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WebSphere Process Server V6 WebSphere Enterprise Service Bus V6

SCA module administration and commands



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This module focuses on the administrative interface and commands related to SCA modules in WebSphere® Process Server V6 and the WebSphere Enterprise Service Bus V6.

Agenda

- **SCA module functions - overview**
- SCA module management using the console
- SCA module management using wsadmin commands
- Summary



The agenda for this module will cover SCA module functions and management of SCA modules using the console or wsadmin commands.

The first section covers an overview of the SCA module functions.

SCA modules as administered objects

- Exposed as administered objects
- Functions performed
 - ▶ List the SCA modules and its import and exports
 - ▶ Show the attributes and interfaces
 - ▶ Dynamically modify the import bindings to point to a different service endpoint
- Performed using the administrative console or wsadmin commands



WebSphere Enterprise Service Bus and WebSphere Process Server expose SCA modules as administered objects within the system management framework of the server. Administrators can view SCA modules and attributes. In addition, the binding of an import can be modified so that it uses a different endpoint for the service.

Allowing the system administrator to dynamically change the import binding gives you the capability to replace service endpoints without the need to make changes to the application in the WebSphere Integration Developer tool.

All the SCA module administrative functions can be performed using the administrative console or wsadmin commands. This presentation is an introduction to those functions.

Section

SCA module management using the administration console



This section covers the administrative functions exposed in the administrative console.

Administration of messaging bindings

- Binding administration in V6.0.1
 - ▶ SCA module administration introduced
 - ▶ Runtime administration of SCA default bindings provided
- Binding administration in V6.0.2
 - ▶ Runtime administration of Web services bindings added
- Binding administration in V6.1
 - ▶ Runtime administration added for these binding types
 - JMS
 - Generic JMS
 - MQ JMS
 - Native MQ
 - HTTP
 - ▶ Only import binding without runtime administration is the session bean binding
- Install SCA modules in 6.2

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SCA module administration and commands

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The ability to administer SCA bindings has been improving over the last few releases. In version 6.0.1 the SCA module administration capabilities were added and SCA default bindings were the only binding type that was modifiable at runtime. In version 6.0.2 the ability to administer Web services bindings at runtime was added. In version 6.1 the runtime binding administration capabilities were expanded to include most of the remaining binding types. All the messaging bindings, JMS, generic JMS, MQ JMS and native MQ are supported and so are HTTP bindings. The only binding type not supported for runtime administration is the session bean binding. Version 6.2 now allows SCA modules to be installed separately.

The details of all of these binding types is not provided in this module. Rather, a representative sample is used to illustrate the kind of things that can be done.

Installing SCA modules

The screenshot displays the 'SCA modules' page in the Integrated Solutions Console. The left-hand navigation pane lists various system components, with 'SCA modules' selected. The main content area features a table of installed modules with columns for 'Module', 'Version', 'Application', and 'Status'. Below the table are buttons for 'Start', 'Stop', 'Install', and 'Uninstall'. The right-hand side shows the configuration details for the 'Schedule' module, including 'General Properties' and 'Module components'.

Select	Module	Version	Application	Status
<input type="checkbox"/>	BFMIF_widNode_server1		BPEContainer_widNode_server1	➔
<input type="checkbox"/>	HTMIF_widNode_server1		TaskContainer_widNode_server1	➔
<input type="checkbox"/>	HTM_PredefinedTaskMsg_V620_widNode_server1		HTM_PredefinedTaskMsg_V620_widNode_server1	➔
<input type="checkbox"/>	HTM_PredefinedTasks_V62_widNode_server1		HTM_PredefinedTasks_V62_widNode_server1	➔
<input type="checkbox"/>	Schedule		Schedule	➔
<input type="checkbox"/>	calendar		calendar	➔

Total 6

In version 6.2, you have the ability now to install and uninstall SCA modules using the SCA Module panel. Selecting the installation will allow you to specify a new SCA module and proceed with the installation. Previously you could only start and stop modules from this panel. Clicking on the SCA module, you can look at the details of the module and configure properties.

Example SCA module administrative panel

The screenshot displays the administrative panel for an SCA module named 'AdminExampleMedMod'. The left sidebar shows a navigation tree with 'SCA modules' selected. The main content area is titled 'SCA modules > AdminExampleMedMod' and includes a 'Configuration' section. Under 'General Properties', the 'Module' is 'AdminExampleMedMod' and the 'Application name' is 'AdminExampleModModApp'. The 'Description' field is empty. To the right, 'Module components' are listed under 'Imports' and 'Exports'. The 'Imports' list includes GenericJMSImport, JMSImport, Interfaces, Binding, JMS, MQJMSImport, and MQNativeImport. The 'Exports' list includes GenericJMSEXP, JMSEXP, MQJMSEXP, Interfaces, Binding, MQJMS, and MQNativeEXP. Below the configuration, a diagram shows a central 'Mediation1' component connected to various JMS and MQ components, including JMSEXP, GenericJMSEXP, MQJMSEXP, MQNativeEXP, JMSImport, GenericJMSImport, MQJMSImport, and MQNativeImport.

In the details of the module, the imports and exports can be seen. These views represent the bindings that were selected during the creation of an SCA module within WebSphere Integration Developer.

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Example binding panel

SCA modules > AdminExampleMedMod > JMSImport

The attributes of the selected JMS import binding.

Configuration

Send Resources

Connection Factory JNDI Name
AdminExampleMedMod/JMSImport_CF Browse... Configure...

Send JMS Destination JNDI Name Browse... Configure...

Receive Resources

Activation specification JNDI Name Browse...

Receive JMS Destination JNDI Name

Advanced Resources

Callback JMS Destination JNDI Name

Apply OK Reset Cancel

SCA modules > AdminExampleMedMod > JMSImport > Browse JNDI Names

Choose the JNDI name to use.

Preferences

Select Cancel

Select	JNDI Name
<input type="radio"/>	sca/resource/genjms/SCA.GENJMS/Callback_CF
<input type="radio"/>	AdminExampleMedMod/MQNativeImport_MQIMPORT_CF
<input type="radio"/>	AdminExampleMedMod/MQJMSExport_LIS_CF
<input type="radio"/>	AdminExampleMedMod/JMSexport_CF
<input checked="" type="radio"/>	AdminExampleMedMod/JMSImport_CF

SCA modules > AdminExampleMedMod > JMSImport > AdminExampleMedMod.JMSImport_CF

A JMS connection factory is used to create connections to the associated JMS provider of JMS destination both point-to-point and publish/subscribe messaging. Use connection factory administrative objects to manage JMS connection factories for the default messaging provider.

Configuration

General Properties

Administration

Scopes
node=server1

Provider
Default messaging provider

* Name
AdminExampleMedMod.JMSI

* JNDI name
AdminExampleMedMod/JMSI

Description
AdminExampleMedMod/JMSImport_CF

Additional Properties

- Connection pool properties

Related Items

- JMS - J2C authentication data
- Buses

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By clicking on the JMS imports from the previous panel, the configuration of the JMS provider can be modified. The browse button allows selection of the JNDI name to be used. The configuration button allows the selected JNDI provider to be viewed and modified.

Section

SCA module management using wsadmin commands



This section covers the wsadmin commands for administering SCA modules.

Administrative commands

- **\$AdminTask** commands
 - ▶ showSCAImportJMSBinding
 - ▶ showSCAExportJMSBinding
 - ▶ modifySCAImportJMSBinding
 - ▶ modifySCAExportJMSBinding
- Commands do not verify validity of JNDI names
 - ▶ Can be checked afterwards using: \$AdminConfig validate
- Show commands return a Java™ Hashtable
 - ▶ Keys define resource type, values contain JNDI names
- WebSphere Process Server information center

http://publib.boulder.ibm.com/infocenter/dmndhelp/v6r1mx/index.jsp?topic=/com.ibm.websphere.wps.610.doc/welcome_top_wps.htm

Here is a representative list of some of the \$AdminTask commands that are available for use with SCA modules using wsadmin for administration of messaging bindings. A list of all commands can be seen by using the \$AdminTask help –commands within wsadmin. Notice that there are specific commands for each binding type to show and modify the bindings. There are also other commands that allow listing of all imports, exports, or SCA modules. A complete list of these commands can be found in the WebSphere Process Server information center

Section

Summary

This section provides a summary of this presentation.

Summary

- SCA modules exposed as administered objects
- Dynamic modification of the import binding
- Installation



SCA modules are exposed as administered objects that can be accessed through the administrative console or using wsadmin commands. Another important function is the ability of the system administrator to dynamically change the import binding, allowing service endpoints to be replaced without the need to modify the application. SCA modules can be installed separately without updating the applications that use them.

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