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WebSphere® Service Registry and Repository Version 6.2

Governance primer



@business on demand.

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Welcome to the WebSphere Service Registry and Repository governance primer.

Goals

- Provide an introduction to SOA governance
- Highlight WebSphere Service Registry and Repository functionality associated with SOA governance

The goals of this presentation are to provide a brief introduction to SOA governance and to highlight functional capabilities within WebSphere Service Registry and Repository that concern governance.

SOA governance and its relationship to IT governance

What is IT governance?

Establishing **decision making rights** associated with IT

Establishing **mechanisms and policies** used to measure and control the way IT decisions are made and carried out

What is SOA governance?

Extension of IT governance focused on the **life cycle of services** to ensure the business value of SOA

Why SOA Governance matters?

- **Realize business benefits of SOA**
 - ▶ Business process flexibility
 - ▶ Improved time to market
- **Mitigate business risk and regain control**
 - ▶ Maintaining quality of service
 - ▶ Ensuring consistency of service
- **Improved team effectiveness**
 - ▶ Measuring the right things
 - ▶ Communicating clearly between business and IT



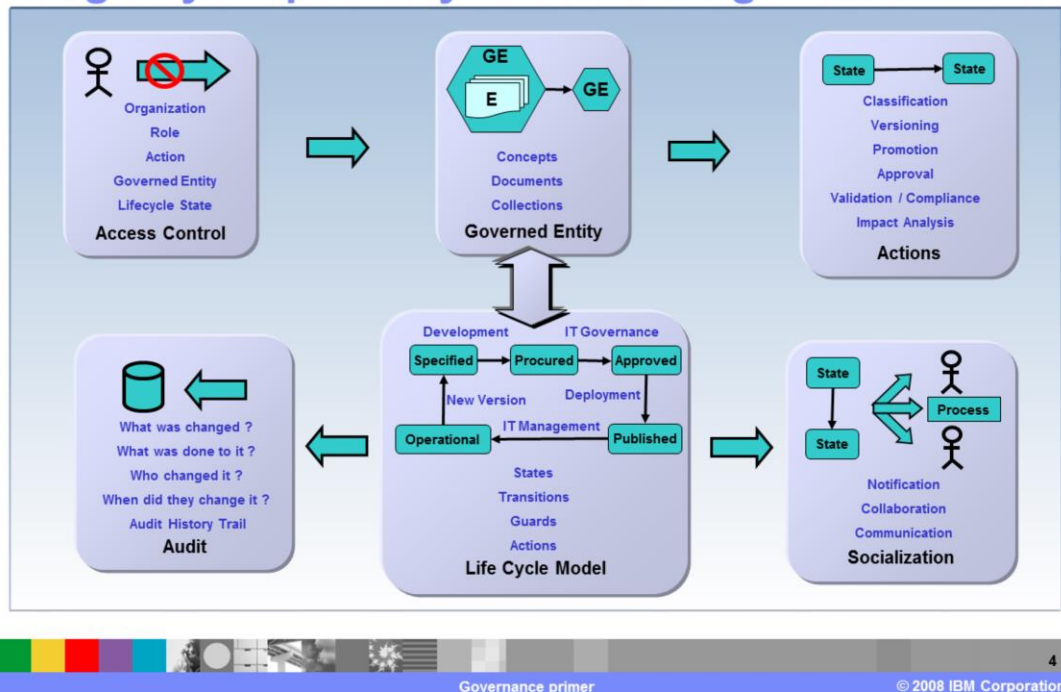
There are number of different definitions for IT governance; common among these are a description of its aims, including management of performance and risk, and a list of its components - decision rights, accountability, policies and processes.

An extension of IT governance is SOA governance. This focuses on the life cycle of services.

An SOA environment spans different business units and technology areas and therefore there is a need for effective SOA governance.

Effective governance helps you realize the benefits of adapting SOA, mitigates risk and improves effectiveness.

Registry / repository role in SOA governance



On this slide you can see the various functions of WebSphere Service Registry and Repository that enable effective SOA governance.

One of the more obvious ways that WebSphere Service Registry and Repository enables governance is through its access control functionality. Fine-level control of access to artifacts in WebSphere Service Registry and Repository is role-based and is similar in concept to the standard, declarative, scheme used to control access to the individual methods of an Enterprise Java™ Bean.

For example, with WebSphere Service Registry and Repository fine-grained access control you can control which roles can create, retrieve, update and delete certain entities, based on those entities' metadata.

The notion of a governed entity is at the centre of the WebSphere Service Registry and Repository Governance model. Any entity stored in WebSphere Service Registry and Repository (for example, a WSDL document) can be governed, as can groups of entities.

WebSphere Service Registry and Repository provides a set of example state machine definitions, and asset managers can customize those or define new ones as required to model the life cycle of their governed entities.

The WebSphere Service Registry and Repository governance API or the Web User Interface allows users to request a transition to be performed on a governed entity; if the entity is not in a state that allows the transition, the request is rejected.

These transitions can also be controlled using WebSphere Service Registry and Repository's access controls by only allowing particular roles to be able to perform a transition.

If the checks are successful, the transition is performed and associated actions are executed; these may include creation of a notification event reporting on the transition.

WebSphere Service Registry and Repository Socialization allows users to subscribe to particular events and receive, for example, an E-mail or a JMS message when these events take place.

When actions occur within WebSphere Service Registry and Repository, additional events can occur; for example, you can run pre-supplied or custom validators against artifacts being loaded into the registry.

Roles and access control – decision rights

WebSphere Service Registry and Repository

Perspective: Configuration Go User: wasadmin

Home

- Active Configuration Profile
 - Access Control
 - Roles
 - Permissions
 - Business Model Systems
 - Classification Systems
 - Life cycle
 - Plug-ins
 - Web UI Configuration
- Manage Configuration Profiles
 - Configuration Profiles

Permissions

Manage Roles > WSRAdmin > Manage Permissions

This is the collection of Permissions present in the Registry.

Preferences

Create a New Permission Add an Existing Permission Copy to another Role Delete

Select	Permission Name	Action	XPATH target
<input type="checkbox"/>	GovernedDeletePermission	srrDelete	/WSRR/BaseObject[classifiedByAnyOf({'http://www.ibm.com/xmins/prod/serviceregistry/6/0/governance/DefaultLifecycle#State'})]
<input type="checkbox"/>	GovernedRetrievePermission	srrRetrieve	/WSRR/BaseObject[classifiedByAnyOf({'http://www.ibm.com/xmins/prod/serviceregistry/6/0/governance/DefaultLifecycle#State'})]
<input type="checkbox"/>	GovernanceTransitionPermission	srrTransition	/WSRR/BaseObject
<input type="checkbox"/>	GovernedUpdatePermission	srrUpdate	/WSRR/BaseObject[classifiedByAnyOf({'http://www.ibm.com/xmins/prod/serviceregistry/6/0/governance/DefaultLifecycle#State'})]
<input type="checkbox"/>	GovernanceManagePermission	srrManageGov	/WSRR/BaseObject
<input type="checkbox"/>	GovernedCreatePermission	srrCreate	/WSRR/BaseObject[classifiedByAnyOf({'http://www.ibm.com/xmins/prod/serviceregistry/6/0/governance/DefaultLifecycle#State'})]

Total: 6

Permission name
The Permission action
The Permission target

This slide shows an access control management page in the WebSphere Service Registry and Repository Web user interface.

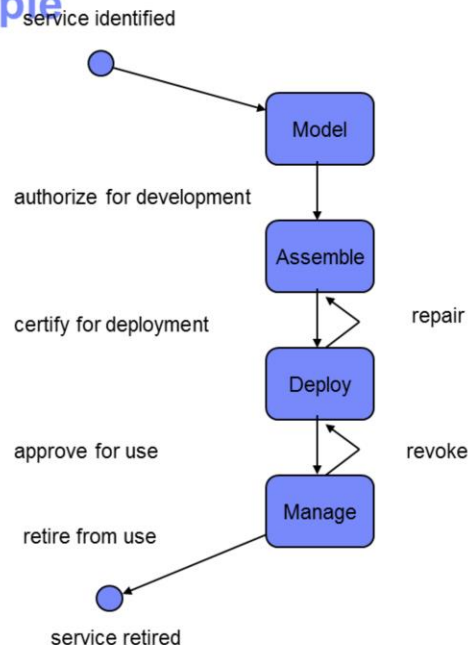
By default, WebSphere Service Registry and Repository supports course grained access control; this means you can perform operations on all entities in WebSphere Service Registry and Repository. However, most organizations will want to enforce finer grained access control, allowing only specific groups of users to change services.

Permissions are granted to roles. You can configure the number and names of the roles used to control access in WebSphere Service Registry and Repository. Typically each role would represent a group of users defined in the user authentication scheme.

A permission defines a set of objects, all WSDL documents for example, and an action, such as delete. When you add a permission to a role, access is restricted so that a user must be in that role in order to perform the action on an object defined in the permission. If a user who is not in the role attempts to perform the action, access is denied.

Service life cycle example

- Life cycle selection
 - › Transition: Administrator, Analyst, Architect
 - › InitiateServiceLifecycle
 - Object must be a Service, Process or Application
- Model
 - › Transition: Administrator, Analyst
 - › AuthorizeForDevelopment
 - OwningOrganization must be set
 - 1 provideInterface in Published state
- Assemble
 - › Transition: Administrator, Architect
 - › CertifyForDeployment
 - 1 availableEndpoints
- Deploy
 - › Transition: Administrator
 - › ApproveForUse
 - 2 availableEndpoints
 - › Repair
- Manage
 - › Transition: Administrator
 - › RetireFromUse
 - No dependencies on service
 - › Revoke
- Retired



The governance life cycle represents the states and transitions that can exist in your SOA deployment. You define a life cycle in accordance with your business processes for developing, testing, deploying, retiring and maintaining services. You can use the life cycle and access control to ensure that only those authorized can transition services and other entities in the registry.

For example, you could define a life cycle that allows developers to publish to the registry but requires a person in a manager role to transition the service from test to production.

Life cycles are defined using SACL, which is an XML notation used in WebSphere Process Server to define state machines. The WebSphere Integration Developer product includes a graphical editor for SACL files.

The life cycle displayed is the default life cycle provided when you install WebSphere Service Registry and Repository. There is also a more complicated life cycle in the governance profile that allows entities to move through different life cycles dependent upon the initial transition.

WebSphere Service Registry and Repository support for user defined business models representing non-standards based content

The screenshot displays the WebSphere Service Registry and Repository web user interface. The main content area is titled "Business Model Systems" and contains a table listing the systems in the registry. The table has columns for "Name", "Description", and "URI". There are four rows of data, each with a checkbox in the "Select" column. The footer of the interface shows "Governance primer" and "© 2008 IBM Corporation".

Select	Name	Description	URI
<input type="checkbox"/>	Governance Profile Business Model		http://www.ibm.com/xmlns/prod/registry/6/1/GovernanceProfile
<input type="checkbox"/>	Technical Model		http://www.ibm.com/xmlns/prod/registry/6/1/TechnicalModel
<input type="checkbox"/>	WSRR Objects		http://www.ibm.com/xmlns/prod/registry/6/1/model/object
<input type="checkbox"/>	WSRR System Properties		http://www.ibm.com/xmlns/prod/registry/6/1/model

Total: 4

This slide shows the business model systems page in the WebSphere Service Registry and Repository Web user interface.

Business modeling allows you to represent the objects that are relevant to your organization inside WebSphere Service Registry and Repository.

Business model systems define templates which have predefined properties, relationships and classifications. You can create one or more objects based on the business model template; then, each new object automatically inherits the properties, relationships and classifications defined in the template.

WebSphere Service Registry and Repository performs additional validation when creating instances of these business objects and provides extended typing capabilities to allow properties and relationships to be validated at the point of create and update.

Relationship targets can be protected to only have particular entity types. The cardinality of these relationships can be protected too.

Property values can be protected to be an enumeration value, of a particular type (string or integer for example), mandatory, or optional.

Business models are based on Web Ontology Language (OWL) files.

Classifying a service to reflect its business domain

The screenshot displays the WebSphere Service Registry and Repository web user interface. The main content area is titled "Classifications" and shows a navigation tree on the left and a classification list on the right. The navigation tree includes categories like "Business Services", "Life Cycle Classifications", "Policy Classifications", "Core Classifications", "Governance Profile Life Cycle", "Governance Profile Taxonomy", "Business Domain", "Finance", "Insurance", "Insurance Account Management", "Insurance Claims Processing", "Sales and Marketing", and "Environment". The "Insurance Claims Processing" classification is selected. The classification list on the right shows "Business Service". Below the list, there are "Add >>>" and "Remove" buttons. At the bottom, there is a table for details of the selected classification, with columns for System, Name, and URI. The table shows "None" for all three columns. There are "Apply", "OK", and "Cancel" buttons at the bottom of the page.

This slide shows the classification details page in the WebSphere Service Registry and Repository Web user interface.

Good classification systems are a key factor in the success of your SOA. A good classification system makes it easy to find services, making it easier to reuse and compose them.

Any entity in WebSphere Service Registry and Repository can have one or more classifications applied to it from one or more classification systems. This allows you to define independent classification systems.

For example, you might use one classification system to represent the organization and another to represent the types of services deployed in your SOA.

Classifications are also used to represent life cycle states. For example, this allows searching for entities in a particular governance life cycle state to be as easy as it is to search for an entity classified as belonging to Finance.

Policy and notification: governance validation policies

The screenshot displays the WebSphere Service Registry and Repository configuration page. The left sidebar shows a navigation tree with categories like 'Active Configuration Profile', 'Access Control', 'Business Model Systems', 'Classification Systems', 'Life cycle', 'Plug-ins', 'Web UI Configuration', and 'Manage Configuration Profiles'. The main content area is titled 'Configuration Item' and shows the details for a policy named 'PolicyLifecycle - Contract - AuthorizeForDevelopmentPolicy'. The 'Content' tab is active, displaying the XML configuration for a 'ValidatorPolicy'. The XML includes various filters and assertions, such as 'ContentApplicabilityFilter', 'WSRROperationFilter', 'TransitionOperationFilter', and 'EntityAssertion'. A 'Download Document' button is visible above the XML content. At the bottom of the interface, there is a copyright notice for IBM Corporation, 2008.

This slide shows the governance policy validator configuration page in WebSphere Service Registry and Repository's Web user interface.

You can create governance policies that enforce correct practices during the service development life cycle.

These are in an XML format file and are enforced by the governance policy validator.

Each file contains a set of policies and a set of assertions.

The policies are bound to individual WebSphere Service Registry and Repository operations and can be constrained to apply to certain artifact types.

Each assertion specifies rules about the metadata that must apply to the objects being processed in the bound operation. An example of an assertion would be to allow objects to be deleted only if they are classified as retired.

Governance profile

- Starting point for WebSphere Service Registry and Repository Governance
- Provides sample content for
 - ▶ Business modeling
 - ▶ Roles
 - ▶ Perspectives
 - ▶ Access control
 - ▶ Life cycles
 - ▶ Governance policies

The Governance profile is a supplied business profile that contains a starting point for someone to configure WebSphere Service Registry and Repository to the needs of their business.

The business model provides the representation of the types of entity that are of interest to business roles.

Several different roles and perspectives have been included to represent administrators, users, developers and others.

The governance profile will set up access control for object creation rights, object access rights and life cycle rights.

Five governance policy validator files are provided in the governance profile. Each contains identified policies and assertions to enforce the decisions made in a particular life cycle.

More information about WebSphere Service Registry and Repository Governance and the Governance profile can be found in the WebSphere Service Registry and Repository information center.

Summary

- Effective governance needed to realize SOA benefits.
- WebSphere Service Registry and Repository has numerous functional areas to enable SOA governance including access control, life cycles, business models and classifications.
- More WebSphere Service Registry and Repository governance information in the information center
<http://publib.boulder.ibm.com/infocenter/sr/v6r2/index.jsp>

As mentioned at the start of the presentation, to realize the benefits of an SOA, to mitigate risk, and to take control, you need effective SOA governance.

There are several functional areas within WebSphere Service Registry and Repository that enable you to implement effective governance. These functional areas, covered earlier, include access control, custom life cycles, business modeling and classification systems.

For more information about WebSphere Service Registry and Repository's governance functionality, see the information center at the supplied URL.

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