

IBM Rational Asset Manager Governing the Assets of your Enterprise

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 What keeps me **Rational**?



Agenda

- Concepts
- Configuring Rational Asset Manager for Governance
- Sample SOA Catalog
- Rational Asset Manager Modular Service Offering




Agenda

- Concepts
 - ▶ Governance
 - ▶ Community
 - ▶ Process
- Configuring Rational Asset Manager for Governance
- Sample SOA Catalog
- Rational Asset Manager Modular Service Offering



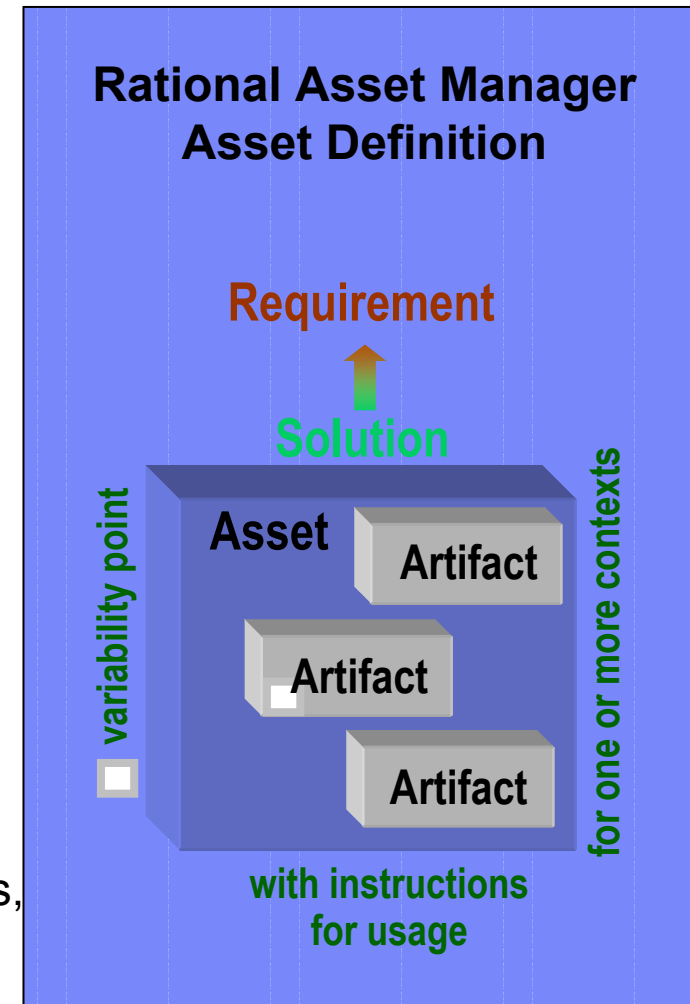
Asset Governance

- The establishment of
 - ▶ **Chains of responsibility** to empower people
 - ▶ **Measurement** to gauge effectiveness
 - ▶ **Policies** to guide the organization to meet their goals
 - ▶ **Control mechanisms** to ensure compliance
 - ▶ **Communication** to keep all required parties informed
-  Rational Asset Manager governance:
- Review and approval
 - Metrics and reporting
 - Communities, Information Model, Asset Versioning
 - Access control
 - Notification, Subscriptions



What is an Asset?

- An Asset is
 - ▶ a collection of Artifacts
 - ▶ which provides a solution to a requirement or business need
 - for one or more contexts
 - with instructions for usage
 - and variability points
- What are Artifacts?
 - ▶ Workproducts from the software process
 - Requirements, Designs, Models, XML, XSD, Source code, Data, Tests, User Interfaces, Documentation, Service Interfaces, Estimates and so on...
- Kinds of assets
 - ▶ Applications, components, business process, information model, patterns, services, frameworks, templates, ...



What is a Community?

- A community is a target audience for assets.
- A community may produce, consume, and manage assets.
- A community may be aligned on organizational boundaries, or for a role, or a project, and so forth.
- Asset may be shared amongst communities.



Asset Governance Process

Roles and Their Activities For Establishing Asset Governance

Asset-based

Development Manager



Create Asset Governance Board
Define Asset Gov and Dev Org
Determine Metrics to Track

Metrics and reporting

...

Review and approval

Asset Governance Board



Define Asset Review Workflows
Define Asset Types
Specify Asset Version Strategy

Information Model

... **Asset Versioning**

Apply the asset governance process to define the policies and artifacts for implementing governance in the repository.

Best practice

Asset-based Development Administrator



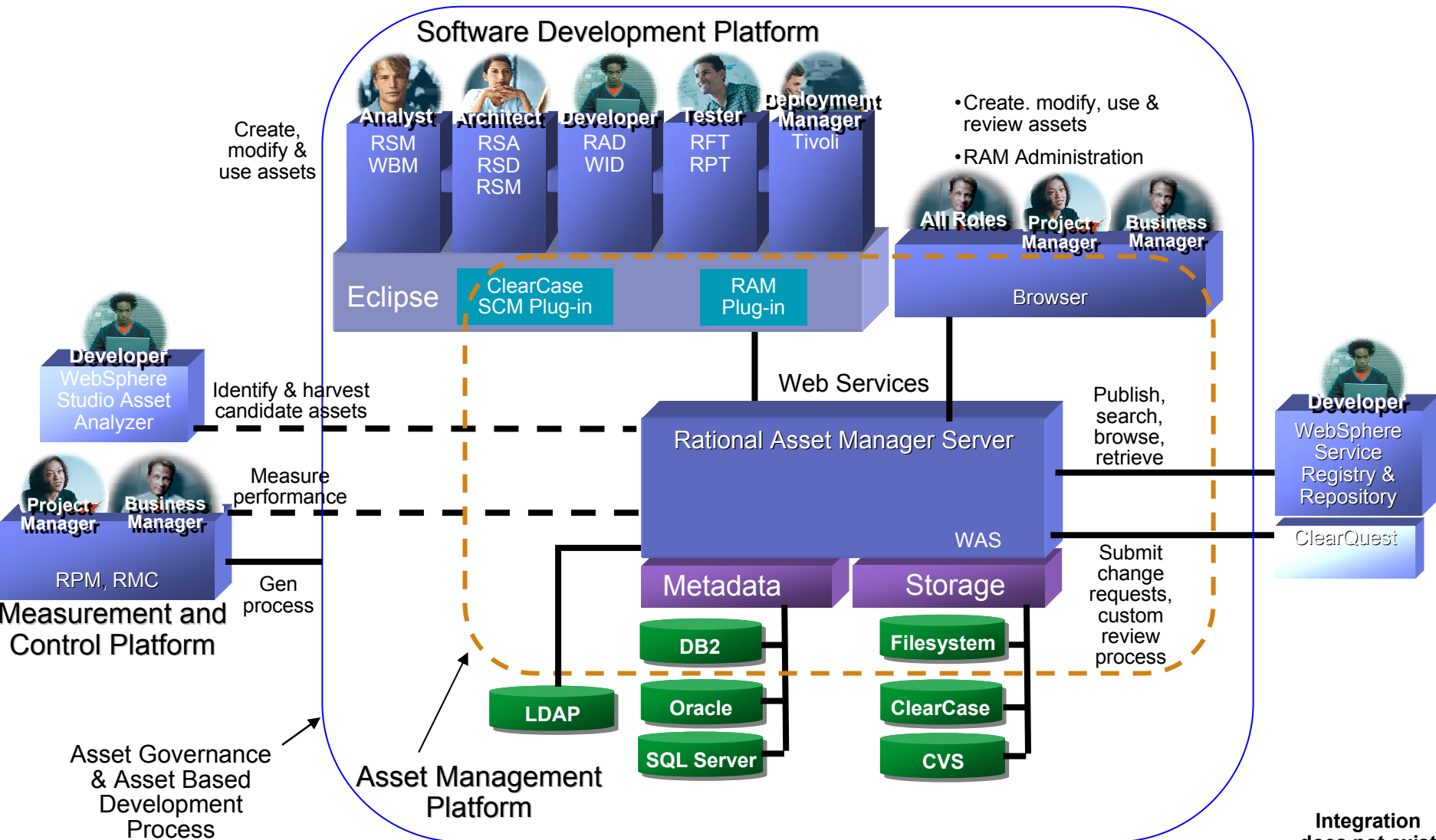
Notification, Subscriptions

Determine Tools to Support ABD
Specify Repository Community

Communities, Access control

Preparing for Rational Asset Manager governance

Rational Asset Manager Architecture



Agenda

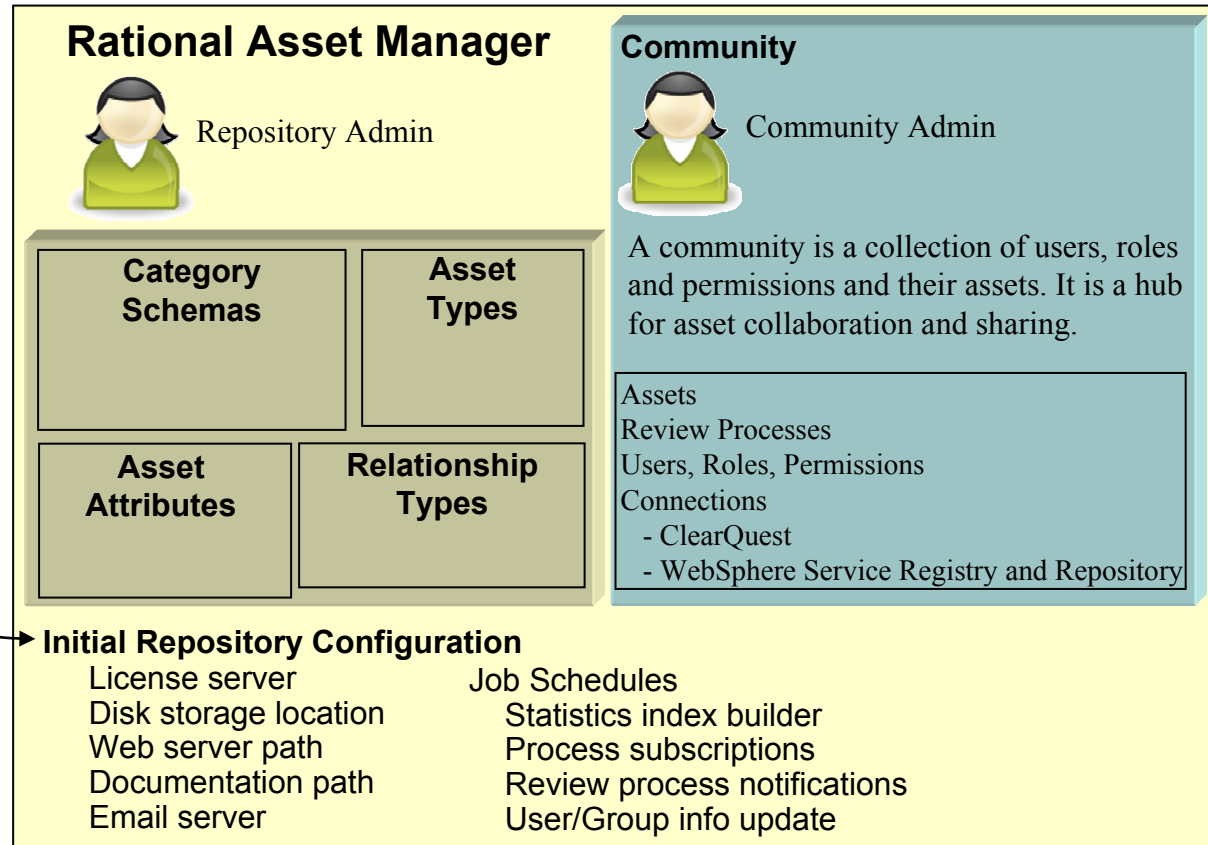
- Concepts
- Configuring Rational Asset Manager for Governance
 - ▶ Getting Started
 - ▶ Information Model
 - ▶ Asset Versioning
 - ▶ Communities
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 - ▶ Notification, Subscriptions
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Getting Started

- The initial repository configuration gets Rational Asset Manager running and optimized for notifications

- Additional configuration to support asset governance are addressed next



Demo: RAM overview, Tools & Config pages



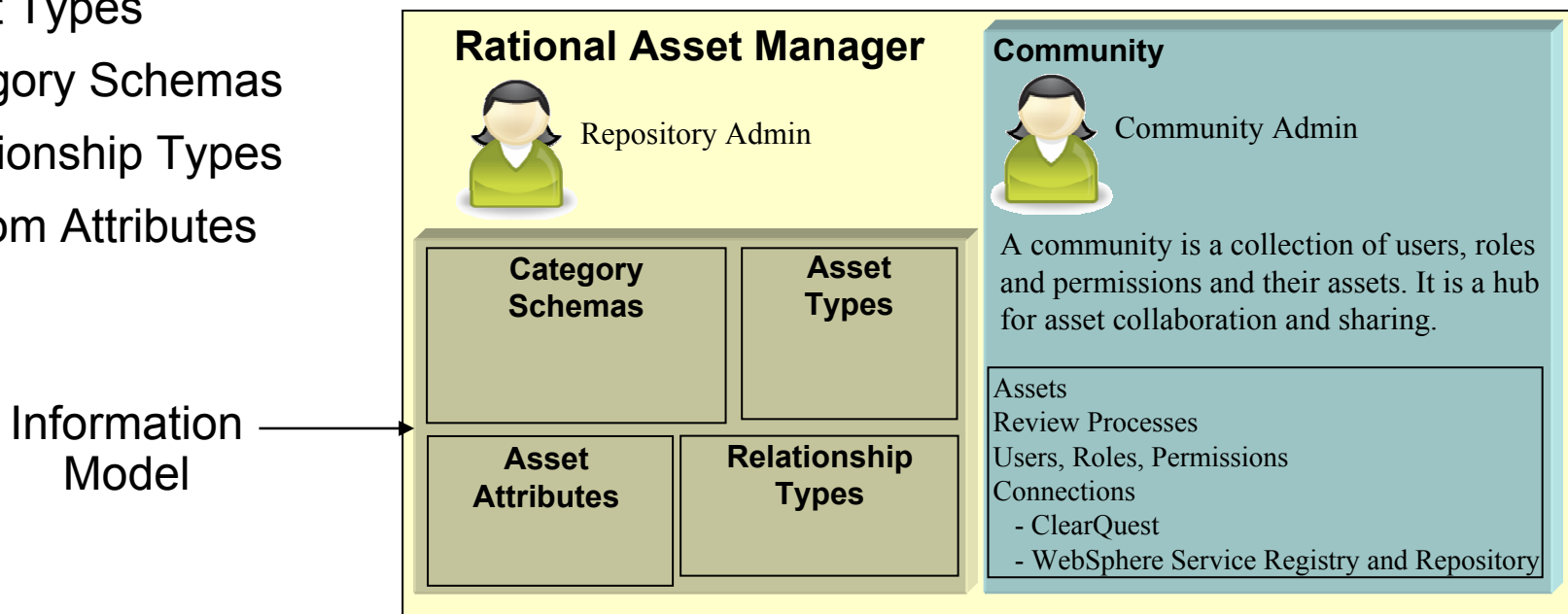
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- Concepts
- Configuring Rational Asset Manager for Governance
 - ▶ Getting Started
 - ▶ **Information Model**
 - Asset Types
 - Category Schemas
 - Relationship Types
 - Custom Attributes
 - Import / Export
 - ▶ Asset Versioning
 - ▶ Communities
 - ▶ Metrics and reporting
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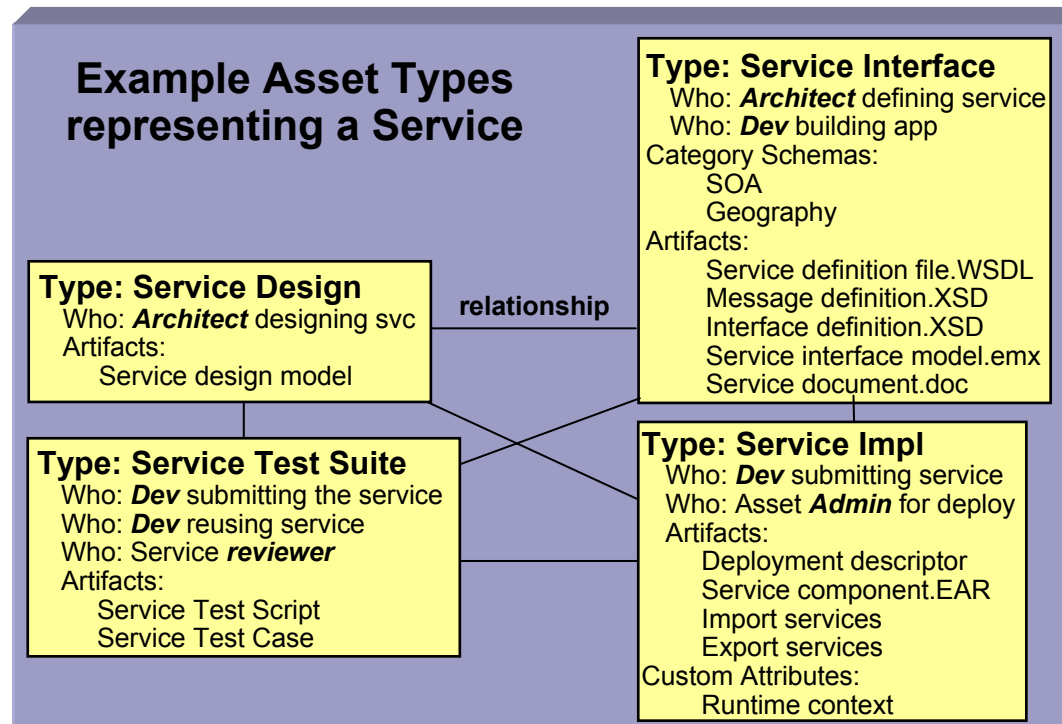
Information Model

- The Rational Asset Manager repository is configurable to govern the assets that are relevant your organization
- This configuration is done at the repository level
- The communities use this information model to configure access
- This is done by defining your
 - ▶ Asset Types
 - ▶ Category Schemas
 - ▶ Relationship Types
 - ▶ Custom Attributes



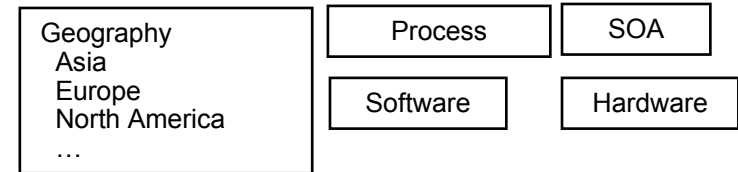
Information Model: Asset Types

- An asset type describes the structure of assets
- An asset is of one asset type
- When defining asset types, do so from the perspective of the target asset consumer Best practice



Information Model: Category Schemas

- Category schemas are a form of communication
- A perspective or view of the business or technical domain or ...
- Used by asset consumers to discover assets
- Are captured in a basic tree structure
- Used to constrain
 - ▶ Asset Types
 - ▶ Review Processes
 - ▶ Roles
- When defining category schemas, do so from the perspective of asset consumers and other stakeholders

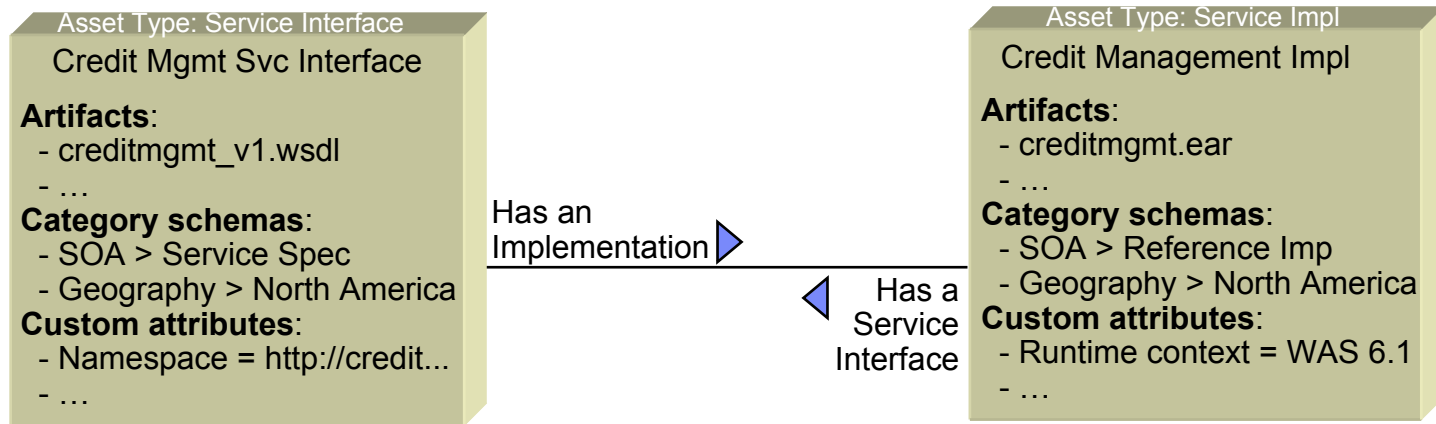


Best
practice



Information Model: Relationship Types

- Asset relationships are bi-directional
- Each relationship end has a type



- When defining the relationship type in the repository, define both ends
- Relationship Types can be used as constraints on Asset Types

Information Model: Custom Attributes

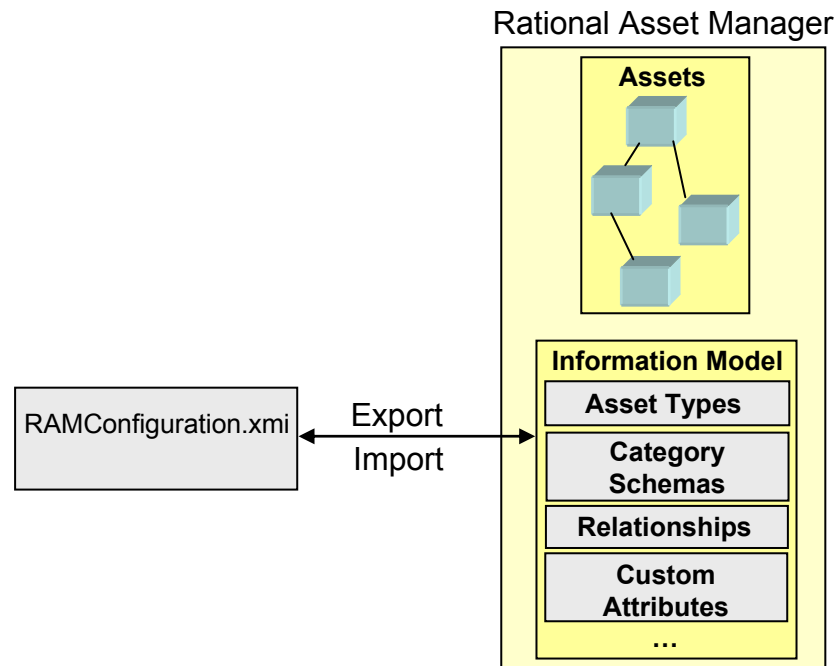
- The core metadata elements for assets in the repository are defined by RAS (Reusable Asset Specification)
 - ▶ This is extended using Asset Types
 - ▶ Which adds constraints on artifacts, relationships as well as category schemas
- Custom Attributes are metadata elements which contain either strings or pre-defined lists
- They are defined at the repository level
- They are associated with Asset Types, and may be required or optional on the Asset Type

[Demo: Info Model](#)



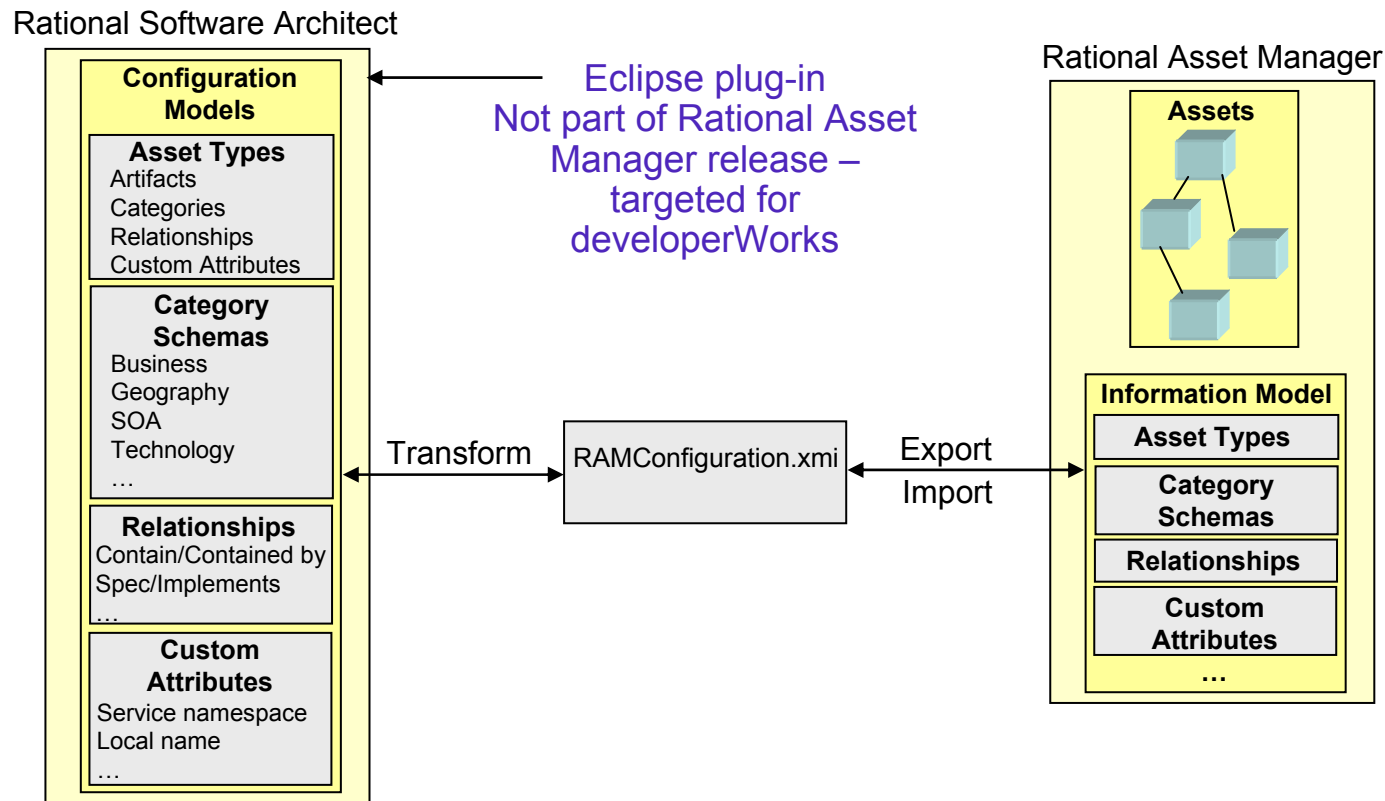
Information Model: Import / Export

- The key elements of the information model can be imported and exported
- The repository administrator performs the import/export
- This allows for exchanging and external manipulation of the information model



Information Model: Import / Export

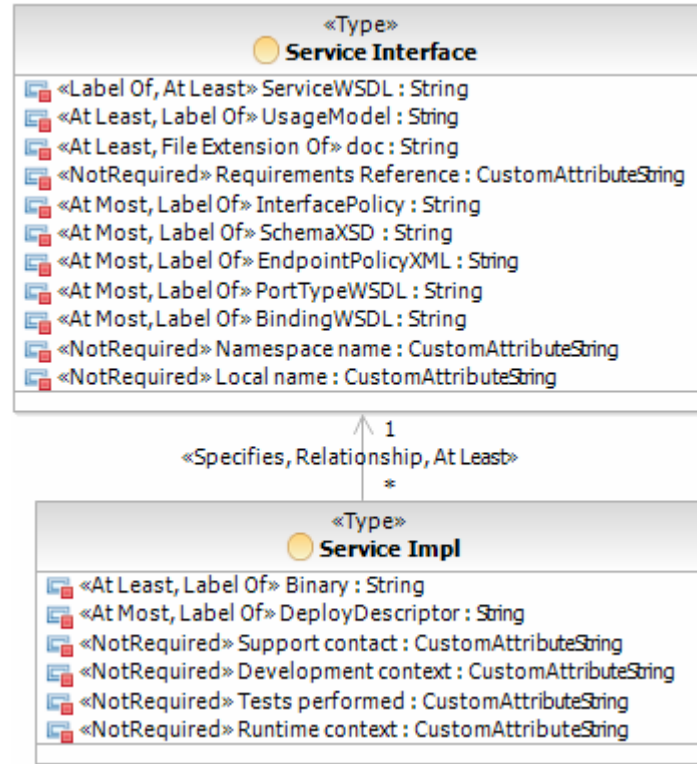
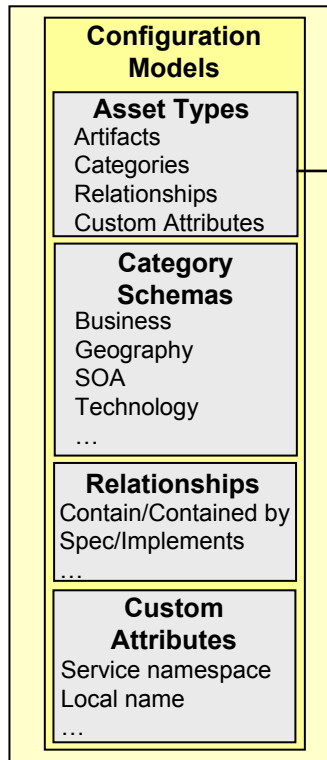
- Visualize and socialize a RAM information model using an RSA model
- Run a transform which produces XMI file to be imported into RAM



Information Model: Import / Export

- Sample Asset Types in RSA model to configure the RAM information model

Rational Software Architect



Demo: Update Info Model with RSA



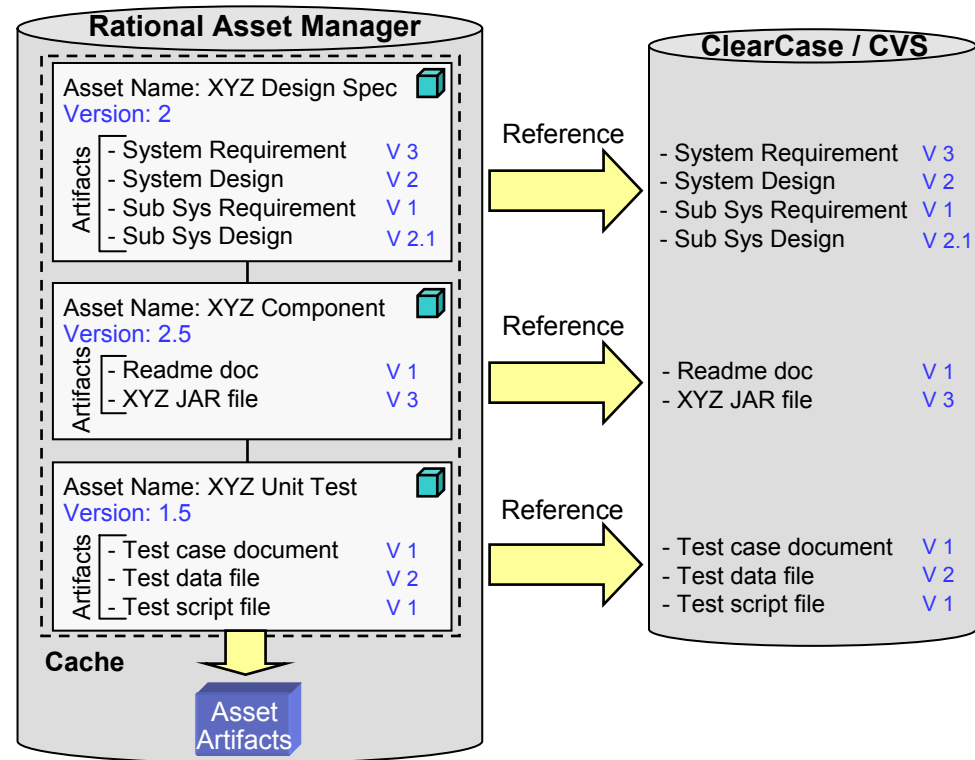
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Asset Versioning

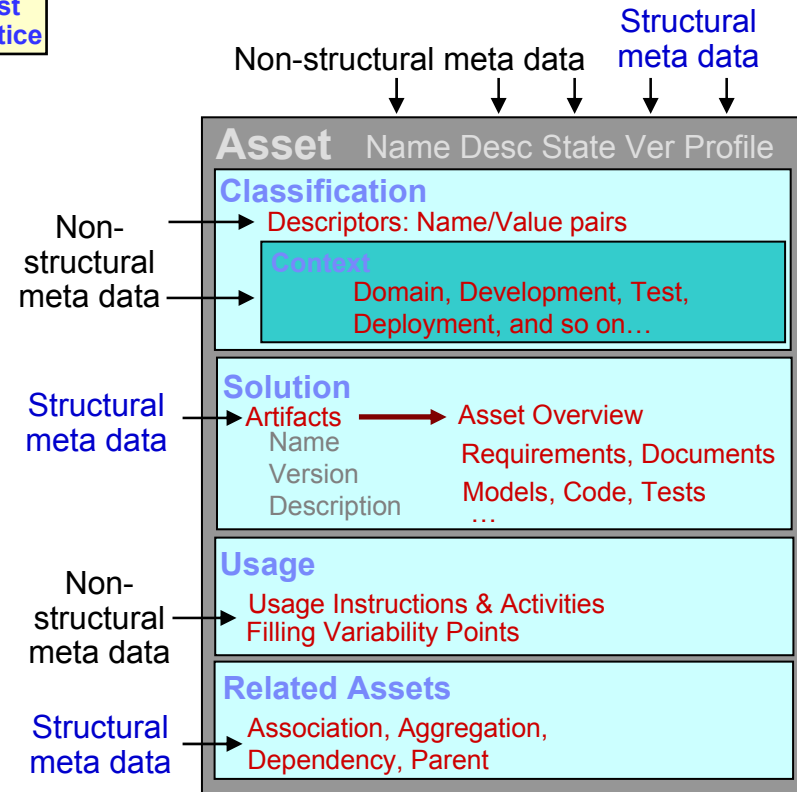
- Every asset's artifacts is cached in the repository
- Versioning is handled at two levels
 - ▶ Asset
 - ▶ Artifact
- Asset
 - ▶ Each asset can be versioned in the repository
 - ▶ Asset versioning is dictated by the policies of the organization
- Artifact
 - ▶ Asset artifacts can be also be located in ClearCase or CVS
 - ▶ Artifact versioning is handled by ClearCase or CVS



Asset Versioning Policy

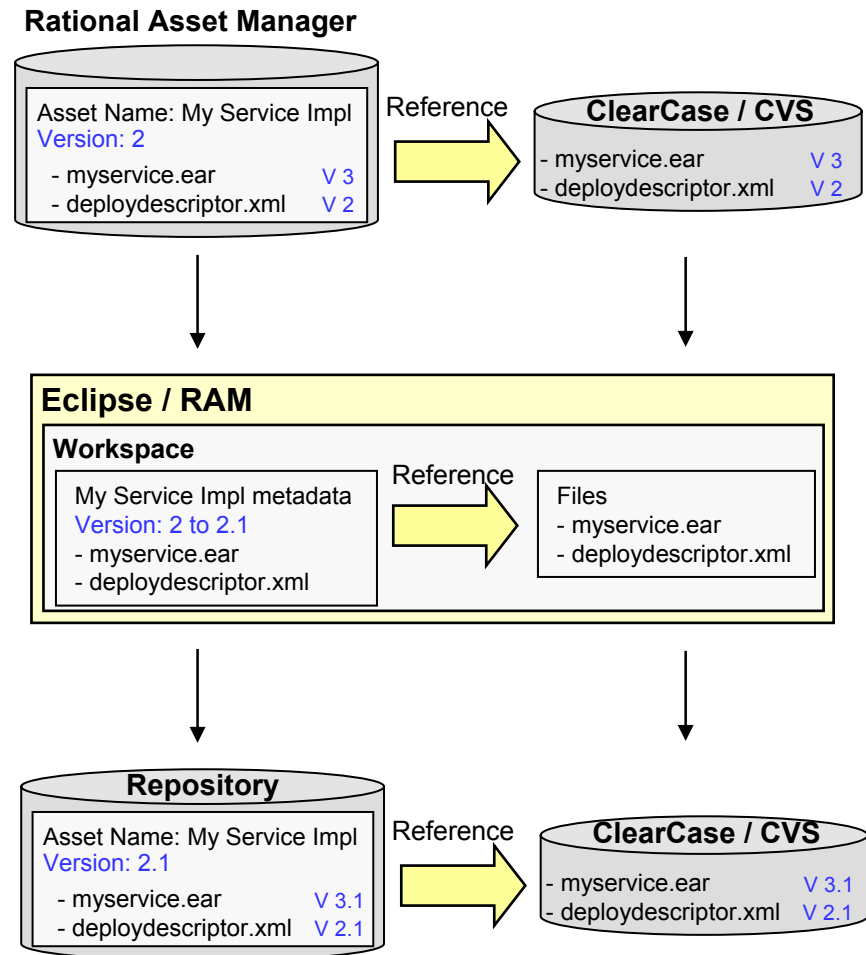
- Identify what kinds of changes to an asset require a new asset version to be created
- For example, one approach to consider is to define structural changes versus non-structural changes
- Structural changes would **require** a new asset version, non-structural changes would not require a new asset version
- Structural changes
 - ▶ Asset name(?), version, changes to artifacts or new artifacts, relationships
- Non-structural changes
 - ▶ Asset name(?), description, classification, and supporting artifacts (readme files, ...)
- Determine these policies early and communicate them

Best practice




Modify an Asset – Create a New Asset Version

- Find an asset in RAM
- Import the asset into Eclipse / RAM
 - ▶ Select branch on which to import asset
 - ▶ Asset artifacts populated in Eclipse workspace
- Modify asset
 - ▶ Artifacts / Files
 - ▶ Metadata
- According to asset versioning policy
 - ▶ Change asset version #
- Update asset (submit to RAM)
 - ▶ Asset artifacts checked in
 - ▶ Metadata references updated




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 -  ▶ **Communities**
 - Access control
 - Review and approval
 - Repository Configuration Community
 - Change management
 - Service registry
 - ▶ Metrics and reporting
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Create Communities, Roles & Access Control



Business Analyst

Analyst Community

Access Control:
 search, read,
 browse, download,
 update all assets in
 Analyst Community

Claims Processing Community



**Architect/
Developer**

Access Control:
 search, read,
 browse, download,
 update all assets in
 Claims Processing
 and Analyst
 Community




Asset Owner



Reviewer

Service Dev Community

Access Control:
 search, read,
 browse, download,
 update all assets in
 Service Dev
 Community



Community Admin

Access Control:
 full entitlement
 across all assets in
 one or more
 Communities

A Community is a collection of users, their roles and permissions, and their assets and review processes

Criteria For Creating A Community

- You create a community when you identify a target audience which has (or wants to use) assets which need to be governed. Best practice

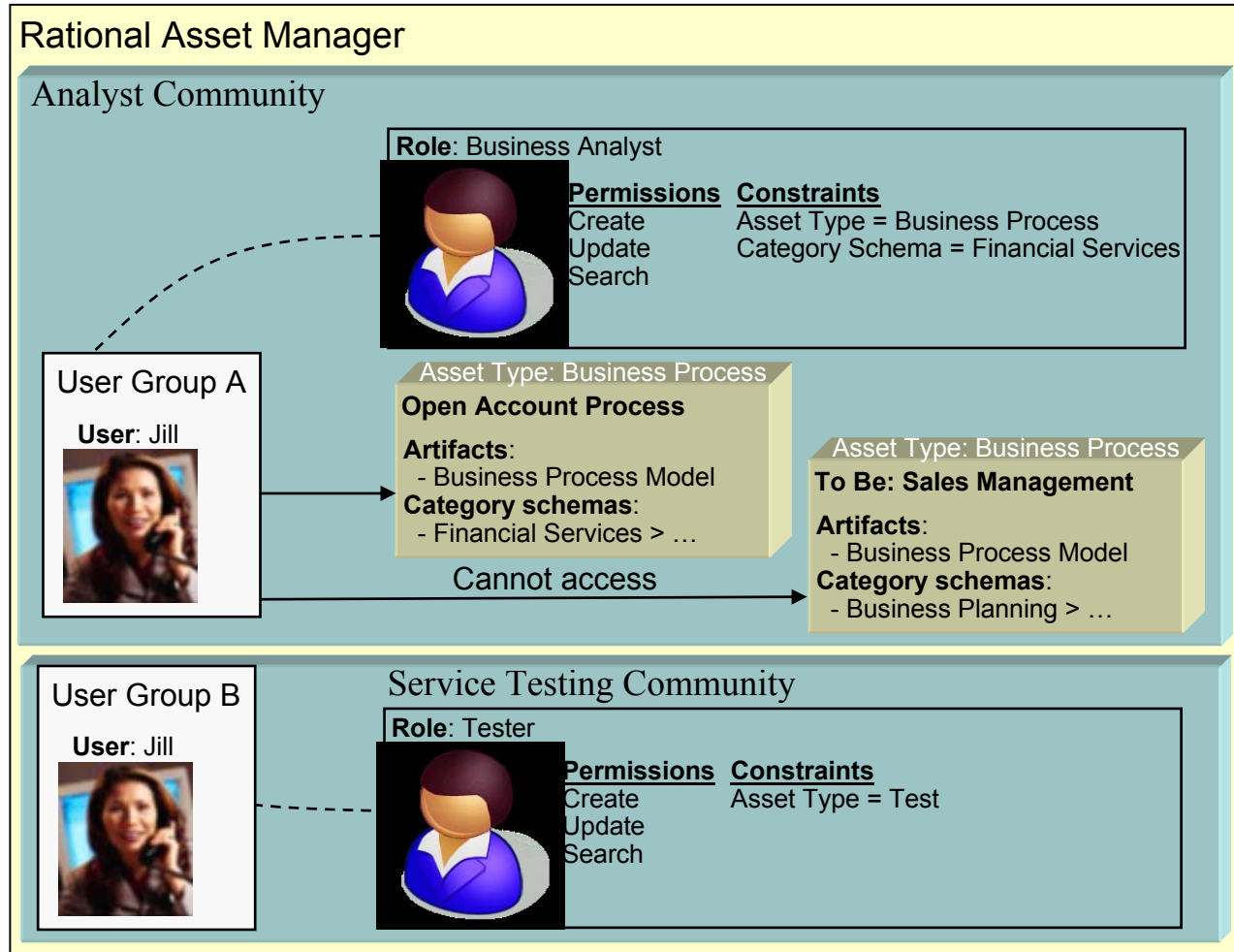
- The community may be built along many different boundaries.
 - ▶ *Organization*: you may create a community based on the organization chart.
 - ▶ *Role*: you may create a community based on some common role (Analyst) that crosses organizational boundaries.
 - ▶ *Project*: you may create a community based on a project, or initiative, although this is often a less permanent boundary, the overhead and organization may be justified.

Access Control

Access control defines what you can do in the repository and with what assets you can work.

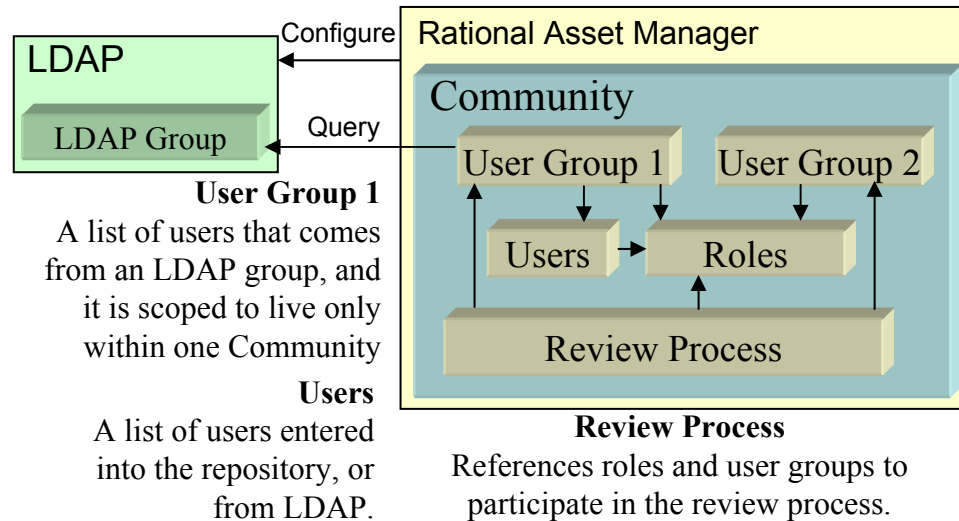
Jill in the Role of Business Analyst in the Analyst Community

Jill in the Role of Tester in the Service Testing Community can access assets of type Test



Rational Asset Manager Community Users and Roles

- The community defines the user groups, roles, and permissions.

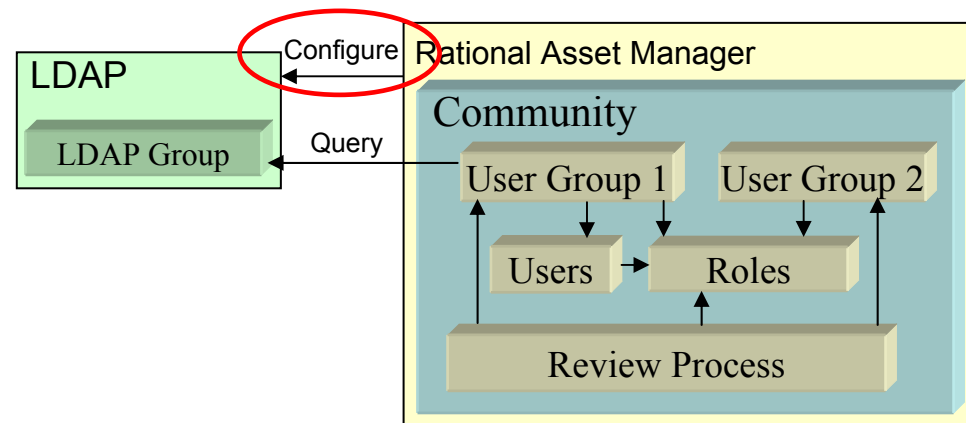


There are default "users" added to a new community.

Name	Roles		
All users		Edit roles	
Signed-in users		Edit roles	
Bill Walker	Architect Service Developer	Edit roles	Remove
Jill Allred	Service Metadata Maintainer	Edit roles	Remove
Peter Jensen	Administrator Service Dev Manager	Edit roles	Remove

Configuring LDAP

- The LDAP connection is configured at the repository level.
- If a connection is configured to LDAP, then each community can connect via a query for a specific user group.
- All queries use the single LDAP connection.



Class Configuration: com.ibm.ram.repository.custom.LDAPUserInfoFactory

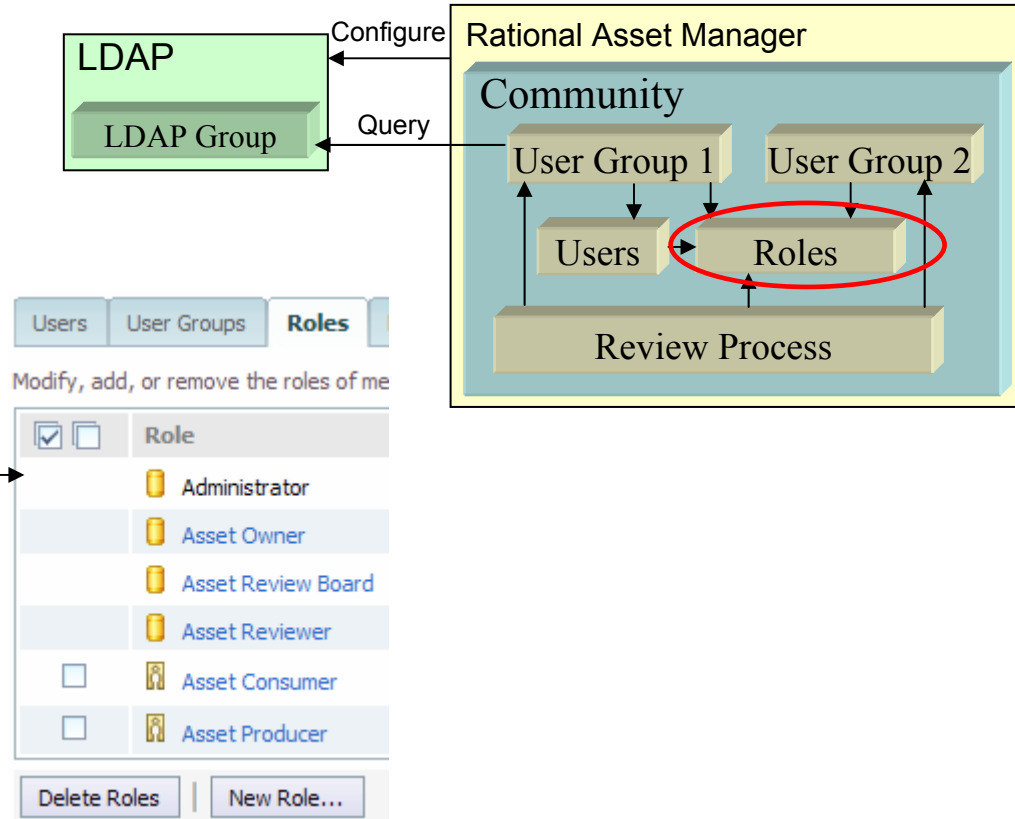
LDAP server's URL:	<input type="text" value="ldap://<url>:389"/>
User's distinguished name:	<input type="text" value="(rdn),(rdn),(rdn)..."/> <small>User's distinguished name to use when accessing the LDAP server</small>
User's password:	<input type="password"/>
User's unique ID property:	<input type="text" value="uid"/> <small>Which property designates the user's unique identifier. This may not be the same as the login id</small>
User's login ID property:	<input type="text" value="mail"/>
User's phone number property:	<input type="text" value="telephonenumber"/>
User's e-mail property:	<input type="text" value="mail"/>
LDAP user base searching:	<input type="text" value="(rdn),(rdn)..."/> <small>When searching a user, where to start the search from</small>
User search filter:	<input type="text" value="(&(objectclass=person)((mail=%v)(cn=%v)))"/> <small>This is the LDAP search query for a user. %v designates the search input</small>
LDAP group base search:	<input type="text" value="(rdn),(rdn)"/> <small>When searching for a Group, where to start the search from</small>
Group search filter:	<input type="text" value="(& ((objectclass=groupOfUniqueNames)(objectclass="/> <small>This is the LDAP search query for a group. %v designates the search input</small>
Image URL template:	<input type="text" value="https://<ImageServer url>/photo/\${uid}.jpg"/> <small>RAM can form a url to point to a user's photo. You can use \${value} to construct a URL, where 'value' represents an LDAP user property</small>

Update Configuration Cancel



Configuring Roles

- Roles are defined per community.
- There are some default roles added to a new community.
- Roles are used by other items
 - ▶ Users
 - ▶ User Groups
 - ▶ Review Processes



Configuring Roles (2)

- On each role identify the permissions.
- You can constrain the permissions by asset type, and asset category

Community Role

Define a role that can be applied to members in this community.

Name:

Description:

Role Permissions

Check the permissions that this role assumes in this community.

<input checked="" type="checkbox"/>	<input type="checkbox"/>	Permission	Description
<input checked="" type="checkbox"/>	<input type="checkbox"/>	 Browse assets	Users can browse the asset,
<input type="checkbox"/>	<input type="checkbox"/>	 Create assets	Users can create new assets
<input type="checkbox"/>	<input type="checkbox"/>	 Delete assets	Users can permanently delete
<input checked="" type="checkbox"/>	<input type="checkbox"/>	 Download assets	Users can download assets. I
<input checked="" type="checkbox"/>	<input type="checkbox"/>	 Read asset details	Users can view asset details l
<input checked="" type="checkbox"/>	<input type="checkbox"/>	 Search assets	Users can search for assets.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	 Subscribe to assets	Users can subscribe to assets
<input type="checkbox"/>	<input type="checkbox"/>	 Update assets	Users can update assets.

Role Scopes

Constrain the scope of the role by making permissions apply only to assets of specific types, classifications, or own

Applies to assets that match: All of the following At least one of the following

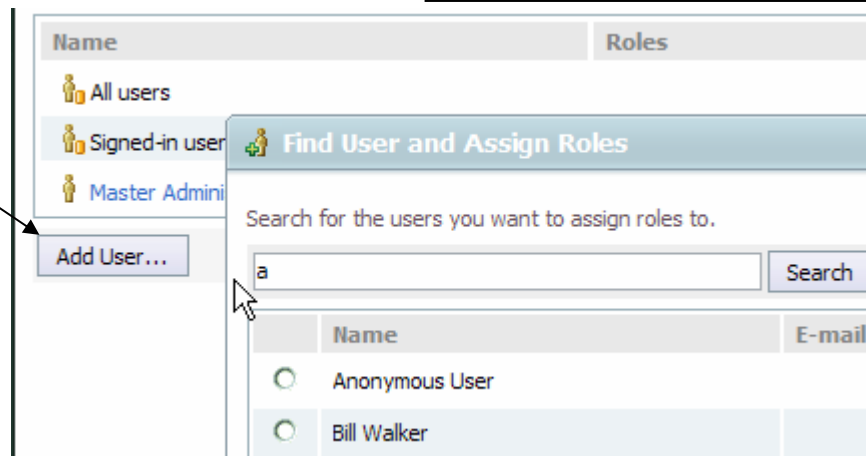
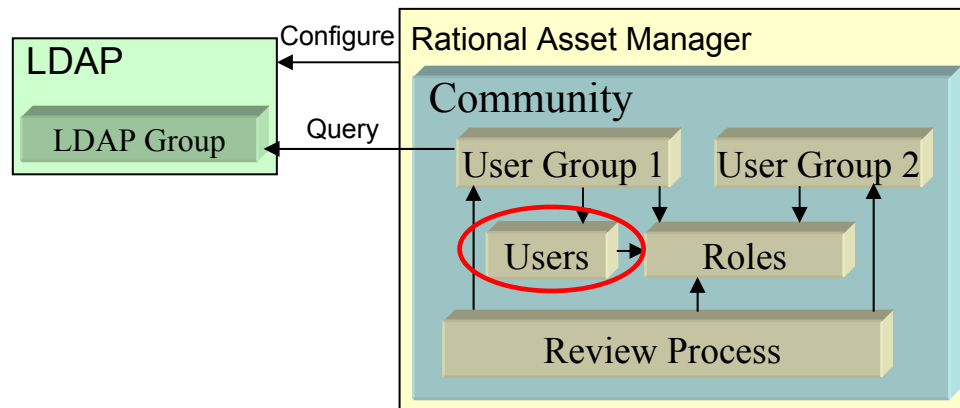
Type

|

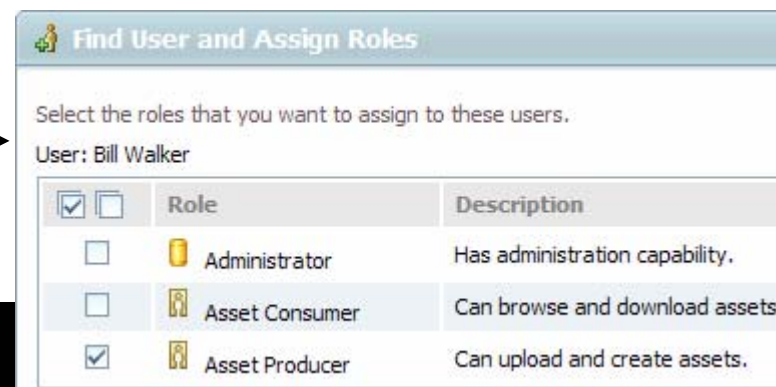


Configuring Users

- Clicking the “Add User...” button assigns roles to a user.
 - ▶ Users can be created manually in RAM, they register with RAM and the container manages security.
 - ▶ Users can be retrieved from LDAP queries on User Groups.

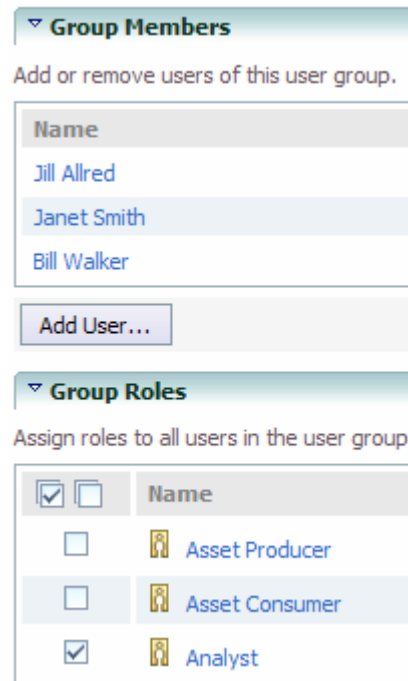
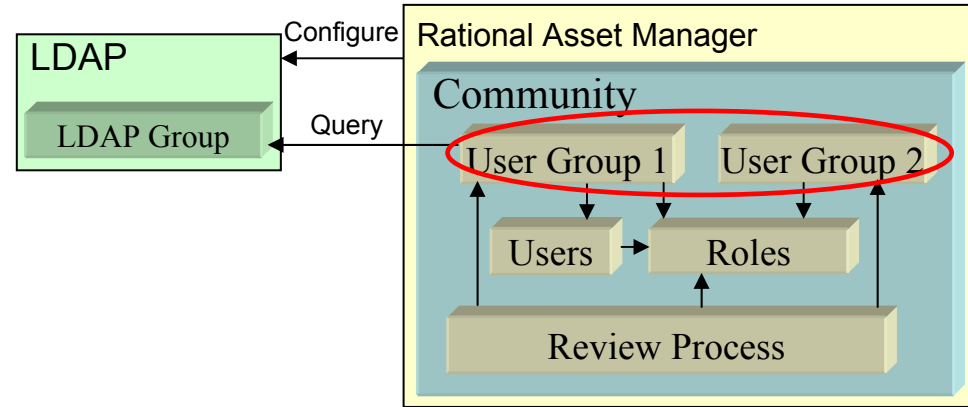


- A User is assigned roles and permissions within a community. A user can have multiple roles.



Configuring User Groups

- User Groups can be populated by manually adding Users.
- User Groups can be populated with Users retrieved from binding to an LDAP query.
- Users in User Groups are mapped to roles.
- The users in a User Group have the same roles and permissions for a particular community.



Demo: Communities,
...



Community for “Repository Configuration”

- When users come to the repository they often don't understand many things about the repository
 - ▶ Information Model, Communities, Access Control, Asset Versioning Policy, ...
- A **best practice** to consider is to create a community called “Repository Configuration” Best practice
- Configure all authenticated users as Asset Consumers to this community
- Create an Asset Type called “Policy”
- Populate community with assets such as
 - ▶ Repository configuration overview
 - ▶ Asset version policy
 - ▶ Category schemas
 - ▶ Workflows and review processes ←
 - ▶ Asset type specifications
 - ▶ Community map

These assets are
workproducts from the
Asset Governance
process

Demo: Repos Config
Community



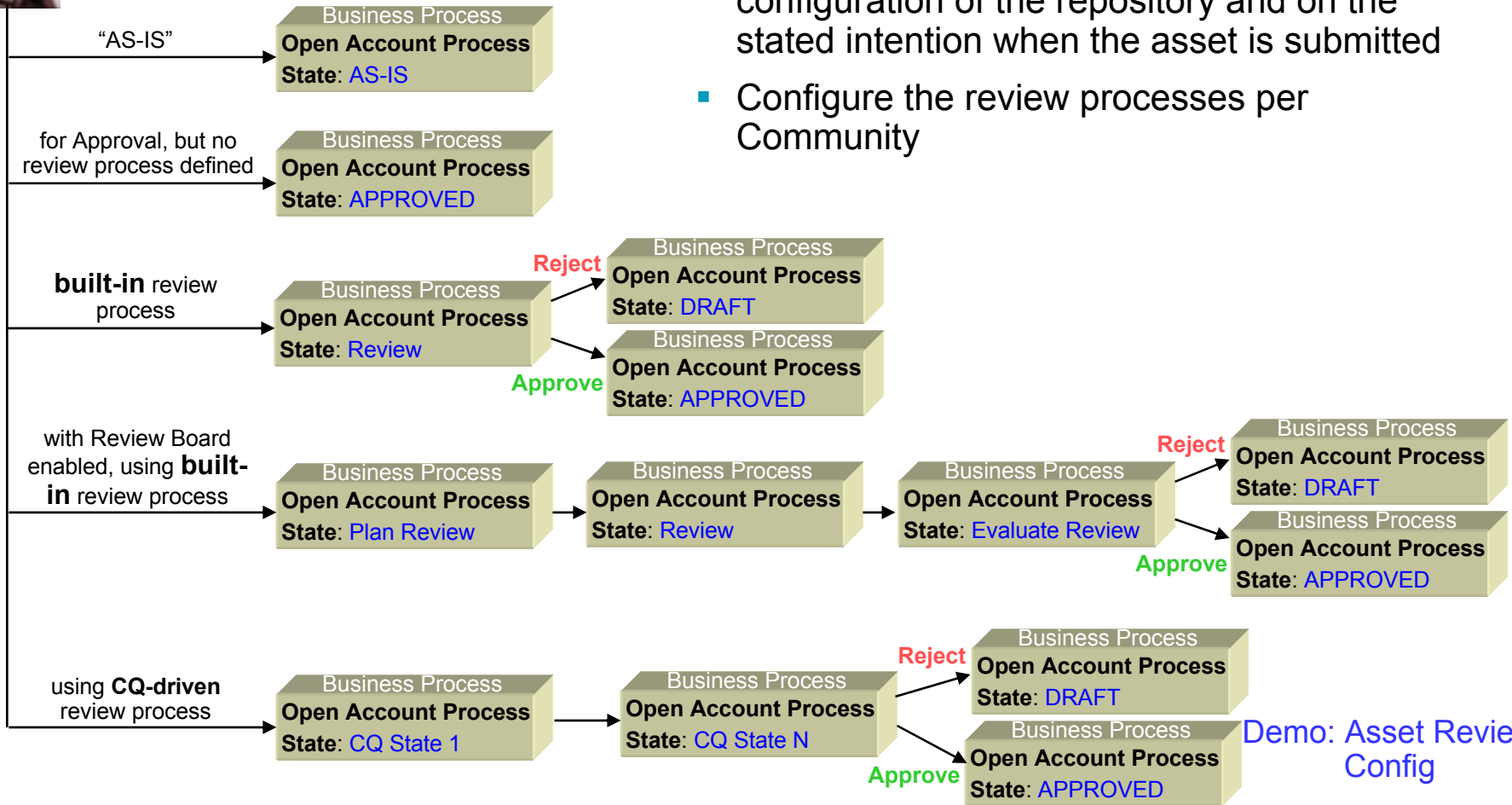
Asset Review Processes

User: Jill



Submit asset...

- There are several flows for review processes
- The flow selected depends on the configuration of the repository and on the stated intention when the asset is submitted
- Configure the review processes per Community

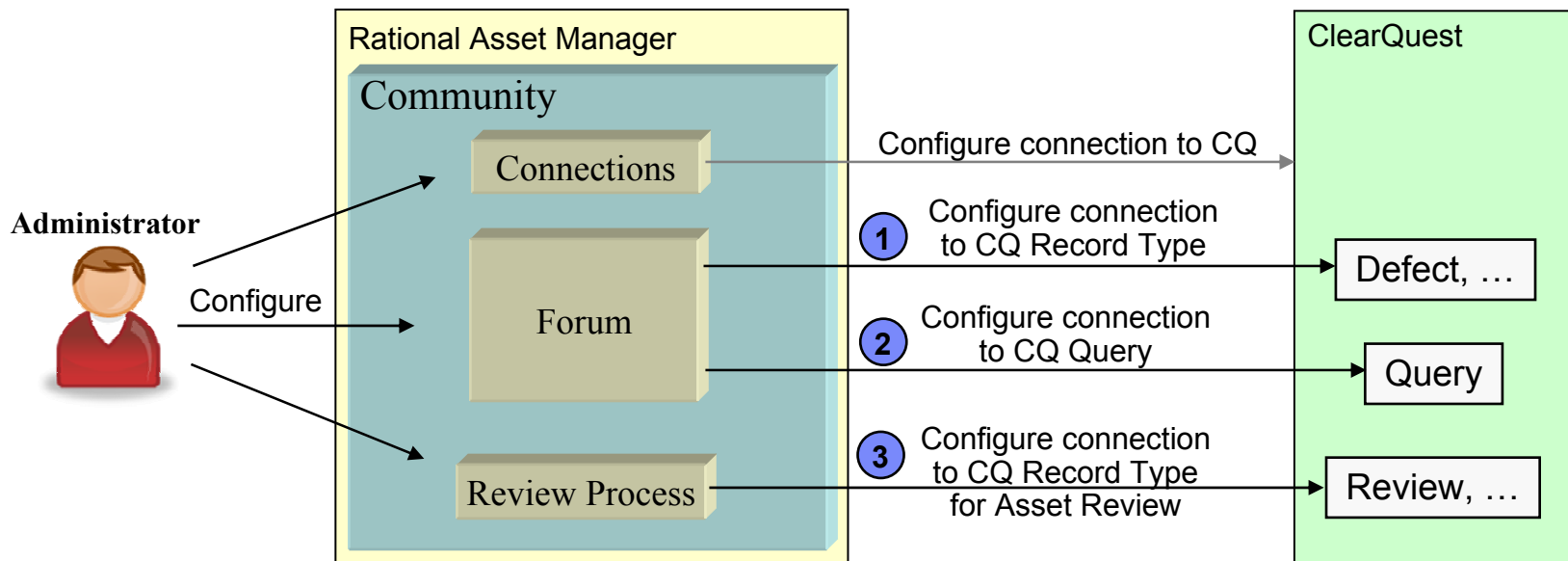


Demo: Asset Review Config



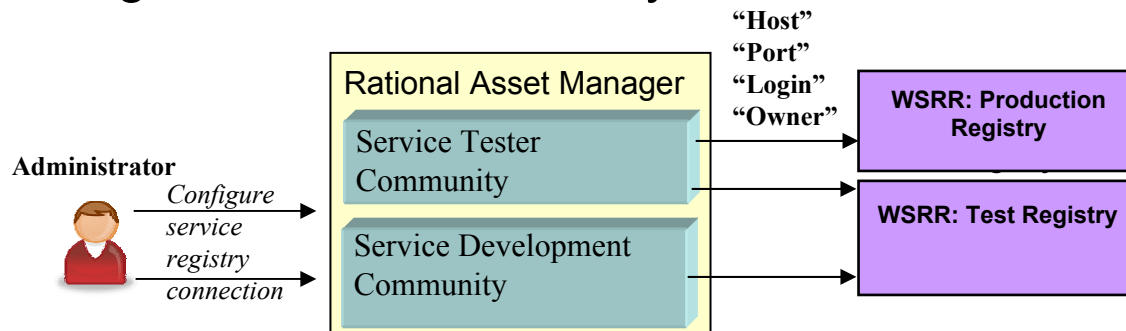
Change Management

- Integrates with ClearQuest (CQ) to track defects on assets
- CQ connections are configured per community
- CQ fields are mapped to RAM fields

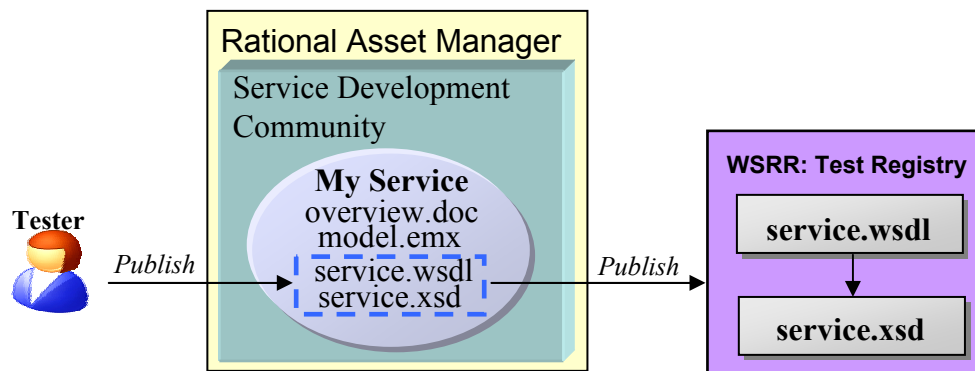


Service Registry


- The connection to WebSphere Service Registry and Repository (WSRR) is configured in the community



- The service documents are published from RAM to WSRR



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 -  ▶ **Metrics and reporting**
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Metrics and Reporting

- Rational Asset Manager manages usage metrics at two levels
 - ▶ Asset
 - ▶ Repository

- Asset metrics are viewed in Eclipse and Web clients by administrators and other users
 - ▶ Amount of time to produce an asset
 - ▶ Expected time to reuse and asset
 - ▶ Total downloads
 - ▶ Average downloads for assets of given type
 - ▶ Unique downloads
 - ▶ Artifact browses

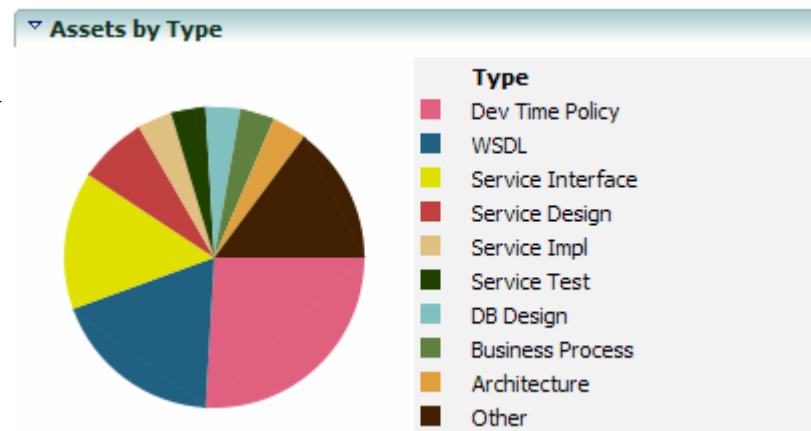


Metrics and Reporting (2)

- Repository statistics
 - ▶ Reports are viewed in Web client by administrators
 - ▶ Reports can be downloaded into .csv file formats


- Reports

- ▶ Repository Contents →
- ▶ Asset Activity
- ▶ User Activity
- ▶ Search History
- ▶ Activity Audit



- Generate audit for up to 22 activities across date range
- Who did what, when, on what asset

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 - ▶  **Notification, Subscriptions**
 - Notifications: RSS Feeds, Email
 - Subscriptions
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Notifications, Subscriptions

- Rational Asset Manager generates notifications for review processes

- Subscriptions
 - ▶ Per asset
 - ▶ Per search criteria
 - ▶ Notifications sent on periodic basis

- RSS Feeds
 - ▶ Per asset
 - ▶ Per search criteria
 - ▶ Notifications sent per event to RSS reader

Demo: Metrics,
Subscriptions



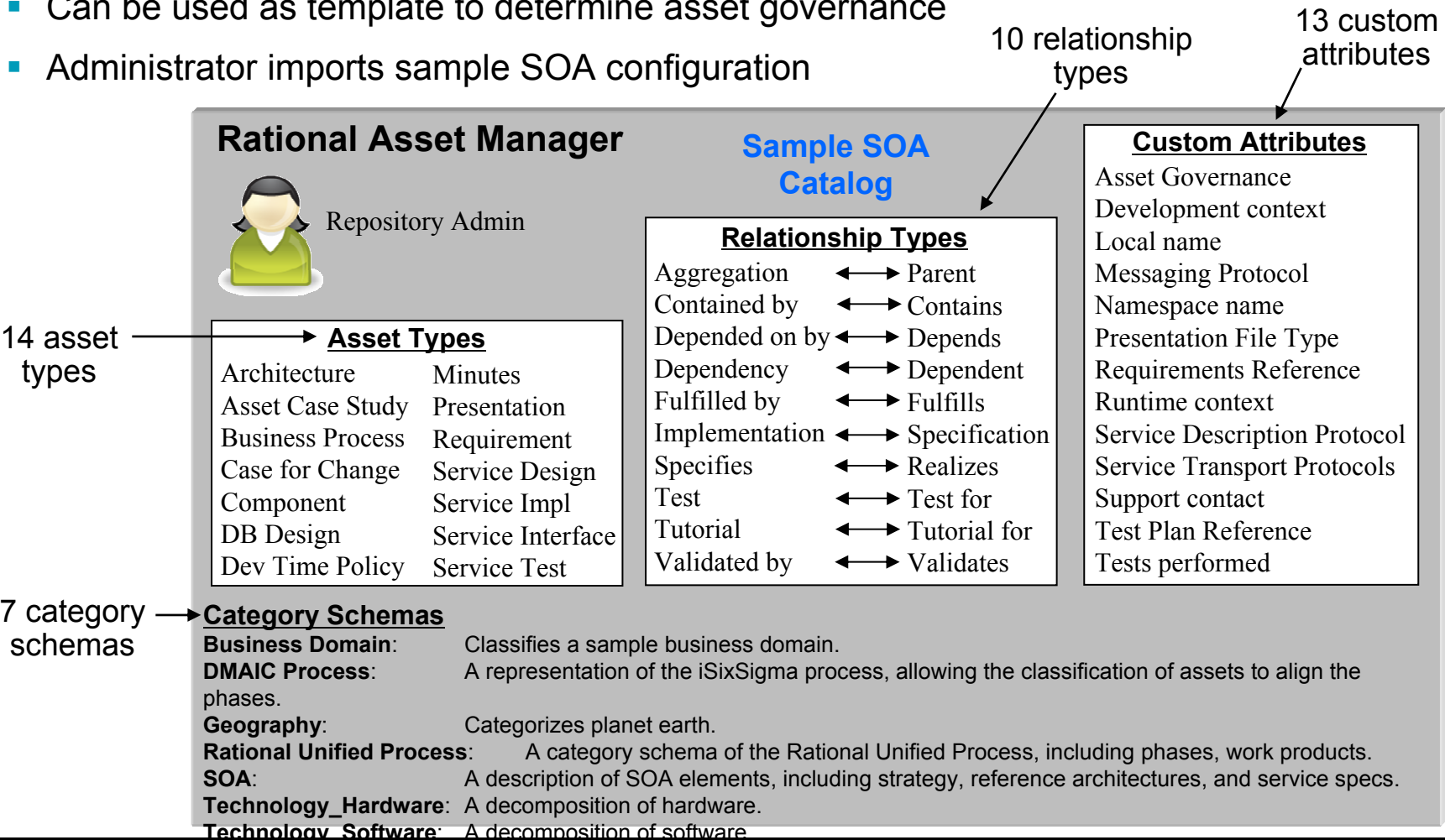
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Sample SOA Catalog

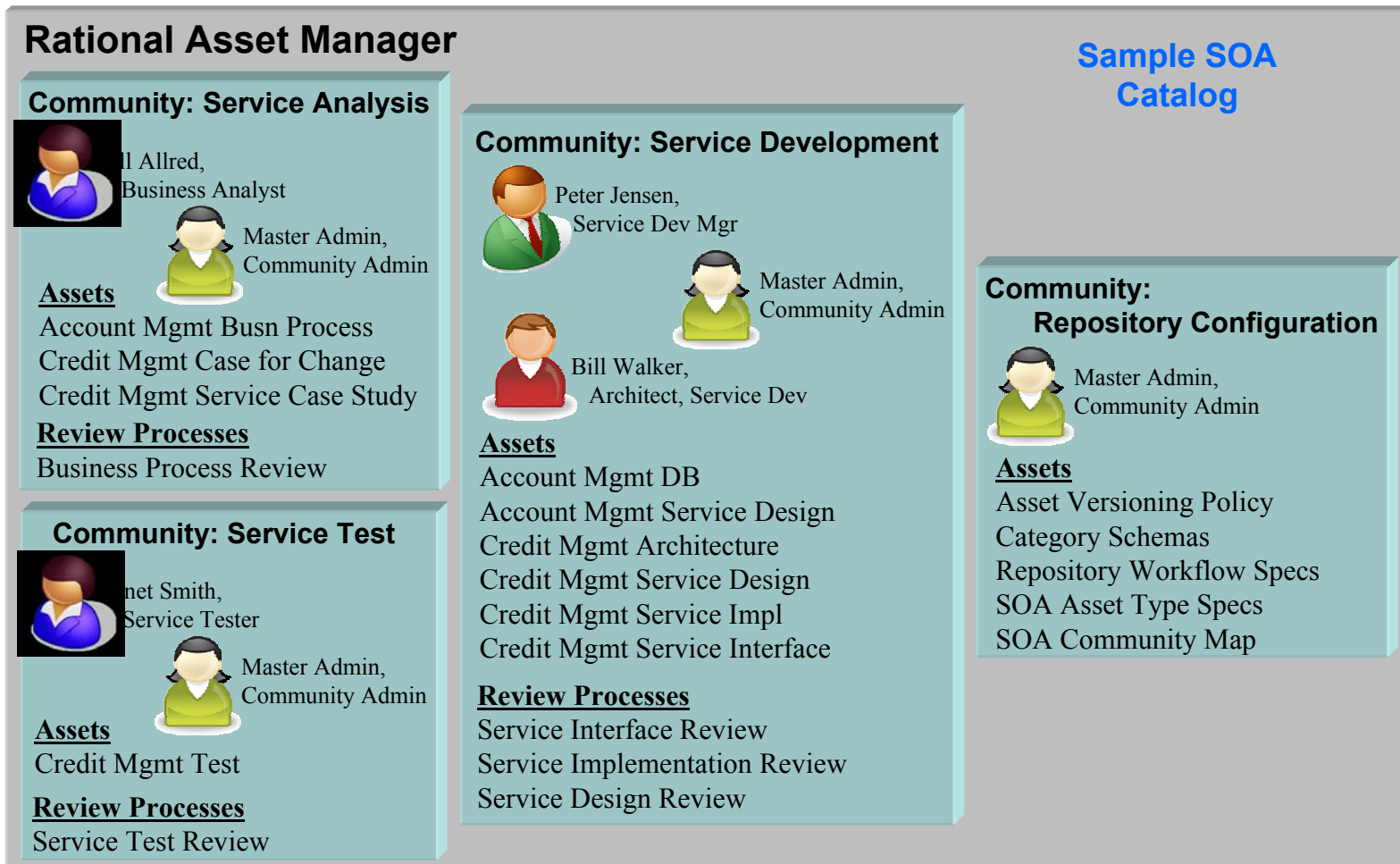
- The catalog contains repository configuration and assets
- Saves time deploying Rational Asset Manager for SOA
- Can be used as template to determine asset governance
- Administrator imports sample SOA configuration



Sample SOA Catalog

4 communities

15 assets



Demo: SOA import and assets



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IBM Rational Asset Manager Modular Service Offering



New!

- ▶ IBM Rational Software Services engagement to quickly deploy RAM in a customer's environment
- ▶ Serves as a first iteration of an enterprise rollout of RAM
- ▶ Includes 10 days of consulting to do:
 - Asset based readiness assessment
 - Mentoring and training
 - Deployment planning
 - Product installation
 - Define and implement a customer's specific RAM information model for a pilot team
 - Asset types, communities, roles, review processes & categorizations





Questions





Thank You

