OSLC Architecture Management Version 2.1. Part 2: Vocabulary

Committee Specification 01

09 October 2018

Specification URIs

This version:

Previous version:
- N/A

Latest version:

Technical Committee:
- OASIS OSLC Lifecycle Integration Domains TC

Chairs:
- Jim Amsden (jamsden@us.ibm.com), IBM
- Graham Bachelor (gray_bachelor@uk.ibm.com), IBM

Editor:
- Jim Amsden (jamsden@us.ibm.com), IBM

Additional artifacts:
This specification is one component of a Work Product that also includes:


Related work:
This specification is related to:

Abstract:
This specification defines a vocabulary and resource shapes for the OSLC Architecture Management domain.

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

TC members should send comments on this specification to the TC’s email list. Others should send comments to the TC’s public comment list oslc-domains@lists.oasis-open.org, after subscribing to it by following the instructions at the “Send A Comment” button on the TC’s web page at https://www.oasis-open.org/committees/oslc-domains/.

This specification is provided under the RF on Limited Terms Mode of the OASIS IPR Policy, the mode chosen when the Technical Committee was established. 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 TC’s web page (https://www.oasis-open.org/committees/oslc-domains/ipr.php).

Note that any machine-readable content (Computer Language Definitions) declared Normative for this Work Product is provided in separate plain text files. In the event of a discrepancy between any such plain text file and display content in the Work Product’s prose narrative document(s), the content in the separate plain text file prevails.

Citation format:
When referencing this specification the following citation format should be used:

[OSLC-am-2.1-Part2]
# Table of Contents

1. Introduction  
   1.1 Terminology  
   1.2 References  
   1.3 Typographical Conventions and Use of RFC Terms  
2. Architecture Management Vocabulary Terms  
   2.1 Vocabulary Details  
3. Resource Constraints  
   3.1 Resource: Resource  
   3.2 Resource: LinkType  
Appendix A. Change History
1. Introduction

This section is non-normative.

This specification defines a vocabulary and resource shapes for OSLC Architecture Management resources. The intent is to define resources needed to support common integration scenarios and not to provide a comprehensive definition of an architecture resource. The resource formats are intended to define a high-level resource that can be specialized by enterprise architecture, analysis or design artifacts. The approach to supporting these scenarios is to delegate operations, as driven by service provider contributed user interfaces, as much as possible and not require a service provider to expose its complete data model and application logic.

1.1 Terminology

This section is non-normative.

Terminology is based on OSLC Core Overview [OSLCCore3], W3C Linked Data Platform [LDP], W3C's Architecture of the World Wide Web [WEBARCH], Hyper-text Transfer Protocol [HTTP11]. Terminology for this specification is defined in part 1 of the multi-part specification.

1.2 References

1.2.1 Normative references

[HTTP11]

[LDP]
Steve Speicher; John Arwe; Ashok Malhotra. Linked Data Platform 1.0. 26 February 2015. W3C Recommendation. URL: https://www.w3.org/TR/ldp/

[OSLCCore3]

[RFC2119]

1.2.2 Informative references

[OSLCQM]

[OSLCRM]
Ian Green. Open Services for Lifecycle Collaboration Requirements Management Specification Version 2.0. Final. URL: http://open-services.net/bin/view/Main/RmSpecificationV2

[WEBARCH]

1.3 Typographical Conventions and Use of RFC Terms

As well as sections marked as non-normative, all authoring guidelines, diagrams, examples, and notes in this specification are non-normative. Everything else in this specification is normative.

The key words must, must not, required, should, should not, recommended, may, and optional in this specification are to be interpreted as described in [RFC2119].
In addition to the namespace URIs and namespace prefixes oslc, rdf, dcterms and foaf defined in the OSLC Core specification, OSLC AM defines the namespace URI of http://open-services.net/ns/am# with a namespace prefix of oslc_am.

This specification also uses these namespace prefix definitions:

- oslc_rm: http://open-services.net/ns/rm# [OSLCRM]
- oslc_qm: http://open-services.net/ns/qm# [OSLCQM]
2. Architecture Management Vocabulary Terms

Property value types that are not defined in the following sections, are defined in [OSLCCore3].

There are two OSLC AM defined resources: Resource and LinkType. OSLC AM defines a least common set of properties for resources, however service implementations are free to extend this set of properties. Clients must preserve properties it does not recognize when updating resources. AM Servers may ignore properties that it does not recognize. Additional properties may come from existing vocabularies (ie. Dublin Core, OWL). When additional properties do not come from a known vocabulary, it is recommended that they exist in their own unique namespace, and providers should not reuse namespaces defined in these specifications.

All RDF/XML resources that include links with annotations must begin with an outer <rdf:RDF> element. This outer XML element is required to support the ability to include annotations on ‘link’ properties with additional <rdf:Description> elements reifying statements about the link.

Service implementations and clients must be prepared to accept any form of valid RDF/XML. For example the following two resource forms are equivalent.

```
xml:ns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
xml:ns:oslc="http://open-services.net/ns/core#"
xml:ns:oslc_am="http://open-services.net/ns/am#"
xml:ns:dcterms="http://purl.org/dc/terms/"

<oslc_am:Resource rdf:about="https://acme.com/resources/res1">
  <dcterms:title>Service Interface</dcterms:title>
  <dcterms:identifier>res1</dcterms:identifier>
  <oslc:serviceProvider rdf:resource="http://open-services.net/ns/am#"/>
</oslc_am:Resource>
```

is equivalent to

```
<rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  xmlns:oslc="http://open-services.net/ns/core#"
  xmlns:oslc_am="http://open-services.net/ns/am#"
  xmlns:dcterms="http://purl.org/dc/terms/"/>

<oslc_am:Resource rdf:about="https://acme.com/resources/res1">
  <dcterms:title>Service Interface</dcterms:title>
  <dcterms:identifier>res1</dcterms:identifier>
  <oslc:serviceProvider rdf:resource="http://open-services.net/ns/am#"/>
</oslc_am:Resource>
```

This specification defines a number of specific, commonly occurring vocabulary terms (OWL classes), properties and values. Servers may define additional classes and provide additional properties as needed.

2.1 Vocabulary Details

The namespace URI for this vocabulary is: http://open-services.net/ns/am#

All vocabulary URIs defined in the OSLC Architecture Management (AM) namespace.

See Also:

- http://docs.oasis-open.org/oslc-domains/

2.1.1 RDFS Classes in this namespace
2.1.2 Architecture Resource

http://open-services.net/ns/am#Resource

Architecture Resource is an RDFS class.

A generic architecture resource. A resource of this type is likely to be a model or design artifact.

2.1.3 Link Type

http://open-services.net/ns/am#LinkType

Link Type is an RDFS class.

A locally managed resource that describes a link type predicate that might otherwise not be directly resolvable.
3. Resource Constraints

This section specifies the constraints for the Architecture Management resources. The resource properties are not limited to the ones defined in this specification, AM Servers may provide additional properties. It is recommended that any additional properties exist in their own unique namespace and not use the namespaces defined in these specifications.

3.1 Resource: Resource

An Architecture Management Resource (AMR) is a generic resource format that can be used to represent any type of specific architecture resource such as a UML Class, Use Case, or Business Process Diagram.

- **Name**: Resource
- **Type URI**: http://open-services.net/ns/am#Resource
- **Summary**: Resource
- **Description**: A generic resource format that can be used to represent any type of specific architecture resource like a UML Class, Use Case, or Business Process Diagram.

### Resource Properties

<table>
<thead>
<tr>
<th>Prefixed Name</th>
<th>Occurs</th>
<th>Read-only</th>
<th>Value-type</th>
<th>Representation</th>
<th>Range</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>dcterms:contributor</td>
<td>Zero-or-many</td>
<td>unspecified</td>
<td>AnyResource</td>
<td>Either</td>
<td>oslc:AnyResource</td>
<td>Contributor or contributors to the resource. It is likely that the target resource will be a foaf:Person but that is not necessarily the case.</td>
</tr>
<tr>
<td>dcterms:created</td>
<td>Zero-or-one</td>
<td>unspecified</td>
<td>dateTime</td>
<td>N/A</td>
<td>Unspecified</td>
<td>Timestamp of resource creation</td>
</tr>
<tr>
<td>dcterms:creator</td>
<td>Zero-or-many</td>
<td>unspecified</td>
<td>AnyResource</td>
<td>Either</td>
<td>oslc:AnyResource</td>
<td>Creator or creators of the resource. It is likely that the target resource will be a foaf:Person but that is not necessarily the case.</td>
</tr>
<tr>
<td>dcterms:description</td>
<td>Zero-or-one</td>
<td>unspecified</td>
<td>XMLLiteral</td>
<td>N/A</td>
<td>Unspecified</td>
<td>Descriptive text about resource represented as rich text in XHTML content.</td>
</tr>
<tr>
<td>Prefix</td>
<td>Name</td>
<td>Occurs</td>
<td>Read-only</td>
<td>Value-type</td>
<td>Representation</td>
<td>Range</td>
</tr>
<tr>
<td>--------</td>
<td>---------------</td>
<td>--------------</td>
<td>-----------</td>
<td>------------</td>
<td>----------------</td>
<td>--------------</td>
</tr>
<tr>
<td></td>
<td>dcterms:identifier</td>
<td>Exactly-one</td>
<td>unspecified</td>
<td>string</td>
<td>N/A</td>
<td>Unspecified</td>
</tr>
<tr>
<td></td>
<td>dcterms:modified</td>
<td>Zero-or-one</td>
<td>unspecified</td>
<td>dateTime</td>
<td>N/A</td>
<td>Unspecified</td>
</tr>
<tr>
<td></td>
<td>dcterms:source</td>
<td>Zero-or-one</td>
<td>unspecified</td>
<td>Resource</td>
<td>Reference</td>
<td>oslc:AnyResource</td>
</tr>
<tr>
<td>Prefix</td>
<td>Occurs</td>
<td>Read-only</td>
<td>Value-type</td>
<td>Representation</td>
<td>Range</td>
<td>Description</td>
</tr>
<tr>
<td>--------</td>
<td>--------------</td>
<td>-----------</td>
<td>------------</td>
<td>----------------</td>
<td>---------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>dcterms:title</td>
<td>Exactly-one</td>
<td>unspecified</td>
<td>XMLLiteral</td>
<td>N/A</td>
<td>Unspecified</td>
<td>Title of the resource represented as rich text in XHTML content.</td>
</tr>
<tr>
<td>dcterms:type</td>
<td>Zero-or-many</td>
<td>unspecified</td>
<td>string</td>
<td>N/A</td>
<td>Unspecified</td>
<td>A short string representation for the type, for example ‘Car’.</td>
</tr>
<tr>
<td>oslc:instanceShape</td>
<td>Zero-or-one</td>
<td>unspecified</td>
<td>Resource</td>
<td>Reference</td>
<td>oslc:ResourceShape</td>
<td>The URI of a Resource Shape that describes the possible properties, occurrence, value types, allowed values and labels. This shape information is useful in displaying the subject resource as well as guiding clients in performing modifications. Instance shapes may be specific to the authenticated user associated with the request that retrieved the resource, the current state of the resource and other factors and thus should not be cached.</td>
</tr>
</tbody>
</table>
### 3.2 Resource: LinkType

A Link Type Resource (LTR) represents type of link that is or can be used when defining links from AM resources. The type has an ID (expressed as a string), whose universally accepted semantics may be defined elsewhere. This resource represents the definition as it is used by this service provider. This resource is meant as a convenience for clients to get a list of known/registered link types with human readable labels and definitions that can be used in client user interfaces when links are being created.

The resource defines the properties rdfs:label and rdfs:comments for the link type URI. The link type URI is made type: `http://open-services.net/ns/am#LinkType` via an `rdf:type` property. The remaining properties may be properties of the link type URI, or on a separate resource managed by the service provider. In the case where the service provider owns the domain of the link type URI these can be the same, and all properties can be on the same link type URI.

Links from AMR resources are managed in accordance with the OSLC Core Guidance on Links and Relationships. They appear as simple properties in the resource. Links may include inlined values for the target and may include anchor properties on the link.
itself. AM Servers should support LinkType Resources for clients to get a list of known and acceptable link properties.

- **Name:** LinkType
- **Type URI:** http://open-services.net/ns/am#LinkType
- **Summary:** LinkType
- **Description:** Represents type of link that is or can be used when defining links from AM resources.

### LinkType Properties

<table>
<thead>
<tr>
<th>Prefix Name</th>
<th>Occurs</th>
<th>Read-only</th>
<th>Value-type</th>
<th>Representation</th>
<th>Range</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>dcterms:contributor</td>
<td>Zero-or-many</td>
<td>unspecified</td>
<td>AnyResource</td>
<td>Either</td>
<td>oslc:AnyResource</td>
<td>Contributor or contributors to the resource. It is likely that the target resource will be a foaf:Person but that is not necessarily the case.</td>
</tr>
<tr>
<td>dcterms:created</td>
<td>Zero-or-one</td>
<td>unspecified</td>
<td>dateTime</td>
<td>N/A</td>
<td>Unspecified</td>
<td>Timestamp of resource creation</td>
</tr>
<tr>
<td>dcterms:creator</td>
<td>Zero-or-many</td>
<td>unspecified</td>
<td>AnyResource</td>
<td>Either</td>
<td>oslc:AnyResource</td>
<td>Creator or creators of the resource. It is likely that the target resource will be a foaf:Person but that is not necessarily the case.</td>
</tr>
<tr>
<td>dcterms:identifier</td>
<td>Exactly-one</td>
<td>unspecified</td>
<td>string</td>
<td>N/A</td>
<td>Unspecified</td>
<td>A unique identifier for a resource. Typically read-only and assigned by the service provider when a resource is created. Not typically intended for end-user display.</td>
</tr>
<tr>
<td>dcterms:modified</td>
<td>Zero-or-one</td>
<td>unspecified</td>
<td>dateTime</td>
<td>N/A</td>
<td>Unspecified</td>
<td>Timestamp of latest resource modification.</td>
</tr>
<tr>
<td>Prefix</td>
<td>Occurs</td>
<td>Read-only</td>
<td>Value-type</td>
<td>Representation</td>
<td>Range</td>
<td>Description</td>
</tr>
<tr>
<td>--------</td>
<td>--------</td>
<td>-----------</td>
<td>-------------</td>
<td>----------------</td>
<td>-------</td>
<td>-------------</td>
</tr>
<tr>
<td>oslc:instanceShape</td>
<td>Zero-or-one</td>
<td>unspecified</td>
<td>Resource</td>
<td>Reference</td>
<td>oslc:ResourceShape</td>
<td>The URI of a Resource Shape that describes the possible properties, occurrence, value types, allowed values and labels. This shape information is useful in displaying the subject resource as well as guiding clients in performing modifications. Instance shapes may be specific to the authenticated user associated with the request that retrieved the resource, the current state of the resource and other factors and thus should not be cached.</td>
</tr>
<tr>
<td>Prefixed Name</td>
<td>Occurs</td>
<td>Read-only</td>
<td>Value-type</td>
<td>Representation</td>
<td>Range</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------</td>
<td>--------------</td>
<td>-----------</td>
<td>------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>oslc:serviceProvider</td>
<td>Zero-or-many</td>
<td>unspecified</td>
<td>Resource</td>
<td>Reference</td>
<td>oslc:ServiceProvider</td>
<td>A link to the resource’s OSLC Service Provider. There may be cases when the subject resource is available from a service provider that implements multiple domain specifications, which could result in multiple values for this property.</td>
</tr>
<tr>
<td>rdfs:comment</td>
<td>Zero-or-one</td>
<td>unspecified</td>
<td>string</td>
<td>N/A</td>
<td>Unspecified</td>
<td>TDescriptive text about link type. Provides a description of this link type that could be used in hover help or other areas of the UI where the user wants to understand more about what a link of this type means.</td>
</tr>
<tr>
<td>rdfs:label</td>
<td>Exactly-one</td>
<td>unspecified</td>
<td>string</td>
<td>N/A</td>
<td>Unspecified</td>
<td>The human readable name for this link type. This value is expected to be used in drop down lists and in tables where a link of this type is involved.</td>
</tr>
</tbody>
</table>
Appendix A. Change History

This section is non-normative.

<table>
<thead>
<tr>
<th>Revision</th>
<th>Date</th>
<th>Editor</th>
<th>Changes Made</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>08/24/2018</td>
<td>Jim Amsden</td>
<td>Committee Specification Draft for Public Review published</td>
</tr>
<tr>
<td>01</td>
<td>09/10/2018</td>
<td>Jim Amsden</td>
<td>Committee Specification revision 01 published</td>
</tr>
</tbody>
</table>