OSLC PLM Workgroup

OSLC in Action
An overview of the CM and RM scenarios and specs

March 3rd 2010
open-services.net

Organisers today

- Workgroup lead: Rainer Ersch, Siemens
- Coordinator: Gray Bachelor, IBM

- Speakers:
  - Steve Speicher, IBM
  - Ian Green, IBM

Agenda

- Introduction
- Roll call
- Overview of Workgroup way of working
- Scenarios and specs overview
  - Change Management (CM)
- Scenarios and specs example
  - Requirements Management (RM)
- How to share experience of usage ?
- Q&A
- Summary
- Close

Roll call

- Please state your name, organisation, role

- If you are in the web conference put your details in a chat
  - Send to “All”
- If not please send an email to gray_bachelor@uk.ibm.com

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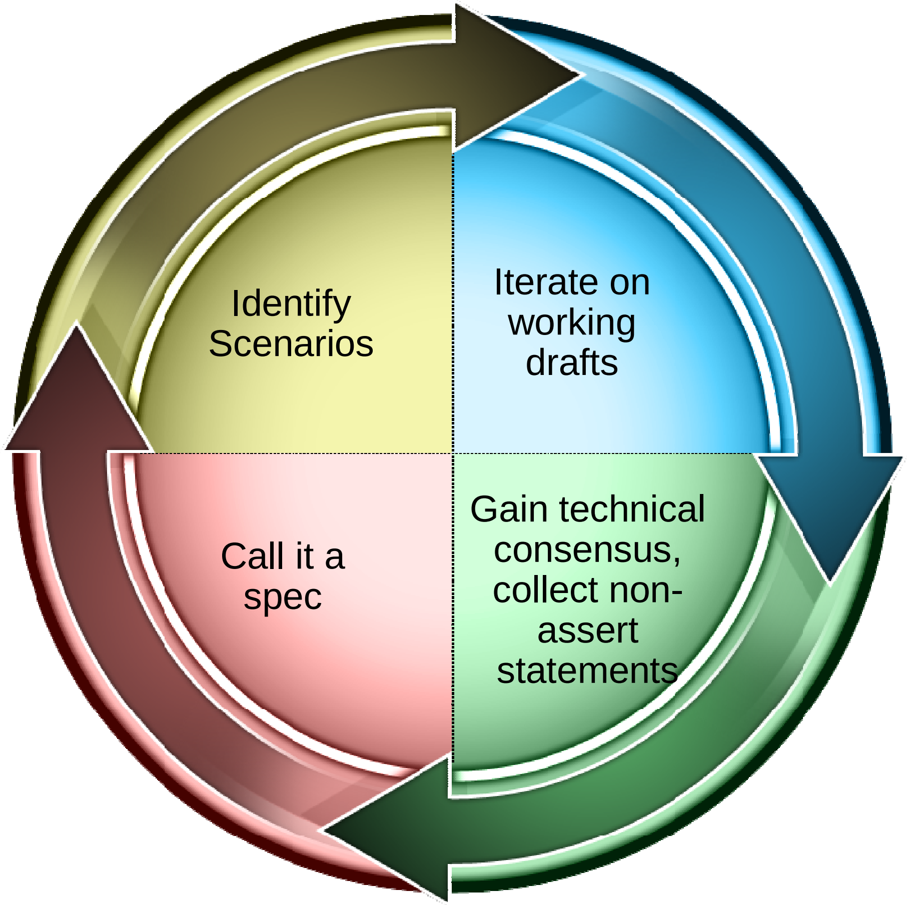
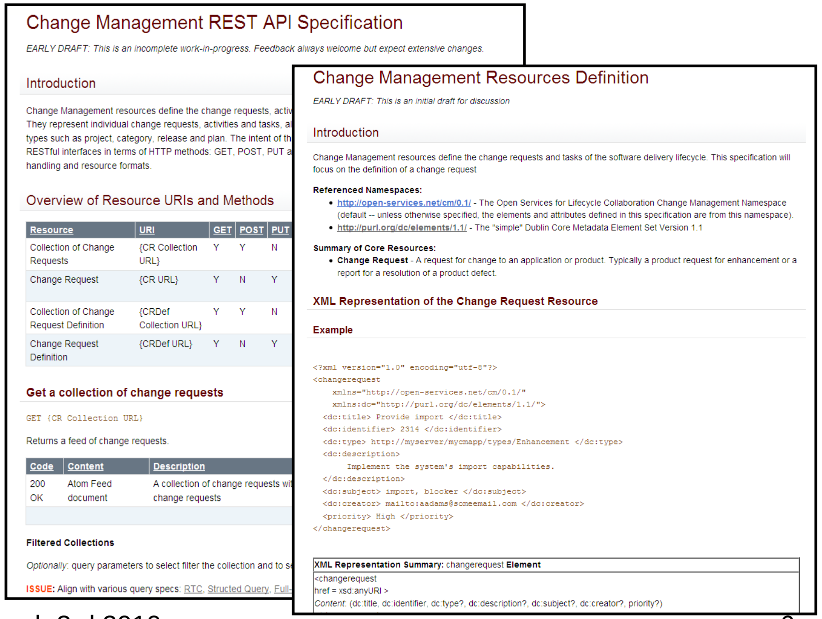
Agile Specification Writing


Identify Scenarios
Iterate on working drafts
Gain technical consensus, collect non-assert statements
Call it a spec

- Minimalist/additive approach
  - Not a “complete” definition for a given area
- Scenario driven scope
- Co-evolve spec and implementations
- Open participation, but active core group (topic lead is driver)



Change Management REST API Specification

EARLY DRAFT: This is an incomplete work-in-progress. Feedback always welcome but expect extensive changes.

Introduction

Change Management resources define the change requests, activ
They represent individual change requests, activities and tasks, al
types such as project, category, release and plan. The intent of th
RESTful interfaces in terms of HTTP methods: GET, POST, PUT a
handling and resource formats.

Overview of Resource URIs and Methods

Resource	URI	GET	POST	PUT
Collection of Change Requests	{CR Collection URL}	Y	Y	N
Change Request	{CR URL}	Y	N	Y
Collection of Change Request Definition	{CRDef Collection URL}	Y	Y	N
Change Request Definition	{CRDef URL}	Y	N	Y

Get a collection of change requests

```
GET {CR Collection URL}
```

Returns a feed of change requests.

Code	Content	Description
200 OK	Atom Feed document	A collection of change requests wi change requests

Filtered Collections

Optionally: query parameters to select filter the collection and to se

ISSUE: Align with various query specs: RTC, Structed Query, Full-

Change Management Resources Definition

EARLY DRAFT: This is an initial draft for discussion

Introduction

Change Management resources define the change requests and tasks of the software delivery lifecycle. This specification will focus on the definition of a change request

Referenced Namespaces:

- http://open-services.net/cm/0.1/ - The Open Services for Lifecycle Collaboration Change Management Namespace (default -- unless otherwise specified, the elements and attributes defined in this specification are from this namespace).
- http://purl.org/dc/elements/1.1/ - The "simple" Dublin Core Metadata Element Set Version 1.1

Summary of Core Resources:

- **Change Request** - A request for change to an application or product. Typically a product request for enhancement or a report for a resolution of a product defect.

XML Representation of the Change Request Resource

Example

```
<?xml version="1.0" encoding="utf-8"?>
<changerequest
    xmlns="http://open-services.net/cm/0.1/"
    xmlns:dc="http://purl.org/dc/elements/1.1/">
  <dc:title> Provide import </dc:title>
  <dc:identifier> 2314 </dc:identifier>
  <dc:type> http://myserver/mycmapp/types/Enhancement </dc:type>
  <dc:description>
       Implement the system's import capabilities.
  </dc:description>
  <dc:subject> import, blocker </dc:subject>
  <dc:creator> mailto:aadams@someemail.com </dc:creator>
  <priority> High </priority>
</changerequest>
```

XML Representation Summary: changerequest **Element**

<changerequest
href = xsd:anyURI >
Content: (dc:title, dc:identifier, dc:type?, dc:description?, dc:subject?, dc:creator?, priority?)

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CM Scope

- The goal of this effort is to define a common set of resources, formats and RESTful services for the use in Change Management tools and use by ALM tools.

- Change Management (CM) resources define the change requests and tasks of the software delivery lifecycle. These resources interact relate and interact with many other resources, such as project, category, etc.

CM Participants

- Formed Jan 2009, V1.0 spec in May 2009
- Participants
  - IBM
  - Tasktop Technologies
  - Accenture
  - Rally
  - Oracle
  - SourceGear
  - BSD Group

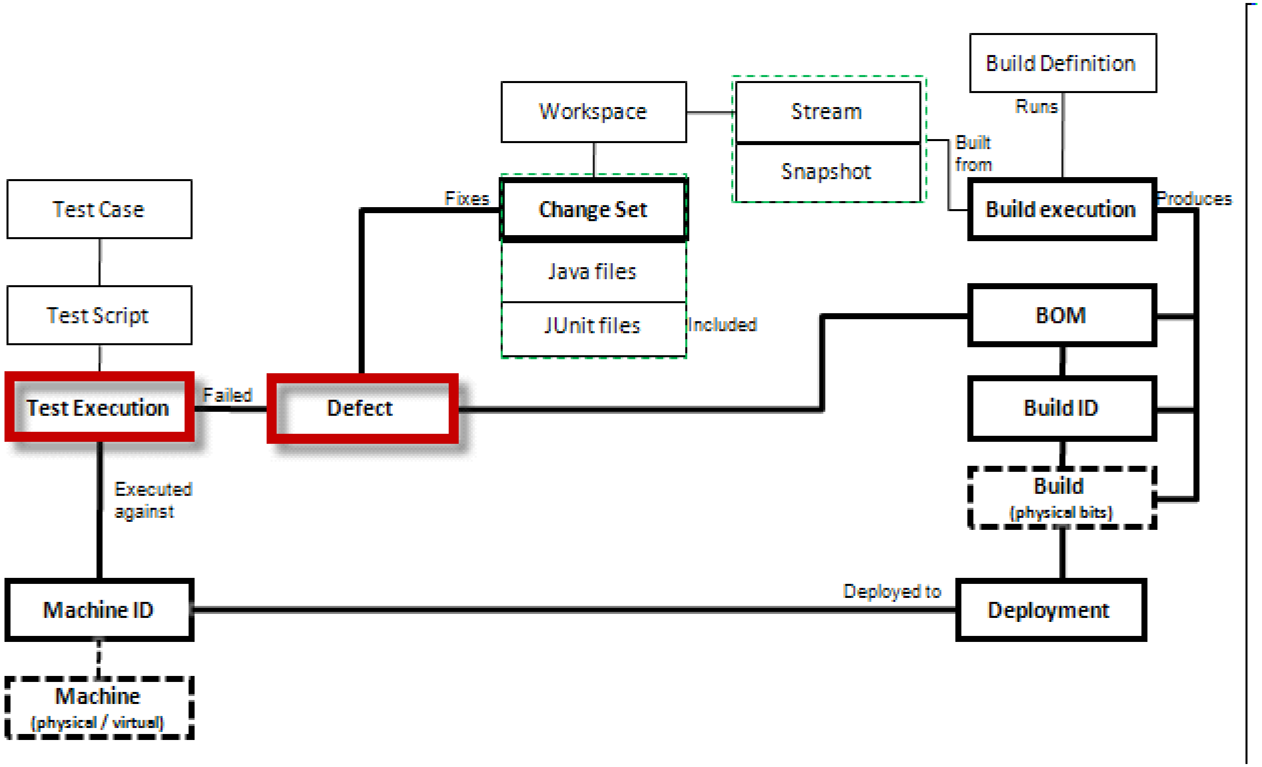
CM 1.0 Scenarios

- Find and Fix a Defect
- Plan Change Requests in an Agile Planning Tool
- Setup and configuration

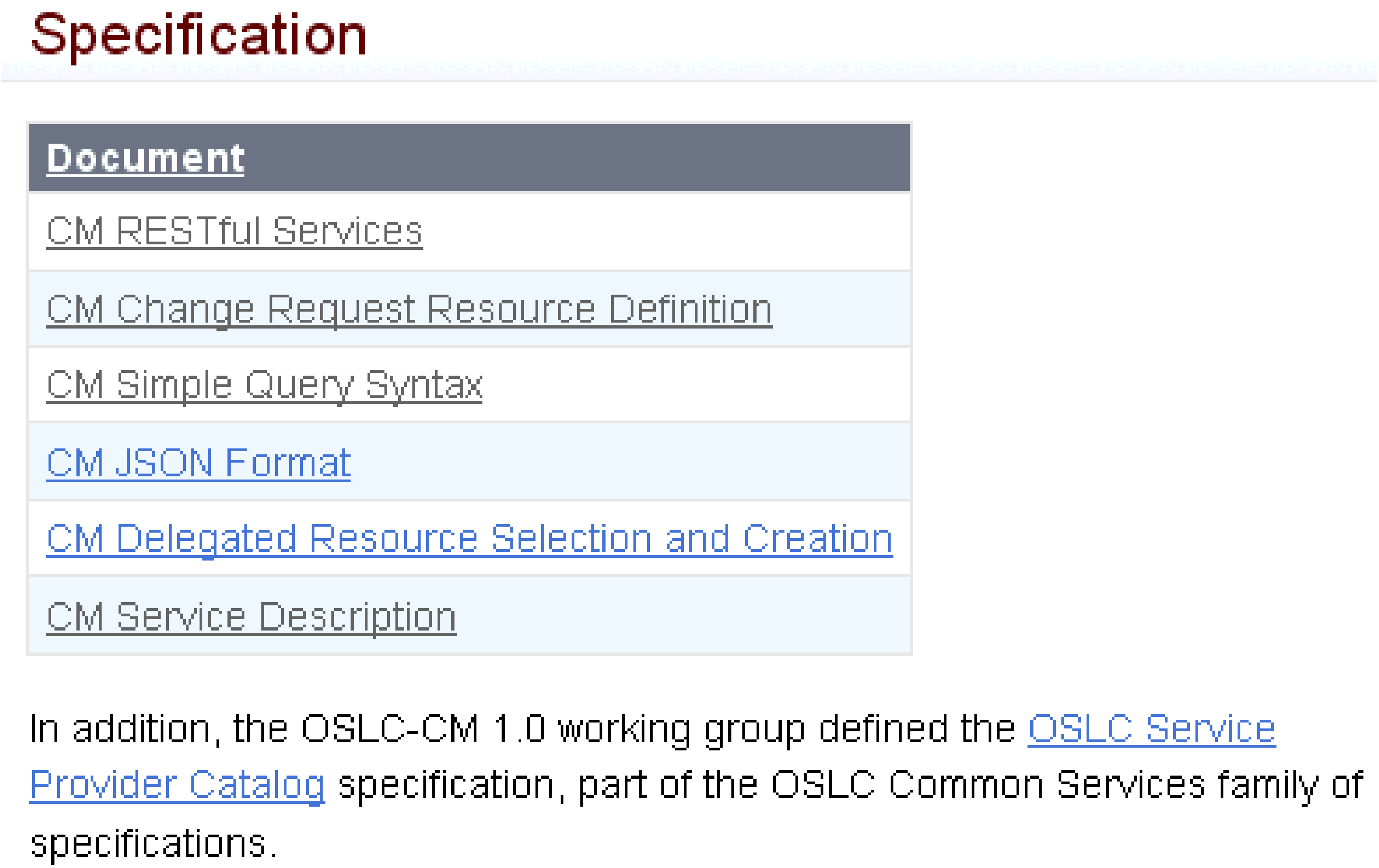
CM 1.0 – Find and Fix a Defect

1. A build is deployed to a configured test machine (physical or virtual)
2. A test is executed
    1. Test fails (continue)
    2. Test passes (if verifying a defect, close it. Otherwise stop)
3. A defect is submitted (Change Request type=defect)
4. Defect is triaged
    1. Fix defect (continue)
    2. Don't fix it (stop)
5. A change set is delivered to fix the defect
6. The build executes.
    1. Build passes (continue)
    2. Build fails (stop)
7. The build ID captures the build status & identifies links to additional information about the build (location of the physical bits, the Bill Of Materials).
8. Team members are notified. (feeds, monitoring the build id etc)
    1. The build ID is referenced along with the BOM to determine what changes are included in the build
    2. Start at 1

Identify Key Resources



CM 1.0 Specifications Overview



Specification

Document
CM RESTful Services
CM Change Request Resource Definition
CM Simple Query Syntax
CM JSON Format
CM Delegated Resource Selection and Creation
CM Service Description

In addition, the OSLC-CM 1.0 working group defined the OSLC Service Provider Catalog specification, part of the OSLC Common Services family of specifications.

CM 2.0 Scenarios

- Streamlined developer task management
- Reporting
- Change Management of Requirements
- Other Themes
  - Alignment – core spec
  - Cross domain – Reporting, RM, SCM

- Planned to finalize 2.0 Specs - June 2010

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Requirements Management

- Remit
  - *“Support effective use of requirements across development lifecycle”*
  - *“… requirements of a system or the outcome of some programme of work […] without prejudice to software, hardware, IT, regulatory, business etc.*”
- Principles and approach
  - Open, democratic, cross-discipline
  - Scenario led, incremental, delivering value
  - Loose coupling, cohesive, extensible

RM Workgroup

- Formed Q109 / first call 5th May
- Participation
  - Accenture
  - Citigroup
  - EADS N.V.
  - Integrate Systems Engineering
  - IBM
  - Northrop-Grumman Corp.
  - Siemens AG
  - Stoneworks
  - Ravenflow

RM Activities

- Scenario development
  - Sourced, articulated, elaborated, documented
  - Cross-discipline awareness
  - ~30 scenarios in backlog
- Scoping & Technical analysis
  - Value to community
  - Alignment with business objectives
  - Feasibility
- Producing specification
  - Enough to support needs
  - Generalize across disciplines
  - Web Service Architecture

RM Scenarios 2009

- Requirements are implemented, delivered and validated
- A change request is satisfied

RM Scenario

- **Requirements are implemented, validated and delivered**
- **Pre-conditions**
  - An interesting collection of requirements has been identified for inclusion in a product. We assume that the requirements process is complete and the requirements have been approved and planned for inclusion in the product. How that came to be is not dealt with here.
- **Scenario:**
  - The requirements are broken down into implementation requests for the implementation of the product to satisfy the requirements
    - Each requirement is linked to one or more implementation requests
    - Each implementation request could further be broken down into smaller implementation requests, each of which is linked to its parent.
    - The implementation requests are assigned to for completion
  - A test plan to validate these requirements is created
    - The test plan is linked to the requirements that are to be qualified.
    - Test cases to validate each requirement are written and linked to each requirement that is to be qualified.
  - Implementation requests are marked as completed and product is delivered
    - Product gets picked up by the next integration
  - The test steps from the test cases are run on the new integration
    - If any test step fails, a qualification change request is created and linked to the test step.
    - Resume qualification upon resolution of the qualification change request
    - If all tests steps pass, continue
  - Links can be used to inspect the content of the integration
    - Links between a requirement and a change request can be used to check that a requirement has been delivered
    - Links between a requirement and a test case can be used to check that the implementation meets that requirement
- **Post-conditions**
  - The requirements are satisfied (all implementation requests completed, test cases passing). The resulting integration meets the requirements placed upon the product.

RM 1.0 Specification

- 6 documents (30 pages of wiki)
  - Description of resource formats
  - Description of behaviour of those resources
- Functional, Partial & Precise specs.
- Web service protocols
  - Constrains service providers (servers)
  - Informs service consumers (clients)
- Pervasive “low bar” technology (W3C)

RM Scenarios 2010

- Traceability investigations
  - Scenario T1 - A requirement is elaborated
  - Scenario T2 - A requirement is reviewed
  - Scenario T3 - The impact of a change is assessed
  - Scenario T4 - Requirements are traded
  - Scenario T5 - Qualification activities are planned
  - Scenario T6 - Qualification status is assessed
  - Scenario T7 - A traceability report is generated
  - Scenario T8 - Changes that affect a requirement are assessed
  - Simple RM/AM workflow
- Relationship Management

- Other Themes
  - Alignment – core spec
  - Cross domain – Reporting, CM, AM

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How to share experience of putting OSLC Specs into practice in the PLM context ?

- The aim is to introduce examples of usage in a PLM context, what would be useful …?
  - Business context and purpose
  - PLM context scenario
  - System Context summary
  - OSLC Spec usage
  - Lessons learnt
  - ?
- What examples are available ?
- Do we need to establish some PLM context first ?
- How to do this in practice ?

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Proposed next meetings

- Next meeting of the PLM Workgroup
- Proposal: March 16th at 11am Eastern
  - Aims
  - Activities
  - Logistics

Thank you

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How to keep in touch

- Open services (OSLC) home
  - http://open-services.net/html/Home.html
- Register on open-services.net
- PlmHome page
  - http://open-services.net/bin/view/Main/PlmHome
- Community mailing list
  - http://open-services.net/html/Community.html
- PLM Workgroup mailing list
  - http://open-services.net/mailman/listinfo/oslc-plm_open-services.net
- Wiki
  - http://open-services.net/bin/view/Main/WebHome
- UserList
  - http://open-services.net/bin/view/Main/UserList