

ASF 3.4

Document Connect for ASF

Installation on z/OS Server
Using WebSphere Application Server V6.0

Edition: 1.1

02 June 2008

1 Table of Contents

1	TABLE OF CONTENTS	2
2	PREREQUISITES	4
3	INSTALLING THE APPLICATION	5
	Preparing the application installation	5
	Installing a new application (Step 1)	7
	Installing a new application (Step 2)	8
	Installing a new application (Step 3)	9
	Installing a new application (Step 4)	10
	Installing a new application (Step 5)	11
	Starting the application	11
4	MIGRATING CONFIGURATION FILES FROM 3.3 TO 3.4	12
5	ACTIVATING THE ASF HELP	13
6	SETTING UP A CONNECTION TO DB2	16
	Defining a data source	16
	Defining JAAS – J2C authentication data	19
	Configuring the connections	21
7	SETTING UP A CONNECTION TO IMS VIA IMS CONNECT	22
	Defining a J2C connection factory	22
	Defining JAAS – J2C authentication data	24
	Configuring the connections	26
8	SETTING UP A CONNECTION TO IMS VIA WEBSHERE MQ	27
	Defining a queue connection factory	27
	Defining an input and an output queue	29
	Defining JAAS – J2C authentication data	33
	Configuring the connections	35

9	SETTING UP A CONNECTION TO CICS VIA THE CICS TRANSACTION GATEWAY	36
	Defining a J2C connection factory	36
	Defining JAAS – J2C authentication data	38
	Configuring the connections	40
10	SETTING UP A CONNECTION TO CICS VIA WEBSHERE MQ	41
	Defining a queue connection factory	41
	Defining an input and an output Queue	43
	Defining JAAS – J2C authentication data	47
	Configuring the connections	49
11	ACTIVATING DICTIONARIES FOR SPELL CHECKING	50
12	USING ONE SET OF CONFIGURATION FILES	51
13	PROTECTING ACCESS TO THE CONFIGURATION SERVLETS	53
14	PRINT PREVIEW CONFIGURATION	55
	AFP Resources	55
	Copy the AFP Resources into USS	55
	Direct Read from Partitioned Datasets	56
	Using the AFP Viewer or a PDF viewer	58
15	APPLYING MAINTENANCE	60
16	THE CONVERSION TOOLKIT	62
	Hardware and software requirements	62
	Installing the toolkit	62
	Using the toolkit	64
	Diagnostics provided with the toolkit	68

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
/local/WebSphere/V6R0

- 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 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

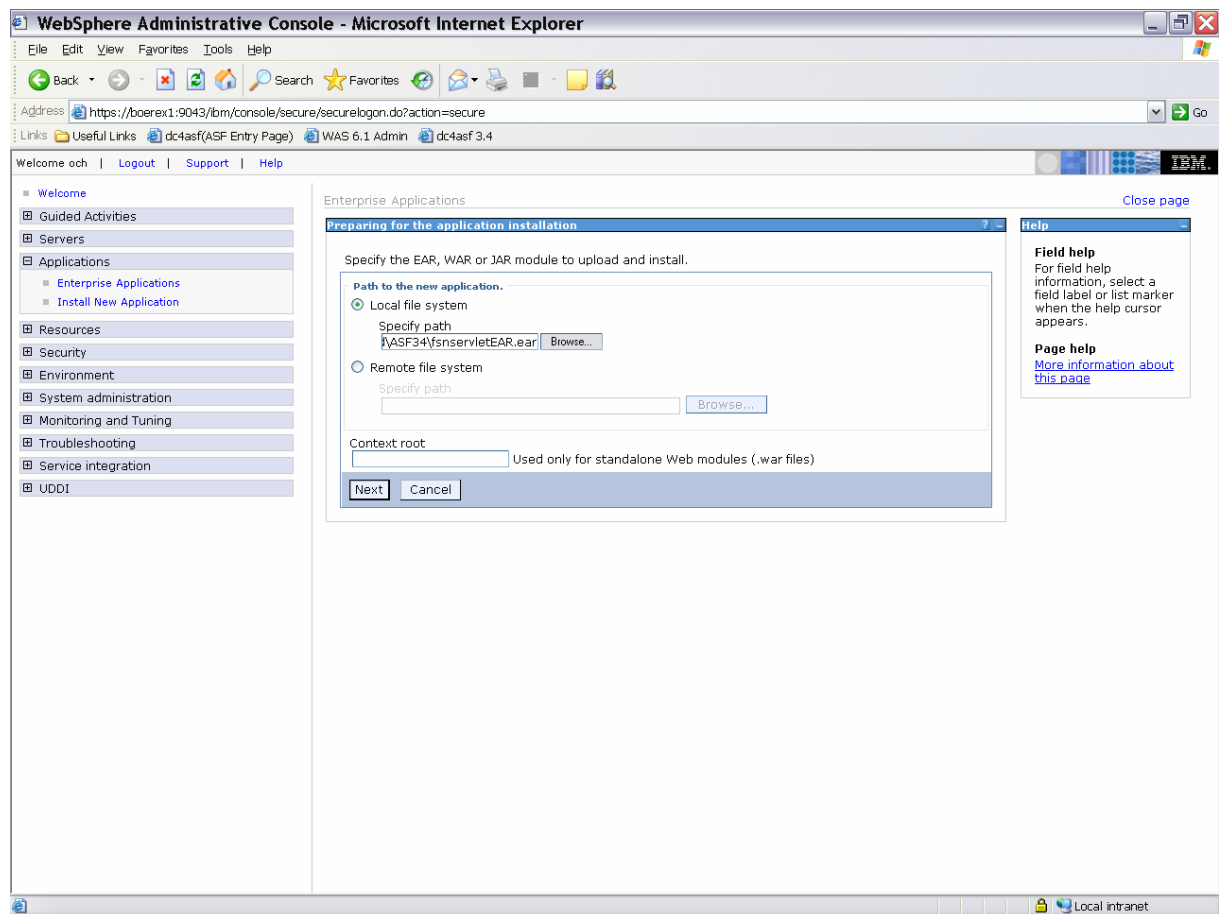
3 Installing the application

Preparing the application installation

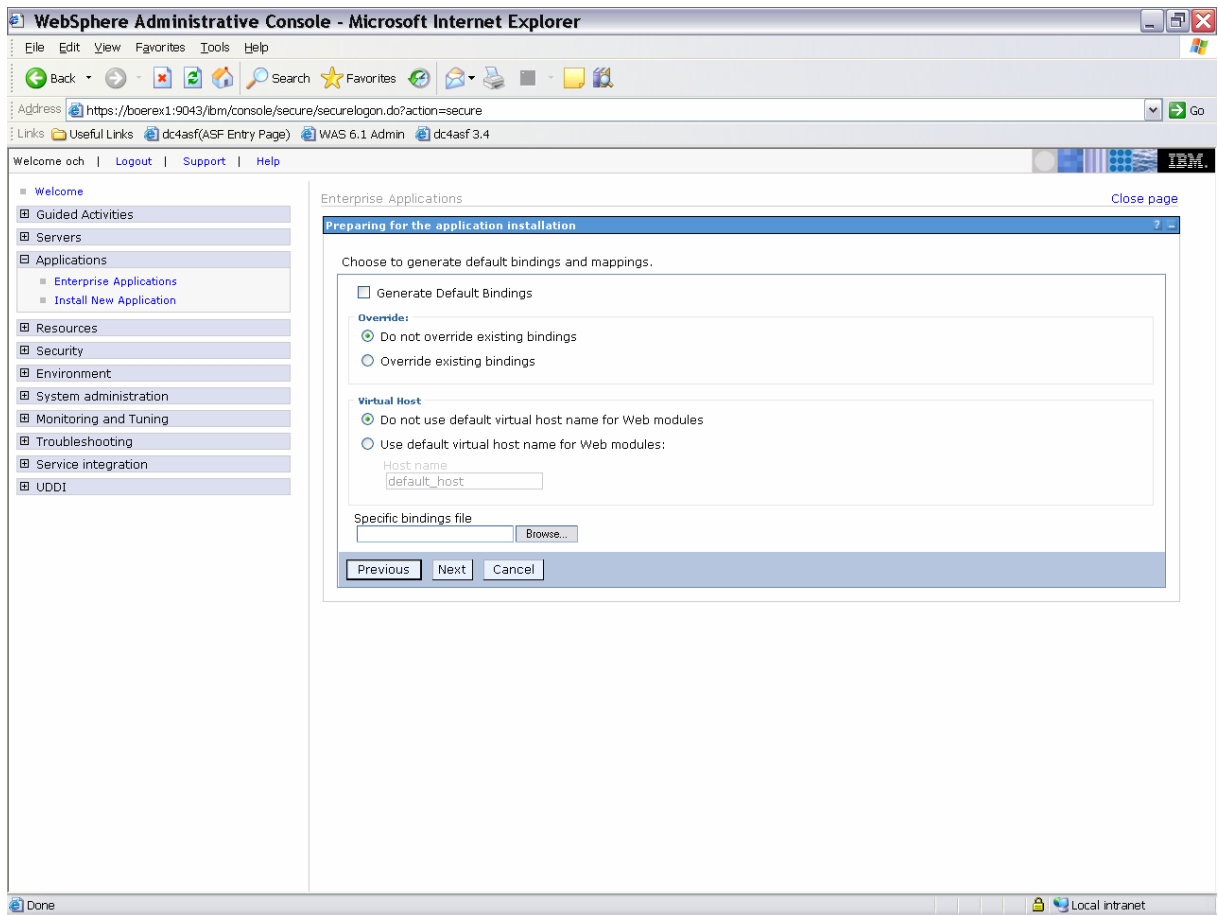
Open [Application](#) > [Install New Application](#)

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

`E:/Programs/IBM/ASF34/fnservlet.ear`



Select [Next](#). The file "fnservlet.ear" is now loaded on the server.



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:

/local/WebSphere/V6R0/AppServer/profile/default/installedApps/

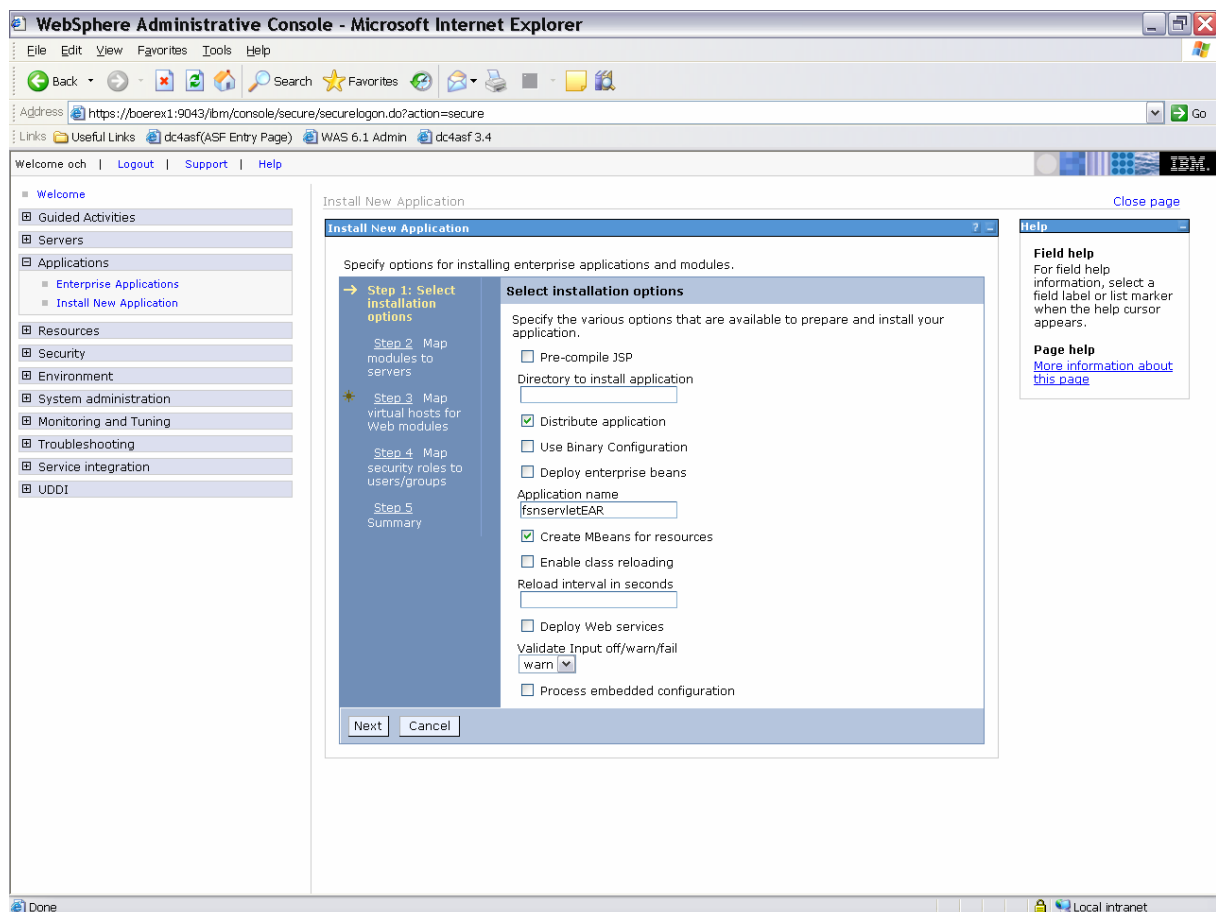
- 'xxxxx' is the cell name
- 'fsnservlet' is the application name.

[Application Name:](#)

Specify a unique name, for example 'fsnservletEAR'.

[Class Reloading:](#)

Do not enable class reloading.



Click [Next](#) to finish Step 1 and go to Step 2.

Installing a new application (Step 2)

The screenshot shows the WebSphere Administrative Console in a Microsoft Internet Explorer browser window. The address bar displays the URL: `https://boerex1:9043/lbm/console/secure/securelogin.do?action=secure`. The console interface includes a navigation menu on the left with categories like 'Welcome', 'Guided Activities', 'Servers', 'Applications', 'Resources', 'Security', 'Environment', 'System administration', 'Monitoring and Tuning', 'Troubleshooting', 'Service integration', and 'UDDI'. The main content area is titled 'Install New Application' and contains a wizard with five steps. Step 2, 'Map modules to servers', is the active step. It includes a section for 'Map modules to servers' with a text input field containing the server address: `WebSphere:cell=crex1dm,node=boerex1.boeblingen.de.ibm.com,server=websrvnd`. Below this is a table with columns for 'Module', 'URI', and 'Server'. The table lists three modules: 'docstaticweb', 'fsnservlet', and 'EHS3.01'. At the bottom of the wizard, there are 'Previous', 'Next', and 'Cancel' buttons.

Install New Application Close page

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 the modules contained in your application. Modules can be installed on the same application server or dispersed among several application servers. Specify the Web servers as targets that will serve as routers for requests to this application. The plug-in configuration file (`cfg.xml`) for each Web server is generated based on the applications which are routed through it.

Clusters and Servers:

`WebSphere:cell=crex1dm,cluster=ReXCluster`
`WebSphere:cell=crex1dm,node=boerex1.boeblingen.de.ibm.com,server=websrvnd` Apply

Select	Module	URI	Server
<input type="checkbox"/>	docstaticweb	docstaticweb.war,WEB-INF/web.xml	WebSphere:cell=crex1dm,node=boerex1.boeblingen.de.ibm.com,server=websrvnd
<input type="checkbox"/>	fsnservlet	fsnservlet.war,WEB-INF/web.xml	WebSphere:cell=crex1dm,node=boerex1.boeblingen.de.ibm.com,server=websrvnd
<input type="checkbox"/>	EHS3.01	IEHS_WAS602.war,WEB-INF/web.xml	WebSphere:cell=crex1dm,node=boerex1.boeblingen.de.ibm.com,server=websrvnd

Previous Next Cancel

No updates are required for Step 2. Click [Next](#) to finish Step 2 and go to Step 3.

Installing a new application (Step 3)

The screenshot shows the WebSphere Administrative Console interface in Microsoft Internet Explorer. The browser address bar displays `https://boerex1:9043/ibm/console/secure/securelogin.do?action=secure`. The console page title is "WebSphere Administrative Console - Microsoft Internet Explorer".

The main content area is titled "Install New Application" and contains a wizard with five steps:

- Step 1: Select installation options
- Step 2: Map modules to servers
- Step 3: Map virtual hosts for Web modules** (current step)
- Step 4: Map security roles to users/groups
- Step 5: Summary

Under "Map virtual hosts for Web modules", there is a section "Apply Multiple Mappings" with a table:

Select	Web module	Virtual host
<input type="checkbox"/>	docstatiweb	default_host
<input type="checkbox"/>	fnservlet	default_host
<input type="checkbox"/>	EHS3.01	default_host

At the bottom of the wizard, there are buttons for "Previous", "Next", and "Cancel".

On the right side, there is a "Help" section with "Field help" and "Page help" links.

No updates are required for Step 3. Click [Next](#) to finish Step 3 and go to Step 4.

Installing a new application (Step 4)

The screenshot shows the WebSphere Administrative Console interface in Microsoft Internet Explorer. The browser window title is "WebSphere Administrative Console - Microsoft Internet Explorer". The address bar shows the URL: <https://boerex1:9043/lbm/console/secure/securelogin.do?action=secure>. The page content is titled "Install New Application" and includes a sidebar with navigation options like "Welcome", "Guided Activities", "Servers", "Applications", "Resources", "Security", "Environment", "System administration", "Monitoring and Tuning", "Troubleshooting", "Service integration", and "UDDI".

The main content area is titled "Install New Application" and contains the following text: "Specify options for installing enterprise applications and modules." Below this is a section titled "Map security roles to users/groups" with the instruction: "Each role that is defined in the application or module must map to a user or group from the domain user registry." There are two buttons: "Look up users" and "Look up groups".

Select	Role	Everyone?	All authenticated?	Mapped users	Mapped groups
<input type="checkbox"/>	dc4asfconfig	<input type="checkbox"/>	<input type="checkbox"/>		

At the bottom of the main content area are buttons for "Previous", "Next", and "Cancel". On the right side, there is a "Help" section with "Field help" and "Page help" instructions.

No updates are required for Step 4. Click [Next](#) to finish Step 4 and go to Step 5.

Installing a new application (Step 5)

The screenshot shows the WebSphere Administrative Console in a Microsoft Internet Explorer browser window. The address bar shows the URL: <https://boerex1:9043/lbm/console/secure/securelogin.do?action=secure>. The page title is "WebSphere Administrative Console - Microsoft Internet Explorer".

The main content area is titled "Install New Application" and contains a "Summary" section for installing enterprise applications and modules. The summary table lists the following options and values:

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	fsnservlet
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

At the bottom of the summary section are three buttons: "Previous", "Finish", and "Cancel".

On the left side of the console, there is a navigation menu with the following items: Welcome, Guided Activities, Servers, Applications (with sub-items Enterprise Applications and Install New Application), Resources, Security, Environment, System administration, Monitoring and Tuning, Troubleshooting, Service integration, and UDDI.

On the right side, there is a "Help" section with "Field help" and "Page help" instructions.

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:

/local/WebSphere/V6R0/AppServer/profile/default/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)

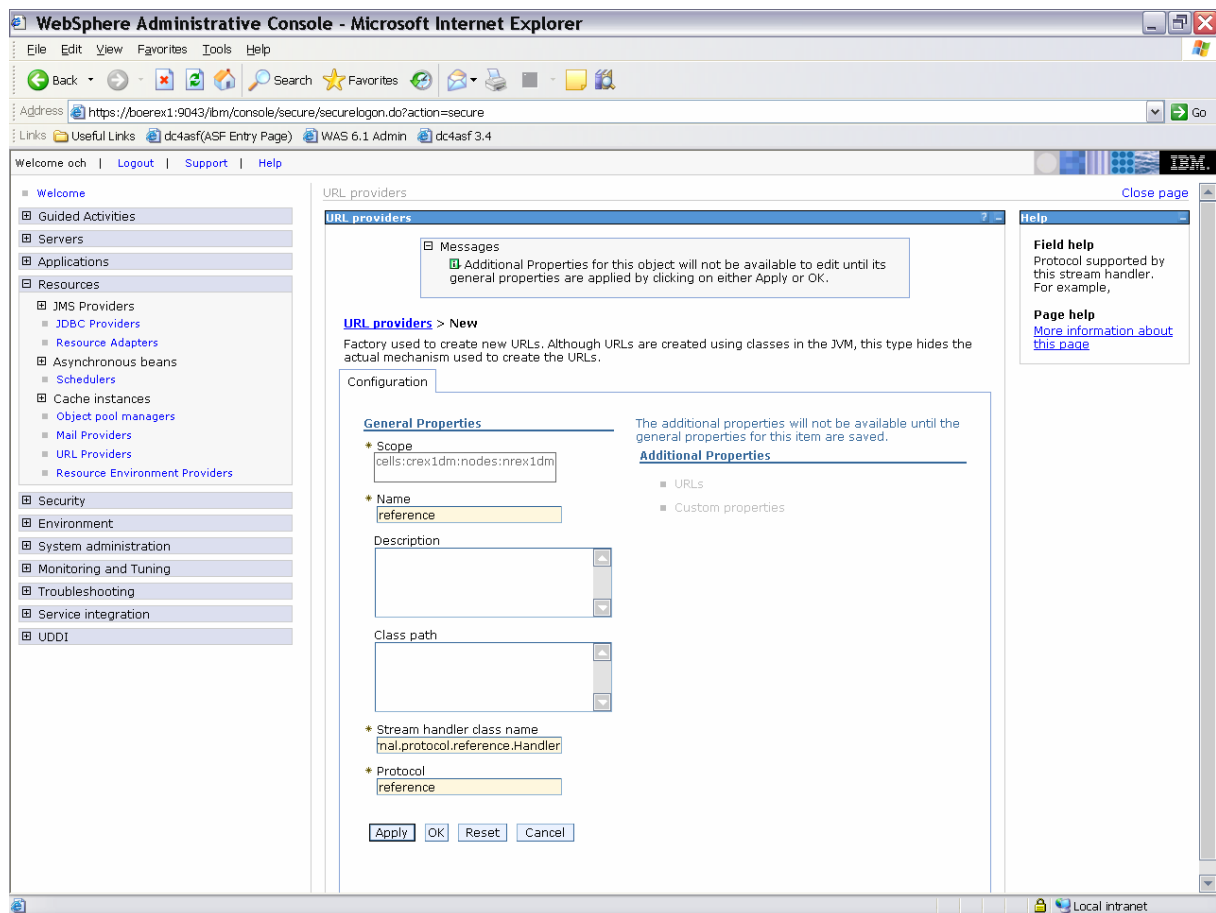
5 Activating the ASF Help

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



Click [Apply](#) and save your modifications.

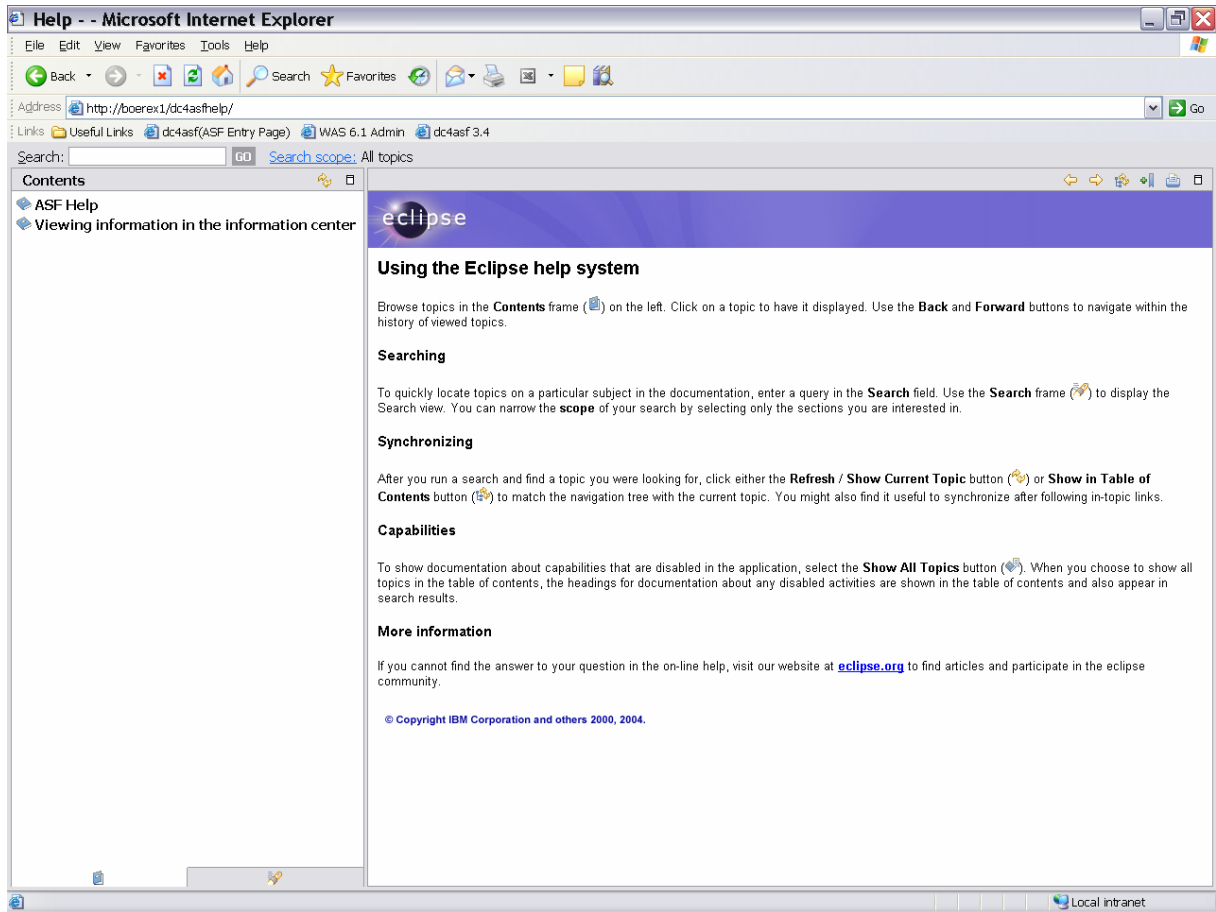
Next change the class loader mode for the module IEHS_WAS602.war to "Parent first".

Open [Enterprise applications](#) > [fnservletEAR](#) > [Web module](#) > [IEHS_WAS602.war](#)

The screenshot shows the WebSphere Administrative Console in Microsoft Internet Explorer. The browser address bar displays <https://boerex1:9043/lbm/console/secure/securelogin.do?action=secure>. The console interface includes a navigation menu on the left with categories like Welcome, Guided Activities, Servers, Applications, Resources, Security, Environment, System administration, Monitoring and Tuning, Troubleshooting, Service integration, and UDDI. The main content area is titled 'Enterprise Applications' and shows the configuration for the 'IEHS_WAS602.war' web module. The 'General Properties' section includes fields for URI (IEHS_WAS602.war), Alternate deployment descriptor, Starting weight (10000), and Class loader mode (set to 'Parent First'). The 'Additional Properties' section lists various configuration options with links to view their details. A 'Field help' box on the right explains that the class loader mode specifies whether classes are loaded using the parent class loader before the application class loader. At the bottom of the configuration area, there are buttons for 'Apply', 'OK', 'Reset', and 'Cancel'.

Click [Apply](#) and save your modifications.

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



6 Setting up a connection to DB2

Defining a data source

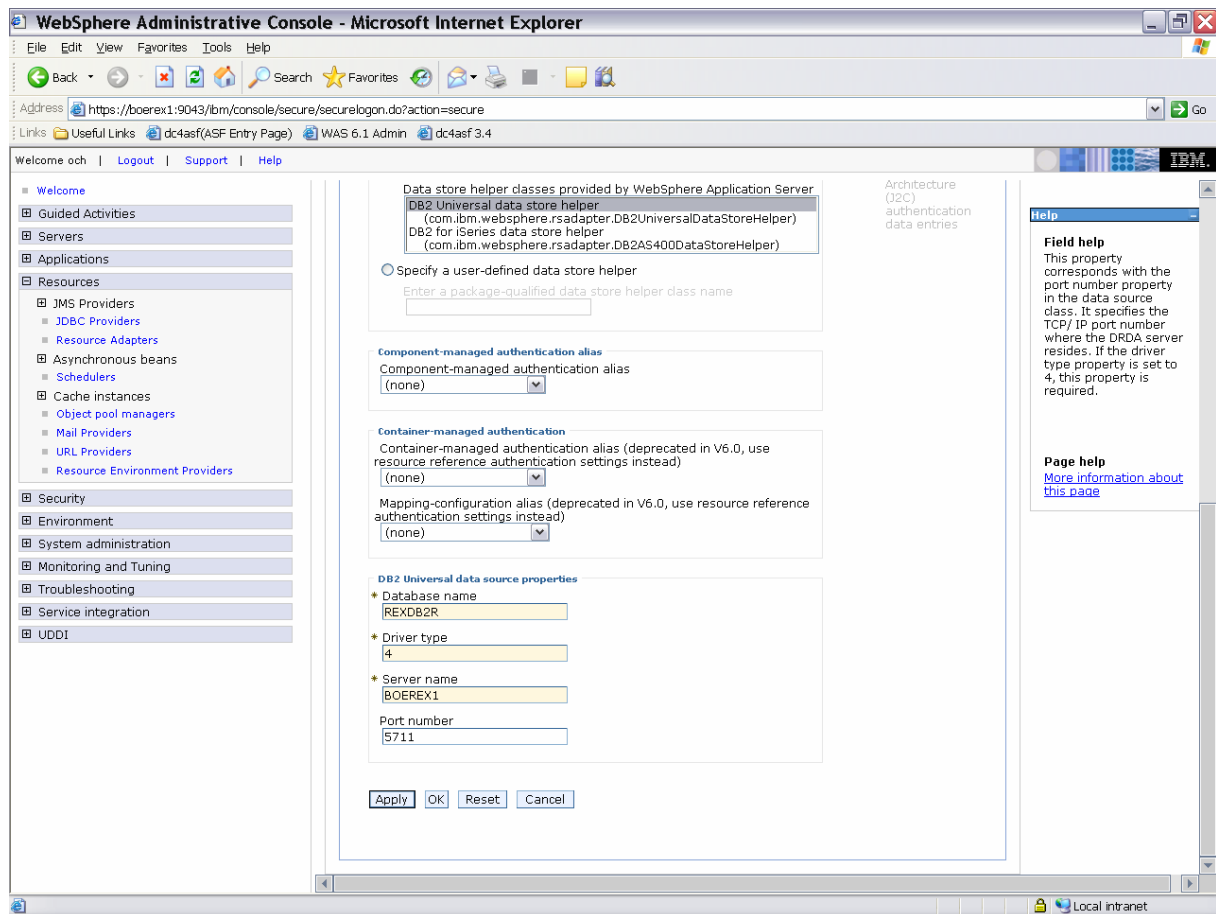
Open [Resources](#) > [JDBC Providers](#) > [DB2 Universal JDBC Driver Provider](#) > [Data sources](#) > [New](#)

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

The screenshot shows the WebSphere Administrative Console interface in Microsoft Internet Explorer. The browser address bar displays `https://boerex1.9043.ibm/console/secure/securelogin.do?action=secure`. The console's left-hand navigation pane is expanded to 'Resources' > 'JDBC Providers' > 'DB2 Universal JDBC Driver Provider' > 'Data sources' > 'New'. The main content area shows a 'Messages' box with a warning icon and text: 'Changes have been made to your local configuration. Click Save to apply changes to the master configuration. The server may need to be restarted for these changes to take effect. Additional Properties for this object will not be available to edit until its general properties are applied by clicking on either Apply or OK.' Below this, the breadcrumb path is 'JDBC providers > DB2 Universal JDBC Driver Provider > Data sources > New'. A descriptive paragraph states: '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.' The 'Configuration' section is active, showing 'General Properties' with the following fields: 'Scope' (cells:crex1dm:nodes:nrex1a), 'Name' (ASF Connection), 'JNDI name' (jdbc/FSNConnection), and a checked checkbox for 'Use this Data Source in container managed persistence (CMP)'. The 'Description' dropdown is set to 'DB2 Universal Driver Datasource'. The 'Data store helper class name' section shows a list of available classes, with 'DB2 Universal data store helper (com.ibm.websphere.rsadapter.DB2UniversalDataStoreHelper)' selected. On the right side, there is a 'Field help' section for the JNDI name and a 'Page help' section with a link to 'More information about this page'. The bottom of the console shows a 'Done' status and a 'Local intranet' security indicator.

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



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.

The screenshot shows the WebSphere Administrative Console interface in Microsoft Internet Explorer. The main content area displays a table of custom properties for the selected data source. The 'currentSchema' property is highlighted, showing its value as 'SC1BAS'. Other properties include resultSetHoldability, currentPackageSet, readOnly, deferPrepares, cliSchema, retrieveMessagesFromServerOnGetMessage, clientAccountingInformation, and clientApplicationInformation.

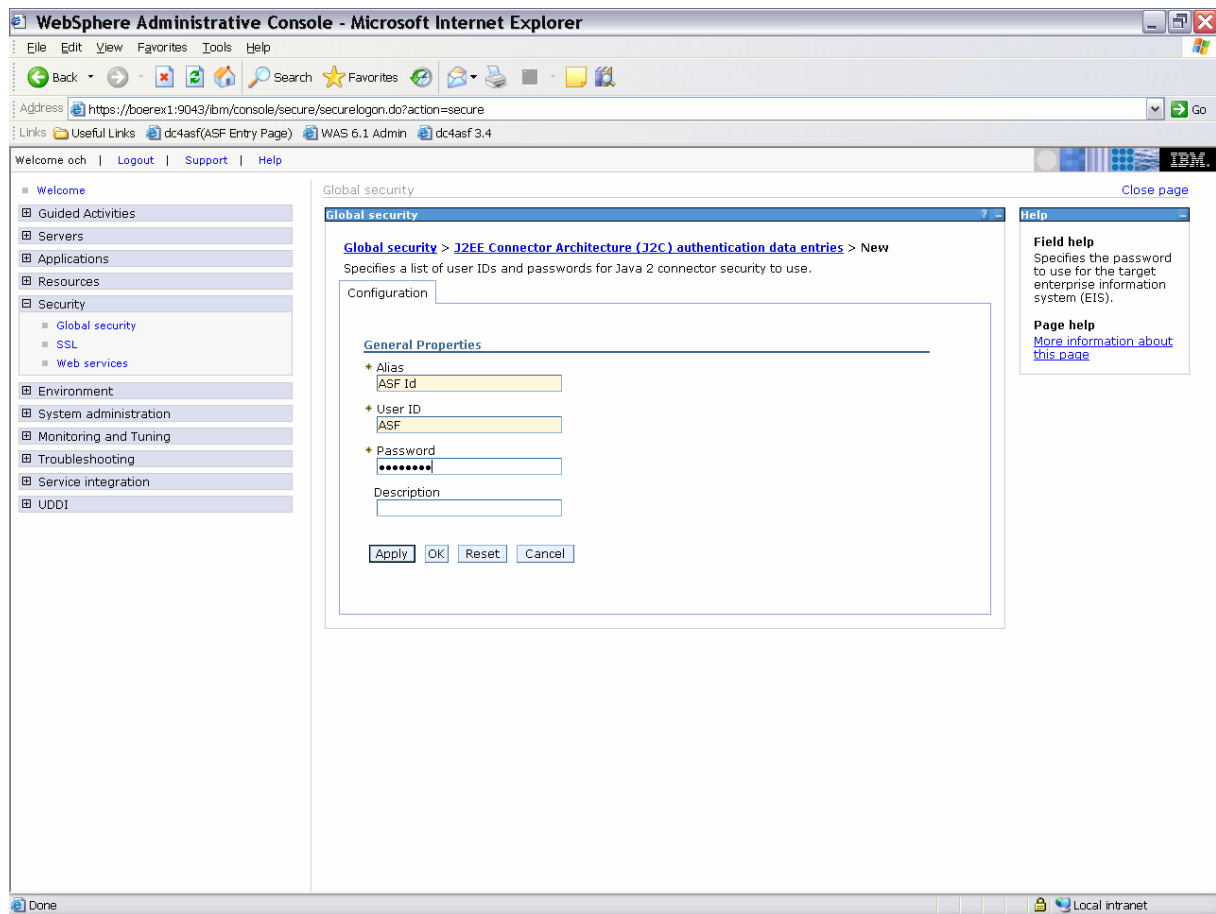
Property Name	Value	Description	Default Value
resultSetHoldability	2	Determine whether ResultSets are closed or kept open when committing a transaction. The possible values are: 1 (HOLD_CURSORS_OVER_COMMIT), 2 (CLOSE_CURSORS_AT_COMMIT).	false
currentPackageSet		This property is used in conjunction with 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 undescribed 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	false

Click [Apply](#) and save your modifications.

Defining JAAS – J2C authentication data

Open [Security](#) > [Global Security](#) > [J2EE Connector architecture \(J2C\) authentication data entries](#) > [New](#)

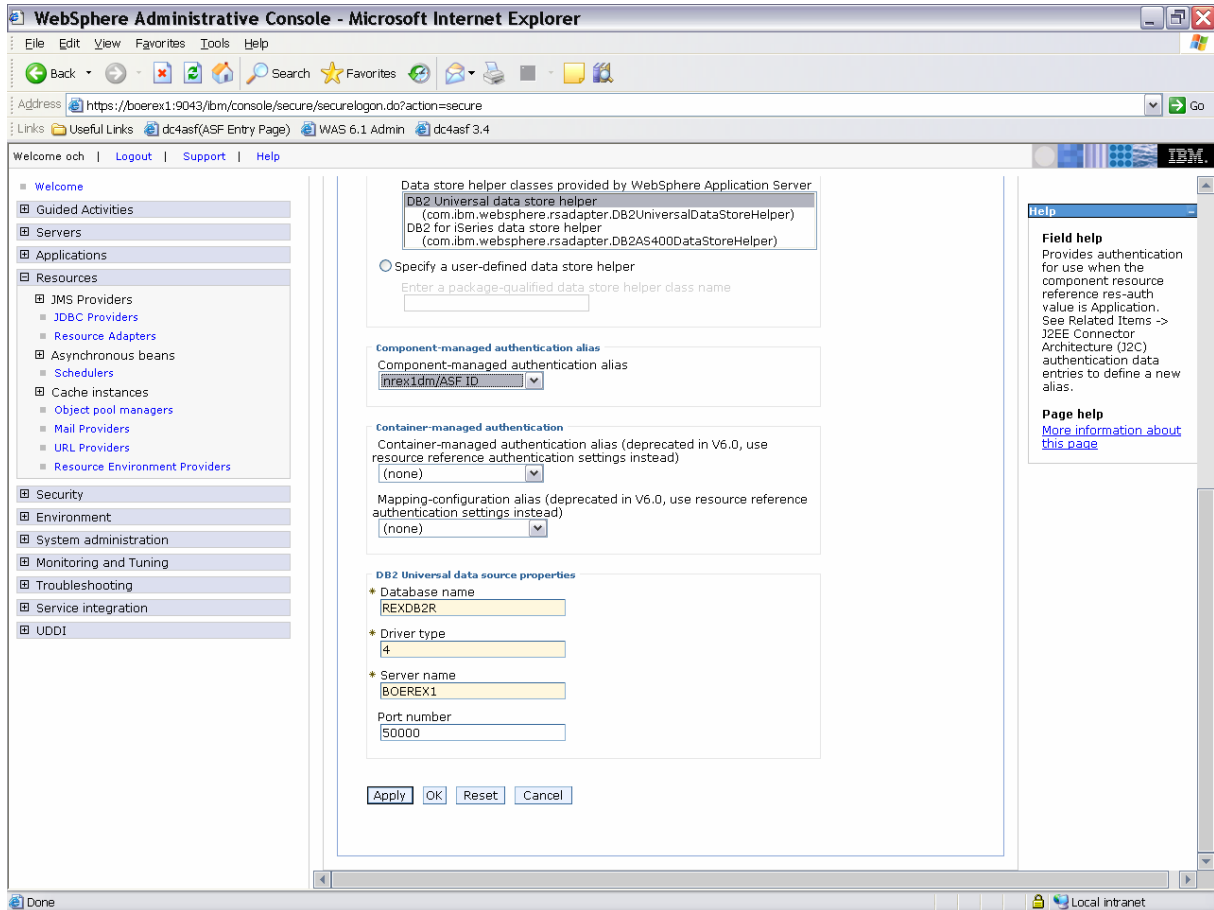
Enter an alias and a valid User ID and password for DB2 access.



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.



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
V "3.4.10.00"
Licensed Materials - Property of IBM 5655-002 © Copyright IBM Corp. 2003, 2007 All Rights Reserved.
390-z/OS 01.08.00

- 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						
<input type="checkbox"/>	DB2DB2R	<table border="1"><tr><td>Connection type</td><td>DB2</td></tr><tr><td>Data Source JNDI</td><td>jdbc/FSNConnection</td></tr><tr><td>Stored procedure name</td><td>DE#07804.FSNWSP1</td></tr></table>	Connection type	DB2	Data Source JNDI	jdbc/FSNConnection	Stored procedure name	DE#07804.FSNWSP1
Connection type	DB2							
Data Source JNDI	jdbc/FSNConnection							
Stored procedure name	DE#07804.FSNWSP1							

Additional connections
Customer specific data

OK Reset Help

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, imskonncn/ASF34IMS9ConnectionFactory.

The screenshot shows the WebSphere Administrative Console in Microsoft Internet Explorer. The browser address bar displays `https://boerex1:9043/lbm/console/secure/securelogin.do?action=secure`. The page title is "WebSphere Administrative Console - Microsoft Internet Explorer".

The main content area is titled "Resource adapters" and shows the configuration page for a new J2C connection factory. The breadcrumb navigation is "Resource adapters > IMS Connector for Java > J2C connection factories > New".

The configuration page includes a "Messages" box at the top stating: "Additional Properties for this object will not be available to edit until its general properties are applied by clicking on either Apply or OK." Below this is a descriptive paragraph about connection factories.

The "Configuration" section contains the following fields:

- General Properties:**
 - Scope:** `cells:crex1dm:nodes:nrex1a`
 - Name:** `ASF34IMS9ConnectionFactory`
 - JNDI name:** `/ASF34IMS9ConnectionFactory`
 - Description:** (empty text area)
 - Connection factory interface:** `javax.resource.cci.ConnectionFactory`
 - Category:** (empty text area)
 - Component-managed authentication alias:** `(none)`
- Additional Properties:** A list of checkboxes for "Connection pool properties", "Advanced connection factory properties", and "Custom properties", all of which are currently unchecked.
- Related Items:** A list of links including "J2EE Connector Architecture (J2C) authentication data entries".

On the right side of the page, there is a "Help" panel with "Field help" and "Page help" sections. The "Field help" section explains the JNDI name field. The "Page help" section provides a link to "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

The screenshot shows the WebSphere Administrative Console interface. The breadcrumb navigation is: Resource adapters > IMS Connector for Java > J2C connection factories > ASF34IMS9ConnectionFactory > Custom properties. The main content area displays a table of preferences for the connection factory.

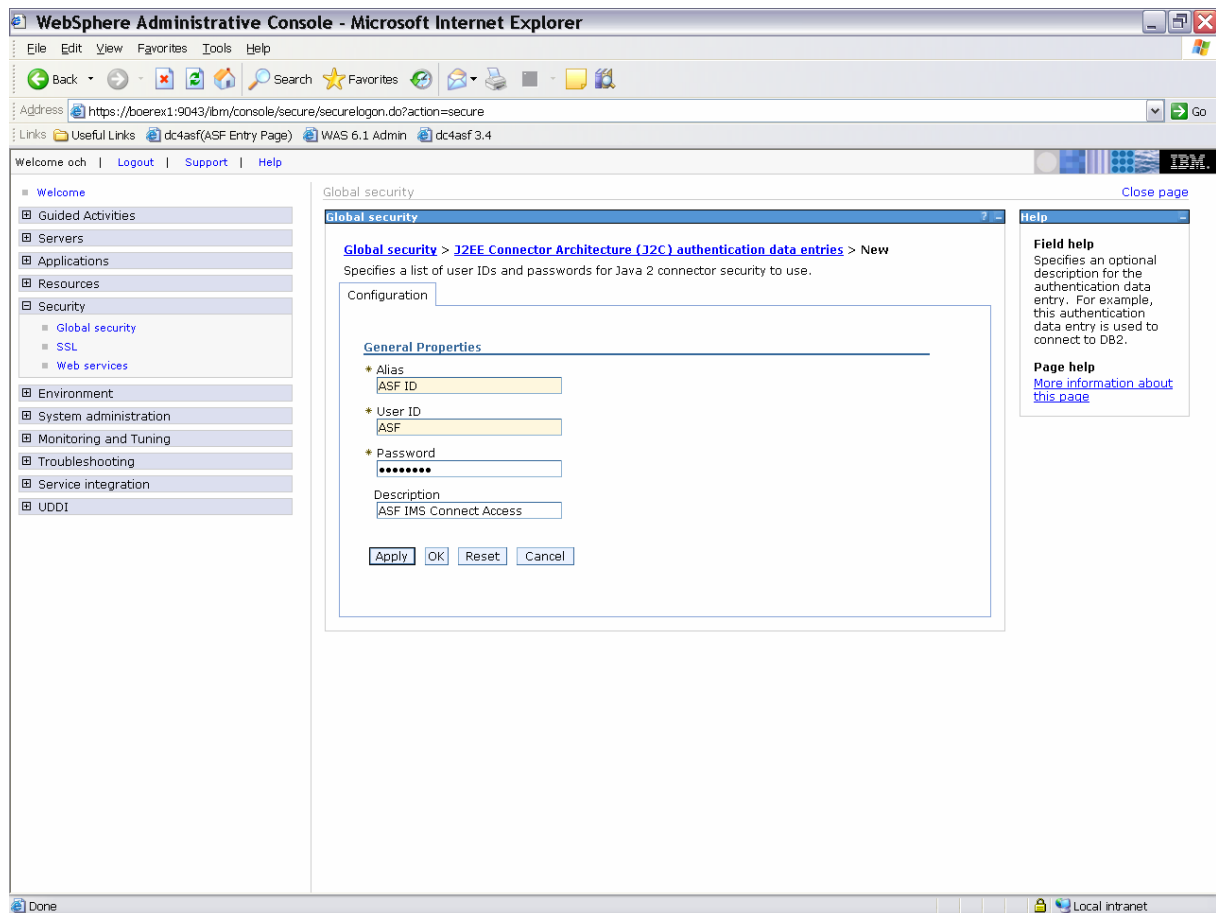
Name	Value	Description	Required
CMODedicated	FALSE	Indicates if sockets are dedicated to specific CMO clients.	false
IMSConnectName			false
MFSXMIRepositoryID	default	Unique identifier of MFS XMI Repository.	false
MFSXMIRepositoryURI			false
SSLEnabled	FALSE	Indicates if SSL is enabled for this connection 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
TraceLevel	1	Level of information to be traced.	false
UserName			false
Total 17			

Click [Apply](#) to save your modifications.

Defining JAAS – J2C authentication data

Open [Security](#) > [Global Security](#) > [J2EE Connector architecture \(J2C\) authentication data entries](#) > [New](#)

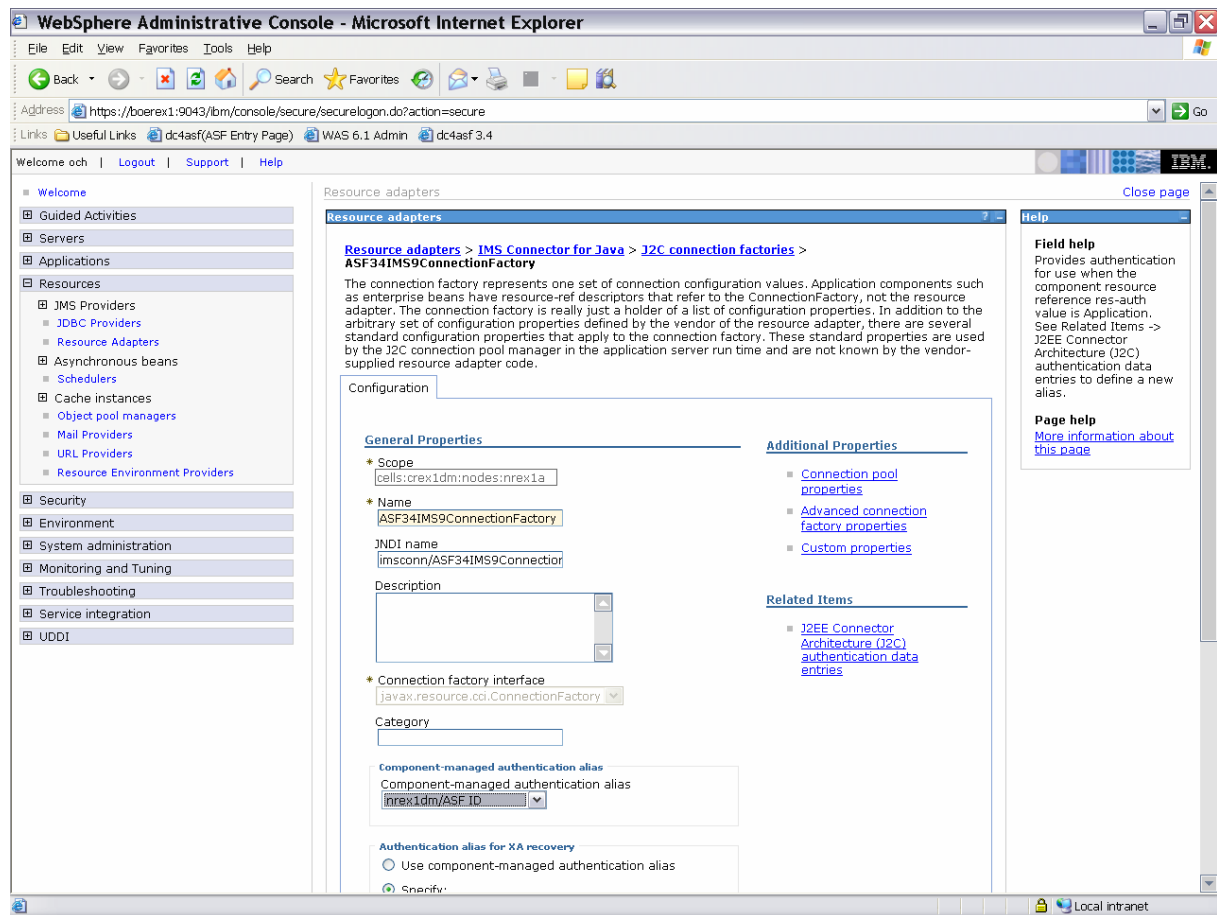
Enter an alias and a valid user ID and password for the IMS Connect connection.



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.



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.

Remove connection	Host nickname	Host connection data										
<input type="checkbox"/>	sc119ic34	<table><tr><td>Connection type</td><td>IMS</td></tr><tr><td>Conversational IMS Processing</td><td><input type="checkbox"/></td></tr><tr><td>J2C Connection Factory JNDI</td><td>imsconn/ASF34IMS9ConnectionFactory</td></tr><tr><td>XCode prefix</td><td></td></tr><tr><td>XCode</td><td>SC1E</td></tr></table>	Connection type	IMS	Conversational IMS Processing	<input type="checkbox"/>	J2C Connection Factory JNDI	imsconn/ASF34IMS9ConnectionFactory	XCode prefix		XCode	SC1E
Connection type	IMS											
Conversational IMS Processing	<input type="checkbox"/>											
J2C Connection Factory JNDI	imsconn/ASF34IMS9ConnectionFactory											
XCode prefix												
XCode	SC1E											
<input type="checkbox"/>	sc219ic34	<table><tr><td>Connection type</td><td>IMS</td></tr><tr><td>Conversational IMS Processing</td><td><input type="checkbox"/></td></tr><tr><td>J2C Connection Factory JNDI</td><td>imsconn/ASF34IMS9ConnectionFactory</td></tr><tr><td>XCode prefix</td><td></td></tr><tr><td>XCode</td><td>SC2E</td></tr></table>	Connection type	IMS	Conversational IMS Processing	<input type="checkbox"/>	J2C Connection Factory JNDI	imsconn/ASF34IMS9ConnectionFactory	XCode prefix		XCode	SC2E
Connection type	IMS											
Conversational IMS Processing	<input type="checkbox"/>											
J2C Connection Factory JNDI	imsconn/ASF34IMS9ConnectionFactory											
XCode prefix												
XCode	SC2E											
		<table><tr><td>Connection type</td><td>IMS</td></tr><tr><td>Conversational IMS Processing</td><td><input type="checkbox"/></td></tr></table>	Connection type	IMS	Conversational IMS Processing	<input type="checkbox"/>						
Connection type	IMS											
Conversational IMS Processing	<input type="checkbox"/>											

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

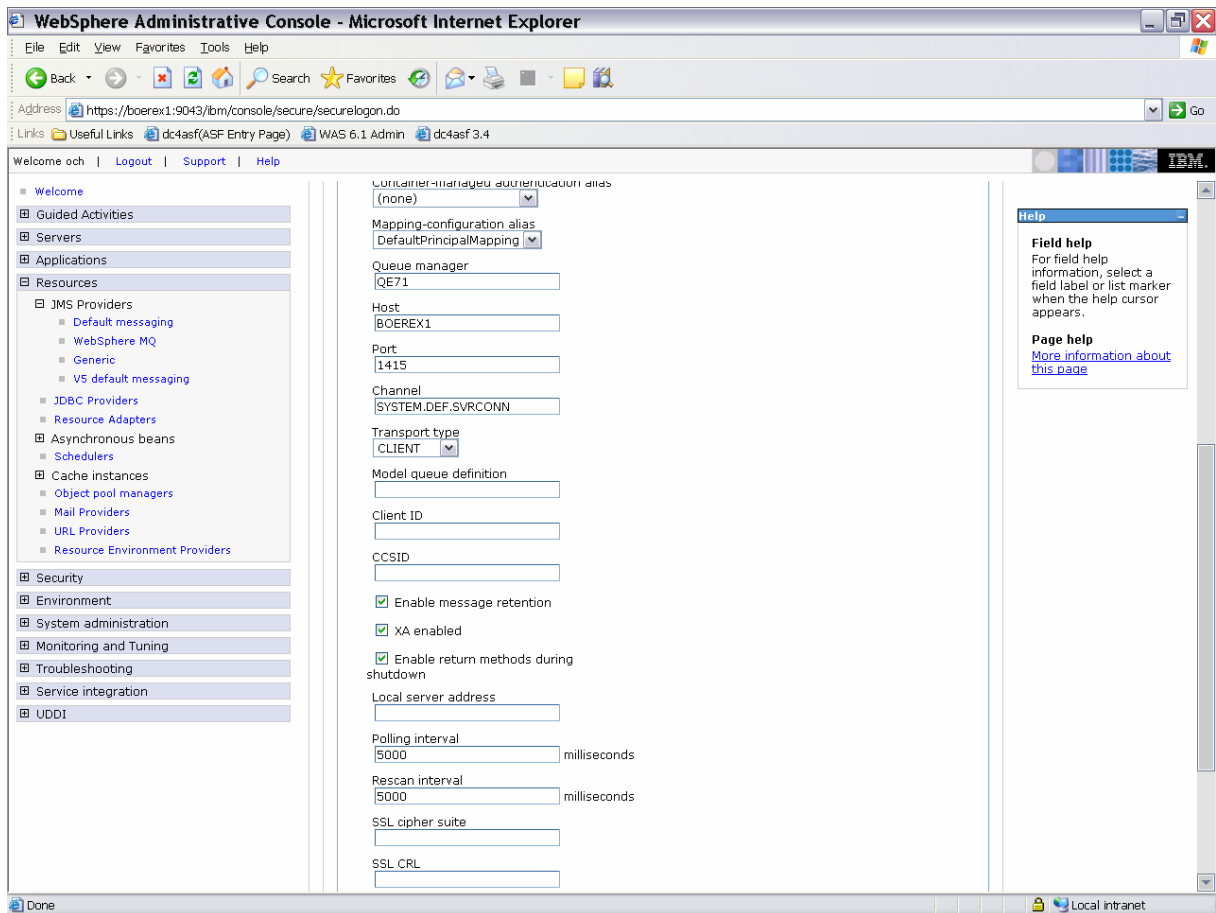
Open [Resources](#) > [WebSphere MQ](#) > [WebSphere MQ queue connection factories](#) > [New](#)

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

The screenshot shows the WebSphere Administrative Console in a Microsoft Internet Explorer browser. The address bar displays `https://boerex1:9043/ibm/console/secure/securelogin.do`. The left-hand navigation pane is expanded to 'Resources' > 'JMS Providers' > 'WebSphere MQ' > 'Queue Connection Factories' > 'New'. The main content area is titled 'WebSphere MQ messaging provider' and contains a 'Configuration' section. Under 'General Properties', the following fields are visible: 'Scope' (cells:crex1dm:nodes:nrex1dm), 'Name' (MQQueueConnectionFactoryIMSV9), 'JNDI name' (mq/MQQueueConnectionFactoryIMSV9), 'Description' (empty), 'Category' (empty), 'Component-managed authentication alias' (none), 'Container-managed authentication alias' (none), 'Mapping-configuration alias' (none), and 'Queue manager' (empty). To the right of the configuration fields, there is a 'Help' section with 'Field help' (The JNDI name for the resource.) and 'Page help' (More information about this page). A 'Messages' box at the top of the configuration area states: 'Additional Properties for this object will not be available to edit until its general properties are applied by clicking on either Apply or OK.'

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, BOEREX1
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



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.

The screenshot shows the WebSphere Administrative Console in a Microsoft Internet Explorer browser. The address bar displays the URL: <https://boerex1:9043/lbm/console/secure/securelogin.do>. The page title is "WebSphere MQ messaging provider".

The left-hand navigation pane shows a tree view with the following categories expanded:

- Resources
 - JMS Providers
 - WebSphere MQ

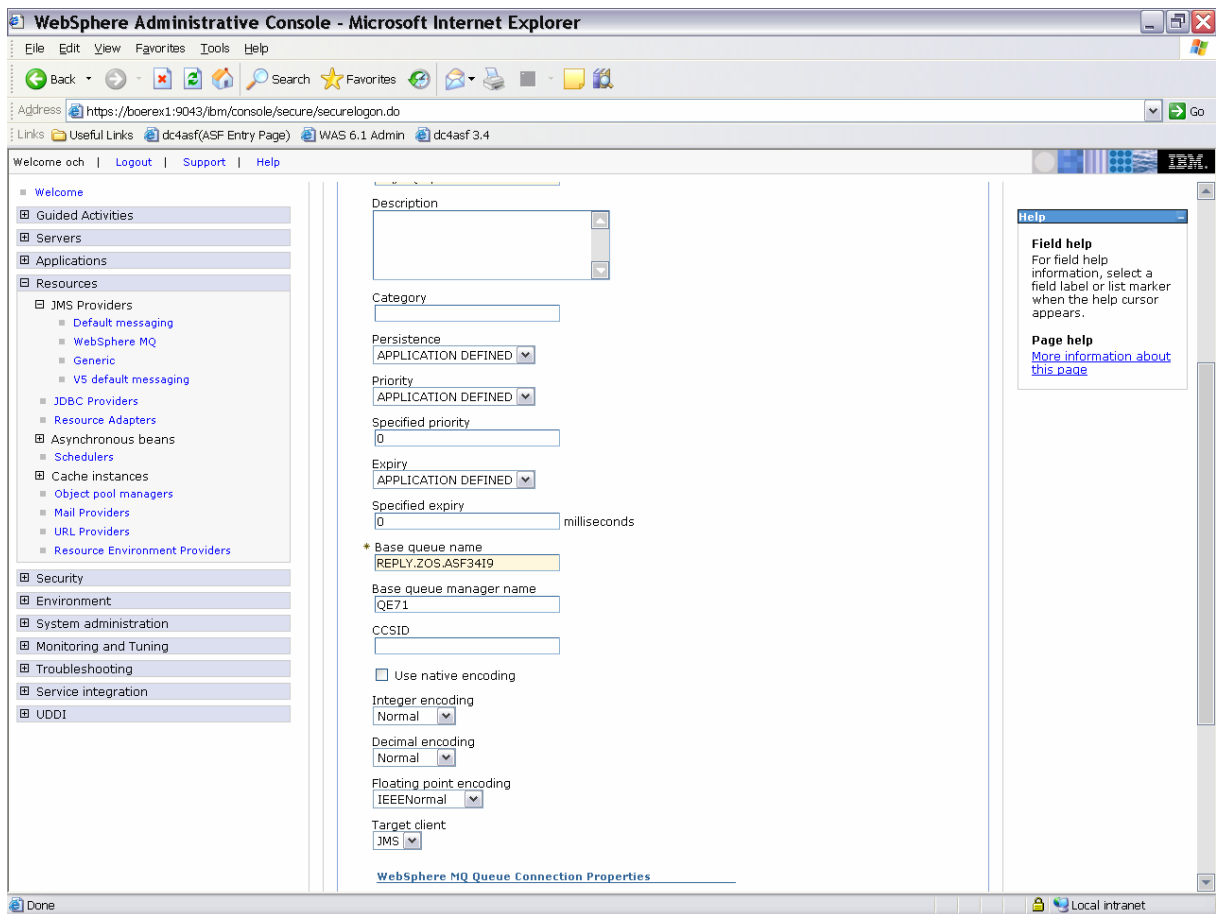
The main content area is titled "WebSphere MQ queue destinations" and shows a "New" button. Below this, there is a "Configuration" section with the following fields:

- Scope:** cells:crex1dm:nodes:nrex1dm
- Name:** MQInputIMSV9
- JNDI name:** mq/MQInputIMSV9
- Description:** (empty text area)
- Category:** (empty text field)
- Persistence:** APPLICATION DEFINED
- Priority:** APPLICATION DEFINED
- Specified priority:** 0
- Expiry:** APPLICATION DEFINED

There is a warning message at the top: "Additional Properties for this object will not be available to edit until its general properties are applied by clicking on either Apply or OK." There is also a "Field help" box on the right stating: "The JNDI name for the resource." and a "Page help" box with a link to "More information about this page".

Define the MQ specific properties for the input queue:

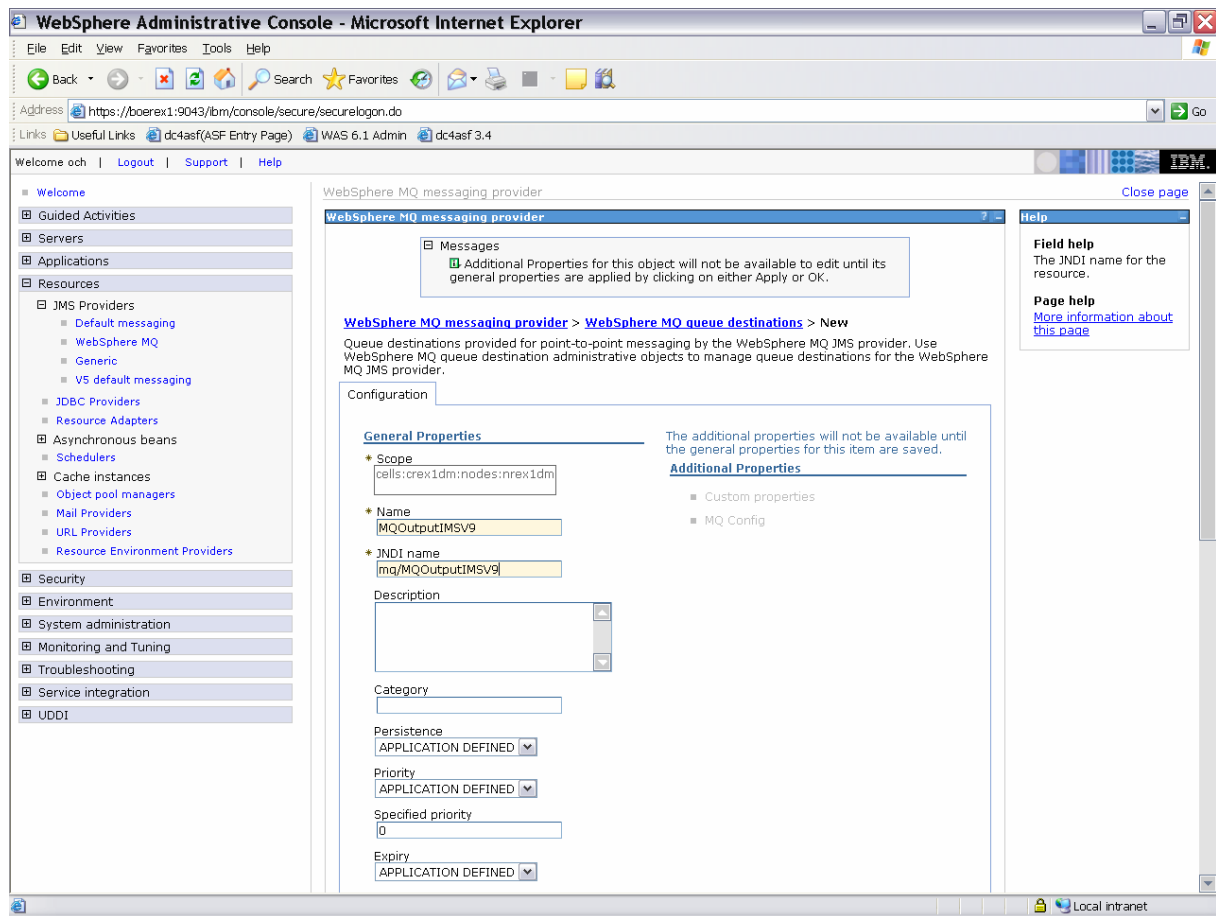
1. Base queue name is the queue name of the target reply queue, for example, REPLY.ZOS.ASF3419.
2. Base queue manager name is the target queue manager, for example, QE71
3. Target client must be set to JMS.



Click **Apply** and save your modifications.

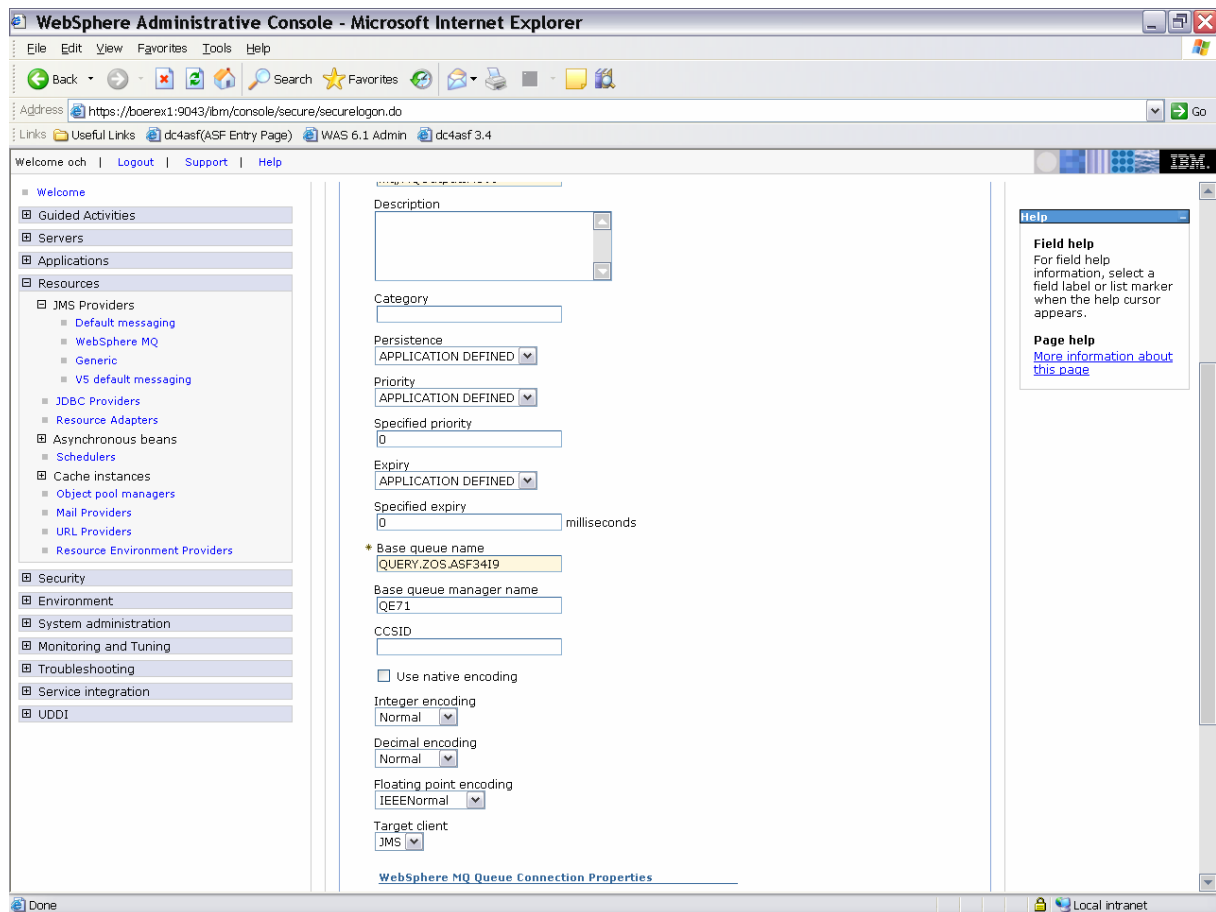
Open [Resources](#) > [WebSphere MQ](#) > [WebSphere MQ queue destinations](#) > [New](#)

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



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.ZOS.ASF3419.
2. Base queue manager name is the target queue manager, for example, QE71
3. Target client must be set to JMS.

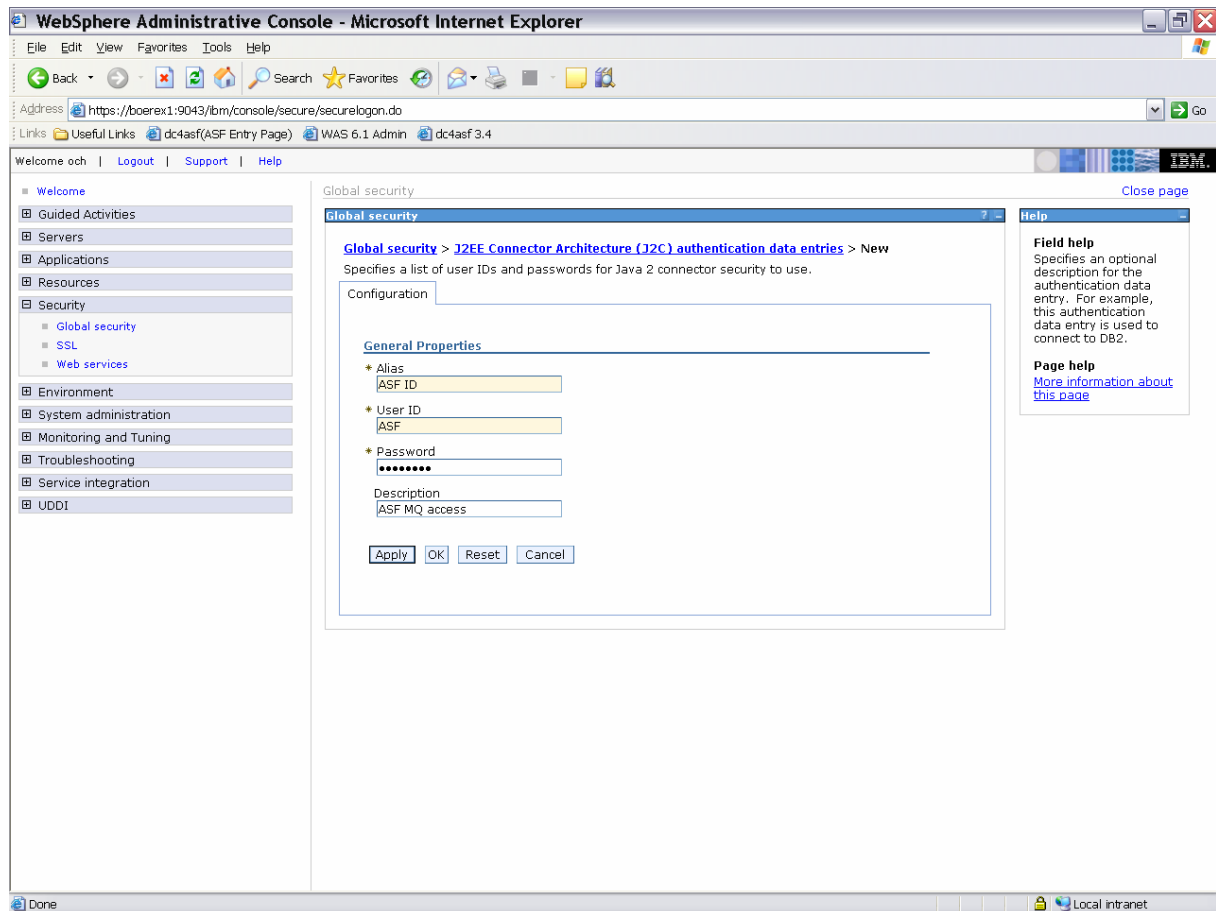


Click [Apply](#) and save your modifications.

Defining JAAS – J2C authentication data

Open [Security](#) > [Global Security](#) > [J2EE Connector architecture \(J2C\) authentication data entries](#) > [New](#)

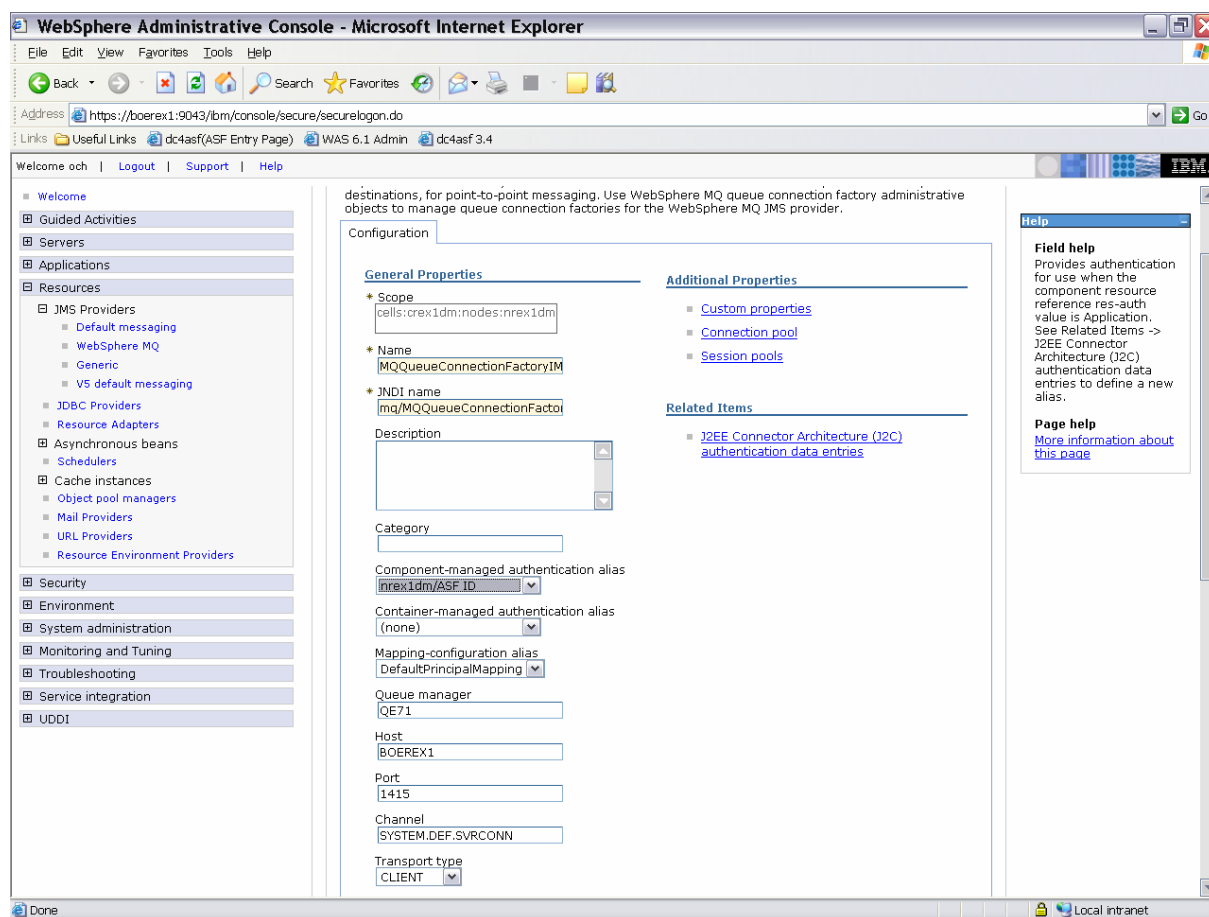
Enter an alias and a valid user ID and password for the MQ connection.



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.



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
V "3.4.10.00"
Licensed Materials - Property of IBM 5655-002 © Copyright IBM Corp. 2003, 2007 All Rights Reserved.
390-z/OS 01.08.00

+ - General configuration
+ - IMS Connect connection configuration
+ - IMSMQ connection configuration

IMSMQ connection configuration

Remove connection	Host nickname	Host connection data																
<input type="checkbox"/>	sc1I9mq	<table border="1"><tr><td>Connection type</td><td>IMSMQ</td></tr><tr><td>Conversational IMS Processing</td><td><input type="checkbox"/></td></tr><tr><td>MQ Connection Factory JNDI</td><td>mq/MQQueueConnectionFactoryIMSV9</td></tr><tr><td>MQ Output Queue JNDI</td><td>mq/MQOutputIMSV9</td></tr><tr><td>MQ Input Queue JNDI</td><td>mq/MQInputIMSV9</td></tr><tr><td>MQ Wait interval</td><td>3000</td></tr><tr><td>XCode prefix</td><td></td></tr><tr><td>XCode</td><td>SC1E</td></tr></table>	Connection type	IMSMQ	Conversational IMS Processing	<input type="checkbox"/>	MQ Connection Factory JNDI	mq/MQQueueConnectionFactoryIMSV9	MQ Output Queue JNDI	mq/MQOutputIMSV9	MQ Input Queue JNDI	mq/MQInputIMSV9	MQ Wait interval	3000	XCode prefix		XCode	SC1E
Connection type	IMSMQ																	
Conversational IMS Processing	<input type="checkbox"/>																	
MQ Connection Factory JNDI	mq/MQQueueConnectionFactoryIMSV9																	
MQ Output Queue JNDI	mq/MQOutputIMSV9																	
MQ Input Queue JNDI	mq/MQInputIMSV9																	
MQ Wait interval	3000																	
XCode prefix																		
XCode	SC1E																	

+ - CICS Transaction Gateway connection configuration
+ - CICS MQ connection configuration
+ - DB2 connection configuration

Click **OK** to save your changes.

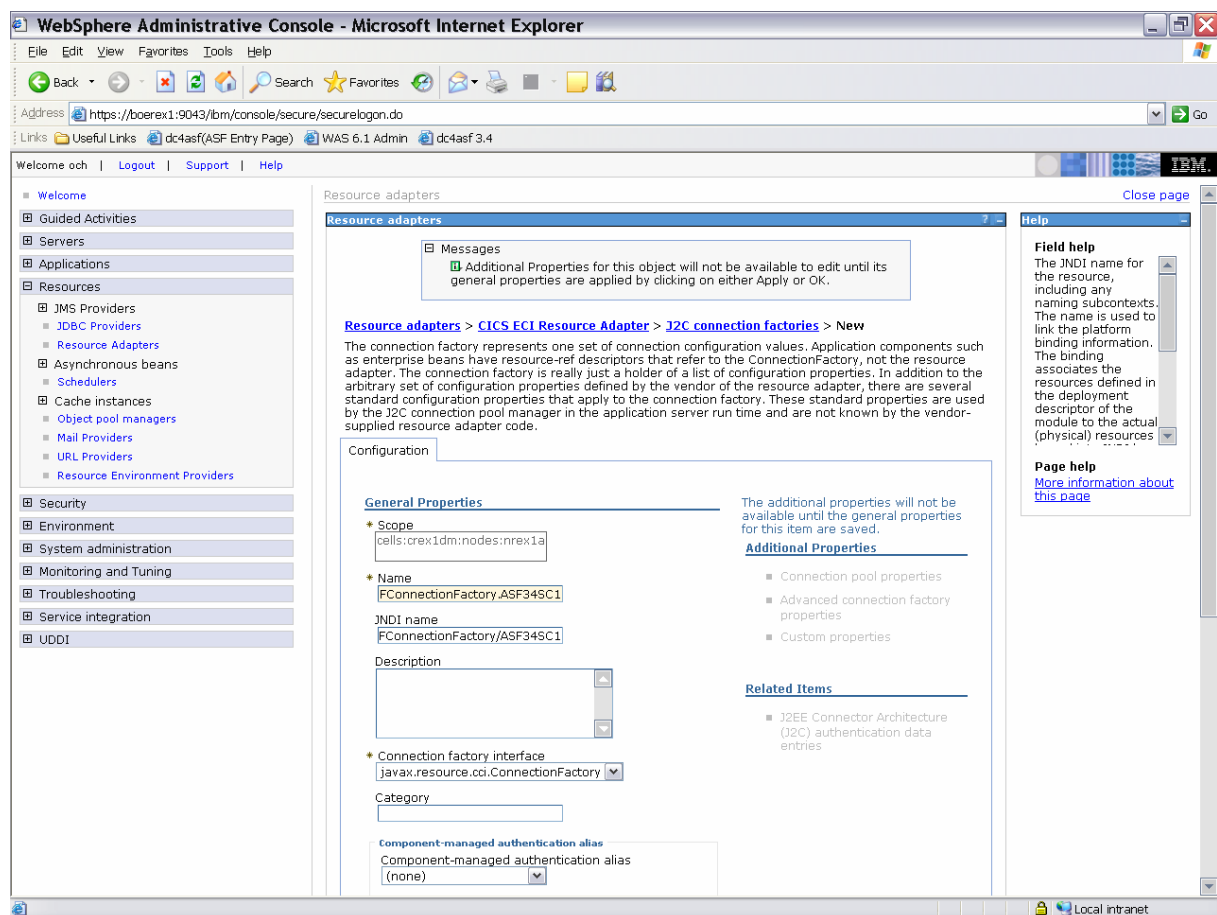
Stop and **Start** your application in the WebSphere Administrative Console.

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.



The screenshot shows the WebSphere Administrative Console interface in Microsoft Internet Explorer. The browser address bar displays `https://boerex1:9043/ibm/console/secure/securelogin.do`. The console's left-hand navigation pane is expanded to 'Resources' > 'Resource Adapters' > 'CICS ECI Resource Adapter' > 'J2C connection factories' > 'New'. The main content area shows the configuration page for a new J2C connection factory. A message box at the top states: 'Additional Properties for this object will not be available to edit until its general properties are applied by clicking on either Apply or OK.' Below this, the breadcrumb path is shown: 'Resource adapters > CICS ECI Resource Adapter > J2C connection factories > New'. The 'Configuration' section is divided into 'General Properties' and 'Additional Properties'. The 'General Properties' section includes: 'Scope' (text: `calls:crex1dm:nodes:nrex1a`), 'Name' (text: `FConnectionFactory.ASF34SC1`), 'JNDI name' (text: `FConnectionFactory/ASF34SC1`), 'Description' (empty text area), 'Connection factory interface' (dropdown: `javax.resource.cci.ConnectionFactory`), 'Category' (empty text area), and 'Component-managed authentication alias' (dropdown: `(none)`). The 'Additional Properties' section is currently empty. A 'Field help' panel on the right explains that the JNDI name is used for naming subcontexts and linking platform binding information. The bottom of the console shows a 'Local intranet' security warning.

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, local:
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

The screenshot shows the WebSphere Administrative Console interface. The breadcrumb navigation is: [Resource adapters](#) > [CICS ECI Resource Adapter](#) > [J2C connection factories](#) > [ASFConnectionFactory.ASF34SC1](#) > [Custom properties](#). The main content area displays a table of custom properties:

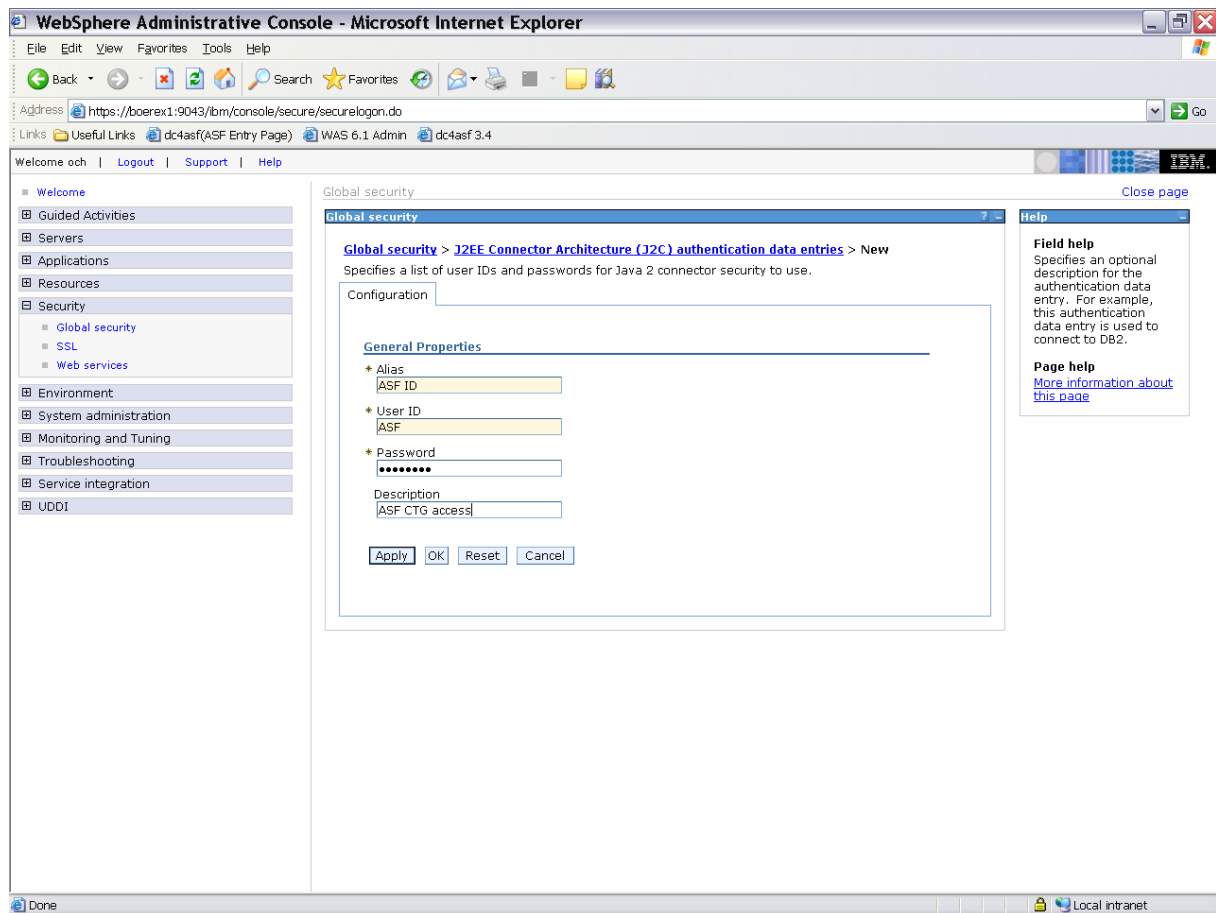
Name	Value	Description	Required
TPNName			false
ClientSecurity			false
ConnectionURL	local:		false
KeyRingClass			false
KeyRingPassword			false
Password			false
PortNumber	2006	PortNumber	false
ServerName	IPVAXCIR		false
ServerSecurity			false
SocketConnectTimeout	0	SocketConnectTimeout	false
TraceLevel	1	TraceLevel	false
TranName			false
UserName			false
Total 13			

Click [Apply](#) and save your modifications.

Defining JAAS – J2C authentication data

Open [Security](#) > [Global Security](#) > [J2EE Connector architecture \(J2C\) authentication data entries](#) > [New](#)

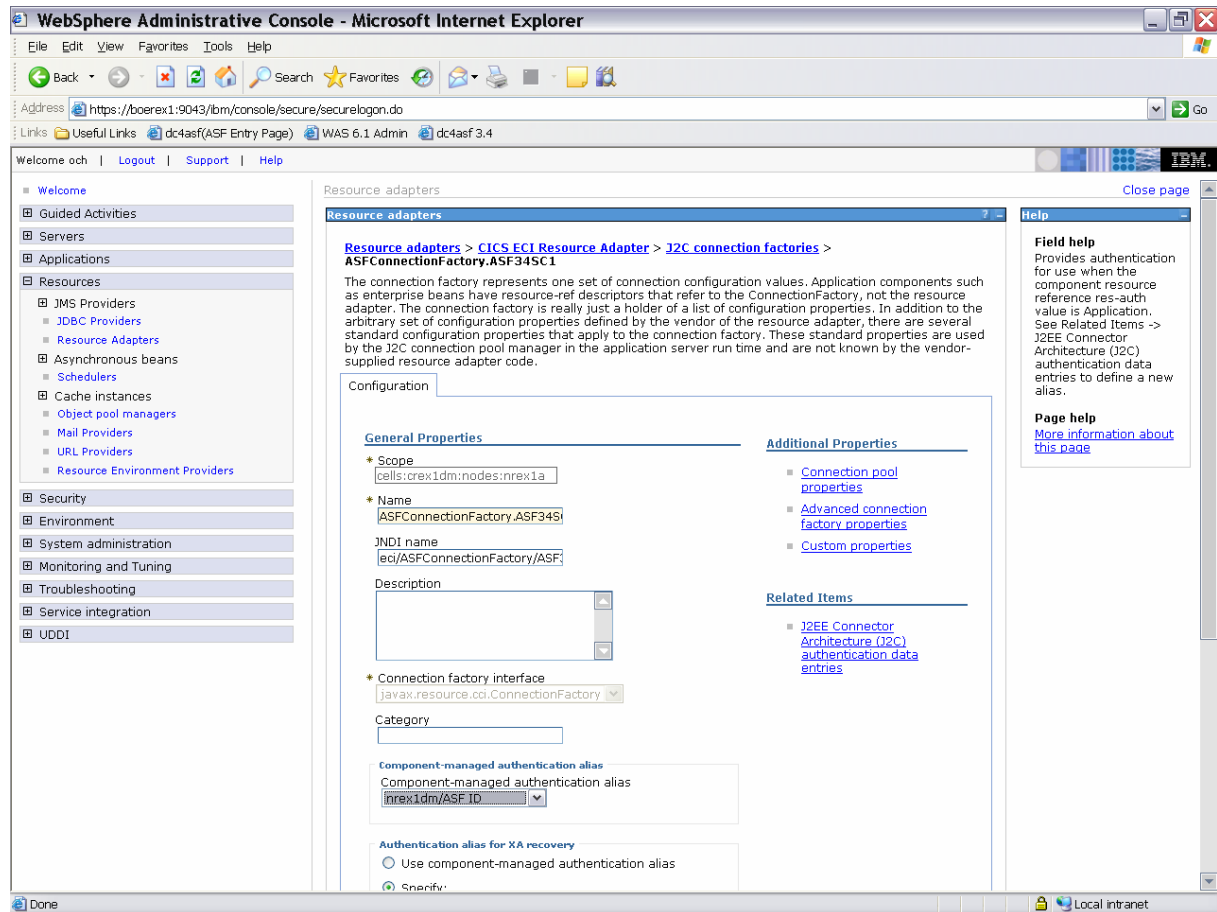
Enter an alias and a valid user ID and password for the CICS Transaction Gateway connection.



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.

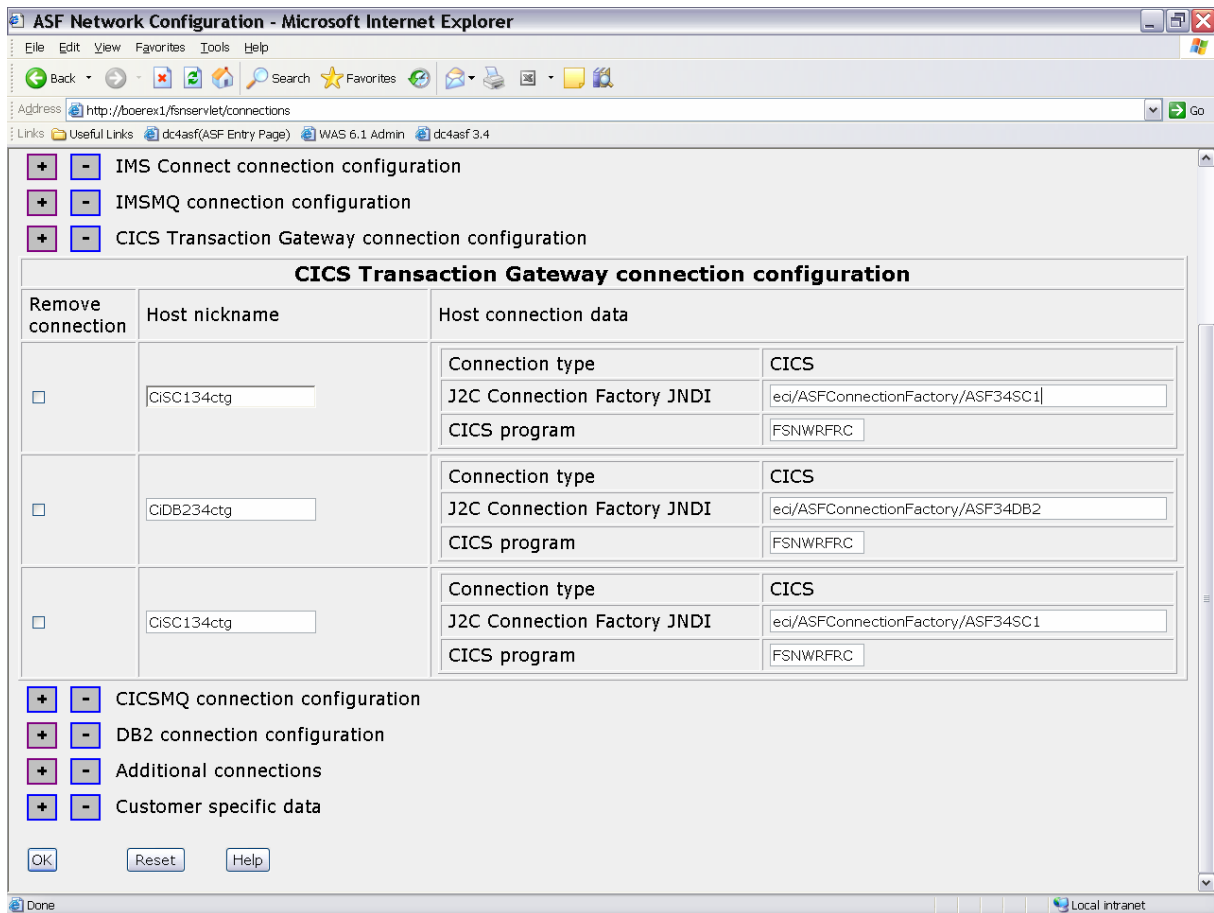


Click [Apply](#), save your modifications, and restart the WebSphere Application Server.

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.



Click **OK** to save your changes.

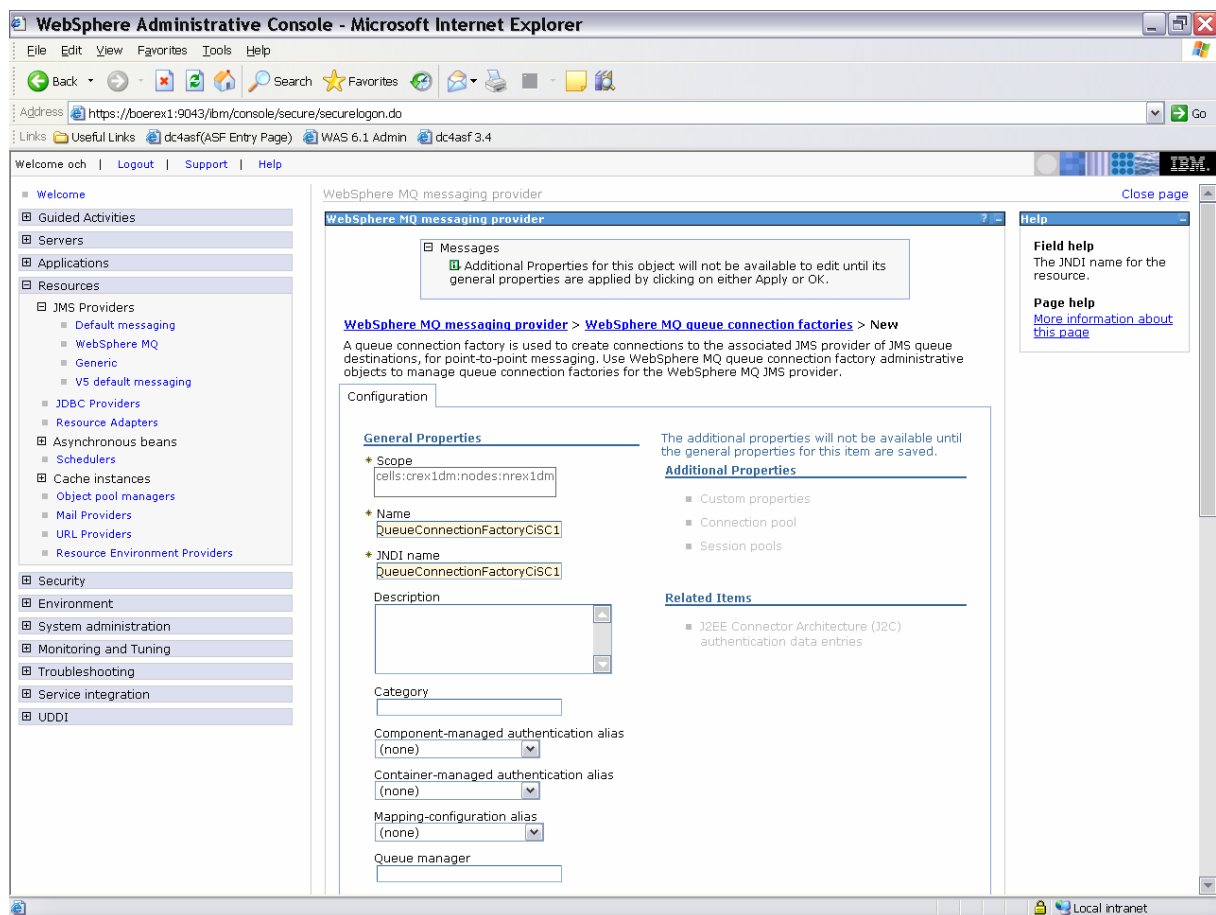
Stop and **Start** your application in the WebSphere Administrative Console.

10 Setting up a connection to CICS via WebSphere MQ

Defining a queue connection factory

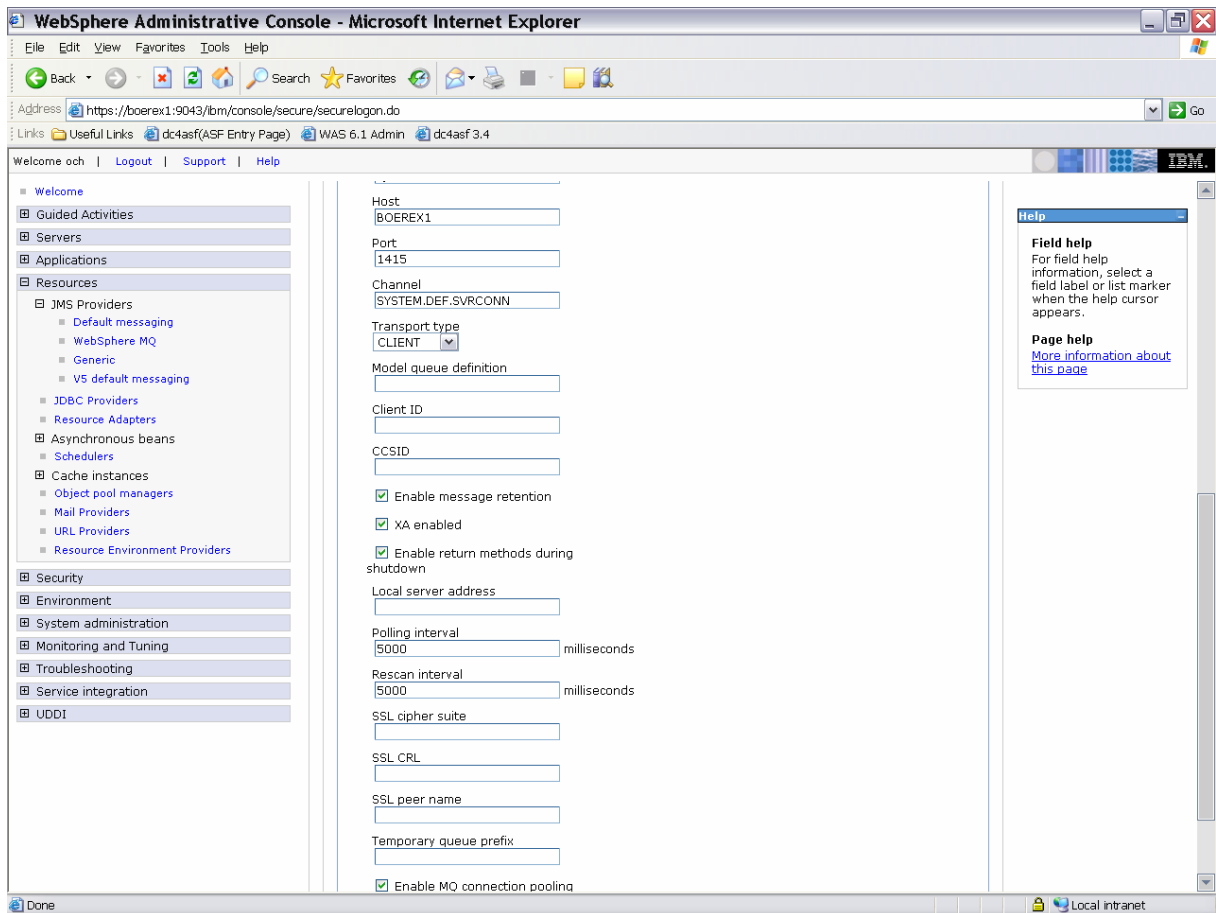
Open [Resources](#) > [WebSphere MQ](#) > [WebSphere MQ queue connection factories](#) > [New](#)

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



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, BOEREX1
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.



Click [Apply](#) and save your modifications.

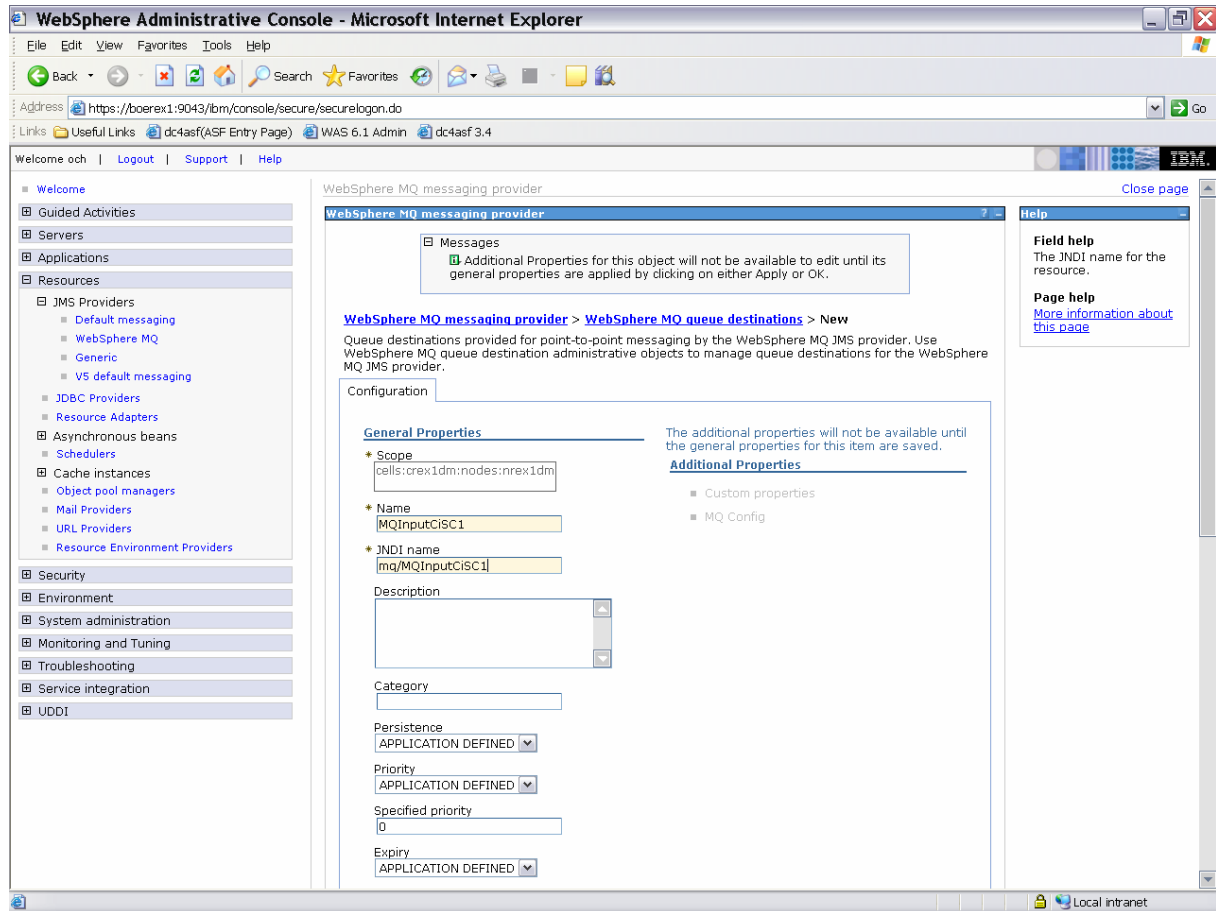
Note:

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

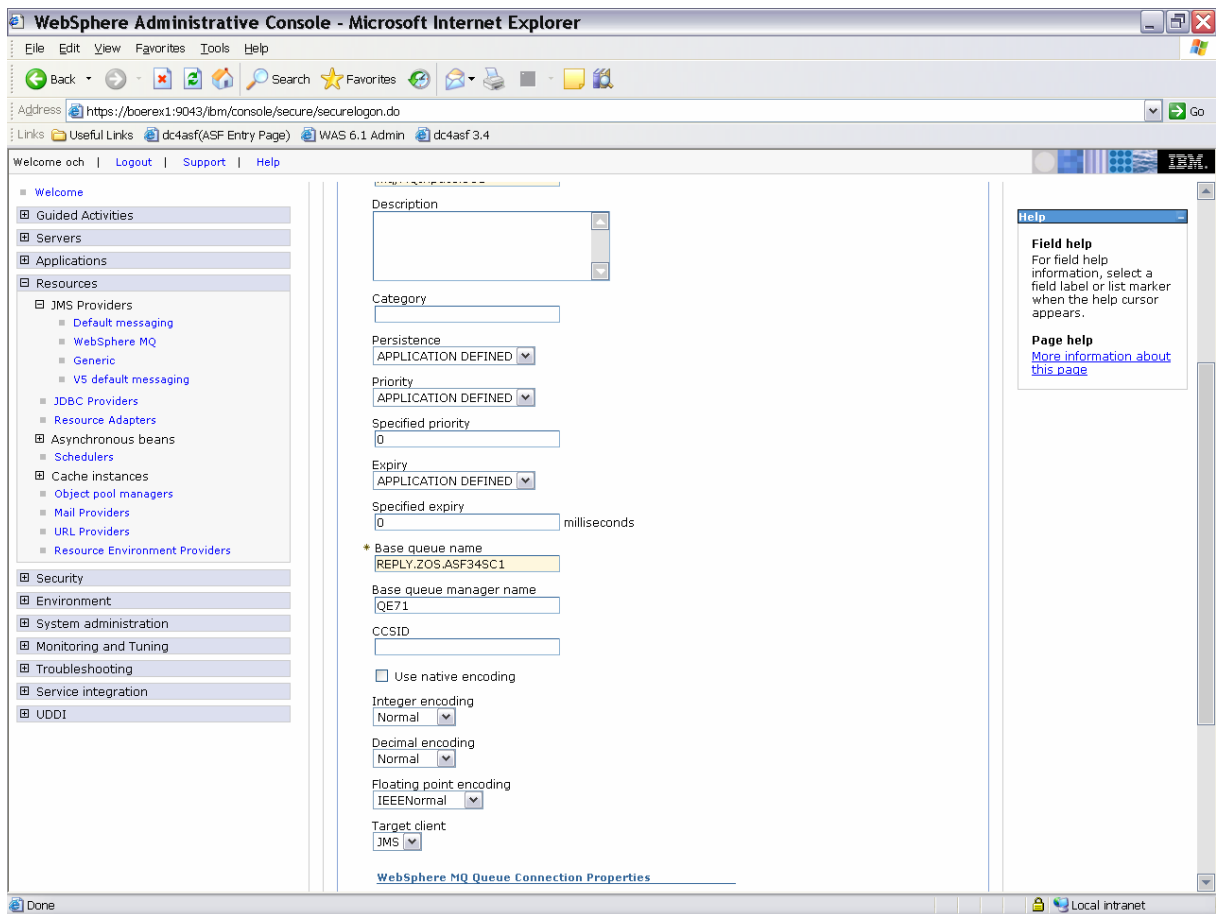
Open [Resources](#) > [WebSphere MQ](#) > [WebSphere MQ queue destinations](#) > [New](#)

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



Define the MQ specific properties for the input queue:

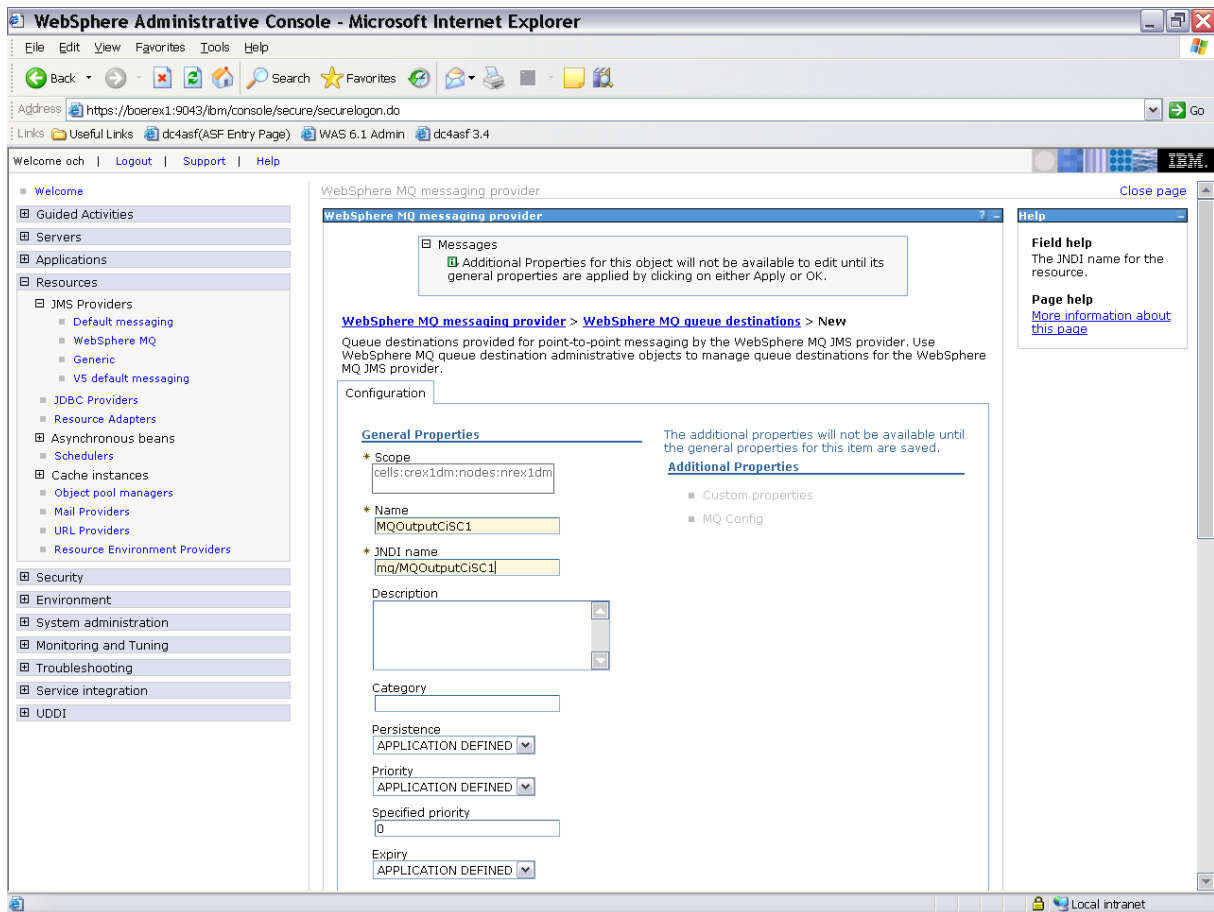
4. Base queue name is the queue name of the target reply queue, for example, REPLY.ZOS.ASF34SC1.
5. Base queue manager name is the target queue manager, for example, QE71
6. Target client must be set to JMS.



Click **Apply** and save your modifications.

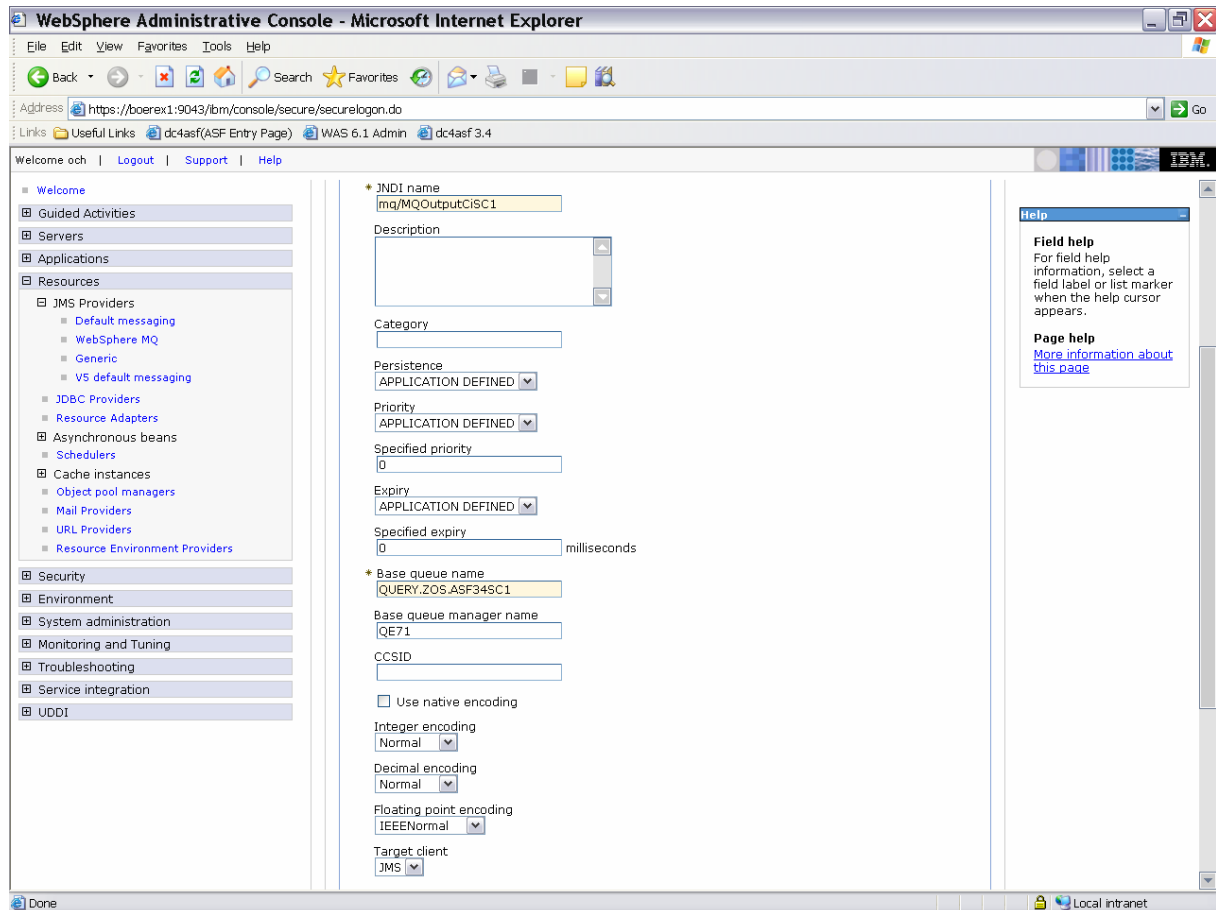
Open [Resources](#) > [WebSphere MQ](#) > [WebSphere MQ queue destinations](#) > [New](#)

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



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.ZOS.ASF34SC1.
5. Base queue manager name is the target queue manager, for example, QE71
6. Target client must be set to JMS.

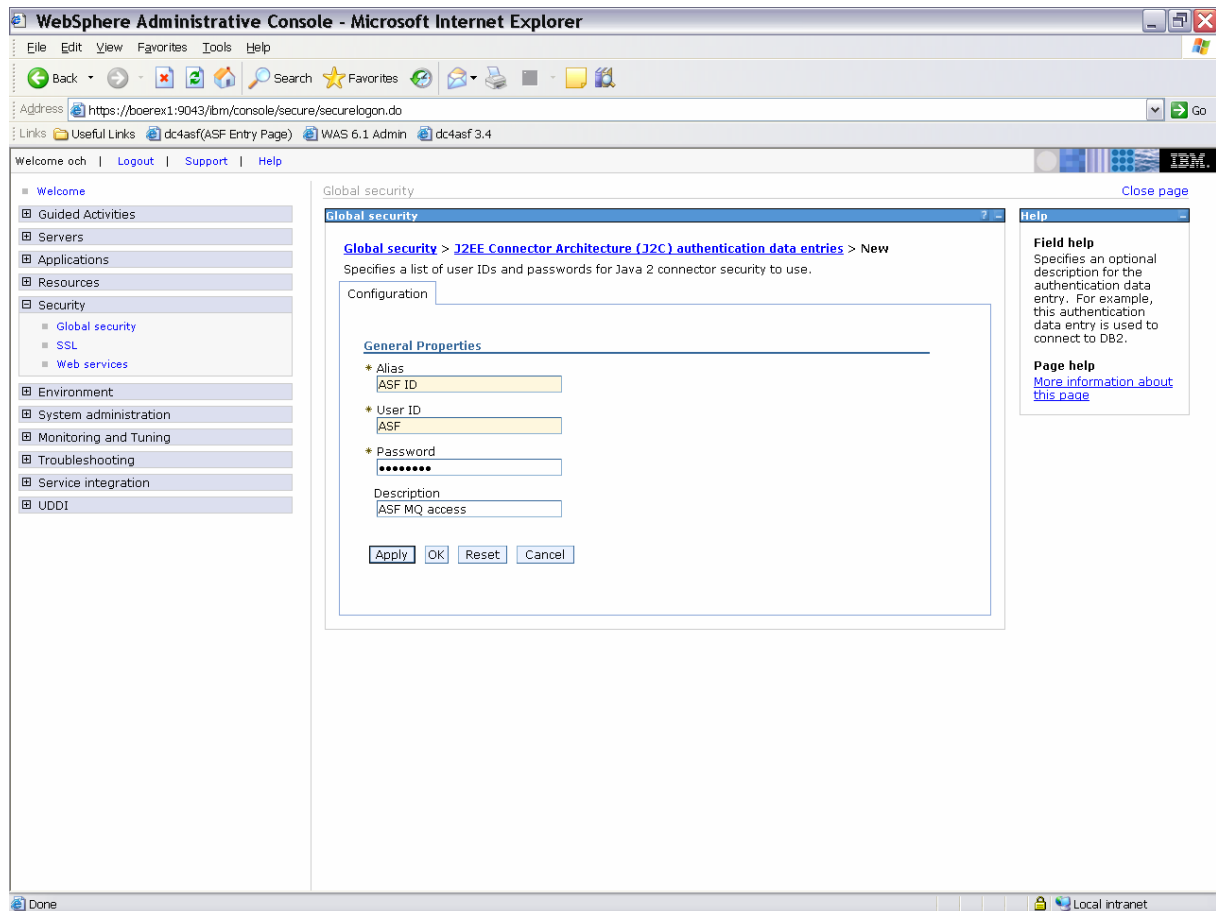


Click **Apply** and save your modifications.

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.



The screenshot shows the WebSphere Administrative Console in Microsoft Internet Explorer. The browser address bar displays `https://boerex1:9043/ibm/console/secure/securelogin.do`. The page title is "Global security". The breadcrumb navigation is "Global security > J2EE Connector Architecture (J2C) authentication data entries > New". The main content area is titled "Configuration" and contains a "General Properties" section with the following fields:

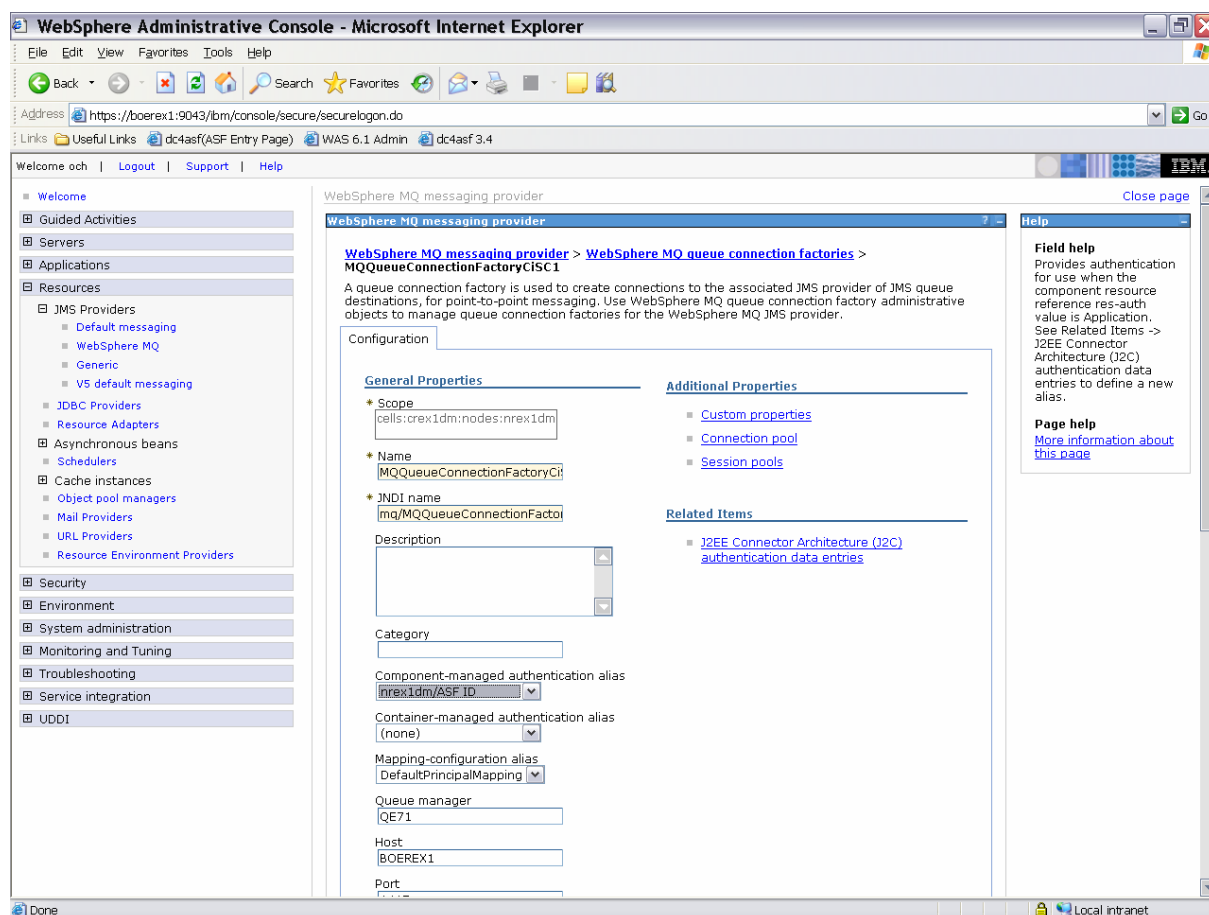
- Alias: ASF ID
- User ID: ASF
- Password: [masked with dots]
- Description: ASF MQ access

At the bottom of the configuration area are buttons for "Apply", "OK", "Reset", and "Cancel". On the right side of the page, there is a "Help" panel with "Field help" and "Page help" sections. The "Field help" text reads: "Specifies an optional description for the authentication data entry. For example, this authentication data entry is used to connect to DB2." The "Page help" text reads: "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.

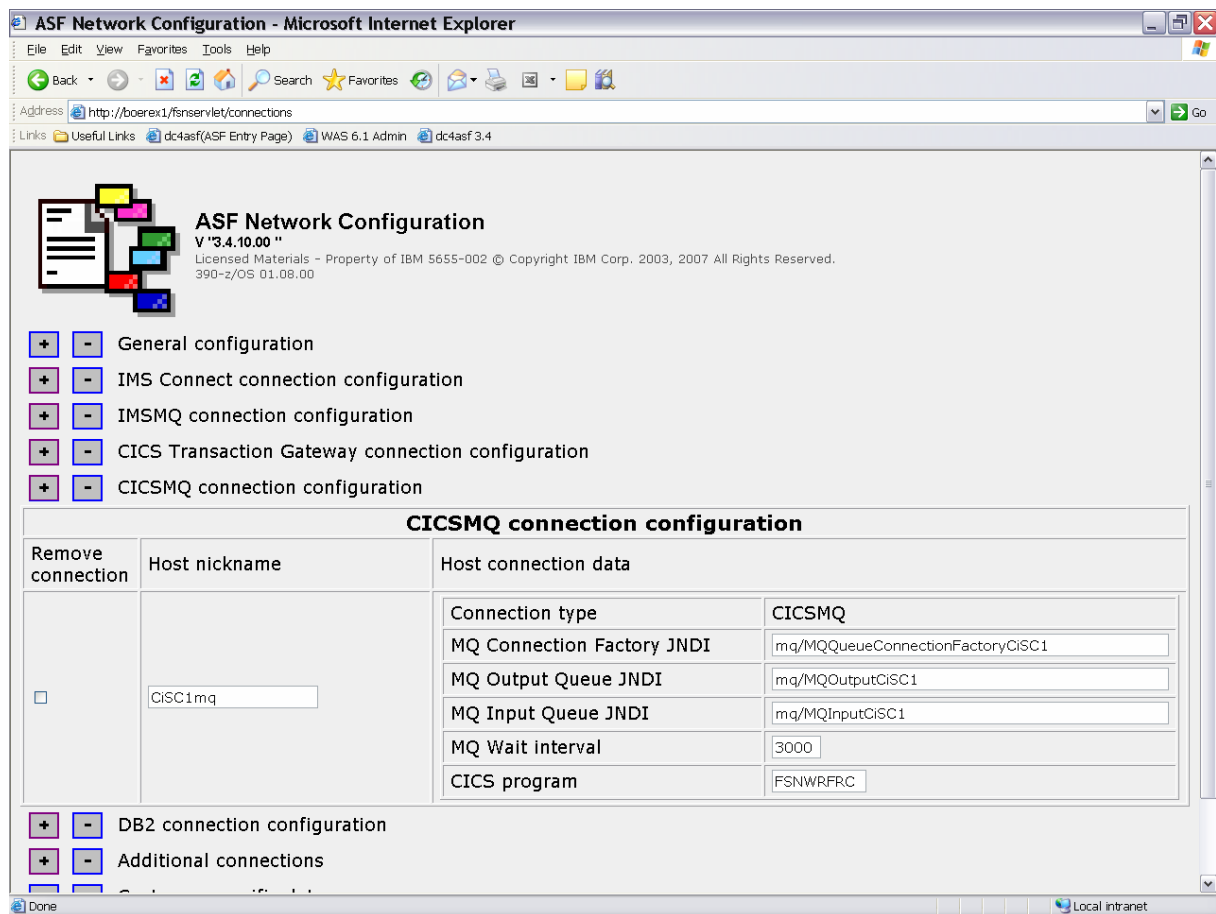


Click [Apply](#), save your modifications, and restart the WebSphere Application Server.

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 MQ 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.

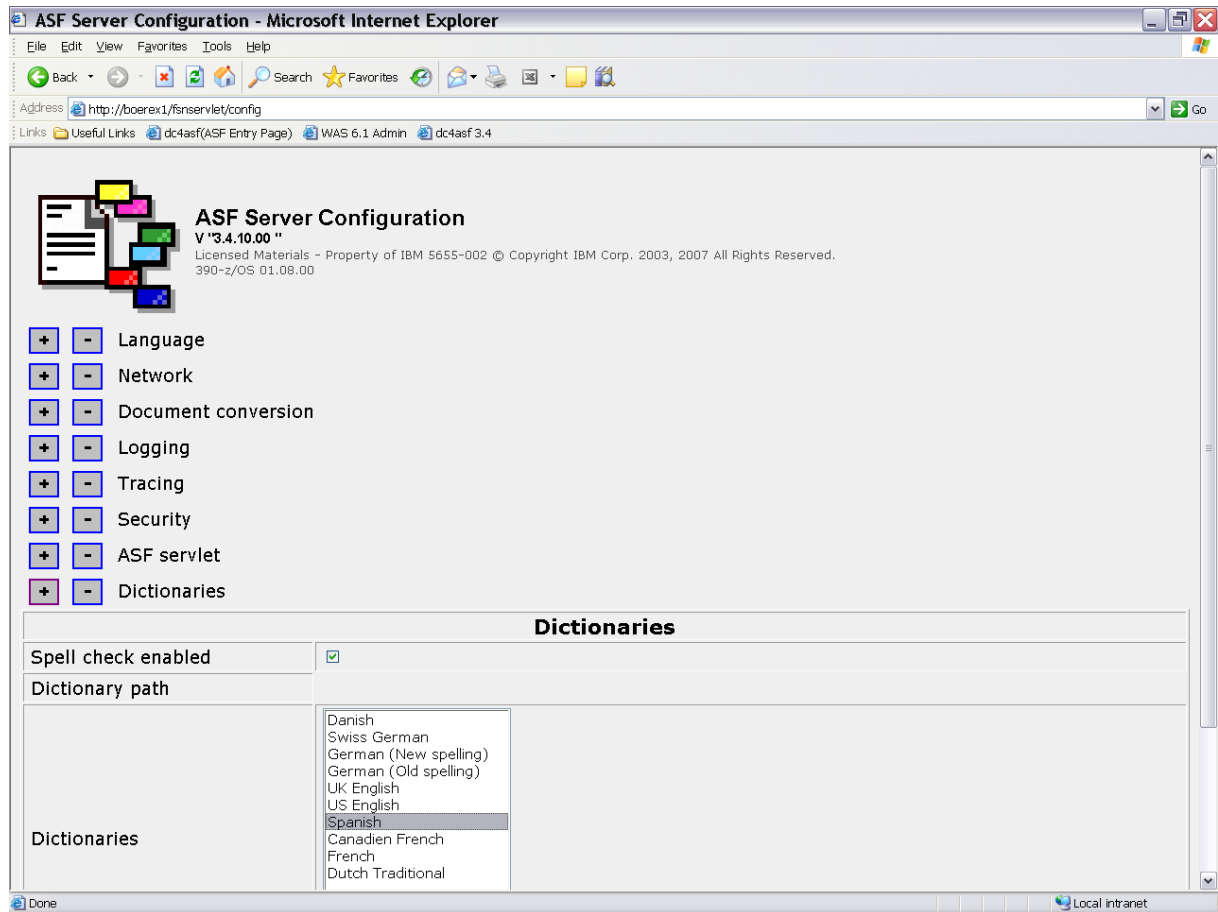


Click **OK** to save your changes.

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.



Click [OK](#).

[Stop](#) and [Start](#) your application using the WebSphere Administrative Console.

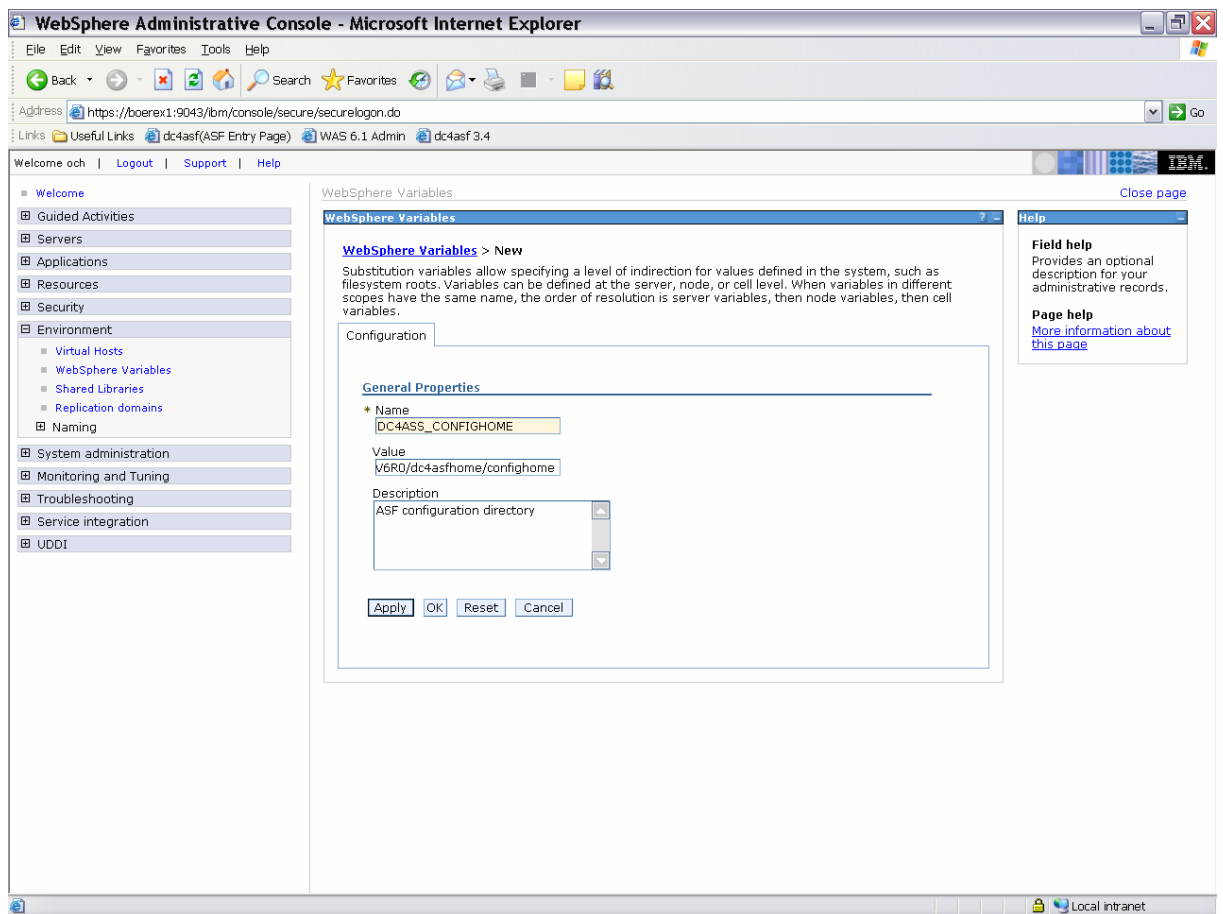
12 Using one set of configuration files

If you are running fnservlet in a multi-node environment or you have more than one instance of fnservlet 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, /local/WebSphere/V6R0/dc4asfhome/confighome and /local/WebSphere/V6R0/dc4asfhome/datahome



- Create the following three directories:

\$(CONFIG_HOME)

For example, /local/WebSphere/V6R0/dc4asfhome/confighome

\$(DATA_HOME)/log

For example, /local/WebSphere/V6R0/dc4asfhome/datahome/log

\$(DATA_HOME)/preview

For example, /local/WebSphere/V6R0/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 fnservlet 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](#) > [fnservletEAR](#) > [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.

The screenshot shows the WebSphere Administrative Console interface in Microsoft Internet Explorer. The browser address bar shows the URL: <https://boerex1:9043/ibm/console/secure/securelogin.do>. The page title is "WebSphere Administrative Console - Microsoft Internet Explorer".

The main content area is titled "Enterprise Applications" and contains the following text:

Enterprise Applications > fnservletEAR > 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 *) 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:
AOPOPER
ASFUSER
DE#00446
DE#03359
DE#03557
DE#05412
DE#07804
DE#09999
EMPLOYEE
EXTERNAL
IMWEB
NETVIEW
NOUSER
OMVSGRP
SPECIAL
STCGROUP
TTY
WSCFG1
WSCLGP
WSSR1

Selected:
DE#05412

OK Cancel

The right sidebar contains "Field help" and "Page help" sections.

[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 there are two possibilities:

1. Copy the AFP Resources into USS
2. Direct Read from Partioned Datasets

Copy the AFP Resources into USS

For using the AFP Resources in USS perform the following steps:

- Copy the page segments from the host system (for example using ftp) into the directory

`/local/WebSphere/V6R0/AppServer/profile/default/installedApps/xxxxx/fservletEAR.ear/fservlet.war/AFPResources/pseg`

Note:

the extension of the overlays must be "**psg**" specified in lower case while the resource names must be specified in upper case).

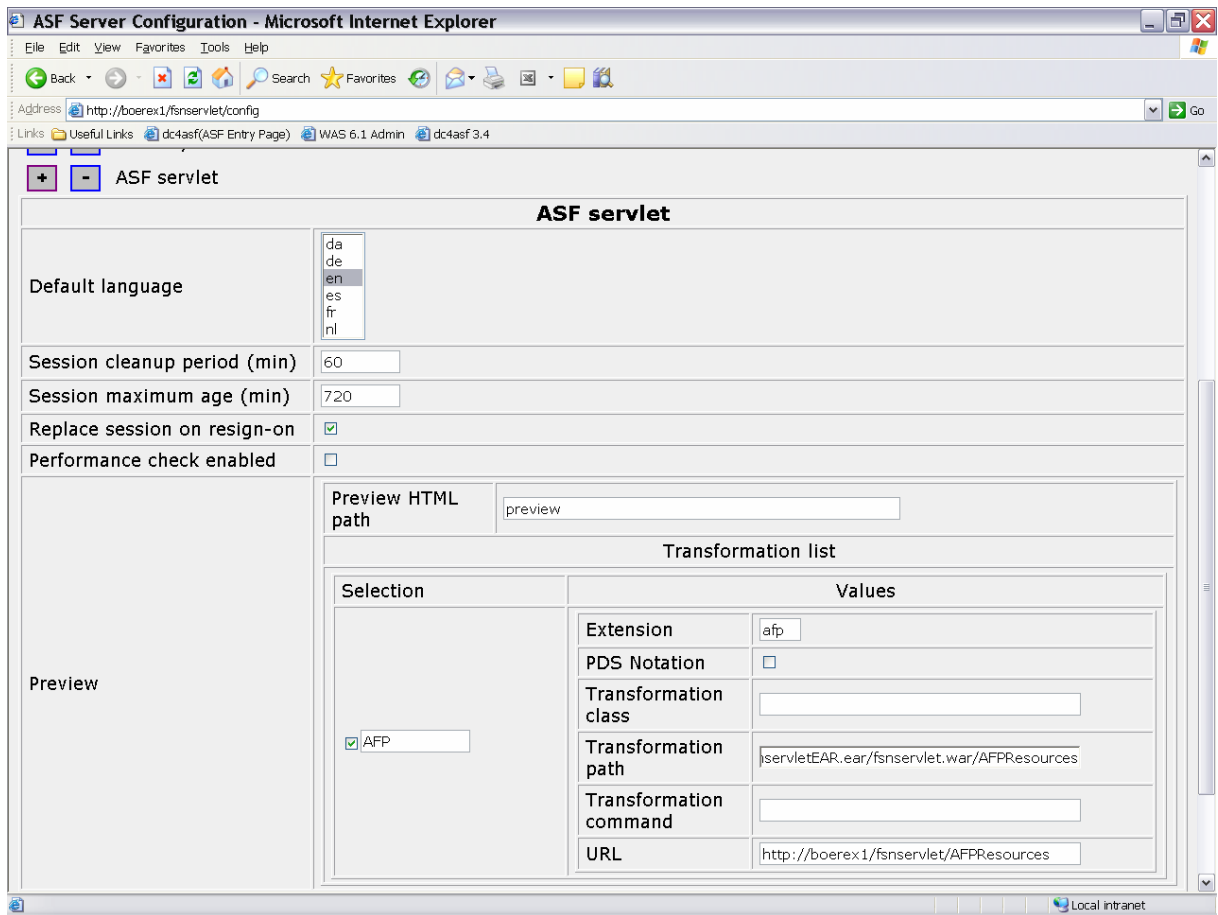
- Copy the overlays from the host system (for example using ftp) into the directory

`/local/WebSphere/V6R0/AppServer/profile/default/installedApps/xxxxx/fservletEAR.ear/fservlet.war/AFPResources/ovl`

Note:

the extension of the overlays must be "**oly**" specified in lower case while the resource names must be specified 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 and your transformation path in the Preview AFP Section.



Click **OK** to save your changes.

Direct Read from Partitioned Datasets

To define the direct read from portioned datasets invoke the servlet application “config”, using the Microsoft Internet Explorer. Specify your server URL and the partitioned datasets where your overlays and page segments are residing in the Preview AFP section. The server URL must be

<http://xxxx/appl//getafpres.dc4asfcommand?getfile=>

where xxxx and appl must be changed to your installation for example //boerex1:9080/fsnservlet.

ASF Server Configuration - Microsoft Internet Explorer

Address: http://boerexx:9080/dc4asf12/DocASFServerConfigServlet

Links: dc4asf(ASF Entry Page) dc4asf(Rational) dc4asf(Tomcat) dc4asfmanfred on boerex1

session on resign-on

Performance check enabled

Preview HTML path: preview

Transformation list

Selection	Values
<input checked="" type="checkbox"/> AFP	Extension: <input type="text" value="afp"/> PDS Notation: <input checked="" type="checkbox"/> Psegs: ASF330.PSEGS1, ASF330.PSEGS2, ASF330.PSEGS3, ASF330.PSEGS4 Overlays: ASF330.OVERLAYS1, ASF330.OVERLAYS2, ASF330.OVERLAYS3 URL: http://boerexx:9080/dc4asf12/getafpres.dc

Done Local intranet

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

Address http://boeuxbs32/fsnservlet/

ASF servlet

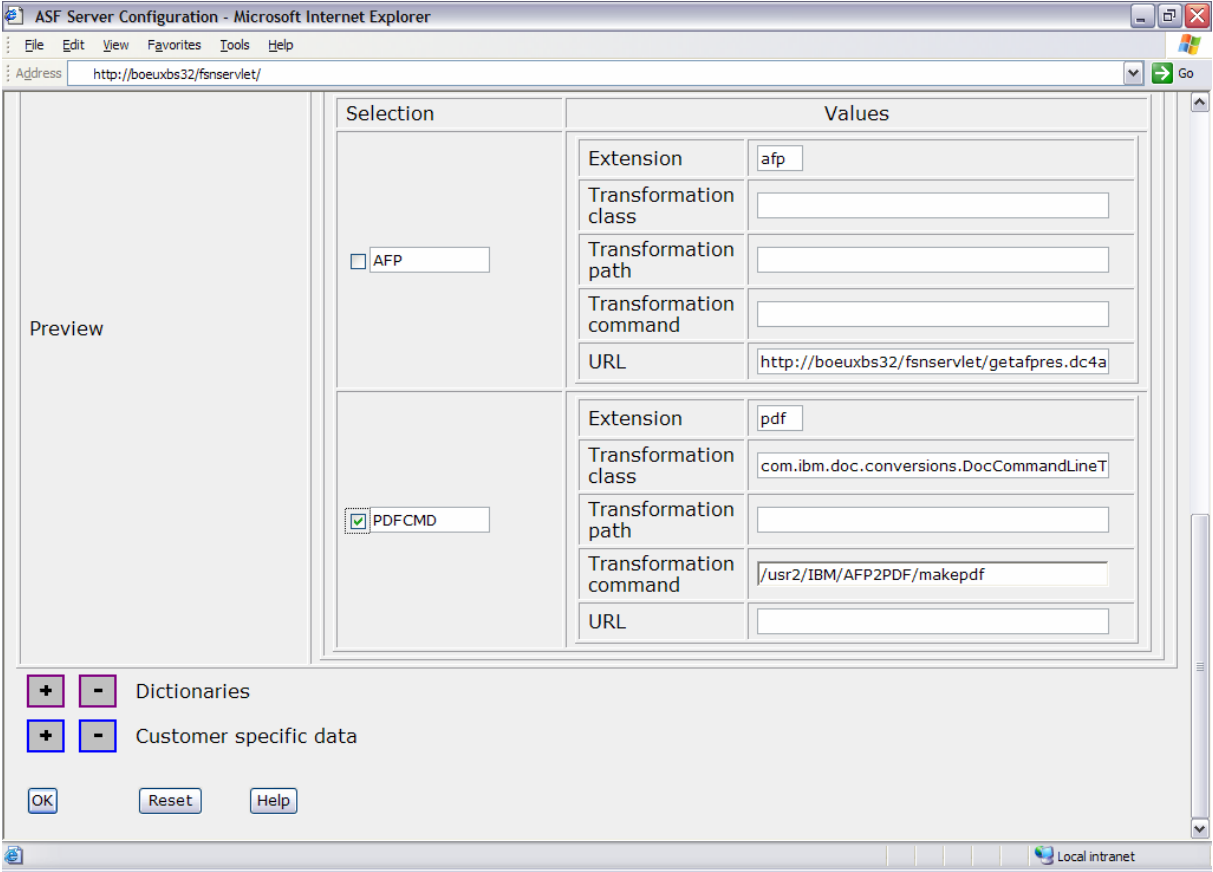
Default language	da de en es fr nl
Session cleanup period (min)	60
Session maximum age (min)	720
Replace session on resignation	<input checked="" type="checkbox"/>
Performance check enabled	<input type="checkbox"/>
Preview	Preview HTML path: preview
	Transformation list

Selection	Values
<input checked="" type="checkbox"/> AFP	Extension: afp Transformation class: <input type="text"/> Transformation path: <input type="text"/> Transformation command: <input type="text"/> URL: http://boeuxbs32/fsnservlet/getafpres.dc4a

Local intranet

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:



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:

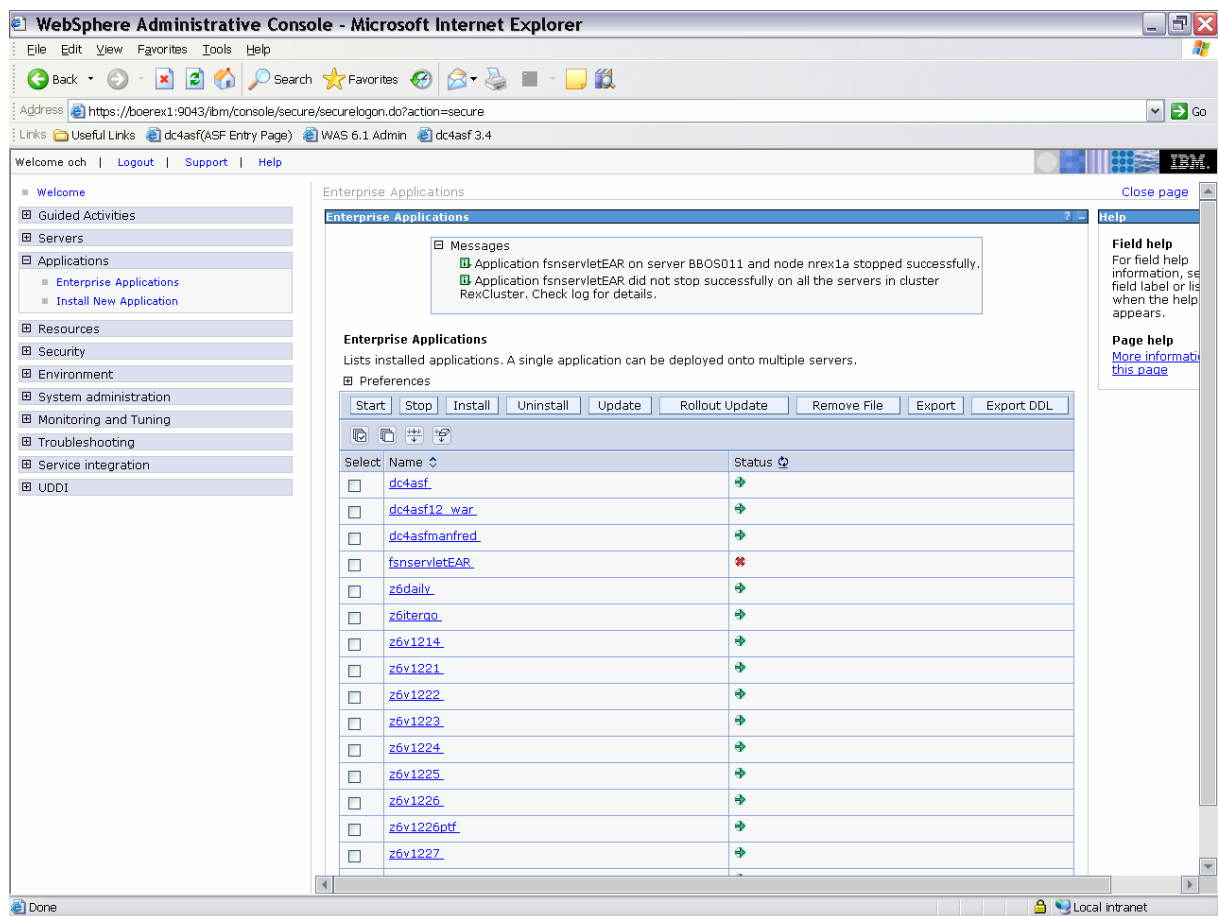
</usr/swrepository/dc4asf/was60/war/ptfs>

Open the WebSphere Administrative Console:

[Open Application](#) > [Enterprise Application](#)

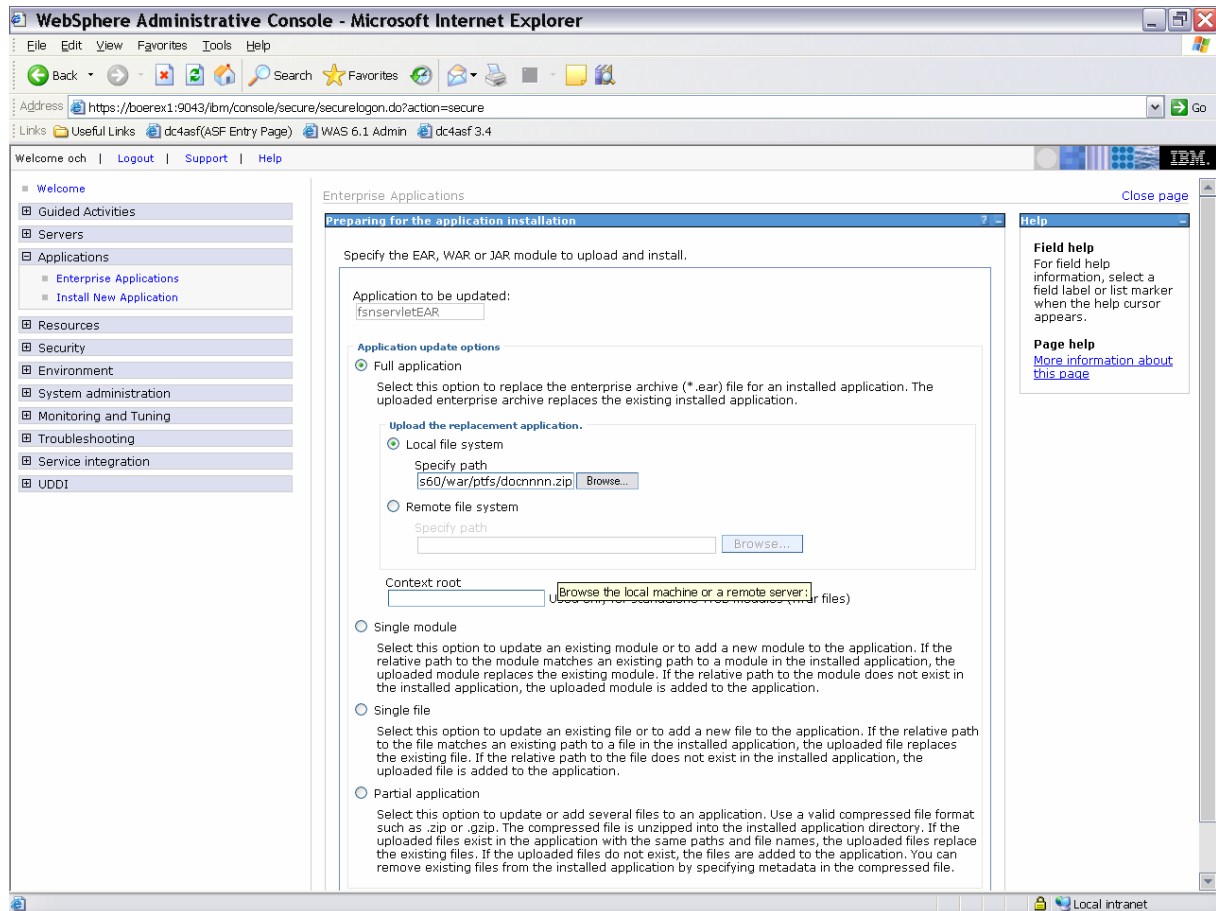
Stop the application fnservletEAR.

Select the application fnservletEAR and enter **Update**.



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

[/usr/swrepository/dc4asf/was60/war/ptfs/docnmmn.zip](#)



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 fnservletEAR. 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

      (C) COPYRIGHT International Business Machines Corp. 2003, 2007

              All Rights Reserved
      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
<code>text.txt</code>	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 <code>text.txt.dflines.txt</code> .

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

      (C) COPYRIGHT International Business Machines Corp. 2003, 2007

      All Rights Reserved
      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 <i>tagname</i> tag should begin and end a paragraph (it has p="Y" in <code>DocXSLConversion.xml</code>) but instead has appeared in the middle of a source line.
*Line: x Autoclosing.: <AUTOCLOSE tag="tagname" />	The <i>tagname</i> 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 <i>tagx</i> tag is defined as a paired tag (end="byendtag"), but the matching end tag was not at the right place. Another paired tag (<i>tagy</i>) contains <i>tagx</i> and was closed earlier.
*Line: x Isolated Tag: "tagname"	The <i>tagname</i> 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.