



IBM Software Group

IBM® WebSphere® Application Server V7

Web services administration updates



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This presentation explains updates to administrative features for managing and deploying Web services in WebSphere Application Server version 7.

Agenda

- New deployment features for JAX-WS services
- New administrative console features
- Configuration Archive support for Web services configurations



This presentation explains four changes in administrative capabilities for Web services. First are some updates in how Web services can be packaged and deployed on WebSphere Application Server version 7. Second, are changes and new features for administering Web services in the administrative console. Last, are some new capabilities for including Web services configuration data within configuration archives.

Section

Deployment features



The next section explains updates to deployment capabilities for Web services.

Deployment enhancements

- The Feature Pack for Web services allowed JAX-WS enabled WAR modules to be deployed
- WebSphere Application Server V7 adds the capability to deploy JAX-WS enabled EJB 3.0 modules
 - ▶ Deployment validation is added for these modules
- JAX-WS enabled EJB 3.0 modules can only be targeted to WebSphere Application Server V7 servers



When the feature pack for Web services introduced a programming model for JAX-WS based services, it added the ability to deploy JAX-WS enabled WAR modules. WebSphere Application Server version 7 adds the ability to also deploy JAX-WS enabled EJB 3.0 modules, which add deployment validation as well. In a mixed version environment, JAX-WS enabled EJB 3.0 modules can only be targeted to WebSphere Application Server version 7 servers.

Section

Administrative console



The next section discusses several changes in how Web services can be managed in the administrative console.

Administrative console changes

- Changes to the listed policy sets and support to import and export policy sets from the console
- Support for cell-wide bindings
 - ▶ In addition to the application specific bindings
- The ability to disable the endpoint listeners associated with a service
- Improved consistency in names for services-based resources



Policy sets were first introduced in the feature pack for Web services, and allow you to associate stored configuration data with JAX-WS service endpoints. In WebSphere Application Server version 7, fewer policy sets are listed in the administrative console after installation; they are still available, but must first be imported to be used. Custom policy sets can also be exported to be used elsewhere. There is also the introduction of cell-wide bindings; application specific bindings are still available as well. There is also a new ability to disable endpoint listeners associated with a service; this can be useful when attempting to throttle back throughput to a service. Finally, the names for various service-oriented resources have been made more consistent.

Policy set: import

- All policy sets are not immediately available after installation
 - ▶ Instead stored in a default repository
 - ▶ You can determine which policy sets to import and use
- Policy sets can be imported and exported from the default repository or from the file system
- Users can import a copy of a policy set in order to edit it



Not all policy sets are immediately available after installation. This has been done to reduce confusion when faced with a large number of policy sets. They are stored in a default repository, and you can decide which policy sets to import and use in your environment. You can also export policy sets, or import a copy in order to change the policy set.

Policy set: import continued

The screenshot shows the 'Application policy sets' panel in the IBM Integrated Solutions Console. The 'Import' button in the 'Preferences' section is highlighted with a red dashed box. A red dashed line points from the 'Import' button to the text 'Import or export policy sets' on the right. The console interface includes a navigation tree on the left, a main content area with a table of policy sets, and a help panel on the right.

Application policy sets

Use this panel to manage or import application policy sets. Application policy sets define quality of service policies for business-related messenger defined in the WSDL. Additional default application policy sets are also available. You can import these policy sets from the default repository with the Import button. Default policy sets are not editable, but you can copy the default policy sets and modify them to suit your needs.

Preferences

New... Delete Copy... **Import** Export...

| Select | Name | Editable | Description |
|--------------------------|---|--------------|--|
| <input type="checkbox"/> | Kerberos VS HTTPS default | Not editable | Policies: WSSecurity, SSLTransport, WSAddressing <ul style="list-style-type: none"> Message authentication: Using Kerberos VS token Transport security: Using SSL for HTTP Follows the OASIS Kerberos Token Profile specification |
| <input type="checkbox"/> | LTPA WSSecurity default | Not editable | Policies: WSSecurity, WSAddressing <ul style="list-style-type: none"> Message integrity: Digitally sign body, timestamp, addressing headers and LTPA token using RSA digital signing Message confidentiality: Encrypt body, signature, and LTPA token using RSA encryption |

Field help
For field help information, select a field label or list marker when the help cursor is displayed.

Page help
[More information about this page](#)

Command Assistance
[View administrative scripting command for last action](#)

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This panel shows the new capabilities to import and export policy sets in the administrative console. This is done from the application policy sets panel.

Policy set: import continued

The screenshot shows the 'Application policy sets' import dialog in the IBM Integrated Solutions Console. The 'Import' radio button is selected. A red dashed box highlights the 'Import a copy' option and the 'name of copy' text field. Below this, a table lists available policy sets for import:

| Select | Name | Description |
|--------------------------|---|---|
| <input type="checkbox"/> | Kerberos VS HTTPS default | Policies: WSSecurity, SSLTransport, WSAddressing ● Message authentication: Using Kerberos VS token ● Transport security: Using SSL for HTTP ● Follows the OASIS Kerberos Token Profile specification |
| <input type="checkbox"/> | LTPA SecureConversation | Policies: WSSecurity, WSAddressing ● Message integrity: Digitally sign body, timestamp, |

On the right side of the dialog, there is a 'Help' section with 'Field help' and 'Page help' links, and a 'Command Assistance' section with a link to 'View administrative scripting command for last action'.

Import existing policy sets or import a copy to edit

When importing an existing policy set, either from the default repository or from the file system, you have the option to import a copy of the policy set instead. You must provide a different name for the policy set, but this allows for the policy set to be altered without overwriting the original.

General bindings

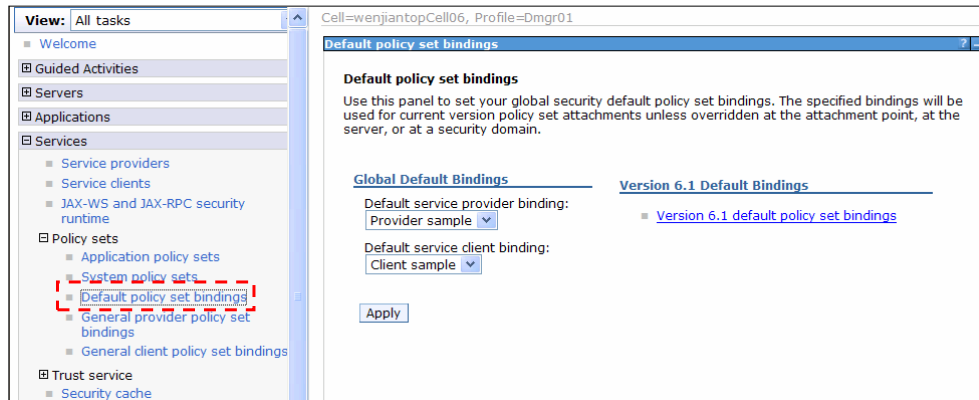
- WebSphere Application Server V7 adds general bindings for service clients and providers
 - ▶ Users can copy, import, and export general bindings
 - ▶ In addition to the existing application specific custom bindings
 - ▶ Can be used across applications and for system trust
- Scoped to a cell or a security domain
- May be assigned to policy set attachments



WebSphere application Server version 7 adds general bindings for use with service clients and providers. General bindings can provide system specific information for policy sets. General bindings can be used across applications and for system trust. They can be used in addition to the existing application specific custom bindings, and are scoped either to the entire cell or to a security domain within a cell. General bindings can also be used with policy set attachments.

Default policy set bindings

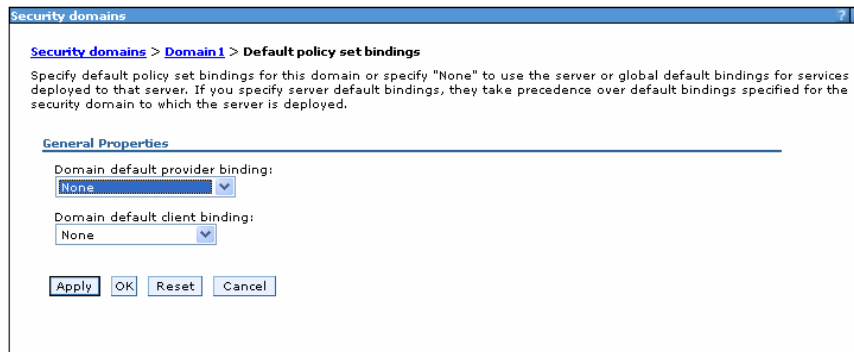
- Specify default policy set bindings for the security domain



This screen shows where the general bindings can be configured. There are separate bindings for providers and clients. There are also separate bindings available depending on the server version. This is provided so that application can be migrated from the Feature Pack for Web services with minimal changes.

Default policy set bindings

- Specify default policy set bindings for the security domain
 - ▶ Separate provider and client bindings



You can also specify a general default binding for a security domain. This is done from the configuration panels for that specific security domain.

General policy set bindings

- Manage general policy set bindings

The screenshot shows the 'General provider policy set bindings' page in the Integrated Solutions Console. The page title is 'General provider policy set bindings'. Below the title, there is a brief description: 'Use this page to create, copy, and manage provider policy set bindings. These bindings provide system-specific configuration and can be reused across policy set attachments. Scoping a binding to a security domain constrains the configuration options to those applicable to that domain and limits use of the binding to the specified domain.' Below the description, there are buttons for 'New...', 'Delete', 'Copy...', 'Import...', and 'Export...'. A table lists the existing bindings:

| Select | Name | Security Domain | Description |
|--------------------------|--------------------------------------|---------------------------------|------------------------------------|
| <input type="checkbox"/> | Provider sample | global security | installed default provider binding |
| <input type="checkbox"/> | WSFP provider sample | global security | WSFP default provider binding |
| Total 2 | | | |

The general policy set bindings can also be managed from the administrative console, giving you the ability to create new bindings, delete, or copy existing bindings. You can also import and export binding configurations.

Service throughput

- WebSphere Application Server V7 adds the ability to disable the listeners associated with service endpoints
 - ▶ Only applies to services installed on WebSphere Application Server version 7
- One or all of the endpoint listeners in a service can be disabled
 - ▶ Used to control throughput to the target service
- JAX-WS services can be controlled through the administrative console, wsadmin and JMX™ APIs
 - ▶ JAX-RPC services can be controlled with wsadmin and JMX APIs, but not the console



WebSphere Application Server V7 adds the ability to disable the listeners associated with service endpoints; this can be done to control the throughput to a specific service. One or all of the endpoint listeners in a service can be disabled. When security is on, a user must have operator, deployer, or administrator role to start or stop the listeners.

Different mechanisms are available to manage services. JAX-WS services can be controlled through the administrative console, wsadmin, and JMX APIs. JAX-RPC services can be controlled with wsadmin and JMX APIs, but not the administrative console.

Service throughput

- If an application containing services is stopped, the associated listeners are also stopped
 - ▶ Application must be running to start the listeners
- Listeners can be stopped or started at both the service and endpoint level
 - ▶ Administrative console only supports operations at the service level
 - ▶ Stopping at the service level stops all endpoints for that service



When an application containing services is stopped, the associated listeners are also stopped. Service endpoints can be started unless the application that contains the services is not running. Endpoint listeners can be stopped at either the server or endpoint level. To do it for individual endpoints, you need to either write Java JMX client code or call wsadmin to invoke the MBean operation. The MBean that is used to start or stop the listeners is named EndpointCentralMBean. The administrative console supports starting and stopping listeners for the server level.

Service throughput in the console

Service providers ?

Service providers

Use this page to manage JAX-WS service providers and other service providers. JAX-RPC services are not displayed. Stop a listener to block incoming requests for a service. Start a listener to allow requests for a service to be processed.

Preferences

Start Listener Stop Listener

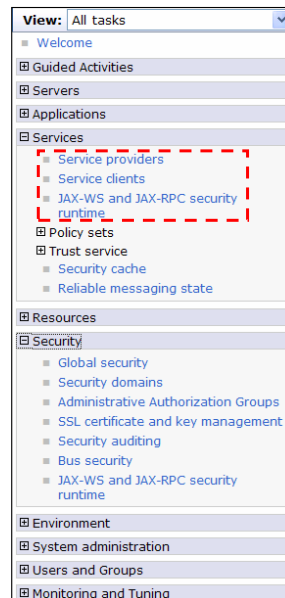
+ + + + + +

| Select | Name | Type | Deployed Asset | Status |
|---|-------------------------------------|--------|--------------------------------------|-------------------|
| You can administer the following resources: | | | | |
| <input type="checkbox"/> | EchoService | JAX-WS | JaxWSServicesSamples | ? |
| <input type="checkbox"/> | EchoService12 | JAX-WS | JaxWSServicesSamples | ? |
| <input type="checkbox"/> | MtomSampleService | JAX-WS | JaxWSServicesSamples | ? |
| <input type="checkbox"/> | MtomSampleService12 | JAX-WS | JaxWSServicesSamples | ? |
| <input type="checkbox"/> | PingService | JAX-WS | JaxWSServicesSamples | ? |
| <input type="checkbox"/> | PingService12 | JAX-WS | JaxWSServicesSamples | ? |
| Total 6 | | | | |

This shows a view of the console, where for a specific application you can start or stop the JAX-WS services it contains. This is only available for services running on WebSphere Application Server version 7.

Naming changes

- Improved consistency in names used for services-based resources



Work has also been done in the administrative console to more consistently name service related resources, resources specific to JAX-WS or JAX-RPC services are now named appropriately.

Section

Configuration archive



The next section explains new support for Web services configuration data to be stored in configuration archives.

Configuration archive

- Configuration archives have added support for Web services specific metadata
 - ▶ Policy sets, policy types, and bindings for the Web services administration
- Environment specific data is supported with environment variables
 - ▶ Allows configurations to be transferred to different systems



Configuration archives have added support for Web services specific metadata such as policy sets, policy types, and bindings data. Environment specific data is supported with environment variables, allowing the configurations to be transferred to different systems.

Section

Summary

Next is the summary of the presentation.

Summary

- Added deployment features for JAX-WS services
- Changes to the administrative console
- Enhanced configuration archive support for Web services



Several administrative updates for Web services have been introduced in WebSphere Application Server version 7. These include how Web services can be packaged and deployed on WebSphere Application Server version 7 and how they are managed in the administrative console. Finally, there are some new capabilities for including Web services configuration data within configuration archives.

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