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Related work:
> This specification replaces or supersedes:

> - None

> This specification is related to:

> - Key Management Interoperability Protocol Specification Version 1.0
> - Key Management Interoperability Protocol Profiles Version 1.0
> - Key Management Interoperability Protocol Usage Guide Version 1.0

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 Key Management Interoperability Protocol TC on the above date. The level of approval is also listed above. Check the "Latest Version" or "Latest Approved Version" location noted above for possible later revisions of this document.

Technical Committee members should send comments on this specification 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 http://www.oasis-open.org/committees/kmip/.

For information on whether any patents have been disclosed that may be essential to implementing this specification, and any offers of patent licensing terms, please refer to the Intellectual Property Rights section of the Technical Committee web page (http://www.oasis-open.org/committees/kmip/ipr.php).

The non-normative errata page for this specification is located at http://www.oasis-open.org/committees/kmip/.

Notices

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~~1~~1 Introduction

The purpose of this document is to describe use-cases to demonstrate the Key Management Interoperability Protocol (KMIP) ~~[[~~**KMIP-Spec]**~~]~~ ~~.~~. The use-cases indicate if all concepts within the protocol are sound and if the protocol is usable when implementing typical scenarios in real life. These use-cases are not intended to fully test an implementation of KMIP. Thus, the use-cases do not contain typical ~~QA~~Quality Assurance scenarios which would stress an implementation. The use-cases are based on v1.0 of the protocol.

The use-cases define a number of client-to-server request-response pairs for a number of operations. For each request-response message pair the operation is stated, along with the relevant parameters needed for the request or response message. This is followed by two different illustrations of the messages: first, a human-readable construction which shows the fields tags, types and values, followed by the TTLV-encoding of the message. These are included to facilitate the implementation of the message creation and parsing functionality. The use-cases show one possible way to construct the messages, and the messages shown are not necessarily the only correct constructions (e.g. it is possible to omit the attribute index if it is zero). Also note that many values change dynamically when running the use-cases (the server-generated timestamps, Unique Identifiers and key material in responses, as well as Batch Item ID values in client-generated requests).

In many situations in the use cases defined in this document, the server behavior depends on the server's policy. The illustrated message exchanges and their contents are not the only possible variants (see **[KMIP-Spec]**). E.g., the server response messages shown in this document correspond to a server policy of completely destroying a managed object, along with all of its attributes, when receiving a Destroy request.

Multiple use cases describe several clients operating on the same managed object(s). For this to work, the clients SHALL have authenticated themselves to the server using the same credentials (see **[KMIP-Prof]**). Alternatively, the server policy applied to the relevant managed object(s) SHALL be such that the clients all have access to the managed object(s) in question.

~~1.1~~1.1 Normative References

[KMIP-Spec]	OASIS Committee Draft ~~06~~10, *Key Management Interoperability Protocol Specification Version 1.0,* ~~November 2009. http://docs.oasis-open.org/kmip/spec/v1.0/cd06/kmip-spec-1.0-cd-06.doc~~ Mar 2010, http://docs.oasis-open.org/kmip/spec/v1.0/cd10/kmip-spec-1.0-cd-10.doc
[KMIP-Prof]	OASIS Committee Draft ~~04~~05, *Key Management Interoperability Protocol Profiles Version 1.0,* ~~November 2009.~~ Mar 2010, http://docs.oasis-open.org/kmip/profiles/v1.0/~~cd04~~cd05/kmip-profiles-1.0-cd-~~04~~05.doc

~~2~~2 Message exchange

The message exchange between clients and the server to test the following use-case scenarios is performed with TTLV encoding over the ~~http transport. This is to facilitate debugging and to focus on KMIP-specific issues instead of potential secure transport setup problems.~~TLS/SSL transport as defined in **[KMIP-Spec]** and **[KMIP-Prof]**.

~~3~~3 Centralized Management

~~3.1~~3.1 Basic functionality

These use-cases test the basic features of KMIP including key creation ~~and~~, template and secret data registration, attribute functionality, access methods, and batch operation.

~~3.1.1~~3.1.1 Use-case: Create / Destroy

In this use-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	Request/Response messages

0	Create (symmetric key)
	In: objectType='00000002' (Symmetric Key), attributes={ CryptographicAlgorithm='00000003' (AES), CryptographicLength='128', CryptographicUsageMask='0000000C' }
	
	`Tag: Request Message (`~~0x420075~~`0x420078), Type: Structure (0x01), Data:`
	`  Tag: Request Header (`~~0x420074~~`0x420077), Type: Structure (0x01), Data:`
	`    Tag: Protocol Version (`~~0x420067~~`0x420069), Type: Structure (0x01), Data:`
	`      Tag: Protocol Version Major (`~~0x420068~~`0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)`
	`      Tag: Protocol Version Minor (`~~0x420069~~`0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)`
	`    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)`
	`  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:`
	`    Tag: Operation (`~~0x42005A~~`0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)`
	`    Tag: Request Payload (`~~0x420076~~`0x420079), Type: Structure (0x01), Data:`
	`      Tag: Object Type (`~~0x420055~~`0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)`
	`      Tag: Template-Attribute (`~~0x42008E~~`0x420091), Type: Structure (0x01), Data:`
	`        Tag: Attribute (0x420008), Type: Structure (0x01), Data:`
	`          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm`
	`          Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (AES)`
	`        Tag: Attribute (0x420008), Type: Structure (0x01), Data:`
	`          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length`
	`          Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000080 (128)`
	`        Tag: Attribute (0x420008), Type: Structure (0x01), Data:`
	`          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage Mask`
	`          Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x0000000C (Encrypt, Decrypt)`
	
	~~420075010000012042007401000000384200670100000020420068020000000400000001000000004200690200000004~~
	~~00000000000000000042000D020000000400000001000000004200 0F01000000D842005A0500000004000000010000 0000~~
	~~420076010000000C0420055050000000400000002000000004 2008E01000000A84200080100000030 42000A0700000017~~
	~~43727970746F67726170686963204 16C676F726974686D0042000B0500000004000000030000000042000801000000 30~~
	~~42000A07000000144372797 0746F67726170686963204C656E6774680000000042000B02000000040 00000800000000~~
	~~42000801000000304200 0A07000000184372797 0746F677261706869632055736 1676520 4D61736B42000B02000000 04~~
	~~0000000C00000000~~
	`42007801000001204200770100000038420069010000002042006A020000000400000001000000004200 6B0200000004`

00000000000000000042000D020000000400000001000000004200 0F01000000D842005C05000000040000000100000000
42007901000000C04200570500000004000000020000000042009 101000000A84200080100000030 42000A070000017
43727970746F6772617068696320416C676F726974686D0042000 B0500000004000000030000000042000801000000 30
42000A0700000014437279 70746F6772617068696320 4C656E6774 680000000042000B020000000 40000008000000000
4200080 10000003042000A0700000 18437279 70746F67726170686 9632055736167 65204D61736B4200 0B0200000004
0000000C00000000

Out: objectType='00000002', uuidKey

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC0731C (Mon
Sep 28 10:26:04 CEST0x000000004AFBE7C2 (Thu Nov 12 11:47:30 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
      Tag: Object Type (0x4200550x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric
Key)
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 46eca90a-4b20-
423c-b968-750f299f0ea7fc8833de-70d2-4ece-b063-fede3a3c59fe
```

42007801000000C04200770100000048420067010000002042006 80200000004000000010000000042006902000000 04
000000000000000042008F090000000800000004AC0731C42000D 02000000040000000100000000 42000F0100000068
42005A0500000004000000010000000042007C0500000004000000 000000000042007901000000404200550500000004
0000000200000000420091070000002434366563613930612D346 2323302D343233632D623936382D373530663239 3966
3063613700000000 42007B01000000C042007A010000004842006 901000000204200 6A0200000004000000010000 0000
42006B020000000400000000000000004200920900000008000000 04AFBE7C242000D020000000400000001000000 00
42000F0100000068 42005C0500000004000000010000000042007F 05000000040000000000000000 42007C010000 0040
42005705000000040000000200000000420094070000002466633 8383333364652D373064322D346563652D623036 332D
6665646533613363353966650000 0000

1	Destroy (symmetric key) In: uuidKey

```
Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 46eca90a-4b20-
423c-b968-750f299f0ea7fc8833de-70d2-4ece-b063-fede3a3c59fe
```

42007501000000904200740100000038420067010000002042006 80200000004000000010000000042006902000000 04
000000000000000042000D0200000004000000010000000042000 F01000000484200 5A0500000004000000140000 0000
42007601000000304200910700000024343636563613930612D34 6232302D343233632D623936382D37353066323939 3966

3063613700000000

420078010000009042007701000000384200690100000020420006A0200000004000000010000000042006B02000000004
0000000000000000042000D0200000004000000010000000042000F01000000484200C05000000040000001400000000
42007901000000304200940700000024666338383333364652D373064322D346563652D623036332D6665646533613363
3539666500000000

Out: uuidKey

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC0731D (Mon
Sep 28 10:26:05 CEST0x000000004AFBE7C3 (Thu Nov 12 11:47:31 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 46eca90a-4b20-
423c-b968-750f299f0ea7fc8833de-70d2-4ece-b063-fede3a3c59fe
```

42007801000000B04200770100000048420067010000002042006802000000040000000100000004200690200000004
0000000000000000042008F090000000800000000004AC0731D42000D0200000004000000010000000042000F0100000058
42005A0500000004000000140000000042007C050000000400000000000000042007901000000304200910700000024
3436656361393061612D346232302D343233632D623936382D373530663239396630653137000000042007B01000000B0
42007A0100000048420069010000002042006A0200000004000000010000000042006B02000000004000000000000000000
42009209000000080000000004AFBE7C342000D0200000004000000010000000042000F010000005842005C0500000004
00000014000000042007F05000000040000000000000042007C010000003042009407000000246663383833363465
2D373064322D346563652D623036332D6665646533613363353539666500000000

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3.1.23.1.2 Use-case: Register / Create / Get attributes / Destroy

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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.

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Time	Request/Response messages

0	Register (template)
	In: objectType='00000007', attributesTemplateAttribute=empty, Template={ ObjectGroup='Group1', ApplicationSpecificInformation='ssl, www.example.com', ContactInformation='Joe', x-Purpose='demonstration', Name={ NameValue='Template1', NameType='00000001' } }
	
	`Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:`
	`  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:`
	`    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:`
	`      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)`

```
        Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
      Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
    Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
      Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000003 (Register)
      Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
        Tag: Object Type (0x4200550x420057), Type: Enumeration (0x05), Data: 0x00000006 (Template)
        Tag: Template-Attribute (0x42008E0x420091), Type: Structure (0x01), Data: null
        Tag: Template (0x420090), Type: Structure (0x01), Data:
          Tag: Attribute (0x420008), Type: Structure (0x01), Data:
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Group
            Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Group1
          Tag: Attribute (0x420008), Type: Structure (0x01), Data:
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Application Specific
Information
            Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
              Tag: Application Namespace (0x420003), Type: Text String (0x07), Data: ssl
              Tag: Application Data (0x420002), Type: Text String (0x07), Data: www.example.com
          Tag: Attribute (0x420008), Type: Structure (0x01), Data:
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Contact Information
            Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Joe
          Tag: Attribute (0x420008), Type: Structure (0x01), Data:
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-Purpose
            Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: demonstration
          Tag: Attribute (0x420008), Type: Structure (0x01), Data:
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
            Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
              Tag: Name Value (0x4200530x420055), Type: Text String (0x07), Data: Template1
              Tag: Name Type (0x4200520x420054), Type: Enumeration (0x05), Data: 0x00000001
(Uninterpreted text string)
```

42007501000001C04200740100000038420067010000002042006802000000040000000100000000420069020000000400
00000000000000042000D020000000400000001000000004200F0100000178420005A05000000040000000300000000420
07601000000160420005505050000000040000000600000000042008E010000001484200080100000028420000A070000000C4F6
26A6563742047726F75700000000042000B07000000064767726F75703100000420000801000005842000A07000000020417O
706C69636174696F6E20537065636966696320496E666F726D6174696F6E42000B0100000028420003070000000373736
C0000000000042000207000000000F7777772E6578616D706C6F6706C652E636F6D000420000801000000304200A070000001343F6E
74616374420496E666F726D6174696F6E00000000042000B07000000034A6F65000000000000420000801000000304200A0
700000009782D5075727270F7365000000000042000B07000000D64656D6F6E7374726174696F6E00000042000801
00000004042000A07000000044E616D6500000000042000B01000000284200530700000009954656D706C617465310000000
00000004200520500000004000000010000000

42007801000001C84200770100000038420069010000002042006A02000000040000000100000000042006B02000000040
0000000000000042000D020000000400000010000000042000F010000018042005C0500000004000000030000000042
00790100000168420005705000000040000000060000000042009101000000000042009001000001484200080100000028420
00A070000000C4F626A6563742047726F75700000000042000B07000000064767726F75703100000420000801000000584200
0A070000002041707706C69636174696F6E20537065636966696320496E666F726D6174696F6E42000B010000002842000
307000000373736C00000000004200020700000000F7777772E6578616D706C6F6706C652E636F6D000420000801000000304200A
0700000013436F6E746163742420496E666F726D6174696F6E00000004200B07000000034A6F650000000000000420000800
10000000304200A070000000978282D5075727270F736500000000000042000B07000000D64656D6F6E7374726174696F
6E00000042000801000000404200A07000000044E616D650000000042000B010000002842200550700000009954656D706
C617465310000000000000004200540500000004000000010000000
```

Out: uuidTemplate

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
```

	<pre> Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC0731E (Mon Sep 28 10:26:06 CEST0x000000004AFBE7C4 (Thu Nov 12 11:47:32 CET 2009)
Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000003 (Register)
Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 4fe3f473-4de4-4248-990e-21e00f7fc006a6ebbb6f-4c54-4bbb-ad29-be6bad4ecad5</pre>

42007801000000B0420077010000004842006701000000204200680200000040000000010000000042006902000000400000000000000000420008F090000000800000004AC0731E42000D0200000004000000010000000042000F010000005842005A05000000040000000300000000420007C050000000400000000000000042007901000000304200910700000024346633363437332D346465342D343234382D393930652D32316530306637666336303036000000042007B01000000B042007A010000004842006901000000204200680200000040000000010000000042006B02000000409090000000800000004AFBE7C442000D0200000004000000010000000042000F010000005842005C05000000040000000300000000420007F05000000040000000000000000042007C01000000304200940700000024613665626262362D346335342D346262622D616432392D6265366261643465636435000000000

| 1 | Create (symmetric key using template)

In: objectType='00000002', template={ NameValue='Template1', NameType='00000001' }, attributes={ CryptographicAlgorithm='AES', CryptographicLength='128', CryptographicUsageMask='0000000C' }

<pre>Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
      Tag: Object Type (0x4200550x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
      Tag: Template-Attribute (0x42008E0x420091), Type: Structure (0x01), Data:
        Tag: Name (0x4200510x420053), Type: Structure (0x01), Data:
          Tag: Name Value (0x4200530x420055), Type: Text String (0x07), Data: Template1
          Tag: Name Type (0x4200520x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm
          Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (AES)
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length
          Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000080 (128)
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage Mask
          Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x0000000C (Encrypt, Decrypt)</pre> |

4200750100000150420074010000003842006701000000204200680200000004000000010000000042006902000000040
0000000000000000042000D020000000400000001000000004200F01000001084200 5A05000000040000000100000000 42
007601000000F0420055050000000400000002000000004 2009E0100 0000D84200510 10100000028420053070 000000954 6
56D706C61746531000000000000000042 00520500000004 00000001 00000000420008010000003042000A07000000174372
7970746F677261706869632041 6C676F726974686D0042000B050000000400000003000000004 2000801000000 3042000A
07000000114 3727970746F6772617068 6963204C656E67746 680000000004 2000B0 20000000 4000000080 0000000004 20008
0100000030 42000A070000001843727970746F67726170686963205573616765204D61736B42000B0200000004 0000000
C00000000

420078010000015042007701000000384 2006901000000204200 6A020000000400000001 00000000 42006B0200000004 0
000000000000000 0042000D0 20000000 40000000 1 00000000420 00F010000010842005C0500000004 000000010000000042
00790100 0000F0420057 050000000 400000002 000000004 200910100 0000D84200 53010 000002842005507070 00000954 6
56D706C617465310000000000 0000004 2005405000000 040000000 100000000 420008010 0000030 42000A070000001743 72
7970746F6 7726170686963204 16C676F 72697468 6D00420 00B05000000 0400000 0030000000042 0008010000003042000
A0700 00001143727970746F67726170686 9632 04C656E67746 680 00000004 2000B020 0000004 00000008 00000000004 2 0008
0 100000030 42000A07000000184372797 0746F67726170686963205573616765204D61736B42000B0 20000000 40000000
C00000000

Out: objectType='00000002', uuidKey

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC0731F (Mon Sep 28 10:26:07 CEST0x000000004AFBE7C5 (Thu Nov 12 11:47:33 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
      Tag: Object Type (0x4200550x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 300881c8-596a-48ad-814f-7ee1198966086 1b10614-d8b5-46f9-8d17-2fa6ea1d747a
```

4200780100000C0 42007701000000484200670100 0000204200680200000004 00000001 00000000 42006902000000040
00000000000000000042008F090000000800000004AC0731F42000D02000000040 0000001 000000004 2000F0100 00000684 2
005A0500000004000000010000000042007C050000000 400000000000000004 20079010 0000040420055050000000400 0
000042009107000000243363162313036313 4 2D643862352D343 66639 2D3864313 72D3266613 6653136 43734 4 37 61 0000 00 0
3080 0000000 42007B01 000000C042007A0 1 000000484 20069010000002042006A02000000040 0000001000000004 2006
B020000000 400000000 00000000 42009209000 0000800 00000 04AFBE7C5 42000D0 200000004 00000001 000000004 2000F
010 000000684 2005C0 5000000 04 0000000 100000000 42007F0500 00000400 0000000 00000 0042007C0 10000004 04 42 00570
5000 00004 0 0000002 00000 0004 2009 40 70 00000 24 3 63 16 23 13 0363 13 4 2 D643862352D3 4 3666 392D38 6 431372D3 26 6 6 1 36
65613 63 7 34 37 610 00 00000

2	Get attributes
	In: uuidKey, attributeNames={'ObjectGroup', 'ApplicationSpecificInformation', 'ContactInformation', 'x-Purpose'}

```
Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
```

```
        Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
        Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get
Attributes)
        Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
          Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 300881e8-596a-
48ad-814f-7ee11989660861b10614-d8b5-46f9-8d17-2fa6ea1d747a
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Group
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Application Specific
Information
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Contact Information
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-Purpose
```

420075010000010842000740100000038420006701000000204200680200000004000000010000000042006902000000040
00000000000000042000D0200000004000000010000000042005A0500000040000000042005A0500000040000000B0000000042
007601000000A842000910700000024333030383831633382D353936612D343861642D383134662D3763653131393839363
630380000000042000A070000000C4F626A65637420047726F7570000000000042000A070000000204170706C69636174696F
6E2053706563696669630496E666F726D6174696F6E42000A070000013436F6E74616374204E466F726D6174696F6E
E000000000042000A0700000009782D507572706F736500000000000000
420078010000010842000770100000038420006901000000204200640200000004000000010000000042006B02000000040
000000000000042000D0200000004000000010000000042000F01000000C042005C0500000040000000B0000000042
007901000000A842000940700000024363162313061342D643862352D343666392D386431372D326661366561316431473
43761000000000042000A070000000C4F626A65637420047726F7570000000000042000A070000000204170706C69636174696F
6E2053706563696669630496E666F726D6174696F6E42000A070000013436F6E74616374204E466F726D6174696F6E
E000000000042000A0700000009782D507572706F736500000000000000

Out: uuidKey, attributes={ ObjectGroup='Group1', ApplicationSpecificInformation='ssl,
www.example.com', ContactInformation='Joe Miller', x-Purpose='demonstration' }


```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC0731F (Mon Sep
28 10:26:07 CEST0x000000004AFBE7C6 (Thu Nov 12 11:47:34 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get
Attributes)
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 300881e8-596a-
48ad-814f-7ee11989660861b10614-d8b5-46f9-8d17-2fa6ea1d747a
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Group
        Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Group1
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Application Specific
Information
        Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
          Tag: Application Namespace (0x420003), Type: Text String (0x07), Data: ssl
          Tag: Application Data (0x420002), Type: Text String (0x07), Data: www.example.com
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
```

```
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Contact Information
          Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Joe
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-Purpose
          Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: demonstration
```

42007801000001B0420077010000004842006701000000204200680200000004000000010000000042006902000000040
000000000000000042008F0900000008000000004AC0731F42000D0200000004000000010000000042000F010000015842
005A050000000400000000B00000004200007C05000000040000000000000000042007901000001304200091070000000243333
0303838316338322D353936612D343861642D383134662D376365313139383936363038000000004200080100000284200
0A070000000C4F626A65637420477267757000000000042000B070000000647726F75703100004200080100000005842000
0A070000002041707006C696361746696F6E2053706563966696320496E666F726D6174696F6E42000B010000028420003
07000000037373736C000000000042000207000000F7777772E6578616D706C652E636F6D0042000801000003042000A0
700000013436F6E746163742496E666F726D6174696F6E00000000042000B07000000031A6F65000000000042000801
0000003042000A070000000097382D507572706F736500000000000042000B07000000D64656D6F6E7374726174696F6
E00000042007B01000001B042007A01000000484200069010000002042006A0200000004000000010000000042006B0200
000004000000000000000042009209000000080000004AFBE7C642000D0200000004000000010000000042000F01000
0015842005C05000000040000000B000000004200007F05000000040000000000000000042007C010000013042009407000
0024363162313036313342D643862352D343666392D386431372D3266613366656131364373476100000004200080100000
02842000A070000000C4F626A65637420477267757000000000042000B070000000647726F75703100004200080100000
05842000A070000002041707006C696361746696F6E2053706563966696320496E666F726D6174696F6E42000B010000002
842000307000000037373736C000000000042000207000000F7777772E6578616D706C652E636F6D00420008010000030
42000A070000013436F6E746163742496E666F726D6174696F6E00000000042000B07000000031A6F6500000000000004
2000801000003042000A070000000097382D507572706F736500000000000042000B07000000D64656D6F6E73747261
74696F6E000000

| 3 | Destroy (symmetric key)<br>In: uuidKey<br><br>```
Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 300881c8-596a-48ad-814f-7ce11989660861b10614-d8b5-46f9-8d17-2fa6ea1d747a
```<br><br><span style="color:red">4200750100000009042007401000000384200670100000020420068020000000400000001000000004200690200000040<br>00000000000000042000D02000000040000000100000004200F01000000484200005A0500000004000000140000000042<br>007601000000304200091070000000243333030383831633382D353936612D343861642D383134662D3736365313139383939363<br>6303800000000</span><br><br><span style="color:red">4200780100000009042007701000000384200690100000020420006A020000000400000001000000004200006B0200000004000000<br>00000000000000042000D0200000004000000010000000042000F01000000484200005C050000000400000014000000000042<br>00790100000030420094070000000243631623130363134342D643862352D343666392D386431372D326661336665613116437<br>34376100000000</span><br><br>Out: uuidKey<br><br>```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
``` |
|---|---|

Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC07320 (Mon Sep 28 10:26:08 CEST0x000000004AFBE7C6 (Thu Nov 12 11:47:34 CET 2009)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)

Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 300881e8-596a-48ad-814f-7ee11989660861b10614-d8b5-46f9-8d17-2fa6ea1d747a

42007801000000B042007701000000484200670100000020420068020000000400000001000000004200690200000040
00000000000000042008F090000000800000004AC0732042000D020000000400000001000000042000F010000005842
005A05000000040000001400000042007C0500000004000000000000004200790100000030420091070000024333
03038383163382D353936612D343861642D383134662D3766653131393839363630380000000042007B01000000B04200
7A0100000048420069010000002042006A020000000400000001000000042006B020000000400000000000000042009
2090000000800000004AFBE7C642000D0200000004000000010000000042000F010000005842005C0500000004000000
140000000042007F0500000004000000000000000042007C010000003042009407000000243631623130363134326D6438
62352D343666392D386431372D326661366561316437346100000000

4	Destroy (template)
	In: uuidTemplate

Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:

Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:

Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)

Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:

Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 4fe3f473-4de4-4248-990e-21e00f7fe006a6ebbb6f-4c54-4bbb-ad29-be6bad4ecad5

420075010000009042007401000000384200670100000020420068020000000400000001000000042006902000000040
00000000000000042000D020000000400000001000000042000F010000004842005A0500000004000000140000000042
0076010000003042009107000002431666333636343733732D346645342D343234382D393930652D32316530306637666633
0303600000000
42007801000000904200770100000038420069010000002042006A020000000400000001000000042006B02000000040
00000000000000042000D020000000400000001000000042000F010000004842005C050000000400000014000000042
007901000000304200940700000024613665626262366662D346335342D346262622D616432392D626536626261643465636
1643500000000

Out: uuidTemplate

Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:

Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:

Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:

Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC07320 (Mon Sep 28 10:26:08 CEST0x000000004AFBE7C6 (Thu Nov 12 11:47:34 CET 2009)

Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

```
   Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
     Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
     Tag: Result Status (0x12007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
     Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
       Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 4fe3f473-4de4-
4248-990e-21e00f7fc006a6ebbb6f-4c54-4bbb-ad29-be6bad4ecad5
```

42007801000000B0420077010000004842006701000000204200680200000004000000010000000042006902000000040
0000000000000000042008F090000000800000004AC0732042000D0200000004000000010000000042000F010000000584200
5A05000000040000000140000000042007C0500000004000000000000000420079010000003042009107000000243436
63333663437332D346465342D34323438322D393930652D3233165303066376663303036000000000042007B01000000B04200
7A010000004842006901000000204200069010000004800000004200060200000040000000040000000042009
2090000000800000004AFBE7C642000D0200000004000000010000000042000F010000000584200 5C0500000004000000
14000000000042007F0500000004000000000000000042007C010000003042009407000000246136656 2626236662D34633
5342D346262622D616432392D626536626261643465636164350000000000

60
61

3.1.33.1.3 Use-case: Create / Locate / Get / Destroy

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

67

Time	Request/Response messages

0	Create (symmetric key)
	
	In: objectType = '00000002', attributes={ Name={ NameValue='Key1', NameType='00000001' }, CryptographicAlgorithm='DES', CryptographicLength='56', CryptographicUsageMask='0000000C', ContactInformation='Joe' }
	
	`Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:`
	`  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:`
	`    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:`
	`      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)`
	`      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)`
	`    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)`
	`  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:`
	`    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)`
	`    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:`
	`      Tag: Object Type (0x4200550x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)`
	`      Tag: Template-Attribute (0x42008E0x420091), Type: Structure (0x01), Data:`
	`        Tag: Attribute (0x420008), Type: Structure (0x01), Data:`
	`          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name`
	`          Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:`
	`            Tag: Name Value (0x4200530x420055), Type: Text String (0x07), Data: Key1`
	`            Tag: Name Type (0x4200520x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)`
	`        Tag: Attribute (0x420008), Type: Structure (0x01), Data:`
	`          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm`

```
                Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000001
(DES0x00000002 (3DES)
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length
          Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000038 (560x000000A8
(168)
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage
Mask
          Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x0000000C (Encrypt,
Decrypt)
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Contact Information
          Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Joe
```

42007501000001984200740100000038420067010000002042006802000000004000000010000000420069020000000040
0000000000000000042000D020000000400000001000000042000F010000015042005A05000000040000000100000000042
0076010000013842005505000000004000000020000000042008E010000012042000801000000384200A070000000044E6
16D650000000042000B01000000204200530700000004B657931000000004200520500000000400000001000000004200
08010000003042000A0700000017437279707746F67726170686963320416C6F67726974686D0042000B0500000000400000
000010000000004200080100000030042000A07000000144372797074746F67726170686963204C656E677468680000000042000B
0200000004000000380000000042000801000000300042000A070000001843727970746F67726170686963320557361676576
04D61736B42000B02000000040000000C000000004200080100000030042000A0700000013436F6E746163742420496E666F
726D6174696F6E000000000042000B07000000034A6F650000000000

42007801000001984200770100000038420069010000002042006A02000000004000000010000000042006B020000000040
0000000000000000042000D020000000400000001000000042000F010000015042005C05000000040000000100000000042
0079010000013842005705000000004000000020000000042009101000000120420008010000003842000A070000000044E6
16D650000000042000B010000002042005507000000004B657931000000004200540500000000400000000100000000042000
08010000003042000A07000000174372797074746F67726170686963320416C6F67726974686D0042000B050000000040000
00020000000004200080100000030042000A07000000144372797074746F67726170686963204C656E677468680000000042000B
02000000040000000A8000000004200080100000030042000A070000001843727970746F67726170686963320557361676576
04D61736B42000B02000000040000000C00000000420008010000003042000A0700000013436F6E746163742420496E666F
726D6174696F6E000000000042000B07000000034A6F650000000000

Out: objectType = '00000002', uuidKey

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC07321 (Mon Sep
28 10:26:09 CEST0x000000004AFBE7C7 (Thu Nov 12 11:47:35 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
      Tag: Object Type (0x4200550x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric
Key)
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 75da9bc9-7867-
49e5-886d-757f3d523d3f1ed28ea5-2b31-4145-bcf2-36d0756d3890
```

42007801000000C04200770100000048420067010000002042006802000000004000000010000000042006902000000004
00000000000000000042008F0900000008000000004AC0732142000D0200000004000000010000000042000F010000006842
005A0500000004000000010000000042007C050000000400000000000000042007901000000404200550500000000400000
000020000000004200910700000024373564613962639322D373836372D343965352D383836642D37357666336435323364

33660000000042007B01000000C042007A0100000048420069010000002042006A02000000040000000100000000042006B0200000004000000000000000042009209000000080000000004AFBE7C742000D0200000004000000001000000042000F010000006842005C05000000040000000100000000042007F050000000400000000000000042007C01000000404200057050000000400000002000000004200940700000024316564323865613532D326233312D343134352D626366322D33366430373536643338393000000000

1	Locate (symmetric key)

In: attributes={ objectType = '00000002', Name={ Name='Key1', NameType='00000001'} }

```
Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type
        Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric
Key)
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
        Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
          Tag: Name Value (0x4200530x420055), Type: Text String (0x07), Data: Key1
          Tag: Name Type (0x4200520x420054), Type: Enumeration (0x05), Data: 0x00000001
(Uninterpreted text string)
```

42007501000000D04200740100000038420067010000002042006802000000040000000100000000042006902000000040000000000000000042000D0200000004000000010000000042000F010000008842005A0500000004000000080000000042007601000000704200080100000028420000A070000000B4F626A6563742054797065000000000042000B050000000400000020000000004200080100000038420000A07000000044E616D65000000004200B0100000020420005307000000044B6579310000000042005205000000040000000100000000
42007801000000D04200770100000038420069010000002042006A02000000040000000100000000042006B02000000040000000000000000042000D0200000004000000010000000042000F010000008842005C0500000004000000080000000042007901000000704200080100000028420000A070000000B4F626A6563742054797065000000000042000B050000000400000020000000004200080100000038420000A07000000044E616D65000000004200B0100000020420005507000000044B6579310000000042005405000000040000000100000000

Out: uuidKey

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC07321 (Mon Sep
28 10:26:09 CEST0x000000004AFBE7C8 (Thu Nov 12 11:47:36 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
```

Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
    Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 75da9bc9-7867-49e5-886d-757f3d523d3f1ed28ea5-2b31-4145-bcf2-36d0756d3890

42007801000000B04200770100000048420067010000002042006802000000040000000100000004200690200000004000000000000000042008F0900000008000000001AC0732142000D0200000004000000010000000042000F010000005842005A0500000004000000080000000042007C0500000004000000000000000042007901000000304200910700000024373564613962633392D373836372D343963352D383836642D373537663364353233643366000000042007B01000000B042007A01000000484200690100000020042006A02000000040000000100000004206B02000000040000000000000000420092090000000800000004AFBE7C842000D0200000004000000010000000042000F010000005842005C0500000004000000080000000042007C010000003042009407000000243165643238656135352D326233312D343134352D626366322D333664303735366433383930000000

| 2 | Get (symmetric key)
In: uuidKey |

```
Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 75da9bc9-7867-49e5-886d-757f3d523d3f1ed28ea5-2b31-4145-bcf2-36d0756d3890
```

420075010000009042007401000000384200670100000020420068020000000400000001000000004200690200000004000000000000000042000D0200000004000000010000000042000F010000004842005A0500000004000000000000000A000000004200760100000030420091070000002437356461396263392D373836372D343963352D383836642D373537663364353233643366000000004
420078010000009042007701000000384200690100000020042006A02000000040000000100000004206B0200000004000000000000000042000D0200000004000000010000000042000F010000004842005C0500000004000000000000000A00000000420079010000003042009407000000243165643238656135352D326233312D343134352D626366322D3336643037353664333839300000000

Out: objectType = '00000002', uuidKey, symmetricKey

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC07322 (Mon Sep 28 10:26:10 CEST0x000000004AFBE7C8 (Thu Nov 12 11:47:36 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
      Tag: Object Type (0x4200550x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
        Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 75da9bc9-7867-
```

~~49e5-886d-757f3d523d3f~~1ed28ea5-2b31-4145-bcf2-36d0756d3890

```
        Tag: Symmetric Key (0x42008C0x42008F), Type: Structure (0x01), Data:
          Tag: Key Block (0x12003E0x420040), Type: Structure (0x01), Data:
            Tag: Key Format Type (0x4200400x420042), Type: Enumeration (0x05), Data: 0x00000001
            Tag: Key Value (0x4200430x420045), Type: Structure (0x01), Data:
              Tag: Key Material (0x4200410x420043), Type: Octet String (0x08), Data:
EAD09734B085DFFEC8E51523F73D6EE9F40EAB7CD06825499D8C0BD0739E1046
            Tag: Cryptographic Algorithm (0x4200260x420028), Type: Enumeration (0x05), Data:
0x00000001 (DES0x00000002 (3DES)
            Tag: Cryptographic Length (0x4200280x42002A), Type: Integer (0x02), Data: 0x00000038
(560x000000A8 (168)
```

420078010000011842007701000000484200670100000020420068020000000400000001000000004200690200000040
0000000000000000042008F0900000008000000004AC0732242000D0200000004000000010000000042000F01000000C042
005A05000000040000000A0000000042007C0500000004000000000000000120079010000009842005505050000000400
00000200000000420091070000002437353646139626339 2D373836372D343963352D383836642D37353766336343523364
336600000000042008C010000005042003E01000000484200400500000004000000010000000042004301000000104200
410800000008EAD09734B085DFFE420026050000000400000001000000004200280200000004000000380000000042007B
01000000128 42007A0100000048420069010000002042006A020000000400000001000000004200 6B020000000400000000
00000000042009209000000080000000004AFBE7C842000D0200000004000000010000000042000F01000000D042005C05
00000004000000004200A000000042007F050000000400000000000042007C01000000A8420057050000000400000020
000000004200940700000024316564328656135 2D326233312D343134352D626366322D33366430373536643338393000
0000000042008F010000006042004001000000584200420500000004000000010000000042004501000000204200430800
00018C8E51523F73D6EE9F40EAB7CD06825499D8C0BD0739E104642002805000000040000000200000000042002A020000
0000 40000000A800000000

3	Destroy (symmetric key) In: uuidKey

```
Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 75da9be9-7867-
49e5-886d-757f3d523d3f1ed28ea5-2b31-4145-bcf2-36d0756d3890
```

420075010000009042007401000000384200670100000020420068020000000400000001000000004200690200000040
00000000000000042000D0200000004000000010000000042000F01000000484200 5A0500000004000000140000000042
0076010000003042009107000000243735646139626339 2D373836372D343963352D383836642D37353766336343532336
4336600000000

420078010000009042007701000000384200690100000020 42006A0200000004000000010000000042006B020000000400
00000000000000042000D0200000004000000010000000042000F01000000484200 5C0500000004000000140000000042
0079010000003042009407000000243165643238656135 2D326233312D343134352D626366322D33336643037353664333
8393000000000

Out: uuidKey

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
```

          Tag: Protocol Version Major (~~0x420068~~0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
          Tag: Protocol Version Minor (~~0x420069~~0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
       Tag: Time Stamp (~~0x42008F~~0x420092), Type: Date-Time (0x09), Data: ~~0x000000004AC07322 (Mon Sep 28 10:26:10 CEST~~0x000000004AFBE7C8 (Thu Nov 12 11:47:36 CET 2009)
       Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
     Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
       Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
       Tag: Result Status (~~0x42007C~~0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
       Tag: Response Payload (~~0x420079~~0x42007C), Type: Structure (0x01), Data:
         Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~75da9be9-7867-49e5-886d-757f3d523d3f~~1ed28ea5-2b31-4145-bcf2-36d0756d3890

~~42007801000000B0420077010000004842006701000000204200680200000004000000010000000042006902000000040~~
~~000000000000000042008F09000000080000000004AC0732242000D0200000004000000010000000042000F010000005842~~
~~005A0500000004000000140000000042007C050000000000000000000000000042007901000000304200910700000002437~~
~~3564613962633932D373836372D343963352D383836642D37353766336433353233643366600000000042007B01000000B04200~~
~~7A0100000048420069010000002042006A02000000040000000100000000042006B020000000400000000000000000420009~~
~~209000000008000000004AFBE7C842000D0200000004000000010000000042000F010000005842005C0500000004000000~~
~~140000000042007F0500000004000000000000000042007C010000003042009407000000024316564328386561352D32623~~
~~3312D343134352D626366322D33366430373536643338393000000000~~

4	Locate
	In: uuidKey

Tag: Request Message (~~0x420075~~0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (~~0x420074~~0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (~~0x420067~~0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (~~0x420068~~0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (~~0x420069~~0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
    Tag: Request Payload (~~0x420076~~0x420079), Type: Structure (0x01), Data:
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Unique Identifier
        Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: ~~75da9be9-7867-49e5-886d-757f3d523d3f~~1ed28ea5-2b31-4145-bcf2-36d0756d3890

~~42007501000000B8420074010000003842006701000000204200680200000004000000010000000042006902000000040~~
~~000000000000000042000D0200000004000000010000000042000F010000007042005A0500000004000000080000000042~~
~~00760100000058420008010000005042000A0700000011556E6971756520496465746966696572200000000000000420~~
~~00B0700000024373564613962633932D373836372D343963352D383836642D37353766336433353233643336600000000~~

~~42007801000000B8420077010000003842006901000000204200680A02000000040000000100000000042006B02000000040~~
~~000000000000000042000D0200000004000000010000000042000F010000007042005C0500000004000000080000000042~~
~~00790100000058420008010000005042000A0700000011556E6971756520496465746966696572200000000000000420~~
~~00B0700000024316564328386561352D326233312D343134352D626366322D33366430373536643338393000000000~~

Out: <empty response payload>

Tag: Response Message (0x420078), Type: Structure (0x01), Data:
  Tag: Response Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420067), Type: Structure (0x01), Data:

```
         Tag: Protocol Version Major (0x420068), Type: Integer (0x02), Data: 0x00000001 (1)
          Tag: Protocol Version Minor (0x420069), Type: Integer (0x02), Data: 0x00000000 (0)
      Tag: Time Stamp (0x42008F), Type: Date-Time (0x09), Data: 0x000000004AC07323 (Mon Sep 28
10:26:11 CEST 2009)
      Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
    Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
      Tag: Operation (0x42005A), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
      Tag: Result Status (0x42007C), Type: Enumeration (0x05), Data: 0x00000000 (Success)
      Tag: Response Payload (0x420079), Type: Structure (0x01), Data: null
```

4200780100000080420077010000004842006701000000204200680200000004000000010000000042006902000000040
0000000000000042008F09000000080000000004AC0732342000D0200000004000000010000000042000F010000002842
005A0500000004000000080000000042007C0500000004000000000000000042007901000000004200 7B0100000080420
07A010000004842006901000000204200 6A0200000004000000010000000042006B020000000400000000000000004200
9209000000080000000004AFBE7C842000D02000000040000000100000004 2000F010000002842005C050000004000000
0080000000042007F050000000400000000000000042007C0100000000
```
68
69
```

~~3.1.4~~3.1.4 Use-case: Dual client use-case, ID Placeholder linked Locate & Get batch

72   This use-case has two clients performing operations on the same key. The first client initially registers a
73   template and creates a symmetric key using that template. The second client then does a batched Locate
74   and Get using the ID Placeholder to retrieve the key. The second client thereafter performs a number of
75   operations on the key (Get Attribute List, Get Attribute, Add Attribute, Modify Attribute and Delete
76   Attribute), before the first client finally destroys the key and the template. The first client also tries to Get
77   the key and the template after they have been destroyed, but the Get operation fails in both cases.

78

79   This use-case demonstrates the fact that it is possible for two clients to cooperate and use the same
80   managed object while only having knowledge of a single pre-agreed Name attribute value and without
81   having to share any other information. ~~Here, the identities of the two clients are not considered and since~~
82   ~~we do not include an Authentication field in the header, they could also be considered to be the same~~
83   ~~client. If the clients authenticate themselves to the server using different credentials, the server needs to~~
84   ~~employ another policy than the Default policy defined in the KMIP specification on the key object to allow~~
85   ~~both clients to access it.~~
86

Time	Request/Response messages

0	Client A:
	
	Register (template)
	
	In: objectType='00000007', ~~attributes~~TemplateAttribute=empty, Template={ CryptographicAlgorithm='AES', CryptographicLength='128', Name={ NameValue='Template1', NameType='00000001' },}
	
	`Tag: Request Message (`~~`0x420075`~~`0x420078), Type: Structure (0x01), Data:`
	`  Tag: Request Header (`~~`0x420074`~~`0x420077), Type: Structure (0x01), Data:`
	`    Tag: Protocol Version (`~~`0x420067`~~`0x420069), Type: Structure (0x01), Data:`
	`      Tag: Protocol Version Major (`~~`0x420068`~~`0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)`
	`      Tag: Protocol Version Minor (`~~`0x420069`~~`0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)`
	`    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)`

```
    Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
       Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000003 (Register)
       Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
         Tag: Object Type (0x4200550x420057), Type: Enumeration (0x05), Data: 0x00000006 (Template)
         Tag: Template-Attribute (0x42008E0x420091), Type: Structure (0x01), Data: null
          Tag: Template (0x420090), Type: Structure (0x01), Data:
            Tag: Attribute (0x420008), Type: Structure (0x01), Data:
              Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm
              Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (AES)
            Tag: Attribute (0x420008), Type: Structure (0x01), Data:
              Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length
              Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000080 (128)
            Tag: Attribute (0x420008), Type: Structure (0x01), Data:
              Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
              Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
                 Tag: Name Value (0x4200530x420055), Type: Text String (0x07), Data: Template1
                 Tag: Name Type (0x4200520x420054), Type: Enumeration (0x05), Data: 0x00000001
(Uninterpreted text string)
```

420075010000013042007401000000384200670100000020420068020000000400000001000000004200690200000040
0000000000000000042000D0200000004000000010000000042000F01000000E842005A050000000400000003000000042
007601000000D042005505000000040000000600000000042009E01000000B8420008010000003042000A0700000017437
27970746F677261170686963320416C676F7269746686D0042000B050000000400000003000000004200080100000030420
00A0700000014437279707746F677261170686963320416C656E6774686800000042000B0200000004000000080000000000
8010000004042000A07000000044E616D650000000042000B0100000028420053070000000954656D706C617465310000
0000000000004200520500000004000000010000000000

420078010000013842007701000000384200690100000020420006A020000000040000000100000000042006B02000000040
0000000000000000042000D020000000040000000100000000042000F01000000F0420005C05000000004000000030000000042
007901000000D842005705000000004000000060000000042009101000000042009001000000B842000080100000003042
00A070000001743727970746F677261170686963320416C676F726974686D00042000B05000000040000000300000000042000
8010000003042000A070000001443727970746F67726170686963204C656E67746680000000042000B020000000040000000
08000000000042000080100000004042000A07000000044E616D650000000042000B01000000284200550700000009544656D
706C6174653100000000000000004200540500000004000000010000000

Out: uuidTemplate


```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC07323 (Mon Sep
28 0x000000004AFBED21 (Thu Nov 12 12:10:26:11 CEST25 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000003 (Register)
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 8383198b-4600-
4388-955f-2802cc699e9e45d8629a-9ad1-41b3-9d09-941f2a595da3
```

420078010000000B042007701000000484200670100000020420068020000000400000001000000000420069020000000040
00000000000000000042008F0900000008000000004AC0732342000D0200000004000000010000000042000F010000005842
005A0500000004000000030000000042007C0500000004000000000000000042007901000000304200910700000002438
```
```

33833313938622D343630302D343338382D393535662D32383032363363393965396300000000042007B01000000B04200
7A0100000048420069010000002042006A020000000400000010000000042006B02000000040000000000000000042009
209000000080000000004AFBED2142000D020000000400000010000000042000F01000000584200B5C05000000040000000
030000000042007F050000000400000000000000042007C010000003042009407000000243435638363239612D39616
4312D343162332D396430392D39343166326135393564613300000000

| 1 | Client A: |
| | Create (symmetric key using template) |

In: objectType='00000002', template={ NameValue= 'Template1', NameType='00000001' }, attributes={ Name={ Name='Key1', NameType='00000001' }, CryptographicUsageMask='00000004', ContactInformation='Foo' }

```
Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
      Tag: Object Type (0x4200550x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric
Key)
      Tag: Template-Attribute (0x42008E0x420091), Type: Structure (0x01), Data:
        Tag: Name (0x4200510x420053), Type: Structure (0x01), Data:
          Tag: Name Value (0x4200530x420055), Type: Text String (0x07), Data: Template1
          Tag: Name Type (0x4200520x420054), Type: Enumeration (0x05), Data: 0x00000001
(Uninterpreted text string)
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
          Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
            Tag: Name Value (0x4200530x420055), Type: Text String (0x07), Data: Key1
            Tag: Name Type (0x4200520x420054), Type: Enumeration (0x05), Data: 0x00000001
(Uninterpreted text string)
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage
Mask
          Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000004 (Encrypt)
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Contact Information
          Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Foo
```

42007501000001584200740100000038420067010000002042006802000000040000000100000004200690200000040
0000000000000042000D020000000400000010000000042000F010000011042005A050000000400000001000000042
007601000000F842005505000000040000000200000004200B801000000E04200510100000028420053070000009546
56D706C6174653100000000000000042005205000000040000000100000004200080100000038420008070000000044E61
6D650000000042000B01000000204200530700000004B6579310000000042005205000000040000000100000004200
0801000000304200800A07000000184372797076F7726170686963205573616765204D6173B420080B0200000000000000
040000000000420008010000003042000A07000000184372797076F7726170686963205573616765204D6173B42000B0200000000400000
000000000420008010000003042000A070000000134367E7461637420496E666F726D6174696F6E0000000000420080B0
700000000466F0F00000000

42007801000001584200770100000038420069010000002042006A020000000400000010000000042006B0200000040
000000000000000000042000D020000000400000010000000042000F010000011042005C050000000400000010000000042
007901000000F842005705000000040000000200000004200910100000E04200530100000028420055070000009546
56D706C6174653100000000000000042005505000000040000000100000004200080100000038420008070000000044E61
6D650000000042000B01000000204200550700000004B6579310000000042005405000000040000000100000004200
0801000000304200800A07000000184372797076F7726170686963205573616765204D6173B42000B0200000000400000

040000000042000801000000304 2000A0700000013436F6E7461637420496E666F726D6174696F6E000000000042000B0 700000003466F6F0000000000

Out: objectType='00000002', uuidKey

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC07324 (Mon Sep 28 0x000000004AFBED23 (Thu Nov 12 12:10:26:12 CEST27 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
      Tag: Object Type (0x4200550x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 7fba0849-a3e2-4d8c-81dd-9a199947e47d0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
```

42007801000000C042007701000000484200670100000020420068020000000400000001000000004200690200000040 000000000000000042008F0900000008000000001AC0732442000D02000000040000000100000004 2000F010000006842 005A050000000400000001000000004 2007C05000000040000000000000004 20079010000004042005505000000040000 000002000000004200910700000024376662613038343 92D613363322D346438632D383164642D3961313939393934376534 37640000000042007B01000000C042007A010000004842006 90100000020420 06A02000000040000000100000004200 6B0200000040 0000000000000004 2009209000000080 000000004AFBED2342000D020000000400000001000000004200F 01000000684 2005C05000000040000000000000004 2007F0500000004000000000000000042 007C010000004042 005705 00000004000000020000000042009407 000000243061333365 5833652D35 62 7612D343836352D393634612D3864316 33626263396 31653300000000

2	Client B:
	Locate and Get (symmetric key by name)
	In (header): batchOrderOption='TRUE'
	In: attributes={ objectType = '00000002', Name={ Name='Key1', NameType='00000001'} }
	In: <empty Get payload>

```
Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Order Option (0x420010), Type: Boolean (0x06), Data: TRUE
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
    Tag: Unique Batch Item ID (0x4200900x420093), Type: Octet String (0x08), Data: 01F76942FF5A7A8A0E9E1875336E415E
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type
```

```
             Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric
Key)
          Tag: Attribute (0x420008), Type: Structure (0x01), Data:
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
            Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
              Tag: Name Value (0x4200530x420055), Type: Text String (0x07), Data: Key1
              Tag: Name Type (0x4200520x420054), Type: Enumeration (0x05), Data: 0x00000001
(Uninterpreted text string)
    Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
      Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
      Tag: Unique Batch Item ID (0x4200900x420093), Type: Octet String (0x08), Data:
3192EDD439D59CC4CFEF21DDDF1CF5E3
      Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data: null
```

42007501000001204200740100000484200670100000020420068020000000400000010000000042006902000000040
000000000000000042001006000000080000000000000001420000D020000000400000002000000042000F010000009842
005A05000000040000000800000000420090080000000801F76942FF5A7A8A420076010000007042000801000000284200
00A070000000B4F626A656374420547970650000000000042000B0500000004000000020000000420008010000003842000
0A07000000044E616D65650000000042000B01000000204200530700000004B657931000000000420052050000000400000
0010000000042000F01000000284200SA05000000040000000A000000004200900800000083192EDD439D59CC4420076
0100000000

42007801000001204200770100000484200690100000020420068A020000000400000010000000042006B02000000040
000000000000000042001006000000080000000000000001420000D020000000400000002000000042000F010000009842
005C05000000040000000800000000420093080000000080E9E1875336E415E4200790100000007042000801000000284200
00A070000000B4F626A656374420547970650000000000042000B0500000004000000020000000420008010000003842000
0A07000000044E616D65650000000042000B01000000204200550700000004B657931000000000420054050000000400000
0010000000042000F010000002842005C05000000040000000A00000000420093080000000008CFEF21DDDF1CF5E3420079
0100000000

Out: uuidKey

Out: objectType='00000002', uuidKey, symmetricKey

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC07324 (Mon Sep
0x000000004AFBED24 (Thu Nov 12 12:10:28 10:26:12 CESTCET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
    Tag: Unique Batch Item ID (0x4200900x420093), Type: Octet String (0x08), Data:
01F76942FF5A7A8A0E9E1875336E415E
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 7fba0849-a3c2-
4d8c-81dd-9a199947e47d0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
    Tag: Unique Batch Item ID (0x4200900x420093), Type: Octet String (0x08), Data:
3192EDD439D59CC4CFEF21DDDF1CF5E3
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
```

	Tag: Response Payload (~~0x420079~~0x42007C), Type: Structure (0x01), Data:
	    Tag: Object Type (~~0x420055~~0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
	    Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~7fba0849-a3e2-4d8c-81dd-9a199947e47d~~0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
	    Tag: Symmetric Key (~~0x42008C~~0x42008F), Type: Structure (0x01), Data:
	     Tag: Key Block (~~0x42003E~~0x420040), Type: Structure (0x01), Data:
	      Tag: Key Format Type (~~0x420040~~0x420042), Type: Enumeration (0x05), Data: 0x00000001
	      Tag: Key Value (~~0x420043~~0x420045), Type: Structure (0x01), Data:
	       Tag: Key Material (~~0x420041~~0x420043), Type: Octet String (0x08), Data: ~~5C7B76DC93EF45FD9231522EB2CE7B0A~~755D03C639648FB5828D5F1CC9FE9B57
	       Tag: Cryptographic Algorithm (~~0x420026~~0x420028), Type: Enumeration (0x05), Data: 0x00000003 (AES)
	       Tag: Cryptographic Length (~~0x420028~~0x42002A), Type: Integer (0x02), Data: 0x00000080 (128)
	
	42007801000001A04200770100000048420067010000002042006802000000040000000100000004200690200000004 0000000000000042008F0900000008000000008000000 [...] 420 07790100000030420091070000002437666261303834392D613363322D346438632D383164642D3961313939393934376534 376400000000042000F01000000D842005A050000004 000000A0000000420090080000000831 92EDD439D59CC442007 C0500000004000000000000000420079010000 0A0420055050000000400000002000000420 091070000002437666261 3034392D613363322D346438632D38316464 2D39613139393939343765343764000000004 2008C010000005842003E0 1000000050420040050000000400000010000000 42004301000001842004108000000105C7B76DC93EF45FD9231522E B2CE7B0A420026050000004000000030000000042002802000000040000000800000000 0042007B01000001A042007A010 000004842006901000000204200 6A0200000004000000010000000 42006B020000000400000 0000008000000004AFBED2442000D02000000040 000000200000 00042000F010000006842005C0500000004000000 0000042009308000000080E9E1875336E415E42007F050000 00400000000000000042007C01000000304200940700000 024306133336538336 52D356237612D343836352D393634612D3864316333626266396165 3 00000000042000F0100000 00D842005C05000000040000000A00000000420093080000008CFEF21DDDF1CF5E342007F0 5000000400000000000000 0042007C0100000A0420057050000000400000002000000042009 4070000002430613333 36538336 52D356237612D343836352D393634612D38643163336262663961653300000000042008F01000000584200 4001000000504200420500000004 000000010000000420045010000 018420043080000001 0755D03C639648FB5828D5F1CC9FE9B57420028050000000040 0000003000000042002A020000004000000080000 0000

3	Client B:
	Get attribute list
	In: uuidKey
	
	Tag: Request Message (~~0x420075~~0x420078), Type: Structure (0x01), Data:
	 Tag: Request Header (~~0x420074~~0x420077), Type: Structure (0x01), Data:
	  Tag: Protocol Version (~~0x420067~~0x420069), Type: Structure (0x01), Data:
	   Tag: Protocol Version Major (~~0x420068~~0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
	   Tag: Protocol Version Minor (~~0x420069~~0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
	  Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
	 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
	  Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x0000000C (Get Attribute List)
	  Tag: Request Payload (~~0x420076~~0x420079), Type: Structure (0x01), Data:
	   Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~7fba0849-a3e2-4d8c-81dd-9a199947e47d~~0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
	
	42007501000000904200740100000038420067010000002042006802000000040000000100000004200690200000004 0000000000000000042000D02000000040000000100000004 2000F01000000484200 5A0500000004000000 0C00000000420076010000003042009107000000243766626130383439 2D613363322D346438632D383164642D3961313939393934376534376400000000
	
	42007801000000904200770100000038420069010000002042006A02000000040000000100000004200 6B020000000 40000000000000000042000D020000000400000 0010000000042000F01000000484200 5C0500000004000000 0C0000000042

0079010000003042009407000000243061333365383336352D356237612D343836352D393634612D3864316333626266396
1653300000000

Out: uuidKey, attributes={ * }

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC07325 (Mon Sep
0x000000004AFBED24 (Thu Nov 12 12:10:28 10:26:13 CESTCET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000C (Get Attribute
List)
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 7fba0849-a3e2-
4d8c-81dd-9a199947e47d0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Digest
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Initial Date
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Unique Identifier
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage Mask
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Contact Information
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Last ChangedChange Date
```

42007801000001D04200770100000048420067010000002042006802000000040000000100000004200690200000004000000001000000042008F0900000008000000004AC0732542000D020000000400000001000000042000F010000017842005A0500000004000000C000000042007C05000000040000000042007901000001504200910700000024376662613038343932D613363322D346438632D383164642D3961313939393934376534376440000000042000A070000001443727970746F677261706869632040C656E6774680000000042000A0700000017437279707476F6772617068696320416C676F726974686D0042000A07000000055374617465000000042000A070000000644696765737400000042000A070000000C496E6974696961C204461746500000000042000A07000000011556E6971756520496465E7469666965720000000000000042000A07000000044E616D65000000000042000A070000001843727970746F6772617068696320557361676520D61736B42000A070000000B4F626A6563742054790650000000000042000A07000000013436F6E7461637420496E666F726D6174696F6E00000000042000A07000000114C617374204368616E6765204461746500000000042007B01000001C842007A0100000048420069010000002042006A0200000004000000010000000420006B0200000004000000000000000042009209000000008000000004AFBED2442000D0200000004000000010000000420000F01000001704200C05C05000000040000000C00000000042007F050000000400000000000000042007C0100000148420094070000002430613133336353833652D356237612D343836352D393634612D38643163333626266396165533000000000042000A070000001443727970746F677261706869632040C656E677468000000042000A07000000174372797076F6772617068696320416C676F726974686D0042000A070000000553746174650000000042000A070000000644696765737400000042000A070000000C496E69746961C20446174650000000042000A07000000011556E6971756520496465E7469666965720000000000000042000A07000000044E616D65000000000042000A070000001843727970746F6772617068696320557361676520D61736B42000A070000000B4F626A65637420547905790650000000000042000A07000000013436F6E7461637420496E666F726D6174696F6E000000000042000A070000001004C617374204368616E6765204461746500

4	Client B: Get attributes In: uuidKey, attributeNames={'Name', 'ContactInformation'}

```
Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get
Attributes)
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 7fba0849-a3e2-
4d8c-81dd-9a199947e47d0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Contact Information
```
42007501000000C04200740100000038420067010000002042006802000000040000000100000004200690200000040
0000000000000042000D0200000004000000010000000042000F01000000784200SA0S000000040000000B0000000042
007601000000604200910700000024376662613038341392D61336322D346438632D383164642D396131393939343765
34376400000000042000A07000000044E616D6500000000042000A0700000013436F6E74616374204496E666F726D61696F
6E0000000000
42007801000000C04200770100000038420069010000002042006A02000000040000000100000004200620200000040
0000000000000042000D0200000004000000010000000042000F01000000784200SC0S000000040000000B0000000042
007901000000604200940700000024306133336538653832D356237612D343836352D393634612D3864316333626266396
1653300000000042000A07000000044E616D6500000000042000A0700000013436F6E74616374204496E666F726D61696F
6E0000000000

Out: uuidKey, attributes={ Name={ Name='Key1', NameType='00000001' }, ContactInformation='Foo' }

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC07325 (Mon Sep
0x000000004AFBED24 (Thu Nov 12 12:10:28 10:26:13 CESTCET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get
Attributes)
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 7fba0849-a3e2-
4d8c-81dd-9a199947e47d0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
        Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
          Tag: Name Value (0x4200530x420055), Type: Text String (0x07), Data: Key1
          Tag: Name Type (0x4200520x420054), Type: Enumeration (0x05), Data: 0x00000001
(Uninterpreted text string)
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Contact Information
        Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Foo
```

42007801000001284200770100000048420067010000002042006802000000040000000100000004200690200000040
0000000000000000042008F090000000800000004AC0732542000D0200000004000000010000000042000F01000000D042
005A050000000400000000B000000042007C05000000040000000000000000042007901000000A8420091070000002437666
6261303834392D613363322D34643632D383164642D3961313939393437653437640000000042000080100000003842000
0A07000000044E616D6500000000042000B010000002042005307000000044B6579310000000042005205000000040000000
0010000000042000080100000003042000A0700000013436F6E746163742043496E666F726D6174696F6E000000000042000B
070000000003466F6F0000000000042007B01000001284200700A0100000048420069010000002042006A02000000400000000
1000000000420068020000004000000000000000420092090000000800000004AFBED2442000D020000000400000001
1000000042000F01000000D042005C050000000400000000B000000042007F050000000400000000000000000420007C010
00000A842000940700000024306133365383652D356237612D34383652D393634612D3864316333362663961653300
0000042000080100000003842000A07000000044E616D65000000000042000B0100000002042005507000000044B6579310000
00000420540500000000400000000010000000042000080100000003042000A07000000013436F6E74616374204696E666F726D6
174696F6E000000000042000B0700000003466F6F0000000000

5	Client B: Add attribute [batch] In: uuidKey, attribute={ x-attribute1='Value1'} In: uuidKey, attribute={ x-attribute2='Value2' }

```
Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)
    Tag: Unique Batch Item ID (0x4200900x420093), Type: Octet String (0x08), Data:
290C75CAE59F39087A92DDA525EB158A
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 7fba0849-a3e2-
4d8c-81dd-9a199947e47d0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute1
        Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Value1
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)
    Tag: Unique Batch Item ID (0x4200900x420093), Type: Octet String (0x08), Data:
BF48C307C95CC22E7230F6E4D3BEA249
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 7fba0849-a3e2-
4d8c-81dd-9a199947e47d0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute2
        Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Value2
```

42007501000001604200740100000038420067010000002042006802000000040000000100000004200690200000040
0000000000000000042000D0200000004000000020000000042000F010000008842005A050000000400000000D000000042
00900800000008290C75CAE59F390842007601000000604200910700000024376662613038343392D613363322D34643863
2D383164642D3961313939393437653437640000000042000080100000002842000A070000000C782D6174747269627574
653100000000042000B070000000656616C75653100004200F01000000884200500500000000400000000D00000000042009
00800000008BF48C307C95CC22E42007601000000604200910700000024376662613038343392D613363322D34643863632D
383164642D3961313939393437653437640000000042000080100000002842000A07000000C782D617474726962757465653
2000042000B070000000656616C7565320000

42007801000001604200770100000038420069010000002042006A020000000400000001000000000420006B020000040
0000000000000000042000D0200000004000000020000000042000F01000000884200520505000000040000000D000000042

009308000000087A92DDA525EB158A42007901000000604200940700000024306133336538336352D356237612D3438363
52D393634612D3864313633362626639616533000000004200801000002842000A070000000C782D6174747269627574
6531000000042000B070000000656616C75653100004200F010000008842005C0500000004000000000000042009
308000000087230F6E4D3BEA2494200790100000060420094070000002430613333365383365D356237612D3438363652D
393634612D386431633362626639616533000000042000801000002842000A070000000C782D6174747269627574653
20000000042000B070000000656616C75653200000

Out: uuidKey, attribute={ x-attribute1='Value1'}

Out: uuidKey, attribute={ x-attribute2='Value2' }

Tag: Response Message (~~0x420078~~0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (~~0x420077~~0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (~~0x420067~~0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (~~0x420068~~0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (~~0x420069~~0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (~~0x42008F~~0x420092), Type: Date-Time (0x09), Data: ~~0x000000004AC07326 (Mon Sep 28~~ 0x000000004AFBED25 (Thu Nov 12 12:10:~~26:14 CEST~~14 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)
    Tag: Unique Batch Item ID (~~0x420090~~0x420093), Type: Octet String (0x08), Data:
~~290C75CAE59F3908~~7A92DDA525EB158A
    Tag: Result Status (~~0x42007C~~0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (~~0x420079~~0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~7fba0849-a3e2-4d8c-81dd-9a199947e47d~~0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute1
        Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Value1
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)
    Tag: Unique Batch Item ID (~~0x420090~~0x420093), Type: Octet String (0x08), Data:
~~BF48C307C95CC22E~~7230F6E4D3BEA249
    Tag: Result Status (~~0x42007C~~0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (~~0x420079~~0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~7fba0849-a3e2-4d8c-81dd-9a199947e47d~~0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute2
        Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Value2

42007801000001904200770100000048420067010000002042006802000000040000000100000000420069020000040
00000000000000042008F0900000008000000001AC0732642000D02000000040000000200000000420000F01000000984
005A0500000004000000D000000004200900800000008290C75CAE59F3908420007C05000000040000000000000420
07901000000604200910700000024376662613038343392D613363322D346438632D383164642D3961313939393437653434
37640000000042000801000002842000A070000000C782D6174747269627574653100000000042000B070000000656616
C756531000042000F010000098842005A0500000004000000D0000000042009008000000BF48C307C95CC22E42007C
05000000040000000000000000420079010000006042009107000000243766626130383439D613363322D346438632D3
83164642D3961313939393437653437640000000042000801000002842000A070000000C782D6174747269627574653
2000000004200B070000000656616C7565320000042007B01000001904207A0100000048420069010000002042006A020
0000004000000010000000042006B02000000040000000000000000420092090000000800000004AFBED254200000020
0000004000000020000000042000F010000009842005C0500000004000000D0000000042009308000000087A92DDA525E
B158A42007F0500000004000000000000000042007C010000006042009407000000243061333336538336352D356237612D
343836352D393634612D386431633362626639616533000000004200801000002842000A070000000C782D617474726
92757465310000000004200B070000000656616C756531000042000F01000009842005C0500000004000000D000000
004200930800000008720F6E4D3BEA24942007F0500000004000000000000000042007C010000006042009407000000
2

430613333653833652D356237612D343836352D393634612D386431633362626639616533000000004200080100000028
42000A070000000C782D6174747269627574653200000000042000B070000000656616C7565320000

6	Client B:

Modify attribute [batch]

In: uuidKey, attribute={ x-attribute1='ModifiedValue1' }

In: uuidKey, attribute={ x-attribute2='ModifiedValue2' }

```
Tag: Request Message (0x420075 0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420074 0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420067 0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x420068 0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x420069 0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A 0x42005C), Type: Enumeration (0x05), Data: 0x0000000E (Modify
Attribute)
    Tag: Unique Batch Item ID (0x420090 0x420093), Type: Octet String (0x08), Data:
42C6D3ED5BFE4F34 BA3EA60548ECB699
    Tag: Request Payload (0x420076 0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420091 0x420094), Type: Text String (0x07), Data: 7fba0849-a3e2-
4d8c-81dd-9a199947e47d 0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute1
        Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: ModifiedValue1
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A 0x42005C), Type: Enumeration (0x05), Data: 0x0000000E (Modify
Attribute)
    Tag: Unique Batch Item ID (0x420090 0x420093), Type: Octet String (0x08), Data:
A391110F7716FCFD 321984E716274A3D
    Tag: Request Payload (0x420076 0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420091 0x420094), Type: Text String (0x07), Data: 7fba0849-a3e2-
4d8c-81dd-9a199947e47d 0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute2
        Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: ModifiedValue2
```

420075010000017042007401000000384200670100000020420068020000000400000001000000004200690200000040
00000000000000004200D0200000004000000020000000042000F01000000904200SA0500000040000000E0000000042
00090080000000842C6D3ED5BFE4F34420076010000006842009107000000243766626130383439322D613363322D3464386
32D383164642D396131393939343476534376400000000042000801000003042000A070000000C782D6174747269627574
6531000000004200B070000000E4D6F64696669656456616C75653100004200F01000000904200SA0500000040000000
00E0000000042009008000000008A391110F7716FCFD4200760100000068420091070000002437666261303834392D6133
3322D346438632D383164642D39613139393933434376534376400000000042000801000003042000A070000000C782D617
4747269627574653200000000042000B070000000E4D6F64696669656456616C7565320000

420078010000017042007701000000384200690100000020420060A020000000400000001000000004200680B020000040
0000000000000004200D0200000004000000020000000042000F01000000904200SC0500000040000000E0000000042
00930800000008BA3EA60548ECB699420079010000006842009407000000243061333365383365D356237612D34383637
52D393634612D38643163333626266396165330000000004200080100000304200A070000000C782D6174747269627574
65310000000004200B070000000E4D6F64696669656456616C75653100004200F01000000904200SC05000000040000000
00E0000000042009308000000008321984E716274A3D420079010000006842009407000000243061333365383365D3562
37612D343836352D393634612D386431633362626639616533000000004200080100000304200A070000000C782D617
4747269627574653200000000042000B070000000E4D6F64696669656456616C7565320000

Out: uuidKey, attribute={ x-ttribute1='ModifiedValue1' }

Out: uuidKey, attribute={ x-attribute2='ModifiedValue2' }

```
Tag: Response Message (~~0x420078~~0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (~~0x420077~~0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (~~0x420067~~0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (~~0x420068~~0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (~~0x420069~~0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (~~0x42008F~~0x420092), Type: Date-Time (0x09), Data: ~~0x000000004AC07326 (Mon Sep 28~~ 0x000000004AFBED26 (Thu Nov 12 12:10:~~26:14 CEST~~30 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x0000000E (Modify Attribute)
    Tag: Unique Batch Item ID (~~0x420090~~0x420093), Type: Octet String (0x08), Data: ~~42C6D3ED5BFE4F34~~BA3EA60548ECB699
    Tag: Result Status (~~0x42007C~~0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (~~0x420079~~0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~7fba0849-a3c2-4d8c-81dd-9a199947e47d~~0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute1
        Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: ModifiedValue1
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x0000000E (Modify Attribute)
    Tag: Unique Batch Item ID (~~0x420090~~0x420093), Type: Octet String (0x08), Data: ~~A391110F7716FCFD~~321984E716274A3D
    Tag: Result Status (~~0x42007C~~0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (~~0x420079~~0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~7fba0849-a3c2-4d8c-81dd-9a199947e47d~~0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute2
        Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: ModifiedValue2
```

420078010000011A042007701000000484200670100000020420068020000000400000001000000004200690200000040
00000000000000000042008F09000000080000000004AC0732642000D02000000040000000200000000042000F01000000A042
005A0500000004000000E0000000042009008000000842C6D3ED5BFE4F3442007C0500000004000000000000000042000
7901000000684200910700000024376662613038343392D613363322D346438632D383164642D3961313939393934376534
37640000000042000801000003042000A070000000C782D617474726962757465310000000042000B070000000E4D6F6
4696669656456616C756563100004200F01000000A042005A0500000004000000E0000000042009008000000084A391111
0F7716FCFD42007C0500000004000000000000000042007901000000684200910700000024376662613038343392D613363
3322D346438632D383164642D3961313939393934376534376400000000420008010000030420002A070000000C782D6174
747269627574653200000000042000B070000000E4D6F64696669656456616C7565320000042007B010000011A042007A010
0000048420069010000020420006A0200000004000000010000000420006B02000000040000000000000000420092090
000000800000000004AFBED2642000D0200000004000000200000000042000F01000000A042005C0500000004000000E000
000004200930800000008BA3EA60548ECB69942007F0500000004000000000000000042007C0100000068420094070000
0024306133336533833652D356237612D343836352D393634612D386431633362626639616533000000004200080100000
03042000A070000000C782D617474726962757465310000000042000B070000000E4D6F64696669656456616C7565310
0004200F01000000A042005C0500000004000000E0000000042009308000000083219846716274A3D42007F050000000
40000000000000000420007C0100000068420094070000002430613333653833652D356237612D343836352D393634612D
3864316333626266396533300000000042000801000003042000A070000000C782D6174747269627574653200000000004
2000B070000000E4D6F64696669656456616C756532000000

| 7 | Client B: |
| | Delete attribute [batch] |

In: uuidKey, attributeNames={'x-attribute1'}

In: uuidKey, attributeNames={'x-attribute2'}

```
Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000F (Delete
Attribute)
    Tag: Unique Batch Item ID (0x4200900x420093), Type: Octet String (0x08), Data:
FB10B7D6A5F8F02FD5C6DF842DAEECD8
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 7fba0849-a3e2-
4d8c-81dd-9a199947e47d0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute1
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000F (Delete
Attribute)
    Tag: Unique Batch Item ID (0x4200900x420093), Type: Octet String (0x08), Data:
3B5C2DE222A01A87572D4F0D433DAB10
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 7fba0849-a3e2-
4d8c-81dd-9a199947e47d0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute2
```

4200750100000130420074010000003842006701000000204200680200000004000000010000000042006902000000040
00000000000000000042000D0200000004000000020000000042000F01000000704200005A05000000040000000F0000000042
009080000000008FB10B7D6A5F8F02F420076010000004842009107000000243766626130383439322D613363322D34643836
32D383164642D396131393939343765343437640000000042000A070000000C782D6174747269627574653100000000004200
0F01000000704200005A05000000040000000F0000000042009008000000083B5C2DE222A01A874200760100000048420009
10700000024376666261303834392D613363322D34643836322D383164642D3961313939393934376534376400000000042000A
070000000C782D617474726962757465320000000

4200780100000130420077010000003842006901000000204200006A02000000040000000100000000042006B02000000040
00000000000000000042000D0200000004000000020000000042000F01000000704200005C05000000040000000F0000000042
009308000000008D5C6DF842DAEECD8420079010000004842009407000000243061333365383365D356237612D3438363
52D393634612D386431633362266639616533000000000042000A070000000C782D6174747469627275465310000000004200
0F01000000704200005C05000000040000000F0000000042009308000000085728D4F0D433DAB10420079010000004842009
40700000024306133333653833652D356237612D343836352D393634612D386431633362266639616533000000000042000A
070000000C782D617474747269627275465320000000

Out: uuidKey, attributeNames={'x-attribute1'}

Out: uuidKey, attributeNames={'x-attribute2'}

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC07327 (Mon Sep
```

<strikethrough>28 </strikethrough>0x000000004AFBED26 (Thu Nov 12 12:10:<strikethrough>26:15 CEST</strikethrough>30 CET 2009)
```
      Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
    Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
      Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000F (Delete
Attribute)
      Tag: Unique Batch Item ID (0x4200900x420093), Type: Octet String (0x08), Data:
FB10B7D6A5F8F02FD5C6DF842DAEECD8
      Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
      Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
        Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 7fba0849-a3e2-
4d8c-81dd-9a199947e47d0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute1
          Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: ModifiedValue1
    Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
      Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000F (Delete
Attribute)
      Tag: Unique Batch Item ID (0x4200900x420093), Type: Octet String (0x08), Data:
3B5C2DE222A01A87572D4F0D433DAB10
      Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
      Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
        Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 7fba0849-a3e2-
4d8c-81dd-9a199947e47d0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute2
          Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: ModifiedValue2
```

42007801000001A0420077010000004842006701000000204200680200000004000000010000000042006902000000040
0000000000000000042008F090000000800000004AC0732742000D0200000004000000020000000042000F01000000A042
005A0500000004000000F000000004200900800000008FB10B7D6A5F8F02F42007C050000000400000000000000000420
079010000006842009107000000243766626130383439322D613363322D346438632D383164642D396131393939343765341
376400000000420008010000003042000A070000000C782D6174747269627574654531000000042000B070000000E4D6F6
469666965456616C75653100004200F01000000A042005A0500000004000000F000000004200900800000008083B5C2D
E222A01A8742007C0500000004000000000000000042007901000000684200910700000024376662613038343932D613336
3322D346438632D383164642D396131393939343765343764000000000420008010000003042000A070000000C782D6174
7472696275746532000000004200B070000000E4D6F64696965456616C7565320000
42007B01000001A042007A010
0000004842006901000000204200680200000004000000010000000042006B0200000004000000000000000042009209000
000080000000004AFBED2642000D02000000040000000200000000420F0100000A042005C0500000004000000F000
00004200930800000008D5C6DF842DAEECD842007F05000000040000000000000000042007C0100000068420094070000
00243061333335383365052D356237612D343836352D393634612D386431633362626639616533000000004200080100000
03042000A070000000C782D6174747472696275746531000000004200B070000000E4D6F64696965456616C7565310
0004200F0100000A042005C0500000004000000F000000004200930800000008572D4F0D433DAB104200F050000000
40000000000000000042007C0100000068420094070000002430613333653833652D356237612D343836352D393634612D
386431633362266639616533000000004200080100000304200A070000000C782D6174747472696275746532000000000
4200B070000000E4D6F64696965456616C7565320000
```
```
| 8 | Client A:
Destroy (symmetric key)
In: uuidKey
```
Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
```

```
Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 7fba0849-a3e2-
4d8c-81dd-9a199947e47d0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
```

```
420075010000009042007401000000384200670100000020420068020000000400000001000000004200690200000040
0000000000000042000D020000000400000001000000004200F010000004842005A050000000400000140000000042
0076010000003042009107000000243766626130383439322D613363322D346438632D383164642D396131393939343765353
4376400000000
420078010000009042007701000000384200690100000020420069020000000400000001000000004200680200000040
0000000000000042000D020000000400000001000000004200F010000004842005C0500000004000000140000000042
0079010000003042009407000000243061333365383365352D356237612D343836352D393634612D3864316333626266396
1653300000000
```

Out: uuidKey


```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC07327 (Mon Sep
28 0x000000004AFBED27 (Thu Nov 12 12:10:26:15 CEST31 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 7fba0849-a3e2-
4d8c-81dd-9a199947e47d0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
```

```
420078010000000B042007701000000484200670100000020420068020000000400000001000000004200690200000040
00000000000000042008F0900000008000000004AC0732742000D020000000400000001000000004200F010000005842
005A050000000400000140000000042007C050000000400000000000000042007901000000304200910700000024376
66261303834392D613363322D346438632D383164642D3936131393939343765353437640000000042007B01000000B04200
7A01000000484200690100000020420068020000000400000001000000042006B0200000004000000000000000042009
2090000000800000004AFBED2742000D0200000004000000010000000042000F010000005842005C0500000004000000
140000000042007F0500000004000000000000000042007C01000000304200940700000024306133336536333365352D35623
7612D343836352D393634612D3864316333626266396165330000000000
```

<table>
<tr><td>9</td><td>

Client A:

Get (symmetric key)

In: uuidKey


```
Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
```

</td></tr>
</table>

```
Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
    Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 7fba0849-a3e2-
4d8c-81dd-9a199947e47d0a33e83e-5b7a-4865-964a-8d1c3bbf9ae3
```

420075010000009042007401000000384200670100000020420068020000000400000001000000004200690200000040
0000000000000000042000D02000000040000000100000004200F010000004842005A05000000040000000A0000000042
00760100000030420091070000002437666261303834392D61336332D346438632D383164642D396131393939343765534376400000000

4200780100000090420077010000003842006901000000204200 6A0200000004000000010000000420 6B0200000040
0000000000000000042000D02000000040000000100000004200F01000000484200 5C05000000040000000A0000000042
00790100000030420094070000002430613333653833652D356237612D343836352D393634612D38643163336262663962653300000000

Out: Operation Failed, Item Not Found

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC07327 (Mon Sep
28 0x000000004AFBED27 (Thu Nov 12 12:10:26:15 CEST31 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000001 (Operation
Failed)
    Tag: Result Reason (0x42007B0x42007E), Type: Enumeration (0x05), Data: 0x00000001 (Item Not
Found)
    Tag: Result Message (0x42007A0x42007D), Type: Text String (0x07), Data: No Cryptographic
Object found with given Unique Identifierdoes not exist
```

420078010000000D0420077010000048420067010000002042006802000000040000000100000004200690200000040
0000000000000000042008F0900000008000000004AC0732742000D02000000040000000100000004200F010000007842
005A05000000040000000A000000004200 7C05000000040000000100000004200 7B05000000040000000100000000420
07A070000003A4E6F20437279707470676170686963204F626A65637420666F756E6420776974682067697665E2055
6E6971756520496465E746966696572200000000000042007B01000000A8 42007A0100000048 42006901000000204200
6A0200000004000000010000000420 6B0200000040000000000000000042009209000000080000000 04AFBED2742000D
0200000004000000010000000 42000F010000005042005C05000000040000000A0000000 42007F050000000400000000
100000000 42007E0500000004000000010000000 42007D07000000154F626A65637420646F6573206E6F742065786973
74000000

10	Client A:
	Destroy (template)
	In: uuidTemplate
	
	`Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:`
	`  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:`
	`    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:`
	`      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)`
	`      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)`
	`    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)`
	`  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:`
	`    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)`

          Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
              Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 8383198b-4600-4388-955f-2802cc699e9e45d8629a-9ad1-41b3-9d09-941f2a595da3

42007501000000904200740100000038420067010000002042006802000000040000000100000000420069020000004000000000000000000042000D020000000400000001000000004200F010000004842005A050000000400000014000000004200760100000030420091070000002438333833313938622D343630302D343338382D393535662D3238303263633639396539630000000042007801000000904200770100000038420069010000002042006A02000000040000000100000000420069020000004000000000000000000042000D020000000400000001000000004200F010000004842005C050000000400000014000000004200790100000030420094070000002434356438363239612D396164312D343162332D396430392D393431663261353935646133000000000420078010000009042007701000000384200690100000020420069020000000400000001000000004200690200000040000000000000000042000D020000000400000001000000004200F010000004842005C050000000400000014000000004200790100000030420094070000002434356438363239612D396164312D343162332D396430392D393431663261353935646133000000000

Out: uuidTemplate

Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC07327 (Mon Sep 28 0x000000004AFBED27 (Thu Nov 12 12:10:26:15 CEST31 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
        Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 8383198b-4600-4388-955f-2802cc699e9e45d8629a-9ad1-41b3-9d09-941f2a595da3

42007801000000B04200770100000048420067010000002042006802000000040000000100000000420069020000004000000000000000000042008F090000000800000004AC0732742000D0200000004000000010000000042000F010000005842005A050000000400000014000000004200760100000030420091070000002438333833313938622D343630302D343338382D393535662D3238303263633639396539630000000042007B01000000B042007A01000000484200690100000020420069020000000400000001000000004200690200000040000000000000000042000909000000080000000004AFBED2742000D020000000400000001000000004200F010000005842005C050000000400000014000000004200790100000030420094070000002434356438363239612D396164312D343162332D396430392D393431663261353935646133000000000

---

11 | Client A:
Get (template)
In: uuidTemplate

Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
        Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 8383198b-4600-4388-955f-2802cc699e9e45d8629a-9ad1-41b3-9d09-941f2a595da3

420075010000009042007401000000384200670100000020420068020000000400000001000000004200690200000004000000000000000000042000D0200000004000000010000000042000F010000004842005A0500000004000000000A000000004200760100000030420091070000002438333833313938622D343630302D343338382D393535662D323830326363363939653963300000000

420078010000009042007701000000384200690100000020420068020000000400000001000000004200690200000004000000000000000000042000D0200000004000000010000000042000F010000004842005C0500000004000000000A000000004200790100000030420094070000002434356438363239612D396164312D343162332D396430392D393431663261313539356461613300000000

Out: Operation Failed, Item Not Found

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC07327 (Mon Sep 28 0x000000004AFBED27 (Thu Nov 12 12:10:26:15 CEST31 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000001 (Failed)
    Tag: Result Reason (0x42007B0x42007E), Type: Enumeration (0x05), Data: 0x00000001 (Item Not Found)
    Tag: Result Message (0x42007A0x42007D), Type: Text String (0x07), Data: No Cryptographic Object found with given Unique Identifier
```

420078010000000D042007701000000484200670100000020420068020000000400000001000000004200690200000004000000000000000000042008F09000000080000000004AC0732742000D0200000004000000010000000042000F010000007842005A0500000004000000000A000000004200760500000004000000010000000042007B0500000004000000000000000042007A070000003A4E6F2043727970746F677261706869632040F626A65637420666F756E642077697468206720766976656E20556E6971756565204964656E7469666965722000000000000042007B01000000D042007A0100000048420069010000002042006A020000000400000001000000004200690200000004000000010000000042006B0200000004000000000000000042009209000000080000000004AFBED2742000D0200000004000000010000000042000F010000007842005C0500000004000000000A000000004200790500000004000000010000000042007E0500000004000000010000000042007D070000003A4E6F2043727970746F677261706869632040F626A65637420666F756E64207769746820676976656E20556E6971756565204964656E74696669657220000000000000

87	
88	### 3.1.5 Use-case: Register / Destroy Secret Data
89 90 91	In this use-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.
92	

Time	Request/Response messages

0	Register (secret data)
	In: objectType='00000007' (Secret Data), attributes={ CryptographicUsageMask='00000002' }
	
	Tag: Request Message (0x420078), Type: Structure (0x01), Data:
	  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
	    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

| | | Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) |
| | | Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) |

Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000003 (Register)
Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000007 (Secret Data)
Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data:
Tag: Attribute (0x420008), Type: Structure (0x01), Data:
Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage Mask
Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000002 (Verify)
Tag: Secret Data (0x420085), Type: Structure (0x01), Data:
Tag: Secret Data Type (0x420086), Type: Enumeration (0x05), Data: 0x00000001
Tag: Key Block (0x420040), Type: Structure (0x01), Data:
Tag: Key Format Type (0x420042), Type: Enumeration (0x05), Data: 0x00000002
Tag: Key Value (0x420045), Type: Structure (0x01), Data:
Tag: Key Material (0x420043), Type: Octet String (0x08), Data: 536563726574450617373776F7264

4200780100000100420077010000003842006901000000204200 6A0200000004000000010000000042006B0200000004
000000000000000042000D0200000004000000010000000042000F01000000B842005C05000000040000000300000000
42007901000000A0420057050000000400000007000000004200910100000038420008010000003042000A0700000018
43727970746F67726170686963205573616765204D61736B42000B02000000040000000200000000420085010000000048
4200860500000004000000010000000042004001000000304200420500000004000000020000000042004501000000018
420043080000000E536563726574450617373776F72640000

Out: uuidObject

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B7924D1 (Mon Feb 15 11:41:21 CET 2010)
Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000003 (Register)
Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 39622cc2-e5d4-4da9-9f10-3bdf64b0e760

42007B01000000B042007A010000004842006901000000204200 6A0200000004000000010000000042006B0200000004
0000000000000000420092090000000800000004B7924D142000D0200000004000000010000000042000F010000058
42005C05000000040000000300000000420 07F050000000400000000000000042007C01000000304200940700000024
33393632326363322D653564342D346461392D396631302D336264663634623065373630000000000

| 1 | Destroy (secret data) |
| | In: uuidObject |

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 39622cc2-e5d4-4da9-
9f10-3bdf64b0e760
```

42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B0200000004
000000000000000042000D0200000004000000010000000042000F010000004842005C05000000040000001400000000
42007901000000304200940700000024333936323236363322D653564342D346461392D396631302D3362646636346230
6537363000000000

Out: uuidKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B7924D1 (Mon Feb 15
11:41:21 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 39622cc2-e5d4-4da9-
9f10-3bdf64b0e760
```

42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004
000000000000000042009209000000080000000004B7924D142000D0200000004000000010000000042000F0100000058
42005C05000000040000001400000000042007F05000000040000000000000000042007C010000003042009407000000240
333936323236363322D653564342D346461392D396631302D3362646636346230653736300000000000

93

94

~~3.2~~<ins>3.2</ins> Use-case: Asynchronous Locate

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

102

103 This use-case shows the use of two clients with the same assumptions as in the use-case described in
104 Section 3.1.4 Since the client is unable to force the server to respond asynchronously, it is possible for a

105	server to respond synchronously to the requests issued at times 1 and 4, in which case the expected
106	response are the ones shown at times 2 and 5, respectively. In the case of the server not responding
107	asynchronously to the Locate requests, the client is permitted to skip the requests illustrated at time 7 and
108	8.
109	

Time	Client A
0	**Client A:** Create (symmetric key) In: objectType = '00000002', attributes={ CryptographicAlgorithm='AES', CryptographicLength='128', Name={ NameValue='Key1', NameType='00000001' }, CryptographicUsageMask='00000004', ObjectGroup='Group1' } Tag: Request Message (~~0x420075~~0x420078), Type: Structure (0x01), Data: Tag: Request Header (~~0x420074~~0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (~~0x420067~~0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (~~0x420068~~0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (~~0x420069~~0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create) Tag: Request Payload (~~0x420076~~0x420079), Type: Structure (0x01), Data: Tag: Object Type (~~0x420055~~0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key) Tag: Template-Attribute (~~0x42008E~~0x420091), Type: Structure (0x01), Data: Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (AES) Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000080 (128) Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data: Tag: Name Value (~~0x420053~~0x420055), Type: Text String (0x07), Data: Key1 Tag: Name Type (~~0x420052~~0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string) Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage Mask Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000004 (Encrypt) Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Group Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Group1 4200750100000190420074010000003842006701000000204200680200000004000000010000000042006902000000040000000000000000042000D02000000040000000100000000420000F01000001484200

04D61736B42000B020000000400000004000000042000801000002842000A070000000C4F626A6563742047726F7570
0000000042000B070000006647726F7570310000

420078010000019042007701000000384200690100000020420006A020000000400000010000000042006B02000000040
0000000000000000042000D020000000400000010000000042000F01000001484200SC0500000004000000010000000042
007901000001304200570500000004000000020000000042009101000001184200801000003042000A0700000001743743
27970746F6772217068696320416C676F726974686D0042000B05000000040000003000000042000801000000304200
0A07000001443727970746F6772217068696320C656E677468000000004200B02000000040000080000000004200
801000003842000A07000000044E616D650000000042000B0100000020420005507000000044B65793100000000420054
050000000400000001000000042000801000000304200A07000001843727970746F6772217068696320S576167652
04D61736B42000B020000000400000004000000042000801000002842000A070000000C4F626A6563742047726F7570
0000000042000B070000006647726F7570310000

Out: objectType = '00000002', uuidKey

Tag: Response Message (~~0x420078~~0x42007B), Type: Structure (0x01), Data:

  Tag: Response Header (~~0x420077~~0x42007A), Type: Structure (0x01), Data:

    Tag: Protocol Version (~~0x420067~~0x420069), Type: Structure (0x01), Data:

      Tag: Protocol Version Major (~~0x420068~~0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

      Tag: Protocol Version Minor (~~0x420069~~0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

    Tag: Time Stamp (~~0x42008F~~0x420092), Type: Date-Time (0x09), Data: ~~0x000000004AC0781B (Mon Sep 28~~ 0x000000004AFBED28 (Thu Nov 12 12:10:~~47:23 CEST~~32 CET 2009)

    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)

    Tag: Result Status (~~0x42007C~~0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

    Tag: Response Payload (~~0x420079~~0x42007C), Type: Structure (0x01), Data:

      Tag: Object Type (~~0x420055~~0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)

      Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~8b961211-97e7-40a6-8664-ed33491dab5e~~95a0e6b3-8edc-4ffb-a88e-e164539dbcca

420078010000000C042007701000000484200670100000020420068020000000400000001000000042006902000000040
000000000000000042008F0900000008000000004AC0781B42000D0200000004000000010000000042000F010000006842
005A05000000040000000100000000042007C05000000040000000000000000042007901000001404200550500000004000
0000020000000042009107000000243862393631323131312D393763372D343061362D383636342D6564334333343931646162
3563300000000042007B01000000C042007A0100000048420069010000000204200060A020000000040000001000000042006
B0200000004000000000000000420092090000000800000004AFBED2842000D02000000040000000100000000042000F
010000006842005C05000000040000000100000000042007F05000000040000000000000000042007C010000004040420057057
5000000000200000042009407000000243935613065623382D386564662D346666622D613838652D6531363453
353339646263636100000000

1	Client B:
	Locate (symmetric key by name)
	In: asynchronousIndicator='TRUE', attributes={ objectType = '00000002', Name={ Name='Key1', NameType='00000001'} }
	Tag: Request Message (~~0x420075~~0x420078), Type: Structure (0x01), Data:

  Tag: Request Header (~~0x420074~~0x420077), Type: Structure (0x01), Data:

    Tag: Protocol Version (~~0x420067~~0x420069), Type: Structure (0x01), Data:

      Tag: Protocol Version Major (~~0x420068~~0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

      Tag: Protocol Version Minor (~~0x420069~~0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

    Tag: Asynchronous Indicator (0x420007), Type: Boolean (0x06), Data: TRUE

    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)

```
        Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
          Tag: Attribute (0x420008), Type: Structure (0x01), Data:
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type
            Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric
Key)
          Tag: Attribute (0x420008), Type: Structure (0x01), Data:
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
            Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
              Tag: Name Value (0x4200530x420055), Type: Text String (0x07), Data: Key1
              Tag: Name Type (0x4200520x420054), Type: Enumeration (0x05), Data: 0x00000001
(Uninterpreted text string)
```

42007501000000E042007401000000484200670100000020420068020000000400000001000000004200690200000040
00000000000000004200070600000008000000000000000142000D0200000004000000010000000042000F0100000088420
05A05000000040000000800000004200760100000070420008010000002842000A070000000B4F626A6563742054797
06500000000000042000B0500000004000000020000000042000801000000384200A07000000044E616D65000000004200
0B010000002042005307000000044B65793100000000420052050000000400000001000000000
42007801000000E042007701000000484200690100000020420068020000000400000001000000004200690200000040
00000000000000004200070600000008000000000000000142000D0200000004000000010000000042000F0100000088420
05C05000000040000000800000004200790100000070420008010000002842000A070000000B4F626A6563742054797
06500000000000042000B0500000004000000020000000042000801000000384200A07000000044E616D65000000004200
0B010000002042005507000000044B65793100000000420054050000000400000001000000000

Out: asyncCorrValue1

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC0781C (Mon Sep
28  0x000000004AFBED28 (Thu Nov 12 12:10:47:24 CEST32 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000002 (Pending)
    Tag: Asynchronous Correlation Value (0x420006), Type: Octet String (0x08), Data:
D1DE142AC6367B4B130BC369AF005A7F
```

42007801000000884200770100000048420067010000002042006802000000040000000100000000420069020000004
00000000000000000042008F0900000008000000001AC0781C42000D02000000040000000100000000420F01000000304200
5A05000000040000000800000042007C0500000004000000020000000042000608000000008D1DE142AC6367B4B420
07B010000008842007A010000004842006901000000204200690200000004000000010000000042006B0200000004000
0000000000000004200920900000008000000004AFBED2842000D0200000004000000010000000042000F010000003042005
C05000000040000000800000042007F0500000004000000020000004200060800000008130BC369AF005A7F
```

2	Client B:
	Poll*
	In: asyncCorrValue1
```

```
Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
```

```
            Tag: Protocol Version Minor (0x420069 0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
          Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
        Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
          Tag: Operation (0x42005A 0x42005C), Type: Enumeration (0x05), Data: 0x0000001A (Poll)
          Tag: Request Payload (0x420076 0x420079), Type: Structure (0x01), Data:
            Tag: Asynchronous Correlation Value (0x420006), Type: Octet String (0x08), Data:
D1DE142AC6367B4B 130BC369AF005A7F
```

42007501000000704200740100000038420067010000002042006802000000040000000100000000420069020000000400
00000000000000042000D020000000400000001000000004200F010000002842005A0500000040000001A0000000042
00760100000010420060080000008D1DE142AC6367B4B

42007801000000704200770100000038420069010000002042006A020000000400000001000000004200 6B02000000040
0000000000000000042000D02000000040000000100000000420F010000002842005C05000000400000001A0000000042
00790100000010420060080000008130BC369AF005A7F

Out: uuidKey1

```
Tag: Response Message (0x420078 0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x420077 0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420067 0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x420068 0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x420069 0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F 0x420092), Type: Date-Time (0x09), Data: 0x000000004AC0781C (Mon Sep
28 0x000000004AFBED28 (Thu Nov 12 12:10:47:24 CEST 32 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A 0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
    Tag: Result Status (0x42007C 0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x420079 0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420091 0x420094), Type: Text String (0x07), Data: 8b961211-97c7-
40a6-8664-ed33491dab5e 95a0e6b3-8edc-4ffb-a88e-e164539dbcca
```

42007801000000B04200770100000048420067010000002042006802000000040000000100000000420069020000000400
0000000000000042008F09000000080000000 4AC0781C42000D02000000040000000100000000 420F010000005842
005A0500000004000000080000000 42007C05000000040000000000000000420079010000003042009 1070000002438 6
239363132313120293763372D343061362D38363634 2D656433334391646162356300000000420 7B01000000B0420 0
7A010000004842006 9010000002042006A02000000040000000100000000 420 6B0200000004000000000000000042009
2090000000 80000000 4AFBED2842000D0200000004000000010000000 0420F010000005842005 C0500000004000000
080000000 042007F05000000040000000000000000042007 C0100000030420094 0700000024393561 30653662332D38656
4632D3466666 22D613838652D65313634353339646263636100000000

```
3   Client B:
    Get (symmetric key)
    In: uuidKey1

Tag: Request Message (0x420075 0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420074 0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420067 0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x420068 0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x420069 0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A 0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
```

Tag: Request Payload (~~0x420076~~0x420079), Type: Structure (0x01), Data:
     Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~8b961211-97c7-40a6-8664-ed33491dab5e~~95a0e6b3-8edc-4ffb-a88e-e164539dbcca

~~42007501000000904200740100000038420067010000002042006802000000040000000100000000420069020000004000000000000000000042000D02000000040000000100000000420F0100000048420005A0500000004000000A00000000420076010000003042009107000000243862393631323131312D393763372D343061362D383636342D656433343931646162356300000000~~
42007801000000904200770100000038420069010000002042006A02000000040000000100000000420B02000000400000000000000000042000D02000000040000000100000000420F010000004842005C05000000400000000A000000004200790100000030420094070000002439356130653662332D386564632D346666622D613838652D6531363435333964626363610000000

Out: objectType = '00000002', uuidKey1, symmetricKey

Tag: Response Message (~~0x420078~~0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (~~0x420077~~0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (~~0x420067~~0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (~~0x420068~~0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (~~0x420069~~0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (~~0x42008F~~0x420092), Type: Date-Time (0x09), Data: ~~0x000000004AC0781D (Mon Sep 28~~ 0x000000004AFBED29 (Thu Nov 12 12:10:~~47:25 CEST~~33 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
    Tag: Result Status (~~0x42007C~~0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (~~0x420079~~0x42007C), Type: Structure (0x01), Data:
       Tag: Object Type (~~0x420055~~0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
       Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~8b961211-97c7-40a6-8664-ed33491dab5e~~95a0e6b3-8edc-4ffb-a88e-e164539dbcca
       Tag: Symmetric Key (~~0x42008C~~0x42008F), Type: Structure (0x01), Data:
         Tag: Key Block (~~0x42003E~~0x420040), Type: Structure (0x01), Data:
          Tag: Key Format Type (~~0x420040~~0x420042), Type: Enumeration (0x05), Data: 0x00000001
          Tag: Key Value (~~0x420043~~0x420045), Type: Structure (0x01), Data:
            Tag: Key Material (~~0x420041~~0x420043), Type: Octet String (0x08), Data: ~~A1DF7B733D8DF7056623FE2D880EF62C~~BEF01F82DFB4682A01C2A08413834AAB
          Tag: Cryptographic Algorithm (~~0x420026~~0x420028), Type: Enumeration (0x05), Data: 0x00000003 (AES)
          Tag: Cryptographic Length (~~0x420028~~0x42002A), Type: Integer (0x02), Data: 0x00000080 (128)

~~42007801000001204200770100000048420067010000002042006802000000040000000100000000420069020000004000000000000000000042008F09000000080000000004AC0781D42000D02000000040000000100000000420F01000000C842005A0500000040000000A0000000042007C05000000400000000000000042007901000000A0420055050000000400000020000000004200910700000024386239363132313131312D393763372D343061362D383636342D656433343931646162356300000000042008C010000005842003E010000005042004005000000040000000100000000420043010000001842004101000000010A1DF7B733D8DF7056623FE2D880EF62C42002605000000040000000300000004200280200000040000000800000000042007B01000001204200770A01000000484200690100000020 42006A0200000004000000010000000042006B0200000004000000000000000042009209000000080000000004AFBED2942000D02000000040000000100000000420F01000000C842005C0500000040000000A0000000042007C05000000400000000000000042007901000000A0420094070000002439356130653662332D386564632D346666622D613838652D6531363435333964626363610000000042008F010000005842004001000000500420040205000000040000000100000000420045010000001842004308000000010BEF01F82DFB4682A01C2A08413834AAB42002805000000040000000300000004200280200000040000000800000080000000000~~

| 4 | Client B: |

Locate (symmetric key by group)

In: asynchronousIndicator='TRUE', attributes={ objectType = '00000002', ObjectGroup='Group1' }

```
Tag: Request Message (~~0x420075~~0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (~~0x420074~~0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (~~0x420067~~0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (~~0x420068~~0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (~~0x420069~~0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Asynchronous Indicator (0x420007), Type: Boolean (0x06), Data: TRUE
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
    Tag: Request Payload (~~0x420076~~0x420079), Type: Structure (0x01), Data:
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type
        Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric
Key)
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Group
        Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Group1
```

~~42007501000000D042007401000000484200670100000020420068020000000400000001000000004200690200000040~~
~~0000000000000000420007060000000800000000000000142000D02000000040000000100000004200F010000007842~~
~~005A05000000040000000800000004200760100000060420008010000002842000A070000000B4F626A6563374205479~~
~~7065000000000042000B050000000400000002000000004200080100000028 42000A070000000C4F626A6563374204772~~
~~6F7570000000000042000B070000000647726F7570310000~~

42007801000000D04200770100000048420069010000002042006A020000000400000001000000004200690200000040
0000000000000000420007060000000800000000000000142000D02000000040000000100000004200F010000007842
005C05000000040000000800000004200790100000060420008010000002842000A070000000B4F626A65637420547
97065000000000042000B050000000400000002000000004200080100000028 42000A070000000C4F626A6563374204772
6F7570000000000042000B070000000647726F7570310000

Out: asyncCorrValue2

```
Tag: Response Message (~~0x420078~~0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (~~0x420077~~0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (~~0x420067~~0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (~~0x420068~~0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (~~0x420069~~0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (~~0x42008F~~0x420092), Type: Date-Time (0x09), Data: ~~0x000000004AC0781D (Mon Sep
28~~ 0x000000004AFBED29 (Thu Nov 12 12:10:~~47:25 CEST~~33 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
    Tag: Result Status (~~0x42007C~~0x42007F), Type: Enumeration (0x05), Data: 0x00000002 (Pending)
    Tag: Asynchronous Correlation Value (0x420006), Type: Octet String (0x08), Data:
~~2DCF4F694617FC30~~48D43C207CD1FB3A
```

~~42007801000000884200770100000048420067010000002042006802000000040000000100000004200690200000040~~
~~000000000000000042008F09000000080000000 4AC0781D42000D02000000040000000100000004200F010000003042~~
~~005A05000000040000000800000004200 7C0500000004000000020000000042000608000000082DCF4F694617FC30~~420

07B0100000088 42007A010000004842006901000000204206A0200000004000000010000000042006B0200000040000
00000000000004200920900000008000000004AFBED2942000D02000000040000000100000004200F010000003042005

C05000000040000000800000004 2007F05000000040000000200000004 20006080000000848D43C207CD1FB3A

5	Client B:

Poll*

In: asyncCorrValue2

```
Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000001A (Poll)
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
      Tag: Asynchronous Correlation Value (0x420006), Type: Octet String (0x08), Data:
2DCF4F694617FC3048D43C207CD1FB3A
```

420075010000007042007401000000384200670100000020420068020000000400000001000000042006902000000040
00000000000000042000D020000000400000001000000042000F010000002942005A05000000040000001A0000000042
00760100000010420060800000000 82DCF4F694617FC30

420078010000007042007701000000384200690100000020420068020000000400000001000000042006B02000000040
00000000000000042000D020000000400000001000000042000F010000002842005C05000000040000001A0000000042
0079010000001042000608000000084 8D43C207CD1FB3A

Out: uuidKey2

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC0781D (Mon Sep
28 0x000000004AFBED29 (Thu Nov 12 12:10:47:25 CEST33 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 8b961211-97e7-
40a6-8664-ed33491dab5e95a0e6b3-8edc-4ffb-a88e-e164539dbcca
```

420078010000008B0420077010000004842006701000000204200680200000004000000010000000420069020000000 40
00000000000000042008F0900000008000000004AC0781D42000D020000000400000001000000042000F010000005842
005A0500000004000000080000000042007C0500000004000000000000000042007901000000304200910700000024386
2393631323131312D393763372D343061362D383636342D656433333431396461622356300000000 42007B01000000B0420 0
7A010000004842006901000000204200680200000004000000010000000420068020000000400000000000000000042009
20900000080000000004AFBED2942000D020000000400000001000000042000F010000005842005C0500000004000000 00
080000000042007F050000000400000000000000042007C0100000030420094070000002439356130653662332D38656
4632D346666622D613838652D653136343533396462636361000000000

6	Client B:

Get (symmetric key)

In: uuidKey2

```
Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 8b961211-97e7-
40a6-8664-ed33491dab5e95a0e6b3-8edc-4ffb-a88e-e164539dbcca
```

42007501000000904200740100000038420067010000002042006802000000040000000100000000420069020000000400
00000000000000042000D020000000400000001000000004200F010000004842005A050000000400000000A00000000042
007601000000304200910700000024386239363132312D393763372D343061362D383636342D656433333439316461622
356300000000

42007801000000904200770100000038420069010000002042006A02000000040000000100000000420068020000000040
00000000000000042000D020000000400000001000000004200F01000000484200C050000000400000000A00000000042
0079010000003042009407000000243935613065623332D386564662D346666622D613838652D6531363435333964626326
3636100000000

Out: objectType = '00000002', uuidKey2, symmetricKey

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC0781D (Mon Sep
28 0x000000004AFBED29 (Thu Nov 12 12:10:47:25 CEST33 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
      Tag: Object Type (0x4200550x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric
Key)
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 8b961211-97e7-
40a6-8664-ed33491dab5e95a0e6b3-8edc-4ffb-a88e-e164539dbcca
      Tag: Symmetric Key (0x42008C0x42008F), Type: Structure (0x01), Data:
        Tag: Key Block (0x42003E0x420040), Type: Structure (0x01), Data:
          Tag: Key Format Type (0x4200400x420042), Type: Enumeration (0x05), Data: 0x00000001
          Tag: Key Value (0x4200430x420045), Type: Structure (0x01), Data:
            Tag: Key Material (0x4200410x420043), Type: Octet String (0x08), Data:
A1DF7B733D8DF7056623FE2D880EF62CBEF01F82DFB4682A01C2A08413834AAB
          Tag: Cryptographic Algorithm (0x4200260x420028), Type: Enumeration (0x05), Data:
0x00000003 (AES)
          Tag: Cryptographic Length (0x4200280x42002A), Type: Integer (0x02), Data: 0x00000080
(128)
```

42007801000001204200770100000048420067010000002042006802000000040000000100000004200690200000040
00000000000000042008F0900000000800000000001AC0781D42000D020000000400000001000000001000000000C842
005A0500000004000000A000000042007C050000000400000000000042007901000000A0420055050000000400
0000200000000420091070000002438623936313231312D393763372D343061362D383636342D6564333334393164616
2356300000000042008C010000005842003E010000005042004005000000040000000100000042004301000000184200
4108000000010A1DF7B733D8DF7056623FE2D880EF62C420026050000000400000003000000042002802000000040000000
800000000042007B010000012042007A0100000048420069010000002042006A02000000040000000100000000420006B0
20000000400000000000000000420092090000000800000004AFBED2942000D0200000004000000100000000420000F01
000000C842005C0500000004000000A000000042007F0500000004000000000000042007C01000000A0420057050
0000004000000020000000420094070000002439356130653662332D386564632D346666622D613838652D65313603435
3339646263636361000000042008F010000005842004001000000504200420500000004000000010000000420004501000
00018420043080000001BEF01F82DFB4682A01C2A08413834AAB420028050000000400000003000000042002A020000
000400000008000000000

7	Client B:
	
	Locate (symmetric key by name)
	
	In: asynchronousIndicator='TRUE', attributes={ objectType = '00000002', Name= { Name='Key1', NameType='00000001' } }
	
	`Tag: Request Message (`~~`0x420075`~~`0x420078), Type: Structure (0x01), Data:`
	`  Tag: Request Header (`~~`0x420074`~~`0x420077), Type: Structure (0x01), Data:`
	`    Tag: Protocol Version (`~~`0x420067`~~`0x420069), Type: Structure (0x01), Data:`
	`      Tag: Protocol Version Major (`~~`0x420068`~~`0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)`
	`      Tag: Protocol Version Minor (`~~`0x420069`~~`0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)`
	`    Tag: Asynchronous Indicator (0x420007), Type: Boolean (0x06), Data: TRUE`
	`    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)`
	`  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:`
	`    Tag: Operation (`~~`0x42005A`~~`0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)`
	`    Tag: Request Payload (`~~`0x420076`~~`0x420079), Type: Structure (0x01), Data:`
	`      Tag: Attribute (0x420008), Type: Structure (0x01), Data:`
	`        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type`
	`        Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)`
	`      Tag: Attribute (0x420008), Type: Structure (0x01), Data:`
	`        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name`
	`        Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:`
	`          Tag: Name Value (`~~`0x420053`~~`0x420055), Type: Text String (0x07), Data: Key1`
	`          Tag: Name Type (`~~`0x420052`~~`0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)`
	
	42007501000000E0420074010000004842006701000000204200680200000004000000010000000420069020000000400000000000000004200070600000008000000000000001420000D0200000004000000010000000420000F0100000088420005A0500000004000000080000000420076010000007042000801000000284200A070000000B4F626A6563742054797706500000000000042000B0500000004000000200000000420090100000038420000A07000000044E616D65000000000420000B0100000020420053070000000044B65793100000000042005205000000040000000100000000
	42007801000000E0420077010000004842006901000000204200680200000004000000010000000420006B020000000400000000000000004200070600000008000000000000001420000D0200000004000000010000000420000F0100000088420005C0500000004000000080000000420079010000007042000801000000284200A070000000B4F626A6563742054797706500000000000042000B0500000004000000200000000420080100000038420000A07000000044E616D65000000000420000B0100000020420055070000000044B65793100000000042005405000000040000000100000000
	
	Out: asyncCorrValue5
	
	`Tag: Response Message (`~~`0x420078`~~`0x42007B), Type: Structure (0x01), Data:`
	`  Tag: Response Header (`~~`0x420077`~~`0x42007A), Type: Structure (0x01), Data:`

```
        Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
          Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
          Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
        Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC0781E (Mon Sep
28 0x000000004AFBED29 (Thu Nov 12 12:10:47:26 CEST33 CET 2009)
        Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
        Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
        Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000002 (Pending)
        Tag: Asynchronous Correlation Value (0x420006), Type: Octet String (0x08), Data:
D48BDD01A8FFEC804D6BBFC35FE57FBA
```

```
420078010000008842007701000000484200670100000020420068020000000400000001000000004200690200000040
000000000000000042008F0900000008000000004AC0781E42000D020000000400000001000000004200F010000003042
005A0500000004000000080000000042007C0500000004000000020000000042000608000000084D48BDD01A8FFEC80420
07B010000008842007A010000004842006901000000020420006A020000000400000001000000004200B02000000040000
00000000000004200920900000080000000004AFBED2942000D020000000400000001000000004200F0100000030420054
C0500000004000000080000000042007F0500000004000000020000000042000608000000084D6BBFC35FE57FBA
```

8	Client B:
	Cancel
	In: asyncCorrValue5

```
Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000019 (Cancel)
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
      Tag: Asynchronous Correlation Value (0x420006), Type: Octet String (0x08), Data:
D48BDD01A8FFEC804D6BBFC35FE57FBA
```

```
420075010000007042007401000000384200670100000020420068020000000400000001000000004200690200000040
0000000000000000420000D0200000004000000010000000420000F010000002842005A0500000004000000190000000042
0076010000001042000608000000008D48BDD01A8FFEC80
420078010000007042007701000000384200690100000020420006A020000000400000001000000004200B020000000040
0000000000000000420000D0200000004000000010000000420000F010000002842005C0500000004000000190000000042
00790100000010420006080000000084D6BBFC35FE57FBA
```

```
Out: asyncCorrValue5, CancelResult='00000001'
```

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC0781F (Mon Sep
28 0x000000004AFBED29 (Thu Nov 12 12:10:47:27 CEST33 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
```

```
Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
   Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000019 (Cancel)
   Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
   Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
      Tag: Asynchronous Correlation Value (0x420006), Type: Octet String (0x08), Data:
D48BDD01A8FFEC804D6BBFC35FE57FBA
      Tag: Cancellation Result (0x420012), Type: Enumeration (0x05), Data: 0x00000001 (Cancelled)
```

```
42007801000000A0420077010000004842006701000000204200680200000004000000010000000042006902000000040
000000000000000042008F0900000008000000004AC0781F42000D020000000400000001000000004842000F010000004842
005A050000000400000019000000004200 7C0500000004000000000000000042007901000000204200060800000008D48
BDD01A8FFEC8042001205000000040000000100000004 2007B01000000A042007A010000004842006901000000204200
6A0200000004000000010000000042006B0200000004000000000000000420092090000000080000000004AFBED2942000
0D02000000040000000100000004 2000F0100000048 42005C050000000400000019000000004 2007F0500000004000000
0000000000000042007C010000002042000608000000084D6BBFC35FE57FBA420012050000000400000001000000000
```

9	Client A:
	
	Destroy (symmetric key)
	
	In: uuidKey
	
	`Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:`
	`  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:`
	`    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:`
	`      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)`
	`      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)`
	`    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)`
	`  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:`
	`    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)`
	`    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:`
	`      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 8b961211-97c7-40a6-8664-ed33491dab5c95a0e6b3-8edc-4ffb-a88e-e164539dbcca`

```
4200750100000090420074010000003842006701000000204200680200000004000000010000000042006902000000040
000000000000000042000D020000000400000001000000004 2000F0100000048 42005A050000000400000014000000000042
0076010000003042009107000000243862393631323131 2D393763372D343061362D383636342D6564333334393164616
2356300000000
```

```
4200780100000090420077010000003842006901000000204200 6A0200000004000000010000000042006B02000000040
00000000000000042000D02000000040000000100000004 2000F0100000048 42005C0500000004000000140000000042
0079010000003042009407000000243935613065366233 2D386564632D346666622D613838652D653136343533396462 6
3636100000000
```

```
Out: uuidKey

Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC0781F (Mon Sep
28 0x000000004AFBED2A (Thu Nov 12 12:10:47:27 CEST34 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
```

```
      Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
      Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
        Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 8b961211-97c7-
40a6-8664-ed33491dab5e95a0e6b3-8edc-4ffb-a88e-e164539dbcca
```

```
42007801000000B0420077010000004842006701000000204200680200000004000000010000000042006902000000040
0000000000000042008F0900000008000000004AC0781F42000D02000000040000000100000000042000F010000005842
005A050000000400000014000000042007C050000000400000000000000042007901000000304200910700000024386
2393631323131312D393763372D343061362D383636342D656433333439316461623536300000000042007B01000000B042007
7A010000004842006901000000204200680020000000400000001000000042006B0200000004000000000000000042009
2090000000800000000AFBED2A42000D020000000400000001000000042000F01000000584200C050000000400000
0140000000042007F050000000400000000000000042007C01000003042009407000000024393536130653662332D38656
4632D346666622D613838652D6531363435333339646263636100000000
```

110 * = executed until response is ready

111

112

44 Key life cycle support

114

4.14.1 Use-case: Revoke scenario

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

124

Time	Client A

0	Client A:
	
	Create (symmetric key)
	
	In: objectType = '00000002', attributes={ CryptographicAlgorithm='AES', CryptographicLength='128', Name={ NameValue='Key1', NameType='00000001' }, CryptographicUsageMask='00000004' }
	
	`Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:`
	`  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:`
	`    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:`
	`      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)`
	`      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)`
	`    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)`
	`  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:`
	`    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)`
	`    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:`
	`      Tag: Object Type (0x4200550x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)`
	`      Tag: Template-Attribute (0x42008E0x420091), Type: Structure (0x01), Data:`
	`        Tag: Attribute (0x420008), Type: Structure (0x01), Data:`

```
                Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm
                Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (AES)
            Tag: Attribute (0x420008), Type: Structure (0x01), Data:
                Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length
                Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000080 (128)
            Tag: Attribute (0x420008), Type: Structure (0x01), Data:
                Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
                Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
                    Tag: Name Value (0x420053 0x420055), Type: Text String (0x07), Data: Key1
                    Tag: Name Type (0x420052 0x420054), Type: Enumeration (0x05), Data: 0x00000001
(Uninterpreted text string)
            Tag: Attribute (0x420008), Type: Structure (0x01), Data:
                Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage
Mask
                Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000004 (Encrypt)
```

420075010000001604200074010000003842000670100000020420068020000000400000001000000004200690200000004
0000000000000000042000D020000000400000010000000042000F01000001184200 5A050000000400000001000000004 2
0076010000010042005505000000040000000200000000420 08E 01000000E842000801000000 3042000A0700000017437
2797074 6F 7726170686963 20416C6 76F726974686D00042000B0500000004000000030000000042000801000000304200
0A070000001443727970746F 77261706869 632 04C656E677468000000000042000B020000000400000080000000004200 0
80100000038 42000A07000000044E616D65000000004200 0B0100000020420053 0700000004 4B6579310000000000420052
0500000004000000010000000042000801000000304200 0A07000000184372 79 70746F 77261706869 632055736167 6565
04D61736B 42000B020000000400000004000000 00

420078010000001604200077010000003842000691010000020420069A 020000000400000001000000004200 6B0200000004 0
0000000000000000042000D020000000400000010000000042000F0100000118 4200 5C 05000000040000000100000000 42
0079010000010042005705 00000004 00000002000000004200 9101000000E842000801000000 3042000A0700000017437
2797074 6F 7726170686963 20416C6 76F726974686D00042000B0500000004000000030000000042000801000000304200
0A07000000144372 79 70746F 77261706869 632 04C656E677468000000000042000B020000000400000080000000004200 0
801000000 38 42000A07000000044E616D65000000004200 0B0100000020420055 0700000004 4B6579310000000000420054
05000000040000000100000000420008010000003042000A07000000184372 79 70746F 77261706869 632055736167 6565
04D61736B 42000B020000000400000004000000 00

Out: objectType = '00000002', uuidKey

```
Tag: Response Message (0x420078 0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x420077 0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420067 0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x420068 0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x420069 0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F 0x420092), Type: Date-Time (0x09), Data: 0x000000004AC0781F (Mon Sep
28  0x000000004AFBED2B (Thu Nov 12 12:10:47:27 CEST 35 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A 0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
    Tag: Result Status (0x42007C 0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x420079 0x42007C), Type: Structure (0x01), Data:
      Tag: Object Type (0x420055 0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric
Key)
      Tag: Unique Identifier (0x420091 0x420094), Type: Text String (0x07), Data: 333de9b9-8e73-
4ff6-a37b-42369f5a4262 21d28b8a-06df-43c0-b72f-2a161633ada9
```

4200780100000 0C04200077010000004842000670100000020420068020000000400000001000000004200690200000004 0
0000000000000000042008F090000000800000001AC0781F42000D020000000400000010000000042000F010000006842
005A05000000040000000100000000 42007C050000000400000 00000000004200790100000040420055050000000400 00
00000000000000004200910700000024333333363463 3962392D386537332D346666362D613337622D3432333636396635613432

3632000000004 2007B01000000C042007A01000000484200690100000020 42006A020000000400000001000000004 2006B020000000400000000000000004200920900000008000000000004AFBED2B42000D0200000004000000010000000042000F 010000006842005C050000000400000001000000042007F0500000004000000000000000042007C01000000404200570 5000000040000000200000000420094070000024323164323862386120D3036466 2D343363302D623732662D32613136 31363333361646139000000000

<table>
<tr><td>1</td><td>

Client A:

Get attribute

In: uuidKey, attributeName={'State'}

Tag: Request Message (~~0x420075~~0x420078), Type: Structure (0x01), Data:

  Tag: Request Header (~~0x420074~~0x420077), Type: Structure (0x01), Data:

    Tag: Protocol Version (~~0x420067~~0x420069), Type: Structure (0x01), Data:

      Tag: Protocol Version Major (~~0x420068~~0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

      Tag: Protocol Version Minor (~~0x420069~~0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)

    Tag: Request Payload (~~0x420076~~0x420079), Type: Structure (0x01), Data:

      Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~333dc9b9-8e73-4ff6-a37b-42369f5a4262~~21d28b8a-06df-43c0-b72f-2a161633ada9

      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State

~~42007501000000A04200740100000038420067010000002042006802000000040000000100000000420069020000000 40000000000000000042000D0200000004000000010000000042000F010000005842005A0500000004000000 0B00000000042 0076010000004042009107000000243333333361633962392D386537332D346666362D613337622D3432333336396663 561343 23632000000042000A07000000055374617465000000~~

42007801000000A04200770100000038420069010000002042006A02000000040000000100000000 42006B02000000040 000000000000000042000D0200000004000000010000000042000F010000005842005C0500000004000000 0B00000000042 0079010000004042009407000000243231643238623861 2D303664662D343363302D623732662D3261313631363333616 461390000000042000A07000000055374617465000000

Out: uuidKey, attribute={ State='00000001' }

Tag: Response Message (~~0x420078~~0x42007B), Type: Structure (0x01), Data:

  Tag: Response Header (~~0x420077~~0x42007A), Type: Structure (0x01), Data:

    Tag: Protocol Version (~~0x420067~~0x420069), Type: Structure (0x01), Data:

      Tag: Protocol Version Major (~~0x420068~~0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

      Tag: Protocol Version Minor (~~0x420069~~0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

    Tag: Time Stamp (~~0x42008F~~0x420092), Type: Date-Time (0x09), Data: ~~0x000000004AC07820 (Mon Sep 28~~ 0x000000004AFBED2B (Thu Nov 12 12:10:~~47:28 CEST~~35 CET 2009)

    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)

    Tag: Result Status (~~0x42007C~~0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

    Tag: Response Payload (~~0x420079~~0x42007C), Type: Structure (0x01), Data:

      Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~333dc9b9-8e73-4ff6-a37b-42369f5a4262~~21d28b8a-06df-43c0-b72f-2a161633ada9

      Tag: Attribute (0x420008), Type: Structure (0x01), Data:

        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State

</td></tr>
</table>

		Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000001 (Pre-Active)
		42007801000000D8420077010000004842006701000000204200680200000004000000010000000042006902000000400000000000000000042008F09000000080000000004AC0782042000D02000000040000000010000000042000F010000008042005A05000000040000000B000000042007C05000000040000000000000000042007901000000584200910700000024333333364633962392D386537332D346666362D613337622D34323333363966635613432362320000000042000801000000204200 0A0700000005537461746500000042000B0500000004000000010000000042007B01000000D842007A010000004842006901000000020420 6A0200000004000000010000000042009209000000080000000004AFBED2B42000D020000000400000001000000042000F010000008042005C05000000040000000B000000042007F0 500000004000000000000000000042007C01000000584200940700000024323164323862386 12D303 6646 62D 343363302D62 3732662D32613136313633333316461 3900000004 2000 8010000 02042000A07000000055374617465 50000000 42000B050 00000040000000100000000

2		Client A:
		
		~~Add attribute~~
		
		Activate
		
		In: uuidKey~~, attribute={ ActivationDate='2' }~~
		
		Tag: Request Message (~~0x420075~~0x420078), Type: Structure (0x01), Data:
		  Tag: Request Header (~~0x420074~~0x420077), Type: Structure (0x01), Data:
		    Tag: Protocol Version (~~0x420067~~0x420069), Type: Structure (0x01), Data:
		      Tag: Protocol Version Major (~~0x420068~~0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
		      Tag: Protocol Version Minor (~~0x420069~~0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
		    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
		   Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
		    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: ~~0x0000000D (Add Attribute~~0x00000012 (Activate)
		    Tag: Request Payload (~~0x420076~~0x420079), Type: Structure (0x01), Data:
		      Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~333de9b9-8e73-4ff6-a37b-42369f5a4262~~1d28b8a-06df-43c0-b72f-2a161633ada9
		      ~~Tag: Attribute (0x420008), Type: Structure (0x01), Data:~~
		        ~~Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Activation Date~~
		        ~~Tag: Attribute Value (0x42000B), Type: Date Time (0x09), Data: 0x0000000000000002 (Thu Jan 01 01:00:02 CET 1970)~~
		
		42007501000000C042007401000000384200670100000020420068020000000400000001000000010000000042006902000000400000000000000000042000D020000000400000001000000042000F010000007842005A0500000004000000 0D0000000042007601000000604200910700000024333333364633962392D386537332D346666362D613337622D34323333363966635613432 3632000000004200080100000028 42000A070000000F416374697661746696E20446174650042000B09000000080000 000000000002
		
		420078010000009042007701000000384200690100000020 4200 6A0200000004000000010000000042006B0200000004000000000000000000042000D020000000400000001000000042000F010000004842005C0500000004000001200000000420079010000003042009407000000243231643238623861 2D303664662D343363302D62 23732662D3261313631363333336161461390 0000000
		
		Out: uuidKey~~, attribute={ ActivationDate='2' }~~
		
		Tag: Response Message (~~0x420078~~0x42007B), Type: Structure (0x01), Data:
		  Tag: Response Header (~~0x420077~~0x42007A), Type: Structure (0x01), Data:
		    Tag: Protocol Version (~~0x420067~~0x420069), Type: Structure (0x01), Data:
		      Tag: Protocol Version Major (~~0x420068~~0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
		      Tag: Protocol Version Minor (~~0x420069~~0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
		    Tag: Time Stamp (~~0x42008F~~0x420092), Type: Date-Time (0x09), Data: ~~0x000000004AC07820 (Mon Sep~~

28 0x000000004AFBED2B (Thu Nov 12 12:10:47:28 CEST 35 CET 2009)
        Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
    Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
        Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute0x00000012 (Activate)
        Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
        Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
            Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 333de9b9-8e73-4ff6-a37b-42369f5a426221d28b8a-06df-43c0-b72f-2a161633ada9
            Tag: Attribute (0x420008), Type: Structure (0x01), Data:
                Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Activation Date
                Tag: Attribute Value (0x42000B), Type: Date Time (0x09), Data: 0x0000000000000002 (Thu Jan 01 01:00:02 CET 1970)

42007801000000E042007701000000484200670100000020420068020000000400000001000000004200690200000040
00000000000000042008F09000000080000000 4AC0782042000D0200000004000000010000000042000F01000000884 2
005A05000000040000000D000000004 2007C0500000004000000000000000042007901000000604200910700000024333
3336463396239 2D386537332D346666362D613337622D343233363 9663561343236320000000042000801000000284200
0A070000000F41637469766174696F6E20446174654200420 B0900000008000000000000000 02

42007B01000000B042007A010000004842006901000000 2042006A0200000004000000010000000042006B020000000 40
00000000000000042009 20900000008000000004AFBED2B42000D0200000004000000010000000042000F0100000058 42
005C050000000400000012000000004 2007F0500000004000000000000000042007C01000000304200940700000024323
316432386238612D303664662D34336330 2D623732662D326131363 3313636333361646 13900000000

		28 0x000000004AFBED2B (Thu Nov 12 12:10:47:28 CEST 35 CET 2009)
		        Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
		    Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
		        Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute0x00000012 (Activate)
		        Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
		        Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
		            Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 333de9b9-8e73-4ff6-a37b-42369f5a426221d28b8a-06df-43c0-b72f-2a161633ada9
		            Tag: Attribute (0x420008), Type: Structure (0x01), Data:
		                Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Activation Date
		                Tag: Attribute Value (0x42000B), Type: Date Time (0x09), Data: 0x0000000000000002 (Thu Jan 01 01:00:02 CET 1970)

3		Client A: Get attribute In: uuidKey, attributeName={ 'State' }

42007801000000E042007701000000484200670100000020420068020000000400000001000000004200690200000040
0000000000000004 2008F09000000080000000 4AC0782042000D0200000004000000010000000042000F0100000088 42
005A05000000040000000D000000004 2007C0500000004000000000000000042007901000000604200910700000024333
3336463396239 2D386537332D346666362D613337622D343233363 9663561343236320000000042000801000000284200
0A070000000F41637469766174696F6E20446174654200420 B09000000080000000000000000 2

42007B01000000B042007A01000000484200690100000020 42006A0200000004000000010000000042006B020000000 40
000000000000000 4200920900000008000000004AFBED2B42000D0200000004000000010000000042000F0100000058 42
005C05000000040000001 2000000004 2007F0500000004000000000000000042007C010000003042009407000000243 23
316432386238612D303664662D34336330 2D623732662D32613136 33313636333361646 13900000000

Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 333de9b9-8e73-4ff6-a37b-42369f5a426221d28b8a-06df-43c0-b72f-2a161633ada9
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State

42007501000000A042007401000000384200670100000020420068020000000400000001000000004200690200000040
00000000000000042000D0200000004000000010000000042000F01000000584 2005A05000000040000000B0000000042
0076010000004042009107000000243333333364633962392D386537332D346666362D613337622D3431323336396635613 43
23632000000004 2000A070000000553746174 65000000

42007801000000A042007701000000384200690100000020 42006A0200000004000000010000000042006B020000000 40
000000000000000 42000D0200000004000000010000000042000F01000000584 2005C05000000040000000B0000000042
0079010000004042009407000000243 23316432386238612D303664662D34336330 2D623732662D32613136313633333616
46139000000004 2000A070000000553746174 65000000

Out: uuidKey, attribute={ State='00000002' }

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC07820 (Mon Sep
28  0x000000004AFBED2B (Thu Nov 12 12:10:47:28 CEST35 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get
Attributes)
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 333de9b9-8e73-
4ff6-a37b-42369f5a426221d28b8a-06df-43c0-b72f-2a161633ada9
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State
        Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (Active)
```

```
42007801000000D842007701000000484200670100000020420068020000000400000001000000004200690200000040
0000000000000000042008F090000000800000004AC0782042000D0200000004000000010000000042000F010000008042
005A0500000004000000000B000000042007C050000000400000000000000004200790100000058420091070000002433
33364633962392D386537332D346666362D613337622D34323336396635613432363200000000420008010000002042000
0A070000000553746174650000000042000B050000000200000000042007B01000000D842007A01000000484200069
01000000204200 6A0 20000000400000001000000004200690 20 900000008000000
004AFBED2B42000D02000000040000000100000000 42000F010000008042005C050000000400000000B0000000042007F0
5000000040000000000000000 42007C0100000058 4200940 7000000 243231643238623861 2D303664662D343363302D62
372 66 2D326131363163333361643 900000000 420008010000002042000A070000000553746174650000004 2000B050
000000400000002 00000000
```

4	Client B:
	Locate (symmetric key by name)
	In: objectType = '00000002', attributes={ Name={ Name='Key1', NameType='00000001' } }

```
Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type
        Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric
Key)
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
        Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
          Tag: Name Value (0x4200530x420055), Type: Text String (0x07), Data: Key1
          Tag: Name Type (0x4200520x420054), Type: Enumeration (0x05), Data: 0x00000001
(Uninterpreted text string)
```

42007501000000D04200740100000038420067010000002042006802000000040000000100000004200690200000040
0000000000000000042000D02000000040000000100000004200F010000008842005A0500000004000000080000000042
0076010000007042000801000000284200A070000000B4F626A656374420547970650000000000042000B050000000400
00002000000004200080100000038420000A07000000044E616D65000000000042000B010000002042005307000000044B65
7931000000042005205000000040000000100000000

42007801000000D0420077010000003842006901000000204200680200000004000000010000000420006B0200000004000
0000000000000042000D0200000004000000010000000420F010000008842005C0500000004000000080000000042
0079010000007042000801000000284200A070000000B4F626A656374420547970650000000000042000B0500000004000
0002000000004200080100000038420000A07000000044E616D6500000000042000B010000002042005507000000044B65
79310000000042005405000000040000000100000000

Out: uuidKey

Tag: Response Message (~~0x420078~~0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (~~0x420077~~0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (~~0x420067~~0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (~~0x420068~~0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (~~0x420069~~0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (~~0x42008F~~0x420092), Type: Date-Time (0x09), Data: ~~0x000000004AC07821 (Mon Sep 28~~ 0x000000004AFBED2B (Thu Nov 12 12:10:~~47:29 CEST~~35 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
    Tag: Result Status (~~0x42007C~~0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (~~0x420079~~0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~333dc9b9-8c73-4ff6-a37b-12369f5a4262~~21d28b8a-06df-43c0-b72f-2a161633ada9

42007801000000B0420077010000004842006701000000204200680200000004000000010000000420069020000004
00000000000000000042008F0900000008000000004AC0782142000D0200000004000000010000000420F0100000058420
05A050000000400000008000000004200070C050000000400000000000000042007901000000304200910700000024333
3336463339623923902D38653733332D346666632D61333762622D3431323336396635613432363200000000042007B01000000B04200
7A010000004842006901000000204200680A020000000400000001000000010000000420006B0200000004000000000000000042009
2090000000800000004AFBED2B42000D02000000040000000100000004200F010000005842005C05000000040000000
0800000000042007F0500000004000000000000000042007C010000003042009407000000243231643238386238612D30306
4662D343363302D623732662D326131363133363330626461390000000

| 5 | Client B:

Get (symmetric key)
In: uuidKey

Tag: Request Message (~~0x420075~~0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (~~0x420074~~0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (~~0x420067~~0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (~~0x420068~~0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (~~0x420069~~0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
    Tag: Request Payload (~~0x420076~~0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~333dc9b9-8c73-4ff6-a37b-12369f5a4262~~21d28b8a-06df-43c0-b72f-2a161633ada9 |

420075010000009042007401000000384200670100000020420068020000000400000001000000004200690200000040
0000000000000042000D0200000004000000010000000042000F01000000484200 5A0500000040000000A0000000042
00760100000030420091070000002433333364633962392D386537332D346666362D613337622D34323333363966356134 3
2363200000000

420078010000009042007701000000384200 69010000002042006A020000000400000001000000004200 6B0200000040
00000000000000004200 0D0200000004000000010000000042000F01000000484200 5C050000004000000A0000000042
00790100000030420094070000002432316432386238612D303664662D343363302D623732662D3261313631363333616
4613900000000

Out: objectType = '00000002', uuidKey, symmetricKey

Tag: Response Message (~~0x420078~~0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (~~0x420077~~0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (~~0x420067~~0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (~~0x420068~~0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (~~0x420069~~0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (~~0x42008F~~0x420092), Type: Date-Time (0x09), Data: ~~0x000000004AC07821 (Mon Sep 28~~ 0x000000004AFBED2B (Thu Nov 12 12:10:~~47:29 CEST~~35 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
    Tag: Result Status (~~0x42007C~~0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (~~0x420079~~0x42007C), Type: Structure (0x01), Data:
      Tag: Object Type (~~0x420055~~0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
      Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~333dc9b9-8c73-4ff6-a37b-42369f5a4262~~21d28b8a-06df-43c0-b72f-2a161633ada9
      Tag: Symmetric Key (~~0x42008C~~0x42008F), Type: Structure (0x01), Data:
        Tag: Key Block (~~0x42003E~~0x420040), Type: Structure (0x01), Data:
          Tag: Key Format Type (~~0x420040~~0x420042), Type: Enumeration (0x05), Data: 0x00000001
          Tag: Key Value (~~0x420043~~0x420045), Type: Structure (0x01), Data:
            Tag: Key Material (~~0x420041~~0x420043), Type: Octet String (0x08), Data: ~~E6C15B28BB6C7A268E9ADEA471A36F23~~EF7833AB15F5A1EE5874BC0D9BBC4BE7
          Tag: Cryptographic Algorithm (~~0x420026~~0x420028), Type: Enumeration (0x05), Data: 0x00000003 (AES)
          Tag: Cryptographic Length (~~0x420028~~0x42002A), Type: Integer (0x02), Data: 0x00000080 (128)

420078010000012042007701000000484200670100000020420068020000000400000001000000004200690200000040
00000000000000004200 8F09000000080000000 4AC0782142000D020000000400000001000000004200 0F01000000C842
005A0500000004000000A000000004200 7C05000000040000000000000042007901000000A0420055050000000 4000
0000200000004200 91070000002433333364633962392D386537332D346666362D613337622D34323333363966356134 32
363200000000420080 C01000000584200 3E010000005042004001000000040000000100000004200 43010000001842004
10800000010 E6C15B28BB6C7A268E9ADEA471A36F23 4200260500000004000000030000000420028 02000000040000000
80000000042007B010000012042007A01000000484200 69010000002042006A0200000004000000010000000042006 B0
20000004000000000000000042009209000000080000000 4AFBED2B 42000D0200000004000000010000000042000F01
000000C842005C050000000400000A000000004200 7F05000000040000000000000042007C01000000A0420057050
0000004000000020000000420094070000002432316432386238612D303664662D343363302D623732662D3261313631
363333616461390000000042008F010000005842004001000000504200420500000004000000010000000042004501000
00001842004308000000010EF7833AB15F5A1EE5874BC0D9BBC4BE7420028050000000400000003000000042002A020000
000040000008000000000

6	Client B:
	Revoke (symmetric key as compromised)
	In: uuidKey, RevocationReason='00000002', CompromiseOccurrenceTime='6'

```
Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000013 (Revoke)
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 333dc9b9-8e73-
4ff6-a37b-12369f5a426221d28b8a-06df-43c0-b72f-2a161633ada9
      Tag: Revocation Reason (0x42007E0x420081), Type: Structure (0x01), Data:
        Tag: Revocation Reason Code (0x42007F0x420082), Type: Enumeration (0x05), Data:
0x00000002 (Key Compromise)
      Tag: Compromise Occurrence Date (0x42001F0x420021), Type: Date-Time (0x09), Data:
0x0000000000000006 (Thu Jan 01 01:00:06 CET 1970)
```

42007501000000B8420074010000003842006701000000020420068020000000040000000100000004200690200000040
0000000000000042000D020000000400000001000000042000F010000007042005A0500000004000000130000000042
0007601000000584200910700000024333333364633962392D386537332D346666362D613337622D34323336396635613143
23632000000042007E01000000104207F050000000400000002000000042001F090000000800000000000000006
42007801000000B8420077010000003842006901000000020420006A020000000040000000100000004200006B0200000040
0000000000000042000D020000000400000001000000042000F010000007042005C0500000004000000130000000042
0079010000005842009407000000243231643238623861 2D303664662D343363302D623732662D326131363313633361616
613900000000042008101000000104208205000000040000000200000004200210900000080000000000000006

Out: uuidKey


```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC07822 (Mon Sep
28 0x000000004AFBED2B (Thu Nov 12 12:10:47:30 CEST35 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000013 (Revoke)
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 333dc9b9-8e73-
4ff6-a37b-12369f5a426221d28b8a-06df-43c0-b72f-2a161633ada9
```

42007801000000B0420077010000004842006701000000020420068020000000040000000100000004200690200000040
0000000000000042008F090000000800000004AC0782242000D0200000004000000010000000042000F010000005842
005A0500000004000000130000000042007C0500000004000000000000000420079010000003042009107000000243333
33364633962392D386537332D346666362D613337622D34323336396635613143236320000000042007B01000000B04200
7A010000004842006901000000020420006A020000000040000000100000004200006B020000000040000000100000004200092
0900000008000000004AFBED2B42000D0200000004000000010000000042000F010000005842005C0500000004000000
130000000042007F050000000400000000000000000042007C0100000030420094070000002432316432386238612D30366
4662D343363302D623732662D326131363313633361646139 00000000
```
```

| 7 | Client B: |
| | Get attribute |

In: uuidKey, attributeName={ 'State' }

```
Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get
Attributes)
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 333de9b9-8e73-
4ff6-a37b-42369f5a426221d28b8a-06df-43c0-b72f-2a161633ada9
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State
```

42007501000000A04200740100000038420067010000002042006802000000040000000100000000420069020000000400
000000000000000042000D0200000004000000010000000042000F010000005842005A05000000040000000B0000000042
0076010000004042009107000000243333333364633962392D386537332D346666362D613337622D34323336396635613433
23632000000000042000A07000000055374617465000000

42007801000000A04200770100000038420069010000002042006A02000000040000000100000000420069020000000400
000000000000000042000D0200000004000000010000000042000F010000005842005C05000000040000000B0000000042
0079010000004042009407000000243231643238623861D303664662D343363302D623732662D3261313631363333616
4613900000000042000A07000000055374617465000000

Out: uuidKey, attribute={ State='00000004' }

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC07822 (Mon Sep
28 0x000000004AFBED2C (Thu Nov 12 12:10:47:30 CEST36 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get
Attributes)
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 333de9b9-8e73-
4ff6-a37b-42369f5a426221d28b8a-06df-43c0-b72f-2a161633ada9
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State
        Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000004 (Compromised)
```

42007801000000D84200770100000048420067010000002042006802000000040000000100000000420069020000000400
000000000000000042008F09000000080000000004AC0782242000D0200000004000000010000000042000F010000008042
005A05000000040000000B0000000042007C050000000400000000000000004200790100000058420091070000002433
3333364633962392D386537332D346666362D613337622D34323336396635613433232362000000000420008010000002042000
0A07000000055374617465000000042000B05000000040000000040000000042007B01000000D842007A010000004842006
9010000002042006A02000000040000000100000000420069020000000400000000000000004200920900000008000000
0004AFBED2C42000D0200000004000000010000000042000F010000008042005C05000000040000000B0000000042007F0

5000000040000000000000000042007C0100000058420094070000002432316432386238612D303664662D343363302D62
3732662D32613131363313633336164613900000000420008010000002042000A070000000553746174650000004200B050
0000004000000040000000

8	Client A:
	Get attribute list
	In: uuidKey

Tag: Request Message (~~0x420075~~0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (~~0x420074~~0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (~~0x420067~~0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (~~0x420068~~0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (~~0x420069~~0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x0000000C (Get Attribute List)
    Tag: Request Payload (~~0x420076~~0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~333de9b9-8e73-4ff6-a37b-42369f5a4262~~21d28b8a-06df-43c0-b72f-2a161633ada9

42007501000000904200740100000038420067010000002042006802000000040000000100000000420069020000000040
00000000000000042000D02000000040000000100000000420F0100000048420005A05000000040000000C0000000042
007601000000304200910700000024333333364633962392D386537332D346666362D613337622D34323236396663561343
2363200000000
42007801000000904200770100000038420069010000002042006A02000000040000000100000000420006B020000000040
00000000000000042000D0200000004000000010000000420F0100000048420005C05000000040000000C0000000042
0079010000003042009407000000024323136432386238612D303664662D343363302D623732662D32613131363313633336
4613900000000

	Out: uuidKey, attributes = { * }

Tag: Response Message (~~0x420078~~0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (~~0x420077~~0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (~~0x420067~~0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (~~0x420068~~0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (~~0x420069~~0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (~~0x42008F~~0x420092), Type: Date-Time (0x09), Data: ~~0x000000004AC07822 (Mon Sep 28~~ 0x000000004AFBED2C (Thu Nov 12 12:10:~~47:30 CEST~~36 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x0000000C (Get Attribute List)
    Tag: Result Status (~~0x42007C~~0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (~~0x420079~~0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~333de9b9-8e73-4ff6-a37b-42369f5a4262~~21d28b8a-06df-43c0-b72f-2a161633ada9
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Compromise Occurrence Date
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Compromise Date

```
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Digest
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Initial Date
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Activation Date
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Revocation Reason
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Unique Identifier
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage Mask
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Last ~~Changed~~Change Date
```

420078010000022842007701000000484200670100000020420068020000000400000001000000004200690200000040
00000000000000000042008F0900000008000000004AC0782242000D0200000004000000010000000042000F01000001D042
005A05000000040000000C0000000042007C05000000040000000000000000420079010000001A84200910700000024333
33364633962392D386537332D346666362D613337622D34323333639663561343236320000000042000A07000000144372
7970746F67726170686963204C656E67746800000000001743727970746F6772617068696320416C676F6F7
26974686D0042000A07000000055374617465000000042000A070000001A436F6D70726F6D697365204F6363757272656E
636520446174650000000000042000A070000000F436F6D70726F6D69736520446174650042000A07000000064696769
57374000042000A070000000C496E697469616C20446174650000000042000A070000000F41637469766174696F6E2044
6174650042000A07000000115265766F636174696F6E20526561736F6E0000000000000042000A0700000011556E69717
565204964656E74696669657200000000000042000A07000000044E616D650000000042000A07000000184372797074
6F67726170686963205573616765204D61736B42000A07000000B4F626A65637442054797065000000000042000A07000
000114C617374204368616E67654204461746500000000000042007B010000022042007A01000000484200690100000
002042006A02000000040000000100000042006B020000000400000000000000420092090000000800000000000004AFBE
D2C42000D02000000040000000100000042000F01000001C842005C05000000040000000C0000000042007F050000000
0400000000000000000042007C01000001A0420094070000002432331632386238612D303664662D343363302D6237362
D326131363136333333616461390000000042000A070000001443727970746F67726170686963204C656E67746800000000
042000A070000001743727970746F6772617068696320416C676F726974686D0042000A07000000055374617465000000004
2000A070000001A436F6D70726F6D697365204F6363757272656E636520446174650000000000042000A070000000F43
6F6D70726F6D697365204461746500042000A07000000064696765737374000042000A070000000C496E697469616C2044446
174650000000042000A070000000F41637469766174696F6E20446174650042000A07000000115265766F636174696F6E6E
20526561736F6E0000000000000042000A0700000011556E69717565204964656E746966696572200000000000042000A
A07000000044E616D650000000042000A070000001843727970746F67726170686963205573616765204D61736B42000A
07000000B4F626A6563742054797065000000000042000A07000000104C617374204368616E67652044617465
```

| 9 | Client A:
Get attributes
In: uuidKey, attributeName = { 'State' }

```
Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get
Attributes)
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: ~~333dc9b9-8e73-4ff6-a37b-12369f5a4262~~21d28b8a-06df-43c0-b72f-2a161633ada9
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State
```

42007501000000A0420074010000003842006701000000020420068020000000400000001000000042006902000000040
0000000000000000042000D020000000400000001000000042000F010000005842005A05000000040000000B00000000042
007601000000040420091070000000243333333364633962392D386537332D346666362D613337622D34323333639663561343
236320000000042000A07000000055374617465000000
|

42007801000000A042007701000000384200690100000020420069010000002042006A020000000400000001000000042006B02000000040
0000000000000000042000D0200000004000000010000000042006F010000005842005C05000000040000000B0000000042
00790100000040420094070000002432316432386238612D303664662D343363302D623732662D32613136313363333616
4613900000000042000A070000000553746174650000000

Out: uuidKey, attribute={ State='00000004' }

Tag: Response Message (~~0x420078~~0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (~~0x420077~~0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (~~0x420067~~0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (~~0x420068~~0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (~~0x420069~~0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (~~0x42008F~~0x420092), Type: Date-Time (0x09), Data: ~~0x000000004AC07822 (Mon Sep 28~~ 0x000000004AFBED2C (Thu Nov 12 12:10:~~47:30 CEST~~36 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
    Tag: Result Status (~~0x42007C~~0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (~~0x420079~~0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~333dc9b9-8e73-4ff6-a37b-42369f5a4262~~21d28b8a-06df-43c0-b72f-2a161633ada9
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State
        Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000004 (Compromised)

42007801000000D84200770100000048420067010000002042006802000000040000000100000004200690200000004000
000000000000000042008F09000000080000000004AC0782242000D0200000004000000010000000042000F0100000080420
05A0500000004000000B000000042007C0500000004000000000000042007901000000584200910700000024333
33364633962392D386537332D346666362D613337622D34323336396635613432363200000000042000801000000204200
0A0700000005537461746500000042000B05000000040000000400000000042007B01000000D842007A01000000484200
6901000000204200690200000004000000010000000042006B0200000004000000000000004200920900000008000000
0004AFBED2C42000D0200000004000000010000000042000F010000008042005C05000000040000000B0000000042007F0
5000000040000000000000042007C01000000584200940700000024323316432386238612D303664662D343363302D62
3732662D32613136313363333631646139000000000420008010000020420000A07000000055374617465000000042000B050
00000040000000400000000

```
          Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 333de9b9-8e73-
4ff6-a37b-42369f5a426221d28b8a-06df-43c0-b72f-2a161633ada9
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute1
          Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Value1
    Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
      Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)
      Tag: Unique Batch Item ID (0x4200900x420093), Type: Octet String (0x08), Data:
F0CB35D89BB9D251D62107C3158409D8
      Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
        Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 333de9b9-8e73-
4ff6-a37b-42369f5a426221d28b8a-06df-43c0-b72f-2a161633ada9
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute2
          Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Value2
```

42007501000001604200740100000038420067010000002042006802000000040000000100000004200690200000004000000000000000000042000D0200000004000000020000000042000F010000008842005A05000000040000000D0000000042009008000000085CD7C98FC5B52FF742007601000000604200910700000024333333364633962392D386537332D346666362D613337622D343233336396635613432363200000000420008010000002842000A070000000C782D617474726962757465310000000042000B070000000656616C75653100004200F010000008842005A05000000040000000D0000000042009000800000008F0CB35D89BB9D25142007601000000604200910700000024333333364633962392D386537332D346666362D613337622D343233336396635613432363200000000420008010000002842000A070000000C782D617474726962757465310000000042000B070000000656616C7565320000

42007801000001604200770100000038420069010000002042006A0200000004000000010000000442006B02000000040000000000000000000042000D0200000004000000020000000042000F010000008842005C05000000040000000D0000000042009308000000089D407FFB45C9567242007901000000604200940700000024323164323862386138612D303664662D343363302D623732662D3261313633336164613900000000420008010000002842000A070000000C782D617474726962757465310000000042000B070000000656616C756531000042000F010000008842005C05000000040000000D0000000042009308000000008D62107C3158409D84200790100000060420094070000002432316432386238612D303664662D343363302D623732662D3261313633336164613900000000420008010000002842000A070000000C782D617474726962757465310000000042000B070000000656616C7565320000

Out: uuidKey, attribute={ x-attribute1='Value1' }

Out: uuidKey, attribute={ x-attribute2='Value2' }

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC07823 (Mon Sep
28 0x000000004AFBED2C (Thu Nov 12 12:10:47:31 CEST36 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)
    Tag: Unique Batch Item ID (0x4200900x420093), Type: Octet String (0x08), Data:
5CD7C98FC5B52FF79D407FFB45C95672
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 333de9b9-8e73-
4ff6-a37b-42369f5a426221d28b8a-06df-43c0-b72f-2a161633ada9
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute1
          Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Value1
```

Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)

    Tag: Unique Batch Item ID (~~0x420090~~0x420093), Type: Octet String (0x08), Data: ~~F0CB35D89BB9D251~~D62107C3158409D8

    Tag: Result Status (~~0x42007C~~0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

    Tag: Response Payload (~~0x420079~~0x42007C), Type: Structure (0x01), Data:

      Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~333de9b9-8e73-4ff6-a37b-42369f5a4262~~21d28b8a-06df-43c0-b72f-2a161633ada9

      Tag: Attribute (0x420008), Type: Structure (0x01), Data:

        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute2

        Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: Value2

420078010000019042007701000000484200670100000020420068020000000400000001000000004200690200000040
0000000000000000042008F0900000008000000004AC0782342000D0200000000400000020000000042000F010000009842
005A0500000004000000000000000042009008000000085CD7C98FC5B52FF742007C0500000004000000000000000420
0790100000060420091070000002433333364633962392D386537332D346666362D613337622D3432333639663561343
2363200000000420008010000002842000A070000000C782D6174747269627574653100000000420008070000000656616
C756531000042000F010000009842005A0500000004000000D000000004200900800000008F0CB35D89BB9D25142007C
05000000040000000000000000420079010000006042009107000000243333336463396239392D386537332D346666362D6
13337622D3432333336396635613432326300000000420008010000002842000A070000000C782D61747474726962757465
3200000000420B0700000006656616C756532000042007B010000019042007A010000004842006901000000204200670A020
00000004000000100000000042006B0200000000000000000420092090000000800000000004AFBED2C42000D0200
00000400000002000000042000F010000009842005C0500000004000000D000000004200930800000008D9D407FFB45C
9567242007F050000000400000000000000042007C0100000060420094070000002432316432386238612D3036646662D
343363302D623732662D3261313631363333316461390000000042000801000000284200A070000000C782D6174747726
962757465310000000042000B070000000656616C756531000042000F010000009842005C05000000040000000D00000000
0042009308000000008D62107C3158409D842007F0500000004000000000000000000420007C010000006042009407000002
432316432386238612D303664662D343363302D623732662D3261313631363333316461390000000042000801000000028
42000A070000000C782D617474747269627572574653320000000042000B070000000656616C75653200000

11	Client A:
	Modify attribute [batch]
	In: uuidKey, attribute={ x-attribute1='ModifiedValue1' }
	In: uuidKey, attribute={ x-attribute2='ModifiedValue2' }

Tag: Request Message (~~0x420075~~0x420078), Type: Structure (0x01), Data:

  Tag: Request Header (~~0x420074~~0x420077), Type: Structure (0x01), Data:

    Tag: Protocol Version (~~0x420067~~0x420069), Type: Structure (0x01), Data:

      Tag: Protocol Version Major (~~0x420068~~0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

      Tag: Protocol Version Minor (~~0x420069~~0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)

  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x0000000E (Modify Attribute)

    Tag: Unique Batch Item ID (~~0x420090~~0x420093), Type: Octet String (0x08), Data: ~~C06597C23C952144~~47FB42CCECA3F6EC

    Tag: Request Payload (~~0x420076~~0x420079), Type: Structure (0x01), Data:

      Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~333de9b9-8e73-4ff6-a37b-42369f5a4262~~21d28b8a-06df-43c0-b72f-2a161633ada9

      Tag: Attribute (0x420008), Type: Structure (0x01), Data:

        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute1

        Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: ModifiedValue1

  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x0000000E (Modify Attribute)

    Tag: Unique Batch Item ID (~~0x420090~~0x420093), Type: Octet String (0x08), Data:

3D9CF6E0445252B808019A230A05E9E1
     Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
       Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 333dc9b9-8e73-4ff6-a37b-42369f5a426221d28b8a-06df-43c0-b72f-2a161633ada9
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute2
          Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: ModifiedValue2

420075010000017042007401000000384200670100000020420068020000000400000001000000004200690200000040
0000000000000000042000D0200000004000000020000000042000F010000009042005A050000004000000EE000000042
00900800000008C06597C23C95214442007601000000684200910700000024333333364633396239B2D386537332D3466663
62D613337622D3432333639663561343236320000000042000801000000304200A070000000C782D617474726926175742
65310000000042000B070000000E4D6F64696669656456616C756531000042000F010000009042005A050000000400000
00E0000000042009008000000083D9CF6E0445252B842007601000000684200910700000024333333364633396239B2D3865
37332D346666362D613337622D3432333336396635613134323632000000004200080100000030420A070000000C782D617
474726926175746532000000004200B070000000E4D6F64696669656456616C7565320000

420078010000017042007701000000384200690100000020420006A0200000004000000010000000042006B0200000040
0000000000000000042000D02000000040000000200000000420F01000009042005C050000000400000000E0000000042
0093080000000847FB42CCECA3F6EC42007901000000684200940700000024323164323862238612D303664662D3433363
302D623732662D32613136313633336164613900000000042000801000000304200A070000000C782D6174747269267157742
65310000000042000B070000000E4D6F64696669656456616C756531000042000F010000009042005C050000000400000
00E0000000042009308000000808019A230A05E9E142007901000000684200940700000024323164323862238612D303036
64662D343363302D623732662D326131363133363333616461390000000042000801000000304200A070000000C782D617
4747269267157465320000000042000B070000000E4D6F64696669656456616C7565320000

Out: uuidKey, attribute={ x-attribute1='ModifiedValue1' }

Out: uuidKey, attribute={ x-attribute2='ModifiedValue2' }

Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC07823 (Mon Sep 28 0x000000004AFBED2D (Thu Nov 12 12:10:47:31 CEST37 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000E (Modify Attribute)
    Tag: Unique Batch Item ID (0x4200900x420093), Type: Octet String (0x08), Data: C06597C23C95214447FB42CCECA3F6EC
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 333dc9b9-8e73-4ff6-a37b-42369f5a426221d28b8a-06df-43c0-b72f-2a161633ada9
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute1
          Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: ModifiedValue1
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000E (Modify Attribute)
    Tag: Unique Batch Item ID (0x4200900x420093), Type: Octet String (0x08), Data: 3D9CF6E0445252B808019A230A05E9E1
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:

```
        Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 333de9b9-8e73-
4ff6-a37b-42369f5a42621d28b8a-06df-43c0-b72f-2a161633ada9
          Tag: Attribute (0x420008), Type: Structure (0x01), Data:
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute2
            Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: ModifiedValue2
```

42007801000001A042007701000000484200670100000020420068020000000400000001000000004200690200000040
0000000000000000042008F0900000008000000004AC0782342000D0200000004000000020000000042000F01000000A042
005A0500000004000000E000000004200900800000008C06597C23C95214442007C0500000004000000000000000420
0790100000068420091070000002433333364633962392D386537332D346666362D613337622D34323233363966356134323
63200000000042000801000003042000A070000000C782D6174747269627574654531000000042000B070000000E4D6F6
4696669656456616C756531000042000F01000000A042005A0500000004000000E0000000042009008000000083D9CF6
E0445252B842007C0500000004000000000000000042007901000000684200910700000024333333364633962392D38653
7332D346666362D613337622D34323233363966356134323632000000004200080100000304200A070000000C782D6174
747269627574654532000000042000B070000000E4D6F64696669656456616C756532000042007B01000001A042007A010
00000484200690100000020420068020000000400000001000000004200690200000040000000000000000420092090
000000080000000004AFBED2D42000D0200000004000000020000000042000F01000000A042005C0500000040000000E000
00000042009308000000847FB42CCECA3F6EC42007F0500000004000000000000000042007C0100000068420094070000
002432316432386238612D30366466622D343363302D623732662D32613136313633336164613900000000042000801000000
03042000A070000000C782D6174747269627574654531000000042000B070000000E4D6F64696669656456616C75653100
0042000F01000000A042005C0500000040000000E00000000042009308000000080819A230A05E9E142007F050000000
040000000000000000042007C01000000684200940700000024323164323862386132D30366466622D343363302D623732662D
32613136313633336164613900000004200080100000304200A070000000C782D6174747269627574654532000000004
2000B070000000E4D6F64696669656456616C75653200000
```
┌────┬─────────────────────────────────────────────────────────────────────────────────┐
│ 12 │ Client A:                                                                         │
│    │                                                                                   │
│    │ Delete attribute [batch]                                                          │
│    │                                                                                   │
│    │ In: uuidKey, attributeNames={ 'x-attribute1' }                                    │
│    │                                                                                   │
│    │ In: uuidKey, attributeNames={ 'x-attribute2' }                                    │
└────┴─────────────────────────────────────────────────────────────────────────────────┘
```

Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000F (Delete
Attribute)
    Tag: Unique Batch Item ID (0x4200900x420093), Type: Octet String (0x08), Data:
1A1B48172DF57ABC3E2C080FA8806057
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 333de9b9-8e73-
4ff6-a37b-42369f5a42621d28b8a-06df-43c0-b72f-2a161633ada9
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute1
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000F (Delete
Attribute)
    Tag: Unique Batch Item ID (0x4200900x420093), Type: Octet String (0x08), Data:
B77FD0753B7C95ED9D55988D43D23B82
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 333de9b9-8e73-
4ff6-a37b-42369f5a42621d28b8a-06df-43c0-b72f-2a161633ada9
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute2
```

42007501000001304200740100000038420067010000002042006802000000040000000100000000420069020000004
00000000000000000042000D0200000004000000020000000042000F010000007042005A0500000004000000F0000000042

0090080000000081A1B48172DF57ABC42007601000000484200910700000024333333364633962392D386537332D3466663
62D613337622D343233363966356134322362000000000042000A070000000C782D6174747269627574655465310000000004200
0F010000007042005A0500000000400000000F000000004200900800000008B77FD0753B7C95ED420076010000004842009
10700000024333333364633962392D386537332D3466663362D613337622D343233363966356134323632000000000042000A
070000000C782D61747474726962627574655465320000000000

420078010000013042007701000000384200690100000020420006A0200000004000000010000000042006B02000000040
0000000000000000042000D02000000004000000020000000042002F010000007042005C0500000040000000F0000000042
009308000000083E2C080FA880605742007901000000484200940700000024323164323862382360612D303664662D3433363
02D623732662D32613136313363336161613900000000042000A070000000C782D617474747269627574655465531000000004200
0F010000007042005C0500000040000000F00000000042009308000000089D55988D43D23B8242007901000000484200940
70000002432316432386238612D303064662D343363302D623732662D32613136313633333361646139000000000042000A
070000000C782D6174747472696962757574655453200000000000

Out: uuidKey, attributeNames={ 'x-attribute1' }
Out: uuidKey, attributeNames={ 'x-attribute2' }

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC07826 (Mon Sep
28 0x000000004AFBED2D (Thu Nov 12 12:10:47:34 CEST37 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000F (Delete
Attribute)
    Tag: Unique Batch Item ID (0x4200900x420093), Type: Octet String (0x08), Data:
1A1B48172DF57ABC3E2C080FA8806057
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 333de9b9 8e73
4ff6 a37b 42369f5a426221d28b8a-06df-43c0-b72f-2a161633ada9
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute1
        Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: ModifiedValue1
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000F (Delete
Attribute)
    Tag: Unique Batch Item ID (0x4200900x420093), Type: Octet String (0x08), Data:
B77FD0753B7C95ED9D55988D43D23B82
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 333de9b9 8e73
4ff6 a37b 42369f5a426221d28b8a-06df-43c0-b72f-2a161633ada9
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-attribute2
        Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: ModifiedValue2
```

42007801000001A04200770100000048420067010000002042006802000000040000000100000004200690200000004
0000000000000000042008F09000000080000000AC0782642000D020000000400000020000000042000F01000000A042
005A0500000040000000F0000000042009008000000081A1B48172DF57ABC42007C050000000400000000000000420
07901000000684200910700000024333333364633962392D386537332D3466663362D613337622D343233363966356134432
36320000000004200080100000030420000A070000000C782D6174747272696275574653100000000042000B070000000E4D6F6

4696669656456616C756531000042000F01000000A042005A050000000400000000F0000000042009008000000008B77FD0
753B7C95ED42007C0500000004000000000000000042007901000000684200910700000024333333364633962392D38653
7332D346666362D613337622D34323333639663561343236320000000042000801000000304200A070000000C782D6174
7472696275746532000000000042000B070000000E4D6F64696669656456616C756532000042007B01000001A042007A010
00000484200690100000020420006A02000000040000000100000000420006B0200000004000000000000000420092090000000008000000004AFBED2D42000D020000000400000002000000020000000042000F01000000A042005C0500000004000000000F000
00000042009308000000083E2C080FA880605742007F0500000004000000000000000042007C010000006842009407000000
0024323163423862386162D303664662D343363302D623732662D326131363136333361646139000000004200080100000
03042000A070000000C782D6174747472696962756574653200000000042000B070000000E4D6F6469666965645661C7565310
0042000F01000000A042005C0500000004000000000F00000004200930800000000089D55988D43D23B8242007F050000000
4000000000000000042007C0100000068420094070000002432316342386238612D303664662D343363302D623732662D
3261313631363333361646139000000004200080100000304200A070000000C782D6174747472696962756574653200000000004
2000B070000000E4D6F64696669656456616C756532000000

| 13 | Client A:
Get (symmetric key)
In: uuidKey

```
Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 333de9b9-8e73-4ff6-a37b-12369f5a426221d28b8a-06df-43c0-b72f-2a161633ada9
```

420075010000009042007401000000384200670100000020420068020000000400000001000000000420069020000000400
000000000000000042000D020000000400000001000000000420009F01000000484200305005000000040000000A0000000042
007601000000304200910700000024333333364633962392D38653733322D346666362D613337622D3433233363996356134
23632000000000
420078010000009042007701000000384200690100000020420006A02000000040000000100000000420006B0200000004000
00000000000000042000D020000000400000001000000000420009F01000000484200305C05000000040000000A00000000042
00790100000030420094070000002432316342386238612D303664662D343363302D623732662D326131363136333336166
46139000000000

Out: objectType = '00000002', uuidKey, symmetricKey

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC07827 (Mon Sep 28 0x000000004AFBED2D (Thu Nov 12 12:10:47:35 CEST37 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
      Tag: Object Type (0x4200550x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
```
|

Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~333de9b9-8e73-4ff6-a37b-42369f5a4262~~21d28b8a-06df-43c0-b72f-2a161633ada9

      Tag: Symmetric Key (~~0x42008C~~0x42008F), Type: Structure (0x01), Data:

        Tag: Key Block (~~0x42003E~~0x420040), Type: Structure (0x01), Data:

          Tag: Key Format Type (~~0x420040~~0x420042), Type: Enumeration (0x05), Data: 0x00000001

          Tag: Key Value (~~0x420043~~0x420045), Type: Structure (0x01), Data:

           Tag: Key Material (~~0x420041~~0x420043), Type: Octet String (0x08), Data: ~~E6C15B28BB6C7A268E9ADEA471A36F23~~EF7833AB15F5A1EE5874BC0D9BBC4BE7

          Tag: Cryptographic Algorithm (~~0x420026~~0x420028), Type: Enumeration (0x05), Data: 0x00000003 (AES)

          Tag: Cryptographic Length (~~0x420028~~0x42002A), Type: Integer (0x02), Data: 0x00000080 (128)

42007801000001204200770100000048420067010000002042006802000000040000000100000000420069020000000400000000000000004 2008F090000000800000001AC0782742000D0200000004000000010000000042000F01000000C842005A0500000004000000A0000000042007C050000000400000000000000042007901000000A042005505000000040000000020000000042009107000000243333336463396239 2D386537332D346666362D613337622D34323233363936 65356134323632000000004 2008C010000005842003E010000005042004005000000040000000100000000420043010000001842004 1080000010E6C15B28BB6C7A268E9ADEA471A36F23420026050000000400000003000000042002802000000040000000800000000042007B010000012042007A010000004842006901000000204200 6A0200000004000000010000000042006B0 20000000400000000000000042009209000000080000000AFBED2D42000D0200000004000000010000000042000F01000000C842005C0500000004000000A0000000042007F0500000004000000000000000042007C01000000A0420057050 00000040000000200000000420094070000002432316432386238612D303664662D343363302D623732662D32613136313631 363333616461390000000042008F010000005842004001000000504200420500000004000000010000000042004501000000184200430800000010EF7833AB15F5A1EE5874BC0D9BBC4BE74200280500000004000000030000000042002A0200000 0000400000080000000000

---

14 | Client A:

Destroy (symmetric key)

In: uuidKey

Tag: Request Message (~~0x420075~~0x420078), Type: Structure (0x01), Data:

  Tag: Request Header (~~0x420074~~0x420077), Type: Structure (0x01), Data:

    Tag: Protocol Version (~~0x420067~~0x420069), Type: Structure (0x01), Data:

      Tag: Protocol Version Major (~~0x420068~~0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

      Tag: Protocol Version Minor (~~0x420069~~0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)

    Tag: Request Payload (~~0x420076~~0x420079), Type: Structure (0x01), Data:

      Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~333de9b9-8e73-4ff6-a37b-42369f5a4262~~21d28b8a-06df-43c0-b72f-2a161633ada9

42007501000000904200740100000038420067010000002042006802000000040000000100000000420069020000000400000000000000004 2000D0200000004000000010000000042000F010000004842005A0500000004000000140000000042 007601000000304200910700000024333333364633396239 2D386537332D346666362D613337622D3432323336393663356134343 32363200000000

42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B020000000400 0000000000000042000D0200000004000000010000000042000F010000004842005C0500000004000000140000000042 00790100000030420094070000002432316432386238612D303664662D343363302D623732662D3261313631363333616 4613900000000

Out: uuidKey

Tag: Response Message (~~0x420078~~0x42007B), Type: Structure (0x01), Data:

  Tag: Response Header (~~0x420077~~0x42007A), Type: Structure (0x01), Data:

```
        Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
          Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
          Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
        Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC07827 (Mon Sep
28 0x000000004AFBED2E (Thu Nov 12 12:10:47:35 CEST38 CET 2009)
        Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
        Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
        Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
        Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
          Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 333dc9b9-8e73-
4ff6-a37b-42369f5a426221d28b8a-06df-43c0-b72f-2a161633ada9
```
```
42007801000000B042007701000000484200670100000020420068020000000400000001000000004200690200000040
0000000000000042008F090000000800000004AC0782742000D02000000040000000100000042000F010000005842
005A050000000400000014000000042007C05000000040000000000000004200790100000030420091070000002433
33364633396239392D386537332D346666362D613337622D34323336396635613432363200000042007B01000000B04200
7A010000004842006901000000204200680200000040000000010000000420006B0200000004000000000000000042009
209000000080000004AFBED2E42000D02000000040000000100000042000F010000005842005C0500000004000000
140000000042007F05000000040000000000000042007C01000000304200940700000024323164623862612D30366
4662D343363302D623732662D32613136313633336164613900000000
```

125

126

~~5~~5 Auditing and reporting

128

~~5.1~~5.1 Use-case: Get usage allocation scenario

130 This use-case tests the usage management functionality of KMIP. A key is created and the Activation
131 Date and Protect Stop Date attributes are set in such a way as to allow the Get Usage Allocation
132 operation to be performed. The value of the Usage Limits attribute is set to 1000 bytes, and two
133 subsequent requests for 500 bytes succeed, (one of them also verifying the amount that can be received
134 using the Check operation), while a third fails since the usage allocation has been used up. The key is
135 finally revoked and destroyed. This use-case shows the use of multiple clients with the assumptions
136 regarding the clients being the same as in the use-case described in Section 3.1.4

137

Time	Client A

0	Client A:
	
	Create (symmetric key)
	
	In: objectType = '00000002', attributes={ CryptographicAlgorithm='AES', CryptographicLength='128', NameValue={ Name='Key1', NameType='00000001' }, CryptographicUsageMask='00000004' }
	
	`Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:`
	`  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:`
	`    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:`
	`      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)`
	`      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)`
	`    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)`
	`  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:`

```
       Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
      Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
       Tag: Object Type (0x4200550x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric
Key)
        Tag: Template-Attribute (0x42008E0x420091), Type: Structure (0x01), Data:
          Tag: Attribute (0x420008), Type: Structure (0x01), Data:
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm
            Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (AES)
          Tag: Attribute (0x420008), Type: Structure (0x01), Data:
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length
            Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000080 (128)
          Tag: Attribute (0x420008), Type: Structure (0x01), Data:
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
            Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
              Tag: Name Value (0x4200530x420055), Type: Text String (0x07), Data: Key1
              Tag: Name Type (0x4200520x420054), Type: Enumeration (0x05), Data: 0x00000001
(Uninterpreted text string)
          Tag: Attribute (0x420008), Type: Structure (0x01), Data:
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage Mask
            Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000004 (Encrypt)
```

4200750100000160420074010000003842006701000000204200680200000004000000010000000042006902000000040
0000000000000042000D02000000040000000100000004200F010000011842005A0500000004000000010000000420
0760100000010042005505000000040000000200000042008E01000000E84200080100000030420000A0700000017437279
70746F6772617068696320416C676F726974686D0042000B05000000040000000300000042000801000000030420000A07
0000001443727970746F67726170686963204C656E6774680000000042000B02000000040000008000000004200080100
00003842000A07000000044E616D65000000004200B0100000020420053070000000044B6579310000000042005205000
0004000000010000000420008010000003042000A0700000018437279707461706869632055573616765204D6173
6B42000B020000000400000004000000

4200780100000160420077010000003842006901000000204200680200000004000000010000000042006B02000000040
0000000000000042000D02000000040000000100000004200F010000011842005C0500000004000000010000000420
0790100000010042005705000000040000000200000042009101000000E84200080100000030420000A0700000017437279
70746F6772617068696320416C676F726974686D0042000B05000000040000000300000042000801000000030420000A07
0000001443727970746F67726170686963204C656E6774680000000042000B02000000040000008000000004200080100
00003842000A07000000044E616D65000000004200B0100000020420055070000000044B6579310000000042005405000
0004000000010000000420008010000003042000A0700000018437279707461706869632055573616765204D6173
6B42000B020000000400000004000000

Out: objectType = '00000002', uuidKey


```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC07828 (Mon Sep
28 10:47:36 CEST 20090x000000004B98E05A (Thu Mar 11 13:21:46 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
      Tag: Object Type (0x4200550x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric
Key)
```

Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~4fec3a59-b217-4abf-84ad-af1547024615~~e696ebd0-8eba-406e-be21-d9059e29ba1d

42007801000000C042007701000000484200670100000020420068020000000400000001000000004200690200000004000000000000000042008F0900000008000000004AC0782842000D0200000004000000010000000042000F01000000684200 5A05000000040000000100000000420007C0500000004000000000000000420079010000004042005505050000000400000002000000004200910700000024346665333613539D623231372D346162662D383461642D6166313534373032343436313 5000000004200 7B01000000C042007A0100000048420069010000002042006A0200000004000000010000000042006B0200 0000040000000000000000420092090000000800000004B98E05A42000D0200000004000000010000000042000F010000 0068 42005C050000004000000001000000042007F05000000400000000000000000420007C0100000004042005705000000 0400000002000000004200940700000024653639366562643O2D386562612D343036652D626532312D6439303539653239 6261316400000000

1	Client A:

Add attribute [batch]

In: uuidKey, attribute={ ActivationDate='2' }

In: uuidKey, attribute={ ProtectStopDate='<*NOW+10min*>' }

Tag: Request Message (~~0x420075~~0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (~~0x420074~~0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (~~0x420067~~0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (~~0x420068~~0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (~~0x420069~~0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)
    Tag: Unique Batch Item ID (~~0x420090~~0x420093), Type: Octet String (0x08), Data: ~~E1AE8A5206CC749A~~D7FE2477E364AE1A
    Tag: Request Payload (~~0x420076~~0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~4fec3a59-b217-4abf-84ad-af1547024615~~e696ebd0-8eba-406e-be21-d9059e29ba1d
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Activation Date
        Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x0000000000000002 (Thu Jan 01 01:00:02 CET 1970)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)
    Tag: Unique Batch Item ID (~~0x420090~~0x420093), Type: Octet String (0x08), Data: ~~C6CAA6E0C409336F~~9696012991BC8A59
    Tag: Request Payload (~~0x420076~~0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~4fec3a59-b217-4abf-84ad-af1547024615~~e696ebd0-8eba-406e-be21-d9059e29ba1d
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Protect Stop Date
        Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: ~~0x000000004AC07A80 (Mon Sep 28 10:57:36 CEST 2009~~0x000000004B98E2B3 (Thu Mar 11 13:31:47 CET 2010)

42007501000001684200740100000038420067010000002042006802000000040000000100000000420069020000000400 000000000000042000D0200000004000000010000000042000F01000000884200 5A05000000040000000D000000004200 900800000008E1AE8A5206CC749A42007601000000604200910700000024346665333613539D623231372D346162662D 383461642D6166313534373032343436313500000000420008010000028 42000A070000000F4163746976617469 6E2044 6174650042000B09000000080000000000000002 42000F010000009042005A05000000040000000D000000004200900800 000008C6CAA6E0C409336F420076010000006842009107000000243466656333613539D623231372D346162662D383461 642D6166313534373032343436313500000000420008010000003042000A070000001150726F746563742053746F70204461 74650000000000000000042000B09000000080000000 4AC07A80
42007801000001684200770100000038420069010000002042006A0200000004000000010000000042006B020000000400

000000000000042000D0200000004000000020000000042000F010000008842005C0500000004000000D0000000042000
930800000008D7FE2477E364AE1A42007901000000060420094070000002465363936656264302D386562612D343036652D
626532312D643930353965323962613164000000004200080100000028420000A070000000F41637469766174696F6E2044
6174650042000B09000000080000000000000242000F010000009042005C0500000004000000D0000000042009308000
0000089696012991BC8A594200790100000068420094070000002465363936656264302D386562612D343036652D626532
312D643930353965323962613164000000004200080100000030420000A070000001150726F746563742053746F70204461
7465000000000000042000B090000008000000004B98E2B3

Out: uuidKey, attribute={ ActivationDate='2' }
Out: uuidKey, attribute={ ProtectStopDate='*<NOW+10min>*' }

Tag: Response Message (~~0x420078~~0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (~~0x420077~~0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (~~0x420067~~0x420069), Type: Structure (0x01), Data:
     Tag: Protocol Version Major (~~0x420068~~0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
     Tag: Protocol Version Minor (~~0x420069~~0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (~~0x42008F~~0x420092), Type: Date-Time (0x09), Data: ~~0x000000004AC07828 (Mon Sep 28 10~~0x000000004B98E05B (Thu Mar 11 13:21:47~~:36 CEST 2009~~ CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)
    Tag: Unique Batch Item ID (~~0x420090~~0x420093), Type: Octet String (0x08), Data: ~~E1AE8A5206CC749A~~D7FE2477E364AE1A
    Tag: Result Status (~~0x42007C~~0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (~~0x420079~~0x42007C), Type: Structure (0x01), Data:
     Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~4fee3a59-b217-4abf-84ad-af1547024615~~e696ebd0-8eba-406e-be21-d9059e29ba1d
     Tag: Attribute (0x420008), Type: Structure (0x01), Data:
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Activation Date
      Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x0000000000000002 (Thu Jan 01 01:00:02 CET 1970)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)
    Tag: Unique Batch Item ID (~~0x420090~~0x420093), Type: Octet String (0x08), Data: ~~C6CAA6E0C409336F~~9696012991BC8A59
    Tag: Result Status (~~0x42007C~~0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (~~0x420079~~0x42007C), Type: Structure (0x01), Data:
     Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~4fee3a59-b217-4abf-84ad-af1547024615~~e696ebd0-8eba-406e-be21-d9059e29ba1d
     Tag: Attribute (0x420008), Type: Structure (0x01), Data:
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Protect Stop Date
      Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: ~~0x000000004AC07A80 (Mon Sep 28 10:57:36 CEST 2009~~0x000000004B98E2B3 (Thu Mar 11 13:31:47 CET 2010)

42007801000000198420077010000004842006701000000204200680200000004000000010000000042006902000000040
0000000000000000042008F0900000008000000004AC0782842000D0200000004000000020000000042000F01000000984200
5A0500000004000000D0000000042009008000000008E1AE8A5206CC749A42007C0500000004000000000000000042007901
0000000604200910700000024346665633361135392D623231372D346162662D383461642D6166313534373032343631350
00000004200080100000028420000A070000000F41637469766174696F6E20446174650042000B090000000800000000000
0000242000F01000000A042005A0500000004000000D000000042009008000000008C6CAA6E0C409336F42007C0500000000
0000000600420079010000006842009107000000243466656333613135392D623231372D346162662D383461642D61663164
2D6163313534373032343631350000000000420000A070000001150726F746563742053746F702044617461740000000000
6500000000000000042000B0900000080000000004AC07A8042007B010000001984200780A01000000484200690100000020420
06A0200000004000000010000000042006B020000000400000000000000000042009209000000080000000004B98E05B4200
0D020000000400000002000000042000F010000009842005C0500000004000000D0000000042009308000000008D7FE24
77E364AE1A42007F0500000004000000000000000042007C01000000060420094070000002465363936656264302D386562

612D343036652D626532312D64393035396532396261316400000000042000801000002842000A070000000F4163746976
6174696F6E20446174654500420090900000000000000242000F01000000A042005C050000000400000000D0000
00004200930800000089696012991BC8A5942007F0500000004000000000000042007C0100000684200940700000000
2465363936656264302D386562612D343036652D626532312D6439303539653239626131640000000004200080100000030
42000A070000001150726F746563743742053746F7020044617465500000000000000042000B0900000008000000004B98E2B3

Client A:

Add Attribute

In: uuidKey, attribute={ UsageLimits={ ~~UsageLimitsTotalBytes~~UsageLimitsTotal='1000', UsageLimitsUnit='1'} }

```
Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 4fec3a59-b217-
4abf-84ad-af1547024615e696ebd0-8eba-406e-be21-d9059e29ba1d
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Usage Limits
        Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
          Tag: Usage Limits Total Bytes (0x4200950x420097), Type: BigLong Integer (0x040x03),
Data: 03E80x00000000000003E8 (1000)
```

42007501000000C84200740100000038420067010000002042006802000000040000000100000004200690200000000400
0000000000000042000D020000000400000001000000042000F010000008042005A0500000004000000D0000000042000
76010000006842009107000000243466656333613539 2D623231372D346162662D383461642D6166313534373032343631
350000000042000801000000304200A070000000C5573616765204C696D69747300000000042000B010000001042009504
0000000800000000000003E8
```
          Tag: Usage Limits Unit (0x420098), Type: Enumeration (0x05), Data: 0x00000001 (Byte)
```

42007801000000D84200770100000038420069010000002042006A02000000040000000100000004200Б020000000400
0000000000000042000D020000000400000001000000042000F010000009042005C0500000004000000D0000000042000
79010000007842009407000000024653639366562643302D386562612D343036652D626532312D6439303539653239626131
6400000000042000801000004042000A070000000C5573616765204C696D697473000000000420008B010000002042009703
0000000800000000000003E842009805000000040000000100000000

Out: uuidKey, attribute={ UsageLimits={ ~~UsageLimitsTotalBytes~~UsageLimitsTotal= '1000', ~~UsageLimitsByteCount~~UsageLimitsCount='1000', UsageLimitsUnit='1'} }

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC0782A (Mon Sep
28 10:47:38 CEST 2009)0x000000004B98E05C (Thu Mar 11 13:21:48 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
```

        Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)

        Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

        Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:

          Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 4fee3a59-b217-4abf-84ad-af1547024615e696ebd0-8eba-406e-be21-d9059e29ba1d

          Tag: Attribute (0x420008), Type: Structure (0x01), Data:

            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Usage Limits

            Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:

              Tag: Usage Limits Total Bytes (0x420095(0x420097), Type: BigLong Integer (0x040x03), Data: 00000000000003E80x00000000000003E8 (1000)

              Tag: Usage Limits Byte Count (0x4200930x420096), Type: BigLong Integer (0x040x03), Data: 00000000000003E80x00000000000003E8 (1000)

42007801000000F8420077010000004842006701000000204200680200000004000000010000000042006902000000040000000000000008000000004AC0782A42000D0200000004000000010000000042000F01000000A042005A05000000040000000D0000000042007C0500000004000000000000000042007901000000784200910700000024346666563336135392D623231372D346162662D383461642D616631353437303234363135000000004200080100000040420000A07000000C5573616765204C696D6974730000000042000B01000000204200950400000008000000000000003E84200930400000008000000000000003E8   Tag: Usage Limits Unit (0x420098), Type: Enumeration (0x05), Data: 0x00000001 (Byte)

42007B010000010842007A01000000484200690100000020420006A020000000400000000100000042006B0200000004000000000000000042009209000000080000000004B98E05C42000D0200000004000000010000000042000F01000000B042005C05000000040000000D0000000042007F0500000004000000000000000042007C0100000088420094070000002465363936656264302D386562612D343036652D626532312D6439303539653239626131640000000042000801000000504200A07000000C5573616765204C696D6974730000000042000B01000003042009703000000080000000000003E84200960300000008000000000003E842009805000000040000000100000000

3	Client B:

Locate (symmetric key by name)

In: objectType = '00000002', attributes={ Name={ Name='Key1', NameType= '00000001'} }

Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:

  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:

    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:

      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)

    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:

      Tag: Attribute (0x420008), Type: Structure (0x01), Data:

        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type

        Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)

      Tag: Attribute (0x420008), Type: Structure (0x01), Data:

        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name

        Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:

          Tag: Name Value (0x4200530x420055), Type: Text String (0x07), Data: Key1

          Tag: Name Type (0x4200520x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)

42007501000000D04200740100000038420067010000002042006802000000040000000100000000420069020000000400000000000000004200D020000000040000000100000042000F01000000884200A05050000000400000008000000004200760100000070420008010000028420000A070000000B4F626A6563742054797065000000004200B050000000400000000

020000000042000801000000384200A07000000044E616D65000000004200B010000002042005307000000044B657931
00000000420052050500000040000000100000000

42007801000000D04200770100000038420069010000002042006A020000000400000001000000004200680200000004
00000000000000004200D0020000000400000001000000004200F010000008842005C05000000040000000800000000420
07901000000704200080100000028420A070000000B4F626A65637420205479706500000000004200B0500000004000000
0200000000420008010000003842000A07000000044E616D65000000004200B010000002042005507000000044B657931
00000000420054050500000040000000100000000

Out: uuidKey

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC0782A (Mon Sep
28 10:47:38 CEST 2009 0x000000004B98E05C (Thu Mar 11 13:21:48 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 4fee3a59-b217-
4abf-84ad-af1547024615 e696ebd0-8eba-406e-be21-d9059e29ba1d
```

42007801000000B04200770100000048420067010000002042006802000000040000000100000000
4200000000000000004200 8F090000000080000000004AC0782A42000D02000000040000000100000000 4200F010000005842 00
5A0500000004000000080000000 42007C0500000004000000010000000 042007901000003042009107000000243466656
53336135392D623231372D346162662D383461642D6166313534373032343631350000000042007B01000000B 042007A01
0000000484200690100000020 42006A020000000 40000000100000000 42006B02000000040000000000000000042009209 00
00000080000000004B98E05C 42000D0200000040000000100000000 42000F0100000058 42005C05000000040000000800000
000042007F0500000004000000000000000042007C010000003042009407000000246536393665626430 2D386562612D34
3036652D626532312D64393035396532396261316400000000

4	Client B:
	Get (symmetric key)
	In: uuidKey
	
	``
	Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
	  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
	    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
	      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
	      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
	    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
	  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
	    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
	    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
	      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 4fee3a59-b217-4abf-84ad-af1547024615 e696ebd0-8eba-406e-be21-d9059e29ba1d
	``

420075010000009042007401000000384200670100000020420068020000000400000001000000004200690200000004
000000000000000042000D02000000040000000100000000 42000F010000004842005A0500000004000000 0A00000000 4200
7601000000304200910700000024346665653336135392D623231372D346162662D383461642D6166313534373032343631
3500000000

420078010000009042007701000000384200690100000020420 06A020000000400000001000000004200 6B0200000004000 00000000000000042000D02000000040000000100000000420 00F010000004842005C0500000040000000A00000000420 079010000030420094070000002465363936656264302D386562612D343036652D626532312D64393035396532396261 31 6400000000

Out: objectType = '00000002', uuidKey, symmetricKey

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC0782A (Mon Sep
28 10:47:38 CEST 20090x000000004B98E05C (Thu Mar 11 13:21:48 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
      Tag: Object Type (0x4200550x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric
Key)
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 4fec3a59-b217-
4abf-84ad-af1547024615e696ebd0-8eba-406e-be21-d9059e29ba1d
      Tag: Symmetric Key (0x42008C0x42008F), Type: Structure (0x01), Data:
        Tag: Key Block (0x42003E0x420040), Type: Structure (0x01), Data:
          Tag: Key Format Type (0x4200400x420042), Type: Enumeration (0x05), Data: 0x00000001
          Tag: Key Value (0x4200430x420045), Type: Structure (0x01), Data:
            Tag: Key Material (0x4200410x420043), Type: Octet String (0x08), Data:
3D41DF1C5C20E272212D86D762A8C7D4674B32B1A3266DF1253B0F2C4440B0B0
          Tag: Cryptographic Algorithm (0x4200260x420028), Type: Enumeration (0x05), Data:
0x00000003 (AES)
          Tag: Cryptographic Length (0x4200280x42002A), Type: Integer (0x02), Data: 0x00000080
(128)
```

42007801000001204200770100000048420067010000002042006802000000040000000100000000420069020000000400 0000000000000042008F0900000008000000004AC0782A42000D020000000400000001000000004200 0F01000000C84200 5A0500000004000000 0A000000004200 7C05000000040000000000000042007901000000A04200550505000000040000000 02000000004200910700000024346665633336135392D623231372D346162662D383461642D6166313534373032343631 35 00000000042008C010000005842003E0100000050420040050000000400000001000000004200430100000018420041080 0 0000103D41DF1C5C20E272212D86D762A8C7D442002605000000040000000300000004200280200000000400000000 0000042007B010000012042007A0100000048420069010000020420 06A0200000004000000010000000042006B0200000 04000000000000000000420092090000000800000004B98E05C42000D0200000004000000010000000042000F01000000C8 42005C0500000004000000 0A00000000042007F0500000004000000000000000042007C01000000A0420057050000000400 000002000000004200940700000024 65363936656264302D386562612D343036652D626532312D6439303539653239626 3164000000004 2008F0100000058420040010000005042004205000000040000000100000000420045010000001842004 30800000001 0674B32B1A3266DF1253B0F2C4440B0B0420028050000000400000003000000042002A020000000400000080 00000000

5	Client B: Check Get usage allocation In (header): BatchOrderOption='true' In: uuidKey, ~~UsageLimitsByteCount~~UsageLimitsCount='500' In: uuidKey, UsageLimitsCount='500'

Tag: Request Message (~~0x420075~~0x420078), Type: Structure (0x01), Data:

  Tag: Request Header (~~0x420074~~0x420077), Type: Structure (0x01), Data:

    Tag: Protocol Version (~~0x420067~~0x420069), Type: Structure (0x01), Data:

      Tag: Protocol Version Major (~~0x420068~~0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

      Tag: Protocol Version Minor (~~0x420069~~0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: ~~0x00000001 (1~~0x00000002 (2)

  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: ~~0x00000011 (Get Usage Allocation~~0x00000009 (Check)

    Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 19D4F3DC9635307A

    Tag: Request Payload (~~0x420076~~0x420079), Type: Structure (0x01), Data:

      Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~4fee3a59-b217-4abf-84ad-af1547024615~~e696ebd0-8eba-406e-be21-d9059e29ba1d

      Tag: Usage Limits ~~Byte~~ Count (~~0x420093~~0x420096), Type: ~~Big~~Long Integer (~~0x04), Data: 01F4 (500)~~

42007501000000A042007401000000384200670100000020420068020000000400000001000000004200690200000004000000000000000042000D020000000400000001000000004200F010000005842005A0500000004000000110000000042007601000000404200910700000024346665633613539322D623231372D346162662D383461642D616663313534373032323436313350000000004200930400000008000000000000001F4

~~Out: uuid~~Key

~~Tag: Response Message (0x420078), Type: Structure (0x01~~0x03), Data: 0x00000000000001F4 (500)

~~ Tag: Response Header (0x420077), Type: Structure (0x01), Data:~~

~~   Tag: Protocol Version (0x420067), Type: Structure (0x01), Data:~~

~~   Tag: Protocol Version Major (0x420068), Type: Integer (0x02), Data: 0x00000001 (1)~~

~~   Tag: Protocol Version Minor (0x420069), Type: Integer (0x02), Data: 0x00000000 (0)~~

~~   Tag: Time Stamp (0x42008F), Type: Date Time (0x09), Data: 0x000000004AC0782A (Mon Sep 28 10:47:38 CEST 2009)~~

~~   Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)~~

  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x00000011 (Get Usage Allocation)

    Tag: ~~Result Status (0x42007C~~Unique Batch Item ID (0x420093), Type: ~~Enumeration (0x05~~Octet String (0x08), Data: ~~0x00000000 (Success)~~20C8DFFD55BDEEE8

    Tag: ~~Response~~Request Payload (0x420079), Type: Structure (0x01), Data:

      Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~4fee3a59-b217-4abf-84ad-af1547024615~~e696ebd0-8eba-406e-be21-d9059e29ba1d

42007801000000B04200770100000048420067010000002042006802000000040000000100000000420069020000000400000000000000004200F090900000008000000004AC0782A42000D0200000004000000010000000042000F01000005842005A0500000004000000110000000042007C05000000040000000000000000420079010000003042009107000000243466656563336135392D623231372D346162662D383461642D61663135343730323234363135000000000
    Tag: Usage Limits Count (0x420096), Type: Long Integer (0x03), Data: 0x00000000000001F4 (500)

420078010000012042007701000000384200690100000020420069020000000400000001000000004200690200000004000000000000000042000D0200000004000000020000000042000F010000006842005C0500000004000000090000000042009308000000081900D4F3DC9635307A420079010000004042009407000000246530363936656264302D386562612D343036652D626532312D643930353965323962613164000000000400000000110000000042009308000000820C8DFFD55BDEEE842007901000000404200940700000024653639366562643032D386562612D343036652D626532312D64393035396532396261313640000000004200960300000008000000000000001F4

Out: uuidKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B98E05D (Thu Mar 11
13:21:49 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000009 (Check)
    Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 19D4F3DC9635307A
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: e696ebd0-8eba-406e-be21-
d9059e29ba1d
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000011 (Get Usage Allocation)
    Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 20C8DFFD55BDEEE8
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: e696ebd0-8eba-406e-be21-
d9059e29ba1d
```

42007B010000013042007A01000000484200690100000020420 06A0200000004000000010000000042006B020000000400
00000000000000420092090000000800000004B98E05D42000D020000000400000002000000042000F01000000684200
5C05000000040000000900000004200930800000000819D4F3DC9635307A42007F05000000040000000000000004 2007C
010000003042009407000000246536393665626430 2D386562612D343036652D626532312D64393035396532396261316
4000000004 2000F01000000684200 5C050000000400000011000000042 00930800000000820C8DFFD55BDEEE842007F0500
00000400000000000000042007C010000003042009407000000246536393665626430 2D386562612D343036652D62653253
312D643930353539653239626 2316400000000

6	Client A:
	Get usage allocation
	In: uuidKey, ~~UsageLimitsByteCount~~UsageLimitsCount='500'

```
Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000011 (Get Usage
Allocation)
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 4fee3a59-b217-
4abf-84ad-af1547024615e696ebd0-8eba-406e-be21-d9059e29ba1d
      Tag: Usage Limits Byte Count (0x4200930x420096), Type: BigLong Integer (0x040x03), Data:
```

```
01F40x00000000000001F4 (500)


42007501000000A04200740100000038420067010000002042006802000000040000000100000004200690200000004
0000000000000042000D0200000004000000010000000042000F010000005842005A050000000400000011000000042
00760100000040420091070000002434666563336135392D623231372D346162662D383461642D616631353437303234363
135000000004200930400000008000000000000001F4
42007801000000A0420077010000003842006901000000204200680200000004000000010000000042006B0200000004
0000000000000042000D0200000004000000010000000042000F010000005842005C050000000400000011000000042
00790100000040420094070000002465363936656264302D386562612D343036652D626532312D64393035396532396261
31640000000042009603000000080000000000000001F4
```

Out: uuidKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B98E05D (Thu Mar 11 13:21:49 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000011 (Get Usage Allocation)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: e696ebd0-8eba-406e-be21-d9059e29ba1d
```

```
42007801000000B0420077010000004842006701000000204200680200000004000000010000000042006902000000040
0000000000000042008F0900000008000000004AC0782B42000D0200000004000000010000000042000F010000005842005
A0500000004000000110000000042007C05000000040000000000000000420079010000003042009107000000243466656
5336135392D623231372D346162662D383461642D61663135343730323436313500000000042007B01000000B042007A010
000004842006901000000204200680200000004000000010000000042006B02000000040000000000000042008F09000000
0800000004B98E05D42000D0200000004000000010000000042000F010000005842005C0500000004000000110000000042
007F0500000004000000000000000042007C01000000304200940700000024653639366562643...
```

| 7 | Client C:
Locate (symmetric key by name)
In: objectType = '00000002', attributes={ Name={ Name='Key1', NameType='00000001'} }

```Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type
        Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric``` |

Key)
```
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
        Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
          Tag: Name Value (0x4200530x420055), Type: Text String (0x07), Data: Key1
          Tag: Name Type (0x4200520x420054), Type: Enumeration (0x05), Data: 0x00000001
(Uninterpreted text string)
```

42007501000000D042007401000000384200670100000020420068020000000400000001000000004200690200000004000000000000000000042000D020000000400000001000000042000F010000008842005A050000000400000008000000004200760100000070420008010000002842000A070000000B4F626A6563742054797065500000000000042000B050000000400000000200000004200080100000038 42000A070000000 44E616D650000000042000B010000002042005307000000044B65793100000000 42005205000000040000000100000000

42007801000000D042007701000000384200690100000020420006A020000000400000001000000042006B020000000400000000000000000042000D020000000400000001000000042000F010000008842005C050000000400000008000000004200790100000070420008010000002842000A070000000B4F626A6563742054797065500000000000042000B0500000004000000002000000042000801000000384200 0A070000000 44E616D650000000042000B010000002042005507000000044B65793100000000 42005405000000040000000100000000

Out: uuidKey

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC0782B (Mon Sep
28 10:47:39 CEST 20090x000000004B98E05D (Thu Mar 11 13:21:49 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 4fee3a59-b217-
4abf-84ad-af1547024615e696ebd0-8eba-406e-be21-d9059e29ba1d
```

42007801000000B0420077010000004842006701000000204200680200000004000000010000000042006902000000040000000000000000042008F0900000008000000004AC0782B42000D02000000040000000100000000042000F010000005842005A0500000004000000080000000042007C05000000040000000000000000420079010000003042009107000000243436656533613539 2D623231372D346162662D383461642D6166313534373032343631350000000042007B010000000B042007A01000000484200690100000020420006A02000000040000000100000000042006B020000000400000000000000000042009200900000008000000004B98E05D42000D0200000004000000010000000042000F010000005842005C050000000400000000000000042007F05000000040000000000000000042007C01000000304200940700000024653639366562302D386562612D3430366562652D62653231 2D643930353965323962613164 00000000

8	Client C:
	
	Get (symmetric key)
	In: uuidKey
	
	Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
	  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
	    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
	      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
	      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

```
      Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
   Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
     Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
     Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
       Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 4fee3a59-b217-
4abf-84ad-af1547024615e696ebd0-8eba-406e-be21-d9059e29ba1d
```

42007501000000904200740100000038420067010000002042006802000000040000000100000000420069020000000400
00000000000000420000D020000000400000001000000042000F010000004842005A0500000004000000A0000000042000
7601000000304200911070000002434666563336135392D623231372D346162662D383461642D61663135343730323234363131
3500000000

420078010000009042007701000000384200690100000020420060A02000000004000000010000000042006B020000000400
000000000000420000D0200000004000000010000000420000F01000000484200506050000000400000A00000000420000
7901000000304200947070000002465363936656264302D386562612D343036652D626532312D6439303539653239626131
6400000000

Out: objectType = '00000002', uuidKey, symmetricKey

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC0782B (Mon Sep
28 10:47:39 CEST 20090x000000004B98E05D (Thu Mar 11 13:21:49 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
      Tag: Object Type (0x4200550x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric
Key)
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 4fee3a59-b217-
4abf-84ad-af1547024615e696ebd0-8eba-406e-be21-d9059e29ba1d
      Tag: Symmetric Key (0x42008C0x42008F), Type: Structure (0x01), Data:
        Tag: Key Block (0x42003E0x420040), Type: Structure (0x01), Data:
          Tag: Key Format Type (0x4200400x420042), Type: Enumeration (0x05), Data: 0x00000001
          Tag: Key Value (0x4200430x420045), Type: Structure (0x01), Data:
            Tag: Key Material (0x4200410x420043), Type: Octet String (0x08), Data:
3D41DF1C5C20E272212D86D762A8C7D4674B32B1A3266DF1253B0F2C4440B0B0
            Tag: Cryptographic Algorithm (0x4200260x420028), Type: Enumeration (0x05), Data:
0x00000003 (AES)
            Tag: Cryptographic Length (0x4200280x42002A), Type: Integer (0x02), Data: 0x00000080
(128)
```

42007801000001204200770100000048420067010000002042006802000000040000000100000000420069020000000400
00000000000000420008F09000000080000000004AC0782B42000D02000000040000000100000000420000F010000000C84200
5A0500000004000000A000000042007C0500000004000000000000000042007901000000A0420055050000000400000
020000000042009107070000002434666563336135392D623231372D346162662D383461642D6166313534373032323436313
5000000004200800100000058420033E01000000050420040050000000400000001000000042004301000000184200410800
0000103D41DF1C5C20E272212D86D762A8C7D44200260500000004000000300000004200280200000004000008000000
000042007B01000001204200770100000048420069010000002042006A020000000400000001000000042006B0200000004
0000000000000042009209000000080000000004B98E05D42000D020000000400000001000000042000F01000000C8
42005C0500000004000000A000000042007F0500000004000000000000000042007C01000000A0420057050000000400
0000020000000042009407070000002465363936656264302D386562612D343036652D626532312D6439303539653239626
31640000000004200800100000058420040010000005042004205000000040000000100000000420450100000184200043

0800000010674B32B1A3266DF1253B0F2C4440B0B042002805000000040000000300000004 2002A020000000400000080
00000000

9	Client C:

Get usage allocation

In: uuidKey, ~~UsageLimitsByteCount~~UsageLimitsCount='500'

```
Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000011 (Get Usage
Allocation)
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: 4fee3a59-b217-
4abf-84ad-af1547024615e696ebd0-8eba-406e-be21-d9059e29ba1d
      Tag: Usage Limits Byte Count (0x4200930x420096), Type: BigLong Integer (0x040x03), Data:
01F40x00000000000001F4 (500)
```

42007501000000A04200740100000038420067010000002042006802000000040000000100000004200690200000004000
00000000000000042000D02000000040000000100000042000F010000005842005A0500000004000000110000000042007
60100000040420091070000002434666563333613535392D623231372D346162662D383461642D61663135343730323434363
135000000004200930340000000080000000000001F4

42007801000000A04200770100000038420069010000002042006A02000000040000000100000004200 6B0200000004000
0000000000000042000D02000000040000000100000042000F010000005842005C0500000004000000110000000042007
9010000004042009407000000246536393665626430 2D386562612D343036652D626532312D64393035396532396261316
40000000042009603000000080000000000001F4

Out: ~~uuidKey~~Operation Failed, Permission Denied

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC0782B (Mon Sep
28 10:47:39 CEST 20090x000000004B98E05D (Thu Mar 11 13:21:49 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000011 (Get Usage
Allocation)
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000001 (Operation
Failed)
    Tag: Result Reason (0x42007B0x42007E), Type: Enumeration (0x05), Data: 0x0000000C (Permission
Denied)
    Tag: Result Message (0x42007A0x42007D), Type: Text String (0x07), Data: Unable to allocate
requested byte amount
```

42007801000000B84200770100000048420067010000002042006802000000040000000100000004200690200000004000
0000000000000042008F090000000800000004AC0782B42000D02000000040000000100000042000F010000006042005A05000000040000001100000000420
05A05000000040000001100000000420 7C05000000040000000100000042007B0500000004000000C000000042007A

0700000028556E61626C6520746F20616C6C6F636174652072657175657374656420627974652020616D6F756E7442007B01
000000B842007A01000000484200690100000002042006A02000000004000000010000000042006B0200000004000000000
00000042009209000000080000000044B98E05D42000D02000000040000000100000004 2000F010000006042005C050500
00040000001100000000 42007F050000000400000001000000004 2007E05000000040000000C0000000042007D07000000
23556E61626C6520746F20616C6C6F636174652072657175657374656420616D6F756E740000000000

10	Client A:

Revoke (symmetric key as cessation of operation) and Destroy (symmetric key)

In (header): batchOrderOption='TRUE'

In: uuidKey, revocationReasonCode='6'

In: uuidKey

Tag: Request Message (~~0x420075~~0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (~~0x420074~~0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (~~0x420067~~0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (~~0x420068~~0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (~~0x420069~~0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Order Option (0x420010), Type: Boolean (0x06), Data: TRUE
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: ~~0x00000001 (1~~0x00000002 (2))
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: ~~0x00000014 (Destroy~~0x00000013 (Revoke))
    Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 727A212BC674B4EA
    Tag: Request Payload (~~0x420076~~0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~4fee3a59-b217-4abf-84ad-af1547024615~~e696ebd0-8eba-406e-be21-d9059e29ba1d

42007501000000904200740100000038420067010000002042006802000000040000000100000004 2006902000000040
0000000000000000042000D0200000004000000010000000 42000F010000004842005A050000000400000014000000004200
76010000003042009107000000024346656333613539 2D623231372D346162662D383461642D616631353534373032343631
3500000000

~~Out: uuidKey~~

~~Tag: Response Message (0x420078), Type: Structure (0x01), Data:~~
  Tag: ~~Response Header (0x420077~~Revocation Reason (0x420081)), Type: Structure (0x01), Data:
    Tag: ~~Protocol Version (0x420067~~Revocation Reason Code (0x420082)), Type: ~~Structure (0x01~~Enumeration (0x05)), Data:
      ~~Tag: Protocol Version Major (0x420068), Type: Integer (0x02), Data: 0x00000001 (1)~~
      ~~Tag: Protocol Version Minor (0x420069), Type: Integer (0x02), Data: 0x00000000 (0)~~
    ~~Tag: Time Stamp (0x42008F), Type: Date Time (0x09), Data: 0x000000004AC0782C (Mon Sep 28 10:47:40 CEST 2009)~~
    ~~Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1~~0x00000006 (Cessation of Operation))
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: ~~Result Status (0x42007C~~Unique Batch Item ID (0x420093)), Type: ~~Enumeration (0x05~~Octet String (0x08)), Data: ~~0x00000000 (Success)~~1D0EBF826109B0A5
    Tag: ~~Response~~Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~4fee3a59-b217-4abf-84ad-af1547024615~~e696ebd0-8eba-406e-be21-d9059e29ba1d

42007801000000B04200770100000048420067010000002042006802000000040000000100000004 2006902000000040

000000000000042008F090000000080000000004AC0782C42000D0200000004000000010000000042000F01000000584200
5A05000000040000001400000000042007C050000000400000000000000004200790100000304200910700000024346665
63336135392D623231372D346162662D383461642D6166631353473032243631350000000042007801000001284200770100
00000484200069010000002042006A0200000004000000010000000042006B02000000040000000000000004200100060000
00000080000000000000000142000D0200000004000000020000000042000F010000070420005C05000000040000001300000000
000042009308000000008727A212BC674B4EA42007901000000484200940700000024653639366562612D386562612D34
3036652D626532312D643930353396532396261316400000000042008101000000104200820500000004000000060000000000
42000F010000005842005C050000000400000014000000000042009308000000081D0EBF826109B0A5420079010000003042
009407000000246536393665626302D386562612D343036652D626532312D6439303533965323962613164000000000

Out: uuidKey

Out: uuidKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B98E05F (Thu Mar 11
13:21:51 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000013 (Revoke)
    Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 727A212BC674B4EA
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: e696ebd0-8eba-406e-be21-
d9059e29ba1d
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 1D0EBF826109B0A5
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: e696ebd0-8eba-406e-be21-
d9059e29ba1d
```

42007B010000013042007A010000004842006901000000204200 6A0200000004000000010000000042006B020000000400
0000000000000042009209000000080000000004B98E05F42000D0200000004000000020000000042000F01000000684200
5C05000000040000001300000000042009308000000008727A212BC674B4EA42007F050000000400000000000000000042007C
010000000304200940700000024653639366562612D386562612D343036652D626532312D6439303533965323962613164
00000000042000F010000006842005C0500000004000000140000000042009308000000081D0EBF826109B0A542007F0500
00000400000000000000000042007C010000000304200940700000024653639366562612D386562612D343036652D626532
312D6439303533965323962613164 00000000

138

139

66 Key Interchange, Key Exchange

141

6.16.1 Use-case: Import of a Third-party Key

143

144	This use-case tests the import of a foreign key using the Register operation. To validate that the
145	registered key is treated the same as a locally created key, an attribute is added to the key and then
146	modified. Finally, the key is destroyed.
147	

Time	Request/Response messages
0	Register (symmetric key) In: objectType = '00000002', attributes={ CryptographicUsageMask='00000004' }, foreignSymmetricKey Tag: Request Message (~~0x420075~~0x420078), Type: Structure (0x01), Data: Tag: Request Header (~~0x420074~~0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (~~0x420067~~0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (~~0x420068~~0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (~~0x420069~~0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x00000003 (Register) Tag: Request Payload (~~0x420076~~0x420079), Type: Structure (0x01), Data: Tag: Object Type (~~0x420055~~0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key) Tag: Template-Attribute (~~0x42008E~~0x420091), Type: Structure (0x01), Data: Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage Mask Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000004 (Encrypt) Tag: Symmetric Key (~~0x42008C~~0x42008F), Type: Structure (0x01), Data: Tag: Key Block (~~0x42003E~~0x420040), Type: Structure (0x01), Data: Tag: Key Format Type (~~0x420040~~0x420042), Type: Enumeration (0x05), Data: 0x00000001 Tag: Key Value (~~0x420043~~0x420045), Type: Structure (0x01), Data: Tag: Key Material (~~0x420041~~0x420043), Type: Octet String (0x08), Data: 0123456789ABCDEF0123456789ABCDEF Tag: Cryptographic Algorithm (~~0x420026~~0x420028), Type: Enumeration (0x05), Data: 0x00000003 (AES) Tag: Cryptographic Length (~~0x420028~~0x42002A), Type: Integer (0x02), Data: 0x00000080 (128) ~~420075010000011042007401000000384200670100000020420068020000000400000010000000042006902000000040000000000000000042000D020000000400000001000000004200F01000000C842005A0500000004000000030000000042007601000000B042005505000000040000000200000000420E8E01000000384200080100000030420000A070000001843727970746F67726170686963205573616765204D61736B42000B020000000400000004000000004200C01000000584200~~ ~~3E010000050420040050000000400000001000000004200430100000018420041108000000100123456789ABCDEF0123456789ABCDEF420026050000000400000003000000004200280200000004000000800000000~~ 42007801000001104200770100000038420069010000002042006A020000000400000010000000042006B02000000040000000000000000042000D020000000400000001000000004200F01000000C842005C05000000040000000300000000420079010000000B0420057050000000400000002000000042009101000000384200080100000030420000A070000001843727970746F67726170686963205573616765204D61736B42000B020000000400000000400000004200F01000000584200040100000050420042050000000400000001000000042004501000000184200430800000010012345 6789ABCDEF0123456789ABCDEF420028050000000400000003000000004200A020000000400000080000000000 Out: uuidKey Tag: Response Message (~~0x420078~~0x42007B), Type: Structure (0x01), Data: Tag: Response Header (~~0x420077~~0x42007A), Type: Structure (0x01), Data:

~~05 November 2009~~09

```
    Tag: Protocol Version (~~0x420067~~0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (~~0x420068~~0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (~~0x420069~~0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (~~0x42008F~~0x420092), Type: Date-Time (0x09), Data: ~~0x000000004AC0782C (Mon Sep 28~~ 0x000000004AFBED32 (Thu Nov 12 12:10:~~47:40 CEST~~47 CET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x00000003 (Register)
    Tag: Result Status (~~0x42007C~~0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (~~0x420079~~0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~bb806453-5c75-42c2-80bd-4e52f1ceb57b~~6e1a5a83-8113-4260-b40d-966f231b91b7
```

~~42007801000000B042007701000000484200670100000020420068020000000400000001000000004200690200000004000000000000000000042008F090000000800000004AC0782C42000D02000000040000000100000004200F010000005842005A05000000040000000300000004200790C05000000040000000000000004200790100000030420091070000002462623830363435332D356337352D343263322D383062642D346535323663316365623537620000000042007B01000000B042007A0100000048420069010000002042006A020000000400000001000000042006B02000000040000000000000000042009209000000080000000 4AFBED3242000D020000000 40000000 1000000042000F010000005842005C05000000040000000D000000000042007F05000000040000000000000004200C010000003042009407000000243665316135613833332D383131332D343236302D623430642D393636663233316239316237000000000~~

1	Add attribute

In: uuidKey, attribute={ x-provider='unknown' }

```
Tag: Request Message (~~0x420075~~0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (~~0x420074~~0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (~~0x420067~~0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (~~0x420068~~0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (~~0x420069~~0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (~~0x42005A~~0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)
    Tag: Request Payload (~~0x420076~~0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (~~0x420091~~0x420094), Type: Text String (0x07), Data: ~~bb806453-5c75-42c2-80bd-4e52f1ceb57b~~6e1a5a83-8113-4260-b40d-966f231b91b7
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-provider
        Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: unknown
```

~~42007501000000C042007401000000384200670100000020420068020000000400000001000000042006902000000040000000000000000042000D020000000400000001000000042000F010000007842005A05000000040000000D0000000042007601000000604200910700000024626238303634353332D356337352D343263322D383062642D346535323663316365623537620000000042000801000000284200A070000000A782D70726F76696465722000000000000000042000B0700000007756E6B6E6F776E00~~

42007801000000C042007701000000384200690100000020 42006A020000000400000001000000042006B02000000040000000000000000042000D020000000400000001000000042000F010000007842005C05000000040000000D0000000042007901000000604200940700000024366531613561 83332D383131332D343236302D623430642D393636663233316239316237000000000042000801000000284200A070000000A782D70726F76696465722000000000000000042000B0700000007756E6B6E6F776E00

Out: uuidKey, attribute={ x-provider='unknown' }

```
Tag: Response Message (~~0x420078~~0x42007B), Type: Structure (0x01), Data:
```

```
          Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
            Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
              Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
              Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
            Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC0782E (Mon Sep
28  0x000000004AFBED32 (Thu Nov 12 12:10:47:42 CESTCET 2009)
            Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
          Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
            Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)
            Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
            Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
              Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: bb806453-5c75-
42c2-80bd-4e52f1ceb57b6e1a5a83-8113-4260-b40d-966f231b91b7
              Tag: Attribute (0x420008), Type: Structure (0x01), Data:
                Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-provider
                Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: unknown
```

42007801000000E04200770100000048420067010000002042006802000000040000000100000000420069020000000400
00000000000000000042008F09000000080000000004AC0782E42000D0200000004000000010000000042000F010000008842
005A0500000004000000000D0000000042007C0500000004000000000000000042007901000000604200910700000024626
2383036343533322D356337352D343263322D383062642D346535332663163656235376200000000042000801000000284200
0A070000000A782D70726F76696465724572200000000000000042000B070000000077756E6B6E6F776E0042007B01000000E042007
A010000004842006901000000204200960A02000000040000000100000000420096B0200000000400000000000000004200920
09000000080000000004AFBED3242000D0200000004000000010000000042000F010000008842005C0500000004000000000
D0000000042007F05000000040000000000000000000000420007C0100000060420094070000002436653161356138332D383131
332D343236302D623430642D3939363666323333316239316237000000004200080100000028420004070000000A782D70726
F766964657200000000000000042000B0700000007756E6B6E6F776E00

2	Modify attribute
	In: uuidKey, attribute={ x-provider='third party' }

```
Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000E (Modify
Attribute)
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: bb806453-5c75-
42c2-80bd-4e52f1ceb57b6e1a5a83-8113-4260-b40d-966f231b91b7
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-provider
        Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: third party
```

42007501000000C8420074010000003842006701000000204200680200000004000000010000000042006902000000040
00000000000000000420000D020000000400000001000000042000F010000008842005A0500000004000000000E0000000042
00760100000068420091070000002462623830363435332D356337352D343263322D383062642D34653532663163656235623
5376200000000042000801000000304200040A070000000A782D70726F766964657220000000000000042000B070000000B7468
6972642070617274790000000000

42007801000000C8420077010000003842006901000000204200960A0200000004000000010000000042006B02000000040
00000000000000000420000D0200000004000000010000000042000F010000008842005C0500000004000000000E0000000042
007901000000684200940700000024366531613536138332D383131332D343236302D623430642D3939363666323333162393
16237000000004200080100000030420004070000000A782D70726F766964657220000000000000042000B070000000B7468

697264207061727479000000000

Out: uuidKey, attribute={ x-provider='third party' }

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC0782E (Mon Sep
28 0x000000004AFBED32 (Thu Nov 12 12:10:47:42 CESTCET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x0000000E (Modify
Attribute)
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: bb806453-5c75-
42c2-80bd-4e52f1ceb57b6e1a5a83-8113-4260-b40d-966f231b91b7
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: x-provider
        Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: third party
```

42007801000000E8420077010000004842006701000000204200680200000004000000010000000042006902000000400
0000000000000000042008F090000000800000004AC0782E42000D02000000040000000100000000420000F010000009042
005A05000000040000000E000000004200C0500000004000000000000000042007901000000684200910700000002462623
28303063435332D356337352D343263322D383062642D346535326631636562235376200000000420008010000000304200
0A070000000A782D70726F766964657200000000000042000B070000000B746869726420706172747900000000000042007
B01000000E842007A010000004842006901000000204200690200000004000000010000000042006B0200000004000000
00000000000042009209000000080000004AFBED3242000D02000000040000000100000000420000F010000009042005C0
500000004000000E000000042007F05000000040000000000000042007C0100000068420094070000002436653161
356138332D383131332D343236302D623430642D393636663233316239316237000000004200080100000003042000A070
000000A782D70726F766964657200000000000042000B070000000B746869726420706172747900000000000
```
```

| 3 | Destroy (symmetric key)
In: uuidKey |

```
Tag: Request Message (0x4200750x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x4200740x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Request Payload (0x4200760x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: bb806453-5c75-
42c2-80bd-4e52f1ceb57b6e1a5a83-8113-4260-b40d-966f231b91b7
```

420075010000009042007401000000384200670100000020420068020000000400000001000000004200690200000040
0000000000000000042000D02000000040000000100000000420000F010000004842005A05000000040000001400000000042
00760100000030420091070000002462623830363435332D356337352D343263322D383062642D34653532663163656623
5376200000000

42007801000000904200770100000038420069010000002042006A020000000400000001000000004200 6B0200000040
```
```

00000000000000042000D020000000400000001000000042000F010000004842005C0500000004000000140000000042
00790100000030420094070000002436653161356138332D383131332D343236302D623430642D39363666632333162393
1623700000000

Out: uuidKey

```
Tag: Response Message (0x4200780x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x4200770x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x4200670x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x4200680x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x4200690x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x42008F0x420092), Type: Date-Time (0x09), Data: 0x000000004AC0782E (Mon Sep
28  0x000000004AFBED32 (Thu Nov 12 12:10:47:42 CESTCET 2009)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005A0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Result Status (0x42007C0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x4200790x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x4200910x420094), Type: Text String (0x07), Data: bb806453-5c75-
42c2-80bd-4e52f1eeb57b6e1a5a83-8113-4260-b40d-966f231b91b7
```

42007801000000B0420077010000004842006701000000204200680200000004000000010000000042006902000000040
00000000000000042008F09000000080000000004AC0782E42000D0200000004000000010000000042000F010000005842
005A05000000040000001400000000042007C05000000004000000000000000042007901000000304200910700000024626
2383036343533332D356337352D343263332322D383036264D34653532663163365623537620000000042007B01000000B042007
7A01000000484200690100000020420006A0200000004000000010000000042006B0200000004000000000000000042009
2090000000080000000004AFBED3242000D0200000004000000010000000042000F010000005842005C0500000004000000
140000000042007F05000000040000000000000000042007C01000000304200940700000024366531613561338332D38313
1332D343236302D623430642D39363666632333162393162370000000

148

149

150

~~7~~7 Vendor Extensions

These use-cases test the handling of unknown message extensions with vendor-specific content.

~~7.1~~7.1 Use-case: 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.

Time	Client A
0	Create (symmetric key) In: objectType='00000002', attributes={ CryptographicAlgorithm='AES', CryptographicLength='128', CryptographicUsageMask='0000000C' }, MessageExtension={ VendorIdentification='Acme', CriticalityIndicator='false', VendorExtension={ tag='0x540001', type='text string', value='na' } }

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
      Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data:
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length
          Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000080 (128)
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm
          Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (AES)
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage
Mask
          Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x0000000C (Encrypt,
Decrypt)
    Tag: Message Extension (0x420051), Type: Structure (0x01), Data:
      Tag: Criticality Indicator (0x420026), Type: Boolean (0x06), Data: FALSE
      Tag: Vendor Identification (0x42009D), Type: Text String (0x07), Data: Acme
      Tag: Vendor Extension (0x42009C), Type: Structure (0x01), Data:
        Tag: Unknown tag (0x014242), Type: Text String (0x07), Data: na
```

420078010000016042007701000000384200690100000020420006A0200000000400000010000000042006B02000000040
00000000000000042000D0200000004000000010000000042000F01000001184200C5C0500000000400000001000000042
007901000000C0420005705000000040000000200000004200910100000A8420008010000030420000A07000000144437
27970746F67726170686963204C656E677468000000000042000B02000000040000000800000004200080100000030420000
0A070000001743727970746F67726170686963204C6F726974686D0042000B050000000400000030000000004200080
10000030420000A070000001843727970746F67726170686963205573616765204D61736B42000B0200000004000000000
0C0000000042005101000000384200260600000008000000000000000042009D070000000441636D650000000042009C0
1000000100142420700000026E610000000000000

Out: objectType='00000002', uuidKey


```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73BF1C (Thu Feb 11
09:26:04 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
```

		Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 052eff73-b35e-4702-9db9-37c12f0151d3
		42007B01000000C042007A0100000048420069010000002042006A02000000040000000100000 0042006B02000000040 0000000000000004200920900000008000000004B73BF1C42000D020000000400000001000000 0042000F010000006842 005C05000000040000000100000 0042007F05000000040000000000000000042007C010000004042 0057050000000400000 00002000000004200940700000024303 532656666373332D623335652D343730322D396462392D333763313266303135 31 64330000 0000

1	Destroy (symmetric key)
	In: uuidKey
	
	Tag: Request Message (0x420078), Type: Structure (0x01), Data:
	  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
	    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
	      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
	      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
	    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
	  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
	    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
	    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
	      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 052eff73-b35e-4702-9db9-37c12f0151d3
	
	42007801000000904200770100000038420069010000002042006A02000000040000000100000 0042006B02000000040 00000000000000042000D020000000400000001000000 0042000F010000004842005C0500000004000001400000000042 00790100000030420094070000002430353265666637332D623335652D343730322D396462392D3337633131326663303135 31643300000000
	
	Out: uuidKey
	
	Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
	  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
	    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
	      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
	      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
	    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73BF1C (Thu Feb 11 09:26:04 CET 2010)
	    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
	  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
	    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
	    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
	    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
	      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 052eff73-b35e-4702-9db9-37c12f0151d3
	
	42007B01000000B042007A0100000048420069010000002042006A02000000040000000100000 0042006B02000000040 0000000000000004200920900000008000000004B73BF1C42000D020000000400000001000000 0042000F010000005842 005C05000000040000001400000000042007F050000000400000000000000000042007C010000003042009407000000243 03 53265666637332D623335652D343730322D396462392D333763313132366630313531643300000000

162 ~~7.~~27.2 Use-case: Unrecognized Message Extension with Criticality
163 Indicator true

164 A create request is issued and the request contains a Message Extension with the Criticality Indicator set
165 to true. The server does not understand the extension, and since it is critical, the create request fails and
166 an error is returned.
167

Time	Client A
0	Create (symmetric key) In: objectType='00000002', attributes={ CryptographicAlgorithm='AES', CryptographicLength='128', CryptographicUsageMask='0000000C' }, MessageExtension={ VendorIdentification='Acme', CriticalityIndicator='true', VendorExtension={ tag='0x540001', type='text string', value='na' } } Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key) Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data: Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000080 (128) Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (AES) Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage Mask Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x0000000C (Encrypt, Decrypt) Tag: Message Extension (0x420051), Type: Structure (0x01), Data: Tag: Criticality Indicator (0x420026), Type: Boolean (0x06), Data: TRUE Tag: Vendor Identification (0x42009D), Type: Text String (0x07), Data: Acme Tag: Vendor Extension (0x42009C), Type: Structure (0x01), Data: Tag: Unknown tag (0x014242), Type: Text String (0x07), Data: na 420078010000016042007701000000384200690100000020420 06A0200000004000000010000000042006B02000000040 00000000000000042000D020000000400000001000000 0042000F010000011842005C0500000004000000010000 0000420079010000000A8420057010000003042000A0700 000001443727970746F67726170686963204C656E6774 6800000042000B0200000004000000080100000030420 0000A0700000017437279707467726170686963204166 726974686D0042000B0500000004000000030000000042 0008010000003042000A07000000184372797074672617 06868696320557361676520D61736B42000B02000000040 000000C0000000042005101000000384200260600000000 08000000000000000142009D0700000004416D6500000000 42009C0100000010014242070000000026E6100000000000

Out: Operation Failed, Feature Not Supported

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73BF1D (Thu Feb 11 09:26:05 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000001 (Operation Failed)
    Tag: Result Reason (0x42007E), Type: Enumeration (0x05), Data: 0x00000008 (Feature Not Supported)
    Tag: Result Message (0x42007D), Type: Text String (0x07), Data: Critical Message Extension not recognized

42007B01000000C042007A01000000484200690100000020420060A020000000400000001000000042006B02000000040
00000000000000420092090000000800000004B73BF1D42000D02000000040000000100000042000F010000006842
005C0500000004000000010000000042007F05000000040000000100000042007E0500000004000000080000000420
07D070000002943726974696363616C204D6573736167652045787465656573696F6E206E6F74207265636F676E697A65640
0000000000000

168

169

170

88 Asymmetric keys

Creation of keys using "Create Key Pair" operation, locating pair using Link attribute.

8.18.1 Use-case: 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.

Time	Client A

0	Create Key Pair
	In: commonAttributes={ CryptographicAlgorithm='RSA', CryptographicLength='1024', CryptographicUsageMask='0000000C' }, privateKeyAttributes={ Name={ NameValue='PrivateKey1', NameType='00000001' }}, CryptographicUsageMask='00000001' }, publicKeyAttributes={ NameValue='PublicKey1', NameType='00000001' }}, CryptographicUsageMask='00000002' }
	
	Tag: Request Message (0x420078), Type: Structure (0x01), Data:
	  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
	    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
	      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
	      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

```
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000002 (Create Key Pair)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Common Template-Attribute (0x42001F), Type: Structure (0x01), Data:
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm
          Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000004 (RSA)
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length
          Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000400 (1024)
      Tag: Private Key Template-Attribute (0x420065), Type: Structure (0x01), Data:
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
          Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
            Tag: Name Value (0x420055), Type: Text String (0x07), Data: PrivateKey1
            Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted
text string)
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage
Mask
          Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000001 (Sign)
      Tag: Public Key Template-Attribute (0x42006E), Type: Structure (0x01), Data:
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
          Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
            Tag: Name Value (0x420055), Type: Text String (0x07), Data: PublicKey1
            Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted
text string)
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage
Mask
          Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000002 (Verify)
```

```
42007801000001E8420077010000003842006901000000020420006A020000000400000001000000042006B02000000040
00000000000000042000D020000000400000001000000042000F01000001A042005C050000000400000002000000004200
79010000018842001F0100000070420008010000003042000A070000001743727970746F6772617068696320416C676F726
974686D0042000B05000000040000000400000000420008010000003042000A070000001443727970746F67726170686963
204C656E67746800000000042000B02000000040000004000000000042006501000000804200080100000040420000
A07000000044E616D65000000042000B010000028420055070000000B507269766174654B6579310000000000042000540
50000000400000001000000042000801000000304200 0A0700000018437279 70746F6772617068696320555361676
04D61736B42000B02000000040000001000000042006E0100000080420008010000004042000A07000000044E616D6
5000000042000B010000028420055070000000A5075626C69634B6579310000000000000042005405000000040000000010
00000042000801000000304200 0A0700000018437279 70746F6772617068696320555361676 5204D61736B42000B0200
00004000000020000000000
```

Out: uuidPrivateKey, uuidPublicKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
```

		Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C13A (Thu Feb 11 09:35:06 CET 2010)
		Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
		Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
		Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000002 (Create Key Pair)
		Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
		Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
		Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 895f72c2-b20a-49d8-9504-6dc2115cc042
		Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: a242fca4-ebf0-4398-ac65-879bab490259
		42007B01000000E042007A010000004842006901000000204200 6A0200000004000000010000000042006B0200000004 00000000000000004200920900000008000000004B73C13A42000D02000000040000000100000000 42000F010000008842 005C050000000400000020000000420007F05000000040000000000000000042007C010000006042009407000000243 8393566373263322D623230612D343964382D393530342D36646332313135636330343200000000420094070000002461 3234326663613442D656266302D343339382D616336352D38373962616234393032353900000000
1		Locate (Public Key)

In: attributes={ objectType='PublicKey', Link={ LinkType='PrivateKeyLink', LinkedObjectIdentifier=uuidPrivateKey } }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type
        Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (Public Key)
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Link
        Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
          Tag: Link Type (0x42004B), Type: Enumeration (0x05), Data: 0x00000103 (Private Key Link)
          Tag: Linked Object Identifier (0x42004C), Type: Text String (0x07), Data: a242fca4-ebf0-4398-ac65-879bab490259

42007801000000F0420077010000003842006901000000204200 6A020000000400000001000000004 2006B02000000040 0000000000000004 2000D0200000004000000010000000042000F010000000A842005C05000000004000000080000000042 007901000000904200080100000028 42000A070000000B4F626A6563742054797065000000000042000B0500000004000 00000300000004 20080100000058 42000A07000000044C696E6B0000000042000B010000004042004B050000000400000 0103000000004 2004C0700000024613234326663613442D656266302D343339382D616336352D383739626162343930323 53900000000

Out: uuidPublicKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data: |

| | ```
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
        Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
        Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C13B (Thu Feb 11 09:35:07 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
        Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 895f72c2-b20a-49d8-9504-6dc2115cc042
``` |
| | 42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B020000000400000000000000004200920900000008000000004B73C13B42000D0200000004000000010000000042000F010000005842005C0500000004000000080000000042007F0500000004000000000000000042007C010000003042009407000000243839393566373263322D623230612D343964382D393530342D366463323131356363303432000000 00 |
| 2 | Locate (Private Key)

In: attributes={ objectType='PrivateKey', Link={ LinkType='PublicKeyLink', LinkedObjectIdentifier=uuidPublicKey } }

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type
        Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000004 (Private Key)
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Link
        Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
          Tag: Link Type (0x42004B), Type: Enumeration (0x05), Data: 0x00000102 (Public Key Link)
          Tag: Linked Object Identifier (0x42004C), Type: Text String (0x07), Data: 895f72c2-b20a-49d8-9504-6dc2115cc042
```

42007801000000F04200770100000038420069010000002042006A0200000004000000010000000042006B0200000004000000000000000042000D0200000004000000010000000042000F01000000A842005C050000000400000008000000004200790100000090420008010000002842000A070000000B4F626A65637420547970650000000042000B05000000040000000400000000420008010000005842000A07000000044C696E6B0000000042000B010000004042004B0500000004000001020000000042004C070000002438393566373263322D623230612D343964382D393530342D366463332313135636330343200000000

Out: uuidPrivateKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
``` |

```
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
        Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
        Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C13B (Thu Feb 11
09:35:07 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
        Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: a242fca4-ebf0-4398-ac65-
879bab490259
```

42007B01000000B042007A01000000484200690100000020420 06A02000000040000000100000000420006B0200000004000000000000000004200920900000008000000004B73C13B42000D020000000400000001000000 0042000F010000005842005C0500000004000000080000000042007F0500000004000000000000000042007C010000003042009407000000246 1323432666361342D656266302D343339382D616336352D38373962616234393032353900000000

3	Destroy

In: uuidPrivateKey

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
        Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
        Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
        Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: a242fca4-ebf0-4398-ac65-
879bab490259
```

42007801000000904200770100000038420069010000002042006A020000000400000001000000004200 6B020000000400000000000000004200 0D020000000400000001000000004200 0F010000004842005C050000000400000014000000004 2007901000000304200940700000024 61323432666361342D656266302D343339382D616336352D38373962616234393 0323539000000

Out: uuidPrivateKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
        Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
        Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C13B (Thu Feb 11
09:35:07 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
```

```
            Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: a242fca4-ebf0-4398-ac65-
879bab490259


42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
0000000000000004200920900000008000000004B73C13B42000D0200000004000000010000000042000F010000005842
005C050000000400000014000000042007F050000000400000000000000042007C01000000304200940700000024613
23432666361342D656266302D343339382D616336352D3837396261623439303235390000000
```

4	Destroy
	In: uuidPublicKey

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 895f72c2-b20a-49d8-9504-
6dc2115cc042
```

```
42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B02000000040
00000000000000042000D0200000004000000010000000042000F010000004842005C05000000040000001400000000042
0079010000003042009407000000243839356637326332D623230612D343964382D393530342D366463323131356363633
0343200000000
```

Out: uuidPublicKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C13B (Thu Feb 11
09:35:07 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 895f72c2-b20a-49d8-9504-
6dc2115cc042
```

```
42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
0000000000000004200920900000008000000004B73C13B42000D0200000004000000010000000042000F010000005842
005C050000000400000014000000042007F050000000400000000000000042007C01000000304200940700000024383
93566373263322D623230612D343964382D393530342D366463323131356363330343200000000
```

178

179 ~~8.2~~8.2 Use-case: Register Both Halves of a Key Pair

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

182

Time	Client A
0	Register (Private Key) In: objectType='00000004', attributes={ CryptographicUsageMask='~~0000000C~~00000001' }, foreignPrivateKey Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000003 (Register) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000004 (Private Key) Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data: Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage Mask Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000001 (Sign) Tag: Private Key (0x420064), Type: Structure (0x01), Data: Tag: Key Block (0x420040), Type: Structure (0x01), Data: Tag: Key Format Type (0x420042), Type: Enumeration (0x05), Data: 0x00000004 Tag: Key Value (0x420045), Type: Structure (0x01), Data: Tag: Key Material (0x420043), Type: Octet String (0x08), Data: 30820276020100300D06092A864886F70D0101010500048202603082025C020100028181009 30451C9ECD94F5BB9DA17D D09381BD23BE43ECA8C7539F301FC8A8CD5D5274C3E7699DBDC711C97A7AA91E2C50A82BD0B1034F0DF493DEC16362427 E58ACCE7F6CE0F9BCC617BBD8C90D0094A2703BA0D09EB19D1005F2FB265526AAC75AF32F8BC782CDED2A57F811E03EAF 67A944DE5E78413DCA8F232D074E6DCEA4CEC9F02030100010281800B6A7D736199EA48A420E4537CA0C7C046784DCBEA A63BAEBC0BC132787449CDE8D7CAD0C0C863C0FEFB06C3062BEFC50033ECF87B4E33A9BE7BCBC8F1511AE215E80DEB5D8 AF2BD31319D7821196640935A0CD67C94599579F2100D65E038831FDAFB0DBE2BBDAC00A696E67E756350E1C99ACE11A3 6DABAC3ED3E730960059024100DDF672FBCC5BDA3D73AFFC4E791E0C03390224405D69CCAABC749FAA0DCD4C2583C71DD E8941A7B9AA030F52EF1451466C074D4D338FE677892ACD9E10FD35BD024100A98FBC3ED6B4C6F860F97165AC2F7BB6F2 E2CB192A9ABD49795BE5BCF37D8EE69A6E169C24E5C32E4E7FA33265461407F952BA49E204818A2F785F113F922B8B024 0253F9470390D39049303777DDBC9750E9D64849CE0903EAE704DC9F589B7680DEB9D609FD5BCD4DECD6F120542E5CFF5 D76F2A43C8615FB5B3A9213463797AA9024100A1DDF023C0CD94C019BB26D09B9E3CA8FA971CB16AA58B9BAF79D6081A1 DBBA452BA53653E2804BA98FF69E8BB1B3A161EA225EA501463216A8DAB9B88A75E5F02406178646E112CF79D921A8A84 3F17F6E7FF974F688122365BF6690CDFC996E1890952EB3820DD1890EC1C8619E87A2BD38F9D03B37FAC742EFB748C788 5942C39 Tag: Cryptographic Algorithm (0x420028), Type: Enumeration (0x05), Data: 0x00000004 (RSA) Tag: Cryptographic Length (0x42002A), Type: Integer (0x02), Data: 0x00000400 (1024) 42007801000003804200770100000038420069010000002042006A0200000004000000010000000042006B02000000040 00000000000000042000D0200000004000000010000000042000F010000033842005C0500000004000000030000000042 007901000003204200570500000004000000040000000042009101000000384200080100000030420000A0700000001843 7 27970746F672617068696320557361676520D61736B42000B0200000004000000010000000142006401000000200000002C84200 4001000002C04200420500000004000000040000000420045010000028842004308000000027A30820276020100300D060 92A864886F70D0101010500048202603082025C020100028181009 30451C9ECD94F5BB9DA17DD09381BD23BE43ECA8C75 39F301FC8A8CD5D5274C3E7699DBDC711C97A7AA91E2C50A82BD0B1034F0DF493DEC16362427E58ACCE7F6CE0F9BCC617

BBD8C90D0094A2703BA0D09EB19D1005F2FB265526AAC75AF32F8BC782CDED2A57F811E03EAF67A944DE5E78413DCA8F2
32D074E6DCEA4CEC9F02030100010281800B6A7D736199EA48A420E4537CA0C7C046784DCBEAA63BAEBC0BC132787449C
DE8D7CAD0C0C863C0FEFB06C3062BEFC50033ECF87B4E33A9BE7BCBC8F1511AE215E80DEB5D8AF2BD31319D7821196640
935A0CD67C94599579F2100D65E038831FDAFB0DBE2BBDAC00A696E67E756350E1C99ACE11A36DABAC3ED3E7309600590
24100DDF672FBCC5BDA3D73AFFC4E791E0C03390224405D69CCAABC749FAA0DCD4C2583C71DDE8941A7B9AA030F52EF14
51466C074D4D338FE677892ACD9E10FD35BD024100A98FBC3ED6B4C6F860F97165AC2F7BB6F2E2CB192A9ABD49795BE5B
CF37D8EE69A6E169C24E5C32E4E7FA33265461407F952BA49E204818A2F785F113F922B8B0240253F9470390D39049303
777DDBC9750E9D64849CE0903EAE704DC9F589B7680DEB9D609FD5BCD4DECD6F120542E5CFF5D76F2A43C8615FB5B3A92
13463797AA9024100A1DDF023C0CD94C019BB26D09B9E3CA8FA971C8F16AA58B9BAF79D6081A1DBBA452BA53653E2804BA
98FF69E8BB1B3A161EA225EA501463216A8DAB9B88A75E5F02406178646E112CF79D921A8A843F17F6E7FF974F6881223
65BF6690CDFC996E1890952EB3820DD1890EC1C8619E87A2BD38F9D03B37FAC742EFB748C7885942C3900000000000042
0028050000000400000004000000042002A020000000400000400000000000

Out: uuidPrivateKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C4A1 (Thu Feb 11 09:49:37 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000003 (Register)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fa06068c-6fb1-42ea-b6a2-d66d27b11943

42007B01000000B042007A01000000484200690100000020 42006A02000000040000000100000000 42006B0200000004 0
000000000000000420092090000000800000000004B73C4A14200 00D02000000040000000100000000 42000F010000005842
005C05000000040000000300000000 42007F05000000040000000000000000 42007C01000000304200940700000024666
13036303638632D366662312D343265612D623661322D64363664323762313139343300000000

1 Register (Public Key)

In: objectType='00000004', attributes={ CryptographicUsageMask=~~'0000000C'~~'00000002', Link={ LinkType='PrivateKeyLink', LinkedObjectIdentifier=uuidPrivateKey } }, foreignPublicKey

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000003 (Register)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000003 (Public Key)
      Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data:
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage Mask
          Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000002 (Verify)

```
           Tag: Attribute (0x420008), Type: Structure (0x01), Data:
               Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Link
                 Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
                   Tag: Link Type (0x42004B), Type: Enumeration (0x05), Data: 0x00000103 (Private Key
Link)
                   Tag: Linked Object Identifier (0x42004C), Type: Text String (0x07), Data: fa06068c-
6fb1-42ea-b6a2-d66d27b11943
         Tag: Public Key (0x42006D), Type: Structure (0x01), Data:
           Tag: Key Block (0x420040), Type: Structure (0x01), Data:
             Tag: Key Format Type (0x420042), Type: Enumeration (0x05), Data: 0x00000005
             Tag: Key Value (0x420045), Type: Structure (0x01), Data:
               Tag: Key Material (0x420043), Type: Octet String (0x08), Data:
30819F300D06092A864886F70D010101050003818D003081890281810093 0451C9ECD94F5BB9DA17DD09381BD23BE43EC
A8C7539F301FC8A8CD5D5274C3E7699DBDC711C97A7AA91E2C50A82BD0B1034F0DF493DEC16362427E58ACCE7F6CE0F9B
CC617BBD8C90D0094A2703BA0D09EB19D1005F2FB265526AAC75AF32F8BC782CDED2A57F811E03EAF67A944DE5E78413D
CA8F232D074E6DCEA4CEC9F0203010001
             Tag: Cryptographic Algorithm (0x420028), Type: Enumeration (0x05), Data: 0x00000004
(RSA)
             Tag: Cryptographic Length (0x42002A), Type: Integer (0x02), Data: 0x00000400 (1024)
```

```
420078010000020842007701000000384200690100000020420 06A020000000400000001000000042006B0200000004 0
00000000000000004 2000D0200000004000000010000000042000F01000001C042005C05000000040000000300000000 42
007901000001A842005705000000000000030000000042009101 00000098420008010000003042000A0700000001843 7
27970746F6772617 06869632055736167652044617368 42000B0200000002000000002000000042 00080100000058 4200
0A07000000044C696E6B000000042000B0100000 04042004B05000000040000010300000 00042004C070000002466613 6
036630363862 2D366662312D 343265612D62366132 2D64363664323762313139343300000000 42006D01000000F042004 0
01000000E84 200420500000004 0000000500000000420045010000000B042004308000000A230819F300D0 6092A86488 6F
70D010101050003818D003081890281810093 0451C9ECD94F5BB9DA17DD 09381BD23BE43 ECA8C7539F301FC8A8CD5D527 4
C3E7699 DBDC711C97A7A A91E2C50A82BD 0B1034F0DF493DEC163 62427E58ACCE7F 6CE0F9BCC617BBD8C90D00 94A2703 B
A0D09EB19 D1005F2FB265526AAC75AF32F8BC78 2CDED2A57F811E03EAF67A944 DE5E78413DCA8F232D074E6DCEA4CEC9 F
0203010001000000000004200 280500000004000000040000 0000420 02A0200000004000040 0000000000
```

Out: uuidPublicKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C4A2 (Thu Feb 11
09:49:38 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000003 (Register)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 79cbf228-16df-4fb1-a385-
443546935e74
```

```
42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004 0
000000000000000042009209000000080000000 4B73C4A242000D020000000400000001000000004 2000F010000005842
005C0500000004000000030000000042007F050000000400000000000000004 2007C010000003042009407000000243 73
96362663232382D313664662D346662312D613338352D3434333534363933356537340000000 0
```

2	Add attribute
	In: uuidPrivateKey, attribute={ Link={ LinkType='PublicKeyLink', LinkedObjectIdentifier=uuidPublicKey } }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:

 Tag: Request Header (0x420077), Type: Structure (0x01), Data:

   Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

    Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

    Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

   Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

   Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)

   Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

    Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fa06068c-6fb1-42ea-b6a2-d66d27b11943

    Tag: Attribute (0x420008), Type: Structure (0x01), Data:

     Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Link

     Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:

      Tag: Link Type (0x42004B), Type: Enumeration (0x05), Data: 0x00000102 (Public Key Link)

      Tag: Linked Object Identifier (0x42004C), Type: Text String (0x07), Data: 79cbf228-16df-4fb1-a385-443546935e74

42007801000000F04200770100000038420069010000002042006A02000000040000000100000000420006B02000000040000000000000000420000D02000000040000000100000000420000F01000000A842005C05000000040000000D00000000420079010000009042009407000000246661303630363863322D36666231322D343265612D623661322D6436366432376231313934333000000000420008010000005842000A0700000000044C696E6B0000000042000B01000000404200044B05000000040000010200000000420044C070000002437396362663232382D313664662D346662312D613338352D34343335343639333565373400000000

Out: uuidPrivateKey, attribute={ Link={ LinkType='PublicKeyLink', LinkedObjectIdentifier=uuidPublicKey } }

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C4A2 (Thu Feb 11 09:49:38 CET 2010)

    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)

    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fa06068c-6fb1-42ea-b6a2-d66d27b11943

      Tag: Attribute (0x420008), Type: Structure (0x01), Data:

        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Link

        Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:

          Tag: Link Type (0x42004B), Type: Enumeration (0x05), Data: 0x00000102 (Public Key Link)

           Tag: Linked Object Identifier (0x42004C), Type: Text String (0x07), Data: 79cbf228-
16df-4fb1-a385-443546935e74

42007B010000011042007A0100000048420069010000002042006A020000000400000001000000042006B02000000040
00000000000000004200920900000008000000004B73C4A242000D0200000004000000010000000042000F01000000B842
005C05000000040000000D0000000042007F0500000004000000000000000042007C01000000904200940700000024666
13036303638632D343265612D623661322D6436366432376231313943330000000042000801000000584200
0A070000000044C696E6B0000000042000B010000004042004B0500000004000001020000000042004C070000002437396
362663232382D313664662D346662312D61333852D3434333534363933356573400000000

3 Locate (Public Key)

In: attributes={ objectType='PublicKey', Link={ LinkType='PrivateKeyLink',
LinkedObjectIdentifier=uuidPrivateKey } }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type
        Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (Public Key)
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Link
        Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
          Tag: Link Type (0x42004B), Type: Enumeration (0x05), Data: 0x00000103 (Private Key
Link)
          Tag: Linked Object Identifier (0x42004C), Type: Text String (0x07), Data: fa06068c-
6fb1-42ea-b6a2-d66d27b11943

42007801000000F04200770100000038420069010000002042006A020000000400000001000000042006B02000000040
0000000000000000042000D020000000400000001000000042000F01000000A842005C0500000004000000080000000042
00790100000090420008010000002842000A070000000B4F626A6563742054797065000000000042000B0500000004000
0000300000000420008010000005842000A07000000044C696E6B0000000042000B010000004042004B05000000040000
010300000000042004C0700000024666130363038632D366662312D343265612D623661322D643636643237623131393
43300000000

Out: uuidPublicKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C4A2 (Thu Feb 11
09:49:38 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)

```
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 79cbf228-16df-4fb1-a385-
443546935e74
```

```
42007B01000000B042007A010000004842006901000000020420 06A0200000004000000010000000042006B02000000040
0000000000000000042009209000000080000000 04B73C4A242000D020000000400000001000000042000F010000005842
005C05000000040000000800000000 42007F050000000400000000000000042007C010000003042009407000000 0243 73
96362663232382D313664662D346662312D613338 35 2D34343335343639333565373400000000
```

4	Locate (Private Key)

In: attributes={ objectType='PrivateKey', Link={ LinkType='PublicKeyLink',
LinkedObjectIdentifier=uuidPublicKey } }

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type
        Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000004 (Private Key)
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Link
        Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
          Tag: Link Type (0x42004B), Type: Enumeration (0x05), Data: 0x00000102 (Public Key Link)
          Tag: Linked Object Identifier (0x42004C), Type: Text String (0x07), Data: 79cbf228-
16df-4fb1-a385-443546935e74
```

```
42007801000000F0420077010000003842006901000000020420 06A0200000004000000010000000042006B02000000040
0000000000000000042000D0200000004000000010000000042000F01000000A842005C0500000004000000080000000042
007901000000904200080100000028420 00A070000000B4F626A656374205479706500000000042000B0500000004000
00004000000004200080100000058420 00A07000000044C696E6B0000000042000B0100000040420 04B0500000004 0000
010200000000042004C07000000243739636626632323 82D313664662D346662312D613338 352D34343335343639333 565 3
7340000000 0
```

Out: uuidPrivateKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C4A3 (Thu Feb 11
09:49:39 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
```

```
     Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
      Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
       Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fa06068c-6fb1-42ea-b6a2-
d66d27b11943
```

```
42007B01000000B042007A010000004842006901000000204200 6A0200000004000000010000000042006B02000000040
00000000000000042009209000000080000 0004B73C4A342000D0200000004000000010000000042000F010000005842
005C0500000004000000080000000042007F050000000400000000000000 0042007C010000003042009407000000246661
3036303638632D366662312D343265612D623661322D6436633664323 76231313934333300000000
```

5	Destroy
	In: uuidPrivateKey

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fa06068c-6fb1-42ea-b6a2-
d66d27b11943
```

```
42007801000000904200770100000038420069010000002042006A02000000040000000100000000 42006B02000000040
0000000000000 0042000D02000000040000000100000000 42000F010000004842005C05000000040000001400000000 0042
007901000000304200940700000024666 13036303638632D366662312D343265612D623661322D6436633664323 76231313
93433 00000000
```

Out: uuidPrivateKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C4A3 (Thu Feb 11
09:49:39 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fa06068c-6fb1-42ea-b6a2-
d66d27b11943
```

```
42007B01000000B042007A010000004842006901000000204200 6A0200000004000000010000000042006B02000000040
00000000000000042009209000000080000 0004B73C4A342000D0200000004000000010000000042000F010000005842
005C050000000400000014000000004 2007F050000000400000000000000 0042007C010000003042009407000000246661
3036303638632D366662312D343265612D623661322D6436633664323 76231313934333300000000
```

6	Destroy

In: uuidPublicKey

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 79cbf228-16df-4fb1-a385-443546935e74
```

```
42007801000000904200770100000038420069010000002042006A020000000400000001000000042006B02000000040
000000000000000042000D020000000400000001000000042000F010000004842005C05000000040000001400000000042
0079010000003042009407000000243739636266323232382D313664662D346662312D613338352D3434333534363933335
65373400000000
```

Out: uuidPublicKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C4A3 (Thu Feb 11 09:49:39 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 79cbf228-16df-4fb1-a385-443546935e74
```

```
42007B01000000B042007A0100000048420069010000002042006A020000000400000001000000042006B02000000040
0000000000000000420092090000000800000004B73C4A342000D020000000400000001000000042000F010000005842
005C0500000004000000140000000042007F050000000400000000000000042007C01000000304200940700000024373
9636266323232382D313664662D346662312D613338352D34343335343639333356573400000000
```

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99 Key Roll-over

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These use-cases test manual key roll-over using the "Re-key" operation. In particular, they test the
formatting of the Re-key command, the handling and server-side processing of the various Time
attributes and the setting of some other attributes that are not automatically copied from the existing key
to the new key.

9.19.1 Use-case: 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.

Time	Client A
0	Create (symmetric key) In: objectType='00000002', attributes={ CryptographicAlgorithm='AES', CryptographicLength='128', CryptographicUsageMask='0000000C', Name={ NameValue='rekeyKey', NameType='00000001' } } Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key) Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data: Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (AES) Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000080 (128) Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage Mask Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x0000000C (Encrypt, Decrypt) Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data: Tag: Name Value (0x420055), Type: Text String (0x07), Data: rekeyKey Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string) `42007801000001604200770100000038420069010000002042006A02000000040000000100000004 2006B02000000040` `00000000000000042000D020000000400000001000000042000F010000011842005C0500000004000 00001000000042` `0079010000010042005705000000040000000200000004200910100000E8420008010000003042000A070000001743737` `2797070746F677261706869632041`... `0C00000000042000801000000384200 0A07000000044E616D650000000042000B010000002042005507000000087265 6B65794B6579420054050000000400000001000000`
  Out: objectType='00000002', uuidKey

	Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
	  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
	    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
	      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
	      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
	    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C8BA (Thu Feb 11 10:07:06 CET 2010)
	    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
	  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
	    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
	    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
	    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
	      Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
	      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fb560735-ef6f-4085-9e0a-eb6f1394c218
	
	42007B01000000C042007A010000004842006901000000204200 6A0200000004000000010000000042006B0200000004000000000000000042009209000000080000000 04B73C8BA42000D0200000004000000010000000042000F01000000684 2005C050000000400000001000000042007F0500000004000000000000000042007C010000004040 0000020000000042009407000000246663536303733352D656663662D343038352D396530613D65623666313339346332 313800000000

1	Locate
	In: attributes={ Name={ NameValue='rekeyKey', NameType='00000001' } }
	
	Tag: Request Message (0x420078), Type: Structure (0x01), Data:
	  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
	    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
	      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
	      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
	    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
	  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
	    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
	    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
	      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
	        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
	        Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
	          Tag: Name Value (0x420055), Type: Text String (0x07), Data: rekeyKey
	          Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)
	
	42007801000000A04200770100000038420069010000002042006A020000000400000001000000042006B02000000040 0000000000000042000D0200000004000000010000000042000F01000000584 2005C050000000400000008000000042 0079010000004042000801000000384 2000A07000000044E616D650000000042000B0100000020420055070000000872 6 56B6579 4B6579420054050000000400000001000000000
	
	Out: uuidKey
	
	Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
	  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
	    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
	      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

	Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
	    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C8BA (Thu Feb 11 10:07:06 CET 2010)
	    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
	  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
	    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
	    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
	    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
	      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fb560735-ef6f-4085-9e0a-eb6f1394c218
	
	42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B020000000400000000000000004200920900000008000000004B73C8BA42000D0200000004000000010000000042000F01000000584200 5C0500000004000000080000000042007F0500000004000000000000000042007C010000003042009407000000246662 53536303733352D656636662D343038352D396530612D656236663133393463323138000000 00

2	Rekey
	In: uuidKey
	
	Tag: Request Message (0x420078), Type: Structure (0x01), Data:
	  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
	    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
	      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
	      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
	    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
	  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
	    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000004 (Re-key)
	    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
	      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fb560735-ef6f-4085-9e0a-eb6f1394c218
	
	42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B020000000400 0000000000000042000D0200000004000000010000000042000F010000004842005C05000000040000000400000000042 0079010000003042009407000000246662353630373335 2D656636662D343038352D396530612D656236663133393463 3233313800000000
	
	Out: uuidNewKey
	
	Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
	  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
	    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
	      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
	      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
	    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C8BB (Thu Feb 11 10:07:07 CET 2010)
	    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
	  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
	    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000004 (Re-key)
	    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
	    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
	      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: bf6cc1d4-f914-4099-b4d4-453050d8bcf4

	42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040 0000000000000000042009209000000080000000004B73C8BB42000D02000000040000000100000000042000F010000005842 005C050000000400000004000000042007F05000000004000000000000000042007C01000000304200940700000024626 3663633164342D663931342D343039392D623464342D3435333035303064386263663400000000

3	**Locate**
	
	In: attributes={ Name={ NameValue='rekeyKey', NameType='00000001' } }
	
	Tag: Request Message (0x420078), Type: Structure (0x01), Data:
	  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
	    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
	      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
	      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
	    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
	  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
	    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
	    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
	      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
	        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
	        Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
	          Tag: Name Value (0x420055), Type: Text String (0x07), Data: rekeyKey
	          Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)
	
	42007801000000A042007701000000384200690100000020420066A0200000004000000010000000042006B02000000040
	0000000000000000042000D020000000400000001000000000042000F010000005842005C05000000040000000800000000042
	0079010000004042000801000000384200000A07000000044E616D650000000042000B010000002042005507000000087265
	6B65794B6579420054050000000400000001000000000
	
	Out: uuidNewKey
	
	Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
	  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
	    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
	      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
	      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
	    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C8BB (Thu Feb 11 10:07:07 CET 2010)
	    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
	  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
	    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
	    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
	    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
	      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: bf6cc1d4-f914-4099-b4d4-453050d8bcf4
	
	42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
	0000000000000000042009209000000080000000004B73C8BB42000D02000000040000000100000000042000F010000005842
	005C050000000400000008000000042007F05000000004000000000000000042007C01000000304200940700000024626
	3663633164342D663931342D343039392D623464342D3435333035303064386263663400000000

4	**Get Attribute**

In: uuidKey, attributeName={'Name'}

~~Out: Operation Failed, Item Not Found~~

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fb560735-ef6f-4085-9e0a-eb6f1394c218
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name

42007801000000A042007701000000384200690100000020420 06A0200000004000000010000000042006B0200000004
0000000000000000042000D02000000040000000100000000 42000F010000005842005C05000000040000000B0000000042
007901000000404200940700000024666235363037333352D6 56636662D343038352D396530612D656236663133393463 63
231380000000042000A07000000044E616D6500000000

Out: uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C8BB (Thu Feb 11 10:07:07 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fb560735-ef6f-4085-9e0a-eb6f1394c218

42007B01000000B042007A01000000484200690100000020420 06A0200000004000000010000000042006B0200000004 00
0000000000000000042009209000000080000000004B73C8BB4 2000D02000000040000000100000000 42000F0100000058 42
005C05000000040000000B0000000042007F0500000004000000 00000000000042007C0100000030420094070000002466 6
235363037333352D656636662D343038352D396530612D65623 6663133393463332313800000000

---

5 | Get (symmetric key)
In: uuidKey

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

```
   Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
      Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
         Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fb560735-ef6f-4085-9e0a-
eb6f1394c218
```

```
4200780100000090420077010000003842006901000000204200 6A020000000400000001000000 0042006B0200000040
0000000000000000 42000D0200000004000000010000000042000F010000004842005C05000000040000000A0000000042
0079010000003042009407000000246 66235363037333352D656636662D343038352D396530612D656 2366631333934633
2313800000000
```

Out: objectType = '00000002', uuidKey, symmetricKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
       Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
       Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C8BB (Thu Feb 11
10:07:07 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
       Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
       Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fb560735-ef6f-4085-9e0a-
eb6f1394c218
       Tag: Symmetric Key (0x42008F), Type: Structure (0x01), Data:
          Tag: Key Block (0x420040), Type: Structure (0x01), Data:
             Tag: Key Format Type (0x420042), Type: Enumeration (0x05), Data: 0x00000001
             Tag: Key Value (0x420045), Type: Structure (0x01), Data:
                Tag: Key Material (0x420043), Type: Octet String (0x08), Data:
BC25617991C49D06536008D076017462
             Tag: Cryptographic Algorithm (0x420028), Type: Enumeration (0x05), Data: 0x00000003
(AES)
             Tag: Cryptographic Length (0x42002A), Type: Integer (0x02), Data: 0x00000080 (128)
```

```
42007B0100000120 42007A0100000048 42006901000000204200 6A0200000004000000010000000042006B0200000040
0000000000000000 42009209000000080000000 4B73C8BB 42000D0200000004000000010000000042000F0100 0000C842
005C05000000040000000A000000004 2007F05000000040000000000000000 42007C01000000A0420057050000000400 00
0000020000000042009407000000246662353630373335 2D656636662D343038352D396530612D6562 3666313339346332
313800000000042008F010000005842004001000000504 2004205000000040000000100000000 42004501000000184200
4308000000010BC25617991C49D06536008D076017462 4200280500000004000000030000000042002A0200000004000000
80 00000000
```

<table>

6	Destroy In: uuidKey

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
       Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
```

     Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
      Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
   Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
      Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
        Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fb560735-ef6f-4085-9e0a-eb6f1394c218

420078010000009042007701000000384200690100000020042006A020000000400000001000000042006B02000000040
000000000000000042000D0200000004000000010000000042000F01000000484200C5C0500000004000000140000000042
00790100000030420094070000002466623536303733352D656636662D343038352D396530612D6562366631333934633
2313800000000

Out: uuidKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C8BC (Thu Feb 11 10:07:08 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fb560735-ef6f-4085-9e0a-eb6f1394c218

42007B01000000B042007A0100000048420069010000002004200069010000002042006A020000000400000010000000042006B02000000040
00000000000000042009209000000080000000004B73C8BC42000D0200000004000000010000000042000F010000005842
005C050000000400000014000000042007F05000000040000000000000000042007C0100000030420094070000002466
23536303733352D656636662D343038352D396530612D6562366631333934633232313800000000

| 7 | Destroy |
| | In: uuidNewKey |

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: bf6cc1d4-f914-4099-b4d4-453050d8bcf4

420078010000009042007701000000384200690100000020042006A02000000040000000100000000042006B02000000040
000000000000000042000D0200000004000000010000000042000F01000000484200C5C0500000004000000140000000042
00790100000030420094070000002462663663633164342D663931342D343039392D623464342D3435333035306438626

3663400000000

Out: uuidNewKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73C8BC (Thu Feb 11
10:07:08 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: bf6cc1d4-f914-4099-b4d4-
453050d8bcf4

42007B01000000B042007A0100000048420069010000002042006A02000000040000000100000042006B02000000040
0000000000000004200920900000008000000004B73C8BC42000D0200000004000000010000000042000F01000000584
2005C0500000004000000140000000042007F0500000004000000000000000042007C010000003042009407000000246
26363663633164342D663931342D343039392D623464342D3435333035306438626366340000000000

196

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9.~~2~~9.2 Use-case: Existing Key Expired, Re-key with Same lifecycle

Create a new symmetric key ~~with a name~~. 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 a time in the past 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 "~~Deactive~~Deactivated". Then issue a Re-key request, including an *Activation Date* attribute with the value set to the previously specified *Deactivation Date* of the existing 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	Client A
0	Create (symmetric key) In: objectType='00000002', attributes={ CryptographicAlgorithm='AES', CryptographicLength='128', CryptographicUsageMask='0000000C' } Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

```
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
      Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data:
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm
          Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (AES)
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length
          Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000080 (128)
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage
Mask
          Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x0000000C (Encrypt,
Decrypt)
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
          Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
            Tag: Name Value (0x420055), Type: Text String (0x07), Data: rekeyKey
            Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted
text string)
```

```
42007801000001604200770100000038420069010000002042006A0200000004000000010000000042006B02000000040
0000000000000000042000D020000000400000010000000042000F01000011842005C0500000004000000010000000042
007901000000100420057050000000400000002000000004200910100000E8420008010000003042000A0700000001743
727970746F6772617068696320416C676F726974686D0042000B0500000004000000030000000042000801000000304200
0A07000000144372797074406F6772617068696320 4C656E6774680000000042000B0200000004000000080000000042000
801000000304200A070000001843727970746F6772617068696320557361676520 4D61736B42000B0200000004000000
0C0000000042000801000000384200A070000000444E616D650000000042000B010000002042005507000000 0872656B6
5794B65794200540500000004000000010000000
```

Out: objectType='00000002', uuidKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73FFC7 (Thu Feb 11
14:01:59 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fbc5f3e5-48bf-4294-b754-
0575a41d93b6
```

```
42007B01000000C042007A01000000484200690100000020 42006A0200000004000000010000000042006B02000000040
000000000000000042009209000000080000000 4B73FFC742000D020000000400000010000000042000F010000006842
005C0500000004000000010000000042007F050000000400000000000000042007C0100000040 420057050000000400000
000020000004200940700000024666263356633653 52D343862662D343239342D623735342D3035373561343164393
```

		623600000000
1		Add Activation Date, Deactivation Date attributes based on Timestamp in previous response (batch) In: uuidKey, attribute={ ActivationDate=' <*Timestamp in previous response – 365 days*>' } In: uuidKey, attribute={ DeactivationDate='<*Timestamp in previous response + 2 minutes*>' }

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Order Option (0x420010), Type: Boolean (0x06), Data: TRUE
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)
    Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: BAC4A9CECC650259
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fbc5f3e5-48bf-4294-b754-0575a41d93b6
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Activation Date
        Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x000000004992CC47 (Wed Feb 11 14:01:59 CET 2009)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)
    Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 582C952324F4552F
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fbc5f3e5-48bf-4294-b754-0575a41d93b6
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Deactivation Date
        Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x000000004B74003F (Thu Feb 11 14:03:59 CET 2010)
```

```
420078010000017842007701000000484200690100000020420069000000040000000100000004200069000000000420069000000000420010060000000800000000000001420000D02000000040000000200000004200090010000008842005C0500000004000000D0000000420093080000008BAC4A9CECC650259420079010000006042009407000000246666263356563365352D343862662D343239342D623735342D3035373536134316439336236000000004200801000000284200A070000000F41637469766174696F6E2044617465004200B0900000008000000004992CC4742000F010000009042005C050000000400000000D0000000420093080000008582C952324F4552F420079010000006842009407000000246666263356563365352D343862662D343239342D623735342D30353735361343164393336236000000004200801000000304200A0700000011446561637469766174696F6E2044617465000000000000004200B0900000008000000004B74003F
```

Out: uuidKey, attribute={ ActivationDate=' <*Timestamp in previous response - 1 year*>' }

Out: uuidKey, attribute={ DeactivationDate=' <*Timestamp in previous response + 2 minutes*>' }

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73FFC7 (Thu Feb 11
```

```
14:01:59 CET 2010)
     Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
   Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
     Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)
     Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: BAC4A9CECC650259
     Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
     Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
       Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fbc5f3e5-48bf-4294-b754-
0575a41d93b6
       Tag: Attribute (0x420008), Type: Structure (0x01), Data:
         Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Activation Date
         Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x000000004992CC47 (Wed
Feb 11 14:01:59 CET 2009)
   Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
     Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)
     Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 582C952324F4552F
     Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
     Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
       Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fbc5f3e5-48bf-4294-b754-
0575a41d93b6
       Tag: Attribute (0x420008), Type: Structure (0x01), Data:
         Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Deactivation Date
         Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x000000004B74003F (Thu
Feb 11 14:03:59 CET 2010)
```

```
42007B0100000019842007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
00000000000000042009209000000080000000004B73FFC742000D0200000004000000020000000042000F010000009842
005C0500000004000000D00000000420093080000008BAC4A9CECC65025942007F050000000400000000000000000420
07C0100000006042009407000000246662633566336535352D343862662D343239342D623735342D30353735613431643933
623600000000042000801000000284200A070000000F41637469766174696F6E20446174650042000B090000000800000
0004992CC4742000F01000000A042005C0500000004000000D00000000420093080000008582C952324F4552F42007F
050000000400000000000000000042007C0100000068420094070000002466662633566336535352D343862662D343239342D6
23735342D3035373561343164393336000000004200080100000030420000A070000001144656163746976617469696F6E
2044617465500000000000000000042000B0900000008000000004B74003F
```

| 2 | Get Attribute * *Repeated until state changes to Deactivated* |
| | In: uuidKey, attributeName={'State'} |

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fbc5f3e5-48bf-4294-b754-
0575a41d93b6
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State
```

```
42007801000000A0420077010000003842006901000000204 2006A0200000004000000010000000042006B02000000040
0000000000000004 2000D020000000400000001000000004 2000F010000005842005C0500000004000000B0000000042
007901000000404200940700000024666626335663365352D343862662D343239342D623735342D3035373561343164393
```

362360000000042000A0700000005537461746 5000000

Out: uuidKey, attribute={ State='*Active*' }

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B73FFC7 (Thu Feb 11 14:01:59 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fbc5f3e5-48bf-4294-b754-0575a41d93b6
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State
        Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (Active)
```

42007B01000000D842007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040000000000000000420092090000000800000004B73FFC742000D020000000400000001000000042000F010000008042005C0500000004000000B0000000042007F05000000040000000000000042007C010000005842009407000000246662633566336535352D343862662D343239342D623735342D303537356135613431643933623623600000000042000801000000204200 0A070000000553746174650000004 2000B050000000400000002000000 00

---

3   Get Attribute

In: uuidKey, attributeName={'State'}

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fbc5f3e5-48bf-4294-b754-0575a41d93b6
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State
```

42007801000000A04200770100000038420069010000002042006A0200000004000000010000000042006B02000000040000000000000000042000D020000000400000001000000042000F010000005842005C0500000004000000B0000000042007901000000404200940700000024666263356633653535352D343862662D343239342D623735342D303535373561313431643933623623600000000042000A070000000553746174650000

Out: uuidKey, attribute={ State='~~Deactive~~' }*Deactivated*' }

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B740040 (Thu Feb 11 14:04:00 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fbc5f3e5-48bf-4294-b754-0575a41d93b6
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State
        Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (Deactivated)

42007B01000000D842007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
000000000000000420092090000000800000004B74004042000D020000000400000001000000042000F010000008042
005C0500000004000000B0000000042007F05000000040000000000000042007C0100000058420094070000002466
6263335663365352D343862662D343239342D623735342D3035373561343164393362360000000042000801000000204200
0A07000000055537461746500000042000B05000000040000000300000000

---

4 | Rekey
In: uuidKey, attribute={ offset=~~'018B8200'~~ 'FE747E00' *(300 days backwards)*}

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000004 (Re-key)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fbc5f3e5-48bf-4294-b754-0575a41d93b6
      Tag: Offset (0x420058), Type: Interval (0x0A), Data: 0xFE747E00

42007801000000A042007701000000384200690100000020420069010000002042006A0200000004000000010000000042006B02000000040
000000000000000420009D020000000400000001000000042000F010000005842005C0500000004000000040000000042
00790100000040420094070000002466626335663365352D343862662D343239342D623735342D30353735613431643933
3623600000000042005800A00000004FE747E00000000000

Out: uuidNewKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

```
        Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B740040 (Thu Feb 11
14:04:00 CET 2010)
        Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
    Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
        Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000004 (Re-key)
        Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
        Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
            Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 389602b1-ca02-4c3c-b5a3-
c3789e7f2c92
```

```
42007B01000000B042007A010000004842006901000000204200 6A0200000004000000010000000042006B02000000040
00000000000000042009209000000080000000004B74004042000D020000000400000001000000 0042000F010000005842
005C05000000040000000400000004 2007F050000000400000000000000042007C0100000030420 0940700000024333
83936303262312D636130 0322D346333632D623561332D6333373839653766326339320000 0000
```

5	Get Attribute

In: uuidNewKey, attributeName={' ActivationDate', 'DectivationDate' }

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 389602b1-ca02-4c3c-b5a3-
c3789e7f2c92
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Activation Date
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Deactivation Date
```

```
42007801000000C8420077010000003842006901000000204200 6A0200000004000000010000000042006B02000000040
00000000000000042000D0200000004000000010000000042000F010000008042005C0500000004 0000000B0000000042
0079010000006842009407000000243333839363030326231 2D363130322D346333632D623561332D6333373839653766 2632
3393200000000420 00A070000000F41637469766174696F6E2044617465004 2000A0700000011446561637469766174 69
6F6E204461746500000000000000
```

Out: uuidNewKey, attribute={ ActivationDate=' <*Value of ActivationTime in existing key* + ~~300~~65 *days*>', DectivationDate='<*Value of DeactivationDate of existing key* + ~~300~~65 *days*>' }

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B740040 (Thu Feb 11
14:04:00 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
```

    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:

      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 389602b1-ca02-4c3c-b5a3-c3789e7f2c92

      Tag: Attribute (0x420008), Type: Structure (0x01), Data:

       Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Activation Date

       Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x0000000049E87DC6 (Fri Apr 17 15:01:58 CEST 2009)

      Tag: Attribute (0x420008), Type: Structure (0x01), Data:

       Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Deactivation Date

       Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x000000004BC9B1BE (Sat Apr 17 15:03:58 CEST 2010)

42007B010000011842007A0100000048420069010000002042006A02000000040000000100000000042006B02000000040
0000000000000000042009209000000080000000004B74004042000D0200000004000000010000000042000F01000000C042
005C0500000004000000000B000000042007F050000000400000000000000000042007C0100000009842009407000000243333
83936303262312D636130322D346333632D623561332D633337383965376632633920000000042000801000000284200
0A070000000F41637469766174696F6E20446174650042000B0900000080000000049E87DC6420008010000003042000
A07000000114465616374697661746976E20446174650000000000000042000B090000008000000004BC9B1BE

6	Get Attribute In: uuidNewKey, attributeName={'State'}

Tag: Request Message (0x420078), Type: Structure (0x01), Data:

  Tag: Request Header (0x420077), Type: Structure (0x01), Data:

    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)

    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 389602b1-ca02-4c3c-b5a3-c3789e7f2c92

      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State

42007801000000A04200770100000038420069010000002042006A02000000040000000100000000042006B020000000040
0000000000000000042000D0200000004000000010000000042000F0100000058420005C0500000004000000000B0000000042
00790100000040420094070000002433383936303262312D636130322D346333632D623561332D63333738393965376632363
39320000000042000A0700000005537461746500000000

Out: uuidNewKey, attribute={ State='*Active*' }

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:

  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)

      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)

    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B740040 (Thu Feb 11 14:04:00 CET 2010)

    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)

    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)

```
42007B01000000D842007A010000004842006901000000204200
6A02000000040000000100000004
2006B020000000400
00000000000000420092090000000800000004B74004042000D0
2000000040000000100000004
2000F010000008042
005C0500000004000000 0B000000042007F05000000040000000000000
00042007C01000000584200940700000024333
8393630326231 2D636130322D34633363 2D623561332D6333373839653
766326339320000000042000801000000 204200
0A0700000005537461746500000042000B0500000004000000020
0000000
```

<table>
<tr><td>7</td><td>Destroy
In: uuidKey</td></tr>
</table>

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fbc5f3e5-48bf-4294-b754-0575a41d93b6
```

```
42007801000000904200770100000038420069010000002042006A02000000040000000100000004
2006B02000000040
00000000000000042000D02000000040000000100000004
2000F010000004842005C0500000004000001400000000042
0079010000003042009407000000246662633 5663365352D343862662D343239342D623735342D303537356134316439
3623600000000
```

<table>
<tr><td></td><td>Out: uuidKey</td></tr>
</table>

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B740040 (Thu Feb 11 14:04:00 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: fbc5f3e5-48bf-4294-b754-0575a41d93b6
```

```
42007B01000000B042007A010000004842006901000000204200 6A02000000040000000100000004
2006B020000000400
00000000000000042009209000000 0800000004B74004042000D0 2000000040000000100000004
2000F010000005842
005C0500000004000001400000000042007F05000000040000000000000
00042007C010000003042009407000000 24666
```

26355663365352D343862662D343239342D623735342D3035373561343164393363236000000000

8	~~Destroy~~

Revoke (symmetric key as cessation of operation) and Destroy

In (header): batchOrderOption='TRUE'

In: uuidKey, revocationReasonCode='6'

In: uuidNewKey

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Order Option (0x420010), Type: Boolean (0x06), Data: TRUE
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000013 (Revoke)
    Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 7012417AA1B7394B
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 389602b1-ca02-4c3c-b5a3-c3789e7f2c92
      Tag: Revocation Reason (0x420081), Type: Structure (0x01), Data:
        Tag: Revocation Reason Code (0x420082), Type: Enumeration (0x05), Data: 0x00000006 (Cessation of Operation)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 3F8F4F1759704555
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 389602b1-ca02-4c3c-b5a3-c3789e7f2c92

420078010000012842007701000000484200690100000020042006A02000000040000000100000000042006B0200000004000000000000000000042001006000000008000000000000000142000D0200000004000000020000000042000F010000007042005C05000000040000001300000000420093080000000870124174AA1B7394B42007901000000484200940700000243333839363032312D636130322D346333632D623561332D6333373839653766326339320000000042008101000000104200820500000004000000060000000042000F010000005842005C05000000040000001400000000420093080000000883F8F4F1759704555420079010000003042009407000000243333839363032312D636130322D346333632D623561332D63333337383965376632633932000000000

Out: uuidNewKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B740040 (Thu Feb 11 14:04:00 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

```
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000013 (Revoke)
    Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 7012417AA1B7394B
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 389602b1-ca02-4c3c-b5a3-
c3789e7f2c92
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 3F8F4F1759704555
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 389602b1-ca02-4c3c-b5a3-
c3789e7f2c92


42007B010000013042007A01000000484200690100000020420 06A0200000004000000010000000042006B02000000040
0000000000000004200920900000008000000004B74004042000D0200000004000000020000000042000F010000006842
005C050000000400000013000000004200930800000087012417AA1B7394B42007F05000000040000000000000000420
07C010000003042009407000000243338393630326231 2D636130322D346333632D623561332D633373893965376632632
3932000000004200F010000006842005C0500000004000000140000000042009308000000083F8F4F1759704555542007
F050000000400000000000000004200F7C0100000030420094070000024333839363030326231 2D636130322D346333632D
623561332D6333373839653776632633932000000000
```

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9.39.3 Use-case: Existing Key Compromised, Re-key with same lifecycle

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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Time	Client A
0	Create (symmetric key) In: objectType='00000002', attributes={ CryptographicAlgorithm='AES', CryptographicLength='128', CryptographicUsageMask='0000000C', Name={ NameValue='rekeyKey', NameType='00000001' }, ActivationDate='2'*'<NOW>'* } Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key) Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data: Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (AES)

```
          Tag: Attribute (0x420008), Type: Structure (0x01), Data:
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length
            Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000080 (128)
          Tag: Attribute (0x420008), Type: Structure (0x01), Data:
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage
Mask
            Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x0000000C (Encrypt,
Decrypt)
          Tag: Attribute (0x420008), Type: Structure (0x01), Data:
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Activation Date
            Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x000000004B741047 (Thu
Feb 11 15:12:23 CET 2010)
          Tag: Attribute (0x420008), Type: Structure (0x01), Data:
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
            Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
              Tag: Name Value (0x420055), Type: Text String (0x07), Data: rekeyKey
              Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted
text string)
```

```
42007801000001904200770100000038420069010000002042006A02000000040000000100000000420006B02000000040
00000000000000420000D020000000400000001000000042000F010000014842005C0500000004000000010000000042
00790100000130420057050000000400000002000000042009101000001184200080100000030420000A070000001743
7270707464677726170686963204C676F7265746696D0042000B05000000004000000030000000042000801000000030420000A070000001443727970746F6772617072068696320 4C656E6774680000000042000B020000000400000080000000004200080100000030420000A070000001843727970746F677726170686963205573616765204D61736B4200080100000030420000A070000000F416374696976617469F6E2044617465004200B090000000800000000004B741047420008010000003842000A07000000044E616D65000000004200B01000000204200055070000000872656B6579467942005405000000004000000100000000
```

Out: objectType='00000002', uuidKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B741048 (Thu Feb 11
15:12:24 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: eea742b4-96ed-4238-afd2-
53189c79f781
```

```
42007B01000000C042007A0100000048420069010000002042006A02000000040000000100000000420006B02000000040
00000000000000042009209000000080000000004B7410484200D0200000004000000010000000420000F0100000068 42
005C0500000004000000010000000042007F050000000400000000000000042007C010000004042005705000000040000 0000020000000042009407000000024656561373433262342D393665642D343233382D616664322D353318396337396637
383100000000
```

| 1 | Get Attribute |

In: uuidKey, attributeName={'State'}

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: eea742b4-96ed-4238-afd2-
53189c79f781
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State
```

```
42007801000000A04200770100000038420069010000002042006A020000000400000001000000042006B02000000040
00000000000000042000D020000000400000001000000042000F010000005842005C05000000040000000B0000000042
0079010000004042009407000000246565613734326234202D393665642D343233382D616664322D3533313839633739663
7383100000000042000A0700000005537461746500000000
```

Out: uuidKey, attribute={ State='*Active*' }

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B741048 (Thu Feb 11
15:12:24 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: eea742b4-96ed-4238-afd2-
53189c79f781
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State
        Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (Active)
```

```
42007B01000000D842007A0100000048420069010000002042006A020000000400000001000000042006B02000000040
00000000000000042009209000000080000000004B74104842000D020000000400000001000000042000F010000008042
005C0500000004000000000B000000042007F05000000040000000000000000042007C0100000058420094070000002465
56137343262342D393665642D343233382D616664322D35333138393633373966637383100000000042000801000000204200
0A0700000005537461746500000042000B0500000004000000020000000
```

2	Revoke (symmetric key as compromised)
	In: uuidKey, RevocationReason='00000002', CompromiseOccurrenceDate=~~'6'~~'*<NOW>*'
	`Tag: Request Message (0x420078), Type: Structure (0x01), Data:`
	`  Tag: Request Header (0x420077), Type: Structure (0x01), Data:`

```
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000013 (Revoke)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: eea742b4-96ed-4238-afd2-
53189c79f781
      Tag: Revocation Reason (0x420081), Type: Structure (0x01), Data:
        Tag: Revocation Reason Code (0x420082), Type: Enumeration (0x05), Data: 0x00000002 (Key
Compromise)
      Tag: Compromise Occurrence Date (0x420021), Type: Date-Time (0x09), Data:
0x000000004B741048 (Thu Feb 11 15:12:24 CET 2010)
```

```
42007801000000B8420077010000003842006901000000204200 6A02000000040000000100000000420
06B02000000040
00000000000000042000D0200000004000000010000000042000F010000070420 05C050000000400000013000000
0042
0079010000005842009407000000246565613734326234 2D3936656 42D343233382D616664322D3533313839633 7396637
38310000000042 00810100000010420082050000000400000002000000004200 2109000000080000000004B741048
```

```
Out: uuidKey


Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B741049 (Thu Feb 11
15:12:25 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000013 (Revoke)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: eea742b4-96ed-4238-afd2-
53189c79f781
```

```
42007B01000000B042007A010000004842006901000000204200 6A02000000040000000100000000420
06B02000000040
0000000000000004200920900000008000000004B741049420 00D02000000040000000100000000420 0F01000000584 2
005C05000000040000001300000000 42007F0500000004000000000000000042007C010000003 04200940700000024656
56137343262342D3936656 42D343233382D616664322D3533313839633739663 73831000000000
```

3	Get Attribute
	In: uuidKey, attributeName={'State'}

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
```

```
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
     Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
       Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: eea742b4-96ed-4238-afd2-
53189c79f781
       Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State
```

42007801000000A042007701000000384200690100000020420 06A02000000040000000100000000420006B02000000040
0000000000000000420000D02000000040000000100000000420000F010000005842005C0500000040000000B0000000042
00790100000040420009407000000246565613734326234D393665642D343233382D616664322D3533313839633739663
7383100000000420000A070000000055374617465000000

Out: uuidKey, attribute={ State='*Compromised*' }

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
       Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
       Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B741049 (Thu Feb 11
15:12:25 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: eea742b4-96ed-4238-afd2-
53189c79f781
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State
        Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000004 (Compromised)
```

42007B01000000D842007A01000000484200690100000020420 06A02000000040000000100000000420006B02000000040
0000000000000000420009209000000080000000004B7410494200 0D02000000040000000100000000420000F010000008042
005C0500000040000000B000000004200007F05000000400000000000000000420007C010000005842009407000000246565
613734326234D393665642D343233382D616664322D35333313839633739663738310000000042000801000000204200
0A070000000055374617465000000042000B05000000040000000400000000

4	Rekey

In: uuidKey, ~~offset='0'~~

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
       Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
       Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000004 (Re-key)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: eea742b4-96ed-4238-afd2-
53189c79f781
```

42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B020000000400
0000000000000042000D0200000004000000010000000042002F010000004842005C05000000040000000400000000420
0790100000030420094070000002465656137343262342D393665642D343233382D616664322D35333138396337396637
383100000000

Out: uuidNewKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B741049 (Thu Feb 11
15:12:25 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000004 (Re-key)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: ad3cb774-d00d-4591-a634-
6ea36a801824
```

42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B020000000400
0000000000000042009209000000080000000004B74104942000D0200000004000000010000000042000F010000005842
005C0500000004000000040000000042007F0500000004000000000000000042007C01000000304200940700000024616
43363623737342D643030642D343539312D613633342D3665656133366138303138323400000000

| 5 | Get Attribute |
| | In: uuidNewKey, attributeName={'State'} |

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: ad3cb774-d00d-4591-a634-
6ea36a801824
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State
```

42007801000000A04200770100000038420069010000002042006A0200000004000000010000000042006B020000000400
0000000000000042000D0200000004000000010000000042000F010000005842005C05000000040000000B0000000042
00790100000040420094070000002461643363623737342D643030642D343539312D613633342D3665661336613830313
832340000000042000A0700000005537461746500000000

Out: uuidNewKey, attribute={ State='*Active*' }

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
```

| | ```
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
        Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
        Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B741049 (Thu Feb 11
15:12:25 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
        Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: ad3cb774-d00d-4591-a634-
6ea36a801824
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: State
            Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (Active)
``` |
| | 42007B01000000D842007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
00000000000000042009209000000080000000004B74104942000D020000000400000001000000042000F010000008042
005C0500000004000000B0000000042007F0500000004000000000000000042007C01000000584200940700000024616
43363623737342D643030642D343539312D613633342D366561333661383031383234000000004200801000000204200
0A07000000055374617465000000042000B050000000400000002000000 |
| 6 | Destroy

In: uuidKey

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
        Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
        Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
        Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: eea742b4-96ed-4238-afd2-
53189c79f781
```

42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B02000000040
0000000000000042000D020000000400000001000000042000F010000004842005C0500000004000000140000000042
0079010000003042009407000000246565613734326234D393665642D343233382D616664322D3533313839633739663
7383100000000

Out: uuidKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
        Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
        Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B741049 (Thu Feb 11
15:12:25 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
``` |

```
     Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
       Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
       Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
       Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
         Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: eea742b4-96ed-4238-afd2-
53189c79f781
```

```
42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
0000000000000004200920900000008000000004B74104942000D0200000004000000010000000042000F010000005842
005C0500000004000000140000000042007F05000000040000000000000000042007C0100000030420094070000002465
6137343262342D393665642D343233382D616664322D3533313839633739663738310000000
```

```
   Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
      Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
         Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
         Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
      Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B741049 (Thu Feb 11
15:12:25 CET 2010)
      Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
   Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000013 (Revoke)
      Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 7131695CF636735E
      Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
      Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
         Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: ad3cb774-d00d-4591-a634-
6ea36a801824
   Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
      Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 1845BCBBF09B5A66
      Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
      Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
         Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: ad3cb774-d00d-4591-a634-
6ea36a801824


42007B010000013042007A01000000484200690100000020420069010000002042006A0200000004000000010000000042006B020000000400
0000000000000042009209000000080000000B74104942000D02000000040000000200000042000F010000006842
005C050000000400000013000000004200930800000087131695CF636735E42007F050000000400000000000000420
07C0100000030420094070000002461643363623737342D643030642D343539312D613633342D36656133366138303138
3234000000004200F010000006842005C05000000040000001400000004200930800000081845BCBBF09B5A6642007
F050000000400000000000000042007C010000003042009407000000246164336362373734342D643030642D343539312D
613633342D36656133366138303138323400000000
```

216

217

~~9.49.4~~ Use-case: Create key, Re-key with new lifecycle

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.

222

Time	Client A
0	Create (symmetric key) In: objectType='00000002', attributes={ CryptographicAlgorithm='AES', CryptographicLength='128', CryptographicUsageMask='0000000C', Name={ NameValue='rekeyKey', NameType='00000001' } } Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:

```
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
      Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data:
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm
          Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (AES)
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length
          Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000080 (128)
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage
Mask
          Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x0000000C (Encrypt,
Decrypt)
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
          Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
            Tag: Name Value (0x420055), Type: Text String (0x07), Data: rekeyKey
            Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted
text string)
```

```
420078010000016042007701000003842006901000000204200 6A020000000400000001000000004 2006B02000000040
0000000000000000042000D020000000400000001000000004 2000F010000011842005C05000000040000000100000000 42
00790100000010042005705000000040000000200000000420091010000000E8420008010000003042000A0700000001743 7
27970746F67726170686963204C676F72697468 6D0042000B050000000300000003420080100000003042 00
0A0700000014437279707 746F67726170686963204C656E6774 680000000042000B0200000004000000800000000042000
801000000304200 0A070000001843727970746F67726170686963205573 616765204D61736B42000B020000000400 00000
0C00000000420080100000 03842000A07000000044E616D65000000004 2000B010000002042005507000000087265 6B6
5794B65794200540500000000400000000100000000
```

Out: objectType='00000002', uuidKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B742475 (Thu Feb 11
16:38:29 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: f0342590-f78a-4d34-a2f4-
4d6fc85a56ef
```

```
42007B01000000C042007A01000000484200690100000020420 06A02000000040000000100000000420 06B02000000040
00000000000000042009209000000080000000 04B74247542000D0200000004000000010000000042000F010000006842
005C050000000400000001000000004 2007F0500000004000000000000000042007C010000004042005705000000040000
0000200000002420094070000002466303334 32353930 2D6637386122D346433342D613266342D3464366663383561353 6
```

	656600000000

1	Locate
	In: attributes={ Name={ NameValue='rekeyKey', NameType='00000001' } }
	
	Tag: Request Message (0x420078), Type: Structure (0x01), Data:
	  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
	    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
	      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
	      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
	    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
	  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
	    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
	    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
	      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
	        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
	        Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
	          Tag: Name Value (0x420055), Type: Text String (0x07), Data: rekeyKey
	          Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)
	
	42007801000000A0420077010000003842006901000000204200 6A0200000004000000010000000042006B0200000004
	00000000000000004 2000D0200000004000000010000000042000F010000005842005C0500000004000000080000000042
	0079010000004042000801000000384 2000A07000000044E616D6500000000 42000B010000002042005507000000087 26
	56B65794B657942005405000000040000000100000000
	
	Out: uuidKey
	
	Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
	  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
	    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
	      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
	      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
	    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B742476 (Thu Feb 11 16:38:30 CET 2010)
	    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
	  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
	    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
	    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
	    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
	      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: f0342590-f78a-4d34-a2f4-4d6fc85a56ef
	
	42007B01000000B042007A0100000048 4200690100000020 4200 6A0200000004000000010000000042006B0200000004
	00000000000000004 2009209000000080000000 04B7424 7642000D0200000004000000010000000042000F010000005842
	005C05000000040000000800000000 42007F0500000004000000000000000042007C0100000030 42009407000000246 63
	03334323539302D663738612D346433342D613266342D346436666338356135366566 00000000

2	Rekey In: uuidKey, attributes={ ActivationDate='0000000043B7B630', ProcessStartDate='0000000043B7B630', ProtectStopDate='000000005E0C7BB0', DeactivationDate='000000005E0C7BB0' }

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000004 (Re-key)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: f0342590-f78a-4d34-a2f4-
4d6fc85a56ef
      Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data:
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Activation Date
          Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x0000000043B7B630 (Sun
Jan 01 12:00:00 CET 2006)
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Process Start Date
          Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x0000000043B7B630 (Sun
Jan 01 12:00:00 CET 2006)
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Protect Stop Date
          Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x000000005E0C7BB0 (Wed
Jan 01 12:00:00 CET 2020)
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Deactivation Date
          Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x000000005E0C7BB0 (Wed
Jan 01 12:00:00 CET 2020)
```

```
42007801000001704200770100000038420069010000002042006A02000000040000000100000000042006B0200000004
00000000000000000042000D02000000040000000100000000042000F01000001284200SC0500000004000000040000000042
0079010000011042009407000000024663033343235393302D663738612D346433342D613266342D3464366663383561353
3656660000000042009101000000D842000801000000284200A070000000F41637469766174696F6E2044617465004200
0B09000000080000000043B7B6304200080100000003042000A070000001250726F63657373320537461727420446174650
0000000000000042000B09000000080000000043B7B6304200080100000003042000A070000001150726F746563742053746F
7020446174650000000000000000000042000B0900000008000000005E0C7BB04200080100000003042000A070000001144465616
37469766174696F6E20446174650000000000000000000042000B0900000008000000005E0C7BB0
```

Out: uuidNewKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B742477 (Thu Feb 11
16:38:31 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000004 (Re-key)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: a3fa6e5c-1397-4ab4-9d12-
```

ff6ffaa75fbd

42007B01000000B042007A010000004842006901000000204 2006A02000000040000000100000004 2006B02000000040
00000000000000042009209000000080000000 04B74247742000D02000000040000000100000004 2000F010000005842
005C0500000004000000040000000042007F05000000040000000000000004 2007C01000000304200940700000024613
36661366535632D313339372D346162342D396431322D6666 3666666161373566626400000000

3	Get Attribute
	In: uuidKey, attributeName={'Name'}
	~~Out: Operation Failed, Item Not Found~~

	Tag: Request Message (0x420078), Type: Structure (0x01), Data:
	  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
	    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
	      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
	      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
	    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
	  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
	    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
	    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
	      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: f0342590-f78a-4d34-a2f4-4d6fc85a56ef
	      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name

	42007801000000A0420077010000003842006901000000204 2006A020000000400000001000000042006B02000000040 00000000000000042000D02000000040000000100000004 2000F010000005842005C0500000004000000 0B0000000042 00790100000040420094070000002466303334 3235390 2D663738612D346433342D613266342D346436666338356135 3 6566000000004 2000A07000000044E616D6500000000
	Out: uuidKey

	Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
	  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
	    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
	      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
	      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
	    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B742477 (Thu Feb 11 16:38:31 CET 2010)
	    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
	  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
	    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
	    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
	    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
	      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: f0342590-f78a-4d34-a2f4-4d6fc85a56ef

	42007B01000000B042007A010000004842006901000000204 2006A02000000040000000100000004 2006B02000000040 00000000000000042009209000000080000000 04B74247742000D02000000040000000100000004 2000F010000005842 005C0500000004000000 0B0000000042007F05000000040000000000000004 2007C01000000304200940700000024663 03334323539302D663738612D346433342D613266342D346436666338 3561353 6566600000000
4	Get Attribute
	In: uuidKey, attributeName={ 'ActivationDate', 'ProcessStartDate', 'ProtectStopDate', 'DeactivationDate' }

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: a3fa6e5c-1397-4ab4-9d12-
ff6ffaa75fbd
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Activation Date
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Process Start Date
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Protect Stop Date
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Deactivation Date
```

```
42007801000000108420077010000003842006901000000204200 6A02000000040000000100000004 2006B02000000040
0000000000000000042000D0200000004000000010000000 42000F01000000C042005C0500000004000000B00000000 42
007901000000A84200940700000024613366613665356332D313339372D346162342D396431322D666636666 6661613735 6
6626400000000042000A0700000000F41637469766174696F6E20446174 6500 42000A07000000125 0726F636573732053 74
617274204461746500 00000000000042000A070000001150726F746563742053746F 7020446174 6500 00000000000042000
A07000000114465616374697661746 96F6E2044617 46500 00000000000000
```

Out: uuidKey, attribute={ ActivationDate='0000000043B7B630', ProcessStartDate='0000000043B7B630', ProtectStopDate='000000005E0C7BB0', DeactivationDate='000000005E0C7BB0' }

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B742477 (Thu Feb 11
16:38:31 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: a3fa6e5c-1397-4ab4-9d12-
ff6ffaa75fbd
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Activation Date
        Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x0000000043B7B630 (Sun
Jan 01 12:00:00 CET 2006)
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Process Start Date
        Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x0000000043B7B630 (Sun
Jan 01 12:00:00 CET 2006)
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Protect Stop Date
        Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x000000005E0C7BB0 (Wed
```

```
Jan 01 12:00:00 CET 2020)
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Deactivation Date
        Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x000000005E0C7BB0 (Wed
Jan 01 12:00:00 CET 2020)
```

```
42007B010000018842007A010000004842006901000000204200 6A0200000004000000010000000042006B02000000040
0000000000000004200920900000008000000004B74247742000D 020000000400000001000000000042006F01000013042
005C05000000040000000B0000000042007F050000000400000000 0000000042007C0100000108420094070000000246613
36661366535632D313339372D346162342D396431322D666636666 66616137356662640000000042000801000000284200
0A070000000F41637469766174696F6E204465616374650042000B0 90000000800000000043B7B630420008010000003042000
A070000001250726F6365737320537461727420446174650000000 000000042000B0900000008000000043B7B630420008
0100000003042000A070000001150726F746563742053746F702044 61746500000000000000042000B0900000008000000
05E0C7BB042000801000000030420 0A070000001144656163746976 6174696F6E204461746500000000000000042000B09
000000080000000005E0C7BB0
```

5   Locate

In: attributes={ Name={ NameValue='rekeyKey', NameType='00000001' } }

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
        Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
          Tag: Name Value (0x420055), Type: Text String (0x07), Data: rekeyKey
          Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted
text string)
```

```
42007801000000A04200770100000038420069010000002042006A 0200000004000000010000000042006B02000000040
000000000000000042000D020000000400000001000000004200 0F010000005842005C050000000400000008000000004 2
007901000000404200080100000038420 00A07000000044E616D65 0000000042000B0100000020420055070000000872 6
56B65794B6579420054050000000400000 00100000000
```

Out: uuidNewKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B742477 (Thu Feb 11
16:38:31 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
```

		Tag: Response Payload (0x42007C), Type: Structure (0x01), Data: Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: a3fa6e5c-1397-4ab4-9d12-ff6ffaa75fbd 42007B01000000B042007A010000004842006901000000204200 6A0200000004000000010000000042006B02000000040 00000000000000042009209000000080000000 4B74247742000D0200000004000000010000000042000F010000005842 005C050000000400000008000000042007F0500000004000000000000000042007C010000003042009407000000246 1336661366535623D313339372D346162342D396431322D6666366666666161 37356662640000000

6	Destroy
	In: uuidKey
	
	Tag: Request Message (0x420078), Type: Structure (0x01), Data:
	  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
	    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
	      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
	      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
	    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
	  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
	    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
	    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
	      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: f0342590-f78a-4d34-a2f4-4d6fc85a56ef
	
	42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B020000000400 00000000000000042000D02000000040000000100000000042000F010000004842005C050000000400000014000000000042 007901000000304200940700000024663033343235393 02D663738612D346433342D613266342D346436666338356135 36656600000000
	
	Out: uuidKey
	
	Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
	  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
	    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
	      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
	      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
	    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B742478 (Thu Feb 11 16:38:32 CET 2010)
	    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
	  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
	    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
	    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
	    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
	      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: f0342590-f78a-4d34-a2f4-4d6fc85a56ef
	
	42007B01000000B042007A010000004842006901000000204200 6A0200000004000000010000000042006B02000000040 00000000000000042009209000000080000000 4B74247842000D0200000004000000010000000042000F010000005842 005C050000000400000014000000042007F0500000004000000000000000042007C010000003042009407000000246 6303334323539302D663738612D346433342D613266342D3464366663383563 3561353636656600000000

7	Revoke (symmetric key as cessation of operation) and Destroy In (header): batchOrderOption='TRUE'

In: uuidNewKey, revocationReasonCode='6'
In: uuidNewKey

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Order Option (0x420010), Type: Boolean (0x06), Data: TRUE
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000013 (Revoke)
    Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 3DC816BB39869D07
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: a3fa6e5c-1397-4ab4-9d12-ff6ffaa75fbd
      Tag: Revocation Reason (0x420081), Type: Structure (0x01), Data:
        Tag: Revocation Reason Code (0x420082), Type: Enumeration (0x05), Data: 0x00000006 (Cessation of Operation)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 32B517312FD5B558
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: a3fa6e5c-1397-4ab4-9d12-ff6ffaa75fbd

4200780100000128420077010000004842006901000000204200 6A0 20000000 40000000 1 0000000 42006B02 0000000040
00000000000000004200100600000008000000000000000142000D0200000004000000020000000420000F010000007042
005C0500000004000000130000000042009308000000083DC816BB39869D0742007901000000484200940700000024613
3666136653563 2D 313339372D 346162342D 396431322D 66663666666 6161373566626400000000420081010000001042008
2050000000400000006000000004 2000F010000005842005C050000000400000014000000004200930800000008 32B51
7312FD5B558 42007901000000304200940700000024613366613665356 32D313339372D346162342D396431322D66663666
66666161373566626400000000

Out: uuidNewKey
Out: uuidNewKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B742478 (Thu Feb 11 16:38:32 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000013 (Revoke)
    Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 3DC816BB39869D07
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: a3fa6e5c-1397-4ab4-9d12-

ff6ffaa75fbd
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 32B517312FD5B558
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: a3fa6e5c-1397-4ab4-9d12-
ff6ffaa75fbd

42007B010000013042007A010000004842006901000000204200 6A020000000400000001000000042006B02000000040
000000000000000042009209000000800000004B74247842000D 0200000004000000020000000042000F010000006842
005C0500000004000000130000000042009308000000083DC816 BB39869D0742007F05000000040000000000000000420
07C01000000304200940700000024613366613665356 32D313339372D346162342D396431322D6666366666661613735 66
626400000000042000F010000006842005C0500000004000000 14000000042009308000000832B517312FD5B55842007
F0500000004000000000000000042007C01000000304200940700000024613366613665356 32D313339372D346162342D
396431322D666636666666616137356662640000 0000

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~~9.~~59.5 Use-case: 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. Locate the new key with the original name. Get the new key and obtain a lease.

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Time	Client ~~A~~	~~Client B~~
0	Client A: Create (symmetric key) In: objectType='00000002', attributes={ CryptographicAlgorithm='AES', CryptographicLength='128', CryptographicUsageMask='0000000C', Name={ NameValue=' rekeyKey', NameType='00000001' }, ActivationDate=~~'2"~~_<NOW>_' } Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)	

```
       Tag: Template-Attribute (0x420091), Type: Structure (0x01),
Data:
         Tag: Attribute (0x420008), Type: Structure (0x01), Data:
           Tag: Attribute Name (0x42000A), Type: Text String
(0x07), Data: Cryptographic Algorithm
           Tag: Attribute Value (0x42000B), Type: Enumeration
(0x05), Data: 0x00000003 (AES)
         Tag: Attribute (0x420008), Type: Structure (0x01), Data:
           Tag: Attribute Name (0x42000A), Type: Text String
(0x07), Data: Cryptographic Length
           Tag: Attribute Value (0x42000B), Type: Integer (0x02),
Data: 0x00000080 (128)
         Tag: Attribute (0x420008), Type: Structure (0x01), Data:
           Tag: Attribute Name (0x42000A), Type: Text String
(0x07), Data: Cryptographic Usage Mask
           Tag: Attribute Value (0x42000B), Type: Integer (0x02),
Data: 0x0000000C (Encrypt, Decrypt)
         Tag: Attribute (0x420008), Type: Structure (0x01), Data:
           Tag: Attribute Name (0x42000A), Type: Text String
(0x07), Data: Name
           Tag: Attribute Value (0x42000B), Type: Structure
(0x01), Data:
             Tag: Name Value (0x420055), Type: Text String (0x07),
Data: rekeyKey
             Tag: Name Type (0x420054), Type: Enumeration (0x05),
Data: 0x00000001 (Uninterpreted text string)
         Tag: Attribute (0x420008), Type: Structure (0x01), Data:
           Tag: Attribute Name (0x42000A), Type: Text String
(0x07), Data: Activation Date
           Tag: Attribute Value (0x42000B), Type: Date-Time
(0x09), Data: 0x000000004B74262C (Thu Feb 11 16:45:48 CET 2010)
```

```
420078010000019042007701000000384200690100000020420006A02000000040
0000001000000000042006B02000000040000000000000000420000D0200000000400
0000010000000000042000F01000001484200C05050000004000000001000000004200
0790100000013042000570500000004000000020000000042009101000001184200
080100000003042000A07000000174372797074F67772617068696320416C676F7
26974686D0042000B0500000004000000030000000042000801000000030420000A
07000000014437277970746F67726170686963204C656E6774680000000042000B0
2000000040000000800000000042000801000000030420000A070000001843727970
746F6772617068696320557361676520D61736B42000B02000000040000000C0
00000004200080100000038420000A07000000044E616D650000000042000B0100
00000204200557050000000872656B65794B65794200540500000004000000010000
0000042000801000002842000A070000000F41637469766174696F6E20446174
650042000B090000000800000000004B74262C
```

Out: objectType='00000002', uuidKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01),
Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer
(0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer
(0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data:
```

0x000000004B74262D (Thu Feb 11 16:45:49 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data:
0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data:
0x00000001 (Create)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05),
Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01),
Data:
      Tag: Object Type (0x420057), Type: Enumeration (0x05),
Data: 0x00000002 (Symmetric Key)
      Tag: Unique Identifier (0x420094), Type: Text String
(0x07), Data: ca368e33-dc3d-4c7c-8f6d-262895bc31ce

42007B01000000C042007A010000004842006901000000 2042006A020000000400
000000010000000042006B020000000400000000000000004200920900000008000
0000004B74262D42000D020000000400000001000000042000F0100000068420
05C0500000004000000010000000042007F0500000004000000000000000042000
7C01000000404200570500000004000000020000000042009407000000024636133
336386533332D646333642D346337632D386636642D32363238393356263333163
6500000000

1	Client A:	
	Get (symmetric key)	
	In: uuidKey	

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01),
Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer
(0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer
(0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data:
0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data:
0x0000000A (Get)
    Tag: Request Payload (0x420079), Type: Structure (0x01),
Data:
      Tag: Unique Identifier (0x420094), Type: Text String
(0x07), Data: ca368e33-dc3d-4c7c-8f6d-262895bc31ce

420078010000009042007701000000384200690100000020 42006A02000000040
000000010000000042006B020000000400000000000000004200D020000000400
000010000000042000F010000004842005C0500000040000000A00000000420
079010000003042009407000000246361333638653333 2D646333642D34633763
2D386636642D3236323839356263333163 6500000000

| 1 | Out: objectType = '00000002', uuidKey, symmetricKey | |

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01),

Data:
        Tag: Protocol Version Major (0x42006A), Type: Integer
(0x02), Data: 0x00000001 (1)
        Tag: Protocol Version Minor (0x42006B), Type: Integer
(0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data:
0x000000004B74262D (Thu Feb 11 16:45:49 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data:
0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data:
0x0000000A (Get)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05),
Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01),
Data:
        Tag: Object Type (0x420057), Type: Enumeration (0x05),
Data: 0x00000002 (Symmetric Key)
        Tag: Unique Identifier (0x420094), Type: Text String
(0x07), Data: ca368e33-dc3d-4c7c-8f6d-262895bc31ce
        Tag: Symmetric Key (0x42008F), Type: Structure (0x01),
Data:
          Tag: Key Block (0x420040), Type: Structure (0x01), Data:
            Tag: Key Format Type (0x420042), Type: Enumeration
(0x05), Data: 0x00000001
            Tag: Key Value (0x420045), Type: Structure (0x01),
Data:
              Tag: Key Material (0x420043), Type: Octet String
(0x08), Data: F43C7798AACB22B1411A8773C199708B
            Tag: Cryptographic Algorithm (0x420028), Type:
Enumeration (0x05), Data: 0x00000003 (AES)
            Tag: Cryptographic Length (0x42002A), Type: Integer
(0x02), Data: 0x00000080 (128)

42007B010000012042007A010000004842006901000000204 2006A02000000040
0000001000000042006B0200000004000000000000000042009209000000080 0
0000004B74262D42000D020000000400000001000000004 2000F01000000C8420
05C05000000040000000A0000000042007F05000000040 000000000000000004200
7C01000000A04200570500000004000000020000000042009407000000246361 3
336386533332D646333642D346337632D386636642D323632383 93562633331 63
6500000000042008F0100000058420040010000005042004205 000000040000000
10000000042004501000000184200430800000010F43C779 8AACB22B1411A8773
C199708B420028050000000400000003000000004 2002A020000000400000080 00
0000000

| 2 | Client A:
Obtain Lease
In: uuidKey

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01),
Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer
(0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer
(0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: | |

0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data:
0x00000010 (Obtain Lease)
    Tag: Request Payload (0x420079), Type: Structure (0x01),
Data:
      Tag: Unique Identifier (0x420094), Type: Text String
(0x07), Data: ca368e33-dc3d-4c7c-8f6d-262895bc31ce

4200780100000090420077010000003842006901000000204200 6A02000000040
000000100000000042006B02000000040000000000000004200 0D020000000400
0000010000000042000F010000004842005C05000000040000001000000000420
0790100000030420094070000002463613336386533332D646333642D34633763
2D386636642D323632383935362633331636500000000

Out: uuidKey, leaseTime, lastChangeDate

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01),
Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer
(0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer
(0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data:
0x000000004B74262E (Thu Feb 11 16:45:50 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data:
0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data:
0x00000010 (Obtain Lease)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05),
Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01),
Data:
      Tag: Unique Identifier (0x420094), Type: Text String
(0x07), Data: ca368e33-dc3d-4c7c-8f6d-262895bc31ce
      Tag: Lease Time (0x420049), Type: Interval (0x0A), Data:
0x00000010
      Tag: Last Change Date (0x420048), Type: Date-Time (0x09),
Data: 0x000000004B74262D (Thu Feb 11 16:45:49 CET 2010)

42007B01000000D042007A010000004842006901000000204200 6A02000000040
000000100000000042006B020000000400000000000000004200 92090000000800
0000004B74262E42000D0200000004000000010000000042000F0100000078420
05C050000000400000010000000004200 7F0500000004000000000000000042000
7C0100000050420094070000002463613336386533332D646333642D34633763 2
D386636642D323632383935362633331636500000000420049 0A00000004000000
10000000004200480900000008000000004B74262D

3		Client B: Revoke (symmetric key as compromised) In: uuidKey, RevocationReason='00000002', CompromiseOccurrenceDate='<NOW>'	Revoke (symmetric key as compromised) In: uuidKey, RevocationReason='00000002', CompromiseOccurrenceDate='6'

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01),
Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer
(0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer
(0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data:
0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data:
0x00000013 (Revoke)
    Tag: Request Payload (0x420079), Type: Structure (0x01),
Data:
      Tag: Unique Identifier (0x420094), Type: Text String
(0x07), Data: ca368e33-dc3d-4c7c-8f6d-262895bc31ce
      Tag: Revocation Reason (0x420081), Type: Structure (0x01),
Data:
        Tag: Revocation Reason Code (0x420082), Type: Enumeration
(0x05), Data: 0x00000002 (Key Compromise)
      Tag: Compromise Occurrence Date (0x420021), Type: Date-Time
(0x09), Data: 0x000000004B74262E (Thu Feb 11 16:45:50 CET 2010)
```

```
42007801000000B8420077010000003842006901000000204200 6A020000000040
0000001000000042006B02000000400000000000000042000D02 0000000400
0000010000000042000F010000007042005C0500000004000000 1300000000420
0790100000058420094070000002463613336386533332D64633 3643264346337 63
2D386636642D323632383935626333316365000000004200 8101000000104 2008
20500000004000000020000000042002109000000080000000004B74262E
```

Out: uuidKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01),
Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer
(0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer
(0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data:
0x000000004B74262E (Thu Feb 11 16:45:50 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data:
0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data:
0x00000013 (Revoke)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05),
Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01),
Data:
      Tag: Unique Identifier (0x420094), Type: Text String
(0x07), Data: ca368e33-dc3d-4c7c-8f6d-262895bc31ce
```

```
42007B01000000B042007A0100000048420069010000002042006A02000000 40
0000001000000042006B020000004000000000000000420092090000000800
```

0000004B74262E42000D0200000004000000010000000042000F0100000058420
05C050000000400000013000000042007F05000000040000000000000000004200
7C010000003042009407000000246363133363865533332D646333642D346337632
D386636642D3236323839356263333316365000000000

4	Client B: Rekey In: uuidKey	Rekey In: uuidKey, offset='0' Out: uuidNewKey

	Tag: Request Message (0x420078), Type: Structure (0x01), Data:
	  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
	    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
	      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
	      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
	    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
	  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
	    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000004 (Re-key)
	    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
	      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: ca368e33-dc3d-4c7c-8f6d-262895bc31ce	

42007801000000904200770100000038420069010000002042006A02000000040
000000100000000042006B020000000400000000000000042000D0200000004000
00001000000042000F010000004842005C050000000400000004000000004200
07901000000030420094070000002463613336386533332D646333642D34633763
2D386636642D3236323839356263333316365000000000

	Out: uuidNewKey	

	Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
	  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
	    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
	      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
	      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
	    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B74262F (Thu Feb 11 16:45:51 CET 2010)
	    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
	  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
	    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000004 (Re-key)
	    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
	    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
	      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 59fbf81d-574f-4f4f-9581-7785dc593f5f	

42007B01000000B042007A0100000048420069010000002042006A02000000040
0000001000000042006B0200000004000000000000000042009209000000000800
0000004B74262F42000D02000000040000000010000000042000F0100000058420
05C0500000004000000004000000000000000000000004200
7C010000003042009407000000243539666226638316142D353734662D346634662
D393538312D37373835364633539366356600000000

5	**Client A:**	
	Obtain Lease	
	In: uuidKey	

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01),
Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer
(0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer
(0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data:
0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data:
0x00000010 (Obtain Lease)
    Tag: Request Payload (0x420079), Type: Structure (0x01),
Data:
      Tag: Unique Identifier (0x420094), Type: Text String
(0x07), Data: ca368e33-dc3d-4c7c-8f6d-262895bc31ce

42007801000000904200770100000038420069010000002042006A02000000040
0000001000000042006B02000000040000000000000000042000D020000000400
00001000000042000F010000004842005C05000000040000000100000000420
079010000003042009407000000246361333638653332D646333642D34633763
2D386636642D3236323839356263333316365000000000

Out: Operation Failed, Permission Denied

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01),
Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer
(0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer
(0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data:
0x000000004B74262F (Thu Feb 11 16:45:51 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data:
0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data:
0x00000010 (Obtain Lease)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05),
Data: 0x00000001 (Operation Failed)
    Tag: Result Reason (0x42007E), Type: Enumeration (0x05),

<table>
<tr>
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<td>

Data: 0x0000000C (Permission Denied)
    Tag: Result Message (0x42007D), Type: Text String (0x07),
Data: CO is in state Compromised, no lease given

42007B01000000C042007A010000004842006901000000204 2006A02000000040
00000010000000042006B02000000040000000000000000420 092090000000800
0000004B74262F42000D020000000400000001000000004200 0F0100000068420
05C05000000040000000100000000042007F050000000400000 0010000000004200
7E05000000040000000C000000000042007D070000002A434F2 0697320696E20737
461746520436F6D70726F6D697365642C206E6F206C6561736 520676976656E00
0000000000

</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>

Client A:

Locate (symmetric key)

In: attributes={ Name={ NameValue='rekeyKey',
NameType='00000001' } }

Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01),
Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer
(0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer
(0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data:
0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data:
0x00000008 (Locate)
    Tag: Request Payload (0x420079), Type: Structure (0x01),
Data:
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07),
Data: Name
        Tag: Attribute Value (0x42000B), Type: Structure (0x01),
Data:
          Tag: Name Value (0x420055), Type: Text String (0x07),
Data: rekeyKey
          Tag: Name Type (0x420054), Type: Enumeration (0x05),
Data: 0x00000001 (Uninterpreted text string)

42007801000000A04200770100000038420069010000002042 006A02000000040
00000010000000042006B020000000400000000000000004200 0D020000000400
000001000000004200 0F010000005842005C0500000004000000080 0000000420
079010000004042000 80100000038 42000A07000000044E616D65 00000000004200
0B010000002042005507 0000000872656B65794B6579420 05405000000040000
00100000000

</td>
<td></td>
</tr>
<tr>
<td></td>
<td>

Out: uuidNewKey

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01),
Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer

</td>
<td></td>
</tr>
</table>

	(0x02), Data: 0x00000001 (1)
	   Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
	  Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B74262F (Thu Feb 11 16:45:51 CET 2010)
	  Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
	 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
	  Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
	  Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
	  Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
	   Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 59fbf81d-574f-4f4f-9581-7785dc593f5f
	
	42007B01000000B042007A0100000048420069010000002042006A02000000040000000100000000042006B0200000004000000000000000042009209000000080000004B74262F42000D02000000040000000100000000042000F0100000058420005C050000000400000008000000000042007F0500000004000000000000000004200 7C0100000030420094070000002435396662663831642D353734662D346634662D393538312D37373835646335393336356600000000

7	Client A:
	
	Get (symmetric key)
	In: uuidNewKey
	
	Tag: Request Message (0x420078), Type: Structure (0x01), Data:
	 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
	  Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
	   Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
	   Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
	  Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
	 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
	  Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
	  Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
	   Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 59fbf81d-574f-4f4f-9581-7785dc593f5f
	
	42007801000000904200770100000038420069010000002042006A02000000040000000100000000042006B020000000400000000000000000042000D020000000400000001000000000042000F010000004842005C05000000040000000A0000000042 0079010000003042009407000000243539666266383164 2D353734662D346634662D393538312D37373835646335393336356600000000
	
	Out: objectType = '00000002', uuidNewKey, newSymmetricKey
	
	Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
	 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

	Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
	       Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
	       Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
	    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B74262F (Thu Feb 11 16:45:51 CET 2010)
	    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
	  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
	    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
	    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
	    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
	       Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
	       Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 59fbf81d-574f-4f4f-9581-7785dc593f5f
	       Tag: Symmetric Key (0x42008F), Type: Structure (0x01), Data:
	        Tag: Key Block (0x420040), Type: Structure (0x01), Data:
	         Tag: Key Format Type (0x420042), Type: Enumeration (0x05), Data: 0x00000001
	         Tag: Key Value (0x420045), Type: Structure (0x01), Data:
	          Tag: Key Material (0x420043), Type: Octet String (0x08), Data: 173E9499F7C573712AFB9883B5DF2BCE
	         Tag: Cryptographic Algorithm (0x420028), Type: Enumeration (0x05), Data: 0x00000003 (AES)
	         Tag: Cryptographic Length (0x42002A), Type: Integer (0x02), Data: 0x00000080 (128)
	
	42007B010000012042007A0100000048420069010000002042006A02000000040
	000000100000000420068020000000400000000000000004200920900000000800
	0000004B74262F42000D020000000400000001000000042000F01000000C8420
	05C0500000004000000000A0000000042007F050000000400000000000000004200
	7C01000000A042005705000000040000000200000000420094070000002435396
	662663831642D353734662D346634662D393538312D37373835646433539336635
	660000000042008F010000005842004001000000504200420500000004000000000
	10000000042004501000000184200430800000010173E9499F7C573712AFB9883
	B5DF2BCE42002805000000040000000300000000042002A0200000004000000800
	0000000	

8	Client A:
	Obtain Lease
	In: uuidNewKey
	
	Tag: Request Message (0x420078), Type: Structure (0x01), Data:
	  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
	    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
	       Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
	       Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)	

```
     Tag: Batch Count (0x42000D), Type: Integer (0x02), Data:
0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data:
0x00000010 (Obtain Lease)
    Tag: Request Payload (0x420079), Type: Structure (0x01),
Data:
      Tag: Unique Identifier (0x420094), Type: Text String
(0x07), Data: 59fbf81d-574f-4f4f-9581-7785dc593f5f
```

```
42007801000000904200770100000038420069010000002042006A02000000040
0000001000000004200 6B02000000040000000000000000042000D020000000400
0000010000000042000F010000004842005C050000000400000010000000000420
0790100000003042009407000000243539666266383164 2D353734662D34663466
2D393538312D37373835646633593336635660000000
```

Out: uuidNewKey, leaseTime, lastChangeDate

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01),
Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer
(0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer
(0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data:
0x000000004B74262F (Thu Feb 11 16:45:51 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data:
0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data:
0x00000010 (Obtain Lease)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05),
Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01),
Data:
      Tag: Unique Identifier (0x420094), Type: Text String
(0x07), Data: 59fbf81d-574f-4f4f-9581-7785dc593f5f
      Tag: Lease Time (0x420049), Type: Interval (0x0A), Data:
0x00000000
      Tag: Last Change Date (0x420048), Type: Date-Time (0x09),
Data: 0x000000004B74262F (Thu Feb 11 16:45:51 CET 2010)
```

```
42007B01000000D042007A010000004842006901000000204 2006A02000000040
0000001000000004200 6B020000000400000000000000000 4200920900000008 0
0000004B74262F42000D0200000004000000010000000042000F0100000078420
05C05000000040000001000000000 042007F0500000004000000000000000 004200
7C010000005042009407000000243539666266383164 2D353734662D3466346662
2D393538312D37373835646633593336635660000000004200490A00000004000000
000000000004200480900000008000000004B74262F
```

9	Client A: Destroy In: uuidKey	

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01),
Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer
(0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer
(0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data:
0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data:
0x00000014 (Destroy)
    Tag: Request Payload (0x420079), Type: Structure (0x01),
Data:
      Tag: Unique Identifier (0x420094), Type: Text String
(0x07), Data: ca368e33-dc3d-4c7c-8f6d-262895bc31ce
```

```
42007801000000904200770100000038420069010000002042006A02000000040
0000001000000042006B0200000004000000000000000042000D020000000400
000001000000042000F01000000484200C5C0500000004000000140000000042000
07901000000304200940700000024636133368653332D646333642D34633763
2D386636642D32363238393562633331636500000000
```

Out: uuidKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01),
Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer
(0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer
(0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data:
0x000000004B74262F (Thu Feb 11 16:45:51 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data:
0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data:
0x00000014 (Destroy)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05),
Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01),
Data:
      Tag: Unique Identifier (0x420094), Type: Text String
(0x07), Data: ca368e33-dc3d-4c7c-8f6d-262895bc31ce
```

```
42007B01000000B042007A0100000048420069010000002042006A02000000040
0000001000000042006B0200000004000000000000000042009209000000080
0000004B74262F42000D0200000004000000010000000042000F0100000058420
05C05000000040000001400000000042007F05000000040000000000000000004200
7C010000003042009407000000246361333368653332D646333642D34633763
2D386636642D32363238393562633331636500000000
```

| 10 | Client A:

Revoke (symmetric key as cessation of operation) and Destroy | |

In (header): batchOrderOption='TRUE'

In: uuidNewKey, revocationReasonCode='6'

In: uuidNewKey


```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01),
Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer
(0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer
(0x02), Data: 0x00000000 (0)
    Tag: Batch Order Option (0x420010), Type: Boolean (0x06),
Data: TRUE
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data:
0x00000002 (2)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data:
0x00000013 (Revoke)
    Tag: Unique Batch Item ID (0x420093), Type: Octet String
(0x08), Data: 3748B9E243205BA7
    Tag: Request Payload (0x420079), Type: Structure (0x01),
Data:
      Tag: Unique Identifier (0x420094), Type: Text String
(0x07), Data: 59fbf81d-574f-4f4f-9581-7785dc593f5f
      Tag: Revocation Reason (0x420081), Type: Structure (0x01),
Data:
        Tag: Revocation Reason Code (0x420082), Type: Enumeration
(0x05), Data: 0x00000006 (Cessation of Operation)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data:
0x00000014 (Destroy)
    Tag: Unique Batch Item ID (0x420093), Type: Octet String
(0x08), Data: 04EAF416D0BEB50D
    Tag: Request Payload (0x420079), Type: Structure (0x01),
Data:
      Tag: Unique Identifier (0x420094), Type: Text String
(0x07), Data: 59fbf81d-574f-4f4f-9581-7785dc593f5f
```

```
420078010000012842007701000000484200690100000020420006A02000000040
00000010000000042006B02000000040000000000000000420010060000000800
0000000000000142000D020000000400000002000000042000F0100000070420
05C050000000400000013000000004200930800000083748B9E243205BA74200
7901000000484200940700000024353966626638316642D353734662D346634662
D393538312D3737383564633535393366356600000000042008101000000104200082
050000000400000006000000004200F010000005842005C050000000400000001
40000000042009308000000804EAF416D0BEB50D420079010000003042009407
00000024353966626638316642D353734662D346634662D393538312D373738356
4633539336635660000000
```

Out: uuidNewKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
```

```
    Tag: Protocol Version (0x420069), Type: Structure (0x01),
Data:
        Tag: Protocol Version Major (0x42006A), Type: Integer
(0x02), Data: 0x00000001 (1)
        Tag: Protocol Version Minor (0x42006B), Type: Integer
(0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data:
0x000000004B74262F (Thu Feb 11 16:45:51 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data:
0x00000002 (2)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data:
0x00000013 (Revoke)
    Tag: Unique Batch Item ID (0x420093), Type: Octet String
(0x08), Data: 3748B9E243205BA7
    Tag: Result Status (0x42007F), Type: Enumeration (0x05),
Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01),
Data:
        Tag: Unique Identifier (0x420094), Type: Text String
(0x07), Data: 59fbf81d-574f-4f4f-9581-7785dc593f5f
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data:
0x00000014 (Destroy)
    Tag: Unique Batch Item ID (0x420093), Type: Octet String
(0x08), Data: 04EAF416D0BEB50D
    Tag: Result Status (0x42007F), Type: Enumeration (0x05),
Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01),
Data:
        Tag: Unique Identifier (0x420094), Type: Text String
(0x07), Data: 59fbf81d-574f-4f4f-9581-7785dc593f5f
```

```
42007B010000013042007A010000004842006901000000204200 6A02000000040
0000001000000004 2006B0200000004000000000000000042009209000000000 800
0000004B74262F42000D02000000040000000 20000000042000F0100000068420
05C0500000004000000130000000042009308000000008 3748B9E243205BA74200
7F05000000040000000000000000042007C0100000030 420094070000002435396
662663831642D353734662D346634662D393538312D37373835646335 39336635
660000000042000F010000006842005C0500000004000000140000000042009309 30
80000000804EAF416D0BEB50D42007F0500000004000000000000000042007C01
00000030 4200940700000024353966662663831642D353734662D346634662D393
538312D37373835646633 5393366356600000000
```

230

~~10~~10 Archival

232

These use-cases test archiving and locating keys using the off-line indicator. If the server performs the
Archive and Recover operations asynchronously, the client Polls the server until the operations complete.
The client indicates in the request that it supports asynchronous responses.

~~10.1~~10.1 Use-case: 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

Time	Client A
0	Create (symmetric key) In: objectType='00000002', attributes={ CryptographicAlgorithm='AES', CryptographicLength='128', CryptographicUsageMask='0000000C', Name={ NameValue='archiveKey', NameType='00000001' } } Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create) Tag: Request Payload (0x420079), Type: Structure (0x01), Data: Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key) Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data: Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (AES) Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000080 (128) Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage Mask Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x0000000C (Encrypt, Decrypt) Tag: Attribute (0x420008), Type: Structure (0x01), Data: Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data: Tag: Name Value (0x420055), Type: Text String (0x07), Data: archiveKey Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string) 42007801000001684200770100000038420069010000002042006A0200000004000000010000000042006B02000000040 0000000000000000042000D020000000400000001000000042000F010000012042005C05000000040000000100000000042 007901000001084200570500000004000000020000000042009101000000F0420008010000003042000A0700000174373 727970746F6772617068696320416C676F726974686D0042000B050000000400000003000000004200080100000030420 0A0700000014437279707467206872617068696320C656E677468800000000042000B020000000400000080000000004200 8010000003042000A070000001843727970746F67726170686963205573616765204D61736B42000B0200000004000000 0C000000004200080100000004042000A07000000044E616D650000000042000B01000000284200550700000000A617263 86976654B65790000000000000042005405000000040000000100000000 Out: objectType='00000002', uuidKey Tag: Response Message (0x42007B), Type: Structure (0x01), Data: Tag: Response Header (0x42007A), Type: Structure (0x01), Data:

240 and archived storage. The Locate finds the key. Recover the key from the archive (also asynchronous),
241 both Locate and Get succeed.
242

	Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
	    Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
	    Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
	  Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B751FA3 (Fri Feb 12 10:30:11 CET 2010)
	  Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
	Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
	  Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
	  Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
	  Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
	    Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
	    Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0d552160-fb04-4f7c-8a73-fef905b21c0f
	
	42007B01000000C042007A010000004842006901000000204200 6A0200000004000000010000000042006B020000000400 00000000000000420092090000000800000004B751FA342000D0200000004000000010000000042000F010000006842 005C0500000004000000010000000042007F05000000040000000000000000042007C0100000040420057050000000400000000020000000042009407000000243064353532313630 2D666230342D346637632D386137332D666566393035623231633 06600000000

1	Locate
	In: attributes={ Name={ NameValue='archiveKey', NameType='00000001' } }
	
	Tag: Request Message (0x420078), Type: Structure (0x01), Data:
	  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
	    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
	      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
	      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
	    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
	  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
	    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
	    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
	      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
	        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type
	        Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
	      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
	        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
	        Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
	          Tag: Name Value (0x420055), Type: Text String (0x07), Data: archiveKey
	          Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted text string)
	
	42007801000000D8420077010000003842006901000000204200 6A020000000400000001000000004 2006B0200000004 0000000000000000420 00D02000000040000000100000000 42000F010000009042005C0500000040000000800000000 42 007901000000784200080101000028420 00A070000000B4F626A65637420547970650 0000000004 2000B0500000040000000020000000 42000801000000404200 0A07000000044E616D6500000000420 00B010000028420055070000000A6172 636869766 5654B6579000000000000004 20054050000000 40000000100000000
	
	Out: uuidKey
	
	Tag: Response Message (0x42007B), Type: Structure (0x01), Data:


```
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B751FA6 (Fri Feb 12
10:30:14 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0d552160-fb04-4f7c-8a73-
fef905b21c0f
```

```
42007B01000000B042007A0100000048420069010000002042006A02000000040000000100000000420006B02000000040
0000000000000042009209000000080000000004B751FA642000D020000000400000001000000000420000F01000000584200
5C050000000400000008000000000420007F05000000040000000000000000420007C0100000003042009407000000243066
4353532313630302D666230342D346637632D386137332D66656566393035623231633306600000000
```

| 2 | Get (symmetric key)
In: uuidKey |

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0d552160-fb04-4f7c-8a73-
fef905b21c0f
```

```
42007801000000904200770100000038420069010000002042006A02000000040000000100000000420006B02000000040
0000000000000042000D020000000400000001000000000420000F0100000048420005C050000000400000000A0000000042
0079010000003042009407000000243066435353231363302D666230342D346637632D386137332D66656566393030356232231631
3306600000000
```

Out: objectType = '00000002', uuidKey, symmetricKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B751FA7 (Fri Feb 12
10:30:15 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
```

	Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
	    Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
	    Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0d552160-fb04-4f7c-8a73-fef905b21c0f
	    Tag: Symmetric Key (0x42008F), Type: Structure (0x01), Data:
	     Tag: Key Block (0x420040), Type: Structure (0x01), Data:
	      Tag: Key Format Type (0x420042), Type: Enumeration (0x05), Data: 0x00000001
	      Tag: Key Value (0x420045), Type: Structure (0x01), Data:
	       Tag: Key Material (0x420043), Type: Octet String (0x08), Data: C3200B1291BA648DB9089DED3073DE74
	      Tag: Cryptographic Algorithm (0x420028), Type: Enumeration (0x05), Data: 0x00000003 (AES)
	      Tag: Cryptographic Length (0x42002A), Type: Integer (0x02), Data: 0x00000080 (128)
	
	42007B010000012042007A010000004842006901000000204 2006A02000000040000000100000 0042006B02000000040 00000000000000042009209000000080000000044B751FA742000D02000000040000000100000042000F01000000C84 2005C0500000004000000A0000000042007F050000000400000000000000042007C01000000A042005705000000040000 000200000000420094070000002430643535323136302D666230342D346637632D386137332D6665663930356232316 3066600000042008F010000005842004001000000504200450100000018420043080000001 0C3200B1291BA648DB9089DED3073DE744200280500000004000000030000000042002A020000000400000000
	8000000000

3	Archive
	In: uuidKey, asynchronousIndicator='true'
	
	Tag: Request Message (0x420078), Type: Structure (0x01), Data:
	 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
	  Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
	   Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
	   Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
	  Tag: Asynchronous Indicator (0x420007), Type: Boolean (0x06), Data: TRUE
	  Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
	 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
	  Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000015 (Archive)
	  Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
	   Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0d552160-fb04-4f7c-8a73-fef905b21c0f
	
	42007801000000A04200770100000048420069010000002042006A020000000400000001000000042006B0200000004000 00000000000004200070600000008000000000000000142000D020000000400000001000000042000F0100000004842 005C050000000400000015000000042007901000000304200940700000024306435353231363 02D666230342D346637 632D386137332D66656639303562323163306600000000
	
	Out: asynchronousCorrelationValue
	
	Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
	 Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
	  Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
	   Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
	   Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
	  Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B751FA7 (Fri Feb 12 10:30:15 CET 2010)
	  Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)

```
    Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
        Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000015 (Archive)
        Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000002 (Operation Pending)
        Tag: Asynchronous Correlation Value (0x420006), Type: Octet String (0x08), Data:
F17893DB51652969
```

42007B010000008842007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
000000000000000420092090000000800000004B751FA742000D0200000004000000010000000042000F010000003042
005C050000000400000015000000004200 7F05000000040000000200000000420006080000008F17893DB51652969

4	Poll*

In: asynchronousCorrelationValue

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000001A (Poll)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Asynchronous Correlation Value (0x420006), Type: Octet String (0x08), Data:
F17893DB51652969
```

42007801000000704200770100000038420069010000002042006A0200000004000000010000000042006B02000000040
0000000000000004 2000D0200000004000000010000000042000F010000002842005C050000000400000001A0000000042
0079010000001042000608000000008F17893DB51652969

Out: uuidKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B751FAA (Fri Feb 12
10:30:18 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000015 (Archive)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0d552160-fb04-4f7c-8a73-
fef905b21c0f
```

42007B01000000B042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
00000000000000004200920900000008000000004B751FAA42000D0200000004000000010000000042000F010000005842
005C050000000400000015000000004200 7F05000000040000000000000000420 07C0100000030420094070000002430 6
43535323136302D666230 34 2D34663763 2D386137332D666566393035623231633 0660000000 0

5	Get (symmetric key)

In: uuidKey

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0d552160-fb04-4f7c-8a73-
fef905b21c0f
```

```
42007801000000904200770100000038420069010000002042006A0200000004000000010000000042006B02000000040
00000000000000042000D02000000040000000100000000420000F010000004842005C05000000040000000A0000000042
00790100000030420094070000002430643535323136302D666230342D346637632D386137332D66656639303035623231
6330660000000
```

Out: Operation Failed, ~~Item Not Found~~Object Archived

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B751FAC (Fri Feb 12
10:30:20 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000001 (Operation Failed)
    Tag: Result Reason (0x42007E), Type: Enumeration (0x05), Data: 0x0000000D (Object Archived)
    Tag: Result Message (0x42007D), Type: Text String (0x07), Data: Object is archived
```

```
42007B01000000A842007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
0000000000000042009209000000080000000004B751FAC42000D020000000400000001000000004200F010000005042
005C05000000040000000A0000000042007F05000000040000000100000000420007E0500000004000000000D000000004200
07D07000000124F626A656374206973206172636869766564000000000000
```

6	Get Attribute (Archive Date)

In: uuidKey, attributeName='ArchiveDate'

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
```

      Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
          Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0d552160-fb04-4f7c-8a73-fef905b21c0f
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Archive Date

42007801000000A8420077010000003842006901000000204200 6A020000000400000001000000042006B02000000040
000000000000000042000D02000000040000000100000004 2000F010000006042005C050000004000000000B0000000042
007901000000484200940700000024306435 3532313630 2D666230342D346637632D386137332D66656566393030356232316
33066000000004 2000A070000000C41726368697665204461746500000000

Out: uuidKey, attribute={ ArchiveDate }

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
       Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
       Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
     Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B751FAC (Fri Feb 12 10:30:20 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
       Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0d552160-fb04-4f7c-8a73-fef905b21c0f
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
         Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Archive Date
         Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x000000004B751FAA (Fri Feb 12 10:30:18 CET 2010)

42007B01000000E042007A01000000484200690100000020 4200 6A020000000400000001000000042006B02000000040
000000000000000042009209090000000 8000000004B751FAC42000D0200000004 00000001000000042000F010000008842
005C05000000040000000B0000000042007F0500000004 00000000000000042007C01000000604200940700000024306
43535323136302D666230342D346637632D386137332D6665 666 39303 35623231633066000000004 200801000000284200
0A070000000C41726368697665204461746500000000042000B0900000008000000004B751FAA

67	Locate
	In: attributes={ Name={ NameValue='archiveKey', NameType='00000001' } }
	Out: Operation Failed, Item Not Found

	Tag: Request Message (0x420078), Type: Structure (0x01), Data:
	  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
	    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
	       Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
	       Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
	    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
	  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
	    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
	    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
	       Tag: Attribute (0x420008), Type: Structure (0x01), Data:
	         Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type
	         Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric

Key)
        Tag: Attribute (0x420008), Type: Structure (0x01), Data:
          Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
          Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
            Tag: Name Value (0x420055), Type: Text String (0x07), Data: archiveKey
            Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted
text string)

42007801000000D8420077010000003842006901000000204200 6A020000000400000001000000042006B02000000040
0000000000000000042000D020000000400000001000000042000F010000009042005C0500000004000000080000000042
0079010000007842000801000000284 2000A070000000B4F626A6563742054797065500000000042000B0500000004000
0000020000000042000801000000404 2000A07000000044E616D65500000000042000B01000000284200 550 70000000A6172
63686976654B6579000000000000004 2005 405000000040000000100000000

Out: <empty response payload>

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B751FAC (Fri Feb 12
10:30:20 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data: null

42007B010000008042007A0100000048420069010000002042006A0200000004000000010000000042006B0200000004 0
000000000000000042009209000000080000000 04B751FAC42000D0200000004000000010000000042000F010000002842
005C05000000040000000800000000 42007F05000000040000000000000000 42007C0100000000

78	Locate
	In: storageStatusMask='00000003', attributes={ Name={ NameValue='archiveKey',
	NameType='00000001' } }
	
	Tag: Request Message (0x420078), Type: Structure (0x01), Data:
	  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
	    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
	      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
	      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
	    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
	  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
	    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
	    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
	      Tag: Storage Status Mask (0x42008E), Type: Integer (0x02), Data: 0x00000003 (3)
	      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
	        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Object Type
	        Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric
	Key)
	      Tag: Attribute (0x420008), Type: Structure (0x01), Data:

```
42007801000000E842007701000000384200690100000020420 06A02000000040000000100000000 42006B02000000040
0000000000000000042000D02000000040000000100000000420 02F01000000A042005C05000000040000000800000000042
0079010000008842008E0200000004000000030000000042000 80100000028420 0A07000000 0B4F626A6563742054797
0650000000000042000B05000000040000000200000000420008 010000000404 2000A07000000 044E616D650000000042 00
0B010000002842 0055070000000A617263686976654B657900 0000000000042005405000000040000000100000000
```

Out: uuidKey

```
42007B01000000B042007A010000004842006901000000204200 6A02000000040000000100000000 42006B02000000040
00000000000000004200920900000008000000004B751FAC42000 D020000000400000001000000004200 0F0100000058 42
005C0500000004000000080000000042007F0500000004000000 0000000000042007C01000000 304200940700000024306
43535323136302D666230342D346637632D386137332D66656639 30356232316330660000000000
```

89	Recover

In: uuidKey, asynchronousIndicator='true'

```
42007801000000A04200770100000048420069010000002042006 A02000000040000000100000000 42006B02000000040
000000000000000004200070600000008000000000000000142000 D02000000040000000100000000 42000F010000004842
005C0500000004000000160000000042007901000000304200940 7000000243064353532313630 2D666230342D3466637
```

32D386137332D6665663930356232323163306600000000

Out: asynchronousCorrelationValue

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B751FAC (Fri Feb 12
10:30:20 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000016 (Recover)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000002 (Operation Pending)
    Tag: Asynchronous Correlation Value (0x420006), Type: Octet String (0x08), Data:
DDBB075607727F3F
```

42007B010000008842007A01000000484200690100000020042006A0200000004000000010000000042006B02000000040
00000000000000042009209000000080000000004B751FAC42000D020000000400000001000000042000F010000003042
005C05000000040000001600000000042007F050000000400000002000000000420006080000000DDBB075607727F3F

910	Poll*

In: asynchronousCorrelationValue

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000001A (Poll)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Asynchronous Correlation Value (0x420006), Type: Octet String (0x08), Data:
DDBB075607727F3F
```

42007801000000704200770100000038420069010000002042006A0200000004000000010000000042006B02000000040
00000000000000042000D0200000004000000010000000042000F010000002842005C05000000040000001A0000000042
0079010000001042000608000000080DDBB075607727F3F

Out: uuidKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B751FB3 (Fri Feb 12
10:30:27 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
```

```
    Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
       Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000016 (Recover)
       Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
       Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
          Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0d552160-fb04-4f7c-8a73-
fef905b21c0f
```

42007B01000000B042007A0100000048420069010000002042006A020000000400000001000000042006B020000000400
000000000000004200920900000008000000004B751FB342000D0200000004000000010000000042000F010000005842
005C0500000004000000160000000042007F0500000004000000000000000042007C0100000030420094070000002430
643535323136302D666230342D346637632D386137332D6665663930353623231633066000000000

<table>
<tr><td>1011</td><td>

Get (symmetric key)

In: uuidKey

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0d552160-fb04-4f7c-8a73-
fef905b21c0f
```

42007801000000904200770100000038420069010000002042006A020000000400000001000000042006B020000000400
0000000000000042000D0200000004000000010000000042000F010000004842005C050000000400000000A0000000042
00790100000030420094070000002430643535323136302D666230342D346637632D386137332D6665663930356232316
3306600000000

Out: objectType = '00000002', uuidKey, symmetricKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B751FB3 (Fri Feb 12
10:30:27 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0d552160-fb04-4f7c-8a73-
fef905b21c0f
      Tag: Symmetric Key (0x42008F), Type: Structure (0x01), Data:
        Tag: Key Block (0x420040), Type: Structure (0x01), Data:
          Tag: Key Format Type (0x420042), Type: Enumeration (0x05), Data: 0x00000001
```
</td></tr>
</table>

		Tag: Key Value (0x420045), Type: Structure (0x01), Data:
		    Tag: Key Material (0x420043), Type: Octet String (0x08), Data:
		C3200B1291BA648DB9089DED3073DE74
		    Tag: Cryptographic Algorithm (0x420028), Type: Enumeration (0x05), Data: 0x00000003
		(AES)
		    Tag: Cryptographic Length (0x42002A), Type: Integer (0x02), Data: 0x00000080 (128)
		
		42007B010000012042007A010000004842006901000000200420066A020000000400000001000000042006B02000000040
		00000000000000420092090000000080000000004B751FB342000D02000000040000000100000000420000F01000000C842
		005C0500000004000000A000000042007F0500000004000000000000042007C01000000A042005705000000040000
		000020000000042009407000000243064353532313630D666230342D346637632D386137332D366566393035623231631
		30660000000042008F0100000005842004001000000504200420500000004000000010000000042004501000000184200
		430800000010C3200B1291BA648DB9089DED3073DE7442002805000000040000000300000000420000002A020000000400000
		8000000000

11~~12~~		Destroy
		In: uuidKey
		
		Tag: Request Message (0x420078), Type: Structure (0x01), Data:
		  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
		    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
		      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
		      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
		    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
		  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
		    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
		    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
		      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0d552160-fb04-4f7c-8a73-
		fef905b21c0f
		
		42007801000000904200770100000038420069010000002004200066A0200000004000000010000000042006B02000000040
		00000000000000042000D020000000400000001000000042000F010000004842005C05000000040000001400000000042
		007901000000304200940700000024306435353231363302D666230342D346637632D386137332D3666566393035623231
		33306600000000
		
		Out: uuidKey
		
		Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
		  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
		    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
		      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
		      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
		    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B751FB4 (Fri Feb 12
		10:30:28 CET 2010)
		    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
		  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
		    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
		    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
		    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
		      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 0d552160-fb04-4f7c-8a73-
		fef905b21c0f
		
		42007B01000000B042007A010000004842006901000000200420066A020000000400000001000000042006B02000000040
		00000000000000420092090000000080000000004B751FB442000D02000000040000000100000000420000F010000005842

```
005C050000000400000014000000004200 7F0500000004000000000000000042007C0100000030 42009 40700000024306
43535323136302D666230342D346637632D386137332D6665663930 35 6232316330 6600000000
```

243

244

11 Access Control, Policies

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These use-cases test attributes and objects related to access control and server policy.

11.1 Use-case: Credential, Operation Policy, Destroy Date

Pass a Credential object in the message header in all requests for identification purposes (how the Credential object is used is defined in **[KMIP-Prof]**). 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 Atttribute 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 use case are based on a certain server policy (e.g. handling of Credentials) that in some aspects differs from the policy assumed in earlier use cases (e.g. in this use case, the Destroy Date is retained). As mentioned in Section 1 , the message exchanges shown in this document are not the only correct alternatives.

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Time	Request/Response
0	Create (symmetric key) In (header): credential={ credentialType='1', credentialValue={ username="Fred", password="password1" }} In: objectType='00000002', attributes={ CryptographicAlgorithm='AES', CryptographicLength='128', CryptographicUsageMask='0000000C', Name={ NameValue='PolicyKey', NameType='00000001' }, OperationPolicyName='default', CryptographicParameters={ BlockCipherMode='1', PaddingMethod='3', HashingAlgorithm='4'} } Tag: Request Message (0x420078), Type: Structure (0x01), Data: Tag: Request Header (0x420077), Type: Structure (0x01), Data: Tag: Protocol Version (0x420069), Type: Structure (0x01), Data: Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0) Tag: Authentication (0x42000C), Type: Structure (0x01), Data: Tag: Credential (0x420023), Type: Structure (0x01), Data: Tag: Credential Type (0x420024), Type: Enumeration (0x05), Data: 0x00000001 (Username and Password) Tag: Credential Value (0x420025), Type: Structure (0x01), Data: Tag: Username (0x420099), Type: Text String (0x07), Data: Fred Tag: Password (0x4200A1), Type: Text String (0x07), Data: password1 Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1) Tag: Batch Item (0x42000F), Type: Structure (0x01), Data: Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create) Tag: Request Payload (0x420079), Type: Structure (0x01), Data:

```
        Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
        Tag: Template-Attribute (0x420091), Type: Structure (0x01), Data:
          Tag: Attribute (0x420008), Type: Structure (0x01), Data:
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Algorithm
            Tag: Attribute Value (0x42000B), Type: Enumeration (0x05), Data: 0x00000003 (AES)
          Tag: Attribute (0x420008), Type: Structure (0x01), Data:
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Length
            Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x00000080 (128)
          Tag: Attribute (0x420008), Type: Structure (0x01), Data:
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic Usage
Mask
            Tag: Attribute Value (0x42000B), Type: Integer (0x02), Data: 0x0000000C (Encrypt,
Decrypt)
          Tag: Attribute (0x420008), Type: Structure (0x01), Data:
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Name
            Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
              Tag: Name Value (0x420055), Type: Text String (0x07), Data: PolicyKey
              Tag: Name Type (0x420054), Type: Enumeration (0x05), Data: 0x00000001 (Uninterpreted
text string)
          Tag: Attribute (0x420008), Type: Structure (0x01), Data:
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Operation Policy Name
            Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: default
          Tag: Attribute (0x420008), Type: Structure (0x01), Data:
            Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Cryptographic
Parameters
            Tag: Attribute Value (0x42000B), Type: Structure (0x01), Data:
              Tag: Block Cipher Mode (0x420011), Type: Enumeration (0x05), Data: 0x00000001 (CBC)
              Tag: Padding Method (0x42005F), Type: Enumeration (0x05), Data: 0x00000003 (PKCS5)
              Tag: Hashing Algorithm (0x420038), Type: Enumeration (0x05), Data: 0x00000004 (SHA-1)
```

```
420078010000025042007701000000884200690100000020420006A02000000004000000010000000042006B02000000040
0000000000000000042000C01000000484200230100000040420024050000000400000001000000004200250100000028420
0099070000000446726564000000004200A1070000000970617373776F72643100000000000000042000D0200000004000
0000010000000042000F01000001B842005C0500000004000000010000000042007901000001A04200570500000004000000
0002000000004200910100000188420008010000003042000A070000001743727970746F6772617068696320416C676F6F7
26974686D0042000B05000000040000000300000000420008010000003042000A070000001443727970746F6772617068069
6963204C656E6774680000000042000B020000000400000008000000004200080100000030420000A070000001843727979
0746F677261706869632055736167652204D61736B42000B0200000004000000000C00000000420008010000004042000A07
000000044E616D650000000042000B01000000284200550700000009506F6C6963794B65790000000000000000420054050
000000040000000010000000042000801000000304200A07000000154F7065726174696F6E20506F6C696379204E616D65
00000042000B0700000007646566617574740042000801000000584200A070000001843727970746F677261706869632
0506172616D657465727342000B010000003042001105000000040000000010000000042005F05000000040000000300000
0000042003805000000040000000040000000
```

Out: objectType='00000002', uuidKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B9F8B4B (Tue Mar 16
14:44:43 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
```

```
      Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
         Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
         Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
         Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
            Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
            Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 63478615-8b6d-4c70-bc23-
8d164817555b
```

```
42007B01000000C042007A010000004842006901000000020420066A020000000400000001000000042006B02000000040
0000000000000004200920900000008000000004B9F8B4B42000D0200000004000000010000000042000F010000006842
005C050000000400000001000000042007F05000000040000000000000000042007C0100000040420057050000000400000
00000200000000420094070000002436333437383631352D386236642D346337302D626332332D38643136343831373535
356200000000
```

1	Client A
	Get Attributes, Get
	In (header): credential={ credentialType='1', credentialValue={ username="Fred", password="password1" } }
	In: attributeName='Operation Policy Name'
	In: uuidKey

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Authentication (0x42000C), Type: Structure (0x01), Data:
      Tag: Credential (0x420023), Type: Structure (0x01), Data:
        Tag: Credential Type (0x420024), Type: Enumeration (0x05), Data: 0x00000001 (Username and
Password)
        Tag: Credential Value (0x420025), Type: Structure (0x01), Data:
          Tag: Username (0x420099), Type: Text String (0x07), Data: Fred
          Tag: Password (0x4200A1), Type: Text String (0x07), Data: password1
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
    Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 4CBB6751574C4DA8
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 63478615-8b6d-4c70-bc23-
8d164817555b
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Operation Policy Name
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
    Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 0EA05EE703DA997B
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 63478615-8b6d-4c70-bc23-
8d164817555b
```

```
4200780100000170420077010000008842006901000000020420066A020000000400000001000000042006B02000000040
0000000000000004200C010000004842002301000000404200240500000004000000010000000042002501000000284200
0990700000004446726564000000004200A107000000097061737373776F72643100000000042000D0200000004000
0000200000000042000F010000007842005C0500000004000000B000000004200930800000084CBB6751574C4DA84200
79010000005042009407000000243633343738363135 2D386236642D346337302D626332332D386431363438313735353
```

5620000000042000A07000000154F7065726174696F6E20506F6C696379204E616D6500000042000F010000005842005C
0500000040000000A0000000042009308000000080EA05EE703DA997B42007901000000304200940700000243633334
37383631352D386236642D346337302D626332322D38643136343831373535356200000000

Out: attributes={ OperationPolicyName='Default' }

Out: objectType = '00000002', uuidKey, symmetricKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B9F8B4C (Tue Mar 16
14:44:44 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
    Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 4CBB6751574C4DA8
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 63478615-8b6d-4c70-bc23-
8d164817555b
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Operation Policy Name
        Tag: Attribute Value (0x42000B), Type: Text String (0x07), Data: default
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
    Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: 0EA05EE703DA997B
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 63478615-8b6d-4c70-bc23-
8d164817555b
      Tag: Symmetric Key (0x42008F), Type: Structure (0x01), Data:
        Tag: Key Block (0x420040), Type: Structure (0x01), Data:
          Tag: Key Format Type (0x420042), Type: Enumeration (0x05), Data: 0x00000001
          Tag: Key Value (0x420045), Type: Structure (0x01), Data:
            Tag: Key Material (0x420043), Type: Octet String (0x08), Data:
C520FCA4E681F7BFFB3523D71427D594
          Tag: Cryptographic Algorithm (0x420028), Type: Enumeration (0x05), Data: 0x00000003
(AES)
          Tag: Cryptographic Length (0x42002A), Type: Integer (0x02), Data: 0x00000080 (128)
```

42007B01000001D842007A01000000484200690100000020042006A0200000004000000010000000042006B02000000040
00000000000000042009209000000080000000004B9F8B4C42000D020000000400000002000000042000F01000000A042
005C0500000004000000B000000004200930800000084CBB6751574C4DA842007F0500000004000000000000000420
07C010000006842009407000000243633343738363135322D386236642D346337302D626332322D38643136343831373535
3562000000000420008010000003042000A07000000154F7065726174696F6E20506F6C696379204E616D6500000042000
B070000000764656661756C740042000F01000000D842005C05000000040000000A0000000042009308000000080EA05E
E703DA997B42007F05000000040000000420007C010000000A042005705000000040000000200000000042009407
00000243633343738363135322D386236642D346337302D626332322D386433313634383137353535356200000000042008F01
0000005842004001000000504200420500000004000000010000000420045010000001842004308000000010C520FCA4E
681F7BFFB3523D71427D5944200280500000004000000030000000042002A02000000040000080000000000

2	Client B
	Get (symmetric key), Get Attribute List
	In (header): credential={ credentialType='1', credentialValue={ username="Barney", password="secret2" } }, BatchOrderOption='true', BatchErrorContinuationOption='Continue'
	In: uuidKey
	In: uuidKey
	Tag: Request Message (0x420078), Type: Structure (0x01), Data:
	Tag: Request Header (0x420077), Type: Structure (0x01), Data:
	Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
	Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
	Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
	Tag: Authentication (0x42000C), Type: Structure (0x01), Data:
	Tag: Credential (0x420023), Type: Structure (0x01), Data:
	Tag: Credential Type (0x420024), Type: Enumeration (0x05), Data: 0x00000001 (Username and Password)
	Tag: Credential Value (0x420025), Type: Structure (0x01), Data:
	Tag: Username (0x420099), Type: Text String (0x07), Data: Barney
	Tag: Password (0x4200A1), Type: Text String (0x07), Data: secret2
	Tag: Batch Order Option (0x420010), Type: Boolean (0x06), Data: TRUE
	Tag: Batch Error Continuation Option (0x42000E), Type: Enumeration (0x05), Data: 0x00000001
	Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
	Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
	Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
	Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: E3E72D5A352687D8
	Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
	Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 63478615-8b6d-4c70-bc23-8d164817555b
	Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
	Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000C (Get Attribute List)
	Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: A9A1D60B0C62ECAF
	Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
	Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 63478615-8b6d-4c70-bc23-8d164817555b

420078010000016842007701000000A042006901000000204200 6A0200000004000000010000000042006B02000000040
0000000000000004200 0C0100000040420023010000003842002405000000040000000100000004200250100000002042
00990700000006426172 6E65790000420 0A107000000077365637265743200420010060000000800000000000001420
00E05000000040000000100000004 2000D0200000004000000020000000042000F010000005842005C05000000040000
000A00000000420093080000000 8E3E72D5A352687D842007901000000304200940700000024363333437383631352D386
236642D346337302D6263323 2D386431363438313735353520000000004200 0F010000005842005C05000000040000000
0C00000000042009308000000008A9A1D60B0C62ECAF42007901000000304200940700000024363333437383631352D38623
6642D346337302D626332 32 2D38643136343831373535356200000000

	Out: Operation Failed, Permission Denied
	Out: Operation Failed, Permission Denied
	Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
	Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
	Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:

```
       Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
       Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
   Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B9F8B4D (Tue Mar 16
14:44:45 CET 2010)
   Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000002 (2)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
   Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
   Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: E3E72D5A352687D8
   Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000001 (Operation Failed)
   Tag: Result Reason (0x42007E), Type: Enumeration (0x05), Data: 0x0000000C (Permission Denied)
   Tag: Result Message (0x42007D), Type: Text String (0x07), Data: Access denied
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
   Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000C (Get Attribute List)
   Tag: Unique Batch Item ID (0x420093), Type: Octet String (0x08), Data: A9A1D60B0C62ECAF
   Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000001 (Operation Failed)
   Tag: Result Reason (0x42007E), Type: Enumeration (0x05), Data: 0x0000000C (Permission Denied)
   Tag: Result Message (0x42007D), Type: Text String (0x07), Data: Access denied
```

```
42007B010000011042007A0100000048420069010000002042006A0200000004000000010000000042006B02000000040
0000000000000042009209000000080000000004B9F8B4D42000D020000000400000002000000042000F010000005842
005C0500000004000000A00000000420093080000008E3E72D5A352687D842007F05000000040000000100000000420
07E05000000040000000C0000000042007D070000000D4163636573732064656E696564000000420F01000000584200
5C0500000004000000C00000000420093080000008A9A1D60B0C62ECAF42007F050000000400000001000000042007
E05000000040000000C0000000042007D070000000D4163636573732064656E696564000000
```

3	Destroy

Destroy

In (header): credential={ credentialType='1', credentialValue={ username="Fred", password="password1" }}

In: uuidKey

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
 Tag: Request Header (0x420077), Type: Structure (0x01), Data:
   Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
     Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
     Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
   Tag: Authentication (0x42000C), Type: Structure (0x01), Data:
     Tag: Credential (0x420023), Type: Structure (0x01), Data:
       Tag: Credential Type (0x420024), Type: Enumeration (0x05), Data: 0x00000001 (Username and
Password)
       Tag: Credential Value (0x420025), Type: Structure (0x01), Data:
         Tag: Username (0x420099), Type: Text String (0x07), Data: Fred
         Tag: Password (0x4200A1), Type: Text String (0x07), Data: password1
   Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
 Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
   Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
   Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
     Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 63478615-8b6d-4c70-bc23-
8d164817555b
```

```
42007801000000E04200770100000088420069010000002042006A0200000004000000010000000042006B02000000040
00000000000000042000C0100000048420023010000004042002405000000040000000100000004200250100000028420
00990700000004446726564000000004200A10700000009706173737760726431000000000042000D0200000004000
000010000000042000F010000004842005C0500000004000000140000000420079010000003042009407000000243633
```

3437383631352D386236642D346337302D626332332D38643136343831373535356200000000

Out: uuidKey

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B9F8B4D (Tue Mar 16
14:44:45 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 63478615-8b6d-4c70-bc23-
8d164817555b
```

42007B01000000B042007A0100000048420069010000002042006A020000000400000001000000042006B02000000040
00000000000000042009209000000080000000004B9F8B4D42000D0200000004000000010000000042000F010000005842
005C050000000400000014000000042007F0500000004000000000000000042007C01000000304200940700000024363
33437383631352D386236642D346337302D626332332D38643136343831373535356200000000

<u>4</u>	<u>Get Attributes</u> <u>In (header): credential={ credentialType='1', credentialValue={ username="Fred", password="password1" }}</u> <u>In: uuidKey, attributeNames={ 'Destroy Date' }</u>

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Authentication (0x42000C), Type: Structure (0x01), Data:
      Tag: Credential (0x420023), Type: Structure (0x01), Data:
        Tag: Credential Type (0x420024), Type: Enumeration (0x05), Data: 0x00000001 (Username and
Password)
        Tag: Credential Value (0x420025), Type: Structure (0x01), Data:
          Tag: Username (0x420099), Type: Text String (0x07), Data: Fred
          Tag: Password (0x4200A1), Type: Text String (0x07), Data: password1
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 63478615-8b6d-4c70-bc23-
8d164817555b
      Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Destroy Date
```

42007801000000F8420077010000008842006901000000204A2006A020000000400000001000000042006B02000000040
00000000000000042000C010000004842002301000000404200240500000004000000010000000420025010000002842
009907000000044672656400000004200A107000000970617373776F726431000000000000000042000D0200000004000

000010000000042000F010000006042005C050000000400000000B0000000042007901000000484200940700000024363334373833363131352D386236642D346337302D626332332D38643136343438313735353536200000000042000A070000000C44657374726F7920446174650000000000

Out: uuidKey, attributes={ DestroyDate=' 0x000000004B9F8B4D' }

Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B9F8B4E (Tue Mar 16 14:44:46 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Unique Identifier (0x420094), Type: Text String (0x07), Data: 63478615-8b6d-4c70-bc23-8d164817555b
      Tag: Attribute (0x420008), Type: Structure (0x01), Data:
        Tag: Attribute Name (0x42000A), Type: Text String (0x07), Data: Destroy Date
        Tag: Attribute Value (0x42000B), Type: Date-Time (0x09), Data: 0x000000004B9F8B4D (Tue Mar 16 14:44:45 CET 2010)

42007B01000000E042007A010000004842006901000000204200696A0200000004000000010000000042006B02000000040000000000000000420092090000000800000000046B8F8B4E42000D0200000004000000010000000042000F010000008842005C0500000004000000000B0000000042007F050000000400000000000000000042007C01000000604200940700000024363334373833363131352D386236642D346337302D626332332D38643136343438313735353536200000000042000801000000284200F0A070000000C44657374726F79204461746500000000042000B090000000800000000046B8F8B4D

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Maximum Response Size (0x420050), Type: Integer (0x02), Data: 0x00000100 (256)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000018 (Query)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Query Function (0x420074), Type: Enumeration (0x05), Data: 0x00000001 (Operations)
      Tag: Query Function (0x420074), Type: Enumeration (0x05), Data: 0x00000002 (Objects)
```

420078010000009042007701000000484200690100000020420006A0200000004000000010000000042006B020000000040
0000000000000004200500020000000400000100000000042000D02000000040000000100000042000F010000003842
005C0500000004000000180000000042007901000000204200740500000004000000010000000420074050000000004000
0000200000000

Out: Operation Failed, Response Too Large

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B7918AA (Mon Feb 15 10:49:30 CET 2010)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000001 (Operation Failed)
    Tag: Result Reason (0x42007E), Type: Enumeration (0x05), Data: 0x00000002 (Response Too Large)
    Tag: Result Message (0x42007D), Type: Text String (0x07), Data: Response size: 568, Maximum Response Size indicated in request: 256
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000000 (0)
```

42007B01000000C042007A01000000B84200690100000020420006A0200000004000000010000000042006B020000000040
0000000000000004200920900000008000000004B7918AA42007F05000000040000000100000000042007E0500000000400
00000200000000042007D0700000043526573706F6E736520736978A653A203536382C204D6178696D756D20526573706F6
E73652053697A6520696E646963617465642069672072657175657374413A2032353600000000042000D0200000004000000
00000000000000

Query (operations, objects)
In (header): maximumResponseSize='2048'
In: queryFunctions={ '00000001', '00000002' }

```
Tag: Request Message (0x420078), Type: Structure (0x01), Data:
  Tag: Request Header (0x420077), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Maximum Response Size (0x420050), Type: Integer (0x02), Data: 0x00000800 (2048)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
```

```
     Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000018 (Query)
    Tag: Request Payload (0x420079), Type: Structure (0x01), Data:
      Tag: Query Function (0x420074), Type: Enumeration (0x05), Data: 0x00000001 (Operations)
      Tag: Query Function (0x420074), Type: Enumeration (0x05), Data: 0x00000002 (Objects)
```

420078010000009042007701000000484200690100000020420069010000002042006A0200000004000000010000000042006B0200000040
00000000000000000420050020000000400000800000000000042000D02000000040000000100000004042000F01000000384200
5C05000000040000001800000000420079010000002042007405000000040000000100000004200074050000000400000
00000200000000

Out: operations, objects

```
Tag: Response Message (0x42007B), Type: Structure (0x01), Data:
  Tag: Response Header (0x42007A), Type: Structure (0x01), Data:
    Tag: Protocol Version (0x420069), Type: Structure (0x01), Data:
      Tag: Protocol Version Major (0x42006A), Type: Integer (0x02), Data: 0x00000001 (1)
      Tag: Protocol Version Minor (0x42006B), Type: Integer (0x02), Data: 0x00000000 (0)
    Tag: Time Stamp (0x420092), Type: Date-Time (0x09), Data: 0x000000004B7918AA (Mon Feb 15
10:49:30 CET 2010)
    Tag: Batch Count (0x42000D), Type: Integer (0x02), Data: 0x00000001 (1)
  Tag: Batch Item (0x42000F), Type: Structure (0x01), Data:
    Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000018 (Query)
    Tag: Result Status (0x42007F), Type: Enumeration (0x05), Data: 0x00000000 (Success)
    Tag: Response Payload (0x42007C), Type: Structure (0x01), Data:
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000001 (Create)
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000002 (Create Key Pair)
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000003 (Register)
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000004 (Re-key)
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000008 (Locate)
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000009 (Check)
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000A (Get)
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000B (Get Attributes)
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000C (Get Attribute List)
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000D (Add Attribute)
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000E (Modify Attribute)
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000000F (Delete Attribute)
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000010 (Obtain Lease)
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000011 (Get Usage
Allocation)
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000012 (Activate)
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000013 (Revoke)
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000014 (Destroy)
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000015 (Archive)
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000016 (Recover)
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000018 (Query)
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x00000019 (Cancel)
      Tag: Operation (0x42005C), Type: Enumeration (0x05), Data: 0x0000001A (Poll)
      Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000001 (Certificate)
      Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000002 (Symmetric Key)
      Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000003 (Public Key)
```

```
        Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000004 (Private Key)
        Tag: Object Type (0x420057), Type: Enumeration (0x05), Data: 0x00000006 (Template)


42007B01000000230 42007A010000004842006901000000204 2006A020000000400000001000000042006B02000000040
00000000000000042009209000000080000000044B7918AA42000D02000000040000000100000004 2000F01000001D842
005C05000000040000001800000000 42007F05000000040000000000000000 42007C01000001B042005C0500000004000
000010000000042005C05000000040000000200000000 42005C05000000040000000300000000 42005C0500000004 0000
000400000000 42005C05000000040000000800000000 42005C05000000040000000900000000 42005C0500000004000000
00A00000000 42005C0500000004000000 0B0000000042005C0500000004000000 0C0000000042005C0500000004 0000000
00D00000000 42005C0500000004000000 0E0000000042005C0500000004000000 0F0000000042005C0500000004 00000001
000000000042005C0500000004000000 110000000042005C0500000004000000 120000000042005C0500000004 00000013
000000000042005C0500000004000000 140000000042005C0500000004000000 15000000004 2005C0500000004000000160
000000000042005C0500000004000000 180000000042005C0500000004000000 190000000042005C0500000004000000 1A00
0000000042005705000000040000000100000000 42005705000000040000000200000000 42005705000000040000000 3000
00000004 2005705000000040000000400000000 42005705000000040000000600000000
```

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~~11~~13 Implementation Conformance

274 This document is intended to be informational only and as such has no conformance clauses. The
275 conformance requirements for the KMIP ~~specification~~Specification can be found in the "KMIP
276 Specification" document itself, at the URL noted on the cover page of this document.

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371 # B. Revision History

Revision	Date	Editor	Changes Made
ed-0.98	2009-04-28	Mathias Björkqvist	Initial conversion of input document to OASIS format.
ed-0.98	2009-08-06	Mathias Björkqvist	Changes to layout and message content to reflect the recent changes to the KMIP specification, added descriptions to the use-cases for which they were missing.
ed-0.98	2009-09-28	Mathias Björkqvist	Updated messages and TTLV encodings to conform with KMIP specification ed-0.98 rev 17.
draft-01	2009-10-08	Mathias Björkqvist	Removed normative words "must", "shall", "required", "will" and "can"; updated messages and TTLV encodings to conform to KMIP specification ed-0.98 rev 19; added normative references; added minor edits
draft-02	2009-10-15	Mathias Björkqvist	Replaced the TBDs, changed status to Committee Draft, changed use-cases to use protocol major version 1 and minor version 0
draft-03	2009-10-15	Mathias Björkqvist	Corrected names of TC chairs
draft-04	2009-11-05	Mathias Björkqvist	Added list of participants, added reference to Profiles document, line spacing change to list of original contributors, added related documents
cd-05	2009-11-06	Mathias Björkqvist	Changes to various naming aspects on front page and document footer. This is the tentative version for public review.

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cd-06	2009-11-12	Mathias Björkqvist	Updated tags.
cd-07	2010-02-17	Mathias Björkqvist	Addressed public review comments, added line numbering.
cd-08	2010-03-17	Mathias Björkqvist	Registration of Templates changed to use the Template object, Usage Allocation changes (Add Attribute, Check, Get Usage Allocation), batched Revoke requests with Destroy requests when destroying objects in the Active state, adopted new format for Username and Password Credential object.
cd-09	2010-03-18	Mathias Björkqvist	Updated participants' list. Editorial fixes.

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