# ASF 3.4 Document Connect for ASF

Installation on Linux Server Using WebSphere Application Server V6.1

Edition: 1.1

02 June 2008

# 1 Table of Contents

1	TABLE OF CONTENTS	2
2	PREREQUISITES	4
3	INSTALLING THE APPLICATION	5
Prep	paring the application installation	5
Inst	alling a new application (Step 1)	6
Inst	alling a new application (Step 2)	7
Inst	alling a new application (Step 3)	8
Inst	alling a new application (Step 4)	9
Star	ting the application	9
4	MIGRATING CONFIGURATION FILES FROM 3.3 TO 3.4	10
5	ACTIVATING THE ASF HELP	11
6	SETTING UP A CONNECTION TO DB2	14
Defi	ning a data source	14
Defi	ning JAAS – J2C authentication data	18
Con	figuring the connections	20
7	SETTING UP A CONNECTION TO IMS VIA IMS CONNECT	21
Defi	ning a J2C connection factory	21
Defi	ning JAAS – J2C authentication data	23
Con	figuring the connections	25
8	SETTING UP A CONNECTION TO IMS VIA WEBSPHERE MQ	26
Defi	ning a queue connection factory	26
Defi	ning an input and an output queue	28
Defi	ning JAAS – J2C authentication data	32
Con	figuring the connections	34
9 GA	SETTING UP A CONNECTION TO CICS VIA THE CICS TRANSACTION TEWAY	35

Defin	ing a J2C connection factory	35
Defin	ing JAAS – J2C authentication data	37
Confi	guring the connections	39
10	SETTING UP A CONNECTION TO CICS VIA WEBSPHERE MQ	40
Defin	ing a queue connection factory	40
Defin	ing an input and an output Queue	42
Defin	ing JAAS – J2C authentication data	46
Confi	guring the connections	48
11	ACTIVATING DICTIONARIES FOR SPELL CHECKING	49
12	USING ONE SET OF CONFIGURATION FILES	50
13	PROTECTING ACCESS TO THE CONFIGURATION SERVLETS	52
14	PRINT PREVIEW CONFIGURATION	54
AFP	Resources	54
Using	g the AFP Viewer or a PDF viewer	55
15	INSTALLING A SECOND APPLICATION	57
16	APPLYING MAINTENANCE	60
17	THE CONVERSION TOOLKIT	62
Hard	ware and software requirements	62
Insta	lling the toolkit	62
Using	g the toolkit	64
Diagi	nostics provided with the toolkit	68

# 2 Prerequisites

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

Note: The installation path is assumed to be opt/IBM/WebSphere/AppServer6.1

- 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

#### Note:

The screens shown in this document are based on WebSphere 6.1. When installing ASF 3.4 under WebSphere 6.0 the screens will differ slightly.

# 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:

opt//IBM/ASF34/fsnservlet.ear

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Address Address http://susel:9060/ibm/console/login.do		💌 🄁 Go
Integrated Solutions Console Welcome och	Help   Logout	
View: All tasks	interprise Applications	Close page
Guided Activities	Preparing for the application installation ? –	Help –
E Servers	Specify the EAR, WAR, JAR, or SAR module to upload and install.	Field help Local file system path
<ul> <li>□ Applications</li> <li>□ Install New Application</li> <li>□ Resources</li> <li>□ Security</li> <li>□ Environment</li> <li>□ System administration</li> <li>□ Users and Groups</li> <li>□ Monitoring and Tuning</li> <li>□ Troubleshooting</li> <li>□ Service integration</li> <li>□ UDDI</li> </ul>	Path to the new application <ul> <li>Local file system</li> <li>Full path</li> <li>BM/ASF34/fsnservlet.ear</li> <li>Browse</li> </ul> Remote file system <ul> <li>Full path</li> <li>Browse</li> <li>Browse</li> <li>Browse the local machine or a remote server</li> <li>Used only tor standardne Web modules (.war files) and SIP modules (.sar files)</li> </ul> How do you want to install the application? <ul> <li>Prompt me only when additional information is required.</li> <li>Show me all installation options and parameters.</li> </ul> Next         Cancel	Page help More information about this page
<u> </u>		Scal intranet

Select <u>Next</u>. The file "fsnservlet.ear" is now loaded on the server.

### 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:

opt/IBM/WebSphere/AppServer6.1/profiles/default/installedApps/

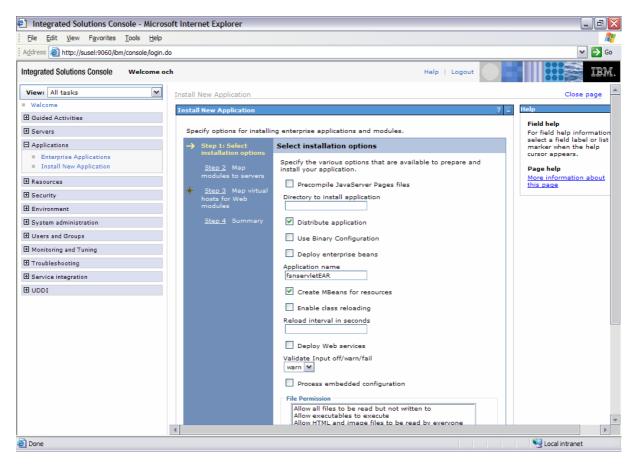
- 'xxxxx' is the cell name
- 'fsnservlet' is the application name.

#### **Application Name:**

Specify a unique name, for example 'fsnservletEAR'.

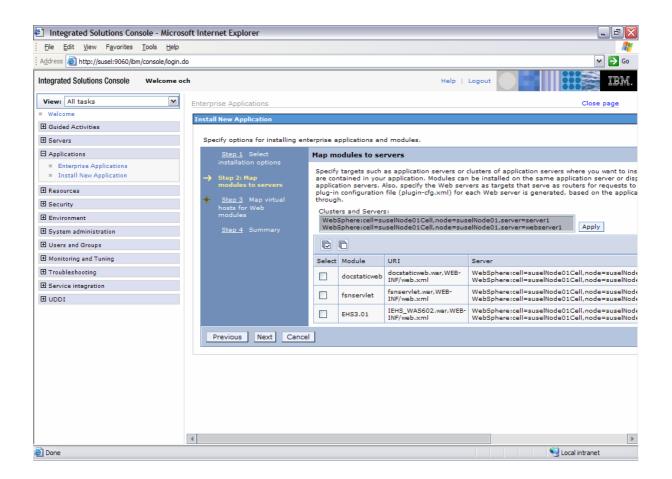
#### **Class Reloading:**

Do not enable class reloading.



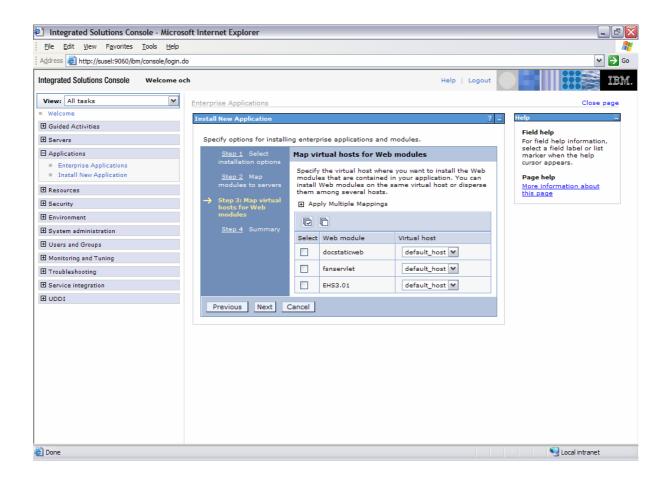
Click <u>Next</u> to finish Step 1 and go to Step 2.

### Installing a new application (Step 2)



No updates are required for Step 2. Click <u>Next</u> to finish Step 2 and go to Step 3.

### Installing a new application (Step 3)



No updates are required for Step 3. Click <u>Next</u> to finish Step 3 and go to Step 4.

### Installing a new application (Step 4)

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View: All tasks	<u>Step 2</u> Map	Summary of installation		4
Welcome	modules to servers	Options	Values	Help
Guided Activities	Step 3 Map virtual	Precompile JavaServer Pages files	No	Field help
± Servers	hosts for Web modules	Directory to install		For field help inform
Applications		application		select a field label c marker when the he
Enterprise Applications	→ Step 4: Summary	Distribute application	Yes	cursor appears.
<ul> <li>Install New Application</li> </ul>		Use Binary Configuration	No	Page help
E Resources		Deploy enterprise beans	No	More information at this page
☑ Security		Application name	fsnservletEAR	Command Assistan
Environment     System administration		Create MBeans for resources	Yes	View administrative scripting command action
Users and Groups		Enable class reloading	No	
Osers and Groups     Monitoring and Tuning		Reload interval in seconds		
		Deploy Web services	No	
E Service integration		Validate Input off/warn/fail	warn	
E UDDI		Process embedded configuration	No	
		File Permission	.*\.dll=755#.*\.so=755#.*\.a=755#.*\.sl=755	
		Application Build ID	Unknown	
		Allow dispatching includes to remote resources	No	
		Allow servicing includes from remote resources	No	
		Cell/Node/Server	Click here	
	Previous Finish	Cancel		
Done				Second Intranet

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

#### Starting the application

Open <u>Applications</u> > <u>Enterprise Application</u>, select your fsnservletEAR application and click <u>Start</u> 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:

opt/IBM/WebSphere/AppServer6.1/profiles/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 <u>Resources</u> > <u>URL Providers</u> > <u>New</u>

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

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Integrated Solutions Console Welcome och	Help   Logout	EM.
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S		🧐 Local intranet

Click Apply and save your modifications.

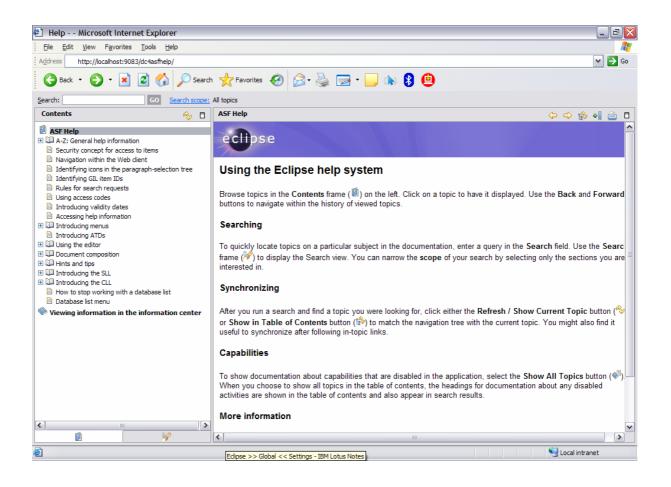
Next change the class loader policy for the module IEHS\_WAS61.war to "Classes loaded with application class loader first".

Open Enterprise aplications > fsnservletEAR > Manage Modules > IEHS\_WAS61.war

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Address 🕘 http://susel:9060/lbm/console/login.do	🕶 🄁 Go
Integrated Solutions Console Welcome och Help   Logout	IBM.
View:         All tasks         Enterprise Applications <ul> <li>Welcome</li> <li>Enterprise Applications</li> <li>Performance</li> </ul> Help	Close page
Guided Activities     Enterprise Applications > fsnservletEAR > Manage Modules > IEHS WAS602.war     Field he	lp
B Servers Use this page to configure an instance of a deployed Web module in the application. This are load page contains deployment-specific information for a Web module and session management parent c	s whether classes led using the class loader before lication class
LE Resources	ormation about
B Security * LIRT	-
Environment EVEN WAS602.war View Module Class	
System administration     Alternate deployment descriptor     Target specific     application status	
Users and Groups     Starting weight     View Deployment	
B Monitoring and Tuning Descriptor	
Troubleshooting     * Class loader order     Deployment	
Service integration     Classes loaded with application class loader first     Descriptor     Session	
BUDDI Management	
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Click <u>Apply</u> and save your modifications.

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

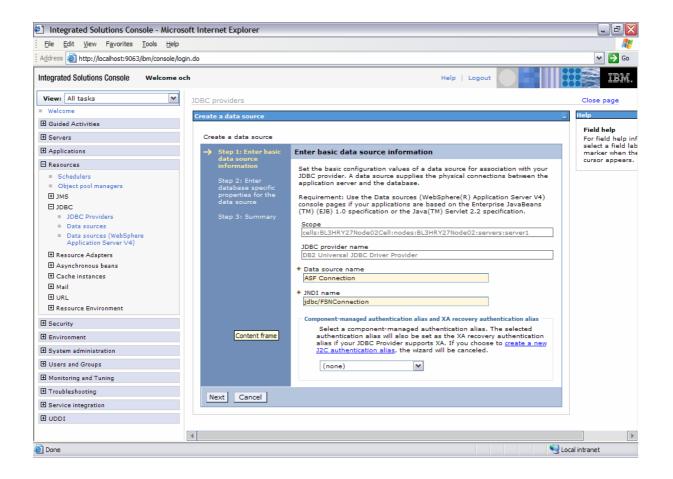


# 6 Setting up a connection to DB2

#### Defining a data source

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

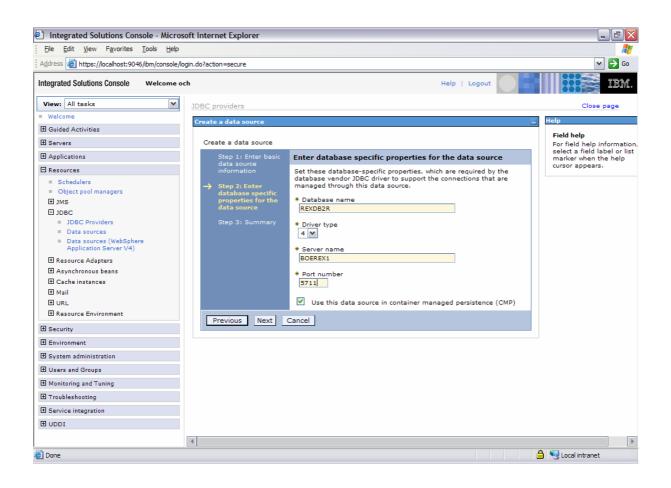
Enter the name, for example, "ASF Connection" and the JNDI name for the data source, for example, jdbc/FSNConnection.



Click Next.

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 Next.

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View: All tasks	JDBC providers		Close	page 🔺
Welcome	Create a data source			_ Hel
Guided Activities				F
1 Servers	Create a data source			F
Applications	Step 1: Enter basic	Summary		s: m
🖂 Resources	data source information	Summary of act	ions:	CL
Schedulers	Step 2: Enter	Options	Values	
<ul> <li>Object pool managers</li> <li>JMS</li> </ul>	database specific properties for the	Scope	cells:BL3HRY27Node02Cell:nodes:BL3HRY27Node02:servers:server1	
I JDBC	data source	Data source name	ASF Connection	
<ul> <li>JDBC Providers</li> <li>Data sources</li> </ul>	→ Step 3: Summary	JNDI name	idbc/FSNConnection	
<ul> <li>Data sources (WebSphere Application Server V4)</li> <li>Resource Adapters</li> </ul>		Component- managed authentication alias	(none)	
Asynchronous beans     Cache instances     Mail		Select an existing JDBC provider	DB2 Universal JDBC Driver Provider	
URL     Besource Environment		Implementation class name	com.ibm.db2.jcc.DB2ConnectionPoolDataSource	
		Database name	REXDB2R	
E Security     Securit		Driver type	4	
Environment		Server name	BOEREX1	
		Port number	5711	
		Use this data source in		
		container managed	true	
		persistence (CMP)		
Service integration		(CMP)		
1 UDDI	Previous Finish	Cancel		
				· · · · · · · · · · · · · · · · · · ·
Done			🔒 😒 Local intranet	
C Done			📃 🤧 Local intranet	

Click  $\underline{\mathsf{Finish}}$  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.

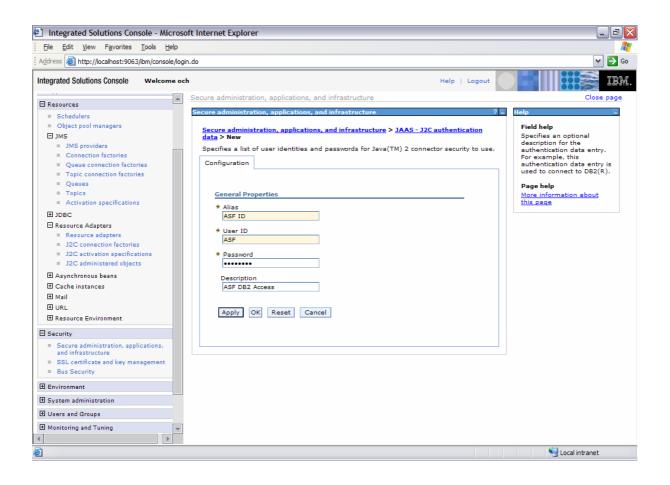
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Address 🕘 https://localhost:9046/lbm/console/login.do?action=secure							
Integrated Solutions Console Welcome o	ch				Help   Logout	s II	Ν.
View: All tasks					prepare requests'. In this case, the driver works without the benefit of described parameter 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.		*
Applications     Resources     Schedulers			<u>currentSchema</u>	<u>SC1BAS</u>	Identifies the default schema name used to availify unavailified 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.	<u>false</u>	
<ul> <li>Object pool managers</li> <li>JMS</li> <li>JDBC</li> </ul>			<u>cliSchema</u>		Indicates the schema of the DB2 shadow catalog tables or views to search when you issue a database meta data catalog query.	<u>false</u>	
<ul> <li>JDBC Providers</li> <li>Data sources</li> <li>Data sources (WebSphere Application Server V4)</li> </ul>			retrieveMessagesFromServerOnGetMessage	<u>true</u>	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.	<u>false</u>	
Application Server (v4)     Resource Adapters     Asynchronous beans     Cache instances     Mail			<u>clientAccountingInformation</u>		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, UNX 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.	<u>false</u>	
URL Resource Environment Security Environment			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, UNX 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.	<u>false</u>	
System administration     Users and Groups     Monitoring and Tuning     Troubleshooting			<u>clientUser</u>		Specifies the current client user name for the connection. This information is for client accounting purposes. Unlike the JDBC connection user name, this value can change during a connection. For a DB2 UDB for Linux, UNIX and Windows server, the maximum length is 255 bytes.	false	
Service integration     UDDI			<u>clientWorkstation</u>		Specifies the workstation name for the current client for the connection. This information is for client accounting purposes. This value can	false	▼
Done							

Click <u>Apply</u> and save your modifications.

### Defining JAAS – J2C authentication data

Open <u>Security</u> > <u>Secure administration</u>, applications, and infrastructure > <u>JAAS – J2C</u> authentication <u>data</u> > <u>New</u>

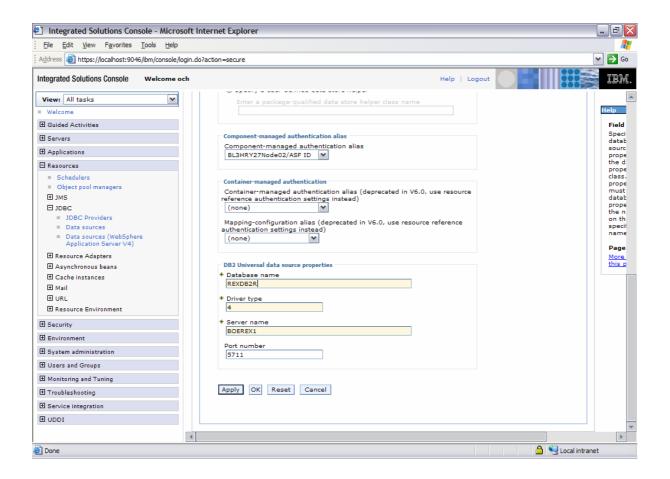
Enter an alias and a valid User ID and password for DB2 access.



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.

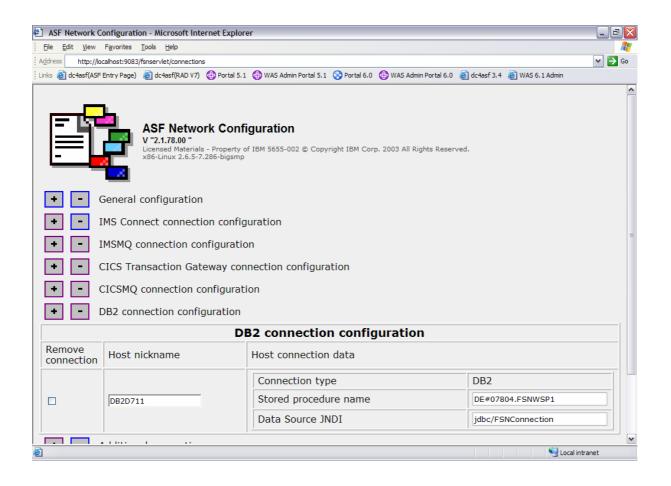


Click <u>Apply</u>, save your modifications, and restart the WebSphere Application Server.

### 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.



Click OK to save your changes.

Stop and Start your application in the WebSphere Administrative Console.

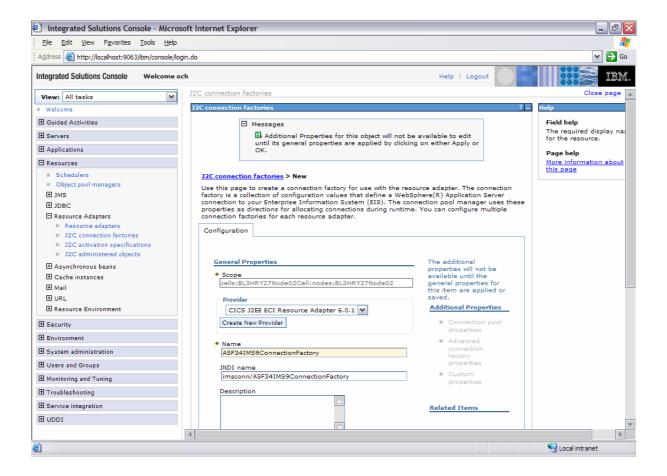
# 7 Setting up a connection to IMS via IMS Connect

### Defining a J2C connection factory

Open <u>Resources</u> > <u>Resource Adapters</u> > <u>J2C connection factories</u> > <u>New</u>

Select the IMS Connector for Java 9.10.21 as resource adapter provider.

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



Click <u>Apply</u> to save your modifications.

Open <u>Resource Adapters</u> > <u>J2C connection factories</u> > <u>ASF34IMS9ConnectionFactory</u> > <u>Custom Properties</u>

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

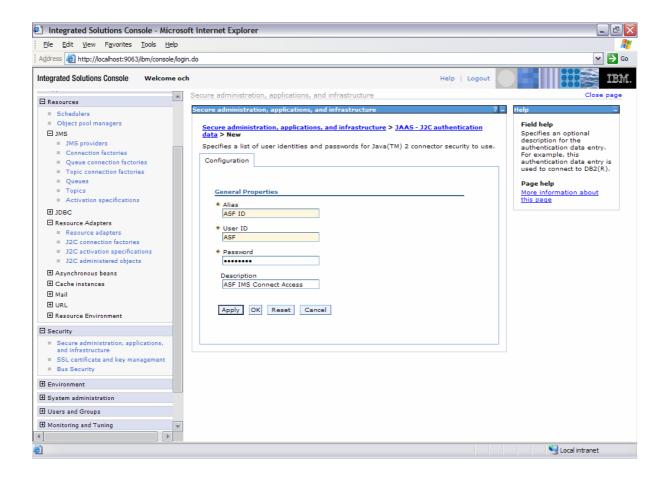
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View: All tasks	<u>UserName</u>		Default name of the user to be authorized	false	Help –
Guided Activities     Servers	SSLEnabled	FALSE	Indicates if SSL is enabled for this connection factory	false	Field help For field help information,
• Applications	HostName	9.152.87.231	TCP/IP host name of the target IMS Connect	false	select a field label or list marker when the help cursor appears.
Resources     Schedulers     Object pool managers	SSLTrustStorePassword		Password of SSL keystore for trusted certificates	false	Page help More information about this page
	PortNumber	<u>6000</u>	Target TCP/IP port number of IMS Connect	false	
<ul> <li>Resource Adapters</li> <li>Resource adapters</li> <li>J2C connection factories</li> </ul>	GroupName		Default name of the IMS group of the user	false	
<ul> <li>J2C activation specifications</li> <li>J2C administered objects</li> <li>Asynchronous beans</li> </ul>	CM0Dedicated	FALSE	Indicates if sockets are dedicated to specific CM0 clients.	false	
	SSLEncryptionType	Weak	The type of cipher suite to be used for encryption	false	
URL  Resource Environment  Security	SSLKeyStorePassword		Password of SSL keystore for client certificates/private keys	false	
Environment	MFSXMIRepositoryURI		Location of MFS XMI Repository.	false	
<ul> <li>System administration</li> <li>Users and Groups</li> </ul>	IMSConnectName		Name of the target IMS Connect - for Local Option only	false	
■ Monitoring and Tuning	DataStoreName	IMS92	Name of the target IMS datastore	false	
<ul> <li>Troubleshooting</li> <li>Service integration</li> </ul>	SSLTrustStoreName		Name (full path) of SSL keystore for trusted certificates	false	
1 UDDI	Total 17				
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Click <u>Apply</u> to save your modifications.

### Defining JAAS – J2C authentication data

Open <u>Security</u> > <u>Secure administration</u>, applications, and infrastructure > <u>JAAS – J2C</u> authentication <u>data</u> > <u>New</u>

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



Click OK to save your modifications.

Open <u>J2C connection factories</u> > <u>ASF34IMS9ConnectionFactory</u>

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

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Done Section Contract Contract	Welcome     Welcome     Guided Activities     Servers     Applications     Resources     Schedulers     Object pool managers     JDBC     Resource Adapters     JDBC     Resource Adapters     J2C activation specifications     J2C activation specifications     J2C activation specifications     J2C activation specifications     J2C administered objects     Asynchronous beans     Cache instances     Mail     URL     Resource Environment     Security     Environment     System administration     Users and Groups     Monitoring and Tuning     Troubleshooting     Service integration	javax.resource.ccl.ConnectionFactory ♥ Category Component-managed authentication alias Component-managed authentication alias BL3HRY22Node02/ASF ID ♥ Authentication alias for XA recovery Use component-managed authentication alias ③ Specify: (none) ♥ 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 ♥	Field help Specifies an authenticat alias for use when the component resource reference res-auth value Application. See Related Items -> J2EE Connecto Architecture (J2C) authentication data entr to define a new alias. Page help More information about this page
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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.

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	ASF Network Con V "2.1.78.00 " Licensed Materials - Propert x86-Linux 2.6.5-7.286-bigsr	y of IBM 5655-002 © Copyright IBM Corp.	2003 All Rights Reserved.	
• • I	MS Connect connection con	figuration		
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lemove onnection	Host nickname	Host connection data		
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Click OK to save your changes.

<u>Stop</u> and <u>Start</u> your application in the WebSphere Administrative Console.

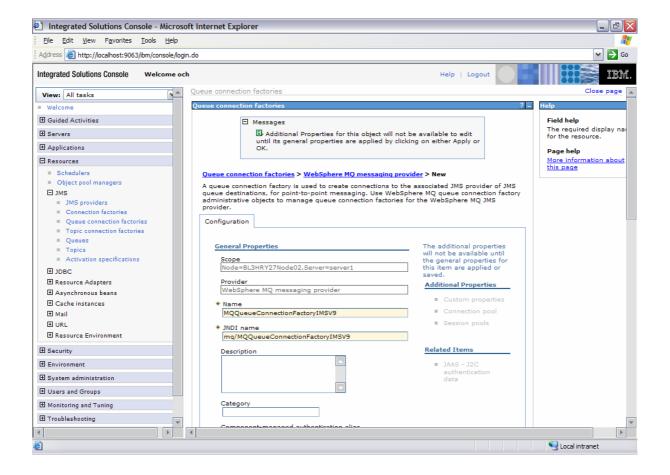
# 8 Setting up a connection to IMS via WebSphere MQ

#### Defining a queue connection factory

Open <u>Resources</u> > <u>JMS</u> > <u>Queue connection factories</u> > <u>New</u>

Select the WebSphere MQ messaging provider.

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



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

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View: All tasks	Name     MQQueueConnectionFactoryIMSV9     JNDI name     mq/MQQueueConnectionFactoryIMSV9     Description	Related Items = JAAS - J2C authentication data	Help Field help The name of the host o which the WebSphere Mr queue manager runs, fc client connection only.
<ul> <li>Object pool managers</li> <li>JMS</li> <li>JMS providers</li> <li>Connection factories</li> <li>Queue connection factories</li> <li>Topic connection factories</li> <li>Queues</li> <li>Topics</li> <li>Activation specifications</li> <li>JDBC</li> <li>B Resource Adapters</li> </ul>	Category Component-managed authentication alias (none) Container-managed authentication alias (none) Mapping-configuration alias DefaultPrincipalMapping		Page help More information about this page
Asynchronous beans     Cache instances     Mail     URL     Resource Environment     Security     Environment     System administration     Users and Groups	Queue manager           QE71           Host           [9.152.87.231]           Port           [1415           Channel           [SYSTEM.DEF.SVRCONN           Transport type           [CLIENT		
Monitoring and Tuning  Troubleshooting	Model queue definition		w b
E Done			S Local intranet

Click <u>Apply</u> 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 <u>Resources</u> > <u>JMS</u> > <u>Queues</u> > <u>New</u>

Select the WebSphere MQ messaging provider.

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

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<ul> <li>Schedulers</li> <li>Object pool managers</li> </ul>	<u>Queues</u> > <u>WebSphere MQ messaging provider</u> > 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	
JMS providers	the WebSphere MQ JMS provider.	
<ul> <li>Connection factories</li> </ul>	Configuration	
Queue connection factories		
Topic connection factories		
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	MQInputIMSV9 MQ Config	
1 Mail	* JNDI name	
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Resource Environment		
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Environment		
System administration		
1 Users and Groups	Category	
🗄 Monitoring and Tuning		
田 Troubleshooting     ▼	Persistence	-
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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.OCH.ASF34I9.
- 2. Base queue manager name is the target queue manager, for example, QE71
- 3. Target client must be set to JMS.

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Applications	Priority APPLICATION DEFINED	receiving application is JMS-compliant or is a
	Specified priority	traditional WebSphere M application.
= Schedulers		Page help
Object pool managers     JMS	APPLICATION DEFINED	More information about this page
JMS providers     Connection factories     Queue connection factories	Specified expiry 0 milliseconds	
Topic connection factories	* Base queue name	
Queues Topics	REPLY.OCH.ASF34I9	
Activation specifications	Base queue manager name QE71	
⊞ JDBC		
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Cache instances	Use native encoding	
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Click <u>Apply</u> and save your modifications.

#### Open <u>Resources</u> > <u>JMS</u> > <u>Queues</u> > <u>New</u>

Select the WebSphere MQ messaging provider.

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

Integrated Solutions Console - Microso	ft Internet Explorer	_ 8 🛛				
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Schedulers		this page				
<ul> <li>Object pool managers</li> </ul>	<u>Queues</u> > <u>WebSphere MQ messaging provider</u> > New Queue destinations provided for point-to-point messaging by the WebSphere MQ JMS provider.					
E JMS	Use WebSphere MQ queue destination administrative objects to manage queue destinations for					
= JMS providers	the WebSphere MQ JMS provider.					
Connection factories	Configuration					
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Topic connection factories	General Properties The additional properties					
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Asynchronous beans	* Name Custom properties					
E Cache instances	MQOutputIMSV9 MQ Config					
1 Mail	* JNDI name					
1 URL	mg/MQOutputIMSV9					
Resource Environment						
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Monitoring and Tuning						
Troubleshooting     ▼	Persistence	-				
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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.OCH.ASF34I9.
- 2. Base queue manager name is the target queue manager, for example, QE71
- 3. Target client must be set to JMS.

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Object pool managers	Expiry	this page
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Queue connection factories	0 milliseconds	
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= Topics	QUER 1.0CH.ASP3415	
Activation specifications	Base queue manager name	
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Resource Adapters	CCSID	
Asynchronous beans		
⊞ Mail	Use native encoding	
1 URL	Integer encoding	
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Environment	Floating point encoding	
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Users and Groups	Target client	
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Troubleshooting     ▼	WebSphere MQ Queue Connection Properties	T
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Click <u>Apply</u> and save your modifications.

# Defining JAAS – J2C authentication data

Open <u>Security</u> > <u>Secure administration</u>, applications, and infrastructure > <u>JAAS – J2C</u> authentication <u>data</u> > <u>New</u>

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

Integrated Solutions Console - Microsoft Internet Explorer	_ 8 🔀
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View: All tasks Secure administration, applications, and infrastructure	Close page
Welcome         Secure administration, applications, and infrastructure         ? =	Help –
Guided Activities     Secure administration, applications, and infrastructure > JAAS - J2C authentication	Field help
Servers	For field help information, select a field label or list
Applications     Specifies a list of user identities and passwords for Java(TM) 2 connector security to use.	marker when the help cursor appears.
Resources Configuration	
<ul> <li>Schedulers</li> <li>Object pool managers</li> <li>JMS</li> <li>JMS providers</li> <li>Connection factories</li> <li>Queue connection factories</li> <li>Queues</li> <li>Topic connection factories</li> <li>Queues</li> <li>Topics</li> <li>Activation specifications</li> <li>JOBC</li> <li>Resource Adapters</li> <li>Asynchronous beans</li> <li>Cache instances</li> <li>Mail</li> <li>URL</li> <li>Resource Environment</li> </ul>	Page help More information about this page
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Select OK and save your modifications.

Open <u>Resources</u> > <u>JMS</u> > <u>Queue connection factories</u> > <u>MQQueueConnectionFactoryIMSV9</u>

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

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View: All tasks	Queue connection factories	Close page
= Welcome	Queue connection factories ? -	Help
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1 Servers	A queue connection factory is used to create connections to the associated JMS provider of JMS	Specifies an authenticat alias for use when the
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Resources	provider.	Application. See Related Items -> J2EE Connecto
Schedulers	Configuration	Architecture (J2C)
<ul> <li>Object pool managers</li> </ul>		authentication data entr to define a new alias.
⊐ JMS     = JMS providers	General Properties Additional Properties	Page help
Connection factories	Scope Custom properties	More information about
Queue connection factories	Node=BL3HRY27Node02,Server=server1 Connection pool	this page
Topic connection factories	Provider Session pools	
Queues     Topics	websphere wo messaging provider	
<ul> <li>Activation specifications</li> </ul>	* Name MQQueueConnectionFactoryIMSV9 Related Items	
⊞ JDBC		
Resource Adapters	* JNDI name JAAS - J2C mg/MQQueueConnectionFactoryIMSV9 authentication	
	data	
	Description	
⊞ Mail		
URL     Resource Environment		
Security	Category	
<ul> <li>Secure administration, applications, and infrastructure</li> </ul>		
<ul> <li>SSL certificate and key management</li> </ul>	Component-managed authentication alias	
Bus Security	BL3HRY27Node02/ASF ID	
Environment	Container-managed authentication alias	
E System administration		
	Mapping-configuration alias	
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Click <u>Apply</u>, 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.

2 ASF Network Configuration - Microsoft Internet Explorer					
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Links 👸 dc4asf(ASF En	try 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		
ASF Network Configuration V "2.1.78.00 " Licensed Materials - Property of IBM 5655-002 © Copyright IBM Corp. 2003 All Rights Reserved. x86-Linux 2.6.5-7.286-bigsmp					
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Remove connection	Host nickname	Host connection data			
		Connection type	IMSMQ		
		Conversational IMS Processing			
	sc1I9mq	XCode prefix			
		XCode	SC1E		
		MQ Wait interval	300		
		MQ Connection Factory JNDI	mq/MQQueueConnectionFactoryIMSV9		
		MQ Output Queue JNDI	mq/MQOutputIMSV9		
		MQ Input Queue JNDI	mq/MQOutputIMSV9		
Done     Subscription					

Click OK to save your changes.

Stop and Start your application in the WebSphere Administrative Console.

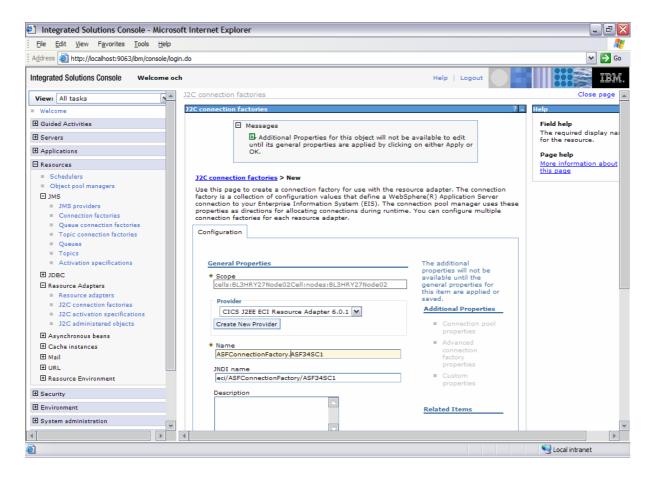
# 9 Setting up a connection to CICS via the CICS Transaction Gateway

#### Defining a J2C connection factory

Open <u>Resources</u> > <u>Resource Adapters</u> > <u>J2C connection factories</u> > <u>New</u>

Select the CICS J2EE ECI Resource Adapter 6.0.1 as the resource adapter provider.

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



Click Apply and save your modifications.

Open <u>Resource Adapters</u> > <u>J2C connection factories</u> > <u>ASFConnectionFactory.ASF34SC1</u> > <u>Custom Properties</u>

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

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E Servers	<u>J2C connection factories</u> > <u>ASEConnectionFactory.ASE34SCI</u> > Custom properties				For field help information,	
Applications		for the resource pr	oviders and resource factories that you configu	ure. For example, n	nost database	select a field label or list marker when the help
Resources		vendors require ad	lditional custom properties for data sources th	at access the datab	base.	cursor appears.
Schedulers						Page help
<ul> <li>Schedulers</li> <li>Object pool managers</li> </ul>		***				More information about this page
E JMS		Name 🗘	Value 🗘	Description 🗘	Required	
<ul> <li>JMS providers</li> </ul>		TraceLevel	1	TraceLevel	false	
<ul> <li>Connection factories</li> <li>Oueue connection factories</li> </ul>		TPNName		TPNName	false	
<ul> <li>Topic connection factories</li> </ul>		Password		Password	false	
Queues		UserName		UserName	false	
<ul> <li>Topics</li> <li>Activation specifications</li> </ul>		TranName		TranName	false	
		ConnectionURL	tcp://boerex1.boeblingen.de.ibm.com:2006/	ConnectionURL	<u>false</u>	
Resource Adapters		ServerName	IPVAXCIR	ServerName	<u>false</u>	
Resource adapters		ClientSecurity		ClientSecurity	<u>false</u>	
J2C connection factories		PortNumber	2006	PortNumber	<u>false</u>	
<ul> <li>J2C activation specifications</li> <li>J2C administered objects</li> </ul>		KeyRingPassword		KeyRingPassword	false	
Asynchronous beans		KeyRingClass		KeyRingClass	false	
Cache instances		ServerSecurity		ServerSecurity	false	
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Resource Environment						
Environment						
System administration	-					
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Click Apply and save your modifications.

## Defining JAAS – J2C authentication data

Open <u>Security</u> > <u>Secure administration</u>, applications, and infrastructure > <u>JAAS – J2C</u> authentication <u>data</u> > <u>New</u>

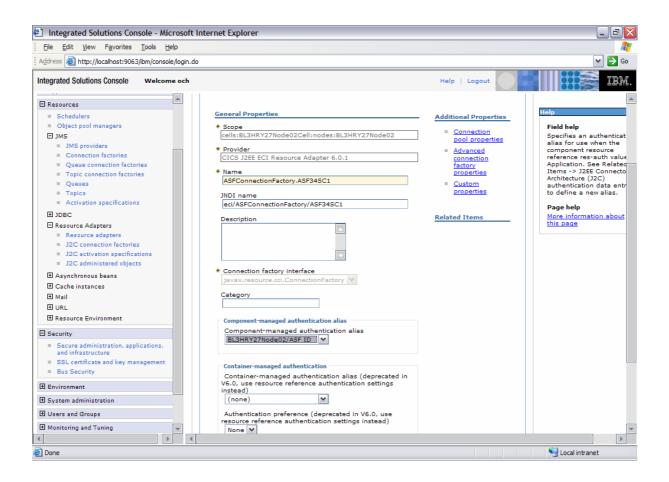
Enter an alias and a valid user ID and password for the CICS Transaction Gateway connection.

Integrated Solutions Console       Welcome och       Help       Logout       Logout         Image: Secure administration, applications, and infrastructure       Close page         Image: Secure administration, applications, and infrastructure       Close page         Image: Secure administration, applications, and infrastructure       Logout       Field help         Secure administration, applications, and infrastructure       Image: Secure administration, applications, and infrastructure       Field help         Specifies a list of user identities and passwords for Java(TM) 2 connector security to use.       Specifies a list of user identities and passwords for Java(TM) 2 connector security to use.       Image: Infrastructure Secure administration deserve is used to connect to DB2(R).         Page help       Assecure Adapters       Assecure Adapters       Assecure Adapters         B 2DC connection factories       Assecure       Assecure       Assecure         B succent administration       Bage help       Mail       Mail       Assecure         B succent administration       Assecure       Consecution factories       Assecure       Assecure         B succent administration       Bescure administration       Assecure       Assecure       Assecure         B succent administration       Bescure       Configuration       Bescure       Assecure         B succent administration <th>Integrated Solutions Console - Micros</th> <th>oft Internet Explorer</th> <th>_ 8 🗙</th>	Integrated Solutions Console - Micros	oft Internet Explorer	_ 8 🗙
Integrated Solutions Console       Welcome och       Help       Logout       Item         Image: Console in the second			
Secure administration, applications, and infrastructure       Cose page         Schedulars       Object pool managers         JMS       Secure administration, applications, and infrastructure         Schedulars       Connection factories         Queues       Specifics an optional data entry.         Topic connection factories       Configuration         Bosonce adapters       Specifies all of user identities and passwords for Java(TM) 2 connector security to use.         Construction factories       Construction factories         Bosonce adapters       Specifies all of user identities and passwords for Java(TM) 2 connector security to use.         Configuration       Specifies all of user identities and passwords for Java(TM) 2 connector security to use.         Activation specifications       Specifies all of user identities and passwords for Java(TM) 2 connector security to use.         Activation specifications       Specifies all of user identities and passwords for Java(TM) 2 connector security to use.         Activation specifications       + Alias         Specifies an opplication, applications, and infrastructure       - Asynchronous beans         Contentiatered objects       - Asynchronous beans         Mail       Mail         With       - Asport for Access         Mail       - Buy Security         Bystem administration       - Asport for Access<	Address 🗃 http://localhost:9063/ibm/console/log	in.do	🗸 🏹 Go
Resources         Schedulers         Object pool managers         MK         MS providers         Connection factories         Queue connection factories         Topic connection factories         Topic connection factories         Activation specifications         B Assource Adapters         Activation specifications         B Assource factories         J2C administration, applications, applications, and infrastructure         Page help         Mail         Ukit         Resource factories and ky management         E Scurity         Scurity         Scurity         Scurity         Scurity         Mail         Ukit         Resource factories and ky management         E System administration         System administration         Users and Groups	Integrated Solutions Console Welcome or	h Help   Logout	IBM.
<ul> <li>Schedulers <ul> <li>Object pool managers</li> <li>MS</li> <li>MS</li> <li>MS secure administration, applications, and infrastructure</li> </ul> </li> <li>Secure administration, applications, and infrastructure &gt; JAAS - J2C authentication data &gt; New Specifies a list of user identities and passwords for Java(TM) 2 connector security to use.</li> <li>Configuration</li> <li>Configur</li></ul>		Secure administration, applications, and infrastructure	Close page
and infrastructure SSL certificate and key management Bus Security Bus Security Bus System administration Bus System administration Busers and Groups	<ul> <li>Object pool managers</li> <li>JMS</li> <li>JMS providers</li> <li>Connection factories</li> <li>Queue connection factories</li> <li>Topic connection factories</li> <li>Queues</li> <li>Topics</li> <li>Activation specifications</li> <li>JDBC</li> <li>Resource Adapters</li> <li>J2C connection factories</li> <li>J2C activation specifications</li> <li>Maynchronous beans</li> <li>Cache instances</li> <li>Mail</li> <li>URL</li> <li>Resource Environment</li> </ul>	Secure administration, applications, and infrastructure > JAAS - J2C authentication data > New Specifies a list of user identities and passwords for Java(TM) 2 connector security to use. Configuration General Properties + Alias ASF ID + User ID ASF + Password  Description ASF CTG Access	Field help Specifies an optional description for the authentication data entry. For example, this authentication data entry is used to connect to DB2(R). Page help More information about
	Secure administration, applications, and infrastructure     SSL certificate and key management     SSL certificate and key management     Bus Security     Denvironment     Denvironment     Users and Groups     Doitoring and Tuning     V		
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Click OK and save your modifications.

Open <u>J2C connection factories</u> > ASFConnectionFactory.ASF34SC1

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



Click <u>Apply</u>, 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 C	Configuration - Microsoft Internet Ex	plorer		_ 7	
<u>File E</u> dit <u>V</u> iew	Favorites Tools Help			_	
ddress http://lo	calhost:9083/fsnservlet/connections			💌 🔁 G	
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+ - (	General configuration				
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	CiSC134ctg	CICS program	FSNWRFRC		
	Justistug	J2C Connection Factory JNDI	eci/ASFConnectionFactory/ASF34SC1		
			CICS		
		Connection type	CICS		
	CiDB234ctg	Connection type CICS program	FSNWRFRC		

Click OK to save your changes.

Stop and Start your application in the WebSphere Administrative Console.

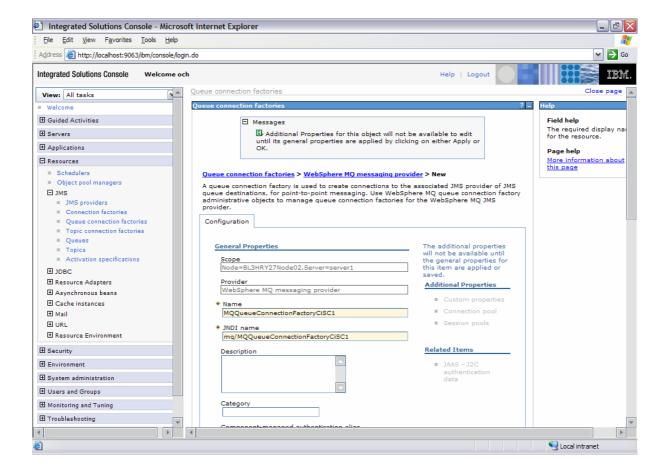
# 10 Setting up a connection to CICS via WebSphere MQ

### Defining a queue connection factory

Open <u>Resources</u> > <u>JMS</u> > <u>Queue connection factories</u> > <u>New</u>

Select the WebSphere MQ messaging provider.

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, 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.

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Click <u>Apply</u> 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 <u>Resources</u> > <u>JMS</u> > <u>Queues</u> > <u>New</u>

Select the WebSphere MQ messaging provider.

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

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Applications	until its general properties are applied by clicking on either Apply or OK.	
Resources	OK.	Page help More information about
Schedulers		this page
<ul> <li>Object pool managers</li> </ul>	<u>Queues</u> > <u>WebSphere MQ messaging provider</u> > New	
E JMS	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	
= JMS providers	the WebSphere MQ JMS provider.	
Connection factories	Configuration	
<ul> <li>Queue connection factories</li> </ul>		
<ul> <li>Topic connection factories</li> <li>Oueues</li> </ul>	General Properties The additional properties	
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⊞ JDBC	saved.	
Resource Adapters	Provider WebSphere MQ messaging provider Additional Properties	
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Cache instances	* Name E Coston poperties MOInputCiSC1 = MQ Config	
1 Mail	MQTIPECIDO1	
1 URL	* JNDI name	
Resource Environment	mg/MQInputCiSC1 The JNDI name for the resource.	
Security	Description	
Environment		
Monitoring and Tuning	Category	
	Persistence	-
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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.OCH.ASF34SC1.
- 5. Base queue manager name is the target queue manager, for example, QE71
- 6. Target client must be set to JMS.

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Click <u>Apply</u> and save your modifications.

#### Open <u>Resources</u> > <u>JMS</u> > <u>Queues</u> > <u>New</u>

Select the WebSphere MQ messaging provider.

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

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Schedulers	Queues > WebSphere MQ messaging provider > New	this page
Object pool managers	Queues > <u>webSphere MO messading provider</u> > <b>New</b> Queue destinations provided for point-to-point messading by the WebSphere MQ JMS	
E JMS	Use WebSphere MQ queue destination administrative objects to manage queue desti	
<ul> <li>JMS providers</li> </ul>	the WebSphere MQ JMS provider.	
<ul> <li>Connection factories</li> </ul>	Configuration	
<ul> <li>Queue connection factories</li> <li>Topic connection factories</li> </ul>		
<ul> <li>Topic connection factories</li> <li>Oueues</li> </ul>	General Properties The additional prop	perties
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Resource Adapters	Provider WebSphere MQ messaging provider Additional Proper	ties
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	* Name MQOutputCiSC1 = MQ Config	
1 Mail	Montpatchoci	
1 URL	* JNDI name	
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E Security	Description	
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🗄 Users and Groups	Category	
Monitoring and Tuning		
田 Troubleshooting     ▼	Persistence	
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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.OCH.ASF34SC1.
- 5. Base queue manager name is the target queue manager, for example, QE71
- 6. Target client must be set to JMS.

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<ul> <li>Topic connection factories</li> </ul>	* Base queue name	
= Queues	VUERY.OCH.ASF34SC1	
= Topics		
<ul> <li>Activation specifications</li> </ul>	Base queue manager name	
JDBC	QE71	
	CCSID	
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1 Mail	Use native encoding	
1 URL	Integer encoding	
E Resource Environment	Normal 💌	
E Security	Decimal encoding	
Environment		
System administration	Floating point encoding IEEENormal	
Users and Groups	Target client	
Monitoring and ⊤uning	JMS 💌	
Troubleshooting     ▼	WebSphere MQ Queue Connection Properties	v
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Click <u>Apply</u> and save your modifications.

# Defining JAAS – J2C authentication data

Open <u>Security</u> > <u>Secure administration</u>, applications, and infrastructure > <u>JAAS – J2C</u> authentication <u>data</u> > <u>New</u>

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

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Guided Activities     Secure administration, applications, and infrastructure > JAAS - J2C authentication	Field help
Servers	For field help information, select a field label or list
B Applications Specifies a list of user identities and passwords for Java(TM) 2 connector security to use.	marker when the help
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<ul> <li>Schedulers</li> <li>Object pool managers</li> <li>JMS</li> <li>JMS providers</li> <li>Connection factories</li> <li>Queue connection factories</li> <li>Queues</li> <li>Topic connection factories</li> <li>Queues</li> <li>Topics</li> <li>Activation specifications</li> <li>JDBC</li> <li>Resource Adapters</li> <li>Asynchronous beans</li> <li>Cache instances</li> <li>Mail</li> <li>URL</li> <li>Resource Environment</li> </ul>	More information about this page
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Click OK and save your modifications.

Open <u>Resources</u> > <u>JMS</u> > <u>Queue connection factories</u> > <u>MQQueueConnectionFactoryCiSC1</u>

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

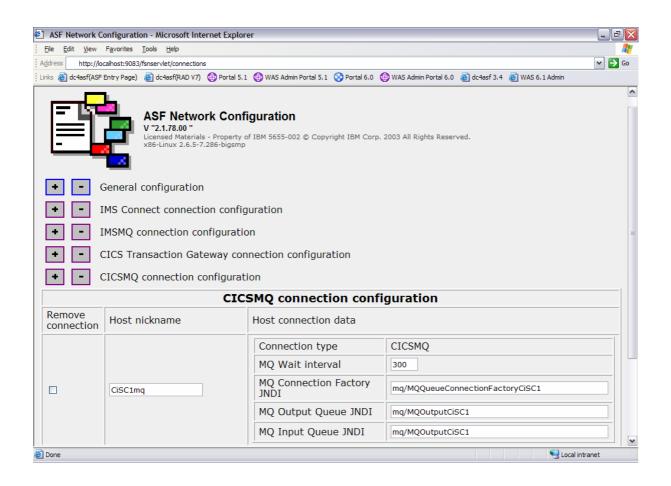
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= Welcome	Queue connection factories ? -	Help
Guided Activities	Queue connection factories > MQQueueConnectionFactoryCiSC1	Field help
Servers	A queue connection factory is used to create connections to the associated JMS provider of JMS	Specifies an authenticat alias for use when the
Applications	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	component resource reference res-auth value
🗆 Resources	provider.	Application. See Related Items -> J2EE Connecto
= Schedulers	Configuration	Architecture (J2C) authentication data entr
Object pool managers     JMS		to define a new alias.
= JMS providers	General Properties Additional Properties	Page help
<ul> <li>Connection factories</li> </ul>	Scope  Sc	More information about this page
Queue connection factories	= Connection pool	
<ul> <li>Topic connection factories</li> <li>Oueues</li> </ul>	Provider  WebSphere MQ messaging provider  Session pools	
= Topics	* Name	
Activation specifications	MQQueueConnectionFactoryCiSC1 Related Items	
⊞ JDBC	* JNDI name = JAAS - J2C	
	mg/MQQueueConnectionFactoryCiSC1 authentication	
	Description	
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Environment		
	Component-managed authentication alias	
🗄 Users and Groups	BL3HRY27Node02/ASF ID	
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Troubleshooting     ▼	Mapping-configuration alias	
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Click <u>Apply</u>, 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.

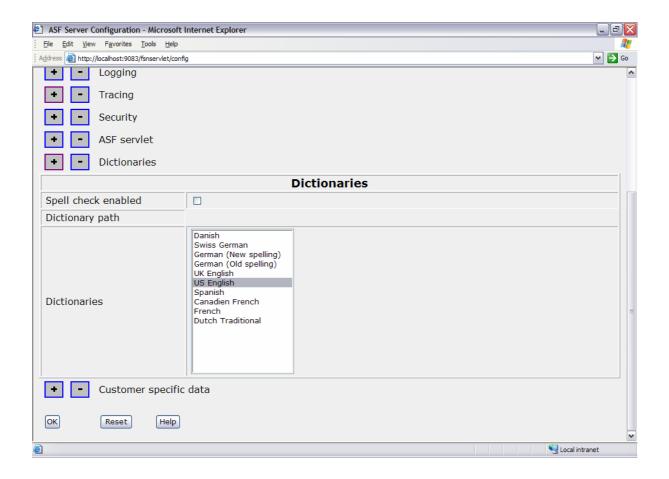


Click OK to save your changes.

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 DC4ASF in a multi-node environment or you have more than one instance of DC4ASF 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, D:\Programs\IBM\WebSphere\AppServer6.1\dc4asfhome\confighome and D:\Program\IBM\WebSphere\AppServer6.1\dc4asfhome\datahome

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View: All tasks	WebSphere Variables	Close page
= Welcome	WebSphere Variables ? -	Help –
Guided Activities	WebSphere Variables > DC4ASF CONFIGHOME	Field help
1 Servers	Use this page to define substitution variables. Variables specify a level of indirection for	Specifies the absolute path that the symbolic name
Applications	some system-defined values, such as file system root directories. Variables have a scope level, which is either server, node, cluster, or cell. Values at one scope level can differ	represents.
± Resources	from values at other levels. When a variable has conflicting scope values, the more granular scope value overrides values at greater scope levels. Therefore, server variables	Page help
E Security	override node variables, which override cluster variables, which override cell variables.	More information about this page
Environment	Configuration	
<ul> <li>Virtual Hosts</li> <li>Update global Web server plug-in configuration</li> <li>WebSphere Variables</li> <li>Shared Libraries</li> <li>Replication domains</li> <li>Naming</li> <li>System administration</li> <li>Users and Groups</li> <li>Monitoring and Tuning</li> <li>Troubleshooting</li> <li>Service integration</li> <li>UDDI</li> </ul>	General Properties         * Name         DCdASF_CONFIGHOME         Value         6.1\dc4asfhome\confighome         Description         Image: Control of the second	
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• Create the following three directories:

\$(CONFIG\_HOME) For example, D:\Programs\IBM\WebSphere\AppServer6.1\dc4asfhome\confighome \$(DATA\_HOME)/log For example, D:\Programs\IBM\WebSphere\AppServer6.1\dc4asfhome\datahome\log \$(DATA\_HOME)/preview For example, D:\Programs\IBM\WebSphere\AppServer6.1\dc4asfhome\datahome\preview

• Copy the following configuration files:

DocConfiguration.xml DocNetworkConfiguration.xml DocXSLConversion.xml DocSpellCheckConfiguration.xml hnp.txt

from  $(APP_INSTALL_ROOT)\xservNode01Cell\dc4asf12.ear/dc4asf12.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:

 The "Secure administration, application and infrastructure" of the WebSphere Application Server (WAS) must be enabled. For more information on "Enabling Security", refer to the online help of the "WebSphere Application Server (Distributed platforms and Windows), Version 6.1".

Note:

In previous releases of WebSphere Application Server, if a user enabled global security, both administrative and application security was enabled. In WebSphere Application Server Version 6.1 however, the notion of global security is split into administrative security and application security, each of which must be enabled separately.

Open <u>Applications</u> > <u>Enterprise Applications</u> > <u>fsnservletEAR</u> > <u>Security role to user/group mapping</u>

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.

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Guided Activities	Enterprise Applications > fsnservletEAR > Security role to user/group mapping > Look	Field help
1 Servers	up users or groups	For field help information, select a field label or list
Applications	Specifies whether to look up users or groups.	marker when the help cursor appears.
Enterprise Applications	The following roles are mapped to the items in the selected list.	Page help
Install New Application	<ul> <li>dc4asfconfig</li> </ul>	More information about this page
Resources		tins page
Security	To search for users or groups, enter a limit (number) and a search pattern (such as	
Environment	a*) and click Search:	
System administration	limit (number of items)	
	20	
Monitoring and Tuning	Search String	
	* Search	
Service integration		
1 UDDI	Select users or groups in the Available list. Move them to the Selected list by clicking >>.	
	Available: BL3HRY27\ASPNET BL3HRY27\db2admin BL3HRY27\db2admin BL3HRY27\velpAssistant BL3HRY27\velpAssistant BL3HRY27\vUSR_TcsServer_CSS BL3HRY27\VUSR_TcsServer_CSS	
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<u>Save</u> the changes to the master configuration, then <u>Stop</u> and <u>Start</u> 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:

D:\Program Files\IBM\IBM Document Connect for ASF\wwww\AFPResources\pseg

Page segments must have the extension "psg".

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

D:\Program Files\IBM\IBM Document Connect for ASF\wwww\AFPResources\ovl

Overlays must have the extension "oly".

• 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.

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ł	Eile	<u>E</u> dit <u>V</u> ie	w F <u>a</u> v	orites	<u>T</u> ools	<u>H</u> elp						1	<b></b>
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							Selection			Values			
									Extension	afp			
									Transformation class				
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									Extension	pdf			
	Preview					Transformation class	com.ibm.doc.util.DocInfoPrintTransform			Ш			
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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				_ 7	X
Eile Edit View Favorites Tools Help						1
Address Address http://localhost:9083/fsnservlet/confi	g				🖌 🔁 🗠	
		ASF s	ervlet		6	^
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 HTML path	preview				_
			Transform	ation list		
	Selection			Values		
		E	xtension	afp		
			ransformation lass			
	AFP		ransformation ath			
			ransformation ommand			
		U	IRL	http://localhost:9083/fsnservlet/getafpres.c		~
🙆 Done				Second Intrane	t	

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).

ASF Server Configuration - Microsoft	Internet Explorer			Z
Elle Edit View Favorites Tools Help				💦 🗸 🗸
; Agaress en http://localhost:9083/fsnservlet/conf				✓ → Go
	Selection		Values	
		Extension	afp	
		Transformation class		
	AFP	Transformation path		
Preview		Transformation command		
		URL	http://localhost:9080/dc4asf12/getafpres.de	
		Extension	pdf	
		Transformation class	com.ibm.doc.conversions.DocCommandLineT	
	PDFCMD	Transformation path		
		Transformation command	D:\IBM\AFP2PDF\install\makepdf.bat	
		URL		
+ - Dictionaries	<u>]</u>			
• Customer specific	c data			
OK Reset Help				~
ê)			Second Intra	

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 Installing a second application

The steps described so far show you how to install the application fsnservletEAR in WebSphere Application Server.

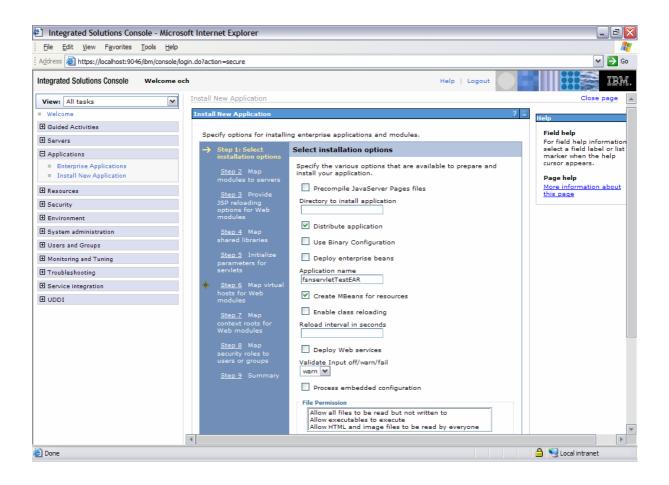
IBM recommends that you generate a second application instance of Document Connect for ASF for use by administrators, for example "fsnservletEARtest".

Perform the steps described in "Installing the application" with the following changes:

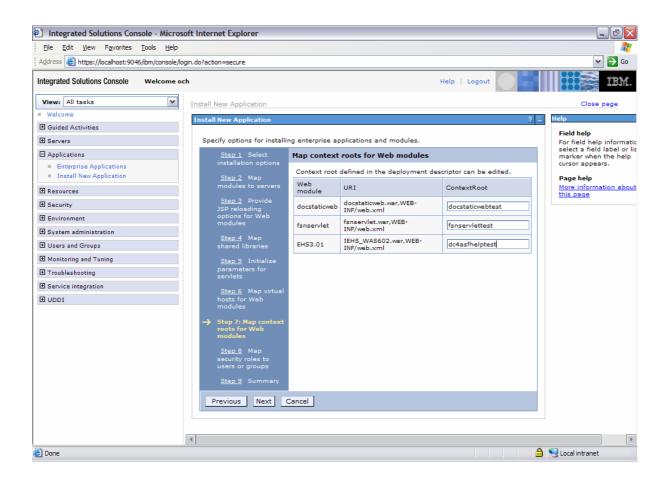
On the first panel, select "Show me all installation options and parameters".

Integrated Solutions Console - Microso	ft Internet Explorer	_ 7
<u>File E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools <u>H</u> elp		
Address Address Address Address Address	ure/securelogon.do?action=recover&submit=%C2%A0OK%C2%A0	🗸 🏳 Go
Integrated Solutions Console Welcome och	Help   Logout	IBM.
View: All tasks	Enterprise Applications	Close page
= Welcome	Preparing for the application installation ? –	Help –
Guided Activities     Guided Activities     Guided Activities     Subscript Activities     Subscrite     Subscript Activities     Subscri		Field help
1 Servers	Specify the EAR, WAR, JAR, or SAR module to upload and install.	Local file system path
Applications	Path to the new application	Page help
Enterprise Applications	Occal file system	More information about this page
Install New Application	Full path ASF34\fsnservletEAR.ear Browse	
E Security     Securit	Remote file system     Full path	
Environment	Browse	
	Context root Used only for standalone Web modules (.war files) and SIP	
Monitoring and ⊤uning	modules (.sar files)	
Troubleshooting     Troubleshooting	How do you want to install the application?	
Service integration	Prompt me only when additional information is required.	
E UDDI	Show me all installation options and parameters.	
Done	Next Cancel	🕒 😜 Local intranet

In Step 1, use "fsnservletTestEARt" as the application name.



In Step 7, use "docstaticwebtest", "fsnservlettest" and "dc4asfhelptest" as context roots.



# 16 Applying maintenance

Copy the zip file containing the maintenance into a directory:

D:\Programs\IBM\dc4asf\ptf

Open the WebSphere Administrative Console:

Open Application > Enterprise Application

<u>Stop</u> the application for which you want to add maintenance, for example "fsnservletTestEAR". Select the application "fsnservletTestEAR" and enter <u>Update</u>.

Integrated Solutions Console - Microso	ft Internet Explorer	- 2 🛛	
Eile Edit View Favorites Iools Help			
Address Address Address Address Address Address	n.do?action=secure	🕶 🄁 Go	
Integrated Solutions Console Welcome och		Help   Logout	
View: All tasks	Enterprise Applications	Close page	
<ul> <li>Welcome</li> </ul>	Enterprise Applications	2 1	
⊞ Guided Activities	Messages		
	Application fsnservletTestEAR on server server successfully.	er1 and node BL3HRY27Node02 stopped	
Applications	successiony.		
<ul> <li>Enterprise Applications</li> <li>Install New Application</li> </ul>	Enterprise Applications		
	Use this page to manage installed applications. A single application	n can be deployed onto multiple servers.	
Resources	Preferences		
Security     Environment	Start Stop Install Uninstall Update Rollout Upd	date Remove File Export Export DDL	
Environment     System administration			
System administration     Users and Groups			
Monitoring and Tuning	Select Name 🗘	Application Status 🙆	
Monitoring and Tuning     Troubleshooting	DefaultApplication	\$	
Service integration		€>	
	fsnservletEAR_	\$	
	fsnservletTestEAR_	*	
	ivtApp_	<b>⇒</b>	
	guery.	<b>⇒</b>	
	Total 6		
	-		
	4		
ê	Connection Documentation	🔒 🧐 Local intranet	

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

#### D:\Programs\IBM\dc4asf\ptf\docnnnn.zip

Integrated Solutions Console - Micros	soft Internet Explorer	_ 7 🛛
Eile Edit View Favorites Tools Help		
Address Address Address Address Address	ogin.do?action=secure	💌 ラ Go
Integrated Solutions Console Welcome o	ch Help   Logout	
View: All tasks	Enterprise Applications	Close page
= Welcome	Preparing for the application installation ? _	Help –
		Field help
E Servers	Specify the EAR, WAR, JAR, or SAR module to upload and install.	Local file system path
Applications     Enterprise Applications     Install New Application	Application to be updated: fsnservletTestEAR	Page help More information about this page
	Application update options	
E Security	Replace the entire application	
Environment	Upload an enterprise archive (*.ear) to replace the entire installed application.	
	Specify the path to the replacement ear file.	
	O Local file system	
Monitoring and Tuning	Full path 4asf\ptf\docnnn.zip Browse	
	Remote file system	
Service integration	Full path	
E UDDI	Browse	
	Context root Used only for standalone Web modules (.var files) and SIP modules (.sar files) How do you want to install the application?  Prompt me only when additional information is required. Show me all installation options and parameters.  Replace or add a single module If the path to the new module matches an existing path to a module in the installed application, the new module replaces the existing module. If the path to the module does not exist in the installed application, the new module is added to the application.	Y
é		🔒 🧐 Local intranet

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

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

# **17 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 (<u>http://java.sun.com</u>).

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

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

- /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

© IBM Corporation 2007

2004-04-28	11:50	<dir></dir>		
2004-04-28	11:50	<dir></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	<pre>text.txtdcflines.txt</pre>
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.

### 17.1.1 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.

### 17.1.2 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.

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.

The result files have the following function and meaning:

File	Description	What to do with that file
text.txtente.xml	EnTe file; text.txt converted to <ente></ente>	This is an intermediate file and should not be touched.
	XML	
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.

## 17.1.3 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\GMLTEST\text.txt
F:\toolkit\TestData\GMLTEST\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\HA4022\text.txt
F:\toolkit\TestData\HA4022\text.txt
F:\toolkit\TestData\HA4022\text.txt
F:\toolkit\TestData\HA4022\text.txt
F:\toolkit\TestData\HA40310\text.txt
F:\toolkit\TestData\ha40373\text.txt
F:\testData\HA40373\text.txt
F:\testData\HA40373\text.txt
F:\testData\HA40373\text.txt
F:\testData\HA40374\text.txt
F:\testData\HA403
```

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
*****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.

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