IBM Software Group

IBM® WebSphere® Application Server V6.1 Feature Pack for Web Services

Policy set overview

@business on demand.

This presentation will explain the new policy sets feature introduced in the Feature Pack for Web Services.

Agenda

- Policy set overview

This presentation will explain the concepts related to Policy sets, a new administrative term for Web Services. In the Feature Pack for Web Services, Policy Sets can only be associated with JAX-WS based Web Services.

Section

Policy sets

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The next section explains the basics of Policy Sets.

# Usability concerns in exploiting Web Services

- Abundance of Web services standards
  - ▶ Complexity
  - ▶ Options in standards lead to interoperability problems

- Confusing, inefficient configuration tasks
  - ▶ Few defaults
  - ▶ Non reusable configurations

- Invisibility of services in the WebSphere Application Server environment

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Working with Web Services has certain difficulties, one particular concern is the abundance of standards associated with Web Services and the complexity this adds when configuring Web Services. Configuration is made more difficult because there have been few defaults, and configuration data had to be re-entered for each Web Service separately. Web Services could also be relatively difficult to locate and manage in a WebSphere Application Server environment.

Web services concepts

- Application may contain one or more services along with other non-service code and artifacts

- Each service has one or more endpoints

- Each endpoint may have one or more operations

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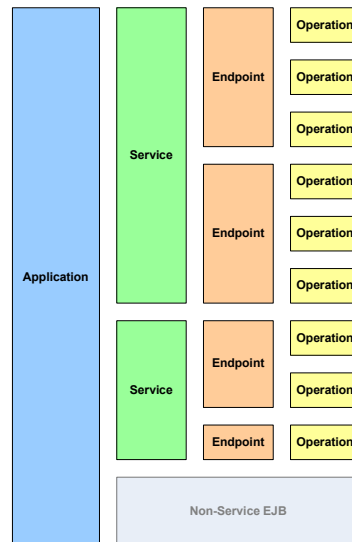
Each Web Service application can contain multiple services. Each service may expose multiple endpoints. And finally each of those endpoints can have one or more operations associated with it. This can lead to a large number of configuration points for a single application.
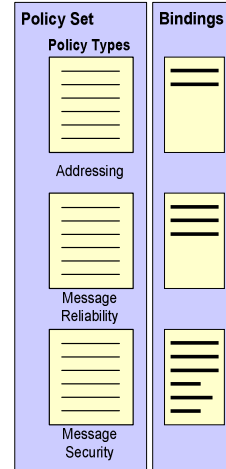
Policy sets concepts

- A **Policy set** consists of policies supporting Qualities of Service (QOS)

- Policy Sets contain **policy types** determined by interoperability and QOS concerns

- Policy types are based on Web Services standards

- Default Policy Sets will be available
  - ▶ Attach directly to service artifacts
  - ▶ Copy and modify to create new Policy Sets

Policy Set

Policy Types

Addressing

Message Reliability

Message Security

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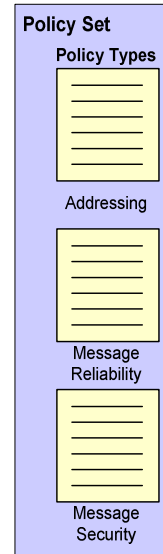
A policy set is a grouping of policy or configuration data supporting a quality of service associated with Web Services, such as security or reliable messaging. The individual configuration data represented by policy sets can then be grouped together into policy types based on their usage. Policy types can also be defined based on specific Web Services standards. The Feature Pack for Web Services will ship with various policy sets already defined, that can be used out of the box. Alternatively, these predefined configurations, can be copied, and used to create customer policy configurations.

Policy sets and bindings

- Policy sets can be associated with necessary bindings
  - ▶ Policy sets specify what to do
  - ▶ Bindings specify details and environment specific details
- Reduces configuration required to fully deploy services
  - ▶ Policy Sets are stored at a cell level
  - ▶ Bindings are stored at an application level

Policy Set

Policy Types

Addressing

Message Reliability

Message Security

Bindings

Policy sets

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Once policy sets have been created, they can be associated with bindings that detail specific details about the environment. These can then be applied as a reusable configuration for Web Services in the environment. The Policy Set configurations will be stored at a cell wide level, while the binding data is application specific.

Attaching policy sets to Web services

- Policy sets with their associated bindings can be attached to applications

- Policy sets with their associated resource can also be attached to services, endpoints, or operations

- Allows for more granular configuration
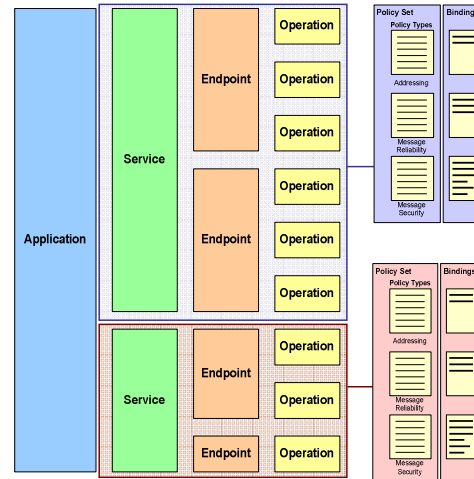
Policy sets can then be associated with applications, or their services, endpoints and operations. Policy sets represent reusable configuration data that can easily be applied at a granular level as needed in an environment.

Policy set specifics

- Different types of policy sets
  - ▶ Application – only available for application resources
  - ▶ System – only available for system resources, like the security token service

- Default policy sets
  - ▶ Quickly enable users out of box, like RAMP, secure conversation and Web service security
  - ▶ Template for customization
  - ▶ Read-only

- Default binding
  - ▶ Minimize configuration required to enable policy set

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There are two types of Policy Sets enabled with the Feature Pack for Web Services. Application Policy Sets are used by application resources. System Policy Sets are used by system resources like the support for the Security Token Service. Default Policy Sets are provided with the Feature Pack for Web Services, this allows users to quickly configure most qualities of service out of the box. The pre-existing Policy Sets can also be used as templates to create custom Policy Sets, the default Policy Sets are read only, so they must be copied before they can be modified. A default binding is also provided to minimize the configuration required by Policy Sets.

Policy set specifics (continued)

- Import and export
  - ▸ Allow policy set to be replicated in different environment
- Support in J2SE™ and J2EE application client
- Scripting support for both policy set and binding
- Simplification of panels
  - ▸ Pre-filled with defaults or values deduced from other configurations
  - ▸ Reduce number of panels
- AST tools support
  - ▸ Import policy set from application server
  - ▸ Create client-side binding

Policy sets

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Policy Sets can be imported and exported from an environment. For example, a Policy Set that has been created and tested in the development environment can be exported and imported into the production WebSphere Application Server environment. Policy Sets are also supported in the Application Clients. There is also scripting support to enable Policy Sets and bindings. Many of the Web Services configuration panels have also been simplified, by reducing the overall number of panels, and by pre-filling the panels with default values.

Section

Summary

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The next section provides a summary of this presentation.

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Summary

- Policy sets ease the complexity of administering Web services
  - ▶ Preconfigured policy sets
  - ▶ Reusable configurations

Policy Sets are aimed at reducing the complexity of Web Services in WebSphere Application Server. By providing reusable configurations, administrators will be able to more quickly deploy and configure Web Services applications. The Policy Sets also provide a template for new users, that can show them how to properly configure WebSphere Application Server for specific qualities of service.

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Policy sets

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