ASF 3.4
Document Connect for ASF

Installation on AIX Server
Using WebSphere Application Server V6.0

Edition: 1.1

02 June 2008

1 Table of Contents

2 Prerequisites

1 Ensure that WebSphere Application Server (WAS) V6.0 has been installed, is operational, and has been started.

Note: The installation path is assumed to be
/usr2/WebSphere/AppServer60

2 Ensure that IBM HTTP Server (Version 6.0 or later) has been installed, is operational, and has been started. Ensure that the WebSphere Application Server “Plug-in” has been installed.

3 Connections to the host:

3.1 Ensure that, when using IMS Connect, the Resource Adapter “IMS Connector 9.10.x” rar file has been deployed within WebSphere.
For more information see:
http://www-306.ibm.com/software/data/ims/ims/components/1conjav125.html

3.2 Ensure that, when using WebSphere MQ to connect to IMS, MQ for z/OS has been installed on the host, the input and output queue are available (on the host) and the input queue is connected to IMS via the storage class.

3.3 Ensure that, when using CICS Transaction Gateway, the Resource Adapter “CICS ECI Resource Adapter 6.0.x” rar file has been deployed within WebSphere. This file is part of the CICS Transaction Gateway or can be downloaded from the following page:
http://www-1.ibm.com/support/docview.wss?uid=swg24008817

3.4 Ensure that, when using WebSphere MQ to connect to CICS, MQ for z/OS has been installed on the host, the input and output queue are available (on the host) and the input queue is connected to CICS via an initiation queue.

3.5 Ensure that, when using DB2 native, the DB2 Universal JDBC Driver Provider that comes with WebSphere is operational.
The DB2 Universal JDBC Provider can be downloaded from the following page:
http://www-306.ibm.com/software/data/db2/support/db2_9

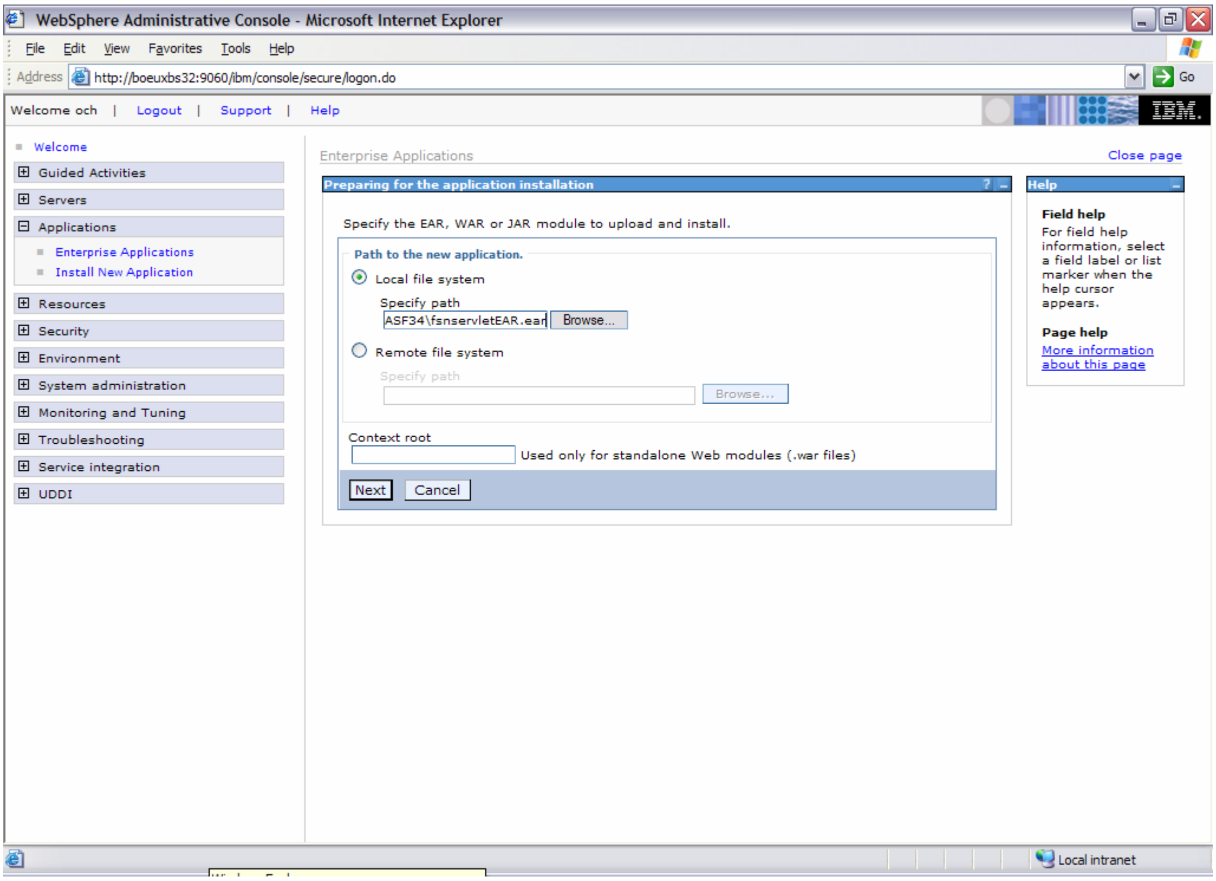
3 Installing the application

Preparing the application installation

Open Application > Install New Application

Enter the path (local path or server path) where the ASF 3.4 ear (fsnservlet.ear) file is located:

E:/Programs/IBM/ASF34/fsnservlet.ear



Address: http://boeuxbs32:9060/ibm/console/secure/logon.do

Preparing for the application installation

Specify the EAR, WAR or JAR module to upload and install.

Path to the new application.

● Local file system

Specify path: ASF34\fsnservletEAR.ear

○ Remote file system

Specify path:

Context root: Used only for standalone Web modules (.war files)

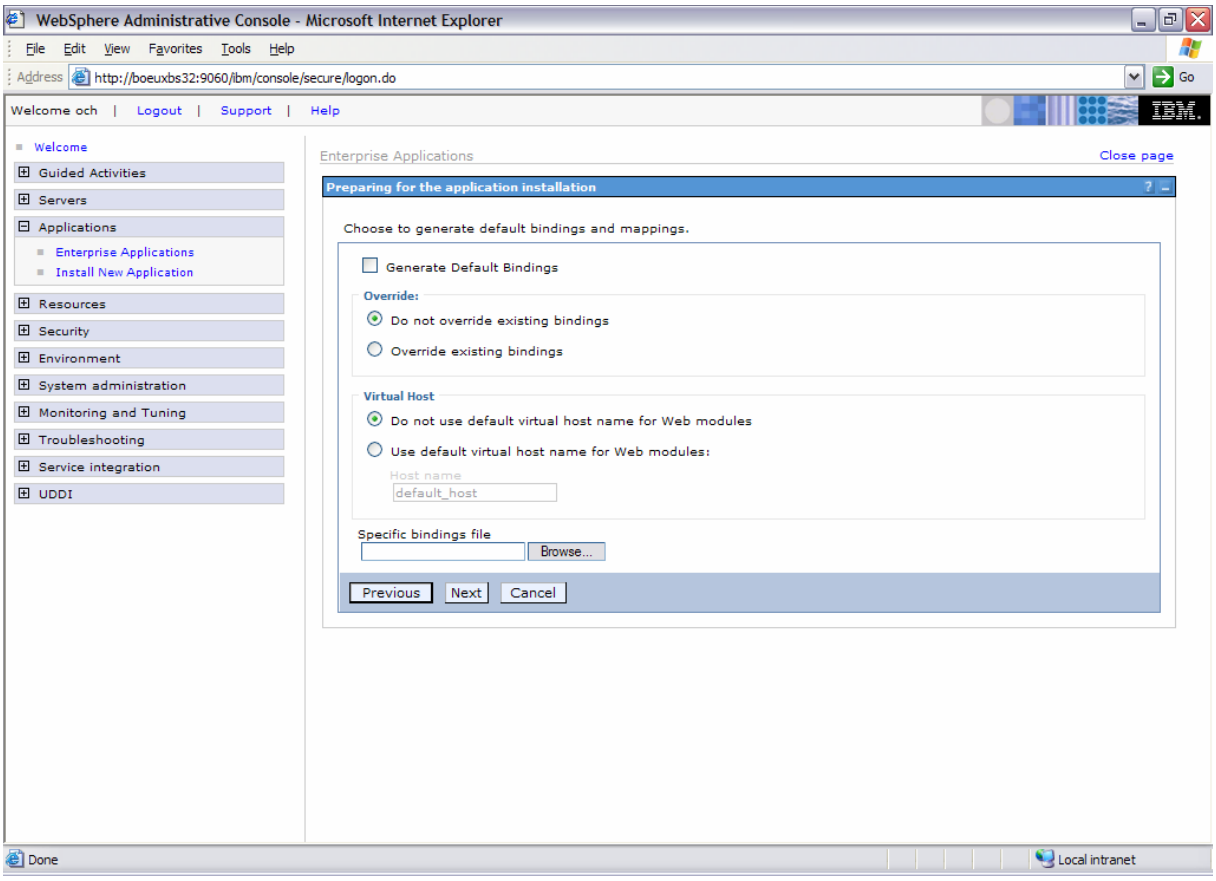
Field help

For field help information, select a field label or list marker when the help cursor appears.

Page help

More information about this page

Select Next. The file “fsnservlet.ear” is now loaded on the server.



Preparing for the application installation

Choose to generate default bindings and mappings.

□ Generate Default Bindings

Override:

● Do not override existing bindings

○ Override existing bindings

Virtual Host

● Do not use default virtual host name for Web modules

○ Use default virtual host name for Web modules:

Host name: default_host

Specific bindings file

Click Next.

Installing a new application (Step 1)

Fill in the required fields (installation directory, application name, class reloading).

Directory to install application:

If you do not enter an installation directory, WAS will install the application under the default directory:

APP_INSTALL_ROOT/xxxxx/fsnservlet.ear

Where:

- APP_INSTALL_ROOT is a path map variable which, for example, is set to:

  /usr2/WebSphere/AppServer60/profiles/server1/installedApps/

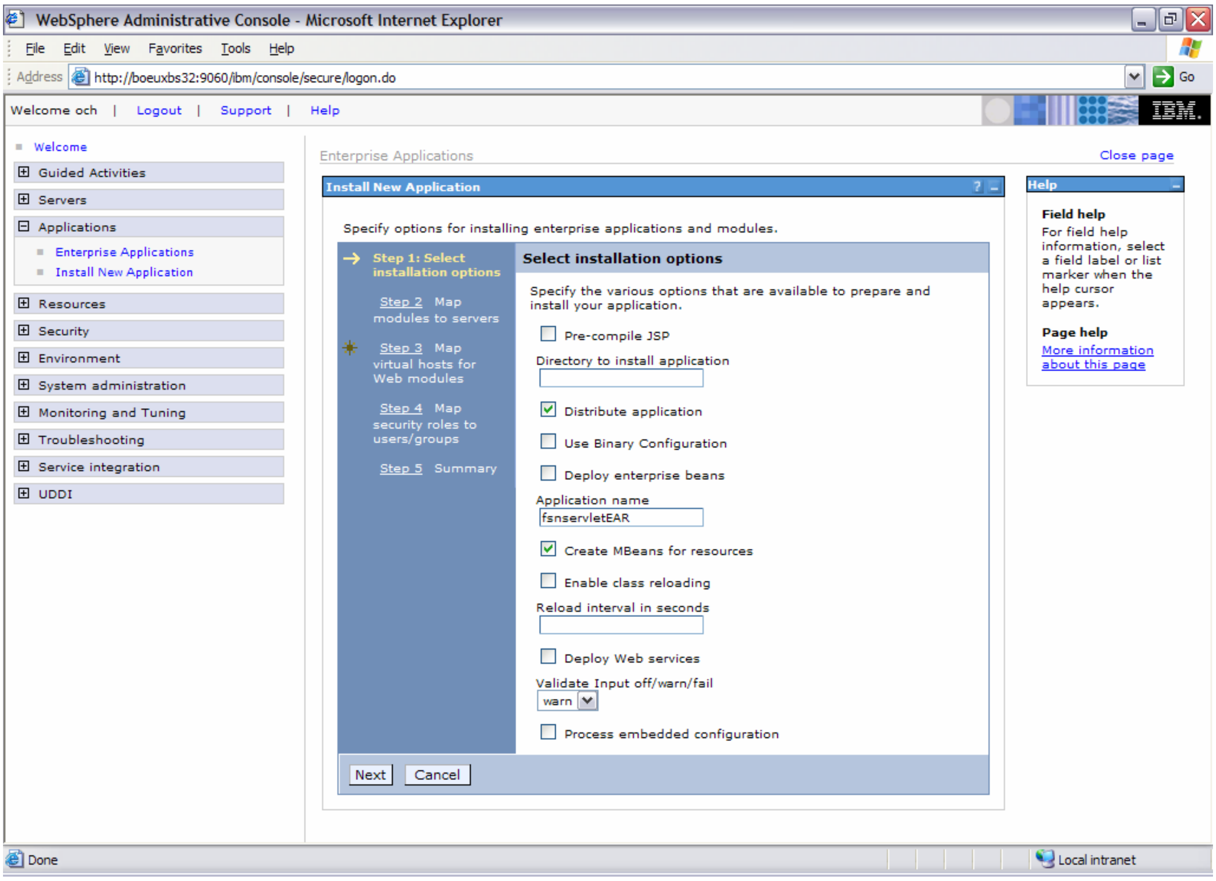
- 'xxxxx' is the cell name
- 'fsnservlet' is the application name.

Application Name:

Specify a unique name, for example 'fsnservletEAR'.

Class Reloading:

Do not enable class reloading.



WebSphere Administrative Console - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://boeuxbs32:9060/ibm/console/secure/logon.do
Go
Welcome och | Logout | Support | Help
IBM.
Welcome
Guided Activities
Servers
Applications
Enterprise Applications
Install New Application
Resources
Security
Environment
System administration
Monitoring and Tuning
Troubleshooting
Service integration
UDDI
Enterprise Applications
Close page
Install New Application
Step 1: Select installation options
Step 2 Map modules to servers
Step 3 Map virtual hosts for Web modules
Step 4 Map security roles to users/groups
Step 5 Summary
Next
Cancel
Done
Local intranet

Specify options for installing enterprise applications and modules.

Select installation options

Specify the various options that are available to prepare and install your application.

☐ Pre-compile JSP

Directory to install application:

☑ Distribute application

☐ Use Binary Configuration

☐ Deploy enterprise beans

Application name: fsnservletEAR

☑ Create MBeans for resources

☐ Enable class reloading

Reload interval in seconds:

☐ Deploy Web services

Validate Input off/warn/fail: warn

☐ Process embedded configuration

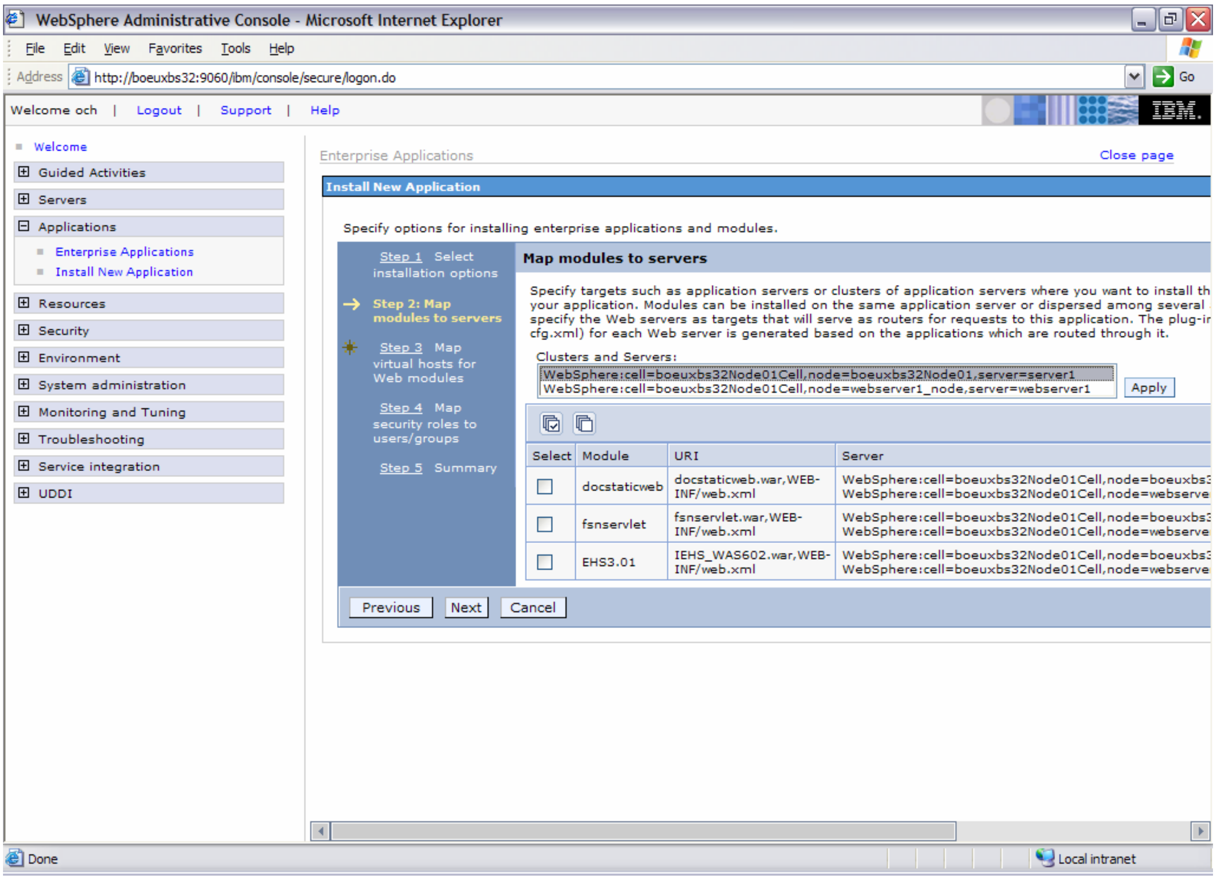
Help

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

Page help
More information about this page

Click Next to finish Step 1 and go to Step 2.

Installing a new application (Step 2)


WebSphere Administrative Console - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://boeuxbs32:9060/ibm/console/secure/logon.do
Go
Welcome och | Logout | Support | Help
Welcome
Guided Activities
Servers
Applications
Enterprise Applications
Install New Application
Resources
Security
Environment
System administration
Monitoring and Tuning
Troubleshooting
Service integration
UDDI
Enterprise Applications
Close page
Install New Application
Step 1 Select installation options
Step 2: Map modules to servers
Step 3 Map virtual hosts for Web modules
Step 4 Map security roles to users/groups
Step 5 Summary
Apply
Previous
Next
Cancel
Done
Local intranet

Specify options for installing enterprise applications and modules.

Map modules to servers

Specify targets such as application servers or clusters of application servers where you want to install th your application. Modules can be installed on the same application server or dispersed among several specify the Web servers as targets that will serve as routers for requests to this application. The plug-ir cfg.xml) for each Web server is generated based on the applications which are routed through it.

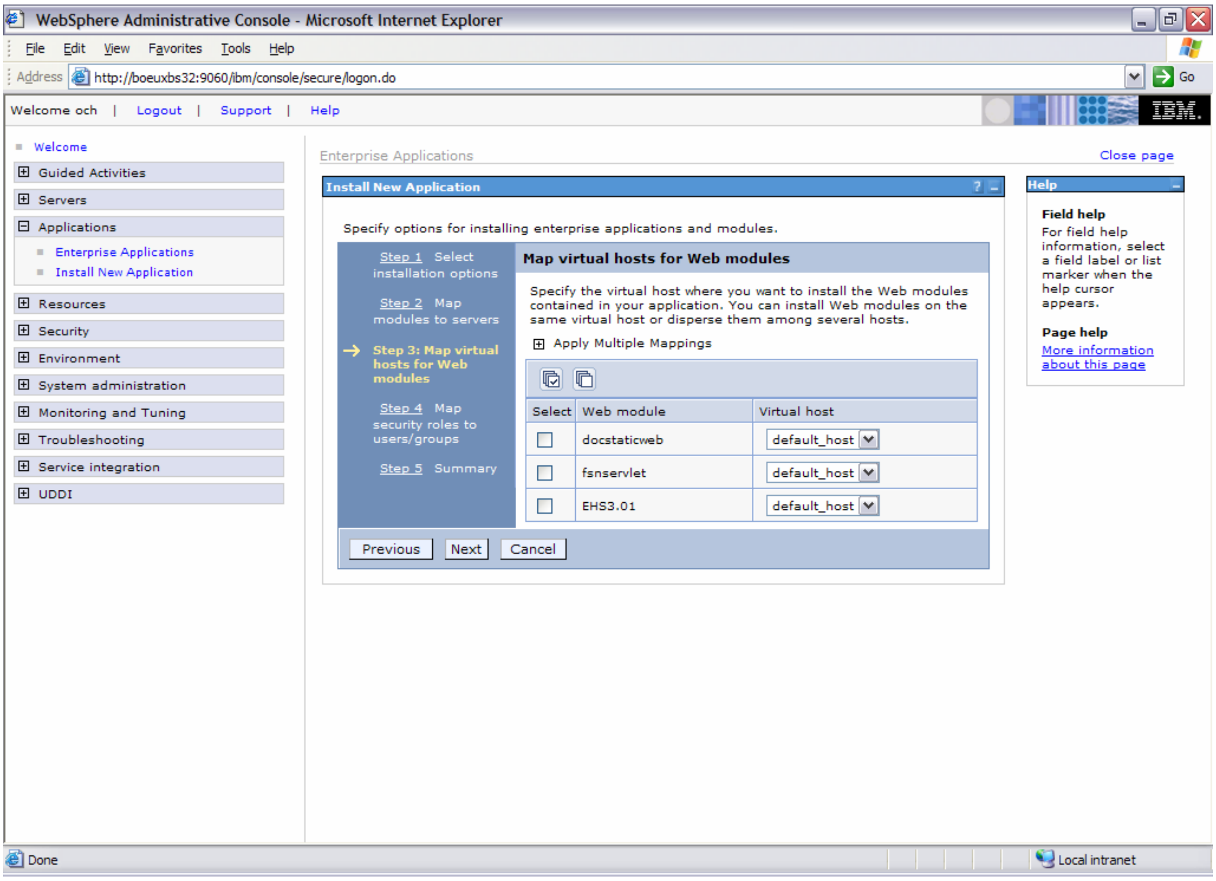
Clusters and Servers:

WebSphere:cell=boeuxbs32Node01Cell,node=boeuxbs32Node01,server=server1
WebSphere:cell=boeuxbs32Node01Cell,node=webserver1_node,server=webserver1

Select	Module	URI	Server
□	docstaticweb	docstaticweb.war,WEB-INF/web.xml	WebSphere:cell=boeuxbs32Node01Cell,node=boeuxbs3 WebSphere:cell=boeuxbs32Node01Cell,node=webserve
□	fsnservlet	fsnservlet.war,WEB-INF/web.xml	WebSphere:cell=boeuxbs32Node01Cell,node=boeuxbs3 WebSphere:cell=boeuxbs32Node01Cell,node=webserve
□	EHS3.01	IEHS_WAS602.war,WEB-INF/web.xml	WebSphere:cell=boeuxbs32Node01Cell,node=boeuxbs3 WebSphere:cell=boeuxbs32Node01Cell,node=webserve

No updates are required for Step 2. Click Next to finish Step 2 and go to Step 3.

Installing a new application (Step 3)



WebSphere Administrative Console - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://boeuxbs32:9060/ibm/console/secure/logon.do
Go
Welcome och | Logout | Support | Help
Welcome
Guided Activities
Servers
Applications
Enterprise Applications
Install New Application
Resources
Security
Environment
System administration
Monitoring and Tuning
Troubleshooting
Service integration
UDDI
Enterprise Applications
Close page
Install New Application
Step 1 Select installation options
Step 2 Map modules to servers
Step 3: Map virtual hosts for Web modules
Step 4 Map security roles to users/groups
Step 5 Summary
Previous
Next
Cancel
Help
Done
Local intranet

Specify options for installing enterprise applications and modules.

Map virtual hosts for Web modules

Specify the virtual host where you want to install the Web modules contained in your application. You can install Web modules on the same virtual host or disperse them among several hosts.

⊞ Apply Multiple Mappings

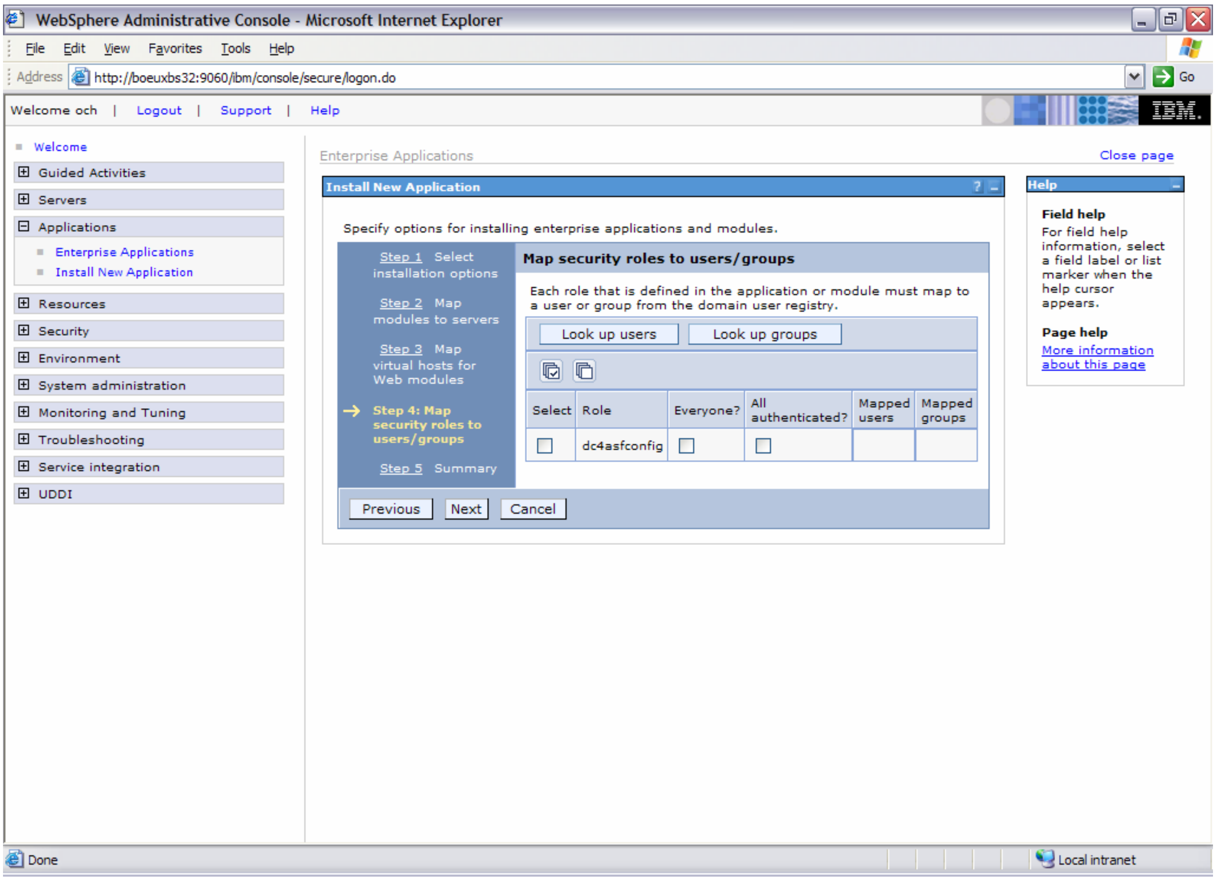
Select	Web module	Virtual host
□	docstaticweb	default_host
□	fsnservlet	default_host
□	EHS3.01	default_host

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

Page help
More information about this page

No updates are required for Step 3. Click Next to finish Step 3 and go to Step 4.

Installing a new application (Step 4)


WebSphere Administrative Console - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://boeuxbs32:9060/ibm/console/secure/logon.do
Go
Welcome och | Logout | Support | Help
IBM.
Welcome
Guided Activities
Servers
Applications
Enterprise Applications
Install New Application
Resources
Security
Environment
System administration
Monitoring and Tuning
Troubleshooting
Service integration
UDDI
Enterprise Applications
Close page
Install New Application
Step 1 Select installation options
Step 2 Map modules to servers
Step 3 Map virtual hosts for Web modules
Step 4: Map security roles to users/groups
Step 5 Summary
Look up users
Look up groups
Previous
Next
Cancel
Help
Field help
Page help
More information about this page
Done
Local intranet

Specify options for installing enterprise applications and modules.

Map security roles to users/groups

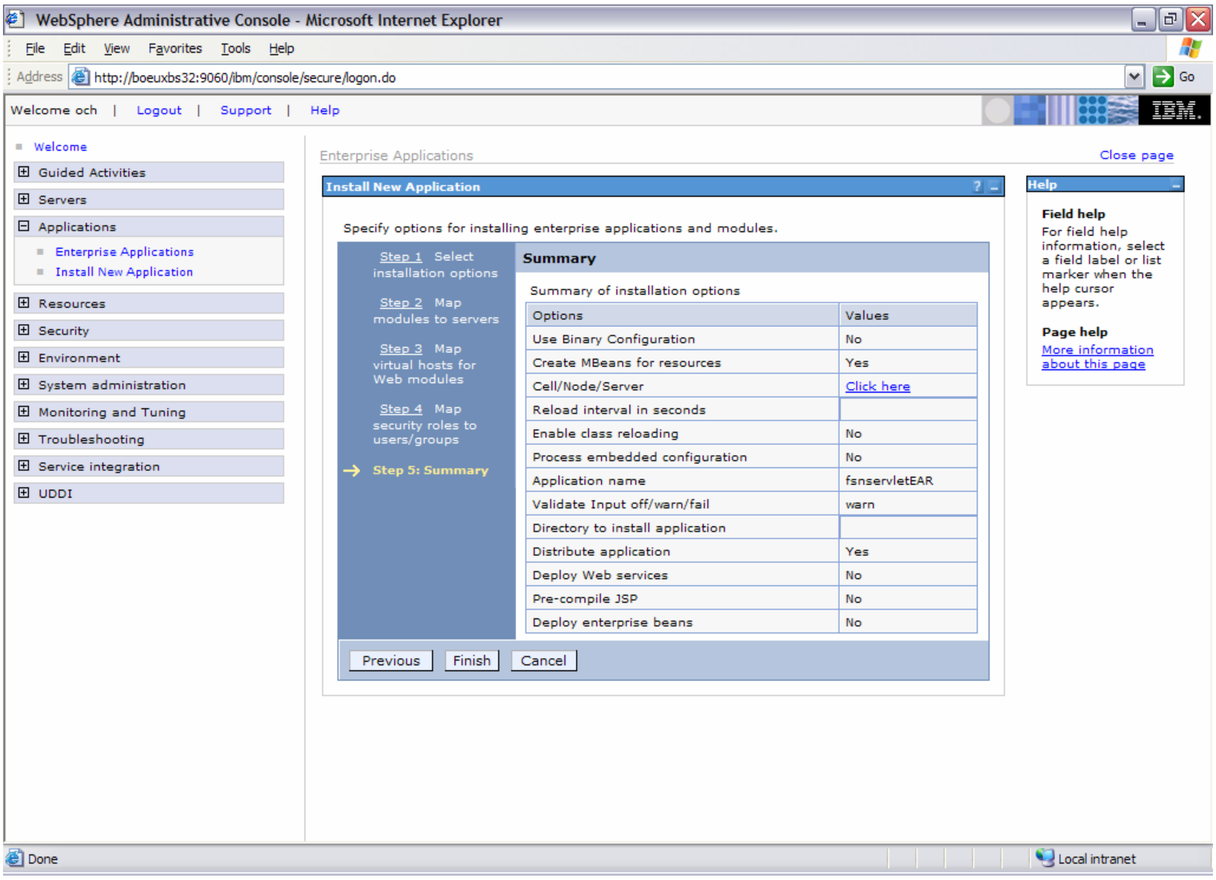
Each role that is defined in the application or module must map to a user or group from the domain user registry.

Select	Role	Everyone?	All authenticated?	Mapped users	Mapped groups
□	dc4asfconfig	□	□		

For field help information, select a field label or list marker when the help cursor appears.

No updates are required for Step 4. Click Next to finish Step 4 and go to Step 5.

Installing a new application (Step 5)


WebSphere Administrative Console - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://boeuxbs32:9060/ibm/console/secure/logon.do
Welcome och | Logout | Support | Help
Welcome
Guided Activities
Servers
Applications
Enterprise Applications
Install New Application
Resources
Security
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Troubleshooting
Service integration
UDDI
Enterprise Applications
Close page
Install New Application
Step 1 Select installation options
Step 2 Map modules to servers
Step 3 Map virtual hosts for Web modules
Step 4 Map security roles to users/groups
Step 5: Summary
Previous
Finish
Cancel
Help
Field help
For field help information, select a field label or list marker when the help cursor appears.
Page help
More information about this page
Done
Local intranet

Specify options for installing enterprise applications and modules.

Summary

Summary of installation options

Options	Values
Use Binary Configuration	No
Create MBeans for resources	Yes
Cell/Node/Server	Click here
Reload interval in seconds	
Enable class reloading	No
Process embedded configuration	No
Application name	fsnservletEAR
Validate Input off/warn/fail	warn
Directory to install application	
Distribute application	Yes
Deploy Web services	No
Pre-compile JSP	No
Deploy enterprise beans	No

Check the settings on this page and click Finish to start the installation of your application. When the installation of the application is completed, the settings are saved in the master configuration.

Starting the application

Open Applications > Enterprise Application, select your fsnservletEAR application and click Start to start the application.

4 Migrating configuration files from 3.3 to 3.4

The configuration files are located in the following directory:

APP_INSTALL_ROOT/xxxxx/fsnservlet.ear/fsnservlet.war/

Where:

- APP_INSTALL_ROOT is a file path variable which, for example, is set to:

  /usr2/WebSphere/AppServer60/profiles/server1/installedApps/

- ‘xxxxx’ is the cell name
- ‘fsnservlet’ is the application name.

If you changed any of the following configuration files for ASF 3.3, you must copy these files to the installed ASF 3.4 directory:

- DocXSLConversion.xml (…/internals/config)
- doccustomer.js (…/custom)
- doccustom.css (…/custom)
- doccustom1.xsl (…/custom)
- doccustom2.xsl (…/custom)
- docnls.js (…/javascript)

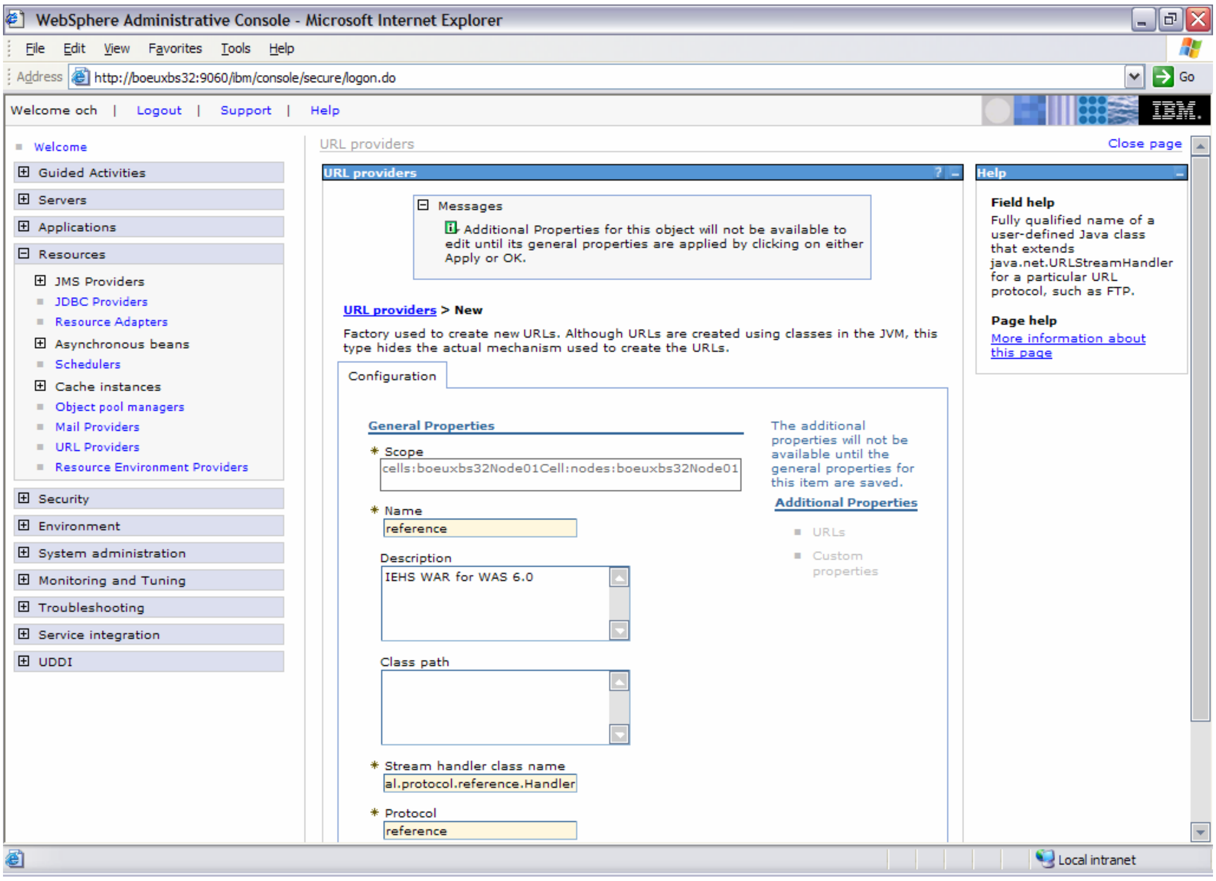
5 Activating the ASF Help

The ASF help application is based on the eclipse help system for WebSphere Application server and requires a URL provider setup.

Open Resources > URL Providers > New

Fill in the required fields (Name, Stream handler class name, Protocol):

1. Name must be reference
2. Stream handler class name must be org.eclipse.osgi.framework.internal.protocol.reference.Handler
3. Protocol must be reference



Messages

Additional Properties for this object will not be available to edit until its general properties are applied by clicking on either Apply or OK.

URL providers > New

Factory used to create new URLs. Although URLs are created using classes in the JVM, this type hides the actual mechanism used to create the URLs.

Configuration

General Properties

* Scope
cells:boeuxbs32Node01Cell:nodes:boeuxbs32Node01

* Name
reference

Description
IEHS WAR for WAS 6.0

Class path

* Stream handler class name
al.protocol.reference.Handler

* Protocol
reference

The additional properties will not be available until the general properties for this item are saved.

Additional Properties

- URLs
- Custom properties

Field help

Fully qualified name of a user-defined Java class that extends java.net.URLStreamHandler for a particular URL protocol, such as FTP.

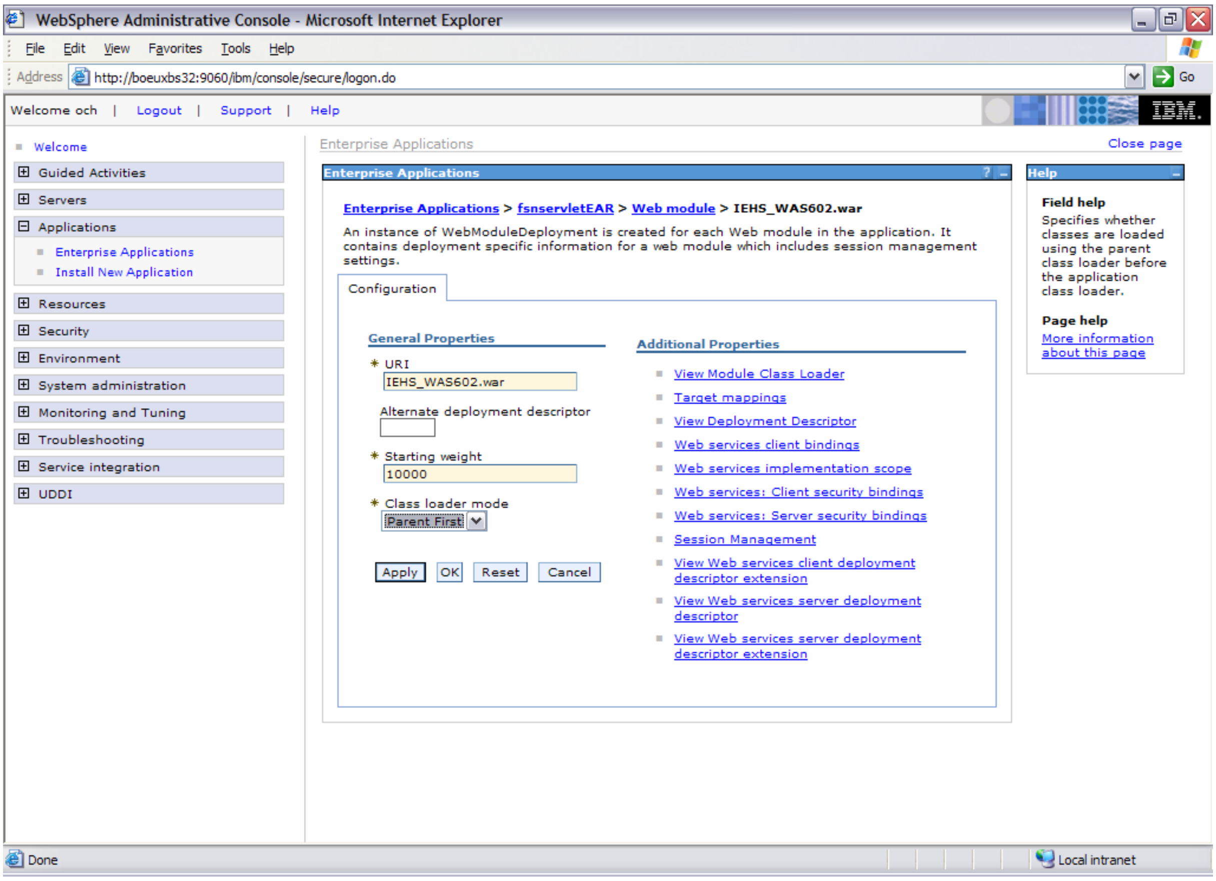
Page help

More information about this page

Click Apply and save your modifications.

Next change the class loader mode for the module IEHS_WAS602.war to “Parent first”.

Open Enterprise aplications > fsnservletEAR > Web module > IEHS_WAS602.war



Enterprise Applications > fsnservletEAR > Web module > IEHS_WAS602.war

An instance of WebModuleDeployment is created for each Web module in the application. It contains deployment specific information for a web module which includes session management settings.

Configuration

General Properties

* URI: IEHS_WAS602.war

Alternate deployment descriptor:

* Starting weight: 10000

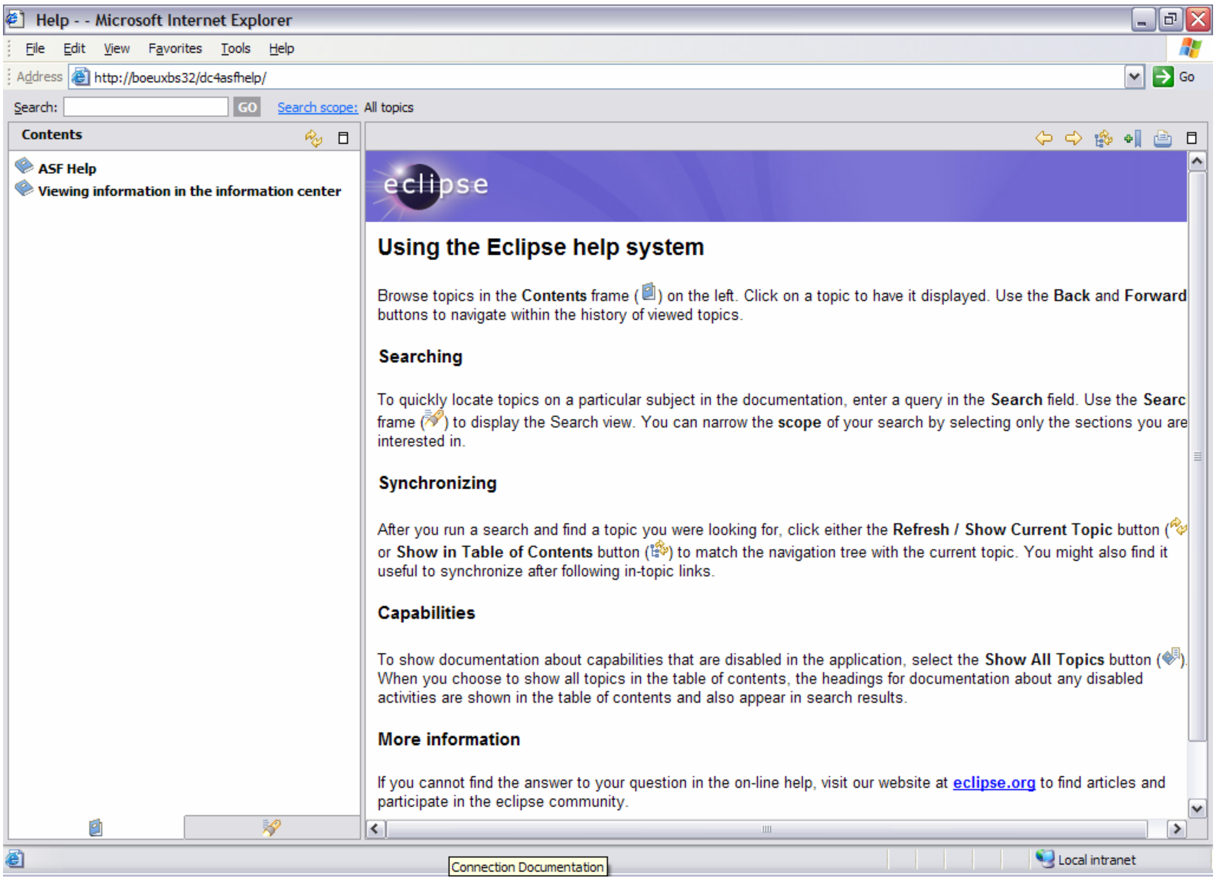
* Class loader mode: Parent First

Apply
OK
Reset
Cancel
Additional Properties
View Module Class Loader
Target mappings
View Deployment Descriptor
Web services client bindings
Web services implementation scope
Web services: Client security bindings
Web services: Server security bindings
Session Management
View Web services client deployment descriptor extension
View Web services server deployment descriptor
View Web services server deployment descriptor extension
Field help
Page help
More information about this page
Done
Local intranet

Field help: Specifies whether classes are loaded using the parent class loader before the application class loader.

Click Apply and save your modifications.

To test the ASF help invoke the servlet application “dc4asfhelp“, using the Microsoft Internet Explorer.


Help - - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://boeuxbs32/dc4asfhelp/
Go
Search:
GO
Search scope: All topics
Contents
ASF Help
Viewing information in the information center
eclipse
Connection Documentation
Local intranet

Using the Eclipse help system

Browse topics in the **Contents** frame ( ) on the left. Click on a topic to have it displayed. Use the **Back** and **Forward** buttons to navigate within the history of viewed topics.

Searching

To quickly locate topics on a particular subject in the documentation, enter a query in the **Search** field. Use the **Searc** frame ( ) to display the Search view. You can narrow the **scope** of your search by selecting only the sections you are interested in.

Synchronizing

After you run a search and find a topic you were looking for, click either the **Refresh / Show Current Topic** button (or **Show in Table of Contents** button ( ) to match the navigation tree with the current topic. You might also find it useful to synchronize after following in-topic links.

Capabilities

To show documentation about capabilities that are disabled in the application, select the **Show All Topics** button ( ). When you choose to show all topics in the table of contents, the headings for documentation about any disabled activities are shown in the table of contents and also appear in search results.

More information

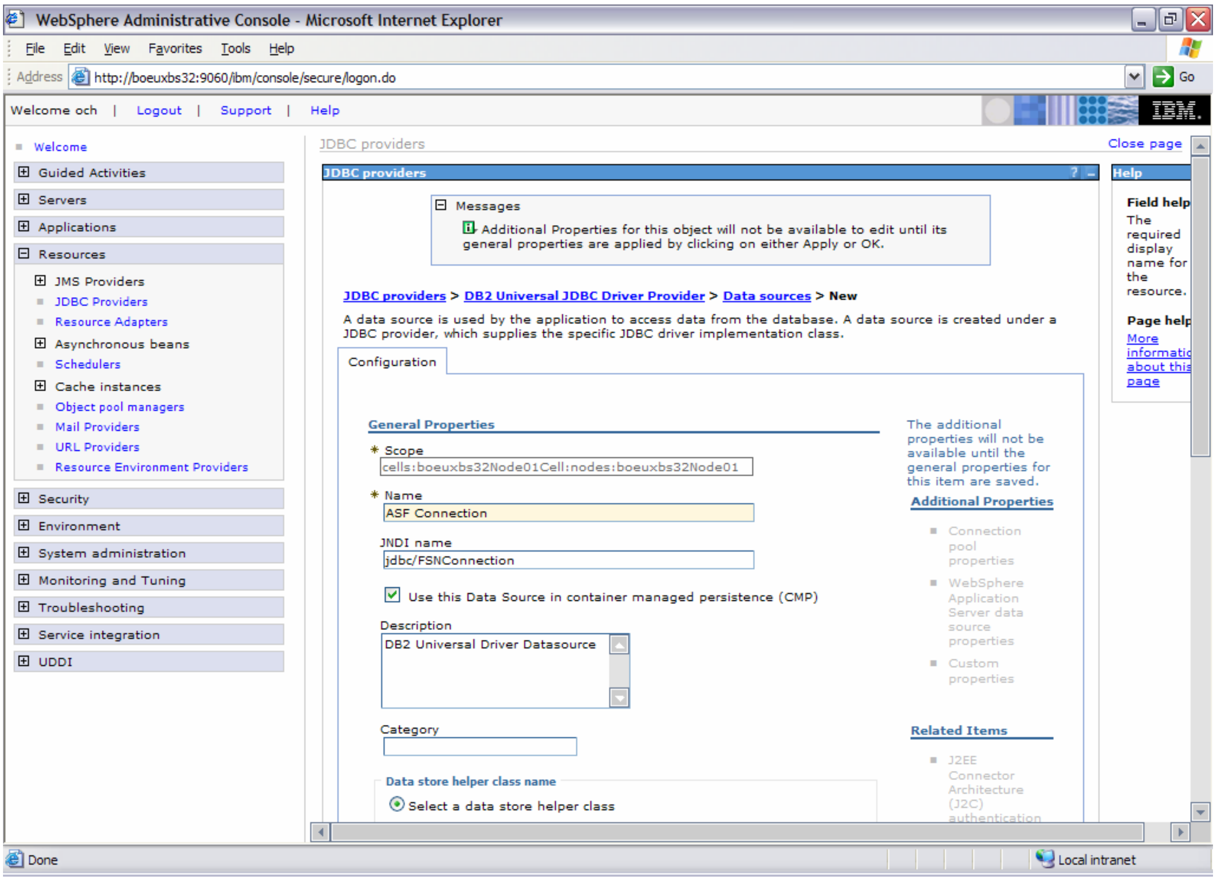
If you cannot find the answer to your question in the on-line help, visit our website at eclipse.org to find articles and participate in the eclipse community.

6 Setting up a connection to DB2

Defining a data source

Open Resources > JDBC Providers > DB2 Universal JDBC Driver Provider > Data sources > New

Enter the name, for example, “ASF Connection” and the JNDI name for the data source, for example, jdbc/FSNConnection.



Messages

Additional Properties for this object will not be available to edit until its general properties are applied by clicking on either Apply or OK.

JDBC providers > DB2 Universal JDBC Driver Provider > Data sources > New

A data source is used by the application to access data from the database. A data source is created under a JDBC provider, which supplies the specific JDBC driver implementation class.

Configuration

General Properties

* Scope: cells:boeuxbs32Node01Cell:nodes:boeuxbs32Node01

* Name: ASF Connection

JNDI name: jdbc/FSNConnection

☑ Use this Data Source in container managed persistence (CMP)

Description: DB2 Universal Driver Datasource

Category:

Data store helper class name

● Select a data store helper class

The additional properties will not be available until the general properties for this item are saved.

Additional Properties

- Connection pool properties
- WebSphere Application Server data source properties
- Custom properties

Related Items

- J2EE Connector Architecture (J2C) authentication

Field help

The required display name for the resource.

Page help

More information about this page

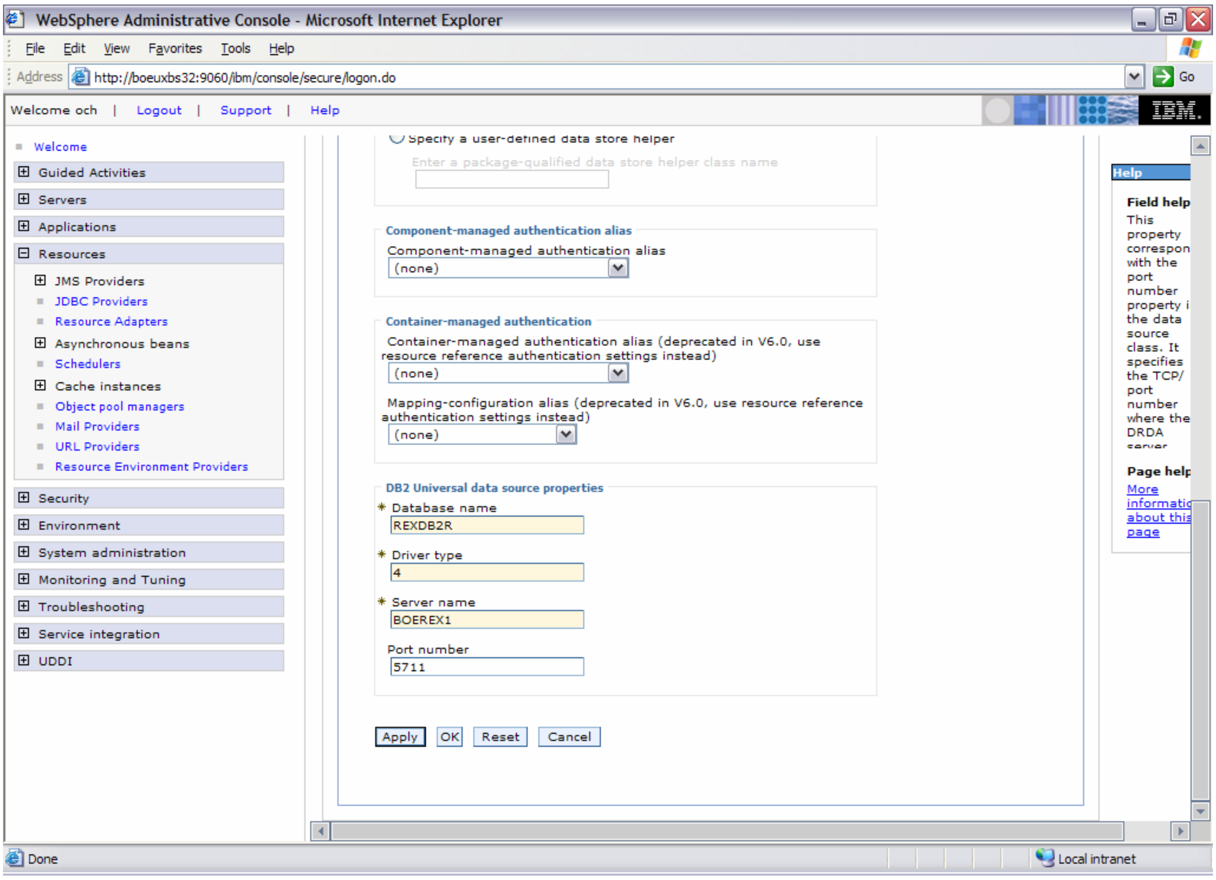
Enter the database specific properties for the data source:

4. Database name, for example, REXDB2R

5. Driver type is 4

6. Server name, for example, BOEREX1 (the TCP/IP address of the DB2 host)

7. Port number of the DB2 host, for example, 5711



○ Specify a user-defined data store helper

Enter a package-qualified data store helper class name

Component-managed authentication alias

Component-managed authentication alias
(none)

Container-managed authentication

Container-managed authentication alias (deprecated in V6.0, use resource reference authentication settings instead)
(none)

Mapping-configuration alias (deprecated in V6.0, use resource reference authentication settings instead)
(none)

DB2 Universal data source properties

* Database name
REXDB2R

* Driver type
4

* Server name
BOEREX1

Port number
5711

Apply | OK | Reset | Cancel

Help

Field help

This property correspon with the port number property i the data source class. It specifies the TCP/ port number where the DRDA server

Page help

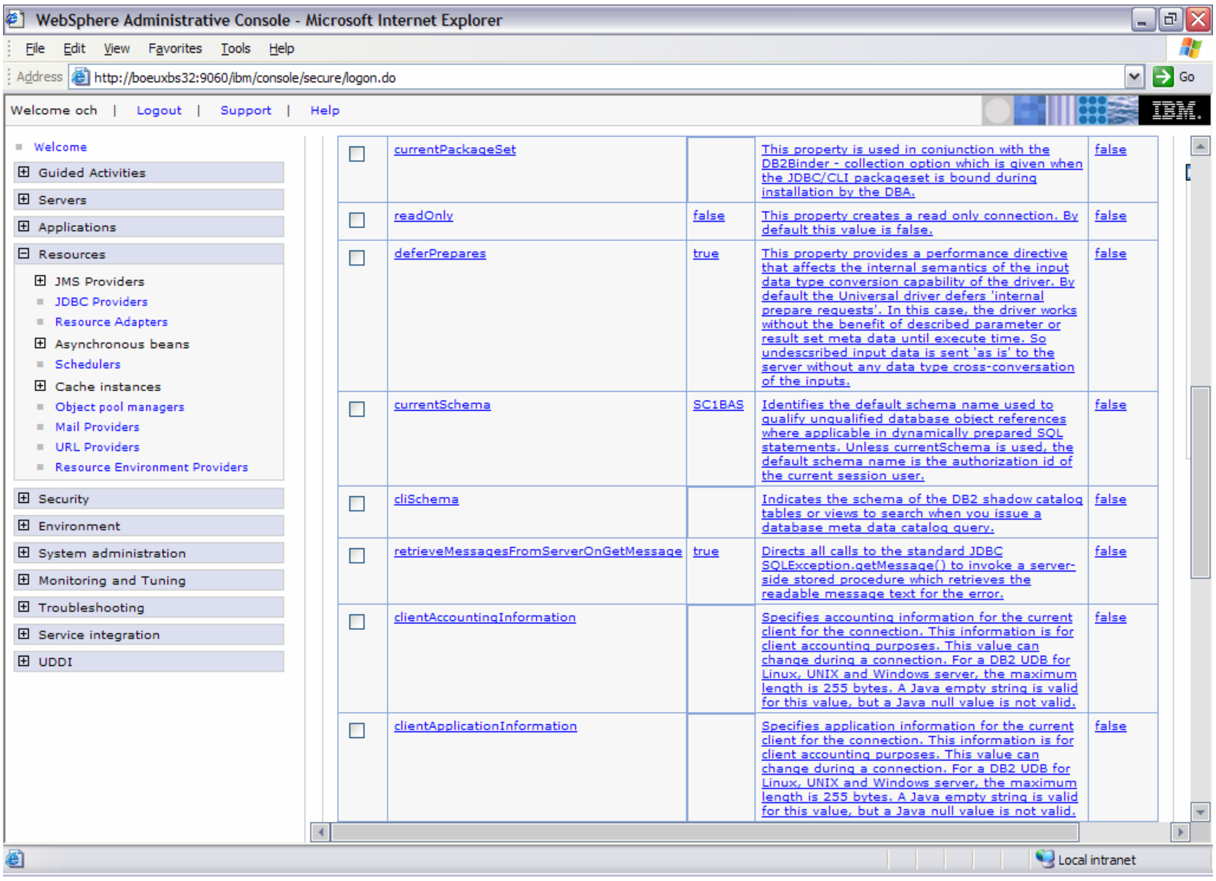
More informatio about this page

Click OK to create the data source.

Open JDBC providers > DB2 Universal JDBC Provider > Data sources > ASF Connection > Custom Properties

Where “ASF Connection” is the name of the data source you created in the previous step.

Define the CurrentSchema, for example, SC1BAS which represents the DB2 collection ID on the host.



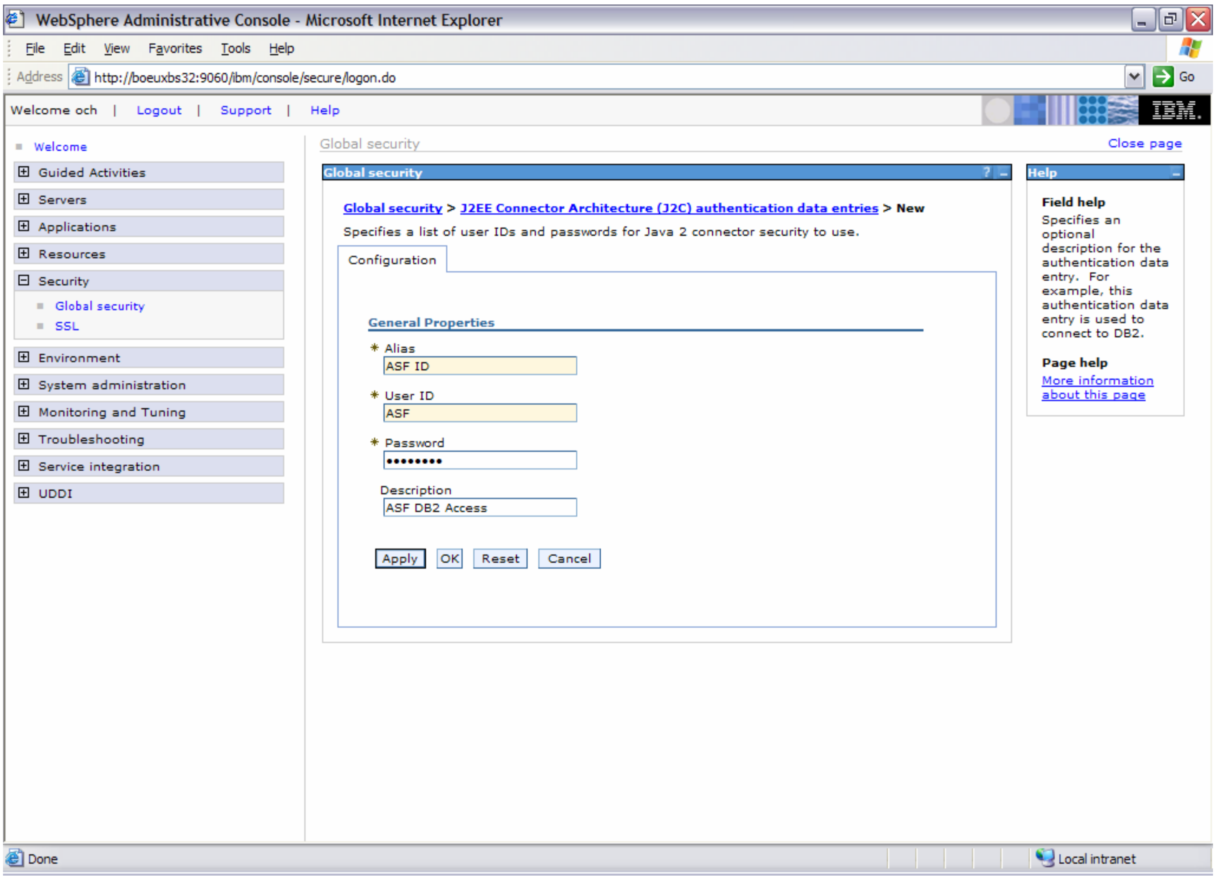
□	currentPackageSet		This property is used in conjunction with the DB2Binder - collection option which is given when the JDBC/CLI packageset is bound during installation by the DBA.	false
□	readOnly	false	This property creates a read only connection. By default this value is false.	false
□	deferPrepares	true	This property provides a performance directive that affects the internal semantics of the input data type conversion capability of the driver. By default the Universal driver defers 'internal prepare requests'. In this case, the driver works without the benefit of described parameter or result set meta data until execute time. So undescsribed input data is sent 'as is' to the server without any data type cross-conversation of the inputs.	false
□	currentSchema	SC1BAS	Identifies the default schema name used to qualify unqualified database object references where applicable in dynamically prepared SQL statements. Unless currentSchema is used, the default schema name is the authorization id of the current session user.	false
□	cliSchema		Indicates the schema of the DB2 shadow catalog tables or views to search when you issue a database meta data catalog query.	false
□	retrieveMessagesFromServerOnGetMessage	true	Directs all calls to the standard JDBC SQLException.getMessage() to invoke a server-side stored procedure which retrieves the readable message text for the error.	false
□	clientAccountingInformation		Specifies accounting information for the current client for the connection. This information is for client accounting purposes. This value can change during a connection. For a DB2 UDB for Linux, UNIX and Windows server, the maximum length is 255 bytes. A Java empty string is valid for this value, but a Java null value is not valid.	false
□	clientApplicationInformation		Specifies application information for the current client for the connection. This information is for client accounting purposes. This value can change during a connection. For a DB2 UDB for Linux, UNIX and Windows server, the maximum length is 255 bytes. A Java empty string is valid for this value, but a Java null value is not valid.	false

Click Apply and save your modifications.

Defining JAAS – J2C authentication data

Open Security > Global Security > J2EE Connector architecture (J2C) authentication data entries > New

Enter an alias and a valid User ID and password for DB2 access.



Global security > J2EE Connector Architecture (J2C) authentication data entries > New

Specifies a list of user IDs and passwords for Java 2 connector security to use.

Configuration

General Properties

* Alias: ASF ID

* User ID: ASF

* Password: ••••••••

Description: ASF DB2 Access

Apply | OK | Reset | Cancel

Field help

Specifies an optional description for the authentication data entry. For example, this authentication data entry is used to connect to DB2.

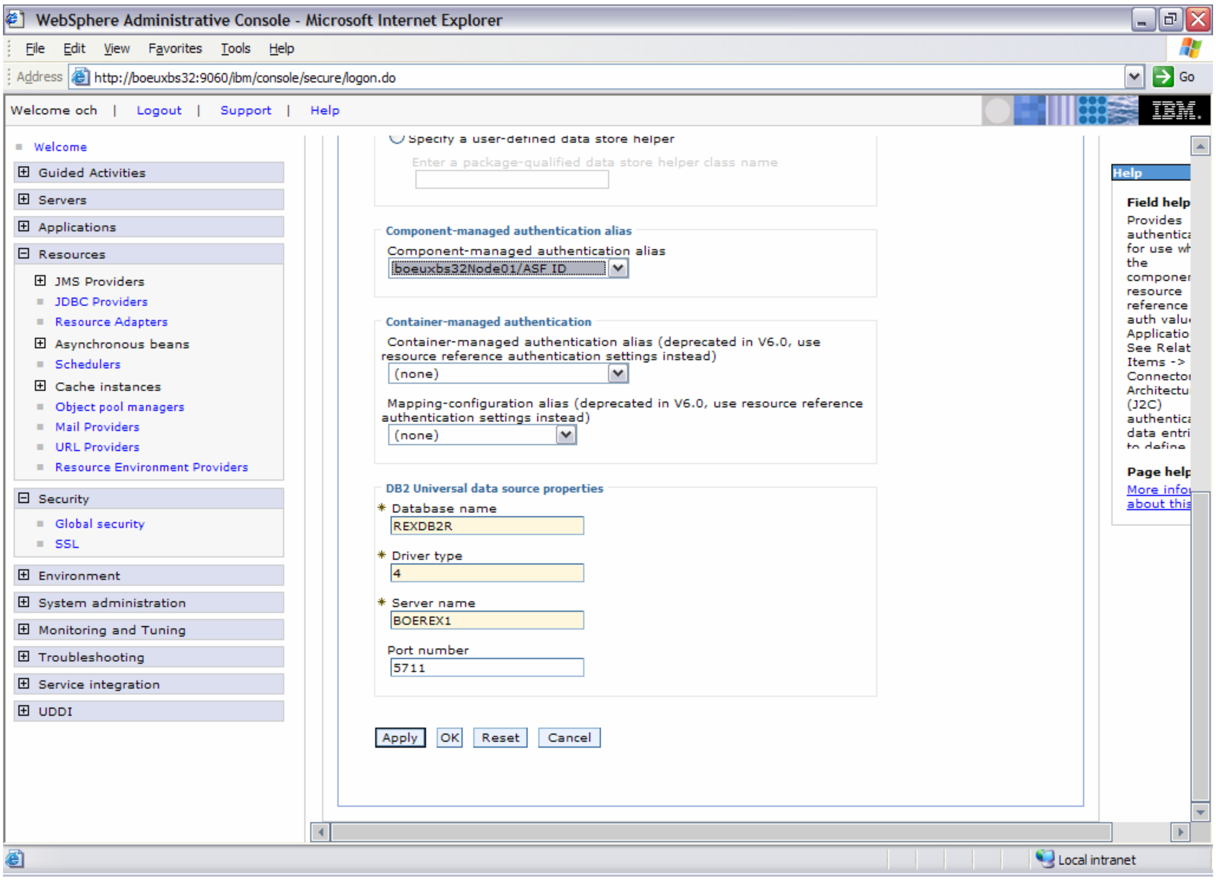
Page help

More information about this page

Click OK and save your modifications.

Open JDBC provider > DB2 Universal JDBC Driver Provider > Data sources > ASF Connection

Select the created JASS-J2C authentication data in the field Component-managed authentication alias.


WebSphere Administrative Console - Microsoft Internet Explorer
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Welcome och | Logout | Support | Help
IBM.
Welcome
Guided Activities
Servers
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JMS Providers
JDBC Providers
Resource Adapters
Asynchronous beans
Schedulers
Cache instances
Object pool managers
Mail Providers
URL Providers
Resource Environment Providers
Security
Global security
SSL
Environment
System administration
Monitoring and Tuning
Troubleshooting
Service integration
UDDI
Help
Field help
Provides authentica for use wh the componer resource reference auth valu Applicatio See Relat Items -> Connector Architectu (J2C) authentica data entri to define
Page help
More info about this
Local intranet

○ Specify a user-defined data store helper

Enter a package-qualified data store helper class name

Component-managed authentication alias

Component-managed authentication alias: boeuxbs32Node01/ASF ID

Container-managed authentication

Container-managed authentication alias (deprecated in V6.0, use resource reference authentication settings instead): (none)

Mapping-configuration alias (deprecated in V6.0, use resource reference authentication settings instead): (none)

DB2 Universal data source properties

* Database name: REXDB2R

* Driver type: 4

* Server name: BOEREX1

Port number: 5711

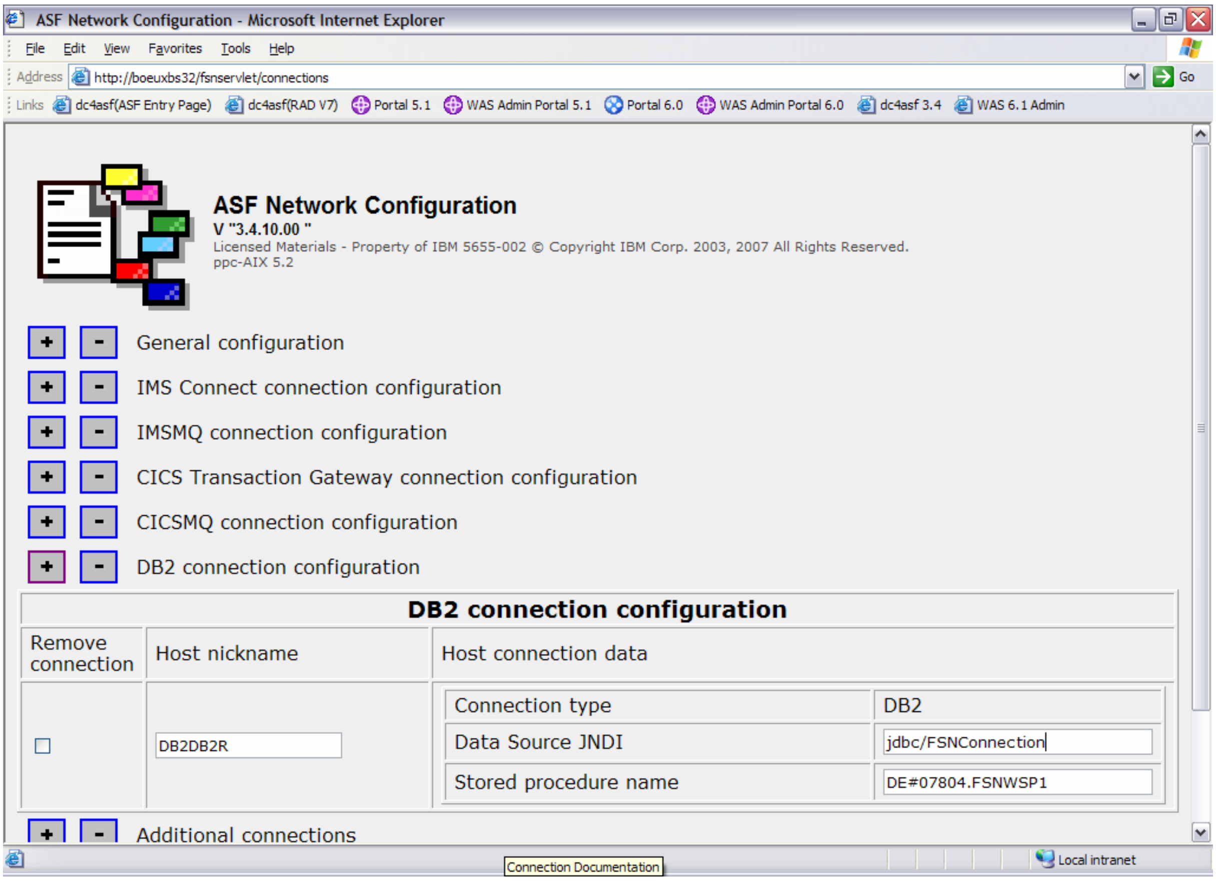
Apply | OK | Reset | Cancel

Click Apply, save your modifications, and restart the WebSphere Application Server.

Configuring the connections

To define the server-host connections in DocNetworkConfiguration.xml invoke the servlet application “connections“, using the Microsoft Internet Explorer.

Add a DB2 Connection type entry by specifying a host nickname, the data source JNDI that you created in Defining a data source and the name of the ASF stored procedure within DB/2.



ASF Network Configuration - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://boeuxbs32/fsnservlet/connections
Go
Links dc4asf(ASF Entry Page) dc4asf(RAD V7) Portal 5.1 WAS Admin Portal 5.1 Portal 6.0 WAS Admin Portal 6.0 dc4asf 3.4 WAS 6.1 Admin
Connection Documentation
Local intranet

ASF Network Configuration
V "3.4.10.00 "
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ppc-AIX 5.2

+ - General configuration
+ - IMS Connect connection configuration
+ - IMSMQ connection configuration
+ - CICS Transaction Gateway connection configuration
+ - CICSMQ connection configuration
+ - DB2 connection configuration

DB2 connection configuration

Remove connection	Host nickname	Host connection data	
□	DB2DB2R	Connection type	DB2
		Data Source JNDI	jdbc/FSNConnection
		Stored procedure name	DE#07804.FSNWSP1

+ - Additional connections

Click OK to save your changes.

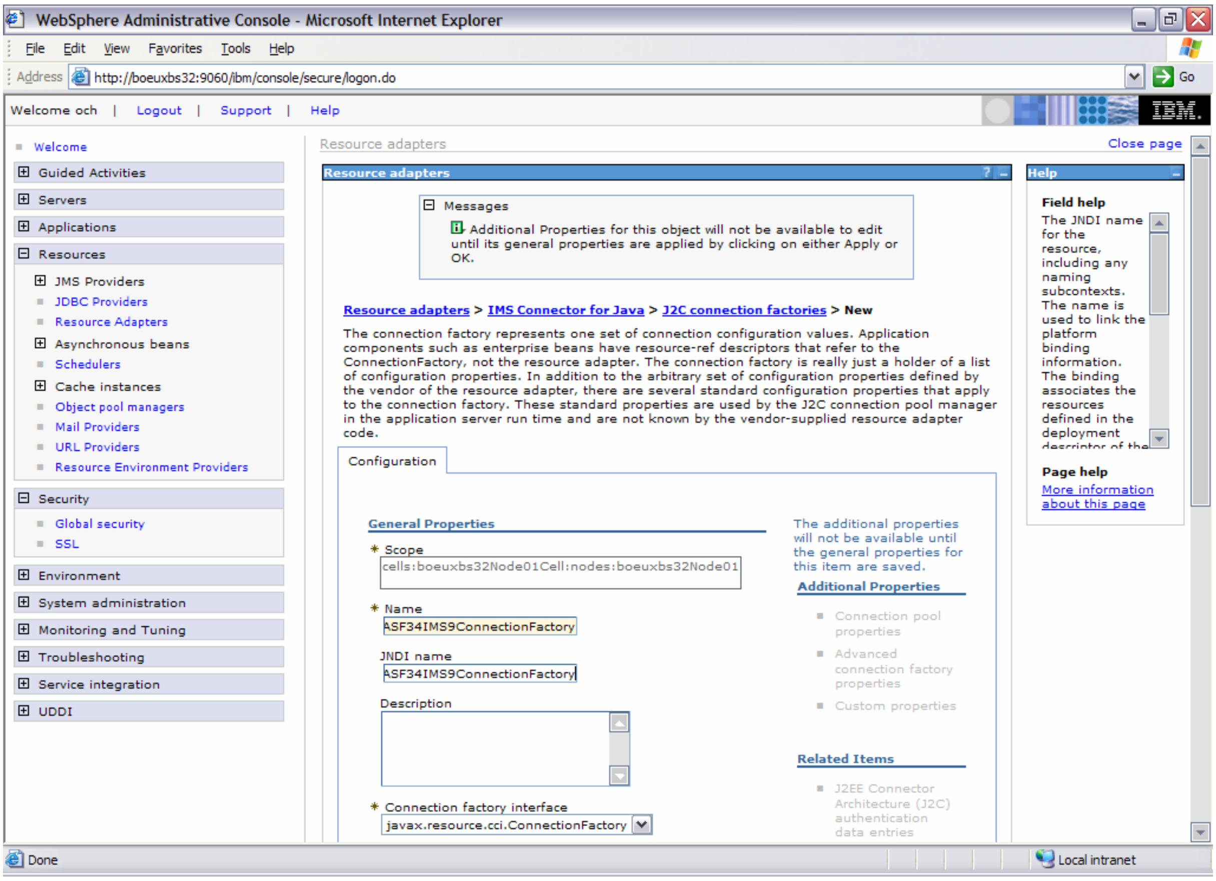
Stop and Start your application in the WebSphere Administrative Console.

7 Setting up a connection to IMS via IMS Connect

Defining a J2C connection factory

Open Resources > Resource Adapters > IMS Connector for Java > J2C connection factories > New

Enter the name, for example, “ASF34IMS9ConnectionFactory” and the JNDI name for the J2C connection factory, for example, imsconn/ASF34IMS9ConnectionFactory.



Messages

Additional Properties for this object will not be available to edit until its general properties are applied by clicking on either Apply or OK.

Resource adapters > IMS Connector for Java > J2C connection factories > New

The connection factory represents one set of connection configuration values. Application components such as enterprise beans have resource-ref descriptors that refer to the ConnectionFactory, not the resource adapter. The connection factory is really just a holder of a list of configuration properties. In addition to the arbitrary set of configuration properties defined by the vendor of the resource adapter, there are several standard configuration properties that apply to the connection factory. These standard properties are used by the J2C connection pool manager in the application server run time and are not known by the vendor-supplied resource adapter code.

General Properties

* Scope
cells:boeuxbs32Node01Cell:nodes:boeuxbs32Node01

* Name
ASF34IMS9ConnectionFactory

JNDI name
ASF34IMS9ConnectionFactory

Description

* Connection factory interface
javax.resource.cci.ConnectionFactory

The additional properties will not be available until the general properties for this item are saved.

Additional Properties

- Connection pool properties
- Advanced connection factory properties
- Custom properties

Related Items

- J2EE Connector Architecture (J2C) authentication data entries

Field help

The JNDI name for the resource, including any naming subcontexts. The name is used to link the platform binding information. The binding associates the resources defined in the deployment descriptor of the

Page help

More information about this page

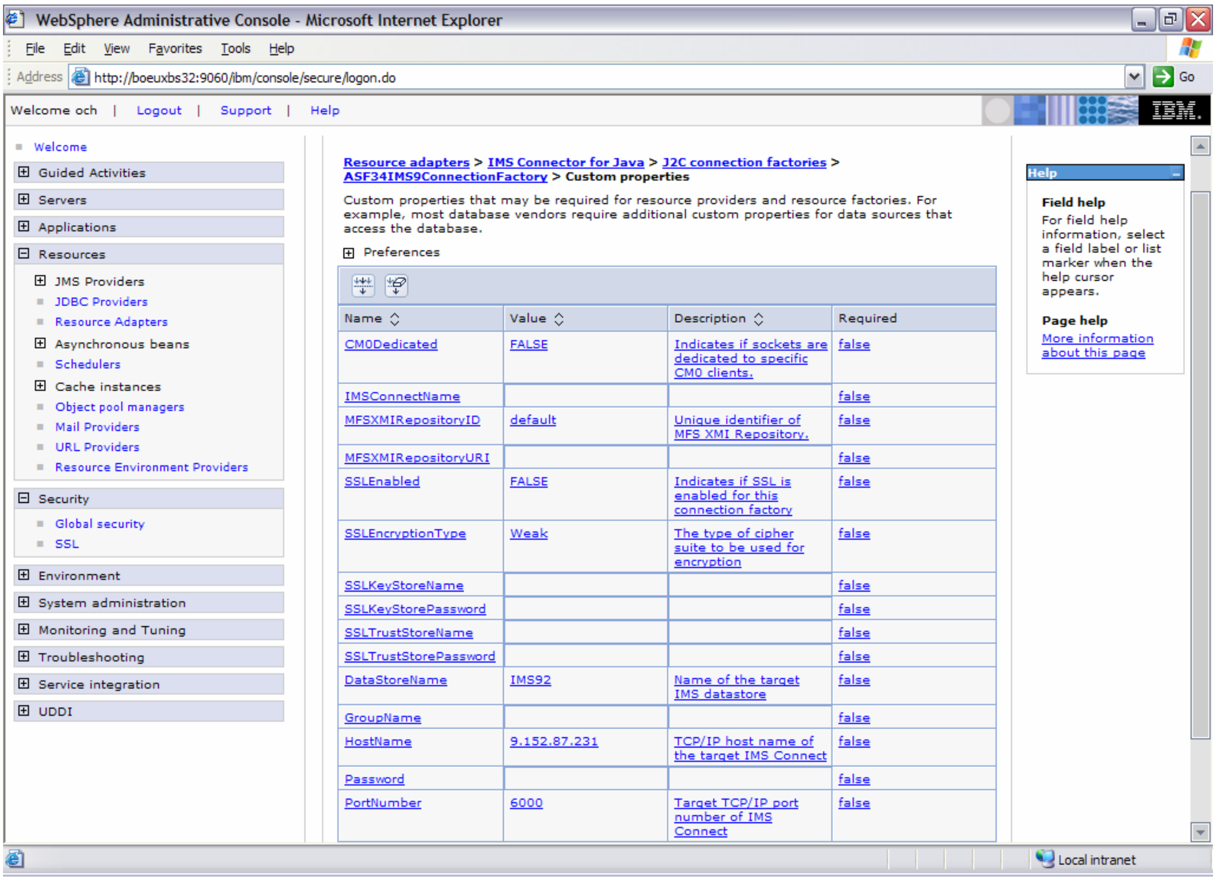
Click Apply to save your modifications.

Open Resource Adapters > IMS Connector for Java > J2C connection factories > ASF34IMS9ConnectionFactory > Custom Properties

where ASF34IMS9ConnectionFactory is the name of the connection factory created in the previous step.

Define the IMS Connect specific properties for the connection factory:

1. HostName is the TCP/IP address of the target IMS Connect, for example, 9.152.87.231
2. PortNumber is the target TCP/IP port number of IMS Connect, for example, 6000
3. DataStoreName is the name of the target IMS data store, for example, IMS92



Resource adapters > IMS Connector for Java > J2C connection factories > ASF34IMS9ConnectionFactory > Custom properties

Custom properties that may be required for resource providers and resource factories. For example, most database vendors require additional custom properties for data sources that access the database.

⊞ Preferences

Name	Value	Description	Required
CM0Dedicated	FALSE	Indicates if sockets are dedicated to specific CM0 clients.	false
IMSConnectName			false
MFSXMIRepositoryID	default	Unique identifier of MFS XMI Repository.	false
MFSXMIRepositoryURI			false
SSLEnabled	FALSE	Indicates if SSL is enabled for this connection factory	false
SSLEncryptionType	Weak	The type of cipher suite to be used for encryption	false
SSLKeyStoreName			false
SSLKeyStorePassword			false
SSLTrustStoreName			false
SSLTrustStorePassword			false
DataStoreName	IMS92	Name of the target IMS datastore	false
GroupName			false
HostName	9.152.87.231	TCP/IP host name of the target IMS Connect	false
Password			false
PortNumber	6000	Target TCP/IP port number of IMS Connect	false

Help

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

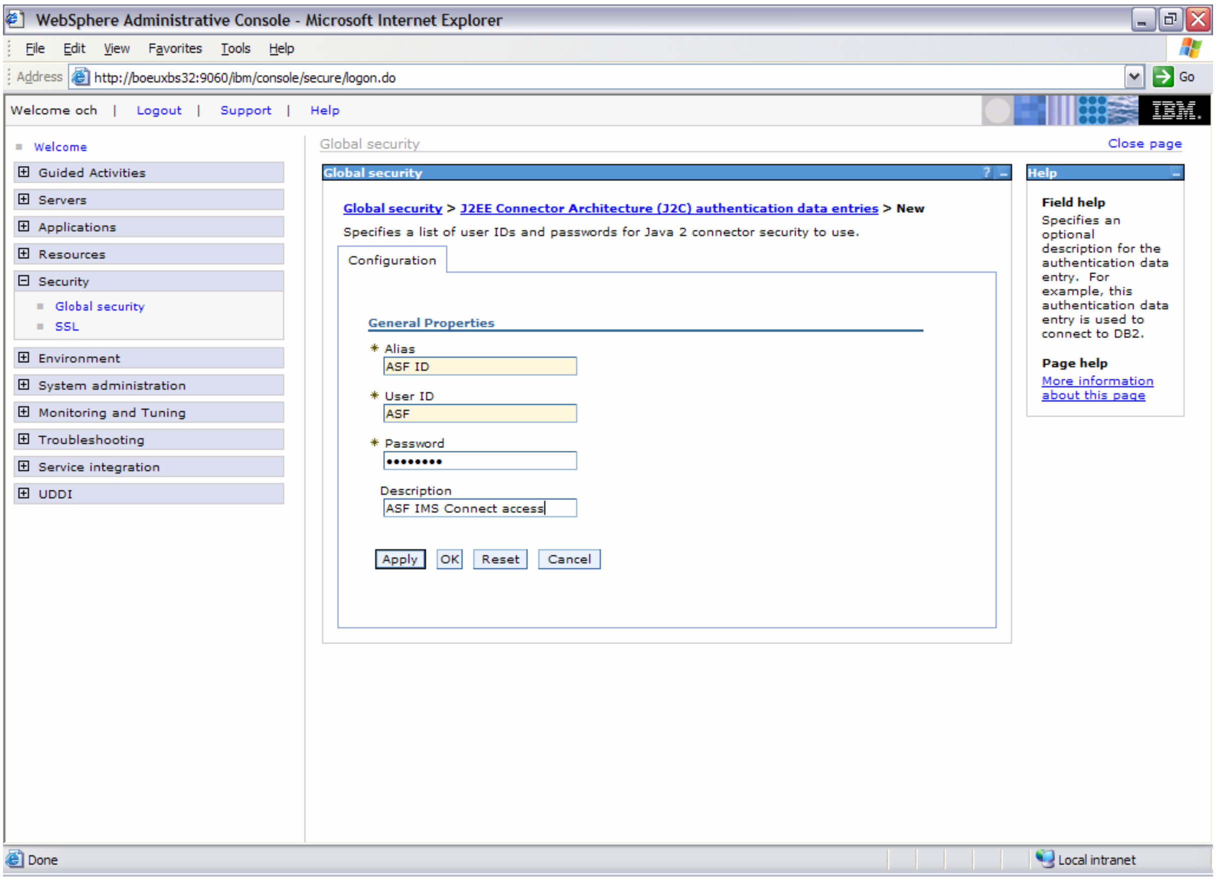
Page help
More information about this page

Click Apply to save your modifications.

Defining JAAS – J2C authentication data

Open Security > Global Security > J2EE Connector architecture (J2C) authentication data entries > New

Enter an alias and a valid user ID and password for the IMS Connect connection.



Global security > J2EE Connector Architecture (J2C) authentication data entries > New

Specifies a list of user IDs and passwords for Java 2 connector security to use.

Configuration

General Properties

* Alias: ASF ID

* User ID: ASF

* Password: ••••••••

Description: ASF IMS Connect access

Apply | OK | Reset | Cancel

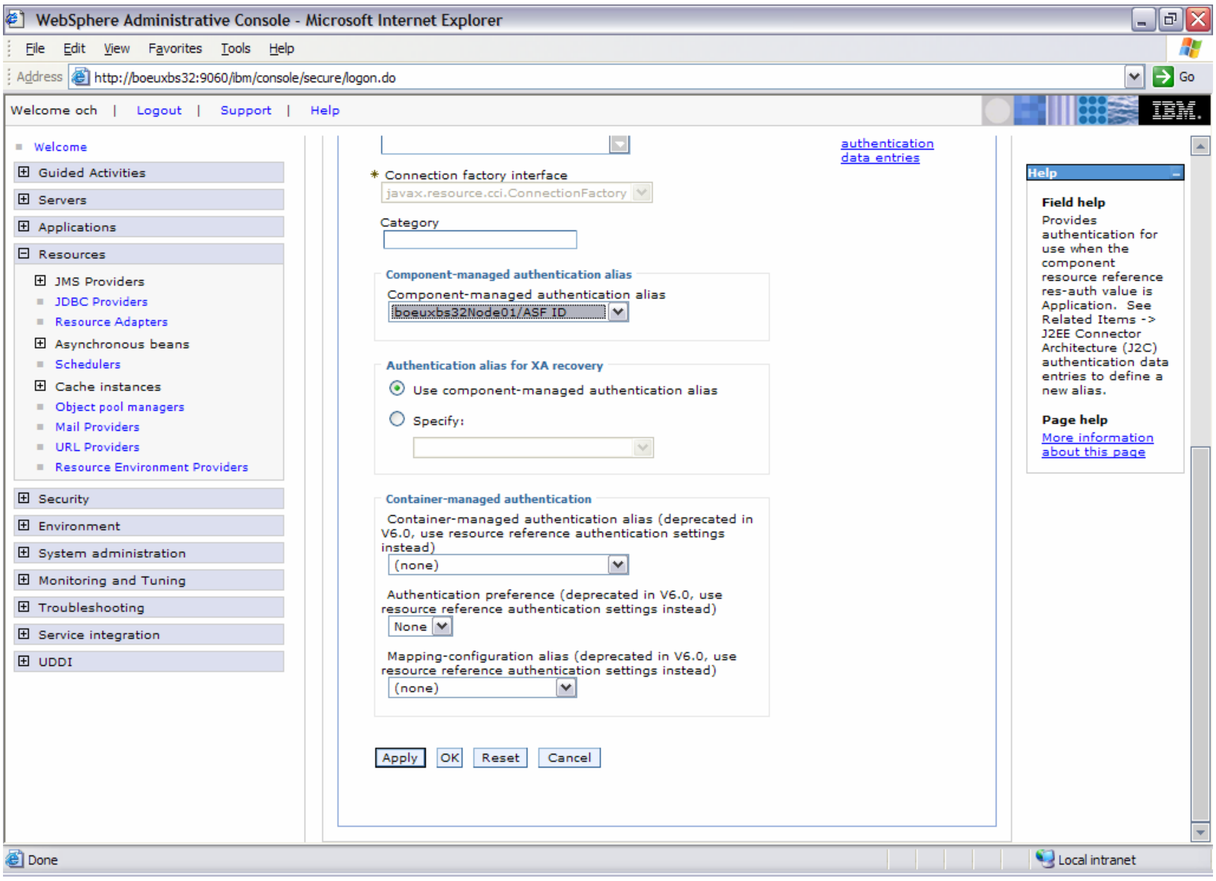
Field help
Specifies an optional description for the authentication data entry. For example, this authentication data entry is used to connect to DB2.

Page help
More information about this page

Click OK to save your modifications.

Open [Resource Adapters](#) > [IMS Connector for Java](#) > [J2C connection factories](#) > [ASF34IMS9ConnectionFactory](#)

Select the created JASS-J2C authentication data in the field Component-managed authentication alias.



* Connection factory interface: javax.resource.cci.ConnectionFactory

Category:

Component-managed authentication alias

Component-managed authentication alias: boeuxbs32Node01/ASF ID

Authentication alias for XA recovery

● Use component-managed authentication alias

○ Specify:

Container-managed authentication

Container-managed authentication alias (deprecated in V6.0, use resource reference authentication settings instead): (none)

Authentication preference (deprecated in V6.0, use resource reference authentication settings instead): None

Mapping-configuration alias (deprecated in V6.0, use resource reference authentication settings instead): (none)

Help

Field help

Provides authentication for use when the component resource reference res-auth value is Application. See Related Items -> J2EE Connector Architecture (J2C) authentication data entries to define a new alias.

Page help

More information about this page

Click [Apply](#) to save your modifications and restart the WebSphere Application Server.

Configuring the connections

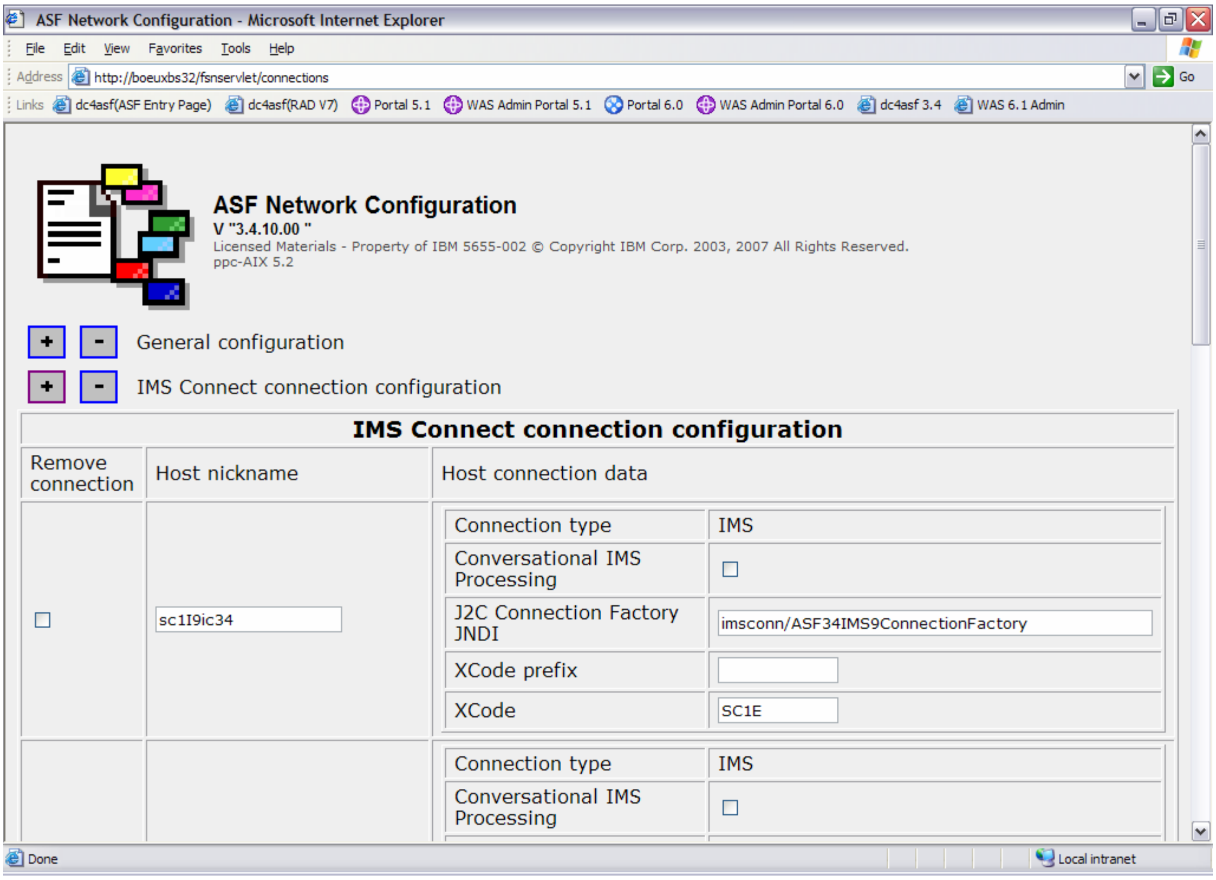
To define the server-host connections in DocNetworkConfiguration.xml,invoke the servlet application “connections“, using the Microsoft Internet Explorer.

Add an IMS Connection type entry by specifying a host nickname, the J2C connection factory JNDI you created in Defining a J2C connection factory. Specify the IMS transaction code or the IMS transaction code prefix and select Conversational IMS Processing if your IMS system is running in conversational mode.

Note:

- If you specify an IMS transaction code prefix xxx, the transaction code of the preview requests is set to xxxV, the transaction code for quick preview requests is set to xxxQ, and the transaction code for all other requests is set to xxxE.

- If you specify an IMS transaction code, this transaction code is used for all requests.


ASF Network Configuration - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address
Go
Links dc4asf(ASF Entry Page) dc4asf(RAD V7) Portal 5.1 WAS Admin Portal 5.1 Portal 6.0 WAS Admin Portal 6.0 dc4asf 3.4 WAS 6.1 Admin
Done
Local intranet

http://boeuxbs32/fsnservlet/connections

ASF Network Configuration
V "3.4.10.00 "
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ppc-AIX 5.2

+ - General configuration

+ - IMS Connect connection configuration

IMS Connect connection configuration

Remove connection	Host nickname	Host connection data	
□	sc1I9ic34	Connection type	IMS
		Conversational IMS Processing	□
		J2C Connection Factory JNDI	imsconn/ASF34IMS9ConnectionFactory
		XCode prefix	
		XCode	SC1E
		Connection type	IMS
		Conversational IMS Processing	□

Click OK to save your changes.

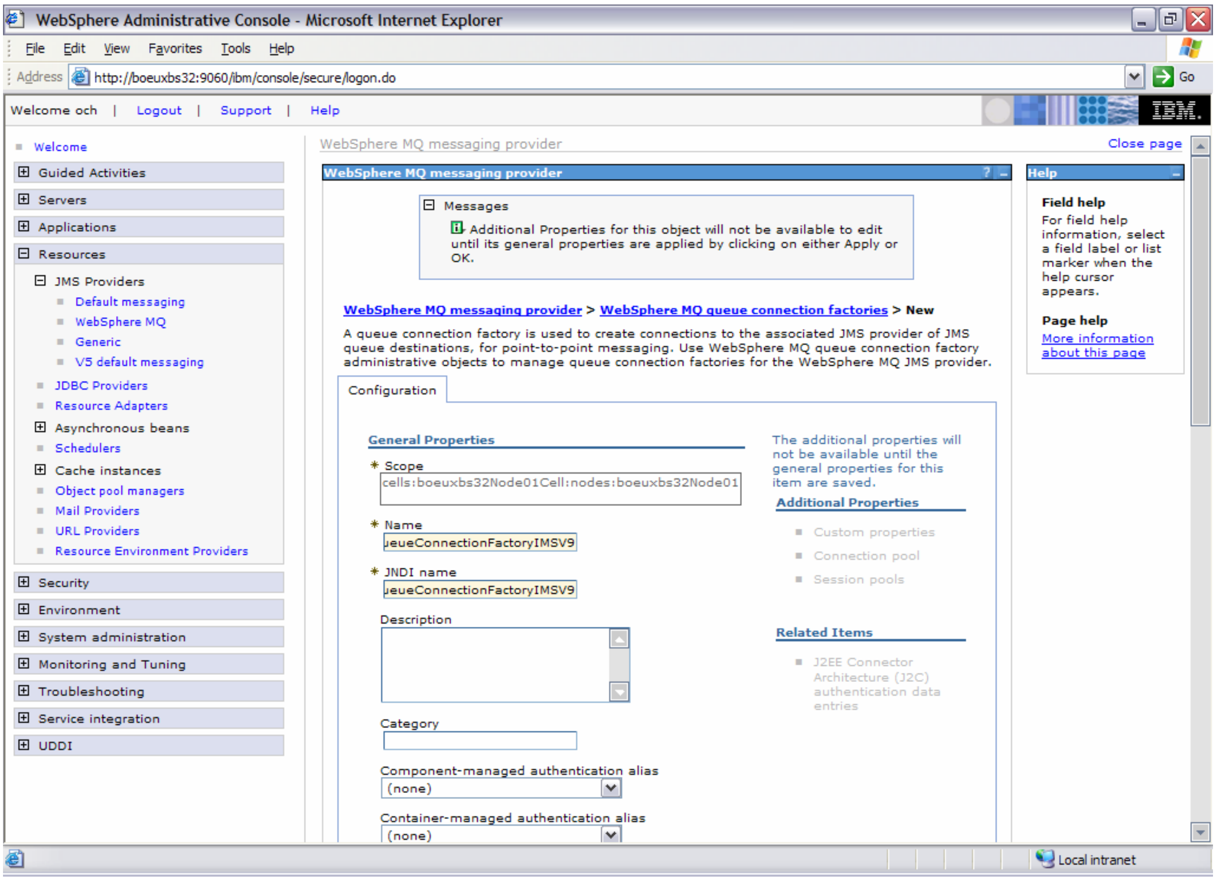
Stop and Start your application in the WebSphere Administrative Console.

8 Setting up a connection to IMS via WebSphere MQ

Defining a queue connection factory

Open Resources > WebSphere MQ > WebSphere MQ queue connection factories > New

Enter the name, for example, “MQQueueConnectionFactoryIMSV9” and the JNDI name for the queue connection factory, for example, mq/MQQueueConnectionFactoryIMSV9.



Address: http://boeuxbs32:9060/ibm/console/secure/logon.do

WebSphere MQ messaging provider

Messages

Additional Properties for this object will not be available to edit until its general properties are applied by clicking on either Apply or OK.

WebSphere MQ messaging provider > WebSphere MQ queue connection factories > **New**

A queue connection factory is used to create connections to the associated JMS provider of JMS queue destinations, for point-to-point messaging. Use WebSphere MQ queue connection factory administrative objects to manage queue connection factories for the WebSphere MQ JMS provider.

General Properties

* Scope: cells:boeuxbs32Node01Cell:nodes:boeuxbs32Node01

* Name: ueueConnectionFactoryIMSV9

* JNDI name: ueueConnectionFactoryIMSV9

Description:

Category:

Component-managed authentication alias: (none)

Container-managed authentication alias: (none)

The additional properties will not be available until the general properties for this item are saved.

Additional Properties

- Custom properties
- Connection pool
- Session pools

Related Items

- J2EE Connector Architecture (J2C) authentication data entries

Field help

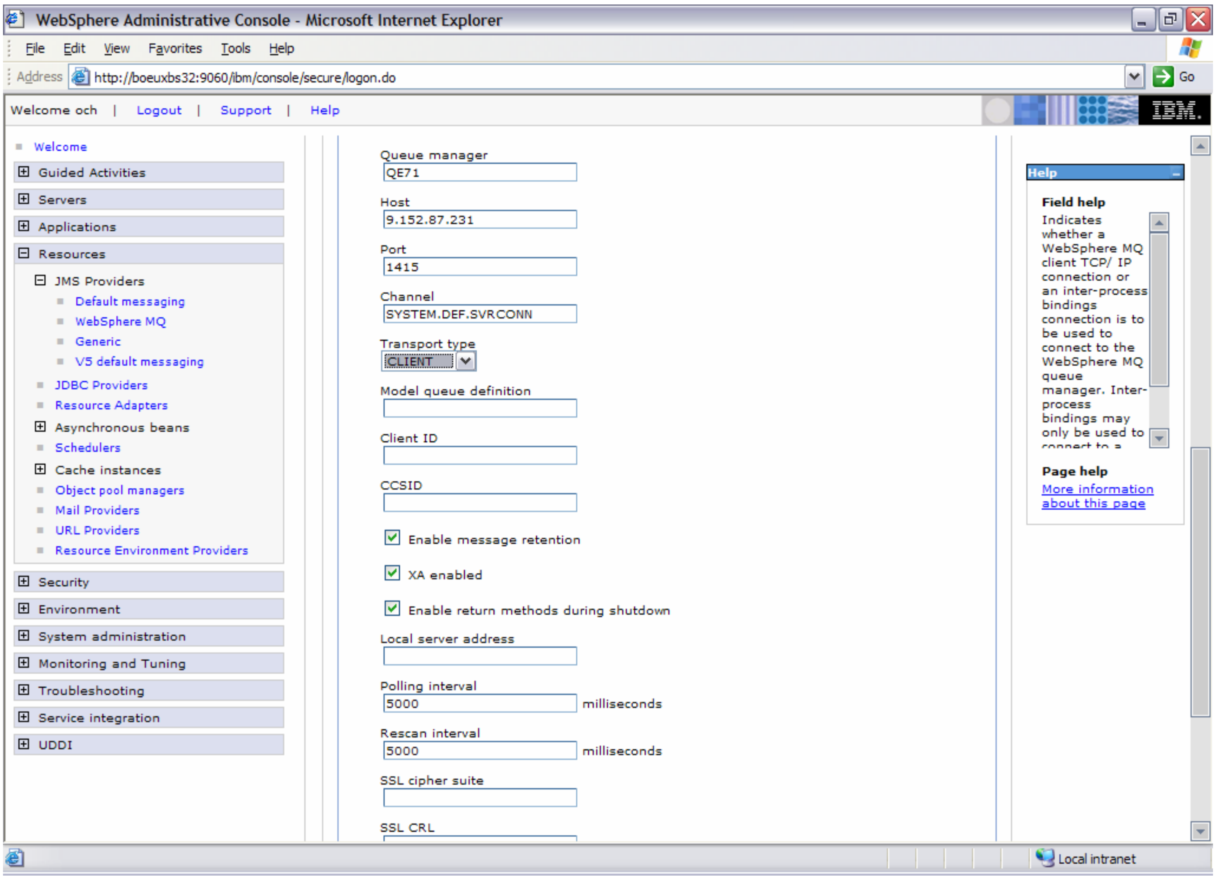
For field help information, select a field label or list marker when the help cursor appears.

Page help

More information about this page

Define the MQ specific properties for the queue connection factory:

1. Queue Manager is the target MQ queue manager name, for example, QE71
2. Host is the TCP/IP address of the target MQ, for example, 9.152.87.231
3. Port is the target TCP/IP port number of MQ, for example, 1415
4. Channel is the server-connection channel name of the target MQ, for example, SYSTEM.DEF.SVRCONN
5. Transport type must be set to CLIENT



Queue manager: QE71

Host: 9.152.87.231

Port: 1415

Channel: SYSTEM.DEF.SVRCONN

Transport type: CLIENT

Model queue definition:

Client ID:

CCSID:

☑ Enable message retention

☑ XA enabled

☑ Enable return methods during shutdown

Local server address:

Polling interval: 5000 milliseconds

Rescan interval: 5000 milliseconds

SSL cipher suite:

SSL CRL

Field help

Indicates whether a WebSphere MQ client TCP/ IP connection or an inter-process bindings connection is to be used to connect to the WebSphere MQ queue manager. Inter-process bindings may only be used to connect to a

Page help

More information about this page

Click Apply and save your modifications.

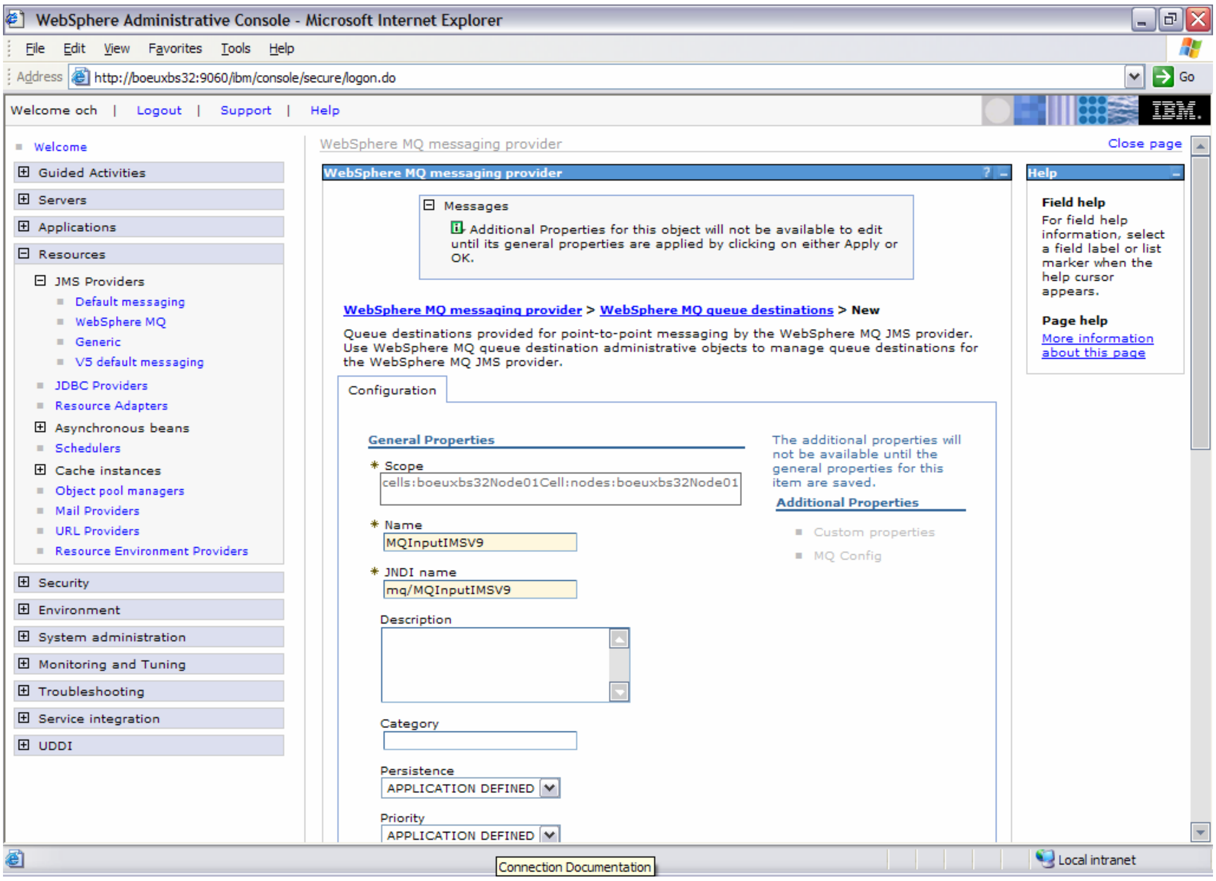
Note:

Ensure that the WebSphere variable MQ_INSTALL_ROOT is set to the value ${WAS_INSTALL_ROOT}/lib/WMQ

Defining an input and an output queue

Open Resources > WebSphere MQ > WebSphere MQ queue destinations > New

Enter the name, for example, “MQInputIMSV9” and the JNDI name for the input queue, for example, mq/MQInputIMSV9.



Messages

Additional Properties for this object will not be available to edit until its general properties are applied by clicking on either Apply or OK.

WebSphere MQ messaging provider > WebSphere MQ queue destinations > New

Queue destinations provided for point-to-point messaging by the WebSphere MQ JMS provider. Use WebSphere MQ queue destination administrative objects to manage queue destinations for the WebSphere MQ JMS provider.

Configuration

General Properties

* Scope: cells:boeuxbs32Node01Cell:nodes:boeuxbs32Node01

* Name: MQInputIMSV9

* JNDI name: mq/MQInputIMSV9

Description:

Category:

Persistence: APPLICATION DEFINED

Priority: APPLICATION DEFINED

The additional properties will not be available until the general properties for this item are saved.

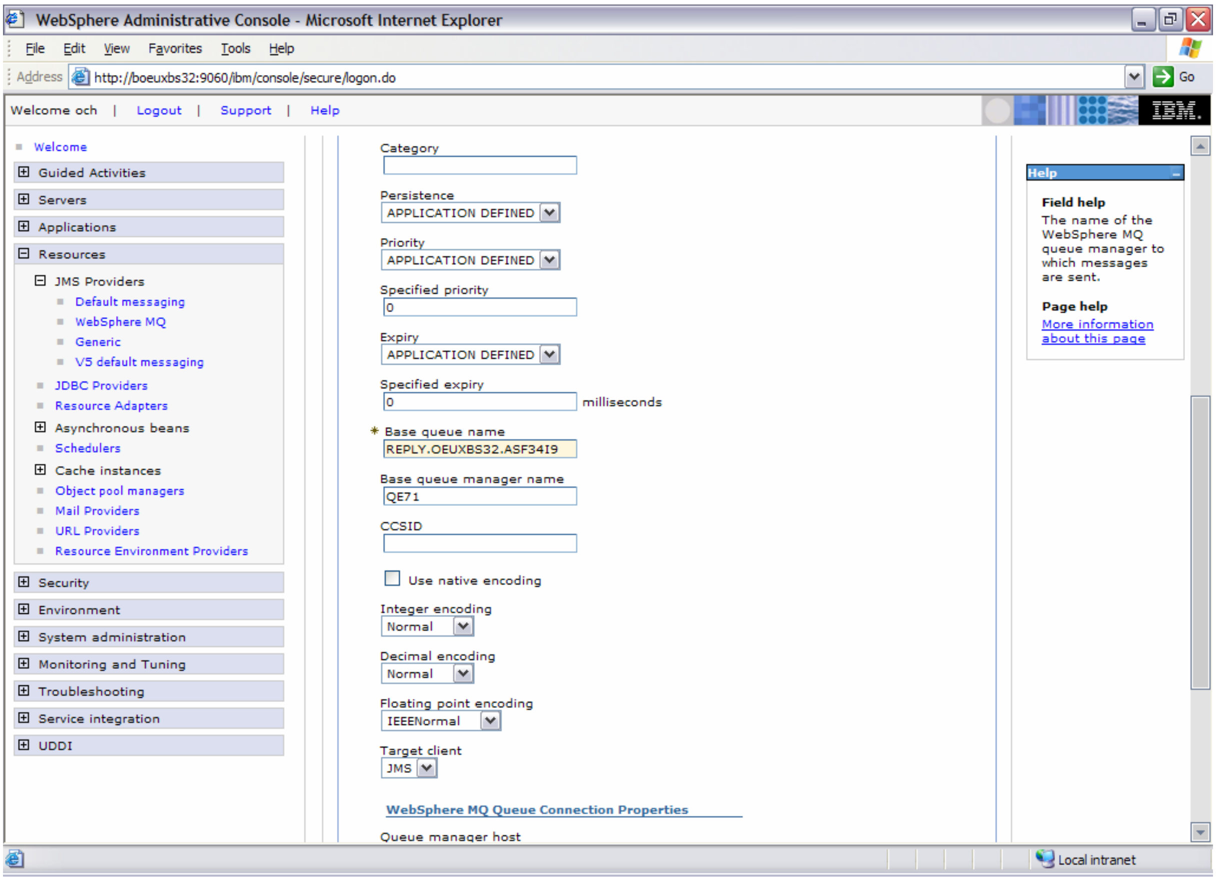
Additional Properties
- Custom properties
- MQ Config

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

Page help
More information about this page

Define the MQ specific properties for the input queue:

1. Base queue name is the queue name of the target reply queue, for example, REPLY.OEUXBS32.ASF34I9.
2. Base queue manager name is the target queue manager, for example, QE71
3. Target client must be set to JMS.



Category

Persistence
APPLICATION DEFINED

Priority
APPLICATION DEFINED

Specified priority
0

Expiry
APPLICATION DEFINED

Specified expiry
0 milliseconds

* Base queue name
REPLY.OEUXBS32.ASF34I9

Base queue manager name
QE71

CCSID

□ Use native encoding

Integer encoding
Normal

Decimal encoding
Normal

Floating point encoding
IEEENormal

Target client
JMS

WebSphere MQ Queue Connection Properties

Queue manager host

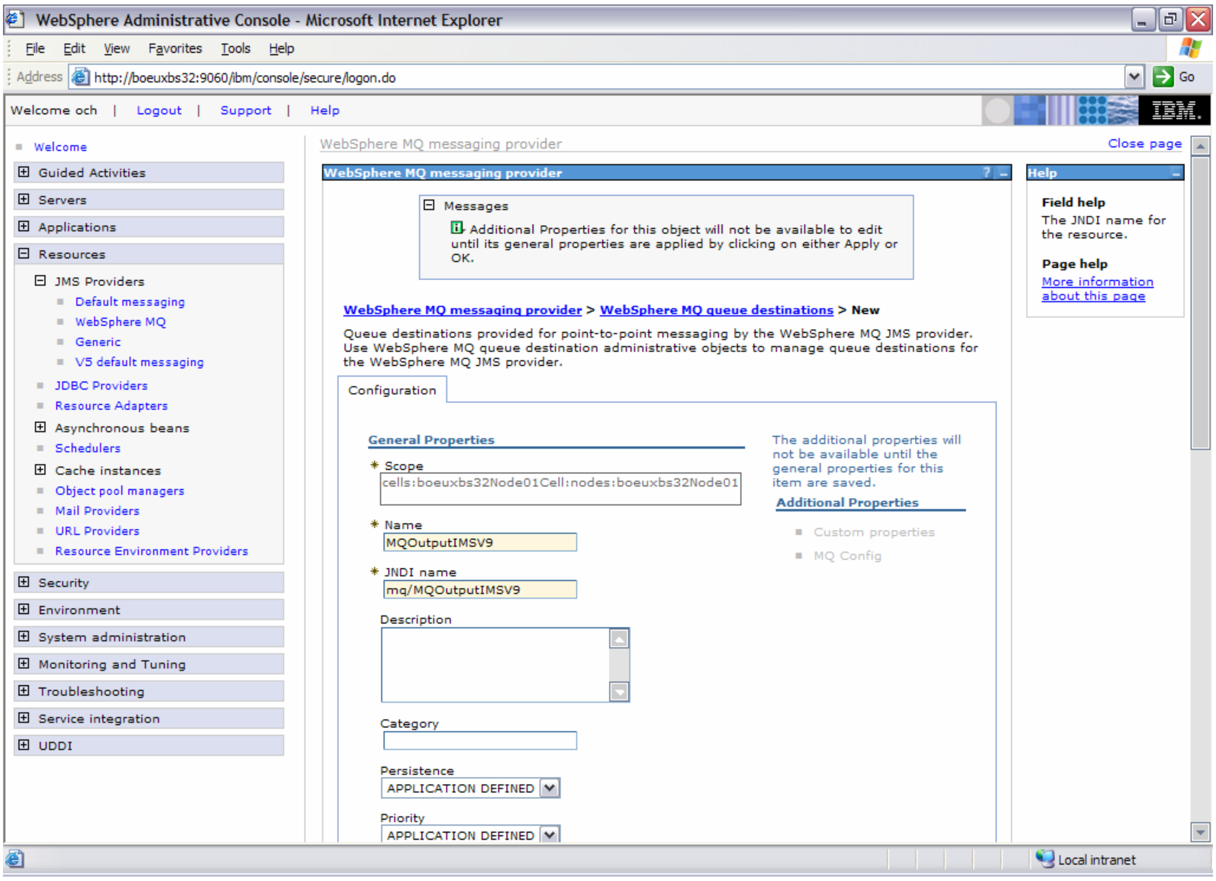
Field help
The name of the WebSphere MQ queue manager to which messages are sent.

Page help
More information about this page

Click Apply and save your modifications.

Open Resources > WebSphere MQ > WebSphere MQ queue destinations > New

Enter the name for example, “MQOutputIMSV9” and the JNDI name for the output queue, for example, mq/MQOutputIMSV9.



WebSphere MQ messaging provider

Messages

Additional Properties for this object will not be available to edit until its general properties are applied by clicking on either Apply or OK.

WebSphere MQ messaging provider > WebSphere MQ queue destinations > New

Queue destinations provided for point-to-point messaging by the WebSphere MQ JMS provider. Use WebSphere MQ queue destination administrative objects to manage queue destinations for the WebSphere MQ JMS provider.

Configuration

General Properties

* Scope: cells:boeuxbs32Node01Cell:nodes:boeuxbs32Node01

* Name: MQOutputIMSV9

* JNDI name: mq/MQOutputIMSV9

Description:

Category:

Persistence: APPLICATION DEFINED

Priority: APPLICATION DEFINED

The additional properties will not be available until the general properties for this item are saved.

Additional Properties

- Custom properties
- MQ Config

Field help

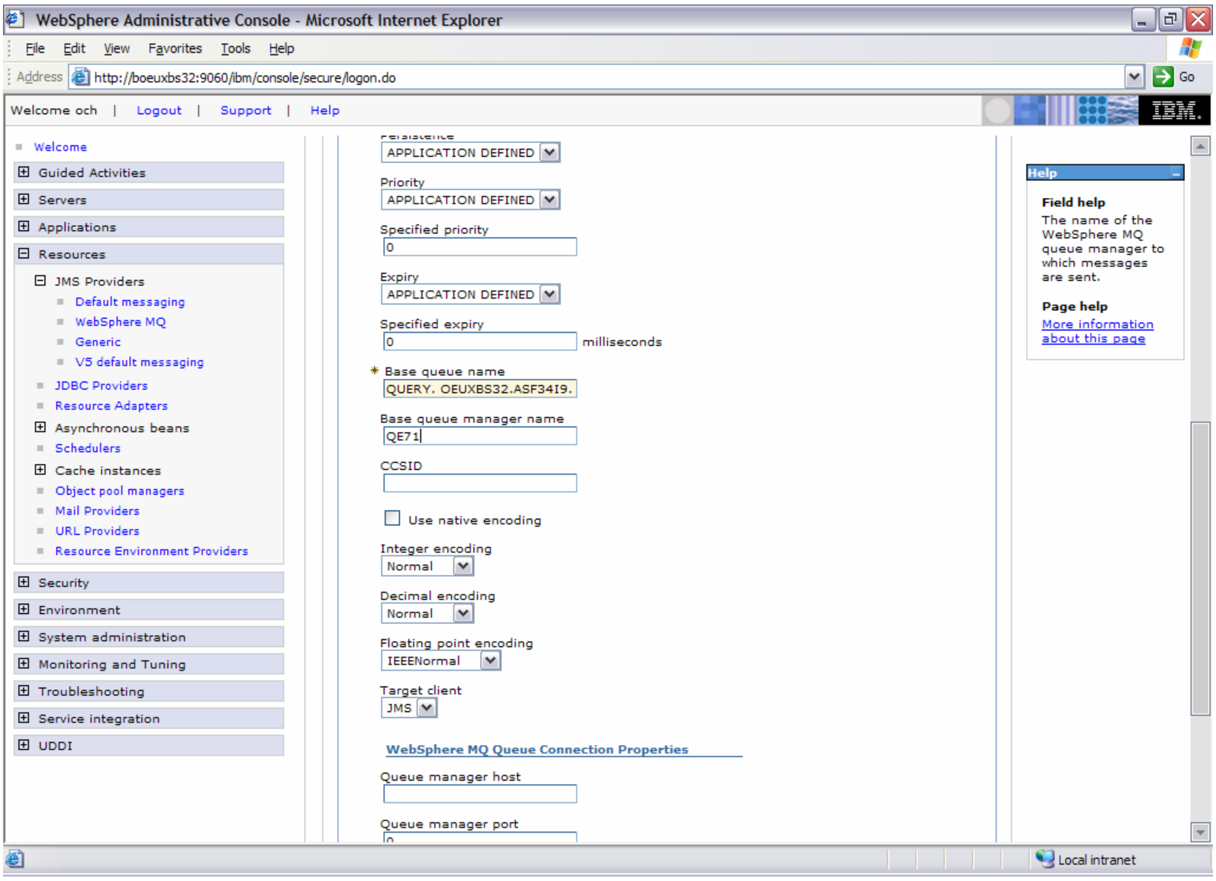
The JNDI name for the resource.

Page help

More information about this page

Define the MQ specific properties for the output queue:

1. Base queue name is the queue name of the target query queue, for example, QUERY.OEUXBS32.ASF34I9.
2. Base queue manager name is the target queue manager, for example, QE71
3. Target client must be set to JMS.



Persistence
APPLICATION DEFINED

Priority
APPLICATION DEFINED

Specified priority
0

Expiry
APPLICATION DEFINED

Specified expiry
0 milliseconds

* Base queue name
QUERY. OEUXBS32.ASF34I9.

Base queue manager name
QE71

CCSID

□ Use native encoding

Integer encoding
Normal

Decimal encoding
Normal

Floating point encoding
IEEENormal

Target client
JMS

WebSphere MQ Queue Connection Properties

Queue manager host

Queue manager port
0

Help

Field help
The name of the WebSphere MQ queue manager to which messages are sent.

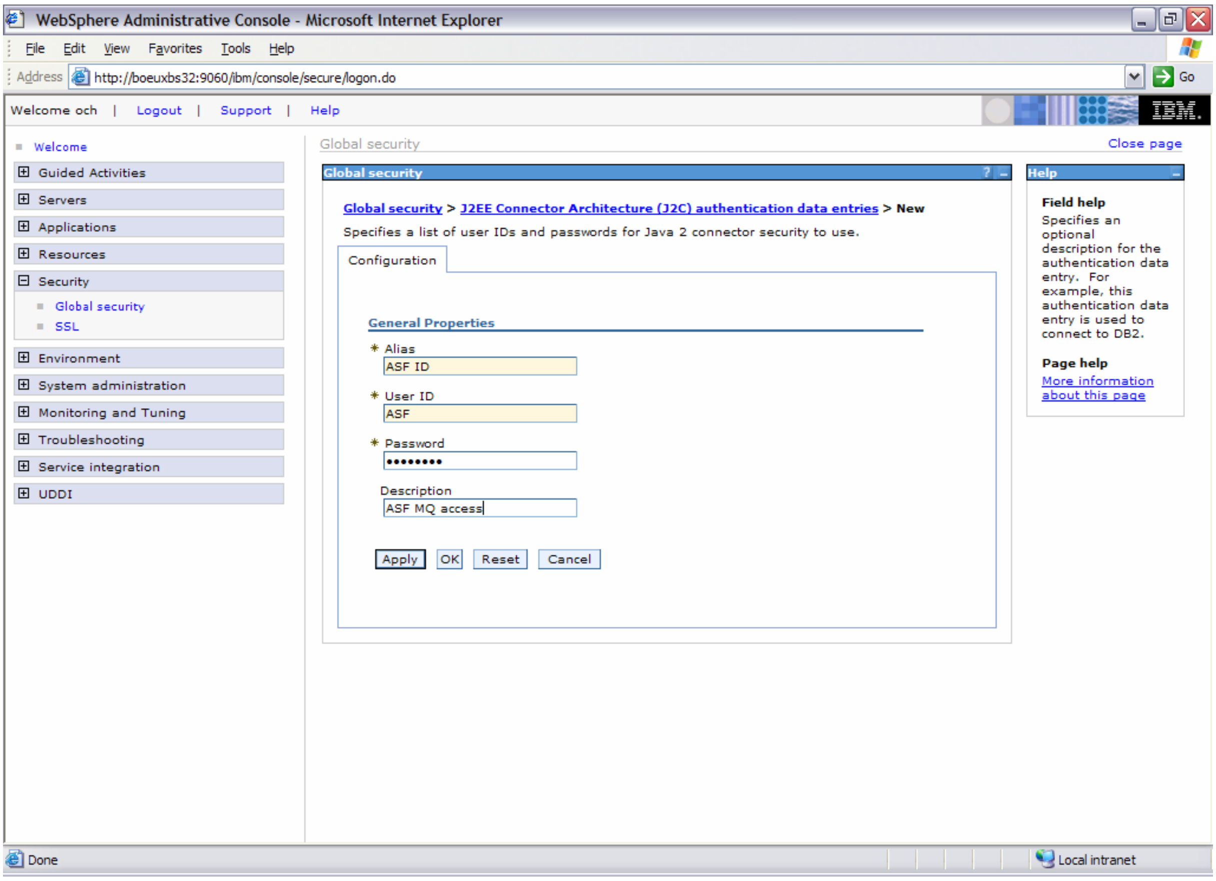
Page help
More information about this page

Click Apply and save your modifications.

Defining JAAS – J2C authentication data

Open Security > Global Security > J2EE Connector architecture (J2C) authentication data entries > New

Enter an alias and a valid user ID and password for the MQ connection.



WebSphere Administrative Console - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://boeuxbs32:9060/ibm/console/secure/logon.do
Go
Welcome och | Logout | Support | Help
IBM.
Welcome
Guided Activities
Servers
Applications
Resources
Security
Global security
SSL
Environment
System administration
Monitoring and Tuning
Troubleshooting
Service integration
UDDI
Global security
Close page
Help
Field help
Specifies an optional description for the authentication data entry. For example, this authentication data entry is used to connect to DB2.
Page help
More information about this page
Done
Local intranet

Global security > J2EE Connector Architecture (J2C) authentication data entries > New

Specifies a list of user IDs and passwords for Java 2 connector security to use.

Configuration

General Properties

* Alias: ASF ID

* User ID: ASF

* Password: ••••••••

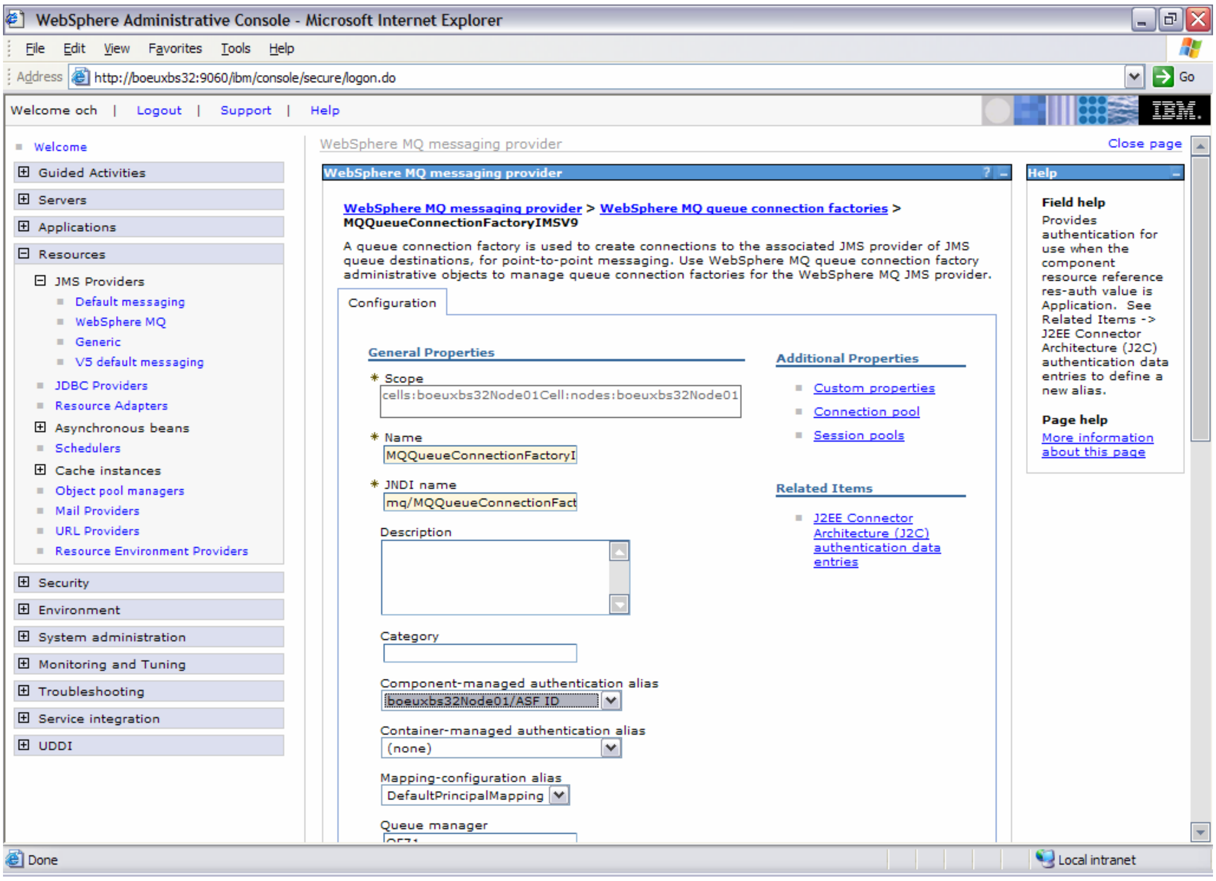
Description: ASF MQ access

Apply | OK | Reset | Cancel

Select OK and save your modifications.

Open Resources > WebSphere MQ > WebSphere MQ queue connection factories > MQQueueConnectionFactoryIMSV9

Select the created JASS-J2C authentication data in the field Component-managed authentication alias.



WebSphere MQ messaging provider

WebSphere MQ messaging provider > WebSphere MQ queue connection factories > MQQueueConnectionFactoryIMSV9

A queue connection factory is used to create connections to the associated JMS provider of JMS queue destinations, for point-to-point messaging. Use WebSphere MQ queue connection factory administrative objects to manage queue connection factories for the WebSphere MQ JMS provider.

Configuration

General Properties

* Scope: cells:boeuxbs32Node01Cell:nodes:boeuxbs32Node01

* Name: MQQueueConnectionFactoryI

* JNDI name: mq/MQQueueConnectionFact

Description:

Category:

Component-managed authentication alias: boeuxbs32Node01/ASF ID

Container-managed authentication alias: (none)

Mapping-configuration alias: DefaultPrincipalMapping

Queue manager: QE71

Additional Properties

- Custom properties
- Connection pool
- Session pools

Related Items

- J2EE Connector Architecture (J2C) authentication data entries

Help

Field help

Provides authentication for use when the component resource reference res-auth value is Application. See Related Items -> J2EE Connector Architecture (J2C) authentication data entries to define a new alias.

Page help

More information about this page

Click Apply, save your modifications, and restart the WebSphere Application Server.

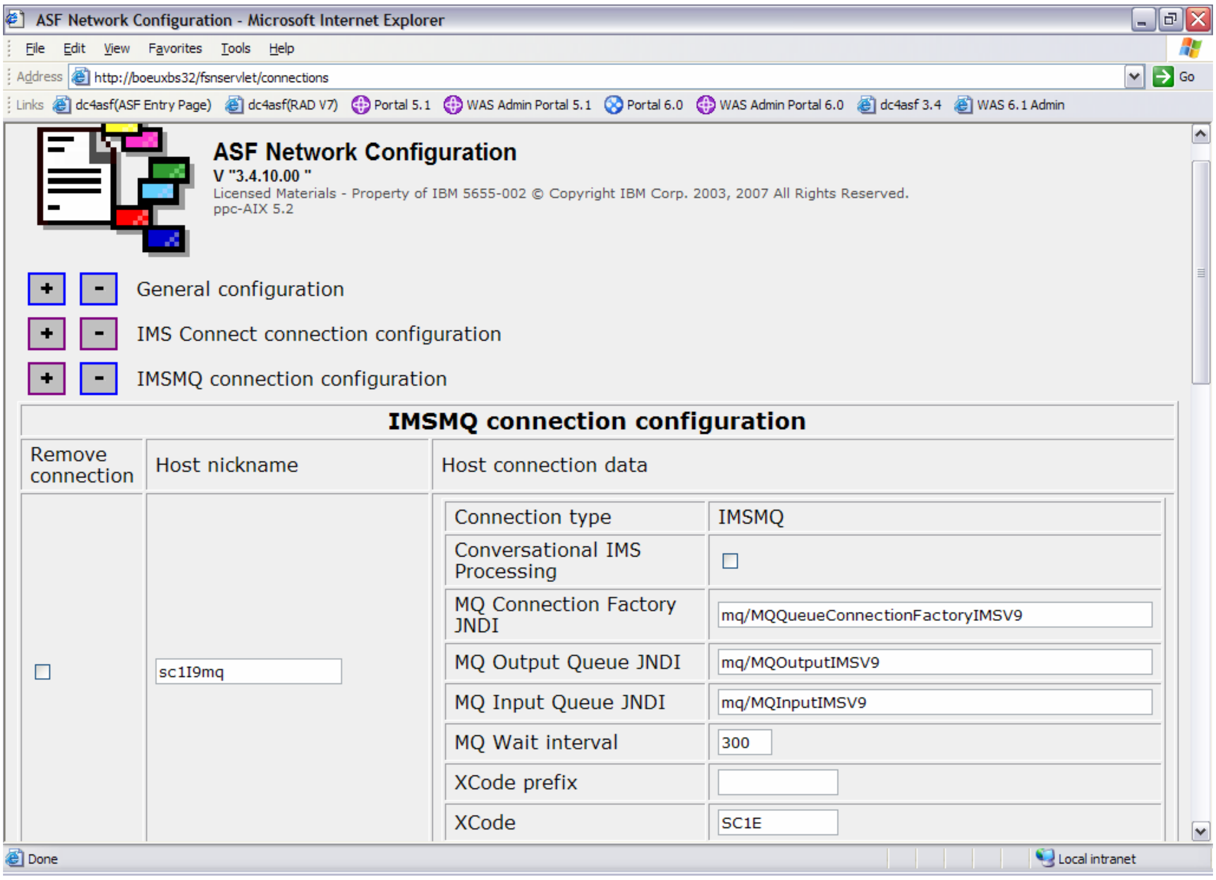
Configuring the connections

To define the server-host connections in DocNetworkConfiguration.xml, invoke the servlet application “connections“, using the Microsoft Internet Explorer.

Add an IMSMQ connection type entry by specifying a host nickname, the MQ connection factory JNDI you created in Defining a queue connection factory, the MQ input queue JNDI, and the MQ output queue JNDI you created in Defining an input and an output queue. Specify the IMS transaction code or the IMS transaction code prefix, and select Conversational IMS processing if your IMS system is running in conversational mode.

Note:

- If you specify an IMS transaction code prefix xxx, the transaction code for preview requests is set to xxxV, the transaction code for quick preview requests is set to xxxQ, and the transaction code for all other requests is set to xxxE.
- If you specify an IMS transaction code, this transaction code is used for all requests.


ASF Network Configuration - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://boeuxbs32/fsnservlet/connections
Go
Links dc4asf(ASF Entry Page) dc4asf(RAD V7) Portal 5.1 WAS Admin Portal 5.1 Portal 6.0 WAS Admin Portal 6.0 dc4asf 3.4 WAS 6.1 Admin
Done
Local intranet

ASF Network Configuration
V "3.4.10.00 "
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ppc-AIX 5.2

+ - General configuration

+ - IMS Connect connection configuration

+ - IMSMQ connection configuration

IMSMQ connection configuration

Remove connection	Host nickname	Host connection data	
□	sc1I9mq	Connection type	IMSMQ
		Conversational IMS Processing	□
		MQ Connection Factory JNDI	mq/MQQueueConnectionFactoryIMSV9
		MQ Output Queue JNDI	mq/MQOutputIMSV9
		MQ Input Queue JNDI	mq/MQInputIMSV9
		MQ Wait interval	300
		XCode prefix	
		XCode	SC1E

Click OK to save your changes.

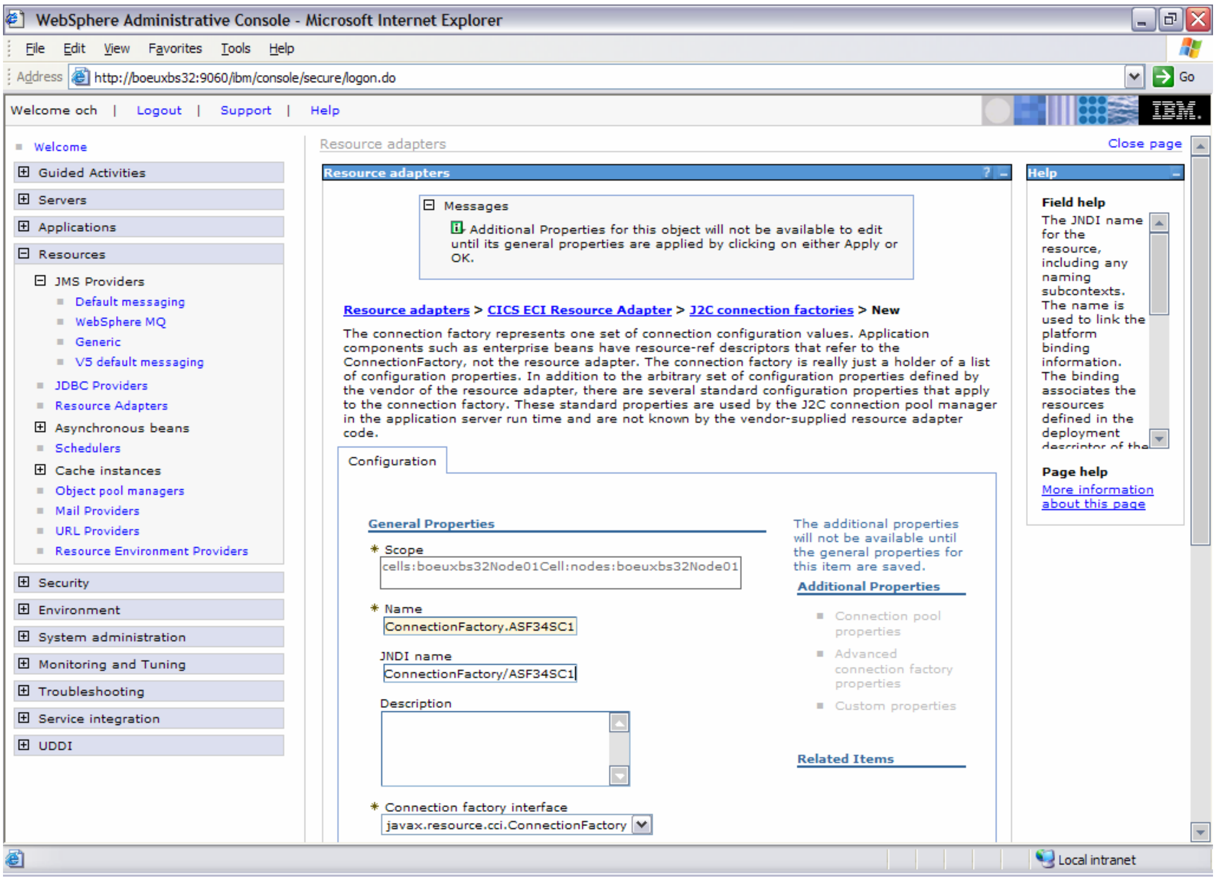
Stop and Start your application in the WebSphere Administrative Console.

9 Setting up a connection to CICS via the CICS Transaction Gateway

Defining a J2C connection factory

Open Resources > Resource Adapters > CICS ECI Resource Adapter > J2C connection factories > New

Enter the name, for example, "ASFConnectionFactory.ASF34SC1" and the JNDI name for the J2C connection factory, for example, eci/ASFConnectionFactory/ASF34SC1.



Messages

Additional Properties for this object will not be available to edit until its general properties are applied by clicking on either Apply or OK.

Resource adapters > CICS ECI Resource Adapter > J2C connection factories > New

The connection factory represents one set of connection configuration values. Application components such as enterprise beans have resource-ref descriptors that refer to the ConnectionFactory, not the resource adapter. The connection factory is really just a holder of a list of configuration properties. In addition to the arbitrary set of configuration properties defined by the vendor of the resource adapter, there are several standard configuration properties that apply to the connection factory. These standard properties are used by the J2C connection pool manager in the application server run time and are not known by the vendor-supplied resource adapter code.

Configuration

General Properties

* Scope
cells:boeuxbs32Node01Cell:nodes:boeuxbs32Node01

* Name
ConnectionFactory.ASF34SC1

JNDI name
ConnectionFactory/ASF34SC1

Description

* Connection factory interface
javax.resource.cci.ConnectionFactory

The additional properties will not be available until the general properties for this item are saved.

Additional Properties

- Connection pool properties
- Advanced connection factory properties
- Custom properties

Related Items

Field help

The JNDI name for the resource, including any naming subcontexts. The name is used to link the platform binding information. The binding associates the resources defined in the deployment descriptor of the

Page help

More information about this page

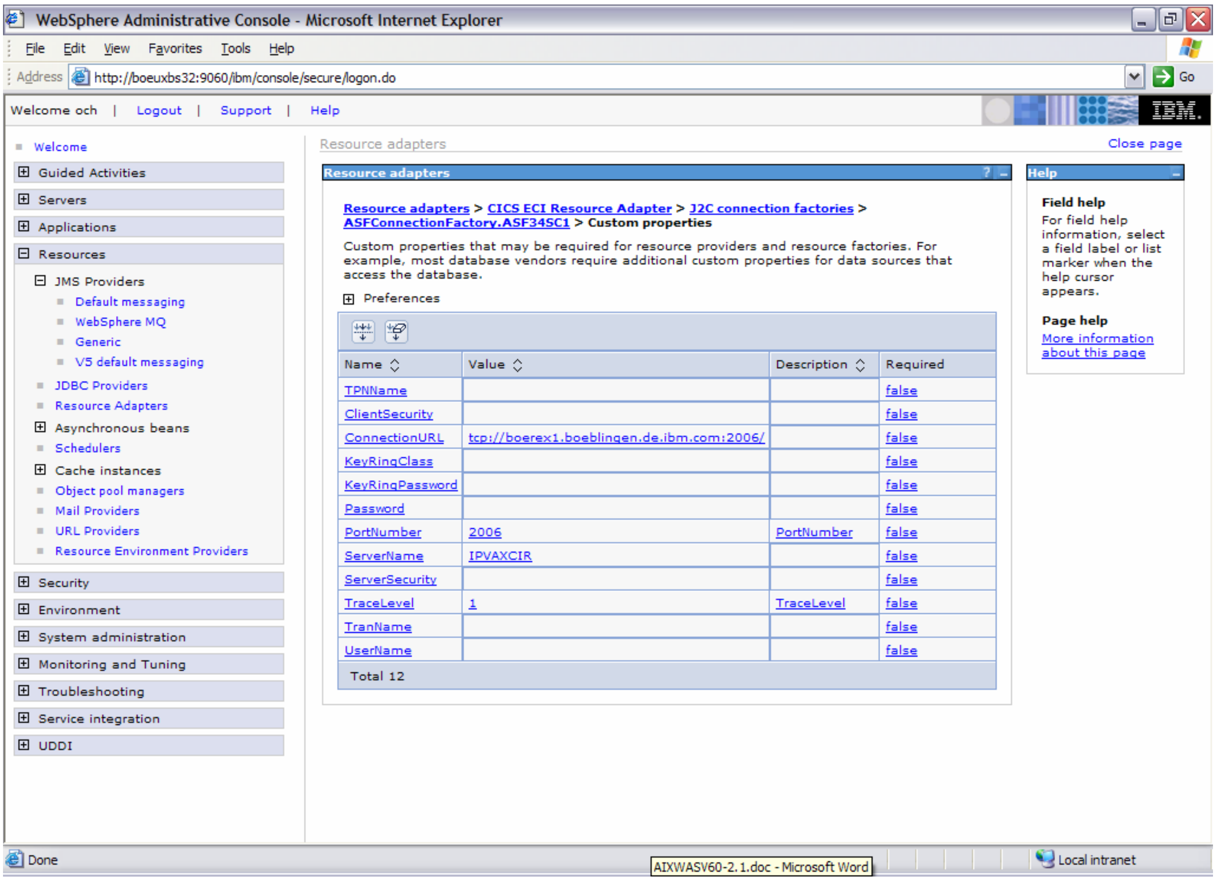
Click Apply and save your modifications.

Open Resources > Resource Adapters > CICS ECI Resource Adapter > J2C connection factories > ASFConnectionFactory.ASF34SC1 > Custom Properties

where ASFConnectionFactory.ASF34SC1 is the name of the connection factory created in the previous step.

Define the CICS Transaction Gateway specific properties for the connection factory:

1. ConnectionURL is the target URL of the CICS Transaction Gateway, for example, tcp://boerex1.boeblingen.de.ibm.com:2006/
2. PortNumber is the target TCP/IP port number of the CICS Transaction Gateway, for example, 2006
3. ServerName is the name of the target CICS server, for example ,IPVAXCIR



Resource adapters > CICS ECI Resource Adapter > J2C connection factories > ASFConnectionFactory.ASF34SC1 > **Custom properties**

Custom properties that may be required for resource providers and resource factories. For example, most database vendors require additional custom properties for data sources that access the database.

Name	Value	Description	Required
TPNName			false
ClientSecurity			false
ConnectionURL	tcp://boerex1.boeblingen.de.ibm.com:2006/		false
KeyRingClass			false
KeyRingPassword			false
Password			false
PortNumber	2006	PortNumber	false
ServerName	IPVAXCIR		false
ServerSecurity			false
TraceLevel	1	TraceLevel	false
TranName			false
UserName			false
Total 12			

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

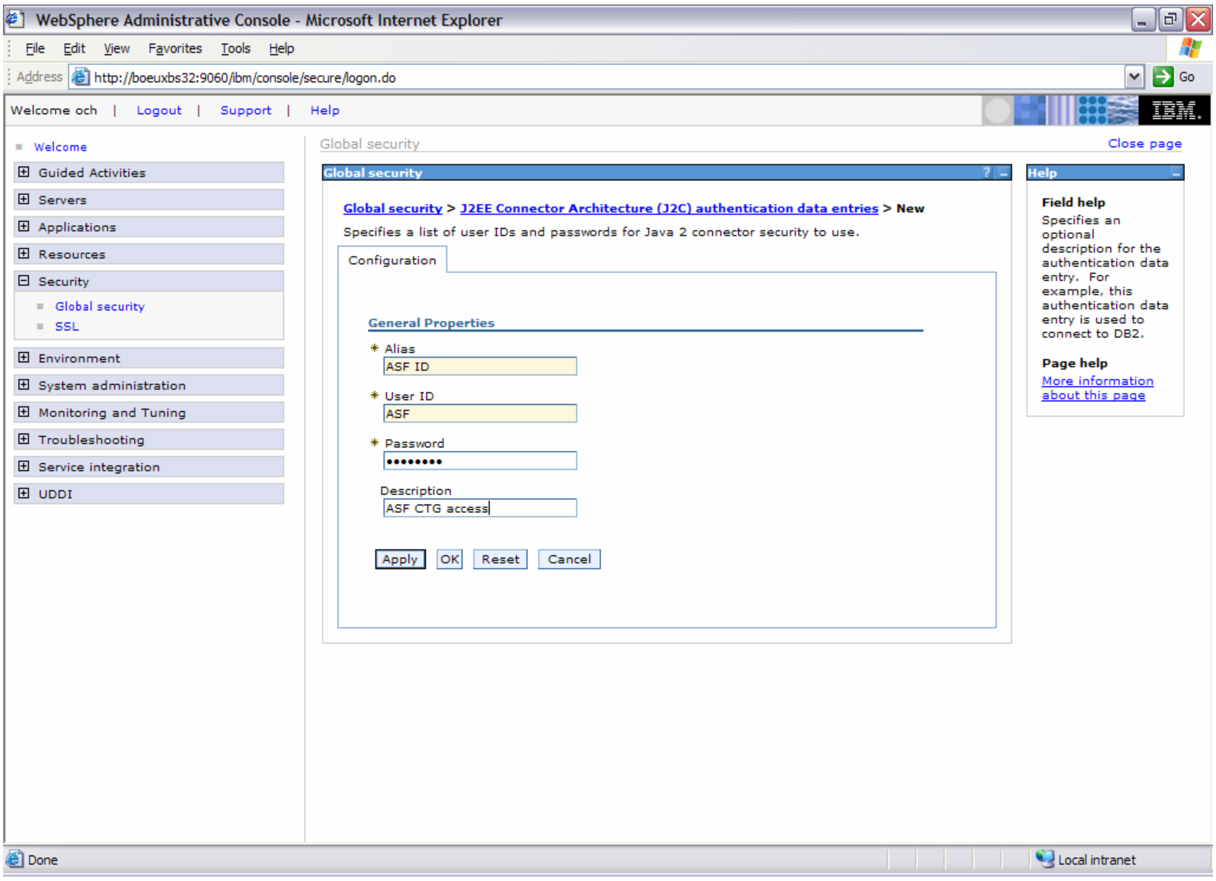
Page help
More information about this page

Click Apply and save your modifications.

Defining JAAS – J2C authentication data

Open Security > Global Security > J2EE Connector architecture (J2C) authentication data entries > New

Enter an alias and a valid user ID and password for the CICS Transaction Gateway connection.



Global security

Global security > J2EE Connector Architecture (J2C) authentication data entries > New

Specifies a list of user IDs and passwords for Java 2 connector security to use.

Configuration

General Properties

* Alias: ASF ID

* User ID: ASF

* Password: ••••••••

Description: ASF CTG access

Apply | OK | Reset | Cancel

Field help

Specifies an optional description for the authentication data entry. For example, this authentication data entry is used to connect to DB2.

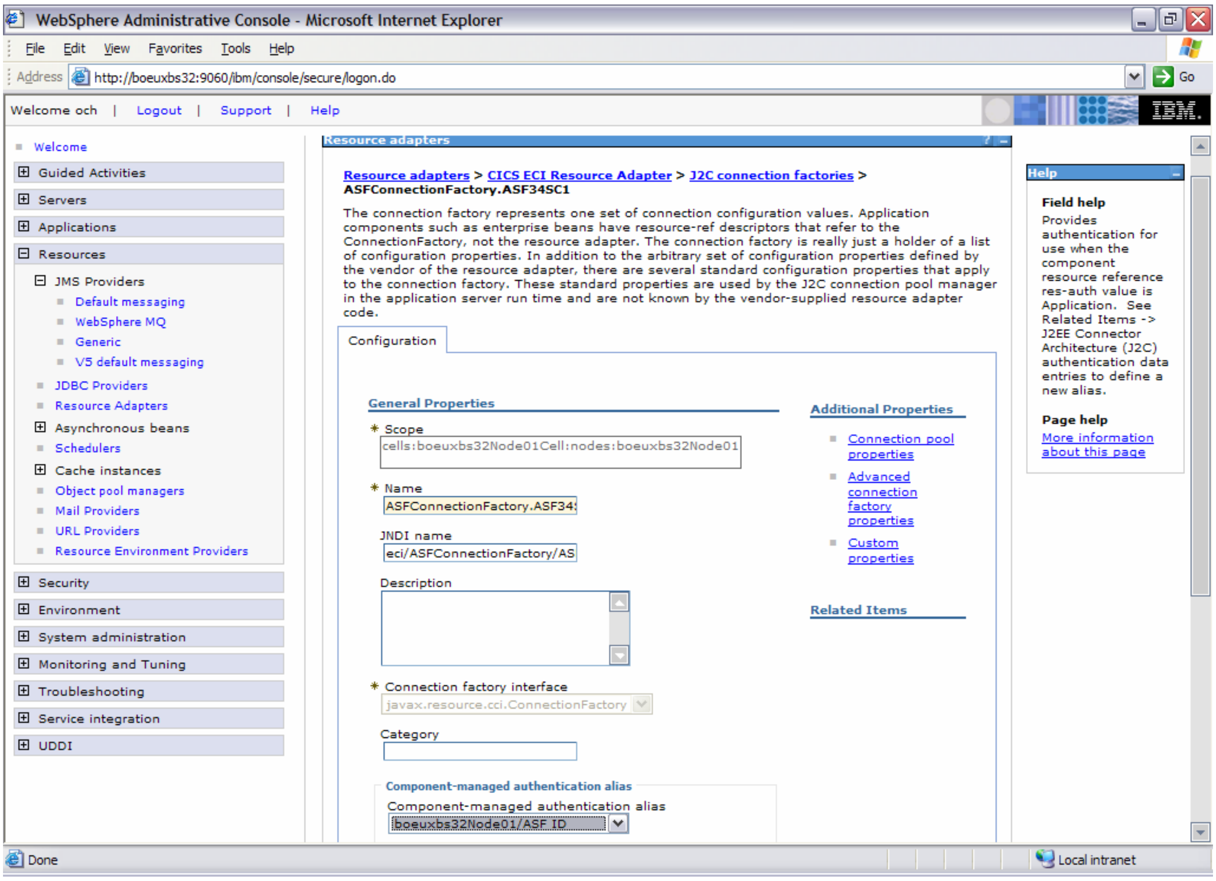
Page help

More information about this page

Click OK and save your modifications.

Open Resources > Resource Adapters > CICS ECI Resource Adapter > J2C connection factories > ASFConnectionFactory.ASF34SC1

Select the created JASS-J2C authentication data in the field Component-managed authentication alias.



Resource adapters > CICS ECI Resource Adapter > J2C connection factories >
ASFConnectionFactory.ASF34SC1

The connection factory represents one set of connection configuration values. Application components such as enterprise beans have resource-ref descriptors that refer to the ConnectionFactory, not the resource adapter. The connection factory is really just a holder of a list of configuration properties. In addition to the arbitrary set of configuration properties defined by the vendor of the resource adapter, there are several standard configuration properties that apply to the connection factory. These standard properties are used by the J2C connection pool manager in the application server run time and are not known by the vendor-supplied resource adapter code.

Configuration

General Properties

* Scope
cells:boeuxbs32Node01Cell:nodes:boeuxbs32Node01

* Name
ASFConnectionFactory.ASF34!

JNDI name
eci/ASFConnectionFactory/AS

Description

* Connection factory interface
javax.resource.cci.ConnectionFactory

Category

Component-managed authentication alias

Component-managed authentication alias
boeuxbs32Node01/ASF ID

Additional Properties
- Connection pool properties
- Advanced connection factory properties
- Custom properties

Related Items

Field help
Provides authentication for use when the component resource reference res-auth value is Application. See Related Items -> J2EE Connector Architecture (J2C) authentication data entries to define a new alias.

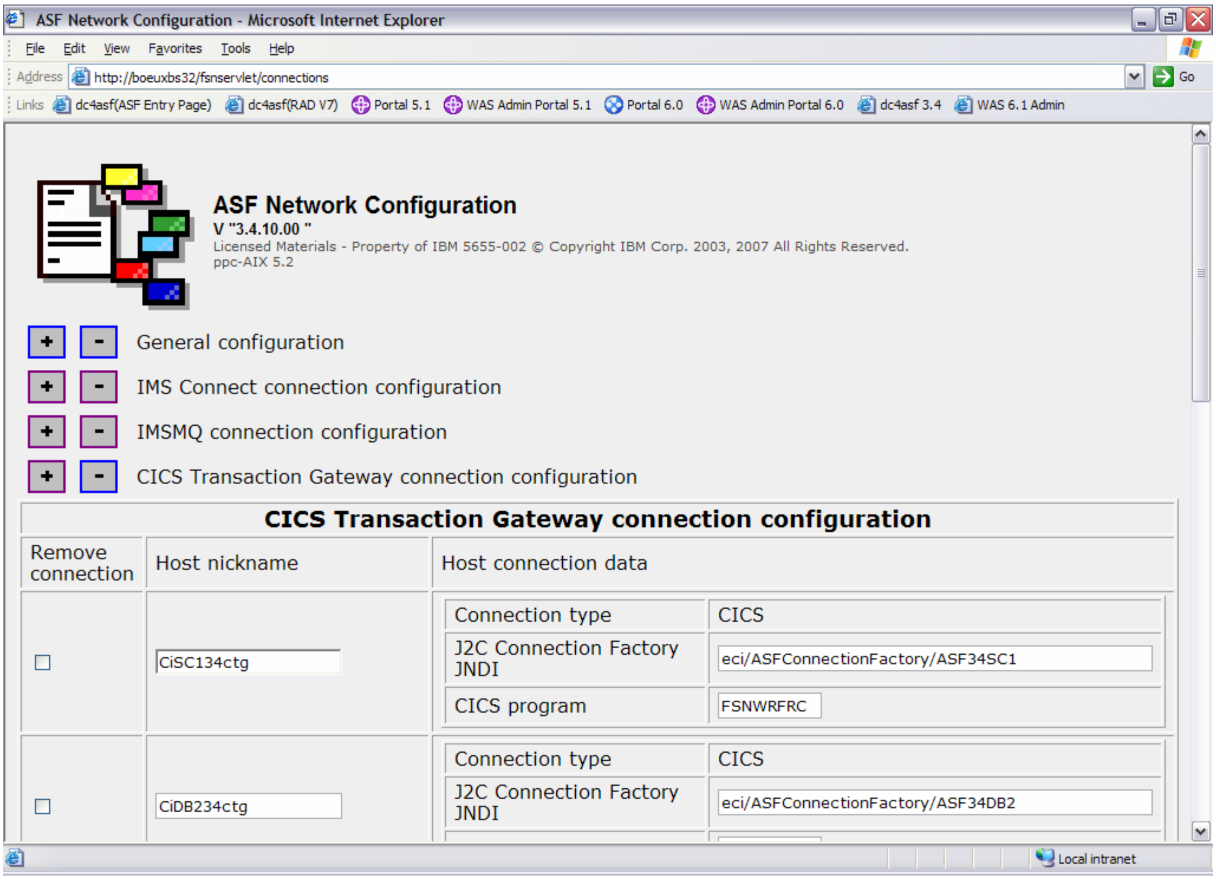
Page help
More information about this page

Click Apply, save your modifications, and restart the WebSphere Application Server.

Configuring the connections

To define the server-host connections in DocNetworkConfiguration.xml invoke the servlet application “connections“, using the Microsoft Internet Explorer.

Add a CICS Transaction Gateway Connection type entry by specifying a host nickname, the J2C connection factory JNDI you created in Defining a J2C connection factory. Specify the CICS program name FSNWRFRC.


ASF Network Configuration - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://boeuxbs32/fsnservlet/connections
Go
Links dc4asf(ASF Entry Page) dc4asf(RAD V7) Portal 5.1 WAS Admin Portal 5.1 Portal 6.0 WAS Admin Portal 6.0 dc4asf 3.4 WAS 6.1 Admin
Local intranet

ASF Network Configuration
V "3.4.10.00 "
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ppc-AIX 5.2

+ - General configuration

+ - IMS Connect connection configuration

+ - IMSMQ connection configuration

+ - CICS Transaction Gateway connection configuration

CICS Transaction Gateway connection configuration

Remove connection	Host nickname	Host connection data	
□	CiSC134ctg	Connection type	CICS
		J2C Connection Factory JNDI	eci/ASFConnectionFactory/ASF34SC1
		CICS program	FSNWRFRC
□	CiDB234ctg	Connection type	CICS
		J2C Connection Factory JNDI	eci/ASFConnectionFactory/ASF34DB2

Click OK to save your changes.

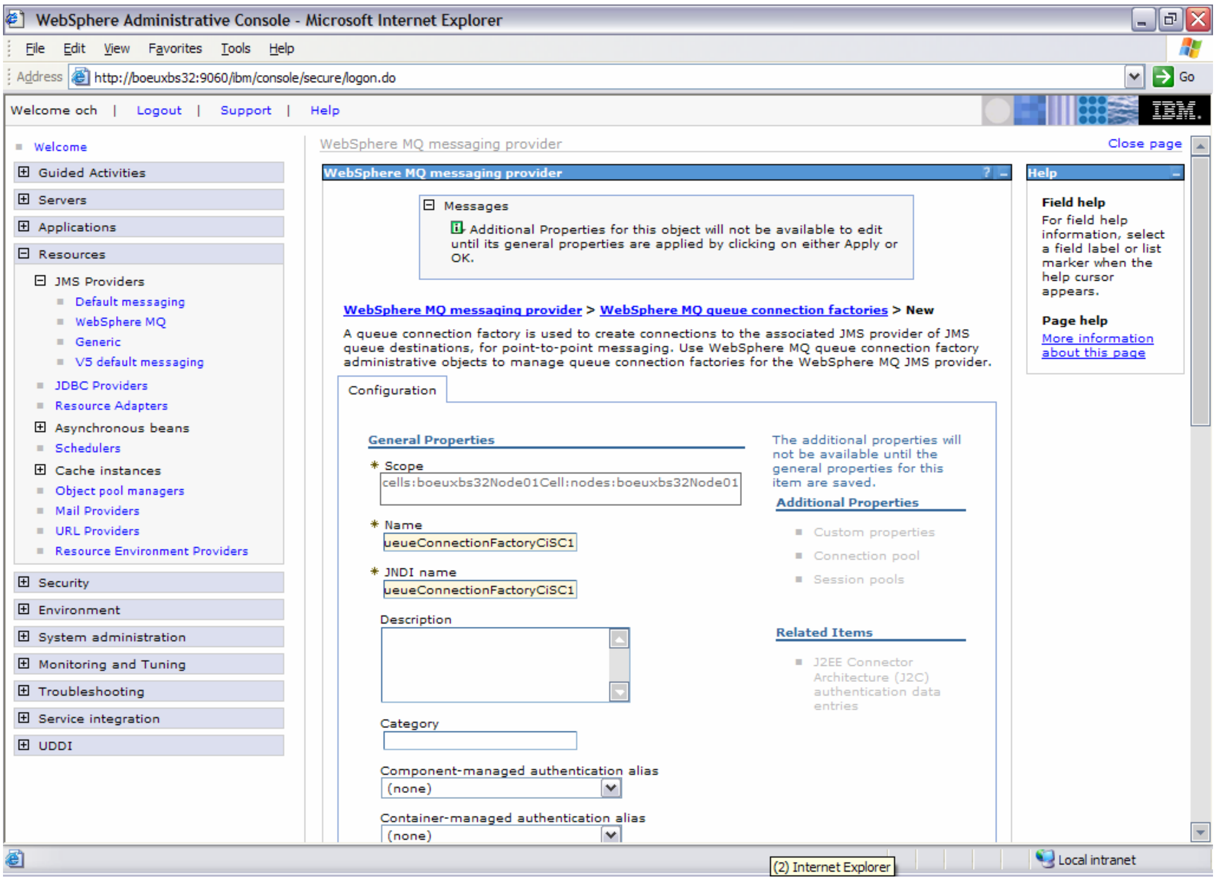
Stop and Start your application in the WebSphere Administrative Console.

10 Setting up a connection to CICS via WebSphere MQ

Defining a queue connection factory

Open Resources > WebSphere MQ > WebSphere MQ queue connection factories > New

Enter the name, for example, “MQQueueConnectionFactoryCiSC1” and the JNDI name for the queue connection factory, for example, mq/MQQueueConnectionFactoryCiSC1.



⊟ Messages

Additional Properties for this object will not be available to edit until its general properties are applied by clicking on either Apply or OK.

WebSphere MQ messaging provider > WebSphere MQ queue connection factories > New

A queue connection factory is used to create connections to the associated JMS provider of JMS queue destinations, for point-to-point messaging. Use WebSphere MQ queue connection factory administrative objects to manage queue connection factories for the WebSphere MQ JMS provider.

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

Page help
More information about this page

General Properties

* Scope
cells:boeuxbs32Node01Cell:nodes:boeuxbs32Node01

* Name
ueueConnectionFactoryCiSC1

* JNDI name
ueueConnectionFactoryCiSC1

Description

Category

Component-managed authentication alias
(none)

Container-managed authentication alias
(none)

The additional properties will not be available until the general properties for this item are saved.

Additional Properties

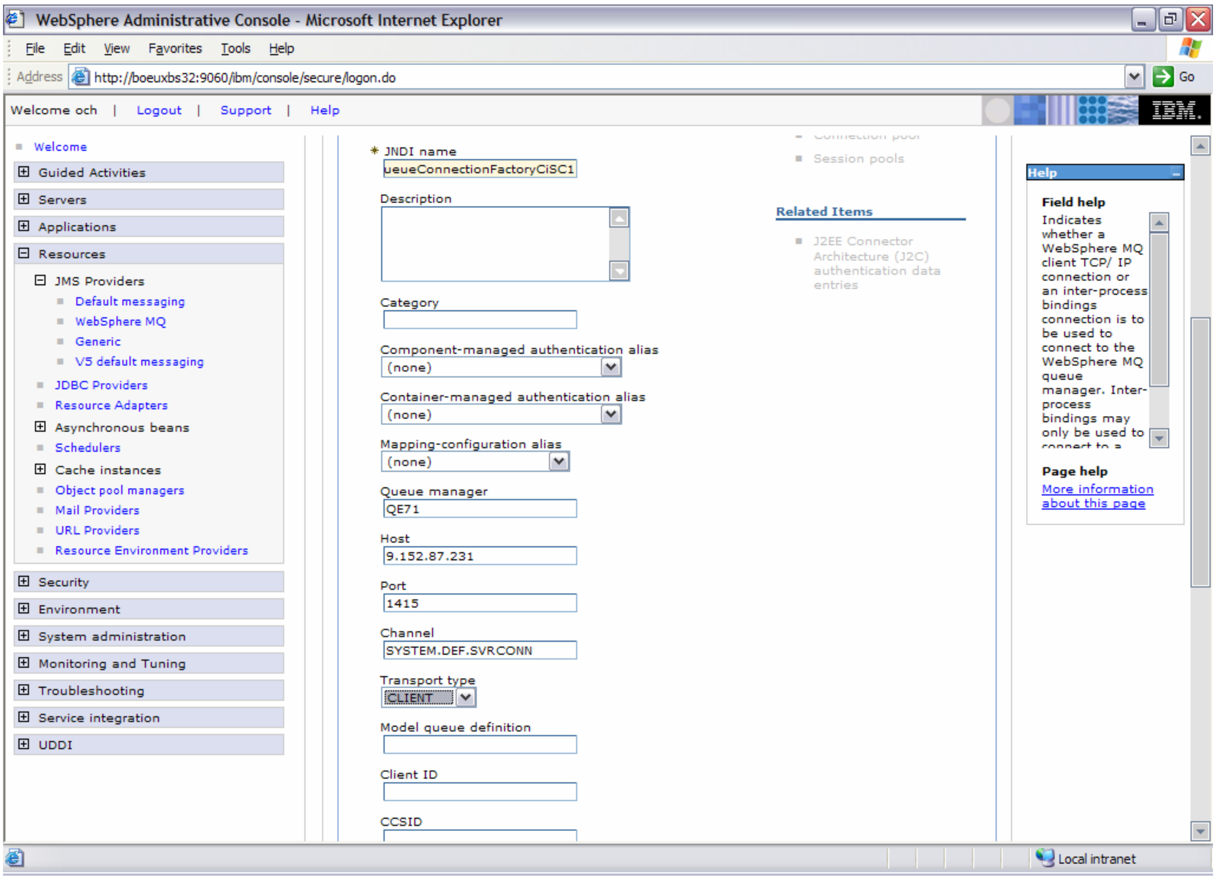
- Custom properties
- Connection pool
- Session pools

Related Items

- J2EE Connector Architecture (J2C) authentication data entries

Define the MQ specific properties for the queue connection factory:

6. Queue Manager is the target MQ queue manager name, for example, QE71
7. Host is the TCP/IP address of the target MQ, for example, 9.152.87.231
8. Port is the target TCP/IP port number of MQ, for example,1415
9. Channel is the server-connection channel name of the target MQ, for example, SYSTEM.DEF.SVRCONN.
10. Transport type must be set to CLIENT.



* JNDI name: ueueConnectionFactoryCiSC1

Description:

Category:

Component-managed authentication alias: (none)

Container-managed authentication alias: (none)

Mapping-configuration alias: (none)

Queue manager: QE71

Host: 9.152.87.231

Port: 1415

Channel: SYSTEM.DEF.SVRCONN

Transport type: CLIENT

Model queue definition:

Client ID:

CCSID:

Field help
Indicates whether a WebSphere MQ client TCP/ IP connection or an inter-process bindings connection is to be used to connect to the WebSphere MQ queue manager. Inter-process bindings may only be used to connect to a

Click Apply and save your modifications.

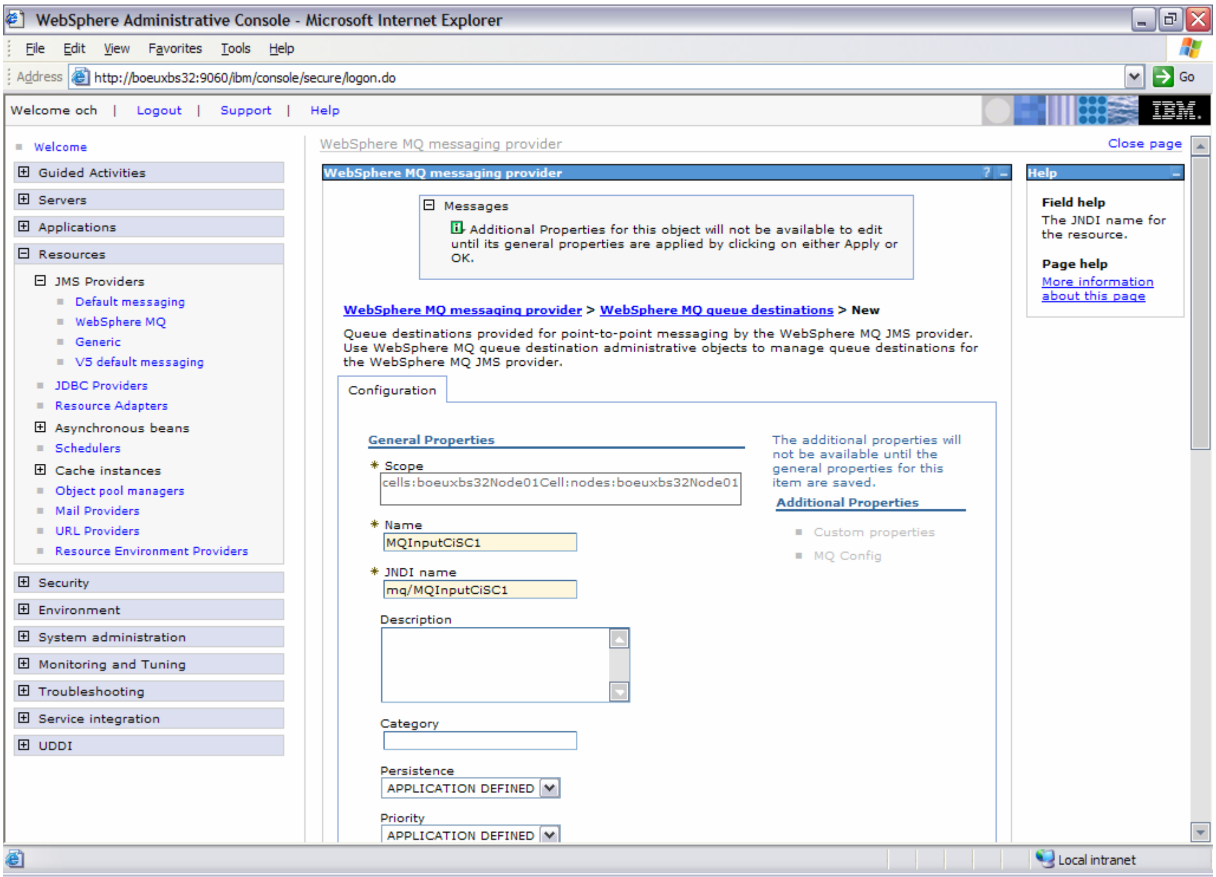
Note:

Ensure that the WebSphere variable MQ_INSTALL_ROOT is set to the value ${WAS_INSTALL_ROOT}/lib/WMQ

Defining an input and an output Queue

Open Resources > WebSphere MQ > WebSphere MQ queue destinations > New

Enter the name, for example, “MQInputCiSC1” and the JNDI name for the input queue, for example, mq/MQInputCiSC1.



WebSphere MQ messaging provider

Messages

Additional Properties for this object will not be available to edit until its general properties are applied by clicking on either Apply or OK.

WebSphere MQ messaging provider > WebSphere MQ queue destinations > New

Queue destinations provided for point-to-point messaging by the WebSphere MQ JMS provider. Use WebSphere MQ queue destination administrative objects to manage queue destinations for the WebSphere MQ JMS provider.

Configuration

General Properties

* Scope: cells:boeuxbs32Node01Cell:nodes:boeuxbs32Node01

* Name: MQInputCiSC1

* JNDI name: mq/MQInputCiSC1

Description:

Category:

Persistence: APPLICATION DEFINED

Priority: APPLICATION DEFINED

The additional properties will not be available until the general properties for this item are saved.

Additional Properties

- Custom properties
- MQ Config

Help

Field help

The JNDI name for the resource.

Page help

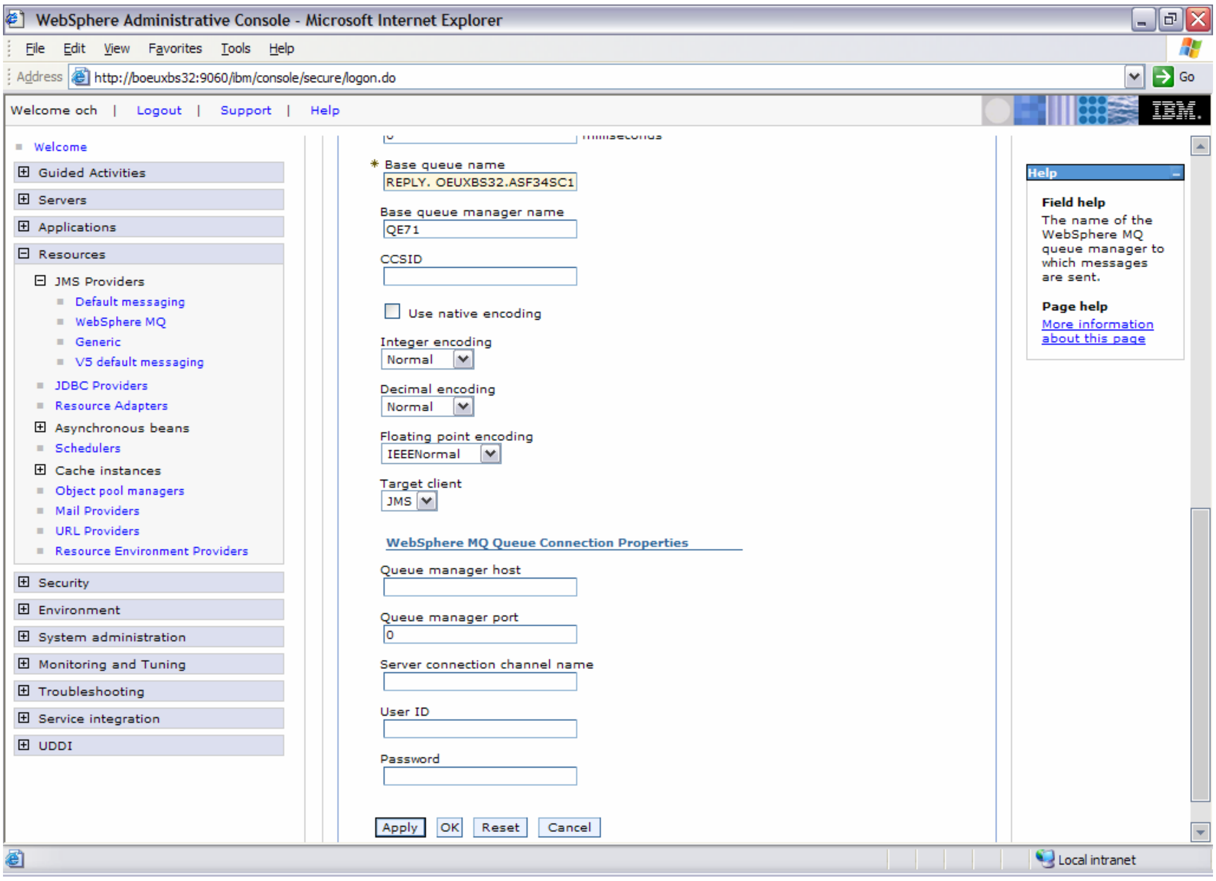
More information about this page

Define the MQ specific properties for the input queue:

4. Base queue name is the queue name of the target reply queue, for example, REPLY.OEUXBS32.ASF34SC1.

5. Base queue manager name is the target queue manager, for example, QE71

6. Target client must be set to JMS.



http://boeuxbs32:9060/ibm/console/secure/logon.do

* Base queue name: REPLY. OEUXBS32.ASF34SC1

Base queue manager name: QE71

CCSID:

□ Use native encoding

Integer encoding: Normal

Decimal encoding: Normal

Floating point encoding: IEEENormal

Target client: JMS

WebSphere MQ Queue Connection Properties

Queue manager host:

Queue manager port: 0

Server connection channel name:

User ID:

Password:

Apply | OK | Reset | Cancel

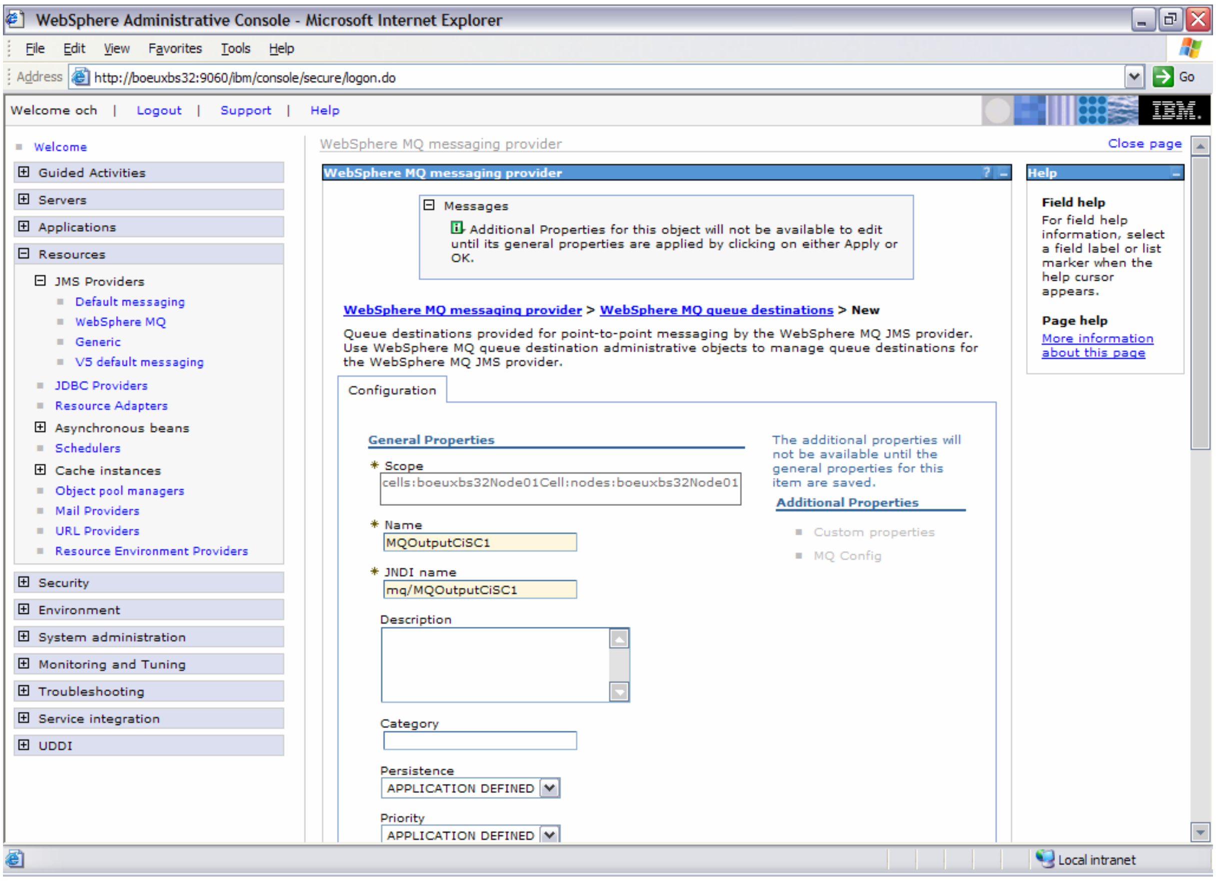
Field help
The name of the WebSphere MQ queue manager to which messages are sent.

Page help
More information about this page

Click Apply and save your modifications.

Open Resources > WebSphere MQ > WebSphere MQ queue destinations > New

Enter the name, for example, “MQOutputCiSC1” and the JNDI name for the output queue, for example, mq/MQOutputCiSC1.



Messages

Additional Properties for this object will not be available to edit until its general properties are applied by clicking on either Apply or OK.

WebSphere MQ messaging provider > WebSphere MQ queue destinations > New

Queue destinations provided for point-to-point messaging by the WebSphere MQ JMS provider. Use WebSphere MQ queue destination administrative objects to manage queue destinations for the WebSphere MQ JMS provider.

General Properties

* Scope: cells:boeuxbs32Node01Cell:nodes:boeuxbs32Node01

* Name: MQOutputCiSC1

* JNDI name: mq/MQOutputCiSC1

Description:

Category:

Persistence: APPLICATION DEFINED

Priority: APPLICATION DEFINED

The additional properties will not be available until the general properties for this item are saved.

Additional Properties

Field help

For field help information, select a field label or list marker when the help cursor appears.

Page help

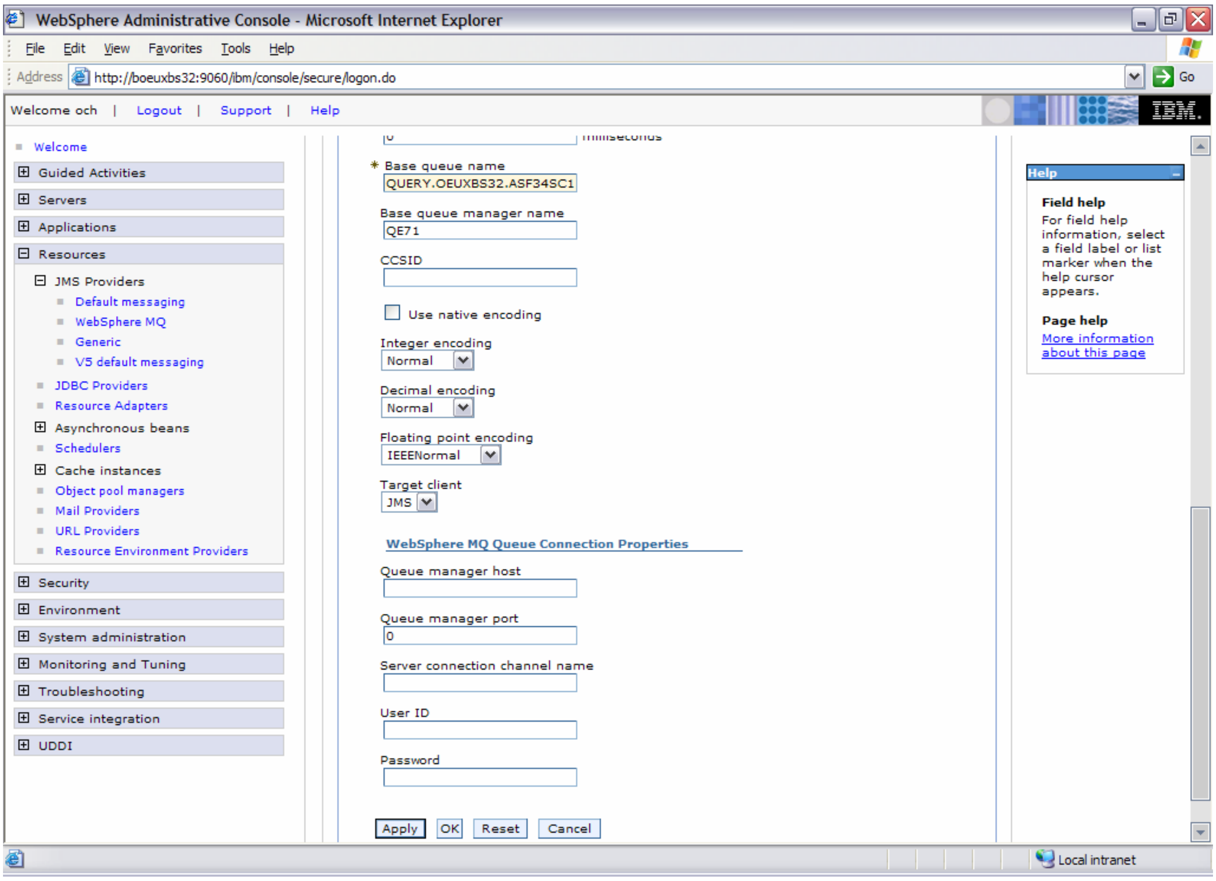
More information about this page

Define the MQ specific properties for the output queue:

4. Base queue name is the queue name of the target query queue, for example, QUERY.OEUXBS32.ASF34SC1.

5. Base queue manager name is the target queue manager, for example, QE71

6. Target client must be set to JMS.



* Base queue name: QUERY.OEUXBS32.ASF34SC1

Base queue manager name: QE71

CCSID:

□ Use native encoding

Integer encoding: Normal

Decimal encoding: Normal

Floating point encoding: IEEENormal

Target client: JMS

WebSphere MQ Queue Connection Properties

Queue manager host:

Queue manager port: 0

Server connection channel name:

User ID:

Password:

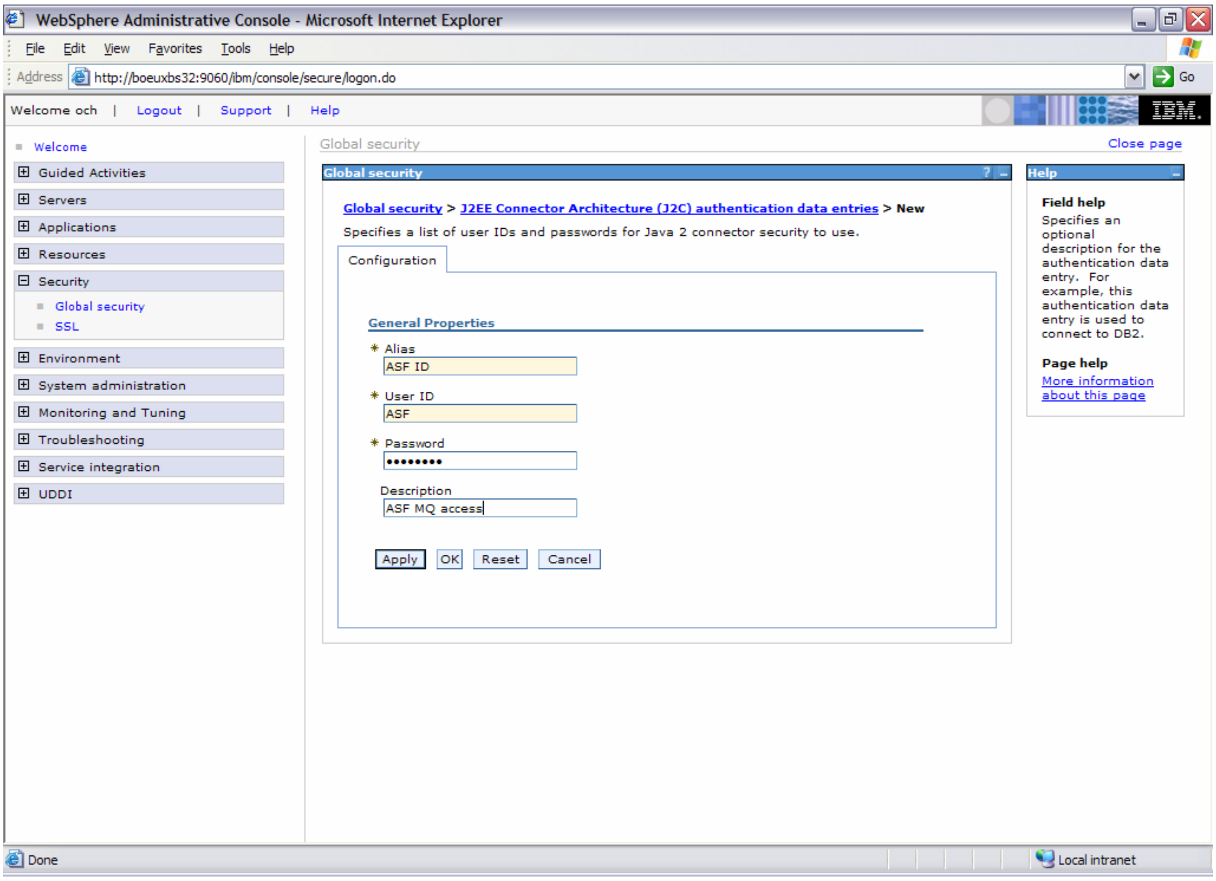
Apply | OK | Reset | Cancel

Click Apply and save your modifications.

Defining JAAS – J2C authentication data

Open Security > Global Security > J2EE Connector architecture (J2C) authentication data entries > New

Enter an alias and a valid User ID and password for the MQ connection.



Global security > J2EE Connector Architecture (J2C) authentication data entries > New

Specifies a list of user IDs and passwords for Java 2 connector security to use.

Configuration

General Properties

* Alias: ASF ID

* User ID: ASF

* Password: ••••••••

Description: ASF MQ access

Apply | OK | Reset | Cancel

Field help

Specifies an optional description for the authentication data entry. For example, this authentication data entry is used to connect to DB2.

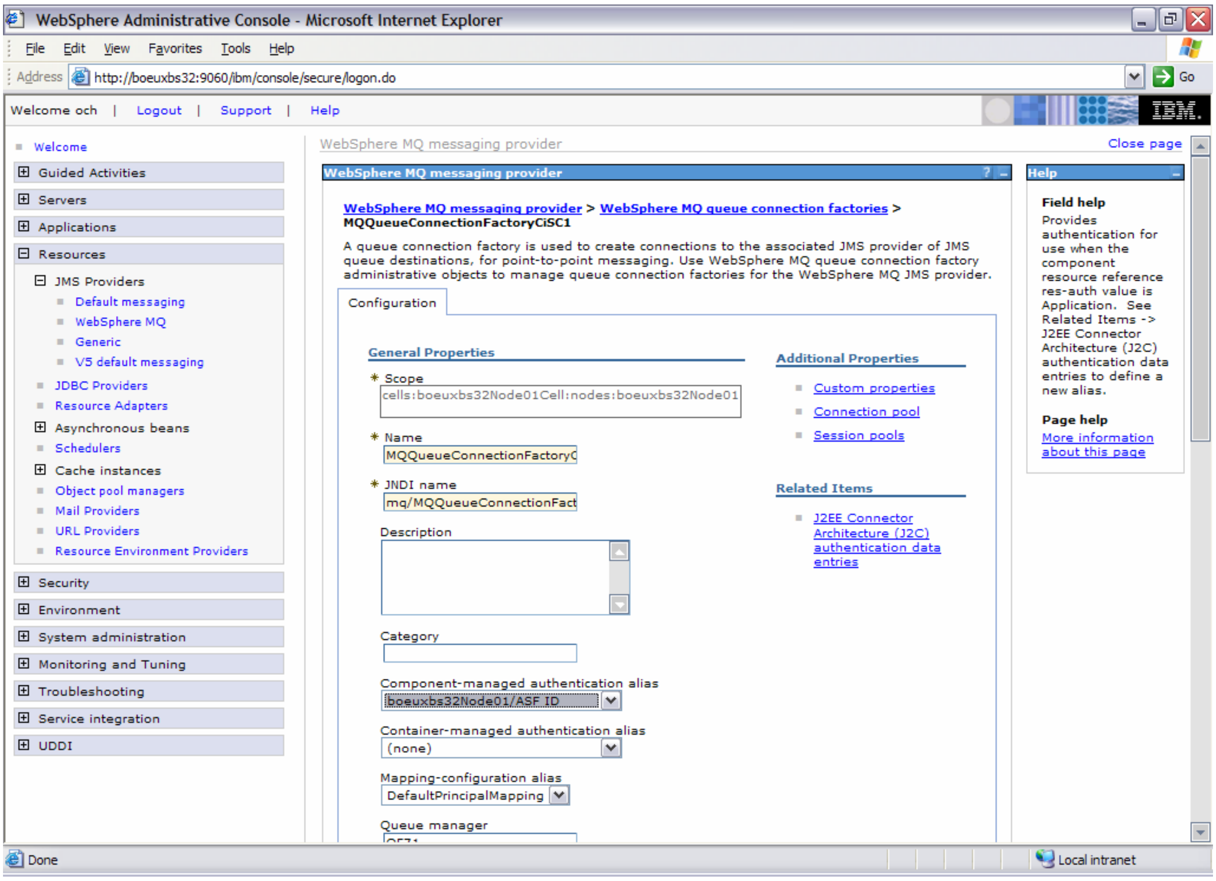
Page help

More information about this page

Click OK and save your modifications.

Open Resources > WebSphere MQ > WebSphere MQ queue connection factories > MQQueueConnectionFactoryCiSC1

Select the created JASS-J2C authentication data in the field Component-managed authentication alias.



WebSphere MQ messaging provider

WebSphere MQ messaging provider > WebSphere MQ queue connection factories > MQQueueConnectionFactoryCiSC1

A queue connection factory is used to create connections to the associated JMS provider of JMS queue destinations, for point-to-point messaging. Use WebSphere MQ queue connection factory administrative objects to manage queue connection factories for the WebSphere MQ JMS provider.

General Properties

* Scope: cells:boeuxbs32Node01Cell:nodes:boeuxbs32Node01

* Name: MQQueueConnectionFactoryC

* JNDI name: mq/MQQueueConnectionFact

Description:

Category:

Component-managed authentication alias: boeuxbs32Node01/ASF ID

Container-managed authentication alias: (none)

Mapping-configuration alias: DefaultPrincipalMapping

Queue manager: QFZ1

Additional Properties

- Custom properties
- Connection pool
- Session pools

Related Items

- J2EE Connector Architecture (J2C) authentication data entries

Help

Field help

Provides authentication for use when the component resource reference res-auth value is Application. See Related Items -> J2EE Connector Architecture (J2C) authentication data entries to define a new alias.

Page help

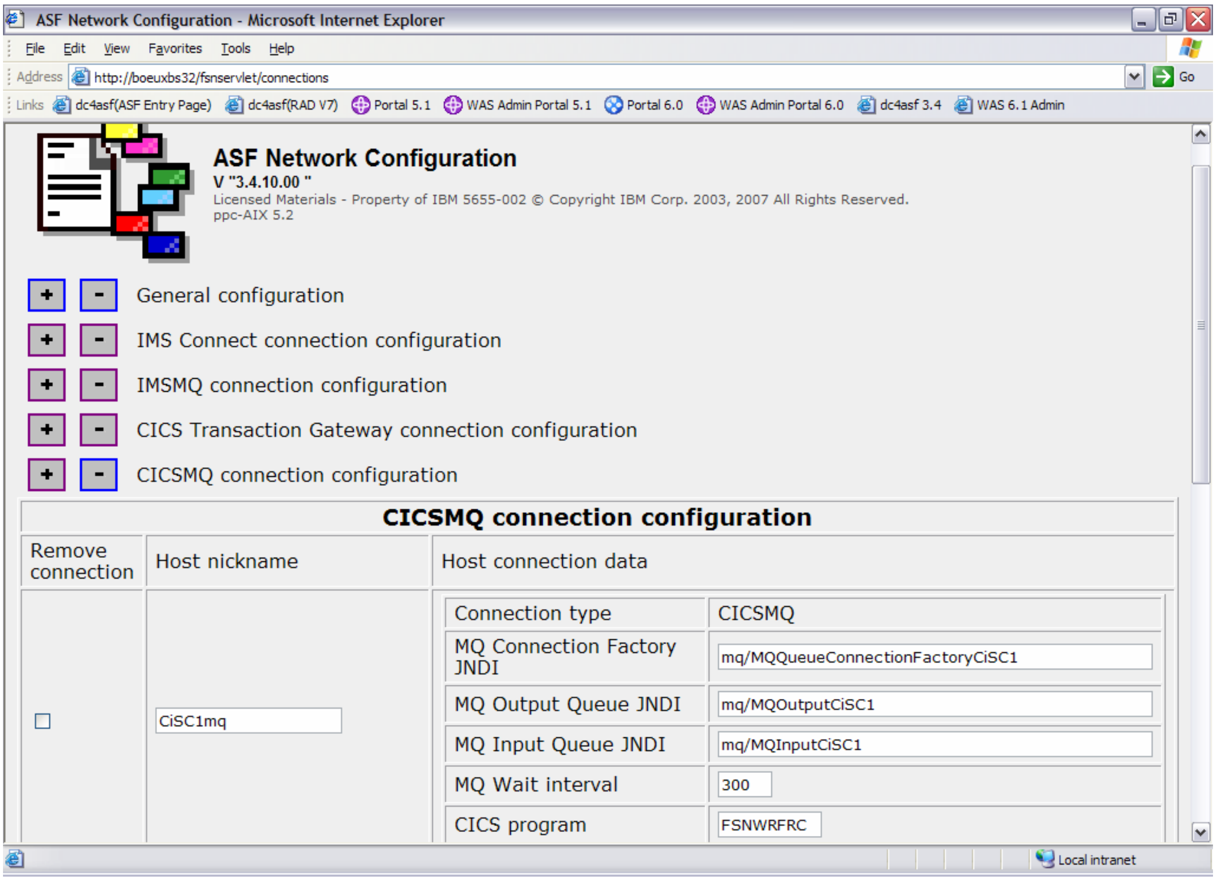
More information about this page

Click Apply, save your modifications, and restart the WebSphere Application Server.

Configuring the connections

To define the server-host connections in DocNetworkConfiguration.xml invoke the servlet application “Connections“, using the Microsoft Internet Explorer.

Add a CICSMQ connection type entry by specifying a host nickname, the MQ connection factory JNDI you created in Defining a queue connection factory, the MQ input queue JNDI, and MQ output queue JNDI you created in Defining an input and an output queue.


ASF Network Configuration - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://boeuxbs32/fsnservlet/connections
Go
Links dc4asf(ASF Entry Page) dc4asf(RAD V7) Portal 5.1 WAS Admin Portal 5.1 Portal 6.0 WAS Admin Portal 6.0 dc4asf 3.4 WAS 6.1 Admin
Local intranet

ASF Network Configuration
V "3.4.10.00 "
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ppc-AIX 5.2

+ - General configuration
+ - IMS Connect connection configuration
+ - IMSMQ connection configuration
+ - CICS Transaction Gateway connection configuration
+ - CICSMQ connection configuration

CICSMQ connection configuration

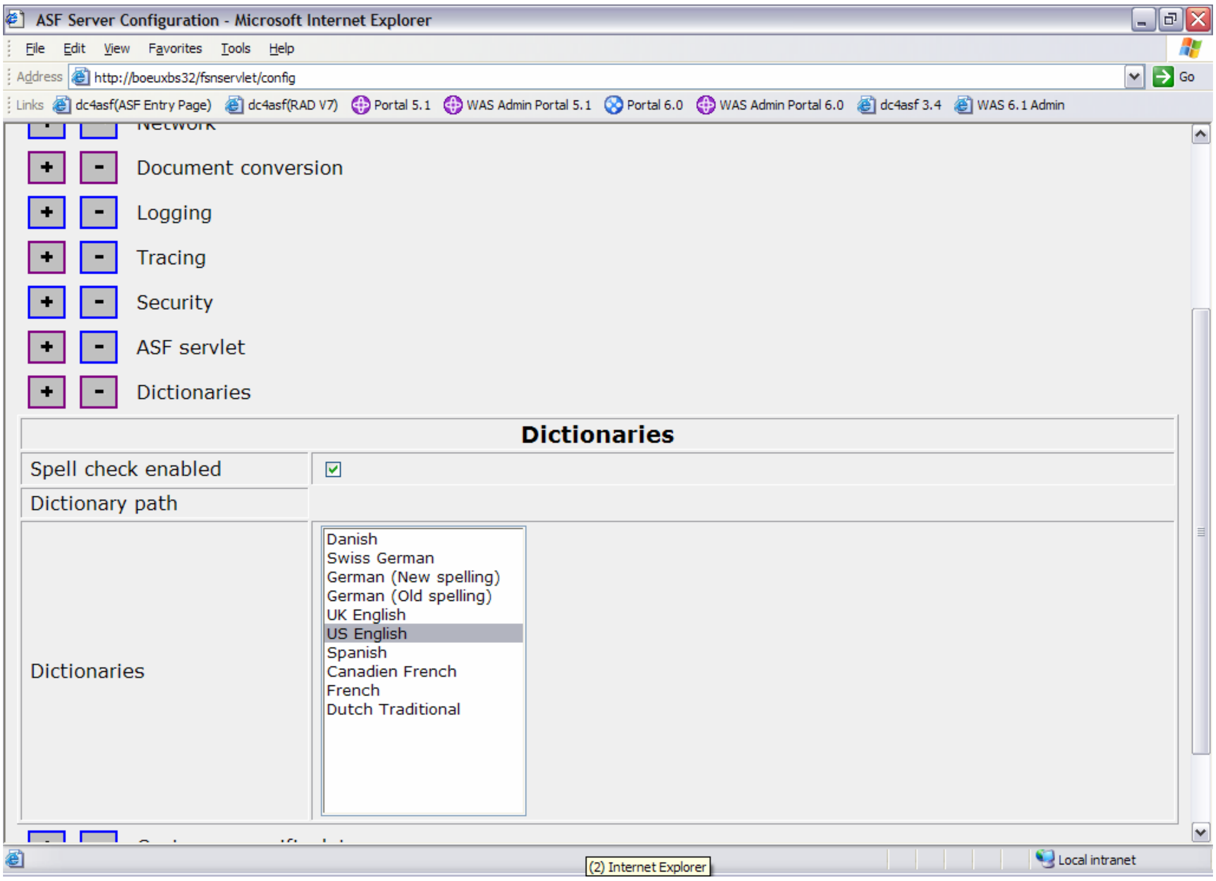
Remove connection	Host nickname	Host connection data	
☐	CiSC1mq	Connection type	CICSMQ
		MQ Connection Factory JNDI	mq/MQQueueConnectionFactoryCiSC1
		MQ Output Queue JNDI	mq/MQOutputCiSC1
		MQ Input Queue JNDI	mq/MQInputCiSC1
		MQ Wait interval	300
		CICS program	FSNWRFRC

Click OK to save your changes.

Stop and Start your application in the WebSphere Administrative Console.

11 Activating dictionaries for spell checking

To activate the dictionaries for spell checking invoke the servlet application “config“, using the Microsoft Internet Explorer. Ask the ASF administrator(s) which dictionaries should be active.



ASF Server Configuration - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://boeuxbs32/fsnservlet/config
Go
Links dc4asf(ASF Entry Page) dc4asf(RAD V7) Portal 5.1 WAS Admin Portal 5.1 Portal 6.0 WAS Admin Portal 6.0 dc4asf 3.4 WAS 6.1 Admin
Network
+ - Document conversion
+ - Logging
+ - Tracing
+ - Security
+ - ASF servlet
+ - Dictionaries
(2) Internet Explorer
Local intranet

Dictionaries	
Spell check enabled	☑
Dictionary path	
Dictionaries	Danish Swiss German German (New spelling) German (Old spelling) UK English US English Spanish Canadien French French Dutch Traditional

Click OK.

Stop and Start your application using the WebSphere Administrative Console.

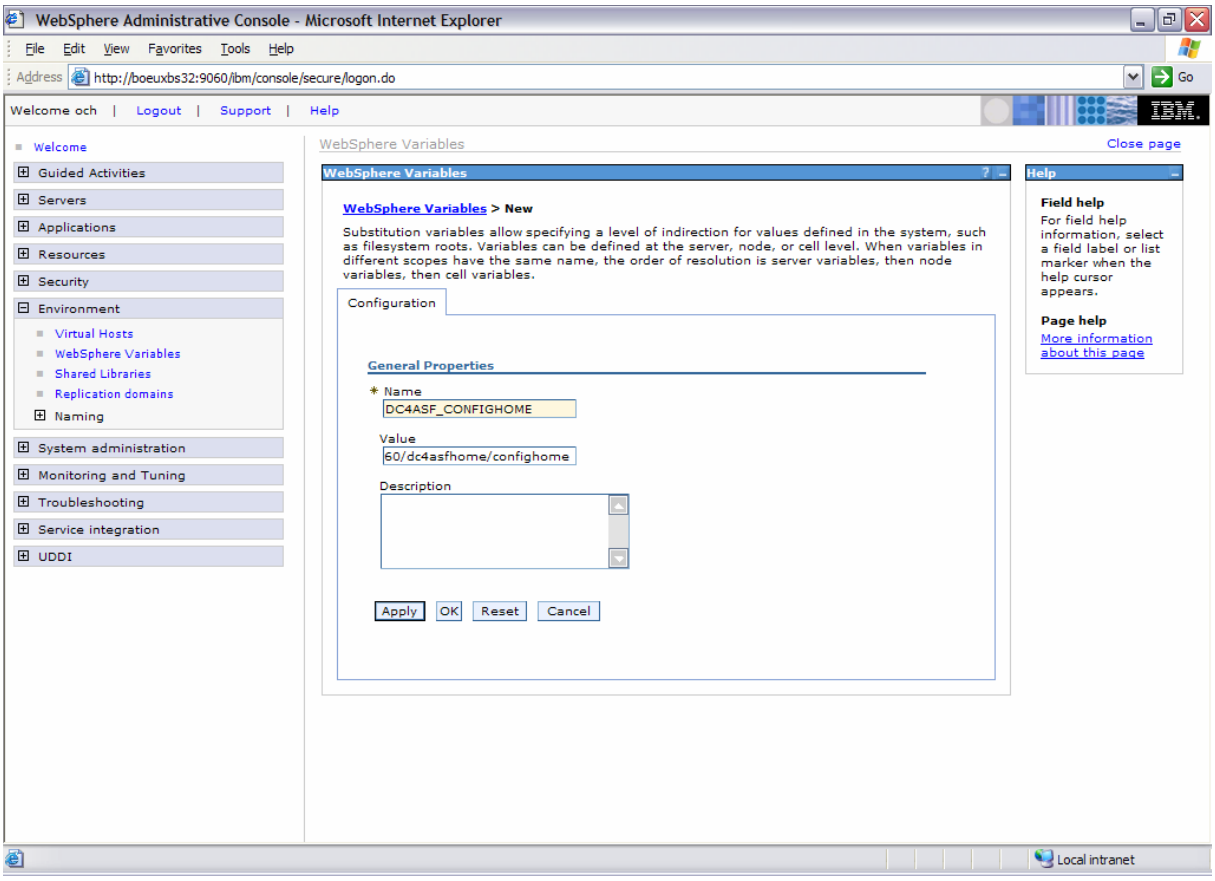
12 Using one set of configuration files

If you are running fsnservlet in a multi-node environment or you have more than one instance of fsnservlet but you want to use only one set of configuration files, perform the following steps:

- Create two WebSphere variables.

  Open Environment > WebSphere Variables > New

  Create the variables DC4ASF_CONFIGHOME and DC4ASF_DATAHOME and set the values to, for example, /usr2/WebSphere/AppServer60/dc4asfhome/confighome and /usr2/WebSphere/AppServer60/dc4asfhome/datahome



http://boeuxbs32:9060/ibm/console/secure/logon.do

WebSphere Variables > New

Substitution variables allow specifying a level of indirection for values defined in the system, such as filesystem roots. Variables can be defined at the server, node, or cell level. When variables in different scopes have the same name, the order of resolution is server variables, then node variables, then cell variables.

* Name: DC4ASF_CONFIGHOME

Value: 60/dc4asfhome/confighome

Description:

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

Page help
More information about this page

- Create the following three directories:

  $(CONFIG_HOME)
  For example, /usr2/WebSphere/AppServer60/dc4asfhome/confighome
  $(DATA_HOME)/log
  For example, usr2/WebSphere/AppServer60/dc4asfhome/datahome/log
  $(DATA_HOME)/preview
  For example, usr2/WebSphere/AppServer60/dc4asfhome/datahome/preview

- Copy the following configuration files:

  DocConfiguration.xml
  DocNetworkConfiguration.xml
  DocXSLConversion.xml
  DocSpellCheckConfiguration.xml

  from $(APP_INSTALL_ROOT)//fsnservletEAR.ear/fsnservlet.war//internals/config
  to $(CONFIG_HOME)

- Change the configuration.xml as follows:

```
<Network>
        <ConfigFile>$(CONFIG_HOME)/DocNetworkConfiguration.xml</ConfigFile>
</Network>
<XSLConversion>
  <HTMLPath>xsl</HTMLPath>
        <ConfigFile>$(CONFIG_HOME)/DocXSLConversion.xml</ConfigFile>
</XSLConversion>

<Logging enable="Y">
        <GenericName>$(DATA_HOME)/log/logfile</GenericName>
        <Extension>.log</Extension>
        <NumberOfGenerations>10</NumberOfGenerations>
        <Filesize>3096</Filesize>
        <Recordlength>330</Recordlength>
</Logging>

<Tracing enable="Y" sessiontrace="N">
        <GenericName>$(DATA_HOME)/log/trcfile</GenericName>
        <Extension>.trc</Extension>
        <Recordlength>3300</Recordlength>
```

13 Protecting access to the configuration servlets

To restrict access to the configuration servlets (config and connections) for fsnservlet the following prerequisite must be met:

- “Global Security” of the WebSphere Application Server (WAS) is enabled.

  For more information on “Global Security” refer to the online help of the “WebSphere Application Server (Distributed platforms and AIX), Version 6.0”.

Open Applications > Enterprise Applications > *fsnservletEAR* > *Map Security roles to users/groups*

Select the role “dc4asfconfig” and click Lookup users.

Enter a limit and a search pattern for users and click Search.

Select the users and click on the arrows to move the users to the “Selected” list.

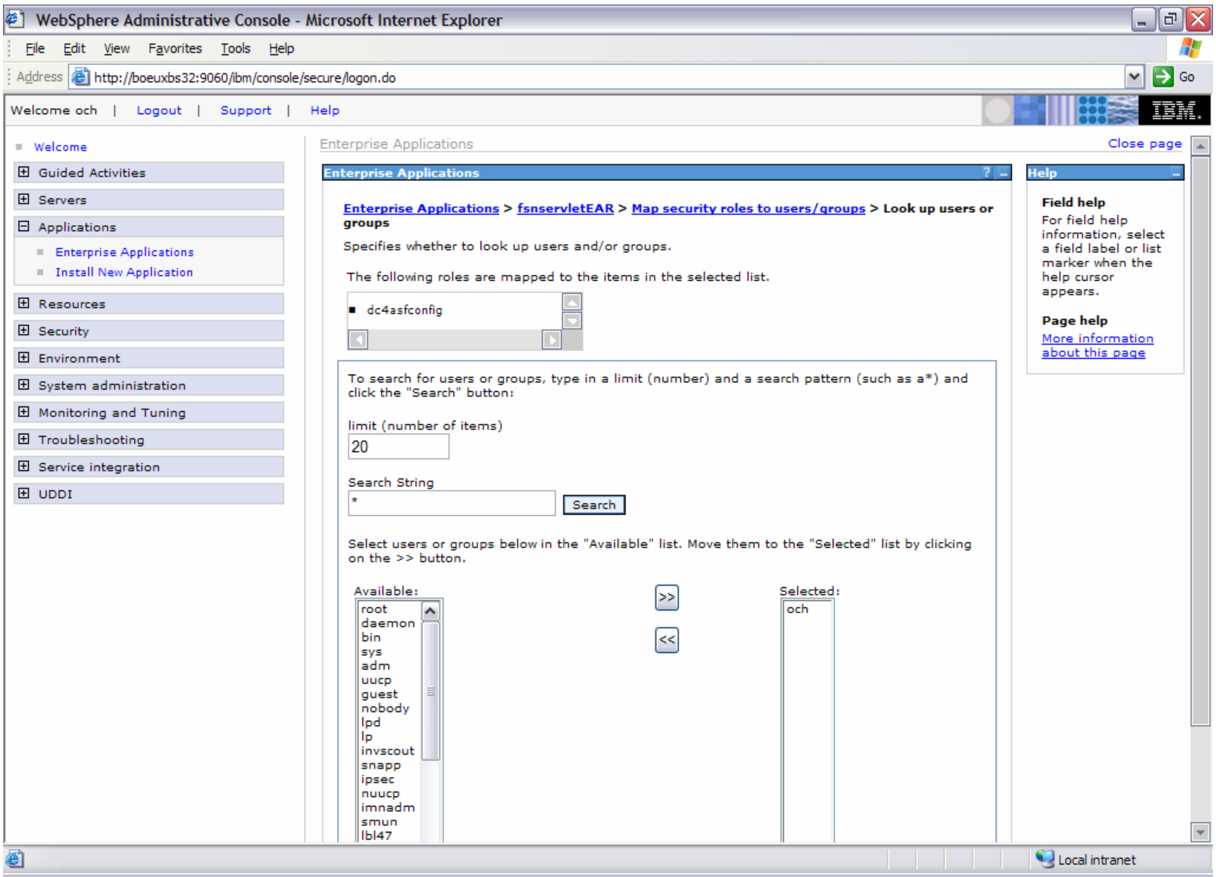
Click OK.

Then click Lookup groups.

Enter a limit and a search pattern for groups and click Search.

Select those groups to which the selected users belong and click on the arrows to move the groups to the “Selected” list.

Click OK twice.



Enterprise Applications

Enterprise Applications > fsnservletEAR > Map security roles to users/groups > **Look up users or groups**

Specifies whether to look up users and/or groups.

The following roles are mapped to the items in the selected list.

■ dc4asfconfig

To search for users or groups, type in a limit (number) and a search pattern (such as a*) and click the "Search" button:

limit (number of items)
20

Search String
*
Search

Select users or groups below in the "Available" list. Move them to the "Selected" list by clicking on the >> button.

Available:
root
daemon
bin
sys
adm
uucp
guest
nobody
lpd
lp
invscout
snapp
ipsec
nuucp
imnadm
smun
lbl47

>> <<

Selected:
och

Help

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

Page help
More information about this page

Save the changes to the master configuration, then Stop and Start the WebSphere Application Server.

To verify that the security implementation was successful, launch both the configuration servlet (config) and the network configuration servlet (connections). You will be prompted for your user ID and password.

14 Print Preview Configuration

AFP Resources

To make the AFP resources (page segments and overlays) available on the server for resolution during “Print Preview” requests perform the following steps:

- Copy the page segments from the host system (for example via ftp) to the directory:

  $(APP_INSTALL_ROOT)/boeuxbs32Node01Cell/dc4asf12.ear/dc4asf12.war/AFPResources/pseg

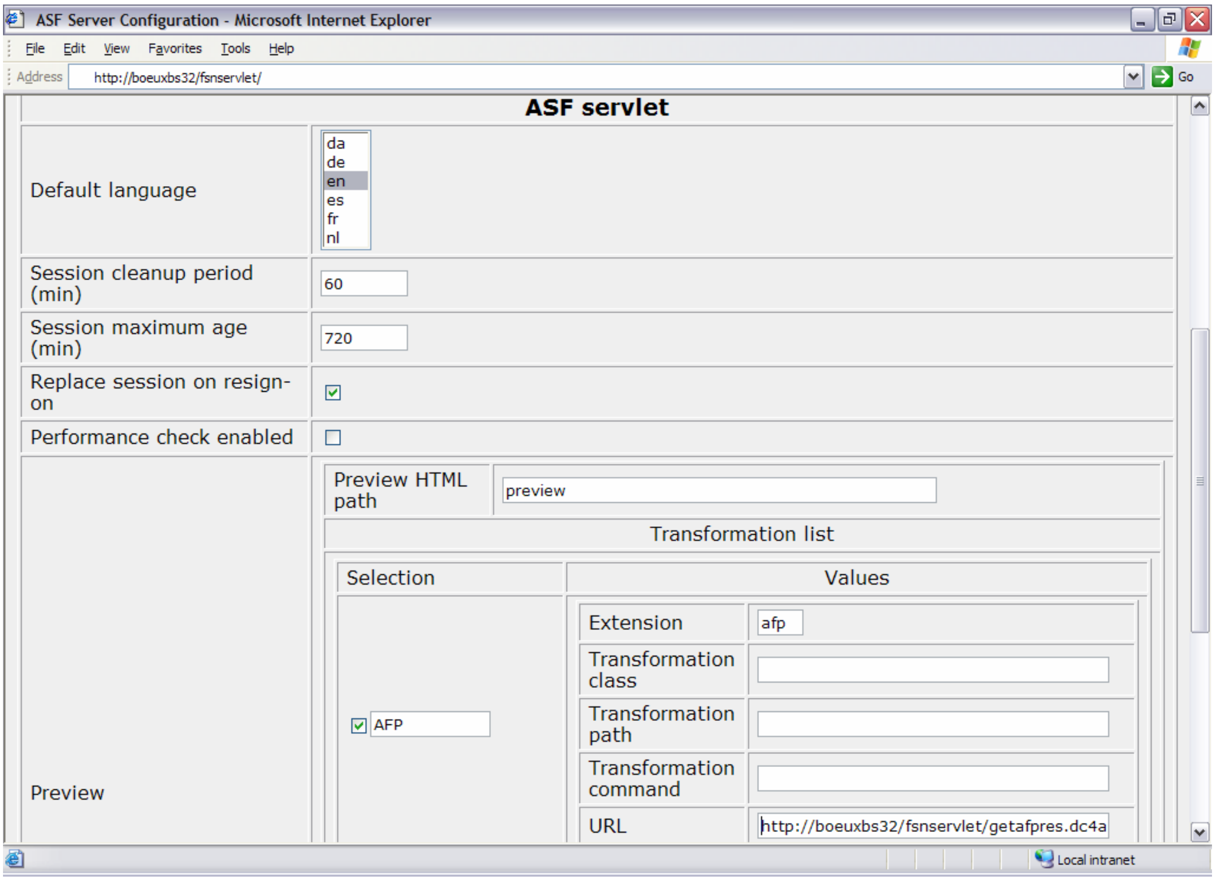
  The page segments must have the extension **“psg”** (lower case and the names must be in upper case).

- Copy the overlays from the host system (for example via ftp) to the directory:

  $(APP_INSTALL_ROOT)/boeuxbs32Node01Cell/dc4asf12.ear/dc4asf12.war/AFPResources/ovl

  The overlays must have the extension **“oly”** (lower case and the names must be in upper case).

- To define the server URL in DocConfiguration.xml invoke the servlet application “config“, using the Microsoft Internet Explorer. Specify your server URL in the Preview AFP Section.


ASF Server Configuration - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://boeuxbs32/fsnservlet/
Go
Local intranet

ASF servlet

Default language	da de en es fr nl
Session cleanup period (min)	60
Session maximum age (min)	720
Replace session on resign-on	☑
Performance check enabled	□
Preview	Preview HTML path: preview

Transformation list

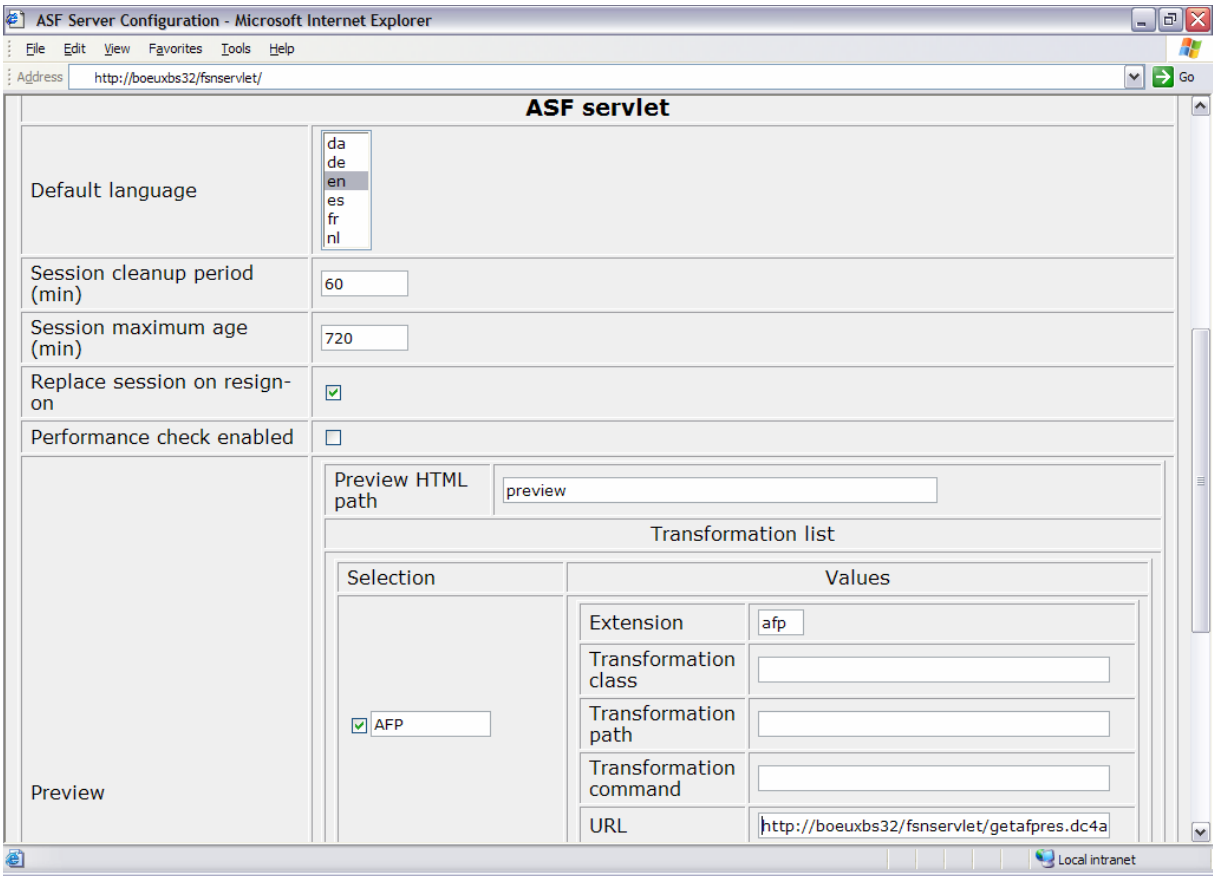
Selection	Values	
☑ AFP	Extension	afp
	Transformation class	
	Transformation path	
	Transformation command	
	URL	http://boeuxbs32/fsnservlet/getafpres.dc4a

Click OK to save your changes.

Using the AFP Viewer or a PDF viewer

To define which viewer to use for print preview (for AFP or PDF format) in the DocConfiguration.xml file, invoke the servlet application “config“, using the Microsoft Internet Explorer. Specify the default type in the Preview Section by clicking the check box.

AFP default sample:


ASF Server Configuration - Microsoft Internet Explorer
File
Edit
View
Favorites
Tools
Help
Address
http://boeuxbs32/fsnservlet/
Go
Local intranet

ASF servlet

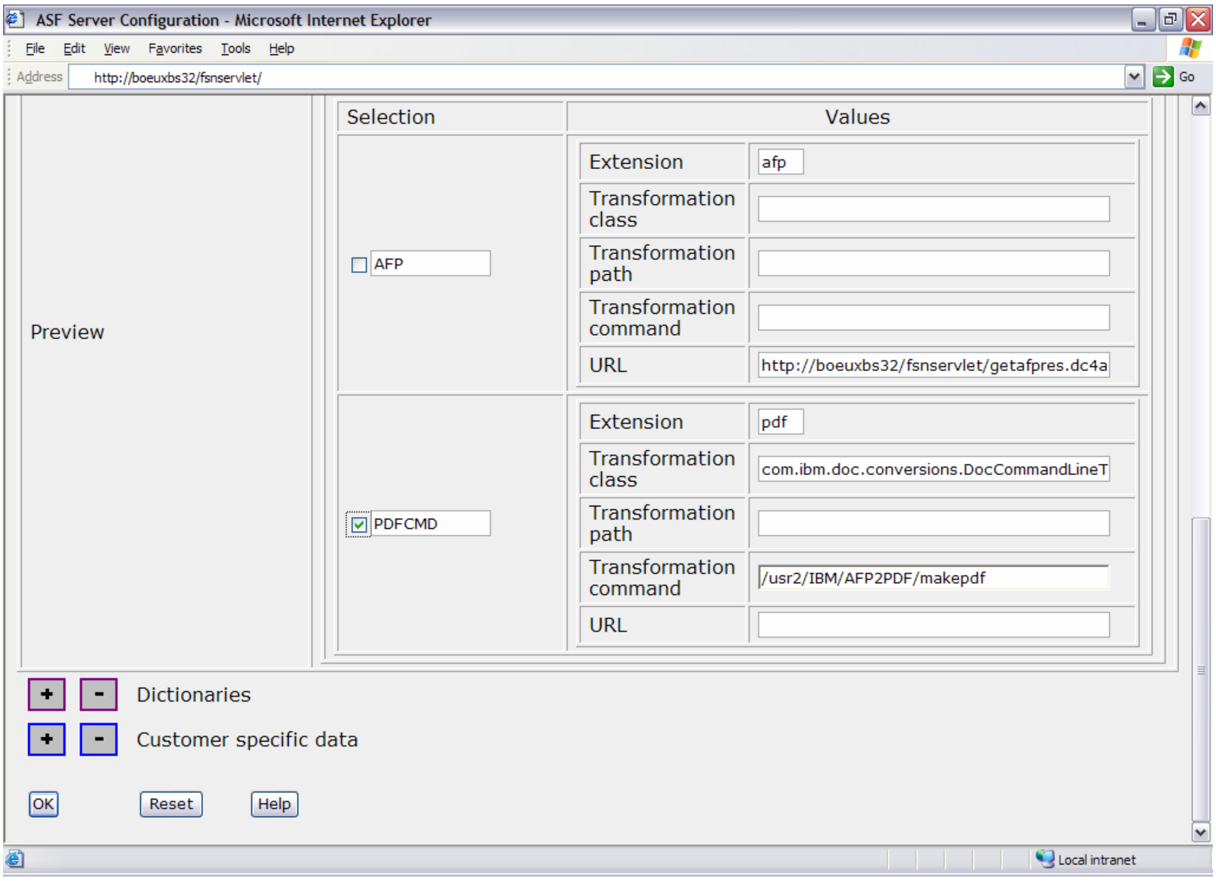
Default language	da de en es fr nl
Session cleanup period (min)	60
Session maximum age (min)	720
Replace session on resign-on	☑
Performance check enabled	□
Preview	Preview HTML path: preview

Transformation list

Selection	Values	
☑ AFP	Extension	afp
	Transformation class	
	Transformation path	
	Transformation command	
	URL	http://boeuxbs32/fsnservlet/getafpres.dc4a

If you have chosen to transform from AFP to PDF, you must also specify what conversion software you are using or where it is installed in the Preview Section (Transformation Class, Transformation path, or Transformation command).

For example, a PDF transform setting could look as follows:


ASF Server Configuration - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://boeuxbs32/fsnservlet/
Go
+ - Dictionaries
+ - Customer specific data
OK
Reset
Help
Local intranet

Preview

Selection	Values	
☐ AFP	Extension	afp
	Transformation class	
	Transformation path	
	Transformation command	
	URL	http://boeuxbs32/fsnservlet/getafpres.dc4a
☑ PDFCMD	Extension	pdf
	Transformation class	com.ibm.doc.conversions.DocCommandLineT
	Transformation path	
	Transformation command	/usr2/IBM/AFP2PDF/makepdf
	URL	

Note:

There is also an API parameter called docprvform that you can use to determine a print preview transform other than the configured default transform. For more information refer to the “Document Connect for ASF Client Integration Guide and Reference”.

15 Applying maintenance

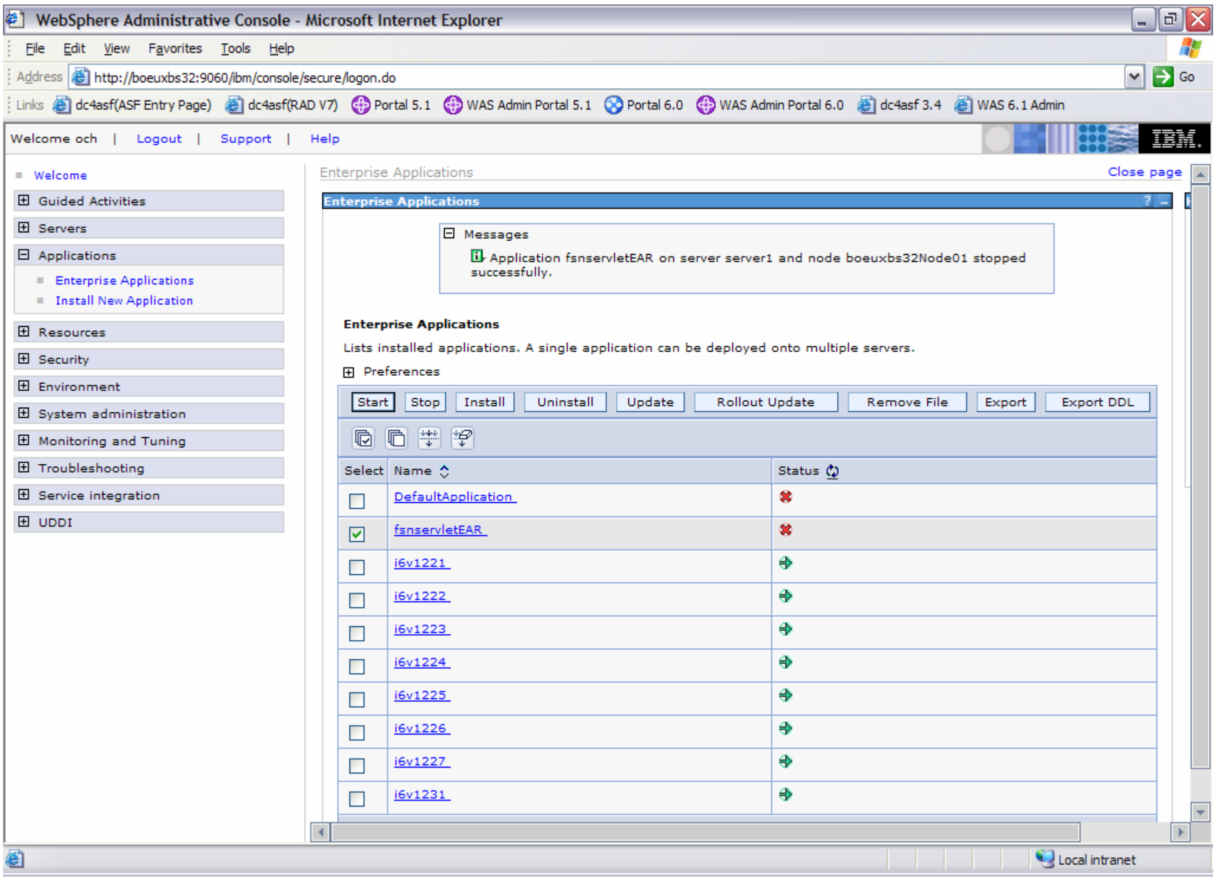
Copy the zip file containing the maintenance into a directory:

/usr/swrepository/dc4asf/was60/war/ptfs

Open the WebSphere Administrative Console:

Open Application >Enterprise Application

Stop the application fsnservletEAR.
Select the application fsnservletEAR and enter Update.



Enterprise Applications

Messages

Application fsnservletEAR on server server1 and node boeuxbs32Node01 stopped successfully.

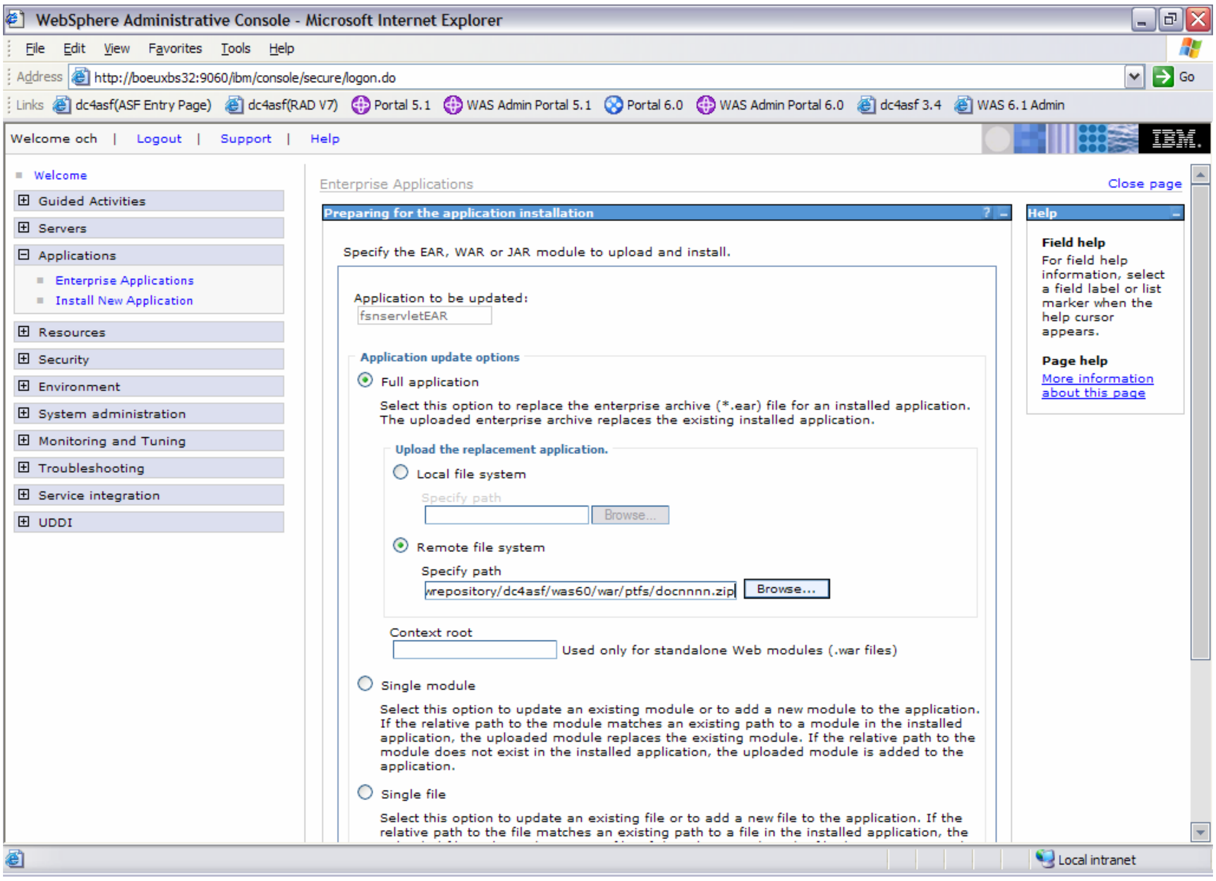
Enterprise Applications

Lists installed applications. A single application can be deployed onto multiple servers.

Select	Name	Status
☐	DefaultApplication	✖
☑	fsnservletEAR	✖
☐	i6v1221	➔
☐	i6v1222	➔
☐	i6v1223	➔
☐	i6v1224	➔
☐	i6v1225	➔
☐	i6v1226	➔
☐	i6v1227	➔
☐	i6v1231	➔

Enter the path (local path or server path) where the new DC4ASF zip file is located:

/usr/swrepository/dc4asf/was60/war/ptfs/docnnnn.zip



WebSphere Administrative Console - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://boeuxbs32:9060/ibm/console/secure/logon.do
Links dc4asf(ASF Entry Page) dc4asf(RAD V7) Portal 5.1 WAS Admin Portal 5.1 Portal 6.0 WAS Admin Portal 6.0 dc4asf 3.4 WAS 6.1 Admin
Welcome och | Logout | Support | Help
Welcome
Guided Activities
Servers
Applications
Enterprise Applications
Install New Application
Resources
Security
Environment
System administration
Monitoring and Tuning
Troubleshooting
Service integration
UDDI
Enterprise Applications
Close page
Help
Local intranet

Preparing for the application installation

Specify the EAR, WAR or JAR module to upload and install.

Application to be updated: fsnservletEAR

Application update options

● Full application

Select this option to replace the enterprise archive (*.ear) file for an installed application. The uploaded enterprise archive replaces the existing installed application.

Upload the replacement application.

○ Local file system

Specify path [ ] Browse...

● Remote file system

Specify path: wrepository/dc4asf/was60/war/ptfs/docnnnn.zip Browse...

Context root [ ] Used only for standalone Web modules (.war files)

○ Single module

Select this option to update an existing module or to add a new module to the application. If the relative path to the module matches an existing path to a module in the installed application, the uploaded module replaces the existing module. If the relative path to the module does not exist in the installed application, the uploaded module is added to the application.

○ Single file

Select this option to update an existing file or to add a new file to the application. If the relative path to the file matches an existing path to a file in the installed application, the

Field help

For field help information, select a field label or list marker when the help cursor appears.

Page help

More information about this page

On each of the next panels click Next and finally click Finish. After the update of the application has completed, save the master configuration.

Open Applications > Enterprise Application and select your application fsnservletTestEAR. Click Start to restart the application.

16 The Conversion Toolkit

The Document Connect for ASF Conversion Toolkit provides a convenient way to verify the DCF to HTML and HTML to DCF conversions, and to test modifications to the DocXSLConversion.xml file and any new custom conversion directives added to the doccustom1.xsl and doccustom2.xsl files.

The toolkit runs on Windows and takes you through the conversion steps from DCF (stored in the txt file) to XHTML (for display in the browser or editor) and back again to DCF, ready for storing in ASF.

The tool writes all the intermediate formats to disk for inspection and, if you have an XML Development Tool, like Altova XMLSPY, you can also test and debug your custom stylesheets.

Hardware and software requirements

To run the toolkit you need Windows 2000 or Windows XP, and a Java Runtime Environment (JRE) V1.3.1 or higher. You can obtain the JRE at the Sun Java page (http://java.sun.com).

Download and install the JRE. After you have successfully installed the JRE, a Windows environment variable needs to be set. Select Control Panel->System->Advanced->Environment Variables. The name of the variable is JAVA_HOME and its value must be set to the install directory of the JRE.

Installing the toolkit

The toolkit is provided as a zip file. This zip file contains everything you need to run the toolkit, given that the installed JRE is operational and the JAVA_HOME environment variable has been set correctly. To install and adapt the toolkit:

1. Download the zip-file to a temporary directory.
2. Unzip the file to a disk drive and directory of your choice; the zip file contains the root directory of the toolkit.

Assume you have unzipped the toolkit to the root of drive F. Then the structure will look as follows:

```
Directory of F:\dc4asftoolkit

2004-04-28  11:57    <DIR>          .
2004-04-28  11:57    <DIR>          ..
2004-04-28  11:50    <DIR>          bin
2004-04-28  11:50    <DIR>          config
2004-04-28  11:50    <DIR>          log
2004-04-28  11:50    <DIR>          resources
2004-04-28  11:50    <DIR>          TestData
2004-04-28  11:50    <DIR>          www
2004-03-09  13:09               251 xtoolkit.bat
               1 File(s)            251 bytes
```

The dc4asftoolkit root directory contains a bat file, which is used to run the toolkit, and the following sub directories:

1. /bin: The bin subdirectory contains all jar files required to run the toolkit. The most important file is the docserver.jar file which is the main Document Connect for ASF executable. It is exactly the same as the docserver.jar used by the Document Connect for ASF Web server application. You should replace it with the latest version from your Web server.
3. /bin/java: This subdirectory contains the jar files needed for the XML conversions. They are not part of Document Connect for ASF. You can replace these with the latest versions from your Web server.
4. /config: This subdirectory contains the configuration files necessary to run the toolkit. The DocXSLConversion.xml file is the one used by the toolkit. To test your changes to the DocXSLConversion.xml file, copy your active DocConfiguration.xml file from the Web server and then modify it.
5. /resources: This subdirectory contains the resource files used by the toolkit. There is no need to modify these files. However, if you want to you can copy the resource files from your Web application server.
6. /log: The log subdirectory contains traces and logs created during your tests.
7. /testdata: This subdirectory contains an example paragraph used only for the installation verification.
8. /www/xsl: This subdirectory contains the xslt stylesheets used by the toolkit. These files must be replaced with the files that have the same names as the files from your Web application server.

To verify the installation, open a Command Prompt window in your toolkit installation directory and type:

```
xtoolkit ./Testdata/mini/text.txt
```

You should then see something like this:

```
*****************************************************************
       IBM Document Connect for ASF Conversion Toolkit

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             Licensed Materials - Property of IBM

  US Government Users Restricted Rights - Use, duplication or
disclosure restricted by GSA ADP Schedule Contract with IBM Corp.
*****************************************************************

Windows XP, Version 5.1
Document Connect for ASF Build Number: 3.4.10.00
Xalan Version: XSLT4J Java 2.5.4
******Start******
Clearing the trace Dir=.\log
2 files deleted from .\log
00000 start---File: .\testdata\mini\text.txt
00000 done----File: .\testdata\mini\text.txt

******Done*******
```

If you see a start and done line, you have successfully installed the toolkit, and your /Testdata/mini subdirectory contains the conversion results and all intermediate data streams created during the conversion.

```
Directory of F:\dc4asftoolkit\TestData\mini
```

```
2004-04-28  11:50    <DIR>          .
2004-04-28  11:50    <DIR>          ..
2004-03-09  11:54                 5 text.txt
2004-04-28  12:25             3,785 text.txt.html
2004-04-28  12:25             3,785 text.txt.html.xml
2004-04-28  12:25             1,534 text.txtdcfdoc.xml
2004-04-28  12:25                31 text.txtdcflines.txt
2004-04-28  12:25                20 text.txtdcfout.xml
2004-04-28  12:25             3,653 text.txtEdiDoc.xml
2004-04-28  12:25                34 text.txtente.xml
2004-04-28  12:25             4,563 text.txtLC.txt
```

Now you are ready to use the Document Connect for ASF Conversion Toolkit.

Using the toolkit

The toolkit is invoked using the batch file xtoolkit.bat. The only parameter is the name of the input file. It must be the file name including the full or relative path. All other parameter settings and the Java classpath setting are done by the batch file.

All output created by the toolkit is written to the directory of the source file. Therefore, if you are planning to set up a test and development environment, you should organize the directory structure of your source files carefully.

16.1.1 Organizing your test data

The best way to organize the test data is to set up a Testdata root directory, with subdirectories for every paragraph you want to test; this is the way it has been done in the installation verification sample as well. The name of the paragraph is mini. Under the directory Testdata, you will find a directory named mini and the actual paragraph is in a file named text.txt.

This guarantees that all the test results are in the same place, and that you can run mass tests, where all test results are preserved and easy to find.

16.1.2 Running a single conversion

A single conversion is run by invoking the xtoolkit.bat file with the name of the file. The steps involved and what to do with the intermediate files is described using the installation verification sample:

1. Open a Command Prompt window in the toolkit install directory.
2. Type xtoolkit *<filename>.*
3. After the conversion has completed, change to the directory that contains the source file and check the results.

The result files have the following function and meaning:

File	**Description**	**What to do with that file**
text.txt	Input file	This is the original test data. When you modify this using a text editor, you can see how the changed input is mapped to the editor and how it is converted back. Compare these results to the outbound conversion result file text.txt.dcflines.txt.

File	Description	What to do with that file
text.txtente.xml	EnTe file; text.txt converted to <EnTe> XML	This is an intermediate file and should not be touched.
text.txtdcfdoc.xml	DCFDocument XML file	This is the result of the Java parser DocASFDCFDocument. It is the input to the docd2h.xsl stylesheet. When you are testing custom conversion directions in doccustom1.xsl, you can load this file into your XML Development Environment (for instance Altova XMLSpy) and apply docd2h.xsl, which includes and invokes doccustom1.xsl.
text.txt.html	XHTML file loaded into the editor	This is the docd2h.xsl (including doccustom1.xsl) conversion result. This is the data stream that is loaded into the editor. You can use Microsoft Internet Explore to see how the data will appear in the editor.
text.txt.html.xml	XHTML file loaded into the editor	This is the same as the text.txt.html; it only has a different file extension for more convenient processing using an XML editor. You can load this file into your XML Development Environment (for instance into Altova XMLSpy) to inspect the resulting XML structure.
text.txtEdiDoc.xml	Purified editor result	This is the result of the DocASFH2D.java purification. It should be the same as text.txt.html.xml. You can load this file into your XML Development Environment (for instance into Altova XMLSpy) and can apply the doch2d.xsl – which includes and loads doccustom2.xsl. This file can be used to test and debug your stylesheet.
text.txtdcfout.xml	doch2d.xsl output	This is the result of the doch2d.xsl (including doccustom2.xsl) conversion. This file is an intermediate file.
text.txtdcflines.txt	DCF/GML output	This is the result of the roundtrip conversion (excluding the HTML) that gets sent back to the host. You can load this file into a text editor and compare it with the original text.txt.
text.txtLC.txt	LINE commands	This file contains the LINE commands that would be sent to the host. There is nothing you can do with this file.

16.1.3 Running a mass conversion

The toolkit supports running mass conversions. If you pass the toolkit a file list, it will convert all of the files in that list. File lists can easily be created using the dir command in a Command Prompt window. Assuming you named all input files text.txt, you need to do the following:

1. Open a Command Prompt window in your TestData root directory.
2. Enter **`dir text.txt /s /b > masstest.filelist`**; this will create a file called masstest.filelist with all the text.txt files under the TestData root.

For example, if your testdata is in the TestData directory of the toolkit, your file list will look as follows:

```
F:\toolkit\TestData\FVSVDEKLEND\text.txt
F:\toolkit\TestData\FVSVDEKLSTART\text.txt
F:\toolkit\TestData\GMLTEST\text.txt
F:\toolkit\TestData\HA40070\text.txt
F:\toolkit\TestData\HA400921\text.txt
F:\toolkit\TestData\HA400922\text.txt
F:\toolkit\TestData\HA400924\text.txt
F:\toolkit\TestData\ha4011f0\text.txt
F:\toolkit\TestData\ha40190\text.txt
F:\toolkit\TestData\HA40202\text.txt
F:\toolkit\TestData\HA40252\text.txt
F:\toolkit\TestData\ha40310\text.txt
F:\toolkit\TestData\ha40373\text.txt
F:\toolkit\TestData\PTR3885\text.txt
F:\toolkit\TestData\wahltext\text.txt
```

If the toolkit is invoked with the name of the file list file, it will convert all the files listed. Open a Command Prompt window in your toolkit directory and enter:

```
xtoolkit f:\toolkit\testdata\masstest.filelist
```

The result may look as follows:

```
*****************************************************************
       IBM Document Connect for ASF Conversion Toolkit

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             Licensed Materials - Property of IBM

  US Government Users Restricted Rights - Use, duplication or
disclosure restricted by GSA ADP Schedule Contract with IBM Corp.
*****************************************************************

Windows XP, Version 5.1
Document Connect for ASF Build Number: 3.4.10.00
Xalan Version: XSLT4J Java 2.5.4
******Start******
Clearing the trace Dir=.\log
2 files deleted from .\log
==Processing a filelist==
--Trace disabled
00001 start---File: F:\Werkzeug\TestData\FVSVDEKLEND\text.txt
00001 done----File: f:\werkzeug\testdata\fvsvdeklend\text.txt

00002 start---File: F:\Werkzeug\TestData\FVSVDEKLSTART\text.txt
*Line: Endtag......: null -closing: OL;
00002 done----File: f:\werkzeug\testdata\fvsvdeklstart\text.txt

00003 start---File: F:\Werkzeug\TestData\GMLTEST\text.txt
00003 done----File: f:\werkzeug\testdata\gmltest\text.txt

00004 start---File: F:\Werkzeug\TestData\HA40070\text.txt
00004 done----File: f:\werkzeug\testdata\ha40070\text.txt

00005 start---File: F:\Werkzeug\TestData\HA400921\text.txt
00005 done----File: f:\werkzeug\testdata\ha400921\text.txt
```

```
00006 start---File: F:\Werkzeug\TestData\HA400922\text.txt
00006 done----File: f:\werkzeug\testdata\ha400922\text.txt

00007 start---File: F:\Werkzeug\TestData\HA400924\text.txt
00007 done----File: f:\werkzeug\testdata\ha400924\text.txt

00008 start---File: F:\Werkzeug\TestData\ha4011f0\text.txt
00008 done----File: f:\werkzeug\testdata\ha4011f0\text.txt

00009 start---File: F:\Werkzeug\TestData\ha40190\text.txt
00009 done----File: f:\werkzeug\testdata\ha40190\text.txt

00010 start---File: F:\Werkzeug\TestData\HA40202\text.txt
*Line: Endtag......: FETT -closing: UL;
00010 done----File: f:\werkzeug\testdata\ha40202\text.txt

00011 start---File: F:\Werkzeug\TestData\HA40252\text.txt
*Line: Endtag......: NORMAL -closing: UL;
00011 done----File: f:\werkzeug\testdata\ha40252\text.txt

00012 start---File: F:\Werkzeug\TestData\ha40310\text.txt
00012 done----File: f:\werkzeug\testdata\ha40310\text.txt

00013 start---File: F:\Werkzeug\TestData\ha40373\text.txt
00013 done----File: f:\werkzeug\testdata\ha40373\text.txt

00014 start---File: F:\Werkzeug\TestData\PTR3885\text.txt
00014 done----File: f:\werkzeug\testdata\ptr3885\text.txt

00015 start---File: F:\Werkzeug\TestData\wahltext\text.txt
00015 done----File: f:\werkzeug\testdata\wahltext\text.txt

==End filelist===========
10 suspect files
==It took 13329 milliseconds
************Start DocObjCache Statistics***********
* Invoked.. 30
* Hits..... 28
* Faults... 2
* Keys.....
* Key...... template:.\www\xsl\doch2d.xsl
* Key...... template:.\www\xsl\docd2h.xsl
************End   DocObjCache Statistics***********
******Done*******
```

Notice that for every file that is processed there is a start and a done line. The example also shows extra messages and references to “suspect files”. The toolkit attempts to provide additional diagnostics based on the DCF source files and the definitions in DocXSLConversion.xml. What these messages mean and what to do with suspect files is described in the next chapter.

Mass conversions are very useful because they allow you to check the following:

Were there any paragraphs that were not convert at all and if so, why?
Are there suspect paragraphs and what potential problems do they have?
Are the definitions in DocXSLConversion.xml correct?

Unfortunately there is no convenient way for you to unload the ASF GIL and store the ASF paragraphs as ASCII files on a PC. You only have the “Print GIL” utility that includes extra processing for data from an emulator session.

Diagnostics provided with the toolkit

When you convert a paragraph (single or via mass conversion) you may receive diagnostic messages in the toolkit protocol. If you run a mass conversion, a file list with all suspect files is created automatically. The file is called something like `masstest.filelist.suspects.filelist` and can be used by the toolkit immediately.

16.1.4 Diagnostic messages

A set of diagnostic messages is created by the Java parser/converter based on the structure of the paragraph and the definitions in DocXSLConversion.xml. The table below shows the messages and gives an explanation of the messages.

Message	Explanation
`*Line` *`x`* `,Column` *`y`* `Tag=` *`“tagname”`* `paragraph beginner/ender found in the middle of a line`	The *tagname* tag should begin and end a paragraph (it has p=”Y” in DocXSLConversion.xml) but instead has appeared in the middle of a source line.
`*Line:` *`x`* `Autoclosing.: <AUTOCLOSE tag="`*`tagname`*`" />`	The *tagname* tag is defined as a paired tag (end=”byendtag”) but there was no end tag in the paragraph.
`*Line: x Endtag......:` *`“tagx”`* `-closing:` *`“tagy”`*`;`	The *tagx* tag is defined as a paired tag (end=”byendtag”), but the matching end tag was not at the right place. Another paired tag (*tagy*) contains *tagx* and was closed earlier.
`*Line: x Isolated Tag:` *`“tagname”`*	The *tagname* tag is defined as an endtag but no matching start tag was found.

Unfortunately no general recommendations can be given for these messages, however the messages definitely point out inconsistent usage of custom tags in DocXSLConversion.xml.

- The “autoclosing” and “isolated tag” messages normally do not indicate a severe problem as the transformation back to DCF is usually correct.
- Paragraph beginners/enders in the middle of a line do not necessarily cause problems either and are easy to fix. The DCF formatting result is usually not affected.
- tagx closing tagy usually causes problems because the display in the editor and even the transformation back can be affected. Fixing those problems may also affect the DCF formatting results.

You should attempt to minimize the number of diagnostic messages. If you have many diagnostic messages, your definitions in DocXSLConversion.xml may not be correct. You definitely should check the conversion results of ASF paragraphs with problems, and also load these paragraphs into the editor to see how they appear, and how a changed paragraph is formatted by DCF.