Key Management Interoperability Protocol Test Cases Version 1.2

Committee Note 01

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http://docs.oasis-open.org/kmip/testcases/v1.2/cn01/kmip-testcases-v1.2-cn01.pdf

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Abstract:
This document is intended for developers and architects who wish to design systems and applications that interoperate using the Key Management Interoperability Protocol specification.

Status:
This document was last revised or approved by the OASIS Key Management Interoperability Protocol (KMIP) TC on the above date. The level of approval is also listed above. Check the “Latest version” location noted above for possible later revisions of this document. Any other numbered Versions and other technical work produced by the Technical Committee (TC) are listed at https://www.oasis-open.org/committees/tc_home.php?wg_abbrev=kmip#technical.

Technical Committee members should send comments on this document to the Technical Committee’s email list. Others should send comments to the Technical Committee by using the “Send A Comment” button on the Technical Committee’s web page at https://www.oasis-open.org/committees/kmip/.

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1 Introduction

The purpose of this document is to describe test cases to demonstrate the Key Management Interoperability Protocol (KMIP) [KMIP-SPEC-1_2], [KMIP-SPEC-1_1], and [KMIP-SPEC-1_0]. The test cases illustrate that the concepts within the protocol are sound and how the protocol may be used when implementing KMIP in applications. These test cases are not intended to fully test an implementation of KMIP. There are test cases for v1.0, v1.1 and v1.2 of the protocol.

1.1 References (non-normative)

[KMIP-SPEC-1_0]

[KMIP-SPEC-1_1]

[KMIP-SPEC-1_2]

[KMIP-ENCODINGS]
2 KMIP Test Cases

The test cases define a number of request-response pairs for KMIP operations. Each test case is provided in the XML format specified in [KMIP-ENCODINGS] intended to be both human-readable and usable by automated tools. The time sequence (starting from 0) for each request-response pair is noted and line numbers are provided for ease of cross-reference for a given test sequence.

Each test case has a unique label (the section name) which includes the protocol version as part of the identifier.

Many of the test cases contained within this document depend on a specific configuration of a KMIP server to match the assumptions of the test case. Support for a test case depends on a server being configured in a manner consistent with the test case assumptions.

The test cases show one possible way to construct the messages, and the messages shown are not necessarily the only conformant constructions as many items within KMIP are optional and server behavior depends on the server's policy. Support for a test case is predicated on a server matching the test case assumptions and the behavior shown in the request-response pairs.

Where possible the flow of unique identifiers between tests, the date-time values, and other dynamic items are indicated using symbolic identifiers – in actual request and response messages these dynamic values will be filled in with valid values.

2.1 KMIP 1.0 Test Cases

2.1.1 TC-311-10 - Create / Destroy

In this test case the client issues a Create request, whereby the server creates a new symmetric key and returns the Unique Identifier. To clean up, the client then performs a Destroy operation to destroy the key.

```
# TIME 0
0001  <RequestMessage>
0002   <RequestHeader>
0003    <ProtocolVersion>
0004     <ProtocolVersionMajor type="Integer" value="1"/>
0005     <ProtocolVersionMinor type="Integer" value="0"/>
0006   </ProtocolVersion>
0007    <BatchCount type="Integer" value="1"/>
0008   </RequestHeader>
0009  </BatchItem>
0010    <Operation type="Enumeration" value="Create"/>
0011  </RequestPayload>
0012    <ObjectType type="Enumeration" value="SymmetricKey"/>
0013    <TemplateAttribute>
0014      <Attribute>
0015         <AttributeName type="TextString" value="Cryptographic Algorithm"/>
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
<AttributeValue type="Enumeration" value="AES"/>
<Attribute>
 <AttributeName type="TextString" value="Cryptographic Length"/>
 <AttributeValue type="Integer" value="128"/>
</Attribute>
<Attribute>
 <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
 <AttributeValue type="Integer" value="Decrypt Encrypt"/>
</Attribute>
</TemplateAttribute>
</RequestPayload>
</BatchItem>
</RequestMessage>

# TIME 1

```
<RequestMessage>
 <RequestHeader>
  <ProtocolVersion>
   <ProtocolVersionMajor type="Integer" value="1"/>
   <ProtocolVersionMinor type="Integer" value="0"/>
  </ProtocolVersion>
  <BatchCount type="Integer" value="1"/>
 </RequestHeader>
 <BatchItem>
  <Operation type="Enumeration" value="Destroy"/>
  <RequestPayload>
   <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  </RequestPayload>
 </BatchItem>
</RequestMessage>
```
2.1.2 TC-312-10 - Register / Create / Get attributes / Destroy

Here the client first registers a template object and then creates a symmetric key using the registered template. To verify that the attributes of the key were set correctly from the template, the client then issues a Get Attributes command, after which it destroys first the key and then the template.
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
Algorithm"/>
  </AttributeName>
  <AttributeValue type="Enumeration" value="AES"/>
</Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Cryptographic Length"/>
    <AttributeValue type="Integer" value="128"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
    <AttributeValue type="Integer" value="Decrypt Encrypt"/>
  </Attribute>
</TemplateAttribute>
</RequestPayload>
</BatchItem>
</RequestMessage>

# TIME 2

Kmip-testcasess-v1.2-cn01
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2009-11-12T10:47:34+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <Attribute>
        <AttributeName type="TextString" value="Object Group"/>
        <AttributeValue type="TextString" value="Group1"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Application Specific Information"/>
        <AttributeValue>
          <ApplicationNamespace type="TextString" value="ssl"/>
          <ApplicationData type="TextString" value="www.example.com"/>
        </AttributeValue>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Contact Information"/>
        <AttributeValue type="TextString" value="Joe"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="x-Purpose"/>
        <AttributeValue type="TextString" value="demonstration"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</RequestMessage>

# TIME 3

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 4

# TIME 4

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
2.1.3 TC-313-10 - Create / Locate / Get / Destroy

This test case tests the Locate and Get operations, in addition to the previously used operations Create and Destroy. A symmetric key is first created, and then a lookup is performed on the Name attribute using the Locate operation. Subsequently, a Get request is issued to retrieve the located key, after which the key on the server is destroyed.

```xml
# TIME 0
0001 <RequestMessage>
0002 <RequestHeader>
0003 <ProtocolVersion>
0004 <ProtocolVersionMajor type="Integer" value="1"/>
0005 <ProtocolVersionMinor type="Integer" value="0"/>
0006 </ProtocolVersion>
0007 <BatchCount type="Integer" value="1"/>
0008 </RequestHeader>
0009 <BatchItem>
0010 <Operation type="Enumeration" value="Create"/>
0011 <RequestPayload>
0012 <ObjectType type="Enumeration" value="SymmetricKey"/>
0013 <TemplateAttribute>
0014 <Attribute>
0015 <AttributeName type="TextString" value="Name"/>
0016 <AttributeValue>
0017 <NameValue type="TextString" value="Key1"/>
0018 <NameType type="Enumeration" value="UninterpretedTextString"/>
0019 </AttributeValue>
0020 </Attribute>
0021 <Attribute>
0022 <AttributeName type="TextString" value="Cryptographic Algorithm"/>
0023 <AttributeValue type="Enumeration" value="DES3"/>
0024 </Attribute>
0025 <Attribute>
0026 <AttributeName type="TextString" value="Cryptographic Length"/>
0027 <AttributeValue type="Integer" value="168"/>
0028 </Attribute>
0029 <Attribute>
0030 <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
0031 <AttributeValue type="Integer" value="Decrypt Encrypt"/>
0032 </Attribute>
0033 <Attribute>
0034 <AttributeName type="TextString" value="Contact Information"/>
0035 <AttributeValue type="TextString" value="Joe"/>
0036 </Attribute>
0037 </TemplateAttribute>
0038 </RequestPayload>
0039 </BatchItem>
0040 </RequestMessage>
```
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2009-11-12T10:47:35+00:00"/>
.BatchCount type="Integer" value="1"/>
</ResponseHeader>
<BatchItem>
<Operation type="Enumeration" value="Locate"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 1

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</RequestHeader>
<BatchItem>
<Operation type="Enumeration" value="Locate"/>
</BatchMessage>
</RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2009-11-12T10:47:36+00:00"/>
.BatchCount type="Integer" value="1"/>
</ResponseHeader>
<BatchItem>
<Operation type="Enumeration" value="Locate"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```xml
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2009-11-12T10:47:36+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <SymmetricKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="c8e51523f73d6ee9f40eab7cd06825499d8c0bd0739e1046"/>
          </KeyValue>
          <CryptographicAlgorithm type="Enumeration" value="DES3"/>
          <CryptographicLength type="Integer" value="168"/>
        </KeyBlock>
      </SymmetricKey>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
```
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</RequestHeader>
<BatchItem>
<Operation type="Enumeration" value="Destroy"/>
<RequestPayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2009-11-12T10:47:36+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
<BatchItem>
<Operation type="Enumeration" value="Destroy"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 4

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</RequestHeader>
<BatchItem>
<Operation type="Enumeration" value="Locate"/>
<RequestPayload>
<Attribute>
<AttributeName type="TextString" value="Unique Identifier"/>
<AttributeValue type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</Attribute>
</RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
<BatchItem>
<Operation type="Enumeration" value="Locate"/>
<RequestPayload>
<Attribute>
<AttributeName type="TextString" value="Unique Identifier"/>
<AttributeValue type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</Attribute>
</RequestPayload>
</BatchItem>
</ResponseMessage>
```
2.1.4 TC-314-10 - Dual Client Test Case, ID Placeholder-linked Locate & Get Batch

This test case has two clients performing operations on the same key. The first client initially registers a template and creates a symmetric key using that template. The second client then does a batched Locate and Get using the ID Placeholder to retrieve the key. The second client thereafter performs a number of operations on the key (Get Attribute List, Get Attribute, Add Attribute, Modify Attribute and Delete Attribute), before the first client finally destroys the key and the template. The first client also tries to Get the key and the template after they have been destroyed, but the Get operation fails in both cases. This test case demonstrates the fact that it is possible for two clients to cooperate and use the same managed object while only having knowledge of a single pre-agreed Name attribute value and without having to share any other information.

```
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="Template"/>
      <TemplateAttribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Algorithm"/>
          <AttributeValue type="Enumeration" value="AES"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Length"/>
          <AttributeValue type="Integer" value="128"/>
        </Attribute>
      </TemplateAttribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
<AttributeName type="TextString" value="Name="/>
<AttributeValue>
  <NameValue type="TextString" value="Template1="/>
  <NameType type="Enumeration" value="UninterpretedTextString"/>
</AttributeValue>
</BatchItem>
</RequestMessage>
# TIME 1
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1="/>
      <ProtocolVersionMinor type="Integer" value="0="/>
    </ProtocolVersion>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create="/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="SymmetricKey="/>
      <TemplateAttribute>
        <Name>
          <NameValue type="TextString" value="Template1="/>
          <NameType type="Enumeration" value="UninterpretedTextString"/>
        </Name>
        <Attribute>
          <AttributeName type="TextString" value="Name="/>
          <AttributeValue>
            <NameValue type="TextString" value="Key1="/>
            <NameType type="Enumeration" value="UninterpretedTextString"/>
          </AttributeValue>
        </Attribute>
      </TemplateAttribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```
<Attribute>
  <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
  <AttributeValue type="Integer" value="Encrypt"/>
</Attribute>

<Attribute>
  <AttributeName type="TextString" value="Contact Information"/>
  <AttributeValue type="TextString" value="Foo"/>
</Attribute>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2009-11-12T11:10:27+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 2

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchOrderOption type="Boolean" value="true"/>
    <BatchCount type="Integer" value="2"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <UniqueBatchItemID type="ByteString" value="0e9e1875336e415e"/>
    <RequestPayload>
      <Attribute>
        <AttributeName type="TextString" value="Object Type"/>
        <AttributeValue type="Enumeration" value="SymmetricKey"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Name"/>
        <AttributeValue>
          <NameValue type="TextString" value="Key1"/>
          <NameType type="Enumeration" value="UninterpretedTextString"/>
        </AttributeValue>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
<Attribute/>
</RequestPayload>
</BatchItem>
<BatchItem>
<Operation type="Enumeration" value="Get"/>
<UniqueBatchItemID type="ByteString" value="cfe8103f10cf5e3"/>
<RequestPayload>
</RequestItem>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2009-11-12T11:10:28+00:00"/>
</ResponseHeader>
</ResponseMessage>

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
</RequestHeader>
</RequestMessage>

<BatchItem>
<Operation type="Enumeration" value="Get"/>
<UniqueBatchItemID type="ByteString" value="cfe8103f10cf5e3"/>
<RequestPayload>
</BatchItem>

<BatchItem>
<Operation type="Enumeration" value="Get"/>
<UniqueBatchItemID type="ByteString" value="cfe8103f10cf5e3"/>
<ResultStatus type="Enumeration" value="Success"/>
</RequestPayload>
</BatchItem>

<BatchItem>
<Operation type="Enumeration" value="Locate"/>
<UniqueBatchItemID type="ByteString" value="0e9e1875336e415e"/>
<ResultStatus type="Enumeration" value="Success"/>
</ResponsePayload>
</BatchItem>

<BatchItem>
<Operation type="Enumeration" value="Get"/>
<UniqueBatchItemID type="ByteString" value="cfe8103f10cf5e3"/>
<ResultStatus type="Enumeration" value="Success"/>
</ResponsePayload>
</BatchItem>

<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
</ResponsePayload>
</BatchItem>

<BatchItem>
<Operation type="Enumeration" value="Get"/>
<UniqueBatchItemID type="ByteString" value="cfe8103f10cf5e3"/>
<ResultStatus type="Enumeration" value="Success"/>
</ResponsePayload>
</BatchItem>

<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
</ResponsePayload>
</BatchItem>

<BatchItem>
<Operation type="Enumeration" value="Get"/>
<UniqueBatchItemID type="ByteString" value="cfe8103f10cf5e3"/>
<ResultStatus type="Enumeration" value="Success"/>
</ResponsePayload>
</BatchItem>

<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
</ResponsePayload>
</BatchItem>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
<BatchCount type="Integer" value="1"/>
</RequestHeader>
<BatchItem>
  <Operation type="Enumeration" value="GetAttributeList"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
  </RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2009-11-12T11:10:28+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributeList"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <AttributeName type="TextString" value="Cryptographic Length"/>
      <AttributeName type="TextString" value="Cryptographic Algorithm"/>
      <AttributeName type="TextString" value="State"/>
      <AttributeName type="TextString" value="Digest"/>
      <AttributeName type="TextString" value="Initial Date"/>
      <AttributeName type="TextString" value="Unique Identifier"/>
      <AttributeName type="TextString" value="Name"/>
      <AttributeName type="TextString" value="Lease Time"/>
      <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
      <AttributeName type="TextString" value="Object Type"/>
      <AttributeName type="TextString" value="Contact Information"/>
      <AttributeName type="TextString" value="Last Change Date"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 4

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```
<AttributeName type="TextString" value="Name"/>
</RequestPayload>
</BatchItem>
</RequestMessage>

0247 <ResponseMessage>
0248 <ResponseHeader>
0249 <ProtocolVersion>
0250 <ProtocolVersionMajor type="Integer" value="1"/>
0251 <ProtocolVersionMinor type="Integer" value="0"/>
0252 </ProtocolVersion>
0253 <TimeStamp type="DateTime" value="2009-11-12T11:10:28+00:00"/>
0254 <BatchCount type="Integer" value="1"/>
0255 </ResponseHeader>
0256 <BatchItem>
0257 <Operation type="Enumeration" value="GetAttributes"/>
0258 <ResultStatus type="Enumeration" value="Success"/>
0259 <ResponsePayload>
0260 <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0261 <Attribute>
0262 <AttributeName type="TextString" value="Name"/>
0263 <AttributeValue>
0264 <NameValue type="TextString" value="Key1"/>
0265 <NameType type="Enumeration" value="UninterpretedTextString"/>
0266 </AttributeValue>
0267 </Attribute>
0268 <Attribute>
0269 <AttributeName type="TextString" value="Contact Information"/>
0270 <AttributeValue type="TextString" value="Foo"/>
0271 </AttributeValue>
0272 </ResponsePayload>
0273 </BatchItem>
0274 </ResponseMessage>

# TIME 5

0275 <RequestMessage>
0276 <RequestHeader>
0277 <ProtocolVersion>
0278 <ProtocolVersionMajor type="Integer" value="1"/>
0279 <ProtocolVersionMinor type="Integer" value="0"/>
0280 </ProtocolVersion>
0281 <BatchCount type="Integer" value="2"/>
0282 </RequestHeader>
0283 <BatchItem>
0284 <Operation type="Enumeration" value="AddAttribute"/>
0285 <UniqueBatchItemID type="ByteString" value="7a92dda525eb158a"/>
0286 <RequestPayload>
0287 <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0288 <Attribute>
0289 <AttributeName type="TextString" value="x-attribute1"/>
0290 <AttributeValue type="TextString" value="Value1"/>
0291 </Attribute>
0292 </RequestPayload>
0293 </BatchItem>
This is a Non-Standards Track Work Product.

The patent provisions of the OASIS IPR Policy do not apply.

```xml
<BatchItem>
  <Operation type="Enumeration" value="AddAttribute"/>
  <UniqueBatchItemID type="ByteString" value="7230f6e4d3bea249"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    <Attribute>
      <AttributeName type="TextString" value="x-attribute2"/>
      <AttributeValue type="TextString" value="Value2"/>
    </Attribute>
  </RequestPayload>
</BatchItem>

<RequestMessage>
  <ResponseHeader>
    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <UniqueBatchItemID type="ByteString" value="7a92dda525eb158a"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <Attribute>
        <AttributeName type="TextString" value="x-attribute1"/>
        <AttributeValue type="TextString" value="Value1"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <UniqueBatchItemID type="ByteString" value="7230f6e4d3bea249"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <Attribute>
        <AttributeName type="TextString" value="x-attribute2"/>
        <AttributeValue type="TextString" value="Value2"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```

```
# TIME 6

<RequestMessage>
  <RequestHeader>
    <ProtocolVersionMajor type="Integer" value="1"/>
    <ProtocolVersionMinor type="Integer" value="0"/>
  </ProtocolVersion>
  <BatchCount type="Integer" value="2"/>
</RequestMessage>
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
0337  </RequestHeader>
0338  </BatchItem>
0339  <Operation type="Enumeration" value="ModifyAttribute"/>
0340  <UniqueBatchItemID type="ByteString" value="ba3ea60548ecb699"/>
0341  </RequestPayload>
0342  </BatchItem>
0343  </RequestMessage>

0361  <ResponseMessage>
0362  </ResponseHeader>
0363  </ProtocolVersion>
0364  </ProtocolVersionMajor type="Integer" value="1"/>
0365  </ProtocolVersionMinor type="Integer" value="0"/>
0366  </ProtocolVersion>
0367  </TimeStamp type="DateTime" value="2009-11-12T11:10:30+00:00"/>
0368  </BatchCount type="Integer" value="2"/>
0369  </ResponseHeader>
0370  </BatchItem>
0371  <Operation type="Enumeration" value="ModifyAttribute"/>
0372  <UniqueBatchItemID type="ByteString" value="321984e716274a3d"/>
0373  </RequestPayload>
0374  </ResponsePayload>
0375  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0376  </Attribute>
0377  </AttributeName type="TextString" value="x-attribute1"/>
0378  </AttributeValue type="TextString" value="ModifiedValue1"/>
0379  </Attribute>
0380  </ResponsePayload>
0381  </BatchItem>
0382  </BatchItem>
0383  <Operation type="Enumeration" value="ModifyAttribute"/>
0384  <UniqueBatchItemID type="ByteString" value="321984e716274a3d"/>
0385  </RequestPayload>
0386  </ResponsePayload>
0387  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0388  </Attribute>
0389  </AttributeName type="TextString" value="x-attribute2"/>
```
0390 | <AttributeValue type="TextString" value="ModifiedValue2"/>
0391 | </AttributeValue>
0392 | </ResponsePayload>
0393 | </BatchItem>
0394 | </ResponseMessage>
# TIME 7
0395 | <RequestMessage>
0396 | <RequestHeader>
0397 | <ProtocolVersion>
0398 |   <ProtocolVersionMajor type="Integer" value="1"/>
0399 |   <ProtocolVersionMinor type="Integer" value="0"/>
0400 | </ProtocolVersion>
0401 | <BatchCount type="Integer" value="2"/>
0402 | </RequestHeader>
0403 | <BatchItem>
0404 |   <Operation type="Enumeration" value="DeleteAttribute"/>
0405 |   <UniqueBatchItemID type="ByteString" value="d5c6df842daeecd8"/>
0406 |   <RequestPayload>
0407 |     <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0408 |     <AttributeName type="TextString" value="x-attribute1"/>
0409 |   </RequestPayload>
0410 | </BatchItem>
0411 | <BatchItem>
0412 |   <Operation type="Enumeration" value="DeleteAttribute"/>
0413 |   <UniqueBatchItemID type="ByteString" value="572d4f0d433dab10"/>
0414 |   <RequestPayload>
0415 |     <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0416 |     <AttributeName type="TextString" value="x-attribute2"/>
0417 |   </RequestPayload>
0418 | </BatchItem>
0419 | </RequestMessage>
0420 | <ResponseMessage>
0421 |   <ResponseHeader>
0422 |     <ProtocolVersion>
0423 |       <ProtocolVersionMajor type="Integer" value="1"/>
0424 |       <ProtocolVersionMinor type="Integer" value="0"/>
0425 |     </ProtocolVersion>
0426 |     <TimeStamp type="DateTime" value="2009-11-12T11:10:30+00:00"/>
0427 |     <BatchCount type="Integer" value="2"/>
0428 |   </ResponseHeader>
0429 | <BatchItem>
0430 |   <Operation type="Enumeration" value="DeleteAttribute"/>
0431 |   <UniqueBatchItemID type="ByteString" value="d5c6df842daecd8"/>
0432 |   <ResultStatus type="Enumeration" value="Success"/>
0433 |   <ResponsePayload>
0434 |     <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0435 |     <Attribute>
0436 |       <AttributeName type="TextString" value="x-attribute1"/>
0437 |       <AttributeValue type="TextString" value="ModifiedValue1"/>
0438 |     </Attribute>
0439 |   </ResponsePayload>
0440 | </BatchItem>
0441 | <BatchItem>
0442 |   <Operation type="Enumeration" value="DeleteAttribute"/>
<table>
<thead>
<tr>
<th>Line</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>0443</td>
<td>&lt;UniqueBatchItemID type=&quot;ByteString&quot; value=&quot;572d4f0d433dab10&quot;/&gt;</td>
</tr>
<tr>
<td>0444</td>
<td>&lt;ResultStatus type=&quot;Enumeration&quot; value=&quot;Success&quot;/&gt;</td>
</tr>
<tr>
<td>0445</td>
<td>&lt;ResponsePayload&gt;</td>
</tr>
<tr>
<td>0446</td>
<td>&gt;</td>
</tr>
<tr>
<td>0447</td>
<td>&lt;UniqueIdentifier type=&quot;TextString&quot; value=&quot;$UNIQUE_IDENTIFIER_1&quot;/&gt;</td>
</tr>
<tr>
<td>0448</td>
<td>&lt;AttributeName type=&quot;TextString&quot; value=&quot;x-attribute2&quot;/&gt;</td>
</tr>
<tr>
<td>0449</td>
<td>&lt;AttributeValue type=&quot;TextString&quot; value=&quot;ModifiedValue2&quot;/&gt;</td>
</tr>
<tr>
<td>0450</td>
<td>&lt;/AttributeName&gt;</td>
</tr>
<tr>
<td>0451</td>
<td>&lt;/ResponsePayload&gt;</td>
</tr>
<tr>
<td>0452</td>
<td>&lt;/BatchItem&gt;</td>
</tr>
<tr>
<td>0453</td>
<td>&lt;/ResponseMessage&gt;</td>
</tr>
<tr>
<td>0454</td>
<td># TIME 8</td>
</tr>
<tr>
<td>0455</td>
<td>&lt;RequestMessage&gt;</td>
</tr>
<tr>
<td>0456</td>
<td>&lt;RequestHeader&gt;</td>
</tr>
<tr>
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</tr>
<tr>
<td>0459</td>
<td>&lt;ProtocolVersionMinor type=&quot;Integer&quot; value=&quot;0&quot;/&gt;</td>
</tr>
<tr>
<td>0460</td>
<td>&lt;/ProtocolVersion&gt;</td>
</tr>
<tr>
<td>0461</td>
<td>&lt;BatchItem&gt;</td>
</tr>
<tr>
<td>0462</td>
<td>&lt;Operation type=&quot;Enumeration&quot; value=&quot;Destroy&quot;/&gt;</td>
</tr>
<tr>
<td>0463</td>
<td>&lt;RequestPayload&gt;</td>
</tr>
<tr>
<td>0464</td>
<td>&lt;UniqueIdentifier type=&quot;TextString&quot; value=&quot;$UNIQUE_IDENTIFIER_1&quot;/&gt;</td>
</tr>
<tr>
<td>0465</td>
<td>&lt;/RequestPayload&gt;</td>
</tr>
<tr>
<td>0466</td>
<td>&lt;/BatchItem&gt;</td>
</tr>
<tr>
<td>0467</td>
<td>&lt;/RequestMessage&gt;</td>
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<tr>
<td>0468</td>
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</tr>
<tr>
<td>0469</td>
<td>&lt;ResponseHeader&gt;</td>
</tr>
<tr>
<td>0470</td>
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</tr>
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</tr>
<tr>
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<td>0478</td>
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</tr>
<tr>
<td>0479</td>
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<td>&lt;ResponsePayload&gt;</td>
</tr>
<tr>
<td>0481</td>
<td>&lt;UniqueIdentifier type=&quot;TextString&quot; value=&quot;$UNIQUE_IDENTIFIER_1&quot;/&gt;</td>
</tr>
<tr>
<td>0482</td>
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</tr>
<tr>
<td>0483</td>
<td>&lt;/BatchItem&gt;</td>
</tr>
<tr>
<td>0484</td>
<td>&lt;/ResponseMessage&gt;</td>
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  <RequestPayload>
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  </RequestPayload>
</BatchItem>

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  <BatchItem>
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    <ResultReason type="Enumeration" value="ItemNotFound"/>
    <ResultMessage type="TextString" value="Object does not exist"/>
  </BatchItem>
</ResponseMessage>

# TIME 10

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  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
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    </RequestPayload>
  </BatchItem>
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    <BatchCount type="Integer" value="1"/>
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    <ResponsePayload>
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    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
2.1.5 TC-315-10 - Register / Destroy Secret Data

In this test case the client issues a Register request containing a Secret Data object, whereby the server registers the object and returns the Unique Identifier. To clean up, the client then performs a Destroy operation to destroy the object.
<TemplateAttribute>
  <Attribute>
    <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
    <AttributeValue type="Integer" value="Verify"/>
  </Attribute>
</TemplateAttribute>

<SecretData>
  <SecretDataType type="Enumeration" value="Password"/>
  <KeyBlock>
    <KeyFormatType type="Enumeration" value="Opaque"/>
    <KeyValue>
      <KeyMaterial type="ByteString" value="53656372657450617373776f7264"/>
    </KeyValue>
  </KeyBlock>
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<RequestPayload>
</BatchItem>
</RequestMessage>

# TIME 1

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  </RequestHeader>
  <BatchItem>
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    <RequestPayload>
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  </BatchItem>
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    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
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  </BatchItem>
</ResponseMessage>
2.1.6 TC-32-10 - Asynchronous Locate

This test case tests the asynchronous capabilities of KMIP using the Locate operation. A key is created and then a Locate request is sent containing the Name of the created key and with the message header Asynchronous Indicator-field set to True. If the server returns an asynchronous response to the Locate, the client then polls the server until the operation is ready. If the server responded asynchronously, a subsequent Locate operation that is also handled asynchronously is then Canceled, before the key is finally destroyed.

This test case shows the use of two clients with the same assumptions as in the test case described in Section . Since the client is unable to force the server to respond asynchronously, it is possible for a server to respond synchronously to the requests issued at times 1 and 4, in which case the expected response are the ones shown at times 2 and 5, respectively. In the case of the server not responding asynchronously to the Locate requests, the client is permitted to skip the requests illustrated at time 7 and 8.
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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<Attribute>
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  <AttributeValue type="Enumeration" value="SymmetricKey"/>
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<Attribute>
  <AttributeName type="TextString" value="Name"/>
  <AttributeValue>
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    <NameType type="Enumeration" value="UninterpretedTextString"/>
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# TIME 2

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    </ProtocolVersion>
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  <BatchItem>
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    </RequestPayload>
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    <RequestPayload>
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    </RequestPayload>
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```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```xml
<BatchItem>
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  <ResultStatus type="Enumeration" value="Success"/>
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# TIME 3

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      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
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      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
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          <KeyValue>
            <KeyMaterial type="ByteString" value="bef01f82dfb4682a01c2a08413b34aab"/>  
          </KeyValue>
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        </KeyBlock>
      </SymmetricKey>
    </ResponsePayload>
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</ResponseMessage>
```
**# TIME 4**

```xml
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0189         </AttributeValue>
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0191             <AttributeName type="TextString" value="Object Group"/>
0192             <AttributeValue type="TextString" value="Group1"/>
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0196 </ResponseMessage>

# TIME 5

```xml
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0207     <BatchItem>
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0212 </ResponseMessage>

# TIME 4

```xml
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# TIME 6

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        </KeyBlock>
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This is a Non-Standards Track Work Product.

The patent provisions of the OASIS IPR Policy do not apply.
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<td>0383</td>
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</tr>
</tbody>
</table>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

2.1.7 TC-41-10 - Revoke Scenario

This test case tests the revocation aspect of the key life cycle support in KMIP. A key is created and a Get Attribute for the State-attribute reveals that the key is in Pre-active state. The Activation Date is then set, which changes the state to Active. The key is then revoked with a revocation reason of Compromised and the state subsequently changed to Compromised, but this does not stop a client from being able to add, modify and delete attributes or even get the key (since we assume here that the out-of-band registration has been used to make the server aware of the fact that the client is capable of interpreting the attributes of the key and determining what it is allowed to do with the key). To clean up, the created key is finally destroyed.
<AttributeValue type="UninterpretedTextString"/>
  </Attribute>
0029  <Attribute>
0030   <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
0031    <AttributeValue type="Integer" value="Encrypt"/>
0032    </AttributeValue>
0033  </Attribute>
0034 </RequestPayload>
0035 </BatchItem>
0036 </RequestMessage>

0037 <ResponseMessage>
0038  <ResponseHeader>
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0040    <ProtocolVersionMajor type="Integer" value="1"/>
0041    <ProtocolVersionMinor type="Integer" value="0"/>
0042   </ProtocolVersion>
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0044   <BatchCount type="Integer" value="1"/>
0045  </ResponseHeader>
0046  <BatchItem>
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0048   <ResultStatus type="Enumeration" value="Success"/>
0049   <ResponsePayload>
0050    <ObjectType type="Enumeration" value="SymmetricKey"/>
0051    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0052  </ResponsePayload>
0053 </BatchItem>
0054 </ResponseMessage>

# TIME 1

0055 <RequestMessage>
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0058    <ProtocolVersionMajor type="Integer" value="1"/>
0059    <ProtocolVersionMinor type="Integer" value="0"/>
0060   </ProtocolVersion>
0061   <BatchCount type="Integer" value="1"/>
0062  </RequestHeader>
0063  <BatchItem>
0064   <Operation type="Enumeration" value="GetAttributes"/>
0065   <RequestPayload>
0066    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0067    <AttributeName type="TextString" value="State"/>
0068  </RequestPayload>
0069 </BatchItem>
0070 </RequestMessage>

0071 <ResponseMessage>
0072  <ResponseHeader>
0073   <ProtocolVersion>
0074    <ProtocolVersionMajor type="Integer" value="1"/>
0075    <ProtocolVersionMinor type="Integer" value="0"/>
0076   </ProtocolVersion>
0077   <TimeStamp type="DateTime" value="2009-11-12T11:10:35+00:00"/>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

0129  </ProtocolVersion>
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0131  </RequestHeader>
0132  <BatchItem>
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0136  <AttributeName type="TextString" value="State"/>
0137  </RequestPayload>
0138  </BatchItem>
0139  </RequestMessage>

0140  <ResponseMessage>
0141    <ResponseHeader>
0142        <ProtocolVersion>
0143          <ProtocolVersionMajor type="Integer" value="1"/>
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0147        <BatchCount type="Integer" value="1"/>
0148    </ResponseHeader>
0149    <BatchItem>
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0151        <ResultStatus type=" Enumeration" value="Success"/>
0152        <ResponsePayload>
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0154          <AttributeName type="TextString" value="State"/>
0155          <AttributeValue type="Enumeration" value="Active"/>
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0157    </BatchItem>
0158  </ResponseMessage>
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# TIME 4
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0168    </RequestHeader>
0169    <BatchItem>
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0171        <RequestPayload>
0172          <Attribute>
0173            <AttributeName type="TextString" value="Object Type"/>
0174            <AttributeValue type="Enumeration" value="SymmetricKey"/>
0175          </Attribute>
0176          <Attribute>
0177            <AttributeName type="TextString" value="Name"/>
0178            <AttributeValue>
0179              <NameValue type="TextString" value="Key1"/>
0180            </AttributeValue>
0181            <NameType type="Enumeration" value="UninterpretedTextString"/>
0182            </AttributeValue>
0183        </RequestPayload>
0184    </BatchItem>
0185  </RequestMessage>
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</RequestPayload>
</BatchItem>
</RequestMessage>

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    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2009-11-12T11:10:35+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
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    <ResultStatus type="Enumeration" value="Success"/>
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    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 5

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    </ProtocolVersion>
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  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
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    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2009-11-12T11:10:35+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
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    <ResponsePayload>
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      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

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      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
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  </RequestHeader>
  <BatchItem>
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    </ResponsePayload>
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  <KeyFormatType type="Enumeration" value="Raw"/>
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  <CryptographicLength type="Integer" value="128"/>
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# TIME 6
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    </RequestHeader>
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        </RevocationReason>
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  </ProtocolVersion>
  <BatchCount type="Integer" value="1"/>
</RequestHeader>

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  </RequestPayload>
</BatchItem>

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  <ResponseHeader>
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      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
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    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
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    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
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        <AttributeValue type="Enumeration" value="Compromised"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 8

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  </RequestHeader>
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  </BatchItem>
</RequestMessage>

<ResponseMessage>
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        <AttributeName type="TextString" value="State"/>
        <AttributeValue type="Enumeration" value="Compromised"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
```xml
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    <ProtocolVersionMinor type="Integer" value="0"/>
  </ProtocolVersion>
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  <BatchCount type="Integer" value="1"/>
</ResponseHeader>

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  <ResponsePayload>
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    <AttributeName type="TextString" value="Cryptographic Algorithm"/>
    <AttributeName type="TextString" value="State"/>
    <AttributeName type="TextString" value="Compromise Occurrence Date"/>
    <AttributeName type="TextString" value="Compromise Date"/>
    <AttributeName type="TextString" value="Digest"/>
    <AttributeName type="TextString" value="Initial Date"/>
    <AttributeName type="TextString" value="Activation Date"/>
    <AttributeName type="TextString" value="Revocation Reason"/>
    <AttributeName type="TextString" value="Unique Identifier"/>
    <AttributeName type="TextString" value="Name"/>
    <AttributeName type="TextString" value="Lease Time"/>
    <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
    <AttributeName type="TextString" value="Object Type"/>
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  </ResponsePayload>
</BatchItem>

# TIME 9

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    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
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    <RequestPayload>
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    </RequestPayload>
  </BatchItem>
</RequestMessage>
```

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</ProtocolVersion>
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</ResponseHeader>
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<AttributeName type="TextString" value="State"/>
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</BatchItem>
</ResponseMessage>

# TIME 10

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</RequestHeader>
<BatchItem>
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<RequestPayload>
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<AttributeName type="TextString" value="x-attribute1"/>
<AttributeValue type="TextString" value="Value1"/>
</Attribute>
</RequestPayload>
</BatchItem>
<BatchItem>
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<UniqueBatchItemID type="ByteString" value="d62107c3158409d8"/>
<RequestPayload>
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<AttributeName type="TextString" value="x-attribute2"/>
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</RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
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</ProtocolVersion>
</ResponseHeader>

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<ProtocolVersionMinor type="Integer" value="0"/>
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<TimeStamp type="DateTime" value="2009-11-12T11:10:36+00:00"/>
</ResponseHeader>
</BatchItem>
<BatchItem>
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   <UniqueBatchItemID type="ByteString" value="9d407ff45c95672"/>
   <ResultStatus type="Enumeration" value="Success"/>
   <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
         <AttributeName type="TextString" value="x-attribute1"/>
         <AttributeValue type="TextString" value="Value1"/>
      </Attribute>
   </ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 11

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         <ProtocolVersionMinor type="Integer" value="0"/>
      </ProtocolVersion>
      <BatchCount type="Integer" value="2"/>
   </RequestHeader>
   <BatchItem>
      <Operation type="Enumeration" value="ModifyAttribute"/>
      <UniqueBatchItemID type="ByteString" value="47fb42cceca3f6ec"/>
      <RequestPayload>
         <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
         <Attribute>
            <AttributeName type="TextString" value="x-attribute1"/>
            <AttributeValue type="TextString" value="ModifiedValue1"/>
         </Attribute>
      </RequestPayload>
   </BatchItem>
   <BatchItem>
      <Operation type="Enumeration" value="AddAttribute"/>
      <UniqueBatchItemID type="ByteString" value="62107c3158409d8"/>
      <ResultStatus type="Enumeration" value="Success"/>
      <ResponsePayload>
         <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
         <Attribute>
            <AttributeName type="TextString" value="x-attribute2"/>
            <AttributeValue type="TextString" value="Value2"/>
         </Attribute>
      </ResponsePayload>
   </BatchItem>
</RequestMessage>
```

```
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         <ProtocolVersionMajor type="Integer" value="1"/>
         <ProtocolVersionMinor type="Integer" value="0"/>
      </ProtocolVersion>
      <BatchCount type="Integer" value="2"/>
   </RequestHeader>
   <BatchItem>
      <Operation type="Enumeration" value="ModifyAttribute"/>
      <UniqueBatchItemID type="ByteString" value="47fb42cceca3f6ec"/>
      <RequestPayload>
         <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
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            <AttributeName type="TextString" value="x-attribute1"/>
            <AttributeValue type="TextString" value="ModifiedValue1"/>
         </Attribute>
      </RequestPayload>
   </BatchItem>
   <BatchItem>
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      <RequestPayload>
```

```
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</ProtocolVersion>
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</ResponseHeader>
</BatchItem>
<BatchItem>
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   <UniqueBatchItemID type="ByteString" value="9d407ff45c95672"/>
   <ResultStatus type="Enumeration" value="Success"/>
   <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
         <AttributeName type="TextString" value="x-attribute1"/>
         <AttributeValue type="TextString" value="Value1"/>
      </Attribute>
   </ResponsePayload>
</BatchItem>
</ResponseMessage>
```
```
0491 | <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
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0495 | </Attribute>
0496 | </RequestPayload>
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0498 | </RequestMessage>
0499 | <ResponseMessage>
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0512 | <ResponsePayload>
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0514 |     < Attribute>
0515 |       <AttributeName type="TextString" value="x-attribute1"/>
0516 |     </AttributeName>
0517 |   </ResponsePayload>
0518 | </BatchItem>
0519 | </ResponseMessage>
0520 | <RequestMessage>
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0523 |     <ProtocolVersionMajor type="Integer" value="1"/>
0524 |     <ProtocolVersionMinor type="Integer" value="0"/>
0525 |   </ProtocolVersion>
0526 |   <BatchCount type="Integer" value="2"/>
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0533 |   <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0534 |     <Attribute>
0535 |       <AttributeName type="TextString" value="x-attribute2"/>
0536 |     </AttributeName>
0537 |   </ResponsePayload>
0538 | </BatchItem>
0539 | </RequestMessage>
0540 | <RequestMessage>
0541 | <RequestHeader>
0542 |   <ProtocolVersion>
0543 |     <ProtocolVersionMajor type="Integer" value="1"/>
0544 |     <ProtocolVersionMinor type="Integer" value="0"/>
0545 |   </ProtocolVersion>
0546 |   <BatchCount type="Integer" value="2"/>
0547 | </RequestHeader>
0548 | </BatchItem>
0549 | <Operation type="Enumeration" value="DeleteAttribute"/>
0550 | <UniqueBatchItemID type="ByteString" value="3e2c080fa8806057"/>
```
<RequestPayload>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  <AttributeName type="TextString" value="x-attribute1"/>
</RequestPayload>
</BatchItem>

<BatchItem>
  <Operation type="Enumeration" value="DeleteAttribute"/>
  <UniqueBatchItemID type="ByteString" value="9d55988d43d23b82"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <AttributeName type="TextString" value="x-attribute2"/>
  </RequestPayload>
</BatchItem>

</RequestMessage>

<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>

<TimeStamp type="DateTime" value="2009-11-12T11:10:37+00:00"/>
<BatchCount type="Integer" value="2"/>
</ResponseHeader>

<BatchItem>
  <Operation type="Enumeration" value="DeleteAttribute"/>
  <UniqueBatchItemID type="ByteString" value="3e2c080fa8806057"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <Attribute>
      <AttributeName type="TextString" value="x-attribute1"/>
      <AttributeValue type="TextString" value="ModifiedValue1"/>
    </Attribute>
  </ResponsePayload>
</BatchItem>

<BatchItem>
  <Operation type="Enumeration" value="DeleteAttribute"/>
  <UniqueBatchItemID type="ByteString" value="9d55988d43d23b82"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <Attribute>
      <AttributeName type="TextString" value="x-attribute2"/>
      <AttributeValue type="TextString" value="ModifiedValue2"/>
    </Attribute>
  </ResponsePayload>
</BatchItem>

</ResponseMessage>

# TIME 13

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
    </ProtocolVersion>
  </RequestHeader>
</RequestMessage>
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
</RequestHeader>
</BatchItem>
</RequestMessage>

# TIME 14

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
</RequestHeader>
</BatchItem>
<Operation type="Enumeration" value="Destroy"/>
<RequestPayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</RequestPayload>
</BatchItem>
</ResponseMessage>
2.1.8 TC-51-10 - Get Usage Allocation Scenario

This test case tests the usage management functionality of KMIP. A key is created and the Activation Date and Protect Stop Date attributes are set in such a way as to allow the Get Usage Allocation operation to be performed. The value of the Usage Limits attribute is set to 1000 bytes, and two subsequent requests for 500 bytes succeed (one of them also verifying the amount that can be received using the Check operation), while a third fails since the usage allocation has been used up. The key is finally revoked and destroyed. This test case shows the use of multiple clients (Client-A, Client-B and Client-C).

```xml
# TIME 0
# [Client-A]
0001 <RequestMessage>
0002  <RequestHeader>
0003   <ProtocolVersion>
0004     <ProtocolVersionMajor type="Integer" value="1"/>
0005     <ProtocolVersionMinor type="Integer" value="0"/>
0006   </ProtocolVersion>
0007   <BatchCount type="Integer" value="1"/>
0008 </RequestHeader>
0009 <BatchItem>
0010   <Operation type="Enumeration" value="Create"/>
0011   <RequestPayload>
0012     <ObjectType type="Enumeration" value="SymmetricKey"/>
0013     <TemplateAttribute>
0014       <Attribute>
0015         <AttributeName type="TextString" value="Cryptographic Algorithm"/>
0016         <AttributeValue type="Enumeration" value="AES"/>
0017       </Attribute>
0018       <Attribute>
0019         <AttributeName type="TextString" value="Cryptographic
```
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="2"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <UniqueBatchItemID type="ByteString" value="d7fe2477e364ae1a"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Activation Date"/>
      </Attribute>
      <AttributeValue type="Integer" value="128"/>
      <AttributeName type="TextString" value="Name"/>
      <AttributeValue>
        <NameValue type="TextString" value="Key1"/>
        <NameType type="Enumeration" value="UninterpretedTextString"/>
      </AttributeValue>
      <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
      <AttributeValue type="Integer" value="Encrypt"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 1
# [Client-A]

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="2"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <UniqueBatchItemID type="ByteString" value="d7fe2477e364ae1a"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Activation Date"/>
      </Attribute>
      <AttributeValue type="Integer" value="128"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```
<AttributeValue type="DateTime" value="$NOW-3600"/>
</Attribute>
</RequestPayload>
</BatchItem>
</RequestMessage>

# TIME 2

## [Client-A]

<RequestMessage>

<RequestHeader>

<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>

<TimeStamp type="DateTime" value="2010-03-11T12:21:47+00:00"/>

</RequestHeader>

<BatchItem>
<Operation type="Enumeration" value="AddAttribute"/>
<UniqueBatchItemID type="ByteString" value="d7fe2477e364ae1a"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</BatchItem>

<BatchItem>
<Operation type="Enumeration" value="AddAttribute"/>
<UniqueBatchItemID type="ByteString" value="9696012991bc8a59"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>
```
```xml
<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>

<BatchCount type="Integer" value="1"/>

<RequestHeader>

<Operation type="AddAttribute"/>

<RequestPayload>

<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>

<Attribute>
  <AttributeName type="TextString" value="Usage Limits"/>
  <AttributeValue>
    <UsageLimitsTotal type="LongInteger" value="1000"/>
    <UsageLimitsUnit type="Enumeration" value="Byte"/>
  </AttributeValue>
</Attribute>

</RequestPayload>

</BatchItem>

</RequestMessage>

<ResponseMessage>

<ResponseHeader>

<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>

<TimeStamp type="DateTime" value="2010-03-11T12:21:48+00:00"/>

<BatchCount type="Integer" value="1"/>

</ResponseHeader>

<BatchItem>

<Operation type="AddAttribute"/>

<ResultStatus type="Success"/>

<ResponsePayload>

<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>

<Attribute>
  <AttributeName type="TextString" value="Usage Limits"/>
  <AttributeValue>
    <UsageLimitsTotal type="LongInteger" value="1000"/>
    <UsageLimitsCount type="LongInteger" value="1000"/>
    <UsageLimitsUnit type="Enumeration" value="Byte"/>
  </AttributeValue>

</Attribute>

</ResponsePayload>

</BatchItem>

</ResponseMessage>

# TIME 3
# [Client-B]

<RequestMessage>

<RequestHeader>

<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>

<BatchCount type="Integer" value="1"/>

</RequestHeader>
```
<BatchItem>
  <Operation type="Enumeration" value="Locate"/>
  <RequestPayload>
    <AttributeName type="TextString" value="Object Type"/>
    <AttributeValue type="Enumeration" value="SymmetricKey"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Name"/>
    <AttributeValue>
      <NameValue type="TextString" value="Key1"/>
      <NameType type="Enumeration" value="UninterpretedTextString"/>
    </AttributeValue>
  </Attribute>
</RequestPayload>
</BatchItem>

# TIME 4
# [Client-B]

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
<ProtocolVersion>  
   <ProtocolVersionMajor type="Integer" value="1"/>  
   <ProtocolVersionMinor type="Integer" value="0"/>  
</ProtocolVersion>  
<TimeStamp type="DateTime" value="2010-03-11T12:21:48+00:00"/>  
</ResponseHeader>  
</BatchItem>  
</BatchItem>  
</ResponseMessage>  

# TIME 5  
# [Client-B]  
<RequestMessage>  
   <RequestHeader>  
      <ProtocolVersion>  
         <ProtocolVersionMajor type="Integer" value="1"/>  
         <ProtocolVersionMinor type="Integer" value="0"/>  
      </ProtocolVersion>  
      <BatchOrderOption type="Boolean" value="true"/>  
      <BatchCount type="Integer" value="2"/>  
   </RequestHeader>  
   <BatchItem>  
      <Operation type="Enumeration" value="Check"/>  
      <UniqueBatchItemID type="ByteString" value="19d4f3dc9635307a"/>  
      <RequestPayload>  
         <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>  
         <UsageLimitsCount type="LongInteger" value="250"/>  
      </RequestPayload>  
   </BatchItem>  
</RequestMessage>  

<BatchItem>  
   <Operation type="Enumeration" value="GetUsageAllocation"/>  
   <UniqueBatchItemID type="ByteString" value="20c8dffd55bdeee8"/>  
   <RequestPayload>  
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>  
      <UsageLimitsCount type="LongInteger" value="250"/>  
   </RequestPayload>  
</BatchItem>  
</ResponseMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```xml
0277  </RequestMessage>
0278  <ResponseMessage>
0279   <ResponseHeader>
0280     <ProtocolVersion>
0281        <ProtocolVersionMajor type="Integer" value="1"/>
0282        <ProtocolVersionMinor type="Integer" value="0"/>
0283     </ProtocolVersion>
0284     <TimeStamp type="DateTime" value="2010-03-11T12:21:49+00:00"/>
0285     <BatchCount type="Integer" value="2"/>
0286   </ResponseHeader>
0287   <BatchItem>
0288     <Operation type="Enumeration" value="Check"/>
0289     <UniqueBatchItemID type="ByteString" value="19d4f3dc9635307a"/>
0290     <ResultStatus type="Enumeration" value="Success"/>
0291     <ResponsePayload>                                      
0292       <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0293     </ResponsePayload>
0294   </BatchItem>
0295   <BatchItem>
0296     <Operation type="Enumeration" value="GetUsageAllocation"/>
0297     <UniqueBatchItemID type="ByteString" value="20c8dffd55bdeee8"/>
0298     <ResultStatus type="Enumeration" value="Success"/>
0299     <ResponsePayload>                                      
0300       <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0301     </ResponsePayload>
0302   </BatchItem>
0303  </ResponseMessage>

# TIME 6
# [Client-A]
0304  <RequestMessage>
0305   <RequestHeader>
0306     <ProtocolVersion>
0307        <ProtocolVersionMajor type="Integer" value="1"/>
0308        <ProtocolVersionMinor type="Integer" value="0"/>
0309     </ProtocolVersion>
0310     <BatchCount type="Integer" value="1"/>
0311   </RequestHeader>
0312   <BatchItem>
0313     <Operation type="Enumeration" value="GetUsageAllocation"/>
0314     <RequestPayload>
0315       <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0316       <UsageLimitsCount type="LongInteger" value="500"/>
0317     </RequestPayload>
0318   </BatchItem>
0319  </RequestMessage>
0320  <ResponseMessage>
0321   <ResponseHeader>
0322     <ProtocolVersion>
0323        <ProtocolVersionMajor type="Integer" value="1"/>
0324        <ProtocolVersionMinor type="Integer" value="0"/>
0325     </ProtocolVersion>
0326     <TimeStamp type="DateTime" value="2010-03-11T12:21:49+00:00"/>
0327     <BatchCount type="Integer" value="1"/>
```

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This is a Non-Standards Track Work Product.

The patent provisions of the OASIS IPR Policy do not apply.

```xml
<?xml version="1.0" encoding="UTF-8"?>
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>

  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <RequestPayload>
      <Attribute>
        <AttributeName type="TextString" value="Object Type"/>
        <AttributeValue type="Enumeration" value="SymmetricKey"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Name"/>
        <AttributeValue>
          <NameValue type="TextString" value="Key1"/>
          <NameType type="Enumeration" value="UninterpretedTextString"/>
        </AttributeValue>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>

  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```

# TIME 7
# [Client-C]

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```
# TIME 8
# [Client-C]
0379  <RequestMessage>
0380   <RequestHeader>
0381     <ProtocolVersion>
0382       <ProtocolVersionMajor type="Integer" value="1"/>
0383       <ProtocolVersionMinor type="Integer" value="0"/>
0384   </ProtocolVersion>
0385   <BatchCount type="Integer" value="1"/>
0386   </RequestHeader>
0387   <BatchItem>
0388     <Operation type="Enumeration" value="Get"/>
0389     <RequestPayload>
0390       <UniqueIdentifier type="TextString"
0391         value="$UNIQUE_IDENTIFIER_0"/>
0392       </RequestPayload>
0393     </BatchItem>
0394   </RequestMessage>
0395 <ResponseMessage>
0396  <ResponseHeader>
0397    <ProtocolVersion>
0398      <ProtocolVersionMajor type="Integer" value="1"/>
0399      <ProtocolVersionMinor type="Integer" value="0"/>
0400    </ProtocolVersion>
0401    <TimeStamp type="DateTime"
0402      value="2010-03-11T12:49+00:00"/>
0403    <BatchCount type="Integer" value="1"/>
0404    </ResponseHeader>
0405   <BatchItem>
0406     <Operation type="Enumeration" value="Get"/>
0407     <ResponseStatus type="Enumeration" value="Success"/>
0408     <ResponsePayload>
0409       <ObjectType type="Enumeration" value="SymmetricKey"/>
0410       <UniqueIdentifier type="TextString"
0411         value="$UNIQUE_IDENTIFIER_0"/>
0412       <SymmetricKey>
0413         <KeyBlock>
0414           <KeyFormatType type="Enumeration" value="Raw"/>
0415           <KeyValue
0416             value="674b32b1a3266df1253b0f2c4440b0b0"/>
0417           </KeyValue>
0418           <CryptographicAlgorithm type="Enumeration" value="AES"/>
0419           <CryptographicLength type="Integer" value="128"/>
0420         </KeyBlock>
0421       </SymmetricKey>
0422     </ResponsePayload>
0423   </BatchItem>
0424 </ResponseMessage>

# TIME 9
# [Client-C]
0425  <RequestMessage>
0426   <RequestHeader>
0427     <ProtocolVersion>
0428       <ProtocolVersionMajor type="Integer" value="1"/>
0429       <ProtocolVersionMinor type="Integer" value="0"/>
0430   </ProtocolVersion>
0431   <BatchCount type="Integer" value="1"/>
```

This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

| 0429 | </RequestHeader> |
| 0430 | <BatchItem> |
| 0431 | <Operation type="Enumeration" value="GetUsageAllocation"/> |
| 0432 | <RequestPayload> |
| 0433 | <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/> |
| 0434 | <UsageLimitsCount type="LongInteger" value="500"/> |
| 0435 | </RequestPayload> |
| 0436 | </BatchItem> |
| 0437 | </RequestMessage> |
| 0438 | <ResponseMessage> |
| 0439 | <ResponseHeader> |
| 0440 | <ProtocolVersion> |
| 0441 | <ProtocolVersionMajor type="Integer" value="1"/> |
| 0442 | <ProtocolVersionMinor type="Integer" value="0"/> |
| 0443 | </ProtocolVersion> |
| 0444 | <TimeStamp type="DateTime" value="2010-03-11T12:49:00+00:00"/> |
| 0445 | <BatchCount type="Integer" value="1"/> |
| 0446 | </ResponseHeader> |
| 0447 | <BatchItem> |
| 0448 | <Operation type="Enumeration" value="GetUsageAllocation"/> |
| 0449 | <ResultStatus type="Enumeration" value="OperationFailed"/> |
| 0450 | <ResultReason type="Enumeration" value="PermissionDenied"/> |
| 0451 | <ResultMessage type="TextString" value="Unable to allocate requested amount"/> |
| 0452 | </BatchItem> |
| 0453 | </ResponseMessage> |

# TIME 10
# [Client-A]
| 0454 | <RequestMessage> |
| 0455 | <RequestHeader> |
| 0456 | <ProtocolVersion> |
| 0457 | <ProtocolVersionMajor type="Integer" value="1"/> |
| 0458 | <ProtocolVersionMinor type="Integer" value="0"/> |
| 0459 | </ProtocolVersion> |
| 0460 | <BatchOrderOption type="Boolean" value="true"/> |
| 0461 | <BatchCount type="Integer" value="2"/> |
| 0462 | </RequestHeader> |
| 0463 | <BatchItem> |
| 0464 | <Operation type="Enumeration" value="Revoked"/> |
| 0465 | <UniqueBatchItemID type="ByteString" value="727a212bc674b4ea"/> |
| 0466 | <RequestPayload> |
| 0467 | <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/> |
| 0468 | </RevocationReason> |
| 0469 | <RevocationReasonCode type="Enumeration" value="CessationOfOperation"/> |
| 0470 | </RevocationReason> |
| 0471 | </RequestPayload> |
| 0472 | </BatchItem> |
| 0473 | <BatchItem> |
| 0474 | <Operation type="Enumeration" value="Destroy"/> |
| 0475 | <UniqueBatchItemID type="ByteString" value="1d0ebf826109b0a5"/> |
| 0476 | <RequestPayload> |
| 0477 | <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/> |
| 0478 | </RequestPayload> |
2.1.9 TC-61-10 - Import of a Third-party Key

This test case tests the import of a foreign key using the Register operation. To validate that the
registered key is treated the same as a locally created key, an attribute is added to the key and
then modified. Finally, the key is destroyed.
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```xml
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="AddAttribute"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="x-provider"/>
        <AttributeValue type="TextString" value="unknown"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 1

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="AddAttribute"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="x-provider"/>
        <AttributeValue type="TextString" value="unknown"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```

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<ResponseHeader>
  <ProtocolVersion>
    <ProtocolVersionMajor type="Integer" value="1"/>
    <ProtocolVersionMinor type="Integer" value="0"/>
  </ProtocolVersion>
  <TimeStamp type="DateTime" value="2009-11-12T11:10:42+00:00"/>
  <BatchCount type="Integer" value="1"/>
</ResponseHeader>

<BatchItem>
  <Operation type="Enumeration" value="AddAttribute"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <Attribute>
      <AttributeName type="TextString" value="x-provider"/>
      <AttributeValue type="TextString" value="unknown"/>
    </Attribute>
  </ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 2

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ModifyAttribute"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="x-provider"/>
        <AttributeValue type="TextString" value="third party"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2009-11-12T11:10:42+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ModifyAttribute"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
2.1.10 TC-71-10 - Unrecognized Message Extension with Criticality Indicator False

A create request is issued and the request contains a Message Extension with the Criticality Indicator set to false. The server does not understand the extension, but since it is non-critical, the create request is processed normally. Subsequently, the created key is deleted.
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
.BatchNorm type="Integer" value="1"/>
</RequestItem>
<Operation type="Enumeration" value="Create"/>
</RequestPayload>
<ObjectType type="Enumeration" value="SymmetricKey"/>
<TemplateAttribute>
.Attribute>
.AttributeName type="TextString" value="Cryptographic Length"/>
.AttributeValue type="Integer" value="128"/>
</Attribute>
</TemplateAttribute>
овых
</RequestPayload>
<MessageExtension>
<VendorIdentification type="TextString" value="Acme"/>
</VendorIdentification>
</MessageExtension>
</BatchItem>
</RequestMessage>
<ResponseMessage>
</ResponseHeader>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2010-02-11T08:26:04+00:00"/>
</ResponseHeader>
<BatchItem>
<Operation type="Enumeration" value="Create"/>
</RequestPayload>
<ObjectType type="Enumeration" value="SymmetricKey"/>
</ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
### TIME 1

| 0057 | </BatchItem> |
| 0058 | </ResponseMessage> |

#### 2.1.11 TC-72-10 - Unrecognized Message Extension with Criticality Indicator True

A create request is issued and the request contains a Message Extension with the Criticality Indicator set to true. The server does not understand the extension, and since it is critical, the create request fails and an error is returned.

### TIME 0

| 0001 | <RequestMessage> |
| 0002 | <RequestHeader> |
| 0003 | <ProtocolVersion> |
| 0004 | <ProtocolVersionMajor type="Integer" value="1"/> |
| 0005 | <ProtocolVersionMinor type="Integer" value="0"/> |
| 0006 | </ProtocolVersion> |
| 0007 | <BatchCount type="Integer" value="1"/> |
| 0008 | </RequestHeader> |
<BatchItem>
  <Operation type="Enumeration" value="Create"/>
  <RequestPayload>
    <ObjectType type="Enumeration" value="SymmetricKey"/>
    <TemplateAttribute>
      <Attribute>
        <AttributeName type="TextString" value="Cryptographic Length"/>
        <AttributeValue type="Integer" value="128"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Cryptographic Algorithm"/>
        <AttributeValue type="Enumeration" value="AES"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
        <AttributeValue type="Integer" value="Decrypt Encrypt"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="x-ID"/>
        <AttributeValue type="TextString" value="TC-72-10"/>
      </Attribute>
    </TemplateAttribute>
  </RequestPayload>
  <MessageExtension>
    <VendorIdentification type="TextString" value="Acme"/>
    <CriticalityIndicator type="Boolean" value="true"/>
    <VendorExtension>
      <TTLV tag="0x540001" type="TextString" value="na"/>
    </VendorExtension>
  </MessageExtension>
</BatchItem>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-02-11T08:26:05+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <ResultStatus type="Enumeration" value="OperationFailed"/>
    <ResultReason type="Enumeration" value="FeatureNotSupported"/>
    <ResultMessage type="TextString" value="Critical Message Extension not recognized"/>
  </BatchItem>
  </ResponseMessage>
2.1.12 TC-81-10 - Create a Key Pair

Create a new private/public key pair. Make sure they are linked correctly by issuing Locate commands with the assigned Unique Identifiers. Finally delete both key halves.

```xml
# TIME 0
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="CreateKeyPair"/>
    <RequestPayload>
      <CommonTemplateAttribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Algorithm"/>
          <AttributeValue type="Enumeration" value="RSA"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Length"/>
          <AttributeValue type="Integer" value="1024"/>
        </Attribute>
      </CommonTemplateAttribute>
      <PrivateKeyTemplateAttribute>
        <Attribute>
          <AttributeName type="TextString" value="Name"/>
          <AttributeValue>
            <NameValue type="TextString" value="PrivateKey1"/>
            <NameType type="Enumeration" value="UninterpretedTextString"/>
          </AttributeValue>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
          <AttributeValue type="Integer" value="Sign"/>
        </Attribute>
      </PrivateKeyTemplateAttribute>
      <PublicKeyTemplateAttribute>
        <Attribute>
          <AttributeName type="TextString" value="Name"/>
          <AttributeValue>
            <NameValue type="TextString" value="PublicKey1"/>
            <NameType type="Enumeration" value="UninterpretedTextString"/>
          </AttributeValue>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
          <AttributeValue type="Integer" value="Sign"/>
        </Attribute>
      </PublicKeyTemplateAttribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```
<AttributeValue type="Integer" value="Verify"/>
</Attribute>
</RequestPayload>
</BatchItem>
</RequestMessage>

# TIME 1

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
</RequestHeader>
<BatchItem>
<Operation type="Enumeration" value="Locate"/>
<RequestPayload>
<Attribute>
<AttributeName type="TextString" value="Object Type"/>
<AttributeValue type="Enumeration" value="PublicKey"/>
</Attribute>
<Attribute>
<AttributeName type="TextString" value="Link"/>
<AttributeValue>
<LinkType type="Enumeration" value="PrivateKeyLink"/>
<LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</AttributeValue>
</Attribute>
</RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
</ResponseHeader>
</ResponseMessage>

<BatchItem>
<Operation type="Enumeration" value="CreateKeyPair"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<PrivateKeyUniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

<BatchItem>
<Operation type="Enumeration" value="Locate"/>
<RequestPayload>
<Attribute>
<AttributeName type="TextString" value="Object Type"/>
<AttributeValue type="Enumeration" value="PublicKey"/>
</Attribute>
<Attribute>
<AttributeName type="TextString" value="Link"/>
<AttributeValue>
<LinkType type="Enumeration" value="PrivateKeyLink"/>
<LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</AttributeValue>
</Attribute>
</RequestPayload>
</BatchItem>
</ResponseMessage>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
<ProtocolVersion>
<TimeStamp type="DateTime" value="2010-02-11T08:35:07+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
<BatchItem>
<Operation type="Enumeration" value="Locate"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 2
0111 <RequestMessage>
0112 <RequestHeader>
0113 <ProtocolVersion>
0114 <ProtocolVersionMajor type="Integer" value="1"/>
0115 <ProtocolVersionMinor type="Integer" value="0"/>
0116 </ProtocolVersion>
0117 <BatchCount type="Integer" value="1"/>
0118 </RequestHeader>
0119 <BatchItem>
0120 <Operation type="Enumeration" value="Locate"/>
0121 <RequestPayload>
0122 <Attribute>
0123  <AttributeName type="TextString" value="Object Type"/>
0124  <AttributeValue type="Enumeration" value="PrivateKey"/>
0125 </Attribute>
0126 <Attribute>
0127  <AttributeName type="TextString" value="Link"/>
0128  <AttributeValue>
0129    <LinkType type="Enumeration" value="PublicKeyLink"/>
0130    <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0131  </AttributeValue>
0132 </Attribute>
0133 </RequestPayload>
0134 </BatchItem>
0135 </RequestMessage>
0136 <ResponseMessage>
0137 <ResponseHeader>
0138 <ProtocolVersion>
0139 <ProtocolVersionMajor type="Integer" value="1"/>
0140 <ProtocolVersionMinor type="Integer" value="0"/>
0141 </ProtocolVersion>
0142 <TimeStamp type="DateTime" value="2010-02-11T08:35:07+00:00"/>
0143 <BatchCount type="Integer" value="1"/>
0144 </ResponseHeader>
0145 <BatchItem>
0146 <Operation type="Enumeration" value="Locate"/>
0147 <ResultStatus type="Enumeration" value="Success"/>
0148 <ResponsePayload>
0149  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

# TIME 3

```xml
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```

# TIME 4

```xml
<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-02-11T08:35:07+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResponseStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
2.1.13 TC-82-10 - Register Both Halves of a Key Pair

Register a private key and a public key and set the Link attribute to point to each other. Verify the links were set correctly by locating the keys based on the link attributes, and then delete both objects.

```
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="PrivateKey"/>
      <TemplateAttribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
          <AttributeValue type="Integer" value="Sign"/>
        </Attribute>
        <PrivateKey>
          <KeyBlock>
            <KeyFormatType type="Enumeration" value="PKCS_8"/>
            <KeyValue>
              <KeyMaterial type="ByteString" value="30820276020100300d06092a864886f70d01010050048202603082025c02010002818100930451c9ed94f5bb9da17dd0381bd23be43eaca87539ff301fc8a8cd5d274c3e7699dbd2711c97a7aa91e2c50a82bd0b1034f0df493dec1636427e58acce7f6ce0f9bccc617bbd4c90d0094a2703b0d09eb19d1005f27be2655268c7a5f3f268c872c3ed2a57f81e03eaf67a944de5e784f13dca8f232d074e6dceaa4ec9f0203010010281800b6a7d736199e48a420e4537ca0c7c046784dceab43bae0bc13"/>
          </KeyValue>
          <KeyMaterial type="ByteString" value="30820276020100300d06092a864886f70d01010050048202603082025c02010002818100930451c9ed94f5bb9da17dd0381bd23be43eaca87539ff301fc8a8cd5d274c3e7699dbd2711c97a7aa91e2c50a82bd0b1034f0df493dec1636427e58acce7f6ce0f9bccc617bbd4c90d0094a2703b0d09eb19d1005f27be2655268c7a5f3f268c872c3ed2a57f81e03eaf67a944de5e784f13dca8f232d074e6dceaa4ec9f0203010010281800b6a7d736199e48a420e4537ca0c7c046784dceab43bae0bc13"/>
        </PrivateKey>
      </TemplateAttribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor>"1"</ProtocolVersionMajor>
      <ProtocolVersionMinor>"0"</ProtocolVersionMinor>
    </ProtocolVersion>
    <BatchCount>"1"</BatchCount>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="PublicKey"/>
      <TemplateAttribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
          <AttributeValue type="Integer" value="Verify"/>
        </Attribute>
      </TemplateAttribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 1

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor>"1"</ProtocolVersionMajor>
      <ProtocolVersionMinor>"0"</ProtocolVersionMinor>
    </ProtocolVersion>
    <BatchCount>"1"</BatchCount>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</RequestMessage>
<AttributeValue><LinkType type="Enumeration" value="PrivateKeyLink"/>
<LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</AttributeValue>
<PublicKey><KeyBlock><KeyFormatType type="Enumeration" value="X_509"/>
<KeyValue><KeyMaterial type="ByteString" value="30819f300d06092a864886f70d0101050003818d00308181080e4708210010010102050030818902818100930451c9ec94f5bb9da17dd09381bd23be43eca8c7539f301fc8a8cd5d5274c3e7699dbdec11c97a7a91e2c50a82bd0b1034f0df493dec16362427ee58acce7f6ce0f9bccc617bb8c90d0094a2703b0d09eeb19d1005f2fb265526ac75af32f8bc782ced22a51f811e03ef67a944de5e78413dba8f232d074e6dce4ce9f0203010001"/>
</KeyValue><CryptographicAlgorithm type="Enumeration" value="RSA"/>
<CryptographicLength type="Integer" value="1024"/>
</KeyBlock></PublicKey><ResponsePayload><UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/></ResponsePayload>
</BatchItem></ResponseMessage>

# TIME 2

<RequestMessage>
<RequestHeader>
<ProtocolVersion><ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/></ProtocolVersion>
</RequestHeader>
<BatchItem>
<Operation type="Enumeration" value="AddAttribute"/>
</BatchItem>
</RequestMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
<RequestPayload>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  <Attribute>
    <AttributeName type="TextString" value="Link"/>
    <AttributeValue>
      <LinkType type="Enumeration" value="PublicKeyLink"/>
      <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </AttributeValue>
  </Attribute>
</RequestPayload>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-02-11T08:49:38+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Link"/>
        <AttributeValue>
          <LinkType type="Enumeration" value="PublicKeyLink"/>
          <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
        </AttributeValue>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 3

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <RequestPayload>
      <Attribute>
        <AttributeName type="TextString" value="Object Type"/>
        <AttributeValue type="Enumeration" value="PublicKey"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
$UNIQUE_IDENTIFIER_0$/$UNIQUE_IDENTIFIER_1$
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```xml
<ResponseHeader>
  <ProtocolVersion>
    <ProtocolVersionMajor type="Integer" value="1"/>
    <ProtocolVersionMinor type="Integer" value="0"/>
  </ProtocolVersion>
  <TimeStamp type="DateTime" value="2010-02-11T08:49:39+00:00"/>
  <BatchCount type="Integer" value="1"/>
</ResponseHeader>

<BatchItem>
  <Operation type="Enumeration" value="Locate"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  </ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 5

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-02-11T08:49:39+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 6

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
</RequestMessage>

<ProtocolVersion>
2.1.14 TC-91-10 - Create a Key, Re-key

Create a symmetric key with a specific name, and then use Locate to find the key. After using Re-key to create a new key, verify that the name was removed from the existing key and copied to the new key. Also verify that the key material for the old key is still retrievable. To clean up, both keys are deleted.
<Attribute type="TextString" value="Cryptographic Algorithm"/>
  <AttributeValue type="Enumeration" value="AES"/>
</Attribute>
  <AttributeName type="TextString" value="Cryptographic Length"/>
  <AttributeValue type="Integer" value="128"/>
</AttributeName>
  <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
  <AttributeValue type="Integer" value="Decrypt Encrypt"/>
</AttributeName>
  <AttributeName type="TextString" value="Name"/>
  <AttributeValue>
    <NameValue type="TextString" value="rekeyKey"/>
    <NameType type="Enumeration" value="UninterpretedTextString"/>
  </AttributeValue>
</AttributeName>
</TemplateAttribute>
</RequestPayload>
</BatchItem>
</RequestMessage>

# TIME 1

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <RequestPayload>
      
      <ResponseMessage>
        <ResponseHeader>
          <ProtocolVersion>
            <ProtocolVersionMajor type="Integer" value="1"/>
            <ProtocolVersionMinor type="Integer" value="0"/>
          </ProtocolVersion>
          <TimeStamp type="DateTime" value="2010-02-11T09:07:06+00:00"/>
          <BatchCount type="Integer" value="1"/>
        </ResponseHeader>
        <BatchItem>
          <Operation type="Enumeration" value="Create"/>
          <ResultStatus type="Enumeration" value="Success"/>
          <ResponsePayload>
            <ObjectType type="Enumeration" value="SymmetricKey"/>
            <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
          </ResponsePayload>
        </BatchItem>
      </ResponseMessage>
    </BatchItem>
  </RequestPayload>
</RequestMessage>
<Attribute>
  <AttributeName type="TextString" value="Name"/>
  <AttributeValue>
    <NameValue type="TextString" value="rekeyKey"/>
    <NameType type="Enumeration" value="UninterpretedTextString"/>
  </AttributeValue>
</Attribute>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-02-11T09:07:06+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 2

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-02-11T09:07:07+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ReKey"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</ResponseMessage>
<Operation type="Enumeration" value="ReKey"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 4

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
    </ProtocolVersion>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
</RequestMessage>
```xml
<BatchCount type="Integer" value="1"/>
</RequestHeader>
</BatchItem>
<Operation type="Enumeration" value="GetAttributes"/>
</RequestPayload>
</BatchItem>
</ResponseMessage>

# TIME 5

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</RequestHeader>
</BatchItem>
<RequestPayload>
<UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</RequestPayload>
</RequestMessage>
```

```xml
<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2010-02-11T09:07:07+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
</BatchItem>
<Operation type="Enumeration" value="GetAttributes"/>
<ResultStatus type="Enumeration" value="Success"/>
</ResponsePayload>
</ResponseMessage>
```
2.1.15 TC-92-10 - Existing Key Expired, Re-key with Same Life-cycle

Create a new symmetric key. Then add the Activation Date and Deactivation Date attributes based on the timestamp in the response to the Create request. The Activation Date is set to the current time and the Deactivation Date to a time in the near future. Repeated Get Attribute calls are performed to verify that the state is first 'Active', then subsequently 'Deactivated'. Then issue a Re-key request, including an Offset value of zero leading to the Activation Date of the replacement key to be set to the same value as the Initial Date of the replacement key. Verify from the response that the Activation Date and Deactivation Date attributes were set correctly (if they are not returned, issue a Get Attribute request). Do a Get Attribute operation to verify that the state of the new key is 'Active'. To clean up, both keys are deleted.
<RequestMessage>
  <RequestHeader>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <TemplateAttribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Algorithm"/>
          <AttributeValue type="Enumeration" value="AES"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Length"/>
          <AttributeValue type="Integer" value="128"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
          <AttributeValue type="Integer" value="Decrypt Encrypt"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Name"/>
          <AttributeValue>
            <NameValue type="TextString" value="rekeyKey"/>
            <NameType type="Enumeration" value="UninterpretedTextString"/>
          </AttributeValue>
        </Attribute>
      </TemplateAttribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-02-11T13:01:59+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 1

<RequestMessage>
  <RequestHeader>
  </RequestHeader>
</RequestMessage>

<RequestMessage>
  <RequestHeader>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <TemplateAttribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Algorithm"/>
          <AttributeValue type="Enumeration" value="AES"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Length"/>
          <AttributeValue type="Integer" value="128"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
          <AttributeValue type="Integer" value="Decrypt Encrypt"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Name"/>
          <AttributeValue>
            <NameValue type="TextString" value="rekeyKey"/>
            <NameType type="Enumeration" value="UninterpretedTextString"/>
          </AttributeValue>
        </Attribute>
      </TemplateAttribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-02-11T13:01:59+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>

<BatchOrderOption type="Boolean" value="true"/>
<BatchCount type="Integer" value="2"/>

<BatchItem>
  <Operation type="Enumeration" value="AddAttribute"/>
  <UniqueBatchItemID type="ByteString" value="bac4a9cecc650259"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <Attribute>
      <AttributeName type="TextString" value="Activation Date"/>
      <AttributeValue type="DateTime" value="2009-02-11T13:01:59+00:00"/>
    </Attribute>
  </RequestPayload>
</BatchItem>

<BatchItem>
  <Operation type="Enumeration" value="AddAttribute"/>
  <UniqueBatchItemID type="ByteString" value="582c952324f4552f"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <Attribute>
      <AttributeName type="TextString" value="Deactivation Date"/>
      <AttributeValue type="DateTime" value="2010-02-11T13:03:59+00:00"/>
    </Attribute>
  </RequestPayload>
</BatchItem>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-02-11T13:01:59+00:00"/>
    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <UniqueBatchItemID type="ByteString" value="bac4a9cecc650259"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Activation Date"/>
        <AttributeValue type="DateTime" value="2009-02-11T13:01:59+00:00"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <UniqueBatchItemID type="ByteString" value="582c952324f4552f"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Deactivation Date"/>
        <AttributeValue type="DateTime" value="2010-02-11T13:03:59+00:00"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
<BatchItem><Operation type="Enumeration" value="AddAttribute"/></BatchItem>

<UniqueBatchItemID type="ByteString" value="582c952324f4552f"/>

<ResultStatus type="Enumeration" value="Success"/>

<ResponsePayload>

<Attribute>
  <AttributeName type="TextString" value="Deactivation Date"/>
  <AttributeValue type="DateTime" value="2010-02-11T13:03:59+00:00"/>
</Attribute>

</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 2

<RequestMessage>

<RequestHeader>

<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>

</RequestHeader>

<BatchItem>

<Operation type="Enumeration" value="GetAttributes"/>

<RequestPayload>

<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>

<AttributeName type="TextString" value="State"/>

</RequestPayload>
</BatchItem>
</RequestMessage>

# TIME 3

<ResponseMessage>

<ResponseHeader>

<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>

<TimeStamp type="DateTime" value="2010-02-11T13:01:59+00:00"/>

</ResponseHeader>

<BatchItem>

<Operation type="Enumeration" value="GetAttributes"/>

<ResultStatus type="Enumeration" value="Success"/>

<ResponsePayload>

<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>

<Attribute>
  <AttributeName type="TextString" value="State"/>
  <AttributeValue type="Enumeration" value="Active"/>
</Attribute>

</ResponsePayload>
</BatchItem>
</ResponseMessage>
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <AttributeName type="TextString" value="State"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 4

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ReKey"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Offset type="Interval" value="0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-02-11T13:04:00+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ReKey"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 5

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <AttributeName type="TextString" value="Activation Date"/>
      <AttributeName type="TextString" value="Deactivation Date"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-02-11T13:04:00+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <Attribute>
        <AttributeName type="TextString" value="Activation Date"/>
        <AttributeValue type="DateTime" value="2009-04-17T13:01:58+00:00"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

| 0263 | <Attribute> |
| 0264 |  | <AttributeName type="TextString" value="Deactivation Date"/> |
| 0265 |  | <AttributeValue type="DateTime" value="2010-04-17T13:03:58+00:00"/> |
| 0266 | </Attribute> |
| 0267 | </ResponsePayload> |
| 0268 | </BatchItem> |
| 0269 | </ResponseMessage> |

# TIME 6

| 0270 | <RequestMessage> |
| 0271 | <RequestHeader> |
| 0272 |  | <ProtocolVersion> |
| 0273 |  | <ProtocolVersionMajor type="Integer" value="1"/> |
| 0274 |  | <ProtocolVersionMinor type="Integer" value="0"/> |
| 0275 | </ProtocolVersion> |
| 0276 | <BatchCount type="Integer" value="1"/> |
| 0277 | </BatchItem> |
| 0278 | </RequestHeader> |
| 0279 | <BatchItem> |
| 0280 |  | <Operation type="Enumeration" value="GetAttributes"/> |
| 0281 |  | <RequestPayload> |
| 0282 |  | <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/> |
| 0283 |  | <AttributeName type="TextString" value="State"/> |
| 0284 |  | </RequestPayload> |
| 0285 | </BatchItem> |
| 0286 | </RequestMessage> |

# TIME 7

| 0287 | <ResponseMessage> |
| 0288 | <ResponseHeader> |
| 0289 |  | <ProtocolVersion> |
| 0290 |  | <ProtocolVersionMajor type="Integer" value="1"/> |
| 0291 |  | <ProtocolVersionMinor type="Integer" value="0"/> |
| 0292 | </ProtocolVersion> |
| 0293 | <TimeStamp type="DateTime" value="2010-02-11T13:04:00+00:00"/> |
| 0294 | <BatchCount type="Integer" value="1"/> |
| 0295 | </BatchItem> |
| 0296 | <Operation type="Enumeration" value="GetAttributes"/> |
| 0297 | <ResponseStatus type="Enumeration" value="Success"/> |
| 0298 | <ResponsePayload> |
| 0299 |  | <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/> |
| 0300 |  | <AttributeName type="TextString" value="State"/> |
| 0301 |  | <AttributeValue type="Enumeration" value="Active"/> |
| 0302 | </Attribute> |
| 0303 | </ResponsePayload> |
| 0304 | </BatchItem> |
| 0305 | </ResponseMessage> |
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
0314  </RequestHeader>
0315  <BatchItem>
0316    <Operation type="Enumeration" value="Destroy"/>
0317    <RequestPayload>
0318      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0319    </RequestPayload>
0320  </BatchItem>
0321  </RequestMessage>

0322  <ResponseMessage>
0323    <ResponseHeader>
0324      <ProtocolVersion>
0325        <ProtocolVersionMajor type="Integer" value="1"/>
0326        <ProtocolVersionMinor type="Integer" value="0"/>
0327    </Proto<
0328      <TimeStamp type="DateTime" value="2010-02-11T13:04:00+00:00"/>
0329    </BatchCount type="Integer" value="1"/>
0330  </ResponseHeader>
0331  <BatchItem>
0332    <Operation type="Enumeration" value="Destroy"/>
0333    <ResultStatus type="Enumeration" value="Success"/>
0334    <ResponsePayload>
0335      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0336    </ResponsePayload>
0337  </BatchItem>
0338  </ResponseMessage>

# TIME 8
0339  <RequestMessage>
0340    <RequestHeader>
0341      <ProtocolVersion>
0342        <ProtocolVersionMajor type="Integer" value="1"/>
0343        <ProtocolVersionMinor type="Integer" value="0"/>
0344    </ProtocolVersion>
0345      <BatchOrderOption type="Boolean" value="true"/>
0346      <BatchCount type="Integer" value="2"/>
0347    </RequestHeader>
0348    <BatchItem>
0349      <Operation type="Enumeration" value="Revoke"/>
0350      <UniqueBatchItemID type="ByteString" value="7012417aa1b7394b"/>
0351      <RequestPayload>
0352        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0353        <RevocationReason>
0354          <RevocationReasonCode type="Enumeration" value="CessationOfOperation"/>
0355        </RevocationReason>
0356      </RequestPayload>
0357      </BatchItem>
0358    </BatchItem>
0359    <BatchItem>
0360      <Operation type="Enumeration" value="Destroy"/>
0361      <UniqueBatchItemID type="ByteString" value="3f8f4f1759704555"/>
0362      <RequestPayload>
0363        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0364      </RequestPayload>
0365    </BatchItem>
```
2.1.16 TC-93-10 - Existing Key Compromised, Re-key with Same Life-cycle

Create a new symmetric key with the Activation Date in the past. Do a Get Attribute operation on the State attribute to verify the key is 'Active'. Then revoke the key as compromised, verify that the state has changed to 'Compromised'. Create a replacement key using Re-key with the offset set to '0' to indicate that the times are to be copied from the existing key. Do a Get Attribute operation to verify that the state of the new key is 'Active'. To clean up, both keys are deleted.
<AttributeName type="TextString" value="Cryptographic Algorithm"/>
<AttributeValue type="Enumeration" value="AES"/>
</Attribute>
<Attribute>
<AttributeName type="TextString" value="Cryptographic Length"/>
<AttributeValue type="Integer" value="128"/>
</Attribute>
<Attribute>
<AttributeName type="TextString" value="Cryptographic Usage Mask"/>
<AttributeValue type="Integer" value="Decrypt Encrypt"/>
</Attribute>
<Attribute>
<AttributeName type="TextString" value="Activation Date"/>
<AttributeValue type="DateTime" value="2010-02-11T14:12:23+00:00"/>
</Attribute>
<Attribute>
<AttributeName type="TextString" value="Name"/>
<AttributeValue type="Enumeration" value="UninterpretedTextString"/>
</AttributeValue>
</Attribute>
</TemplateAttribute>
</RequestPayload>
</BatchItem>
</RequestMessage>

# TIME 1

RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-02-11T14:12:24+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</RequestMessage>

ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-02-11T14:12:24+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
<BatchCount type="Integer" value="1"/>
</RequestHeader>

<BatchItem>
<Operation type="Enumeration" value="GetAttributes"/>

<ResponsePayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>

<ResponseHeader>
</ResponseHeader>

<BatchItem>
<Operation type="Enumeration" value="GetAttributes"/>

<ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 2

<BatchCount type="Integer" value="1"/>

<RequestHeader>
</RequestHeader>

<BatchItem>
<Operation type="Enumeration" value="Revoke"/>

<ResponsePayload>
</BatchItem>
</RequestMessage>
```xml
<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2010-02-11T14:12:25+00:00"/>

<BatchCount type="Integer" value="1"/>
<BatchItem>
  <Operation type="Enumeration" value="Revoke"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  </ResponsePayload>
</BatchItem>
</ResponseHeader>

# TIME 3
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>  
      <AttributeName type="TextString" value="State"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2010-02-11T14:12:25+00:00"/>

<BatchCount type="Integer" value="1"/>
<BatchItem>
  <Operation type="Enumeration" value="GetAttributes"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <Attribute>
      <AttributeName type="TextString" value="State"/>
      <AttributeValue type="Enumeration" value="Compromised"/>
    </Attribute>
  </ResponsePayload>
</BatchItem>
</ResponseHeader>
```
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ReKey"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-02-11T14:12:25+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ReKey"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 5

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <AttributeName type="TextString" value="State"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <AttributeName type="TextString" value="State"/>
    </RequestPayload>
  </BatchItem>
</ResponseMessage>
<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>

<TimeStamp type="DateTime" value="2010-02-11T14:12:25+00:00"/>

<BatchCount type="Integer" value="1"/>

</ResponseHeader>

<BatchItem>
  <Operation type="Enumeration" value="GetAttributes"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    <Attribute>
      <AttributeName type="TextString" value="State"/>
      <AttributeValue type="Enumeration" value="Active"/>
    </Attribute>
  </ResponsePayload>
</BatchItem>

</ResponseMessage>

# TIME 6

<RequestMessage>
  <RequestHeader>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 7

<ResponseMessage>
  <ResponseHeader>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchOrderOption type="Boolean" value="true"/>
    <BatchCount type="Integer" value="2"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Revoke"/>
    <UniqueBatchItemID type="ByteString" value="7131695cf636735e"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <RevocationReason>
        <RevocationReasonCode type="Enumeration" value="CessationOfOperation"/>
      </RevocationReason>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <UniqueBatchItemID type="ByteString" value="1845bcbbf09b5a66"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```

```
<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-02-11T14:12:25+00:00"/>
    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Revoke"/>
    <UniqueBatchItemID type="ByteString" value="7131695cf636735e"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <UniqueBatchItemID type="ByteString" value="1845bcbbf09b5a66"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
2.1.17 TC-94-10 - Create Key, Re-key with New Life-cycle

Create a symmetric key with a specific name, then use Locate to find the key. After using Re-key to create a new key, verify that the name was removed from the existing key and copied to the new key. To clean up, both keys are deleted.
<table>
<thead>
<tr>
<th>Line</th>
<th>XML Fragment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0043</td>
<td>&lt;TimeStamp type=&quot;DateTime&quot; value=&quot;2010-02-11T15:38:29+00:00&quot;/&gt;</td>
</tr>
<tr>
<td>0044</td>
<td>&lt;BatchCount type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</td>
</tr>
<tr>
<td>0045</td>
<td>&lt;/ResponseHeader&gt;</td>
</tr>
<tr>
<td>0046</td>
<td>&lt;BatchItem&gt;</td>
</tr>
<tr>
<td>0047</td>
<td>&lt;Operation type=&quot;Enumeration&quot; value=&quot;Create&quot;/&gt;</td>
</tr>
<tr>
<td>0048</td>
<td>&lt;ResultStatus type=&quot;Enumeration&quot; value=&quot;Success&quot;/&gt;</td>
</tr>
<tr>
<td>0049</td>
<td>&lt;ResponsePayload&gt;</td>
</tr>
<tr>
<td>0050</td>
<td>&lt;ObjectType type=&quot;Enumeration&quot; value=&quot;SymmetricKey&quot;/&gt;</td>
</tr>
<tr>
<td>0051</td>
<td>&lt;UniqueIdentifier type=&quot;TextString&quot; value=&quot;$UNIQUE_IDENTIFIER_0&quot;/&gt;</td>
</tr>
<tr>
<td>0052</td>
<td>&lt;/ResponsePayload&gt;</td>
</tr>
<tr>
<td>0053</td>
<td>&lt;/BatchItem&gt;</td>
</tr>
<tr>
<td>0054</td>
<td>&lt;/ResponseMessage&gt;</td>
</tr>
<tr>
<td>0055</td>
<td># TIME 1</td>
</tr>
<tr>
<td>0056</td>
<td>&lt;RequestMessage&gt;</td>
</tr>
<tr>
<td>0057</td>
<td>&lt;RequestHeader&gt;</td>
</tr>
<tr>
<td>0058</td>
<td>&lt;ProtocolVersion&gt;</td>
</tr>
<tr>
<td>0059</td>
<td>&lt;ProtocolVersionMajor type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</td>
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<tr>
<td>0060</td>
<td>&lt;ProtocolVersionMinor type=&quot;Integer&quot; value=&quot;0&quot;/&gt;</td>
</tr>
<tr>
<td>0061</td>
<td>&lt;/ProtocolVersion&gt;</td>
</tr>
<tr>
<td>0062</td>
<td>&lt;/RequestHeader&gt;</td>
</tr>
<tr>
<td>0063</td>
<td>&lt;BatchItem&gt;</td>
</tr>
<tr>
<td>0064</td>
<td>&lt;Operation type=&quot;Enumeration&quot; value=&quot;Locate&quot;/&gt;</td>
</tr>
<tr>
<td>0065</td>
<td>&lt;RequestPayload&gt;</td>
</tr>
<tr>
<td>0066</td>
<td>&lt;Attribute&gt;</td>
</tr>
<tr>
<td>0067</td>
<td>&lt;AttributeName type=&quot;TextString&quot; value=&quot;Name&quot;/&gt;</td>
</tr>
<tr>
<td>0068</td>
<td>&lt;AttributeValue&gt;</td>
</tr>
<tr>
<td>0069</td>
<td>&lt;NameValue type=&quot;TextString&quot; value=&quot;rekeyKey&quot;/&gt;</td>
</tr>
<tr>
<td>0070</td>
<td>&lt;NameType type=&quot;Enumeration&quot; value=&quot;UninterpretedTextString&quot;/&gt;</td>
</tr>
<tr>
<td>0071</td>
<td>&lt;/AttributeValue&gt;</td>
</tr>
<tr>
<td>0072</td>
<td>&lt;/Attribute&gt;</td>
</tr>
<tr>
<td>0073</td>
<td>&lt;RequestPayload&gt;</td>
</tr>
<tr>
<td>0074</td>
<td>&lt;/BatchItem&gt;</td>
</tr>
<tr>
<td>0075</td>
<td>&lt;/RequestMessage&gt;</td>
</tr>
<tr>
<td>0076</td>
<td>&lt;ResponseMessage&gt;</td>
</tr>
<tr>
<td>0077</td>
<td>&lt;ResponseHeader&gt;</td>
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<td>&lt;ProtocolVersion&gt;</td>
</tr>
<tr>
<td>0079</td>
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<tr>
<td>0080</td>
<td>&lt;ProtocolVersionMinor type=&quot;Integer&quot; value=&quot;0&quot;/&gt;</td>
</tr>
<tr>
<td>0081</td>
<td>&lt;/ProtocolVersion&gt;</td>
</tr>
<tr>
<td>0082</td>
<td>&lt;TimeStamp type=&quot;DateTime&quot; value=&quot;2010-02-11T15:38:30+00:00&quot;/&gt;</td>
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<td>0083</td>
<td>&lt;BatchCount type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</td>
</tr>
<tr>
<td>0084</td>
<td>&lt;/ResponseHeader&gt;</td>
</tr>
<tr>
<td>0085</td>
<td>&lt;BatchItem&gt;</td>
</tr>
<tr>
<td>0086</td>
<td>&lt;Operation type=&quot;Enumeration&quot; value=&quot;Locate&quot;/&gt;</td>
</tr>
<tr>
<td>0087</td>
<td>&lt;ResultStatus type=&quot;Enumeration&quot; value=&quot;Success&quot;/&gt;</td>
</tr>
<tr>
<td>0088</td>
<td>&lt;ResponsePayload&gt;</td>
</tr>
<tr>
<td>0089</td>
<td>&lt;UniqueIdentifier type=&quot;TextString&quot; value=&quot;$UNIQUE_IDENTIFIER_0&quot;/&gt;</td>
</tr>
<tr>
<td>0090</td>
<td>&lt;/ResponsePayload&gt;</td>
</tr>
<tr>
<td>0091</td>
<td>&lt;/BatchItem&gt;</td>
</tr>
<tr>
<td>0092</td>
<td>&lt;/ResponseMessage&gt;</td>
</tr>
<tr>
<td>0093</td>
<td># TIME 2</td>
</tr>
<tr>
<td>0094</td>
<td>&lt;RequestMessage&gt;</td>
</tr>
</tbody>
</table>
<RequestHeader>
  <ProtocolVersion>
    <ProtocolVersionMajor type="Integer" value="1"/>
    <ProtocolVersionMinor type="Integer" value="0"/>
  </ProtocolVersion>
  <BatchCount type="Integer" value="1"/>
</RequestHeader>

<BatchItem>
  <Operation type="Enumeration" value="ReKey"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <TemplateAttribute>
      <Attribute>
        <AttributeName type="TextString" value="Activation Date"/>
        <AttributeValue type="DateTime" value="2006-01-01T11:00:00+00:00"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Process Start Date"/>
        <AttributeValue type="DateTime" value="2006-01-01T11:00:00+00:00"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Protect Stop Date"/>
        <AttributeValue type="DateTime" value="2020-01-01T11:00:00+00:00"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Deactivation Date"/>
        <AttributeValue type="DateTime" value="2020-01-01T11:00:00+00:00"/>
      </Attribute>
    </TemplateAttribute>
  </RequestPayload>
</BatchItem>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-02-11T15:38:31+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ReKey"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
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# TIME 3
0142  </ResponseMessage>
0143  # TIME 3
0144  <RequestMessage>
0145      <RequestHeader>
0146          <ProtocolVersion>
0147              <ProtocolVersionMajor type="Integer" value="1"/>
0148              <ProtocolVersionMinor type="Integer" value="0"/>
0149          </ProtocolVersion>
0150      <BatchCount type="Integer" value="1"/>
0151  </RequestHeader>
0152      <BatchItem>
0153          <Operation type="Enumeration" value="GetAttributes"/>
0154          <RequestPayload>
0155              <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0156              <AttributeName type="TextString" value="Name"/>
0157          </RequestPayload>
0158      </BatchItem>
0159  </RequestMessage>
0160  <ResponseMessage>
0161      <ResponseHeader>
0162          <ProtocolVersion>
0163              <ProtocolVersionMajor type="Integer" value="1"/>
0164              <ProtocolVersionMinor type="Integer" value="0"/>
0165          </ProtocolVersion>
0166      <TimeStamp type="DateTime" value="2010-02-11T15:38:31+00:00"/>
0167      <BatchCount type="Integer" value="1"/>
0168  </ResponseHeader>
0169      <BatchItem>
0170          <Operation type="Enumeration" value="GetAttributes"/>
0171          <ResultStatus type="Enumeration" value="Success"/>
0172          <ResponsePayload>
0173              <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0174          </ResponsePayload>
0175      </BatchItem>
0176  </ResponseMessage>

# TIME 4
0177  <RequestMessage>
0178      <RequestHeader>
0179          <ProtocolVersion>
0180              <ProtocolVersionMajor type="Integer" value="1"/>
0181              <ProtocolVersionMinor type="Integer" value="0"/>
0182          </ProtocolVersion>
0183      <BatchCount type="Integer" value="1"/>
0184  </RequestHeader>
0185      <BatchItem>
0186          <Operation type="Enumeration" value="GetAttributes"/>
0187          <RequestPayload>
0188              <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0189              <AttributeName type="TextString" value="Activation Date"/>
0190              <AttributeName type="TextString" value="Process Start Date"/>
0191              <AttributeName type="TextString" value="Protect Stop Date"/>
0192              <AttributeName type="TextString" value="Deactivation Date"/>
0193          </RequestPayload>
0194      </BatchItem>
0195  </RequestMessage>
<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-02-11T15:38:31+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <Attribute>
        <AttributeName type="TextString" value="Activation Date"/>
        <AttributeValue type="DateTime" value="2006-01-01T11:00:00+00:00"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Process Start Date"/>
        <AttributeValue type="DateTime" value="2006-01-01T11:00:00+00:00"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Protect Stop Date"/>
        <AttributeValue type="DateTime" value="2020-01-01T11:00:00+00:00"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Deactivation Date"/>
        <AttributeValue type="DateTime" value="2020-01-01T11:00:00+00:00"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 5

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <RequestPayload>
      <Attribute>
        <AttributeName type="TextString" value="Name"/>
        <NameValue type="TextString" value="rekeyKey"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
<NameType type="Enumeration" value="UninterpretedTextString"/>

<AttributeValue>
</Attribute>
</RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2010-02-11T15:38:31+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
</BatchItem>
<Operation type="Enumeration" value="Locate"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 6

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</RequestHeader>
</BatchItem>
<Operation type="Enumeration" value="Destroy"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
< ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2010-02-11T15:38:32+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
</BatchItem>
<Operation type="Enumeration" value="Destroy"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value=""/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```xml
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchOrderOption type="Boolean" value="true"/>
    <BatchCount type="Integer" value="2"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Revoke"/>
    <UniqueBatchItemID type="ByteString" value="3dc816bb39869d07"/>
    <RequestPayload>
      <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <RevocationReason>
        <RevocationReasonCode type="Enumeration" value="CessationOfOperation"/>
      </RevocationReason>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <UniqueBatchItemID type="ByteString" value="32b517312fd5b558"/>
    <RequestPayload>
      <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-02-11T15:38:32+00:00"/>
    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Revoke"/>
    <UniqueBatchItemID type="ByteString" value="3dc816bb39869d07"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <UniqueBatchItemID type="ByteString" value="32b517312fd5b558"/>
    <ResultStatus type="Enumeration" value="Success"/>
  </BatchItem>
</ResponseMessage>
```
2.1.18 TC-95-10 - Obtain Lease for Expired Key

Create a symmetric key with a specific name and obtain a lease. Revoke the key with state 'Compromised' and re-key the key. Try to obtain a lease on the old key which fails due to a server policy which does not allow giving out leases for compromised keys. Locate the new key with the original name. Get the new key and obtain a lease.

```xml
<ResponsePayload>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>
```

```
# TIME 0
# [Client-A]
0001  <RequestMessage>
0002    <RequestHeader>
0003      <ProtocolVersion>
0004        <ProtocolVersionMajor type="Integer" value="1"/>
0005        <ProtocolVersionMinor type="Integer" value="0"/>
0006      </ProtocolVersion>
0007      <BatchCount type="Integer" value="1"/>
0008    </RequestHeader>
0009    <BatchItem>
0010      <Operation type="Enumeration" value="Create"/>
0011      <RequestPayload>
0012        <ObjectType type="Enumeration" value="SymmetricKey"/>
0013        <TemplateAttribute>
0014          <Attribute>
0015            <AttributeName type="TextString" value="Cryptographic Algorithm"/>
0016            <AttributeValue type="Enumeration" value="AES"/>
0017          </Attribute>
0018          <Attribute>
0019            <AttributeName type="TextString" value="Cryptographic Length"/>
0020            <AttributeValue type="Integer" value="128"/>
0021          </Attribute>
0022          <Attribute>
0023            <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
0024            <AttributeValue type="Integer" value="Decrypt Encrypt"/>
0025          </Attribute>
0026          <Attribute>
0027            <AttributeName type="TextString" value="Name"/>
0028            <AttributeValue>
0029              <NameValue type="TextString" value="rekeyKey"/>
0030              <NameType type="Enumeration" value="UninterpretedTextString"/>
0031          </AttributeValue>
0032          </Attribute>
0033          <Attribute>
0034            <AttributeName type="TextString" value="Activation Date"/>
```
<AttributeValue type="DateTime" value="2010-02-11T15:45:48+00:00"/>
</Attribute>
</TemplateAttribute>
</RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>

<ResponseHeader>
  <ProtocolVersion>
    <ProtocolVersionMajor type="Integer" value="1"/>
    <ProtocolVersionMinor type="Integer" value="0"/>
  </ProtocolVersion>
  <TimeStamp type="DateTime" value="2010-02-11T15:45:49+00:00"/>
  <BatchCount type="Integer" value="1"/>
</ResponseHeader>

<BatchItem>
  <Operation type="Enumeration" value="Create"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <ObjectType type="Enumeration" value="SymmetricKey"/>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  </ResponsePayload>
</BatchItem>

</ResponseMessage>

# TIME 1
# [Client-A]

<RequestMessage>

<RequestHeader>
  <ProtocolVersion>
    <ProtocolVersionMajor type="Integer" value="1"/>
    <ProtocolVersionMinor type="Integer" value="0"/>
  </ProtocolVersion>
  <BatchCount type="Integer" value="1"/>
</RequestHeader>

<BatchItem>
  <Operation type="Enumeration" value="Get"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  </RequestPayload>
</BatchItem>

</RequestMessage>

<ResponseMessage>

<ResponseHeader>
  <ProtocolVersion>
    <ProtocolVersionMajor type="Integer" value="1"/>
    <ProtocolVersionMinor type="Integer" value="0"/>
  </ProtocolVersion>
  <TimeStamp type="DateTime" value="2010-02-11T15:45:49+00:00"/>
  <BatchCount type="Integer" value="1"/>
</ResponseHeader>

<BatchItem>
  <Operation type="Enumeration" value="Get"/>
  <ResultStatus type="Enumeration" value="Success"/>
</BatchItem>

</ResponseMessage>
<ResponsePayload>
  <ObjectType type="Enumeration" value="SymmetricKey"/>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  <SymmetricKey>
    <KeyBlock>
      <KeyFormatType type="Enumeration" value="Raw"/>
      <KeyValue>
        <KeyMaterial type="ByteString" value="f43c7798aacb22b1411a8773c199708b"/>
      </KeyValue>
      <CryptographicAlgorithm type="Enumeration" value="AES"/>
      <CryptographicLength type="Integer" value="128"/>
    </KeyBlock>
  </SymmetricKey>
</ResponsePayload>

# TIME 2
# [Client-A]
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ObtainLease"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-02-11T15:45:50+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ObtainLease"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <LeaseTime type="Interval" value="16"/>
      <LastChangeDate type="DateTime" value="2010-02-11T15:45:49+00:00"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
# TIME 3
# [Client-B]

0136 <RequestMessage>
0137   <RequestHeader>
0138     <ProtocolVersion>
0139       <ProtocolVersionMajor type="Integer" value="1"/>
0140       <ProtocolVersionMinor type="Integer" value="0"/>
0141   </ProtocolVersion>
0142   <BatchCount type="Integer" value="1"/>
0143   </RequestHeader>
0144   <BatchItem>
0145     <Operation type="Enumeration" value="Revoke"/>
0146     <RequestPayload>
0147       <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0148       <RevocationReason>
0149         <RevocationReasonCode type="Enumeration" value="KeyCompromise"/>
0150       </RevocationReason>
0151       <CompromiseOccurrenceDate type="DateTime" value="2010-02-11T15:45:50+00:00"/>
0152     </RequestPayload>
0153   </BatchItem>
0154 </RequestMessage>

0155 <ResponseMessage>
0156   <ResponseHeader>
0157     <ProtocolVersion>
0158       <ProtocolVersionMajor type="Integer" value="1"/>
0159       <ProtocolVersionMinor type="Integer" value="0"/>
0160   </ProtocolVersion>
0161     <TimeStamp type="DateTime" value="2010-02-11T15:45:50+00:00"/>
0162     <BatchCount type="Integer" value="1"/>
0163   </ResponseHeader>
0164   <BatchItem>
0165     <Operation type="Enumeration" value="Revoke"/>
0166     <ResultStatus type="Enumeration" value="Success"/>
0167     <ResponsePayload>
0168       <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0169     </ResponsePayload>
0170   </BatchItem>
0171 </ResponseMessage>

# TIME 4
# [Client-B]

0172 <RequestMessage>
0173   <RequestHeader>
0174     <ProtocolVersion>
0175       <ProtocolVersionMajor type="Integer" value="1"/>
0176       <ProtocolVersionMinor type="Integer" value="0"/>
0177     </ProtocolVersion>
0178     <BatchCount type="Integer" value="1"/>
0179   </RequestHeader>
0180   <BatchItem>
0181     <Operation type="Enumeration" value="ReKey"/>
0182     <RequestPayload>
0183       <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>

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<RequestPayload/>
</BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-02-11T15:45:51+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ReKey"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 5
# [Client-A]

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ObtainLease"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-02-11T15:45:51+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ObtainLease"/>
    <ResultStatus type="Enumeration" value="OperationFailed"/>
    <ResultReason type="Enumeration" value="PermissionDenied"/>
    <ResultMessage type="TextString" value="CO is in state Compromised, no lease given"/>
  </BatchItem>
</ResponseMessage>
# TIME 6
# [Client-A]
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <RequestPayload>
      <Attribute>
        <AttributeName type="TextString" value="Name"/>
        <AttributeValue>
          <NameValue type="TextString" value="rekeyKey"/>
          <NameType type="Enumeration" value="UninterpretedTextString"/>
        </AttributeValue>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 7
# [Client-A]
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ObtainLease"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</ResponseMessage>

# TIME 8
# [Client-A]

<RequestMessage>
  <RequestHeader>
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      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ObtainLease"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</ResponseMessage>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>

<BatchCount type="Integer" value="1"/>

<Operation type="Enumeration" value="ObtainLease"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
  <LeaseTime type="Interval" value="0"/>
  <LastChangeDate type="DateTime" value="2010-02-11T15:45:51+00:00"/>
</ResponsePayload>
</BatchItem>
</ResponseHeader>

<BatchItem>
  <Operation type="Enumeration" value="Destroy"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  </RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-02-11T15:45:51+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 10
# [Client-A]

<RequestMessage>
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    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-02-11T15:45:51+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-02-11T15:45:51+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>

<BatchOrderOption type="Boolean" value="true"/>

<BatchCount type="Integer" value="2"/>

</RequestHeader>

<BatchItem>
  <Operation type="Enumeration" value="Revoke"/>
  <UniqueBatchItemID type="ByteString" value="3748b9e243205ba7"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    <RevocationReason>
      <RevocationReasonCode type="Enumeration" value="CessationOfOperation"/>
    </RevocationReason>
  </RequestPayload>
</BatchItem>

<BatchItem>
  <Operation type="Enumeration" value="Destroy"/>
  <UniqueBatchItemID type="ByteString" value="04eaf416d0beb50d"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
  </RequestPayload>
</BatchItem>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-02-11T15:45:51+00:00"/>
    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Revoke"/>
    <UniqueBatchItemID type="ByteString" value="3748b9e243205ba7"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <UniqueBatchItemID type="ByteString" value="04eaf416d0beb50d"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
2.1.19 TC-101-10 - Create a Key, Archive and Recover it

Create a symmetric key with a specified name, then use Locate to find the key and get the key.

Archive the key (asynchronous operation, use Poll until it completes) and use Get and Locate on it, but both fail. Add the Storage Status Mask to the Locate command, indicating to the server to search in both online and archived storage. The Locate finds the key. Recover the key from the archive (also asynchronous), both Locate and Get succeed.

```
# TIME 0
0001 <RequestMessage>
0002  <RequestHeader>
0003   <ProtocolVersion>
0004     <ProtocolVersionMajor type="Integer" value="1"/>
0005     <ProtocolVersionMinor type="Integer" value="0"/>
0006   </ProtocolVersion>
0007   <BatchCount type="Integer" value="1"/>
0008 </RequestHeader>
0009 <BatchItem>
0010   <Operation type="Enumeration" value="Create"/>
0011   <RequestPayload>
0012     <ObjectType type="Enumeration" value="SymmetricKey"/>
0013     <TemplateAttribute>
0014       <Attribute>
0015         <AttributeName type="TextString" value="Cryptographic Algorithm"/>
0016         <AttributeValue type=" Enumeration" value="AES"/>
0017       </Attribute>
0018       <Attribute>
0019         <AttributeName type="TextString" value="Cryptographic Length"/>
0020         <AttributeValue type="Integer" value="128"/>
0021       </Attribute>
0022       <Attribute>
0023         <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
0024         <AttributeValue type="Integer" value="Decrypt Encrypt"/>
0025       </Attribute>
0026       <Attribute>
0027         <AttributeName type="TextString" value="Name"/>
0028         <AttributeValue>
0029           <NameValue type="TextString" value="archiveKey"/>
0030           <NameType type="Enumeration" value="UninterpretedTextString"/>
0031         </AttributeValue>
0032       </Attribute>
0033     </TemplateAttribute>
0034   </RequestPayload>
0035 </BatchItem>
0036 </RequestMessage>
0037 <ResponseMessage>
0038  <ResponseHeader>
0039   <ProtocolVersion>
0040     <ProtocolVersionMajor type="Integer" value="1"/>
0041   </ProtocolVersion>
```

```xml
<ProtocolVersionMinor type="Integer" value="0"/>
<Operation type="Enumeration" value="Create"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
  <ObjectType type="Enumeration" value="SymmetricKey"/>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 1

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <RequestPayload>
      <Attribute>
        <AttributeName type="TextString" value="Object Type"/>
        <AttributeValue type="Enumeration" value="SymmetricKey"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Name"/>
        <AttributeValue>
          <NameValue type="TextString" value="archiveKey"/>
          <NameType type="Enumeration" value="UninterpretedTextString"/>
        </AttributeValue>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-02-12T09:30:14+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
<ResponsePayload>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</ResponseMessage>

# TIME 2

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-02-12T09:30:15+00:00"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <SymmetricKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="c3200b1291ba648db9089ded3073de74"/>
          </KeyValue>
          <CryptographicAlgorithm type="Enumeration" value="AES"/>
          <CryptographicLength type="Integer" value="128"/>
        </KeyBlock>
      </SymmetricKey>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 3
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
  </RequestHeader>
</RequestMessage>
0145    </ProtocolVersion>
0146    <AsynchronousIndicator type="Boolean" value="true"/>
0147    <BatchCount type="Integer" value="1"/>
0148    </RequestHeader>
0149    <BatchItem>
0150      <Operation type="Enumeration" value="Archive"/>
0151      <RequestPayload>
0152        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0153      </RequestPayload>
0154    </BatchItem>
0155  </RequestMessage>
0156  <ResponseMessage>
0157    <ResponseHeader>
0158      <ProtocolVersion>
0159        <ProtocolVersionMajor type="Integer" value="1"/>
0160        <ProtocolVersionMinor type="Integer" value="0"/>
0161      </ProtocolVersion>
0162      <TimeStamp type="DateTime" value="2010-02-12T09:30:15+00:00"/>
0163      <BatchCount type="Integer" value="1"/>
0164    </ResponseHeader>
0165    <BatchItem>
0166      <Operation type="Enumeration" value="Archive"/>
0167      <ResultStatus type="Enumeration" value="OperationPending"/>
0168      <AsynchronousCorrelationValue type="ByteString" value="$ASYNCHRONOUS_CORRELATION_VALUE"/>
0169    </BatchItem>
0170  </ResponseMessage>

# TIME 4
0171  <RequestMessage>
0172    <RequestHeader>
0173      <ProtocolVersion>
0174        <ProtocolVersionMajor type="Integer" value="1"/>
0175        <ProtocolVersionMinor type="Integer" value="0"/>
0176      </ProtocolVersion>
0177      <BatchCount type="Integer" value="1"/>
0178    </RequestHeader>
0179    <BatchItem>
0180      <Operation type="Enumeration" value="Poll"/>
0181      <RequestPayload>
0182        <AsynchronousCorrelationValue type="ByteString" value="$ASYNCHRONOUS_CORRELATION_VALUE"/>
0183      </RequestPayload>
0184    </BatchItem>
0185  </RequestMessage>
0186  <ResponseMessage>
0187    <ResponseHeader>
0188      <ProtocolVersion>
0189        <ProtocolVersionMajor type="Integer" value="1"/>
0190        <ProtocolVersionMinor type="Integer" value="0"/>
0191      </ProtocolVersion>
0192      <TimeStamp type="DateTime" value="2010-02-12T09:30:18+00:00"/>
0193      <BatchCount type="Integer" value="1"/>
0194    </ResponseHeader>
0195    <BatchItem>
0196      <Operation type="Enumeration" value="Archive"/>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
0197 | <ResponseStatus type="Enumeration" value="Success"/>
0198 | <ResponsePayload>
0199 |   <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0200 | </ResponsePayload>
0201 | </BatchItem>
0202 | </ResponseMessage>

# TIME 5
0203 | <RequestMessage>
0204 |   <RequestHeader>
0205 |     <ProtocolVersion>
0206 |       <ProtocolVersionMajor type="Integer" value="1"/>
0207 |       <ProtocolVersionMinor type="Integer" value="0"/>
0208 |     </ProtocolVersion>
0209 |     <BatchCount type="Integer" value="1"/>
0210 |   </RequestHeader>
0211 |   <BatchItem>
0212 |     <Operation type="Enumeration" value="Get"/>
0213 |     <RequestPayload>
0214 |       <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0215 |     </RequestPayload>
0216 |   </BatchItem>
0217 | </RequestMessage>
0218 | <ResponseMessage>
0219 |   <ResponseHeader>
0220 |     <ProtocolVersion>
0221 |       <ProtocolVersionMajor type="Integer" value="1"/>
0222 |       <ProtocolVersionMinor type="Integer" value="0"/>
0223 |     </ProtocolVersion>
0224 |     <TimeStamp type="DateTime" value="2010-02-12T09:30:20+00:00"/>
0225 |     <BatchCount type="Integer" value="1"/>
0226 |   </ResponseHeader>
0227 |   <BatchItem>
0228 |     <Operation type="Enumeration" value="Get"/>
0229 |     <ResultStatus type="Enumeration" value="OperationFailed"/>
0230 |     <ResultReason type="Enumeration" value="ObjectArchived"/>
0231 |     <ResultMessage type="TextString" value="Object is archived"/>
0232 |   </BatchItem>
0233 | </ResponseMessage>

# TIME 6
0234 | <RequestMessage>
0235 |   <RequestHeader>
0236 |     <ProtocolVersion>
0237 |       <ProtocolVersionMajor type="Integer" value="1"/>
0238 |       <ProtocolVersionMinor type="Integer" value="0"/>
0239 |     </ProtocolVersion>
0240 |     <BatchCount type="Integer" value="1"/>
0241 |   </RequestHeader>
0242 |   <BatchItem>
0243 |     <Operation type="Enumeration" value="GetAttributes"/>
0244 |     <RequestPayload>
0245 |       <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0246 |       <AttributeName type="TextString" value="Archive Date"/>
0247 |     </RequestPayload>
```
<BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-02-12T09:30:20+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Archive Date"/>
        <AttributeValue type="DateTime" value="2010-02-12T09:30:18+00:00"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 7

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
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      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <RequestPayload>
      <Attribute>
        <AttributeName type="TextString" value="Object Type"/>
        <AttributeValue type="Enumeration" value="SymmetricKey"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Name"/>
        <AttributeValue>
          <NameValue type="TextString" value="archiveKey"/>
          <NameType type="Enumeration" value="UninterpretedTextString"/>
        </AttributeValue>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchItem>
      <Operation type="Enumeration" value="GetAttributes"/>
      <ResultStatus type="Enumeration" value="Success"/>
      <ResponsePayload>
        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
        <Attribute>
          <AttributeName type="TextString" value="Archive Date"/>
          <AttributeValue type="DateTime" value="2010-02-12T09:30:18+00:00"/>
        </Attribute>
      </ResponsePayload>
    </BatchItem>
  </ResponseHeader>
</ResponseMessage>
```
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2010-02-12T09:30:20+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
</BatchItem>
<Operation type="Enumeration" value="Locate"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME B
<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</RequestHeader>
</BatchItem>
<Operation type="Enumeration" value="Locate"/>
<RequestPayload>
<StorageStatusMask type="Integer" value="ArchivalStorage"
  OnLineStorage"/>
<Attribute>
  <AttributeName type="TextString" value="Object Type"/>
  <AttributeValue type="Enumeration" value="SymmetricKey"/>
</Attribute>
<Attribute>
  <AttributeName type="TextString" value="Name"/>
  <AttributeValue>
    <NameValue type="TextString" value="archiveKey"/>
    <NameType type="Enumeration" value="UninterpretedTextString"/>
  </AttributeValue>
</Attribute>
</RequestPayload>
</BatchItem>
</RequestMessage>
<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2010-02-12T09:30:20+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
</BatchItem>
<Operation type="Enumeration" value="Locate"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
```
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <AsynchronousIndicator type="Boolean" value="true"/>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Recover"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="\$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 9

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-02-12T09:30:20+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Recover"/>
    <ResultStatus type="Enumeration" value="OperationPending"/>
    <AsynchronousCorrelationValue type="ByteString" value="\$ASYNCHRONOUS_CORRELATION_VALUE"/>
  </BatchItem>
</ResponseMessage>

# TIME 10

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Poll"/>
    <RequestPayload>
      <AsynchronousCorrelationValue type="ByteString" value="\$ASYNCHRONOUS_CORRELATION_VALUE"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Poll"/>
    <RequestPayload>
      <AsynchronousCorrelationValue type="ByteString" value="\$ASYNCHRONOUS_CORRELATION_VALUE"/>
    </RequestPayload>
  </BatchItem>
</ResponseMessage>
This is a Non-Standards Track Work Product.

The patent provisions of the OASIS IPR Policy do not apply.

```
0404  <ProtocolVersionMajor type="Integer" value="1"/>
0405  <ProtocolVersionMinor type="Integer" value="0"/>
0406  </ProtocolVersion>
0407  <TimeStamp type="DateTime" value="2010-02-12T09:30:27+00:00"/>
0408  <BatchCount type="Integer" value="1"/>
0409  </ResponseHeader>
0410  <BatchItem>
0411    <Operation type="Enumeration" value="Recover"/>
0412    <ResultStatus type="Enumeration" value="Success"/>
0413    <ResponsePayload>
0414      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0415    </ResponsePayload>
0416  </BatchItem>
0417  </ResponseMessage>

# TIME 11
0418  <RequestMessage>
0419    <RequestHeader>
0420      <ProtocolVersion>
0421        <ProtocolVersionMajor type="Integer" value="1"/>
0422        <ProtocolVersionMinor type="Integer" value="0"/>
0423      </ProtocolVersion>
0424      <BatchCount type="Integer" value="1"/>
0425    </RequestHeader>
0426    <BatchItem>
0427      <Operation type="Enumeration" value="Get"/>
0428      <RequestPayload>
0429        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0430      </RequestPayload>
0431    </BatchItem>
0432  </RequestMessage>
0433  <ResponseMessage>
0434    <ResponseHeader>
0435      <ProtocolVersion>
0436        <ProtocolVersionMajor type="Integer" value="1"/>
0437        <ProtocolVersionMinor type="Integer" value="0"/>
0438      </ProtocolVersion>
0439      <TimeStamp type="DateTime" value="2010-02-12T09:30:27+00:00"/>
0440      <BatchCount type="Integer" value="1"/>
0441    </ResponseHeader>
0442    <BatchItem>
0443      <Operation type="Enumeration" value="Get"/>
0444      <ResultStatus type="Enumeration" value="Success"/>
0445      <ResponsePayload>
0446        <ObjectType type="Enumeration" value="SymmetricKey"/>
0447        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0448      </ResponsePayload>
0449    </BatchItem>
0450    <ResponseMessage>
0451      <KeyBlock>
0452        <KeyFormatType type="Enumeration" value="Raw"/>
0453        <KeyMaterial type="ByteString" value="c3200b1291b648db9089ded3073de74"/>
0454      </KeyMaterial>
0455      <CryptographicAlgorithm type="Enumeration" value="AES"/>
0456      <CryptographicLength type="Integer" value="128"/>
```
2.1.20 TC-111-10 - Credential, Operation Policy, Destroy Date

Pass a Credential object of type Username and Password in the message header in all requests for identification purposes (how the Credential object is used is defined in [KMIP-Spec]). Create a symmetric key and set the Operation Policy Name attribute to 'default'. Using another Username and Password Credential, attempt to perform a Get operation batched with a Get Attribute List on the created symmetric key - according to the Default Operation Policy, both these request SHALL fail, and with the Batch Error Continuation Option set to 'Continue', the client SHALL also receive both response payloads. Using the initially used Credential, destroy the object and get the Destroy Date attribute. The message exchanges in this test case are based on a certain server policy (e.g. handling of Credentials) that in some aspects differs from the policy
assumed in earlier test cases (e.g. in this test case, the Destroy Date is retained). The message exchanges shown in this test case assume that both Credentials used in this example are for valid users of the server.

```xml
# TIME 0
0001 <RequestMessage>
0002   <RequestHeader>
0003     <ProtocolVersion>
0004       <ProtocolVersionMajor type="Integer" value="1"/>
0005       <ProtocolVersionMinor type="Integer" value="0"/>
0006   </ProtocolVersion>
0007   <Authentication>
0008     <Credential>
0009       <CredentialType type="Enumeration" value="UsernameAndPassword"/>
0010       <CredentialValue>
0011         <Username type="TextString" value="Fred"/>
0012         <Password type="TextString" value="password1"/>
0013     </CredentialValue>
0014   </Credential>
0015 </Authentication>
0016   <BatchCount type="Integer" value="1"/>
0017 </RequestHeader>
0018   <BatchItem>
0019     <Operation type="Enumeration" value="Create"/>
0020   </BatchItem>
0021   <RequestPayload>
0022     <ObjectType type="Enumeration" value="SymmetricKey"/>
0023       <TemplateAttribute>
0024         <AttributeName type="TextString" value="Cryptographic Algorithm"/>
0025         <AttributeValue type="Enumeration" value="AES"/>
0026       </AttributeName>
0027       <AttributeName type="TextString" value="Cryptographic Length"/>
0028         <AttributeValue type="Integer" value="128"/>
0029       </AttributeName>
0030       <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
0031         <AttributeValue type="Integer" value="Decrypt Encrypt"/>
0032       </AttributeName>
0033     </TemplateAttribute>
0034     <Attribute>
0035       <AttributeName type="TextString" value="Name"/>
0036       <AttributeValue>
0037         <NameValue type="TextString" value="PolicyKey"/>
0038       </AttributeValue>
0039       <NameType type="Enumeration" value="UninterpretedTextString"/>
0040     </Attribute>
0041     <Attribute>
0042       <AttributeName type="TextString" value="Operation Policy Name"/>
0043       <AttributeValue type="TextString" value="default"/>
0044     </Attribute>
0045   </RequestPayload>
```

This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-03-16T13:44:44+00:00"/>
    <BatchCount type="Integer" value="2"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <UniqueBatchItemID type="ByteString" value="0ea05ee703da997b"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <UniqueBatchItemID type="ByteString" value="4cbb6751574c4da8"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Operation Policy Name"/>
        <AttributeValue type="TextString" value="default"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <UniqueBatchItemID type="ByteString" value="0ea05ee703da997b"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <SymmetricKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="c520fca4e681f7bffb3523d71427d594"/>
          </KeyValue>
          <CryptographicAlgorithm type="Enumeration" value="AES"/>
          <CryptographicLength type="Integer" value="128"/>
        </KeyBlock>
      </SymmetricKey>
    </ResponsePayload>
  </BatchItem>
</RequestMessage>
```xml
# TIME 2
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <Authentication>
      <Credential>
        <CredentialType type="Enumeration" value="UsernameAndPassword"/>
        <CredentialValue>
          <Username type="TextString" value="Barney"/>
          <Password type="TextString" value="secret2"/>
        </CredentialValue>
      </Credential>
    </Authentication>
    <BatchErrorContinuationOption type="Enumeration" value="Continue"/>
    <BatchOrderOption type="Boolean" value="true"/>
    <BatchCount type="Integer" value="2"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <UniqueBatchItemID type="ByteString" value="e3e72d5a352687d8"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributeList"/>
    <UniqueBatchItemID type="ByteString" value="a9a1d60b0c62ecaf"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-03-16T13:44:45+00:00"/>
    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <UniqueBatchItemID type="ByteString" value="e3e72d5a352687d8"/>
    <ResultStatus type="Enumeration" value="OperationFailed"/>
    <ResultReason type="Enumeration" value="PermissionDenied"/>
    <ResultMessage type="TextString" value="Access denied"/>
  </BatchItem>
</ResponseMessage>
```
<Operation type="Enumeration" value="GetAttributeList"/>
<UniqueBatchItemID type="ByteString" value="a91d60b0c62ecaf"/>
<ResultStatus type="Enumeration" value="OperationFailed"/>
<ResultReason type="Enumeration" value="PermissionDenied"/>
<ResultMessage type="TextString" value="Access denied"/>
</BatchItem>
</ResponseMessage>

# TIME 3

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <Authentication>
      <Credential>
        <CredentialType type="Enumeration" value="UsernameAndPassword"/>
        <CredentialValue>
          <Username type="TextString" value="Fred"/>
          <Password type="TextString" value="password1"/>
        </CredentialValue>
      </Credential>
    </Authentication>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2010-03-16T13:44:45+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 4

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
2.1.21 TC-121-10 - Query, Maximum Response Size

Perform a Query operation, querying the Operations and Objects supported by the server, with a restriction on the Maximum Response Size set in the request header. Since the resulting Query response is too big, an error is returned. Increase the Maximum Response Size, resubmit the Query request, and get a successful response.
# TIME 0
0001  <RequestMessage>
0002   <RequestHeader>
0003     <ProtocolVersion>
0004       <ProtocolVersionMajor type="Integer" value="1"/>
0005       <ProtocolVersionMinor type="Integer" value="0"/>
0006     </ProtocolVersion>
0007     <MaximumResponseSize type="Integer" value="256"/>
0008   </RequestHeader>
0009  </BatchItem>
0010  <BatchItem>
0011    <Operation type="Enumeration" value="Query"/>
0012    <RequestPayload>
0013      <QueryFunction type="Enumeration" value="QueryOperations"/>
0014      <QueryFunction type="Enumeration" value="QueryObjects"/>
0015    </RequestPayload>
0016  </BatchItem>
0017 </RequestMessage>

0018  <ResponseMessage>
0019   <ResponseHeader>
0020     <ProtocolVersion>
0021       <ProtocolVersionMajor type="Integer" value="1"/>
0022       <ProtocolVersionMinor type="Integer" value="0"/>
0023     </ProtocolVersion>
0024     <TimeStamp type="DateTime" value="2010-02-15T09:49:30+00:00"/>
0025     <BatchCount type="Integer" value="1"/>
0026   </ResponseHeader>
0027   <BatchItem>
0028    <Operation type="Enumeration" value="Query"/>
0029    <ResultStatus type="Enumeration" value="OperationFailed"/>
0030    <ResultReason type="Enumeration" value="ResponseTooLarge"/>
0031    <ResultMessage type="TextString" value="Response size: 568, Maximum Response Size indicated in request: 256"/>
0032  </BatchItem>
0033 </ResponseMessage>

# TIME 1

0034  <RequestMessage>
0035   <RequestHeader>
0036     <ProtocolVersion>
0037       <ProtocolVersionMajor type="Integer" value="1"/>
0038       <ProtocolVersionMinor type="Integer" value="0"/>
0039     </ProtocolVersion>
0040     <MaximumResponseSize type="Integer" value="2048"/>
0041     <BatchCount type="Integer" value="1"/>
0042   </RequestHeader>
0043   <BatchItem>
0044    <Operation type="Enumeration" value="Query"/>
0045    <RequestPayload>
0046      <QueryFunction type="Enumeration" value="QueryOperations"/>
0047      <QueryFunction type="Enumeration" value="QueryObjects"/>
0048    </RequestPayload>
0049  </BatchItem>
0050 </RequestMessage>

0051  <ResponseMessage>
0052   <ResponseHeader>
0053     <ProtocolVersion>

0054

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```
<ProtocolVersion type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
<TimeStam p type="DateTime" value="2010-02-15T09:30+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>

<BatchItem>
  <Operation type="Enumeration" value="Query"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <Operation type="Enumeration" value="Create"/>
    <Operation type="Enumeration" value="CreateKeyPair"/>
    <Operation type="Enumeration" value="Register"/>
    <Operation type="Enumeration" value="ReKey"/>
    <Operation type="Enumeration" value="Locate"/>
    <Operation type="Enumeration" value="Check"/>
    <Operation type="Enumeration" value="Get"/>
    <Operation type="Enumeration" value="GetAttributes"/>
    <Operation type="Enumeration" value="GetAttributeList"/>
    <Operation type="Enumeration" value="AddAttribute"/>
    <Operation type="Enumeration" value="ModifyAttribute"/>
    <Operation type="Enumeration" value="DeleteAttribute"/>
    <Operation type="Enumeration" value="ObtainLease"/>
    <Operation type="Enumeration" value="GetUsageAllocation"/>
    <Operation type="Enumeration" value="Activate"/>
    <Operation type="Enumeration" value="Revoke"/>
    <Operation type="Enumeration" value="Destroy"/>
    <Operation type="Enumeration" value="Archive"/>
    <Operation type="Enumeration" value="Recover"/>
    <Operation type="Enumeration" value="Query"/>
    <Operation type="Enumeration" value="Cancel"/>
    <Operation type="Enumeration" value="Poll"/>
    <ObjectType type="Enumeration" value="Certificate"/>
    <ObjectType type="Enumeration" value="SymmetricKey"/>
    <ObjectType type="Enumeration" value="PublicKey"/>
    <ObjectType type="Enumeration" value="PrivateKey"/>
    <ObjectType type="Enumeration" value="Template"/>
  </ResponsePayload>
</BatchItem>
</ResponseMessage>
```

### 2.1.22 TC-131-10 - Register an Asymmetric Key Pair in PKCS1 Format

Register a private key in the PKCS_1 key format, then register the corresponding public key, also in PKCS_1 format, with the Link attribute pointing to the previously registered private key.

Thereafter add the Link attribute to the private key, and perform Locate operations to find the public and private keys using the Link attribute. Get both the private and public keys in PKCS_1 key format, then destroy both the private and the public key.

```xml
# TIME 0
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion type="Integer" value="1"/>
  </RequestHeader>
</RequestMessage>
```
<table>
<thead>
<tr>
<th>Line</th>
<th>XML Fragment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0005</td>
<td><code>&lt;ProtocolVersionMinor type=&quot;Integer&quot; value=&quot;0&quot;/&gt;</code></td>
</tr>
<tr>
<td>0006</td>
<td><code>&lt;/ProtocolVersion&gt;</code></td>
</tr>
<tr>
<td>0007</td>
<td><code>&lt;BatchCount type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</code></td>
</tr>
<tr>
<td>0008</td>
<td><code>&lt;/BatchItem&gt;</code></td>
</tr>
<tr>
<td>0010</td>
<td><code>&lt;Object Type=&quot;Enumeration&quot; value=&quot;Register&quot;/&gt;</code></td>
</tr>
<tr>
<td>0011</td>
<td><code>&lt;RequestPayload&gt;</code></td>
</tr>
<tr>
<td>0012</td>
<td><code>&lt;ObjectType type=&quot;Enumeration&quot; value=&quot;PrivateKey&quot;/&gt;</code></td>
</tr>
<tr>
<td>0013</td>
<td><code>&lt;Attribute&gt;</code></td>
</tr>
<tr>
<td>0014</td>
<td><code>&lt;AttributeName type=&quot;String&quot; value=&quot;Cryptographic Usage Mask&quot;/&gt;</code></td>
</tr>
<tr>
<td>0016</td>
<td><code>&lt;AttributeValue type=&quot;String&quot; value=&quot;x-ID&quot;/&gt;</code></td>
</tr>
<tr>
<td>0018</td>
<td><code>&lt;Attribute&gt;</code></td>
</tr>
<tr>
<td>0019</td>
<td><code>&lt;AttributeValue type=&quot;String&quot; value=&quot;TC-131-10-prikey1&quot;/&gt;</code></td>
</tr>
<tr>
<td>0021</td>
<td><code>&lt;/AttributeName&gt;</code></td>
</tr>
<tr>
<td>0022</td>
<td><code>&lt;/RequestPayload&gt;</code></td>
</tr>
<tr>
<td>0023</td>
<td><code>&lt;PrivateKey&gt;</code></td>
</tr>
<tr>
<td>0024</td>
<td><code>&lt;KeyBlock&gt;</code></td>
</tr>
<tr>
<td>0025</td>
<td><code>&lt;KeyFormatType type=&quot;Enumeration&quot; value=&quot;PKCS_1&quot;/&gt;</code></td>
</tr>
<tr>
<td>0026</td>
<td><code>&lt;KeyValue&gt;</code></td>
</tr>
</tbody>
</table>
| 0027 | `<KeyIdType type="ByteString" value="308204a50201000280201000a7f161c002496ced6cd6d4adb91997343535777600a5c5fb7af1e40af80b064a87655f8002cfeaba6b184540a2d608674648346758bd71812b205387c0f5653bc4d7ac7e114fb3b1767b975c422e7d0f3cfc627fa2a6f89b9be9e60a1d7c2d833e5afbb0b1434f4795a4110f8a8aa21490dfbf6b5089f98135b1c67b701675abdbc7d5721a9c9d14af0f81fca08b66a0ec88925353c785328abf07e4b4275bbf7e6a8c8c801db66e3d21126ea8d70ca3412fb7afe9103da809e9c1b7ae64c5130fbc21db8062c5db0c7c89469ac99b1cbc5e3c612a928d79a1f799374fe30e54951662a6eda29cfc64133355dc7426b0d6f0500a23010002010003b12455d53c1816516c518493f6398aaaf72b17df8a94d8b88a7d48c0a47f62579a4e6454f8d711ef850c0dd9dbd1f67e9a44342ec1d0dd63c168ff674ac5daabd6bbaa26e0a3adb4f6480fb1218cd3b08e352e88b67f07229f98b2144d2b27293e1b11d73393b4c1f7b5b1ee3d7569b495eqda14425da43197b2b6be8efef7b137542ae56c6d5849f87209567f3925a47b016d5685971bc75cfc4b252d0a49e9c15e5bc3088192363ce9efff41f05b045b73c5d79baf3bf7c0f45d0e3806ad982d125905c3473e847179a8787f2c6b3b968f994aa6e91b8592f53676e78965ca2edf77ba3971df70ce927474f19e76a461cd83d63bf290281001005c69ec9c3cdd2464744a797313dabfb9f1dbd7c99ff96423fecd3cba794286bbe9204f5bc183ff99ee0928d2612262774c8297f5cb8f7f7c24ac51f7c182f8b0f419f1bd5659674c5cb6ed5fa9920513417600d70735729a07a9e54d342beaba8eef8e7ee82d3a01b04ec4a00d4db41e3511fc22e854b3a6960ce6419b8db08181005c0d0e5a77072809704b673540cbfc09356a80bc3d592812eb47610bf9fac6aecefe22ace4e38459cda74a5963d88c04189d34399bf5b14920e3f48e37a0d9f6e95f93996e8fe735ef0a6e4904910141da406bf6df86aa116e4f595a3ee9c5a1012e662e4f15f355ac971e1766b2bf9c89109974141b44d373e1398205a5f02818100b2871273b79fada383c116ab7877aa6a8603e542a7186d431e82d27c19ac90a415485033942e9f6e2973bb7db2d8b0e94ad1ee2125180f9bce8604517a5a467fb963014b5dccc24f4b0f87c23093d11920db2e2df916498de3923345adba5f3f4318586a36d630390d5357f7147ab3aa1eebe0393f87c2707e178c739f9f028181009690bed14b2a2faa26d986d59223ee21e77df1d94652db2a17851f20229981f9d923227df049798eaaef22f7d5b516ba15a61fa6680b040ca0bdc6503b917a41b0bb798a74fadb70e1c035cbecc2bf1a85a726a1d9026e4f1084f518234c2df7e700b952015b543adb641777854676a341711666a79f26e79c149c5aa102818100a0c985a0a0791a659f99731134c44f373e2520
```
0028 <KeyBlock>
0029   <CryptographicAlgorithm type="Enumeration" value="RSA"/>
0030   <CryptographicLength type="Integer" value="2048"/>
0031 </KeyBlock>
0032 </PrivateKey>
0033 </RequestPayload>
0034 </BatchItem>
0035 </RequestMessage>

0036 </ResponseMessage>
0037   </ResponseHeader>
0038   <ProtocolVersion>
0039     <ProtocolVersionMajor type="Integer" value="1"/>
0040     <ProtocolVersionMinor type="Integer" value="0"/>
0041   </ProtocolVersion>
0042   <TimeStamp type="DateTime" value="2012-04-27T08:14:36+00:00"/>
0043   <BatchCount type="Integer" value="1"/>
0044   </ResponseHeader>
0045   <BatchItem>
0046     <Operation type="Enumeration" value="Register"/>
0047     <ResultStatus type="Enumeration" value="Success"/>
0048     <ResponsePayload>
0049       <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0050     </ResponsePayload>
0051   </BatchItem>
0052 </ResponseMessage>

# TIME 1
0053 <RequestMessage>
0054   <RequestHeader>
0055     <ProtocolVersion>
0056       <ProtocolVersionMajor type="Integer" value="1"/>
0057       <ProtocolVersionMinor type="Integer" value="0"/>
0058     </ProtocolVersion>
0059     <BatchCount type="Integer" value="1"/>
0060   </RequestHeader>
0061   <BatchItem>
0062     <Operation type="Enumeration" value="Register"/>
0063     <RequestPayload>
0064       <ObjectType type="Enumeration" value="PublicKey"/>
0065       <TemplateAttribute>
0066         <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
0067         <AttributeValue type="Integer" value="Verify"/>
0068       </Attribute>
0069       <Attribute>
0070         <AttributeName type="TextString" value="Link"/>
0071         <AttributeValue>
0072           <LinkType type="Enumeration" value="PrivateKeyLink"/>
0073           <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0074       </AttributeValue>
0075     </TemplateAttribute>
0076     </RequestPayload>
```

This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

<?xml version="1.0" encoding="UTF-8"?>

<Attribute>
  <AttributeName type="TextString" value="x-ID"/>
  <AttributeValue type="TextString" value="TC-131-10-pubkey1"/>
</Attribute>

<PublicKey>
  <KeyBlock>
    <KeyFormatType type="Enumeration" value="PKCS_1"/>
    <KeyValue>
      <KeyMaterial type="ByteString" value="3082010a0282010100ab7f161c0042496cc6c6d4dad919973435355776003acf54b7af1e440af80b64a8755f8002cfeba6b184540a2d66086d74648346d75b8d71812b205387c0f6583bc4d7dc7c1f4f3b176b7957c422e7d03fc6267fa2a6f89b9bee9e60a1d7c2d833ea5f4bb0b1434f4e7954a4100f8a214900d8b65089f98135b1c67b701675abdbcd75721a9d47a7f08f30f2c8b0d68e3a0eccc829533c795328abf70e1b4e77bb7f4e8ac8c810c9e66e3d2112e6eb8da7d0ca34142cb76f91f013da809e9ch7aee64c54130fbc21d8e9c2cb06c5c8d7ccee8946a9ac9b1c2815c3612a29a82d73a1f93974fe30e54951662a6eda29c6fc411335d5dc7426b0f605020301001"/>
    </KeyMaterial>
    <CryptographicAlgorithm type="Enumeration" value="RSA"/>
    <CryptographicLength type="Integer" value="2048"/>
  </KeyBlock>
</PublicKey>

<RequestPayload>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTITY_1"/>
</RequestPayload>
</RequestMessage>

# TIME 2

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
  </BatchItem>
</RequestMessage>
<RequestPayload>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  <Attribute>
    <AttributeName type="TextString" value="Link"/>
    <AttributeValue>
      <LinkType type="Enumeration" value="PublicKeyLink"/>
      <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </AttributeValue>
  </Attribute>
</RequestPayload>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:36+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Link"/>
        <AttributeValue>
          <LinkType type="Enumeration" value="PublicKeyLink"/>
          <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
        </AttributeValue>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 3

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
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        <AttributeName type="TextString" value="Object Type"/>
        <AttributeValue>
          <Enumeration value="PublicKey"/>
        </AttributeValue>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
<AttributeName type="TextString" value="Link"/>
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<LinkType type="Enumeration" value="PrivateKeyLink"/>
<LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
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</Attribute>
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</BatchItem>
</RequestMessage>

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</ResponseHeader>

<BatchItem>
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# TIME 4

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</Operation>
</RequestPayload>

<Attribute>
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</ResponseHeader>

<BatchItem>
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</Operation>
</ResponsePayload>
</BatchItem>
</ResponseMessage>
```

<ResponseMessage>
```
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  <BatchCount type="Integer" value="1"/>
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<BatchItem>
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  <ResultStatus type="Enumeration" value="Success"/>
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    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  </ResponsePayload>
</BatchItem>

</ResponseMessage>

# TIME 5

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  <BatchItem>
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    <RequestPayload>
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    </RequestPayload>
  </BatchItem>

</RequestMessage>

<ResponseMessage>
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    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>

  <BatchItem>
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    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="PrivateKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <PrivateKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="PKCS_1"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="308204a50201000282010100ab7f161c0042496ccd6c6d4dadb9199734353">
        </KeyValue>
      </PrivateKey>
    </ResponsePayload>
  </BatchItem>

</ResponseMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
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</BatchItem>
</RequestMessage>

<ResponseMessage>
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</ResponseHeader>
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<ResultStatus type="Enumeration" value="Success"/>
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</ResponsePayload>
</BatchItem>
</ResponseMessage>

<RequestMessage>
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</ProtocolVersion>
</RequestHeader>
</BatchItem>
<Operation type="Enumeration" value="Destroy"/>
</RequestPayload>
</ResponseMessage>
2.1.23 TC-132-10 - Register an Asymmetric Key Pair and a Corresponding X509 Certificate

Register a public/private key pair in the PKCS_1 key format and a corresponding X509 certificate.

Add the appropriate links between the registered objects. Make sure the certificate was registered and the attributes set correctly by listing and retrieving the attributes. Get the keys and certificate, and finally destroy all the registered objects.

```
# TIME 0
0001  <RequestMessage>
0002   <RequestHeader>
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0006     </ProtocolVersion>
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0008   </RequestHeader>
0009   <BatchItem>
0010     <Operation type="Enumeration" value="Register"/>
0011     <RequestPayload>
0012       <ObjectType type="Enumeration" value="PublicKey"/>
0013       <TemplateAttribute>
0014         <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
0015         <AttributeValue type="Integer" value="Verify"/>
0016       </AttributeName>
0017       <AttributeValue type="TextString" value="x-ID"/>
0018       <AttributeValue type="TextString" value="TC-132-10-pubkey1"/>
0019     </TemplateAttribute>
0020     <PublicKey>
0021       <KeyBlock>
0022         <KeyFormatType type="Enumeration" value="PKCS_1"/>
0023         <KeyValue>
0024           <KeyMaterial type="ByteString" value="3082010a0282010100ab7f161c0042496cc6c64daddb91997343535777603acfc54b7af14404af80b64a8755f8002cfeba6b184540a2d6e86d74e64346d75b8d7182b205387c0f6583bc4d7ec114f3b176b7957c422e7d03fc6267fa2a6f89b9bee9e60a1d7c2d833ea5f4bb0b1434f4e795a41100f8aa214900df8b65089f98135b1c67b701675abdcb7d5721ac9d14afe7f081f6cc80b64e8a0e9e8295353c79532abf70e1b4e7bb8b7fa8ac8c810c9db686e3d21126eb88a87d0ca34142c76df91f013da809e9c1b7aee64c51410fbb21d80e9cc2c6b65c5d77ce8946a9ac99b1c2815c3c612a29a82d73a1f99374fe30e54951662a6eda29c6fc411335d5dc7426b0f605020301001">
0025           </KeyValue>
0026     </KeyBlock>
0027   </PublicKey>
0028 </RequestPayload>
0029 </BatchItem>
0030 </RequestMessage>
```
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    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:36+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
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    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
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    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 1

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  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="PrivateKey"/>
      <TemplateAttribute>
        <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
        <AttributeValue type="Integer" value="Sign"/>
      </TemplateAttribute>
      <AttributeName type="TextString" value="Link"/>
      <AttributeValue>
        <LinkType type="Enumeration" value="PublicKeyLink"/>
        <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      </AttributeValue>
      <AttributeName type="TextString" value="x-ID"/>
      <AttributeValue type="TextString" value="TC-132-10-prikey1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
This is a Non-Standards Track Work Product.

The patent provisions of the OASIS IPR Policy do not apply.

```
<RequestMessage>
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    </ProtocolVersion>
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  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
    </ResponsePayload>
  </BatchItem>
</RequestMessage>

# TIME 3

<RequestMessage>
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    </ProtocolVersion>
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  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <UniqueBatchItemID type="ByteString" value="31f81bfb0f0492bd"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <UniqueBatchItemID type="ByteString" value="ba865701c7837be2"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Link"/>
        <AttributeValue>
          <LinkType type="Enumeration" value="PrivateKeyLink"/>
          <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
        </AttributeValue>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```
<RequestPayload>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  <Attribute>
    <AttributeName type="TextString" value="Link"/>
    <AttributeValue>
      <LinkType type="Enumeration" value="CertificateLink"/>
      <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
    </AttributeValue>
  </Attribute>
</RequestPayload>

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    </ProtocolVersion>
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    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
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    <UniqueBatchItemID type="ByteString" value="31f81bfb0f0492bd"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
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        <AttributeName type="TextString" value="Link"/>
        <AttributeValue>
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          <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
        </AttributeValue>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
  <BatchItem>
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    <UniqueBatchItemID type="ByteString" value="ba865701c7837be2"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Link"/>
        <AttributeIndex type="Integer" value="1"/>
        <AttributeValue>
          <LinkType type="Enumeration" value="CertificateLink"/>
          <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
        </AttributeValue>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
<ResponseMessage>
  <ResponseHeader>
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    </ProtocolVersion>
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    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributeList"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
      <AttributeName type="TextString" value="Cryptographic Length"/>
      <AttributeName type="TextString" value="Certificate Issuer"/>
      <AttributeName type="TextString" value="Certificate Type"/>
      <AttributeName type="TextString" value="Certificate Subject"/>
      <AttributeName type="TextString" value="Certificate Identifier"/>
      <AttributeName type="TextString" value="State"/>
      <AttributeName type="TextString" value="Digest"/>
      <AttributeName type="TextString" value="Link"/>
      <AttributeName type="TextString" value="Lease Time"/>
      <AttributeName type="TextString" value="Initial Date"/>
      <AttributeName type="TextString" value="Unique Identifier"/>
      <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
      <AttributeName type="TextString" value="Object Type"/>
      <AttributeName type="TextString" value="Last Change Date"/>
      <AttributeName type="TextString" value="x-ID"/>
    </RequestPayload>
  </BatchItem>
</ResponseMessage>

# TIME 5
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  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
      <AttributeName type="TextString" value="Certificate Identifier"/>
      <AttributeName type="TextString" value="Certificate Issuer"/>
      <AttributeName type="TextString" value="Certificate Subject"/>
      <AttributeName type="TextString" value="Certificate Type"/>
      <AttributeName type="TextString" value="Cryptographic Length"/>
    </RequestPayload>
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</RequestMessage>

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  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
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      <Attribute>
        <AttributeName type="TextString" value="Certificate Identifier"/>
        <AttributeValue>
          <Issuer type="TextString" value="CN=KMIP,OU=OASIS,O=TEST,C=US"/>
          <SerialNumber type="TextString" value="1"/>
        </AttributeValue>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Certificate Issuer"/>
        <AttributeValue>
          <CertificateIssuerDistinguishedName type="TextString" value="CN=KMIP,OU=OASIS,O=TEST,C=US"/>
        </AttributeValue>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
<Subject/>

<AttributeValue>
  <CertificateSubjectDistinguishedName type="TextString" value="CN=KMIP,OU=OASIS,O=TEST,C=US"/>
</AttributeValue>

<Attribute>
  <AttributeName type="TextString" value="Certificate Type"/>
  <AttributeValue type="Enumeration" value="X_509"/>
</Attribute>

<Attribute>
  <AttributeName type="TextString" value="Cryptographic Length"/>
  <AttributeValue type="Integer" value="2048"/>
</Attribute>

# TIME 6

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  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <KeyFormatType type="Enumeration" value="PKCS_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

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    <BatchCount type="Integer" value="1"/>
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  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <ObjectType type="Enumeration" value="PrivateKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <PrivateKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="PKCS_1"/>
          <KeyValue>
            <KeyMaterial type="ByteString"/>
value="308204a50201e00282010a07f16c004296ccd6c6d4dadb919973435357776003acfc54b7af1e4040ab80b6a8755f8002cfeba6b184540a2d66086d74648346d75b8d71812b205387c0f658383c4d7dec7ec1143fb17b6b795c42ae7d0f3cf6267fa2af6f89bb9be9e90a1d7cc3e545f4bb0b143f4e79c4110f8e2a14900df8b65089f98135b1c7b670157abd6c7d5721aad9c14a7f081fced9b06e8a0ec829535375328abf70e1b42e7bb87f4e8ac8c810cdbe6ed3d21262e8a8d7a0ca34142cb7f91f101da809e9c1b7ae64c54130fbc2d10e9c2c06c58d7ccf89e96a9ca99b1c2b815c53612a29a82d73af99374fe30e54951662a6eda29c6fc41335d5dc7426bf0650f2030100010028201003b12455d53c1816516c518493f6393898aaf72b17d7a9849db88a7d48ca0a47f2579a4e644f86da711fe0435c0d9d9bdf71e69a4432ed2d6d03c61f8a74c7de5dafabdeb8a26b0a3ad84def6480fb1218cd3b083e25e88bf6072f99b21442b712393e1b11d73393c41f75b15ee3d7569b495ed1a144252a43197b27b0e8f8f17e37542ae5c6d5849f82789576f7f3925a47b016d564859717bc57fcb4522da0a49c8e165ebe7b3088193236ec9eff14085045b73c5d79bae38f7c6f7cf04c5dc0f83068a9821d250505c3473e84179a878f2f6cb3bd968fb9f9e6a4e691859f2367e78905c2ae48787a3917f07c5e927474f19e764a61cd386d3bfc292081810050c69c8c33d2464744a79613dfabf9fd7b87f96423fecc3ca8794286bcecd209f45138f99ee9028dbd2622c7c0e8297f9cfebce7c7f7c24acc515f1c7812bf8f4019fbde59657964c5cbe6d5fa992051341760d007135729a070a9e45d342ebef87f47e8ee2d3a01b04ce4a0044dbd41e35116fc222e85f8a36a96c6e6619b1b028181005d5ea7702789064b673540cb3806b83d592182e4710b9f6a6aceef22cace438459cd74e9563d8c01489343999b514b92e34ef38a7d90fe69593396e8fe735e6f0a6e4490040104d8a406b6fd86a1161e45f95a3ea5c1012e6662e4f15f353ca9c17176b2b39c8510974141b4d37e3e1319820550f28181002871237bfbfad3833c16ab7877a6a868063e542a7186d431e827c19a0c41548403394e2f6e62973b7bb2d8b0e9a4deeeb12518108f0b86464517a5a467fb963014bd5dcc2fb4f087b2c0309d1920db2e22df916bd489e23225cd455adabf32ef43f18586a436630390d685f7714b39aa1ebbee393887c2707e178c739f9f028181009690b925a4f15bead6f86de269d259232e2ee77d1d49065b2ba1f8715a7e202988fb9d23227df04f8749eae9f22f7d5b61b1a561fa6669b040ca0dca6e5o63b3b03917a4b1bb7983a74f6d70e1c305c3cbe2bff1a85a726ad9206e4f1084f158234dc3def770b952015bd543bb6a4117718754676a34171666a79f26c79c149c5aa102811000ac985a0a0791a659f99731134c44f37b2e520a2ce35800ad2724ed360dfd6e8ca61df12047fd08bb76ac4d13c056a0699e2f98a1c9c19011294d71208f4aabab3b8a78aa051f415bca48d6bac06088af601d49417e1fc9bc23affa4d496618dbc024986ed690bb7b205768ff9f8ac15416f489f8129c32341a8b44f"/>
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  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
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      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <PublicKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="PKCS_1"/>
          <KeyValue>
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          </KeyMaterial>
          <CryptographicAlgorithm type="Enumeration" value="RSA"/>
          <CryptographicLength type="Integer" value="2048"/>
        </KeyBlock>
      </PublicKey>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 8

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  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
    </RequestPayload>
  </BatchItem>
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</RequestHeader>
</RequestPayload>
</BatchItem>
</RequestMessage>

# TIME 9

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</BatchItem>
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<BatchCount type="Integer" value="1"/>
</RequestHeader>

<BatchItem>
  <Operation type="Enumeration" value="Destroy"/>
  <RequestPayload>
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  </RequestPayload>
</BatchItem>

</RequestMessage>

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</ResponseMessage>

# TIME 10

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<BatchItem>
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</BatchItem>

</ResponseMessage>
2.1.24 TC-134-10 - Register Key Pair, Certify and Re-certify Public Key

Register a public/private key pair on the server. Request the server to have a certificate created using the Certify operation. Retrieve the certificate and its attributes, then execute the Re-certify operation to re-certify the public key. Finally, destroy all the objects.

The new KMIP 1.1 certificate DN attributes are retrieved as are the original (deprecated) KMIP 1.0 certificate DN attributes.
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  <RequestPayload>
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    <TemplateAttribute>
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        <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
        <AttributeValue type="Integer" value="Verify"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="x-ID"/>
        <AttributeValue type="TextString" value="TC-134-10-pubkey1"/>
      </Attribute>
    </TemplateAttribute>
    <PublicKey>
      <KeyBlock>
        <KeyFormatType type="Enumeration" value="PKCS_1"/>
        <KeyValue>
          <KeyMaterial type="ByteString" value="3082010a02820100ab7f161c0042496 eccentric values for KeyMaterial, KeyBlock, and PublicKey">
            35b1c67b701675abdbc7d5721aac9d14a7f081fcce80b6e8a0ecc8295353c795328
            3abf7e71b42e7bb8b74e8ac8c810c66e3d21126eba8da7d0ca34142cb76f91f013
            3da809e9c9b7ae64c54130fbc2d80e9c2cb06c58d7cc894a9ac991c2815c3612
            a29a82d73a1f99374fe30e54951662a6eda29cfc411335d5dc7426b0f6050203010
            0011"/>
            <KeyMaterial type="ByteString" value="3082010a02820100ab7f161c0042496eccentric values for KeyMaterial, KeyBlock, and PublicKey">
              35b1c67b701675abdbc7d5721aac9d14a7f081fcce80b6e8a0ecc8295353c795328
              3abf7e71b42e7bb8b74e8ac8c810c66e3d21126eba8da7d0ca34142cb76f91f013
              3da809e9c9b7ae64c54130fbc2d80e9c2cb06c58d7cc894a9ac991c2815c3612
              a29a82d73a1f99374fe30e54951662a6eda29cfc411335d5dc7426b0f6050203010
              0011"/>
            </KeyValue>
            <CryptographicAlgorithm type="Enumeration" value="RSA"/>
            <CryptographicLength type="Integer" value="2048"/>
            </KeyBlock>
          </PublicKey>
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      </RequestMessage>
    </ResponseMessage>
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</ResponseHeader>

<BatchItem>
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  <ResultStatus type="Enumeration" value="Success"/>
</BatchItem>
</ResponseMessage>
<ResponsePayload>
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</ResponseMessage>

# TIME 1

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  <RequestPayload>
  <ObjectType type="Enumeration" value="PrivateKey"/>
  <TemplateAttribute>
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    <AttributeValue type="Integer" value="Sign"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Link"/>
    <AttributeValue>
      <LinkType type="Enumeration" value="PublicKeyLink"/>
      <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </AttributeValue>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="x-ID"/>
    <AttributeValue type="TextString" value="TC-134-10-prikey1"/>
  </Attribute>
  </TemplateAttribute>
  <PrivateKey>
    <KeyBlock>
      <KeyFormatType type="Enumeration" value="PKCS_1"/>
      <KeyMaterial type="ByteString" value="308204a502010028201010a7f161c0042496cc66c64d4adb91997343535777603acfc54bf7afe440a5bf80b60a8755f8002cfeba6b184540a266086d74648346d75bd71812b205387c076583c467dc7ec1143b3b176b7957c422e7d03fc6267fa2a6f89b9beee9e60a72c883fe5a5f4bb6b1454f4e795a4110f8a214900f8b65089f98135b1c67b701675abdbc7d5721a9d4a7f081f01e0e0b64e0ace8295353c79532abf70e1b42e7bb87f7e8ac881e0dbe6e3d2126e8a87d0ca34142cb7e6f91f0138d09e9c1b7ae6c54130fbc2108e9c2cb6c58d7ece894a9ac99b1c2815c3612a29a82d73a1f99374fe30e54951662a6eda29c1c64f413353d5dc7426b0f6050203010001028201003b12455d53c1816516c518493f6398afa72b17dafa894db88a7d4bc0a47f62579a4e64f86a711f0ec850cdd9dbb17f69a443d3bac1d60d3c618f9a74ce5fda6b6b6a2e6e0a3adb4def6480fb1218cd3b08e252e8856f0729f9b2144d2b72292e1b1d73393bc41f75b15ee3d7569b495ed1a1442a4131b7b26b0e8f8f17c37542ae5c6d5849f87209567f3925a47b01656485971bc57fcf45220da"/>
    </KeyMaterial>
  </KeyBlock>
  </PrivateKey>
</RequestPayload>
</BatchItem>
</RequestMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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    <Operation type="Enumeration" value="Register"/>
    <ResultStatus type="Enumeration" value="Success"/>
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# TIME 2

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    <Operation type="Enumeration" value="Register"/>
    <ResultStatus type="Enumeration" value="Success"/>
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</RequestMessage>
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      <Attribute>
        <AttributeName type="TextString" value="Link"/>
        <AttributeValue>
          <LinkType type="Enumeration" value="PrivateKeyLink"/>
          <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
        </AttributeValue>
      </Attribute>
    </RequestPayload>
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# TIME 3

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    <Operation type="Enumeration" value="Certify"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
<CertificateRequestType type="Enumeration" value="PKCS_10"/>
<CertificateRequestType type="ByteString" value="308202813082016902010303c10b300906035504061302553310d300b060355040a130441434d45310d300b060355040b13044b4d49503f030d060355040c313064366e7430820122300d06092a864886f70d010101000382010f00380201a0282010100ab7f161c004249cccd6c6d4dad919734353577s603cafc54b7af1e440af8b0b6a87555f8002cfeba6b184540a2d6606e7d4648346d75b8d7182b2053870f59b3bc47d7ec114f3b176b7957c4227d03f6267fa2a6f89b9bee9e60a1d7c2d8335a5f4bb0b1434f4e795a41100f8aa214900df8b65089f9f135b1c67b701675abac7d5721a9d14a7f081fcec80b64e8a0ecccc8295353c795328abf7e01b42e7bb87f4e8ac8c810cdb66e3d21126eba8da70caca34142cb76f91f013da809e9c1b7ae66c54130f0e21d80e99c2cb06c5c87dce89469a9ac99b1c2815c3612a29a82d73a1f9f9374fe30e54951662a6eda2c6fc411335d5dc7426b0f605020301001a00300d06092a864886f70d0101050500382010102d90f5492c3df177ldfe4e8f5e1087cb952197319a96996e2d58e6d4a5d808d350427b997cd921ad7c7674ae44379a85f6d6e6a481e9a4e84f43c02655015d3437f783fe0c781519c880f8d3ce007c7faede9632fe5659e2cacc35b56aaf3e13dc18097d996df01b66fce5e26ca109380863a209125c0f9d7953f327falca444d893f81b92a91428c469c84690f90f1324846e12d01671962c332a7826152aaaf86c867185c2e27caaf2f009898db07f6e4b45c518192aa493df8f0198db67f9067ab60e5a08032941377f473d8701685ac68203a3b3492302214eb3895f15403f261a6af6db5e6aa47fa38c9dfc73f4de80d6b91dbd042d1c82ba6"/>

<TemplateAttribute>
  <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
  <AttributeValue type="Integer" value="Verify Sign"/>
</TemplateAttribute>

<AttributeName type="TextString" value="Name"/>
<AttributeValue>
  <NameValue type="TextString" value="TC-134-10-certificate1"/>
  <NameType type="Enumeration" value="UninterpretedTextString"/>
</AttributeValue>

<AttributeName type="TextString" value="UninterpretedTextString"/>
<AttributeValue type="TextString" value="TC-134-10-certificate1"/>
<AttributeValue type="TextString" value="TC-134-10-certificate2"/>

<ResponseMessage>
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# TIME 5

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    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
      <AttributeName type="TextString" value="Cryptographic Length"/>
      <AttributeName type="TextString" value="Certificate Issuer"/>
      <AttributeName type="TextString" value="Certificate Type"/>
      <AttributeName type="TextString" value="Certificate Subject"/>
      <AttributeName type="TextString" value="Certificate Identifier"/>
      <AttributeName type="TextString" value="State"/>
      <AttributeName type="TextString" value="Digest"/>
      <AttributeName type="TextString" value="Link"/>
      <AttributeName type="TextString" value="Lease Time"/>
      <AttributeName type="TextString" value="Initial Date"/>
      <AttributeName type="TextString" value="Unique Identifier"/>
      <AttributeName type="TextString" value="Name"/>
      <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
      <AttributeName type="TextString" value="Object Type"/>
      <AttributeName type="TextString" value="Last Change Date"/>
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  </BatchItem>
</ResponseMessage>
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    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
      <AttributeName type="TextString" value="Certificate Identifier"/>
      <AttributeName type="TextString" value="Certificate Issuer"/>
      <AttributeName type="TextString" value="Certificate Subject"/>
      <AttributeName type="TextString" value="Certificate Type"/>
      <AttributeName type="TextString" value="Cryptographic Length"/>
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</RequestMessage>

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    <ResultStatus type="Enumeration" value="Success"/>
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        <AttributeName type="TextString" value="Certificate Identifier"/>
        <AttributeValue>
          <Issuer type="TextString" value="CN=KMIP,OU=OASIS,O=TEST,C=US"/>
          <SerialNumber type="TextString" value="9BBA23D1B6A48F97"/>
        </AttributeValue>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Certificate Issuer"/>
        <CertificateIssuerDistinguishedName type="TextString" value="CN=KMIP,OU=OASIS,O=TEST,C=US"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
<AttributeName type="TextString" value="Certificate Subject"/>
<AttributeValue>
  <CertificateSubjectDistinguishedName type="TextString" value="CN=Client,OU=KMIP,O=ACME,C=US"/>
</AttributeValue>
</Attribute>

<AttributeName type="TextString" value="Certificate Type"/>
<AttributeValue type="Enumeration" value="X_509"/>
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<AttributeName type="TextString" value="Cryptographic Length"/>
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# TIME 7

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    <Operation type="Enumeration" value="ReCertify"/>
    <RequestPayload>
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      <CertificateRequestType type="Enumeration" value="PKCS_10"/>
      <CertificateRequest type="ByteString" value="3082028130820169201010303c310b300906035504020100308201002b7f161c004246cc6c6d4dadb91972353577776003acf54b7a7fe444af80b64a8755f8002cfeaa6b184540a2d6086ed74648346d75b8d7182b205387c0f6583bc4d7dc7ec114f3b176b7957c422e7d03fc6267fa2a6f89b9ee9e60a1d7e2d33e5a5f4b0b1434f4e795a41100f8aa214900df8b5089f98135b167b701675abc7d5721ac9d14af7f081fccc80b6e48a00ecc8295353c795328abf70e1b42eb7bba7f4e8ac8c810cd666e3d21126ebaba7da70ca3412cb7f691f013da809e9c1b7ae64c54130fbc21d808e9c2b06c5c8d7c8e8946a9ac99bc12815c3612a29a82d7a1f093974fe30e54951662a6eda29c6fc4113355d5c7426b0f60502030100a0100300d6092a864886f70d01010505003820101002d90f5492c3df7f177df4e87e1087cb952197319a9696ed588edfda5808d3304427b9797c921a7c674aee413fba5fd61664a819e84af430c8656515d3437f83f0c781519c980f3d3c07f9ade632f86596e2c3c5bd2690f3e313d81097d996f01066fc526ca10938063a209125cc0df7953f32f7a1c444d893df819a19284c469c846090fd132484e12d01671962c332a7826152daaf846c8678152e27c0af2f00989db07fe4b45c518192aa493d8f8c0198d6f90672ab6de05a0832941377f473d8071685adce18203eb349423022148e3895f15403f2616ad6d6bb5e6aa47fa38c9dfe73f4de80dddb91bd042d1c82ba6"/>
    </CertificateRequest>
    </RequestPayload>
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</Attribute>
<Attribute>
<AttributeName type="TextString" value="Name"/>
<AttributeValue>
  <NameValue type="TextString" value="TC-134-10-certificate2"/>
  <NameType type="Enumeration" value="UninterpretedTextString"/>
</AttributeValue>
</Attribute>
</TemplateAttribute>
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</RequestMessage>

# TIME 8

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  <BatchItem>
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      <AttributeName type="TextString" value="Link"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

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    <ResultStatus type="Enumeration" value="Success"/>
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  </RequestHeader>
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    <RequestPayload>
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      <AttributeName type="TextString" value="Link"/>
      <AttributeValue>
        <LinkType type="Enumeration" value="PublicKeyLink"/>
        <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      </AttributeValue>
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</RequestMessage>

# TIME 9

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    <ResultStatus type="Enumeration" value="Success"/>
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        <AttributeName type="TextString" value="Link"/>
        <AttributeValue>
          <LinkType type="Enumeration" value="PublicKeyLink"/>
          <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
        </AttributeValue>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
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</RequestPayload>
</BatchItem>
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      <AttributeValue>
        <LinkType type="Enumeration" value="CertificateLink"/>
        <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
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# TIME 10

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      <AttributeName type="TextString" value="Link"/>
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        <LinkType type="Enumeration" value="PublicKeyLink"/>
        <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      </AttributeValue>
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    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
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      <AttributeName type="TextString" value="Link"/>
      <AttributeValue>
        <LinkType type="Enumeration" value="PrivateKeyLink"/>
        <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      </AttributeValue>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
      <AttributeName type="TextString" value="Link"/>
      <AttributeValue>
        <LinkType type="Enumeration" value="CertificateLink"/>
        <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
      </AttributeValue>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
This is a Non-Standards Track Work Product.

The patent provisions of the OASIS IPR Policy do not apply.

```xml
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
      <AttributeName type="TextString" value="Link"/>
      <AttributeName type="TextString" value="CertificateIdentifier"/>
      <AttributeName type="TextString" value="Name"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 11

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:42+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
      <Attribute>
        <AttributeName type="TextString" value="Link"/>
        <AttributeValue>
          <LinkType type="Enumeration" value="ReplacementObjectLink"/>
          <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
        </AttributeValue>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```xml
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```

# TIME 12

```xml
# TIME 12

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```
<RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:14:42+00:00"/>
</ResponseHeader>
<BatchItem>
<Operation type="Enumeration" value="Destroy"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 13

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</RequestHeader>
<BatchItem>
<Operation type="Enumeration" value="Destroy"/>
<RequestPayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:14:42+00:00"/>
</ResponseHeader>
<BatchItem>
<Operation type="Enumeration" value="Destroy"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
```xml
# TIME 14
0672  <RequestMessage>
0673     <RequestHeader>
0674         <ProtocolVersion>
0675             <ProtocolVersionMajor type="Integer" value="1"/>
0676             <ProtocolVersionMinor type="Integer" value="0"/>
0677         </ProtocolVersion>
0678         <BatchCount type="Integer" value="1"/>
0679     </RequestHeader>
0680     <BatchItem>
0681         <Operation type="Enumeration" value="Destroy"/>
0682         <RequestPayload>
0683             <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
0684     </RequestPayload>
0685     </BatchItem>
0686  </RequestMessage>
0687  <ResponseMessage>
0688     <ResponseHeader>
0689         <ProtocolVersion>
0690             <ProtocolVersionMajor type="Integer" value="1"/>
0691             <ProtocolVersionMinor type="Integer" value="0"/>
0692         </ProtocolVersion>
0693         <TimeStamp type="DateTime" value="2012-04-27T08:14:42+00:00"/>
0694         <BatchCount type="Integer" value="1"/>
0695     </ResponseHeader>
0696     <BatchItem>
0697         <Operation type="Enumeration" value="Destroy"/>
0698         <ResponseStatus type="Enumeration" value="Success"/>
0699         <ResponsePayload>
0700             <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
0701     </ResponsePayload>
0702     </BatchItem>
0703  </ResponseMessage>

# TIME 15
0704  <RequestMessage>
0705     <RequestHeader>
0706         <ProtocolVersion>
0707             <ProtocolVersionMajor type="Integer" value="1"/>
0708             <ProtocolVersionMinor type="Integer" value="0"/>
0709         </ProtocolVersion>
0710         <BatchCount type="Integer" value="1"/>
0711     </RequestHeader>
0712     <BatchItem>
0713         <Operation type="Enumeration" value="Destroy"/>
0714         <RequestPayload>
0715             <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
0716     </RequestPayload>
0717     </BatchItem>
0718  </RequestMessage>
0719  <ResponseMessage>
0720     <ResponseHeader>
0721         <ProtocolVersion>
0722             <ProtocolVersionMajor type="Integer" value="1"/>
```
2.1.25 TC-NP-1-10 - Put

In this test case the client issues a Create request, whereby the server creates a new symmetric key and returns the Unique Identifier. To clean up, the client then performs a Destroy operation to destroy the key.

The server sends Put messages to the client via a separate channel.

```
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <TemplateAttribute>
        <AttributeName type="TextString" value="Cryptographic Algorithm"/>
        <AttributeValue type="Enumeration" value="AES"/>
      </Attribute>
      <TemplateAttribute>
        <AttributeName type="TextString" value="Cryptographic Length"/>
        <AttributeValue type="Integer" value="128"/>
      </Attribute>
      <TemplateAttribute>
        <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
        <AttributeValue type="TextString" value="Decrypt Encrypt"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
<Attribute>
  <AttributeName type="TextString" value="x-ID"/>
  <AttributeValue type="TextString" value="TC-NP-1-10"/>
</Attribute>

# [Client-to-Server]
<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2013-06-26T05:13:47+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 1
# [Server-to-Client]
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Put"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <PutFunction type="Enumeration" value="New"/>
      <SymmetricKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="7546ef6cd37c49806824984477987d1e"/>
          </KeyValue>
          <CryptographicAlgorithm type="Enumeration" value="AES"/>
          <CryptographicLength type="Integer" value="128"/>
        </KeyBlock>
        <Attribute>
          <AttributeName type="TextString" value="x-ID"/>
        </Attribute>
      </SymmetricKey>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```
<AttributeValue type="TextString" value="TC-NP-1-10"/>
</Attribute>
</RequestMessage>

# [Server-to-Client]
<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2013-06-26T05:13:48+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Put"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload/>
  </BatchItem>
</ResponseMessage>

# TIME 2
# [Client-to-Server]

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2013-06-26T05:13:48+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
2.1.26 TC-NP-2-10 - Notify & Put

This test case tests the import of key using the Register operation. To validate that the registered key is treated the same as a locally created key, an attribute is added to the key and then modified. Finally, the key is destroyed.

The server sends Notify and Put messages to the client via a separate channel.

```xml
# TIME 0
# [Client-to-Server]
0001  <RequestMessage>
0002   <RequestHeader>
0003     <ProtocolVersion>
0004       <ProtocolVersionMajor type="Integer" value="1"/>
0005       <ProtocolVersionMinor type="Integer" value="0"/>
0006     </ProtocolVersion>
0007     <BatchCount type="Integer" value="1"/>
0008   </RequestHeader>
0009   <BatchItem>
0010     <Operation type="Enumeration" value="Register"/>
0011     <RequestPayload>
0012       <ObjectType type="Enumeration" value="SymmetricKey"/>
0013       <TemplateAttribute>
0014         <Attribute>
0015           <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
0016           <AttributeValue type="Integer" value="Encrypt"/>
0017         </Attribute>
0018         <Attribute>
0019           <AttributeName type="TextString" value="x-ID"/>
0020           <AttributeValue type="TextString" value="TC-NP-2-10"/>
0021         </Attribute>
0022       </TemplateAttribute>
0023       <SymmetricKey>
0024         <KeyBlock>
0025           <KeyFormatType type="Enumeration" value="Raw"/>
0026           <KeyValue>
0027             <KeyMaterial type="ByteString" value="1122456789abcdef0123456789abcdef"/>
0028           </KeyValue>
0029           <CryptographicAlgorithm type="Enumeration" value="AES"/>
0030           <CryptographicLength type="Integer" value="128"/>
0031         </KeyBlock>
0032       </SymmetricKey>
0033   </RequestPayload>
0034 </BatchItem>
0035 </RequestMessage>

# [Client-to-Server]
0036  <ResponseMessage>
0037  <ResponseHeader>
0038     <ProtocolVersion>
0039       <ProtocolVersionMajor type="Integer" value="1"/>
0040       <ProtocolVersionMinor type="Integer" value="0"/>
0041     </ProtocolVersion>
0042     <TimeStamp type="DateTime" value="2013-06-26T05:54:18+00:00"/>
0043     <BatchCount type="Integer" value="1"/>
```

<table>
<thead>
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<th>Line</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
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<td></td>
<td>&lt;/ResponseHeader&gt;</td>
</tr>
<tr>
<td>0045</td>
<td></td>
<td>&lt;BatchItem&gt;</td>
</tr>
<tr>
<td>0046</td>
<td></td>
<td>&lt;Operation type=&quot;Enumeration&quot; value=&quot;Register&quot;/&gt;</td>
</tr>
<tr>
<td>0047</td>
<td></td>
<td>&lt;ResponseStatus type=&quot;Enumeration&quot; value=&quot;Success&quot;/&gt;</td>
</tr>
<tr>
<td>0048</td>
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</tr>
<tr>
<td>0049</td>
<td></td>
<td>&lt;UniqueId type=&quot;TextString&quot; value=&quot;$UNIQUE_IDENTIFIER_0&quot;/&gt;</td>
</tr>
<tr>
<td>0050</td>
<td></td>
<td>&lt;/ResponsePayload&gt;</td>
</tr>
<tr>
<td>0051</td>
<td></td>
<td>&lt;/BatchItem&gt;</td>
</tr>
<tr>
<td>0052</td>
<td></td>
<td>&lt;/ResponseMessage&gt;</td>
</tr>
</tbody>
</table>

---

```xml
# TIME 1
# [Server-to-Client]
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Put"/>
    <RequestPayload>
      <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <PutFunction type="Enumeration" value="New"/>
      <SymmetricKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="1122456789abcdef0123456789abcdef"/>
          </KeyValue>
          <CryptographicAlgorithm type="Enumeration" value="AES"/>
          <CryptographicLength type="Integer" value="128"/>
        </KeyBlock>
      </SymmetricKey>
      <Attribute>
        <AttributeName type="TextString" value="x-ID"/>
        <AttributeValue type="TextString" value="TC-NP-2-10"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Unique Identifier"/>
        <AttributeValue type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Object Type"/>
        <AttributeValue type="Enumeration" value="SymmetricKey"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Cryptographic Algorithm"/>
        <AttributeValue type="Enumeration" value="AES"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```

---

This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
<AttributeValue type="Integer" value="128"/>
</Attribute>

<AttributeName type="TextString" value="Cryptographic Usage Mask"/>
<AttributeValue type="Integer" value="Encrypt"/>
</Attribute>

<AttributeName type="TextString" value="Digest"/>
<AttributeValue>
<HashingAlgorithm type="Enumeration" value="SHA_256"/>
<DigestValue type="ByteString" value="47c01d3851ce2f254d18928526b6126e30cef9a34a4cfbd4648ec3ed21a9e86"/>
</AttributeValue>
</Attribute>

<AttributeName type="TextString" value="Initial Date"/>
<AttributeValue type="DateTime" value="2013-06-26T05:54:18+00:00"/>
</Attribute>

<AttributeName type="TextString" value="Last Change Date"/>
<AttributeValue type="DateTime" value="2013-06-26T05:54:18+00:00"/>
</Attribute>

<AttributeName type="TextString" value="Lease Time"/>
<AttributeValue type="Interval" value="3600"/>
</Attribute>

<AttributeName type="TextString" value="State"/>
<AttributeValue type="Enumeration" value="PreActive"/>
</Attribute>

# [Server-to-Client]
<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2013-06-26T05:54:18+00:00"/>
</ResponseHeader>
<BatchItem>
<Operation type="Enumeration" value="Put"/>
<ResultStatus type="Enumeration" value="Success"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 2
# [Client-to-Server]
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="x-provider"/>
        <AttributeValue type="TextString" value="unknown"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# [Client-to-Server]

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2013-06-26T05:54:18+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="x-provider"/>
        <AttributeValue type="TextString" value="unknown"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 3

# [Server-to-Client]

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Notify"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString">
      </UniqueIdentifier>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
<ResponsePayload>
  <Attribute>
    <AttributeName type="TextString" value="x-provider"/>
    <AttributeValue type="TextString" value="unknown"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Last Change Date"/>
    <AttributeValue type="DateTime" value="2013-06-26T05:54:18+00:00"/>
  </Attribute>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 4
# [Client-to-Server]
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ModifyAttribute"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="x-provider"/>
        <AttributeValue type="TextString" value="third party"/>
      </Attribute>
    </RequestPayload>
    <ResponsePayload>
      <ResponseMessage>
        <ResponseHeader>
          <ProtocolVersion>
            <ProtocolVersionMajor type="Integer" value="1"/>
            <ProtocolVersionMinor type="Integer" value="0"/>
          </ProtocolVersion>
          <BatchCount type="Integer" value="1"/>
        </ResponseHeader>
        <BatchItem>
          <Operation type="Enumeration" value="Notify"/>
          <ResultStatus type="Enumeration" value="Success"/>
          <ResponsePayload>
            </ResponsePayload>
          </BatchItem>
        </ResponseMessage>
      </ResponsePayload>
    </ResponsePayload>
  </BatchItem>
</RequestMessage>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
<TimeStamp type="DateTime" value="2013-06-26T05:54:18+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
<BatchItem>
<Operation type="Enumeration" value="ModifyAttribute"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  <Attribute>
    <AttributeName type="TextString" value="x-provider"/>
    <AttributeValue type="TextString" value="third party"/>
  </Attribute>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 5
# [Server-to-Client]
REQUEST:
<RequestMessage>
<RequestHeader>
<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</RequestHeader>
<BatchItem>
<Operation type="Enumeration" value="Notify"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  <Attribute>
    <AttributeName type="TextString" value="x-provider"/>
    <AttributeValue type="TextString" value="third party"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Last Change Date"/>
    <AttributeValue type="DateTime" value="2013-06-26T05:54:18+00:00"/>
  </Attribute>
</ResponsePayload>
</BatchItem>
</RequestMessage>

# RESPONSE:
<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2013-06-26T05:54:18+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
<BatchItem>
<Operation type="Enumeration" value="ModifyAttribute"/>
</BatchItem>
</ResponseMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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<td></td>
</tr>
<tr>
<td>0295</td>
<td>&lt;ResultStatus type=&quot;Enumeration&quot; value=&quot;Success&quot;/&gt;</td>
<td></td>
</tr>
<tr>
<td>0296</td>
<td>&lt;ResponsePayload&gt;</td>
<td></td>
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# TIME 6

# [Client-to-Server]

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# [Client-to-Server]

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# TIME 7

# [Server-to-Client]

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This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

2.1.27 TC-ECC-1-10 - Register an ECC Key Pair

EC recommended curve is P-256 (secp256r1)

- Private Key format ECPrivateKey - http://tools.ietf.org/html/rfc5915
- Public Key format SubjectPublicKeyInfo - http://tools.ietf.org/html/rfc5480

Register a EC private key in the ECPrivateKey key format, then register the corresponding public key, in X.509 (SubjectPublicKeyInfo) format, with the Link attribute pointing to the previously registered private key. Then add the Link attribute to the private key, and perform Locate operations to find the public and private keys using the Link attribute. Get both the private and public keys in default format, then destroy both the private and the public key.

-----BEGIN EC PRIVATE KEY-----
MHcCAQEEIJEqDiCPx0sYUYR+R1nEWlswW2fOSqRDqLJadr570oAoGCCqGSM49
AwEHoUQDQgAEs0Q5L7cqomf4bX2DfeH2bOl9g/8Bc7vFx+iBYVpKQvPBOX6Smq2N
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```xml
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0171             <AttributeName type="TextString" value="Object Type"/>
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0180         </Attribute>
0181     </BatchItem>
0182 </RequestMessage>
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0187             <ProtocolVersionMinor type="Integer" value="0"/>
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0190         <BatchCount type="Integer" value="1"/>
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0198     </BatchItem>
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0207   </RequestHeader>
0208   <BatchItem>
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0221     </AttributeValue>
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0223 </BatchItem>
0224 </RequestMessage>

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0234   <BatchItem>
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0236     <ResultStatus type="Enumeration" value="Success"/>
0237     <ResponsePayload>
0238       <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0239     </ResponsePayload>
0240   </BatchItem>
0241 </ResponseMessage>
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

| 0253 | <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/> |
| 0254 | </RequestPayload> |
| 0255 | </BatchItem> |
| 0256 | </RequestMessage> |
| 0257 | <ResponseMessage> |
| 0258 | <ResponseHeader> |
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| 0261 | <ProtocolVersionMinor type="Integer" value="0"/> |
| 0262 | </ProtocolVersion> |
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| 0264 | <BatchCount type="Integer" value="1"/> |
| 0265 | </ResponseHeader> |
| 0266 | <BatchItem> |
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| 0268 | <ResultStatus type="Enumeration" value="Success"/> |
| 0269 | <ResponsePayload> |
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| 0271 | <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/> |
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| 0273 | <KeyBlock> |
| 0274 | <KeyFormatType type="Enumeration" value="ECPrivateKey"/> |
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| 0276 | </KeyMaterial> |
| 0277 | </KeyValue> |
| 0278 | <CryptographicAlgorithm type="Enumeration" value="ECDSA"/> |
| 0279 | <CryptographicLength type="Integer" value="256"/> |
| 0280 | </KeyBlock> |
| 0281 | </PrivateKey> |
| 0282 | </ResponsePayload> |
| 0283 | </BatchItem> |
| 0284 | </ResponseMessage> |

# TIME 6

| 0285 | <RequestMessage> |
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| 0289 | <ProtocolVersionMinor type="Integer" value="0"/> |
| 0290 | </ProtocolVersion> |
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  <BatchCount type="Integer" value="1"/>
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# TIME 7

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    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```

This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
2.1.28 TC-ECC-2-10 - Register an ECC Key Pair in PKCS8 Format

EC recommended curve is P-256 (secp256r1)

- Public Key format SubjectPublicKeyInfo - http://tools.ietf.org/html/rfc5480

Register a EC private key in PKCS8 key format (with passphrase 'secret' using pbeWithSHAAnd3-KeyTripleDES-CBC), then register the corresponding public key, in X.509 (SubjectPublicKeyInfo) format, with the Link attribute pointing to the previously registered private key. Then add the
Link attribute to the private key, and perform Locate operations to find the public and private keys using the Link attribute. Get both the private and public keys in default format, then destroy both the private and the public key.

-----BEGIN ENCRYPTED PRIVATE KEY-----
MIGxMBwGCiqGSiB3DQEMAQwDgQ1CAaFBCABIGQkUySNQsaKfPt19y
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urzWFpSRK+Yt+zpokG+ra0008kiz59Fm30zi2P2F4G74GMM
-----END ENCRYPTED PRIVATE KEY-----

-----BEGIN PUBLIC KEY-----
MFkwEwYHCoZIzj0CAQYIKoZIzj0DAQcDQgAEs0Q5L7cqomf4bx2DfeH2b0lgb/Bc
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-----END PUBLIC KEY-----

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0009   <BatchItem>
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0011     <RequestPayload>
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0016           <AttributeValue type="Integer" value="Sign"/>
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0018       </TemplateAttribute>
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This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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kmip-testcases-v1.2-cn01
Non-Standards Track
Copyright © OASIS Open 2014. All Rights Reserved.
11 November 2014
Page 199 of 880
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This is a Non-Standards Track Work Product.

The patent provisions of the OASIS IPR Policy do not apply.

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This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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2.1.29 TC-ECC-3-10 - Register an ECC Key Pair and ECDSA Certificate

EC recommended curve is P-256 (secp256r1)

- Private Key format ECPrivateKey - http://tools.ietf.org/html/rfc5915
- Public Key format SubjectPublicKeyInfo - http://tools.ietf.org/html/rfc5480

Register a EC private key in the ECPrivateKey key format, then register the corresponding public key, in X.509 (SubjectPublicKeyInfo) format, and a corresponding ECDSA certificate, with the Link attribute pointing to the previously registered private key. Return the attribute values for the ECDSA certificate showing the correct server parsing of the certificate. Then add the Link attribute to the private key, and perform Locate operations to find the public and private keys using the Link attribute. Get both the private and public keys in default format, then destroy both the private and the public key.

-----BEGIN EC PRIVATE KEY-----
MHcCAQEEIJEqDiCPXdc0sYUY+RlnEWIsW2fO8GtpRDqLJadr570oAoGCCqGSM49
AwEHoUQDQgAEs0Q5L7cqmof4bx2Df2H2b0lq/8Bc7vFx+1bYVgpQvPBOX6Smq2N
yrJbKCyooqc8AvvfLGKD16kJR0jCm0iOyWw==
-----END EC PRIVATE KEY-----

-----BEGIN PUBLIC KEY-----
MFkwEwYHKoZIzj0CAQYIKoZIzj0DAQcDQgAEs0Q5L7cqmof4bx2Df2H2b0lq/8Bc
7vFx+1bYVgpQvPBOX6Smq2NyrJbKCyooqc8AvvfLGKD16kJR0jCm0iOyWw==
-----END PUBLIC KEY-----

-----BEGIN CERTIFICATE-----
MIIB1zCCAX2gAwIBAgIJANraFqWNKSTZMAoGCCqGSM49BAMCMEcxCzAJBgNVBAYT
A1VTMQ0wCwYDVQQKDARURVNUMQ4wDAYDVQQLDADVQNVJUzEaMBgGA1UEAwwRS01J
UC1Pqyl2ZWNwMjU2cyEwhcNMTmWnjI2MDM1NDQzWwhcNjmwNjIOMDm1NDQzWjBI
MQswCQYDVQQGEwJVUzENMAsGA1UECgwEVEVTVDEOMAwGA1UECwwFT0FTSVmXgjAY
BgNVBAMMEUtNSVAtRUMtc2VjctDI1nnIxMFkwEwYHkoZIzj0CAQYIKoZIzj0DAQcD
QgAEs0Q5L7cqmof4bx2Df2H2b0lq/8Bc7vFx+1bYVgpQvPBOX6Smq2NyrJbKCyoo
coc8AvvfLGKD16kJR0jCm0iOyW6NQME4wQYDVROOBBYEFMDL251FazsU0zoYiZ9
4Pf79STMb6GAIU1d1wQYMbaAFMdL251FazsU0zoYiZ94Pf79STMaGAIU1dEwQF
MAMBAF8wCgYIKoZ1IzjOEAwIDAAsRQIgI19fyzd1gavOhIaeHbOnBoV0l1Emg6q
YA+0EmaQ98C1CQp4F4UPY3lvowI8hDTVavL3MAX/9Cm822RF1fshp7RQ==
-----END CERTIFICATE-----

# TIME 0
0001  <RequestMessage>
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</RequestHeader>

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  <RequestPayload>
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    <TemplateAttribute>
      <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
      <AttributeValue type="Integer" value="Sign"/>
    </Attribute>
    <Attribute>
      <AttributeName type="TextString" value="x-ID"/>
      <AttributeValue type="TextString" value="TC-ECC-3-10-prikey1"/>
    </Attribute>
    <PrivateKey>
      <KeyBlock>
        <KeyFormatType type="Enumeration" value="ECPrivateKey"/>
        <KeyValue>
          <KeyMaterial type="ByteString" value="30770201010420912a0e208f5dd734b1851847e4659c4588b16d9f3bc1ada510ea2c969daf9ef4a00a06082a8648ce3d03107a14403420004b344392fb72a4267f86d7d837deld96ce960ff05ceeef31fa26d8546a6442f3c1397e929ad8dca2b5b282ca8a1cf00bef7cb18a0f5ea44493a30a6d223b25b"/>
        </KeyValue>
        <CryptographicAlgorithm type="Enumeration" value="ECDSA"/>
        <CryptographicLength type="Integer" value="256"/>
      </KeyBlock>
    </PrivateKey>
  </RequestPayload>
</BatchItem>

<ResponseMessage>
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    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:36+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
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    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
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    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
<ResponseMessage>

# TIME 1

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      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
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  </RequestHeader>
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    <RequestPayload>
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          <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
          <AttributeValue type="Integer" value="Verify"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Link"/>
          <AttributeValue>
            <LinkType type="Enumeration" value="PrivateKeyLink"/>
            <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
          </AttributeValue>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="x-ID"/>
          <AttributeValue type="TextString" value="TC-ECC-3-10-pubkey1"/>
        </Attribute>
      </TemplateAttribute>
      <PublicKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="X_509"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="3059301306072a8648ce3d03010703420004b344392fb72aa267f86d7d837d3a6d223b25b"/>
          </KeyValue>
          <CryptographicAlgorithm type="Enumeration" value="ECDSA"/>
        </KeyBlock>
      </PublicKey>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>

<BatchItem>
  <Operation type="Enumeration" value="Register"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
  </ResponsePayload>
</BatchItem>

# TIME 2

<RequestMessage>
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    </ProtocolVersion>
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  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="Certificate"/>
      <TemplateAttribute>
        <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
        <AttributeValue type="Integer" value="Verify Sign"/>
      </TemplateAttribute>
      <Certificate>
        <CertificateType type="Enumeration" value="X_509"/>
        <CertificateValue type="ByteString" value="...">
          ... base64 encoded certificate...
        </CertificateValue>
      </Certificate>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<BatchCount type="Integer" value="1"/>
</ResponseMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <UniqueBatchItemID type="ByteString" value="01"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Link"/>
        <AttributeValue>
          <LinkType type="Enumeration" value="PublicKeyLink"/>
          <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
        </AttributeValue>
      </Attribute>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <UniqueBatchItemID type="ByteString" value="02"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 3

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    </ProtocolVersion>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <UniqueBatchItemID type="ByteString" value="01"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Link"/>
        <AttributeValue>
          <LinkType type="Enumeration" value="PublicKeyLink"/>
          <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
        </AttributeValue>
      </Attribute>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <UniqueBatchItemID type="ByteString" value="02"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```xml
<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:36+00:00"/>
    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <UniqueBatchItemID type="ByteString" value="01"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Link"/>
        <AttributeValue>
          <LinkType type="Enumeration" value="CertificateLink"/>
          <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
        </AttributeValue>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <UniqueBatchItemID type="ByteString" value="02"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Link"/>
        <AttributeIndex type="Integer" value="1"/>
        <AttributeValue>
          <LinkType type="Enumeration" value="CertificateLink"/>
          <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
        </AttributeValue>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
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    </ProtocolVersion>
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  </RequestHeader>
  <BatchItem>
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    </RequestPayload>
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</RequestMessage>

# TIME 5

<RequestMessage>
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    </ProtocolVersion>
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  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributeList"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
      <AttributeName type="TextString" value="x-ID"/>
      <AttributeName type="TextString" value="Unique Identifier"/>
      <AttributeName type="TextString" value="Object Type"/>
      <AttributeName type="TextString" value="Certificate Type"/>
      <AttributeName type="TextString" value="Certificate Identifier"/>
      <AttributeName type="TextString" value="Certificate Issuer"/>
      <AttributeName type="TextString" value="Certificate Subject"/>
      <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
      <AttributeName type="TextString" value="Digest"/>
      <AttributeName type="TextString" value="Initial Date"/>
      <AttributeName type="TextString" value="Last Change Date"/>
      <AttributeName type="TextString" value="Lease Time"/>
      <AttributeName type="TextString" value="Link"/>
      <AttributeName type="TextString" value="State"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
<ProtocolVersion>
  <BatchCount type="Integer" value="1"/>
</RequestHeader>

<BatchItem>
  <Operation type="Enumeration" value="GetAttributes"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
    <AttributeName type="TextString" value="Certificate Type"/>
    <AttributeName type="TextString" value="Certificate Identifier"/>
    <AttributeName type="TextString" value="Certificate Issuer"/>
    <AttributeName type="TextString" value="Certificate Subject"/>
  </RequestPayload>
</BatchItem>

<ResponseMessage>
  <ResponseHeader>
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      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:36+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
      <Attribute>
        <AttributeName type="TextString" value="Certificate Type"/>
        <AttributeValue type="Enumeration" value="X_509"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Certificate Identifier"/>
        <Issuer type="TextString" value="CN=KMIP-EC-secp256r1,OU=OASIS,O=TEST,C=US"/>
        <SerialNumber type="TextString" value="DADA16A58D2924D9"/>
      </AttributeValue>
      <Attribute>
        <AttributeName type="TextString" value="Certificate Issuer"/>
        <CertificateIssuerDistinguishedName type="TextString" value="CN=KMIP-EC-secp256r1,OU=OASIS,O=TEST,C=US"/>
      </AttributeValue>
      <Attribute>
        <AttributeName type="TextString" value="Certificate Subject"/>
        <CertificateSubjectDistinguishedName type="TextString" value="CN=KMIP-EC-secp256r1,OU=OASIS,O=TEST,C=US"/>
      </AttributeValue>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
<RequestMessage>
  <RequestHeader>
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      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <RequestPayload>
      <Attribute>
        <AttributeName type="TextString" value="Object Type"/>
        <AttributeValue type="Enumeration" value="PublicKey"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Link"/>
        <AttributeValue>
          <LinkType type="Enumeration" value="PrivateKeyLink"/>
          <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
        </AttributeValue>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 7

<RequestMessage>
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      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
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  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
</RequestMessage>
```
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
</RequestHeader>
</BatchItem>
<Operation type="Enumeration" value="Locate"/>
<RequestPayload>
  <AttributeName type="TextString" value="Object Type"/>
  <AttributeValue type="Enumeration" value="PrivateKey"/>
</Attribute>
<AttributeName type="TextString" value="Link"/>
<AttributeValue>
  <LinkType type="Enumeration" value="PublicKeyLink"/>
  <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
</AttributeValue>
</RequestPayload>
</BatchItem>
</ResponseMessage>

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  </BatchItem>
</RequestMessage>
```

# TIME 8

```
<RequestMessage>
  <RequestHeader>
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    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  </BatchItem>
</RequestMessage>
```
<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:36+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="PrivateKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <PrivateKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="ECPrivateKey"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="3081b1301c060a2a864886f70d010c0103300e04082f2656a3365731390202080004190eadf7e9ce21053b01c53e175b0e8c4d627c17da1b2df47d8cfb35a0d7252a9a648860d61225be735178d0ca8548871567c22803d8f6f6009f05c26429c83ab72d0f2e7e7870befc3ec74f6f52d0eccafe34b72a791e9535b34f584b96dc12434e8a82df0b5c3e70018f2d474566ae66a9398234ebda2ca4d02992613cb77b9651282c4f3d05a3c5b33cc3ae0"/>
          </KeyMaterial>
          <CryptographicAlgorithm type="Enumeration" value="ECDSA"/>
          <CryptographicLength type="Integer" value="256"/>
        </KeyValue>
      </KeyBlock>
    </PrivateKey>
  </ResponsePayload>
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</ResponseMessage>

# TIME 9

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    </ProtocolVersion>
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  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

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    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
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    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
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<BatchCount type="Integer" value="1"/>
</ResponseHeader>
<BatchItem>
<Operation type="Enumeration" value="Get"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<ObjectType type="Enumeration" value="PublicKey"/>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
</PublicKey>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 10

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<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</RequestHeader>
<BatchItem>
<Operation type="Enumeration" value="Destroy"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:14:36+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
<BatchItem>
<Operation type="Enumeration" value="Destroy"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<KeyValue>
<KeyFormatType type="Enumeration" value="X_509"/>
<KeyValue>
<KeyMaterial type="ByteString"
value="3059301306072a8648ce3d020106082a8648ce3d03010703420004b34392fb72aa267f66d7d37de1d6ce960f6f05ccee3f1fa26d854a6442f3c1397e929ad8d07252b282ca8a1cf006ef7cb18a0f5ea44493a30a6d223b25b"/>
</KeyValue>
</PublicKey>
</ResponsePayload>
</BatchItem>
</ResponseMessage>
```
2.2 KMIP 1.1 Test Cases

2.2.1 TC-311-11 - Create / Destroy

In this test case the client issues a Create request, whereby the server creates a new symmetric key and returns the Unique Identifier. To clean up, the client then performs a Destroy operation to destroy the key.

```xml
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <TemplateAttribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Algorithm"/>
          <AttributeValue type="Enumeration" value="AES"/>
        </Attribute>
      </TemplateAttribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="0"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:36+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
<AttributeValue type="Integer" value="128"/>
</Attribute>
<Attribute>
  <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
  <AttributeValue type="Integer" value="Decrypt Encrypt"/>
</Attribute>
<Attribute>
  <AttributeName type="TextString" value="x-ID"/>
  <AttributeValue type="TextString" value="TC-311-11"/>
</Attribute>
</TemplateAttribute>
</RequestPayload>
</BatchItem>
</RequestMessage>

# TIME 1

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:21+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 1

<ResponseMessage>
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    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:21+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</ResponseMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:21+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
2.2.2 TC-312-11 - Register / Create / Get attributes / Destroy

Here the client first registers a template object and then creates a symmetric key using the 
registered template. To verify that the attributes of the key were set correctly from the 
template, the client then issues a Get Attributes command, after which it destroys first the key 
and then the template.
<Attribute>
  <AttributeName type="TextString" value="Application Specific Information"/>
  <AttributeValue>
    <ApplicationNamespace type="TextString" value="ssl"/>
    <ApplicationData type="TextString" value="www.example.com"/>
  </AttributeValue>
</Attribute>

<Attribute>
  <AttributeName type="TextString" value="Contact Information"/>
  <AttributeValue type="TextString" value="Joe"/>
</Attribute>

<Attribute>
  <AttributeName type="TextString" value="x-Purpose"/>
  <AttributeValue type="TextString" value="demonstration"/>
</Attribute>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:21+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 1
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <TemplateAttribute>
        <Name>
          <NameValue type="TextString" value="TC-312-11-template1"/>
        </Name>
      </TemplateAttribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
<Name>
  <AttributeValue type="TextString" value="Cryptographic Algorithm"/>
</Name>

<Attribute>
  <AttributeName type="TextString" value="Cryptographic Length"/>
  <AttributeValue type="Integer" value="128"/>
</Attribute>

<Attribute>
  <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
  <AttributeValue type="Integer" value="Decrypt Encrypt"/>
</Attribute>

<Attribute>
  <AttributeName type="TextString" value="Name"/>
  <AttributeValue>
    <NameValue type="TextString" value="TC-312-11-key1"/>
    <NameType type="Enumeration" value="UninterpretedTextString"/>
  </AttributeValue>
</Attribute>

<ResponseType type="Enumeration" value="SymmetricKey"/>

<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>

<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="1"/>
<BatchCount type="Integer" value="1"/>
<Operation type="Enumeration" value="Create"/>
<ResultStatus type="Enumeration" value="Success"/>
<ObjectType type="Enumeration" value="SymmetricKey"/>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>

<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="1"/>
<BatchCount type="Integer" value="1"/>
<Operation type="Enumeration" value="Create"/>
<ResultStatus type="Enumeration" value="Success"/>
<ObjectType type="Enumeration" value="SymmetricKey"/>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
<BatchItem>
  <Operation type="Enumeration" value="GetAttributes"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    <AttributeName type="TextString" value="Object Group"/>
    <AttributeName type="TextString" value="Application Specific Information"/>
    <AttributeName type="TextString" value="Contact Information"/>
    <AttributeName type="TextString" value="x-Purpose"/>
  </RequestPayload>
</BatchItem>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:22+00:00"/>
    <BatchCount type="Integer" value="1"/>
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  <BatchItem>
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    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
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      <Attribute>
        <AttributeName type="TextString" value="Object Group"/>
        <AttributeValue type="TextString" value="Group1"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Application Specific Information"/>
        <AttributeValue>
          <ApplicationNamespace type="TextString" value="ssl"/>
          <ApplicationData type="TextString" value="www.example.com"/>
        </AttributeValue>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Contact Information"/>
        <AttributeValue type="TextString" value="Joe"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="x-Purpose"/>
        <AttributeValue type="TextString" value="demonstration"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 3

<RequestMessage>
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      <ProtocolVersionMajor type="Integer" value="1"/>
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    </ProtocolVersion>
  </RequestHeader>
</RequestMessage>
0183 
0184 | <ProtocolVersionMajor type="Integer" value="1"/>
0185 | <ProtocolVersionMinor type="Integer" value="1"/>
0186 | </ProtocolVersion>
0187 | <BatchCount type="Integer" value="1"/>
0188 | </RequestHeader>
0189 | <BatchItem>
0190 | <Operation type="Enumeration" value="Destroy"/>
0191 | <RequestPayload>
0192 | <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0193 | </RequestPayload>
0194 | </BatchItem>
0195 | </RequestMessage>
0196 | <ResponseHeader>
0197 | </ProtocolVersion>
0198 | <ProtocolVersionMajor type="Integer" value="1"/>
0199 | <ProtocolVersionMinor type="Integer" value="1"/>
0200 | </ProtocolVersion>
0201 | <TimeStamp type="DateTime" value="2012-04-27T08:12:22+00:00"/>
0202 | <BatchCount type="Integer" value="1"/>
0203 | </ResponseHeader>
0204 | <BatchItem>
0205 | <Operation type="Enumeration" value="Destroy"/>
0206 | <ResponseStatus type="Enumeration" value="Success"/>
0207 | <ResponsePayload>
0208 | <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0209 | </ResponsePayload>
0210 | </BatchItem>
0211 | </ResponseMessage>

# TIME 4

0212 | <RequestMessage>
0213 | <RequestHeader>
0214 | </ProtocolVersion>
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0216 | <ProtocolVersionMinor type="Integer" value="1"/>
0217 | </ProtocolVersion>
0218 | <BatchCount type="Integer" value="1"/>
0219 | </RequestHeader>
0220 | <BatchItem>
0221 | <Operation type="Enumeration" value="Destroy"/>
0222 | <RequestPayload>
0223 | <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0224 | </ResponsePayload>
0225 | </BatchItem>
0226 | </RequestMessage>
0227 | <ResponseMessage>
0228 | <ResponseHeader>
0229 | </ProtocolVersion>
0230 | <ProtocolVersionMajor type="Integer" value="1"/>
0231 | <ProtocolVersionMinor type="Integer" value="1"/>
0232 | </ProtocolVersion>
0233 | <TimeStamp type="DateTime" value="2012-04-27T08:12:22+00:00"/>
0234 | <BatchCount type="Integer" value="1"/>
This test case tests the Locate and Get operations, in addition to the previously used operations Create and Destroy. A symmetric key is first created, and then a lookup is performed on the Name attribute using the Locate operation. Subsequently, a Get request is issued to retrieve the located key, after which the key on the server is destroyed.
<Attribute>
  <AttributeName type="TextString" value="Object Type"/>
  <AttributeValue type="Enumeration" value="SymmetricKey"/>
</Attribute>
</RequestPayload>
</BatchItem>
</RequestMessage>

# TIME 2

<kml:Document>
  <kml:Placemark>
    <kml:ExtendedData>
      <kml:SchemaData name="nonstd" type="Feature">
        <kml:Field name="name">
          <kml:TextChangedText value="TC-313-11-key1"/>
        </kml:Field>
      </kml:SchemaData>
    </kml:ExtendedData>
    <kml:Polygon>
      <kml:EXIFData/>
    </kml:Polygon>
  </kml:Placemark>
</kml:Document>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```xml
<ProtocolVersion>
  <TimeStamp type="DateTime" value="2012-04-27T08:12:22+00:00"/>
</ResponseHeader>

<BatchItem>
  <Operation type="Enumeration" value="Locate"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  </ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 2

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:23+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <SymmetricKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="7367578051012a6d134a855e25c8cd5e4ca131455729d3c8"/>
          </KeyValue>
          <CryptographicAlgorithm type="Enumeration" value="DES3"/>
          <CryptographicLength type="Integer" value="168"/>
        </KeyBlock>
      </SymmetricKey>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

<table>
<thead>
<tr>
<th>Time</th>
<th>Request Message</th>
<th>Response Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td><code>&lt;RequestMessage&gt;</code></td>
<td><code>&lt;ResponseMessage&gt;</code></td>
</tr>
<tr>
<td>3</td>
<td><code>&lt;RequestHeader&gt;</code></td>
<td><code>&lt;ResponseHeader&gt;</code></td>
</tr>
<tr>
<td>3</td>
<td><code>&lt;ProtocolVersion&gt;</code></td>
<td><code>&lt;ProtocolVersion&gt;</code></td>
</tr>
<tr>
<td>3</td>
<td><code>&lt;BatchCount&gt;</code></td>
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</tr>
<tr>
<td>3</td>
<td><code>&lt;Operation type=&quot;Enumeration&quot; value=&quot;Destroy&quot;/&gt;</code></td>
<td><code>&lt;Operation type=&quot;Enumeration&quot; value=&quot;Destroy&quot;/&gt;</code></td>
</tr>
<tr>
<td>3</td>
<td><code>&lt;RequestPayload&gt;</code></td>
<td><code>&lt;RequestPayload&gt;</code></td>
</tr>
<tr>
<td>3</td>
<td><code>&lt;UniqueIdentifier type=&quot;TextString&quot; value=&quot;$UNIQUE_IDENTIFIER_0&quot;/&gt;</code></td>
<td><code>&lt;UniqueIdentifier type=&quot;TextString&quot; value=&quot;$UNIQUE_IDENTIFIER_0&quot;/&gt;</code></td>
</tr>
<tr>
<td>4</td>
<td><code>&lt;RequestMessage&gt;</code></td>
<td><code>&lt;ResponseMessage&gt;</code></td>
</tr>
<tr>
<td>4</td>
<td><code>&lt;RequestHeader&gt;</code></td>
<td><code>&lt;ResponseHeader&gt;</code></td>
</tr>
<tr>
<td>4</td>
<td><code>&lt;BatchCount&gt;</code></td>
<td><code>&lt;BatchCount&gt;</code></td>
</tr>
<tr>
<td>4</td>
<td><code>&lt;Operation type=&quot;Enumeration&quot; value=&quot;Locate&quot;/&gt;</code></td>
<td><code>&lt;Operation type=&quot;Enumeration&quot; value=&quot;Locate&quot;/&gt;</code></td>
</tr>
<tr>
<td>4</td>
<td><code>&lt;RequestPayload&gt;</code></td>
<td><code>&lt;RequestPayload&gt;</code></td>
</tr>
<tr>
<td>4</td>
<td><code>&lt;AttributeName type=&quot;TextString&quot; value=&quot;Unique Identifier&quot;/&gt;</code></td>
<td><code>&lt;AttributeName type=&quot;TextString&quot; value=&quot;Unique Identifier&quot;/&gt;</code></td>
</tr>
<tr>
<td>4</td>
<td><code>&lt;AttributeValue type=&quot;TextString&quot; value=&quot;$UNIQUE_IDENTIFIER_0&quot;/&gt;</code></td>
<td><code>&lt;AttributeValue type=&quot;TextString&quot; value=&quot;$UNIQUE_IDENTIFIER_0&quot;/&gt;</code></td>
</tr>
</tbody>
</table>
2.2.4 TC-314-11 - Dual Client Test Case, ID Placeholder-linked Locate & Get

This test case has two clients performing operations on the same key. The first client initially registers a template and creates a symmetric key using that template. The second client then does a batched Locate and Get using the ID Placeholder to retrieve the key. The second client thereafter performs a number of operations on the key (Get Attribute List, Get Attribute, Add Attribute, Modify Attribute and Delete Attribute), before the first client finally destroys the key and the template. The first client also tries to Get the key and the template after they have been destroyed, but the Get operation fails in both cases. This test case demonstrates the fact that it is possible for two clients to cooperate and use the same managed object while only having knowledge of a single pre-agreed Name attribute value and without having to share any other information.
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <TemplateAttribute>
        <Name>
          <NameValue type="TextString" value="TC-314-11-template1"/>
        </Name>
        <NameType type="UninterpretedTextString"/>
      </TemplateAttribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 1

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 2

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <TemplateAttribute>
        <Name>
          <NameValue type="TextString" value="TC-314-11-template1"/>
        </Name>
        <NameType type="UninterpretedTextString"/>
      </TemplateAttribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 2

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
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  <RequestHeader>
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      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchOrderOption type="Boolean" value="true"/>
    <BatchCount type="Integer" value="2"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <UniqueBatchItemID type="ByteString" value="aa21f8c659d6e10d"/>
    <RequestPayload>
      <Attribute>
        <AttributeName type="TextString" value="Object Type"/>
        <AttributeValue type="TextString" value="SymmetricKey"/>
        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
  # TIME 2
</RequestMessage>
<AttributeValue type="Enumeration" value="SymmetricKey"/>
</Attribute>
<AttributeName type="TextString" value="Name"/>
<AttributeValue>
<NameValue type="TextString" value="TC-314-11-key1"/>
<NameType type="Enumeration" value="UninterpretedTextString"/>
<AttributeValue>
</RequestPayload>
</BatchItem>
</BatchItem>
<Operation type="Enumeration" value="Get"/>
<UniqueBatchItemID type="ByteString" value="495a95f165854d1e"/>
<RequestPayload>
</ResponsePayload>
</BatchItem>
</BatchItem>
<Operation type="Enumeration" value="Locate"/>
<UniqueBatchItemID type="ByteString" value="aa21f8c659d6e10d"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
</ResponsePayload>
</BatchItem>
</BatchItem>
<Operation type="Enumeration" value="Get"/>
<UniqueBatchItemID type="ByteString" value="495a95f165854d1e"/>
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<ResponsePayload>
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<KeyFormatType type="Enumeration" value="Raw"/>
<KeyValue>
<KeyMaterial type="ByteString" value="d351910f1d7934d6e2ae17576564e2bc"/>
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# TIME 3

```xml
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      <ProtocolVersionMajor type="Integer" value="1"/>
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    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributeList"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      </RequestPayload>
  </BatchItem>
</RequestMessage>
```

```
# TIME 4

```xml
<RequestMessage>
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    <ProtocolVersion>
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      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:23+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributeList"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <AttributeName type="TextString" value="Cryptographic Length"/>
      <AttributeName type="TextString" value="Cryptographic Algorithm"/>
      <AttributeName type="TextString" value="State"/>
      <AttributeName type="TextString" value="Digest"/>
      <AttributeName type="TextString" value="Lease Time"/>
      <AttributeName type="TextString" value="Initial Date"/>
      <AttributeName type="TextString" value="Unique Identifier"/>
      <AttributeName type="TextString" value="Name"/>
      <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
      <AttributeName type="TextString" value="Object Type"/>
      <AttributeName type="TextString" value="Contact Information"/>
      <AttributeName type="TextString" value="Last Change Date"/>
      <AttributeName type="TextString" value="Fresh"/>
    </ResponsePayload>
  </BatchItem>
</RequestMessage>
```

kmip-testcases-v1.2-cn01

Non-Standards Track

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<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>

<BatchCount type="Integer" value="1"/>

<RequestHeader>
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    <RequestPayload>
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      <AttributeName type="TextString" value="Name"/>
      <AttributeName type="TextString" value="Contact Information"/>
    </RequestPayload>
  </BatchItem>
</RequestHeader>

<ResponseMessage>
  <ResponseHeader>
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    </ProtocolVersion>
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    <BatchCount type="Integer" value="1"/>
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  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
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        <AttributeName type="TextString" value="Name"/>
        <AttributeValue>
          <NameValue type="TextString" value="TC-314-11-key1"/>
          <NameType type="Enumeration" value="UninterpretedTextString"/>
        </AttributeValue>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Contact Information"/>
        <AttributeValue type="TextString" value="Foo"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 5

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    </ProtocolVersion>
    <BatchCount type="Integer" value="2"/>
  </RequestHeader>
</RequestMessage>
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<UniqueBatchItemID type="ByteString" value="32d84369c120488e"/>
<RequestPayload>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
  <Attribute>
    <AttributeName type="TextString" value="x-attribute1"/>
    <AttributeValue type="TextString" value="Value1"/>
  </Attribute>
  <RequestPayload>
</BatchItem>

<Operation type="Enumeration" value="AddAttribute"/>
<UniqueBatchItemID type="ByteString" value="519cf4f0c1ac13f"/>
<RequestPayload>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
  <Attribute>
    <AttributeName type="TextString" value="x-attribute2"/>
    <AttributeValue type="TextString" value="Value2"/>
  </Attribute>
  <RequestPayload>
</BatchItem>

<ResponseMessage>
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      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:23+00:00"/>
    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <UniqueBatchItemID type="ByteString" value="32d84369c120488e"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <Attribute>
        <AttributeName type="TextString" value="x-attribute1"/>
        <AttributeValue type="TextString" value="Value1"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
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    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <Attribute>
        <AttributeName type="TextString" value="x-attribute2"/>
        <AttributeValue type="TextString" value="Value2"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
<ResponsePayload>
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    <Operation type="Enumeration" value="ModifyAttribute"/>
    <UniqueBatchItemID type="ByteString" value="dc2bfda88f39f5fc"/>
    <ResultStatus type="Enumeration" value="Success"/>
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        <AttributeName type="TextString" value="x-attribute2"/>
        <AttributeValue type="TextString" value="ModifiedValue2"/>
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</ResponsePayload>

# TIME 7

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    </ProtocolVersion>
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      <AttributeName type="TextString" value="x-attribute1"/>
    </RequestPayload>
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  <BatchItem>
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    <UniqueBatchItemID type="ByteString" value="88fa2f142c615edb"/>
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  </BatchItem>
</RequestMessage>

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    </ProtocolVersion>
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</table>
2.2.5 TC-315-11 - Register / Destroy Secret Data

In this test case the client issues a Register request containing a Secret Data object, whereby the server registers the object and returns the Unique Identifier. To clean up, the client then performs a Destroy.
# TIME 0
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    </ProtocolVersion>
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  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="SecretData"/>
      <TemplateAttribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
          <AttributeValue type="Integer" value="Verify"/>
        </Attribute>
      </TemplateAttribute>
      <SecretData>
        <SecretDataType type="Enumeration" value="Password"/>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Opaque"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="5365637265745061737764"/>
          </KeyValue>
        </KeyBlock>
      </SecretData>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 1
<RequestMessage>
  <ResponseMessage>
    <ResponseHeader>
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        <ProtocolVersionMajor type="Integer" value="1"/>
        <ProtocolVersionMinor type="Integer" value="1"/>
      </ProtocolVersion>
      <TimeStamp type="DateTime" value="2012-04-27T08:12:24+00:00"/>
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    </ResponseHeader>
    <BatchItem>
      <Operation type="Enumeration" value="Register"/>
      <ResultStatus type="Enumeration" value="Success"/>
      <ResponsePayload>
        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      </ResponsePayload>
    </BatchItem>
  </ResponseMessage>
</RequestMessage>
2.2.6 TC-32-11 - Asynchronous Locate

This test case tests the asynchronous capabilities of KMIP using the Locate operation. A key is created and then a Locate request is sent containing the Name of the created key and with the message header Asynchronous Indicator-field set to True. If the server returns an asynchronous response to the Locate, the client then polls the server until the operation is ready. If the server responded asynchronously, a subsequent Locate operation that is also handled asynchronously is then Canceled, before the key is finally destroyed.

This test case shows the use of two clients with the same assumptions as in the test case described in Section . Since the client is unable to force the server to respond asynchronously, it is possible for a server to respond synchronously to the requests issued at times 1 and 4, in which case the expected response are the ones shown at times 2 and 5, respectively. In the case of the server not responding asynchronously to the Locate requests, the client is permitted to skip the requests illustrated at time 7 and 8.
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    <ProtocolVersionMinor type="Integer" value="1"/>
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  <RequestPayload>
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        <AttributeValue type="Enumeration" value="AES"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Cryptographic Length"/>
        <AttributeValue type="Integer" value="128"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Name"/>
        <AttributeValue>
          <NameValue type="TextString" value="TC-32-12-key1"/>
          <NameType type="Enumeration" value="UninterpretedTextString"/>
        </AttributeValue>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
        <AttributeValue type="Integer" value="Encrypt"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Object Group"/>
        <AttributeValue type="TextString" value="Group1"/>
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    </TemplateAttribute>
  </RequestPayload>
</BatchItem>

<ResponseMessage>
  <ResponseHeader>
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      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
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    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
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    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 1
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    </ProtocolVersion>
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  </RequestHeader>
  <BatchItem>
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      <Attribute>
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        <AttributeValue>
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          <NameType type="Enumeration" value="UninterpretedTextString"/>
        </AttributeValue>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:24+00:00"/>
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  </ResponseHeader>
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  </RequestHeader>
</RequestMessage>
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</RequestHeader>
</BatchItem>
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# TIME 3

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</BatchItem>
</ResponseMessage>

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</RequestMessage>

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<ResponseHeader>
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<ProtocolVersionMinor type="Integer" value="1"/>
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</BatchItem>
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</ResponseMessage>

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</ResponseMessage>
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      <KeyValue>
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</ResponseMessage>

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    </ProtocolVersion>
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      </Attribute>
      <Attribute>
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    </BatchItem>
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    </ProtocolVersion>
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    <BatchCount type="Integer" value="1"/>
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<ResultStatus type="Enumeration" value="Success"/>

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# TIME 9

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This test case tests the revocation aspect of the key life cycle support in KMIP. A key is created and a Get Attribute for the State-attribute reveals that the key is in Pre-active state. The Activation Date is then set, which changes the state to Active. The key is then revoked with a revocation reason of Compromised and the state subsequently changed to Compromised, but this does not stop a client from being able to add, modify and delete attributes or even get the key (since we assume here that the out-of-band registration has been used to make the server aware of the fact that the client is capable of interpreting the attributes of the key and determining what it is allowed to do with the key). To clean up, the created key is finally destroyed.
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      </AttributeValue>
    </Attribute>
    <Attribute>
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  </RequestPayload>
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# TIME 4

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    </ResponsePayload>
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</RequestMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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Non-Standards Track  Copyright © OASIS Open 2014. All Rights Reserved. Page 252 of 880
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            <KeyMaterial type="ByteString" value="9c7d7c4fd2076f1909a6ba4342cab1de"/>
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This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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    <Operation type="Enumeration" value="GetAttributeList"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:24+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributeList"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <AttributeName type="TextString" value="Cryptographic Length"/>
      <AttributeName type="TextString" value="Cryptographic Algorithm"/>
      <AttributeName type="TextString" value="State"/>
      <AttributeName type="TextString" value="Compromise Occurrence Date"/>
      <AttributeName type="TextString" value="Compromise Date"/>
      <AttributeName type="TextString" value="Digest"/>
      <AttributeName type="TextString" value="Lease Time"/>
      <AttributeName type="TextString" value="Initial Date"/>
      <AttributeName type="TextString" value="Activation Date"/>
      <AttributeName type="TextString" value="Revocation Reason"/>
      <AttributeName type="TextString" value="Unique Identifier"/>
      <AttributeName type="TextString" value="Name"/>
      <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
      <AttributeName type="TextString" value="Object Type"/>
      <AttributeName type="TextString" value="Last Change Date"/>
      <AttributeName type="TextString" value="Fresh"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```

---

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The patent provisions of the OASIS IPR Policy do not apply.
<RequestHeader>
   <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
   </ProtocolVersion>
   <BatchCount type="Integer" value="1"/>
</RequestHeader>

<BatchItem>
   <Operation type="Enumeration" value="GetAttributes"/>
   <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <AttributeName type="TextString" value="State"/>
   </RequestPayload>
</BatchItem>

<ResponseMessage>
   <ResponseHeader>
      <ProtocolVersion>
         <ProtocolVersionMajor type="Integer" value="1"/>
         <ProtocolVersionMinor type="Integer" value="1"/>
      </ProtocolVersion>
      <TimeStamp type="DateTime" value="2012-04-27T08:12:24+00:00"/>
      <BatchCount type="Integer" value="1"/>
   </ResponseHeader>
   <BatchItem>
      <Operation type="Enumeration" value="GetAttributes"/>
      <ResultStatus type="Enumeration" value="Success"/>
      <ResponsePayload>
         <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
         <Attribute>
            <AttributeName type="TextString" value="State"/>
            <AttributeValue type="Enumeration" value="Compromised"/>
         </Attribute>
      </ResponsePayload>
   </BatchItem>
</ResponseMessage>

# TIME 10

<RequestMessage>
   <RequestHeader>
      <ProtocolVersion>
         <ProtocolVersionMajor type="Integer" value="1"/>
         <ProtocolVersionMinor type="Integer" value="1"/>
      </ProtocolVersion>
      <BatchCount type="Integer" value="2"/>
   </RequestHeader>
   <BatchItem>
      <Operation type="Enumeration" value="AddAttribute"/>
      <UniqueBatchItemID type="ByteString" value="23a177faa569463c"/>
      <RequestPayload>
         <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
         <Attribute>
            <AttributeName type="TextString" value="x-attribute1"/>
            <AttributeValue type="TextString" value="Value1"/>
         </Attribute>
      </RequestPayload>
   </BatchItem>
</RequestMessage>
<RequestPayload>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <UniqueBatchItemID type="ByteString" value="9b898dc0577f8080"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="x-attribute2"/>
        <AttributeValue type="TextString" value="Value2"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestPayload>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:24+00:00"/>
    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <UniqueBatchItemID type="ByteString" value="23a177faa569463c"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="x-attribute1"/>
        <AttributeValue type="TextString" value="Value1"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <UniqueBatchItemID type="ByteString" value="9b898dc0577f8080"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="x-attribute2"/>
        <AttributeValue type="TextString" value="Value2"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME II

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
  </RequestHeader>
  <RequestPayload>
    <BatchItem>
      <Operation type="Enumeration" value="AddAttribute"/>
      <UniqueBatchItemID type="ByteString" value="9b898dc0577f8080"/>
      <RequestPayload>
        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
        <Attribute>
          <AttributeName type="TextString" value="x-attribute2"/>
          <AttributeValue type="TextString" value="Value2"/>
        </Attribute>
      </RequestPayload>
    </BatchItem>
  </RequestPayload>
</RequestMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```xml
<ProtocolVersion>
  <BatchCount type="Integer" value="2"/>
</RequestHeader>
<BatchItem>
  <Operation type="Enumeration" value="ModifyAttribute"/>
  <UniqueBatchItemID type="ByteString" value="0752c951bb9926cc"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <Attribute>
      <AttributeName type="TextString" value="x-attribute1"/>
      <AttributeValue type="TextString" value="ModifiedValue1"/>
    </Attribute>
  </RequestPayload>
</BatchItem>
<BatchItem>
  <Operation type="Enumeration" value="ModifyAttribute"/>
  <UniqueBatchItemID type="ByteString" value="33f55c8d7e6cafbf"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <Attribute>
      <AttributeName type="TextString" value="x-attribute2"/>
      <AttributeValue type="TextString" value="ModifiedValue2"/>
    </Attribute>
  </RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ModifyAttribute"/>
    <UniqueBatchItemID type="ByteString" value="0752c951bb9926cc"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="x-attribute1"/>
        <AttributeValue type="TextString" value="ModifiedValue1"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="ModifyAttribute"/>
    <UniqueBatchItemID type="ByteString" value="33f55c8d7e6cafbf"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="x-attribute2"/>
        <AttributeValue type="TextString" value="ModifiedValue2"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
<Attribute>
  <AttributeName type="TextString" value="x-attribute2"/>
  <AttributeValue type="TextString" value="ModifiedValue2"/>
</Attribute>
</ResponsePayload>
</BatchItem>

# TIME 12

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="2"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="DeleteAttribute"/>
    <UniqueBatchItemID type="ByteString" value="a3eb249b495e8ad2"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <AttributeName type="TextString" value="x-attribute1"/>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="DeleteAttribute"/>
    <UniqueBatchItemID type="ByteString" value="c1fe7b3c4c977730"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <AttributeName type="TextString" value="x-attribute2"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="DeleteAttribute"/>
    <UniqueBatchItemID type="ByteString" value="a3eb249b495e8ad2"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <AttributeName type="TextString" value="x-attribute1"/>
      <AttributeValue type="TextString" value="ModifiedValue1"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
<BatchItem>
  <Operation type="Enumeration" value="DeleteAttribute"/>
  <UniqueBatchItemID type="ByteString" value="c1fe7b3b4c977730"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <Attribute>
      <AttributeName type="TextString" value="x-attribute2"/>
      <AttributeValue type="TextString" value="ModifiedValue2"/>
    </Attribute>
  </ResponsePayload>
</BatchItem>

# TIME 13

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <SymmetricKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="9c7d7c4fd2076f1909a6ba4342cab1de"/>
          </KeyValue>
        </KeyBlock>
        <CryptographicAlgorithm type="Enumeration" value="AES"/>
        <CryptographicLength type="Integer" value="128"/>
      </SymmetricKey>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
2.2.8 TC-51-11 - Get Usage Allocation Scenario

This test case tests the usage management functionality of KMIP. A key is created and the Activation Date and Protect Stop Date attributes are set in such a way as to allow the Get Usage Allocation operation to be performed. The value of the Usage Limits attribute is set to 1000 bytes, and two subsequent requests for 500 bytes succeed (one of them also verifying the amount that can be received using the Check operation), while a third fails since the usage allocation has been used up. The key is finally revoked and destroyed. This test case shows the use of multiple clients (Client-A, Client-B and Client-C).
<RequestHeader>
  <ProtocolVersion>
    <ProtocolVersionMajor type="Integer" value="1"/>
    <ProtocolVersionMinor type="Integer" value="1"/>
  </ProtocolVersion>
  <BatchCount type="Integer" value="1"/>
</RequestHeader>

<BatchItem>
  <Operation type="Enumeration" value="Create"/>
  <RequestPayload>
    <ObjectType type="Enumeration" value="SymmetricKey"/>
    <TemplateAttribute>
      <AttributeName type="TextString" value="Cryptographic Algorithm"/>
      <AttributeValue type="Enumeration" value="AES"/>
    </Attribute>
    <AttributeName type="TextString" value="Cryptographic Length"/>
    <AttributeValue type="Integer" value="128"/>
    <AttributeName type="TextString" value="Name"/>
    <AttributeValue>
      <NameValue type="TextString" value="TC-51-11-key1"/>
      <NameType type="Enumeration" value="UninterpretedTextString"/>
    </AttributeValue>
    <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
    <AttributeValue type="Integer" value="Encrypt"/>
    <TemplateAttribute/>
  </RequestPayload>
</BatchItem>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
<ResponseMessage>

# TIME 1
# [Client-A]
<RequestMessage>
<RequestHeader>
<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
<BatchCount type="Integer" value="2"/>
</RequestHeader>
<BatchItem>
  <Operation type="Enumeration" value="AddAttribute"/>
  <UniqueBatchItemID type="ByteString" value="369f6802ee57532b"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <Attribute>
      <AttributeName type="TextString" value="Activation Date"/>
      <AttributeValue type="DateTime" value="$NOW-3600"/>
    </Attribute>
  </RequestPayload>
</BatchItem>
<BatchItem>
  <Operation type="Enumeration" value="AddAttribute"/>
  <UniqueBatchItemID type="ByteString" value="b7ca806e52825bf4"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <Attribute>
      <AttributeName type="TextString" value="Protect Stop Date"/>
      <AttributeValue type="DateTime" value="$NOW+600"/>
    </Attribute>
  </RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
<BatchCount type="Integer" value="2"/>
</ResponseHeader>
<BatchItem>
  <Operation type="Enumeration" value="AddAttribute"/>
  <UniqueBatchItemID type="ByteString" value="369f6802ee57532b"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <Attribute>
      <AttributeName type="TextString" value="Activation Date"/>
      <AttributeValue type="DateTime" value="$NOW-3600"/>
    </Attribute>
  </ResponsePayload>
</BatchItem>
</ResponseMessage>
This is a Non-Standards Track Work Product.

The patent provisions of the OASIS IPR Policy do not apply.

```xml
<BatchItem>
  <Operation type="Enumeration" value="AddAttribute"/>
  <UniqueBatchItemID type="ByteString" value="b7ca806e52825bf4"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <Attribute>
      <AttributeName type="TextString" value="Protect Stop Date"/>
      <AttributeValue type="DateTime" value="$NOW+600"/>
    </Attribute>
  </ResponsePayload>
</BatchItem>

# TIME 2
# [Client-A]
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Usage Limits"/>
        <AttributeValue>
          <UsageLimitsTotal type="LongInteger" value="1000"/>
          <UsageLimitsUnit type="Enumeration" value="Byte"/>
        </AttributeValue>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Usage Limits"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```

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<AttributeValue>
    <UsageLimitsTotal type="LongInteger" value="1000"/>
    <UsageLimitsCount type="LongInteger" value="1000"/>
    <UsageLimitsUnit type="Enumeration" value="Byte"/>
</AttributeValue>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 3
# [Client-B]
0167 <RequestMessage>
0168 <RequestHeader>
0169  <ProtocolVersion>
0170   <ProtocolVersionMajor type="Integer" value="1"/>
0171   <ProtocolVersionMinor type="Integer" value="1"/>
0172 </ProtocolVersion>
0173 <BatchCount type="Integer" value="1"/>
0174 </RequestHeader>
0175 <BatchItem>
0176   <Operation type="Enumeration" value="Locate"/>
0177   <RequestPayload>
0178     <AttributeName type="TextString" value="Object Type"/>
0179     <AttributeValue type="Enumeration" value="SymmetricKey"/>
0180   </AttributeName>
0181 </RequestPayload>
0182 </BatchItem>
0183 <ResponseMessage>
0184 <ResponseHeader>
0185  <ProtocolVersion>
0186   <ProtocolVersionMajor type="Integer" value="1"/>
0187   <ProtocolVersionMinor type="Integer" value="1"/>
0188 </ProtocolVersion>
0189 <TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
0190 <BatchCount type="Integer" value="1"/>
0191 </ResponseHeader>
0192 <BatchItem>
0193   <Operation type="Enumeration" value="Locate"/>
0194   <ResultStatus type="Enumeration" value="Success"/>
0195   <ResponsePayload>
0196     <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0197   </ResponsePayload>
0198 </BatchItem>
0199 </ResponseMessage>

# TIME 4
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# [Client-B]
0209 <RequestMessage>
0210   <RequestHeader>
0211     <ProtocolVersion>
0212       <ProtocolVersionMajor type="Integer" value="1"/>
0213       <ProtocolVersionMinor type="Integer" value="1"/>
0214   </ProtocolVersion>
0215   </RequestHeader>
0216   <BatchItem>
0217     <Operation type="Enumeration" value="Get"/>
0218     <RequestPayload>
0219       <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0220   </RequestPayload>
0221 </BatchItem>
0222 </RequestMessage>
0223 # TIME 5
0224 # [Client-B]
0225 <RequestMessage>
0226   <RequestHeader>
0227     <ProtocolVersion>
0228       <ProtocolVersionMajor type="Integer" value="1"/>
0229       <ProtocolVersionMinor type="Integer" value="1"/>
0230     </ProtocolVersion>
0231     <BatchOrderOption type="Boolean" value="true"/>
0232     <BatchCount type="Integer" value="2"/>
0233     </ProtocolVersion>
0234     <BatchItem>
0235       <Operation type="Enumeration" value="Get"/>
0236       <ResultStatus type="Enumeration" value="Success"/>
0237       <ResponsePayload>
0238         <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0239         </UniqueIdentifier>
0240       </ResponsePayload>
0241   </BatchItem>
0242 </RequestMessage>
0243 # TIME 5
0244 # [Client-B]
0245 <RequestMessage>
0246   <RequestHeader>
0247     <ProtocolVersion>
0248       <ProtocolVersionMajor type="Integer" value="1"/>
0249       <ProtocolVersionMinor type="Integer" value="1"/>
0250     </ProtocolVersion>
0251     <BatchCount type="Integer" value="2"/>
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Check"/>
    <UniqueBatchItemID type="ByteString" value="d35a294f9425f06e"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <UsageLimitsCount type="LongInteger" value="500"/>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="GetUsageAllocation"/>
    <UniqueBatchItemID type="ByteString" value="80454d8ce4f738fe"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <UsageLimitsCount type="LongInteger" value="500"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Check"/>
    <UniqueBatchItemID type="ByteString" value="d35a294f9425f06e"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="GetUsageAllocation"/>
    <UniqueBatchItemID type="ByteString" value="80454d8ce4f738fe"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 6
# [Client-A]

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
</RequestMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
# TIME 7
# [Client-C]

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <RequestPayload>
      <Attribute>
        <AttributeName type="TextString" value="Object Type"/>
        <AttributeValue type="Enumeration" value="SymmetricKey"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Name"/>
        <AttributeValue>
          <NameValue type="TextString" value="TC-51-11-key1"/>
          <NameType type="Enumeration" value="UninterpretedTextString"/>
        </AttributeValue>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetUsageAllocation"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 8
# [Client-C]

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <SymmetricKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString"
              #..."/>
value="50f31013c771af4448110f695efa9ec7"/>

<CryptographicAlgorithm type="Enumeration" value="AES"/>
<CryptographicLength type="Integer" value="128"/>
</KeyBlock>
</SymmetricKey>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 9
# [Client-C]

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetUsageAllocation"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <UsageLimitsCount type="LongInteger" value="500"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetUsageAllocation"/>
    <ResultStatus type="Enumeration" value="OperationFailed"/>
    <ResultReason type="Enumeration" value="PermissionDenied"/>
    <ResultMessage type="TextString" value="Unable to allocate requested amount"/>
  </BatchItem>
</ResponseMessage>

# TIME 10
# [Client-A]

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchOrderOption type="Boolean" value="true"/>
    <BatchCount type="Integer" value="2"/>
  </RequestHeader>
</RequestMessage>
This test case tests the import of a foreign key using the Register operation. To validate that the registered key is treated the same as a locally created key, an attribute is added to the key and then modified. Finally, the key is destroyed.
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <TemplateAttribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
          <AttributeValue type="Integer" value="Encrypt"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="x-ID"/>
          <AttributeValue type="TextString" value="TC-61-11"/>
        </Attribute>
      </TemplateAttribute>
      <SymmetricKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="0123456789abcdef0123456789abcdef"/>
          </KeyValue>
          <CryptographicAlgorithm type="Enumeration" value="AES"/>
          <CryptographicLength type="Integer" value="128"/>
        </KeyBlock>
      </SymmetricKey>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="x-provider"/>
        <AttributeValue type="TextString" value="unknown"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="x-provider"/>
        <AttributeValue type="TextString" value="unknown"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 2

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ModifyAttribute"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="x-provider"/>
        <AttributeValue type="TextString" value="unknown"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
xml
<AttributeName type="TextString" value="x-provider"/>
<AttributeValue type="TextString" value="third party"/>
</Attribute>
</RequestPayload>
</BatchItem>
</RequestMessage>

# TIME 3

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="x-provider"/>
        <AttributeValue type="TextString" value="third party"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ModifyAttribute"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="x-provider"/>
        <AttributeValue type="TextString" value="third party"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```

```
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
  </BatchItem>
</ResponseMessage>
```
2.2.10 TC-71-11 - Unrecognized Message Extension with Criticality Indicator

False

A create request is issued and the request contains a Message Extension with the Criticality Indicator set to false. The server does not understand the extension, but since it is non-critical, the create request is processed normally. Subsequently, the created key is deleted.
0036   <TTLV tag="0x540001" type="TextString" value="na"/>
0037   </VendorExtension>
0038   </MessageExtension>
0039   </BatchItem>
0040   </RequestMessage>
0041   <ResponseMessage>
0042     <ResponseHeader>
0043       <ProtocolVersion>
0044         <ProtocolVersionMajor type="Integer" value="1"/>
0045         <ProtocolVersionMinor type="Integer" value="1"/>
0046       </ProtocolVersion>
0047       <TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
0048       <BatchCount type="Integer" value="1"/>
0049     </ResponseHeader>
0050     <BatchItem>
0051       <Operation type="Enumeration" value="Create"/>
0052       <ResultStatus type="Enumeration" value="Success"/>
0053       <ResponsePayload>
0054         <ObjectType type="Enumeration" value="SymmetricKey"/>
0055         <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0056       </ResponsePayload>
0057     </BatchItem>
0058   </ResponseMessage>
0059   # TIME 1
0060   <RequestMessage>
0061     <RequestHeader>
0062       <ProtocolVersion>
0063         <ProtocolVersionMajor type="Integer" value="1"/>
0064         <ProtocolVersionMinor type="Integer" value="1"/>
0065       </ProtocolVersion>
0066       <BatchCount type="Integer" value="1"/>   
0067     </RequestHeader>
0068     <BatchItem>
0069       <Operation type="Enumeration" value="Destroy"/>
0070       <RequestPayload>
0071         <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0072     </RequestPayload>
0073     </BatchItem>
0074   </RequestMessage>
0075   <ResponseMessage>
0076     <ResponseHeader>
0077       <ProtocolVersion>
0078         <ProtocolVersionMajor type="Integer" value="1"/>
0079         <ProtocolVersionMinor type="Integer" value="1"/>
0080       </ProtocolVersion>
0081       <TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
0082     </ResponseHeader>
0083     <BatchItem>
0084       <Operation type="Enumeration" value="Destroy"/>
0085       <ResultStatus type="Enumeration" value="Success"/>
0086       <ResponsePayload>
0087         <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0088   </ResponseMessage>
2.2.11 TC-72-11 - Unrecognized Message Extension with Criticality Indicator True

A create request is issued and the request contains a Message Extension with the Criticality Indicator set to true. The server does not understand the extension, and since it is critical, the create request fails and an error is returned.

```xml
# TIME 0
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <TemplateAttribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Length"/>
          <AttributeValue type="Integer" value="128"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Algorithm"/>
          <AttributeValue type="Enumeration" value="AES"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
          <AttributeValue type="Integer" value="Decrypt Encrypt"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="x-ID"/>
          <AttributeValue type="TextString" value="TC-72-11"/>
        </Attribute>
      </TemplateAttribute>
    </RequestPayload>
    <MessageExtension>
      <VendorIdentification type="TextString" value="Acme"/>
      <CriticalityIndicator type="Boolean" value="true"/>
    </VendorExtension>
    <TTLV tag="0x540001" type="TextString" value="na"/>
  </BatchItem>
</RequestMessage>
```
2.2.12 TC-81-11 - Create a Key Pair

Create a new private/public key pair. Make sure they are linked correctly by issuing Locate commands with the assigned Unique Identifiers. Finally delete both key halves.
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
### Request Message

<table>
<thead>
<tr>
<th>Line</th>
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</tr>
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<td><code>&lt;Operation type=&quot;Enumeration&quot; value=&quot;Locate&quot;/&gt;</code></td>
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<td>0079</td>
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<td>0083</td>
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<tr>
<td>0084</td>
<td><code>&lt;Attribute&gt;</code></td>
</tr>
<tr>
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<td><code>&lt;AttributeName type=&quot;TextString&quot; value=&quot;Link&quot;/&gt;</code></td>
</tr>
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</tr>
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<td>0088</td>
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<tr>
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<td><code>&lt;TimeStamp type=&quot;DateTime&quot; value=&quot;2012-04-27T08:12:26+00:00&quot;/&gt;</code></td>
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<td>0101</td>
<td><code>&lt;BatchCount type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</code></td>
</tr>
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<td><code>&lt;/ResponseHeader&gt;</code></td>
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### Request Message

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</tr>
<tr>
<td>0125</td>
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</tr>
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<td>0126</td>
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</tr>
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<td>0128</td>
<td><code>&lt;AttributeValue&gt;</code></td>
</tr>
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<td>0129</td>
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</tr>
<tr>
<td>0130</td>
<td><code>&lt;LinkedObjectIdentifier type=&quot;TextString&quot;</code></td>
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</tbody>
</table>
<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:26+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 3

<RequestMessage>
  <RequestHeader>
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      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
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  </RequestHeader>
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    <RequestPayload>
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    </RequestPayload>
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    <TimeStamp type="DateTime" value="2012-04-27T08:12:26+00:00"/>
    <BatchCount type="Integer" value="1"/>
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  <BatchItem>
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    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
2.2.13 TC-82-11 - Register Both Halves of a Key Pair

Register a private key and a public key and set the Link attribute to point to each other. Verify the links were set correctly by locating the keys based on the link attributes, and then delete both objects.
| 0010 | <Operation type="Enumeration" value="Register"/> |
| 0011 | <RequestPayload> |
| 0012 | <ObjectType type="Enumeration" value="PrivateKey"/> |
| 0013 | <TemplateAttribute> |
| 0014 | <Attribute> |
| 0015 | <AttributeName type="TextString" value="Cryptographic Usage Mask"/> |
| 0016 | <AttributeValue type="Integer" value="Sign"/> |
| 0017 | </Attribute> |
| 0018 | </ObjectType> |
| 0019 | <Attribute> |
| 0020 | <AttributeName type="TextString" value="x-ID"/> |
| 0021 | </Attribute> |
| 0022 | </TemplateAttribute> |
| 0023 | <PrivateKey> |
| 0024 | <KeyBlock> |
| 0025 | <KeyFormatType type="Enumeration" value="PKCS_8"/> |
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| 0027 | </KeyMaterial> |
| 0028 | </KeyBlock> |
| 0029 | <CryptographicAlgorithm type="Enumeration" value="RSA"/> |
| 0030 | <CryptographicLength type="Integer" value="1024"/> |
| 0031 | </Key> |
| 0032 | </PrivateKey> |
| 0033 | </RequestPayload> |
| 0034 | </BatchItem> |
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# TIME 1

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      </KeyBlock>
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</RequestMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
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# TIME 2
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    <LinkType type="Enumeration" value="PublicKeyLink"/>
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</ResponseMessage>

# TIME 3

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          </RequestHeader>
          <BatchItem>
            <Operation type="Enumeration" value="Locate"/>
            <RequestPayload>
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                <AttributeValue type="Enumeration" value="PublicKey"/>
              </Attribute>
              <Attribute>
                <AttributeName type="TextString" value="Link"/>
                <AttributeValue>
                  <LinkType type="Enumeration" value="PrivateKeyLink"/>
                  <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
                </AttributeValue>
              </Attribute>
            </RequestPayload>
          </BatchItem>
        </RequestMessage>

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            </ProtocolVersion>
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            <BatchCount type="Integer" value="1"/>
          </ResponseHeader>
          <BatchItem>
            <Operation type="Enumeration" value="Locate"/>
            <ResultStatus type="Enumeration" value="Success"/>
            <ResponsePayload>
              <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
            </ResponsePayload>
          </BatchItem>
        </ResponseMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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# Time 5

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| 0247  |   |
| 0248  |   |
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  </RequestHeader>
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    <Operation type="Enumeration" value="Destroy"/>
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    </RequestPayload>
  </BatchItem>
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# TIME 6

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  <BatchItem>
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</RequestMessage>

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    </ProtocolVersion>
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    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
2.2.14 TC-91-11 - Create a Key, Re-key

Create a symmetric key with a specific name, and then use Locate to find the key. After using Re-key to create a new key, verify that the name was removed from the existing key and copied to the new key. Also verify that the key material for the old key is still retrievable. To clean up, both keys are deleted.

```xml
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    <BatchCount type="Integer" value="1"/>
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    <RequestPayload>
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        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Algorithm"/>
          <AttributeValue type="Enumeration" value="AES"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Length"/>
          <AttributeValue type="Integer" value="128"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
          <AttributeValue type="Integer" value="Decrypt Encrypt"/>
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        <Attribute>
          <AttributeName type="TextString" value="Name"/>
          <AttributeValue>
            <NameValue type="TextString" value="TC-91-11-rekeyKey"/>
            <NameType type="Enumeration" value="UninterpretedTextString"/>
          </AttributeValue>
        </Attribute>
      </TemplateAttribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```
<RequestMessage>
  <RequestHeader>
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      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <RequestPayload>
      <Attribute>
        <AttributeName type="TextString" value="Name"/>
        <AttributeValue>
          <NameValue type="TextString" value="TC-91-11-rekeyKey"/>
          <NameType type="Enumeration" value="UninterpretedTextString"/>
        </AttributeValue>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 1

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  </RequestHeader>
  <BatchItem>
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    <RequestPayload>
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        <AttributeName type="TextString" value="Name"/>
        <AttributeValue>
          <NameValue type="TextString" value="TC-91-11-rekeyKey"/>
          <NameType type="Enumeration" value="UninterpretedTextString"/>
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This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
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</ResponsePayload>
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# TIME 2

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# TIME 3

<RequestMessage>
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<RequestMessage>
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  <BatchItem>
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    <RequestPayload>
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        <AttributeName type="TextString" value="Name"/>
        <AttributeValue>
          <NameValue type="TextString" value="TC-91-11-rekeyKey"/>
        </AttributeValue>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```
This is a Non-Standards Track Work Product.

The patent provisions of the OASIS IPR Policy do not apply.

```
0140  <NameType type="Enumeration"
0141    value="UninterpretedTextString"/>
0142  </AttributeValue>
0143  </Attribute>
0144  </RequestPayload>
0145  </BatchItem>
0146  </RequestMessage>
0147  <ResponseMessage>
0148    <ResponseHeader>
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0150        <ProtocolVersionMajor type="Integer" value="1"/>
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0154      <BatchCount type="Integer" value="1"/>
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0156    <BatchItem>
0157      <Operation type="Enumeration" value="Locate"/>
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0160        <UniqueIdentifier type="TextString"
0161          value="$UNIQUE_IDENTIFIER_1"/>
0162      </ResponsePayload>
0163    </BatchItem>
0164  </ResponseMessage>

# TIME 4

0165  <RequestMessage>
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0172    </RequestHeader>
0173    <BatchItem>
0174      <Operation type="Enumeration" value="GetAttributes"/>
0175      <RequestPayload>
0176        <UniqueIdentifier type="TextString"
0177          value="$UNIQUE_IDENTIFIER_0"/>
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0181  </RequestMessage>
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```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```xml
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</BatchItem>
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# TIME 5

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```xml
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  <Operation type="Enumeration" value="Get"/>
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  </RequestPayload>
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# TIME 6

```xml
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  <ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:12:26+00:00"/>
</ResponseHeader>

```xml
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      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
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          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="9ca9840291a65889043c37707da997e8"/>
          </KeyValue>
          <CryptographicAlgorithm type="Enumeration" value="AES"/>
          <CryptographicLength type="Integer" value="128"/>
        </KeyBlock>
      </SymmetricKey>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
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This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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<tr>
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</tr>
<tr>
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</tr>
<tr>
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</tr>
<tr>
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</tr>
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<tr>
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<tr>
<td>0266</td>
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<tr>
<td>0269</td>
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</tr>
<tr>
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</tr>
</tbody>
</table>

# TIME 7

<table>
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<th>XML Fragment</th>
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</thead>
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</tr>
<tr>
<td>0273</td>
<td><code>&lt;ProtocolVersion&gt;</code></td>
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</tr>
<tr>
<td>0284</td>
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</tr>
<tr>
<td>0285</td>
<td><code>&lt;/RequestMessage&gt;</code></td>
</tr>
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<td>0286</td>
<td><code>&lt;ResponseMessage&gt;</code></td>
</tr>
<tr>
<td>0287</td>
<td><code>&lt;/ResponseHeader&gt;</code></td>
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<tr>
<td>0288</td>
<td><code>&lt;ProtocolVersion&gt;</code></td>
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<tr>
<td>0289</td>
<td><code>&lt;ProtocolVersionMajor type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</code></td>
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<td>0290</td>
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<td>0292</td>
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</tr>
<tr>
<td>0293</td>
<td><code>&lt;BatchCount type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</code></td>
</tr>
</tbody>
</table>
2.2.15 TC-92-11 - Existing Key Expired, Re-key with Same Life-cycle

Create a new symmetric key. Then add the Activation Date and Deactivation Date attributes based on the timestamp in the response to the Create request. The Activation Date is set to the current time and the Deactivation Date to a time in the near future. Repeated Get Attribute calls are performed to verify that the state is first 'Active', then subsequently 'Deactivated'. Then issue a Re-key request, including an Offset value of zero leading to the Activation Date of the replacement key to be set to the same value as the Initial Date of the replacement key. Verify from the response that the Activation Date and Deactivation Date attributes were set correctly (if they are not returned, issue a Get Attribute request). Do a Get Attribute operation to verify that the state of the new key is 'Active'. To clean up, both keys are deleted.
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
<RequestMessage>
  <RequestHeader>
    ..
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
      ..
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 2
# [REPEAT] until GetAttributes response shows State changed to
Deactivated

<RequestMessage>
  <RequestHeader>
    ..
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
      ..
    </RequestPayload>
  </BatchItem>
</RequestMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
```
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ReKey"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Offset type="Interval" value="0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:27+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ReKey"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```

# TIME 5

```
<RequestMessage>
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    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ReKey"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
</RequestMessage>
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

| 0234 | <!--mark> </RequestHeader>  
0235 | <BatchItem>  
0236 | <Operation type="Enumeration" value="GetAttributes"/>  
0237 | <RequestPayload>  
0238 | <UniqueIdentifier type="TextString"  
0239 | value="$UNIQUE_IDENTIFIER_1"/>  
0240 | <AttributeName type="TextString" value="Activation Date"/>  
0241 | <AttributeName type="TextString" value="Deactivation Date"/>  
0242 | </RequestPayload>  
0243 | </BatchItem>  
0244 | </RequestMessage> |
| 0245 | <ResponseMessage>  
0246 | <ResponseHeader>  
0247 | <ProtocolVersion>  
0248 | <ProtocolVersionMajor type="Integer" value="1"/>  
0249 | <ProtocolVersionMinor type="Integer" value="1"/>  
0250 | </ProtocolVersion>  
0251 | <TimeStamp type="DateTime" value="2012-04-27T08:14:27+00:00"/>  
0252 | <BatchCount type="Integer" value="1"/>  
0253 | </ResponseHeader>  
0254 | <BatchItem>  
0255 | <Operation type="Enumeration" value="GetAttributes"/>  
0256 | <ResponseStatus type="Enumeration" value="Success"/>  
0257 | <ResponsePayload>  
0258 | <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>  
0259 | <Attribute>  
0260 | <AttributeName type="TextString" value="Activation Date"/>  
0261 | <AttributeValue type="DateTime" value="$NOW"/>  
0262 | </Attribute>  
0263 | <Attribute>  
0264 | <AttributeName type="TextString" value="Deactivation Date"/>  
0265 | <AttributeValue type="DateTime" value="$NOW+120"/>  
0266 | </Attribute>  
0267 | </ResponsePayload>  
0268 | </BatchItem>  
0269 | </ResponseMessage> |
| 0270 | <!--mark> </RequestMessage>  
0271 | <RequestHeader>  
0272 | <ProtocolVersion>  
0273 | <ProtocolVersionMajor type="Integer" value="1"/>  
0274 | <ProtocolVersionMinor type="Integer" value="1"/>  
0275 | </ProtocolVersion>  
0276 | </RequestHeader>  
0277 | <BatchItem>  
0278 | <Operation type="Enumeration" value="GetAttributes"/>  
0279 | <RequestPayload>  
0280 | <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>  
0281 | <AttributeName type="TextString" value="State"/>  
0282 | </RequestPayload>  
0283 | </BatchItem>  
0284 | </RequestMessage> |
<ResponseHeader>
   <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
   </ProtocolVersion>
   <TimeStamp type="DateTime" value="2012-04-27T08:14:27+00:00"/>
   <BatchCount type="Integer" value="1"/>
</ResponseHeader>

<BatchItem>
   <Operation type="Enumeration" value="GetAttributes"/>
   <ResultStatus type="Enumeration" value="Success"/>
   <ResponsePayload>
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      <Attribute>
         <AttributeName type="TextString" value="State"/>
         <AttributeValue type="Enumeration" value="Active"/>
      </Attribute>
   </ResponsePayload>
</BatchItem>

# TIME 7

<RequestMessage>
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      <ProtocolVersion>
         <ProtocolVersionMajor type="Integer" value="1"/>
         <ProtocolVersionMinor type="Integer" value="1"/>
      </ProtocolVersion>
      <BatchCount type="Integer" value="1"/>
   </RequestHeader>
   <BatchItem>
      <Operation type="Enumeration" value="Destroy"/>
      <RequestPayload>
         <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      </RequestPayload>
   </BatchItem>
</RequestMessage>

<ResponseMessage>
   <ResponseHeader>
      <ProtocolVersion>
         <ProtocolVersionMajor type="Integer" value="1"/>
         <ProtocolVersionMinor type="Integer" value="1"/>
      </ProtocolVersion>
      <TimeStamp type="DateTime" value="2012-04-27T08:14:27+00:00"/>
      <BatchCount type="Integer" value="1"/>
   </ResponseHeader>
   <BatchItem>
      <Operation type="Enumeration" value="Destroy"/>
      <ResultStatus type="Enumeration" value="Success"/>
      <ResponsePayload>
         <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      </ResponsePayload>
   </BatchItem>
</ResponseMessage>
# TIME 8

```
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchOrderOption type="Boolean" value="true"/>
    <BatchCount type="Integer" value="2"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Revoke"/>
    <UniqueBatchItemID type="ByteString" value="955dfbb9abbec308"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <RevocationReason>
        <RevocationReasonCode type="Enumeration" value="CessationOfOperation"/>
      </RevocationReason>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <UniqueBatchItemID type="ByteString" value="6ce5ea0c8334b076"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```

```
<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:27+00:00"/>
    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Revoke"/>
    <UniqueBatchItemID type="ByteString" value="955dfbb9abbec308"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <UniqueBatchItemID type="ByteString" value="6ce5ea0c8334b076"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
2.2.16 TC-93-11 - Existing Key Compromised, Re-key with Same Life-cycle

Create a new symmetric key with the Activation Date in the past. Do a Get Attribute operation on the State attribute to verify the key is 'Active'. Then revoke the key as compromised, verify that the state has changed to 'Compromised'. Create a replacement key using Re-key with the offset set to '0' to indicate that the times are to be copied from the existing key. Do a Get Attribute operation to verify that the state of the new key is 'Active'. To clean up, both keys are deleted.

```
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0004                <ProtocolVersionMajor type="Integer" value="1"/>
0005                <ProtocolVersionMinor type="Integer" value="1"/>
0006            </ProtocolVersion>
0007                <BatchCount type="Integer" value="1"/>
0008        </RequestHeader>
0009        <BatchItem>
0010            <Operation type="Enumeration" value="Create"/>
0011            <RequestPayload>
0012                <ObjectType type="Enumeration" value="SymmetricKey"/>
0013                    <TemplateAttribute>
0014                        <AttributeName type="TextString" value="Cryptographic Algorithm"/>
0015                        <AttributeValue type="Enumeration" value="AES"/>
0016                        </AttributeValue>
0017                    <Attribute>
0018                        <AttributeName type="TextString" value="Cryptographic Length"/>
0019                        <AttributeValue type="Integer" value="128"/>
0020                        </AttributeValue>
0021                    <Attribute>
0022                        <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
0023                        <AttributeValue type="Integer" value="Decrypt Encrypt"/>
0024                        </AttributeValue>
0025                    <Attribute>
0026                        <AttributeName type="TextString" value="Activation Date"/>
0027                        <AttributeValue type="DateTime" value="$NOW"/>
0028                        </AttributeValue>
0029                    <Attribute>
0030                        <AttributeName type="TextString" value="Name"/>
0031                        <AttributeValue>
0032                            <NameValue type="TextString" value="TC-93-11-rekeyKey"/>
0033                            <NameType type="Enumeration" value="UninterpretedTextString"/>
0034                        </AttributeValue>
0035                        </AttributeName>
0036                    </Attribute>
0037                </TemplateAttribute>
```
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</RequestMessage>

# TIME 1

<RequestMessage>
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      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <AttributeName type="TextString" value="State"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:27+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>

  </ResponseMessage>
0090 | <AttributeName type="TextString" value="State"/>
0091 | <AttributeValue type="Enumeration" value="Active"/>
0092 | </Attribute>
0093 | </ResponsePayload>
0094 | </BatchItem>
0095 | </ResponseMessage>

# TIME 2

0096 | <RequestMessage>
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0099 |    <ProtocolVersionMajor type="Integer" value="1"/>
0100 |    <ProtocolVersionMinor type="Integer" value="1"/>
0101 |   </ProtocolVersion>
0102 |   <BatchCount type="Integer" value="1"/>
0103 |  </RequestHeader>
0104 |  <BatchItem>
0105 |   <Operation type="Enumeration" value="Revoke"/>
0106 |   <RequestPayload>
0107 |    <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0108 |    <RevocationReason>
0109 |     <RevocationReasonCode type="Enumeration" value="KeyCompromise"/>
0110 |    </RevocationReason>
0111 |    <CompromiseOccurrenceDate type="DateTime" value="$NOW"/>
0112 |   </RequestPayload>
0113 |  </BatchItem>
0114 | </RequestMessage>

0115 | <ResponseMessage>
0116 |  <ResponseHeader>
0117 |   <ProtocolVersion>
0118 |    <ProtocolVersionMajor type="Integer" value="1"/>
0119 |    <ProtocolVersionMinor type="Integer" value="1"/>
0120 |   </ProtocolVersion>
0121 |   <TimeStamp type="DateTime" value="2012-04-27T08:14:27+00:00"/>
0122 |   <BatchCount type="Integer" value="1"/>
0123 |  </ResponseHeader>
0124 |  <BatchItem>
0125 |   <Operation type="Enumeration" value="Revoke"/>
0126 |   <ResultStatus type="Enumeration" value="Success"/>
0127 |   <ResponsePayload>
0128 |    <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0129 |   </ResponsePayload>
0130 |  </BatchItem>
0131 | </ResponseMessage>

# TIME 3

0132 | <RequestMessage>
0133 |  <RequestHeader>
0134 |   <ProtocolVersion>
0135 |    <ProtocolVersionMajor type="Integer" value="1"/>
0136 |    <ProtocolVersionMinor type="Integer" value="1"/>
0137 |   </ProtocolVersion>
0138 |   <BatchCount type="Integer" value="1"/>
0139 |  </RequestHeader>
0140 | </BatchItem>
<Operation type="Enumeration" value="GetAttributes"/>
<RequestPayload>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  <AttributeName type="TextString" value="State"/>
</RequestPayload>
</BatchItem>
</RequestMessage>

# TIME 4

<RequestMessage>
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      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ReKey"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:27+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="State"/>
        <AttributeValue type="Enumeration" value="Compromised"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <AttributeName type="TextString" value="State"/>
    <AttributeValue type="Enumeration" value="Compromised"/>
  </BatchItem>
</ResponseMessage>
<Operation type="Enumeration" value="ReKey"/>
<ResultStatus type="Enumeration" value="Success"/>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
</ResponsePayload>
</ResponseItem>
</ResponseMessage>

# TIME 5

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    <AttributeName type="TextString" value="State"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <Attribute>
        <AttributeName type="TextString" value="State"/>
        <AttributeValue type="Enumeration" value="Active"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</RequestMessage>

# TIME 6

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
  </RequestHeader>
</RequestMessage>
<BatchCount type="Integer" value="1"/>
</BatchItem>
  <Operation type="Enumeration" value="Destroy"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  </RequestPayload>
</BatchItem>
</RequestMessage>

# TIME 7

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchOrderOption type="Boolean" value="true"/>
    <BatchCount type="Integer" value="2"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Revoke"/>
    <UniqueBatchItemID type="ByteString" value="c95bbfd6ad466474"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <RevocationReason>
        <RevocationReasonCode type="Enumeration" value="CessationOfOperation"/>
      </RevocationReason>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <UniqueBatchItemID type="ByteString" value="4e6a3e943e1dda87"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:27+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
2.2.17 TC-94-11 - Create Key, Re-key with New Life-cycle

Create a symmetric key with a specific name, then use Locate to find the key. After using Re-key to create a new key, verify that the name was removed from the existing key and copied to the new key. To clean up, both keys are deleted.
<Attribute>
  <AttributeName type="TextString" value="Cryptographic Length"/>
  <AttributeValue type="Integer" value="128"/>
</Attribute>

<Attribute>
  <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
  <AttributeValue type="Integer" value="Decrypt Encrypt"/>
</Attribute>

<Attribute>
  <AttributeName type="TextString" value="Name"/>
  <AttributeValue>
    <NameValue type="TextString" value="TC-94-11-rekeyKey"/>
    <NameType type="Enumeration" value="UninterpretedTextString"/>
  </AttributeValue>
</Attribute>

# TIME 1

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <RequestPayload>
      <Attribute>
        <AttributeName type="TextString" value="Name"/>
        <AttributeValue>
          <NameValue type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
          <NameType type="Enumeration" value="SymmetricKey"/>
        </AttributeValue>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:27+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

<NameValue type="TextString" value="TC-94-11-rekeyKey"/>
<NameType type="Enumeration" value="UninterpretedTextString"/>

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ReKey"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <TemplateAttribute>
        <Attribute>
          <AttributeName type="TextString" value="Activation Date"/>
          <AttributeValue type="DateTime" value="$NOW-31536000"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Process Start Date"/>
          <AttributeValue type="DateTime" value="$NOW-31536000"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Protect Stop Date"/>
          <AttributeValue type="DateTime" value="$NOW+31536000"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Deactivation Date"/>
          <AttributeValue type="DateTime" value="$NOW+31536000"/>
        </Attribute>
      </TemplateAttribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 2

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
0172  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0173  </ResponsePayload>
0174  </BatchItem>
0175  </ResponseMessage>

# TIME 4

0176  <RequestMessage>
0177  <RequestHeader>
0178    <ProtocolVersion>
0179      <ProtocolVersionMajor type="Integer" value="1"/>
0180      <ProtocolVersionMinor type="Integer" value="1"/>
0181    </ProtocolVersion>
0182    <BatchCount type="Integer" value="1"/>
0183  </RequestHeader>
0184  <BatchItem>
0185    <Operation type="Enumeration" value="GetAttributes"/>
0186    <RequestPayload>
0187      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0188    </RequestPayload>
0189    <AttributeName type="TextString" value="Activation Date"/>
0190    <AttributeName type="TextString" value="Process Start Date"/>
0191    <AttributeName type="TextString" value="Protect Stop Date"/>
0192    <AttributeName type="TextString" value="Deactivation Date"/>
0193  </BatchItem>
0194  </RequestMessage>

0195  <ResponseMessage>
0196  <ResponseHeader>
0197    <ProtocolVersion>
0198      <ProtocolVersionMajor type="Integer" value="1"/>
0199      <ProtocolVersionMinor type="Integer" value="1"/>
0200    </ProtocolVersion>
0201    <TimeStamp type="DateTime" value="2012-04-27T08:14:28+00:00"/>
0202    <BatchCount type="Integer" value="1"/>
0203  </ResponseHeader>
0204  <BatchItem>
0205    <Operation type="Enumeration" value="GetAttributes"/>
0206    <ResponseStatus type="Enumeration" value="Success"/>
0207    <ResponsePayload>
0208      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0209      <AttributeName type="TextString" value="Activation Date"/>
0210      <AttributeValue type="DateTime" value="$NOW-31536000"/>
0211    </AttributeName>
0212      <AttributeName type="TextString" value="Process Start Date"/>
0213      <AttributeValue type="DateTime" value="$NOW-31536000"/>
0214    </AttributeName>
0215      <AttributeName type="TextString" value="Protect Stop Date"/>
0216      <AttributeValue type="DateTime" value="$NOW+31536000"/>
0217    </AttributeName>
0218      <AttributeName type="TextString" value="Deactivation Date"/>
0219      <AttributeValue type="DateTime" value="$NOW+31536000"/>
0220    </AttributeName>
0221      <AttributeName type="TextString" value="Activation Date"/>
0222      <AttributeValue type="DateTime" value="$NOW+31536000"/>
0223    </AttributeName>

0195  </ResponseMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <RequestPayload>
      <AttributeName type="TextString" value="Name"/>
      <AttributeName value="TC-94-11-rekeyKey"/>
      <NameType type="Enumeration" value="UninterpretedTextString"/>
      <AttributeValue/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:28+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 6

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
  </BatchItem>
</RequestMessage>
```
<RequestPayload>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</RequestPayload>
</BatchItem>
</RequestMessage>

# TIME 7

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchOrderOption type="Boolean" value="true"/>
    <BatchCount type="Integer" value="2"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Revoke"/>
    <UniqueBatchItemID type="ByteString" value="64bf984d81eee045"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <RevocationReason>
        <RevocationReasonCode type="Enumeration" value="CessationOfOperation"/>
      </RevocationReason>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <UniqueBatchItemID type="ByteString" value="6e140354775e324d"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:28+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
2.2.18 TC-95-11 - Obtain Lease for Expired Key

Create a symmetric key with a specific name and obtain a lease. Revoke the key with state 'Compromised' and re-key the key. Try to obtain a lease on the old key which fails due to a server policy which does not allow giving out leases for compromised keys. Locate the new key with the original name. Get the new key and obtain a lease.

```xml
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <TemplateAttribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Algorithm"/>
          <AttributeValue type="Enumeration" value="AES"/>
        </Attribute>
      </TemplateAttribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```
<Attribute>
  <AttributeName type="TextString" value="Cryptographic Length"/>
  <AttributeValue type="Integer" value="128"/>
</Attribute>

<Attribute>
  <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
  <AttributeValue type="Integer" value="Decrypt Encrypt"/>
</Attribute>

<Attribute>
  <AttributeName type="TextString" value="Name"/>
  <AttributeValue>
    <NameValue type="TextString" value="TC-95-11-rekeyKey"/>
    <NameType type="Enumeration" value="UninterpretedTextString"/>
  </AttributeValue>
</Attribute>

<Attribute>
  <AttributeName type="TextString" value="Activation Date"/>
  <AttributeValue type="DateTime" value="$NOW"/>
</Attribute>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:28+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 1
# [Client-A]

# TIME 1
<Operation type="Enumeration" value="Get"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  </RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:28+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <SymmetricKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="ef5a0e97a29b32034c66efbf26ad3e42"/>
          </KeyValue>
          <CryptographicAlgorithm type=" Enumeration" value="AES"/>
          <CryptographicLength type="Integer" value="128"/>
        </KeyBlock>
      </SymmetricKey>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 2
# [Client-A]
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ObtainLease"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
<ResponseHeader>
  <ProtocolVersion>
    <ProtocolVersionMajor type="Integer" value="1"/>
    <ProtocolVersionMinor type="Integer" value="1"/>
  </ProtocolVersion>
</ResponseHeader>

<BatchItem>
  <Operation type="Enumeration" value="ObtainLease"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <LeaseTime type="Interval" value="0"/>
    <LastChangeDate type="DateTime" value="$NOW"/>
  </ResponsePayload>
</BatchItem>

<ResponseMessage>
  # TIME 3
  # [Client-B]
  <RequestMessage>
    <RequestHeader>
      <ProtocolVersion>
        <ProtocolVersionMajor type="Integer" value="1"/>
        <ProtocolVersionMinor type="Integer" value="1"/>
      </ProtocolVersion>
    </RequestHeader>
    <BatchItem>
      <Operation type="Enumeration" value="Revoke"/>
      <RequestPayload>
        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
        <RevocationReason>
          <RevocationReasonCode type="Enumeration" value="KeyCompromise"/>
        </RevocationReason>
        <CompromiseOccurrenceDate type="DateTime" value="$NOW"/>
      </RequestPayload>
    </BatchItem>
  </RequestMessage>
</ResponseMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Revoke"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
<ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 4
# [Client-B]
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ReKey"/>
    <RequestPayload>
      <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:28+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ReKey"/>
    <ResponseStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 5
# [Client-A]
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ObtainLease"/>
    <RequestPayload>
      <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```
<RequestMessage>
  <ProtocolVersion>
    <ProtocolVersionMajor type="Integer" value="1"/>
    <ProtocolVersionMinor type="Integer" value="1"/>
  </ProtocolVersion>
  <TimeStamp type="DateTime" value="2012-04-27T08:14:28+00:00"/>
  <BatchCount type="Integer" value="1"/>
  <Operation type="Enumeration" value="ObtainLease"/>
  <ResultStatus type="Enumeration" value="OperationFailed"/>
  <ResultReason type="Enumeration" value="PermissionDenied"/>
  <ResultMessage type="TextString" value="CO is in state Compromised, no lease given"/>
</BatchItem>
</ResponseMessage>

# TIME 6
# [Client-A]

<RequestMessage>
  <ProtocolVersion>
    <ProtocolVersionMajor type="Integer" value="1"/>
    <ProtocolVersionMinor type="Integer" value="1"/>
  </ProtocolVersion>
  <BatchCount type="Integer" value="1"/>
  <Operation type="Enumeration" value="Locate"/>
  <RequestPayload>
    <Attribute>
      <AttributeName type="TextString" value="Name"/>
      <AttributeValue>
        <NameValue type="TextString" value="TC-95-11-rekeyKey"/>
        <NameType type="Enumeration" value="UninterpretedTextString"/>
      </AttributeValue>
    </Attribute>
  </RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
  <ProtocolVersion>
    <ProtocolVersionMajor type="Integer" value="1"/>
    <ProtocolVersionMinor type="Integer" value="1"/>
  </ProtocolVersion>
  <TimeStamp type="DateTime" value="2012-04-27T08:14:28+00:00"/>
  <BatchCount type="Integer" value="1"/>
  <Operation type="Enumeration" value="Locate"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString"/>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```xml
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:28+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <ResponseStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <SymmetricKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="525d4b0bbb66bcb538029d49a6f569a5"/>
          </KeyValue>
          <CryptographicAlgorithm type="Enumeration" value="AES"/>
          <CryptographicLength type="Integer" value="128"/>
        </KeyBlock>
        <SymmetricKey>
        </SymmetricKey>
      </ResponsePayload>
    </ResponseMessage>

# TIME 8
# [Client-A]
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```
This is a Non-Standards Track Work Product. The patent provisions of the OASIS IPR Policy do not apply.

```
0318     <ProtocolVersion>
0319     <ProtocolVersionMajor type="Integer" value="1"/>
0320     <ProtocolVersionMinor type="Integer" value="1"/>
0321     </ProtocolVersion>
0322     <BatchCount type="Integer" value="1"/>
0323     </RequestHeader>
0324     <BatchItem>
0325     <Operation type="Enumeration" value="ObtainLease"/>
0326     <RequestPayload>
0327     <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0328     </RequestPayload>
0329     </BatchItem>
0330     </RequestMessage>
0331     <ResponseMessage>
0332     <ResponseHeader>
0333     <ProtocolVersion>
0334     <ProtocolVersionMajor type="Integer" value="1"/>
0335     <ProtocolVersionMinor type="Integer" value="1"/>
0336     </ProtocolVersion>
0337     <TimeStamp type="DateTime" value="2012-04-27T08:14:28+00:00"/>
0338     <BatchCount type="Integer" value="1"/>
0339     </ResponseHeader>
0340     <BatchItem>
0341     <Operation type="Enumeration" value="ObtainLease"/>
0342     <ResultStatus type="Enumeration" value="Success"/>
0343     <ResponsePayload>
0344     <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0345     <LeaseTime type="Interval" value="0"/>
0346     <LastChangeDate type="DateTime" value="$NOW"/>
0347     </ResponsePayload>
0348     </BatchItem>
0349     </ResponseMessage>

# TIME 9
# [Client-A]
0350     <RequestMessage>
0351     <RequestHeader>
0352     <ProtocolVersion>
0353     <ProtocolVersionMajor type="Integer" value="1"/>
0354     <ProtocolVersionMinor type="Integer" value="1"/>
0355     </ProtocolVersion>
0356     <BatchCount type="Integer" value="1"/>
0357     </RequestHeader>
0358     <BatchItem>
0359     <Operation type="Enumeration" value="Destroy"/>
0360     <RequestPayload>
0361     <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0362     </RequestPayload>
0363     </BatchItem>
0364     </RequestMessage>
0365     <ResponseMessage>
0366     <ResponseHeader>
0367     <ProtocolVersion>
0368     <ProtocolVersionMajor type="Integer" value="1"/>
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
2.2.19 TC-101-11 - Create a Key, Archive and Recover it

Create a symmetric key with a specified name, then use Locate to find the key and get the key.

Archive the key (asynchronous operation, use Poll until it completes) and use Get and Locate on it, but both fail (Get returns an error and Locate returns no Unique Identifiers). Add the Storage Status Mask to the Locate-command, indicating to the server to search in both online and archived storage. The Locate then finds the archived key. Recover the key (asynchronous operation, use Poll until it completes) from the archive, then repeat the Get operation which will now succeed.

Since the client is unable to force the server to respond asynchronously, it is possible for a server to respond synchronously to the requests issued at times 3 and 9, in which case the expected responses are the ones shown at times 4 and 10 respectively.

Note: a server may perform Archive and Recover operations synchronously and not require the use of Poll for the client to wait for the operation to complete

```xml
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    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <TemplateAttribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Algorithm"/>
          <AttributeValue type="Enumeration" value="AES"/>
        </Attribute>
      </TemplateAttribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```

```xml
<UniqueBatchItemID type="ByteString" value="e00004346ea64da4"/>
<ResultStatus type="Enumeration" value="Success"/>
</ResponsePayload>
</BatchItem>

<BatchItem>
  <Operation type="Enumeration" value="Destroy"/>
  <UniqueBatchItemID type="ByteString" value="0376ca8cdcc8af1"/>
  <ResultStatus type="Enumeration" value="Success"/>
  </ResponsePayload>
</BatchItem>
</ResponseMessage>
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
<AttributeValue type="Enumeration" value="SymmetricKey"/>
</Attribute>
<AttributeName type="TextString" value="Name"/>
<AttributeValue>
<NameValuePair type="TextString" value="TC-101-11-archiveKey"/>
<NameType type="Enumeration" value="UninterpretedTextString"/>
</AttributeValue>
</Attribute>
</RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
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    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:28+00:00"/>
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  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 2

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    <RequestPayload>
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    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:28+00:00"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

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    </ProtocolVersion>
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  <BatchItem>
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    <RequestPayload>
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    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
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      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:28+00:00"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
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```
### TIME 3

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</table>
# TIME 4
# [REPEAT] until Archive response is returned

0171  <RequestMessage>
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0176           </ProtocolVersion>
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0179       <BatchItem>
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0193           <BatchCount type="Integer" value="1"/>
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0195       <BatchItem>
0196           <Operation type="Enumeration" value="Archive"/>
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0200           </ResponsePayload>
0201       </BatchItem>
0202 </ResponseMessage>

# TIME 5

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0207               <ProtocolVersionMinor type="Integer" value="1"/>
0208           </ProtocolVersion>
0209           <BatchCount type="Integer" value="1"/>
0210       </RequestHeader>
0211       <BatchItem>
0212           <Operation type="Enumeration" value="Get"/>
0213           <RequestPayload>
0214               <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0215           </RequestPayload>
0216       </BatchItem>
0217 </RequestMessage>

0218  <ResponseMessage>
0219       <ResponseHeader>
0220       <ProtocolVersion>

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</ProtocolVersion>
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<BatchCount type="Integer" value="1"/>
</ResponseHeader>
</BatchItem>
<Operation type="Enumeration" value="GetAttributes"/>
<RequestPayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
<AttributeName type="TextString" value="Archive Date"/>
</RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
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</ResponseHeader>
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# TIME 7

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  <RequestPayload>
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      <AttributeValue type="Enumeration" value="SymmetricKey"/>
    </Attribute>
    <Attribute>
      <AttributeName type="TextString" value="Name"/>
      <AttributeValue>
        <NameValue type="TextString" value="TC-101-11-archiveKey"/>
        <NameType type="Enumeration" value="UninterpretedTextString"/>
      </AttributeValue>
    </Attribute>
  </RequestPayload>
</BatchItem>

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# TIME 8

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    </ProtocolVersion>
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  </RequestHeader>
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<AttributeValue type="Enumeration" value="SymmetricKey"/>
</Attribute>
<AttributeName type="TextString" value="Name"/>
<AttributeValue>
  <NameValue type="TextString" value="TC-101-11-archiveKey"/>
  <NameType type="Enumeration" value="UninterpretedTextString"/>
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</RequestPayload>
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# TIME 9

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    </ProtocolVersion>
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    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Recover"/>
    <RequestPayload>
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    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
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      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
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    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
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    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```xml
0376  </ProtocolVersion>
0377  <TimeStamp type="DateTime" value="2012-04-27T08:14:33+00:00"/>
0378  <BatchCount type="Integer" value="1"/>
0379  </ResponseHeader>
0380  <BatchItem>
0381  <Operation type="Enumeration" value="Recover"/>
0382  <ResultStatus type="Enumeration" value="OperationPending"/>
0383  <AsynchronousCorrelationValue type="ByteString"
value="$ASYNCHRONOUS_CORRELATION_VALUE"/>
0384  </BatchItem>
0385  </ResponseMessage>

# TIME 10
# [REPEAT] until Recover response is returned

0386  <RequestMessage>
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0388           <ProtocolVersion>
0390           <ProtocolVersionMajor type="Integer" value="1"/>
0391           <ProtocolVersionMinor type="Integer" value="1"/>
0392           </ProtocolVersion>
0393       </RequestHeader>
0394       <BatchItem>
0395           <Operation type="Enumeration" value="Poll"/>
0396           <RequestPayload>
0397               <AsynchronousCorrelationValue type="ByteString"
value="$ASYNCHRONOUS_CORRELATION_VALUE"/>
0398           </RequestPayload>
0399       </BatchItem>
0400  </RequestMessage>

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0406           <ProtocolVersionMinor type="Integer" value="1"/>
0407           </ProtocolVersion>
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0409       <BatchItem>
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0413           <ResponsePayload>
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# TIME 11

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0423           <ProtocolVersionMinor type="Integer" value="1"/>
0424           </ProtocolVersion>
0425       </RequestHeader>
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
<BatchItem>
  <Operation type="Enumeration" value="Get"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  </RequestPayload>
</BatchItem>

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  </ResponseHeader>
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    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <SymmetricKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="0b4c9fb659c5ce09ec12c3233d526f45"/>
          </KeyValue>
          <CryptographicAlgorithm type="Enumeration" value="AES"/>
          <CryptographicLength type="Integer" value="128"/>
        </KeyBlock>
      </SymmetricKey>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 12

<RequestMessage>
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  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```

kmip-testcases-v1.2-cn01
Non-Standards Track
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2.2.20 TC-111-11 - Credential, Operation Policy, Destroy Date

Pass a Credential object of type Username and Password in the message header in all requests for identification purposes. Create a symmetric key and set the Operation Policy Name attribute to 'default'. Using another Username and Password Credential, attempt to perform a Get operation batched with a Get Attribute List on the created symmetric key - according to the Default Operation Policy, both these request SHALL fail, and with the Batch Error Continuation Option set to 'Continue', the client SHALL also receive both response payloads. Using the first (correct) Credential, Destroy the object and then get the Destroy Date attribute.

The message exchanges shown in this test case assume that the first Credential (Fred) is valid and the second credential (Barney) is either invalid or does not have access to the newly created key (which should always be true under the 'default' Operation Policy).

Note: a server can elect to not return meta-data for destroyed objects and in those circumstances the Get Attributes operation may fail.
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  <BatchItem>
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    <RequestPayload>
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        </AttributeName>
        <AttributeValue type="Enumeration" value="AES"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Cryptographic Length"/>
        <AttributeValue type="Integer" value="128"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
        <AttributeValue type="Integer" value="Decrypt Encrypt"/>
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      <Attribute>
        <AttributeName type="TextString" value="Name"/>
        <AttributeValue>
          <NameValue type="TextString" value="TC-111-11-key1"/>
          <NameType type="Enumeration" value="UninterpretedTextString"/>
        </AttributeValue>
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      <Attribute>
        <AttributeName type="TextString" value="Operation Policy Name"/>
        <AttributeValue type="TextString" value="default"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Cryptographic Parameters"/>
        <AttributeValue>
          <BlockCipherMode type="Enumeration" value="CBC"/>
          <PaddingMethod type="Enumeration" value="PKCS5"/>
          <HashingAlgorithm type="Enumeration" value="SHA_1"/>
        </AttributeValue>
      </Attribute>
    </TemplateAttribute>
  </RequestPayload>
</BatchItem>
</RequestMessage>
<Operation type="Enumeration" value="Create"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
  <ObjectType type="Enumeration" value="SymmetricKey"/>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</ResponseMessage>

# TIME 1

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <UniqueBatchItemID type="ByteString" value="55d88770e2556dab"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <AttributeName type="TextString" value="Operation Policy Name"/>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <UniqueBatchItemID type="ByteString" value="eb864ee01f1f98cd"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:35+00:00"/>
    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <ResponsePayload>
      <Object type="Enumeration" value="Create"/>
      <ResultStatus type="Enumeration" value="Success"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
<Operation type="Enumeration" value="GetAttributes"/>
<UniqueBatchItemID type="ByteString" value="55d88770e2556dab"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  <Attribute>
    <AttributeName type="TextString" value="Operation Policy Name"/>
    <AttributeValue type="TextString" value="default"/>
  </Attribute>
</ResponsePayload>
</BatchItem>

<Operation type="Enumeration" value="Get"/>
<UniqueBatchItemID type="ByteString" value="eb864ee01f1f98cd"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
  <ObjectType type="Enumeration" value="SymmetricKey"/>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  <SymmetricKey>
    <KeyBlock>
      <KeyFormatType type="Enumeration" value="Raw"/>
      <KeyValue>
        <KeyMaterial type="ByteString" value="30e55f4b230b34ce8afc476c66f8351b"/>
      </KeyValue>
    </KeyBlock>
    <CryptographicAlgorithm type="Enumeration" value="AES"/>
    <CryptographicLength type="Integer" value="128"/>
  </SymmetricKey>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 2
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <Authentication>
      <Credential>
        <CredentialType type="Enumeration" value="UsernameAndPassword"/>
        <CredentialValue>
          <Username type="TextString" value="Barney"/>
          <Password type="TextString" value="secret2"/>
        </CredentialValue>
      </Credential>
      <BatchErrorContinuationOption type="Enumeration" value="Continue"/>
      <BatchOrderOption type="Boolean" value="true"/>
      <BatchCount type="Integer" value="2"/>
    </Authentication>
  </RequestHeader>
<BatchItem>
  <Operation type="Enumeration" value="Get"/>
  <UniqueBatchItemID type="ByteString" value="4f0e6d3dba3d0495"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  </RequestPayload>
</BatchItem>

<BatchItem>
  <Operation type="Enumeration" value="GetAttributeList"/>
  <UniqueBatchItemID type="ByteString" value="9b937e7cd50b233b"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  </RequestPayload>
</BatchItem>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:35+00:00"/>
    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <UniqueBatchItemID type="ByteString" value="4f0e6d3dba3d0495"/>
    <ResultStatus type="Enumeration" value="OperationFailed"/>
    <ResultReason type="Enumeration" value="PermissionDenied"/>
    <ResultMessage type="TextString" value="Access denied"/>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributeList"/>
    <UniqueBatchItemID type="ByteString" value="9b937e7cd50b233b"/>
    <ResultStatus type="Enumeration" value="OperationFailed"/>
    <ResultReason type="Enumeration" value="PermissionDenied"/>
    <ResultMessage type="TextString" value="Access denied"/>
  </BatchItem>
</ResponseMessage>

# TIME 3

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <Authentication>
      <Credential>
        <CredentialType type="Enumeration" value="UsernameAndPassword"/>
        <CredentialValue>
          <Username type="TextString" value="Fred"/>
          <Password type="TextString" value="password1"/>
        </CredentialValue>
      </Credential>
    </Authentication>
  </RequestHeader>
</RequestMessage>
<Authentication/>
0242       <BatchItem>
0243            <Operation type="Enumeration" value="Destroy"/>
0244            <RequestPayload>
0245                <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0246            </RequestPayload>
0247        </BatchItem>
0248 </RequestMessage>

# TIME 4
0249 <RequestMessage>
0250       <RequestHeader>
0251            <ProtocolVersion>
0252                <ProtocolVersionMajor type="Integer" value="1"/>
0253                <ProtocolVersionMinor type="Integer" value="1"/>
0254            </ProtocolVersion>
0255            <Authentication>
0256                <Credential>
0257                   <CredentialType type="Enumeration" value="UsernameAndPassword"/>
0258                   <CredentialValue>
0259                      <Username type="TextString" value="Fred"/>
0260                      <Password type="TextString" value="password1"/>
0261                   </CredentialValue>
0262                </Credential>
0263            </Authentication>
0264            <BatchCount type="Integer" value="1"/>
0265        </RequestHeader>
0266        <BatchItem>
0267            <Operation type="Enumeration" value="GetAttributes"/>
0268            <RequestPayload>
0269                <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0270                <AttributeName type="TextString" value="Destroy Date"/>
0271            </RequestPayload>
0272        </BatchItem>
0273 </RequestMessage>
2.2.21 TC-112-11 - Device Credential, Operation Policy, Destroy Date

Pass a Credential object of type Device Credential in the message header in all requests for identification purposes. Create a symmetric key and set the Operation Policy Name attribute to 'default'. Using another Credential, attempt to perform a Get operation batched with a Get Attribute List on the created symmetric key. According to the Default Operation Policy, both these request SHALL fail, and with the Batch Error Continuation Option set to 'Continue', the client SHALL also receive both response payloads. Using the first Credential, Destroy the object and get the Destroy Date attribute. The message exchanges shown in this test case assume that the first Credential (devID2233) is valid and the second credential (devID4444) is either invalid or does not have access to the newly created key (which should always be true under the 'default' Operation Policy).

Note: a server can elect to not return meta-data for destroyed objects and in those circumstances the Get Attributes operation may fail.
<CredentialValue>
  <Password type="TextString" value="secret"/>
  <DeviceIdentifier type="TextString" value="devID2233"/>
  <NetworkIdentifier type="TextString" value="netID9000"/>
  <MachineIdentifier type="TextString" value="machineID1"/>
  <MediaIdentifier type="TextString" value="mediaID313"/>
  </CredentialValue>
</Authentication>

.BatchCount type="Integer" value="1"/>
</RequestHeader>

.</BatchItem>
</BatchItem>
</RequestMessage>

<Operation type="Enumeration" value="Create"/>
</RequestPayload>

</RequestItem>
</RequestMessage>

</Request>
</Batch>
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</Batch>
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      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:35+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0="/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <Authentication>
      <Credential>
        <CredentialType type="Enumeration" value="Device"/>
        <CredentialValue>
          <DeviceSerialNumber type="TextString" value="serNum123456"/>
          <Password type="TextString" value="secret"/>
          <DeviceIdentifier type="TextString" value="devID2233"/>
          <NetworkIdentifier type="TextString" value="netID9000"/>
          <MachineIdentifier type="TextString" value="machineID1"/>
          <MediaIdentifier type="TextString" value="mediaID313"/>
        </CredentialValue>
      </Credential>
    </Authentication>
    <BatchCount type="Integer" value="2"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <UniqueBatchItemID type="ByteString" value="e705e27dc0ba7789"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0="/>
      <AttributeName type="TextString" value="Operation Policy Name"/>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <UniqueBatchItemID type="ByteString" value="50a7f741a1119826"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0="/>
      <AttributeName type="TextString" value="Operation Policy Name"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <Authentication/>
  </RequestHeader>
  <RequestPayload>
  </RequestPayload>
</RequestMessage>

# TIME 2

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:35+00:00"/>
    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <UniqueBatchItemID type="ByteString" value="e705e27dc0ba7789"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Operation Policy Name"/>
        <AttributeValue type="TextString" value="default"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <UniqueBatchItemID type="ByteString" value="50a7f741a1119826"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <SymmetricKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="acfeaffdbdd17d0e63624a22083ee4b6"/>
          </KeyValue>
          <CryptographicAlgorithm type="Enumeration" value="AES"/>
          <CryptographicLength type="Integer" value="128"/>
        </KeyBlock>
      </SymmetricKey>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 2

<ResponseMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <Authentication/>
  </RequestHeader>
  <RequestPayload>
  </RequestPayload>
</RequestMessage>
```xml
<Credential>
  <CredentialType type="Enumeration" value="Device"/>
  <CredentialValue>
    <DeviceSerialNumber type="TextString" value="serNum101010"/>
    <Password type="TextString" value="passwd"/>
    <DeviceIdentifier type="TextString" value="devID4444"/>
    <NetworkIdentifier type="TextString" value="netID9"/>
    <MachineIdentifier type="TextString" value="machineID1111"/>
    <MediaIdentifier type="TextString" value="mediaID0000"/>
  </CredentialValue>
</Credential>

<Authentication>
  <BatchErrorContinuationOption type="Enumeration" value="Continue"/>
  <BatchOrderOption type="Boolean" value="true"/>
  <BatchCount type="Integer" value="2"/>
</Authentication>

<BatchItem>
  <Operation type="Enumeration" value="Get"/>
  <UniqueBatchItemID type="ByteString" value="1154049d742c498e"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  </RequestPayload>
</BatchItem>

<BatchItem>
  <Operation type="Enumeration" value="GetAttributeList"/>
  <UniqueBatchItemID type="ByteString" value="8ae55c6e91d97b05"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  </RequestPayload>
</BatchItem>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:35+00:00"/>
    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <UniqueBatchItemID type="ByteString" value="1154049d742c498e"/>
    <ResultStatus type="Enumeration" value="OperationFailed"/>
    <ResultReason type="Enumeration" value="PermissionDenied"/>
    <ResultMessage type="TextString" value="Access denied"/>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributeList"/>
    <UniqueBatchItemID type="ByteString" value="8ae55c6e91d97b05"/>
    <ResultStatus type="Enumeration" value="OperationFailed"/>
    <ResultReason type="Enumeration" value="PermissionDenied"/>
  </BatchItem>
</ResponseMessage>
```
This is a Non-Standards Track Work Product.  
The patent provisions of the OASIS IPR Policy do not apply.
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
<Authentication>
  <Credential>
    <CredentialType type="Enumeration" value="Device"/>
    <CredentialValue>
      <DeviceSerialNumber type="TextString" value="serNum123456"/>
      <Password type="TextString" value="secret"/>
      <NetworkIdentifier type="TextString" value="netID9000"/>
      <MachineIdentifier type="TextString" value="machineID1"/>
      <MediaIdentifier type="TextString" value="mediaID313"/>
    </CredentialValue>
  </Credential>
</Authentication>

<BatchCount type="Integer" value="1"/>
</RequestHeader>

<BatchItem>
  <Operation type="Enumeration" value="GetAttributes"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <AttributeName type="TextString" value="Destroy Date"/>
  </RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersionMajor type="Integer" value="1"/>
    <ProtocolVersionMinor type="Integer" value="1"/>
  </ProtocolVersion>
  <TimeStamp type="DateTime" value="2012-04-27T08:14:35+00:00"/>
  <BatchCount type="Integer" value="1"/>
</ResponseHeader>

<BatchItem>
  <Operation type="Enumeration" value="GetAttributes"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <Attribute>
      <AttributeName type="TextString" value="Destroy Date"/>
      <AttributeValue type="DateTime" value="2012-04-27T08:14:35+00:00"/>
    </Attribute>
  </ResponsePayload>
</BatchItem>
</ResponseMessage>
2.2.22 TC-121-11 - Query, Maximum Response Size

Perform a Query operation, querying the Operations and Objects supported by the server, with a restriction on the Maximum Response Size set in the request header. Since the resulting Query response is too large, an error is returned. Increase the Maximum Response Size, resubmit the Query request, and get a successful response.

Note: the list of object types supported and operations will vary depending on the server implementation. The server can report the Vendor Identification in whatever TextString form the vendor selects. The server may return vendor specific tags in the Server Information structure indicating additional vendor-specific information about the server.

```
# TIME 0
0001  <RequestMessage>
0002    <RequestHeader>
0003       <ProtocolVersion>
0004         <ProtocolVersionMajor type="Integer" value="1"/>
0005         <ProtocolVersionMinor type="Integer" value="1"/>
0006       </ProtocolVersion>
0007       <MaximumResponseSize type="Integer" value="256"/>
0008       <BatchCount type="Integer" value="1"/>
0009     </RequestHeader>
0010     <BatchItem>
0011       <Operation type="Enumeration" value="Query"/>
0012         <RequestPayload>
0013           <QueryFunction type="Enumeration" value="QueryOperations"/>
0014           <QueryFunction type="Enumeration" value="QueryObjects"/>
0015         </RequestPayload>
0016     </BatchItem>
0017 </RequestMessage>

0018  <ResponseMessage>
0019    <ResponseHeader>
0020       <ProtocolVersion>
0021         <ProtocolVersionMajor type="Integer" value="1"/>
0022         <ProtocolVersionMinor type="Integer" value="1"/>
0023       </ProtocolVersion>
0024       <TimeStamp type="DateTime" value="2012-04-27T08:14:35+00:00"/>
0025       <BatchCount type="Integer" value="1"/>
0026     </ResponseHeader>
0027     <BatchItem>
0028       <Operation type="Enumeration" value="Query"/>
0029       <ResultStatus type="Enumeration" value="OperationFailed"/>
0030       <ResultReason type="Enumeration" value="ResponseTooLarge"/>
0031       <ResultMessage type="TextString" value="Response size: 648, Maximum Response Size indicated in request: 256"/>
0032     </BatchItem>
0033 </ResponseMessage>

# TIME 1
0034  <RequestMessage>
0035    <RequestHeader>
0036       <ProtocolVersion>
0037         <ProtocolVersionMajor type="Integer" value="1"/>
0038         <ProtocolVersionMinor type="Integer" value="1"/>
0039       </ProtocolVersion>
0040       <MaximumResponseSize type="Integer" value="2048"/>
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
<BatchCount type="Integer" value="1"/>
</RequestHeader>
<BatchItem>
  <Operation type="Enumeration" value="Query"/>
  <RequestPayload>
    <QueryFunction type="Enumeration" value="QueryObjects"/>
    <QueryFunction type="Enumeration" value="QueryServerInformation"/>
  </RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:35+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Query"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <Operation type="Enumeration" value="Create"/>
      <Operation type="Enumeration" value="CreateKeyPair"/>
      <Operation type="Enumeration" value="Register"/>
      <Operation type="Enumeration" value="ReKey"/>
      <Operation type="Enumeration" value="Certify"/>
      <Operation type="Enumeration" value="ReCertify"/>
      <Operation type="Enumeration" value="Locate"/>
      <Operation type="Enumeration" value="Check"/>
      <Operation type="Enumeration" value="Get"/>
      <Operation type="Enumeration" value="GetAttributes"/>
      <Operation type="Enumeration" value="GetAttributeList"/>
      <Operation type="Enumeration" value="AddAttribute"/>
      <Operation type="Enumeration" value="ModifyAttribute"/>
      <Operation type="Enumeration" value="DeleteAttribute"/>
      <Operation type="Enumeration" value="ObtainLease"/>
      <Operation type="Enumeration" value="GetUsageAllocation"/>
      <Operation type="Enumeration" value="Activate"/>
      <Operation type="Enumeration" value="Revoke"/>
      <Operation type="Enumeration" value="Destroy"/>
      <Operation type="Enumeration" value="Archive"/>
      <Operation type="Enumeration" value="Recover"/>
      <Operation type="Enumeration" value="Query"/>
      <Operation type="Enumeration" value="Cancel"/>
      <Operation type="Enumeration" value="Poll"/>
      <Operation type="Enumeration" value="ReKeyKeyPair"/>
      <Operation type="Enumeration" value="DiscoverVersions"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
2.2.23 TC-122-11 - Query Vendor Extensions

Query the server for a list and map of vendor extension tags it recognizes.

Note: Extension Type is an Integer as there is no corresponding enumerated type for the Item Type field.

```xml
# TIME 0
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Query"/>
    <RequestPayload>
      <QueryFunction type="Enumeration" value="QueryExtensionList"/>
    </RequestPayload>
  </BatchItem>
</ResponseMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:35+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Query"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ExtensionInformation>
        <ExtensionName type="TextString" value="ACME LOCATION"/>
      </ExtensionInformation>
      <ExtensionInformation>
        <ExtensionName type="TextString" value="ACME ZIP CODE"/>
      </ExtensionInformation>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
2.2.24 TC-131-11 - Register an Asymmetric Key Pair in PKCS1 Format

Register a private key in the PKCS_1 key format, then register the corresponding public key, also in PKCS_1 format, with the Link attribute pointing to the previously registered private key.

Thereafter add the Link attribute to the private key, and perform Locate operations to find the public and private keys using the Link attribute. Get both the private and public keys in PKCS_1 key format, then destroy both the private and the public key.
<ProtocolVersion>
    <ProtocolVersionMajor type="Integer" value="1"/>
    <ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>

<BatchCount type="Integer" value="1"/>

<RequestHeader>
</RequestHeader>

<BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <RequestPayload>
        <ObjectType type="Enumeration" value="PrivateKey"/>
        <TemplateAttribute>
            <Attribute>
                <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
                <AttributeValue type="Integer" value="Sign"/>
            </Attribute>
            <Attribute>
                <AttributeName type="TextString" value="x-ID"/>
            </Attribute>
        </TemplateAttribute>
        <PrivateKey>
            <KeyBlock>
                <KeyFormatType type="Enumeration" value="PKCS_1"/>
                <KeyValue>
                    <KeyMaterial type="ByteString" value="308204a502010028020100a7f161c0024296cc66c6d4dadb919973435357776003ac5f4b7a1fe440a4ab80b64a87558002cde6ab1b18454a02d668674648346d75b8d71812b2053587c0f6583bc4d7d7ce114f3b176b7975c422e7d3f6c267fa2a6f89b9b9e9e60a1d7c2d833e5a5f4bb0b1434f4f7e95a4110f8a2a14900d6b5b328a9f89135bic67b7101675abdc7b5d21a9c91af7081fcee80b64e8a0ec8295353c79532abf70a1b42e7bb8b7f4e8ac6c810cd6be63d21126e8a7d0ca34142c7b7f91f013da809e99c7b7ae64c51430fb21d8b0e9c2c8b6c58c7cc8946a9ac991b9c285c3612a932734af9374f6e30e549516362a6eda29c6f4c11353dc97426b0f60502030100102820100012455d3c1816516c518493f6398aafa772b7df8949db88a77d8c0a47f62579a4e64486da711fece8950dd9dbbd17f69a434d2e1cd063dc6188b7a74cde5f5a5b96b9a26eb0a3adb46f6480fb1218cd3b083e252e8856bdf792ff9821444d2b27293eb11b733393bc4f75b15e6e3d7569b4995eda14425da43197b726b0e8efef17d37542a5e56d5849f87809567f3925a47b016d564859717bc57fc452d0a49e816e5eb7b308193236ec9efff140858045b73c5d79bafa3f7c6f7045c5dfce03801ad982d1259058c3473e847179a878f2c6b3bd968fb9eae469185892f3676e7895c59991d7fd075e927474f19e7e64ba61d386db3f2b9208180105c69ca8c3cc2464744a79373da4f9f1d9cd7a9749f6423f3c3bca794286bce904f05b1e38cf9ee9a69b43682f8019fb1d5659674c5cbe6d5fa990251314760c00735729a070a9e5432be8e8f4e883e8430b0e04cc4a00d4ddb41e35116fc221e854b43a696c0e6419b1b028180100cde5ea7702789064b6735400c8f9356a080b3d592812eb47a610b9fac6aceeef22aacee438459cda74e5963588c04189d34399bf5b149b20e34ef38a7d09e69539369e8fe735e6f0a64ee99040104d8a406b6f6d86a116e45f95a3eaa5c1012e662e44f15f35ac971e1766b2b9c985109974141b4d37e1e319820a5f5f02818100b2871237bf9faed38c3136aab7877a6a86806e3e542a7186d431e8d27c19ace041458043394e9ff6e2973bb72d8b0e94adde1ee21580f8b68a6f3021950b0f6963014bd5ccc24bfb087c23039d1920db2e22f9df1e6d49e23225cd455a5d9af39f43f18564a36d30309d8653f8f741b399a1e2beee3938e87c2707e178c739f90f02818100960bed14b2afa26d986d592321ee27d71d94065bd2ba1f78157e6f2089d293d227df04794aae922f27d75f51b6b1a561fa66b80b040ca0bdce65b023b917a4b1b7983a74fad70e1c305cbec2bf1fa85a72
This is a Non-Standards Track Work Product.

The patent provisions of the OASIS IPR Policy do not apply.

```xml
<RequestMessage>
  <RequestHeader>
    ...<ProtocolVersionMajor type="Integer" value="1"/>
    ...<ProtocolVersionMinor type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    ...<Operation type="Enumeration" value="Register"/>
    ...<RequestPayload>
      ...<ObjectType type="Enumeration" value="PublicKey"/>
      ...<TemplateAttribute>
        ...<Attribute>
          ...<AttributeName type="TextString" value="Cryptographic Usage Mask"/>
          ...<AttributeValue type="Integer" value="Verify"/>
        </Attribute>
        ...<Attribute>
          ...<AttributeName type="TextString" value="Link"/>
          ...<AttributeValue>
            ...<LinkType type="Enumeration" value="PrivateKeyLink"/>
            ...<LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
          </AttributeValue>
        </Attribute>
      </TemplateAttribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 1

```
This is a Non-Standards Track Work Product. The patent provisions of the OASIS IPR Policy do not apply.
0120  <BatchItem>
0121     <Operation type="Enumeration" value="AddAttribute"/>
0122     <RequestPayload>
0123         <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0124     <Attribute>
0125         <AttributeName type="TextString" value="Link"/>
0126         <AttributeValue>
0127             <LinkType type="Enumeration" value="PublicKeyLink"/>
0128             <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0129         </AttributeValue>
0130     </Attribute>
0131   </RequestPayload>
0132 </BatchItem>
0133 </RequestMessage>
0134 <ResponseMessage>
0135     <ResponseHeader>
0136         <ProtocolVersion>
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0138             <ProtocolVersionMinor type="Integer" value="1"/>
0139         </ProtocolVersion>
0140         <TimeStamp type="DateTime" value="2012-04-27T08:14:36+00:00"/>
0141         <BatchCount type="Integer" value="1"/>
0142     </ResponseHeader>
0143     <BatchItem>
0144         <Operation type="Enumeration" value="AddAttribute"/>
0145         <ResultStatus type="Enumeration" value="Success"/>
0146         <ResponsePayload>
0147             <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0148         <Attribute>
0149             <AttributeName type="TextString" value="Link"/>
0150             <AttributeValue>
0151                 <LinkType type="Enumeration" value="PublicKeyLink"/>
0152                 <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0153             </AttributeValue>
0154         </Attribute>
0155     </ResponsePayload>
0156 </BatchItem>
0157 </ResponseMessage>
0158 # TIME 3
0159 <RequestMessage>
0160     <RequestHeader>
0161         <ProtocolVersion>
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0165         <BatchCount type="Integer" value="1"/>
0166     </RequestHeader>
0167     <BatchItem>
0168         <Operation type="Enumeration" value="Locate"/>
0169         <RequestPayload>
0170             <AttributeName type="TextString" value="Object Type"/>
0171             <AttributeValue type="Enumeration" value="PublicKey"/>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
0172      </Attribute>
0173      <Attribute>
0174      <AttributeName type="TextString" value="Link"/>
0175      <AttributeValue>
0176      <LinkType type="Enumeration" value="PrivateKeyLink"/>
0177      <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0178      </AttributeValue>
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0181      </BatchItem>
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0183      <ResponseMessage>
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0194      <ResultStatus type="Enumeration" value="Success"/>
0195      <ResponsePayload>
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0197      </ResponsePayload>
0198      </BatchItem>
0199      </ResponseMessage>
```

# TIME 4

```
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0205      </ProtocolVersion>
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0207      </RequestHeader>
0208      <BatchItem>
0209      <Operation type="Enumeration" value="Locate"/>
0210      <RequestPayload>
0211      <Attribute>
0212      <AttributeName type="TextString" value="Object Type"/>
0213      <AttributeValue type="Enumeration" value="PrivateKey"/>
0214      </Attribute>
0215      <Attribute>
0216      <AttributeName type="TextString" value="Link"/>
0217      <AttributeValue>
0218      <LinkType type="Enumeration" value="PublicKeyLink"/>
0219      <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0220      </AttributeValue>
0221      <Attribute>
0222      <RequestPayload>
0223      </BatchItem>
0224      </RequestMessage>
```
<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
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    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:36+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
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    <Operation type="Enumeration" value="Locate"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 5

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    </ProtocolVersion>
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  <BatchItem>
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    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <KeyFormatType type="Enumeration" value="PKCS_1"/>
    </RequestPayload>
  </BatchItem>
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<ResponseMessage>
  <ResponseHeader>
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    <TimeStamp type="DateTime" value="2012-04-27T08:14:36+00:00"/>
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  </ResponseHeader>
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    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
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      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <PrivateKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="PKCS_1"/>
          <KeyValue>
            <KeyMaterial type="ByteString"/>
          </KeyValue>
        </KeyBlock>
      </PrivateKey>
    </ResponsePayload>
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  <KeyValue>
    <CryptographicAlgorithm type="Enumeration" value="RSA"/>
    <CryptographicLength type="Integer" value="2048"/>
  </KeyValue>
  <PrivateKey/>
</KeyBlock>

# TIME 6

<kmp-testcases-v1.2-cn01

Non-Standards Track

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```
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
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    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="PublicKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <PublicKey>
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          <KeyFormatType type="Enumeration" value="PKCS_1"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="3082010a0282010100ab7f161c004296cc6d64dad9b1997343535777603acf54b7a"/>
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  </ResponseHeader>
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    <RequestPayload>
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tifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
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```
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### TIME 8

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</table>
2.2.25 TC-132-11 - Register an Asymmetric Key Pair and a Corresponding X509 Certificate

Register a public/private key pair in the PKCS_1 key format and a corresponding X509 certificate.

Add the appropriate links between the registered objects. Make sure the certificate was registered and the attributes set correctly by listing and retrieving the attributes. Get the keys and certificate, and finally destroy all the registered objects.

```
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0018                  <Attribute>
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0020                      <AttributeValue type="TextString" value="TC-132-11-pubkey1"/>
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```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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# TIME 1

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This is a Non-Standards Track Work Product. 
The patent provisions of the OASIS IPR Policy do not apply.
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
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# TIME 5

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0310 <AttributeName type="TextString" value="Certificate Subject"/>
0311 <AttributeName type="TextString" value="Certificate Type"/>
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<KeyFormatType type="Enumeration" value="PKCS_1"/>

<KeyValue/>

<KeyMaterial type="ByteString" value="308204a5020100280210100a7b1f61c0042496cede6c6d4dadb91997343537776003ac5f4b7af1e440a6b8064a8755f8002cf0eab6b18450a2d6608d74f68346d5b8d2718002b30587c0f6583bc4d7dc7ec11f43f1b76b7975c3e22e7d03f6c267fa2a6f89f9b9ee960a1d7c2d833e5a5f4bb0b1434f4e795a41100f8aa214900df8b65089f98135bc67b071675abbbe4d7d5721acc9d14af79f8ce800b6e4a0ec8295353c795328abf70e1b427ebb87f4e8a8c810cdbe66d3d21126b8a8da7d0ca34142cb7f6f91f10d3a0989c1b77e6c451430fbc2d809ec9c2b06c58df7c8ece989a69a99b1c2b8c543612a29a8273a1f99374fe30e54951626a2ed6a29cf6c411335dfdc74260bf605020301001028021003b12455df53c18165165c18493f6398aafa72b17dfaa894db8887d48c0a4f762579ae646f686a711f6ec850cdd9dbd4f769a443d2e1cd6d03c16f8a747c05f5dafa7bd6bba26eb0a3adbf64def6840bf1281cd3b083e252e885b6f0729f98b2144d2b27293e1b1ld73393be41f795b13ed37569b4959ed1a14425da4319b27b26beb8f17c3c75d42ae56d6849f87209567f392a547b016d54859177bcb57fcf4b52d0a49e816e5b7e3088193236ec9e1ff1c0e54085085045b73c5d7b9af3876f7f04dec5dce00840a98d21529508c3473e847179a878f2c6b3db968f99ea6e918589f2f6376e78965c22ed4877ba3917fd07c1f9e19e764ba61d6c3d63b3f20928181005d96c98c37dc2467474a793713daf9bf1d6c799f9f6423fe3cb3ca794286bce920f4b5c13f99ee0828bd2b12c62774c2fbc7e7fc7c24ac51fc781f2bf8f4019b1d5659676c45cbe6df5a992051341760cd007035729a070a9e54d34beba8ef47ee823a0140bcde4a0d4db41e3516fe22c2e85b4a3696c0e6419b1b028180100cd5ea7702879806be673540cbbf09356ad80bc3d59212eab47e71609bfac6aceefe22aceae43849595ae70c35b889e6f8b7e29197d9b73fc729b77b1a6b599e5041d9a40686ed8a1611e459f95a3ea5c1012e666e2e4f15f3359c917e6b2bcb9c89109974141b4d37e1e319820a55028181002871237bf9ad38c3316aab7877a6a868063e542a71864d31e82d7c19ac04154840339342eeff6e2973bb7b2dbb09e4aad1ee82158108fbc86745173a5467f6b93014bd5dccc2b4f8087f23039d11920db2e22f916fe8d9e23225cd455abdaf32ef4f318586a436d3093085f7f714b39aae1eebe3938f87c270e17873739f9f02818100960bed14b2afa2a698d6592231ee275d1495065b2ba1f7815e7e20299881fd92d3227df08479eaae2292f7d5b16b1a561fa668b040ca0b9cded50b2b9174abbb7989a747ad70e1c305bcbe2b8f1a85726a19026e0f1084f518234dc37e7f07b9520215bd433b6d4117718754676a34171666a79f2679c149c5a102818100a0c985a0a0a791a659f9973134c44f37b2e520a2ce2a35800ad27241ed360dfde6e86ca61f412047fd08b75aad4c13c056a699e2979a1ca199028b271120107a3b3ba78a05f71f415baca8b695c060888fa0610d49417e1f0c9b23affa4d496618dbc024986ed690bbb7b0257678ff9df8ac15416f489f8129c32341a8b4d4"/>

</KeyValue>

</CryptographicAlgorithm type="Enumeration" value="RSA"/>
```xml
<KeyFormatType type="Enumeration" value="PKCS_1"/>
<PublicKey>
</PublicKey>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 7

<RequestMessage>
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<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
</RequestHeader>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:14:37+00:00"/>
</ResponseHeader>
</ResponseMessage>

<CryptographicLength type="Integer" value="2048"/>
</KeyBlock>
</PrivateKey>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

<CryptographicAlgorithm type="Enumeration" value="RSA"></CryptographicAlgorithm>
</CryptographicLength type="Integer" value="2048"/>
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
This is a Non-Standards Track Work Product. The patent provisions of the OASIS IPR Policy do not apply.

```
 0486   <Certificate>
 0487     <%ResponsePayload>
 0488     </BatchItem>
 0489     </ResponseMessage>

# TIME 9

0490   <RequestMessage>
0491       <RequestHeader>
0492         <ProtocolVersion>
0493           <ProtocolVersionMajor type="Integer" value="1"/>
0494           <ProtocolVersionMinor type="Integer" value="1"/>
0495         </ProtocolVersion>
0496         <BatchCount type="Integer" value="1"/>
0497       </RequestHeader>
0498       <BatchItem>
0499         <Operation type="Enumeration" value="Destroy"/>
0500         <RequestPayload>
0501           <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0502       </RequestPayload>
0503     </BatchItem>
0504   </RequestMessage>

0505   <ResponseMessage>
0506       <ResponseHeader>
0507         <ProtocolVersion>
0508           <ProtocolVersionMajor type="Integer" value="1"/>
0509           <ProtocolVersionMinor type="Integer" value="1"/>
0510         </ProtocolVersion>
0511         <TimeStamp type="DateTime" value="2012-04-27T08:14:37+00:00"/>
0512         <BatchCount type="Integer" value="1"/>
0513       </ResponseHeader>
0514       <BatchItem>
0515         <Operation type="Enumeration" value="Destroy"/>
0516         <ResultStatus type="Enumeration" value="Success"/>
0517         <ResponsePayload>
0518           <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0519       </ResponsePayload>
0520     </BatchItem>
0521   </ResponseMessage>

# TIME 10

0522   <RequestMessage>
0523       <RequestHeader>
0524         <ProtocolVersion>
0525           <ProtocolVersionMajor type="Integer" value="1"/>
0526           <ProtocolVersionMinor type="Integer" value="1"/>
0527         </ProtocolVersion>
0528         <BatchCount type="Integer" value="1"/>
0529       </RequestHeader>
```
<BatchItem>
  <Operation type="Enumeration" value="Destroy"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  </RequestPayload>
</BatchItem>

# TIME 11

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
2.2.26 TC-133-11 - Create, Re-key Key Pair

Create a public/private key pair on the server and retrieve the keys in PKCS_1 format. Re-key the key pair and retrieve the new public/private key pair in transparent format. To verify that the links are set correctly, the Link attributes are retrieved. Finally, all the keys are destroyed.

Note: a server is not required to support conversion between key formats so returning keys in Transparent form when registered in PKCS_1 may not be supported.
0034   </PrivateKeyTemplateAttribute>
0035   </PublicKeyTemplateAttribute>
0036   <Attribute>
0037     <AttributeName type="TextString" value="Name"/>
0038     <AttributeValue>
0039       <NameValue type="TextString" value="TC-133-11-
publicKey1"/>
0040     <NameType type="Enumeration" value="UninterpretedTextString"/>
0041   </AttributeValue>
0042   </Attribute>
0043   <Attribute>
0044     <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
0045     <AttributeValue type="Integer" value="Verify"/>
0046   </AttributeValue>
0047   </PublicKeyTemplateAttribute>
0048   </RequestPayload>
0049   </BatchItem>
0050   </RequestMessage>

0051   </ResponseMessage>
0052   <ResponseHeader>
0053     <ProtocolVersion>
0054       <ProtocolVersionMajor type="Integer" value="1"/>
0055       <ProtocolVersionMinor type="Integer" value="1"/>
0056     </ProtocolVersion>
0057     <TimeStamp type="DateTime" value="2012-04-27T08:14:39+00:00"/>
0058     <BatchCount type="Integer" value="1"/>
0059   </ResponseHeader>
0060   <BatchItem>
0061     <Operation type="Enumeration" value="CreateKeyPair"/>
0062     <ResultStatus type="Enumeration" value="Success"/>
0063     <ResponsePayload>
0064       <PrivateKeyUniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0065       <PublicKeyUniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0066     </ResponsePayload>
0067   </BatchItem>
0068   </ResponseMessage>

# TIME 1

0069   <RequestMessage>
0070     <RequestHeader>
0071       <ProtocolVersion>
0072         <ProtocolVersionMajor type="Integer" value="1"/>
0073         <ProtocolVersionMinor type="Integer" value="1"/>
0074       </ProtocolVersion>
0075       <BatchCount type="Integer" value="1"/>
0076     </RequestHeader>
0077     <BatchItem>
0078       <Operation type="Enumeration" value="Get"/>
0079       <RequestPayload>
0080         <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0081         <KeyFormatType type="Enumeration" value="PKCS_1"/>
0082       </RequestPayload>
0083     </BatchItem>
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kmip-testcases-v1.2-cn01 11 November 2014
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The patent provisions of the OASIS IPR Policy do not apply.

```xml
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ReKeyKeyPair"/>
    <RequestPayload>
      <PrivateKeyUniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:41+00:00"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ReKeyKeyPair"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <PrivateKeyUniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
      <PublicKeyUniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 4

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchOrderOption type="Boolean" value="true"/>
    <BatchCount type="Integer" value="2"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ReKeyKeyPair"/>
    <RequestPayload>
      <PrivateKeyUniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:41+00:00"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ReKeyKeyPair"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <PrivateKeyUniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
      <PublicKeyUniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 3

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ReKeyKeyPair"/>
    <RequestPayload>
      <PrivateKeyUniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:41+00:00"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ReKeyKeyPair"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <PrivateKeyUniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
      <PublicKeyUniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```

<Operation type="Enumeration" value="Locate"/>
<UniqueBatchItemID type="ByteString" value="f409f9adc43f836f"/>
<RequestPayload>
  <MaximumItems type="Integer" value="1"/>
  <Attribute>
    <AttributeName type="TextString" value="Name"/>
    <AttributeValue>
      <NameValue type="TextString" value="TC-133-11-privateKey1"/>
    </AttributeValue>
  </Attribute>
  <AttributeName type="TextString" value="Object Type"/>
  <AttributeValue type="Enumeration" value="PrivateKey"/>
</RequestPayload>
</BatchItem>
<BatchItem>
  <Operation type="Enumeration" value="Get"/>
  <UniqueBatchItemID type="ByteString" value="396c4d8b5bde0667"/>
  <RequestPayload>
    <KeyFormatType type="Enumeration" value="TransparentRSAPrivateKey"/>
  </RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:41+00:00"/>
    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <UniqueBatchItemID type="ByteString" value="f409f9adc43f836f"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
    </ResponsePayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <UniqueBatchItemID type="ByteString" value="396c4d8b5bde0667"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
    </ResponsePayload>
    <PrivateKey>
      <KeyBlock>
        <KeyFormatType type="Enumeration" value="UninterpretedTextString"/>
      </KeyBlock>
    </PrivateKey>
  </BatchItem>
</ResponseMessage>
<KeyValue>
  <KeyMaterial>
    <Modulus type="BigInteger" value="0000000000000000eb4492bb2364359408c57b8a4f7003572c81aedd19
ed929db13c741cc196b717d1c98f0c250580e37ac3ade11a7ca7aeed3a30424b53d3
3205010ce7ef71ded79e6585d1d77ba3767a8dbfa4d27d71b5831a3452a827f2c2
d398e659df5063ed1dfda28baa94b0e6a74499bad8d8c40e22943b8a19ea9e5819f3a57
5b4409af6b57f5723b45f7c74e54572a72d0aacccbcd49680d6fff8a7c9334ddt0a9e8c
8df2f42889b5840a45afbd4c8686c35a3549e2820f24299bc31b3c05a0bab252c975
35f604f66e4987cb14adb72debac91221a8eb1ad581080144eb89004bf9d9792
be37ec6191ad81e2b60b80174e6cb66ca08c3ac07f51ba1c056130ec69"/>
    <PublicKey type="BigInteger" value="42e22587e4ce6d2227916e855907f9frf13b7872c228622725960bfef286df
5047d1de37674ab8889f64696c202747f911f6d7dbae2b7a3e517767a4a39e6eb5d
e7f40f2451423f6bbda638a497925675c41519fof212d30e65422a1a0ca6d0993cd
7e1f0df889a6f6febeb9452cf5ebce1540410d291553c1cd804aca35e57d43a43ff
d7671aeada0baf0917f8419073454ac6fb218bd3c75cbeb9f3e7bfe40e5f9632db
492eb0cb2ada41083e040535ae409ad866fd199a0335f253cda2d1a95b2fe7b0eece
64b969aaccab322fa0c5c75cf0c15c267db431abedefcea191b72000b612e6e65
eb39c9f08eef767740b4ab32d9c5697ed91e8ccc1"/>
    <PublicExponent type="BigInteger" value="00000000000000100001" />
    <P type="BigInteger" value="0000000000000000f88c737435b8b3f5bdb2b2eb73dd5a665e2ee56c64e05
516903b754ed30213e72a7da638a497925675c41519f0f212d30e65422a1a0ca6d0993cd
9643898a4b879b628771bbdb4d34fbebda27a56f6979309caf9e27d269b1c0454
b62012dc52847e3679f7f19cf7f6b646c9edaafbe546845fc1190fa0ef80b8a45
de63973"/>
    <Q type="BigInteger" value="0000000000000000eb6294819a364dc3afca507e6dc6db5a635f2133166
6842d6734e204b89671acl7e7268c85980eed819d4525e858a8a0713ace15a4e8
b227a6d6a56a1a823707d49085e072736132c882b4767aae2518e6463f3cf490b
776b9ca53ad2f1c3add4976a66ac34521096d39adae5502352b7900fa49b6f65b
28df4ad"/>
    <CRTCoeficient type="BigInteger" value="0000000000000000cc75a52cb58eb65878ac7f7c19070c0a495d5376f40b8
6351b99b1eb3b4e28d39d5b558968ba5a317e21a41ef459d70a9b5273db6ee2cb9f6776d2511b
feb82d34dd0ab24a821f1db2e5c3788347058db696e43fdd40da6a16534ce1f9e3
19b74c5"/>
    <PrimeExponentP type="BigInteger" value="0000000000000000eb6294819a364dc3afca507e6dc6db5a635f2133166
6842d6734e204b89671acl7e7268c85980eed819d4525e858a8a0713ace15a4e8
b227a6d6a56a1a823707d49085e072736132c882b4767aae2518e6463f3cf490b
776b9ca53ad2f1c3add4976a66ac34521096d39adae5502352b7900fa49b6f65b
28df4ad"/>
  </KeyMaterial>
  <CryptographicAlgorithm type="Enumeration" value="RSA" />
  <CryptographicLength type="Integer" value="2048" />
</KeyValue>
<KeyBlock>
  </PrivateKey>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 5
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchOrderOption type="Boolean" value="true"/>
    <BatchCount type="Integer" value="2"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <UniqueBatchItemID type="ByteString" value="5df01d7748d64a16"/>
    <RequestPayload>
      <MaximumItems type="Integer" value="1"/>
      <Attribute>
        <AttributeName type="TextString" value="Name"/>
        <AttributeValue>
          <NameValue type="TextString" value="TC-133-11-publicKey1"/>
          <NameType type="Enumeration" value="UninterpretedTextString"/>
        </AttributeValue>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Object Type"/>
        <AttributeValue type="Enumeration" value="PublicKey"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <UniqueBatchItemID type="ByteString" value="7c7f588280a61c24"/>
    <RequestPayload>
      <KeyFormatType type="Enumeration" value="TransparentRSAPublicKey"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:41+00:00"/>
    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <UniqueBatchItemID type="ByteString" value="5df01d7748d64a16"/>
    <ResultStatus type="Enumeration" value="Success"/>
  </BatchItem>
</ResponseMessage>
```
<ResponsePayload>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
</ResponsePayload>

<internal_code>
<BatchItem>
  <Operation type="Enumeration" value="Get"/>
  <UniqueBatchItemID type="ByteString" value="7c7f588280a61c24"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
    <PublicKey>
      <KeyBlock>
        <KeyFormatType type="Enumeration" value="TransparentRSAPublicKey"/>
        <KeyValue>
          <KeyMaterial>
            <Modulus type="BigInteger" value="0000000000000000eab4492b2364359408c57b8af47003572c81aaed719ed92d9b13c741cc196b717dc9f80c250580e37ac3ade11a7cd1aede3a0424b53d3200510ce7eef71ded7e96e585d1d7ba3767a8dbfad4d2701b5831a3452a827fc2cd398659df5063e1df28a994b0667449bbad8d40e22943b841a9e58519fa3575b4409abfe57f572345f7ce4e45277a2d0accbc6d49608d6ff8a7c933dd70a9e8c8df4282bb58404a5af1b0b548668c35e3549e28204f22249bec13b20c05abo252c975e53f04f68c6e498c7b44d72debac91221a8e81ad58108014debb90b4bf9d9792be37ec619ad83e2b60b80174eeeb66ca08c3ac07f51ba10c56130ec69"/>
            </KeyMaterial>
            <CryptographicAlgorithm type="Enumeration" value="RSA"/>
            <CryptographicLength type="Integer" value="2048"/>
        </KeyMaterial>
      </KeyValue>
      </KeyBlock>
    </PublicKey>
  </ResponsePayload>
</BatchItem>
</ResponseMessage>
```
This is a Non-Standards Track Work Product.

The patent provisions of the OASIS IPR Policy do not apply.

```xml
0362  <ResponseMessage>
0363    <ResponseHeader>
0364      <ProtocolVersion>
0365        <ProtocolVersionMajor type="Integer" value="1"/>
0366        <ProtocolVersionMinor type="Integer" value="1"/>
0367      </ProtocolVersion>
0368      <TimeStamp type="DateTime" value="2012-04-27T08:14:41+00:00"/>
0369      <BatchCount type="Integer" value="1"/>
0370    </ResponseHeader>
0371    <BatchItem>
0372      <Operation type="Enumeration" value="GetAttributes"/>
0373      <ResultStatus type="Enumeration" value="Success"/>
0374      <ResponsePayload>
0375        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
0376          <Attribute>
0377            <AttributeName type="TextString" value="Link"/>
0378            <AttributeValue>
0379              <LinkType type="Enumeration" value="PublicKeyLink"/>
0380              <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
0381            </AttributeValue>
0382          </Attribute>
0383          <Attribute>
0384            <AttributeName type="TextString" value="Link"/>
0385            <AttributeValue>
0386              <LinkType type="Enumeration" value="ReplacedObjectLink"/>
0387              <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0388            </AttributeValue>
0389          </Attribute>
0390        </ResponsePayload>
0391    </BatchItem>
0392  </ResponseMessage>

# TIME 7

```
```xml
0394  <RequestMessage>
0395    <RequestHeader>
0396      <ProtocolVersion>
0397        <ProtocolVersionMajor type="Integer" value="1"/>
0398        <ProtocolVersionMinor type="Integer" value="1"/>
0399      </ProtocolVersion>
0400      <BatchCount type="Integer" value="1"/>
0401    </RequestHeader>
0402    <BatchItem>
0403      <Operation type="Enumeration" value="GetAttributes"/>
0404      <RequestPayload>
0405        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
0406        <AttributeName type="TextString" value="Link"/>
0407      </RequestPayload>
0408    </BatchItem>
0409  </RequestMessage>
```
```xml
0410  <ResponseMessage>
0411    <ResponseHeader>
0412      <ProtocolVersion>
0413        <ProtocolVersionMajor type="Integer" value="1"/>
```
```xml
```
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</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
<BatchItem>
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<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
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<Attribute>
<AttributeName type="TextString" value="Link"/>
<AttributeValue type="TextString">
<LinkType type="Enumeration" value="PrivateKeyLink"/>
<LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
</AttributeValue>
</Attribute>
<Attribute>
<AttributeName type="TextString" value="Link"/>
<AttributeIndex type="Integer" value="1"/>
<AttributeValue type="TextString">
<LinkType type="Enumeration" value="ReplacedObjectLink"/>
<LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
</AttributeValue>
</Attribute>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 8

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      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
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      <AttributeName type="TextString" value="Link"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
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      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
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    <ResponsePayload>
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      <Attribute>
        <AttributeName type="TextString" value="Link"/>
        <AttributeValue type="TextString">
          <LinkType type="Enumeration" value="PrivateKeyLink"/>
          <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
        </AttributeValue>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Link"/>
        <AttributeIndex type="Integer" value="1"/>
        <AttributeValue type="TextString">
          <LinkType type="Enumeration" value="ReplacedObjectLink"/>
          <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
        </AttributeValue>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
<ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
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        <AttributeName type="TextString" value="Link"/>
        <AttributeValue>
          <LinkType type="Enumeration" value="PublicKeyLink"/>
          <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
        </AttributeValue>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Link"/>
        <AttributeIndex type="Integer" value="1"/>
        <AttributeValue>
          <LinkType type="Enumeration" value="ReplacementObjectLink"/>
          <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
        </AttributeValue>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 9

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    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <AttributeName type="TextString" value="Link"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
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      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:41+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
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    <ResponsePayload>
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      <AttributeName type="TextString" value="Link"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
<ResultStatus type="Enumeration" value="Success"/>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
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  <AttributeName type="TextString" value="Link"/>
  <AttributeValue>
    <LinkType type="Enumeration" value="PrivateKeyLink"/>
    <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  </AttributeValue>
</Attribute>
<Attribute>
  <AttributeName type="TextString" value="Link"/>
  <AttributeIndex type="Integer" value="1"/>
  <AttributeValue>
    <LinkType type="Enumeration" value="ReplacementObjectLink"/>
    <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
  </AttributeValue>
</Attribute>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 10

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:41+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
  </BatchItem>
</ResponseMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

| 0567 | </ResponsePayload> |
| 0568 | </BatchItem> |
| 0569 | </ResponseMessage> |

# TIME 11

| 0570 | <RequestMessage> |
| 0571 | <RequestHeader> |
| 0572 |  <ProtocolVersion> |
| 0573 |    <ProtocolVersionMajor type="Integer" value="1"/> |
| 0574 |    <ProtocolVersionMinor type="Integer" value="1"/> |
| 0575 |  </ProtocolVersion> |
| 0576 |  <BatchCount type="Integer" value="1"/> |
| 0577 |  </RequestHeader> |
| 0578 |  <BatchItem> |
| 0579 |    <Operation type="Enumeration" value="Destroy"/> |
| 0580 |  <RequestPayload> |
| 0581 |    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/> |
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| 0583 |  </BatchItem> |
| 0584 | </RequestMessage> |

| 0585 | <ResponseMessage> |
| 0586 | <ResponseHeader> |
| 0587 |  <ProtocolVersion> |
| 0588 |    <ProtocolVersionMajor type="Integer" value="1"/> |
| 0589 |    <ProtocolVersionMinor type="Integer" value="1"/> |
| 0590 |  </ProtocolVersion> |
| 0591 |  <TimeStamp type="DateTime" value="2012-04-27T08:14:41+00:00"/> |
| 0592 |  <BatchCount type="Integer" value="1"/> |
| 0593 |  </ResponseHeader> |
| 0594 |  <BatchItem> |
| 0595 |    <Operation type="Enumeration" value="Destroy"/> |
| 0596 |    <ResultStatus type="Enumeration" value="Success"/> |
| 0597 |  <ResponsePayload> |
| 0598 |    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/> |
| 0599 |  </ResponsePayload> |
| 0600 |  </BatchItem> |
| 0601 | </ResponseMessage> |

# TIME 12

| 0602 | <RequestMessage> |
| 0603 | <RequestHeader> |
| 0604 |  <ProtocolVersion> |
| 0605 |    <ProtocolVersionMajor type="Integer" value="1"/> |
| 0606 |    <ProtocolVersionMinor type="Integer" value="1"/> |
| 0607 |  </ProtocolVersion> |
| 0608 |  <BatchCount type="Integer" value="1"/> |
| 0609 |  </RequestHeader> |
| 0610 |  <BatchItem> |
| 0611 |    <Operation type="Enumeration" value="Destroy"/> |
| 0612 |  <RequestPayload> |
| 0613 |    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/> |
| 0614 |  </RequestPayload> |
| 0615 |  </BatchItem> |
| 0616 | </RequestMessage> |
| 0617 | </ResponseMessage> |
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```xml
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    <ProtocolVersionMajor type="Integer" value="1"/>
    <ProtocolVersionMinor type="Integer" value="1"/>
  </ProtocolVersion>
  <TimeStamp type="DateTime" value="2012-04-27T08:14:41+00:00"/>
  <BatchCount type="Integer" value="1"/>
</ResponseHeader>

<BatchItem>
  <Operation type="Enumeration" value="Destroy"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
  </ResponsePayload>
</BatchItem>

<ResponseMessage>
  # TIME 13

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:41+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
### 2.2.27 TC-134-11 - Register Key Pair, Certify and Re-certify Public Key

Register a public/private key pair on the server. Request the server to have a certificate created using the Certify operation. Retrieve the certificate and its attributes, then execute the Re-certify operation to re-certify the public key. Finally, destroy all the objects.

The new KMIP 1.1 certificate DN attributes are retrieved as are the original (deprecated) KMIP 1.0 certificate DN attributes.

```xml
# TIME 0
0001 <RequestMessage>
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0006     </ProtocolVersion>
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0008   </RequestHeader>
0009   <BatchItem>
0010     <Operation type="Enumeration" value="Register"/>
0011     <RequestPayload>
0012       <ObjectType type="Enumeration" value="PublicKey"/>
0013       <TemplateAttribute>
0014         <Attribute>
0015           <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
0016             <AttributeValue type="Integer" value="Verify"/>
0017         </Attribute>
0018         <Attribute>
0019           <AttributeName type="TextString" value="x-ID"/>
0020             <AttributeValue type="TextString" value="TC-134-11-pubkey1"/>
0021         </Attribute>
0022       </TemplateAttribute>
0023       <PublicKey>
0024         <KeyBlock>
0025           <KeyFormatType type="Enumeration" value="PKCS_1"/>
0026           <KeyValue>
0027             <KeyMaterial type="ByteString">
0028               value="3082010a0282010100ab7f161c0042496ccd6c6d4dad9b1999734353577603acf54b7af1e440af80b64a8755f88002cfeba6b184540a2d66086746483465d758d71812b205387cf0f53b4cd7c7ec114f3b176b7957c422e7d033fc6267fa2a6f89b9beee9e0a1d7c2d33e5a5f4bb0b1434f4e795a41100f8aa214900df8b65089f98135b1c67b701675abdbc7d5721aa9d14a7f081fcccc80b64e8a0ecc8295353c795328abf70eb427bb7f48ac8c810c86e3d21126eba8da7d0ca3412cb76f91f013da809e9c1b7ae64c54130fbc21d80e9c2cb06c5c8d7c5ce3893a999bc2815c5612a29a827d3a7f9374fe30e54951662a6eda29c6fc411335d5dc7426b0f605020301001"/>
0029           </KeyMaterial>
0030         </KeyValue>
0031       </KeyBlock>
0032       <PublicKey>
0033         <KeyFormatType type="Enumeration" value="PKCS_1"/>
0034         <KeyValue>
0035             <KeyMaterial type="ByteString">
0036               value="3082010a0282010100ab7f161c0042496ccd6c6d4dad9b1999734353577603acf54b7af1e440af80b64a8755f88002cfeba6b184540a2d66086746483465d758d71812b205387cf0f53b4cd7c7ec114f3b176b7957c422e7d033fc6267fa2a6f89b9beee9e0a1d7c2d33e5a5f4bb0b1434f4e795a41100f8aa214900df8b65089f98135b1c67b701675abdbc7d5721aa9d14a7f081fcccc80b64e8a0ecc8295353c795328abf70eb427bb7f48ac8c810c86e3d21126eba8da7d0ca3412cb76f91f013da809e9c1b7ae64c54130fbc21d80e9c2cb06c5c8d7c5ce3893a999bc2815c5612a29a827d3a7f9374fe30e54951662a6eda29c6fc411335d5dc7426b0f605020301001"/>
0037           </KeyMaterial>
0038         </KeyValue>
0039       </PublicKey>
0040     </RequestPayload>
0041   </BatchItem>
0042 </RequestMessage>
```
<ResponseMessage>
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      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:41+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 1

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    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
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    <RequestPayload>
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        <Attribute>
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          <AttributeValue type="Integer" value="Sign"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Link"/>
          <AttributeValue>
            <LinkType type="Enumeration" value="PublicKeyLink"/>
            <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
          </AttributeValue>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="x-ID"/>
          <AttributeValue type="TextString" value="TC-134-11-prikey1"/>
        </Attribute>
      </TemplateAttribute>
      <PrivateKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="PKCS_1"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="308204a50201000282010100ab7f161c0042496cc6c6d4dadb9199734353"/>
          </KeyValue>
        </KeyBlock>
      </PrivateKey>
    </RequestPayload>
  </BatchItem>
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# TIME 2

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  </RequestHeader>
  <BatchItem>
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    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
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    <AttributeName type="TextString" value="X.509 Certificate Identifier"/>
    <AttributeName type="TextString" value="X.509 Certificate Issuer"/>
    <AttributeName type="TextString" value="X.509 Certificate Subject"/>
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0286  <AttributeName type="TextString" value="Initial Date"/>
0287  <AttributeName type="TextString" value="Unique Identifier"/>
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This is a Non-Standards Track Work Product. The patent provisions of the OASIS IPR Policy do not apply.

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0382 <CertificateRequestType type="Enumeration" value="PKCS_10"/>

# TIME 7
This is a Non-Standards Track Work Product.

The patent provisions of the OASIS IPR Policy do not apply.

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# TIME 10

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This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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# TIME 11

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# TIME 15

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 ResultStatus type="Enumeration" value="Success"/>
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# TIME 16

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 Operation type="Enumeration" value="Destroy"/>
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 ResultStatus type="Enumeration" value="Success"/>
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 value="$UNIQUE_IDENTIFIER_3"/>
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</BatchItem>
</ResponseMessage>
2.2.28 TC-141-11 - Key Wrapping using AES Key Wrap and No Encoding

Register a 128-bit AES key encryption key (KEK) with the Cryptographic Usage Mask attribute set to Wrap and the Cryptographic Parameters specifying NIST Key Wrap as the Block Cipher Mode. Subsequently, register another 128-bit AES data key (DEK). Retrieve the DEK wrapped using the NIST Key Wrap algorithm and the KEK. The Cryptographic Usage Mask Attribute Name is specified, indicating to the server that this attribute is to be wrapped together with the key material. The Encoding Option field is omitted, which means that the default TTLV-encoding is used. Finally, destroy both keys to return the server to the initial state.

The key material for both the KEK and the DEK are from the test vectors specified in Section 4.6 of [NISTKeyWrap].
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</tr>
</thead>
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<tr>
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</tr>
<tr>
<td>0013</td>
<td><code>&lt;TemplateAttribute&gt;</code></td>
</tr>
<tr>
<td>0014</td>
<td><code>&lt;Attribute&gt;</code></td>
</tr>
<tr>
<td>0015</td>
<td><code>&lt;AttributeName type=&quot;TextString&quot; value=&quot;Name&quot;/&gt;</code></td>
</tr>
<tr>
<td>0016</td>
<td><code>&lt;AttributeValue&gt;</code></td>
</tr>
<tr>
<td>0017</td>
<td><code>&lt;NameValue type=&quot;TextString&quot; value=&quot;TC-141-11-key1&quot;/&gt;</code></td>
</tr>
<tr>
<td>0018</td>
<td><code>&lt;NameType type=&quot;Enumeration&quot; value=&quot;UninterpretedTextString&quot;/&gt;</code></td>
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<tr>
<td>0019</td>
<td><code>&lt;/AttributeValue&gt;</code></td>
</tr>
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<td><code>&lt;Attribute&gt;</code></td>
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<tr>
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<td><code>&lt;AttributeValue type=&quot;DateTime&quot; value=&quot;NOW-3600&quot;/&gt;</code></td>
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<td>0035</td>
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<tr>
<td>0037</td>
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<td>0042</td>
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<td>0052</td>
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</tr>
<tr>
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<tr>
<td>0054</td>
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</tr>
<tr>
<td>0055</td>
<td><code>&lt;Operation type=&quot;Enumeration&quot; value=&quot;Register&quot;/&gt;</code></td>
</tr>
<tr>
<td>0056</td>
<td><code>&lt;ResultStatus type=&quot;Enumeration&quot; value=&quot;Success&quot;/&gt;</code></td>
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<td>0057</td>
<td><code>&lt;/ResponsePayload&gt;</code></td>
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</tbody>
</table>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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0062  <UniqueIdentifier type="TextString" 
0063    value="$UNIQUE_IDENTIFIER_0"/>
0064  </ResponsePayload>
0065  </BatchItem>
0066  </ResponseMessage>
0067  # TIME 1
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0069    <RequestHeader>
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0073      </ProtocolVersion>
0074      <BatchCount type="Integer" value="1"/>
0075    </RequestHeader>
0076    <BatchItem>
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0085              <NameType type="Enumeration" value="UninterpretedTextString"/>
0086          </AttributeValue>
0087          </Attribute>
0088        </TemplateAttribute>
0089        <SymmetricKey>
0090          <KeyBlock>
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0092            <KeyValue>
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        <EncryptionKeyInformation>
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          <CryptographicParameters>
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          </CryptographicParameters>
        </EncryptionKeyInformation>
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</RequestMessage>

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    <EncryptionKeyInformation>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
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        <BlockCipherMode type="Enumeration" value="NISTKeyWrap"/>
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    </EncryptionKeyInformation>
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# TIME 3

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    <BatchCount type="Integer" value="1"/>
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# TIME 4

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# TIME 5

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    </BatchItem>
</RequestMessage>
<RequestPayload>
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  <RevocationReason>
    <RevocationReasonCode type="Enumeration" value="Unspecified"/>
  </RevocationReason>
</RequestPayload>
</BatchItem>
</RequestMessage>

# TIME 6

<!-- REQUEST 7 -->

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    </ProtocolVersion>
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</ResponseMessage>

<!-- RESPONSE 7 -->

<!-- REQUEST 8 -->

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    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
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# TIME 6

<!-- REQUEST 9 -->

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    </ProtocolVersion>
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  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</ResponseMessage>
2.2.29 TC-142-11 - Key Wrapping using AES Key Wrap with Attributes

Register a 128-bit AES key encryption key (KEK) with the Cryptographic Usage Mask attribute set to Wrap and the Cryptographic Parameters specifying NIST Key Wrap as the Block Cipher Mode. Subsequently, register another 128-bit AES data key (DEK). Retrieve the data key wrapped using the NIST Key Wrap algorithm and the KEK. The Encoding Option is set to No Encoding, which means that only the key material is wrapped as opposed to the whole TTLV-encoded Key Value structure being wrapped. Finally, destroy both keys to return the server to the initial state. The key material for both the KEK and the DEK are from the test vectors specified in Section 4.6 of [NISTKeyWrap].
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    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:42+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
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    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
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    </ResponsePayload>
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# TIME 1

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  </RequestHeader>
  <BatchItem>
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    <RequestPayload>
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          <AttributeValue>
            <NameValue type="TextString" value="TC-142-11-key2"/>
          </AttributeValue>
        </Attribute>
      </TemplateAttribute>
    </RequestPayload>
  </BatchItem>
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value="UninterpretedTextString"/>
    </AttributeValue>
  </Attribute>
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# TIME 2

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    </RequestPayload>
  </BatchItem>
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  <CryptographicParameters>
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  </CryptographicParameters>
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<RequestPayload>
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    <SymmetricKey>
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dc05b94b1c1946fd3d6ef14cfe184daada0daf07cf9e038c462f501d8bba82c7d6b33
152db9f9d415924b9f13f6cb75ff880ab09dc862e473f74bda9398ec7695d41"/>
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            <CryptographicParameters>
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            </CryptographicParameters>
          </EncryptionKeyInformation>
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      </KeyBlock>
    </SymmetricKey>
  </ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 3

<RequestMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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</RequestHeader>

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  <RequestPayload>
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  </RequestPayload>
</BatchItem>
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    <BatchCount type="Integer" value="1"/>
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  <BatchItem>
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    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
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      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <SymmetricKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="00112233445566778899aabbccddeeff"/>
          </KeyValue>
          <CryptographicAlgorithm type="Enumeration" value="AES"/>
          <CryptographicLength type="Integer" value="128"/>
        </KeyBlock>
      </SymmetricKey>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 4

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      # TIME 4
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
</RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:43+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 5

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Revoke"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <RevocationReason>
        <RevocationReasonCode type="Enumeration" value="Unspecified"/>
      </RevocationReason>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:42+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Revoke"/>
    <ResultStatus type="Enumeration" value="Success"/>
  </BatchItem>
</ResponseMessage>
```
# TIME 6

## 2.2.30 TC-151-11 - Locate a Fresh Object from the Default Group

Locate a single fresh object from the default object group. Perform a Get Attribute to retrieve the value of the Fresh attribute to make sure that the key is fresh. Get the object (the kind of object returned depends on the server policy), and get the Fresh attribute again to verify that the object is no longer fresh. Finally, destroy the object. This test case illustrates only one possible behavior related to the default group. In this test case, it is assumed that the server has fresh objects available in the default group, or that it creates a new object on-the-fly as a consequence of the Locate request. It is also assumed that no other client retrieves the object after the Locate but before the batched Get Attributes request, thereby toggling the value of the Fresh attribute.
<RequestMessage>
    <RequestHeader>
        <ProtocolVersion>
            <ProtocolVersionMajor type="Integer" value="1"/>
            <ProtocolVersionMinor type="Integer" value="1"/>
        </ProtocolVersion>
        <BatchOrderOption type="Boolean" value="true"/>
        <BatchCount type="Integer" value="2"/>
    </RequestHeader>
    <BatchItem>
        <Operation type="Enumeration" value="Locate"/>
        <UniqueBatchItemID type="ByteString" value="1e766d8a95d6e5d1"/>
        <RequestPayload>
            <MaximumItems type="Integer" value="1"/>
            <ObjectGroupMember type="Enumeration" value="GroupMemberFresh"/>
            <Attribute>
                <AttributeName type="TextString" value="Object Group"/>
                <AttributeValue type="TextString" value="default"/>
            </Attribute>
        </RequestPayload>
    </BatchItem>
    <BatchItem>
        <Operation type="Enumeration" value="GetAttributes"/>
        <UniqueBatchItemID type="ByteString" value="8650f83be5373722"/>
        <RequestPayload>
            <AttributeName type="TextString" value="Fresh"/>
        </RequestPayload>
    </BatchItem>
</RequestMessage>

<ResponseMessage>
    <ResponseHeader>
        <ProtocolVersion>
            <ProtocolVersionMajor type="Integer" value="1"/>
            <ProtocolVersionMinor type="Integer" value="1"/>
        </ProtocolVersion>
        <TimeStamp type="DateTime" value="2012-04-27T08:14:43+00:00"/>
        <BatchCount type="Integer" value="2"/>
    </ResponseHeader>
    <BatchItem>
        <Operation type="Enumeration" value="Locate"/>
        <UniqueBatchItemID type="ByteString" value="1e766d8a95d6e5d1"/>
        <ResultStatus type="Enumeration" value="Success"/>
        <ResponsePayload>
            <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
            <Attribute>
                <AttributeName type="TextString" value="Fresh"/>
            </Attribute>
        </ResponsePayload>
    </BatchItem>
    <BatchItem>
        <Operation type="Enumeration" value="GetAttributes"/>
        <UniqueBatchItemID type="ByteString" value="8650f83be5373722"/>
        <ResultStatus type="Enumeration" value="Success"/>
        <ResponsePayload>
            <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
            <Attribute>
                <AttributeName type="TextString" value="Fresh"/>
            </Attribute>
        </ResponsePayload>
    </BatchItem>
</ResponseMessage>
<AttributeValue type="Boolean" value="true"/>
</AttributeValue>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 1

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
</RequestHeader>
<BatchItem>
<Operation type="Enumeration" value="Get"/>
<RequestPayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</RequestPayload>
</BatchItem>
</RequestMessage>

# TIME 2

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
</ProtocolVersion>
</RequestHeader>
<BatchItem>
<Operation type="Enumeration" value="Get"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<ObjectType type="Enumeration" value="SymmetricKey"/>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
<SymmetricKey>
<KeyBlock>
<KeyFormatType type="Enumeration" value="Raw"/>
<KeyValue>
<KeyMaterial type="ByteString" value="7fe09d434868ae14a0021ac19330f8d9226790d680e519f8ac25f42d72f60f0c"/>
</KeyValue>
</KeyBlock>
</SymmetricKey>
</ResponsePayload>
</BatchItem>
</RequestMessage>
<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>

<BatchCount type="Integer" value="1"/>

<Operation type="Enumeration" value="GetAttributes"/>

<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>

<AttributeName type="TextString" value="Fresh"/>

<RequestPayload>

<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>

<ResultStatus type="Enumeration" value="Success"/>

<ResponsePayload>

<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>

<AttributeName type="TextString" value="Fresh"/>

<AttributeValue type="Boolean" value="false"/>

</Attribute>

</ResponsePayload>

</BatchItem>

</ResponseMessage>

# TIME 3

<RequestMessage>

<RequestHeader>

<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>

</RequestHeader>

<BatchItem>

<Operation type="Enumeration" value="Destroy"/>

<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>

</RequestPayload>

</BatchItem>

</RequestMessage>

<ResponseMessage>

<ResponseHeader>

<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>

</ResponseHeader>

<BatchItem>

</Operation type="Enumeration" value="Destroy"/>

</RequestPayload>

</BatchItem>

</ResponseMessage>

<ResponseMessage>
2.2.31 TC-152-11 - Client-side Group Management

Register two symmetric keys, both with the same (non-default) Object Group name specified and the Fresh attribute set to true. Get the Fresh attribute from both keys to make sure it was set. Perform three batched Locate and Get requests to get a fresh key from the group. The first two requests should return both the registered keys, whereas the third request should return no key. To clean up, destroy both keys. This test case assumes that the server supports and sets the Fresh attribute when requested to do so by the client.
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
```xml
<kmlt-testcases-v1.2-cn01
0077  <BatchItem>
0078      <Operation type="Enumeration" value="Register"/>
0079      <RequestPayload>
0080      </ObjectType type="Enumeration" value="SymmetricKey"/>
0081      </TemplateAttribute>
0082      <Attribute>
0083          <AttributeName type="TextString" value="Cryptographic Algorithm"/>
0084          <AttributeValue type="Enumeration" value="AES"/>
0085      </Attribute>
0086      <Attribute>
0087          <AttributeName type="TextString" value="Cryptographic Length"/>
0088          <AttributeValue type="Integer" value="256"/>
0089      </Attribute>
0090      <Attribute>
0091          <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
0092          <AttributeValue type="Integer" value="Decrypt Encrypt"/>
0093      </Attribute>
0094      <Attribute>
0095          <AttributeName type="TextString" value="Object Group"/>
0096          <AttributeValue type="TextString" value="ClientFreshTest"/>
0097      </Attribute>
0098      <Attribute>
0099          <AttributeName type="TextString" value="Fresh"/>
0100          <AttributeValue type="Boolean" value="true"/>
0101      </Attribute>
0102      <Attribute>
0103          <AttributeName type="TextString" value="x-ID"/>
0104          <AttributeValue type="TextString" value="TC-152-11-key2"/>
0105      </Attribute>
0106      </TemplateAttribute>
0107      <SymmetricKey>
0108          <KeyBlock>
0109              <KeyFormatType type="Enumeration" value="Raw"/>
0110              <KeyValue>
0111                  <KeyMaterial type="ByteString" value="00112233445566778899aabbccddeeff000102030405060708090a0b0c0d0e0f"/>
0112                  </KeyValue>
0113              </KeyValue>
0114              <CryptographicAlgorithm type="Enumeration" value="AES"/>
0115              <CryptographicLength type="Integer" value="256"/>
0116          </KeyBlock>
0117      </RequestPayload>
0118  </BatchItem>
0119  </ResponseMessage>
0120  <ResponseHeader>
0121      <ProtocolVersion>
0122          <ProtocolVersionMajor type="Integer" value="1"/>
0123          <ProtocolVersionMinor type="Integer" value="1"/>
0124      </ProtocolVersion>
0125      <TimeStamp type="DateTime" value="2012-04-27T08:14:43+00:00"/>
0126      <BatchCount type="Integer" value="1"/>
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

0128  </ResponseHeader>
0129  </BatchItem>
0130  <Operation type="Enumeration" value="Register"/>
0131  <ResponseStatus type="Enumeration" value="Success"/>
0132  <ResponsePayload>
0133  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0134  </ResponsePayload>
0135  </BatchItem>
0136  </ResponseMessage>

# TIME 2
0137  <RequestMessage>
0138    <RequestHeader>
0139      <ProtocolVersion>
0140        <ProtocolVersionMajor type="Integer" value="1"/>
0141        <ProtocolVersionMinor type="Integer" value="1"/>
0142      </ProtocolVersion>
0143      <BatchCount type="Integer" value="1"/>
0144    </RequestHeader>
0145    <BatchItem>
0146      <Operation type="Enumeration" value="GetAttributes"/>
0147      <RequestPayload>
0148        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0149        <AttributeName type="TextString" value="Fresh"/>
0150      </RequestPayload>
0151    </BatchItem>
0152  </RequestMessage>

0153  <ResponseMessage>
0154    <ResponseHeader>
0155      <ProtocolVersion>
0156        <ProtocolVersionMajor type="Integer" value="1"/>
0157        <ProtocolVersionMinor type="Integer" value="1"/>
0158      </ProtocolVersion>
0159      <TimeStamp type="DateTime" value="2012-04-27T08:14:43+00:00"/>
0160      <BatchCount type="Integer" value="1"/>
0161    </ResponseHeader>
0162    <BatchItem>
0163      <Operation type="Enumeration" value="GetAttributes"/>
0164      <ResponseStatus type="Enumeration" value="Success"/>
0165      <ResponsePayload>
0166        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0167        <Attribute>
0168          <AttributeName type="TextString" value="Fresh"/>
0169          <AttributeValue type="Boolean" value="true"/>
0170        </Attribute>
0171      </ResponsePayload>
0172    </BatchItem>
0173  </ResponseMessage>

# TIME 3
0174  <RequestMessage>
0175    <RequestHeader>
0176      <ProtocolVersion>
0177        <ProtocolVersionMajor type="Integer" value="1"/>
0178        <ProtocolVersionMinor type="Integer" value="1"/>
```
0179  </ProtocolVersion>
0180  <BatchCount type="Integer" value="1"/>
0181  </RequestHeader>
0182  <BatchItem>
0183   <Operation type="Enumeration" value="GetAttributes"/>
0184   <RequestPayload>
0185    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0186    <AttributeName type="TextString" value="Fresh"/>
0187  </RequestPayload>
0188  </BatchItem>
0189 </RequestMessage>

0190  <ResponseMessage>
0191   <ResponseHeader>
0192    <ProtocolVersion>
0193     <ProtocolVersionMajor type="Integer" value="1"/>
0194     <ProtocolVersionMinor type="Integer" value="1"/>
0195    </ProtocolVersion>
0196    <Timestamp type="DateTime" value="2012-04-27T08:14:44+00:00"/>
0197    <BatchCount type="Integer" value="1"/>
0198   </ResponseHeader>
0199   <BatchItem>
0200    <Operation type="Enumeration" value="GetAttributes"/>
0201    <ResultStatus type="Enumeration" value="Success"/>
0202    <ResponsePayload>
0203     <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0204     <Attribute>
0205      <AttributeName type="TextString" value="Fresh"/>
0206      <AttributeValue type="Boolean" value="true"/>
0207     </Attribute>
0208   </ResponsePayload>
0209  </BatchItem>
0210 </ResponseMessage>

# TIME 4

0211  <RequestMessage>
0212   <RequestHeader>
0213    <ProtocolVersion>
0214     <ProtocolVersionMajor type="Integer" value="1"/>
0215     <ProtocolVersionMinor type="Integer" value="1"/>
0216    </ProtocolVersion>
0217    <BatchOrderOption type="Boolean" value="true"/>
0218    <BatchCount type="Integer" value="2"/>
0219   </RequestHeader>
0220   <BatchItem>
0221    <Operation type="Enumeration" value="Locate"/>
0222    <UniqueBatchItemID type="ByteString" value="294fb5e3e93f8ecc"/>
0223    <RequestPayload>
0224     <MaximumItems type="Integer" value="1"/>
0225     <ObjectGroupMember type="Enumeration" value="GroupMemberFresh"/>
0226     <Attribute>
0227      <AttributeName type="TextString" value="Object Group"/>
0228      <AttributeValue type="TextString" value="ClientFreshTest"/>
0229     </Attribute>
0230   </RequestPayload>
0231   </BatchItem>
```
<BatchItem>
  <Operation type="Enumeration" value="Get"/>
  <UniqueBatchItemID type="ByteString" value="9da79a935d4e4ae6"/>
  <RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:44+00:00"/>
    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <UniqueBatchItemID type="ByteString" value="294fb5e3e93f8ecc"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <UniqueBatchItemID type="ByteString" value="9da79a935d4e4ae6"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <SymmetricKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="000102030405060708090a0b0c0d0e0f101112131415161718191a1b1c1d1e2f"/>
          </KeyValue>
          <CryptographicAlgorithm type="Enumeration" value="AES"/>
          <CryptographicLength type="Integer" value="256"/>
        </KeyBlock>
      </SymmetricKey>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 5

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchOrderOption type="Boolean" value="true"/>
    <BatchCount type="Integer" value="2"/>
  </RequestHeader>
</RequestMessage>
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="integer" value="1"/>
      <ProtocolVersionMinor type="integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:44+00:00"/>
    <BatchCount type="integer" value="2"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <UniqueBatchItemID type="ByteString" value="85e3e21d14d6df1d"/>
    <RequestPayload>
      <MaximumItems type="integer" value="1"/>
      <ObjectGroupMember type="Enumeration" value="GroupMemberFresh"/>
      <Attribute>
        <AttributeName type="TextString" value="Object Group"/>
        <AttributeValue type="TextString" value="ClientFreshTest"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <UniqueBatchItemID type="ByteString" value="40feae5e1bda875"/>
    <RequestPayload>
      <ResultStatus type="Enumeration" value="Success"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="integer" value="1"/>
      <ProtocolVersionMinor type="integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:44+00:00"/>
    <BatchCount type="integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <UniqueBatchItemID type="ByteString" value="85e3e21d14d6df1d"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <UniqueBatchItemID type="ByteString" value="40feae5e1bda875"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <SymmetricKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="00112233445566778899aabbccddeeff000102030405060708090a0b0c0d0e0f"/>
          </KeyValue>
          <CryptographicAlgorithm type="Enumeration" value="AES"/>
          <CryptographicLength type="integer" value="256"/>
        </KeyBlock>
      </SymmetricKey>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```xml
    <KeyBlock>
    </KeyBlock>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 6

<RequestMessage>
    <RequestHeader>
        <ProtocolVersion>
            <ProtocolVersionMajor type="Integer" value="1"/>
            <ProtocolVersionMinor type="Integer" value="1"/>
            <BatchOrderOption type="Boolean" value="true"/>
            <BatchCount type="Integer" value="2"/>
        </ProtocolVersion>
        <MaximumItems type="Integer" value="1"/>
        <ObjectGroupMember type="Enumeration" value="GroupMemberFresh"/>
        <AttributeName type="TextString" value="Object Group"/>
        <AttributeValue type="TextString" value="ClientFreshTest"/>
    </RequestPayload>
</BatchItem>

<BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <UniqueBatchItemID type="ByteString" value="5713c4911444b36e"/>
</RequestPayload>
</BatchItem>

<RequestMessage>
    <ResponseHeader>
        <ProtocolVersion>
            <ProtocolVersionMajor type="Integer" value="1"/>
            <ProtocolVersionMinor type="Integer" value="1"/>
            <TimeStamp type="DateTime" value="2012-04-27T08:44:00+00:00"/>
            <BatchCount type="Integer" value="2"/>
        </ProtocolVersion>
    </ResponsePayload>
</BatchItem>

<BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <UniqueBatchItemID type="ByteString" value="657339bdf375bfa2"/>
</RequestPayload>
</BatchItem>

<ResponseMessage>
    <ResponseHeader>
        <ProtocolVersion>
            <ProtocolVersionMajor type="Integer" value="1"/>
            <ProtocolVersionMinor type="Integer" value="1"/>
            <ProtocolVersion>
                <BatchOrderOption type="Boolean" value="true"/>
                <BatchCount type="Integer" value="2"/>
            </ProtocolVersion>
            <ResultStatus type="Enumeration" value="Success"/>
            <ResultMessage type="TextString" value="NOT_FOUND"/>
        </ResponsePayload>
    </BatchItem>
</BatchItem>
```

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```
0391   </BatchItem>
0392   </ResponseMessage>

# TIME 7
0393   <RequestMessage>
0394       <RequestHeader>
0395           <ProtocolVersion>
0396               <ProtocolVersionMajor type="Integer" value="1"/>
0397               <ProtocolVersionMinor type="Integer" value="1"/>
0398           </ProtocolVersion>
0399           <BatchCount type="Integer" value="1"/>
0400       </RequestHeader>
0401       <BatchItem>
0402           <Operation type="Enumeration" value="Destroy"/>
0403           <RequestPayload>
0404               <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0405           </RequestPayload>
0406       </BatchItem>
0407   </RequestMessage>
0408   <ResponseMessage>
0409       <ResponseHeader>
0410           <ProtocolVersion>
0411               <ProtocolVersionMajor type="Integer" value="1"/>
0412               <ProtocolVersionMinor type="Integer" value="1"/>
0413           </ProtocolVersion>
0414           <TimeStamp type="DateTime" value="2012-04-27T08:14:44+00:00"/>
0415           <BatchCount type="Integer" value="1"/>
0416       </ResponseHeader>
0417       <BatchItem>
0418           <Operation type="Enumeration" value="Destroy"/>
0419           <ResultStatus type="Enumeration" value="Success"/>
0420       </ResponsePayload>
0421       <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0422       </ResponsePayload>
0423       </BatchItem>
0424   </ResponseMessage>

# TIME 8
0425   <RequestMessage>
0426       <RequestHeader>
0427           <ProtocolVersion>
0428               <ProtocolVersionMajor type="Integer" value="1"/>
0429               <ProtocolVersionMinor type="Integer" value="1"/>
0430           </ProtocolVersion>
0431           <BatchCount type="Integer" value="1"/>
0432       </RequestHeader>
0433       <BatchItem>
0434           <Operation type="Enumeration" value="Destroy"/>
0435           <RequestPayload>
0436               <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0437           </RequestPayload>
0438       </BatchItem>
0439   </RequestMessage>
0440   <ResponseMessage>
0441   </ResponseHeader>
```
2.2.32 TC-153-11 - Default Object Group Member

This test case exercises the 'default' Object Group Member flag in the Locate request. Three keys are created on the server and put into the same group (the Object Group attribute is set to the same value for all keys). Thereafter, the client performs four batched Locate and Get requests, asking for the default object from the group. This test case assumes that the server policy is such that it serves objects from the group in a round-robin fashion. The pointer to the default object is advanced each time an object is retrieved using a Get request. The first three times Locate and Get is executed, the three keys are returned one after the other. When Locate and Get is executed for the fourth time, the first key is again returned. Finally, all keys are destroyed.

Note: there is no requirement for a server to implement support for any round-robin based allocation; this test case illustrates a server which supports such a policy.
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
0020  <AttributeName type="TextString" value="Cryptographic Length"/>
0021  <AttributeValue type="Integer" value="256"/>
0022  </Attribute>
0023  <Attribute>
0024    <AttributeValue type="Integer" value="Decrypt Encrypt"/>
0025  </Attribute>
0026  <Attribute>
0027    <AttributeValue type="TextString" value="Object Group"/>
0028    <AttributeValue type="TextString" value="RoundRobinTestGroup"/>
0029  </Attribute>
0030  </Attribute>
0031  </AttributeValue>
0032  <Attribute>
0033    <AttributeValue type="TextString" value="AES"/>
0034  </Attribute>
0035  <Attribute>
0036    <AttributeValue type="TextString" value="TC-153-11-key1"/>
0037  </Attribute>
0038  <Attribute>
0039    <AttributeValue type="TextString" value="TC-153-11-key2"/>
0040  </Attribute>
```

```
<BatchItem>
0041  <Operation type="Enumeration" value="Create"/>
0042  <UniqueBatchItemID type="ByteString" value="ac0e6e56e8d99f66"/>
0043  <RequestPayload>
0044    <ObjectType type="Enumeration" value="SymmetricKey"/>
0045    <TemplateAttribute>
0046      <Attribute>
0047        <AttributeName type="TextString" value="Cryptographic Algorithm"/>
0048        <AttributeValue type="Enumeration" value="AES"/>
0049      </Attribute>
0050      <Attribute>
0051        <AttributeName type="TextString" value="Cryptographic Length"/>
0052        <AttributeValue type="Integer" value="256"/>
0053      </Attribute>
0054      <Attribute>
0055        <AttributeName type="TextString" value="Object Group"/>
0056        <AttributeValue type="TextString" value="RoundRobinTestGroup"/>
0057      </Attribute>
0058      <Attribute>
0059        <AttributeValue type="TextString" value="x-ID"/>
0060      </Attribute>
0061      </TemplateAttribute>
0062  </RequestPayload>
0063  </BatchItem>
```

```
<BatchItem>
0064  <Operation type="Enumeration" value="Create"/>
0065  <UniqueBatchItemID type="ByteString" value="77e87d356ba09da1"/>
0066  <RequestPayload>
0067    <BatchItem>
0068      <Operation type="Enumeration" value="Create"/>
0069      <UniqueBatchItemID type="ByteString" value="77e87d356ba09da1"/>
```
<RequestPayload>
  <ObjectType type="Enumeration" value="SymmetricKey"/>
  <TemplateAttribute>
    <AttributeName type="TextString" value="Cryptographic Algorithm"/>
    <AttributeValue type="Enumeration" value="AES"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Cryptographic Length"/>
    <AttributeValue type="Integer" value="256"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
    <AttributeValue type="Integer" value="Decrypt Encrypt"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Object Group"/>
    <AttributeValue type="TextString" value="RoundRobinTestGroup"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="x-ID"/>
    <AttributeValue type="TextString" value="TC-153-11-key3"/>
  </Attribute>
  </TemplateAttribute>
</RequestPayload>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:44+00:00"/>
    <BatchCount type="Integer" value="3"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type=" Enumeration" value="Create"/>  
    <UniqueBatchItemID type="ByteString" value="75e8bdb337aec40e"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
  <BatchItem>
    <Operation type=" Enumeration" value="Create"/>  
    <UniqueBatchItemID type="ByteString" value="ac0e6e56e8d99f66"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
  <BatchItem>
    <Operation type=" Enumeration" value="Create"/>  
    <UniqueBatchItemID type="ByteString" value="ac0e6e56e8d99f66"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="UNIQUE_IDENTIFIER_2"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
value="$UNIQUE_IDENTIFIER_1"/>
0122   </ResponsePayload>
0123 </BatchItem>
0124 <BatchItem>
0125   <Operation type="Enumeration" value="Create"/>
0126   <UniqueBatchItemID type="ByteString" value="77e87d356ba09da1"/>
0127   <ResultStatus type="Enumeration" value="Success"/>
0128   <ResponsePayload>
0129     <ObjectType type="Enumeration" value="SymmetricKey"/>
0130     <UniqueIdentifier type="TextString"
value="$UNIQUE_IDENTIFIER_2"/>
0131   </ResponsePayload>
0132 </BatchItem>
0133 </ResponseMessage>

# TIME 1
0134 <RequestMessage>
0135   <RequestHeader>
0136     <ProtocolVersion>
0137       <ProtocolVersionMajor type="Integer" value="1"/>
0138       <ProtocolVersionMinor type="Integer" value="1"/>
0139   </ProtocolVersion>
0140     <BatchOrderOption type="Boolean" value="true"/>
0141     <BatchCount type="Integer" value="2"/>
0142   </RequestHeader>
0143  <BatchItem>
0144    <Operation type="Enumeration" value="Locate"/>
0145    <UniqueBatchItemID type="ByteString" value="99e7a6ea0125bb67"/>
0146    <RequestPayload>
0147     <MaximumItems type="Integer" value="1"/>
0148     <ObjectGroupMember type="Enumeration"
value="GroupMemberDefault"/>
0149     <Attribute>
0150       <AttributeName type="TextString" value="Object Group"/>
0151       <AttributeValue type="TextString"
value="RoundRobinTestGroup"/>
0152   </Attribute>
0153    </RequestPayload>
0154  </BatchItem>
0155 <BatchItem>
0156    <Operation type="Enumeration" value="Get"/>
0157    <UniqueBatchItemID type="ByteString" value="0efd9c2e346ee1cb"/>
0158    <RequestPayload>
0159   </RequestPayload>
0160 </BatchItem>
0161 </RequestMessage>

0162 <ResponseMessage>
0163   <ResponseHeader>
0164     <ProtocolVersion>
0165       <ProtocolVersionMajor type="Integer" value="1"/>
0166       <ProtocolVersionMinor type="Integer" value="1"/>
0167     </ProtocolVersion>
0168     <TimeStamp type="DateTime" value="2012-04-27T08:14:44+00:00"/>
0169     <BatchCount type="Integer" value="2"/>
0170   </ResponseHeader>
0171 <BatchItem>
0172    <Operation type="Enumeration" value="Locate"/>
0173    <UniqueBatchItemID type="ByteString" value="99e7a6ea0125bb67"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</BatchItem>

<BatchItem>
  <Operation type="Enumeration" value="Get"/>
  <UniqueBatchItemID type="ByteString" value="0efd9c2e346ee1cb"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <ObjectType type="Enumeration" value="SymmetricKey"/>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <SymmetricKey>
      <KeyBlock>
        <KeyFormatType type="Enumeration" value="Raw"/>
        <KeyValue>
          <KeyMaterial type="ByteString" value="bd13da8bce07ea6b89c4d110827bf6a8478cf95edca9bbc278ab04f4cbeecff0"/>
        </KeyValue>
        <CryptographicAlgorithm type="Enumeration" value="AES"/>
        <CryptographicLength type="Integer" value="256"/>
      </KeyBlock>
    </SymmetricKey>
  </ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 2

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchOrderOption type="Boolean" value="true"/>
    <BatchCount type="Integer" value="2"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <UniqueBatchItemID type="ByteString" value="0303428f37f17b8d"/>
    <RequestPayload>
      <MaximumItems type="Integer" value="1"/>
      <ObjectGroupMember type="Enumeration" value="GroupMemberDefault"/>
      <Attribute>
        <AttributeName type="TextString" value="Object Group"/>
        <AttributeValue type="TextString" value="RoundRobinTestGroup"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <UniqueBatchItemID type="ByteString" value="dae46b60d9b6459b"/>
    <RequestPayload>
  </BatchItem>
</RequestMessage>
<RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:14:44+00:00"/>
<BatchCount type="Integer" value="2"/>
</ResponseHeader>

<BatchItem>
<Operation type="Enumeration" value="Locate"/>
<UniqueBatchItemID type="ByteString" value="0303428f37f17b8d"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
</ResponsePayload>
</BatchItem>

<BatchItem>
<Operation type="Enumeration" value="Get"/>
<UniqueBatchItemID type="ByteString" value="dae46b60d9b6459b"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<ObjectType type="Enumeration" value="SymmetricKey"/>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
</SymmetricKey>
<KeyBlock>
<KeyFormatType type="Enumeration" value="Raw"/>
<KeyValue>
<KeyMaterial type="ByteString" value="430bfb0cbc273e15326e3a23965f7704a13af37a642c37026c9a59694c83b7a3"/>
</KeyValue>
</KeyBlock>
</CryptographicAlgorithm type="Enumeration" value="AES"/>
</CryptographicLength type="Integer" value="256"/>
</KeyBlock>
</SymmetricKey>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 3

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
</BatchOrderOption type="Boolean" value="true"/>
<BatchCount type="Integer" value="2"/>
</RequestHeader>

<BatchItem>
<Operation type="Enumeration" value="Locate"/>
<UniqueBatchItemID type="ByteString" value="863c27d7a0d3da5e"/>
</BatchItem>
</RequestMessage>
```
<RequestPayload>
  <MaximumItems type="Integer" value="1"/>
  <ObjectGroupMember type="Enumeration" value="GroupMemberDefault"/>
  <Attribute>
    <AttributeName type="TextString" value="Object Group"/>
    <AttributeValue type="TextString" value="RoundRobinTestGroup"/>
  </Attribute>
</RequestPayload>

<BatchItem>
  <Operation type="Enumeration" value="Get"/>
  <UniqueBatchItemID type="ByteString" value="c4617b3205e96fb2"/>
  <RequestPayload/>
</BatchItem>

<BatchItem>
  <Operation type="Enumeration" value="Get"/>
  <UniqueBatchItemID type="ByteString" value="c4617b3205e96fb2"/>
  <RequestPayload/>
</BatchItem>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:44+00:00"/>
    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <UniqueBatchItemID type="ByteString" value="863c27d7a0d3da5e"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
    </ResponsePayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <UniqueBatchItemID type="ByteString" value="c4617b3205e96fb2"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
      <SymmetricKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="a51b38e400168a25f2f122d7b8543a00daff22e61677a08a33a834f5f52c3097"/>
          </KeyValue>
        </KeyBlock>
        <CryptographicAlgorithm type="Enumeration" value="AES"/>
        <CryptographicLength type="Integer" value="256"/>
      </SymmetricKey>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchOrderOption type="Boolean" value="true"/>
    <BatchCount type="Integer" value="2"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <UniqueBatchItemID type="ByteString" value="f1ce9893ee5bde19"/>
    <RequestPayload>
      <MaximumItems type="Integer" value="1"/>
      <ObjectGroupMember type="Enumeration" value="GroupMemberDefault"/>
      <Attribute>
        <AttributeName type="TextString" value="Object Group"/>
        <AttributeValue type="TextString" value="RoundRobinTestGroup"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <UniqueBatchItemID type="ByteString" value="9a18dd11cc6ce394"/>
    <RequestPayload>
      <ResultStatus type="Enumeration" value="Success"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 4

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:44+00:00"/>
    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <UniqueBatchItemID type="ByteString" value="f1ce9893ee5bde19"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <UniqueBatchItemID type="ByteString" value="9a18dd11cc6ce394"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>

<SymmetricKey>
  <KeyBlock>
    <KeyFormatType type="Enumeration" value="Raw"/>
    <KeyValue>
      <KeyMaterial type="ByteString" value="bd13da8bce07ea6b89c4d110827bf6a8478cf95edca9bbc278ab04f4cbeecff0"/>
    </KeyValue>
  </KeyBlock>
</SymmetricKey>

</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 5

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchErrorContinuationOption type="Enumeration" value="Continue"/>
    <BatchOrderOption type="Boolean" value="true"/>
    <BatchCount type="Integer" value="3"/> 
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <UniqueBatchItemID type="ByteString" value="f4cf0a5614786eb7"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <UniqueBatchItemID type="ByteString" value="dd55da10ebe91928"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <UniqueBatchItemID type="ByteString" value="18334af52fee87fa"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchErrorContinuationOption type="Enumeration" value="Continue"/>
    <BatchOrderOption type="Boolean" value="true"/>
    <BatchCount type="Integer" value="3"/>
  </ResponseHeader>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
  </ResponsePayload>
</ResponseMessage>
Exercise the Discover Versions operation in different ways in order to find out which versions a server supports, as well as to get a list of versions supported by both client and server.

This test case shows the expected responses from a KMIP 1.2 server that supports versions 1.1 and 1.0, with 1.1 being the preferred version.
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="DiscoverVersions"/>
    <RequestPayload>
      <ProtocolVersion>
        <ProtocolVersionMajor type="Integer" value="1"/>
        <ProtocolVersionMinor type="Integer" value="0"/>
      </ProtocolVersion>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 1

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="DiscoverVersions"/>
    <RequestPayload>
      <ProtocolVersion>
        <ProtocolVersionMajor type="Integer" value="1"/>
        <ProtocolVersionMinor type="Integer" value="0"/>
      </ProtocolVersion>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2011-12-01T08:46:15+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="DiscoverVersions"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ProtocolVersion>
        <ProtocolVersionMajor type="Integer" value="1"/>
        <ProtocolVersionMinor type="Integer" value="0"/>
      </ProtocolVersion>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="DiscoverVersions"/>
    <RequestPayload>
      <ProtocolVersion>
        <ProtocolVersionMajor type="Integer" value="1"/>
        <ProtocolVersionMinor type="Integer" value="0"/>
      </ProtocolVersion>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2011-06-24T12:52:18+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="DiscoverVersions"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ProtocolVersion>
        <ProtocolVersionMajor type="Integer" value="1"/>
        <ProtocolVersionMinor type="Integer" value="0"/>
      </ProtocolVersion>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="DiscoverVersions"/>
    <RequestPayload>
      <ProtocolVersion>
        <ProtocolVersionMajor type="Integer" value="1"/>
        <ProtocolVersionMinor type="Integer" value="0"/>
      </ProtocolVersion>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2011-06-24T12:52:18+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="DiscoverVersions"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ProtocolVersion>
        <ProtocolVersionMajor type="Integer" value="1"/>
        <ProtocolVersionMinor type="Integer" value="0"/>
<Operation type="Enumeration" value="DiscoverVersions"/>

<ResultStatus type="Enumeration" value="Success"/>

<ResponsePayload>

<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>

</ResponsePayload>

</BatchItem>

</ResponseMessage>

# TIME 2

<RequestMessage>

<RequestHeader>

<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>

</RequestPayload>

</RequestHeader>

<BatchItem>

<Operation type="Enumeration" value="DiscoverVersions"/>

<RequestPayload>

<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>

</ResponsePayload>

</BatchItem>

</RequestMessage>

# TIME 3

<RequestMessage>

<RequestHeader>

<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>

</RequestPayload>

</RequestHeader>

<BatchItem>

<Operation type="Enumeration" value="DiscoverVersions"/>

<ResultStatus type="Enumeration" value="Success"/>

<ResponsePayload>

<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>

</ResponsePayload>

</BatchItem>

</RequestMessage>
2.2.34 TC-171-11 - Handling of Attributes and Attribute Index Values

This test case illustrates the changes in Attribute and Attribute Index handling introduced in KMIP-1.1. A symmetric key is created on the server, and two Name attributes and the Contact Information attribute is specified for the key. A Get Attributes request containing the Object Type attribute name twice is sent, but this operation fails since a single Attribute Name cannot be specified more than once in a Get Attributes request. The Object Type Attribute is then requested once, and this request succeeds. Thereafter, the Contact Information Attribute is modified, with the Attribute Index value of 0 specified. The Name attribute is deleted without specifying the Attribute Index which succeeds (which would have failed under KMIP-1.0). Finally, the created key is destroyed.

```xml
<BatchCount type="Integer" value="1"/>
</RequestHeader>

<Operation type="Enumeration" value="DiscoverVersions"/>

<ProtocolVersion>
    <ProtocolVersionMajor type="Integer" value="9"/>
    <ProtocolVersionMinor type="Integer" value="31"/>
</ProtocolVersion>

</RequestPayload>

</BatchItem>
</RequestMessage>

<ResponseMessage>

<BatchItem>

<Operation type="Enumeration" value="DiscoverVersions"/>

<ResultStatus type="Enumeration" value="Success"/>
</ResponsePayload>

</BatchItem>
</ResponseMessage>
```
<ObjectType type="Enumeration" value="SymmetricKey"/>
  <TemplateAttribute>
    <Attribute>
      <AttributeName type="TextString" value="Cryptographic Algorithm"/>
      <AttributeValue type="Enumeration" value="AES"/>
    </Attribute>
    <Attribute>
      <AttributeName type="TextString" value="Cryptographic Length"/>
      <AttributeValue type="Integer" value="256"/>
    </Attribute>
    <Attribute>
      <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
      <AttributeValue type="Integer" value="Decrypt Encrypt"/>
    </Attribute>
    <Attribute>
      <AttributeName type="TextString" value="Name"/>
      <AttributeValue>
        <NameValue type="TextString" value="TC-171-11-name1"/>
        <NameType type="Enumeration" value="UninterpretedTextString"/>
      </AttributeValue>
    </Attribute>
    <Attribute>
      <AttributeName type="TextString" value="Name"/>
      <AttributeValue>
        <NameValue type="TextString" value="TC-171-11-name2"/>
        <NameType type="Enumeration" value="UninterpretedTextString"/>
      </AttributeValue>
    </Attribute>
    <Attribute>
      <AttributeName type="TextString" value="Contact Information"/>
      <AttributeValue type="TextString" value="admin@localhost"/>
    </Attribute>
  </TemplateAttribute>
</RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:44+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <ResultStatus type="Enumeration" value="Success"/>
  </BatchItem>
  <ResponsePayload>
    <ObjectType type="Enumeration" value="SymmetricKey"/>
  </ResponsePayload>
</ResponseMessage>
This is a Non-Standards Track Work Product.  
The patent provisions of the OASIS IPR Policy do not apply.

```
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 1

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <AttributeName type="TextString" value="Object Type"/>
      <AttributeName type="TextString" value="Object Type"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
    <TimeStamp type="DateTime" value="2012-04-27T08:44:44+00:00"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <ResultStatus type="Enumeration" value="OperationFailed"/>
    <ResultReason type="Enumeration" value="InvalidMessage"/>
    <ResultMessage type="TextString" value="Attribute Name specified more than once: Object Type"/>
  </BatchItem>
</ResponseMessage>

# TIME 2

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <AttributeName type="TextString" value="Object Type"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```
<RequestPayload/>
</BatchItem>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:14:44+00:00"/>
</ResponseHeader>
</BatchItem>
<Operation type="Enumeration" value="GetAttributes"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
<Attribute>
<AttributeName type="TextString" value="Object Type"/>
<AttributeValue type="Enumeration" value="SymmetricKey"/>
</Attribute>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 3

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</RequestHeader>
</BatchItem>
<Operation type="Enumeration" value="ModifyAttribute"/>
<RequestPayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
<Attribute>
<AttributeName type="TextString" value="Contact Information"/>
<AttributeIndex type="Integer" value="0"/>
<AttributeValue type="TextString" value="donald@localhost"/>
</Attribute>
</RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:14:44+00:00"/>
</ResponseHeader>
</BatchItem>
<ResponsePayload>
</BatchItem>
</ResponseMessage>
<ResponseHeader>
</BatchItem>
<Operation type="Enumeration" value="ModifyAttribute"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponseHeader>
</ResponseMessage>

# TIME 4

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
</RequestHeader>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:44:00:00"/>
</ResponseHeader>
</ResponseMessage>

<BatchItem>
<Operation type="DeleteAttribute"/>
</BatchItem>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
</ResponseHeader>
</ResponseMessage>

<BatchItem>
<Operation type="DeleteAttribute"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</BatchItem>

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
</RequestHeader>
</RequestMessage>

<BatchItem>
<Operation type="DeleteAttribute"/>
</BatchItem>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
</ResponseHeader>
</ResponseMessage>

<BatchItem>
<Operation type="DeleteAttribute"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</BatchItem>
### TIME

```
0215   </BatchItem>
0216   </ResponseMessage>

# TIME 5

0217   <RequestMessage>
0218     <RequestHeader>
0219       <ProtocolVersion>
0220         <ProtocolVersionMajor type="Integer" value="1"/>
0221         <ProtocolVersionMinor type="Integer" value="1"/>
0222       </ProtocolVersion>
0223       <BatchCount type="Integer" value="1"/>
0224     </RequestHeader>
0225     <BatchItem>
0226       <Operation type="Enumeration" value="Destroy"/>
0227       <RequestPayload>
0228         <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0229       </RequestPayload>
0230   </BatchItem>
0231   </RequestMessage>

0232   <ResponseMessage>
0233     <ResponseHeader>
0234       <ProtocolVersion>
0235         <ProtocolVersionMajor type="Integer" value="1"/>
0236         <ProtocolVersionMinor type="Integer" value="1"/>
0237       </ProtocolVersion>
0238       <TimeStamp type="DateTime" value="2012-04-27T08:14:44+00:00"/>
0239       <BatchCount type="Integer" value="1"/>
0240     </ResponseHeader>
0241     <BatchItem>
0242       <Operation type="Enumeration" value="Destroy"/>
0243       <ResultStatus type="Enumeration" value="Success"/>
0244       <ResponsePayload>
0245         <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0246       </ResponsePayload>
0247     </BatchItem>
0248   </ResponseMessage>
```

```
2.2.35 TC-181-11 - Digests of Symmetric Keys

Exercise the Digest attribute by registering two symmetric keys with the same key material but using different Key Format Type. The Digest Value for the key with the Key Format Type set to Transparent Symmetric Key is calculated on the TTLV-encoded Key Material structure, whereas the Digest Value for the key registered in the Raw Key Format Type is calculated on the raw Key Material Byte String. The server calculates the value of the mandatory Digest attribute instance using the Key Format Type used by the client when registering the keys. Thereafter, the client asks the server to create a symmetric key using the Create operation. In this situation, it is up to the server to choose what Key Format Type of the created key it uses to calculate the Digest Value.
```
Note: This test case assumes a server that does not compute any additional Digest attributes using another Hashing Algorithm and/or Key Format Type. A server is permitted to provide multiple Digest attributes.

```xml
# TIME 0
0001 <RequestMessage>
0002   <RequestHeader>
0003     <ProtocolVersion>
0004       <ProtocolVersionMajor type="Integer" value="1"/>
0005       <ProtocolVersionMinor type="Integer" value="1"/>
0006     </ProtocolVersion>
0007     <BatchCount type="Integer" value="1"/>
0008   </RequestHeader>
0009   <BatchItem>
0010     <Operation type="Enumeration" value="Register"/>
0011     <RequestPayload>
0012       <ObjectType type="Enumeration" value="SymmetricKey"/>
0013       <TemplateAttribute>
0014         <AttributeName type="TextString" value="Cryptographic Algorithm"/>
0015           <AttributeValue type="Enumeration" value="AES"/>
0016         </AttributeName>
0017       </Attribute>
0018       <AttributeName type="TextString" value="Cryptographic Length"/>
0019         <AttributeValue type="Integer" value="256"/>
0020       </AttributeName>
0021       <Attribute>
0022         <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
0023           <AttributeValue type="Integer" value="Decrypt Encrypt"/>
0024         </AttributeName>
0025       </Attribute>
0026       <AttributeName type="TextString" value="x-ID"/>
0027         <AttributeValue type="TextString" value="TC-181-11-key1"/>
0028       </AttributeName>
0029       </Attribute>
0030     </TemplateAttribute>
0031   </SymmetricKey>
0032   <KeyBlock>
0033     <KeyFormatType type="Enumeration" value="Raw"/>
0034     <KeyValue>
0035       <KeyMaterial type="ByteString" value="00011112223333444455556666777788889999aaaabbbccccddddeeeeffff"/>
0036     </KeyValue>
0037     <CryptographicAlgorithm type="Enumeration" value="AES"/>
0038     <CryptographicLength type="Integer" value="256"/>
0039   </KeyBlock>
0040   </RequestPayload>
0041 </BatchItem>
0042 </RequestMessage>
0043 </ResponseMessage>
```
<ResponseHeader>
  <ProtocolVersion>
    <ProtocolVersionMajor type="Integer" value="1"/>
    <ProtocolVersionMinor type="Integer" value="1"/>
  </ProtocolVersion>
  <TimeStamp type="DateTime" value="2012-04-27T08:14:45+00:00"/>
  <BatchCount type="Integer" value="1"/>
</ResponseHeader>

# TIME 1

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestBody>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <AttributeName type="TextString" value="Digest"/>
    </RequestBody>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:45+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Digest"/>
        <AttributeValue>
          <HashingAlgorithm type="Enumeration" value="SHA_256"/>
          <DigestValue type="ByteString" value="6c064fe051add11edc07727b594eb48711df843e08445bba2cd786bc16bc58e8"/>
        </AttributeValue>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
<KeyFormatType type="Enumeration" value="Raw"/>
</AttributeValue>
</Attribute>
</ResponsePayload>
</BatchItem>
</ResponseMessage>
# TIME 2
<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
</RequestHeader>
<BatchItem>
<Operation type="Enumeration" value="Register"/>
<RequestPayload>
<ObjectType type="Enumeration" value="SymmetricKey"/>
<TemplateAttribute>
<Attribute>
<AttributeName type="TextString" value="Cryptographic Algorithm"/>
<AttributeValue type="Enumeration" value="AES"/>
</Attribute>
<Attribute>
<AttributeName type="TextString" value="Cryptographic Length"/>
<AttributeValue type="Integer" value="256"/>
</Attribute>
<Attribute>
<AttributeName type="TextString" value="Cryptographic Usage Mask"/>
<AttributeValue type="Integer" value="Decrypt Encrypt"/>
</Attribute>
</TemplateAttribute>
<SymmetricKey>
<KeyBlock>
<KeyFormatType type="Enumeration" value="TransparentSymmetricKey"/>
<KeyValue>
<KeyMaterial>
<Key type="ByteString"
value="0000111222333444555666777888999999aaabbcccccdddeeeeffff"/>
</KeyMaterial>
</KeyValue>
</KeyBlock>
</SymmetricKey>
</RequestPayload>
</BatchItem>
0146  <RequestMessage>
0147  <ResponseMessage>
0148    <ResponseHeader>
0149      <ProtocolVersion>
0150        <ProtocolVersionMajor type="Integer" value="1"/>
0151        <ProtocolVersionMinor type="Integer" value="1"/>
0152      </ProtocolVersion>
0153      <TimeStamp type="DateTime" value="2012-04-27T08:14:45+00:00"/>
0154      <BatchCount type="Integer" value="1"/>
0155    </ResponseHeader>
0156    <BatchItem>
0157      <Operation type="Enumeration" value="Register"/>
0158      <ResultStatus type="Enumeration" value="Success"/>
0159      <ResponsePayload>
0160        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0161      </ResponsePayload>
0162    </BatchItem>
0163  </ResponseMessage>

# TIME 3

0164  <RequestMessage>
0165    <RequestHeader>
0166      <ProtocolVersion>
0167        <ProtocolVersionMajor type="Integer" value="1"/>
0168        <ProtocolVersionMinor type="Integer" value="1"/>
0169      </ProtocolVersion>
0170      <BatchCount type="Integer" value="1"/>
0171    </RequestHeader>
0172    <BatchItem>
0173      <Operation type="Enumeration" value="GetAttributes"/>
0174      <RequestPayload>
0175        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0176        <AttributeName type="TextString" value="Digest"/>
0177      </RequestPayload>
0178    </BatchItem>
0179  </RequestMessage>

0180  <ResponseMessage>
0181    <ResponseHeader>
0182      <ProtocolVersion>
0183        <ProtocolVersionMajor type="Integer" value="1"/>
0184        <ProtocolVersionMinor type="Integer" value="1"/>
0185      </ProtocolVersion>
0186      <TimeStamp type="DateTime" value="2012-04-27T08:14:45+00:00"/>
0187      <BatchCount type="Integer" value="1"/>
0188    </ResponseHeader>
0189    <BatchItem>
0190      <Operation type="Enumeration" value="GetAttributes"/>
0191      <ResultStatus type="Enumeration" value="Success"/>
0192      <ResponsePayload>
0193        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0194        <AttributeName type="TextString" value="Digest"/>
0195        <AttributeValue>
0196          <HashingAlgorithm type="Enumeration" value="SHA_256"/>
0197      </ResponsePayload>
0198    </BatchItem>
0199  </ResponseMessage>
<DigestValue type="ByteString" value="499ce96ff6f5e19fe9fe7a2fe4c3e92b88db0001a4e8df28d9966856b6c4b87c"/>
</KeyFormatType type="Enumeration" value="TransparentSymmetricKey"/>
</AttributeValue>
</Attribute>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 4

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
</RequestHeader>
<BatchItem>
<Operation type="Enumeration" value="Create"/>
<RequestPayload>
<ObjectType type="Enumeration" value="SymmetricKey"/>
<TemplateAttribute>
<Attribute>
<AttributeName type="TextString" value="Cryptographic Algorithm"/>
<AttributeValue type="Enumeration" value="AES"/>
</Attribute>
<Attribute>
<AttributeName type="TextString" value="Cryptographic Length"/>
<AttributeValue type="Integer" value="256"/>
</Attribute>
<Attribute>
<AttributeName type="TextString" value="Cryptographic Usage Mask"/>
<AttributeValue type="Integer" value="Decrypt Encrypt"/>
</Attribute>
<Attribute>
<AttributeName type="TextString" value="x-ID"/>
<AttributeValue type="TextString" value="TC-181-11-key3"/>
</Attribute>
</TemplateAttribute>
</RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
</ResponseHeader>
<TimeStamp type="DateTime" value="2012-04-27T08:14:45+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

0248     <Operation type="Enumeration" value="Create"/>
0249     <ResultStatus type="Enumeration" value="Success"/>
0250     <ResponsePayload>
0251         <ObjectType type="Enumeration" value="SymmetricKey"/>
0252         <UniqueIdentifier type="TextString" value="UNIQUE_IDENTIFIER_2"/>
0253     </ResponsePayload>
0254     </BatchItem>
0255     </ResponseMessage>

# TIME 5

0256     <RequestMessage>
0257     <RequestHeader>
0258         <ProtocolVersion>
0259             <ProtocolVersionMajor type="Integer" value="1"/>
0260             <ProtocolVersionMinor type="Integer" value="1"/>
0261         </ProtocolVersion>
0262         <BatchCount type="Integer" value="1"/>
0263     </RequestHeader>
0264     <BatchItem>
0265         <Operation type="Enumeration" value="GetAttributes"/>
0266         <RequestPayload>
0267             <UniqueIdentifier type="TextString" value="UNIQUE_IDENTIFIER_2"/>
0268             <AttributeName type="TextString" value="Digest"/>
0269         </RequestPayload>
0270     </BatchItem>
0271     </RequestMessage>

0272     <ResponseMessage>
0273     <ResponseHeader>
0274         <ProtocolVersion>
0275             <ProtocolVersionMajor type="Integer" value="1"/>
0276             <ProtocolVersionMinor type="Integer" value="1"/>
0277         </ProtocolVersion>
0278         <TimeStamp type="DateTime" value="2012-04-27T08:14:45+00:00"/>
0279         <BatchCount type="Integer" value="1"/>
0280     </ResponseHeader>
0281     <BatchItem>
0282         <Operation type="Enumeration" value="GetAttributes"/>
0283         <ResultStatus type="Enumeration" value="Success"/>
0284         <ResponsePayload>
0285             <UniqueIdentifier type="TextString" value="UNIQUE_IDENTIFIER_2"/>
0286             <Attribute>
0287                 <AttributeName type="TextString" value="Digest"/>
0288                 <AttributeValue>
0289                     <HashingAlgorithm type="Enumeration" value="SHA_256"/>
0290                     <DigestValue type="ByteString" value="314b23505091d0332b536e6016cf700b3b16e3f4896b6d24d4ec2215f8"/>
0291                     <KeyFormatType type="Enumeration" value="Raw"/>
0292                 </AttributeValue>
0293             </Attribute>
0294             </ResponsePayload>
0295     </BatchItem>
0296     </ResponseMessage>

# TIME 6
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>  
      <KeyFormatType type="Enumeration" value="Raw"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:45+00:00"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
      <SymmetricKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="c1a99ac4716d4ea787d40b449d7b816f0ce82772b463cbf3a042b3f8e81e7bb7"/>
          </KeyValue>
          <CryptographicAlgorithm type="Enumeration" value="AES"/>
          <CryptographicLength type="Integer" value="256"/>
        </KeyBlock>
      </SymmetricKey>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 7

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
</RequestMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```xml
<BatchItem>
  <Operation type="Enumeration" value="Destroy"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  </RequestPayload>
</BatchItem>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:45+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 8

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:45+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
Exercise the Digest attribute by registering two RSA private keys with the same key material but using different Key Format Type. The Digest Value for the key with the Key Format Type set to Transparent RSA Private Key is calculated on the TTLV-encoded Key Material structure, whereas the Digest Value for the key registered in the PKCS_1 Key Format Type is calculated on the Key Material Byte String. The server calculates the value of the mandatory Digest attribute instance using the Key Format Type used by the client when registering the keys.

Note: This test case assumes a server that does not compute any additional Digest attributes using another Hashing Algorithm and/or Key Format Type. A server is permitted to provide multiple Digest attributes.
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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```
0072  <UniqueIdentifier type="TextString"
value="$UNIQUE_IDENTIFIER_0"/>
0073  <AttributeName type="TextString" value="Digest"/>
0074  </RequestPayload>
0075  </BatchItem>
0076  </RequestMessage>
0077  <ResponseMessage>
0078       <ResponseHeader>
0079           <ProtocolVersion>
0080               <ProtocolVersionMajor type="Integer" value="1"/>
0081               <ProtocolVersionMinor type="Integer" value="1"/>
0082           </ProtocolVersion>
0083           <TimeStamp type="DateTime" value="2012-04-27T08:14:45+00:00"/>
0084           <BatchCount type="Integer" value="1"/>
0085       </ResponseHeader>
0086       <BatchItem>
0087           <Operation type="Enumeration" value="GetAttributes"/>
0088           <ResultStatus type="Enumeration" value="Success"/>
0089       </ResponsePayload>
0090       <UniqueIdentifier type="TextString"
value="$UNIQUE_IDENTIFIER_0"/>
0091       <Attribute>
0092           <AttributeName type="TextString" value="Digest"/>
0093           <AttributeValue>
0094               <HashingAlgorithm type="Enumeration" value="SHA_256"/>
0095               <DigestValue type="ByteString"
value="11110a01ed4589d9987c9ad60368e2b762f2b20c00946e1932c1605a18172
f55"/>
0096                   <KeyFormatType type="Enumeration" value="PKCS_1"/>
0097       </AttributeValue>
0098       </Attribute>
0099       </ResponsePayload>
1000     </BatchItem>
1001   </ResponseMessage>

# TIME 2
1002  <RequestMessage>
1003       <RequestHeader>
1004           <ProtocolVersion>
1005               <ProtocolVersionMajor type="Integer" value="1"/>
1006               <ProtocolVersionMinor type="Integer" value="1"/>
1007           </ProtocolVersion>
1008           <BatchCount type="Integer" value="1"/>
1009       </RequestHeader>
1010       <BatchItem>
1011           <Operation type="Enumeration" value="Register"/>
1012       </RequestPayload>
1013           <ObjectType type="Enumeration" value="PrivateKey"/>
1014       <TemplateAttribute>
1015           <Attribute>
1016               <AttributeName type="TextString" value="Cryptographic
Algorithm"/>
1017               <AttributeValue type="Enumeration" value="RSA"/>
1018           </Attribute>
1019           <Attribute>
1020               <AttributeName type="TextString" value="Cryptographic
Length"/>
1021               <AttributeValue type="Integer" value="2048"/>
```
null
<CRTCoefficient type="BigInteger" value="00000000000000009690bed14b2afaa26d986d592231ee27d71d49065bd2b1f78157e20229881fd9d23227d0f8479eeafa922fd75d5b16b1a561fa6680b040ca0bdc650b23b917a41b1bb7983a74fad70e1c305cbe2b2ff1a85a726a1d90260e4f1084f518234dcd3fe770b9520215bd543bb6a4117718754676a34171666a79f26e79c149c5a1"/>

<KeyMaterial>
  <KeyValue/>
</KeyBlock>

<CryptographicAlgorithm type="Enumeration" value="RSA"/>

<CryptographicLength type="Integer" value="2048"/>

</KeyBlock>

</RequestPayload>
</BatchItem>
</RequestMessage>

# TIME 3

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
      <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <AttributeName type="TextString" value="Digest"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersionMajor type="Integer" value="1"/>
    <ProtocolVersionMinor type="Integer" value="1"/>
  </ProtocolVersion>
  <TimeStamp type="DateTime" value="2012-04-27T08:14:45+00:00"/>
  <BatchCount type="Integer" value="1"/>
  <ResponsePayload>
    <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
  </ResponsePayload>
</ResponseHeader>
</ResponseMessage>
<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:45+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <Attribute>
        <AttributeName type="TextString" value="Digest"/>
        <AttributeValue>
          <HashingAlgorithm type="Enumeration" value="SHA_256"/>
          <DigestValue type="ByteString" value="d73bbc51e83332935f912dbfc35c5efc3b7bf8021835ba86b8da4181f74244ac"/>
          <KeyFormatType type="Enumeration" value="TransparentRSAPrivate-Key"/>
        </AttributeValue>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 4

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:46+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
  </BatchItem>
</ResponseMessage>
In this test case the client issues a Create request, whereby the server creates a new symmetric key and returns the Unique Identifier. To clean up, the client then performs a Destroy operation to destroy the key.

The server sends Put messages to the client via a separate channel.
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <TemplateAttribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Algorithm"/>
          <AttributeValue type="Enumeration" value="AES"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Length"/>
          <AttributeValue type="Integer" value="128"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
          <AttributeValue type="Integer" value="Decrypt Encrypt"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="x-ID"/>
          <AttributeValue type="TextString" value="TC-NP-1-11"/>
        </Attribute>
      </TemplateAttribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# [Client-to-Server]

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2013-06-26T05:13:47+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 1
# [Server-to-Client]

```xml
<<RequestMessage>>
<<RequestHeader>>
<<ProtocolVersion>>
<<ProtocolVersionMajor type="Integer" value="1"/>>
<<ProtocolVersionMinor type="Integer" value="1"/>>
</ProtocolVersion>
<<BatchCount type="Integer" value="1"/>>
</RequestHeader>
<<BatchItem>>
<<Operation type="Enumeration" value="Put"/>>
<<RequestPayload>>
<<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>>
<<PutFunction type="Enumeration" value="New"/>>
<<SymmetricKey>>
<<KeyBlock>>
<<KeyFormatType type="Enumeration" value="Raw"/>>
<<KeyValue>>
<<KeyMaterial type="ByteString" value="7546ef6cd37c49806824984477987d1e"/>>
</KeyValue>
</KeyBlock>
</SymmetricKey>
<<Attribute>>
<<AttributeName type="TextString" value="x-ID"/>>
<<AttributeValue type="TextString" value="TC-NP-1-11"/>>
</Attribute>
<<Attribute>>
<<AttributeName type="TextString" value="Unique Identifier"/>>
<<AttributeValue type="TextString" value="$UNIQUE_IDENTIFIER_0"/>>
</Attribute>
<<Attribute>>
<<AttributeName type="TextString" value="Object Type"/>>
<<AttributeValue type="Enumeration" value="SymmetricKey"/>>
</Attribute>
<<Attribute>>
<<AttributeName type="TextString" value="Cryptographic Algorithm"/>>
<<AttributeValue type="Enumeration" value="AES"/>>
</Attribute>
<<Attribute>>
<<AttributeName type="TextString" value="Cryptographic Length"/>>
<<AttributeValue type="Integer" value="128"/>>
</Attribute>
<<Attribute>>
<<AttributeName type="TextString" value="Cryptographic Usage Mask"/>>
<<AttributeValue type="Integer" value="Decrypt Encrypt"/>>
</Attribute>
<<Attribute>>
<<AttributeName type="TextString" value="Digest"/>>
<<AttributeValue type="TextString" value=""/>>
</Attribute>
```
<HashingAlgorithm type="Enumeration" value="SHA_256"/>

<DigestValue type="ByteArray" value="7549ecda2cd1569974c3748f223fbc947ce9cabce581497522e4b75e9d6ed8e1"/>

<KeyFormatType type="Enumeration" value="Raw"/>

<AttributeName type="TextString" value="Fresh"/>
<AttributeValue type="Boolean" value="true"/>

<AttributeName type="TextString" value="Initial Date"/>
<AttributeValue type="DateTime" value="2013-06-26T05:13:48+00:00"/>

<AttributeName type="TextString" value="Last Change Date"/>
<AttributeValue type="DateTime" value="2013-06-26T05:13:48+00:00"/>

<AttributeName type="TextString" value="Lease Time"/>
<AttributeValue type="Interval" value="3600"/>

<AttributeName type="TextString" value="State"/>
<AttributeValue type="Enumeration" value="PreActive"/>

<Operation type="Enumeration" value="Put"/>
<ResultStatus type="Enumeration" value="Success"/>

<RequestPayload/>

<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="1"/>

<TimeStamp type="DateTime" value="2013-06-26T05:13:48+00:00"/>

<BatchCount type="Integer" value="1"/>
This test case tests the import of key using the Register operation. To validate that the registered key is treated the same as a locally created key, an attribute is added to the key and then modified. Finally, the key is destroyed.

The server sends Notify and Put messages to the client via a separate channel.
<Usage Mask/>
</Attribute>
</AttributeValue type="Integer" value="Encrypt"/>
</Attribute>
</AttributeValue type="TextString" value="x-ID"/>
</AttributeName type="TextString" value="TC-NP-2-11"/>
</AttributeValue type="TextString" value="TC-NP-2-11"/>
</AttributeName type="TextString" value="x-ID"/>
</AttributeValue type="TextString" value="TC-NP-2-11"/>
</AttributeName type="TextString" value="x-ID"/>
</AttributeValue type="TextString" value="TC-NP-2-11"/>
</AttributeName type="TextString" value="x-ID"/>
</AttributeValue type="TextString" value="TC-NP-2-11"/>
</AttributeName type="TextString" value="x-ID"/>
</AttributeValue type="TextString" value="TC-NP-2-11"/>
</AttributeName type="TextString" value="x-ID"/>
</AttributeValue type="TextString" value="TC-NP-2-11"/>
</AttributeName type="TextString" value="x-ID"/>
</AttributeValue type="TextString" value="TC-NP-2-11"/>
</AttributeName type="TextString" value="x-ID"/>
</AttributeValue type="TextString" value="TC-NP-2-11"/>
</AttributeName type="TextString" value="x-ID"/>
</AttributeValue type="TextString" value="TC-NP-2-11"/>
</AttributeName type="TextString" value="x-ID"/>
</AttributeValue type="TextString" value="TC-NP-2-11"/>
</AttributeName type="TextString" value="x-ID"/>
</AttributeValue type="TextString" value="TC-NP-2-11"/>
</AttributeName type="TextString" value="x-ID"/>
</AttributeValue type="TextString" value="TC-NP-2-11"/>
</AttributeName type="TextString" value="x-ID"/>
</AttributeValue type="TextString" value="TC-NP-2-11"/>
</AttributeName type="TextString" value="x-ID"/>
</AttributeValue type="TextString" value="TC-NP-2-11"/>
</AttributeName type="TextString" value="x-ID"/>
</AttributeValue type="TextString" value="TC-NP-2-11"/>
</AttributeName type="TextString" value="x-ID"/>
<SymmetricKey>
  <KeyBlock>
    <KeyFormatType type="Enumeration" value="Raw"/>
    <KeyMaterial type="ByteString" value="1122456789abcdef0123456789abcdef"/>
  </KeyValue>
  <CryptographicAlgorithm type="Enumeration" value="AES"/>
  <CryptographicLength type="Integer" value="128"/>
</KeyBlock>
</SymmetricKey>

<Attribute>
  <AttributeName type="TextString" value="x-ID"/>
  <AttributeValue type="TextString" value="TC-NP-2-11"/>
</Attribute>

<Attribute>
  <AttributeName type="TextString" value="Unique Identifier"/>
  <AttributeValue type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</Attribute>

<Attribute>
  <AttributeName type="TextString" value="Object Type"/>
  <AttributeValue type="Enumeration" value="SymmetricKey"/>
</Attribute>

<Attribute>
  <AttributeName type="TextString" value="Cryptographic Algorithm"/>
  <AttributeValue type="Enumeration" value="AES"/>
</Attribute>

<Attribute>
  <AttributeName type="TextString" value="Cryptographic Length"/>
  <AttributeValue type="Integer" value="128"/>
</Attribute>

<Attribute>
  <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
  <AttributeValue type="Integer" value="Encrypt"/>
</Attribute>

<Attribute>
  <AttributeName type="TextString" value="Digest"/>
  <DigestValue type="ByteString" value="47c01d3851ce2f254d18928526b6126de30cef9a34a4cfbd4648ec3ed21a9e86"/>
  <KeyFormatType type="Enumeration" value="Raw"/>
</Attribute>

<Attribute>
  <AttributeName type="TextString" value="Fresh"/>
  <AttributeValue type="Boolean" value="true"/>
</Attribute>

<Attribute>
  <AttributeName type="TextString" value="Initial Date"/>
  <AttributeValue type="DateTime" value="2013-06-26T05:54:18+00:00"/>
</Attribute>
# [Server-to-Client]

```xml
<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Put"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```

# TIME 2

# [Client-to-Server]

```xml
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="x-provider"/>
        <AttributeValue type="TextString" value="unknown"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```
<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2013-06-26T05:54:18+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="x-provider"/>
        <AttributeValue type="TextString" value="unknown"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Notify"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="x-provider"/>
        <AttributeValue type="TextString" value="unknown"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Last Change Date"/>
        <AttributeValue type="DateTime" value="2013-06-26T05:54:18+00:00"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Notify"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
0216  <TimeStamp type="DateTime" value="2013-06-26T05:54:18+00:00"/>
0217    <BatchCount type="Integer" value="1"/>
0218  </ResponseHeader>
0219  <BatchItem>
0220    <Operation type="Enumeration" value="Notify"/>
0221    <ResultStatus type="Enumeration" value="Success"/>
0222  </ResponsePayload>
0223  </BatchItem>
0224  </ResponseMessage>

# TIME 4
# [Client-to-Server]
0225  <RequestMessage>
0226    <RequestHeader>
0227      <ProtocolVersion>
0228        <ProtocolVersionMajor type="Integer" value="1"/>
0229        <ProtocolVersionMinor type="Integer" value="1"/>
0230      </ProtocolVersion>
0231      <BatchCount type="Integer" value="1"/>
0232      </RequestHeader>
0233    </BatchItem>
0234    <Operation type="Enumeration" value="ModifyAttribute"/>
0235    <RequestPayload>
0236      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0237        <AttributeName type="TextString" value="x-provider"/>
0238        <AttributeValue type="TextString" value="third party"/>
0239      </Attribute>
0240    </RequestPayload>
0241  </BatchItem>
0242  </RequestMessage>

# TIME 5
# [Client-to-Server]
0243  <ResponseMessage>
0244    <ResponseHeader>
0245      <ProtocolVersion>
0246        <ProtocolVersionMajor type="Integer" value="1"/>
0247        <ProtocolVersionMinor type="Integer" value="1"/>
0248      </ProtocolVersion>
0249      <BatchCount type="Integer" value="1"/>
0250      <TimeStamp type="DateTime" value="2013-06-26T05:54:18+00:00"/>
0251      </ResponseHeader>
0252    <BatchItem>
0253      <Operation type="Enumeration" value="ModifyAttribute"/>
0254      <ResultStatus type="Enumeration" value="Success"/>
0255      <ResponsePayload>
0256        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0257          <AttributeName type="TextString" value="x-provider"/>
0258          <AttributeValue type="TextString" value="third party"/>
0259        </Attribute>
0260      </ResponsePayload>
0261    </BatchItem>
0262  </ResponseMessage>
```
# [Server-to-Client]
0266  <RequestMessage>
0267    <RequestHeader>
0268      <ProtocolVersion>
0269        <ProtocolVersionMajor type="Integer" value="1"/>
0270        <ProtocolVersionMinor type="Integer" value="1"/>
0271      </ProtocolVersion>
0272      <BatchCount type="Integer" value="1"/>
0273    </RequestHeader>
0274    <BatchItem>
0275      <Operation type="Enumeration" value="Notify"/>
0276      <RequestPayload>
0277        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0278        <Attribute>
0279          <AttributeName type="TextString" value="x-provider"/>
0280          <AttributeValue type="TextString" value="third party"/>
0281        </Attribute>
0282        <Attribute>
0283          <AttributeName type="TextString" value="Last Change Date"/>
0284          <AttributeValue type="DateTime" value="2013-06-26T05:54:18+00:00"/>
0285        </Attribute>
0286      </RequestPayload>
0287    </BatchItem>
0288  </RequestMessage>

# [Server-to-Client]
0289  <ResponseMessage>
0290    <ResponseHeader>
0291      <ProtocolVersion>
0292        <ProtocolVersionMajor type="Integer" value="1"/>
0293        <ProtocolVersionMinor type="Integer" value="1"/>
0294      </ProtocolVersion>
0295      <TimeStamp type="DateTime" value="2013-06-26T05:54:18+00:00"/>
0296      <BatchCount type="Integer" value="1"/>
0297    </ResponseHeader>
0298    <BatchItem>
0299      <Operation type="Enumeration" value="Notify"/>
0300      <ResultStatus type="Enumeration" value="Success"/>
0301      <ResponsePayload>
0302    </ResponsePayload>
0303    </BatchItem>
0304  </ResponseMessage>

# TIME 6
# [Client-to-Server]
0305  <RequestMessage>
0306    <RequestHeader>
0307      <ProtocolVersion>
0308        <ProtocolVersionMajor type="Integer" value="1"/>
0309        <ProtocolVersionMinor type="Integer" value="1"/>
0310      </ProtocolVersion>
0311      <BatchCount type="Integer" value="1"/>
0312    </RequestHeader>
0313    <BatchItem>
0314      <Operation type="Enumeration" value="Destroy"/>
0315      <RequestPayload>
0316      <UniqueIdentifier type="TextString"
```

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</RequestMessage>

# TIME 7

# [Server-to-Client]

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Notify"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Last Change Date"/>
        <AttributeValue type="DateTime" value="2013-06-26T05:54:18+00:00"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="State"/>
        <AttributeValue type="Enumeration" value="Destroyed"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# [Server-to-Client]

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Notify"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Last Change Date"/>
        <AttributeValue type="DateTime" value="2013-06-26T05:54:18+00:00"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="State"/>
        <AttributeValue type="Enumeration" value="Destroyed"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# [Server-to-Client]
2.2.39 TC-ECC-1-11 - Register an ECC Key Pair

EC recommended curve is P-256 (secp256r1)

- Private Key format ECPrivateKey - http://tools.ietf.org/html/rfc5915
- Public Key format SubjectPublicKeyInfo - http://tools.ietf.org/html/rfc5480

Register a EC private key in the ECPrivateKey key format, then register the corresponding public key, in X.509 (SubjectPublicKeyInfo) format, with the Link attribute pointing to the previously registered private key. Then add the Link attribute to the private key, and perform Locate operations to find the public and private keys using the Link attribute. Get both the private and public keys in default format, then destroy both the private and the public key.

```
-----BEGIN EC PRIVATE KEY-----
MHcCAQEEIJEqDiCPXdc0sYUYR+RlnEWIsW2fO8GtpRDqLJadr570aAoGCCqGSM49
AwEHoUQDQgAEs0Q5L7cqomf4bX2DfeH2b0l9a/8Bc7vFx+ibYVGpQvPBOX6Smq2N
yrJbKCyooc8AvvfLGD16kJROjCm0iOyWw==
-----END EC PRIVATE KEY-----
```

```
-----BEGIN PUBLIC KEY-----
MFkwEwYHkQQAQIDDYDl7cqxomf4bX2DfeH2b0l9a/8Bc7vFx+ibYVGpQvPBOX6Smq2NyrJbKCyooc8AvvfLGD16kJROjCm0iOyWw==
-----END PUBLIC KEY-----
```
<TemplateAttribute>
  <Attribute>
    <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
    <AttributeValue type="Integer" value="Sign"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="x-ID"/>
    <AttributeValue type="TextString" value="TC-ECC-1-11-prkey1"/>
  </Attribute>
</TemplateAttribute>

<PrivateKey>
  <KeyBlock>
    <KeyFormatType type="Enumeration" value="ECPrivateKey"/>
    <KeyValue>
      <KeyMaterial type="ByteString" value="30770201010420912a0e208f5dd734b1851847e4659c4588b16d9f3bc1ada510eac969daaf9ef4a0a06082a8648ce3d030107a14403420004b344392fb72aa267f86d7d837de1d96ee960ff05ceef3f1fa26d8546a6442f3c1397e929aad8dcab25b282ca8a1cf00bef7cb18a0f5ea44493a30a6d23b25b"/>
    </KeyValue>
    <CryptographicAlgorithm type="Enumeration" value="ECDSA"/>
    <CryptographicLength type="Integer" value="256"/>
  </KeyBlock>
</PrivateKey>

<RequestPayload>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</RequestPayload>
</BatchItem>
</RequestMessage>

# TIME 1

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</RequestMessage>

# TIME 1

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</RequestMessage>
<Operation type="Enumeration" value="Register"/>
   <RequestPayload>
      <ObjectType type="Enumeration" value="PublicKey"/>
      <TemplateAttribute>
         <Attribute>
            <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
            <AttributeValue type="Integer" value="Verify"/>
         </Attribute>
         <Attribute>
            <AttributeName type="TextString" value="x-ID"/>
            <AttributeValue type="TextString" value="TC-ECC-1-11-pubkey1"/>
         </Attribute>
      </TemplateAttribute>
      <PublicKey>
         <KeyBlock>
            <KeyFormatType type="Enumeration" value="X_509"/>
            <KeyValue>
               <KeyMaterial type="ByteString" value="3059301306072a8648ce3d020106082a8648ce3d03010703420004b344392fb72aa267f86d7d837de1d96ce960ffcc0ceff3ffafa26d8546a6442f3c1397e929aad8dcb25b282ca81cf00b6f7cb18a0f5ea44493a30a6d223b25b"/>
            </KeyValue>
            <CryptographicAlgorithm type="Enumeration" value="ECDSA"/>
            <CryptographicLength type="Integer" value="256"/>
         </KeyBlock>
      </PublicKey>
   </RequestPayload>
   </BatchItem>
</RequestMessage>

<ResponseMessage>
   <ResponseHeader>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
      <ProtocolVersion>
      <TimeStamp type="DateTime" value="2012-04-27T08:14:36+00:00"/>
      <BatchCount type="Integer" value="1"/>
      </ProtocolVersion>
   </ResponseHeader>
   <BatchItem>
      <Operation type="Enumeration" value="Register"/>
      <ResultStatus type="Enumeration" value="Success"/>
      <ResponsePayload>
         <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      </ResponsePayload>
      </BatchItem>
   </ResponseMessage>
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <RequestPayload>
      <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Link"/>
        <AttributeValue>
          <LinkType type="Enumeration" value="PublicKeyLink"/>
          <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
        </AttributeValue>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 3

<RequestMessage>
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    </ProtocolVersion>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Link"/>
        <AttributeValue>
          <LinkType type="Enumeration" value="PublicKeyLink"/>
          <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
        </AttributeValue>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</RequestMessage>
<ProtocolVersion>
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</RequestHeader>
<Operation type="Enumeration" value="Locate"/>
<RequestPayload>
<Attribute>
<AttributeName type="TextString" value="Object Type"/>
<AttributeValue type="Enumeration" value="PublicKey"/>
</Attribute>
<Attribute>
<AttributeName type="TextString" value="Link"/>
<AttributeValue>
<LinkType type="Enumeration" value="PrivateKeyLink"/>
<LinkedObjectIdentifier type="TextString" value="UNIQUE_IDENTIFIER_0"/>
</AttributeValue>
</Attribute>
</RequestPayload>
</BatchItem>
</RequestMessage>

<ProtocolVersion>
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<ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:14:36+00:00"/>
</BatchCount>
</ResponseHeader>
<BatchItem>
<Operation type="Enumeration" value="Locate"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="UNIQUE_IDENTIFIER_1"/>
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</ResponseMessage>

# TIME 4

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<ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</RequestHeader>
<Operation type="Enumeration" value="Locate"/>
<RequestPayload>
<Attribute>
<AttributeName type="TextString" value="Object Type"/>
<AttributeValue type="Enumeration" value="PrivateKey"/>
</Attribute>
</RequestPayload>
</BatchItem>
</RequestMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
<AttributeValue>
   <LinkType type="Enumeration" value="PublicKeyLink"/>
   <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
</AttributeValue>
```

```
<AttributeValue>
</AttributeValue>
```

```
<RequestPayload>
</RequestPayload>
```

```
<BatchItem>
</BatchItem>
```

```
<getResponseMessage>
<getResponseHeader>
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      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
   </ProtocolVersion>
   <TimeStamp type="DateTime" value="2012-04-27T08:14:36+00:00"/>
   <BatchCount type="Integer" value="1"/>
</getResponseHeader>
<BatchItem>
   <Operation type="Enumeration" value="Locate"/>
   <ResultStatus type="Enumeration" value="Success"/>
   <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
   </ResponsePayload>
</BatchItem>
</getResponseMessage>
```

```
# TIME 5
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      <ProtocolVersionMinor type="Integer" value="1"/>
   </ProtocolVersion>
   <BatchCount type="Integer" value="1"/>
</RequestHeader>
<BatchItem>
   <Operation type="Enumeration" value="Get"/>
   <ResultStatus type="Enumeration" value="Success"/>
   <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
   </RequestPayload>
</BatchItem>
</RequestMessage>
```

```
<getResponseMessage>
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      <ProtocolVersionMinor type="Integer" value="1"/>
   </ProtocolVersion>
   <TimeStamp type="DateTime" value="2012-04-27T08:14:36+00:00"/>
   <BatchCount type="Integer" value="1"/>
</getResponseHeader>
<BatchItem>
   <Operation type="Enumeration" value="Get"/>
   <ResultStatus type="Enumeration" value="Success"/>
</BatchItem>
</getResponseMessage>
```
<ResponsePayload><ObjectType type="Enumeration" value="PrivateKey"/>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
<PrivateKey>
<KeyBlock>
<KeyFormatType type="Enumeration" value="ECPrivateKey"/>
<KeyValue>
<KeyMaterial type="ByteString" value="30770201010420912a0e208f5dd734b1851847e4659c4588b16d9f3bc1 ada510ea2c969daf9ef4a00a06082a8648ce3d030107a1440342004b344392fb72a a267f86d7837de1d96ce9b0ff05ceeef3f1fa2e26854a6442f3c1397e929aad8dca b25b282ca8alcf0bef7cb18a0f9ea44493a30a6d223b25b"/>
</KeyValue>
</KeyBlock>
</PrivateKey></ResponsePayload>

# TIME 6

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</RequestHeader>
</RequestMessage>

<ResponseMessage>
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<ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
</ResponseHeader>
</ResponseMessage>

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<ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
</RequestHeader>
</RequestMessage>

<ResponseMessage>
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<ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
</ResponseHeader>
</ResponseMessage>

<RequestMessage>
<RequestHeader>
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<ProtocolVersionMinor type="Integer" value="1"/>
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</RequestHeader>
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<ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
</RequestHeader>
</RequestMessage>

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</ProtocolVersion>
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<ResponseMessage>
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<ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
</ResponseHeader>
</ResponseMessage>

<RequestMessage>
<RequestHeader>
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<ProtocolVersionMajor type="Integer" value="1"/>
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</ProtocolVersion>
</RequestHeader>
</RequestMessage>
<KeyValue>
  <KeyMaterial type="ByteString" value="3059301306072a8648ce3d020106082a8648ce3d03010703420004b344392fb72a2a26f86d7d37de1d96ce960ffe05ceef3f1fa26d8546a6442f3c1397e929add8dcab25b282ca8a1cf00bef7cb18a0f5e44493a30a6d223b25b"/>
</KeyValue>

<CryptographicAlgorithm type="Enumeration" value="ECDSA"/>

<CryptographicLength type="Integer" value="256"/>

</KeyBlock>
</PublicKey>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 7

<RequestMessage>
  <RequestHeader>
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      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 8

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    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</RequestMessage>
2.2.40 TC-ECC-2-11 - Register an ECC Key Pair in PKCS8 Format

EC recommended curve is P-256 (secp256r1)

- Public Key format SubjectPublicKeyInfo - http://tools.ietf.org/html/rfc5480

Register a EC private key in PKCS8 key format (with passphrase 'secret' using pbeWithSHAAnd3-KeyTripleDES-CBC), then register the corresponding public key, in X.509 (SubjectPublicKeyInfo) format, with the Link attribute pointing to the previously registered private key. Then add the Link attribute to the private key, and perform Locate operations to find the public and private keys using the Link attribute. Get both the private and public keys in default format, then destroy both the private and the public key.

-----BEGIN ENCRYPTED PRIVATE KEY-----
MIGxMBwGCicqGSIb3DQEQAQMQwDgQIcAF0cAFXb4CAggABIGQkUySNQsJpKPt19y
g/n+gqaBHsoo1URUH4BFVvVPVUNqKQmz0MD8/gfBsz1DOU9s7mC97LVgWaEqJTad
sQgFsJL32IuNTWnOLtY3JbD4z4gmyYM2c/aJj9eYVj0UFp6n11CsdU6FHy
urzWFAAsKk+Yt+zpoKGl+ra00008k1z59Fm30ziZPF474GMM
-----END ENCRYPTED PRIVATE KEY-----

-----BEGIN PUBLIC KEY-----
MFkwe6YHk0Zsiz0CqAqYIKoZIzjODAqDQgAFdAASoQ5L7cqm4f4bX2DfeH2bo1/8Bc
7vPz+i+bYVPkQvPBO6Smq2NyrJbKCyoc8AvvfLGl6kRJOjCm01OyWw==
-----END PUBLIC KEY-----
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="PrivateKey"/>
      <TemplateAttribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
          <AttributeValue type="Integer" value="Sign"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="x-ID"/>
          <AttributeValue type="TextString" value="TC-ECC-2-11-prikey1"/>
        </Attribute>
      </TemplateAttribute>
      <PrivateKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="PKCS_8"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="3081b1301c060a2a864886f70d010c0103300e04082f2656a3365731390202080048190eadf76e9cee21053b01c53e175b0e8c4d627c17ada12df478cfb35a0d7252a9a6488660d61235be735178d0ca8548871567c22803d8f6f6009f05c26429c83ab72d0f2e7e7870bebf3ec746f520d0eccafe34b72a791e9535b34584b96d12403e8a82d0b5c3e70018f2d4754d66ae66a9398234ebda2ca4d02992613cb377b9651282c4f3f0c5a3c5c33cc3ae0"/>  
        </KeyValue>
        <CryptographicAlgorithm type="Enumeration" value="ECDSA"/>
        <CryptographicLength type="Integer" value="256"/>
      </KeyBlock>
      </PrivateKey>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 0

<RequestMessage>
  <RequestHeader>
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      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="PrivateKey"/>
      <TemplateAttribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
          <AttributeValue type="Integer" value="Sign"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="x-ID"/>
          <AttributeValue type="TextString" value="TC-ECC-2-11-prikey1"/>
        </Attribute>
      </TemplateAttribute>
      <PrivateKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="PKCS_8"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="3081b1301c060a2a864886f70d010c0103300e04082f2656a3365731390202080048190eadf76e9cee21053b01c53e175b0e8c4d627c17ada12df478cfb35a0d7252a9a6488660d61235be735178d0ca8548871567c22803d8f6f6009f05c26429c83ab72d0f2e7e7870bebf3ec746f520d0eccafe34b72a791e9535b34584b96d12403e8a82d0b5c3e70018f2d4754d66ae66a9398234ebda2ca4d02992613cb377b9651282c4f3f0c5a3c5c33cc3ae0"/>  
        </KeyValue>
        <CryptographicAlgorithm type="Enumeration" value="ECDSA"/>
        <CryptographicLength type="Integer" value="256"/>
      </KeyBlock>
      </PrivateKey>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
<ResponsePayload>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>
```

```
# TIME 1

<RequestMessage>
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      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="PublicKey">
        <TemplateAttribute>
          <Attribute>
            <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
            <AttributeValue type="Integer" value="Verify"/>
          </Attribute>
          <Attribute>
            <AttributeName type="TextString" value="Link"/>
            <AttributeValue>
              <LinkType type="Enumeration" value="PrivateKeyLink"/>
              <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
            </AttributeValue>
          </Attribute>
          <Attribute>
            <AttributeName type="TextString" value="x-ID"/>
            <AttributeValue type="TextString" value="TC-ECC-2-11-pubkey1"/>
          </Attribute>
        </TemplateAttribute>
        <PublicKey>
          <KeyBlock>
            <KeyFormatType type="Enumeration" value="X_509"/>
            <KeyValue>
              <KeyMaterial type="ByteString" value="3059301306072a8648ce3d020106082a8648ce3d03010703420004b344392fb72aa267f86d7d837de96ce960fffc05ceef3f1fa26d8546a6442f3c1397e929aad8dca8b282ca8a1cf00bef7c18a0f5ea4493a30a6d223b25b"/>
            </KeyValue>
            <CryptographicAlgorithm type="Enumeration" value="ECDSA"/>  
            <CryptographicLength type="Integer" value="256"/>
          </KeyBlock>
        </PublicKey>
      </RequestPayload>
    </BatchItem>
  </BatchCount>
  <ResponseMessage>
    <ResponseHeader>
```

kmip-testcases-v1.2-cn01
Non-Standards Track
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<TimeStamp type="DateTime" value="2012-04-27T08:14:36+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
</BatchItem>
<Operation type="Enumeration" value="AddAttribute"/>
<RequestPayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
<Attribute>
<AttributeName type="TextString" value="Link"/>
<AttributeValue>
<LinkType type="Enumeration" value="PublicKeyLink"/>
<LinkedObjectId type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
</AttributeValue>
</Attribute>
</RequestPayload>
</BatchItem>
</RequestMessage>

---

<RequestMessage>
<RequestHeader>
<ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</RequestHeader>
</BatchItem>
<Operation type="Enumeration" value="AddAttribute"/>
<RequestPayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
<Attribute>
<AttributeName type="TextString" value="Link"/>
<AttributeValue>
<LinkType type="Enumeration" value="PublicKeyLink"/>
<LinkedObjectId type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
</AttributeValue>
</Attribute>
</RequestPayload>
</BatchItem>
</RequestMessage>

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<RequestMessage>
<RequestHeader>
<ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</RequestHeader>
</BatchItem>
<Operation type="Enumeration" value="AddAttribute"/>
<RequestPayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
<Attribute>
<AttributeName type="TextString" value="Link"/>
<AttributeValue>
<LinkType type="Enumeration" value="PublicKeyLink"/>
<LinkedObjectId type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
</AttributeValue>
</Attribute>
</RequestPayload>
</BatchItem>
</RequestMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

# TIME 3

```xml
<RequestMessage>
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    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <RequestPayload>
      <AttributeName type="TextString" value="Object Type"/>
      <AttributeValue type="Enumeration" value="PublicKey"/>
      <AttributeName type="TextString" value="Link"/>
      <AttributeValue>
        <LinkType type="Enumeration" value="PrivateKeyLink"/>
        <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      </AttributeValue>
      </Attribute>
      </RequestPayload>
    </BatchItem>
  </RequestMessage>
```

# TIME 4

```xml
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  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:36+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="1"/>
    </ProtocolVersion>
    </RequestHeader>
    <BatchItem>
      <Operation type="Enumeration" value="Locate"/>
      <RequestPayload>
        <AttributeName type="TextString" value="Object Type"/>
        <AttributeValue type="Enumeration" value="PrivateKey"/>
        </AttributeValue>
        <Attribute>
          <AttributeName type="TextString" value="Link"/>
          <AttributeValue>
            <LinkType type="Enumeration" value="PublicKeyLink"/>
            <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
          </AttributeValue>
          </Attribute>
        </RequestPayload>
      </BatchItem>
  </RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
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  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
    </BatchItem>
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# TIME 5

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2.2.41 TC-ECC-3-11 - Register an ECC Key Pair and ECDSA Certificate

EC recommended curve is P-256 (secp256r1)

- Private Key format ECPrivateKey - http://tools.ietf.org/html/rfc5915

- Public Key format SubjectPublicKeyInfo - http://tools.ietf.org/html/rfc5480
Register a EC private key in the ECPrivateKey key format, then register the corresponding public key, in X.509 (SubjectPublicKeyInfo) format, and a corresponding ECDSA certificate, with the Link attribute pointing to the previously registered private key. Return the attribute values for the ECDSA certificate showing the correct server parsing of the certificate. Then add the Link attribute to the private key, and perform Locate operations to find the public and private keys using the Link attribute. Get both the private and public keys in default format, then destroy both the private and the public key.

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AwEHoUQDQgAEQq6SL7qcmof4bX2DfeH2b0lq/8Bc7vPxB+iBYVGPqVpB0X6Smq2N
yrJbKCyoc8AvvfLGKD16kRJOjCmo1OyWw==
-----END EC PRIVATE KEY-----

-----BEGIN PUBLIC KEY-----
MFkwEwYHKoZIzj0CAQYIKoZIzj0DAQcDQgAEs0Q5L7cqomf4bX2DfeH2b0lq/8Bc
7vPxB+iBYVGPqVpB0X6Smq2NyrJbKCyoc8AvvfLGKD16kRJOjCmo1OyWw==
-----END PUBLIC KEY-----

-----BEGIN CERTIFICATE-----
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oc8AvvfLGKD16kRJOjCmo1OyW6NQA4wH6EQYDVR0BBYEFMdL251FazsUho/ZyI29
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0018     </TemplateAttribute>
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This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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    <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
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    <AttributeName type="TextString" value="Lease Time"/>
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    <AttributeName type="TextString" value="State"/>
    <AttributeName type="TextString" value="X.509 Certificate Identifier"/>
    <AttributeName type="TextString" value="X.509 Certificate Issuer"/>
    <AttributeName type="TextString" value="X.509 Certificate Subject"/>
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</BatchItem>
</RequestMessage>

# TIME 5

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# TIME 6

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The patent provisions of the OASIS IPR Policy do not apply.

```xml
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0406     <Operation type="Enumeration" value="Locate"/>
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0408       <AttributeName type="TextString" value="Object Type"/>
0409       <AttributeValue type="Enumeration" value="PrivateKey"/>
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# TIME 8
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0438 </ResponseMessage>
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0439 # TIME 8
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0447   </RequestHeader>
0448   <BatchItem>
0449     <Operation type="Enumeration" value="Get"/>
0450     <RequestPayload>
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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# TIME 9

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        </KeyValue>
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        <CryptographicLength type="Integer" value="256"/>
      </KeyBlock>
    </PublicKey>
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# TIME 10

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    </RequestPayload>
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        </KeyValue>
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        <CryptographicLength type="Integer" value="256"/>
      </KeyBlock>
    </PublicKey>
  </ResponsePayload>
</ResponseMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
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0551     <ResultStatus type="Enumeration" value="Success"/>
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0554     </ResponsePayload>
0555  </BatchItem>
0556 </ResponseMessage>

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0569     </RequestPayload>
0570  </BatchItem>
0571 </RequestMessage>

0572  <ResponseMessage>
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0582     <Operation type="Enumeration" value="Destroy"/>
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0588 </ResponseMessage>

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0596     </RequestHeader>
0597  <BatchItem>
0598     <Operation type="Enumeration" value="Destroy"/>
```
2.3 KMIP 1.2 Test Cases

2.3.1 TC-311-12 - Create / Destroy

In this test case the client issues a Create request, whereby the server creates a new symmetric key and returns the Unique Identifier. To clean up, the client then performs a Destroy operation to destroy the key.

```xml
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  <BatchItem>
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    <RequestPayload>
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          ...
        </Attribute>
      </TemplateAttribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
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    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:36+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
<Attribute name="MessageType" type="TextString" value="Request"/>

<Attribute name="TemplateAttribute" type="Sequence">
  <Attribute name="TemplateAttributeItem" type="Sequence">
    <Attribute name="AttributeName" type="TextString" value="Cryptographic Algorithm"/>
    <AttributeValue type="Enumeration" value="AES"/>
    </Attribute>
    <Attribute name="AttributeName" type="TextString" value="Cryptographic Length"/>
    <AttributeValue type="Integer" value="128"/>
    </Attribute>
    <Attribute name="TemplateName" type="TextString" value="Cryptographic Usage Mask"/>
    <AttributeValue type="Integer" value="Decrypt Encrypt"/>
    </Attribute>
    <Attribute name="TemplateName" type="TextString" value="x-ID"/>
    <AttributeValue type="TextString" value="TC-311-12"/>
    </Attribute>
  </Attribute>
</TemplateAttribute>

<RequestMessage>
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    </ProtocolVersion>
  </RequestHeader>
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    </RequestPayload>
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</RequestMessage>

# TIME 1

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  </BatchItem>
</RequestMessage>
2.3.2 TC-312-12 - Register / Create / Get attributes / Destroy

Here the client first registers a template object and then creates a symmetric key using the registered template. To verify that the attributes of the key were set correctly from the template, the client then issues a Get Attributes command, after which it destroys first the key and then the template.
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

---

```xml
<Template>
  <Attribute>
    <AttributeName type="TextString" value="Object Group"/>
    <AttributeValue type="TextString" value="Group1"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Application Specific Information"/>
    <ApplicationNamespace type="TextString" value="ssl"/>
    <ApplicationData type="TextString" value="www.example.com"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Contact Information"/>
    <AttributeValue type="TextString" value="Joe"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="x-Purpose"/>
    <AttributeValue type="TextString" value="demonstration"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="x-ID"/>
    <AttributeValue type="TextString" value="TC-312-12-from-template"/>
  </Attribute>
</Template>

# TIME 1

```
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</RequestHeader>

<BatchItem>
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  <RequestPayload>
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        <NameType type="Enumeration" value="UninterpretedTextString"/>
      </Name>
      <Attribute>
        <AttributeName type="TextString" value="CryptographicAlgorithm"/>
        <AttributeValue type="Enumeration" value="AES"/>
      </Attribute>
      <Attribute>
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      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="CryptographicUsageMask"/>
        <AttributeValue type="Integer" value="Decrypt Encrypt"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Name"/>
        <AttributeValue>
          <NameValue type="TextString" value="TC-312-12-key1"/>
          <NameType type="Enumeration" value="UninterpretedTextString"/>
        </AttributeValue>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="x-ID"/>
        <AttributeValue type="TextString" value="TC-312-12-from-create"/>
      </Attribute>
    </TemplateAttribute>
  </RequestPayload>
</BatchItem>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:22+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
</ResponseMessage>
<ResponsePayload>
  <ObjectType type="Enumeration" value="SymmetricKey"/>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 2

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:22+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <Attribute>
        <AttributeName type="TextString" value="x-ID"/>
        <AttributeValue type="TextString" value="TC-312-12-from-template"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="x-ID"/>
        <AttributeIndex type="Integer" value="1"/>
        <AttributeValue type="TextString" value="TC-312-12-from-create"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="x-Purpose"/>
        <AttributeValue type="TextString" value="demonstration"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Unique Identifier"/>
        <AttributeValue type="TextString" value="demonstration"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
value="$UNIQUE_IDENTIFIER_1"/>
      </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Object Type"/>
    <AttributeValue type="Enumeration" value="SymmetricKey"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Cryptographic Algorithm"/>
    <AttributeValue type="Enumeration" value="AES"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Cryptographic Length"/>
    <AttributeValue type="Integer" value="128"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Application Specific Information"/>
    <AttributeValue>
      <ApplicationNamespace type="TextString" value="ssl"/>
      <ApplicationData type="TextString" value="www.example.com"/>
    </AttributeValue>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Contact Information"/>
    <AttributeValue type="TextString" value="Joe"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
    <AttributeValue type="Integer" value="Decrypt Encrypt"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Digest"/>
    <AttributeValue>
      <HashingAlgorithm type="Enumeration" value="SHA_256"/>
      <DigestValue type="ByteString" value="c61217ddfa8a8004410ce1a7edd8e5013693a173310918971e46e910d61c669"/>
      <KeyFormatType type="Enumeration" value="Raw"/>
    </AttributeValue>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Fresh"/>
    <AttributeValue type="Boolean" value="true"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Initial Date"/>
    <AttributeValue type="DateTime" value="2013-06-17T08:37:31+00:00"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Last Change Date"/>
    <AttributeValue type="DateTime" value="2013-06-17T08:37:31+00:00"/>
  </Attribute>
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17T08:37:31+00:00"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Lease Time"/>
    <AttributeValue type="Interval" value="3600"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Name"/>
    <AttributeValue/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Object Group"/>
    <AttributeValue type="TextString" value="Group1"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Original Creation Date"/>
    <AttributeValue type="DateTime" value="2013-06-23T00:11:30+00:00"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="State"/>
    <AttributeValue type="Enumeration" value="PreActive"/>
  </Attribute>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 3

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2013-06-17T08:24:02+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <ResponsePayload>
      ...
<BatchItem>
  <Operation type="Enumeration" value="GetAttributes"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <Attribute>
      <AttributeName type="TextString" value="x-ID"/>
      <AttributeValue type="TextString" value="TC-312-12"/>
    </Attribute>
    <Attribute>
      <AttributeName type="TextString" value="Unique Identifier"/>
      <AttributeValue type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </Attribute>
    <Attribute>
      <AttributeName type="TextString" value="Object Type"/>
      <AttributeValue type="Enumeration" value="Template"/>
    </Attribute>
    <Attribute>
      <AttributeName type="TextString" value="Initial Date"/>
      <AttributeValue type="DateTime" value="2013-06-17T08:24:02+00:00"/>
    </Attribute>
    <Attribute>
      <AttributeName type="TextString" value="Last Change Date"/>
      <AttributeValue type="DateTime" value="2013-06-17T08:24:02+00:00"/>
    </Attribute>
    <Attribute>
      <AttributeName type="TextString" value="Lease Time"/>
      <AttributeValue type="Interval" value="3600"/>
    </Attribute>
    <Attribute>
      <AttributeName type="TextString" value="Name"/>
      <AttributeValue>
        <NameValue type="TextString" value="TC-312-12-template1"/>
        <NameType type="Enumeration" value="UninterpretedTextString"/>
      </AttributeValue>
    </Attribute>
  </ResponsePayload>
</BatchItem>

# TIME 4

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="x-ID"/>
        <AttributeValue type="TextString" value="TC-312-12"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Unique Identifier"/>
        <AttributeValue type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Object Type"/>
        <AttributeValue type="Enumeration" value="Template"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Initial Date"/>
        <AttributeValue type="DateTime" value="2013-06-17T08:24:02+00:00"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Last Change Date"/>
        <AttributeValue type="DateTime" value="2013-06-17T08:24:02+00:00"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Lease Time"/>
        <AttributeValue type="Interval" value="3600"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Name"/>
        <AttributeValue>
          <NameValue type="TextString" value="TC-312-12-template1"/>
          <NameType type="Enumeration" value="UninterpretedTextString"/>
        </AttributeValue>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```xml
<RequestPayload>
  </BatchItem>
</RequestMessage>

<!-- TIME 5

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2013-06-17T08:40:15+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="Template"/>
      <UniqueIdentifier type="TextString" value="8590e6e9-61c1-4b81-98d3-053a3c6a521b"/>
      <Template>
        <Attribute>
          <AttributeName type="TextString" value="Object Group"/>
          <AttributeValue type="TextString" value="Group1"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Application Specific Information"/>
          <AttributeValue>
            <ApplicationNamespace type="TextString" value="ssl"/>
            <ApplicationData type="TextString" value="www.example.com"/>
          </AttributeValue>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Contact Information"/>
          <AttributeValue type="TextString" value="Joe"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="x-Purpose"/>
          <AttributeValue type="TextString" value="demonstration"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="x-ID"/>
          <AttributeValue type="TextString" value="TC-312-12-from-template"/>
        </Attribute>
      </Template>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:22+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

TIME 6

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:22+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
2.3.3 TC-313-12 - Create / Locate / Get / Destroy

This test case tests the Locate and Get operations. A symmetric key is first created, and then a
lookup is performed on the Name attribute using the Locate operation. Subsequently, a Get
request is issued to retrieve the located key. A locate is performed on the Unique Identifier with
State of PreActive (the State the key must be in). The key on the server is destroyed and the
locate is performed again which should return no objects (as the state of the key should now be
Destroyed).

```xml
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <TemplateAttribute>
        <Attribute>
          <AttributeName type="TextString" value="Name"/>
          <AttributeValue>
            <NameValue type="TextString" value="TC-313-12-key1"/>
            <NameType type="Enumeration" value="UninterpretedTextString"/>
          </AttributeValue>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Algorithm"/>
          <AttributeValue type="Enumeration" value="DES3"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Length"/>
          <AttributeValue type="Integer" value="168"/>
        </Attribute>
      </TemplateAttribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```

```xml
<BatchItem>
  <Operation type="Enumeration" value="Destroy"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  </ResponsePayload>
</BatchItem>
</ResponseMessage>
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```xml
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <RequestPayload>
      <Attribute>
        <AttributeName type="TextString" value="Object Type"/>
        <AttributeValue type="Enumeration" value="SymmetricKey"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Name"/>
        <AttributeValue type="TextString" value="TC-313-12-key1"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
  </RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
  </ResponseMessage>

# TIME 1

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <RequestPayload>
      <Attribute>
        <AttributeName type="TextString" value="Object Type"/>
        <AttributeValue type="Enumeration" value="SymmetricKey"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Name"/>
        <AttributeValue type="TextString" value="TC-313-12-key1"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
  </RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersionMajor type="Integer" value="1"/>
  </ResponseHeader>

<BatchItem>
  <Operation type="Enumeration" value="Create"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <ObjectType type="Enumeration" value="SymmetricKey"/>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  </ResponsePayload>
</BatchItem>
</ResponseMessage>
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:12:22+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
<branchitem>
<Operation type="Enumeration" value="Locate"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 2
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:23+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <SymmetricKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyMaterial type="ByteStrin" value="7367578051012a6d134a855e25c8cd5e4ca131455729d3c8">
          <CryptographicAlgorithm type="Enumeration" value="DES3"/>
          <CryptographicLength type="Integer" value="168"/>
          </KeyMaterial>
        </KeyBlock>
      </SymmetricKey>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
# TIME 3
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <RequestPayload>
      <Attribute>
        <AttributeName type="TextString" value="State"/>
        <AttributeValue type="Enumeration" value="PreActive"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Unique Identifier"/>
        <AttributeValue type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 4
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</RequestMessage>
```
<table>
<thead>
<tr>
<th>Line</th>
<th>XML Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>0188</td>
<td>&lt;Operation type=&quot;Enumeration&quot; value=&quot;Destroy&quot;/&gt;</td>
</tr>
<tr>
<td>0189</td>
<td>&lt;RequestPayload&gt;</td>
</tr>
<tr>
<td>0190</td>
<td>&lt;UniqueIdentifier type=&quot;TextString&quot; value=&quot;$UNIQUE_IDENTIFIER_0&quot;/&gt;</td>
</tr>
<tr>
<td>0191</td>
<td>&lt;/RequestPayload&gt;</td>
</tr>
<tr>
<td>0192</td>
<td>&lt;/BatchItem&gt;</td>
</tr>
<tr>
<td>0193</td>
<td>&lt;/RequestMessage&gt;</td>
</tr>
<tr>
<td>0194</td>
<td>&lt;ResponseMessage&gt;</td>
</tr>
<tr>
<td>0195</td>
<td>&lt;ResponseHeader&gt;</td>
</tr>
<tr>
<td>0196</td>
<td>&lt;ProtocolVersion&gt;</td>
</tr>
<tr>
<td>0197</td>
<td>&lt;ProtocolVersionMajor type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</td>
</tr>
<tr>
<td>0198</td>
<td>&lt;ProtocolVersionMinor type=&quot;Integer&quot; value=&quot;2&quot;/&gt;</td>
</tr>
<tr>
<td>0199</td>
<td>&lt;/ProtocolVersion&gt;</td>
</tr>
<tr>
<td>0200</td>
<td>&lt;TimeStamp type=&quot;DateTime&quot; value=&quot;2012-04-27T08:12:23+00:00&quot;/&gt;</td>
</tr>
<tr>
<td>0201</td>
<td>&lt;/BatchCount type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</td>
</tr>
<tr>
<td>0202</td>
<td>&lt;/ResponseHeader&gt;</td>
</tr>
<tr>
<td>0203</td>
<td>&lt;/BatchItem&gt;</td>
</tr>
<tr>
<td>0204</td>
<td>&lt;Operation type=&quot;Enumeration&quot; value=&quot;Destroy&quot;/&gt;</td>
</tr>
<tr>
<td>0205</td>
<td>&lt;ResponseStatus type=&quot;Enumeration&quot; value=&quot;Success&quot;/&gt;</td>
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<td>&lt;ResponsePayload&gt;</td>
</tr>
<tr>
<td>0207</td>
<td>&lt;UniqueIdentifier type=&quot;TextString&quot; value=&quot;$UNIQUE_IDENTIFIER_0&quot;/&gt;</td>
</tr>
<tr>
<td>0208</td>
<td>&lt;/ResponsePayload&gt;</td>
</tr>
<tr>
<td>0209</td>
<td>&lt;/BatchItem&gt;</td>
</tr>
<tr>
<td>0210</td>
<td>&lt;/ResponseMessage&gt;</td>
</tr>
<tr>
<td>0211</td>
<td># TIME 5</td>
</tr>
<tr>
<td>0212</td>
<td>&lt;RequestMessage&gt;</td>
</tr>
<tr>
<td>0213</td>
<td>&lt;RequestHeader&gt;</td>
</tr>
<tr>
<td>0214</td>
<td>&lt;ProtocolVersion&gt;</td>
</tr>
<tr>
<td>0215</td>
<td>&lt;ProtocolVersionMajor type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</td>
</tr>
<tr>
<td>0216</td>
<td>&lt;ProtocolVersionMinor type=&quot;Integer&quot; value=&quot;2&quot;/&gt;</td>
</tr>
<tr>
<td>0217</td>
<td>&lt;/ProtocolVersion&gt;</td>
</tr>
<tr>
<td>0218</td>
<td>&lt;/RequestHeader&gt;</td>
</tr>
<tr>
<td>0219</td>
<td>&lt;/BatchItem&gt;</td>
</tr>
<tr>
<td>0220</td>
<td>&lt;Operation type=&quot;Enumeration&quot; value=&quot;Locate&quot;/&gt;</td>
</tr>
<tr>
<td>0221</td>
<td>&lt;RequestPayload&gt;</td>
</tr>
<tr>
<td>0222</td>
<td>&lt;Attribute&gt;</td>
</tr>
<tr>
<td>0223</td>
<td>&lt;AttributeName type=&quot;TextString&quot; value=&quot;State&quot;/&gt;</td>
</tr>
<tr>
<td>0224</td>
<td>&lt;AttributeValue type=&quot;Enumeration&quot; value=&quot;PreActive&quot;/&gt;</td>
</tr>
<tr>
<td>0225</td>
<td>&lt;/Attribute&gt;</td>
</tr>
<tr>
<td>0226</td>
<td>&lt;/Attribute&gt;</td>
</tr>
<tr>
<td>0227</td>
<td>&lt;AttributeName type=&quot;TextString&quot; value=&quot;Unique Identifier&quot;/&gt;</td>
</tr>
<tr>
<td>0228</td>
<td>&lt;AttributeValue type=&quot;TextString&quot; value=&quot;$UNIQUE_IDENTIFIER_0&quot;/&gt;</td>
</tr>
<tr>
<td>0229</td>
<td>&lt;/Attribute&gt;</td>
</tr>
<tr>
<td>0230</td>
<td>&lt;/RequestPayload&gt;</td>
</tr>
<tr>
<td>0231</td>
<td>&lt;/BatchItem&gt;</td>
</tr>
<tr>
<td>0232</td>
<td>&lt;/RequestMessage&gt;</td>
</tr>
<tr>
<td>0233</td>
<td>&lt;ResponseMessage&gt;</td>
</tr>
<tr>
<td>0234</td>
<td>&lt;ResponseHeader&gt;</td>
</tr>
<tr>
<td>0235</td>
<td>&lt;ProtocolVersion&gt;</td>
</tr>
<tr>
<td>0236</td>
<td>&lt;ProtocolVersionMajor type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</td>
</tr>
<tr>
<td>0237</td>
<td>&lt;ProtocolVersionMinor type=&quot;Integer&quot; value=&quot;2&quot;/&gt;</td>
</tr>
<tr>
<td>0238</td>
<td>&lt;/ProtocolVersion&gt;</td>
</tr>
<tr>
<td>0239</td>
<td>&lt;TimeStamp type=&quot;DateTime&quot; value=&quot;2012-04-27T08:12:23+00:00&quot;/&gt;</td>
</tr>
</tbody>
</table>
2.3.4 TC-314-12 - Dual Client Test Case, ID Placeholder-linked Locate & Get Batch

This test case has two clients performing operations on the same key. The first client initially registers a template and creates a symmetric key using that template. The second client then does a batched Locate and Get using the ID Placeholder to retrieve the key. The second client thereafter performs a number of operations on the key (Get Attribute List, Get Attribute, Add Attribute, Modify Attribute and Delete Attribute), before the first client finally destroys the key and the template. The first client also tries to Get the key and the template after they have been destroyed, but the Get operation fails in both cases. This test case demonstrates the fact that it is possible for two clients to cooperate and use the same managed object while only having knowledge of a single pre-agreed Name attribute value and without having to share any other information.

```xml
# TIME 0
# [Client-A]
0001  <RequestMessage>
0002    <RequestHeader>
0003      <ProtocolVersion>
0004        <ProtocolVersionMajor type="Integer" value="1"/>
0005        <ProtocolVersionMinor type="Integer" value="2"/>
0006      </ProtocolVersion>
0007      <BatchCount type="Integer" value="1"/>
0008    </RequestHeader>
0009    <BatchItem>
0010      <Operation type="Enumeration" value="Register"/>
0011      <RequestPayload>
0012        <ObjectType type="Enumeration" value="Template"/>
0013        <TemplateAttribute>
0014          <Attribute>
0015            <AttributeName type="TextString" value="Name"/>
0016            <AttributeValue>
0017              <NameValue type="TextString" value="TC-314-12-template1"/>
0018              <NameType type="Enumeration" value="UninterpretedTextString"/>
0019            </AttributeValue>
0020          </Attribute>
0021        </TemplateAttribute>
0022        <Template>
0023          <Attribute>
0024            <AttributeName type="TextString" value="Cryptographic
```
Algorithm"/>
       <AttributeValue type="Enumeration" value="AES"/>
       </Attribute>
     </RequestPayload>
   </BatchItem>
 </RequestMessage>

# TIME 1
# [Client-A]

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <TemplateAttribute>
        <Name>
          <NameValue type="TextString" value="TC-314-12-template1"/>
          <NameType type="Enumeration" value="UninterpretedTextString"/>
        </Name>
        <Attribute>
          <AttributeName type="TextString" value="Name"/>
          <AttributeValue>
            <NameValue type="TextString" value="TC-314-12-key1"/>
            <NameType type="Enumeration" value="UninterpretedTextString"/>
          </AttributeValue>
        </Attribute>
      </TemplateAttribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
<Attribute type="TextString" value="Cryptographic Usage Mask"/>
<AttributeValue type="Integer" value="Encrypt"/>

<AttributeName type="TextString" value="Contact Information"/>
<AttributeValue type="TextString" value="Foo"/>
</BatchItem>
</RequestPayload>
</BatchItem>
</RequestMessage>

</ResponseMessage>

# TIME 2
# [Client-B]

<RequestMessage>

<RequestHeader>
</RequestHeader>

<Operation type="Enumeration" value="Locate"/>
<UniqueBatchItemID type="ByteString" value="aa21f8c659d6e10d"/>

<RequestPayload>
<Attribute>
<AttributeName type="TextString" value="Object Type"/>
<AttributeValue type="Enumeration" value="SymmetricKey"/>
</Attribute>
</RequestPayload>
</BatchItem>
</RequestMessage>
<RequestMessage>
  <RequestHeader>
    <NameType type="Enumeration" value="UninterpretedTextString"/>
    </Attribute>
    </RequestPayload>
    </BatchItem>
    <BatchItem>
      <Operation type="Enumeration" value="Get"/>
      <UniqueBatchItemID type="ByteString" value="495a95f165854d1e"/>
      <RequestPayload>
        </BatchItem>
        </ResponseMessage>
        <ResponseHeader>
          <ProtocolVersion>
            <ProtocolVersionMajor type="Integer" value="1"/>
            <ProtocolVersionMinor type="Integer" value="2"/>
          </ProtocolVersion>
          <TimeStamp type="DateTime" value="2012-04-27T08:12:23+00:00"/>
          <BatchCount type="Integer" value="2"/>
        </ResponseHeader>
        <BatchItem>
          <Operation type="Enumeration" value="Locate"/>
          <UniqueBatchItemID type="ByteString" value="aa21f8c659d6e10d"/>
          <ResultStatus type="Enumeration" value="Success"/>
          <ResponsePayload>
            <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
          </ResponsePayload>
        </BatchItem>
        <BatchItem>
          <Operation type="Enumeration" value="Get"/>
          <UniqueBatchItemID type="ByteString" value="495a95f165854d1e"/>
          <ResultStatus type="Enumeration" value="Success"/>
          <ResponsePayload>
            <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
            <SymmetricKey>
              <KeyBlock>
                <KeyFormatType type="Enumeration" value="Raw"/>
                <KeyMaterial type="ByteString" value="d351910f1d7934d6e2ae17576564e2bc"/>
              </KeyBlock>
              <CryptographicAlgorithm type="Enumeration" value="AES"/>
              <CryptographicLength type="Integer" value="128"/>
            </SymmetricKey>
          </ResponsePayload>
        </BatchItem>
      </ResponseMessage>
      # TIME 3
      # [Client-B]
      <RequestMessage>
        <RequestHeader>
<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>

<BatchCount type="Integer" value="1"/>

<BatchItem>
  <Operation type="Enumeration" value="GetAttributeList"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
  </RequestPayload>
</BatchItem>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:23+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributeList"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <AttributeName type="TextString" value="Cryptographic Length"/>
      <AttributeName type="TextString" value="Cryptographic Algorithm"/>
      <AttributeName type="TextString" value="State"/>
      <AttributeName type="TextString" value="Digest"/>
      <AttributeName type="TextString" value="Lease Time"/>
      <AttributeName type="TextString" value="Initial Date"/>
      <AttributeName type="TextString" value="Unique Identifier"/>
      <AttributeName type="TextString" value="Name"/>
      <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
      <AttributeName type="TextString" value="Object Type"/>
      <AttributeName type="TextString" value="Contact Information"/>
      <AttributeName type="TextString" value="Last Change Date"/>
      <AttributeName type="TextString" value="Original Creation Date"/>
      <AttributeName type="TextString" value="Fresh"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 4
# [Client-B]

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
  </RequestHeader>
</RequestMessage>
0227 </ProtocolVersion>
0228 <BatchCount type="Integer" value="1"/>
0229 </RequestHeader>
0230 <BatchItem>
0231 <Operation type="Enumeration" value="GetAttributes"/>
0232 <RequestPayload>
0233 <UniqueIdentifier type="TextString"
0234 value="$UNIQUE_IDENTIFIER_1"/>
0235 <AttributeName type="TextString" value="Name"/>
0236 <AttributeName type="TextString" value="Contact Information"/>
0237 </RequestPayload>
0238 </BatchItem>
0239 </RequestMessage>
0240 <ResponseMessage>
0241 <ResponseHeader>
0242 <ProtocolVersion>
0243 <ProtocolVersionMajor type="Integer" value="1"/>
0244 <ProtocolVersionMinor type="Integer" value="2"/>
0245 </ProtocolVersion>
0246 <TimeStamp type="DateTime" value="2012-04-27T08:12:23+00:00"/>
0247 </ResponseHeader>
0248 <BatchItem>
0249 <Operation type="Enumeration" value="GetAttributes"/>
0250 <ResultStatus type="Enumeration" value="Success"/>
0251 <ResponsePayload>
0252 <UniqueIdentifier type="TextString"
0253 value="$UNIQUE_IDENTIFIER_1"/>
0254 <Attribute>
0255 <AttributeName type="TextString" value="Name"/>
0256 <AttributeValue>
0257 <NameValue type="TextString" value="TC-314-12-key1"/>
0258 <NameType type="Enumeration"
0259 value="UninterpretedTextString"/>
0260 </AttributeValue>
0261 </Attribute>
0262 <Attribute>
0263 <AttributeName type="TextString" value="Contact Information"/>
0264 <AttributeValue type="TextString" value="Foo"/>
0265 </AttributeValue>
0266 </ResponsePayload>
0267 </BatchItem>
0268 </ResponseMessage>

# TIME 5
# [Client-B]
0269 <RequestMessage>
0270 <RequestHeader>
0271 <ProtocolVersion>
0272 <ProtocolVersionMajor type="Integer" value="1"/>
0273 <ProtocolVersionMinor type="Integer" value="2"/>
0274 </ProtocolVersion>
0275 <BatchCount type="Integer" value="2"/>
0276 </RequestHeader>
0277 <BatchItem>
0278 <Operation type="Enumeration" value="AddAttribute"/>
0279 <UniqueBatchItemID type="ByteString" value="32d84369c120488e"/>
This is a Non-Standards Track Work Product.

The patent provisions of the OASIS IPR Policy do not apply.

```xml
<RequestPayload>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
  <Attribute>
    <AttributeName type="TextString" value="x-attribute1"/>
    <AttributeValue type="TextString" value="Value1"/>
  </Attribute>
</RequestPayload>

<BatchItem>
  <Operation type="Enumeration" value="AddAttribute"/>
  <UniqueBatchItemID type="ByteString" value="519cf4f0e1a13f"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    <Attribute>
      <AttributeName type="TextString" value="x-attribute2"/>
      <AttributeValue type="TextString" value="Value2"/>
    </Attribute>
  </RequestPayload>
</BatchItem>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:23+00:00"/>
    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <UniqueBatchItemID type="ByteString" value="32d94369c120488e"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <Attribute>
        <AttributeName type="TextString" value="x-attribute1"/>
        <AttributeValue type="TextString" value="Value1"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <UniqueBatchItemID type="ByteString" value="519cf4f0e1a13f"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <Attribute>
        <AttributeName type="TextString" value="x-attribute2"/>
        <AttributeValue type="TextString" value="Value2"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
<ResponseMessage>
  # TIME 6
  # [Client-B]
  <RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="2"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Modification" value="ModifyAttribute"/>
    <UniqueBatchItemID type="OctetString" value="fce08e45995686b6"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <Attribute>
        <AttributeName type="TextString" value="x-attribute1"/>
        <AttributeValue type="TextString" value="ModifiedValue1"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Modification" value="ModifyAttribute"/>
    <UniqueBatchItemID type="OctetString" value="dc2bfda88f39f5fc"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <Attribute>
        <AttributeName type="TextString" value="x-attribute2"/>
        <AttributeValue type="TextString" value="ModifiedValue2"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
  </RequestMessage>
  <ResponseMessage>
    <ResponseHeader>
      <ProtocolVersion>
        <ProtocolVersionMajor type="Integer" value="1"/>
        <ProtocolVersionMinor type="Integer" value="2"/>
      </ProtocolVersion>
      <TimeStamp type="DateTime" value="2012-04-27T08:12:23+00:00"/>
      <BatchCount type="Integer" value="2"/>
    </ResponseHeader>
    <BatchItem>
      <Operation type="Modification" value="ModifyAttribute"/>
      <UniqueBatchItemID type="OctetString" value="fce08e45995686b6"/>
      <ResultStatus type="Modification" value="Success"/>
      <ResponsePayload>
        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
        <Attribute>
          <AttributeName type="TextString" value="x-attribute1"/>
          <AttributeValue type="TextString" value="ModifiedValue1"/>
        </Attribute>
      </ResponsePayload>
    </BatchItem>
    <BatchItem>
      <Operation type="Modification" value="ModifyAttribute"/>
      <UniqueBatchItemID type="OctetString" value="dc2bfda88f39f5fc"/>
      <ResultStatus type="Modification" value="Success"/>
      <ResponsePayload>
        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
        <Attribute>
          <AttributeName type="TextString" value="x-attribute2"/>
          <AttributeValue type="TextString" value="ModifiedValue2"/>
        </Attribute>
      </ResponsePayload>
    </BatchItem>
  </ResponseMessage>
0383</BatchItem>
0384</BatchItem>
0385<Operation type="Enumeration" value="ModifyAttribute"/>
0386<UniqueBatchItemID type="ByteString" value="dc2bfda88f39f5fc"/>
0387<ResultStatus type="Enumeration" value="Success"/>
0388</ResponsePayload>
0389</UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0390<AttributeName type="TextString" value="x-attribute2"/>
0391<AttributeValue type="TextString" value="ModifiedValue2"/>
0392</Attribute>
0393</ResponsePayload>
0394</BatchItem>
0395</ResponseMessage>

# TIME 7
# [Client-B]
0397<RequestMessage>
0398<RequestHeader>
0399<ProtocolVersion>
0400<ProtocolVersionMajor type="Integer" value="1"/>
0401<ProtocolVersionMinor type="Integer" value="2"/>
0402</ProtocolVersion>
0403<BatchCount type="Integer" value="2"/>
0404</RequestHeader>
0405</BatchItem>
0406<Operation type="Enumeration" value="DeleteAttribute"/>
0407<UniqueBatchItemID type="ByteString" value="ba8d4889753b7414"/>
0408</RequestPayload>
0409</UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0410<AttributeName type="TextString" value="x-attribute1"/>
0411</RequestPayload>
0412</BatchItem>
0413</BatchItem>
0414<Operation type="Enumeration" value="DeleteAttribute"/>
0415<UniqueBatchItemID type="ByteString" value="88fa2f142c615edb"/>
0416</RequestPayload>
0417</UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0418<AttributeName type="TextString" value="x-attribute2"/>
0419</RequestPayload>
0420</BatchItem>
0421</RequestMessage>
0422</ResponseMessage>
0423</ResponseHeader>
0424<ProtocolVersion>
0425<ProtocolVersionMajor type="Integer" value="1"/>
0426<ProtocolVersionMinor type="Integer" value="2"/>
0427</ProtocolVersion>
0428<TimeStamp type="DateTime" value="2012-04-27T12:23:00:00"/>
0429</BatchCount type="Integer" value="2"/>
0430</ResponseHeader>
0431</BatchItem>
0432<Operation type="Enumeration" value="DeleteAttribute"/>
0433<UniqueBatchItemID type="ByteString" value="ba8d4889753b7414"/>
0434</ResultStatus type="Enumeration" value="Success"/>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
<BatchItem>
  <Operation type="Enumeration" value="Destroy"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
  </RequestPayload>
</BatchItem>

<BatchItem>
  <Operation type="Enumeration" value="DeleteAttribute"/>
  <UniqueBatchItemID type="ByteString" value="88fa2f142c615ed6b"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    <Attribute>
      <AttributeName type="TextString" value="x-attribute1"/>
      <AttributeValue type="TextString" value="ModifiedValue1"/>
    </Attribute>
  </ResponsePayload>
</BatchItem>

<BatchItem>
  <Operation type="Enumeration" value="DeleteAttribute"/>
  <UniqueBatchItemID type="ByteString" value="88fa2f142c615ed6b"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    <Attribute>
      <AttributeName type="TextString" value="x-attribute2"/>
      <AttributeValue type="TextString" value="ModifiedValue2"/>
    </Attribute>
  </ResponsePayload>
</BatchItem>
```

# TIME 8
# [Client-A]

```
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```

```xml
<BatchItem>
  <Operation type="Enumeration" value="Destroy"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
  </ResponsePayload>
</BatchItem>
```

```
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```

```
<BatchItem>
  <Operation type="Enumeration" value="Destroy"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
  </ResponsePayload>
</BatchItem>
```
| 0486 | </BatchItem>  
| 0487 | </ResponseMessage> |
| 0488 | # TIME 9  
| 0489 | # [Client-A]  
| 0490 | <RequestMessage>  
| 0491 | <RequestHeader>  
| 0492 | <ProtocolVersion>  
| 0493 | <BatchCount type="Integer" value="1"/>  
| 0494 | </ProtocolVersion>  
| 0495 | </RequestHeader>  
| 0496 | <BatchItem>  
| 0497 | <Operation type="Enumeration" value="Get"/>  
| 0498 | <RequestPayload>  
| 0499 | <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>  
| 0500 | </RequestPayload>  
| 0501 | </BatchItem>  
| 0502 | </RequestMessage> |
| 0503 | <ResponseMessage>  
| 0504 | <ResponseHeader>  
| 0505 | <ProtocolVersion>  
| 0506 | <ProtocolVersionMajor type="Integer" value="1"/>  
| 0507 | <ProtocolVersionMinor type="Integer" value="2"/>  
| 0508 | </ProtocolVersion>  
| 0509 | <TimeStamp type="DateTime" value="2012-04-27T08:12:24+00:00"/>  
| 0510 | <BatchCount type="Integer" value="1"/>  
| 0511 | </ResponseHeader>  
| 0512 | <BatchItem>  
| 0513 | <Operation type="Enumeration" value="Get"/>  
| 0514 | <ResultStatus type="Enumeration" value="OperationFailed"/>  
| 0515 | <ResultReason type="Enumeration" value="ItemNotFound"/>  
| 0516 | <ResultMessage type="TextString" value="No Cryptographic Object found with given Unique Identifier"/>  
| 0517 | </BatchItem>  
| 0518 | </ResponseMessage> |
| 0519 | # TIME 10  
| 0520 | # [Client-A]  
| 0521 | <RequestMessage>  
| 0522 | <RequestHeader>  
| 0523 | <ProtocolVersion>  
| 0524 | <ProtocolVersion>  
| 0525 | <BatchCount type="Integer" value="1"/>  
| 0526 | </RequestHeader>  
| 0527 | <BatchItem>  
| 0528 | <Operation type="Enumeration" value="Destroy"/>  
| 0529 | <RequestPayload>  
| 0530 | <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>  
| 0531 | </RequestPayload>  
| 0532 | </BatchItem>  
| 0533 | </RequestMessage>  
| 0534 | </ResponseMessage> |
<ResponseHeader>
  <ProtocolVersion>
    <ProtocolVersionMajor type="Integer" value="1"/>
    <ProtocolVersionMinor type="Integer" value="2"/>
  </ProtocolVersion>
  <TimeStamp type="DateTime" value="2012-04-27T08:12:24+00:00"/>
  <BatchCount type="Integer" value="1"/>
</ResponseHeader>

# TIME 11
# [Client-A]
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:24+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResultPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResultPayload>
    <ResultMessage type="TextString" value="No Cryptographic Object found with given Unique Identifier"/>
  </BatchItem>
</ResponseMessage>
2.3.5 TC-315-12 - Register / Destroy Secret Data

In this test case the client issues a Register request containing a Secret Data object, whereby the server registers the object and returns the Unique Identifier. To clean up, the client then performs a Destroy.

```
# TIME 0
0001  <RequestMessage>
0002   <RequestHeader>
0003      <ProtocolVersion>
0004         <ProtocolVersionMajor type="Integer" value="1"/>
0005         <ProtocolVersionMinor type="Integer" value="2"/>
0006      </ProtocolVersion>
0007   <BatchCount type="Integer" value="1"/>
0008   </RequestHeader>
0009   <BatchItem>
0010      <Operation type="Enumeration" value="Register"/>
0011      <RequestPayload>
0012         <ObjectType type="Enumeration" value="SecretData"/>
0013         <TemplateAttribute>
0014            <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
0015                <AttributeValue type="Integer" value="Verify"/>
0016            </AttributeName>
0017         </TemplateAttribute>
0018         <SecretData>
0019            <SecretDataType type="Enumeration" value="Password"/>
0020            <KeyBlock>
0021                <KeyFormatType type="Enumeration" value="Opaque"/>
0022                <KeyValue>
0023                   <KeyMaterial type="ByteString" value="53656372657450617373776f7264"/>
0024                </KeyValue>
0025            </KeyBlock>
0026         </SecretData>
0027      </RequestPayload>
0028   </BatchItem>
0029  </RequestMessage>
0030  <ResponseMessage>
0031   <ResponseHeader>
0032      <ProtocolVersion>
0033         <ProtocolVersionMajor type="Integer" value="1"/>
0034         <ProtocolVersionMinor type="Integer" value="2"/>
0035      </ProtocolVersion>
0036      <TimeStamp type="DateTime" value="2012-04-27T08:12:24+00:00"/>
0037      </ProtocolVersion>
0038      <BatchCount type="Integer" value="1"/>
0039      </TimeStamp>
0040   </ResponseHeader>
0041   <BatchItem>
0042      <Operation type="Enumeration" value="Register"/>
0043      <ResultStatus type="Enumeration" value="Success"/>
0044      <ResponsePayload>
```

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Non-Standards Track 11 November 2014
This test case tests the asynchronous capabilities of KMIP using the Locate operation. A key is created and then a Locate request is sent containing the Name of the created key and with the message header Asynchronous Indicator-field set to True. If the server returns an asynchronous response to the Locate, the client then polls the server until the operation is ready. If the server responded asynchronously, a subsequent Locate operation that is also handled asynchronously is then Canceled, before the key is finally destroyed.

This test case shows the use of two clients. Since the client is unable to force the server to respond asynchronously, it is possible for a server to respond synchronously to the requests issued at times 1 and 4, in which case the expected responses are the ones shown at times 2

### 2.3.6 TC-32-12 - Asynchronous Locate

and 5, respectively. In the case of the server not responding asynchronously to the Locate requests, the client is permitted to skip the requests illustrated at time 7 and 8.

Note: a server may perform all operations synchronously and not require the use of Poll for the client to wait for the operations to complete

```
# TIME 0
# [Client-A]
0001  <RequestMessage>
0002    <RequestHeader>
0003      <ProtocolVersion>
0004        <ProtocolVersionMajor type="Integer" value="1"/>
0005        <ProtocolVersionMinor type="Integer" value="2"/>
0006      </ProtocolVersion>
0007      <BatchCount type="Integer" value="1"/>
0008    </RequestHeader>
0009    <BatchItem>
0010      <Operation type="Enumeration" value="Create"/>
0011      <RequestPayload>
0012        <ObjectType type="Enumeration" value="SymmetricKey"/>
0013        <TemplateAttribute>
0014          <Attribute>
0015            <AttributeName type="TextString" value="Cryptographic Algorithm"/>
0016            <AttributeValue type="Enumeration" value="AES"/>
0017          </Attribute>
0018          <Attribute>
0019            <AttributeName type="TextString" value="Cryptographic Length"/>
0020            <AttributeValue type="Integer" value="128"/>
0021          </Attribute>
0022          <Attribute>
0023            <AttributeName type="TextString" value="Name"/>
0024            <AttributeValue>
0025              <NameValue type="TextString" value="TC-32-12-key1"/>
0026              <NameType type="Enumeration" value="UninterpretedTextString"/>
0027            </AttributeValue>
0028          </Attribute>
0029          <Attribute>
0030            <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
0031            <AttributeValue type="Integer" value="Encrypt"/>
0032          </Attribute>
0033          <Attribute>
0034            <AttributeName type="TextString" value="Object Group"/>
0035            <AttributeValue type="TextString" value="Group1"/>
0036          </Attribute>
0037      </TemplateAttribute>
0038    </RequestPayload>
0039  </BatchItem>
0040  </RequestMessage>
0041  <ResponseMessage>
0042    <ResponseHeader>
0043      <ProtocolVersion>
0044        <ProtocolVersionMajor type="Integer" value="1"/>
```

```xml
<ProtocolVersionMinor type="Integer" value="2"/>
<ProtocolVersion/>
<TimeStamp type="DateTime" value="2012-04-27T08:12:24+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
<BatchItem>
<Operation type="Enumeration" value="Create"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<ObjectType type="Enumeration" value="SymmetricKey"/>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 1
# [Client-B]
<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<AsynchronousIndicator type="Boolean" value="true"/>
<BatchCount type="Integer" value="1"/>
</RequestHeader>
<BatchItem>
<Operation type="Enumeration" value="Locate"/>
</BatchItem>
<BatchItem>
<Operation type="Enumeration" value="Locate"/>
</BatchItem>
<BatchItem>
<Operation type="Enumeration" value="Locate"/>
</BatchItem>
<BatchItem>
<Operation type="Enumeration" value="Locate"/>
</BatchItem>
<BatchItem>
</RequestMessage>
```
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Poll"/>
    <RequestPayload>
      <AsynchronousCorrelationValue type="ByteString" value="$ASYNCHRONOUS_CORRELATION_VALUE"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:24+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <ResponseStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 3
# [Client-B]
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
<BatchItem>
  </RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:24+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <SymmetricKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyMaterial type="ByteString" value="cc9e3b20f5c4fc4d1298f68d0b7de65b"/>
        </KeyBlock>
      </SymmetricKey>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 4
# [Client-B]

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <AsynchronousIndicator type="Boolean" value="true"/>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <RequestPayload>
      <Attribute>
        <AttributeName type="TextString" value="Object Type"/>
        <AttributeValue type="Enumeration" value="SymmetricKey"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Object Group"/>
        <AttributeValue type="TextString" value="Group1"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
This is a Non-Standards Track Work Product.

The patent provisions of the OASIS IPR Policy do not apply.

```
<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:24+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <ResultStatus type="Enumeration" value="OperationPending"/>
    <AsynchronousCorrelationValue type="ByteString" value="$ASYNCHRONOUS_CORRELATION_VALUE"/>
  </BatchItem>
</ResponseMessage>

# TIME 5
# [Client-B]
# [REPEAT] until Locate response is returned

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Poll"/>
    <RequestPayload>
      <AsynchronousCorrelationValue type="ByteString" value="$ASYNCHRONOUS_CORRELATION_VALUE"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:24+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 6
# [Client-B]

<RequestMessage>
```
<RequestHeader>
  <ProtocolVersion>
    <ProtocolVersionMajor type="Integer" value="1"/>
    <ProtocolVersionMinor type="Integer" value="2"/>
  </ProtocolVersion>
  <BatchCount type="Integer" value="1"/>
</RequestHeader>

<BatchItem>
  <Operation type="Enumeration" value="Get"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  </RequestPayload>
</BatchItem>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:24+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <SymmetricKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="cc9e3b20f5c4fc4d1298f68d0b7de65b"/>
          </KeyValue>
        </KeyBlock>
      </SymmetricKey>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 7
# [Client-B]

<kmpi-testcases-v1.2-cn01> 11 November 2014
Non-Standards Track  Copyright © OASIS Open 2014. All Rights Reserved.  Page 543 of 880
<Operation type="Enumeration" value="Locate"/>
<RequestPayload>
  <Attribute>
    <AttributeName type="TextString" value="Object Type"/>
    <AttributeValue type="Enumeration" value="SymmetricKey"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Name"/>
    <AttributeValue type="Enumeration">
      <NameValue type="TextString" value="TC-32-12-key1"/>
      <NameType type="Enumeration" value="UninterpretedTextString"/>
    </AttributeValue>
  </Attribute>
</RequestPayload>
</BatchItem>
</RequestMessage>

# TIME 8
# [Client-B]

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Cancel"/>
    <RequestPayload>
      <AsynchronousCorrelationValue type="ByteString" value="$ASYNCHRONOUS_CORRELATION_VALUE"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
This test case tests the revocation aspect of the key life cycle support in KMIP. A key is created and a Get Attribute for the State-attribute reveals that the key is in Pre-active state. The

| 0349 | </ProtocolVersion> |
| 0350 | <TimeStamp type="DateTime" value="2012-04-27T08:12:24+00:00"/> |
| 0351 | </ResponseHeader> |
| 0352 | <BatchItem> |
| 0353 | <Operation type="Enumeration" value="Cancel"/> |
| 0354 | <ResultStatus type="Enumeration" value="Success"/> |
| 0355 | </ResponsePayload> |
| 0356 | <AsynchronousCorrelationValue type="ByteString" value="\$ASYNCHRONOUS_CORRELATION_VALUE"/> |
| 0357 | </CancellationResult type="Enumeration" value="Canceled"/> |
| 0358 | </ResponsePayload> |
| 0359 | </BatchItem> |
| 0360 | </ResponseMessage> |
| # TIME 9 |
| # [Client-A] |
| 0362 | <RequestMessage> |
| 0363 | <RequestHeader> |
| 0364 | <ProtocolVersion> |
| 0365 | <ProtocolVersionMajor type="Integer" value="1"/> |
| 0366 | <ProtocolVersionMinor type="Integer" value="2"/> |
| 0367 | </ProtocolVersion> |
| 0368 | <BatchCount type="Integer" value="1"/> |
| 0369 | </RequestHeader> |
| 0370 | <BatchItem> |
| 0371 | <Operation type="Enumeration" value="Destroy"/> |
| 0372 | <RequestPayload> |
| 0373 | <UniqueIdentifier type="TextString" value="\$UNIQUE_IDENTIFIER_0"/> |
| 0374 | </RequestPayload> |
| 0375 | </BatchItem> |
| 0376 | </RequestMessage> |
| 0377 | <ResponseMessage> |
| 0378 | <ResponseHeader> |
| 0379 | <ProtocolVersion> |
| 0380 | <ProtocolVersionMajor type="Integer" value="1"/> |
| 0381 | <ProtocolVersionMinor type="Integer" value="2"/> |
| 0382 | </ProtocolVersion> |
| 0383 | <TimeStamp type="DateTime" value="2012-04-27T08:12:24+00:00"/> |
| 0384 | <BatchCount type="Integer" value="1"/> |
| 0385 | </ResponseHeader> |
| 0386 | <BatchItem> |
| 0387 | <Operation type="Enumeration" value="Destroy"/> |
| 0388 | <ResultStatus type="Enumeration" value="Success"/> |
| 0389 | </ResponsePayload> |
| 0390 | <UniqueIdentifier type="TextString" value="\$UNIQUE_IDENTIFIER_0"/> |
| 0391 | </ResponsePayload> |
| 0392 | </BatchItem> |
| 0393 | </ResponseMessage> |

### 2.3.7 TC-41-12 - Revoke Scenario

This test case tests the revocation aspect of the key life cycle support in KMIP. A key is created and a Get Attribute for the State-attribute reveals that the key is in Pre-active state. The
Activation Date is then set, which changes the state to Active. The key is then revoked with a revocation reason of Compromised and the state subsequently changed to Compromised, but this does not stop a client from being able to add, modify and delete attributes or even get the key. To clean up, the created key is finally destroyed.

```xml
# TIME 0
# [Client-A]
0001 <RequestMessage>
0002   <RequestHeader>
0003     <ProtocolVersion>
0004       <ProtocolVersionMajor type="Integer" value="1"/>
0005       <ProtocolVersionMinor type="Integer" value="2"/>
0006     </ProtocolVersion>
0007     <BatchCount type="Integer" value="1"/>
0008   </RequestHeader>
0009     <BatchItem>
0010       <Operation type="Enumeration" value="Create"/>
0011       <RequestPayload>
0012         <ObjectType type="Enumeration" value="SymmetricKey"/>
0013         <TemplateAttribute>
0014           <Attribute>
0015             <AttributeName type="TextString" value="Cryptographic Algorithm"/>
0016             <AttributeValue type="Enumeration" value="AES"/>
0017           </Attribute>
0018           <Attribute>
0019             <AttributeName type="TextString" value="Cryptographic Length"/>
0020             <AttributeValue type="Integer" value="128"/>
0021           </Attribute>
0022           <Attribute>
0023             <AttributeName type="TextString" value="Name"/>
0024             <AttributeValue>
0025                 <NameValue type="TextString" value="TC-41-12-key1"/>
0026                 <NameType type="Enumeration" value="UninterpretedTextString"/>
0027           </AttributeValue>
0028           </Attribute>
0029           <Attribute>
0030             <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
0031             <AttributeValue type="Integer" value="Encrypt"/>
0032           </Attribute>
0033         </TemplateAttribute>
0034       </RequestPayload>
0035     </BatchItem>
0036   </RequestMessage>
0037 <ResponseMessage>
0038     <ResponseHeader>
0039       <ProtocolVersion>
0040         <ProtocolVersionMajor type="Integer" value="1"/>
0041         <ProtocolVersionMinor type="Integer" value="2"/>
0042       </ProtocolVersion>
0043       <TimeStamp type="DateTime" value="2012-04-27T08:12:24+00:00"/>
0044       <BatchCount type="Integer" value="1"/>
0045     </ResponseHeader>
```
<table>
<thead>
<tr>
<th>Line</th>
<th>XML Fragment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0046</td>
<td><code>&lt;BatchItem&gt;</code></td>
</tr>
<tr>
<td>0047</td>
<td><code>&lt;Operation type=&quot;Enumeration&quot; value=&quot;Create&quot;/&gt;</code></td>
</tr>
<tr>
<td>0048</td>
<td><code>&lt;ResultStatus type=&quot;Enumeration&quot; value=&quot;Success&quot;/&gt;</code></td>
</tr>
<tr>
<td>0049</td>
<td><code>&lt;ResponsePayload&gt;</code></td>
</tr>
<tr>
<td>0050</td>
<td><code>&lt;ObjectType type=&quot;Enumeration&quot; value=&quot;SymmetricKey&quot;/&gt;</code></td>
</tr>
<tr>
<td>0051</td>
<td><code>&lt;UniqueIdentifier type=&quot;TextString&quot; value=&quot;$UNIQUE_IDENTIFIER_0&quot;/&gt;</code></td>
</tr>
<tr>
<td>0052</td>
<td><code>&lt;/ResponsePayload&gt;</code></td>
</tr>
<tr>
<td>0053</td>
<td><code>&lt;BatchItem&gt;</code></td>
</tr>
<tr>
<td>0054</td>
<td><code>&lt;/ResponseMessage&gt;</code></td>
</tr>
</tbody>
</table>

```xml
# TIME 1
# [Client-A]
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <AttributeName type="TextString" value="State"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:24+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="State"/>
        <AttributeValue type="Enumeration" value="PreActive"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```

```xml
# TIME 2
# [Client-A]
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="State"/>
        <AttributeValue type="Enumeration" value="PreActive"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</RequestMessage>
```
0095        <ProtocolVersionMajor type="Integer" value="1"/>
0096        <ProtocolVersionMinor type="Integer" value="2"/>
0097        </ProtocolVersion>
0098        <BatchCount type="Integer" value="1"/>
0099        </RequestHeader>
0100        <BatchItem>
0101        <Operation type="Enumeration" value="Activate"/>
0102        <RequestPayload>
0103        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0104        </RequestPayload>
0105        </BatchItem>
0106        </RequestMessage>
0107        <ResponseMessage>
0108            <ResponseHeader>
0109                <ProtocolVersion>
0110                    <ProtocolVersionMajor type="Integer" value="1"/>
0111                    <ProtocolVersionMinor type="Integer" value="2"/>
0112                    </ProtocolVersion>
0113                    <TimeStamp type="DateTime" value="2012-04-27T08:12:24+00:00"/>
0114                    <BatchCount type="Integer" value="1"/>
0115                </ResponseHeader>
0116                <BatchItem>
0117                    <Operation type="Enumeration" value="Activate"/>
0118                    <ResponseStatus type="Enumeration" value="Success"/>
0119                    <ResponsePayload>
0120                        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0121                    </ResponsePayload>
0122                </BatchItem>
0123            </ResponseMessage>

# TIME 3
# [Client-A]
0124        <RequestMessage>
0125            <RequestHeader>
0126                <ProtocolVersion>
0127                    <ProtocolVersionMajor type="Integer" value="1"/>
0128                    <ProtocolVersionMinor type="Integer" value="2"/>
0129                </ProtocolVersion>
0130                <BatchCount type="Integer" value="1"/>
0131            </RequestHeader>
0132            <BatchItem>
0133                <Operation type="Enumeration" value="GetAttributes"/>
0134                <RequestPayload>
0135                        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0136                </RequestPayload>
0137            </BatchItem>
0138        </RequestMessage>
0139        <ResponseMessage>
0140            <ResponseHeader>
0141                <ProtocolVersion>
0142                    <ProtocolVersionMajor type="Integer" value="1"/>
0143                    <ProtocolVersionMinor type="Integer" value="2"/>
0144                </ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:12:24+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
<BatchItem>
<Operation type="Enumeration" value="GetAttributes"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 4
# [Client-B]
<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</RequestHeader>
<BatchItem>
<Operation type="Enumeration" value="Locate"/>
</RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:12:24+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
<BatchItem>
<Operation type="Enumeration" value="Locate"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
</ResponseItem>
</ResponseMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

| 0199 | <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/> |
| 0200 | </ResponsePayload> |
| 0201 | </BatchItem> |
| 0202 | </ResponseMessage> |

| 0203 | # TIME 5 |
| 0204 | # [Client-B] |
| 0205 | <RequestMessage> |
| 0206 | <RequestHeader> |
| 0207 |  <ProtocolVersion> |
| 0208 |  </ProtocolVersion> |
| 0209 |  </ProtocolVersion> |
| 0210 |  <BatchCount type="Integer" value="1"/> |
| 0211 | </RequestHeader> |
| 0212 | <BatchItem> |
| 0213 |  <Operation type="Enumeration" value="Get"/> |
| 0214 |  <RequestPayload> |
| 0215 |  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/> |
| 0216 | </RequestPayload> |
| 0217 | </BatchItem> |
| 0218 | </RequestMessage> |
| 0219 | <ResponseMessage> |
| 0220 | <ResponseHeader> |
| 0221 |  <ProtocolVersion> |
| 0222 |  </ProtocolVersion> |
| 0223 |  </ProtocolVersion> |
| 0224 |  <TimeStamp type="DateTime" value="2012-04-27T08:12:24+00:00"/> |
| 0225 |  <BatchCount type="Integer" value="1"/> |
| 0226 | </ResponseHeader> |
| 0227 | <BatchItem> |
| 0228 |  <Operation type="Enumeration" value="Get"/> |
| 0229 |  <ResultStatus type="Enumeration" value="Success"/> |
| 0230 |  <ResponsePayload> |
| 0231 |  <ObjectType type="Enumeration" value="SymmetricKey"/> |
| 0232 |  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/> |
| 0233 |  <SymmetricKey> |
| 0234 |  <KeyBlock> |
| 0235 |  <KeyFormatType type="Enumeration" value="Raw"/> |
| 0236 |  <KeyValue> |
| 0237 |  <KeyMaterial type="ByteString" value="9c7d7c4fd2076f1909a6ba4342cab1de"/> |
| 0238 | </KeyValue> |
| 0239 |  <CryptographicAlgorithm type="Enumeration" value="AES"/> |
| 0240 |  <CryptographicLength type="Integer" value="128"/> |
| 0241 | </KeyBlock> |
| 0242 |  <SymmetricKey> |
| 0243 | </ResponsePayload> |
| 0244 | </BatchItem> |
| 0245 | </ResponseMessage> |

| 0246 | # TIME 6 |
| 0247 | # [Client-B] |
| 0248 | <RequestMessage> |
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Revoke"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <RevocationReason>
        <RevocationReasonCode type="Enumeration" value="KeyCompromise"/>
      </RevocationReason>
      <CompromiseOccurrenceDate type="DateTime" value="1970-01-01T00:00:06+00:00"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
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    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:24+00:00"/>
    <BatchCount type="Integer" value="1"/>
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  <BatchItem>
    <Operation type="Enumeration" value="Revoke"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
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    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 7
# [Client-B]

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    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <AttributeName type="TextString" value="State"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
<RequestMessage>
  <ResponseMessage>
    <ResponseHeader>
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        <ProtocolVersionMajor type="Integer" value="1"/>
        <ProtocolVersionMinor type="Integer" value="2"/>
      </ProtocolVersion>
      <TimeStamp type="DateTime" value="2012-04-27T08:12:24+00:00"/>
      <BatchCount type="Integer" value="1"/>
    </ResponseHeader>
    <BatchItem>
      <Operation type="Enumeration" value="GetAttributes"/>
      <ResultStatus type="Enumeration" value="Success"/>
      <ResponsePayload>
        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
        <Attribute>
          <AttributeName type="TextString" value="State"/>
          <AttributeValue type="Enumeration" value="Compromised"/>
        </Attribute>
      </ResponsePayload>
    </BatchItem>
  </ResponseMessage>
</RequestMessage>

# TIME 8
# [Client-A]
<RequestMessage>
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      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributeList"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:24+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributeList"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
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<th>Description</th>
</tr>
</thead>
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<td><code>&lt;AttributeName type=&quot;TextString&quot; value=&quot;Unique Identifier&quot;/&gt;</code></td>
<td></td>
</tr>
<tr>
<td>0349</td>
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<td><code>&lt;AttributeName type=&quot;TextString&quot; value=&quot;Cryptographic Length&quot;/&gt;</code></td>
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<td>0353</td>
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<td>0357</td>
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<td>0359</td>
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<td></td>
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<td>0360</td>
<td><code>&lt;AttributeName type=&quot;TextString&quot; value=&quot;Name&quot;/&gt;</code></td>
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</tr>
<tr>
<td>0361</td>
<td><code>&lt;AttributeName type=&quot;TextString&quot; value=&quot;Original Creation Date&quot;/&gt;</code></td>
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<td>0362</td>
<td><code>&lt;AttributeName type=&quot;TextString&quot; value=&quot;Revocation Reason&quot;/&gt;</code></td>
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<td>0363</td>
<td><code>&lt;AttributeName type=&quot;TextString&quot; value=&quot;State&quot;/&gt;</code></td>
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<td>0364</td>
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<td>0365</td>
<td><code>&lt;/BatchItem&gt;</code></td>
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</tr>
<tr>
<td>0366</td>
<td><code>&lt;/ResponseMessage&gt;</code></td>
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# TIME 9
# [Client-A]

0368 `<RequestMessage>`
0369 `<RequestHeader>`
0370 `<ProtocolVersion>`
0371 `<ProtocolVersionMajor type="Integer" value="1"/>`
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0373 `</ProtocolVersion>`
0374 `<BatchCount type="Integer" value="1"/>`
0375 `</RequestHeader>`
0376 `<BatchItem>`
0377 `<Operation type="Enumeration" value="GetAttributes"/>`
0378 `<RequestPayload>`
0379 `<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>`
0380 `<AttributeName type="TextString" value="State"/>`
0381 `</RequestPayload>`
0382 `</BatchItem>`
0383 `</RequestMessage>`

0384 `<ResponseMessage>`
0385 `<ResponseHeader>`
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0388 `<ProtocolVersionMinor type="Integer" value="2"/>`
0389 `</ProtocolVersion>`
0390 `<TimeStamp type="DateTime" value="2012-04-27T08:24+00:00"/>`
0391 `<BatchCount type="Integer" value="1"/>`
0392 `</ResponseHeader>`
0393 `<BatchItem>`
0394 `<Operation type="Enumeration" value="GetAttributes"/>`
0395 `<ResultStatus type="Enumeration" value="Success"/>`
0396 `<ResponsePayload>`
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<Attribute>
  <AttributeName type="TextString" value="State"/>
  <AttributeValue type="Enumeration" value="Compromised"/>
</Attribute>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 10
# [Client-A]
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="2"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <UniqueBatchItemID type="ByteString" value="23a177faa569463c"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="x-attribute1"/>
        <AttributeValue type="TextString" value="Value1"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <UniqueBatchItemID type="ByteString" value="9b898dc0577f8080"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="x-attribute2"/>
        <AttributeValue type="TextString" value="Value2"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

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<ResponseMessage>
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      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:24+00:00"/>
    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <UniqueBatchItemID type="ByteString" value="23a177faa569463c"/>
  </BatchItem>
</ResponseMessage>
```xml
<BatchItem>
  <Operation type="Enumeration" value="AddAttribute"/>
  <UniqueBatchItemID type="ByteString" value="9b898dc0577f8080"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <Attribute>
      <AttributeName type="TextString" value="x-attribute1"/>
      <AttributeValue type="TextString" value="Value1"/>
    </Attribute>
    <Attribute>
      <AttributeName type="TextString" value="x-attribute2"/>
      <AttributeValue type="TextString" value="Value2"/>
    </Attribute>
  </ResponsePayload>
</BatchItem>
<branch>
  <BatchItem>
    <Operation type="Enumeration" value="ModifyAttribute"/>
    <UniqueBatchItemID type="ByteString" value="0752c951bb9926cc"/>
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        <AttributeName type="TextString" value="x-attribute1"/>
        <AttributeValue type="TextString" value="ModifiedValue1"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="x-attribute2"/>
        <AttributeValue type="TextString" value="ModifiedValue2"/>
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    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="ModifyAttribute"/>
    <UniqueBatchItemID type="ByteString" value="33f55c8d7e6cafbf"/>
    <RequestPayload>
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      <Attribute>
        <AttributeName type="TextString" value="x-attribute1"/>
        <AttributeValue type="TextString" value="ModifiedValue1"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="x-attribute2"/>
        <AttributeValue type="TextString" value="ModifiedValue2"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</branch>
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# TIME 11
# [Client-A]

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    </ProtocolVersion>
    <BatchCount type="Integer" value="2"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ModifyAttribute"/>
    <UniqueBatchItemID type="ByteString" value="0752c951bb9926cc"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="x-attribute1"/>
        <AttributeValue type="TextString" value="ModifiedValue1"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="x-attribute2"/>
        <AttributeValue type="TextString" value="ModifiedValue2"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="ModifyAttribute"/>
    <UniqueBatchItemID type="ByteString" value="33f55c8d7e6cafbf"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="x-attribute1"/>
        <AttributeValue type="TextString" value="ModifiedValue1"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="x-attribute2"/>
        <AttributeValue type="TextString" value="ModifiedValue2"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```
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  <UniqueBatchItemID type="ByteString" value="clfe7b3b4c977730"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0="/>
    <AttributeName type="TextString" value="x-attribute2"/>
  </RequestPayload>
</BatchItem>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="DeleteAttribute"/>
    <UniqueBatchItemID type="ByteString" value="a3eb249b495e8ad2"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0="/>
      <Attribute>
        <AttributeName type="TextString" value="x-attribute1"/>
        <AttributeValue type="TextString" value="ModifiedValue1"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="DeleteAttribute"/>
    <UniqueBatchItemID type="ByteString" value="clfe7b3b4c977730"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0="/>
      <Attribute>
        <AttributeName type="TextString" value="x-attribute2"/>
        <AttributeValue type="TextString" value="ModifiedValue2"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
<Operation type="Enumeration" value="Get"/>
<RequestPayload>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <SymmetricKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="9c7d7c4fd2076f1909a6ba4342cab1de"/>
          </KeyValue>
        </KeyBlock>
        <CryptographicAlgorithm type="Enumeration" value="AES"/>
        <CryptographicLength type="Integer" value="128"/>
      </SymmetricKey>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 14
# [Client-A]

<RequestMessage>
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      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
2.3.8 TC-51-12 - Get Usage Allocation Scenario

This test case tests the usage management functionality of KMIP. A key is created and the Activation Date and Protect Stop Date attributes are set in such a way as to allow the Get Usage Allocation operation to be performed. The value of the Usage Limits attribute is set to 1000 bytes, and two subsequent requests for 500 bytes succeed (one of them also verifying the amount that can be received using the Check operation), while a third fails since the usage allocation has been used up. The key is finally revoked and destroyed. This test case shows the use of multiple clients (Client-A, Client-B and Client-C).

```xml
<ResponseHeader>
  <ProtocolVersion>
    <ProtocolVersionMajor type="Integer" value="1"/>
    <ProtocolVersionMinor type="Integer" value="2"/>
  </ProtocolVersion>
  <TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
  <BatchCount type="Integer" value="1"/>
</ResponseHeader>

<BatchItem>
  <Operation type="Enumeration" value="Destroy"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  </ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 0
# [Client-A]
0001 <RequestMessage>
0002  <RequestHeader>
0003   <ProtocolVersion>
0004     <ProtocolVersionMajor type="Integer" value="1"/>
0005     <ProtocolVersionMinor type="Integer" value="2"/>
0006   </ProtocolVersion>
0007   <BatchCount type="Integer" value="1"/>
0008 </RequestHeader>
0009 <BatchItem>
0010  <Operation type="Enumeration" value="Create"/>
0011  <RequestPayload>
0012   <ObjectType type="Enumeration" value="SymmetricKey"/>
0013   <TemplateAttribute>
0014    <Attribute>
0015     <AttributeName type="TextString" value="Cryptographic Algorithm"/>
0016     <AttributeValue type="Enumeration" value="AES"/>
0017   </Attribute>
0018   <Attribute>
0019     <AttributeName type="TextString" value="Cryptographic Length"/>
0020     <AttributeValue type="Integer" value="128"/>
0021   </Attribute>
0022 </TemplateAttribute>
0023 </RequestPayload>
0024 </BatchItem>
```
<Attribute>
  <AttributeName type="TextString" value="Name"/>
  <AttributeValue>
    <Value type="TextString" value="TC-51-12-key1"/>
    <NameType type="Enumeration" value="UninterpretedTextString"/>
  </AttributeValue>
</Attribute>

<Attribute>
  <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
  <AttributeValue type="Integer" value="Encrypt"/>
</Attribute>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 1
# [Client-A]
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="2"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <UniqueBatchItemID type="ByteString" value="369f6802ee57532b"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Activation Date"/>
        <AttributeValue type="DateTime" value="1970-01-01T00:00:02+00:00"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
This is a Non-Standards Track Work Product.

The patent provisions of the OASIS IPR Policy do not apply.

```xml
<RequestMessage>
  <RequestHeader>
  </RequestHeader>
  <BatchItem>
    <Operation type="AddAttribute"/>
    <UniqueBatchItemID type="String" value="b7ca806e52825bf4"/>
    <RequestPayload>
      <UniqueIdentifier type="String" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="String" value="Protect Stop Date"/>
        <AttributeValue type="DateTime" value="$NOW+600"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="AddAttribute"/>
    <UniqueBatchItemID type="String" value="369f6802ee57532b"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="String" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="String" value="Activation Date"/>
        <AttributeValue type="DateTime" value="1970-01-01T00:00:02+00:00"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
  <BatchItem>
    <Operation type="AddAttribute"/>
    <UniqueBatchItemID type="String" value="b7ca806e52825bf4"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="String" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="String" value="Protect Stop Date"/>
        <AttributeValue type="DateTime" value="$NOW+600"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
  <ResponseMessage>
    <ResponseHeader>
      <ProtocolVersion>
        <ProtocolVersionMajor type="Integer" value="1"/>
        <ProtocolVersionMinor type="Integer" value="2"/>
      </ProtocolVersion>
      <TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
      <BatchCount type="Integer" value="2"/>
    </ResponseHeader>
    <BatchItem>
      <Operation type="AddAttribute"/>
      <UniqueBatchItemID type="String" value="369f6802ee57532b"/>
      <ResultStatus type="Enumeration" value="Success"/>
      <ResponsePayload>
        <UniqueIdentifier type="String" value="$UNIQUE_IDENTIFIER_0"/>
        <Attribute>
          <AttributeName type="String" value="Activation Date"/>
          <AttributeValue type="DateTime" value="1970-01-01T00:00:02+00:00"/>
        </Attribute>
      </ResponsePayload>
    </BatchItem>
    <BatchItem>
      <Operation type="AddAttribute"/>
      <UniqueBatchItemID type="String" value="b7ca806e52825bf4"/>
      <ResultStatus type="Enumeration" value="Success"/>
      <ResponsePayload>
        <UniqueIdentifier type="String" value="$UNIQUE_IDENTIFIER_0"/>
        <Attribute>
          <AttributeName type="String" value="Protect Stop Date"/>
          <AttributeValue type="DateTime" value="$NOW+600"/>
        </Attribute>
      </ResponsePayload>
    </BatchItem>
  </ResponseMessage>
</RequestMessage>
```

# TIME 2

# [Client-A]

<RequestMessage>
  <RequestHeader>
  </RequestHeader>
  </RequestPayload>
</RequestMessage>
```
```
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</RequestHeader>
<BatchItem>
  <Operation type="Enumeration" value="AddAttribute"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <Attribute>
      <AttributeName type="TextString" value="Usage Limits"/>
      <AttributeValue>
        <UsageLimitsTotal type="LongInteger" value="1000"/>
        <UsageLimitsUnit type="Enumeration" value="Byte"/>
      </AttributeValue>
    </Attribute>
  </RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Usage Limits"/>
        <AttributeValue>
          <UsageLimitsTotal type="LongInteger" value="1000"/>
          <UsageLimitsCount type="LongInteger" value="1000"/>
          <UsageLimitsUnit type="Enumeration" value="Byte"/>
        </AttributeValue>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```

```
# TIME 3
# [Client-B]
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
</RequestMessage>
```
<Operation type="Enumeration" value="Locate"/>
<RequestPayload>
  <Attribute>
    <AttributeName type="TextString" value="Object Type"/>
    <AttributeValue type="Enumeration" value="SymmetricKey"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Name"/>
    <AttributeValue>
      <NameValue type="TextString" value="TC-51-12-key1"/>
      <NameType type="Enumeration" value="UninterpretedTextString"/>
    </AttributeValue>
  </Attribute>
</RequestPayload>
</BatchItem>
</RequestMessage>

# TIME 4
# [Client-B]

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion Major type="Integer" value="1"/>
    <ProtocolVersionMinor type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
</ResponseHeader>
</ResponseMessage>

# TIME 5
# [Client-B]

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
</RequestHeader>
<BatchItem>
<Operation type="Enumeration" value="Check"/>
<UniqueBatchItemID type="ByteString" value="d35a294f9425f06e"/>
<RequestPayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
<UsageLimitsCount type="LongInteger" value="500"/>
</RequestPayload>
</BatchItem>
<BatchItem>
<Operation type="Enumeration" value="GetUsageAllocation"/>
<UniqueBatchItemID type="ByteString" value="80454d8ce4f738fe"/>
<RequestPayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
<UsageLimitsCount type="LongInteger" value="500"/>
</RequestPayload>
</BatchItem>
</RequestMessage>
<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Check"/>
    <UniqueBatchItemID type="ByteString" value="d35a294f9425f06e"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="GetUsageAllocation"/>
    <UniqueBatchItemID type="ByteString" value="80454d8ce4f738fe"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <UsageLimitsCount type="LongInteger" value="500"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 6
# [Client-A]
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetUsageAllocation"/>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <UsageLimitsCount type="LongInteger" value="500"/>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
</ResponseMessage>
```
0330  <Operation type="Enumeration" value="GetUsageAllocation"/>
0331  <ResultStatus type="Enumeration" value="Success"/>
0332  <ResponsePayload>
0333     <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0334  </ResponsePayload>
0335  </BatchItem>
0336  </ResponseMessage>

# TIME 7
# [Client-C]
0337  <RequestMessage>
0338      <RequestHeader>
0339          <ProtocolVersion>
0340              <ProtocolVersionMajor type="Integer" value="1"/>
0341              <ProtocolVersionMinor type="Integer" value="2"/>
0342          </ProtocolVersion>
0343          <BatchCount type="Integer" value="1"/>
0344      </RequestHeader>
0345      <BatchItem>
0346          <Operation type="Enumeration" value="Locate"/>
0347          <RequestPayload>
0348              <Attribute>
0349                  <AttributeName type="TextString" value="Object Type"/>
0350                  <AttributeValue type="Enumeration" value="SymmetricKey"/>
0351              </Attribute>
0352          </RequestPayload>
0353      </BatchItem>
0354      <ResponseMessage>
0355          <ResponseHeader>
0356              <ProtocolVersion>
0357                  <ProtocolVersionMajor type="Integer" value="1"/>
0358                  <ProtocolVersionMinor type="Integer" value="2"/>
0359              </ProtocolVersion>
0360              <TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
0361              <BatchCount type="Integer" value="1"/>
0362          </ResponseHeader>
0363          <BatchItem>
0364              <Operation type="Enumeration" value="Locate"/>
0365              <ResultStatus type="Enumeration" value="Success"/>
0366              <ResponsePayload>
0367                  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0368              </ResponsePayload>
0369          </BatchItem>
0370      </ResponseMessage>

# TIME 8
# [Client-C]
```
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <SymmetricKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="50f31013c771af4448110f695efa9ec7"/>
          </KeyValue>
          <CryptographicAlgorithm type="Enumeration" value="AES"/>
          <CryptographicLength type="Integer" value="128"/>
        </KeyBlock>
      </SymmetricKey>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 9
# [Client-C]

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
<Operation type="Enumeration" value="GetUsageAllocation"/>
<RequestPayload
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  <UsageLimitsCount type="LongInteger" value="500"/>
</RequestPayload>
</BatchItem>
</RequestMessage>

# TIME 10
# [Client-A]
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchOrderOption type="Boolean" value="true"/>
    <BatchCount type="Integer" value="2"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Revoke"/>
    <UniqueBatchItemID type="ByteString" value="79b998c5f29465f4"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <RevocationReason>
        <RevocationReasonCode type="Enumeration" value="CessationOfOperation"/>
      </RevocationReason>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <UniqueBatchItemID type="ByteString" value="b0633f0e41187345"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
2.3.9 TC-61-12 - Import of a Third-party Key

This test case tests the import of a foreign key using the Register operation. To validate that the registered key is treated the same as a locally created key, an attribute is added to the key and then modified. Finally, the key is destroyed.

```xml
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <TemplateAttribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
          <AttributeValue type="Integer" value="Encrypt"/>
        </Attribute>
      </TemplateAttribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```
<AttributeName type="TextString" value="x-ID"/>
<AttributeValue type="TextString" value="TC-61-12"/>
</Attribute>
</TemplateAttribute>
</SymmetricKey>
</KeyBlock>
</SymmetricKey>
</RequestPayload>
</BatchItem>
</RequestMessage>

# TIME 1

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
</RequestHeader>
<BatchItem>
<Operation type="Enumeration" value="AddAttribute"/>
<RequestPayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
<Attribute>
<AttributeName type="TextString" value="x-provider"/>
<AttributeValue type="TextString" value="unknown"/>
</Attribute>
</RequestPayload>
</BatchItem>
</RequestMessage>
This is a Non-Standards Track Work Product.

The patent provisions of the OASIS IPR Policy do not apply.

```xml
<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="x-provider"/>
        <AttributeValue type="TextString" value="unknown"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 2

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ModifyAttribute"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="x-provider"/>
        <AttributeValue type="TextString" value="third party"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ModifyAttribute"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
2.3.10 TC-71-12 - Unrecognized Message Extension with Criticality Indicator False

A create request is issued and the request contains a Message Extension with the Criticality Indicator set to false. The server does not understand the extension, but since it is non-critical, the create request is processed normally. Subsequently, the created key is deleted.
<table>
<thead>
<tr>
<th>0003</th>
<th><code>&lt;ProtocolVersion&gt;</code></th>
</tr>
</thead>
<tbody>
<tr>
<td>0004</td>
<td><code>&lt;ProtocolVersionMajor type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</code></td>
</tr>
<tr>
<td>0005</td>
<td><code>&lt;ProtocolVersionMinor type=&quot;Integer&quot; value=&quot;2&quot;/&gt;</code></td>
</tr>
<tr>
<td>0006</td>
<td><code>&lt;/ProtocolVersion&gt;</code></td>
</tr>
<tr>
<td>0007</td>
<td><code>&lt;BatchCount type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</code></td>
</tr>
<tr>
<td>0008</td>
<td><code>&lt;/RequestHeader&gt;</code></td>
</tr>
<tr>
<td>0009</td>
<td><code>&lt;BatchItem&gt;</code></td>
</tr>
<tr>
<td>0010</td>
<td><code>&lt;Operation type=&quot;Enumeration&quot; value=&quot;Create&quot;/&gt;</code></td>
</tr>
<tr>
<td>0011</td>
<td><code>&lt;RequestPayload&gt;</code></td>
</tr>
<tr>
<td>0012</td>
<td><code>&lt;ObjectType type=&quot;Enumeration&quot; value=&quot;SymmetricKey&quot;/&gt;</code></td>
</tr>
<tr>
<td>0013</td>
<td><code>&lt;TemplateAttribute&gt;</code></td>
</tr>
<tr>
<td>0014</td>
<td><code>&lt;Attribute&gt;</code></td>
</tr>
<tr>
<td>0015</td>
<td><code>&lt;AttributeName type=&quot;TextString&quot; value=&quot;Cryptographic Length&quot;/&gt;</code></td>
</tr>
<tr>
<td>0016</td>
<td><code>&lt;AttributeValue type=&quot;Integer&quot; value=&quot;128&quot;/&gt;</code></td>
</tr>
<tr>
<td>0017</td>
<td><code>&lt;/Attribute&gt;</code></td>
</tr>
<tr>
<td>0018</td>
<td><code>&lt;Attribute&gt;</code></td>
</tr>
<tr>
<td>0019</td>
<td><code>&lt;AttributeName type=&quot;TextString&quot; value=&quot;Cryptographic Algorithm&quot;/&gt;</code></td>
</tr>
<tr>
<td>0020</td>
<td><code>&lt;AttributeValue type=&quot;Enumeration&quot; value=&quot;AES&quot;/&gt;</code></td>
</tr>
<tr>
<td>0021</td>
<td><code>&lt;/Attribute&gt;</code></td>
</tr>
<tr>
<td>0022</td>
<td><code>&lt;Attribute&gt;</code></td>
</tr>
<tr>
<td>0023</td>
<td><code>&lt;AttributeName type=&quot;TextString&quot; value=&quot;Cryptographic Usage Mask&quot;/&gt;</code></td>
</tr>
<tr>
<td>0024</td>
<td><code>&lt;AttributeValue type=&quot;Integer&quot; value=&quot;Decrypt Encrypt&quot;/&gt;</code></td>
</tr>
<tr>
<td>0025</td>
<td><code>&lt;/Attribute&gt;</code></td>
</tr>
<tr>
<td>0026</td>
<td><code>&lt;Attribute&gt;</code></td>
</tr>
<tr>
<td>0027</td>
<td><code>&lt;AttributeName type=&quot;TextString&quot; value=&quot;x-ID&quot;/&gt;</code></td>
</tr>
<tr>
<td>0028</td>
<td><code>&lt;AttributeValue type=&quot;TextString&quot; value=&quot;TC-71-12&quot;/&gt;</code></td>
</tr>
<tr>
<td>0029</td>
<td><code>&lt;/Attribute&gt;</code></td>
</tr>
<tr>
<td>0030</td>
<td><code>&lt;/TemplateAttribute&gt;</code></td>
</tr>
<tr>
<td>0031</td>
<td><code>&lt;RequestPayload&gt;</code></td>
</tr>
<tr>
<td>0032</td>
<td><code>&lt;MessageExtension&gt;</code></td>
</tr>
<tr>
<td>0033</td>
<td><code>&lt;VendorIdentification type=&quot;TextString&quot; value=&quot;Acme&quot;/&gt;</code></td>
</tr>
<tr>
<td>0034</td>
<td><code>&lt;CriticalityIndicator type=&quot;Boolean&quot; value=&quot;false&quot;/&gt;</code></td>
</tr>
<tr>
<td>0035</td>
<td><code>&lt;VendorExtension&gt;</code></td>
</tr>
<tr>
<td>0036</td>
<td><code>&lt;TTLV tag=&quot;0x540001&quot; type=&quot;TextString&quot; value=&quot;na&quot;/&gt;</code></td>
</tr>
<tr>
<td>0037</td>
<td><code>&lt;/VendorExtension&gt;</code></td>
</tr>
<tr>
<td>0038</td>
<td><code>&lt;/MessageExtension&gt;</code></td>
</tr>
<tr>
<td>0039</td>
<td><code>&lt;/BatchItem&gt;</code></td>
</tr>
<tr>
<td>0040</td>
<td><code>&lt;/RequestMessage&gt;</code></td>
</tr>
<tr>
<td>0041</td>
<td><code>&lt;ResponseMessage&gt;</code></td>
</tr>
<tr>
<td>0042</td>
<td><code>&lt;ResponseHeader&gt;</code></td>
</tr>
<tr>
<td>0043</td>
<td><code>&lt;ProtocolVersion&gt;</code></td>
</tr>
<tr>
<td>0044</td>
<td><code>&lt;ProtocolVersionMajor type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</code></td>
</tr>
<tr>
<td>0045</td>
<td><code>&lt;ProtocolVersionMinor type=&quot;Integer&quot; value=&quot;2&quot;/&gt;</code></td>
</tr>
<tr>
<td>0046</td>
<td><code>&lt;/ProtocolVersion&gt;</code></td>
</tr>
<tr>
<td>0047</td>
<td><code>&lt;TimeStamp type=&quot;DateTime&quot; value=&quot;2012-04-27T08:12:25+00:00&quot;/&gt;</code></td>
</tr>
<tr>
<td>0048</td>
<td><code>&lt;BatchCount type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</code></td>
</tr>
<tr>
<td>0049</td>
<td><code>&lt;/ResponseHeader&gt;</code></td>
</tr>
<tr>
<td>0050</td>
<td><code>&lt;BatchItem&gt;</code></td>
</tr>
<tr>
<td>0051</td>
<td><code>&lt;Operation type=&quot;Enumeration&quot; value=&quot;Create&quot;/&gt;</code></td>
</tr>
<tr>
<td>0052</td>
<td><code>&lt;ResultStatus type=&quot;Enumeration&quot; value=&quot;Success&quot;/&gt;</code></td>
</tr>
<tr>
<td>0053</td>
<td><code>&lt;ResponsePayload&gt;</code></td>
</tr>
<tr>
<td>0054</td>
<td><code>&lt;ObjectType type=&quot;Enumeration&quot; value=&quot;SymmetricKey&quot;/&gt;</code></td>
</tr>
<tr>
<td>0055</td>
<td><code>&lt;UniqueIdentifier type=&quot;TextString&quot; value=&quot;$UNIQUE_IDENTIFIER_0&quot;/&gt;</code></td>
</tr>
</tbody>
</table>
A create request is issued and the request contains a Message Extension with the Criticality Indicator set to true. The server does not understand the extension, and since it is critical, the create request fails and an error is returned.
<RequestMessage>
  <RequestHeader>
    <BatchItem>
      <Operation type=" Enumeration" value=" Create"/>
      <RequestPayload>
        <ObjectType type=" Enumeration" value=" SymmetricKey"/>
        <TemplateAttribute>
          <Attribute>
            <AttributeName type=" TextString" value=" Cryptographic Length"/>
            <AttributeValue type=" Integer" value=" 128"/>
          </Attribute>
          <Attribute>
            <AttributeName type=" TextString" value=" Cryptographic Algorithm"/>
            <AttributeValue type=" Enumeration" value=" AES"/>
          </Attribute>
          <Attribute>
            <AttributeName type=" TextString" value=" Cryptographic Usage Mask"/>
            <AttributeValue type=" Integer" value=" Decrypt Encrypt"/>
          </Attribute>
          <Attribute>
            <AttributeName type=" TextString" value=" x-ID"/>
            <AttributeValue type=" TextString" value=" TC-72-12"/>
          </Attribute>
        </TemplateAttribute>
      </RequestPayload>
      <MessageExtension>
        <VendorIdentification type=" TextString" value=" Acme"/>
        <CriticalityIndicator type=" Boolean" value=" true"/>
        <VendorExtension>
          <TTLV tag=" 0x540001" type=" TextString" value=" na"/>
        </VendorExtension>
      </MessageExtension>
    </BatchItem>
  </RequestHeader>
</RequestMessage>
2.3.12 TC-81-12 - Create a Key Pair

Create a new private/public key pair. Make sure they are linked correctly by issuing Locate commands with the assigned Unique Identifiers. Finally delete both key halves.

```xml
# TIME 0
0001 <RequestMessage>
0002 <RequestHeader>
0003 <ProtocolVersion>
0004   <ProtocolVersionMajor type="Integer" value="1"/>
0005   <ProtocolVersionMinor type="Integer" value="2"/>
0006 </ProtocolVersion>
0007 <BatchCount type="Integer" value="1"/>
0008 </RequestHeader>
0009 <BatchItem>
0010   <Operation type="Enumeration" value="CreateKeyPair"/>
0011 <RequestPayload>
0012   <CommonTemplateAttribute>
0013     <Attribute>
0014       <AttributeName type="TextString" value="Cryptographic Algorithm"/>
0015       <AttributeValue type="Enumeration" value="RSA"/>
0016     </Attribute>
0017     <Attribute>
0018       <AttributeName type="TextString" value="Cryptographic Length"/>
0019       <AttributeValue type="Integer" value="1024"/>
0020     </Attribute>
0021   </CommonTemplateAttribute>
0022   <PrivateKeyTemplateAttribute>
0023     <Attribute>
0024       <AttributeName type="TextString" value="Name"/>
0025       <AttributeValue>
0026         <NameValue type="TextString" value="TC-81-12-privatekey1"/>
0027         <NameType type="Enumeration" value="UninterpretedTextString"/>
0028       </AttributeValue>
0029     </Attribute>
0030     <Attribute>
0031       <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
0032       <AttributeValue type="Integer" value="Sign"/>
0033     </Attribute>
0034   </PrivateKeyTemplateAttribute>
0035   <PublicKeyTemplateAttribute>
0036     <Attribute>
0037       <AttributeName type="TextString" value="Name"/>
0038       <AttributeValue>
0039         <NameValue type="TextString" value="TC-81-12-publickey1"/>
0040         <NameType type="Enumeration" value="UninterpretedTextString"/>
0041     </AttributeValue>
0042     </Attribute>
0043   </PublicKeyTemplateAttribute>
</RequestPayload>
</BatchItem>
</RequestMessage>
```
<AttributeName type="TextString" value="Cryptographic Usage Mask"/>
<AttributeValue type="Integer" value="Verify"/>
</Attribute>
</RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:12:26+00:00"/>
</ResponseHeader>
</BatchItem>
<BatchItem>
<Operation type="Enumeration" value="CreateKeyPair"/>
<ResultStatus type="Enumeration" value="Success"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 1

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
</RequestHeader>
</BatchItem>
<BatchItem>
<Operation type="Enumeration" value="Locate"/>
</RequestPayload>
</BatchItem>
</RequestMessage>

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
</RequestHeader>
</BatchItem>
<BatchItem>
<Operation type="Enumeration" value="Locate"/>
</RequestPayload>
</BatchItem>
</RequestMessage>
<ResponseHeader>
  <ProtocolVersion>
    <ProtocolVersionMajor type="Integer" value="1"/>
    <ProtocolVersionMinor type="Integer" value="2"/>
  </ProtocolVersion>
  <TimeStamp type="DateTime" value="2012-04-27T08:12:26+00:00"/>
  <BatchCount type="Integer" value="1"/>
</ResponseHeader>

<BatchItem>
  <Operation type="Enumeration" value="Locate"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
  </ResponsePayload>
</BatchItem>

<BatchItem>
  <Operation type="Enumeration" value="Locate"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
  </ResponsePayload>
</BatchItem>

<BatchItem>
  <Operation type="Enumeration" value="Locate"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
  </ResponsePayload>
</BatchItem>

<BatchItem>
  <Operation type="Enumeration" value="Locate"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
  </ResponsePayload>
</BatchItem>

<BatchItem>
  <Operation type="Enumeration" value="Locate"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
  </ResponsePayload>
</BatchItem>

<BatchItem>
  <Operation type="Enumeration" value="Locate"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
  </ResponsePayload>
</BatchItem>

<BatchItem>
  <Operation type="Enumeration" value="Locate"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
  </ResponsePayload>
</BatchItem>

<BatchItem>
  <Operation type="Enumeration" value="Locate"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
  </ResponsePayload>
</BatchItem>

<BatchItem>
  <Operation type="Enumeration" value="Locate"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
  </ResponsePayload>
</BatchItem>

<BatchItem>
  <Operation type="Enumeration" value="Locate"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
  </ResponsePayload>
</BatchItem>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
<UniqueIdentifier type="TextString"
value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 3

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
</RequestHeader>
<BatchItem>
<Operation type="Enumeration" value="Destroy"/>
<RequestPayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:26:00:00"/>
</ResponseHeader>
<BatchItem>
<Operation type="Enumeration" value="Destroy"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 4

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
</RequestHeader>
<BatchItem>
<Operation type="Enumeration" value="Destroy"/>
<RequestPayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
</RequestPayload>
</BatchItem>
```

kmip-testcases-v1.2-cn01
Non-Standards Track
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### 2.3.13 TC-82-12 - Register Both Halves of a Key Pair

Register a private key and a public key and set the Link attribute to point to each other. Verify the links were set correctly by locating the keys based on the link attributes, and then delete both objects.

```xml
# TIME 0
0001  <RequestMessage>
0002   <RequestHeader>
0003     <ProtocolVersion>
0004       <ProtocolVersionMajor type="Integer" value="1"/>
0005       <ProtocolVersionMinor type="Integer" value="2"/>
0006     </ProtocolVersion>
0007     <BatchCount type="Integer" value="1"/>
0008   </RequestHeader>
0009   <BatchItem>
0010     <Operation type="Enumeration" value="Register"/>
0011     <RequestPayload>
0012       <ObjectType type="Enumeration" value="PrivateKey"/>
0013       <TemplateAttribute>
0014         <Attribute>
0015           <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
0016           <AttributeValue type="Integer" value="Sign"/>
0017         </Attribute>
0018         <Attribute>
0019           <AttributeName type="TextString" value="x-ID"/>
0020           <AttributeValue type="TextString" value="TC-82-12-prikey"/>
0021         </Attribute>
0022       </TemplateAttribute>
0023       <PrivateKey>
0024         <KeyBlock>
0025           <KeyFormatType type="Enumeration" value="PKCS_8"/>
0026           <KeyValue>
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
<RequestPayload>
  <ObjectType type="Enumeration" value="PublicKey"/>
  <TemplateAttribute>
    <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
    <AttributeValue type="Integer" value="Verify"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Link"/>
    <AttributeValue>
      <LinkType type="Enumeration" value="PrivateKeyLink"/>
      <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </AttributeValue>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="x-ID"/>
    <AttributeValue type="TextString" value="TC-82-12-pubkey"/>
  </Attribute>
  </TemplateAttribute>
  <PublicKey>
    <KeyBlock>
      <KeyFormatType type="Enumeration" value="X_509"/>
      <KeyValue>
        <KeyMaterial type="ByteString" value="30819f300d06092a864886f70d01010105000381d00308190281810930451c9ed94f5bb9da17dd09381bd23be43eca8c7539f301fc8a8c5d5d274c3e7e99d7bd711c97a7aa9e2c50a82b0b1034f0df493dec16362427e58acce7f6ce0f9bcc617bbe8c90d0094a2703ba0d09eb19d1005f2f265526aad75af32f8bc782c2de2a57f81e303af67a944de5e78413dca8f232d074e6dcea4ec9f02b30310001"/>
      </KeyMaterial>
      <CryptographicAlgorithm type="Enumeration" value="RSA"/>
      <CryptographicLength type="Integer" value="1024"/>
    </KeyValue>
    </KeyBlock>
  </PublicKey>
</RequestPayload>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:26+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <ResultStatus type="Enumeration" value="Success"/>
  </BatchItem>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
  </ResponsePayload>
  <BatchItem>
</ResponseMessage>
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <RequestPayload>
      <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Link"/>
        <AttributeValue>
          <LinkType type="Enumeration" value="PublicKeyLink"/>
          <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
        </AttributeValue>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:26+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Link"/>
        <AttributeValue>
          <LinkType type="Enumeration" value="PublicKeyLink"/>
          <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
        </AttributeValue>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <RequestPayload>
      <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Link"/>
        <AttributeValue>
          <LinkType type="Enumeration" value="PublicKeyLink"/>
          <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
        </AttributeValue>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:26+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Link"/>
        <AttributeValue>
          <LinkType type="Enumeration" value="PublicKeyLink"/>
          <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
        </AttributeValue>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
</RequestHeader>
</BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:26+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 4

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <RequestPayload>
      <Attribute>
        <AttributeName type="TextString" value="Object Type"/>
        <AttributeValue type="Enumeration" value="PrivateKey"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Link"/>
        <AttributeValue>
          <LinkType type="Enumeration" value="PrivateKeyLink"/>
          <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
        </AttributeValue>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```xml
<Attribute>
  <AttributeName type="TextString" value="Link"/>
  <AttributeValue>
    <LinkType type="Enumeration" value="Public-Key-Link"/>
    <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
  </AttributeValue>
</Attribute>

<RequestPayload>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</RequestPayload>
</BatchItem>
</RequestMessage>

REQUEST 5

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:26+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
2.3.14 TC-91-12 - Create a Key, Re-key

Create a symmetric key with a specific name, and then use Locate to find the key. After using Re-key to create a new key, verify that the name was removed from the existing key and copied to the new key. Also verify that the key material for the old key is still retrievable. To clean up, both keys are deleted.
<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>

<BatchCount type="Integer" value="1"/>

<BatchItem>
  <Operation type="Enumeration" value="Create"/>
  <RequestPayload>
    <ObjectType type="Enumeration" value="SymmetricKey"/>
    <TemplateAttribute>
      <Attribute>
        <AttributeName type="TextString" value="Cryptographic Algorithm"/>
        <AttributeValue type="Enumeration" value="AES"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Cryptographic Length"/>
        <AttributeValue type="Integer" value="128"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
        <AttributeValue type="Integer" value="Decrypt Encrypt"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Name"/>
        <AttributeValue>
          <NameValue type="TextString" value="TC-91-12-rekeyKey"/>
        </AttributeValue>
      </Attribute>
    </TemplateAttribute>
  </RequestPayload>
</BatchItem>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:26+00:00"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
0055 <RequestMessage>
0056   <RequestHeader>
0057     <ProtocolVersion>
0058       <ProtocolVersionMajor type="Integer" value="1"/>
0059       <ProtocolVersionMinor type="Integer" value="2"/>
0060     </ProtocolVersion>
0061     <BatchCount type="Integer" value="1"/>
0062   </RequestHeader>
0063   <BatchItem>
0064     <Operation type="Enumeration" value="Locate"/>
0065     <RequestPayload>
0066       <AttributeName type="TextString" value="Name"/>
0067       <AttributeNameValue>
0068         <NameValue type="TextString" value="TC-91-12-rekeyKey"/>
0069         <NameType type="Enumeration" value="UninterpretedTextString"/>
0070       </AttributeNameValue>
0071     </RequestPayload>
0072   </BatchItem>
0073 </RequestMessage>

0076 <ResponseMessage>
0077   <ResponseHeader>
0078     <ProtocolVersion>
0079       <ProtocolVersionMajor type="Integer" value="1"/>
0080       <ProtocolVersionMinor type="Integer" value="2"/>
0081     </ProtocolVersion>
0082     <TimeStamp type="DateTime" value="2012-04-27T08:12:26+00:00"/>
0083     <BatchCount type="Integer" value="1"/>
0084   </ResponseHeader>
0085   <BatchItem>
0086     <Operation type="Enumeration" value="Locate"/>
0087     <ResultStatus type="Enumeration" value="Success"/>
0088     <ResponsePayload>
0089       <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0090     </ResponsePayload>
0091   </BatchItem>
0092 </ResponseMessage>

# TIME 2
0093 <RequestMessage>
0094   <RequestHeader>
0095     <ProtocolVersion>
0096       <ProtocolVersionMajor type="Integer" value="1"/>
0097       <ProtocolVersionMinor type="Integer" value="2"/>
0098     </ProtocolVersion>
0099     <BatchCount type="Integer" value="1"/>
0100   </RequestHeader>
0101   <BatchItem>
0102     <Operation type="Enumeration" value="ReKey"/>
0103     <RequestPayload>
0104       <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0105     </RequestPayload>
0106   </BatchItem>
This is a Non-Standards Track Work Product.

The patent provisions of the OASIS IPR Policy do not apply.

```
<RequestMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:26+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ReKey"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```

# TIME 3

```
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <RequestPayload>
      <AttributeName type="TextString" value="Name"/>
      <AttributeValue>
        <NameValue type="TextString" value="TC-91-12-rekeyKey"/>
        <NameType type="Enumeration" value="UninterpretedTextString"/>
      </AttributeValue>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```

```
<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:26+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
# TIME 4

```xml
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <AttributeName type="TextString" value="Name"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```

# TIME 5

```xml
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```
<RequestMessage>
  <ResponseMessage>
    <ResponseHeader>
      <ProtocolVersion>
        <ProtocolVersionMajor type="Integer" value="1"/>
        <ProtocolVersionMinor type="Integer" value="2"/>
      </ProtocolVersion>
      <TimeStamp type="DateTime" value="2012-04-27T08:12:26+00:00"/>
      <BatchCount type="Integer" value="1"/>
    </ResponseHeader>
    <BatchItem>
      <Operation type="Enumeration" value="Get"/>
      <ResultStatus type="Enumeration" value="Success"/>
      <ResponsePayload>
        <ObjectType type="Enumeration" value="SymmetricKey"/>
        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
        <SymmetricKey>
          <KeyBlock>
            <KeyFormatType type="Enumeration" value="Raw"/>
            <KeyValue>
              <KeyMaterial type="ByteString" value="9ca9840291a65889043c37707da997e8"/>
            </KeyValue>
            <CryptographicAlgorithm type="Enumeration" value="AES"/>
            <CryptographicLength type="Integer" value="128"/>
          </KeyBlock>
        </SymmetricKey>
      </ResponsePayload>
    </BatchItem>
  </ResponseMessage>
</RequestMessage>

# TIME 6

<RequestMessage>
  <ResponseMessage>
    <ResponseHeader>
      <ProtocolVersion>
        <ProtocolVersionMajor type="Integer" value="1"/>
        <ProtocolVersionMinor type="Integer" value="2"/>
      </ProtocolVersion>
      <BatchCount type="Integer" value="1"/>
    </ResponseHeader>
    <BatchItem>
      <Operation type="Enumeration" value="Destroy"/>
      <RequestPayload>
        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      </RequestPayload>
    </BatchItem>
  </ResponseMessage>
</RequestMessage>

<RequestMessage>
  <ResponseMessage>
    <ResponseHeader>
      <ProtocolVersion>
        <ProtocolVersionMajor type="Integer" value="1"/>
        <ProtocolVersionMinor type="Integer" value="2"/>
      </ProtocolVersion>
      <TimeStamp type="DateTime" value="2012-04-27T08:12:26+00:00"/>
      <BatchCount type="Integer" value="1"/>
    </ResponseHeader>
    <BatchItem>
      <Operation type="Enumeration" value="Get"/>
      <ResultStatus type="Enumeration" value="Success"/>
      <ResponsePayload>
        <ObjectType type="Enumeration" value="SymmetricKey"/>
        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
        <SymmetricKey>
          <KeyBlock>
            <KeyFormatType type="Enumeration" value="Raw"/>
            <KeyValue>
              <KeyMaterial type="ByteString" value="9ca9840291a65889043c37707da997e8"/>
            </KeyValue>
            <CryptographicAlgorithm type="Enumeration" value="AES"/>
            <CryptographicLength type="Integer" value="128"/>
          </KeyBlock>
        </SymmetricKey>
      </ResponsePayload>
    </BatchItem>
  </ResponseMessage>
</RequestMessage>
### 2.3.15 TC-92-12 - Existing Key Expired, Re-key with Same Life-cycle

Create a new symmetric key. Then add the Activation Date and Deactivation Date attributes based on the timestamp in the response to the Create request. The Activation Date is set to the current time and the Deactivation Date to a time in the near future. Repeated Get Attribute calls are performed to verify that the state is first 'Active', then subsequently 'Deactivated'. Then issue a Re-key request, including an Offset value of zero leading to the Activation Date of the replacement key to be set to the same value as the Initial Date of the replacement key. Verify
from the response that the Activation Date and Deactivation Date attributes were set correctly (if they are not returned, issue a Get Attribute request). Do a Get Attribute operation to verify that the state of the new key is 'Active'. To clean up, both keys are deleted.

```
# TIME 0
001  <RequestMessage>
002   <RequestHeader>
003       <ProtocolVersion>
004           <ProtocolVersionMajor type="Integer" value="1"/>
005           <ProtocolVersionMinor type="Integer" value="2"/>
006       </ProtocolVersion>
007       <BatchCount type="Integer" value="1"/>
008   </RequestHeader>
009   <BatchItem>
010       <Operation type="Enumeration" value="Create"/>
011       <RequestPayload>
012           <ObjectType type="Enumeration" value="SymmetricKey"/>
013           <TemplateAttribute>
014               <Attribute>
015                   <AttributeName type="TextString" value="Cryptographic Algorithm"/>
016                   <AttributeValue type="Enumeration" value="AES"/>
017               </Attribute>
018               <Attribute>
019                   <AttributeName type="TextString" value="Cryptographic Length"/>
020                   <AttributeValue type="Integer" value="128"/>
021               </Attribute>
022               <Attribute>
023                   <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
024                   <AttributeValue type="Integer" value="Decrypt Encrypt"/>
025               </Attribute>
026               <Attribute>
027                   <AttributeName type="TextString" value="Name"/>
028                   <AttributeValue>
029                       <NameValue type="TextString" value="TC-92-12-rekeyKey"/>
030                   </AttributeValue>
031               </Attribute>
032           </TemplateAttribute>
033       </RequestPayload>
034   </BatchItem>
035 </RequestMessage>
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```xml
<BatchItem>
  <Operation type="Enumeration" value="AddAttribute"/>
  <UniqueBatchItemID type="ByteString" value="606051f958d79b0f"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <Attribute>
      <AttributeName type="TextString" value="Activation Date"/>
      <AttributeValue type="DateTime" value="$NOW"/>
    </Attribute>
  </RequestPayload>
</BatchItem>

<BatchItem>
  <Operation type="Enumeration" value="AddAttribute"/>
  <UniqueBatchItemID type="ByteString" value="7cb12802f6a52cf1"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <Attribute>
      <AttributeName type="TextString" value="Deactivation Date"/>
      <AttributeValue type="DateTime" value="$NOW+120"/>
    </Attribute>
  </RequestPayload>
</BatchItem>
```

```
<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:27+00:00"/>
    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="AddAttribute"/>
    <UniqueBatchItemID type="ByteString" value="606051f958d79b0f"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
value="$UNIQUE_IDENTIFIER_0"/>
  <AttributeName type="TextString" value="Activation Date"/>
  <AttributeValue type="DateTime" value="$NOW"/>
</Attribute>
</BatchItem>
<BatchItem>
  <Operation type="Enumeration" value="AddAttribute"/>
  <UniqueBatchItemID type="ByteString" value="7cb12802f6a52cf1"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UnqiueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <Attribute>
      <AttributeName type="TextString" value="Deactivation Date"/>
      <AttributeValue type="DateTime" value="$NOW+120"/>
    </Attribute>
  </ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 2

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <AttributeName type="TextString" value="State"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:27+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <AttributeName type="TextString" value="State"/>
      <Attribute>
        <AttributeName type="TextString" value="State"/>
        <AttributeValue type="Enumeration" value="Active"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
0153  </Attribute>
0154  </ResponsePayload>
0155  </BatchItem>
0156  </ResponseMessage>

# TIME 3
# [REPEAT] until GetAttributes response shows State changed to Deactivated
0157  <RequestMessage>
0158  <RequestHeader>
0159     <ProtocolVersion>
0160         <ProtocolVersionMajor type="Integer" value="1"/>
0161         <ProtocolVersionMinor type="Integer" value="2"/>
0162     </ProtocolVersion>
0163     <BatchCount type="Integer" value="1"/>
0164  </RequestHeader>
0165  <BatchItem>
0166     <Operation type="Enumeration" value="GetAttributes"/>
0167     <RequestPayload>
0168         <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0169         <AttributeName type="TextString" value="State"/>
0170     </RequestPayload>
0171  </BatchItem>
0172  </RequestMessage>

0173  <ResponseMessage>
0174     <ResponseHeader>
0175         <ProtocolVersion>
0176             <ProtocolVersionMajor type="Integer" value="1"/>
0177             <ProtocolVersionMinor type="Integer" value="2"/>
0178         </ProtocolVersion>
0179         <TimeStamp type="DateTime" value="2012-04-27T08:14:27+00:00"/>
0180         <BatchCount type="Integer" value="1"/>
0181     </ResponseHeader>
0182  <BatchItem>
0183     <Operation type="Enumeration" value="GetAttributes"/>
0184     <ResponseStatus type="Enumeration" value="Success"/>
0185     <ResponsePayload>
0186         <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0187         <AttributeName type="TextString" value="State"/>
0188         <AttributeValue type="Enumeration" value="Deactivated"/>
0189     </ResponsePayload>
0190  </BatchItem>
0191  </ResponseMessage>

# TIME 4
0194  <RequestMessage>
0195  <RequestHeader>
0196     <ProtocolVersion>
0197         <ProtocolVersionMajor type="Integer" value="1"/>
0198         <ProtocolVersionMinor type="Integer" value="2"/>
0199     </ProtocolVersion>
0200     <BatchCount type="Integer" value="1"/>
0201  </RequestHeader>
0202  </BatchItem>
<Operation type="Enumeration" value="ReKey"/>
<RequestPayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
<Offset type="Interval" value="0"/>
</RequestPayload>
</BatchItem>
</RequestMessage>

# TIME 5

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</RequestHeader>
<BatchItem>
<Operation type="Enumeration" value="GetAttributes"/>
<RequestPayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
<AttributeName type="TextString" value="Activation Date"/>
<AttributeName type="TextString" value="Deactivation Date"/>
</RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:14:27+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
<BatchItem>
<Operation type="Enumeration" value="ReKey"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>
<?xml version="1.0" encoding="utf-8"?>
<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:27+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <Attribute>
        <AttributeName type="TextString" value="State"/>
        <AttributeValue type="Enumeration" value="Active"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 7
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
    </ProtocolVersion>
    <ProtocolVersionMinor type="Integer" value="2"/>
  </RequestHeader>
  <BatchCount type="Integer" value="1"/>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:27+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 8

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchOrderOption type="Boolean" value="true"/>
    <BatchCount type="Integer" value="2"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Revoke"/>
    <UniqueBatchItemID type="ByteString" value="955dfbb9abbec308"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <RevocationReason>
        <RevocationReasonCode type="Enumeration" value="CessationOfOperation"/>
      </RevocationReason>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
</RequestMessage>
2.3.16 TC-93-12 - Existing Key Compromised, Re-key with Same Life-cycle

Create a new symmetric key with the Activation Date in the past. Do a Get Attribute operation on the State attribute to verify the key is 'Active'. Then revoke the key as compromised, verify that the state has changed to 'Compromised'. Create a replacement key using Re-key with the offset set to '0' to indicate that the times are to be copied from the existing key. Do a Get Attribute operation to verify that the state of the new key is 'Active'. To clean up, both keys are deleted.
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
<RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <TemplateAttribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Algorithm"/>
          <AttributeValue type="Enumeration" value="AES"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Length"/>
          <AttributeValue type="Integer" value="128"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
          <AttributeValue type="Integer" value="Decrypt Encrypt"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Activation Date"/>
          <AttributeValue type="DateTime" value="$NOW"/>
        </Attribute>
      </TemplateAttribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion type="Enumeration">
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:27+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>

  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      < ObjectType type="Enumeration" value="SymmetricKey"/>
      < UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>

</ResponseMessage>

# TIME 1
```
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <AttributeName type="TextString" value="State"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 2

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Revoke"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <RevocationReason>
        <RevocationReasonCode type="Enumeration" value="KeyCompromise"/>
      </RevocationReason>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
<CompromiseOccurrenceDate type="DateTime" value="$NOW"/>
</RequestPayload>
</BatchItem>
</RequestMessage>

# TIME 3

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</RequestHeader>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:14:27+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
</ResponseMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
</ResponseMessage>

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</RequestHeader>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:14:27+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
</ResponseMessage>

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</RequestHeader>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:14:27+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
</ResponseMessage>

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</RequestHeader>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:14:27+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
</ResponseMessage>

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</RequestHeader>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:14:27+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
</ResponseMessage>

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</RequestHeader>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:14:27+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
</ResponseMessage>

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</RequestHeader>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:14:27+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
</ResponseMessage>

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</RequestHeader>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:14:27+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
</ResponseMessage>

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</RequestHeader>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
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<BatchCount type="Integer" value="1"/>
</ResponseHeader>
</ResponseMessage>

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<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</RequestHeader>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:14:27+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
</ResponseMessage>

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
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<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
0163  <AttributeName type="TextString" value="State"/>
0164  <AttributeValue type="Enumeration" value="Compromised"/>
0165  </Attribute>
0166  </ResponsePayload>
0167  </BatchItem>
0168  </ResponseMessage>

# TIME 4

0169  <RequestMessage>
0170  <RequestHeader>
0171  <ProtocolVersion>
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0173  <ProtocolVersionMinor type="Integer" value="2"/>
0174  </ProtocolVersion>
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0176  </RequestHeader>
0177  <BatchItem>
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0179  <RequestPayload>
0180  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0181  </RequestPayload>
0182  </BatchItem>
0183  </RequestMessage>

0184  <ResponseMessage>
0185  <ResponseHeader>
0186  <ProtocolVersion>
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0188  <ProtocolVersionMinor type="Integer" value="2"/>
0189  </ProtocolVersion>
0190  <TimeStamp type="DateTime" value="2012-04-27T08:14:27+00:00"/>
0191  <BatchCount type="Integer" value="1"/>
0192  </ResponseHeader>
0193  <BatchItem>
0194  <Operation type="Enumeration" value="ReKey"/>
0195  <ResultStatus type="Enumeration" value="Success"/>
0196  <ResponsePayload>
0197  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0198  </ResponsePayload>
0199  </BatchItem>
0200  </ResponseMessage>

# TIME 5

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0203  <ProtocolVersion>
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0205  <ProtocolVersionMinor type="Integer" value="2"/>
0206  </ProtocolVersion>
0207  <BatchCount type="Integer" value="1"/>
0208  </RequestHeader>
0209  <BatchItem>
0210  <Operation type="Enumeration" value="GetAttributes"/>
0211  <RequestPayload>
0212  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0213  <AttributeName type="TextString" value="State"/>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
0214   </RequestPayload>
0215   </BatchItem>
0216   </RequestMessage>
0217   <ResponseMessage>
0218   <ResponseHeader>
0219   <ProtocolVersion>
0220   <ProtocolVersionMajor type="Integer" value="1"/>
0221   <ProtocolVersionMinor type="Integer" value="2"/>
0222   </ProtocolVersion>
0223   <TimeStamp type="DateTime" value="2012-04-27T08:14:27+00:00"/>
0224   </BatchCount type="Integer" value="1"/>
0225   </ResponseHeader>
0226   </BatchItem>
0227   <Operation type="Enumeration" value="GetAttributes"/>
0228   <ResultStatus type="Enumeration" value="Success"/>
0229   <ResponsePayload>
0230   <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0231   <Attribute>
0232   <AttributeName type="TextString" value="State"/>
0233   <AttributeValue type="Enumeration" value="Active"/>
0234   </Attribute>
0235   </ResponsePayload>
0236   </BatchItem>
0237   </ResponseMessage>
0238   # TIME 6
0239   <RequestMessage>
0240   <RequestHeader>
0241   <ProtocolVersion>
0242   <ProtocolVersionMajor type="Integer" value="1"/>
0243   <ProtocolVersionMinor type="Integer" value="2"/>
0244   </ProtocolVersion>
0245   </RequestHeader>
0246   </BatchItem>
0247   <Operation type="Enumeration" value="Destroy"/>
0248   <RequestPayload>
0249   <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0250   </RequestPayload>
0251   </BatchItem>
0252   </RequestMessage>
0253   <ResponseMessage>
0254   <ResponseHeader>
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0257   <ProtocolVersionMinor type="Integer" value="2"/>
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</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 7

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      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchOrderOption type="Boolean" value="true"/>
    <BatchCount type="Integer" value="2"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Revoke"/>
    <UniqueBatchItemID type="ByteString" value="c95bbfd6ad466474"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <UniqueBatchItemID type="ByteString" value="4e6a3e943e1dda87"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:27+00:00"/>
    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Revoke"/>
    <UniqueBatchItemID type="ByteString" value="c95bbfd6ad466474"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <UniqueBatchItemID type="ByteString" value="4e6a3e943e1dda87"/>
    <ResultStatus type="Enumeration" value="Success"/>
  </BatchItem>
</ResponseMessage>
2.3.17 TC-94-12 - Create Key, Re-key with New Life-cycle

Create a symmetric key with a specific name, then use Locate to find the key. After using Re-key to create a new key, verify that the name was removed from the existing key and copied to the new key. To clean up, both keys are deleted.

```xml
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <TemplateAttribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Algorithm"/>
          <AttributeValue type="Enumeration" value="AES"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Length"/>
          <AttributeValue type="Integer" value="128"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
          <AttributeValue type="Integer" value="Decrypt Encrypt"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Name"/>
          <AttributeValue type="TextString" value="TC-94-12-rekeyKey"/>
        </Attribute>
      </TemplateAttribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
0038  | <ResponseHeader>
0039  |   <ProtocolVersion>
0040  |     <ProtocolVersionMajor type="Integer" value="1"/>
0041  |     <ProtocolVersionMinor type="Integer" value="2"/>
0042  |   </ProtocolVersion>
0043  |   <TimeStamp type="DateTime" value="2012-04-27T08:14:27+00:00"/>
0044  |   <BatchCount type="Integer" value="1"/>
0045  |   </ResponseHeader>
0046  |   <BatchItem>
0047  |     <Operation type="Enumeration" value="Create"/>
0048  |     <ResultStatus type="Enumeration" value="Success"/>
0049  |     <ResponsePayload>
0050  |       <ObjectType type="Enumeration" value="SymmetricKey"/>
0051  |       <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0052  |     </ResponsePayload>
0053  |   </BatchItem>
0054  | </ResponseMessage>

# TIME 1

0055  | <RequestMessage>
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0057  |     <ProtocolVersion>
0058  |       <ProtocolVersionMajor type="Integer" value="1"/>
0059  |       <ProtocolVersionMinor type="Integer" value="2"/>
0060  |     </ProtocolVersion>
0061  |     <BatchCount type="Integer" value="1"/>
0062  |   </RequestHeader>
0063  |   <BatchItem>
0064  |     <Operation type="Enumeration" value="Locate"/>
0065  |     <RequestPayload>
0066  |       <Attribute>
0067  |         <AttributeName type="TextString" value="Name"/>
0068  |         <AttributeValue>
0069  |           <NameValue type="TextString" value="TC-94-12-rekeyKey"/>
0070  |           <NameType type="Enumeration" value="UninterpretedTextString"/>
0071  |         </AttributeValue>
0072  |       </Attribute>
0073  |     </RequestPayload>
0074  |   </BatchItem>
0075  | </RequestMessage>

0076  | <ResponseMessage>
0077  |   <ResponseHeader>
0078  |     <ProtocolVersion>
0079  |       <ProtocolVersionMajor type="Integer" value="1"/>
0080  |       <ProtocolVersionMinor type="Integer" value="2"/>
0081  |     </ProtocolVersion>
0082  |     <TimeStamp type="DateTime" value="2012-04-27T08:14:27+00:00"/>
0083  |     <BatchCount type="Integer" value="1"/>
0084  |   </ResponseHeader>
0085  |   <BatchItem>
0086  |     <Operation type="Enumeration" value="Locate"/>
0087  |     <ResultStatus type="Enumeration" value="Success"/>
0088  |     <ResponsePayload>
0089  |       <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0090  |   </ResponsePayload>
```
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<td></td>
<td><strong># TIME 2</strong></td>
</tr>
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<tr>
<td>0904</td>
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</tr>
<tr>
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<td>0929</td>
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</tr>
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<tr>
<td>0943</td>
<td>&lt;BatchItem&gt;</td>
</tr>
<tr>
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</tr>
<tr>
<td>0945</td>
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<td>0948</td>
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</table>

This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
<ResponseMessage>

# TIME 3

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <AttributeName type="TextString" value="Name"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 4

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <AttributeName type="TextString" value="Activation Date"/>
      <AttributeName type="TextString" value="Process Start Date"/>
      <AttributeName type="TextString" value="Protect Stop Date"/>
      <AttributeName type="TextString" value="Deactivation Date"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:28+00:00"/>
    <BatchCount type="Integer" value="1"/>
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  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
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      <Attribute>
        <AttributeName type="TextString" value="Activation Date"/>
        <AttributeValue type="DateTime" value="$NOW-31536000"/>
      </Attribute>
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        <AttributeName type="TextString" value="Process Start Date"/>
        <AttributeValue type="DateTime" value="$NOW-31536000"/>
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# TIME 5

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      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
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          <NameType type="Enumeration" value="UninterpretedTextString"/>
        </AttributeValue>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
2.3.18 TC-95-12 - Obtain Lease for Expired Key

Create a symmetric key with a specific name and obtain a lease. Revoke the key with state 'Compromised' and re-key the key. Try to obtain a lease on the old key which fails due to a server policy which does not allow giving out leases for compromised keys. Locate the new key with the original name. Get the new key and obtain a lease.

```xml
# TIME 0
# [Client-A]
0001 <RequestMessage>
0002 <RequestHeader>
0003   <ProtocolVersion>
0004     <ProtocolVersionMajor type="Integer" value="1"/>
0005     <ProtocolVersionMinor type="Integer" value="2"/>
0006   </ProtocolVersion>
0007     <BatchCount type="Integer" value="1"/>
0008   </RequestHeader>
0009 <BatchItem>
0010     <Operation type="Enumeration" value="Create"/>
0011     <RequestPayload>
0012       <ObjectType type="Enumeration" value="SymmetricKey"/>
0013       <TemplateAttribute>
0014         <Attribute>
0015           <AttributeName type="TextString" value="Cryptographic Algorithm"/>
0016             <AttributeValue type="Enumeration" value="AES"/>
0017         </Attribute>
0018         <Attribute>
0019           <AttributeName type="TextString" value="Cryptographic Length"/>
0020             <AttributeValue type="Integer" value="128"/>
0021         </Attribute>
0022         <Attribute>
0023           <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
0024             <AttributeValue type="Integer" value="Decrypt Encrypt"/>
0025         </Attribute>
0026         <Attribute>
0027           <AttributeName type="TextString" value="Name"/>
0028             <AttributeValue>
0029               <NameValue type="TextString" value="TC-95-12-rekeyKey"/>
0030             </AttributeValue>
0031         </Attribute>
0032         <Attribute>
0033           <AttributeName type="TextString" value="Activation Date"/>
0034             <AttributeValue type="DateTime" value="$NOW"/>
0035         </Attribute>
0036         </TemplateAttribute>
0037       </RequestPayload>
```
```
# TIME 1
# [Client-A]
0039  </BatchItem>
0040  </RequestMessage>
0041  <ResponseMessage>
0042  <ResponseHeader>
0043    <ProtocolVersion>
0044      <ProtocolVersionMajor type="Integer" value="1"/>
0045      <ProtocolVersionMinor type="Integer" value="2"/>
0046    </ProtocolVersion>
0047    <TimeStamp type="DateTime" value="2012-04-27T08:14:28+00:00"/>
0048    <BatchCount type="Integer" value="1"/>
0049  </ResponseHeader>
0050  <BatchItem>
0051    <Operation type="Enumeration" value="Create"/>
0052    <ResultStatus type="Enumeration" value="Success"/>
0053    <ResponsePayload>
0054      <ObjectType type="Enumeration" value="SymmetricKey"/>
0055      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0056    </ResponsePayload>
0057  </BatchItem>
0058  </ResponseMessage>
0059  </RequestMessage>
0060    <ProtocolVersion>
0061      <ProtocolVersionMajor type="Integer" value="1"/>
0062      <ProtocolVersionMinor type="Integer" value="2"/>
0063    </ProtocolVersion>
0064    <BatchCount type="Integer" value="1"/>
0065    </ResponseHeader>
0066    <BatchItem>
0067      <Operation type="Enumeration" value="Get"/>
0068      <RequestPayload>
0069        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0070      </RequestPayload>
0071    </BatchItem>
0072  </RequestMessage>
0073  <ResponseMessage>
0074    <ResponseHeader>
0075      <ProtocolVersion>
0076        <ProtocolVersionMajor type="Integer" value="1"/>
0077        <ProtocolVersionMinor type="Integer" value="2"/>
0078      </ProtocolVersion>
0079    </ResponseHeader>
0080    <BatchItem>
0081      <Operation type="Enumeration" value="Get"/>
0082      <ResultStatus type="Enumeration" value="Success"/>
0083      <ResponsePayload>
0084        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0085        <SymmetricKey>
0086      </ResponsePayload>
0087    </BatchItem>
0088    <ResponseMessage>
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  <KeyValue>
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  </KeyValue>
  <CryptographicAlgorithm type="Enumeration" value="AES"/>
  <CryptographicLength type="Integer" value="128"/>
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</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 2
# [Client-A]
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    <ProtocolVersionMinor type="Integer" value="2"/>
  </ProtocolVersion>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ObtainLease"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:28+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ObtainLease"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <LeaseTime type="Interval" value="3600"/>
      <LastChangeDate type="DateTime" value="$NOW"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 3
# [Client-B]
<RequestMessage>
  <RequestHeader>
  <ProtocolVersion>
| 0139 | `<ProtocolVersionMajor type="Integer" value="1"/>` |
| 0140 | `<ProtocolVersionMinor type="Integer" value="2"/>` |
| 0141 | `</ProtocolVersion>` |
| 0142 | `<BatchCount type="Integer" value="1"/>` |
| 0143 | `</RequestHeader>` |
| 0144 | `<BatchItem>` |
| 0145 | `<Operation type="Enumeration" value="Revoke"/>` |
| 0146 | `<RequestPayload>` |
| 0147 | `<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>` |
| 0148 | `<RevocationReason>` |
| 0149 | `<RevocationReasonCode type="Enumeration" value="KeyCompromise"/>` |
| 0150 | `</RevocationReason>` |
| 0151 | `<CompromiseOccurrenceDate type="DateTime" value="$NOW"/>` |
| 0152 | `</RequestPayload>` |
| 0153 | `</BatchItem>` |
| 0154 | `</RequestMessage>` |
| 0155 | `<ResponseMessage>` |
| 0156 | `<ResponseHeader>` |
| 0157 | `<ProtocolVersion>` |
| 0158 | `<ProtocolVersionMajor type="Integer" value="1"/>` |
| 0159 | `<ProtocolVersionMinor type="Integer" value="2"/>` |
| 0160 | `</ProtocolVersion>` |
| 0161 | `<TimeStamp type="DateTime" value="2012-04-27T08:14:28+00:00"/>` |
| 0162 | `<BatchCount type="Integer" value="1"/>` |
| 0163 | `</ResponseHeader>` |
| 0164 | `<BatchItem>` |
| 0165 | `<Operation type="Enumeration" value="Revoke"/>` |
| 0166 | `<ResponseStatus type="Enumeration" value="Success"/>` |
| 0167 | `<ResponsePayload>` |
| 0168 | `<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>` |
| 0169 | `</ResponsePayload>` |
| 0170 | `</BatchItem>` |
| 0171 | `</ResponseMessage>` |

```
# TIME 4
# [Client-B]
0172 | `<RequestMessage>` |
0173 | `<RequestHeader>` |
0174 | `<ProtocolVersion>` |
0175 | `<ProtocolVersionMajor type="Integer" value="1"/>` |
0176 | `<ProtocolVersionMinor type="Integer" value="2"/>` |
0177 | `</ProtocolVersion>` |
0178 | `<BatchCount type="Integer" value="1"/>` |
0179 | `</RequestHeader>` |
0180 | `<BatchItem>` |
0181 | `<Operation type="Enumeration" value="ReKey"/>` |
0182 | `<RequestPayload>` |
0183 | `<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>` |
0184 | `</RequestPayload>` |
0185 | `</BatchItem>` |
0186 | `</RequestMessage>` |
0187 | `<ResponseMessage>` |
0188 | `<ResponseHeader>` |
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

| 0189 | <ProtocolVersion> |
| 0190 |   <ProtocolVersionMajor type="Integer" value="1"/> |
| 0191 |   <ProtocolVersionMinor type="Integer" value="2"/> |
| 0192 | </ProtocolVersion> |
| 0193 | <TimeStamp type="DateTime" value="2012-04-27T08:14:28+00:00"/> |
| 0194 | <BatchCount type="Integer" value="1"/> |
| 0195 | </ResponseHeader> |
| 0196 | <BatchItem> |
| 0197 |   <Operation type="Enumeration" value="ReKey"/> |
| 0198 |   <ResultStatus type="Enumeration" value="Success"/> |
| 0199 |   <ResponsePayload> |
| 0200 |     <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/> |
| 0201 | </ResponsePayload> |
| 0202 | </BatchItem> |
| 0203 | </ResponseMessage> |

# TIME 5
# [Client-A]
| 0204 | <RequestMessage> |
| 0205 |   <RequestHeader> |
| 0206 |     <ProtocolVersion> |
| 0207 |       <ProtocolVersionMajor type="Integer" value="1"/> |
| 0208 |       <ProtocolVersionMinor type="Integer" value="2"/> |
| 0209 | </ProtocolVersion> |
| 0210 |     <BatchCount type="Integer" value="1"/> |
| 0211 | </RequestHeader> |
| 0212 | <BatchItem> |
| 0213 |   <Operation type="Enumeration" value="ObtainLease"/> |
| 0214 |   <RequestPayload> |
| 0215 |     <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/> |
| 0216 | </RequestPayload> |
| 0217 | </BatchItem> |
| 0218 | </RequestMessage> |

| 0219 | <ResponseMessage> |
| 0220 |   <ResponseHeader> |
| 0221 |     <ProtocolVersion> |
| 0222 |       <ProtocolVersionMajor type="Integer" value="1"/> |
| 0223 |       <ProtocolVersionMinor type="Integer" value="2"/> |
| 0224 | </ProtocolVersion> |
| 0225 |     <TimeStamp type="DateTime" value="2012-04-27T08:14:28+00:00"/> |
| 0226 |     <BatchCount type="Integer" value="1"/> |
| 0227 | </ResponseHeader> |
| 0228 | <BatchItem> |
| 0229 |   <Operation type="Enumeration" value="ObtainLease"/> |
| 0230 |   <ResultStatus type="Enumeration" value="OperationFailed"/> |
| 0231 |   <ResultReason type="Enumeration" value="PermissionDenied"/> |
| 0232 |   <ResultMessage type="TextString" value="CO is in state Compromised, no lease given"/> |
| 0233 | </BatchItem> |
| 0234 | </ResponseMessage> |

# TIME 6
# [Client-A]
| 0235 | <RequestMessage> |
| 0236 |   <RequestHeader> |
| 0237 | </ProtocolVersion> |
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
</RequestHeader>
</BatchItem>
</RequestMessage>

# TIME 7
# [Client-A]

<RequestMessage>

<RequestHeader>

<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
</RequestHeader>
</BatchItem>
</RequestMessage>

<ResponseMessage>

<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:14:28+00:00"/>
</ResponseHeader>
</BatchItem>
</ResponseMessage>

<ResponseMessage>

<ResponseHeader>

<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
</ResponseHeader>
</BatchItem>
</ResponseMessage>

<ResponseMessage>

<ResponseHeader>

<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
</ResponseHeader>
</BatchItem>
</ResponseMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```xml
<ResponseHeader>
  <ProtocolVersion>
    <ProtocolVersionMajor type="Integer" value="1"/>
    <ProtocolVersionMinor type="Integer" value="2"/>
  </ProtocolVersion>
  <TimeStamp type="DateTime" value="2012-04-27T08:14:28+00:00"/>
  <BatchCount type="Integer" value="1"/>
</ResponseHeader>

<BatchItem>
  <Operation type="Enumeration" value="Get"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <ObjectType type="Enumeration" value="SymmetricKey"/>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    <SymmetricKey>
      <KeyBlock>
        <KeyFormatType type="Enumeration" value="Raw"/>
        <KeyValue>
          <KeyMaterial type="ByteString" value="525d4b0bbb66bcb538029d49a6f569a5"/>
        </KeyValue>
        <CryptographicAlgorithm type="Enumeration" value="AES"/>
        <CryptographicLength type="Integer" value="128"/>
      </KeyBlock>
    </SymmetricKey>
  </ResponsePayload>
</BatchItem>

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ObtainLease"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```

# TIME 8
# [Client-A]

```xml
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ObtainLease"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```

```xml
<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:28+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <SymmetricKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="525d4b0bbb66bcb538029d49a6f569a5"/>
          </KeyValue>
          <CryptographicAlgorithm type="Enumeration" value="AES"/>
          <CryptographicLength type="Integer" value="128"/>
        </KeyBlock>
      </SymmetricKey>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

<table>
<thead>
<tr>
<th>TIME 9</th>
<th>[Client-A]</th>
</tr>
</thead>
<tbody>
<tr>
<td>0341</td>
<td><code>&lt;Operation type=&quot;Enumeration&quot; value=&quot;ObtainLease&quot;/&gt;</code></td>
</tr>
<tr>
<td>0342</td>
<td><code>&lt;ResultStatus type=&quot;Enumeration&quot; value=&quot;Success&quot;/&gt;</code></td>
</tr>
<tr>
<td>0343</td>
<td><code>&lt;ResponsePayload&gt;</code></td>
</tr>
<tr>
<td>0344</td>
<td><code>&lt;UniqueIdentifier type=&quot;TextString&quot; value=&quot;$UNIQUE_IDENTIFIER_1&quot;/&gt;</code></td>
</tr>
<tr>
<td>0345</td>
<td><code>&lt;LeaseTime type=&quot;Interval&quot; value=&quot;3600&quot;/&gt;</code></td>
</tr>
<tr>
<td>0346</td>
<td><code>&lt;LastChangeDate type=&quot;DateTime&quot; value=&quot;$NOW&quot;/&gt;</code></td>
</tr>
<tr>
<td>0347</td>
<td><code>&lt;ResponsePayload&gt;</code></td>
</tr>
<tr>
<td>0348</td>
<td><code>&lt;BatchItem&gt;</code></td>
</tr>
<tr>
<td>0349</td>
<td><code>&lt;/ResponseMessage&gt;</code></td>
</tr>
</tbody>
</table>

# TIME 9

# [Client-A]

| 0350   | `<RequestMessage>` |
| 0351   | `<RequestHeader>` |
| 0352   | `<ProtocolVersion>` |
| 0353   | `<ProtocolVersionMajor type="Integer" value="1"/>` |
| 0354   | `<ProtocolVersionMinor type="Integer" value="2"/>` |
| 0355   | `</ProtocolVersion>` |
| 0356   | `<BatchCount type="Integer" value="1"/>` |
| 0357   | `</BatchItem>` |
| 0358   | `</RequestHeader>` |
| 0359   | `<Operation type="Enumeration" value="Destroy"/>` |
| 0360   | `<RequestPayload>` |
| 0361   | `<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>` |
| 0362   | `</RequestPayload>` |
| 0363   | `<BatchItem>` |
| 0364   | `</RequestMessage>` |

| 0365   | `<ResponseMessage>` |
| 0366   | `<ResponseHeader>` |
| 0367   | `<ProtocolVersion>` |
| 0368   | `<ProtocolVersionMajor type="Integer" value="1"/>` |
| 0369   | `<ProtocolVersionMinor type="Integer" value="2"/>` |
| 0370   | `</ProtocolVersion>` |
| 0371   | `<TimeStamp type="DateTime" value="2012-04-27T08:14:28+00:00"/>` |
| 0372   | `<BatchCount type="Integer" value="1"/>` |
| 0373   | `</ResponseHeader>` |
| 0374   | `<BatchItem>` |
| 0375   | `<Operation type="Enumeration" value="Destroy"/>` |
| 0376   | `<ResultStatus type="Enumeration" value="Success"/>` |
| 0377   | `<ResponsePayload>` |
| 0378   | `<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>` |
| 0379   | `</ResponsePayload>` |
| 0380   | `<BatchItem>` |
| 0381   | `</ResponseMessage>` |

# TIME 10

# [Client-A]

| 0382   | `<RequestMessage>` |
| 0383   | `<RequestHeader>` |
| 0384   | `<ProtocolVersion>` |
| 0385   | `<ProtocolVersionMajor type="Integer" value="1"/>` |
| 0386   | `<ProtocolVersionMinor type="Integer" value="2"/>` |
| 0387   | `</ProtocolVersion>` |
| 0388   | `<BatchOrderOption type="Boolean" value="true"/>` |
| 0389   | `<BatchCount type="Integer" value="2"/>` |
2.3.19 TC-101-12 - Create a Key, Archive and Recover it

Create a symmetric key with a specified name, then use Locate to find the key and get the key.

Archive the key (asynchronous operation, use Poll until it completes) and use Get and Locate on
it, but both fail (Get returns an error and Locate returns no Unique Identifiers). Add the Storage Status Mask to the Locate-command, indicating to the server to search in both online and archived storage. The Locate then finds the archived key. Recover the key (asynchronous operation, use Poll until it completes) from the archive, then repeat the Get operation which will now succeed.

Since the client is unable to force the server to respond asynchronously, it is possible for a server to respond synchronously to the requests issued at times 3 and 9, in which case the expected responses are the ones shown at times 4 and 10 respectively.

Note: a server may perform Archive and Recover operations synchronously and not require the use of Poll for the client to wait for the operation to complete

```
# TIME 0
0001 <RequestMessage>
0002   <RequestHeader>
0003     <ProtocolVersion>
0004       <ProtocolVersionMajor type="Integer" value="1"/>
0005       <ProtocolVersionMinor type="Integer" value="2"/>
0006     </ProtocolVersion>
0007     <BatchCount type="Integer" value="1"/>
0008   </RequestHeader>
0009 
0010   <BatchItem>
0011     <Operation type="Enumeration" value="Create"/>
0012     <RequestPayload>
0013       <ObjectType type="Enumeration" value="SymmetricKey"/>
0014       <TemplateAttribute>
0015         <AttributeName type="TextString" value="Cryptographic Algorithm"/>
0016         <AttributeValue type="Enumeration" value="AES"/>
0017       </AttributeName>
0018       <AttributeName type="TextString" value="Cryptographic Length"/>
0019         <AttributeValue type="Integer" value="128"/>
0020       </AttributeName>
0021       <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
0022         <AttributeValue type="Integer" value="Decrypt Encrypt"/>
0023       </AttributeName>
0024     </RequestPayload>
0025     </BatchItem>
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
0036   </RequestMessage>
0037   <ResponseMessage>
0038   <ResponseHeader>
0039   <ProtocolVersion>
0040       <ProtocolVersionMajor type="Integer" value="1"/>
0041       <ProtocolVersionMinor type="Integer" value="2"/>
0042   </ProtocolVersion>
0043   <TimeStamp type="DateTime" value="2012-04-27T08:14:28+00:00"/>
0044   <BatchCount type="Integer" value="1"/>
0045   </ResponseHeader>
0046   <BatchItem>
0047       <Operation type="Enumeration" value="Create"/>
0048       <ResultStatus type="Enumeration" value="Success"/>
0049       <ResponsePayload>
0050           <ObjectType type="Enumeration" value="SymmetricKey"/>
0051           <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0052       </ResponsePayload>
0053   </BatchItem>
0054   </ResponseMessage>

# TIME 1

0055   <RequestMessage>
0056   <RequestHeader>
0057       <ProtocolVersion>
0058           <ProtocolVersionMajor type="Integer" value="1"/>
0059           <ProtocolVersionMinor type="Integer" value="2"/>
0060       </ProtocolVersion>
0061       <BatchCount type="Integer" value="1"/>
0062   </RequestHeader>
0063   <BatchItem>
0064       <Operation type="Enumeration" value="Locate"/>
0065       <RequestPayload>
0066           <Attribute>
0067               <AttributeName type="TextString" value="Object Type"/>
0068               <AttributeValue type="Enumeration" value="SymmetricKey"/>
0069           </Attribute>
0070           <Attribute>
0071               <AttributeName type="TextString" value="Name"/>
0072               <AttributeValue>
0073                   <NameValue type="TextString" value="TC-101-12-archiveKey"/>
0074                   <NameType type="Enumeration" value="UninterpretedTextString"/>
0075               </AttributeValue>
0076           </Attribute>
0077       </RequestPayload>
0078   </BatchItem>
0079   </RequestMessage>
0080   <ResponseMessage>
0081   <ResponseHeader>
0082       <ProtocolVersion>
0083           <ProtocolVersionMajor type="Integer" value="1"/>
0084           <ProtocolVersionMinor type="Integer" value="2"/>
0085       </ProtocolVersion>
0086       <TimeStamp type="DateTime" value="2012-04-27T08:14:28+00:00"/>
0087       <BatchCount type="Integer" value="1"/>
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

0088 </ResponseHeader>
0089 <BatchItem>
0090 <Operation type="Enumeration" value="Locale"/>
0091 <ResultStatus type="Enumeration" value="Success"/>
0092 <ResponsePayload>
0093 <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0094 </ResponsePayload>
0095 </BatchItem>
0096 </ResponseMessage>

# TIME 2
0097 <RequestMessage>
0098 <RequestHeader>
0099 <ProtocolVersion>
0100 <ProtocolVersionMajor type="Integer" value="1"/>
0101 <ProtocolVersionMinor type="Integer" value="2"/>
0102 </ProtocolVersion>
0103 <BatchCount type="Integer" value="1"/>
0104 </RequestHeader>
0105 <BatchItem>
0106 <Operation type="Enumeration" value="Get"/>
0107 <RequestPayload>
0108 <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0109 </RequestPayload>
0110 </BatchItem>
0111 </RequestMessage>
0112 </ResponseMessage>
0113 <ResponseHeader>
0114 <ProtocolVersion>
0115 <ProtocolVersionMajor type="Integer" value="1"/>
0116 <ProtocolVersionMinor type="Integer" value="2"/>
0117 </ProtocolVersion>
0118 <TimeStamp type="DateTime" value="2012-04-27T08:14:28+00:00"/>
0119 <BatchCount type="Integer" value="1"/>
0120 </ResponseHeader>
0121 <BatchItem>
0122 <Operation type="Enumeration" value="Get"/>
0123 <ResultStatus type="Enumeration" value="Success"/>
0124 <ResponsePayload>
0125 <ObjectType type="Enumeration" value="SymmetricKey"/>
0126 <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0127 <SymmetricKey>
0128 <KeyBlock>
0129 <KeyFormatType type="Enumeration" value="Raw"/>
0130 <KeyValue>
0131 <KeyMaterial type="ByteString" value="0b4c9fb659c5ce09ec12c3233d526f45"/>
0132 </KeyValue>
0133 <CryptographicAlgorithm type="Enumeration" value="AES"/>
0134 <CryptographicLength type="Integer" value="128"/>
0135 </KeyBlock>
0136 </SymmetricKey>
0137 </ResponsePayload>
0138 </BatchItem>
0139 </ResponseMessage>
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <AsynchronousIndicator type="Boolean" value="true"/>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Archive"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:28+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Archive"/>
    <ResultStatus type="Enumeration" value="OperationPending"/>
    <AsynchronousCorrelationValue type="ByteString" value="$ASYNCHRONOUS_CORRELATION_VALUE"/>
  </BatchItem>
</ResponseMessage>

# TIME 4
  # [REPEAT] until Archive response is returned
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Poll"/>
    <RequestPayload>
      <AsynchronousCorrelationValue type="ByteString" value="$ASYNCHRONOUS_CORRELATION_VALUE"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
    </ProtocolVersion>
  </ResponseHeader>
  <BatchItem>
  </BatchItem>
</ResponseMessage>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:14:32+00:00"/>
</ResponseHeader>
</BatchItem>
<Operation type="Enumeration" value="Get"/>
<RequestPayload>
  <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</RequestPayload>
</BatchItem>
</ResponseMessage>

# TIME 6

0234  <RequestMessage>
0235   <RequestHeader>
0236     <ProtocolVersion>
0237       <ProtocolVersionMajor type="Integer" value="1"/>
0238         <ProtocolVersionMinor type="Integer" value="2"/>
0239       </ProtocolVersion>
0240     </ProtocolVersion>
0241     <TimeStamp type="DateTime" value="2012-04-27T08:14:32+00:00"/>
0242     <BatchCount type="Integer" value="1"/>
0243   </RequestHeader>
0244   <BatchItem>
0245     <Operation type="Enumeration" value="Get"/>
0246     <ResultStatus type="Enumeration" value="OperationFailed"/>
0247     <ResultReason type="Enumeration" value="ObjectArchived"/>
0248     <ResultMessage type="TextString" value="Object is archived"/>
0249   </BatchItem>
0250 </ResponseMessage>

# TIME 7

0251  <RequestMessage>
0252   <RequestHeader>
0253     <ProtocolVersion>
0254       <ProtocolVersionMajor type="Integer" value="1"/>
0255         <ProtocolVersionMinor type="Integer" value="2"/>
0256       </ProtocolVersion>
0257     </ProtocolVersion>
0258     <TimeStamp type="DateTime" value="2012-04-27T08:14:33+00:00"/>
0259     <BatchCount type="Integer" value="1"/>
0260   </RequestHeader>
0261   <BatchItem>
0262     <Operation type="Enumeration" value="Get"/>
0263     <ResultStatus type="Enumeration" value="OperationFailed"/>
0264     <ResultReason type="Enumeration" value="ObjectArchived"/>
0265     <ResultMessage type="TextString" value="Object is archived"/>
0266   </BatchItem>
0267 </ResponseMessage>

# TIME 8

0268  <RequestMessage>
0269   <RequestHeader>
0270     <ProtocolVersion>
0271       <ProtocolVersionMajor type="Integer" value="1"/>
0272         <ProtocolVersionMinor type="Integer" value="2"/>
0273       </ProtocolVersion>
0274     </ProtocolVersion>
0275     <TimeStamp type="DateTime" value="2012-04-27T08:14:34+00:00"/>
0276     <BatchCount type="Integer" value="1"/>
0277   </RequestHeader>
0278   <BatchItem>
0279     <Operation type="Enumeration" value="Get"/>
0280     <ResultStatus type="Enumeration" value="OperationFailed"/>
0281     <ResultReason type="Enumeration" value="ObjectArchived"/>
0282     <ResultMessage type="TextString" value="Object is archived"/>
0283   </BatchItem>
0284 </ResponseMessage>
<BatchItem>
  <Operation type="Enumeration" value="GetAttributes"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <AttributeName type="TextString" value="Archive Date"/>
  </RequestPayload>
</BatchItem>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:32+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Archive Date"/>
        <AttributeValue type="DateTime" value="2012-04-27T08:14:30+00:00"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 7

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Locate"/>
    <RequestPayload>
      <Attribute>
        <AttributeName type="TextString" value="Object Type"/>
        <AttributeValue type="Enumeration" value="SymmetricKey"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Name"/>
        <AttributeValue>
          <NameValue type="TextString" value="TC-101-12-archiveKey"/>
        </AttributeValue>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
### TIME 8

```xml
0293  </RequestPayload>
0294  </BatchItem>
0295  </RequestMessage>

0296  <ResponseMessage>
0297  <ResponseHeader>
0298  <ProtocolVersion>
0299      <ProtocolVersionMajor type="Integer" value="1"/>
0300      <ProtocolVersionMinor type="Integer" value="2"/>
0301  </ProtocolVersion>
0302      <TimeStamp type="DateTime" value="2012-04-27T08:14:33+00:00"/>
0303  </ResponseHeader>
0304  </BatchItem>
0305      <Operation type="Enumeration" value="Locate"/>
0306      <ResultStatus type="Enumeration" value="Success"/>
0307  </ResponsePayload>
0308  </ResponseMessage>

# TIME 8

0312  <RequestMessage>
0313  <RequestHeader>
0314      <ProtocolVersion>
0315          <ProtocolVersionMajor type="Integer" value="1"/>
0316          <ProtocolVersionMinor type="Integer" value="2"/>
0317      </ProtocolVersion>
0318      <BatchCount type="Integer" value="1"/>
0319  </RequestHeader>
0320  </BatchItem>
0321      <Operation type="Enumeration" value="Locate"/>
0322      <RequestPayload>
0323          <StorageStatusMask type="Integer" value="ArchivalStorage OnLineStorage"/>
0324              <Attribute>
0325                  <AttributeName type="TextString" value="Object Type"/>
0326                  <AttributeValue type="Enumeration" value="SymmetricKey"/>
0327              </Attribute>
0328              <Attribute>
0329                  <AttributeName type="TextString" value="Name"/>
0330                  <AttributeValue>
0331                      <NameValue type="TextString" value="TC-101-12-archiveKey"/>
0332              </AttributeValue>
0333              </Attribute>
0334      </RequestPayload>
0335  </BatchItem>
0336  </RequestMessage>

0338  <ResponseMessage>
0339  <ResponseHeader>
0340      <ProtocolVersion>
0341          <ProtocolVersionMajor type="Integer" value="1"/>
0342          <ProtocolVersionMinor type="Integer" value="2"/>
0343      </ProtocolVersion>
0344      <TimeStamp type="DateTime" value="2012-04-27T08:14:33+00:00"/>
```
<BatchCount type="Integer" value="1"/>
</ResponseHeader>

<BatchItem>
<Operation type="Enumeration" value="Locate"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</BatchItem>

# TIME 9

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
</RequestHeader>

<BatchItem>
<Operation type="Enumeration" value="Recover"/>
<ResultStatus type="Enumeration" value="OperationPending"/>
<AsynchronousCorrelationValue type="ByteString" value="$ASYNCHRONOUS_CORRELATION_VALUE"/>
</BatchItem>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:14:33+00:00"/>
</ResponseHeader>

<BatchItem>
<Operation type="Enumeration" value="Recover"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 10

# [REPEAT] until Recover response is returned

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
</RequestHeader>

<BatchItem>
<Operation type="Enumeration" value="Recover"/>
<ResultStatus type="Enumeration" value="OperationPending"/>
<AsynchronousCorrelationValue type="ByteString" value="$ASYNCHRONOUS_CORRELATION_VALUE"/>
</BatchItem>
</RequestMessage>
<Operation type="Enumeration" value="Poll"/>
<RequestPayload>
<AsynchronousCorrelationValue type="ByteString" value="$ASYNCHRONOUS_CORRELATION_VALUE"/>
</RequestPayload>
</BatchItem>

</ResponseMessage>

# TIME 11

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
</RequestHeader>
</BatchItem>

<Operation type="Enumeration" value="Get"/>
<RequestPayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</RequestPayload>
</BatchItem>

</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
</ResponseHeader>
</BatchItem>

<Operation type="Enumeration" value="Get"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<ObjectType type="Enumeration" value="SymmetricKey"/>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

0447  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0448  </SymmetricKey>
0449  </KeyBlock>
0450  <KeyFormatType type="Enumeration" value="Raw"/>
0451  </KeyValue>
0452  <KeyMaterial type="ByteString" value="0b4c9fb659c5ce09ec12c3233d526f45"/>
0453  </KeyValue>
0454  </CryptographicAlgorithm type="Enumeration" value="AES"/>
0455  </CryptographicLength type="Integer" value="128"/>
0456  </KeyBlock>
0457  </SymmetricKey>
0458  </ResponsePayload>
0459  </BatchItem>
0460  </ResponseMessage>

0461  # TIME 12
0462  <RequestMessage>
0463  <RequestHeader>
0464  <ProtocolVersion>
0465  <ProtocolVersionMajor type="Integer" value="1"/>
0466  <ProtocolVersionMinor type="Integer" value="2"/>
0467  </ProtocolVersion>
0468  </RequestHeader>
0469  <BatchItem>
0470  <Operation type="Enumeration" value="Destroy"/>
0471  <RequestPayload>
0472  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0473  </RequestPayload>
0474  </BatchItem>
0475  </RequestMessage>

0476  <ResponseMessage>
0477  <ResponseHeader>
0478  <ProtocolVersion>
0479  <ProtocolVersionMajor type="Integer" value="1"/>
0480  <ProtocolVersionMinor type="Integer" value="2"/>
0481  </ProtocolVersion>
0482  <TimeStamp type="DateTime" value="2012-04-27T08:14:35+00:00"/>
0483  <BatchCount type="Integer" value="1"/>
0484  </ResponseHeader>
0485  <BatchItem>
0486  <Operation type="Enumeration" value="Destroy"/>
0487  <ResultStatus type="Enumeration" value="Success"/>
0488  <ResponsePayload>
0489  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0490  </ResponsePayload>
0491  </BatchItem>
0492  </ResponseMessage>
2.3.20 TC-111-12 - Credential, Operation Policy, Destroy Date

Pass a Credential object of type Username and Password in the message header in all requests for identification purposes. Create a symmetric key and set the Operation Policy Name attribute to 'default'. Using another Username and Password Credential, attempt to perform a Get operation batched with a Get Attribute List on the created symmetric key - according to the Default Operation Policy, both these request SHALL fail, and with the Batch Error Continuation Option set to 'Continue', the client SHALL also receive both response payloads. Using the first (correct) Credential, Destroy the object and then get the Destroy Date attribute.

The message exchanges shown in this test case assume that the first Credential (Fred) is valid and the second credential (Barney) is either invalid or does not have access to the newly created key (which should always be true under the 'default' Operation Policy).

Note: a server can elect to not return meta-data for destroyed objects and in those circumstances the Get Attributes operation may fail.

```xml
# TIME 0
0001  <RequestMessage>
0002    <RequestHeader>
0003      <ProtocolVersion>
0004        <ProtocolVersionMajor type="Integer" value="1"/>
0005        <ProtocolVersionMinor type="Integer" value="2"/>
0006      </ProtocolVersion>
0007      <Authentication>
0008        <Credential>
0009          <CredentialType type="Enumeration" value="UsernameAndPassword"/>
0010          <CredentialValue>
0011            <Username type="TextString" value="Fred"/>
0012            <Password type="TextString" value="password1"/>
0013        </CredentialValue>
0014      </Credential>
0015    </Authentication>
0016    <BatchCount type="Integer" value="1"/>
0017  </RequestHeader>
0018  <BatchItem>
0019    <Operation type="Enumeration" value="Create"/>
0020    <RequestPayload>
0021      <ObjectType type="Enumeration" value="SymmetricKey"/>
0022      <TemplateAttribute>
0023        <Attribute>
0024          <AttributeName type="TextString" value="Cryptographic Algorithm"/>
0025            <AttributeValue type="Enumeration" value="AES"/>
0026        </Attribute>
0027        <Attribute>
0028          <AttributeName type="TextString" value="Cryptographic Length"/>
0029            <AttributeValue type="Integer" value="128"/>
0030        </Attribute>
0031        <Attribute>
0032          <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
```
<AttributeValue type="Integer" value="Decrypt Encrypt"/>
</Attribute>
</Attribute>
<Attribute>
  <AttributeName type="TextString" value="Name"/>
  <AttributeValue>
    <NameValue type="TextString" value="TC-111-12-key1"/>
  </AttributeValue>
  <NameType type="Enumeration" value="UninterpretedTextString"/>
</Attribute>
</Attribute>
</AttributeValue>
</Attribute>
<NameValue type="TextString" value="TC-111-12-key1"/>
</NameType>
</AttributeName>

<Attribute>
  <AttributeName type="TextString" value="Cryptographic Parameters"/>
  <AttributeValue>
    <BlockCipherMode type="Enumeration" value="CBC"/>
    <PaddingMethod type="Enumeration" value="PKCS5"/>
    <HashingAlgorithm type="Enumeration" value="SHA_1"/>
  </AttributeValue>
</Attribute>
</AttributeValue>
</Attribute>
</TagName>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 1
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:35+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Create"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</RequestMessage>
```xml
<RequestMessage>
  <RequestHeader>
    <Authentication>
      <Credential>
        <CredentialValue>
          <Username type="TextString" value="Fred"/>
          <Password type="TextString" value="password1"/>
        </CredentialValue>
      </Credential>
    </Authentication>
    <BatchCount type="Integer" value="2"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <UniqueBatchItemID type="ByteString" value="55d88770e2556dab"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <AttributeName type="TextString" value="Operation Policy Name"/>
    </RequestPayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <UniqueBatchItemID type="ByteString" value="eb864ee01f1f98cd"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:35+00:00"/>
    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <UniqueBatchItemID type="ByteString" value="55d88770e2556dab"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Operation Policy Name"/>
        <AttributeValue type="TextString" value="default"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <UniqueBatchItemID type="ByteString" value="eb864ee01f1f98cd"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <ObjectType type="Enumeration" value="SymmetricKey"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
0136   <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0137   <SymmetricKey>
0138     <KeyBlock>
0139       <KeyFormatType type="Enumeration" value="Raw"/>
0140       <KeyValue>
0141         <KeyMaterial type="ByteString" value="30e55f4b230b34ce8afc476c66f8351b"/>
0142       </KeyValue>
0143       <CryptographicAlgorithm type="Enumeration" value="AES"/>
0144       <CryptographicLength type="Integer" value="128"/>
0145     </KeyBlock>
0146   </SymmetricKey>
0147  </ResponsePayload>
0148 </BatchItem>
0149 </ResponseMessage>

# TIME 2
0150 <RequestMessage>
0151   <RequestHeader>
0152     <ProtocolVersion>
0153       <ProtocolVersionMajor type="Integer" value="1"/>
0154       <ProtocolVersionMinor type="Integer" value="2"/>
0155     </ProtocolVersion>
0156     <Authentication>
0157       <Credential>
0158         <CredentialType type="Enumeration" value="UsernameAndPassword"/>
0159         <CredentialValue>
0160           <Username type="TextString" value="Barney"/>
0161           <Password type="TextString" value="secret2"/>
0162         </CredentialValue>
0163       </Credential>
0164     </Authentication>
0165     <BatchErrorContinuationOption type="Enumeration" value="Continue"/>
0166     <BatchOrderOption type="Boolean" value="true"/>
0167     <BatchCount type="Integer" value="2"/>
0168   </RequestHeader>
0169   <BatchItem>
0170     <Operation type="Enumeration" value="Get"/>
0171     <UniqueBatchItemID type="ByteString" value="4f0e6d3dba3d0495"/>
0172   <RequestPayload>
0173     <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0174   </RequestPayload>
0175 </BatchItem>
0176 <BatchItem>
0177     <Operation type="Enumeration" value="GetAttributeList"/>
0178     <UniqueBatchItemID type="ByteString" value="9b937e7cd50b233b"/>
0179   <RequestPayload>
0180     <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0181   </RequestPayload>
0182 </BatchItem>
0183 </RequestMessage>
0184 <ResponseMessage>
0185 <ResponseHeader>
```
<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:14:35+00:00"/>
<BatchCount type="Integer" value="2"/>
</ResponseHeader>
<BatchItem>
  <Operation type="Enumeration" value="Get"/>
  <UniqueBatchItemID type="ByteString" value="4f0e6d3dba3d0495"/>
  <ResultStatus type="Enumeration" value="OperationFailed"/>
  <ResultReason type="Enumeration" value="PermissionDenied"/>
  <ResultMessage type="TextString" value="Access denied"/>
</BatchItem>
<BatchItem>
  <Operation type="Enumeration" value="GetAttributeList"/>
  <UniqueBatchItemID type="ByteString" value="9b937e7cd50b233b"/>
  <ResultStatus type="Enumeration" value="OperationFailed"/>
  <ResultReason type="Enumeration" value="PermissionDenied"/>
  <ResultMessage type="TextString" value="Access denied"/>
</BatchItem>
</ResponseMessage>

# TIME 3

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <Authentication>
      <Credential>
        <CredentialType type="Enumeration" value="UsernameAndPassword"/>
        <CredentialValue>
          <Username type="TextString" value="Fred"/>
          <Password type="TextString" value="password1"/>
        </CredentialValue>
      </Credential>
    </Authentication>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:35+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
</ResponseMessage>
**ResponseHeader**

```xml
<BatchItem>
  <Operation type="Enumeration" value="Destroy"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  </ResponsePayload>
</BatchItem>
</ResponseMessage>
```

### TIME 4

```xml
# TIME 4
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <Authentication>
      <Credential>
        <CredentialType type="Enumeration" value="UsernameAndPassword"/>
        <CredentialValue>
          <Username type="TextString" value="Fred"/>
          <Password type="TextString" value="password1"/>
        </CredentialValue>
      </Credential>
      <BatchCount type="Integer" value="1"/>
    </Authentication>

  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <AttributeName type="TextString" value="Destroy Date"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```

```xml
<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:35+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Destroy Date"/>
        <AttributeValue type="DateTime" value="2012-04-27T08:14:35+00:00"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
2.3.21 TC-112-12 - Device Credential, Operation Policy, Destroy Date

Pass a Credential object of type Device Credential in the message header in all requests for identification purposes. Create a symmetric key and set the Operation Policy Name attribute to 'default'. Using another Credential, attempt to perform a Get operation batched with a Get Attribute List on the created symmetric key. According to the Default Operation Policy, both these request SHALL fail, and with the Batch Error Continuation Option set to 'Continue', the client SHALL also receive both response payloads. Using the first Credential, Destroy the object and get the Destroy Date attribute. The message exchanges shown in this test case assume that the first Credential (devID2233) is valid and the second credential (devID4444) is either invalid or does not have access to the newly created key (which should always be true under the 'default' Operation Policy).

Note: a server can elect to not return meta-data for destroyed objects and in those circumstances the Get Attributes operation may fail.

```
# TIME 0
0001  <RequestMessage>
0002   <RequestHeader>
0003     <ProtocolVersion>
0004       <ProtocolVersionMajor type="Integer" value="1"/>
0005       <ProtocolVersionMinor type="Integer" value="2"/>
0006   </ProtocolVersion>
0007     <Authentication>
0008       <Credential>
0009         <CredentialType type="Enumeration" value="Device"/>
0010         <CredentialValue>
0011           <DeviceSerialNumber type="TextString" value="serNum123456"/>
0012           <Password type="TextString" value="secret"/>
0013           <DeviceIdentifier type="TextString" value="devID2233"/>
0014           <NetworkIdentifier type="TextString" value="netID9000"/>
0015           <MachineIdentifier type="TextString" value="machineID1"/>
0016           <MediaIdentifier type="TextString" value="mediaID313"/>
0017         </CredentialValue>
0018       </Credential>
0019     </Authentication>
0020   <BatchCount type="Integer" value="1"/>
0021 </RequestHeader>
0022 <BatchItem>
0023   <Operation type="Enumeration" value="Create"/>
0024   <RequestPayload>
0025     <ObjectType type="Enumeration" value="SymmetricKey"/>
0026     <TemplateAttribute>
0027       <AttributeName type="TextString" value="Cryptographic Algorithm"/>
```
<AttributeValue type="Enumeration" value="AES"/>
</Attribute>
</Attribute>
<AttributeName type="TextString" value="Cryptographic Length"/>
ATTRIBUTEVALUE type="Integer" value="128"/>
</AttributeValue>
<AttributeName type="TextString" value="Cryptographic Usage Mask"/>
ATTRIBUTEVALUE type="Integer" value="Decrypt Encrypt"/>
</AttributeValue>
<AttributeName type="TextString" value="Name"/>
<AttributeValue>
<NameValue type="TextString" value="TC-112-12-key1"/>
</NameValue>
</AttributeValue>
<AttributeName type="TextString" value="Operation Policy Name"/>
ATTRIBUTEVALUE type="TextString" value="default"/>
</AttributeValue>
<AttributeName type="TextString" value="Cryptographic Parameters"/>
ATTRIBUTEVALUE>
<BlockCipherMode type="Enumeration" value="CBC"/>
</BlockCipherMode>
</AttributeValue>
</RequestPayload>
</BatchItem>
</ResponseMessage>
```xml
# TIME 1
0080 <RequestMessage>
0081  <RequestHeader>
0082   <ProtocolVersion>
0083     <ProtocolVersionMajor type="Integer" value="1"/>
0084     <ProtocolVersionMinor type="Integer" value="2"/>
0085   </ProtocolVersion>
0086  <Authentication>
0087    <Credential>
0088     <CredentialType type="Enumeration" value="Device"/>
0089     <CredentialValue>
0090       <DeviceSerialNumber type="TextString" value="serNum123456"/>
0091       <Password type="TextString" value="secret"/>
0092       <DeviceIdentifier type="TextString" value="devID2233"/>
0093       <NetworkIdentifier type="TextString" value="netID9000"/>
0094       <MachineIdentifier type="TextString" value="machineID1"/>
0095       <MediaIdentifier type="TextString" value="mediaID313"/>
0096    </CredentialValue>
0097   </Authentication>
0098 <BatchCount type="Integer" value="2"/>
0100  </RequestHeader>
0101  <BatchItem>
0102   <Operation type="Enumeration" value="GetAttributes"/>
0103   <UniqueBatchItemID type="ByteString" value="e705e27dc0ba7789"/>
0104   <RequestPayload>
0105     <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0106     <AttributeName type="TextString" value="Operation Policy Name"/>
0107   </RequestPayload>
0108  </BatchItem>
0109  <BatchItem>
0110   <Operation type="Enumeration" value="Get"/>
0111   <UniqueBatchItemID type="ByteString" value="50a7f741a1119826"/>
0112   <RequestPayload>
0113     <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0114   </RequestPayload>
0115  </BatchItem>
0116 </RequestMessage>
0117 <ResponseMessage>
0118  <ResponseHeader>
0119   <ProtocolVersion>
0120     <ProtocolVersionMajor type="Integer" value="1"/>
0121     <ProtocolVersionMinor type="Integer" value="2"/>
0122   </ProtocolVersion>
0123   <TimeStamp type="DateTime" value="2012-04-27T08:14:35+00:00"/>
0124   <BatchCount type="Integer" value="2"/>
0125  </ResponseHeader>
0126  <BatchItem>
0127   <Operation type="Enumeration" value="GetAttributes"/>
0128   <UniqueBatchItemID type="ByteString" value="e705e27dc0ba7789"/>
0129   <ResultStatus type="Enumeration" value="Success"/>
0130  <ResponsePayload>
0131   <UniqueIdentifier type="TextString" value="responsePayload"/>
```

value="$UNIQUE_IDENTIFIER_0"/>
          <AttributeName type="TextString" value="Operation Policy Name"/>
          <AttributeValue type="TextString" value="default"/>
        </Attribute>
        </ResponsePayload>
      </BatchItem>
      <BatchItem>
        <Operation type="Enumeration" value="Get"/>
        <UniqueBatchItemID type="ByteString" value="50a7f741a1119826"/>
        <ResultStatus type="Enumeration" value="Success"/>
        <ResponsePayload>
          <ObjectType type="Enumeration" value="SymmetricKey"/>
          <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
          <SymmetricKey>
            <KeyBlock>
              <KeyFormatType type="Enumeration" value="Raw"/>
              <KeyValue>
                <KeyMaterial type="ByteString" value="acfeaffdbdd17d0e63624a22083ee4b6"/>
              </KeyValue>
              <CryptographicAlgorithm type="Enumeration" value="AES"/>
              <CryptographicLength type="Integer" value="128"/>
            </KeyBlock>
          </SymmetricKey>
        </ResponsePayload>
      </BatchItem>
    </ResponseMessage>
  </TIME 2>

# TIME 2

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <Authentication>
      <Credential>
        <CredentialType type="Enumeration" value="Device"/>
        <CredentialValue>
          <DeviceSerialNumber type="TextString" value="serNum101010"/>
          <Password type="TextString" value="passwd"/>
          <DeviceIdentifier type="TextString" value="devID4444"/>
          <NetworkIdentifier type="TextString" value="netID9"/>
          <MachineIdentifier type="TextString" value="machineID1111"/>
          <MediaIdentifier type="TextString" value="mediaID0000"/>
        </CredentialValue>
      </Credential>
    </Authentication>
    <BatchErrorContinuationOption type="Enumeration" value="Continue"/>
    <BatchOrderOption type="Boolean" value="true"/>
    <BatchCount type="Integer" value="2"/>
  </RequestHeader>
<BatchItem>
  <Operation type="Enumeration" value="Get"/>
  <UniqueBatchItemID type="ByteString" value="1154049d742c498e"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  </RequestPayload>
</BatchItem>

<BatchItem>
  <Operation type="Enumeration" value="GetAttributeList"/>
  <UniqueBatchItemID type="ByteString" value="8ae55c6e91d97b05"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  </RequestPayload>
</BatchItem>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:35+00:00"/>
    <BatchCount type="Integer" value="2"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <UniqueBatchItemID type="ByteString" value="1154049d742c498e"/>
    <ResultStatus type="Enumeration" value="OperationFailed"/>
    <ResultReason type="Enumeration" value="PermissionDenied"/>
    <ResultMessage type="TextString" value="Access denied"/>
  </BatchItem>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributeList"/>
    <UniqueBatchItemID type="ByteString" value="8ae55c6e91d97b05"/>
    <ResultStatus type="Enumeration" value="OperationFailed"/>
    <ResultReason type="Enumeration" value="PermissionDenied"/>
    <ResultMessage type="TextString" value="Access denied"/>
  </BatchItem>
</ResponseMessage>

# TIME 3

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <Authentication>
      <Credential>
        <CredentialType type="Enumeration" value="Device"/>
        <CredentialValue>
          <DeviceSerialNumber type="TextString" value="serNum123456"/>
        </CredentialValue>
        <Password type="TextString" value="secret"/>
        <DeviceIdentifier type="TextString" value="devID2233"/>
        <NetworkIdentifier type="TextString" value="netID9000"/>
      </Credential>
    </Authentication>
  </RequestHeader>
</RequestMessage>
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <Authentication>
      <Credential>
        <CredentialType type="Enumeration" value="Device"/>
        <CredentialValue>
          <DeviceSerialNumber type="TextString" value="serNum123456"/>
          <Password type="TextString" value="secret"/>
          <DeviceIdentifier type="TextString" value="devID2233"/>
          <NetworkIdentifier type="TextString" value="netID9000"/>
          <MachineIdentifier type="TextString" value="machineID1"/>
          <MediaIdentifier type="TextString" value="mediaID313"/>
        </CredentialValue>
      </Credential>
    </Authentication>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 4

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:35+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 4

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <Authentication>
      <Credential>
        <CredentialType type="Enumeration" value="Device"/>
        <CredentialValue>
          <DeviceSerialNumber type="TextString" value="serNum123456"/>
          <Password type="TextString" value="secret"/>
          <DeviceIdentifier type="TextString" value="devID2233"/>
          <NetworkIdentifier type="TextString" value="netID9000"/>
          <MachineIdentifier type="TextString" value="machineID1"/>
          <MediaIdentifier type="TextString" value="mediaID313"/>
        </CredentialValue>
      </Credential>
    </Authentication>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
2.3.22 TC-121-12 - Query, Maximum Response Size

Perform a Query operation, querying the Operations and Objects supported by the server, with a restriction on the Maximum Response Size set in the request header. Since the resulting Query response is too large, an error is returned. Increase the Maximum Response Size, resubmit the Query request, and get a successful response.

Note: the list of object types supported and operations will vary depending on the server implementation. The server can report the Vendor Identification in whatever TextString form the vendor selects. The server may return vendor specific tags in the Server Information structure indicating additional vendor-specific information about the server.
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <MaximumResponseSize type="Integer" value="2048"/>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Query"/>
    <RequestPayload>
      <QueryFunction type="Enumeration" value="QueryOperations"/>
      <QueryFunction type="Enumeration" value="QueryObjects"/>
      <QueryFunction type="Enumeration" value="QueryServerInformation"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 1

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <MaximumResponseSize type="Integer" value="2048"/>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Query"/>
    <RequestPayload>
      <QueryFunction type="Enumeration" value="QueryOperations"/>
      <QueryFunction type="Enumeration" value="QueryObjects"/>
      <QueryFunction type="Enumeration" value="QueryServerInformation"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:35+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Query"/>
    <ResultStatus type="Enumeration" value="OperationFailed"/>
    <ResultReason type="Enumeration" value="ResponseTooLarge"/>
    <ResultMessage type="TextString" value="Response size: 648,
Maximum Response Size indicated in request: 256"/>
  </BatchItem>
</ResponseMessage>

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <MaximumResponseSize type="Integer" value="2048"/>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Query"/>
    <RequestPayload>
      <QueryFunction type="Enumeration" value="QueryOperations"/>
      <QueryFunction type="Enumeration" value="QueryObjects"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:35+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Query"/>
    <ResultStatus type="Enumeration" value="OperationFailed"/>
    <ResultReason type="Enumeration" value="ResponseTooLarge"/>
    <ResultMessage type="TextString" value="Response size: 648,
Maximum Response Size indicated in request: 256"/>
  </BatchItem>
</ResponseMessage>

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <MaximumResponseSize type="Integer" value="2048"/>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Query"/>
    <RequestPayload>
      <QueryFunction type="Enumeration" value="QueryOperations"/>
      <QueryFunction type="Enumeration" value="QueryObjects"/>
      <QueryFunction type="Enumeration" value="QueryServerInformation"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:35+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Query"/>
    <ResultStatus type="Enumeration" value="OperationFailed"/>
    <ResultReason type="Enumeration" value="ResponseTooLarge"/>
    <ResultMessage type="TextString" value="Response size: 648,
Maximum Response Size indicated in request: 256"/>
  </BatchItem>
</ResponseMessage>
<ResultStatus type="Enumeration" value="Success"/>
<OperationPayload>
  <Operation type="Enumeration" value="Query"/>
  <ResultStatus type="Enumeration" value="Query"/>
</OperationPayload>

<Operation type="Enumeration" value="Locate"/>
<Operation type="Enumeration" value="Destroy"/>
<Operation type="Enumeration" value="Get"/>
<Operation type="Enumeration" value="Create"/>
<Operation type="Enumeration" value="Register"/>
<Operation type="Enumeration" value="GetAttributes"/>
<Operation type="Enumeration" value="GetAttributeList"/>
<Operation type="Enumeration" value="AddAttribute"/>
<Operation type="Enumeration" value="ModifyAttribute"/>
<Operation type="Enumeration" value="DeleteAttribute"/>
<Operation type="Enumeration" value="Activate"/>
<Operation type="Enumeration" value="Revoke"/>
<Operation type="Enumeration" value="Poll"/>
<Operation type="Enumeration" value="Cancel"/>
<Operation type="Enumeration" value="Check"/>
<Operation type="Enumeration" value="GetUsageAllocation"/>
<Operation type="Enumeration" value="CreateKeyPair"/>
<Operation type="Enumeration" value="ReKey"/>
<Operation type="Enumeration" value="Archive"/>
<Operation type="Enumeration" value="Recover"/>
<Operation type="Enumeration" value="ObtainLease"/>
<Operation type="Enumeration" value="ReKeyKeyPair"/>
<Operation type="Enumeration" value="Certify"/>
<Operation type="Enumeration" value="ReCertify"/>
<Operation type="Enumeration" value="DiscoverVersions"/>
<Operation type="Enumeration" value="Notify"/>
<Operation type="Enumeration" value="Put"/>
<Operation type="Enumeration" value="RNGRetrieve"/>
<Operation type="Enumeration" value="RNGSeed"/>
<Operation type="Enumeration" value="Encrypt"/>
<Operation type="Enumeration" value="Decrypt"/>
<Operation type="Enumeration" value="Sign"/>
<Operation type="Enumeration" value="SignatureVerify"/>
<Operation type="Enumeration" value="MAC"/>
<Operation type="Enumeration" value="MACVerify"/>
<Operation type="Enumeration" value="Hash"/>
<Operation type="Enumeration" value="CreateSplitKey"/>
<Operation type="Enumeration" value="JoinSplitKey"/>
<Operation type="Enumeration" value="Certificate"/>
<Operation type="Enumeration" value="SymmetricKey"/>
<Operation type="Enumeration" value="SecretData"/>
<Operation type="Enumeration" value="Publickey"/>
<Operation type="Enumeration" value="PrivateKey"/>
<Operation type="Enumeration" value="Template"/>
<Operation type="Enumeration" value="OpaqueObject"/>
<Operation type="Enumeration" value="SplitKey"/>
<Operation type="Enumeration" value="PGPKey"/>
<VendorIdentification type="TextString" value="SOME-VENDOR-NAME"/>
</ServerInformation>
</ResponsePayload>
</BatchItem>
### 2.3.23 TC-122-12 - Query Vendor Extensions

Query the server for a list and map of vendor extension tags it recognizes.

Note: Extension Type is an Integer as there is no corresponding enumerated type for the Item Type field.

```
# TIME 0
0001 <RequestMessage>
0002  <RequestHeader>
0003   <ProtocolVersion>
0004    <ProtocolVersionMajor type="Integer" value="1"/>
0005    <ProtocolVersionMinor type="Integer" value="2"/>
0006  </ProtocolVersion>
0007   <BatchCount type="Integer" value="1"/>
0008  </RequestHeader>
0009  <BatchItem>
0010   <Operation type="Enumeration" value="Query"/>
0011  </Operation>
0012   <RequestPayload>
0013    <QueryFunction type="Enumeration" value="QueryExtensionList"/>
0014  </RequestPayload>
0015 </BatchItem>
0016 </RequestMessage>

# TIME 1
0017 <ResponseMessage>
0018  <ResponseHeader>
0019   <ProtocolVersion>
0020    <ProtocolVersionMajor type="Integer" value="1"/>
0021    <ProtocolVersionMinor type="Integer" value="2"/>
0022  </ProtocolVersion>
0023   <TimeStamp type="DateTime" value="2012-04-27T08:14:35+00:00"/>
0024  </ResponseHeader>
0025  <BatchItem>
0026   <Operation type="Enumeration" value="Query"/>
0027   <ResultStatus type="Enumeration" value="Success"/>
0028  </ResponsePayload>
0029  <ExtensionInformation>
0030   <ExtensionName type="TextString" value="ACME LOCATION"/>
0031 </ExtensionInformation>
0032  <ExtensionInformation>
0033   <ExtensionName type="TextString" value="ACME ZIP CODE"/>
0034 </ExtensionInformation>
0035 </ResponsePayload>
0036 </BatchItem>
0037 </ResponseMessage>
```
2.3.24 TC-131-12 - Register an Asymmetric Key Pair in PKCS1 Format

Register a private key in the PKCS_1 key format, then register the corresponding public key, also in PKCS_1 format, with the Link attribute pointing to the previously registered private key.

Thereafter add the Link attribute to the private key, and perform Locate operations to find the public and private keys using the Link attribute. Get both the private and public keys in PKCS_1 key format, then destroy both the private and the public key.
<BatchItem>
  <Operation type="Enumeration" value="Register"/>
  <RequestPayload>
    <ObjectType type="Enumeration" value="PrivateKey"/>
    <TemplateAttribute>
      <Attribute>
        <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
        <AttributeValue type="Integer" value="Sign"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="x-ID"/>
        <AttributeValue type="TextString" value="TC-131-12-prikey1"/>
      </Attribute>
    </TemplateAttribute>
    <PrivateKey>
      <KeyBlock>
        <KeyFormatType type="Enumeration" value="PKCS_1"/>
        <KeyValue>
          <KeyMaterial type="ByteString" value="308204a5020100a282010001028201003b12455d53c1816156c18493f6398afa7b217dafa894db88a7d48c0a4f7f62579a4e64f86d8a711efec850cd9dbdb17f69a4432dec1dd603dc648f2a74dcf5dafab62aa26eb0a3adb4def6480f2b1218cd3b083e252e885bf670f29f98b1424d2db7aeb3e11d73333bc41ff75b15ee3d7569b4995eda14245da43197bb260be8fe17c37542a5c6d5b489f87209567f3925aa7b01ed564859717bc57cfbc54220a149c9e816e5be3083913236ec9efff140858045b73c5d79baf387f6c7f045c0dfcc3806ad982d1259058c3473e847179a878ff2c6b3bd966fb99ea4e6918592f3676e78965c2aed8477ba3917df07c5e9274747f19e764ba161dc83d63b2f92084b05d6c98cc3cdc246447a973913daf9b1fcb799ff9f6423ecd3c3ba794286bce9204f5c183f99e9282db4212c62777c48297fcfbc7fc72ca44c51f7c182bf84f019bf1d6596974c5cb65f5af92051341760cd00735729a709a5e5d342be8af47ee8ed23a0bab04ec4a00d4fd4e1e35116fc221e85b4a3a696ce6419b1b0281800cd5ea7572809780a6b63754cbbf09356ad80bc3d59282e2b47610b996aa6ac2e222ae64385495c7a4ed659368c804189d34399f5b1a920e34ef38a7d09f069593396e8f73e6f0a6e499040104da8a06bf8d6a1162e4f595a3eaa5c10120662e4f4f15f335ac971e1762b2b9c98510997414b14d37e1303e8198950a52081800d287137bf9afad38c3316ab7877a6a86063e54a21786d4318d27c19ac0a415458033942e9ff6e2973b7bbd28b0e94adlee82158108f8c8665417a5a467fb963014b5ddcc24b4f9823039d11920db2e2f9f16b48d9e23225cd455adabf32ef43185864a36d6309d685f7714b39aeebe3e93f87c2707e178c739ff9f028818009690b61d4e2a6d986d59231ee2771d4f960d2baf178517e20229881fd9d23227d0f8479eafea922f7d56b1db1a561fa66b08040ca0bdce650b23b917a4bb1bb7983a74fad700e1c305c3ecb2ff81a857a6190d26e4f108451f8234ddc3fe7707b9520215bd5433b6a4117778754676a347116667f926e79c149c5a10281800ca0858a0aa7a91a659ff9731134c44f737be2e50a2e2a35800ad2724ed360dfe8e6ca614f12074f9d0b876aacd13cc056a0699ef2f98a1cc19011294d712084f4aba3b3ba87aa0517f415aca8d6bac060888a6f0a143d49417e1f0c9b23affa4d496618dbc024986ed90bb7b025768ff9df8ac15146f489f812932341a844f"/>
"
| 0028 | </KeyValue> |
| 0029 | <CryptographicAlgorithm type="Enumeration" value="RSA"/> |
| 0030 | <CryptographicLength type="Integer" value="2048"/> |
| 0031 | </KeyBlock> |
| 0032 | </PrivateKey> |
| 0033 | </RequestPayload> |
| 0034 | </BatchItem> |
| 0035 | </RequestMessage> |
| 0036 | <ResponseMessage> |
| 0037 | <ResponseHeader> |
| 0038 | <ProtocolVersion> |
| 0039 | <ProtocolVersionMajor type="Integer" value="1"/> |
| 0040 | <ProtocolVersionMinor type="Integer" value="2"/> |
| 0041 | </ProtocolVersion> |
| 0042 | <TimeStamp type="DateTime" value="2012-04-27T08:14:36+00:00"/> |
| 0043 | <BatchCount type="Integer" value="1"/> |
| 0044 | </ResponseHeader> |
| 0045 | <BatchItem> |
| 0046 | <Operation type="Enumeration" value="Register"/> |
| 0047 | <ResultStatus type="Enumeration" value="Success"/> |
| 0048 | </ResponsePayload> |
| 0049 | <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/> |
| 0050 | </ResponsePayload> |
| 0051 | </BatchItem> |
| 0052 | </ResponseMessage> |

```
# TIME 1

<RequestMessage> |
| 0054 | <RequestHeader> |
| 0055 | <ProtocolVersion> |
| 0056 | <ProtocolVersionMajor type="Integer" value="1"/> |
| 0057 | <ProtocolVersionMinor type="Integer" value="2"/> |
| 0058 | </ProtocolVersion> |
| 0059 | <BatchCount type="Integer" value="1"/> |
| 0060 | </RequestHeader> |
| 0061 | <BatchItem> |
| 0062 | <Operation type="Enumeration" value="Register"/> |
| 0063 | </RequestPayload> |
| 0064 | <ObjectType type="Enumeration" value="PublicKey"/> |
| 0065 | <TemplateAttribute> |
| 0066 | <Attribute> |
| 0067 | <AttributeName type="TextString" value="Cryptographic Usage Mask"/> |
| 0068 | <AttributeValue type="Integer" value="Verify"/> |
| 0069 | </Attribute> |
| 0070 | <Attribute> |
| 0071 | <AttributeName type="TextString" value="Link"/> |
| 0072 | <AttributeValue> |
| 0073 | <LinkType type="Enumeration" value="PrivateKeyLink"/> |
| 0074 | <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/> |
| 0075 | </AttributeValue> |
| 0076 | </Attribute> |
| 0077 | <Attribute> |
| 0078 | <AttributeName type="TextString" value="x-ID"/> |
| 0079 | <AttributeValue type="TextString" value="TC-131-12-pubkey1"/> |
```
This is a Non-Standards Track Work Product.

The patent provisions of the OASIS IPR Policy do not apply.
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
<AttributeName type="TextString" value="Link"/>
<AttributeValue>
  <LinkType type="Enumeration" value="PublicKeyLink"/>
  <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
</AttributeValue>
</Attribute>
```

```
<Operation type="Enumeration" value="AddAttribute"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  <Attribute>
    <AttributeName type="TextString" value="Link"/>
    <AttributeValue>
      <LinkType type="Enumeration" value="PublicKeyLink"/>
      <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </AttributeValue>
  </Attribute>
</ResponsePayload>
</BatchItem>
</ResponseMessage>
```

```
<Operation type="Enumeration" value="Locate"/>
<RequestPayload>
  <Attribute>
    <AttributeName type="TextString" value="Object Type"/>
    <AttributeValue type="Enumeration" value="PublicKey"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Link"/>
    <AttributeValue>
      <LinkType type="Enumeration" value="PrivateKeyLink"/>
      <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </AttributeValue>
  </Attribute>
</RequestPayload>
</BatchItem>
</RequestMessage>
```

```
<Operation type="Enumeration" value="Locate"/>
<RequestPayload>
  <Attribute>
    <AttributeName type="TextString" value="Object Type"/>
    <AttributeValue type="Enumeration" value="PublicKey"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Link"/>
    <AttributeValue>
      <LinkType type="Enumeration" value="PrivateKeyLink"/>
      <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </AttributeValue>
  </Attribute>
</RequestPayload>
```
<table>
<thead>
<tr>
<th>Line</th>
<th>XML Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>0178</td>
<td><code>&lt;AttributeValue&gt;</code></td>
</tr>
<tr>
<td>0179</td>
<td><code>&lt;/AttributeValue&gt;</code></td>
</tr>
<tr>
<td>0180</td>
<td><code>&lt;/Attribute&gt;</code></td>
</tr>
<tr>
<td>0181</td>
<td><code>&lt;/RequestPayload&gt;</code></td>
</tr>
<tr>
<td>0182</td>
<td><code>&lt;/BatchItem&gt;</code></td>
</tr>
<tr>
<td>0183</td>
<td><code>&lt;/RequestMessage&gt;</code></td>
</tr>
<tr>
<td>0184</td>
<td><code>&lt;/ResponseMessage&gt;</code></td>
</tr>
<tr>
<td>0185</td>
<td><code>&lt;ResponseHeader&gt;</code></td>
</tr>
<tr>
<td>0186</td>
<td><code>&lt;ProtocolVersion&gt;</code></td>
</tr>
<tr>
<td>0187</td>
<td><code>&lt;ProtocolVersionMajor type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</code></td>
</tr>
<tr>
<td>0188</td>
<td><code>&lt;ProtocolVersionMinor type=&quot;Integer&quot; value=&quot;2&quot;/&gt;</code></td>
</tr>
<tr>
<td>0189</td>
<td><code>&lt;/ProtocolVersion&gt;</code></td>
</tr>
<tr>
<td>0190</td>
<td><code>&lt;TimeStamp type=&quot;DateTime&quot; value=&quot;2012-04-27T08:14:36+00:00&quot;/&gt;</code></td>
</tr>
<tr>
<td>0191</td>
<td><code>&lt;/ResponseHeader&gt;</code></td>
</tr>
<tr>
<td>0192</td>
<td><code>&lt;/BatchItem&gt;</code></td>
</tr>
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This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
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This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
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| 0344   | </RequestMessage>                                                      |
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This is a Non-Standards Track Work Product.

The patent provisions of the OASIS IPR Policy do not apply.

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# TIME 8

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```
2.3.25 TC-132-12 - Register an Asymmetric Key Pair and a Corresponding X509 Certificate

Register a public/private key pair in the PKCS_1 key format and a corresponding X509 certificate.

Add the appropriate links between the registered objects. Make sure the certificate was registered and the attributes set correctly by listing and retrieving the attributes. Get the keys and certificate, and finally destroy all the registered objects.

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0016                 </TemplateName>
0017            </TemplateAttribute>
0018            <PublicKey>
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0023                </KeyMaterial>
0024                    </KeyValue>
0025                    <CryptographicAlgorithm type="Enumeration" value="RSA"/>
0026                    <CryptographicLength type="Integer" value="2048"/>
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0028            </PublicKey>
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0030     </BatchItem>
0031 </RequestMessage>
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# TIME 1

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        <Attribute>
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This is a Non-Standards Track Work Product.

The patent provisions of the OASIS IPR Policy do not apply.
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</RequestMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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      <AttributeName type="TextString" value="X.509 Certificate Issuer"/>
      <AttributeName type="TextString" value="X.509 Certificate Subject"/>
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      <AttributeName type="TextString" value="Certificate Issuer"/>
      <AttributeName type="TextString" value="Certificate Type"/>
      <AttributeName type="TextString" value="Certificate Subject"/>
      <AttributeName type="TextString" value="Certificate Identifier"/>
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      <AttributeName type="TextString" value="Digest"/>
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# TIME 5

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# TIME 6

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0444       </KeyBlock>
0445     </PublicKey>
0446   </ResponsePayload>
0447 </ResponseHeader>
0448   </BatchItem>
0449   </ResponseMessage>
```

This is a Non-Standards Track Work Product.

The patent provisions of the OASIS IPR Policy do not apply.
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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<th>11 November 2014</th>
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<td>Non-Standards Track</td>
<td>Copyright © OASIS Open 2014. All Rights Reserved.</td>
</tr>
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</table>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
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# TIME 11

# TIME 11

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  </BatchItem>
</ResponseMessage>
2.3.26 TC-133-12 - Create, Re-key Key Pair

Create a public/private key pair on the server and retrieve the keys in PKCS_1 format. Re-key the key pair and retrieve the new public/private key pair in transparent format. To verify that the links are set correctly, the Link attributes are retrieved. Finally, all the keys are destroyed.

Note: a server is not required to support conversion between key formats so returning keys in Transparent form when registered in PKCS_1 may not be supported.
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# TIME 1

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        </KeyBlock>
      </PublicKey>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
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# TIME 3

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      <PublicKeyUniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
    </RequestPayload>
  </BatchItem>
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# TIME 4

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0208 | <NameType type="Enumeration" value="UninterpretedTextString"/>
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0211 | <Attribute>
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0222 | </RequestPayload>
0223 | </BatchItem>
0224 | </ResponseMessage>
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0226 | <ResponseHeader>
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0228 |  
0229 |  
0230 |  
0231 | </ResponseHeader>
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0233 | <Operation type="Enumeration" value="Locate"/>
0234 | <UniqueBatchItemID type="ByteString" value="f409f9adc43f836f"/>
0235 | <ResultStatus type="Enumeration" value="Success"/>
0236 | <ResponsePayload>
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      value="0000000000010001"/
    </PublicExponent>
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    </PrimeExponentP>
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    </PrimeExponentQ>
    <CRTCoefficient type="BigInteger">
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    </CRTCoefficient>
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      value="RSA"/>
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# TIME 6

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This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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# TIME 7

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# TIME 9

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      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:41+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <ResultStatus type="Enumeration" value="Success"/>
  </BatchItem>
</ResponseMessage>
```
0568    </BatchItem>
0569  </ResponseMessage>

# TIME 11
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0585  <ResponseMessage>
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0596    <ResponseStatus type="Enumeration" value="Success"/>
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# TIME 12
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0608    <BatchCount type="Integer" value="1"/>  
0609   </RequestHeader>
0610   <BatchItem>
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0612    <RequestPayload>
0613     <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
0614    </RequestPayload>
0615   </BatchItem>
0616  </RequestMessage>

0617  <ResponseMessage>
0618   <ResponseHeader>
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
0619  <ProtocolVersion>
0620  <ProtocolVersionMajor type="Integer" value="1"/>
0621  <ProtocolVersionMinor type="Integer" value="2"/>
0622  </ProtocolVersion>
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0624  <BatchCount type="Integer" value="1"/>
0625  </ResponseHeader>
0626  <BatchItem>
0627    <Operation type="Enumeration" value="Destroy"/>
0628    <ResultStatus type="Enumeration" value="Success"/>
0629    <ResponsePayload>
0630      <UniqueIdentifier type="TextString"
0631        value="$UNIQUE_IDENTIFIER_2"/>
0632      </ResponsePayload>
0633      </BatchItem>
0634  </ResponseMessage>
```

```
0649  <ResponseMessage>
0650  <ResponseHeader>
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0653    <ProtocolVersionMinor type="Integer" value="2"/>
0654  </ProtocolVersion>
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0656  <BatchCount type="Integer" value="1"/>
0657  </ResponseHeader>
0658  <BatchItem>
0659    <Operation type="Enumeration" value="Destroy"/>
0660    <ResultStatus type="Enumeration" value="Success"/>
0661    <ResponsePayload>
0662      <UniqueIdentifier type="TextString"
0663        value="$UNIQUE_IDENTIFIER_3"/>
0664      </ResponsePayload>
0665    </BatchItem>
0666  </ResponseMessage>
```
2.3.27 TC-134-12 - Register Key Pair, Certify and Re-certify Public Key

Register a public/private key pair on the server. Request the server to have a certificate created using the Certify operation. Retrieve the certificate and its attributes, then execute the Re-certify operation to re-certify the public key. Finally, destroy all the objects.

The new KMIP 1.1 certificate DN attributes are retrieved as are the original (deprecated) KMIP 1.0 certificate DN attributes.

```xml
# TIME 0
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0002    <RequestHeader>
0003      <ProtocolVersion>
0004          <ProtocolVersionMajor type="Integer" value="1"/>
0005          <ProtocolVersionMinor type="Integer" value="2"/>
0006      </ProtocolVersion>
0007      <BatchCount type="Integer" value="1"/>
0008    </RequestHeader>
0009    <BatchItem>
0010      <Operation type="Enumeration" value="Register"/></Operation>
0011      <RequestPayload>
0012        <ObjectType type="Enumeration" value="PublicKey"/>
0013        <TemplateAttribute>
0014          <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
0015            <AttributeValue type="Integer" value="Verify"/>
0016          </AttributeName>
0017          <AttributeName type="TextString" value="x-ID"/>
0018            <AttributeValue type="TextString" value="TC-134-12-pubkey1"/>
0019          </AttributeName>
0020        </TemplateAttribute>
0021      </RequestPayload>
0022    </BatchItem>
```

```
```

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Page 688 of 880
<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:41+00:00"/>
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  </ResponseHeader>
  <BatchItem>
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    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
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    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 1

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    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
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    <RequestPayload>
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      <TemplateAttribute>
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          <AttributeValue type="Integer" value="Sign"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Link"/>
          <AttributeValue>
            <LinkType type="Enumeration" value="PublicKeyLink"/>
            <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
          </AttributeValue>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="x-ID"/>
          <AttributeValue type="TextString" value="TC-134-12-prikey1"/>
        </Attribute>
      </TemplateAttribute>
      <PrivateKey>
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          <KeyFormatType type="Enumeration" value="PKCS_1"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="308204a5020100028201000100020100ab7f161c0042496ccd6c6d4dadb9199734353"/>
          </KeyValue>
        </KeyBlock>
      </PrivateKey>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
Example Kmip Test Cases - V1.2 - CN01

11 November 2014

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</BatchItem>
</RequestMessage>

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    </ResponseHeader>
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        </CertificateRequest>
      </ResponsePayload>
    </BatchItem>
  </ResponseMessage>

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# TIME 5

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</ResponseHeader>

<BatchItem>
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</BatchItem>
</ResponseMessage>
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            <ProtocolVersionMinor type="Integer" value="2"/>
        </ProtocolVersion>
        <BatchCount type="Integer" value="1"/>
    </RequestHeader>
    <BatchItem>
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        <RequestPayload>
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# TIME 5

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            <AttributeName type="TextString" value="Object Type"/>
            <AttributeName type="TextString" value="Certificate Type"/>
            <AttributeName type="TextString" value="Certificate Identifier"/>
            <AttributeName type="TextString" value="Certificate Issuer"/>
            <AttributeName type="TextString" value="Certificate Length"/>
            <AttributeName type="TextString" value="Certificate Subject"/>
        </ResponsePayload>
    </BatchItem>
</RequestMessage>
This is a Non-Standards Track Work Product.

The patent provisions of the OASIS IPR Policy do not apply.
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
<AttributeName type="TextString" value="Certificate Length"/>
<AttributeValue type="Integer" value="635"/>
</Attribute>
<AttributeName type="TextString" value="X.509 Certificate Identifier"/>
<AttributeValue>
  <IssuerDistinguishedName type="ByteString" value="303b310b3009060355040613025553310d300b060355040a130454455354310e300c060355040b13054f41543953311d300b06035504031304b4d4950"/>
</AttributeValue>
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<AttributeValue>
  <IssuerDistinguishedName type="ByteString" value="303b310b3009060355040613025553310d300b060355040a130454455354310e300c060355040b13054f41543953311d300b06035504031304b4d4950"/>
</AttributeValue>
<AttributeName type="TextString" value="X.509 Certificate Subject"/>
<AttributeValue>
  <SubjectDistinguishedName type="ByteString" value="303c310b3009060355040613025553310d300b060355040a130454455354310d300b060355040b1304b4d4950310f300d06035504031306436c69656e7430820122300d06092a864886f70d010105000382010a0282010100ab7f161c0042496ccd6d4dadb9199734353577776003acf54b7af1e440af8b80b64a8755f8002cfeba6b184540a2d66086d74648346d75b8d71812b20"
```

# TIME 7
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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0443  <ProtocolVersionMinor type="Integer" value="2"/>
0444  </ProtocolVersion>
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0453  </BatchItem>
0454  </RequestMessage>
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# TIME 9

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0483  <ProtocolVersionMinor type="Integer" value="2"/>
0484  </ProtocolVersion>
0485  <BatchCount type="Integer" value="1"/>
0486  </RequestHeader>
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<ResponseMessage>
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This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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<RequestHeader>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
<BatchCount type="Integer" value="1"/>
<Operation type="Enumeration" value="GetAttributes"/>
<AttributeName type="TextString" value="Link"/>
<AttributeName type="TextString" value="CertificateIdentifier"/>
<AttributeName type="TextString" value="Name"/>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
<RequestPayload>
<Attribute>
<AttributeName type="TextString" value="Link"/>
<AttributeValue>
<LinkType type="Enumeration" value="PublickeyLink"/>
<LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</AttributeValue>
</Attribute>
<Attribute>
<AttributeName type="TextString" value="Link"/>
<AttributeIndex type="Integer" value="1"/>
<AttributeValue>
<LinkType type="Enumeration" value="ReplacementObjectLink"/>
<LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
</AttributeValue>
</Attribute>
</RequestPayload>
<RequestItem>
<RequestMessage>
<ProtocolVersion>
<BatchCount type="Integer" value="1"/>
<Operation type="Enumeration" value="GetAttributes"/>
<RequestPayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
<AttributeName type="TextString" value="Link"/>
<AttributeName type="TextString" value="CertificateIdentifier"/>
<AttributeName type="TextString" value="Name"/>
<RequestPayload>
<Attribute>
<AttributeName type="TextString" value="Link"/>
<AttributeValue>
<LinkType type="Enumeration" value="PublickeyLink"/>
<LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</AttributeValue>
</Attribute>
<Attribute>
<AttributeName type="TextString" value="Link"/>
<AttributeIndex type="Integer" value="1"/>
<AttributeValue>
<LinkType type="Enumeration" value="ReplacementObjectLink"/>
<LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
</AttributeValue>
</Attribute>
</RequestPayload>
<RequestItem>
<RequestMessage>
<ProtocolVersion>
<BatchCount type="Integer" value="1"/>
<Operation type="Enumeration" value="GetAttributes"/>
<RequestPayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
<AttributeName type="TextString" value="Link"/>
<AttributeName type="TextString" value="CertificateIdentifier"/>
<AttributeName type="TextString" value="Name"/>
<RequestPayload>
<Attribute>
<AttributeName type="TextString" value="Link"/>
<AttributeValue>
<LinkType type="Enumeration" value="PublickeyLink"/>
<LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</AttributeValue>
</Attribute>
<Attribute>
<AttributeName type="TextString" value="Link"/>
<AttributeIndex type="Integer" value="1"/>
<AttributeValue>
<LinkType type="Enumeration" value="ReplacementObjectLink"/>
<LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
</AttributeValue>
</Attribute>
</RequestPayload>
<RequestItem>
```

This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```xml
<ProtocolVersionMinor type="Integer" value="2"/>
<ProtocolVersion/>
<TimeStamptype="DateTime" value="2013-06-18T08:55:57+00:00"/>
<BatchCount type="Integer" value="1"/>
<ResponseHeader>
<BatchItem>
<Operation type="Enumeration" value="GetAttributes"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
<Attribute>
<AttributeName type="TextString" value="Link"/>
<AttributeValue>
<LinkType type="Enumeration" value="PublicKeyLink"/>
<LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</AttributeValue>
</Attribute>
<Attribute>
<AttributeName type="TextString" value="Link"/>
<AttributeIndex type="Integer" value="1"/>
<AttributeValue>
<LinkType type="Enumeration" value="ReplacedObjectLink"/>
<LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
</AttributeValue>
</Attribute>
<Attribute>
<AttributeName type="TextString" value="Certificate Identifier"/>
<AttributeValue>
<Issuer type="TextString" value="CN=KMIP,OU=OASIS,O=TEST,C=US"/>
<SerialNumber type="TextString" value="CF77F7A23282BC12"/>
</AttributeValue>
</Attribute>
<Attribute>
<AttributeName type="TextString" value="Name"/>
<AttributeValue>
<NameValue type="TextString" value="TC-134-12-certificate2"/>
>NameType type="Enumeration" value="UninterpretedTextString"/>
</AttributeValue>
</Attribute>
<Attribute>
<AttributeName type="TextString" value="Name"/>
<AttributeIndex type="Integer" value="1"/>
<AttributeValue>
<NameValue type="TextString" value="TC-134-12-certificate1"/>
</AttributeValue>
</Attribute>
</ResponsePayload>
```
<BatchItem>
</ResponseItem>

# TIME 12

| 0645 | </BatchItem> |
| 0646 | </ResponseMessage> |

```xml
# TIME 12
0647 <RequestMessage>
0648 <RequestHeader>
0649 <ProtocolVersion>
0650 <ProtocolVersionMajor type="Integer" value="1"/>
0651 <ProtocolVersionMinor type="Integer" value="2"/>
0652 </ProtocolVersion>
0653 <BatchCount type="Integer" value="1"/>
0654 </RequestHeader>
0655 <BatchItem>
0656 <Operation type="Enumeration" value="Destroy"/>
0657 <RequestPayload>
0658 <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0659 </RequestPayload>
0660 </BatchItem>
0661 </ResponseMessage>

# TIME 13
0662 <ResponseMessage>
0663 <ResponseHeader>
0664 <ProtocolVersion>
0665 <ProtocolVersionMajor type="Integer" value="1"/>
0666 <ProtocolVersionMinor type="Integer" value="2"/>
0667 </ProtocolVersion>
0668 <TimeStamp type="DateTime" value="2012-04-27T08:14:42+00:00"/>
0669 <BatchCount type="Integer" value="1"/>
0670 </ResponseHeader>
0671 <BatchItem>
0672 <Operation type="Enumeration" value="Destroy"/>
0673 <ResultStatus type="Enumeration" value="Success"/>
0674 <ResponsePayload>
0675 <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0676 </ResponsePayload>
0677 </BatchItem>
0678 </ResponseMessage>
```

```xml
<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:14:42+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
<BatchItem>
  <Operation type="Enumeration" value="Destroy"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  </ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 14

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:42+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 15

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
  </RequestHeader>
</RequestMessage>
```

This is a Non-Standards Track Work Product.

The patent provisions of the OASIS IPR Policy do not apply.
2.3.28 TC-141-12 - Key Wrapping using AES Key Wrap and No Encoding

Register a 128-bit AES key encryption key (KEK) with the Cryptographic Usage Mask attribute set to Wrap and the Cryptographic Parameters specifying NIST Key Wrap as the Block Cipher Mode. Subsequently, register another 128-bit AES data key (DEK). Retrieve the data key wrapped using the NIST Key Wrap algorithm and the KEK. The Encoding Option is set to No Encoding, which means that only the key material is wrapped as opposed to the whole TTLV-encoded Key Value structure being wrapped. Finally, destroy both keys to return the server to the initial state. The key material for both the KEK and the DEK are from the test vectors specified in Section 4.6 of [NISTKeyWrap].

```xml
# TIME 0
0001  <RequestMessage>
0002    <RequestHeader>
0003      <ProtocolVersion>
0004          <ProtocolVersionMajor type="Integer" value="1"/>
0005          <ProtocolVersionMinor type="Integer" value="2"/>
0006      </ProtocolVersion>
0007      </RequestHeader>
0008    </RequestMessage>
0009    <ProtocolHeader>
0010      <ProtocolVersion>
0011          <ProtocolVersionMajor type="Integer" value="1"/>
0012          <ProtocolVersionMinor type="Integer" value="2"/>
0013      </ProtocolVersion>
0014      </RequestHeader>
0015      <RequestPayload>
0016          <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
0017      </RequestPayload>
0018      </BatchItem>
0019    </ResponseMessage>
```

This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
<RequestPayload>
  <ObjectType type="Enumeration" value="SymmetricKey"/>
  <TemplateAttribute>
    <Attribute>
      <AttributeName type="TextString" value="Name"/>
      <AttributeValue>
        <NameValue type="TextString" value="TC-141-12-key1"/>
        <NameType type="Enumeration" value="UninterpretedTextString"/>
      </AttributeValue>
    </Attribute>
    <Attribute>
      <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
      <AttributeValue type="Integer" value="WrapKey"/>
    </Attribute>
    <Attribute>
      <AttributeName type="TextString" value="Cryptographic Parameters"/>
      <AttributeValue>
        <BlockCipherMode type="Enumeration" value="NISTKeyWrap"/>
      </AttributeValue>
    </Attribute>
    <Attribute>
      <AttributeName type="TextString" value="Activation Date"/>
      <AttributeValue type="DateTime" value="$NOW-3600"/>
    </Attribute>
  </TemplateAttribute>
  <SymmetricKey>
    <KeyBlock>
      <KeyFormatType type="Enumeration" value="Raw"/>
      <KeyValue>
        <KeyMaterial type="ByteString" value="000102030405060708090a0b0c0d0e0f"/>
      </KeyValue>
      <CryptographicAlgorithm type="Enumeration" value="AES"/>
      <CryptographicLength type="Integer" value="128"/>
    </KeyBlock>
  </SymmetricKey>
</RequestPayload>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:42+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString"/>
value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 1

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <TemplateAttribute>
        <Attribute>
          <AttributeName type="TextString" value="Name"/>
          <AttributeValue>
            <NameValue type="TextString" value="TC-141-12-key2"/>
            <NameType type="Enumeration" value="UninterpretedTextString"/>
          </AttributeValue>
          </AttributeName>
          <Attribute>
            <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
            <AttributeValue type="Integer" value="Decrypt Encrypt"/>
          </Attribute>
          </AttributeName>
        </TemplateAttribute>
        <SymmetricKey>
          <KeyBlock>
            <KeyFormatType type="Enumeration" value="Raw"/>
            <KeyValue>
              <KeyMaterial type="ByteString" value="00112233445566778899aabbccddeeff"/>
            </KeyValue>
            </KeyMaterial>
            <CryptographicAlgorithm type="Enumeration" value="AES"/>
            <CryptographicLength type="Integer" value="128"/>
          </KeyBlock>
        </SymmetricKey>
      </RequestPayload>
    </BatchItem>
  </RequestMessage>
<table>
<thead>
<tr>
<th>Line</th>
<th>XML Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>0115</td>
<td><code>&lt;ResultStatus type=&quot;Enumeration&quot; value=&quot;Success&quot;/&gt;</code></td>
</tr>
<tr>
<td>0116</td>
<td><code>&lt;ResponsePayload&gt;</code></td>
</tr>
<tr>
<td>0117</td>
<td><code>&lt;UniqueIdentifier type=&quot;TextString&quot; value=&quot;$UNIQUE_IDENTIFIER_1&quot;/&gt;</code></td>
</tr>
<tr>
<td>0118</td>
<td><code>&lt;ResponsePayload&gt;</code></td>
</tr>
<tr>
<td>0119</td>
<td><code>&lt;BatchItem&gt;</code></td>
</tr>
<tr>
<td>0120</td>
<td><code>&lt;ResponseMessage&gt;</code></td>
</tr>
<tr>
<td>0121</td>
<td><code>&lt;RequestMessage&gt;</code></td>
</tr>
<tr>
<td>0122</td>
<td><code>&lt;RequestHeader&gt;</code></td>
</tr>
<tr>
<td>0123</td>
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</tr>
<tr>
<td>0124</td>
<td><code>&lt;ProtocolVersionMajor type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</code></td>
</tr>
<tr>
<td>0125</td>
<td><code>&lt;ProtocolVersionMinor type=&quot;Integer&quot; value=&quot;2&quot;/&gt;</code></td>
</tr>
<tr>
<td>0126</td>
<td><code>&lt;ProtocolVersion&gt;</code></td>
</tr>
<tr>
<td>0127</td>
<td><code>&lt;BatchCount type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</code></td>
</tr>
<tr>
<td>0128</td>
<td><code>&lt;RequestHeader&gt;</code></td>
</tr>
<tr>
<td>0129</td>
<td><code>&lt;BatchItem&gt;</code></td>
</tr>
<tr>
<td>0130</td>
<td><code>&lt;Operation type=&quot;Enumeration&quot; value=&quot;Get&quot;/&gt;</code></td>
</tr>
<tr>
<td>0131</td>
<td><code>&lt;RequestPayload&gt;</code></td>
</tr>
<tr>
<td>0132</td>
<td><code>&lt;UniqueIdentifier type=&quot;TextString&quot; value=&quot;$UNIQUE_IDENTIFIER_1&quot;/&gt;</code></td>
</tr>
<tr>
<td>0133</td>
<td><code>&lt;KeyWrappingSpecification&gt;</code></td>
</tr>
<tr>
<td>0134</td>
<td><code>&lt;WrappingMethod type=&quot;Enumeration&quot; value=&quot;Encrypt&quot;/&gt;</code></td>
</tr>
<tr>
<td>0135</td>
<td><code>&lt;EncryptionKeyIdInformation&gt;</code></td>
</tr>
<tr>
<td>0136</td>
<td><code>&lt;UniqueIdentifier type=&quot;TextString&quot; value=&quot;$UNIQUE_IDENTIFIER_0&quot;/&gt;</code></td>
</tr>
<tr>
<td>0137</td>
<td><code>&lt;CryptographicParameters&gt;</code></td>
</tr>
<tr>
<td>0138</td>
<td><code>&lt;BlockCipherMode type=&quot;Enumeration&quot; value=&quot;NISTKeyWrap&quot;/&gt;</code></td>
</tr>
<tr>
<td>0139</td>
<td><code>&lt;CryptographicParameters&gt;</code></td>
</tr>
<tr>
<td>0140</td>
<td><code>&lt;EncryptionKeyIdInformation&gt;</code></td>
</tr>
<tr>
<td>0141</td>
<td><code>&lt;EncodingOption type=&quot;Enumeration&quot; value=&quot;NoEncoding&quot;/&gt;</code></td>
</tr>
<tr>
<td>0142</td>
<td><code>&lt;KeyWrappingSpecification&gt;</code></td>
</tr>
<tr>
<td>0143</td>
<td><code>&lt;RequestPayload&gt;</code></td>
</tr>
<tr>
<td>0144</td>
<td><code>&lt;BatchItem&gt;</code></td>
</tr>
<tr>
<td>0145</td>
<td><code>&lt;RequestMessage&gt;</code></td>
</tr>
<tr>
<td>0146</td>
<td><code>&lt;ResponseMessage&gt;</code></td>
</tr>
<tr>
<td>0147</td>
<td><code>&lt;ResponseHeader&gt;</code></td>
</tr>
<tr>
<td>0148</td>
<td><code>&lt;ProtocolVersion&gt;</code></td>
</tr>
<tr>
<td>0149</td>
<td><code>&lt;ProtocolVersionMajor type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</code></td>
</tr>
<tr>
<td>0150</td>
<td><code>&lt;ProtocolVersionMinor type=&quot;Integer&quot; value=&quot;2&quot;/&gt;</code></td>
</tr>
<tr>
<td>0151</td>
<td><code>&lt;ProtocolVersion&gt;</code></td>
</tr>
<tr>
<td>0152</td>
<td><code>&lt;TimeStamp type=&quot;DateTime&quot; value=&quot;2012-04-27T08:14:42+00:00&quot;/&gt;</code></td>
</tr>
<tr>
<td>0153</td>
<td><code>&lt;BatchCount type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</code></td>
</tr>
<tr>
<td>0154</td>
<td><code>&lt;ResponseHeader&gt;</code></td>
</tr>
<tr>
<td>0155</td>
<td><code>&lt;BatchItem&gt;</code></td>
</tr>
<tr>
<td>0156</td>
<td><code>&lt;Operation type=&quot;Enumeration&quot; value=&quot;Get&quot;/&gt;</code></td>
</tr>
<tr>
<td>0157</td>
<td><code>&lt;ResultStatus type=&quot;Enumeration&quot; value=&quot;Success&quot;/&gt;</code></td>
</tr>
<tr>
<td>0158</td>
<td><code>&lt;ResponsePayload&gt;</code></td>
</tr>
<tr>
<td>0159</td>
<td><code>&lt;ObjectType type=&quot;Enumeration&quot; value=&quot;SymmetricKey&quot;/&gt;</code></td>
</tr>
<tr>
<td>0160</td>
<td><code>&lt;UniqueIdentifier type=&quot;TextString&quot; value=&quot;$UNIQUE_IDENTIFIER_1&quot;/&gt;</code></td>
</tr>
<tr>
<td>0161</td>
<td><code>&lt;SymmetricKey&gt;</code></td>
</tr>
<tr>
<td>0162</td>
<td><code>&lt;KeyBlock&gt;</code></td>
</tr>
<tr>
<td>0163</td>
<td><code>&lt;KeyFormatType type=&quot;Enumeration&quot; value=&quot;Raw&quot;/&gt;</code></td>
</tr>
<tr>
<td>0164</td>
<td><code>&lt;KeyValue type=&quot;ByteString&quot; value=&quot;1fa68b0a8112b447aef34bd8fb5a7b829d3e862371d2cfe5&quot;/&gt;</code></td>
</tr>
</tbody>
</table>
<CryptographicAlgorithm type="Enumeration" value="AES"/>
<CryptographicLength type="Integer" value="128"/>
<KeyWrappingData>
  <WrappingMethod type="Enumeration" value="Encrypt"/>
  <EncryptionKeyInformation>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <CryptographicParameters>
      <BlockCipherMode type="Enumeration" value="NISTKeyWrap"/>
    </CryptographicParameters>
  </EncryptionKeyInformation>
</KeyWrappingData>
<KeyBlock>
  <KeyFormatType type="Enumeration" value="Raw"/>
  <KeyValue>
    <KeyMaterial type="ByteString"/>
  </KeyValue>
</KeyBlock>
</SymmetricKey>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:42+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <SymmetricKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString"/>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```xml
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:42+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Revoke"/>
    <RequestPayload>
      <Value type="TextString" value="011234567899aabbccddeeff"/>
      </Value>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```

# TIME 4

```xml
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```

# TIME 5

```xml
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Revoke"/>
    <RequestPayload>
      <Value type="TextString" value="011234567899aabbccddeeff"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```
2.3.29 TC-142-12 - Key Wrapping using AES Key Wrap with Attributes

Register a 128-bit AES key encryption key (KEK) with the Cryptographic Usage Mask attribute set to Wrap and the Cryptographic Parameters specifying NIST Key Wrap as the Block Cipher Mode. Subsequently, register another 128-bit AES data key (DEK). Retrieve the DEK wrapped using the NIST Key Wrap algorithm and the KEK. The Cryptographic Usage Mask Attribute Name is specified, indicating to the server that this attribute is to be wrapped together with the key material. The Encoding Option field is omitted, which means that the default TTLV-encoding is used. Finally, destroy both keys to return the server to the initial state.

The key material for both the KEK and the DEK are from the test vectors specified in Section 4.6 of [NISTKeyWrap].
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</RequestMessage>

# TIME 1

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <TemplateAttribute>
        <Attribute>
          <AttributeName type="TextString" value="Name"/>
          <AttributeValue>
            <NameValue type="TextString" value="TC-142-12-key2"/>
          </AttributeValue>
        </Attribute>
      </TemplateAttribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
<NameType type="Enumeration" value="UninterpretedTextString"/>
</AttributeValue>
<Attribute>
  <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
  <AttributeValue type="Integer" value="Decrypt Encrypt"/>
</Attribute>
</TemplateAttribute>
<SymmetricKey>
  <KeyBlock>
    <KeyFormatType type="Enumeration" value="Raw"/>
    <KeyValue>
      <KeyMaterial type="ByteString" value="00112233445566778899aabbccddeeff"/>
    </KeyValue>
    <CryptographicAlgorithm type="Enumeration" value="AES"/>
    <CryptographicLength type="Integer" value="128"/>
  </KeyBlock>
</SymmetricKey>
</RequestPayload>
</BatchItem>
</RequestMessage>

# TIME 2

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <KeyWrappingSpecification>
<WrappingMethod type="Enumeration" value="Encrypt"/>
<EncryptionKeyInformation>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</EncryptionKeyInformation>
<CryptographicParameters>
  <BlockCipherMode type="Enumeration" value="NISTKeyWrap"/>
</CryptographicParameters>
</KeyWrappingSpecification>
</KeyWrappingSpecification>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

<BatchItem>
  <Operation type="Enumeration" value="Get"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <ObjectType type="Enumeration" value="SymmetricKey"/>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    <SymmetricKey>
      <KeyBlock>
        <KeyFormatType type="Enumeration" value="Raw"/>
        <KeyValue type="ByteString" value="0dc0f8cb416ebf4422dd85805d3dd80e49c6c75f763dbbe99748de568e4ec
dc05b94b1c1946f3d3e614cebebce184dada0dafa07c93e038c6b95f01bd48a82c7d6b33
152dbf9d415924b9f13f6cb75f762e826e743f74da9b9398ec7695d41"/>
        <CryptographicAlgorithm type="Enumeration" value="AES"/>
        <CryptographicLength type="Integer" value="128"/>
        <KeyWrappingData>
          <WrappingMethod type="Enumeration" value="Encrypt"/>
          <EncryptionKeyInformation>
            <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
          </EncryptionKeyInformation>
        </KeyWrappingData>
      </KeyBlock>
    </SymmetricKey>
  </ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 3
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:43+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <SymmetricKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="00112233445566778899aabbccddeeff"/>
          </KeyValue>
          <CryptographicAlgorithm type="Enumeration" value="AES"/>
          <CryptographicLength type="Integer" value="128"/>
        </KeyBlock>
      </SymmetricKey>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 4

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
  </BatchItem>
</RequestMessage>
<RequestPayload>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
</RequestPayload>
</BatchItem>

</ResponseMessage>

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Revoke"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <RevocationReason>
        <RevocationReasonCode type="Enumeration" value="Unspecified"/>
      </RevocationReason>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:43+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Revoke"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
2.3.30 TC-151-12 - Locate a Fresh Object from the Default Group

Locate a single fresh object from the default object group. Perform a Get Attribute to retrieve the value of the Fresh attribute to make sure that the key is fresh. Get the object (the kind of object returned depends on the server policy), and get the Fresh attribute again to verify that the object is no longer fresh. Finally, destroy the object. This test case illustrates only one possible behavior related to the default group. In this test case, it is assumed that the server has fresh objects available in the default group, or that it creates a new object on-the-fly as a consequence of the Locate request. It is also assumed that no other client retrieves the object.
after the Locate but before the batched Get Attributes request, thereby toggling the value of the Fresh attribute.

```
# TIME 0

0001  <RequestMessage>  <RequestHeader>
0002   <ProtocolVersion>
0003     <ProtocolVersionMajor type="Integer" value="1"/>
0004     <ProtocolVersionMinor type="Integer" value="2"/>
0005     </ProtocolVersion>
0006     <BatchOrderOption type="Boolean" value="true"/>
0007     <BatchCount type="Integer" value="2"/>
0008   </RequestHeader>
0009   <BatchItem>
0010     <Operation type="Enumeration" value="Locate"/>
0011     <UniqueBatchItemID type="ByteString" value="1e766d8a95d6e5d1"/>
0012     <RequestPayload>
0013       <MaximumItems type="Integer" value="1"/>
0014       <ObjectGroupMember type="Enumeration" value="GroupMemberFresh"/>
0015         <Attribute>
0016           <AttributeName type="TextString" value="Object Group"/>
0017           <AttributeValue type="TextString" value="default"/>
0018         </Attribute>
0019     </RequestPayload>
0020   </BatchItem>
0021   <BatchItem>
0022     <Operation type="Enumeration" value="GetAttributes"/>
0023     <UniqueBatchItemID type="ByteString" value="8650f83be5373722"/>
0024     <RequestPayload>
0025       <AttributeName type="TextString" value="Fresh"/>
0026     </RequestPayload>
0027   </BatchItem>
0028 </RequestMessage>

0029  <ResponseMessage>
0030   <ResponseHeader>
0031     <ProtocolVersion>
0032       <ProtocolVersionMajor type="Integer" value="1"/>
0033       <ProtocolVersionMinor type="Integer" value="2"/>
0034     </ProtocolVersion>
0035     <TimeStamp type="DateTime" value="2012-04-27T08:14:43+00:00"/>
0036     <BatchCount type="Integer" value="2"/>
0037   </ResponseHeader>
0038   <BatchItem>
0039     <Operation type="Enumeration" value="Locate"/>
0040     <UniqueBatchItemID type="ByteString" value="1e766d8a95d6e5d1"/>
0041     <ResultStatus type="Enumeration" value="Success"/>
0042     <ResponsePayload>
0043       <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0044     </ResponsePayload>
0045   </BatchItem>
0046   <BatchItem>
0047     <Operation type="Enumeration" value="GetAttributes"/>
0048     <UniqueBatchItemID type="ByteString" value="8650f83be5373722"/>
0049     <ResultStatus type="Enumeration" value="Success"/>
0050   </ResponsePayload>
```
This is a Non-Standards Track Work Product.

The patent provisions of the OASIS IPR Policy do not apply.

<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>

<Attribute>
  <AttributeName type="TextString" value="Fresh"/>
  <AttributeValue type="Boolean" value="true"/>
</Attribute>

# TIME 1

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:43+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <SymmetricKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="7fe09d43486ae14a0021ac19330f8d9226790d680e519f8ac25f42d72f60f0c"/>
          </KeyValue>
          <CryptographicAlgorithm type="Enumeration" value="AES"/>
          <CryptographicLength type="Integer" value="256"/>
        </KeyBlock>
      </SymmetricKey>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
<table>
<thead>
<tr>
<th>TIME 2</th>
<th>Time 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>0102</td>
<td>0139</td>
</tr>
<tr>
<td>0103</td>
<td>0140</td>
</tr>
<tr>
<td>0104</td>
<td>0141</td>
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<td>0105</td>
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<tr>
<td>0115</td>
<td>0152</td>
</tr>
<tr>
<td>0116</td>
<td>0153</td>
</tr>
</tbody>
</table>

```xml
# TIME 2
0102 <RequestMessage>
0103  <RequestHeader>
0104   <ProtocolVersion>
0105     <ProtocolVersionMajor type="Integer" value="1"/>
0106     <ProtocolVersionMinor type="Integer" value="2"/>
0107   </ProtocolVersion>
0108   <BatchCount type="Integer" value="1"/>
0109  </RequestHeader>
0110  <BatchItem>
0111    <Operation type="Enumeration" value="GetAttributes"/>
0112    <RequestPayload>
0113     <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0114     <AttributeName type="TextString" value="Fresh"/>
0115    </RequestPayload>
0116  </BatchItem>
0117 </RequestMessage>

0118 <ResponseMessage>
0119  <ResponseHeader>
0120   <ProtocolVersion>
0121     <ProtocolVersionMajor type="Integer" value="1"/>
0122     <ProtocolVersionMinor type="Integer" value="2"/>
0123   </ProtocolVersion>
0124   <TimeStamp type="DateTime" value="2012-04-27T08:14:43+00:00"/>
0125   <BatchCount type="Integer" value="1"/>
0126  </ResponseHeader>
0127  <BatchItem>
0128    <Operation type="Enumeration" value="GetAttributes"/>
0129    <ResultStatus type="Enumeration" value="Success"/>
0130    <ResponsePayload>
0131     <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0132     <AttributeName type="TextString" value="Fresh"/>
0133     <AttributeValue type="Boolean" value="false"/>
0134    </ResponsePayload>
0135  </BatchItem>
0136 </ResponseMessage>

# TIME 3
0139 <RequestMessage>
0140  <RequestHeader>
0141   <ProtocolVersion>
0142     <ProtocolVersionMajor type="Integer" value="1"/>
0143     <ProtocolVersionMinor type="Integer" value="2"/>
0144   </ProtocolVersion>
0145   <BatchCount type="Integer" value="1"/>
0146  </RequestHeader>
0147  <BatchItem>
0148    <Operation type="Enumeration" value="Destroy"/>
0149    <RequestPayload>
0150     <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0151    </RequestPayload>
0152  </BatchItem>
0153 </RequestMessage>
```
2.3.31 TC-152-12 - Client-side Group Management

Register two symmetric keys, both with the same (non-default) Object Group name specified and the Fresh attribute set to true. Get the Fresh attribute from both keys to make sure it was set. Perform three batched Locate and Get requests to get a fresh key from the group. The first two requests should return both the registered keys, whereas the third request should return no key. To clean up, destroy both keys. This test case assumes that the server supports and sets the Fresh attribute when requested to do so by the client.
Usage Mask"/>
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Usage Mask"/>
<BatchCount type="Integer" value="1"/>
</RequestHeader>

<BatchItem>
  <Operation type="Enumeration" value="Register"/>
  <RequestPayload>
    <ObjectType type="Enumeration" value="SymmetricKey"/>
    <TemplateAttribute>
      <Attribute>
        <AttributeName type="TextString" value="Cryptographic Algorithm"/>
        <AttributeValue type="Enumeration" value="AES"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Cryptographic Length"/>
        <AttributeValue type="Integer" value="256"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
        <AttributeValue type="Integer" value="Decrypt Encrypt"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Object Group"/>
        <AttributeValue type="TextString" value="ClientFreshTest"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Fresh"/>
        <AttributeValue type="Boolean" value="true"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="x-ID"/>
        <AttributeValue type="TextString" value="TC-152-12-key2"/>
      </Attribute>
    </TemplateAttribute>
    <SymmetricKey>
      <KeyBlock>
        <KeyFormatType type="Enumeration" value="Raw"/>
        <KeyValue>
          <KeyMaterial type="ByteString">
            value="00112233445566778899aabbccddeeff000102030405060708090a0b0c0d0e0f"
          </KeyMaterial>
        </KeyValue>
      </KeyBlock>
      <CryptographicAlgorithm type="Enumeration" value="AES"/>
      <CryptographicLength type="Integer" value="256"/>
    </SymmetricKey>
  </RequestPayload>
</BatchItem>
</RequestMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
0126  <TimeStamp type="DateTime" value="2012-04-27T08:14:43+00:00"/>
0127  <BatchCount type="Integer" value="1"/>
0128  </ResponseHeader>
0129  <BatchItem>
0130  <Operation type="Enumeration" value="Register"/>
0131  <ResultStatus type="Enumeration" value="Success"/>
0132  <ResponsePayload>
0133  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0134  </ResponsePayload>
0135  </BatchItem>
0136  </ResponseMessage>

# TIME 2

0137  <RequestMessage>
0138  <RequestHeader>
0139  <ProtocolVersion>
0140  <ProtocolVersionMajor type="Integer" value="1"/>
0141  <ProtocolVersionMinor type="Integer" value="2"/>
0142  </ProtocolVersion>
0143  <BatchCount type="Integer" value="1"/>
0144  </RequestHeader>
0145  <BatchItem>
0146  <Operation type="Enumeration" value="GetAttributes"/>
0147  <RequestPayload>
0148  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0149  <AttributeName type="TextString" value="Fresh"/>
0150  </RequestPayload>
0151  </BatchItem>
0152  </RequestMessage>

0153  <ResponseMessage>
0154  <ResponseHeader>
0155  <ProtocolVersion>
0156  <ProtocolVersionMajor type="Integer" value="1"/>
0157  <ProtocolVersionMinor type="Integer" value="2"/>
0158  </ProtocolVersion>
0159  <TimeStamp type="DateTime" value="2012-04-27T08:14:43+00:00"/>
0160  <BatchCount type="Integer" value="1"/>
0161  </ResponseHeader>
0162  <BatchItem>
0163  <Operation type="Enumeration" value="GetAttributes"/>
0164  <ResultStatus type="Enumeration" value="Success"/>
0165  <ResponsePayload>
0166  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0167  <Attribute>
0168  <AttributeName type="TextString" value="Fresh"/>
0169  <AttributeValue type="Boolean" value="true"/>
0170  </Attribute>
0171  </ResponsePayload>
0172  </BatchItem>
0173  </ResponseMessage>

# TIME 3

0174  <RequestMessage>
0175  <RequestHeader>
0176  <ProtocolVersion>
```
```xml
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>

<BatchCount type="Integer" value="1"/>

<Operation type="Enumeration" value="GetAttributes"/>
<RequestPayload>
  <UniqueIdentifier type="TextString" value="@$UNIQUE_IDENTIFIER_1$"/>
  <AttributeName type="TextString" value="Fresh"/>
</RequestPayload>
</BatchItem>

<BatchItem>
  <Operation type="Enumeration" value="GetAttributes"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="@$UNIQUE_IDENTIFIER_1$"/>
    <Attribute>
      <AttributeName type="TextString" value="Fresh"/>
      <AttributeValue type="Boolean" value="true"/>
    </Attribute>
  </ResponsePayload>
</BatchItem>

<BatchItem>
  <Operation type="Enumeration" value="Locate"/>
  <UniqueBatchItemID type="ByteString" value="294fb5e3e93f8ecc"/>
  <RequestPayload>
    <MaximumItems type="Integer" value="1"/>
    <ObjectGroupMember type="Enumeration" value="GroupMemberFresh"/>
  </RequestPayload>
</BatchItem>

<BatchItem>
  <Operation type="Enumeration" value="Locate"/>
  <UniqueBatchItemID type="ByteString" value="294fb5e3e93f8ecc"/>
  <RequestPayload>
    <MaximumItems type="Integer" value="1"/>
    <ObjectGroupMember type="Enumeration" value="GroupMemberFresh"/>
    <Attribute>
      <AttributeName type="TextString" value="Object Group"/>
      <AttributeValue type="TextString" value="ClientFreshTest"/>
    </Attribute>
  </RequestPayload>
</BatchItem>
```

---

This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
<BatchOrderOption type="Boolean" value="true"/>
<BatchCount type="Integer" value="2"/>
</RequestHeader>
<BatchItem>
<Operation type="Enumeration" value="Locate"/>
<UniqueBatchItemID type="ByteString" value="85e3e21d14d6df1d"/>
<RequestPayload>
<MaximumItems type="Integer" value="1"/>
<ObjectGroupMember type="Enumeration" value="GroupMemberFresh"/>
</RequestPayload>
</BatchItem>
<BatchItem>
<Operation type="Enumeration" value="Get"/>
<UniqueBatchItemID type="ByteString" value="40feae5e1bda875"/>
<RequestPayload>
</RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:14:44+00:00"/>
</ResponseHeader>
</ResponseMessage>

<BatchItem>
<Operation type="Enumeration" value="Locate"/>
<UniqueBatchItemID type="ByteString" value="85e3e21d14d6df1d"/>
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This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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kmip-testcases-v1.2-cn01
Non-Standards Track
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2.3.32 TC-153-12 - Default Object Group Member

This test case exercises the 'default' Object Group Member flag in the Locate request. Three keys are created on the server and put into the same group (the Object Group attribute is set to the same value for all keys). Thereafter, the client performs four batched Locate and Get requests, asking for the default object from the group. This test case assumes that the server policy is such that it serves objects from the group in a round-robin fashion. The pointer to the default object is advanced each time an object is retrieved using a Get request. The first three times Locate and Get is executed, the three keys are returned one after the other. When Locate and Get is executed for the fourth time, the first key is again returned. Finally, all keys are destroyed.

Note: there is no requirement for a server to implement support for any round-robin based allocation; this test case illustrates a server which supports such a policy.
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This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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<td>0238</td>
<td>&lt;UniqueBatchItemID type=&quot;ByteString&quot; value=&quot;0303428f37f17b8d&quot;/&gt;</td>
</tr>
<tr>
<td>0239</td>
<td>&lt;ResultStatus type=&quot;Enumeration&quot; value=&quot;Success&quot;/&gt;</td>
</tr>
<tr>
<td>0240</td>
<td>&lt;ResponsePayload&gt;</td>
</tr>
<tr>
<td>0241</td>
<td>&lt;UniqueIdentifier type=&quot;TextString&quot; value=&quot;$UNIQUE_IDENTIFIER_1&quot;/&gt;</td>
</tr>
<tr>
<td>0242</td>
<td>&lt;/ResponsePayload&gt;</td>
</tr>
<tr>
<td>0243</td>
<td>&lt;/BatchItem&gt;</td>
</tr>
<tr>
<td>0244</td>
<td>&lt;BatchItem&gt;</td>
</tr>
<tr>
<td>0245</td>
<td>&lt;Operation type=&quot;Enumeration&quot; value=&quot;Get&quot;/&gt;</td>
</tr>
<tr>
<td>0246</td>
<td>&lt;UniqueBatchItemID type=&quot;ByteString&quot; value=&quot;dae46b60d9b6459b&quot;/&gt;</td>
</tr>
<tr>
<td>0247</td>
<td>&lt;ResultStatus type=&quot;Enumeration&quot; value=&quot;Success&quot;/&gt;</td>
</tr>
<tr>
<td>0248</td>
<td>&lt;ResponsePayload&gt;</td>
</tr>
<tr>
<td>0249</td>
<td>&lt;ObjectType type=&quot;Enumeration&quot; value=&quot;SymmetricKey&quot;/&gt;</td>
</tr>
<tr>
<td>0250</td>
<td>&lt;UniqueIdentifier type=&quot;TextString&quot; value=&quot;$UNIQUE_IDENTIFIER_1&quot;/&gt;</td>
</tr>
<tr>
<td>0251</td>
<td>&lt;SymmetricKey&gt;</td>
</tr>
<tr>
<td>0252</td>
<td>&lt;KeyBlock&gt;</td>
</tr>
<tr>
<td>0253</td>
<td>&lt;KeyFormatType type=&quot;Enumeration&quot; value=&quot;Raw&quot;/&gt;</td>
</tr>
<tr>
<td>0254</td>
<td>&lt;KeyValue&gt;</td>
</tr>
<tr>
<td>0255</td>
<td>&lt;KeyMaterial type=&quot;ByteString&quot; value=&quot;430bfb0cbc273e15326e3a23965f7704a13af37a642c37026c9a59694c83b7a3&quot;/&gt;</td>
</tr>
<tr>
<td>0256</td>
<td>&lt;/KeyValue&gt;</td>
</tr>
<tr>
<td>0257</td>
<td>&lt;CryptographicAlgorithm type=&quot;Enumeration&quot; value=&quot;AES&quot;/&gt;</td>
</tr>
<tr>
<td>0258</td>
<td>&lt;CryptographicLength type=&quot;Integer&quot; value=&quot;256&quot;/&gt;</td>
</tr>
<tr>
<td>0259</td>
<td>&lt;/KeyBlock&gt;</td>
</tr>
<tr>
<td>0260</td>
<td>&lt;/SymmetricKey&gt;</td>
</tr>
<tr>
<td>0261</td>
<td>&lt;/ResponsePayload&gt;</td>
</tr>
<tr>
<td>0262</td>
<td>&lt;/BatchItem&gt;</td>
</tr>
<tr>
<td>0263</td>
<td>&lt;/ResponseMessage&gt;</td>
</tr>
</tbody>
</table>

# TIME 3

<table>
<thead>
<tr>
<th>Line</th>
<th>XML Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>0264</td>
<td>&lt;RequestMessage&gt;</td>
</tr>
<tr>
<td>0265</td>
<td>&lt;RequestHeader&gt;</td>
</tr>
<tr>
<td>0266</td>
<td>&lt;ProtocolVersion&gt;</td>
</tr>
<tr>
<td>0267</td>
<td>&lt;ProtocolVersionMajor type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</td>
</tr>
<tr>
<td>0268</td>
<td>&lt;ProtocolVersionMinor type=&quot;Integer&quot; value=&quot;2&quot;/&gt;</td>
</tr>
<tr>
<td>0269</td>
<td>&lt;/ProtocolVersion&gt;</td>
</tr>
<tr>
<td>0270</td>
<td>&lt;BatchOrderOption type=&quot;Boolean&quot; value=&quot;true&quot;/&gt;</td>
</tr>
<tr>
<td>0271</td>
<td>&lt;BatchCount type=&quot;Integer&quot; value=&quot;2&quot;/&gt;</td>
</tr>
<tr>
<td>0272</td>
<td>&lt;/RequestHeader&gt;</td>
</tr>
<tr>
<td>0273</td>
<td>&lt;/BatchItem&gt;</td>
</tr>
</tbody>
</table>
<.operation type="Enumeration" value="Locate" />
<uniquebatchitemid type="ByteString" value="863c27d7a0d3da5e" />
<requestpayload>
</requestitem>
</batchitem>
<batchitem>
<operation type="Enumeration" value="Get" />
<uniquebatchitemid type="ByteString" value="c4617b3205e96fb2" />
<requestpayload>
</requestitem>
</batchitem>
</requestmessage>

<responsetmessage>
<responsetheader>
<protocolversion>
<protocolversionmajor type="Integer" value="1" />
<protocolversionminor type="Integer" value="2" />
</protocolversion>
<timestamp type="DateTime" value="2012-04-27T08:14:44+00:00" />
<batchcount type="Integer" value="2" />
</responsetheader>
<batchitem>
<operation type="Enumeration" value="Locate" />
<uniquebatchitemid type="ByteString" value="863c27d7a0d3da5e" />
<resultstatus type="Enumeration" value="Success" />
<responsepayload>
<uniqueidentifier type="TextString" value="$UNIQUE_IDENTIFIER_2" />
</responsepayload>
</batchitem>
<batchitem>
<operation type="Enumeration" value="Get" />
<uniquebatchitemid type="ByteString" value="c4617b3205e96fb2" />
<resultstatus type="Enumeration" value="Success" />
<responsepayload>
<objecttype type="Enumeration" value="SymmetricKey" />
<uniqueidentifier type="TextString" value="$UNIQUE_IDENTIFIER_2" />
</responsepayload>
</batchitem>
</responsetmessage>
<SymmetricKey/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 4

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
</RequestHeader>

<BatchItem>
<Operation type="Enumeration" value="Locate"/>
<UniqueBatchItemID type="ByteString" value="f1ce9893ee5bde19"/>
<RequestPayload>
<MaximumItems type="Integer" value="1"/>
<ObjectGroupMember type="Enumeration" value="GroupMemberDefault"/>
<Attribute>
<AttributeName type="TextString" value="Object Group"/>
<AttributeValue type="TextString" value="RoundRobinTestGroup"/>
</Attribute>
</RequestPayload>
</BatchItem>

<BatchItem>
<Operation type="Enumeration" value="Get"/>
<UniqueBatchItemID type="ByteString" value="9a18dd11cc6ce394"/>
<RequestPayload>
</BatchPayload>
</BatchItem>
</RequestMessage>

_ResponseMessage_
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
</ResponseHeader>

<BatchItem>
<Operation type="Enumeration" value="Locate"/>
<UniqueBatchItemID type="ByteString" value="f1ce9893ee5bde19"/>
<ResultStatus type="Enumeration" value="Success"/>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</BatchItem>

<BatchItem>
<Operation type="Enumeration" value="Get"/>
<UniqueBatchItemID type="ByteString" value="9a18dd11cc6ce394"/>
<ResultStatus type="Enumeration" value="Success"/>
</ResponsePayload>
</BatchItem>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
<ResponsePayload>
  <ObjectType type="Enumeration" value="SymmetricKey"/>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  <SymmetricKey>
    <KeyBlock>
      <KeyFormatType type="Enumeration" value="Raw"/>
      <KeyValue>
        <KeyMaterial type="ByteString" value="bd13da8bce07ea6b89c4d110827bf6a8478cf95edca9bce278ab04f4cbeecff0"/>
      </KeyValue>
      <CryptographicAlgorithm type="Enumeration" value="AES"/>
      <CryptographicLength type="Integer" value="256"/>
    </KeyBlock>
  </SymmetricKey>
</ResponsePayload>

# TIME 5

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchErrorContinuationOption type="Enumeration" value="Continue"/>
    <BatchOrderOption type="Boolean" value="true"/>
    <BatchCount type="Integer" value="3"/>
  </RequestHeader>

  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <UniqueBatchItemID type="ByteString" value="f4cf0a5614786eb7"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>

  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <UniqueBatchItemID type="ByteString" value="dd55da10ebe91928"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>

  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <UniqueBatchItemID type="ByteString" value="18334af52f3ee87fa"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```
Exercise the Discover Versions operation in different ways in order to find out which versions a server supports, as well as to get a list of versions supported by both client and server.

This test case shows the expected responses from a KMIP 1.2 server that supports versions 1.2, 1.1 and 1.0, with 1.2 being the preferred version.

```
# TIME 0
0001  <RequestMessage>
0002   <RequestHeader>
0003    <ProtocolVersion>
0004      <ProtocolVersionMajor type="Integer" value="1"/>
0005      <ProtocolVersionMinor type="Integer" value="2"/>
0006    </ProtocolVersion>
0007    <BatchCount type="Integer" value="1"/>
0008   </RequestHeader>
0009 </RequestItem>
```
```xml
<Operation type="Enumeration" value="DiscoverVersions"/>
<RequestPayload/>
</BatchItem>
</RequestMessage>

<Operation type="Enumeration" value="DiscoverVersions"/>
<ResultStatus type="Enumeration" value="Success"/>
<RequestPayload>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="0"/>
</ProtocolVersion>
</RequestPayload>
</BatchItem>
</ResponseMessage>

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
</RequestHeader>
</BatchItem>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
</ResponseHeader>
</BatchItem>
</ResponseMessage>
```

# TIME 1

```xml
<Operation type="Enumeration" value="DiscoverVersions"/>
<RequestPayload>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="1"/>
</ProtocolVersion>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
</RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
</ResponseHeader>
</BatchItem>
</ResponseMessage>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2011-06-24T12:52:18+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
</BatchItem>
<Operation type="Enumeration" value="DiscoverVersions"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
  <ProtocolVersion>
    <ProtocolVersionMajor type="Integer" value="1"/>
    <ProtocolVersionMinor type="Integer" value="0"/>
  </ProtocolVersion>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 2

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="DiscoverVersions"/>
    <RequestPayload>
      <ProtocolVersion>
        <ProtocolVersionMajor type="Integer" value="1"/>
        <ProtocolVersionMinor type="Integer" value="1"/>
      </ProtocolVersion>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 3

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
  </ResponseHeader>
  <TimeStamp type="DateTime" value="2011-12-01T08:46:15+00:00"/>
  <BatchCount type="Integer" value="1"/>
</ResponseHeader>
</BatchItem>
<Operation type="Enumeration" value="DiscoverVersions"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
  <ProtocolVersion>
    <ProtocolVersionMajor type="Integer" value="1"/>
    <ProtocolVersionMinor type="Integer" value="1"/>
  </ProtocolVersion>
</ResponsePayload>
</BatchItem>
</ResponseMessage>
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="DiscoverVersions"/>
    <RequestPayload>
      <ProtocolVersion>
        <ProtocolVersionMajor type="Integer" value="1"/>
        <ProtocolVersionMinor type="Integer" value="2"/>
      </ProtocolVersion>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 4

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="DiscoverVersions"/>
    <RequestPayload>
      <ProtocolVersion>
        <ProtocolVersionMajor type="Integer" value="9"/>
        <ProtocolVersionMinor type="Integer" value="31"/>
      </ProtocolVersion>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
2.3.34 TC-171-12 - Handling of Attributes and Attribute Index Values

This test case illustrates the changes in Attribute and Attribute Index handling introduced in KMIP-1.1. A symmetric key is created on the server, and two Name attributes and the Contact Information attribute is specified for the key. A Get Attributes request containing the Object Type attribute name twice is sent, but this operation fails since a single Attribute Name cannot be specified more than once in a Get Attributes request. The Object Type Attribute is then requested once, and this request succeeds. Thereafter, the Contact Information Attribute is modified, with the Attribute Index value of 0 specified. The Name attribute is deleted without specifying the Attribute Index which succeeds (which would have failed under KMIP-1.0). Finally, the created key is destroyed.
This is a Non-Standards Track Work Product.

The patent provisions of the OASIS IPR Policy do not apply.

```
0022  <Attribute>
0023   <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
0024  </Attribute>
0025  <AttributeValue type="Integer" value="Decrypt Encrypt"/>
0026 </Attribute>
0027  <AttributeName type="TextString" value="Name"/>
0028  <AttributeValue>
0029   <NameValue type="TextString" value="TC-171-12-name1"/>
0030      <NameType type="Enumeration" value="UninterpretedTextString"/>
0031   </AttributeValue>
0032 </Attribute>
0033  <Attribute>
0034   <AttributeName type="TextString" value="Name"/>
0035   <AttributeValue>
0036     <NameValue type="TextString" value="TC-171-12-name2"/>
0037      <NameType type="Enumeration" value="UninterpretedTextString"/>
0038   </AttributeValue>
0039 </Attribute>
0040  <Attribute>
0041   <AttributeName type="TextString" value="Contact Information"/>
0042     <AttributeValue type="TextString" value="admin@localhost"/>
0043 </AttributeValue>
0044 </TemplateAttribute>
0045 </RequestPayload>
0046 </BatchItem>
0047 </RequestMessage>
0048 <ResponseMessage>
0049  <ResponseHeader>
0050   <ProtocolVersion>
0051     <ProtocolVersionMajor type="Integer" value="1"/>
0052     <ProtocolVersionMinor type="Integer" value="2"/>
0053   </ProtocolVersion>
0054   <TimeStamp type="DateTime" value="2012-04-27T08:14:44+00:00"/>
0055   <BatchCount type="Integer" value="1"/>
0056 </ResponseHeader>
0057 <BatchItem>
0058   <Operation type="Enumeration" value="Create"/>
0059   <ResultStatus type="Enumeration" value="Success"/>
0060   <ResponsePayload>
0061     <ObjectType type="Enumeration" value="SymmetricKey"/>
0062       <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0063 </ResponsePayload>
0064 </BatchItem>
0065 </ResponseMessage>

# TIME 1
0066 <RequestMessage>
0067  <RequestHeader>
0068   <ProtocolVersion>
0069     <ProtocolVersionMajor type="Integer" value="1"/>
0070     <ProtocolVersionMinor type="Integer" value="2"/>
0071   </ProtocolVersion>
```

```xml
<BatchCount type="Integer" value="1"/>
</RequestHeader>

<BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
        <AttributeType type="TextString" value="Object Type"/>
        <AttributeType type="TextString" value="Object Type"/>
    </RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
    <ResponseHeader>
        <ProtocolVersion>
            <ProtocolVersionMajor type="Integer" value="1"/>
            <ProtocolVersionMinor type="Integer" value="2"/>
        </ProtocolVersion>
        <BatchCount type="Integer" value="1"/>
    </ResponseHeader>

    <BatchItem>
        <Operation type="Enumeration" value="GetAttributes"/>
        <ResultStatus type="Enumeration" value="OperationFailed"/>
        <ResultReason type="Enumeration" value="InvalidMessage"/>
        <ResultMessage type="TextString" value="Attribute Name specified more than once: Object Type"/>
    </BatchItem>
</ResponseMessage>

# TIME 2

<RequestMessage>
    <RequestHeader>
        <ProtocolVersion>
            <ProtocolVersionMajor type="Integer" value="1"/>
            <ProtocolVersionMinor type="Integer" value="2"/>
        </ProtocolVersion>
        <BatchCount type="Integer" value="1"/>
    </RequestHeader>

    <BatchItem>
        <Operation type="Enumeration" value="GetAttributes"/>
        <RequestPayload>
            <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
            <AttributeType type="TextString" value="Object Type"/>
        </RequestPayload>
    </BatchItem>
</RequestMessage>

<ResponseMessage>
    <ResponseHeader>
        <ProtocolVersion>
            <ProtocolVersionMajor type="Integer" value="1"/>
            <ProtocolVersionMinor type="Integer" value="2"/>
        </ProtocolVersion>
        <BatchCount type="Integer" value="1"/>
        <TimeStamp type="DateTime" value="2012-04-27T08:44:44+00:00"/>
    </ResponseHeader>

    <BatchItem>
        <Operation type="Enumeration" value="GetAttributes"/>
        <ResultStatus type="Enumeration" value="OperationFailed"/>
        <ResultReason type="Enumeration" value="InvalidMessage"/>
        <ResultMessage type="TextString" value="Attribute Name specified more than once: Object Type"/>
    </BatchItem>
</ResponseMessage>
```

<BatchItem>
  <Operation type="Enumeration" value="GetAttributes"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <Attribute>
      <AttributeName type="TextString" value="Object Type"/>
      <AttributeValue type="Enumeration" value="SymmetricKey"/>
    </Attribute>
  </ResponsePayload>
</BatchItem>

# TIME 3

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ModifyAttribute"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Contact Information"/>
        <AttributeIndex type="Integer" value="0"/>
        <AttributeValue type="TextString" value="donald@localhost"/>
      </Attribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:44+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="ModifyAttribute"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Contact Information"/>
        <AttributeValue type="TextString" value="donald@localhost"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
This is a Non-Standards Track Work Product.

The patent provisions of the OASIS IPR Policy do not apply.
2.3.35 TC-181-12 - Digests of Symmetric Keys

Exercise the Digest attribute by registering two symmetric keys with the same key material but using different Key Format Type. The Digest Value for the key with the Key Format Type set to Transparent Symmetric Key is calculated on the TTLV-encoded Key Material structure, whereas the Digest Value for the key registered in the Raw Key Format Type is calculated on the raw Key Material Byte String. The server calculates the value of the mandatory Digest attribute instance using the Key Format Type used by the client when registering the keys. Thereafter, the client asks the server to create a symmetric key using the Create operation. In this situation, it is up to the server to choose what Key Format Type of the created key it uses to calculate the Digest Value.

Note: This test case assumes a server that does not compute any additional Digest attributes using another Hashing Algorithm and/or Key Format Type. A server is permitted to provide multiple Digest attributes.
# TIME 1

```xml
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQ_IDENTIFIER_0"/>
      <AttributeName type="TextString" value="Digest"/>
      <AttributeValue>
        <HashingAlgorithm type="Enumeration" value="SHA_256"/>
        <DigestValue type="ByteString" value="6c064fe051add11edc07727b594eb48711df843e08445bba2cd786bc16bc58e8"/>
        <KeyFormatType type="Enumeration" value="Raw"/>
      </AttributeValue>
    </ResponsePayload>
  </BatchItem>
</RequestMessage>
```

# TIME 2

```xml
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Digest"/>
        <AttributeValue>
          <HashingAlgorithm type="Enumeration" value="SHA_256"/>
          <DigestValue type="ByteString" value="6c064fe051add11edc07727b594eb48711df843e08445bba2cd786bc16bc58e8"/>
          <KeyFormatType type="Enumeration" value="Raw"/>
        </AttributeValue>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</RequestMessage>
```
<RequestHeader>
</RequestHeader>

<BatchItem>
  <Operation type="Enumeration" value="Register"/>
  <RequestPayload>
    <ObjectType type="Enumeration" value="SymmetricKey"/>
    <TemplateAttribute>
      <Attribute>
        <AttributeName type="TextString" value="Cryptographic Algorithm"/>
        <AttributeValue type="Enumeration" value="AES"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Cryptographic Length"/>
        <AttributeValue type="Integer" value="256"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
        <AttributeValue type="Integer" value="Decrypt Encrypt"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="x-ID"/>
        <AttributeValue type="TextString" value="TC-181-12-key2"/>
      </Attribute>
    </TemplateAttribute>
    <SymmetricKey>
      <KeyBlock>
        <KeyFormatType type="Enumeration" value="TransparentSymmetricKey"/>
        <KeyValue>
          <KeyMaterial>
            <Key type="ByteString" value="0000111122223333444455556666777788889999aaaabbbbcdddeeedf">00011122223333444455556666777788889999aaaabbbbcdddeeedf</KeyMaterial>
            </Key>
          </KeyMaterial>
        </KeyValue>
      </KeyBlock>
    </SymmetricKey>
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</RequestMessage>

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### TIME 3

```
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  </RequestHeader>
  <BatchItem>
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    </RequestPayload>
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</RequestMessage>
```

### TIME 4

```
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  </RequestHeader>
  <BatchItem>
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    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
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        <AttributeName type="TextString" value="Digest"/>
        <AttributeValue>
          <HashingAlgorithm type="Enumeration" value="SHA_256"/>
          <DigestValue type="ByteString" value="499ce96ff6f5e19fe9fe7a2fe4c3e92b88db0001a4e8df28d9966856b6c4b87c"/>
          <KeyFormatType type="Enumeration" value="TransparentSymmetricKey"/>
        </AttributeValue>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</RequestMessage>
```
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<AttributeName type="TextString" value="Cryptographic Length"/>
<AttributeValue type="Integer" value="256"/>
</Attribute>
<AttributeName type="TextString" value="Cryptographic Usage Mask"/>
<AttributeValue type="Integer" value="Decrypt Encrypt"/>
</Attribute>
<AttributeName type="TextString" value="x-ID"/>
<AttributeValue type="TextString" value="TC-181-12-key3"/>
</Attribute>
</RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
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# TIME 5

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# TIME 6

# TIME 6

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The patent provisions of the OASIS IPR Policy do not apply.

```
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0322       <BatchItem>
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0325           <ResponsePayload>
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0327               <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
0328               <SymmetricKey>
0329                   <KeyBlock>
0330                       <KeyFormatType type="Enumeration" value="Raw"/>  
0331                       <KeyValue>
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0333                           </KeyValue>
0334                           <CryptographicAlgorithm type="Enumeration" value="AES"/>  
0335                           <CryptographicLength type="Integer" value="256"/>  
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0339               </BatchItem>
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0353           </RequestPayload>
0354       </BatchItem>
0355   </RequestMessage>

0356   <ResponseMessage>
0357       <ResponseHeader>
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</ResponseMessage>

# TIME 8

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</RequestMessage>

# TIME 9

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<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
</ResponsePayload>
</BatchItem>
</RequestMessage>
2.3.36 TC-182-12 - Digests of RSA Private Keys

Exercise the Digest attribute by registering two RSA private keys with the same key material but using different Key Format Type. The Digest Value for the key with the Key Format Type set to Transparent RSA Private Key is calculated on the TTLV-encoded Key Material structure, whereas the Digest Value for the key registered in the PKCS_1 Key Format Type is calculated on the Key Material Byte String. The server calculates the value of the mandatory Digest attribute instance using the Key Format Type used by the client when registering the keys.

Note: This test case assumes a server that does not compute any additional Digest attributes using another Hashing Algorithm and/or Key Format Type. A server is permitted to provide multiple Digest attributes.
| 0013 | `<TemplateAttribute>` |
| 0014 | `Attribute` |
| 0015 | `<AttributeName type="TextString" value="Cryptographic Algorithm"/>` |
| 0016 | `<AttributeValue type="Enumeration" value="RSA"/>` |
| 0017 | `</Attribute>` |
| 0018 | `<AttributeName type="TextString" value="Cryptographic Length"/>` |
| 0019 | `<AttributeValue type="Integer" value="2048"/>` |
| 0020 | `</Attribute>` |
| 0021 | `<AttributeName type="TextString" value="Cryptographic Usage Mask"/>` |
| 0022 | `<AttributeValue type="Integer" value="Sign"/>` |
| 0023 | `</Attribute>` |
| 0024 | `<AttributeValue type="TextString" value="x-ID"/>` |
| 0025 | `</Attribute>` |
| 0026 | `<PrivateKey>` |
| 0027 | `<KeyBlock>` |
| 0028 | `<KeyFormatType type="Enumeration" value="PKCS_1"/>` |
| 0029 | `<KeyValue>` |
| 0030 | `<KeyMaterial type="ByteString" value="308204a502010002820101000282010200ab7f161c0042496cc6d6d6dadb919973435357776003ac5f4b7a4e40af8b064a8755f8002cfe6a6b184540a26d686d7648346d75b8d71812b205387c0f6583bc4d77ec114f331b76b7957c4227e03fc626754a2af89b9b9ee9e60a1d7c2d833e5af4bb0b143434f4e795a4110f8aa214900df6b865a89f79135b1c67b701675ab7b75721aa9cd14a7f801f0c8ec8b06e8ae08ec8295353c795328abf70e1b427bb8b7f4e8ac88c810cd6d6ee3d21126e6bda8107dca34142cb76f91f013da809e9c1b7ae64c54130fbc212080e9c2cb06c5cf87c8e89469acz99b1c2815c3612a29b8273a1f99374fe30e54951662aaed6a29c6f4c141335d5c742d6f06505203100000e2080003b12455d53c1816516c518493f63998a0af72b17df894db88aad74d80a47f62579a4e64f686d711feae850cdd9dbdb17f69a434d2ec1d6d03613ff8a747ce45fda5a8bda62b3808ca2e35883b6f0729f98b2144d2b72293e1117d3933bc41f75b15ee3d7569b4995ed1a144250d43379b7b26b0e8f6871735742ae5c6d5a849f87209567f3925a47b016d5e64597917bc57f48e5922d0a49f8816e5be7b3068391326ec9eff1408580545b735c5d9baf38f7c6f704f5dfce03806ad982b1259058c3473e847179a878f26b3d96fb99e46e91859f2376e78965c2ae4877ba3917df07c5e927474f19e764ba1d3c86d3df2b028181005d69c8c3c9c2d467474a793713daf9f1d9c7b79f9f6423fecd3ca794286bce9204b51c83f9ee9028db621262774c8297f0fbcbe7f7c24ca4c51fc7182fb8f0419fb1d5659674c5cbe6d5fa992051341760ccd00735729a70a9e54324beba8e8fe782d3a1b0b40c4ea00d4db41e35116fc221e854b43a696c0e641991b0b281800cd5ea7702789064b673540ccbff09356ad808bc3d59219b2ha674810b9fa6acef2d2ada438459c7a4e59653ad8804134399bf5b4bb920e34ef38a709f69593396e7fe35fe60a64ec94004104d4a4006b6f8d6a116f45f95a3aa5c101e662e644f15f335ac971e1766b2bb9c98510971411b4d37e3e31920a5af5028181008271327bf9fad38c3316ab7877a6a868063e542a7186d431e827c19ca041458403394e9ffe6e29737bdd2d8b0e94ad1e82151801fc86645a7a5a467fb963014bd5dccb24bfb087c23039d1922db0e22f9df16b8498e23225cd455ada2f32e4f3185864a36d63090d6853f7714b39aa1eebee3938f87c270e7178c739f9f02818109690e142b2aa26d0986d59231ee27d71d4065bd2ba1f78157e2029882df9d23227d0f8479eeae92f275d51b16a1561fa6680b040ca0bdc650b23b917a4b1bb7983a74fad70e1c305bce2b2f8a185a72

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<KeyBlock>
  <KeyValue>
    <CryptographicAlgorithm type="Enumeration" value="RSA"/>
    <CryptographicLength type="Integer" value="2048"/>
  </KeyValue>
</KeyBlock>

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    </ProtocolVersion>
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      <AttributeName type="TextString" value="Digest"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 1

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  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <AttributeName type="TextString" value="Digest"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

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      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

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    </ProtocolVersion>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <AttributeName type="TextString" value="Digest"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
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    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
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    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
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</AttributeValue>
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</Attribute>
<Attribute>
<AttributeName type="TextString" value="Cryptographic Length"/>
<AttributeValue type="Integer" value="2048"/>
</Attribute>
<Attribute>
<AttributeName type="TextString" value="Cryptographic Usage Mask"/>
<AttributeValue type="Integer" value="Sign"/>
</Attribute>
</TemplateAttribute>
</RequestPayload>
</BatchItem>
</RequestMessage>
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0133  <KeyBlock>
0134  <KeyFormatType type="Enumeration" value="TransparentRSAPrivateKey"/>
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0136    <KeyMaterial>
0137      <Modulus type="BigInteger" value="00000000000000ab7f16c0042496cc6d4d4dadb9199734357776003ac5f4b7a1fe440a6b806a4a875f58002cf6b6a184540a2d6606d746484d675b8d71812b2053870cf65b3cdd7decd7f176fb7957422e7d3fc6267fa2a6f689b9beee9e0a1d7c2d83ee5a5f4b4b01b1434fe795a41100f8aa214900df8b65089f98135b1c67b701675abdb7d5721aa9d147f081fccc80b6e8a0eccc82895353c7957328abf70e1b42e7bb8b7f4e8ac8c801db66e3d2112eb9a8d70ca34142cb76f91f013da809e9c1b7ae464c54130fbc2d180e9c2c0b65c6d77ce89f6a9ac99b1c2815c3612a29a82d73a1f99374fe30e54951662a6edaa296c411335d5dc7426b0f605"/>
0138  </KeyMaterial>
0139  <PrivateKeyType type="BigInteger" value="3b1245d53181516c518493f639aaafafa7217df8a9d888a7d48c0a47f62579ea3e688686a711f8ec5850cd9db17769a44d2edcd6d03c618f74ade5fda fabd6baa2e604a3adb4df6840fb12843cb083e2522e885b6f0729f98b2144db2727e3e11d733933c4f1f7b15e3ed756b9495ed1a142d5a4319b7b2b06e0e8f17f37c542ae5c5ed849f678209567f3925a47b016d564859717bc57f6c4522d0a49ce816e5be7308819326c6e9ff1f4058045b73c5d79abf38f7c6f0c45dc0f3806ad9b2d1259058c3473e84719a878fc63b968fbf99ea46e9185892f36767e87965c2ed4ad77ba3917df07c5e927474f19e7674a61dc3d6363f2a"/>
0140  </PrivateKey>
0141  <P type="BigInteger" value="00000000000000005d69c8c3c3dc264744a793713dafb9f1dbf799ff96423feced3acb794286cbe920f4bc5f18e3f199e0902db86212c62774c8297f7cbe7f7c24ca4c51fc7182bf4019bf1d5696745cbe6d5f9a20951314760cd00735729a70a9e545342ebe8af47ee82d3a01b0400c044d4db41e35116fc221e854b43a696c0e6419b1b"/>
0142  <Q type="BigInteger" value="00000000000000000d5e9533968e8735e60a6a49940901041d8a406b68f68a1e16e54f95a3eaa5c1012e6662e4f15f335ac971e17662bb9c9851099747b444d37e3a19b820a5f"/>
0143  <PrimeExponentP type="BigInteger" value="00000000000000000d5e9533968e8735e60a6a49940901041d8a406b68f68a1e16e54f95a3eaa5c1012e6662e4f15f335ac971e17662bb9c9851099747b444d37e3a19b820a5f"/>
0144  <PrimeExponentQ type="BigInteger" value="00000000000000000d5e9533968e8735e60a6a49940901041d8a406b68f68a1e16e54f95a3eaa5c1012e6662e4f15f335ac971e17662bb9c9851099747b444d37e3a19b820a5f"/>
0145  <CRTCoefficient type="BigInteger" value="0000000000000000a9c9850a0a791a659f979731134c44f37b2e520a2e3a5800ad2741ed360dfdeee8ca614f12047f0d08b76ac4d1c3056a0699e2f98a1c91a01124971208f4fabab33ba87a0517f415baca88d6bac006088fa601d349417e1f09b23affa4d496618dbc024986ed909bb7b205768ff9df8ac5146f489f8129c32341a8b44f"/>
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  <CryptographicLength type="Integer" value="2048"/>
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</RequestPayload>
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</RequestMessage>

# TIME 3

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    <RequestPayload>
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      <AttributeName type="TextString" value="Digest"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

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    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:45+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

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  <BatchItem>
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    <RequestPayload>
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    </RequestPayload>
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    <AttributeName type="TextString" value="Digest"/>
    <AttributeValue>
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      <DigestValue type="ByteString" value="d73bbc51e83332935f912dbfc35c5efc3b7bf8021835ba86b8da4181f74244ac"/>
      <KeyFormatType type="Enumeration" value="TransparentRSAPrivateKey"/>
    </AttributeValue>
  </Attribute>
</ResponsePayload>

# TIME 4

<RequestMessage>
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# TIME 5

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      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:46+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
</RequestMessage>
2.3.37 TC-NP-1-12 - Put

In this test case the client issues a Create request, whereby the server creates a new symmetric key and returns the Unique Identifier. To clean up, the client then performs a Destroy operation to destroy the key.

The server sends Put messages to the client via a separate channel.
```
<ObjectType type="Enumeration" value="SymmetricKey"/>
<TemplateAttribute>
  <Attribute>
    <AttributeName type="TextString" value="Cryptographic Algorithm"/>
    <AttributeValue type="Enumeration" value="AES"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Cryptographic Length"/>
    <AttributeValue type="Integer" value="128"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
    <AttributeValue type="Integer" value="Decrypt Encrypt"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="x-ID"/>
    <AttributeValue type="TextString" value="TC-NP-1-12"/>
  </Attribute>
</TemplateAttribute>

# [Client-to-Server]
<Operation type="Enumeration" value="Create"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
  <ObjectType type="Enumeration" value="SymmetricKey"/>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 1
# [Server-to-Client]
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2013-06-26T05:13:47+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Put"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</RequestMessage>
```
<RequestPayload>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  <PutFunction type="Enumeration" value="New"/>
  <SymmetricKey>
    <KeyBlock>
      <KeyFormatType type="Enumeration" value="Raw"/>
      <KeyValue>
        <KeyMaterial type="ByteString" value="7546ef6cd37c49806824984477987d1e"/>
      </KeyValue>
    </KeyBlock>
  </SymmetricKey>
  <Attribute>
    <AttributeName type="TextString" value="x-ID"/>
    <AttributeValue type="TextString" value="TC-NP-1-12"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Unique Identifier"/>
    <AttributeValue type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Object Type"/>
    <AttributeValue type="Enumeration" value="SymmetricKey"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Cryptographic Algorithm"/>
    <AttributeValue type="Enumeration" value="AES"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Cryptographic Length"/>
    <AttributeValue type="Integer" value="128"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
    <AttributeValue type="Integer" value="Decrypt Encrypt"/>
  </Attribute>
  <Attribute>
    <AttributeName type="TextString" value="Digest"/>
    <AttributeValue type="ByteString" value="7549e3da2dc1569974c3748f23fbc947ce9cabce581497522e4b75e9d6ed681"/>
    <HashingAlgorithm type="Enumeration" value="SHA_256"/>
    <DigestValue type="ByteString" value="7546ef6cd37c49806824984477987d1e"/>
    <KeyFormatType type="Enumeration" value="Raw"/>
  </Attribute>
</RequestPayload>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
This test case tests the import of key using the Register operation. To validate that the
registered key is treated the same as a locally created key, an attribute is added to the key and
then modified. Finally, the key is destroyed.

The server sends Notify and Put messages to the client via a separate channel.
<AttributeValue type="TextString" value="TC-NP-2-12"/>
</AttributeValue>
</TemplateAttribute>
</SymmetricKey>
</RequestPayload>
</BatchItem>
</RequestMessage>

# TIME 1
# [Server-to-Client]
<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
</RequestHeader>
<BatchItem>
<Operation type="Enumeration" value="Put"/>
<RequestPayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</RequestPayload>
</BatchItem>
</RequestMessage>
<KeyValue>
  <CryptographicAlgorithm type="Enumeration" value="AES"/>
  <CryptographicLength type="Integer" value="128"/>
</KeyBlock>

<Attribute>
  <AttributeName type="TextString" value="x-ID"/>
  <AttributeValue type="TextString" value="TC-NP-2-12"/>
</Attribute>

<Attribute>
  <AttributeName type="TextString" value="Unique Identifier"/>
  <AttributeValue type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</Attribute>

<Attribute>
  <AttributeName type="TextString" value="Object Type"/>
  <AttributeValue type="Enumeration" value="SymmetricKey"/>
</Attribute>

<Attribute>
  <AttributeName type="TextString" value="Cryptographic Algorithm"/>
  <AttributeValue type="Enumeration" value="AES"/>
</Attribute>

<Attribute>
  <AttributeName type="TextString" value="Cryptographic Length"/>
  <AttributeValue type="Integer" value="128"/>
</Attribute>

<Attribute>
  <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
  <AttributeValue type="Integer" value="Encrypt"/>
</Attribute>

<Attribute>
  <AttributeName type="TextString" value="Digest"/>
  <AttributeValue>
    <HashingAlgorithm type="Enumeration" value="SHA_256"/>
    <DigestValue type="ByteString" value="47c01d3851ce2f254d18928526b6126de30cef9a34a4cfbd468ec3ed21a9e86"/>
  </AttributeValue>
</Attribute>

<Attribute>
  <AttributeName type="TextString" value="KeyFormatType"/>
  <AttributeValue type="Enumeration" value="Raw"/>
</Attribute>

<Attribute>
  <AttributeName type="TextString" value="Fresh"/>
  <AttributeValue type="Boolean" value="true"/>
</Attribute>

<Attribute>
  <AttributeName type="TextString" value="Initial Date"/>
  <AttributeValue type="DateTime" value="2013-06-26T05:54:18+00:00"/>
</Attribute>

<Attribute>
  <AttributeName type="TextString" value="Last Change Date"/>
  <AttributeValue type="DateTime" value="2013-06-26T05:54:18+00:00"/>
</Attribute>
<table>
<thead>
<tr>
<th>Line</th>
<th>XML Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>0119</td>
<td>&lt;/Attribute&gt;</td>
</tr>
<tr>
<td>0120</td>
<td>&lt;/Attribute&gt;</td>
</tr>
<tr>
<td>0121</td>
<td>&lt;AttributeName type=&quot;TextString&quot; value=&quot;Lease Time&quot;/&gt;</td>
</tr>
<tr>
<td>0122</td>
<td>&lt;AttributeValue type=&quot;Interval&quot; value=&quot;3600&quot;/&gt;</td>
</tr>
<tr>
<td>0123</td>
<td>&lt;/Attribute&gt;</td>
</tr>
<tr>
<td>0124</td>
<td>&lt;/Attribute&gt;</td>
</tr>
<tr>
<td>0125</td>
<td>&lt;AttributeName type=&quot;TextString&quot; value=&quot;State&quot;/&gt;</td>
</tr>
<tr>
<td>0126</td>
<td>&lt;AttributeValue type=&quot;Enumeration&quot; value=&quot;PreActive&quot;/&gt;</td>
</tr>
<tr>
<td>0127</td>
<td>&lt;/Attribute&gt;</td>
</tr>
<tr>
<td>0128</td>
<td>&lt;/RequestPayload&gt;</td>
</tr>
<tr>
<td>0129</td>
<td>&lt;/BatchItem&gt;</td>
</tr>
<tr>
<td>0130</td>
<td>&lt;/RequestMessage&gt;</td>
</tr>
<tr>
<td>0131</td>
<td>&lt;ResponseMessage&gt;</td>
</tr>
<tr>
<td>0132</td>
<td>&lt;ResponseHeader&gt;</td>
</tr>
<tr>
<td>0133</td>
<td>&lt;ProtocolVersion&gt;</td>
</tr>
<tr>
<td>0134</td>
<td>&lt;ProtocolVersionMajor type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</td>
</tr>
<tr>
<td>0135</td>
<td>&lt;ProtocolVersionMinor type=&quot;Integer&quot; value=&quot;0&quot;/&gt;</td>
</tr>
<tr>
<td>0136</td>
<td>&lt;/ProtocolVersion&gt;</td>
</tr>
<tr>
<td>0137</td>
<td>&lt;TimeStamp type=&quot;DateTime&quot; value=&quot;2013-06-26T05:54:18+00:00&quot;/&gt;</td>
</tr>
<tr>
<td>0138</td>
<td>&lt;BatchCount type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</td>
</tr>
<tr>
<td>0139</td>
<td>&lt;/ResponseHeader&gt;</td>
</tr>
<tr>
<td>0140</td>
<td>&lt;/BatchItem&gt;</td>
</tr>
<tr>
<td>0141</td>
<td>&lt;Operation type=&quot;Enumeration&quot; value=&quot;Put&quot;/&gt;</td>
</tr>
<tr>
<td>0142</td>
<td>&lt;ResultStatus type=&quot;Enumeration&quot; value=&quot;Success&quot;/&gt;</td>
</tr>
<tr>
<td>0143</td>
<td>&lt;/ResponsePayload&gt;</td>
</tr>
<tr>
<td>0144</td>
<td>&lt;/ResponseMessage&gt;</td>
</tr>
<tr>
<td>0145</td>
<td>&lt;BatchItem&gt;</td>
</tr>
<tr>
<td>0146</td>
<td>&lt;/RequestMessage&gt;</td>
</tr>
<tr>
<td>0147</td>
<td># [Server-to-Client]</td>
</tr>
<tr>
<td>0148</td>
<td>&lt;RequestMessage&gt;</td>
</tr>
<tr>
<td>0149</td>
<td>&lt;RequestHeader&gt;</td>
</tr>
<tr>
<td>0150</td>
<td>&lt;ProtocolVersion&gt;</td>
</tr>
<tr>
<td>0151</td>
<td>&lt;ProtocolVersionMajor type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</td>
</tr>
<tr>
<td>0152</td>
<td>&lt;ProtocolVersionMinor type=&quot;Integer&quot; value=&quot;2&quot;/&gt;</td>
</tr>
<tr>
<td>0153</td>
<td>&lt;/ProtocolVersion&gt;</td>
</tr>
<tr>
<td>0154</td>
<td>&lt;BatchCount type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</td>
</tr>
<tr>
<td>0155</td>
<td>&lt;/RequestHeader&gt;</td>
</tr>
<tr>
<td>0156</td>
<td>&lt;/BatchItem&gt;</td>
</tr>
<tr>
<td>0157</td>
<td>&lt;RequestPayload&gt;</td>
</tr>
<tr>
<td>0158</td>
<td>&lt;UniqueIdentifier type=&quot;TextString&quot; value=&quot;$UNIQUE_IDENTIFIER_0&quot;/&gt;</td>
</tr>
<tr>
<td>0159</td>
<td>&lt;/Attribute&gt;</td>
</tr>
<tr>
<td>0160</td>
<td>&lt;AttributeName type=&quot;TextString&quot; value=&quot;x-provider&quot;/&gt;</td>
</tr>
<tr>
<td>0161</td>
<td>&lt;AttributeValue type=&quot;TextString&quot; value=&quot;unknown&quot;/&gt;</td>
</tr>
<tr>
<td>0162</td>
<td>&lt;/Attribute&gt;</td>
</tr>
<tr>
<td>0163</td>
<td>&lt;/RequestPayload&gt;</td>
</tr>
<tr>
<td>0164</td>
<td>&lt;/BatchItem&gt;</td>
</tr>
<tr>
<td>0165</td>
<td>&lt;/RequestMessage&gt;</td>
</tr>
<tr>
<td>0166</td>
<td># [Client-to-Server]</td>
</tr>
<tr>
<td>0167</td>
<td>&lt;ResponseMessage&gt;</td>
</tr>
<tr>
<td>0168</td>
<td>&lt;ResponseHeader&gt;</td>
</tr>
<tr>
<td>0169</td>
<td>&lt;ProtocolVersionMajor type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</td>
</tr>
</tbody>
</table>
0170     <ProtocolVersionMinor type="Integer" value="2"/>
0171     </ProtocolVersion>
0172     <TimeStamp type="DateTime" value="2013-06-26T05:54:18+00:00"/>
0173     <BatchCount type="Integer" value="1"/>
0174     </ResponseHeader>
0175     <BatchItem>
0176     <Operation type="Enumeration" value="AddAttribute"/>
0177     <ResultStatus type="Enumeration" value="Success"/>
0178     <ResponsePayload>
0179         <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0180             <Attribute>
0181                 <AttributeName type="TextString" value="x-provider"/>
0182                 <AttributeValue type="TextString" value="unknown"/>
0183             </Attribute>
0184         </ResponsePayload>
0185     </BatchItem>
0186     </ResponseMessage>

# TIME 3
# [Server-to-Client]
0187     <RequestMessage>
0188     <RequestHeader>
0189         <ProtocolVersion>
0190             <ProtocolVersionMajor type="Integer" value="1"/>
0191             <ProtocolVersionMinor type="Integer" value="0"/>
0192         </ProtocolVersion>
0193         <BatchCount type="Integer" value="1"/>
0194     </RequestHeader>
0195     <BatchItem>
0196         <Operation type="Enumeration" value="Notify"/>
0197         <RequestPayload>
0198             <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0199                 <Attribute>
0200                     <AttributeName type="TextString" value="x-provider"/>
0201                     <AttributeValue type="TextString" value="unknown"/>
0202                 </Attribute>
0203                 <Attribute>
0204                     <AttributeName type="TextString" value="Last Change Date"/>
0205                     <AttributeValue type="DateTime" value="2013-06-26T05:54:18+00:00"/>
0206                 </Attribute>
0207             </RequestPayload>
0208         </BatchItem>
0209     </RequestMessage>

# [Server-to-Client]
0210     <ResponseMessage>
0211     <ResponseHeader>
0212         <ProtocolVersion>
0213             <ProtocolVersionMajor type="Integer" value="1"/>
0214             <ProtocolVersionMinor type="Integer" value="0"/>
0215         </ProtocolVersion>
0216         <TimeStamp type="DateTime" value="2013-06-26T05:54:18+00:00"/>
0217         <BatchCount type="Integer" value="1"/>
0218     </ResponseHeader>
0219     <BatchItem>
0220         <Operation type="Enumeration" value="Notify"/>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
<ResponseStatus type="Enumeration" value="Success"/>
<RequestPayload>
</BatchItem>
</ResponseMessage>

# TIME 4
# [Client-to-Server]
<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
</RequestHeader>
<BatchItem>
<Operation type="Enumeration" value="ModifyAttribute"/>
<RequestPayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
<Attribute>
<AttributeName type="TextString" value="x-provider"/>
<AttributeValue type="TextString" value="third party"/>
</Attribute>
</RequestPayload>
</BatchItem>
</RequestMessage>

# TIME 5
# [Server-to-Client]
<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
</RequestHeader>
<BatchItem>
<Operation type="Enumeration" value="ModifyAttribute"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
<Attribute>
<AttributeName type="TextString" value="x-provider"/>
<AttributeValue type="TextString" value="third party"/>
</Attribute>
</RequestPayload>
</BatchItem>
</RequestMessage>
```
<ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
</RequestHeader>
</BatchItem>
</RequestPayload>
</BatchItem>
</ResponseMessage>

# [Server-to-Client]

<ResponseMessage>
<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="0"/>
</ProtocolVersion>
</ResponseHeader>
<BatchCount type="Integer" value="1"/>
</BatchItem>
<Operation type="Enumeration" value="Notify"/>
<ResultStatus type="Enumeration" value="Success"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 6

# [Client-to-Server]

<RequestMessage>
<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
</RequestHeader>
</BatchCount type="Integer" value="1"/>
</BatchItem>
<Operation type="Enumeration" value="Destroy"/>
</RequestPayload>
</BatchItem>
</RequestMessage>


# [Client-to-Server]
0320  <ResponseMessage>
0321   <ResponseHeader>
0322     <ProtocolVersion>
0323       <ProtocolVersionMajor type="Integer" value="1"/>
0324       <ProtocolVersionMinor type="Integer" value="2"/>
0325     </ProtocolVersion>
0326     <TimeStamp type="DateTime" value="2013-06-26T05:54:18+00:00"/>
0327     <BatchCount type="Integer" value="1"/>
0328   </ResponseHeader>
0329   <BatchItem>
0330     <Operation type="Enumeration" value="Destroy"/>
0331     <ResultStatus type="Enumeration" value="Success"/>
0332     <ResponsePayload>
0333       <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0334     </ResponsePayload>
0335   </BatchItem>
0336 </ResponseMessage>

# TIME 7

# [Server-to-Client]
0337  <RequestMessage>
0338   <RequestHeader>
0339     <ProtocolVersion>
0340       <ProtocolVersionMajor type="Integer" value="1"/>
0341       <ProtocolVersionMinor type="Integer" value="0"/>
0342     </ProtocolVersion>
0343     <BatchCount type="Integer" value="1"/>
0344   </RequestHeader>
0345   <BatchItem>
0346     <Operation type="Enumeration" value="Notify"/>
0347     <RequestPayload>
0348       <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0349       <Attribute>
0350         <AttributeName type="TextString" value="Last Change Date"/>
0351         <AttributeValue type="DateTime" value="2013-06-26T05:54:18+00:00"/>
0352       </Attribute>
0353       <Attribute>
0354         <AttributeName type="TextString" value="State"/>
0355         <AttributeValue type="Enumeration" value="Destroyed"/>
0356       </Attribute>
0357     </RequestPayload>
0358   </BatchItem>
0359 </RequestMessage>

# [Server-to-Client]
0360  <ResponseMessage>
0361   <ResponseHeader>
0362     <ProtocolVersion>
0363       <ProtocolVersionMajor type="Integer" value="1"/>
0364       <ProtocolVersionMinor type="Integer" value="0"/>
0365     </ProtocolVersion>
0366     <TimeStamp type="DateTime" value="2013-06-26T05:54:18+00:00"/>
0367     <BatchCount type="Integer" value="1"/>
0368   </ResponseHeader>
0369   <BatchItem>
2.3.39 TC-ECC-1-12 - Register an ECC Key Pair

EC recommended curve is secp256k1

- Private Key format ECPrivateKey - http://tools.ietf.org/html/rfc5915
- Public Key format SubjectPublicKeyInfo - http://tools.ietf.org/html/rfc5480

Register a EC private key in the ECPrivateKey key format, then register the corresponding public key, in X.509 (SubjectPublicKeyInfo) format, with the Link attribute pointing to the previously registered private key. Then add the Link attribute to the private key, and perform Locate operations to find the public and private keys using the Link attribute. Get both the private and public keys in default format, then destroy both the private and the public key.

```
-----BEGIN EC PRIVATE KEY-----
MHQCAQEEnItNeowwjCeYsQB1ljAC6JE3WTZv1KjEHG1a4oAwZxooAcGBSuBBAAK
oUQDQgAE2rXTw1MRPbQUq/wcDr9aAlWeZWqhyLCqjYcKoDJM2kiZk16h5tvCWabH
glz0ZZKsdZTMQL1gS3KNIY28xfT2g==
-----END EC PRIVATE KEY-----

-----BEGIN PUBLIC KEY-----
MFywEAYHKoZIzj0CAQYFK4EEAAAoDQgAE2rXTw1MRPbQUq/wcDr9aAlWeZWqhyLCq
jYcKoDJM2kiZk16h5tvCWabHglz0ZZKsdZTMQL1gS3KNIY28xfT2g==
-----END PUBLIC KEY-----

# TIME 0
0001 <RequestMessage>
0002  <RequestHeader>
0003   <ProtocolVersion>
0004     <ProtocolVersionMajor type="Integer" value="1"/>
0005     <ProtocolVersionMinor type="Integer" value="2"/>
0006   </ProtocolVersion>
0007   <BatchCount type="Integer" value="1"/>
0008 </RequestHeader>
0009 <BatchItem>
0010   <Operation type="Enumeration" value="Register"/>
0011   <RequestPayload>
0012     <ObjectType type="Enumeration" value="PrivateKey"/>
0013     <TemplateAttribute>
0014       <Attribute>
0015         <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
0016         <AttributeValue type="Integer" value="Sign"/>
```
<Attribute>
  <AttributeName type="TextString" value="x-ID"/>
  <AttributeValue type="TextString" value="TC-ECC-1-12-prikey1"/>
</Attribute>

<PrivateKey>
  <KeyBlock>
    <KeyFormatType type="Enumeration" value="ECPrivateKey"/>
    <KeyValue>
      <KeyMaterial type="ByteString" value="30740201010420db4d128c30ca309e62c4019758c00ba244dd64d9bf52a31078866b8a00c19c68a00706052b8104000aa14403420004dab5d3c25313db414abfc1c0ebf5a02559e656a1c8b0aa8d870aa0324cda4899925e1e6d2c259a6c7825cf46592ac7594cc40bd604b728d88b636f317d366"/>
    </KeyValue>
    <CryptographicAlgorithm type="Enumeration" value="EC"/>
    <CryptographicLength type="Integer" value="256"/>
  </KeyBlock>
</PrivateKey>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:14:36+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
<AttributeName type="TextString" value="Cryptographic Usage Mask"/>
<AttributeValue type="Integer" value="Verify"/>
</Attribute>
<Attribute>
<AttributeName type="TextString" value="Link"/>
<AttributeValue>
<LinkType type="Enumeration" value="PrivateKeyLink"/>
<LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</AttributeValue>
</Attribute>
<Attribute>
<AttributeName type="TextString" value="x-ID"/>
<AttributeValue type="TextString" value="TC-ECC-1-12-pubkey1"/>
</Attribute>
</TemplateAttribute>
<PublicKey>
<KeyBlock>
<KeyFormatType type="Enumeration" value="X_509"/>
<KeyValue>
<KeyMaterial type=" ByteString" value="3056301006072a8648ce3d020106052b8104000a03420004dab5d3c253113
db414abcfc1c9ebf5a0259e656a1c8b0aa8d870aa324cda489925e1e6dcb259a6c7825cf46592ac7594cc40b6d04b728d88b636f317d366"/>
</KeyValue>
<CryptographicAlgorithm type=" Enumeration" value="EC"/>
<CryptographicLength type=" Integer" value="256"/>
</KeyBlock>
</PublicKey>
</RequestPayload>
</BatchItem>
</RequestMessage>

# TIME 2

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:14:36+00:00"/>
</RequestHeader>
</RequestPayload>
</BatchItem>
</RequestMessage>

# TIME 2
0116  <ProtocolVersionMinor type="Integer" value="2"/>
0117   </ProtocolVersion>
0118  <BatchCount type="Integer" value="1"/>
0119   </RequestHeader>
0120  <BatchItem>
0121   <Operation type="Enumeration" value="AddAttribute"/>
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0124  </Attribute>
0125  </AttributeName type="TextString" value="Link"/>
0126  <AttributeValue>
0127   <LinkType type="Enumeration" value="PublicKeyLink"/>
0128   <LinkedObjectIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0129  </AttributeValue>
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This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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  </Attribute>
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    <AttributeName type="TextString" value="Link"/>
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      <Attribute>
        <AttributeName type="TextString" value="Link"/>
        <AttributeValue>
          <LinkType type="Enumeration" value="PublicKeyLink"/>
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# TIME 5

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</KeyBlock>

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  </BatchItem>
</RequestMessage>

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        </KeyMaterial>
      </KeyBlock>
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# TIME 7

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| 0341 | </BatchItem> |
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| 0348 | </ProtocolVersion> |
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# TIME 8

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| 0369 | <Operation type="Enumeration" value="Destroy"/> |
| 0370 | <RequestPayload> |
| 0371 | <UniqueIdentifier type="TextString"
2.3.40 TC-ECC-2-12 - Register an ECC Key Pair in PKCS8 Format

EC recommended curve is secp256k1

- Public Key format SubjectPublicKeyInfo - http://tools.ietf.org/html/rfc5480

Register a EC private key in PKCS8 key format (with passphrase 'secret' using pbeWithSHAAnd3-KeyTripleDES-CBC), then register the corresponding public key, in X.509 (SubjectPublicKeyInfo) format, with the Link attribute pointing to the previously registered private key. Then add the Link attribute to the private key, and perform Locate operations to find the public and private keys using the Link attribute. Get both the private and public keys in default format, then destroy both the private and the public key.

-----BEGIN ENCRYPTED PRIVATE KEY-----
MIGpMBwGCiqGSIb3DQEMAQwDgQ1rUQTS8GObcCAggABIGIA7njjI0W9Cmq60Rn
eFHqc9yko1oSsvg8aETKc4z2xL0AHG2u5RchOIIIwXLTOmzU8m3y2h1ZDz10Ijfg
wX28XZ2gPAo8CAkbuZQ21wzevzz9igF2u3z6PTX+fyyxnj0ou17SeaYp00Ux0
ovFD2eJEW1co9TkBeVhK4ziaHHuvOjH5Wxt4A==
-----END ENCRYPTED PRIVATE KEY-----

-----BEGIN PUBLIC KEY-----
MFYwEAYHkZizj0CAQyFk4EEA0DQgAE2rXTw1MRPbQUq/wcDr9aAlWeZWqhyLCq
jYcKoDm2ikZk1h5tvCWabHglz0Z2KsedZTMQL1gS3Kni1LY28xfTzg==
-----END PUBLIC KEY-----

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0002 <RequestHeader>
0003 <ProtocolVersion>
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<AttributeValue type="Integer" value="Sign"/>
</AttributeName>
</TemplateAttribute>
<PrivateKey>
<KeyBlock>
<KeyForm type="Enumeration" value="PKCS_8"/>
<KeyValue>
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</KeyValue>
</CryptographicAlgorithm type="Enumeration" value="EC"/>
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</ResponsePayload>
</BatchItem>
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```

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```
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            <AttributeName type="TextString" value="Link"/>
            <AttributeValue>
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            <AttributeName type="TextString" value="x-ID"/>
            <AttributeValue type="TextString" value="TC-ECC-2-12-pubkey1"/>
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        </TemplateAttribute>
        <PublicKey>
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            </KeyValue>
            <CryptographicAlgorithm type="Enumeration" value="EC"/>
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# TIME 5

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2.3.41 TC-ECC-3-12 - Register an ECC Key Pair and ECDSA Certificate

EC recommended curve is secp256k1

- Private Key format ECPrivateKey - http://tools.ietf.org/html/rfc5915
- Public Key format SubjectPublicKeyInfo - http://tools.ietf.org/html/rfc5480

Register a EC private key in the ECPrivateKey key format, then register the corresponding public key, in X.509 (SubjectPublicKeyInfo) format, and a corresponding ECDSA certificate, with the Link attribute pointing to the previously registered private key. Return the attribute values for the ECDSA certificate showing the correct server parsing of the certificate. Then add the Link attribute to the private key, and perform Locate operations to find the public and private keys.
using the Link attribute. Get both the private and public keys in default format, then destroy both the private and the public key.

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-----END EC PRIVATE KEY-----

-----BEGIN PUBLIC KEY-----
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This is a Non-Standards Track Work Product.

The patent provisions of the OASIS IPR Policy do not apply.

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  </BatchItem>
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      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
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    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
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    <ResultStatus type="Enumeration" value="Success"/>
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          <KeyValue>
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          </KeyValue>
          <CryptographicAlgorithm type="Enumeration" value="EC"/>
          <CryptographicLength type="Integer" value="256"/>
        </KeyBlock>
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</ResponseMessage>

# TIME 9

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    <ResponsePayload>
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          </KeyValue>
          <CryptographicAlgorithm type="Enumeration" value="EC"/>
          <CryptographicLength type="Integer" value="256"/>
        </KeyBlock>
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</ResponseMessage>
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  <ResponsePayload>
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  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
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    </RequestPayload>
  </BatchItem>
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<ResponseMessage>
  <ResponseHeader>
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This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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  </ResponseHeader>
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    <ResultStatus type="Enumeration" value="Success"/>
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    <RequestPayload>
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    </RequestPayload>
  </BatchItem>
</ResponseMessage>
```
2.3.42 TC-PGP-1-12 - Register PGP Key - RSA

Register a PGP public and private key block. Add the appropriate links between the registered objects. Make sure everything was registered and the attributes set correctly by listing and retrieving the attributes. Get the keys, and finally destroy all the registered objects.

Note: the ascii armored keys are:

```
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mQENBFHA/dQBCADged9e6tib8klFhpwSn1lJseckgjSL5wT1QKkmJMMRI1Ru5R
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QdsUokxzgcycIBcw5RnKtjstW9YCF/j16EtABEBAAGOT0tNSVagVNFUuiBSU0Eg
KE9Bu01lIETeSNYNW5h52VtZ5lEludGvyb3B1cmFiaWxpdkHguHJvdg9jb2wp
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XmM2riXoB681FR4dlV/Xngrevk4S2XFIKx2w0hpsQVqrBKYMcshfFCKScVabV
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4J0j04omkU8Jj4fVlkoOo2o6ks+htD+j5WHxMx1TosgrfuV8z5Mt7U
=nVoy
-----END PGP PUBLIC KEY BLOCK-----
-----BEGIN PGP PRIVATE KEY BLOCK-----
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=nVoy
-----END PGP PRIVATE KEY BLOCK-----
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

Non-Standards Track

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kmip-testcases-v1.2-cn01

11 November 2014
Non-Standards Track

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1180 1gSEThpL74Fzgu0D1gFpEpE75YshqKsDsdskMX1yAmZwuoLDctN8aYrSejrsBy7Rt
1181 337AsWSSmnFtzyYbVlph0GHbDuro/4Ad5o76Mset3Bcl16UGa6UMsbjcv/vv
1182 U6PyjeIeyepvCfo/7G7tsQbIIEwSOXUkamm2etvno3YBMx517x92P72fz8+zCvJ
1183 mAXx5/9QG6q9EMFOGQWYQ5zcTckQ+eGnz2MQmB6jWahqU81XM3/g5Y8f5i870Y
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1185 psH1nPEfJgnB3fJ3p7AC7Mcj5Phx3m9UmCrK1yGMjdFC1+tN2F50SA8A5hCvB
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1187 i1LywogsUxe9ywyaw6PHTHBy+c1hyXcHQfFWfgeyKeo5nGuKBZcqsXJg/Zg1
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1190 rUCx80Y0rnMl6V65XfTIE8+ao2Hl/hgwHERdNspITsGESfE1RxuuNS+iFW/qy3C
1191 E1RPS01JUCBVU0VSIFJTQSAoTOF7TSMgS2V51E1hbgmFn2W1lbnQsW50ZJXvcGyV
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1196 pCDMF8M6EOHsyl/0PbBZ55lvahXqLqCz3u/10nWYkd+v4xsq7EF5sA+eezr5k9
1197 IPk5avTpylRq2h6HT7Zg3bld0SYOTRurL2SkkAzonQuTCewWnu/4QFgXaMbqoaU
1198 So2ICJRU9+1djjq4Z2N+IF1rgnSPtiAaRTwmmPh++WQ6jaJerzU6G2o4n1YFfZfVO
1199 iycT/05XzPky3tQ=
1200 =vd7s

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-----END PGP PRIVATE KEY BLOCK-----
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
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This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
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# TIME 3

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The patent provisions of the OASIS IPR Policy do not apply.

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kmip-testcases-v1.2-cn01
Non-Standards Track
11 November 2014
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Page 814 of 880
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This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
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</RequestMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
Client registers a metadata-only object with the key management server and then locates and gets the value and the associated attributes. Finally the managed object is destroyed.
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    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
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    </RequestPayload>
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# TIME 1

<ResponseMessage>
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      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
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    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

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    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
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      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
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    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
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    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

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    </ProtocolVersion>
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    </RequestPayload>
  </BatchItem>
</RequestMessage>

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    <ResultStatus type="Enumeration" value="Success"/>
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# TIME 2

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</ResponsePayload>
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</ResponseMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
0143     <Attribute>
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0145     </AttributeValue>
0146     </AttributeValue>
0147     </KeyValueLocationValue type="TextString" value="HSM-12345"/>
0148     </KeyValueLocationType type="Enumeration" value="UninterpretedTextString"/>
0149     </AttributeValue>
0150     </Attribute>
0151     <Attribute>
0152         <AttributeName type="TextString" value="Key Value Present"/>
0153     </AttributeValue>
0154     </ResponsePayload>
0155     </BatchItem>
0156     </ResponseMessage>

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0157     <RequestMessage>
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0161                 <ProtocolVersionMinor type="Integer" value="2"/>
0162             </ProtocolVersion>
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0164             <BatchCount type="Integer" value="1"/>
0165         </RequestHeader>
0166         <BatchItem>
0167             <Operation type="Enumeration" value="Destroy"/>
0168             <RequestPayload>
0169                 <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0170             </RequestPayload>
0171         </BatchItem>
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0184             <ResultStatus type="Enumeration" value="Success"/>
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0187             </ResponsePayload>
0188         </BatchItem>
0189     </ResponseMessage>
```
2.3.44 TC-MDO-2-12 - Locate MDO keys by Key Value Present

Client registers both a metadata-only object and a normal object with key management server and then locates just the metadata-only object, and gets the value and the associated attributes. Finally the managed object is destroyed.

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  0008     <BatchCount type="Integer" value="1"/>
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  0010   <BatchItem>
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  0012     <RequestPayload>
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  0014       <TemplateAttribute>
  0015         <AttributeName type="TextString" value="Cryptographic Algorithm"/>
  0016         <AttributeValue type="Enumeration" value="AES"/>
  0017       </AttributeName>
  0018       <AttributeName type="TextString" value="Cryptographic Length"/>
  0019         <AttributeValue type="Integer" value="128"/>
  0020       </AttributeName>
  0021       <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
  0022         <AttributeValue type="Integer" value="Encrypt Verify Sign"/>
  0023       </AttributeName>
  0024       <AttributeName type="TextString" value="Key Value Location"/>
  0025         <AttributeValue>
  0026           <KeyValueLocationValue type="TextString" value="HSM-12345"/>
  0027           <KeyValueLocationType type="Enumeration" value="UninterpretedTextString"/>
  0028       </AttributeName>
  0029       <AttributeName type="TextString" value="Name"/>
  0030         <AttributeValue>
  0031           <NameValue type="TextString" value="MDO-M-2-12-mdokey"/>
  0032       </AttributeName>
  0033   </RequestPayload>
  0034 </BatchItem>
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  </KeyBlock>
</RequestPayload>
</RequestMessage>

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  <BatchItem>
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    <ResultStatus type="Enumeration" value="Success"/>
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    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 1

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    <BatchCount type="Integer" value="1"/>
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  <BatchItem>
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    <RequestPayload>
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        <AttributeValue type="Enumeration" value="AES"/>
      </TemplateAttribute>
      <TemplateAttribute>
        <AttributeName type="TextString" value="Cryptographic Length"/>
        <AttributeValue type="Integer" value="128"/>
      </TemplateAttribute>
      <TemplateAttribute>
        <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
        <AttributeValue type="Integer" value="Encrypt Verify"/>
Sign"/>
</Attribute>
</Attribute>
<AttributeName type="TextString" value="Name"/>
<AttributeValue>
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</AttributeValue>
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</TemplateAttribute>
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</BatchItem>
</RequestMessage>
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</ResponseMessage>

# TIME 2

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<RequestPayload>
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</RequestPayload>
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# TIME 3

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</RequestHeader>
</BatchItem>
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<AttributeName type="TextString" value="Key Value Present"/>
<AttributeName type="TextString" value="Original Creation Date"/>
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</BatchItem>
</RequestMessage>

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</ProtocolVersion>
</BatchCount type="Integer" value="1"/>
</ResponseHeader>
</BatchItem>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

<ResponseMessage>
<ResponseHeader>
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<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
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</BatchItem>
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<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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| 0196 | <ProtocolVersionMinor type="Integer" value="2"/> |
| 0197 | </ProtocolVersion> |
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| 0199 | <BatchCount type="Integer" value="1"/> |
| 0200 | </ResponseHeader> |
| 0201 | <BatchItem> |
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| 0203 | <ResultStatus type="Enumeration" value="Success"/> |
| 0204 | <ResponsePayload> |
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| 0206 | <AttributeName type="TextString" value="Key Value Location"/> |
| 0207 | <AttributeValue> |
| 0208 | <KeyValueLocationValue type="TextString" value="HSM-12345"/> |
| 0209 | <KeyValueLocationType type="Enumeration" value="UninterpretedTextString"/> |
| 0210 | </AttributeValue> |
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| 0214 | </Attribute> |
| 0215 | </ResponsePayload> |
| 0216 | </BatchItem> |
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# TIME 4

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| 0224 | <ProtocolVersionMinor type="Integer" value="2"/> |
| 0225 | </ProtocolVersion> |
| 0226 | <BatchOption type="Boolean" value="true"/> |
| 0227 | <BatchCount type="Integer" value="1"/> |
| 0228 | </RequestHeader> |
| 0229 | <BatchItem> |
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| 0231 | <ResponsePayload> |
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| 0234 | <AttributeName type="TextString" value="Key Value Present"/> |
| 0235 | <AttributeName type="TextString" value="Original Creation Date"/> |
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| 0237 | </BatchItem> |
| 0238 | </RequestMessage> |
| 0239 | <ResponseMessage> |
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| 0243 | <ProtocolVersionMinor type="Integer" value="2"/> |
| 0244 | </ProtocolVersion> |
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
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0246  <BatchCount type="Integer" value="1"/>
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0248  <BatchItem>
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0251      <ResponsePayload>
0252          <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
0253              <AttributeName type="TextString" value="Original Creation Date"/>
0254              <AttributeValue type="DateTime" value="1970-01-01T10:42:00+00:00"/>
0255          </Attribute>
0256      </ResponsePayload>
0257  </BatchItem>
0258  </ResponseMessage>

# TIME 5

0260  <RequestMessage>
0261      <RequestHeader>
0262          <ProtocolVersion>
0263              <ProtocolVersionMajor type="Integer" value="1"/>
0264              <ProtocolVersionMinor type="Integer" value="2"/>
0265          </ProtocolVersion>
0266          <BatchOrderOption type="Boolean" value="true"/>
0267          <BatchCount type="Integer" value="1"/>
0268      </RequestHeader>
0269      <BatchItem>
0270          <Operation type="Enumeration" value="Destroy"/>
0271          <RequestPayload>
0272              <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0273          </RequestPayload>
0274      </BatchItem>
0275  </RequestMessage>

# TIME 6

0276  <ResponseMessage>
0277      <ResponseHeader>
0278          <ProtocolVersion>
0279              <ProtocolVersionMajor type="Integer" value="1"/>
0280              <ProtocolVersionMinor type="Integer" value="2"/>
0281          </ProtocolVersion>
0282          <TimeStamp type="DateTime" value="2013-06-14T07:00:22+00:00"/>
0283          <BatchCount type="Integer" value="1"/>
0284      </ResponseHeader>
0285      <BatchItem>
0286          <Operation type="Enumeration" value="Destroy"/>
0287          <ResultStatus type="Enumeration" value="Success"/>
0288          <ResponsePayload>
0289              <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0290          </ResponsePayload>
0291      </BatchItem>
0292  </ResponseMessage>
```
### 2.3.45 TC-MDO-3-12 - Register MDO Key using PKCS11 URI

Client registers a metadata-only object with the key management server using the URI form of the Key Value Location and then locates and gets the value and the associated attributes. Finally the managed object is destroyed.


```xml
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchOrderOption type="Boolean" value="true"/>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2013-06-14T07:00:22+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
<BatchItem>
  <Operation type="Enumeration" value="Register"/>
  <RequestPayload>
    <ObjectType type="Enumeration" value="SymmetricKey"/>
    <TemplateAttribute>
      <Attribute>
        <AttributeName type="TextString" value="Cryptographic Algorithm"/>
        <AttributeValue type="Enumeration" value="AES"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Cryptographic Length"/>
        <AttributeValue type="Integer" value="128"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
        <AttributeValue type="Integer" value="Encrypt Verify Sign"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Key Value Location"/>
        <AttributeValue>
          <KeyValueLocationValue type="TextString" value="pkcs11:token=My%20Token;object=MDO-M-3;objecttype=secretkey;id=%69%95%3e%5c%f4%bd%ec%91"/>
          <KeyValueLocationType type="Enumeration" value="URI"/>
        </AttributeValue>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Name"/>
        <AttributeValue>
          <NameValue type="TextString" value="MDO-M-3-12"/>
          <NameType type="Enumeration" value="UninterpretedTextString"/>
        </AttributeValue>
      </Attribute>
    </TemplateAttribute>
    <SymmetricKey>
      <KeyBlock>
        <KeyFormatType type="Enumeration" value="Raw"/>
        <CryptographicAlgorithm type="Enumeration" value="AES"/>
        <CryptographicLength type="Integer" value="128"/>
      </KeyBlock>
    </SymmetricKey>
  </RequestPayload>
  </RequestMessage>
</BatchItem>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```xml
0059  <BatchCount type="Integer" value="1"/>
0060  </ResponseHeader>
0061  <BatchItem>
0062      <Operation type="Enumeration" value="Register"/>
0063      <ResultStatus type="Enumeration" value="Success"/>
0064      <ResponsePayload>
0065          <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0066      </ResponsePayload>
0067  </BatchItem>
0068  </ResponseMessage>

# TIME 1
0069  <RequestMessage>
0070      <RequestHeader>
0071          <ProtocolVersion>
0072              <ProtocolVersionMajor type="Integer" value="1"/>
0073              <ProtocolVersionMinor type="Integer" value="2"/>
0074          </ProtocolVersion>
0075          <BatchOrderOption type="Boolean" value="true"/>
0076          <BatchCount type="Integer" value="1"/>
0077      </RequestHeader>
0078      <BatchItem>
0079          <Operation type="Enumeration" value="Get"/>
0080          <RequestPayload>
0081              <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0082          </RequestPayload>
0083      </BatchItem>
0084  </RequestMessage>

0085  <ResponseMessage>
0086      <ResponseHeader>
0087          <ProtocolVersion>
0088              <ProtocolVersionMajor type="Integer" value="1"/>
0089              <ProtocolVersionMinor type="Integer" value="2"/>
0090          </ProtocolVersion>
0091          <TimeStamp type="DateTime" value="2012-11-28T00:15:10+00:00"/>
0092          <BatchCount type="Integer" value="1"/>
0093      </ResponseHeader>
0094      <BatchItem>
0095          <Operation type="Enumeration" value="Get"/>
0096          <ResultStatus type="Enumeration" value="Success"/>
0097          <ResponsePayload>
0098              <ObjectType type="Enumeration" value="SymmetricKey"/>
0099              <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
0100          </ResponsePayload>
0101      </BatchItem>
0102  </ResponseMessage>

# TIME 2
```
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchOrderOption type="Boolean" value="true"/>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <AttributeName type="TextString" value="Key Value Location"/>
      <AttributeName type="TextString" value="Key Value Present"/>
      <AttributeName type="TextString" value="Original Creation Date"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 3

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchOrderOption type="Boolean" value="true"/>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="GetAttributes"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <Attribute>
        <AttributeName type="TextString" value="Key Value Location"/>
        <AttributeValue>
          <KeyValueLocationValue type="TextString" value="pkcs11:token=My%20Token;object=MDO-M-3;objecttype=secretkey;id=%69%95%3e%5c%f4%bd%ec%91"/>
          <KeyValueLocationType type="Enumeration" value="URI"/>
        </AttributeValue>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Key Value Present"/>
        <AttributeValue type="Boolean" value="false"/>
      </Attribute>
    </ResponsePayload>
  </BatchItem>
</RequestMessage>
Create a symmetric key and perform split and join in various combinations.

```xml
<RequestMessage>
  <RequestHeader>
    <ProtocolVersionMajor type="Integer" value="1"/>
    <ProtocolVersionMinor type="Integer" value="2"/>
  </ProtocolVersion>
  <BatchCount type="Integer" value="1"/>
</RequestHeader>
<BatchItem>
  <Operation type="Enumeration" value="Create"/>
  <RequestPayload>
    <ObjectType type="Enumeration" value="SymmetricKey"/>
    <TemplateAttribute>
      <Attribute>
        <AttributeName type="TextString" value="CryptographicAlgorithm"/>
        <AttributeValue type="Enumeration" value="AES"/>
      </Attribute>
    </TemplateAttribute>
  </RequestPayload>
</BatchItem>
</RequestMessage>
```

### TIME 0

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<tr>
<th>Line</th>
<th>XML Fragment</th>
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<tr>
<td>0001</td>
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</tr>
<tr>
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<td><code>&lt;RequestHeader&gt;</code></td>
</tr>
<tr>
<td>0003</td>
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</tr>
<tr>
<td>0004</td>
<td><code>&lt;ProtocolVersionMinor type=&quot;Integer&quot; value=&quot;2&quot;/&gt;</code></td>
</tr>
<tr>
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</tr>
<tr>
<td>0006</td>
<td><code>&lt;Operation type=&quot;Enumeration&quot; value=&quot;Create&quot;/&gt;</code></td>
</tr>
<tr>
<td>0007</td>
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<tr>
<td>0009</td>
<td><code>&lt;TemplateAttribute&gt;</code></td>
</tr>
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<td><code>&lt;AttributeName type=&quot;TextString&quot; value=&quot;CryptographicAlgorithm&quot;/&gt;</code></td>
</tr>
<tr>
<td>0011</td>
<td><code>&lt;AttributeValue type=&quot;Enumeration&quot; value=&quot;AES&quot;/&gt;</code></td>
</tr>
</tbody>
</table>

#### 2.3.46 TC-SJ-1-12 - Create and Split/Join

Create a symmetric key and perform split and join in various combinations.
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```xml
<Attribute>
  <AttributeName type="TextString" value="Cryptographic Length"/>
  <AttributeValue type="Integer" value="128"/>
</Attribute>
<Attribute>
  <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
  <AttributeValue type="Integer" value="Decrypt Encrypt"/>
</Attribute>
<Attribute>
  <AttributeName type="TextString" value="Name"/>
  <AttributeValue>
    <NameValue type="TextString" value="TC-SJ-1-12"/>
    <NameType type="Enumeration" value="UninterpretedTextString"/>
  </AttributeValue>
</Attribute>
</TemplateAttribute>

# TIME 1

```
<SplitKeyParts type="Integer" value="5"/>
<SplitKeyThreshold type="Integer" value="3"/>
<SplitKeyMethod type="Enumeration" value="PolynomialSharingGF2_8"/>
</TemplateAttribute>
</RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2013-06-21T22:18:59+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="CreateSplitKey"/>
    <ResponseStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_4"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_5"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 2
# Successful Join with 3 of the required 3-of-5 keys

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="JoinSplitKey"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_5"/>
      <TemplateAttribute>
        <Attribute>
<AttributeName type="TextString" value="Cryptographic Algorithm"/>
<AttributeValue type="Enumeration" value="AES"/>
</Attribute>
<AttributeName type="TextString" value="Cryptographic Length"/>
<AttributeValue type="Integer" value="128"/>
</Attribute>
<AttributeName type="TextString" value="Cryptographic Usage Mask"/>
<AttributeValue type="Integer" value="Decrypt Encrypt"/>
</Attribute>
<AttributeName type="TextString" value="Name"/>
<AttributeValue>
<NameValue type="TextString" value="TC-SJ-1-12-join1"/>
<NameType type="Enumeration" value="UninterpretedTextString"/>
</AttributeValue>
</Attribute>

# TIME 3
# Non-successful Join with only 2 of the required 3-of-5 keys

<RequestMessage>
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<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</RequestHeader>
<BatchItem>
<Operation type="Enumeration" value="JoinSplitKey"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_6"/>
</ResponsePayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
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<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2013-06-21T22:18:59+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
<BatchItem>
<Operation type="Enumeration" value="JoinSplitKey"/>
<ResultStatus type="Enumeration" value="Success"/>
<ResponsePayload>
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<tr>
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<td><code>&lt;UniqueIdentifier type=&quot;TextString&quot; value=&quot;$UNIQUE_IDENTIFIER_4&quot;/&gt;</code></td>
</tr>
<tr>
<td>0167</td>
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<tr>
<td>0168</td>
<td><code>&lt;Attribute&gt;</code></td>
</tr>
<tr>
<td>0169</td>
<td><code>&lt;AttributeName type=&quot;TextString&quot; value=&quot;Cryptographic Algorithm&quot;/&gt;</code></td>
</tr>
<tr>
<td>0170</td>
<td><code>&lt;AttributeValue type=&quot;Enumeration&quot; value=&quot;AES&quot;/&gt;</code></td>
</tr>
<tr>
<td>0171</td>
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<tr>
<td>0173</td>
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<tr>
<td>0174</td>
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</tr>
<tr>
<td>0175</td>
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<td><code>&lt;Attribute&gt;</code></td>
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<tr>
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<tr>
<td>0178</td>
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<td>0181</td>
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<td><code>&lt;NameValue type=&quot;TextString&quot; value=&quot;TC-SJ-1-12-join2&quot;/&gt;</code></td>
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<td>0187</td>
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<td>0191</td>
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<td>0192</td>
<td><code>&lt;ResponseHeader&gt;</code></td>
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<tr>
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</tr>
<tr>
<td>0194</td>
<td><code>&lt;ProtocolVersionMajor type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</code></td>
</tr>
<tr>
<td>0195</td>
<td><code>&lt;ProtocolVersionMinor type=&quot;Integer&quot; value=&quot;2&quot;/&gt;</code></td>
</tr>
<tr>
<td>0196</td>
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<tr>
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<td>0198</td>
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<tr>
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<tr>
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<tr>
<td>0202</td>
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</tr>
</tbody>
</table>

# TIME 4

0207 | `<RequestMessage>` |
0208 | `<RequestHeader>` |
0209 | `<ProtocolVersion>` |
0210 | `<ProtocolVersionMajor type="Integer" value="1"/>` |
0211 | `<ProtocolVersionMinor type="Integer" value="2"/>` |
0212 | `</ProtocolVersion>` |
0213 | `<BatchCount type="Integer" value="1"/>`
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2013-06-21T22:18:59+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 5

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2013-06-21T22:18:59+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
  </BatchItem>
</ResponseMessage>
```
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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</tr>
<tr>
<td>0276</td>
<td><code>&lt;/ProtocolVersion&gt;</code></td>
</tr>
<tr>
<td>0277</td>
<td><code>&lt;BatchCount type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</code></td>
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<tr>
<td>0278</td>
<td><code>&lt;/RequestHeader&gt;</code></td>
</tr>
<tr>
<td>0279</td>
<td><code>&lt;BatchItem&gt;</code></td>
</tr>
<tr>
<td>0280</td>
<td><code>&lt;Operation type=&quot;Enumeration&quot; value=&quot;Destroy&quot;/&gt;</code></td>
</tr>
<tr>
<td>0281</td>
<td><code>&lt;RequestPayload&gt;</code></td>
</tr>
<tr>
<td>0282</td>
<td><code>&lt;UniqueIdentifier type=&quot;TextString&quot; value=&quot;$UNIQUE_IDENTIFIER_2&quot;/&gt;</code></td>
</tr>
<tr>
<td>0283</td>
<td><code>&lt;/RequestPayload&gt;</code></td>
</tr>
<tr>
<td>0284</td>
<td><code>&lt;/BatchItem&gt;</code></td>
</tr>
<tr>
<td>0285</td>
<td><code>&lt;/RequestMessage&gt;</code></td>
</tr>
<tr>
<td>0286</td>
<td><code>&lt;ResponseMessage&gt;</code></td>
</tr>
<tr>
<td>0287</td>
<td><code>&lt;ResponseHeader&gt;</code></td>
</tr>
<tr>
<td>0288</td>
<td><code>&lt;ProtocolVersion&gt;</code></td>
</tr>
<tr>
<td>0289</td>
<td><code>&lt;ProtocolVersionMajor type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</code></td>
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<tr>
<td>0290</td>
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<tr>
<td>0291</td>
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<tr>
<td>0292</td>
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<tr>
<td>0294</td>
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</tr>
<tr>
<td>0295</td>
<td><code>&lt;BatchItem&gt;</code></td>
</tr>
<tr>
<td>0296</td>
<td><code>&lt;Operation type=&quot;Enumeration&quot; value=&quot;Destroy&quot;/&gt;</code></td>
</tr>
<tr>
<td>0297</td>
<td><code>&lt;ResponseStatus type=&quot;Enumeration&quot; value=&quot;Success&quot;/&gt;</code></td>
</tr>
<tr>
<td>0298</td>
<td><code>&lt;ResponsePayload&gt;</code></td>
</tr>
<tr>
<td>0299</td>
<td><code>&lt;UniqueIdentifier type=&quot;TextString&quot; value=&quot;$UNIQUE_IDENTIFIER_2&quot;/&gt;</code></td>
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<tr>
<td>0300</td>
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</tr>
<tr>
<td>0301</td>
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</tr>
<tr>
<td>0302</td>
<td><code>&lt;/ResponseMessage&gt;</code></td>
</tr>
<tr>
<td># TIME 7</td>
<td></td>
</tr>
<tr>
<td>0303</td>
<td><code>&lt;RequestMessage&gt;</code></td>
</tr>
<tr>
<td>0304</td>
<td><code>&lt;RequestHeader&gt;</code></td>
</tr>
<tr>
<td>0305</td>
<td><code>&lt;ProtocolVersion&gt;</code></td>
</tr>
<tr>
<td>0306</td>
<td><code>&lt;ProtocolVersionMajor type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</code></td>
</tr>
<tr>
<td>0307</td>
<td><code>&lt;ProtocolVersionMinor type=&quot;Integer&quot; value=&quot;2&quot;/&gt;</code></td>
</tr>
<tr>
<td>0308</td>
<td><code>&lt;/ProtocolVersion&gt;</code></td>
</tr>
<tr>
<td>0309</td>
<td><code>&lt;BatchCount type=&quot;Integer&quot; value=&quot;1&quot;/&gt;</code></td>
</tr>
<tr>
<td>0310</td>
<td><code>&lt;/RequestHeader&gt;</code></td>
</tr>
<tr>
<td>0311</td>
<td><code>&lt;BatchItem&gt;</code></td>
</tr>
<tr>
<td>0312</td>
<td><code>&lt;Operation type=&quot;Enumeration&quot; value=&quot;Destroy&quot;/&gt;</code></td>
</tr>
<tr>
<td>0313</td>
<td><code>&lt;RequestPayload&gt;</code></td>
</tr>
<tr>
<td>0314</td>
<td><code>&lt;UniqueIdentifier type=&quot;TextString&quot; value=&quot;$UNIQUE_IDENTIFIER_3&quot;/&gt;</code></td>
</tr>
<tr>
<td>0315</td>
<td><code>&lt;/RequestPayload&gt;</code></td>
</tr>
</tbody>
</table>
<BatchItem>
</RequestMessage>

<ResponseMessage>
    <ResponseHeader>
        <ProtocolVersion>
            <ProtocolVersionMajor type="Integer" value="1"/>
            <ProtocolVersionMinor type="Integer" value="2"/>
        </ProtocolVersion>
        <TimeStamp type="DateTime" value="2013-06-21T22:18:59+00:00"/>
        <BatchCount type="Integer" value="1"/>
    </ResponseHeader>
    <BatchItem>
        <Operation type="Enumeration" value="Destroy"/>
        <ResultStatus type="Enumeration" value="Success"/>
        <ResponsePayload>
            <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
        </ResponsePayload>
    </BatchItem>
</ResponseMessage>

# TIME 8

<RequestMessage>
    <RequestHeader>
        <ProtocolVersion>
            <ProtocolVersionMajor type="Integer" value="1"/>
            <ProtocolVersionMinor type="Integer" value="2"/>
        </ProtocolVersion>
        <BatchCount type="Integer" value="1"/>
    </RequestHeader>
    <BatchItem>
        <Operation type="Enumeration" value="Destroy"/>
        <RequestPayload>
            <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_4"/>
        </RequestPayload>
    </BatchItem>
</RequestMessage>

<ResponseMessage>
    <ResponseHeader>
        <ProtocolVersion>
            <ProtocolVersionMajor type="Integer" value="1"/>
            <ProtocolVersionMinor type="Integer" value="2"/>
        </ProtocolVersion>
        <TimeStamp type="DateTime" value="2013-06-21T22:18:59+00:00"/>
        <BatchCount type="Integer" value="1"/>
    </ResponseHeader>
    <BatchItem>
        <Operation type="Enumeration" value="Destroy"/>
        <ResultStatus type="Enumeration" value="Success"/>
        <ResponsePayload>
            <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_4"/>
        </ResponsePayload>
    </BatchItem>
</ResponseMessage>

# TIME 9
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
  </RequestHeader>
  <BatchCount type="Integer" value="1"/>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_5"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

# TIME 10

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
  </RequestHeader>
  <BatchCount type="Integer" value="1"/>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueId type="TextString" value="$UNIQUE_IDENTIFIER_6"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
2.3.47 TC-SJ-2-12 - Register and Split / Join

Register a symmetric key and perform split and join in various combinations.

```xml
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <TemplateAttribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
          <AttributeValue type="Integer" value="Encrypt Decrypt"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="x-ID"/>
          <AttributeValue type="TextString" value="TC-SJ-2-12"/>
        </Attribute>
      </TemplateAttribute>
      <SymmetricKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="0102030405060708090A0B0C0D0E0F10"/>
          </KeyValue>
          <CryptographicAlgorithm type="Enumeration" value="AES"/>
          <CryptographicLength type="Integer" value="128"/>
        </KeyBlock>
      </SymmetricKey>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="CreateSplitKey"/>
    <ObjectType type="Enumeration" value="SplitKey"/>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    <SplitKeyParts type="Integer" value="4"/>
    <SplitKeyThreshold type="Integer" value="2"/>
    <SplitKeyMethod type="Enumeration" value="PolynomialSharingGF2_8"/>
    <TemplateAttribute/>
    <TemplateAttribute/>
  </BatchItem>
</RequestMessage>

# TIME 1

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="CreateSplitKey"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <SplitKeyParts type="Integer" value="4"/>
      <SplitKeyThreshold type="Integer" value="2"/>
      <SplitKeyMethod type="Enumeration" value="PolynomialSharingGF2_8"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2013-06-21T22:18:59+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="CreateSplitKey"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
# TIME 2

```xml
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```

```xml
<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2013-06-21T22:18:59+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SplitKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <SplitKey>
        <SplitKeyParts type="Integer" value="4"/>
        <KeyPartIdentifier type="Integer" value="1"/>
        <SplitKeyThreshold type="Integer" value="2"/>
        <SplitKeyMethod type="Enumeration" value="PolynomialSharingGF2_8"/>
      </SplitKey>
      <KeyBlock>
        <KeyFormatType type="Enumeration" value="Raw"/>
        <KeyValue>
          <KeyMaterial type="ByteString" value="66C46A7754F94DE420C7B1A7FFF5EC56"/>
        </KeyValue>
        <CryptographicAlgorithm type="Enumeration" value="AES"/>
      </KeyBlock>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
This is a Non-Standards Track Work Product.

The patent provisions of the OASIS IPR Policy do not apply.

```
<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2013-06-21T22:18:59+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
    </RequestPayload>
    <BatchItem>
      <Operation type="Enumeration" value="Get"/>
      <RequestPayload>
        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
      </RequestPayload>
    </BatchItem>
    <BatchItem>
      <Operation type="Enumeration" value="Get"/>
      <RequestPayload>
        <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
      </RequestPayload>
    </BatchItem>
  </BatchItem>
</ResponseMessage>

# TIME 3

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2013-06-21T22:18:59+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <ObjectType type="Enumeration" value="SplitKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
      <SplitKey>
        <SplitKeyParts type="Integer" value="4"/>
        <KeyPartIdentifier type="Integer" value="2"/>
        <SplitKeyThreshold type="Integer" value="2"/>
        <SplitKeyMethod type="Enumeration" value="PolynomialSharingGF2_8"/>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="CF93D1E2A7E593CD5B8D6247F4E5D49C"/>
          </KeyValue>
          <CryptographicAlgorithm type="Enumeration" value="AES"/>
          <CryptographicLength type="Integer" value="128"/>
        </KeyBlock>
      </SplitKey>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</RequestHeader>
<BatchItem>
  <Operation type="Enumeration" value="Get"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_4"/>
  </RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2013-06-21T22:18:59+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <SplitKey>
        <SplitKeyParts type="Integer" value="4"/>
        <KeyPartIdentifier type="Integer" value="4"/>
        <SplitKeyThreshold type="Integer" value="2"/>
        <SplitKeyMethod type="Enumeration" value="PolynomialSharingGF2_8"/>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyMaterial type="ByteString" value="803DBAD55CDD329FAD19D99AE2C5A415"/>
        </KeyBlock>
      </SplitKey>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 6
# Successful Join with 2 of the required 2-of-4 keys
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```
<BatchCount type="Integer" value="1"/>
</RequestHeader>
<BatchItem>
  <Operation type="Enumeration" value="JoinSplitKey"/>
  <RequestPayload>
    <ObjectType type="Enumeration" value="SymmetricKey"/>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
    <TemplateAttribute>
      <Attribute>
        <AttributeName type="TextString" value="Cryptographic Algorithm"/>
        <AttributeValue type="Enumeration" value="AES"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Cryptographic Length"/>
        <AttributeValue type="Integer" value="128"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
        <AttributeValue type="Integer" value="Decrypt Encrypt"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="Name"/>
        <AttributeValue>
          <NameValue type="TextString" value="TC-SJ-2-12-join1"/>
          <NameType type="Enumeration" value="UninterpretedTextString"/>
        </AttributeValue>
      </Attribute>
    </TemplateAttribute>
  </RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2013-06-21T22:18:59+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="JoinSplitKey"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_5"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
```
```xml
0337  <RequestMessage>
0338   <RequestHeader>
0339     <ProtocolVersion>
0340       <ProtocolVersionMajor type="Integer" value="1"/>
0341       <ProtocolVersionMinor type="Integer" value="2"/>
0342     </ProtocolVersion>
0343     <BatchCount type="Integer" value="1"/>
0344   </RequestHeader>
0345   <BatchItem>
0346     <Operation type="Enumeration" value="Get"/>
0347     <RequestPayload>
0348       <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_5"/>
0349     </RequestPayload>
0350   </BatchItem>
0351 </RequestMessage>

0352  <ResponseMessage>
0353   <ResponseHeader>
0354     <ProtocolVersion>
0355       <ProtocolVersionMajor type="Integer" value="1"/>
0356       <ProtocolVersionMinor type="Integer" value="2"/>
0357     </ProtocolVersion>
0358     <TimeStamp type="DateTime" value="2013-06-21T22:18:59+00:00"/>
0359     <BatchCount type="Integer" value="1"/>
0360   </ResponseHeader>
0361   <BatchItem>
0362     <Operation type="Enumeration" value="Get"/>
0363     <ResultStatus type="Enumeration" value="Success"/>
0364     <ResponsePayload>
0365       <ObjectType type="Enumeration" value="SymmetricKey"/>
0366       <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_5"/>
0367       <SymmetricKey>
0368         <KeyBlock>
0369           <KeyFormatType type="Enumeration" value="Raw"/>
0370           <KeyValue>
0371             <KeyMaterial type="ByteString" value="0102030405060708090A0B0C0D0E0F10"/>
0372             </KeyMaterial>
0373             <CryptographicAlgorithm type="Enumeration" value="AES"/>
0374             <CryptographicLength type="Integer" value="128"/>
0375           </KeyValue>
0376         </KeyBlock>
0377       </SymmetricKey>
0378     </ResponsePayload>
0379   </BatchItem>
0380 </ResponseMessage>

# TIME 8
# Non-successful Join with only 1 of the required 2-of-4 keys

0381  <RequestMessage>
0382   <RequestHeader>
0383     <ProtocolVersion>
0384       <ProtocolVersionMajor type="Integer" value="1"/>
0385       <ProtocolVersionMinor type="Integer" value="2"/>
0386     </ProtocolVersion>
0387     <BatchCount type="Integer" value="1"/>
0388   </RequestHeader>
```
<Operation type="Enumeration" value="JoinSplitKey"/>
<RequestPayload>
  <ObjectType type="Enumeration" value="SymmetricKey"/>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
</RequestPayload>
</BatchItem>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2013-06-21T22:18:59+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="JoinSplitKey"/>
    <ResultStatus type="Enumeration" value="OperationFailed"/>
    <ResultReason type="Enumeration" value="CryptographicFailure"/>
    <ResultMessage type="TextString" value="FAILURE"/>
  </BatchItem>
</ResponseMessage>

# TIME 9

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2013-06-21T22:18:59+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
<ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 10

| 0441 | </RequestMessage> |
| 0442 | <RequestHeader> |
| 0443 | <ProtocolVersion> |
| 0444 | <ProtocolVersionMajor type="Integer" value="1"/> |
| 0445 | <ProtocolVersionMinor type="Integer" value="2"/> |
| 0446 | </ProtocolVersion> |
| 0447 | <BatchCount type="Integer" value="1"/> |
| 0448 | </RequestHeader> |
| 0449 | <BatchItem> |
| 0450 | <Operation type="Enumeration" value="Destroy"/> |
| 0451 | <RequestPayload> |
| 0452 | <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/> |
| 0453 | </RequestPayload> |
| 0454 | </BatchItem> |
| 0455 | <ResponseMessage> |
| 0456 | <ResponseHeader> |
| 0457 | <ProtocolVersion> |
| 0458 | <ProtocolVersionMajor type="Integer" value="1"/> |
| 0459 | <ProtocolVersionMinor type="Integer" value="2"/> |
| 0460 | </ProtocolVersion> |
| 0461 | <TimeStamp type="DateTime" value="2013-06-21T22:18:59+00:00"/> |
| 0462 | <BatchCount type="Integer" value="1"/> |
| 0463 | </ResponseHeader> |
| 0464 | <BatchItem> |
| 0465 | <Operation type="Enumeration" value="Destroy"/> |
| 0466 | <ResultStatus type="Enumeration" value="Success"/> |
| 0467 | <ResponsePayload> |
| 0468 | <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/> |
| 0469 | </ResponsePayload> |
| 0470 | </BatchItem> |
| 0471 | </ResponseMessage> |
| 0472 | # TIME 11 |
| 0473 | <RequestMessage> |
| 0474 | <RequestHeader> |
| 0475 | <ProtocolVersion> |
| 0476 | <ProtocolVersionMajor type="Integer" value="1"/> |
| 0477 | <ProtocolVersionMinor type="Integer" value="2"/> |
| 0478 | </ProtocolVersion> |
| 0479 | <BatchCount type="Integer" value="1"/> |
| 0480 | </RequestHeader> |
| 0481 | <BatchItem> |
| 0482 | <Operation type="Enumeration" value="Destroy"/> |
| 0483 | <RequestPayload> |
| 0484 | <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/> |
| 0485 | </RequestPayload> |
| 0486 | </BatchItem> |
| 0487 | </RequestMessage> |
| 0488 | </ResponseMessage> |
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

0492  <ResponseHeader>
0493       <ProtocolVersion>
0494           <ProtocolVersionMajor type="Integer" value="1"/>
0495           <ProtocolVersionMinor type="Integer" value="2"/>
0496       </ProtocolVersion>
0497       <TimeStamp type="DateTime" value="2013-06-21T22:18:59+00:00"/>
0498       <BatchCount type="Integer" value="1"/>
0499   </ResponseHeader>
0500       <BatchItem>
0501           <Operation type="Enumeration" value="Destroy"/>
0502           <ResultStatus type="Enumeration" value="Success"/>
0503           <ResponsePayload>
0504               <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
0505           </ResponsePayload>
0506       </BatchItem>
0507   </ResponseMessage>

# TIME 12

0508 <RequestMessage>
0509       <RequestHeader>
0510           <ProtocolVersion>
0511               <ProtocolVersionMajor type="Integer" value="1"/>
0512               <ProtocolVersionMinor type="Integer" value="2"/>
0513           </ProtocolVersion>
0514       <BatchCount type="Integer" value="1"/>
0515   </RequestHeader>
0516       <BatchItem>
0517           <Operation type="Enumeration" value="Destroy"/>
0518           <RequestPayload>
0519               <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
0520           </RequestPayload>
0521       </BatchItem>
0522 </RequestMessage>

0523 <ResponseMessage>
0524       <ResponseHeader>
0525           <ProtocolVersion>
0526               <ProtocolVersionMajor type="Integer" value="1"/>
0527               <ProtocolVersionMinor type="Integer" value="2"/>
0528           </ProtocolVersion>
0529       <TimeStamp type="DateTime" value="2013-06-21T22:18:59+00:00"/>
0530       <BatchCount type="Integer" value="1"/>
0531   </ResponseHeader>
0532       <BatchItem>
0533           <Operation type="Enumeration" value="Destroy"/>
0534           <ResultStatus type="Enumeration" value="Success"/>
0535           <ResponsePayload>
0536               <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
0537           </ResponsePayload>
0538       </BatchItem>
0539   </ResponseMessage>

# TIME 13

0540 <RequestMessage>
0541       <RequestHeader>

<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
</BatchItem>
<Operation type="Enumeration" value="Destroy"/>
<RequestPayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_4"/>
</RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2013-06-21T22:18:59+00:00"/>
.BatchNorm type="Integer" value="1"/>
</ResponseHeader>
<BatchItem>
<Operation type="Enumeration" value="Destroy"/>
<ResponseStatus type="Enumeration" value="Success"/>
<ResponsePayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_4"/>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 14

<RequestMessage>
<RequestHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</RequestHeader>
<BatchItem>
<Operation type="Enumeration" value="Destroy"/>
<RequestPayload>
<UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_5"/>
</RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
<ResponseHeader>
<ProtocolVersion>
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2013-06-21T22:18:59+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
</ResponseMessage>
## 2.3.48 TC-SJ-3-12 - Join Split Keys

Register split keys and join in various combinations.

```xml
# TIME 0
0001 <RequestMessage>
0002   <RequestHeader>
0003     <ProtocolVersion>
0004       <ProtocolVersionMajor type="Integer" value="1"/>
0005       <ProtocolVersionMinor type="Integer" value="2"/>
0006     </ProtocolVersion>
0007     <BatchItemCount type="Integer" value="1"/>
0008   </RequestHeader>
0009   <BatchItem>
0010     <Operation type="Enumeration" value="Register"/>
0011     <RequestPayload>
0012       <ObjectType type="Enumeration" value="SplitKey"/>
0013       <TemplateAttribute>
0014         <Attribute>
0015           <AttributeName type="TextString" value="x-ID"/>
0016           <AttributeValue type="TextString" value="TC-SJ-3-12-split1"/>
0017         </Attribute>
0018       </TemplateAttribute>
0019     </SplitKey>
0020     <SplitKeyParts type="Integer" value="4"/>
0021     <KeyPartIdentifier type="Integer" value="1"/>
0022     <SplitKeyThreshold type="Integer" value="2"/>
0023     <SplitKeyMethod type="Enumeration"
0024       value="PolynomialSharingGF2_8"/>
0025       <KeyBlock>
0026         <KeyFormatType type="Enumeration" value="Raw"/>
0027         <KeyValue>
0028           <KeyMaterial type="ByteString"
0029             value="66C46A7754F94DE420C7B1A7FFF5EC56"/>
0030         </KeyValue>
0031       </KeyBlock>
0032     </RequestPayload>
0033   </BatchItem>
0034 </RequestMessage>
0035 <ResponseMessage>
0036   <ResponseHeader>
0595   </BatchItem>
0596   <Operation type="Enumeration" value="Destroy"/>
0597   <ResultStatus type="Enumeration" value="Success"/>
0598   <ResponsePayload>
0600   <UniqueIdentifier type="TextString"
0601     value="$UNIQUE_IDENTIFIER_5"/>
0602 </ResponsePayload>
0603   </BatchItem>
0604 </ResponseMessage>
```

This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.
```xml
<ProtocolVersionMajor type="Integer" value="1"/>
<ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>

<BatchItem>
  <Operation type="Enumeration" value="Register"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  </ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 1

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="SplitKey"/>
      <TemplateAttribute>
        <Attribute>
          <AttributeName type="TextString" value="x-ID"/>
          <AttributeValue type="TextString" value="TC-SJ-3-12-split2"/>
        </Attribute>
      </TemplateAttribute>
      <SplitKey>
        <SplitKeyParts type="Integer" value="4"/>
        <KeyPartIdentifier type="Integer" value="2"/>
        <SplitKeyThreshold type="Integer" value="2"/>
        <SplitKeyMethod type="Enumeration" value="PolynomialSharingGF2_8"/>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="CF93D1E2A7E593CD5B8D6247F4E5D49C"/>
          </KeyValue>
        </KeyBlock>
      </SplitKey>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
  </ResponseHeader>
</ResponseMessage>
```
<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>

<BatchCount type="Integer" value="1"/>

<Operation type="Enumeration" value="Register"/>

<ResultStatus type="Enumeration" value="Success"/>

<ResponsePayload>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
</ResponsePayload>

</BatchItem>

</ResponseMessage>

# TIME 2

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="SplitKey">
        <TemplateAttribute>
          <Attribute>
            <AttributeName type="TextString" value="x-ID"/>
            <AttributeValue type="TextString" value="TC-SJ-3-12-split3"/>
          </Attribute>
        </TemplateAttribute>
        <SplitKey>
          <SplitKeyParts type="Integer" value="4"/>
          <KeyPartIdentifier type="Integer" value="3"/>
          <SplitKeyThreshold type="Integer" value="2"/>
          <SplitKeyMethod type="Enumeration" value="PolynomialSharingGF2_8"/>
          <KeyBlock>
            <KeyFormatType type="Enumeration" value="Raw"/>
            <KeyValue>
              <KeyMaterial type="ByteString" value="A855B891F61AD9217240D8EC061E37DA"/>
            </KeyValue>
          </KeyBlock>
        </SplitKey>
      </RequestPayload>
    </BatchItem>
  </RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
<BatchItem>
  <Operation type="Enumeration" value="Register"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
  </ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 3

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="SplitKey"/>
      <TemplateAttribute>
        <Attribute>
          <AttributeName type="TextString" value="x-ID"/>
          <AttributeValue type="TextString" value="TC-SJ-3-12-split4"/>
        </Attribute>
      </TemplateAttribute>
      <SplitKey>
        <SplitKeyParts type="Integer" value="4"/>
        <KeyPartIdentifier type="Integer" value="4"/>
        <SplitKeyThreshold type="Integer" value="2"/>
        <SplitKeyMethod type="Enumeration"
          value="PolynomialSharingGF2_8"/>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="803DBAD55CDD329FAD19D99AE2C5A415"/>
          </KeyValue>
        </KeyBlock>
      </SplitKey>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2012-04-27T08:12:25+00:00"/>
</ResponseMessage>

<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<BatchCount type="Integer" value="1"/>
</ResponseHeader>
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

```xml
<BatchItem>
  <Operation type="Enumeration" value="Register"/>
  <ResultStatus type="Enumeration" value="Success"/>
  <ResponsePayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
  </ResponsePayload>
</BatchItem>

# TIME 4
# Successful Join with 2 of the required 2-of-4 keys

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="JoinSplitKey"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
      <TemplateAttribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Algorithm"/>
          <AttributeValue type="Enumeration" value="AES"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Length"/>
          <AttributeValue type="Integer" value="128"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
          <AttributeValue type="Integer" value="Decrypt Encrypt"/>
        </Attribute>
        <Attribute>
          <AttributeName type="TextString" value="Name"/>
          <AttributeValue type="TextString" value="TC-SJ-3-12-join1"/>
        </Attribute>
      </TemplateAttribute>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
```

# TIME 4
<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>
<TimeStamp type="DateTime" value="2013-06-21T22:18:59+00:00"/>

# TIME 5

<RequestMessage>
<RequestHeader>
  <ProtocolVersion>
    <ProtocolVersionMajor type="Integer" value="1"/>
    <ProtocolVersionMinor type="Integer" value="2"/>
  </ProtocolVersion>
  <BatchCount type="Integer" value="1"/>
</RequestHeader>
<BatchItem>
  <Operation type="Enumeration" value="Get"/>
  <RequestPayload>
    <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_4"/>
  </RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2013-06-21T22:18:59+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_4"/>
      <SymmetricKey>
        <KeyBlock>
          <KeyFormatType type="Enumeration" value="Raw"/>
          <KeyValue>
            <KeyMaterial type="ByteString" value="0102030405060708090a0b0c0d0e0f10"/>
          </KeyValue>
        </KeyBlock>
      </SymmetricKey>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>
<CryptographicLength type="Integer" value="128"/>
</KeyBlock>
</ResponsePayload>
</BatchItem>
</ResponseMessage>

# TIME 6
# Non-successful Join with only 1 of the required 2-of-4 keys

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="JoinSplitKey"/>
    <RequestPayload>
      <ObjectType type="Enumeration" value="SymmetricKey"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2013-06-21T22:18:59+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="JoinSplitKey"/>
    <ResultStatus type="Enumeration" value="OperationFailed"/>
    <ResultReason type="Enumeration" value="CryptographicFailure"/>
    <ResultMessage type="TextString" value="FAILURE"/>
  </BatchItem>
</ResponseMessage>

# TIME 7

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>
<BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2013-06-21T22:18:59+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 8

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2013-06-21T22:18:59+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 9
This is a Non-Standards Track Work Product. The patent provisions of the OASIS IPR Policy do not apply.

```xml
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2013-06-21T22:18:59+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 10

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
    </RequestPayload>
  </BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Destroy"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
    </RequestPayload>
  </BatchItem>
</ResponseMessage>
```
Register a symmetric key and perform split and join in various combinations.
```
<RequestHeader>
  <ProtocolVersion>
    <ProtocolVersionMajor type="Integer" value="1"/>
    <ProtocolVersionMinor type="Integer" value="2"/>
  </ProtocolVersion>
  <BatchCount type="Integer" value="1"/>
</RequestHeader>

<BatchItem>
  <Operation type="Enumeration" value="Register"/>
  <RequestPayload>
    <ObjectType type="Enumeration" value="SymmetricKey"/>
    <TemplateAttribute>
      <Attribute>
        <AttributeName type="TextString" value="Cryptographic Usage Mask"/>
        <AttributeValue type="Integer" value="Encrypt Decrypt"/>
      </Attribute>
      <Attribute>
        <AttributeName type="TextString" value="x-ID"/>
        <AttributeValue type="TextString" value="TC-SJ-4-12"/>
      </Attribute>
    </TemplateAttribute>
    <SymmetricKey>
      <KeyBlock>
        <KeyFormatType type="Enumeration" value="Raw"/>
        <KeyValue>
          <KeyMaterial type="ByteString" value="0102030405060708090a0b0c0d0e0f10"/>
        </KeyValue>
        <CryptographicAlgorithm type="Enumeration" value="AES"/>
        <CryptographicLength type="Integer" value="128"/>
      </KeyBlock>
    </SymmetricKey>
  </RequestPayload>
</BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2013-06-21T22:18:59+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Register"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 1
```

<ProtocolVersion>
  <ProtocolVersionMajor type="Integer" value="1"/>
  <ProtocolVersionMinor type="Integer" value="2"/>
</ProtocolVersion>

<BatchCount type="Integer" value="1"/>

<Operation type="Enumeration" value="CreateSplitKey"/>

<RequestPayload>
  <ObjectType type="Enumeration" value="SplitKey"/>
  <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_0"/>
  <SplitKeyParts type="Integer" value="4"/>
  <SplitKeyThreshold type="Integer" value="4"/>
  <SplitKeyMethod type="Enumeration" value="XOR"/>
  <TemplateAttribute/>
</RequestPayload>

</BatchItem>
</RequestMessage>

<ResponseMessage>
  <ResponseHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <TimeStamp type="DateTime" value="2013-06-21T22:18:59+00:00"/>
    <BatchCount type="Integer" value="1"/>
  </ResponseHeader>
  <BatchItem>
    <Operation type="Enumeration" value="CreateSplitKey"/>
    <ResultStatus type="Enumeration" value="Success"/>
    <ResponsePayload>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_1"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_2"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_3"/>
      <UniqueIdentifier type="TextString" value="$UNIQUE_IDENTIFIER_4"/>
    </ResponsePayload>
  </BatchItem>
</ResponseMessage>

# TIME 2

<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
    <RequestPayload>
      <UniqueIdentifier type="TextString"/>
<RequestMessage>
  <RequestHeader>
    <ProtocolVersion>
      <ProtocolVersionMajor type="Integer" value="1"/>
      <ProtocolVersionMinor type="Integer" value="2"/>
    </ProtocolVersion>
    <BatchCount type="Integer" value="1"/>
  </RequestHeader>
  <BatchItem>
    <Operation type="Enumeration" value="Get"/>
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    <SplitKeyThreshold type="Integer" value="4"/>
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# TIME 6
# Successful Join with 4 of the required 4-of-4 keys

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# TIME 7

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# TIME 8
# Non-successful Join with only 1 of the required 4-of-4 keys

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# TIME 9

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# TIME 10

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This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.


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This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

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Appendix A. Acknowledgments

The following individuals have participated in the creation of this specification and are gratefully acknowledged:

Editors of the previous versions of this document:

Mathias Björkqvist, IBM (v1.0 and v1.1)
Tim Hudson, Cryptsoft (v1.1)
René Pawlitzek, IBM (v1.0)

Technical Committee Participants:

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Gordon Arnold, IBM
Todd Arnold, IBM
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Indra Fitzgerald, Hewlett-Packard
Judith Furlong, EMC Corporation
Susan Gleeson, Oracle
Robert Griffin, EMC Corporation
Paul Grojean, Individual
Robert Haas, IBM
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Appendix B. Revision History

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<td>26-June-2013</td>
<td>Tim Hudson / Faisal Faruqui</td>
<td>Initial draft with updated conformance wording style. Updated test case style. Included test cases for 1.0, 1.1 and 1.2. Applied new OASIS template.</td>
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<td>wd02</td>
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<td>wd02a</td>
<td>24-October-2013</td>
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<td>Editorial corrections to two typographical errors in the test cases in TC-71-{10,11,12}, TC-MDO-{1,2}.</td>
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