# OASISOPENPROJECTS

# OSLC Change Management Version 3.0. Part 2: Vocabulary

## Project Specification 01
## 17 September 2020

**This stage:**

https://docs.oasis-open-projects.org/oslc-op/cm/v3.0/ps01/change-mgt-vocab.html (Authoritative)
https://docs.oasis-open-projects.org/oslc-op/cm/v3.0/ps01/change-mgt-vocab.pdf

**Previous stage:**

https://docs.oasis-open-projects.org/oslc-op/cm/v3.0/psd03/change-mgt-vocab.html (Authoritative)
https://docs.oasis-open-projects.org/oslc-op/cm/v3.0/psd03/change-mgt-vocab.pdf
(published as Project Specification Draft on 15 August 2019)

**Latest stage:**

https://docs.oasis-open-projects.org/oslc-op/cm/v3.0/change-mgt-vocab.html (Authoritative)
https://docs.oasis-open-projects.org/oslc-op/cm/v3.0/change-mgt-vocab.pdf

**Latest version:**

https://open-services.net/spec/cm/latest

**Latest editor's draft:**

https://open-services.net/spec/cm/latest-draft

**Open Project:**

OASIS Open Services for Lifecycle Collaboration (OSLC) OP

**Project Chairs:**

Jim Amsden (jamsden@us.ibm.com), IBM
Andrii Berezovskyi (andriib@kth.se), KTH

**Editors:**

Jim Amsden (jamsden@us.ibm.com), IBM
Samuel Padgett (spadgett@us.ibm.com), IBM
Steve Speicher (sspeiche@us.ibm.com), IBM

**Additional components:**

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

* *OSLC Change Management Version 3.0. Part 1: Specification*. https://docs.oasis-open-projects.org/oslc-op/cm/v3.0/ps01/change-mgt-spec.html

- *OSLC Change Management Version 3.0. Part 2: Vocabulary (this document)*. https://docs.oasis-open-projects.org/oslc-op/cm/v3.0/ps01/change-mgt-vocab.html
- *OSLC Change Management Version 3.0. Part 3: Constraints*. https://docs.oasis-open-projects.org/oslc-op/cm/v3.0/ps01/change-mgt-shapes.html
- *OSLC Change Management Version 3.0. Part 4: Machine Readable Vocabulary Terms*. https://docs.oasis-open-projects.org/oslc-op/cm/v3.0/ps01/change-mgt-vocab.ttl
- *OSLC Change Management Version 3.0. Part 5: Machine Readable Constraints*. https://docs.oasis-open-projects.org/oslc-op/cm/v3.0/ps01/change-mgt-shapes.ttl

#### Related work:

This specification is related to:

- *Open Services for Lifecycle Collaboration Change Management Specification Version 2.0*. http://open-services.net/bin/view/Main/CmSpecificationV2

#### RDF Namespaces:

http://open-services.net/ns/cm#

#### Abstract:

This specification defines vocabulary terms for the Change Management domain.

#### Status:

This document was last revised or approved by the OASIS Open Services for Lifecycle Collaboration (OSLC) OP on the above date. The level of approval is also listed above. Check the "Latest stage" location noted above for possible later revisions of this document. Any other numbered Versions and other technical work produced by the Open Project are listed at https://github.com/oslc-op/oslc-specs.

Comments on this work can be provided by opening issues in the project repository or by sending email to the project's public comment list oslc-op@lists.oasis-open-projects.org.

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-CM-3.0-Part2]**
*OSLC Change Management Version 3.0. Part 2: Vocabulary*. Edited by Jim Amsden, Samuel Padgett, and Steve Speicher. 17 September 2020. OASIS Project Specification 01. https://docs.oasis-open-projects.org/oslc-op/cm/v3.0/ps01/change-mgt-vocab.html. Latest stage: https://docs.oasis-open-projects.org/oslc-op/cm/v3.0/change-mgt-vocab.html.

# Notices

# Table of Contents

# 1. Introduction

*This section is non-normative.*

This specification defines vocabulary terms for common Change Management resources. The intent is to define resources needed to support common integration scenarios and not to provide a comprehensive definition of a Change Request. The resource formats may not match exactly the native models supported by change management service providers, but are intended to be compatible with them. 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.

See OSLC Change Management Version 3.0. Part 5: Machine Readable Constraints for the standard OSLC constraints defined on this vocabulary.
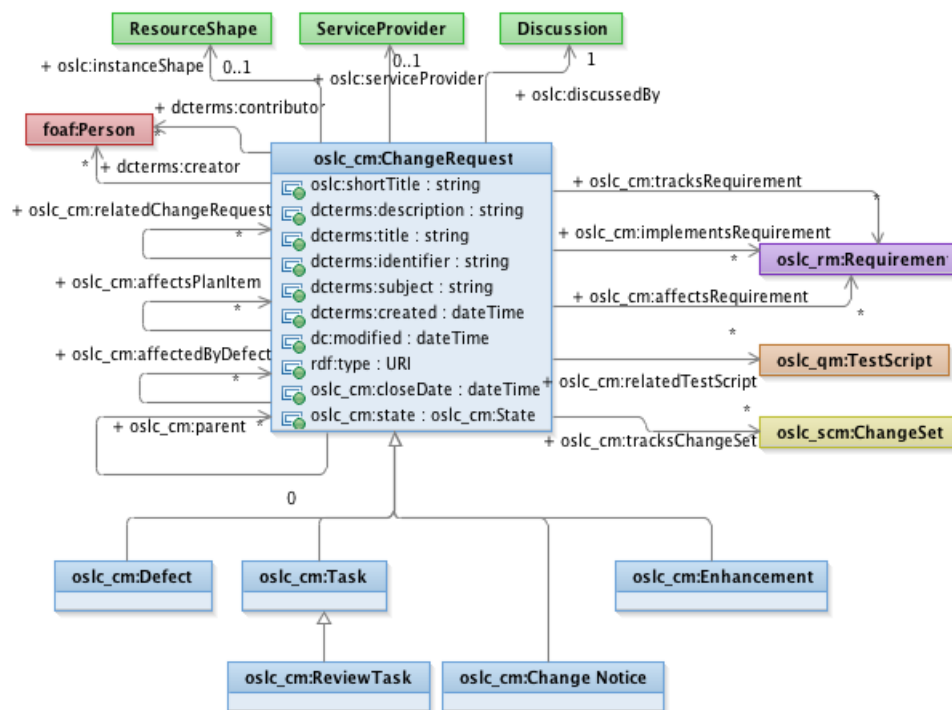


Fig. 1 OSLC Change Management 3.0 Overview

## 1.1 Terminology

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].

## 1.2 References

### 1.2.1 Normative references

[HTTP11]

> R. Fielding, Ed.; J. Reschke, Ed.. *Hypertext Transfer Protocol (HTTP/1.1): Message Syntax and Routing*. June 2014. Proposed Standard. URL: https://httpwg.org/specs/rfc7230.html

[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]

Steve Speicher; Jim Amsden. *OSLC Core Overview v3.0*. Project Specification. URL: https://docs.oasis-open.org/oslc-core/oslc-core/v3.0/oslc-core-v3.0-part1-overview.html

[RFC2119]

S. Bradner. *Key words for use in RFCs to Indicate Requirement Levels*. March 1997. Best Current Practice. URL: https://tools.ietf.org/html/rfc2119

### 1.2.2 Informative references

[OSLCQM]

Paul McMahan. *Open Services for Lifecycle Collaboration Quality Management Specification Version 2.0*. Final. URL: http://open-services.net/bin/view/Main/QmSpecificationV2

[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]

Ian Jacobs; Norman Walsh. *Architecture of the World Wide Web, Volume One*. 15 December 2004. W3C Recommendation. URL: https://www.w3.org/TR/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 CM defines the namespace URI of `http://open-services.net/ns/cm#` with a namespace prefix of `oslc_cm`

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. Change Management Vocabulary Terms

This specification defines the ChangeRequest superclass, and a number of specific, commonly occurring subclasses, properties and values. Servers may define additional ChangeRequest subclasses and provide additional properties as needed.

## 2.1 Vocabulary Details

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

All vocabulary URIs defined in the OSLC Change Management (CM) namespace.

### 2.1.1 Classes in this namespace (9)

ChangeNotice, ChangeRequest, Defect, Enhancement, Priority, ReviewTask, Severity, State, Task

**ChangeNotice**

http://open-services.net/ns/cm#ChangeNotice

*ChangeNotice* is an RDFS class.

Represents an assignment notification of a change request. May be used also to bestow authority onto the assigned user to effect the changes.

**ChangeRequest**

http://open-services.net/ns/cm#ChangeRequest

*ChangeRequest* is an RDFS class.

The CM Change Request resource.

**Defect**

http://open-services.net/ns/cm#Defect

*Defect* is an RDFS class.

A software or product defect.

**Enhancement**

http://open-services.net/ns/cm#Enhancement

*Enhancement* is an RDFS class.

A request for new functionality.

**Priority**

http://open-services.net/ns/cm#Priority

*Priority* is an RDFS class.

Defines the possible oslc_cm:priority property values.

**ReviewTask**

http://open-services.net/ns/cm#ReviewTask

*ReviewTask* is an RDFS class.

A request to make a change and review the change.

**Severity**

http://open-services.net/ns/cm#Severity

*Severity* is an RDFS class.

Defines the possible oslc_cm:severity property values.

**State**

http://open-services.net/ns/cm#State

*State* is an RDFS class.

Defines the possible oslc_cm:state property values.

**Task**

http://open-services.net/ns/cm#Task

*Task* is an RDFS class.

An executable and trackable activity.

## 2.1.2 Properties in this namespace (27)

affectedByDefect, affectsPlanItem, affectsRequirement, affectsTestResult, approved, authorizer, blocksTestExecutionRecord, closed, closeDate, fixed, implementsRequirement, inProgress, parent, priority, relatedChangeRequest, relatedTestCase, relatedTestExecutionRecord, relatedTestPlan, relatedTestScript, reviewed, severity, state, status, testedByTestCase, tracksChangeSet, tracksRequirement, verified

**affectedByDefect**

http://open-services.net/ns/cm#affectedByDefect

*affectedByDefect* is an RDF property.

Change request is affected by a reported defect. It is likely that the target resource will be an oslc_cm:Defect.

**affectsPlanItem**

http://open-services.net/ns/cm#affectsPlanItem

*affectsPlanItem* is an RDF property.

Change request affects a plan item. It is likely that the target resource will be an oslc_cm:ChangeRequest.

**affectsRequirement**

http://open-services.net/ns/cm#affectsRequirement

*affectsRequirement* is an RDF property.

The ChangeRequest affects a Requirement. It is likely that the target resource will be an oslc_rm:Requirement.

**affectsTestResult** *(Archaic term)*

http://open-services.net/ns/cm#affectsTestResult

*affectsTestResult* is an RDF property.

Associated resource that is affected by this Change Request. It is likely that the target resource will be an oslc_qm:TestResult.

**approved**

http://open-services.net/ns/cm#approved

*approved* is an RDF property.

Whether or not the Change Request has been approved.

**authorizer**

http://open-services.net/ns/cm#authorizer

*authorizer* is an RDF property.

The URI of a resource describing an agent who is responsible authorizing for and/or has authorized effort to be expended to address a set of change requests.

**blocksTestExecutionRecord** *(Archaic term)*

http://open-services.net/ns/cm#blocksTestExecutionRecord

*blocksTestExecutionRecord* is an RDF property.

Associated resource that is blocked by this Change Request. It is likely that the target resource will be an oslc_qm:TestExecutionRecord.

**closed**

http://open-services.net/ns/cm#closed

*closed* is an RDF property.

Whether or not the Change Request is completely done, no further fixes or fix verification is needed.

**closeDate**

http://open-services.net/ns/cm#closeDate

*closeDate* is an RDF property.

The date at which no further activity or work is intended to be conducted.

**fixed**

http://open-services.net/ns/cm#fixed

*fixed* is an RDF property.

Whether or not the Change Request has been fixed.

**implementsRequirement**

http://open-services.net/ns/cm#implementsRequirement

*implementsRequirement* is an RDF property.

The ChangeRequest implements the associated Requirement. It is likely that the target resource will be an oslc_rm:Requirement.

**inProgress**

http://open-services.net/ns/cm#inProgress

*inProgress* is an RDF property.

Whether or not the Change Request in a state indicating that active work is occurring.

**parent**

http://open-services.net/ns/cm#parent

*parent* is an RDF property.

The related parent change requests of the subject change request.

**priority**

http://open-services.net/ns/cm#priority

*priority* is an RDF property.

Used to indicate the relative importance of ChangeRequests. It is likely that the target resource will be an oslc_cm:Priority.

**relatedChangeRequest**

http://open-services.net/ns/cm#relatedChangeRequest

*relatedChangeRequest* is an RDF property.

This relationship is loosely coupled, has no specific meaning, and can be used to link related change requests. It is likely that the target resource will be an oslc_cm:ChangeRequest.

**relatedTestCase** *(Archaic term)*

http://open-services.net/ns/cm#relatedTestCase

*relatedTestCase* is an RDF property.

Related test case resource. It is likely that the target resource will be an oslc_qm:TestCase.

**relatedTestExecutionRecord** *(Archaic term)*

http://open-services.net/ns/cm#relatedTestExecutionRecord

*relatedTestExecutionRecord* is an RDF property.

Related to a test execution resource. It is likely that the target resource will be an oslc_qm:TestExecutionRecord.

**relatedTestPlan** *(Archaic term)*

http://open-services.net/ns/cm#relatedTestPlan

*relatedTestPlan* is an RDF property.

Related test plan resource. It is likely that the target resource will be an oslc_qm:TestPlan.

**relatedTestScript** *(Archaic term)*

http://open-services.net/ns/cm#relatedTestScript

*relatedTestScript* is an RDF property.

Related test script resource. It is likely that the target resource will be an oslc_qm:TestScript.

**reviewed**

http://open-services.net/ns/cm#reviewed

*reviewed* is an RDF property.

Whether or not the Change Request has been reviewed.

**severity**

http://open-services.net/ns/cm#severity

*severity* is an RDF property.

Used to indicate the severity or potential impact of a defect. It is likely that the target resource will be an oslc_cm:Severity.

**state**

http://open-services.net/ns/cm#state

*state* is an RDF property.

Used to indicate the status of the change request.

**status** *(Archaic term)*

http://open-services.net/ns/cm#status

*status* is an RDF property.

Used to indicate the status of the change request based on values defined by the service provider. Most often a read-only property. It is likely that the target resource will be a string corresponding to an oslc_cm:State value.

**testedByTestCase** *(Archaic term)*

http://open-services.net/ns/cm#testedByTestCase

*testedByTestCase* is an RDF property.

Test case by which this change request is tested. It is likely that the target resource will be an oslc_qm:TestCase.

**tracksChangeSet**

http://open-services.net/ns/cm#tracksChangeSet

*tracksChangeSet* is an RDF property.

Tracks a change set resource. It is likely that the target resource will be an oslc_config:ChangeSet.

**tracksRequirement**

http://open-services.net/ns/cm#tracksRequirement

*tracksRequirement* is an RDF property.

Tracks the associated Requirement or Requirement ChangeSet resources. It is likely that the target resource will be an oslc_rm:Requirement.

**verified**

http://open-services.net/ns/cm#verified

*verified* is an RDF property.

Whether or not the resolution or fix of the Change Request has been verified.

### 2.1.3 Resources (Individuals) in this namespace (20)

approved, Blocker, closed, Critical, defect, fixed, High, inprogress, Low, Major, Medium, Minor, Normal, planItem, PriorityUnassigned, requirementsChangeRequest, reviewed, SeverityUnassigned, task, verified

**approved**

http://open-services.net/ns/cm#Approved

*approved* is an RDF individual.

Whether or not the Change Request has been approved.

**Blocker**

http://open-services.net/ns/cm#Blocker

*Blocker* is an RDF individual.

Severe problem. No workaround. Blocks development, test, or usage.

**closed**

http://open-services.net/ns/cm#Closed

*closed* is an RDF individual.

Whether or not the Change Request is completely done, no further fixes or fix verification is needed.

**Critical**

http://open-services.net/ns/cm#Critical

*Critical* is an RDF individual.

Severe problem. No workaround.

**defect**

http://open-services.net/ns/cm#defect

*defect* is an RDF individual.

Used to report defects in testing.

**fixed**

http://open-services.net/ns/cm#Fixed

*fixed* is an RDF individual.

Whether or not the Change Request has been fixed.

**High**

http://open-services.net/ns/cm#High

*High* is an RDF individual.

Highest priority, action on the change request highly recommended.

**inprogress**

http://open-services.net/ns/cm#Inprogress

*inprogress* is an RDF individual.

Whether or not the Change Request in a state indicating that active work is occurring.

**Low**

http://open-services.net/ns/cm#Low

*Low* is an RDF individual.

Action on the change request can be safely deferred.

**Major**

http://open-services.net/ns/cm#Major

*Major* is an RDF individual.

Prevents function from being used. There is a workaround.

**Medium**

http://open-services.net/ns/cm#Medium

*Medium* is an RDF individual.

Acting on the change request can wait, but not forever.

**Minor**

http://open-services.net/ns/cm#Minor

*Minor* is an RDF individual.

Minimal impact.

**Normal**

http://open-services.net/ns/cm#Normal

*Normal* is an RDF individual.

Affects non-critical functionality. There is a workaround.

**planItem**

http://open-services.net/ns/cm#planItem

*planItem* is an RDF individual.

Used for associating change requests into plans (project, release, sprint, etc).

**PriorityUnassigned**

http://open-services.net/ns/cm#PriorityUnassigned

*PriorityUnassigned* is an RDF individual.

The priority of the change request is intentionally not set.

**requirementsChangeRequest**

http://open-services.net/ns/cm#requirementsChangeRequest

*requirementsChangeRequest* is an RDF individual.

Used for associating a change request for usage in tracking changes to a Requirements resource.

**reviewed**

http://open-services.net/ns/cm#Reviewed

*reviewed* is an RDF individual.

Whether or not the Change Request has been reviewed.

**SeverityUnassigned**

http://open-services.net/ns/cm#SeverityUnassigned

*SeverityUnassigned* is an RDF individual.

The severity of the change request is intentionally not set.

**task**

http://open-services.net/ns/cm#task

*task* is an RDF individual.

Used for associating change requests into executable and track-able items.

**verified**

http://open-services.net/ns/cm#Verified

*verified* is an RDF individual.

Whether or not the resolution or fix of the Change Request has been verified.

# 3. Standard Enumeration Values

The Change Management specification defines a number of standard enumeration values for ChangeRequest state, priority and severity. Servers are not limited to these values, they are only provided to establish a common set of values that facilitate interoperability.

Providers **MAY** have custom state, priority and severity values.

Providers **SHOULD** use `skos:narrower` when custom state, priority or severity values refine standard values to help clients understand the meaning of custom values.

Providers **SHOULD NOT** use owl:sameAs when custom state, priority or severity values refine standard values.

Priority and severity example:

Example 1

```
@prefix ex: <http://example.com/bugtracker> .
@prefix oslc: <http://open-services.net/ns/core#> .
@prefix oslc_cm: <http://open-services.net/ns/cm#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix dcterms: <http://purl.org/dc/terms/> .
@prefix skos: <http://www.w3.org/2004/02/skos/core> .

<http://example.com/bugs/2314>
   a oslc_cm:Defect ;
   dcterms:identifier "00002314" ;
   oslc:shortTitle "Bug 2314" ;
   dcterms:title "Invalid installation instructions" ;
   oslc_cm:priority oslc_cm:High ;
   oslc_cm:severity <http://example.com/enums#S1> .

<http://example.com/enums#HOT>
   a oslc_cm:Severity;
   rdfs:label "Severe - HOT" ;
   skos:narrower oslc_cm:Critical ;
   ex:icon <http://example.com/severity/S1.gif>.
```

## 3.1 Resource: State

Defines a set of standard values for property oslc_cm:status.

- **Name:** `State`
- **Type URI** `http://open-services.net/ns/cm#State`

| Range | Description |
|---|---|
| oslc_cm:Closed | Completely done, no further fixes or fix verification is needed. |
| oslc_cm:Inprogress | Active work is occurring. |
| oslc_cm:Fixed | The issue is resolved or fixed but the resolution or fix has not yet been verified. |
| oslc_cm:Approved | The resolution or fix is approved and can be delivered. |
| oslc_cm:Reviewed | The resolution or fix has been reviewed. |
| oslc_cm:Verified | The resolution or the fix is verified. |

## 3.2 Resource: Priority

- **Name:** `Priority`

- **Type URI** `http://open-services.net/ns/cm#Priority`

| Range | Description |
|---|---|
| oslc_cm:High | Highest priority, action on the change request highly recommended. |
| oslc_cm:Medium | Acting on the change request can wait, but not forever. |
| oslc_cm:Low | Action on the change request can be safely deferred. |
| oslc_cm:PriorityUnassigned | The priority of the change request is intentionally not set. |

## 3.3 Resource: Severity

- **Name:** `Severity`
- **Type URI** `http://open-services.net/ns/cm#Severity`

**NEEDS UPDATE**: Improve descriptions.

| Range | Description |
|---|---|
| oslc_cm:Blocker | Severe problem. No workaround. Blocks development, test, or usage. |
| oslc_cm:Critical | Severe problem. No workaround. |
| oslc_cm:Major | Prevents function from being used. There is a workaround. |
| oslc_cm:Normal | Affects non-critical functionality. There is a workaround. |
| oslc_cm:Minor | Minimal impact. |
| oslc_cm:SeverityUnassigned | Intentionally set blank. |

# 4. Conformance

Change Management servers **MUST** use the vocabulary terms defined here where required, and with the meanings defined here.

Change Management servers **MAY** augment this vocabulary with additional classes, properties, and individuals.