

# **ASF 3.3 with CICS Document Connect for ASF**

Installation on AIX Server  
Using WebSphere Application Server V6

Server-to-Host Connection using  
WebSphere MQ

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<b>1</b>	<b>PREREQUISITES</b>	<b>3</b>
<b>2</b>	<b>INSTALLATION OF THE APPLICATION</b>	<b>4</b>
	Preparing for the application installation	4
	Install new application (Step 1)	6
	Install new application (Step 2)	7
	Install new application (Step 3)	8
	Install new application (Step 4)	9
	Start the application	9
<b>3</b>	<b>ACTIVATION OF DICTIONARIES FOR SPELLCHECKING</b>	<b>10</b>
<b>4</b>	<b>ENABLE MQ CONNECTION</b>	<b>11</b>
<b>5</b>	<b>WEB SERVER CHANGES</b>	<b>12</b>
	Using the IBM HTTP Server	12
	5.1.1    Configure the WebSphere PLUGIN	12
	5.1.2    Configure the IBM HTTP Server	12
	Using the Microsoft Internet Information Server (IIS)	12
<b>6</b>	<b>CONFIGURE THE CONNECTIONS</b>	<b>13</b>
<b>7</b>	<b>SINGLE CONFIGURATION FILE</b>	<b>14</b>
<b>8</b>	<b>PROTECT ACCESS TO THE CONFIGURATION SERVLETS</b>	<b>16</b>
<b>9</b>	<b>AFP RESOURCES</b>	<b>17</b>
<b>10</b>	<b>INSTALLING A SECOND APPLICATION</b>	<b>18</b>
<b>11</b>	<b>APPLYING MAINTENANCE</b>	<b>19</b>

# 1 Prerequisites

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

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

2. IBM HTTP Server (Version 1.3.26, or later) has been installed, is operational, and has been started.

Note: The installation path is assumed to be  
`/usr/IBMHttpServer1328`

3. WebSphere MQ has been installed and the connections to the host (IMS) are available. This means that the queues and channels are available and the input queue is connected to IMS via the storage class.

Note: The MQ installation path is assumed to be  
`/usr/mqm/`

4. Document Connect for ASF (DC4ASF) war file has been downloaded.

Note: The path where the war file `dc4asf.war` resides is assumed to be  
`/usr/swrepository/dc4asf/was60/war/1.2.2.1/`

## 2 Installation of the application

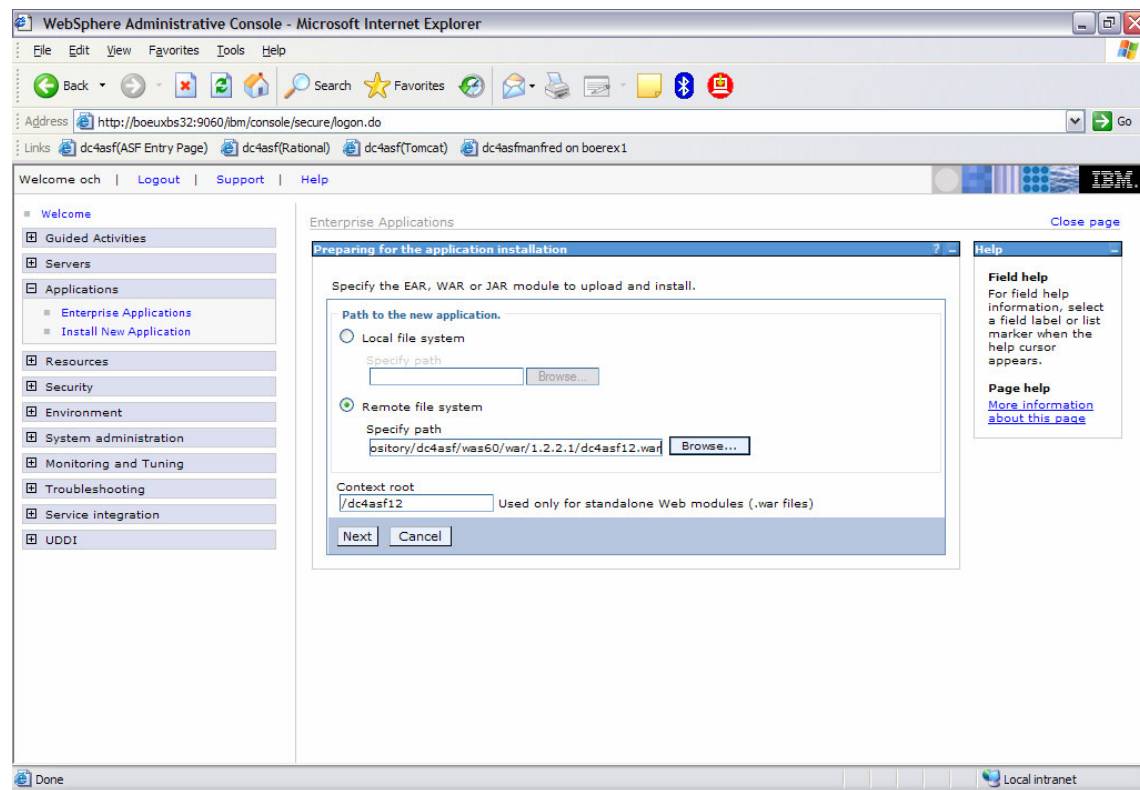
### *Preparing for the application installation*

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

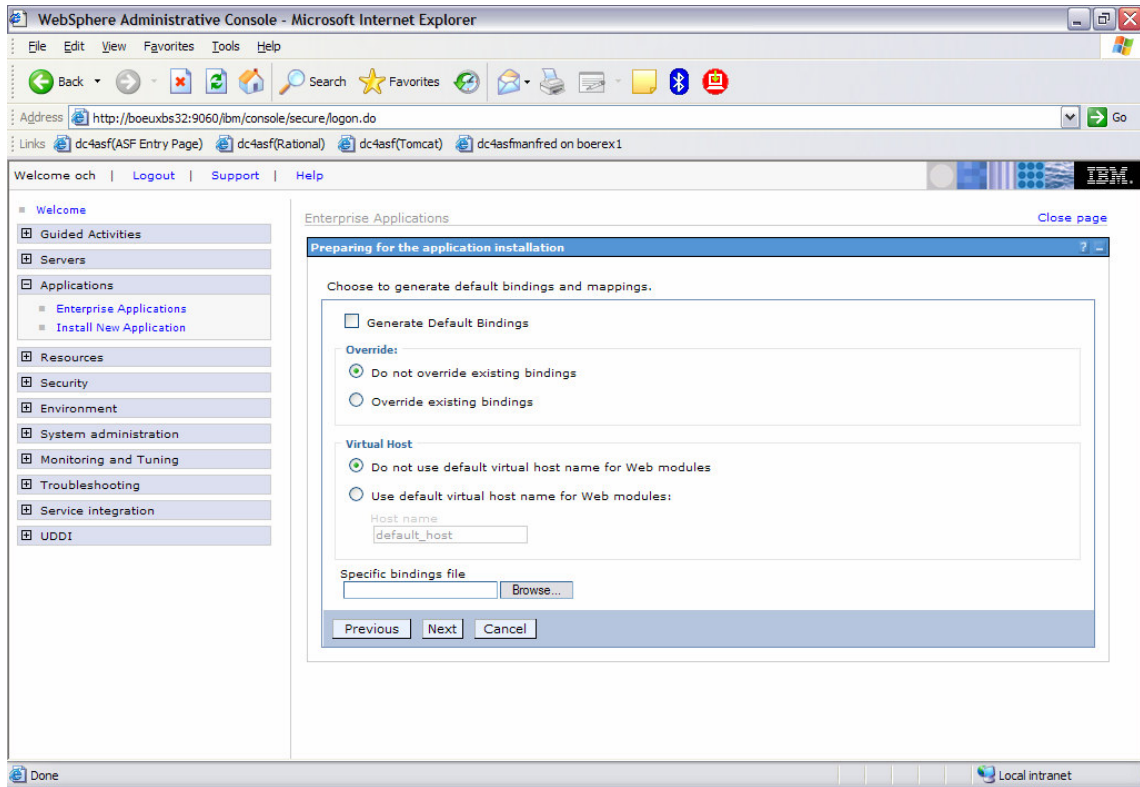
Enter the path (local path or server path) where the DC4ASF war file is located:

`/usr/swrepository/dc4asf/was60/war/1.2.2.1/dc4asf12.war`

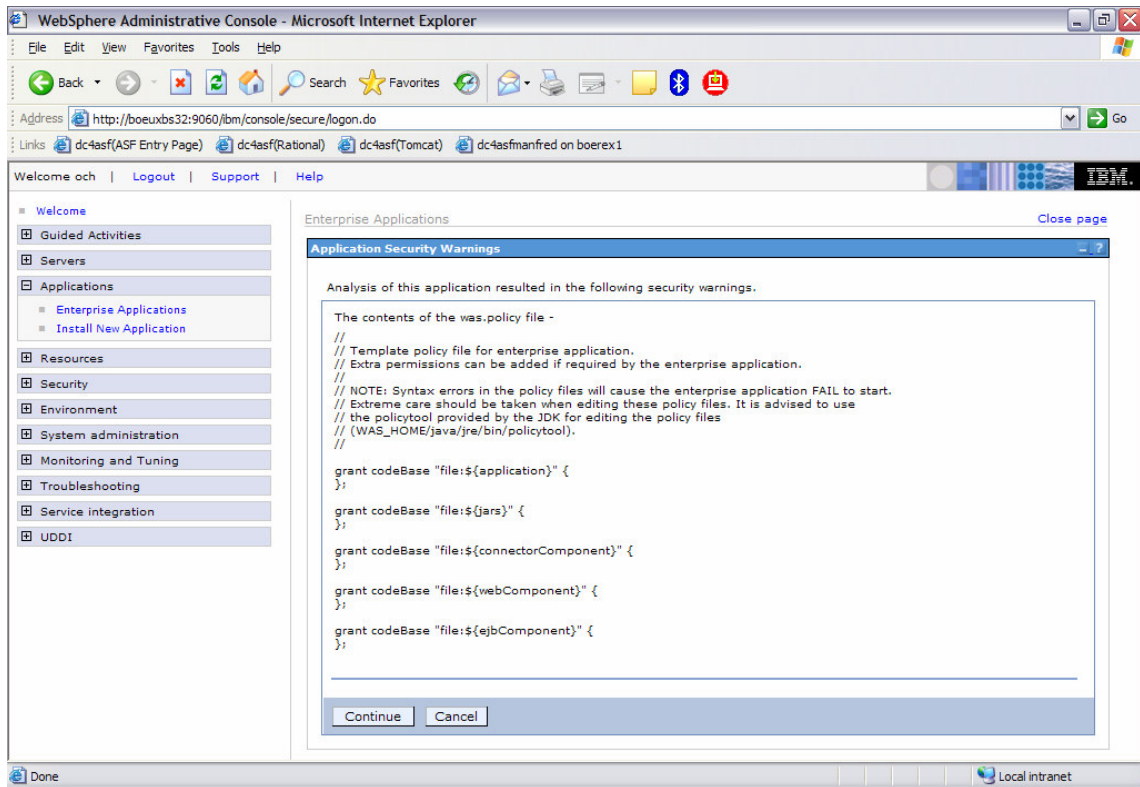
Enter the context root, for example “/dc4asf12”



Select [Next](#). The file “dc4asf12.war” is now loaded on the server.



Select **Next**.



Select **Continue**.

## Install 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/dc4asf12.ear

where

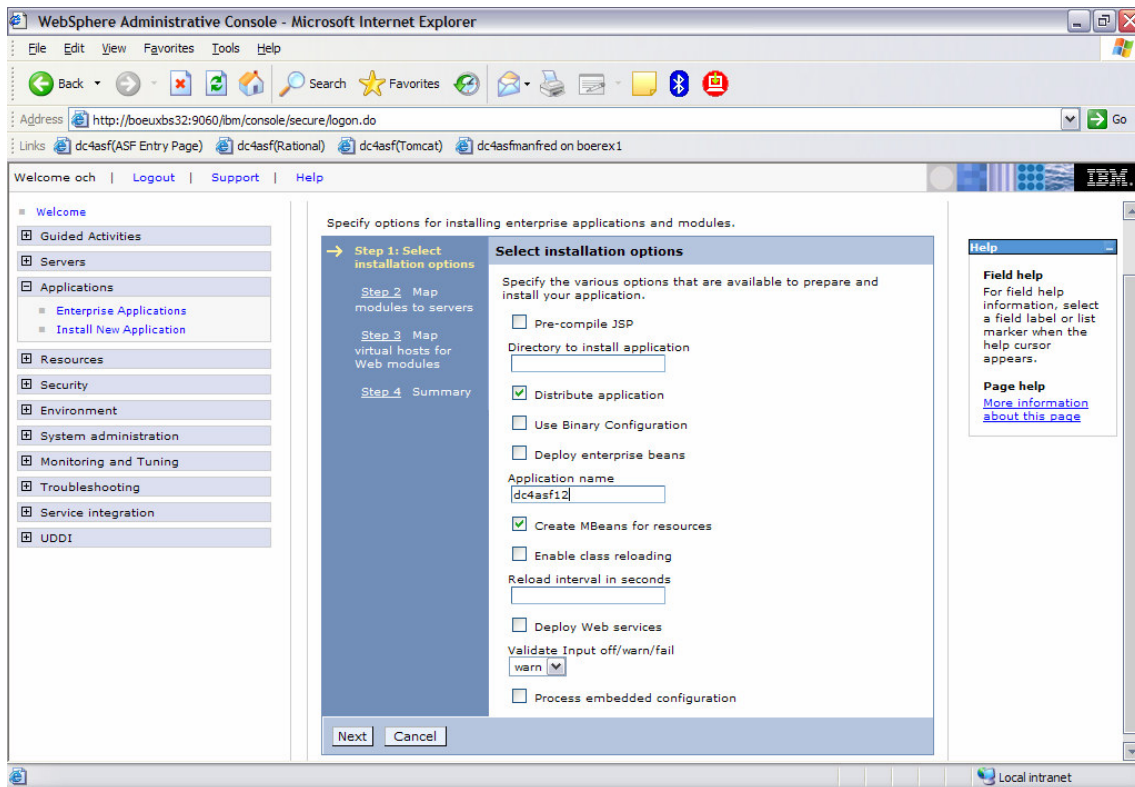
- APP\_INSTALL\_ROOT is a path map variable which f.e. is set to  
/usr2/WebSphere/AppServer60/profiles/server1/installedApps/
- 'xxxxx' is the cell name and
- 'dc4asf12' is the application name.

[Application Name:](#)

Specify a unique name, for example 'dc4asf12'.

[Class Reloading:](#)

Do not enable class reloading.



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

## Install new application (Step 2)

The screenshot shows the WebSphere Administrative Console in Microsoft Internet Explorer. The browser address bar displays `http://boeuxbs32:9060/ibm/console/secure/login.do`. The console interface includes a left-hand navigation menu with categories like 'Welcome', 'Guided Activities', 'Servers', 'Applications', 'Resources', 'Environment', 'System administration', 'Monitoring and Tuning', 'Troubleshooting', 'Service integration', and 'UDDI'. The main content area is titled 'Enterprise Applications' and contains the 'Install New Application' wizard. The wizard is currently on 'Step 2: Map modules to servers'. It instructs the user to specify targets for installing enterprise applications and modules. Below the instructions, there is a text area for 'Clusters and Servers' with the following content: `WebSphere:cell=boeuxbs32Node01Cell,node=boeuxbs32Node01,server=server1` and `WebSphere:cell=boeuxbs32Node01Cell,node=websrvr1_node,server=websrvr1`. An 'Apply' button is next to the text area. Below this, there is a table with columns 'Select', 'Module', 'URI', and 'Server'. The table contains one row with a checked checkbox in the 'Select' column, the module 'dc4asf12', the URI 'dc4asf12.war,WEB-INF/web.xml', and the server 'WebSphere:cell=boeuxbs32Node01Cell,node=boeuxbs32Node01'. At the bottom of the wizard, there are 'Previous', 'Next', and 'Cancel' buttons.

WebSphere Administrative Console - Microsoft Internet Explorer

Address: `http://boeuxbs32:9060/ibm/console/secure/login.do`

Welcome och | Logout | Support | Help

Enterprise Applications [Close page](#)

**Install New Application**

Specify options for installing enterprise applications and modules.

**Step 2: Map modules to servers**

Specify targets such as application servers or clusters of application servers where you want to install the modules contained in your application. Modules can be installed on the same application server or dispersed among multiple application servers. Also, specify the Web servers as targets that will serve as routers for requests to the application. The plug-in configuration file (plugin-cfg.xml) for each Web server is generated based on the application targets specified through it.

Clusters and Servers:

`WebSphere:cell=boeuxbs32Node01Cell,node=boeuxbs32Node01,server=server1`

`WebSphere:cell=boeuxbs32Node01Cell,node=websrvr1_node,server=websrvr1`

Select	Module	URI	Server
<input checked="" type="checkbox"/>	dc4asf12	dc4asf12.war,WEB-INF/web.xml	WebSphere:cell=boeuxbs32Node01Cell,node=boeuxbs32Node01

Select [Next](#) to finish Step 2 and go to Step 3.

## Install new application (Step 3)

The screenshot shows the WebSphere Administrative Console in a Microsoft Internet Explorer browser. The address bar displays `http://boeuxbs32:9060/ibm/console/secure/logon.do`. The main content area is titled "Enterprise Applications" and contains the "Install New Application" wizard. The wizard is currently on Step 3, "Map virtual hosts for Web modules".

The wizard interface includes a left-hand navigation pane with the following steps:

- Step 1: Select installation options
- Step 2: Map modules to servers
- Step 3: Map virtual hosts for Web modules (current step)
- Step 4: Summary

The main content area for Step 3 is titled "Map virtual hosts for Web modules" and contains the following text: "Specify the virtual host where you want to install the Web modules contained in your application. You can install Web modules on the same virtual host or disperse them among several hosts." Below this text is a checkbox labeled "Apply Multiple Mappings" which is checked. A table below the checkbox shows the mapping of a web module to a virtual host:

Select	Web module	Virtual host
<input checked="" type="checkbox"/>	dc4asf12	default_host

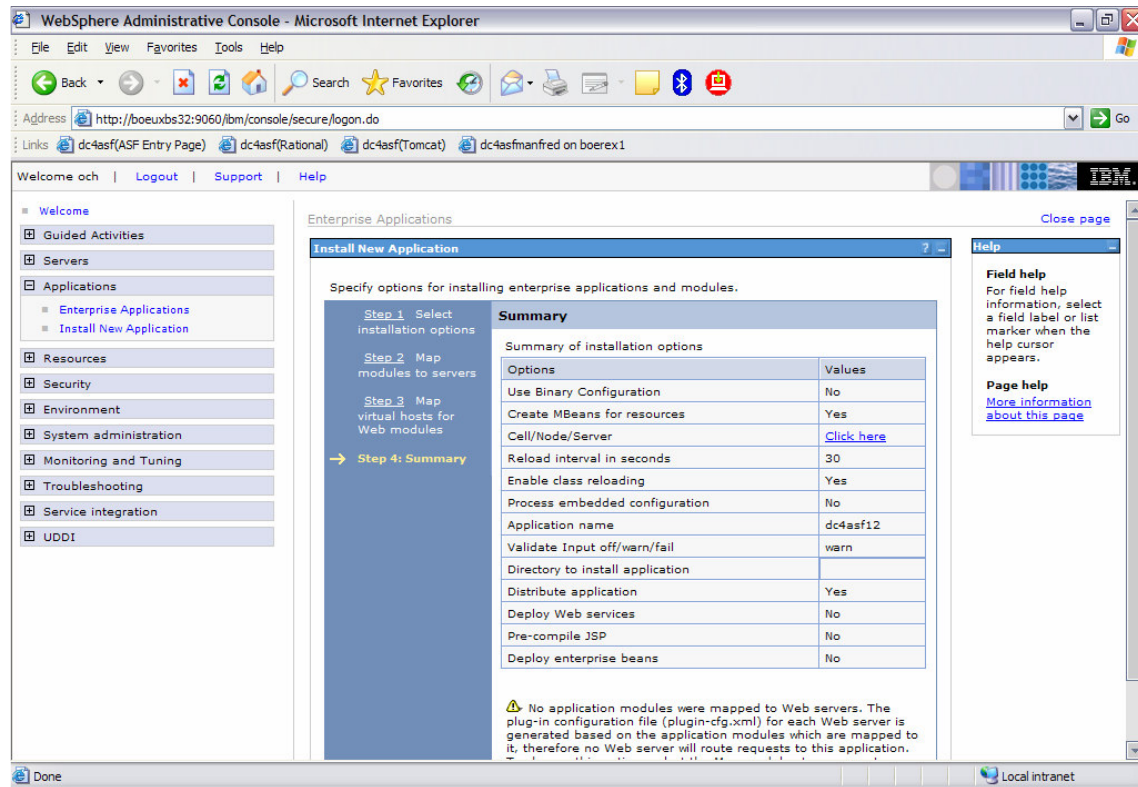
At the bottom of the wizard are three buttons: "Previous", "Next", and "Cancel".

On the right side of the wizard, there is a "Help" section with "Field help" and "Page help" links. The "Field help" text reads: "For field help information, select a field label or list marker when the help cursor appears." The "Page help" text reads: "More information about this page".

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



## Install new application (Step 4)



The screenshot shows the WebSphere Administrative Console in a Microsoft Internet Explorer browser. The address bar displays `http://boeuxbs32:9060/ibm/console/secure/logon.do`. The main content area is titled "Enterprise Applications" and contains a sub-section "Install New Application". The page is divided into three main parts: a left-hand navigation menu, a central summary table, and a right-hand help panel.

The left-hand navigation menu includes the following items:

- Welcome
- Guided Activities
- Servers
- Applications
  - Enterprise Applications
  - Install New Application
- Resources
- Security
- Environment
- System administration
- Monitoring and Tuning
- Troubleshooting
- Service integration
- UDDI

The central "Install New Application" section is titled "Specify options for installing enterprise applications and modules." and shows a progress indicator for four steps:

- Step 1: Select installation options
- Step 2: Map modules to servers
- Step 3: Map virtual hosts for Web modules
- Step 4: Summary (highlighted with a blue arrow)

The "Summary" table lists the following options and values:

Options	Values
Use Binary Configuration	No
Create MBeans for resources	Yes
Cell/Node/Server	<a href="#">Click here</a>
Reload interval in seconds	30
Enable class reloading	Yes
Process embedded configuration	No
Application name	dc4asf12
Validate Input off/warn/fail	warn
Directory to install application	
Distribute application	Yes
Deploy Web services	No
Pre-compile JSP	No
Deploy enterprise beans	No

Below the table, a warning icon and message state: "No application modules were mapped to Web servers. The plug-in configuration file (plugin-cfg.xml) for each Web server is generated based on the application modules which are mapped to it, therefore no Web server will route requests to this application."

The right-hand help panel contains "Field help" and "Page help" sections. The "Page help" section includes a link: [More information about this page](#).

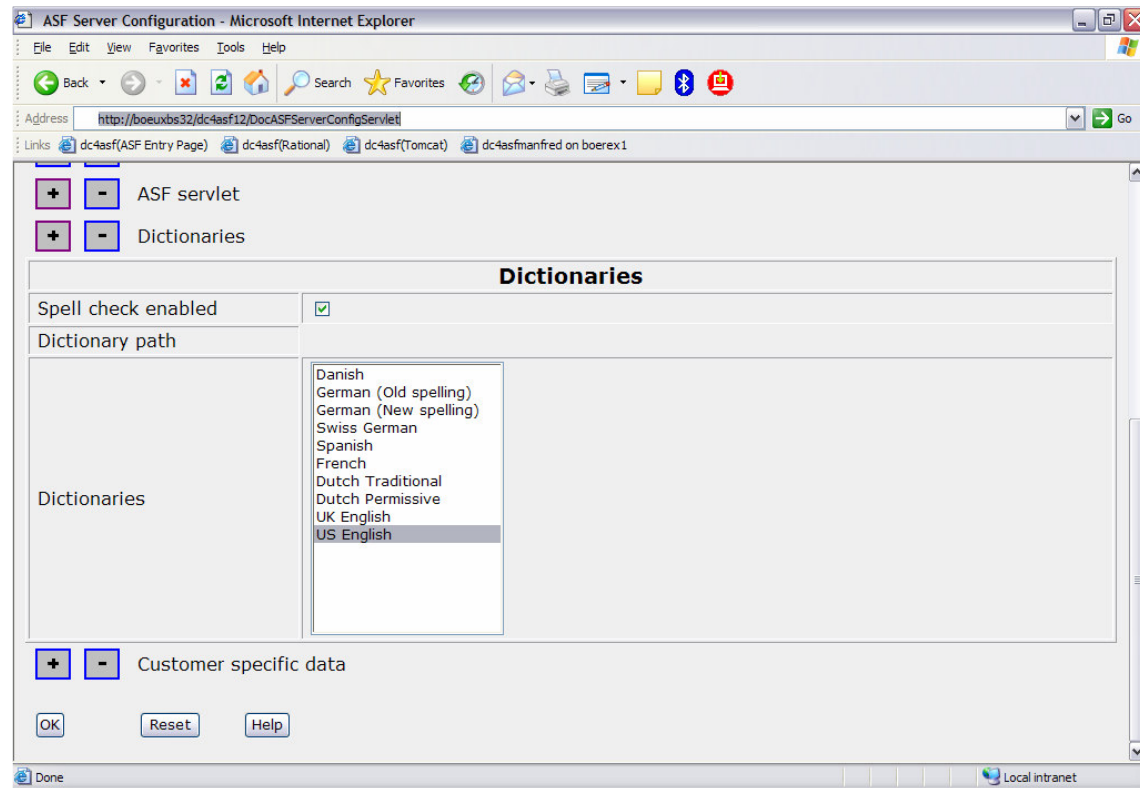
Check the settings on this page and select **Finish** to start the installation of your application. When the installation of the application has been completed it must be **saved** in the master configuration.

## Start the application

Open [Applications](#) > [Enterprise Application](#), select your dc4asf12 application and select **Start** to start the application.

### 3 Activation of Dictionaries for Spellchecking

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



Select **OK**.

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

## 4 Enable MQ Connection

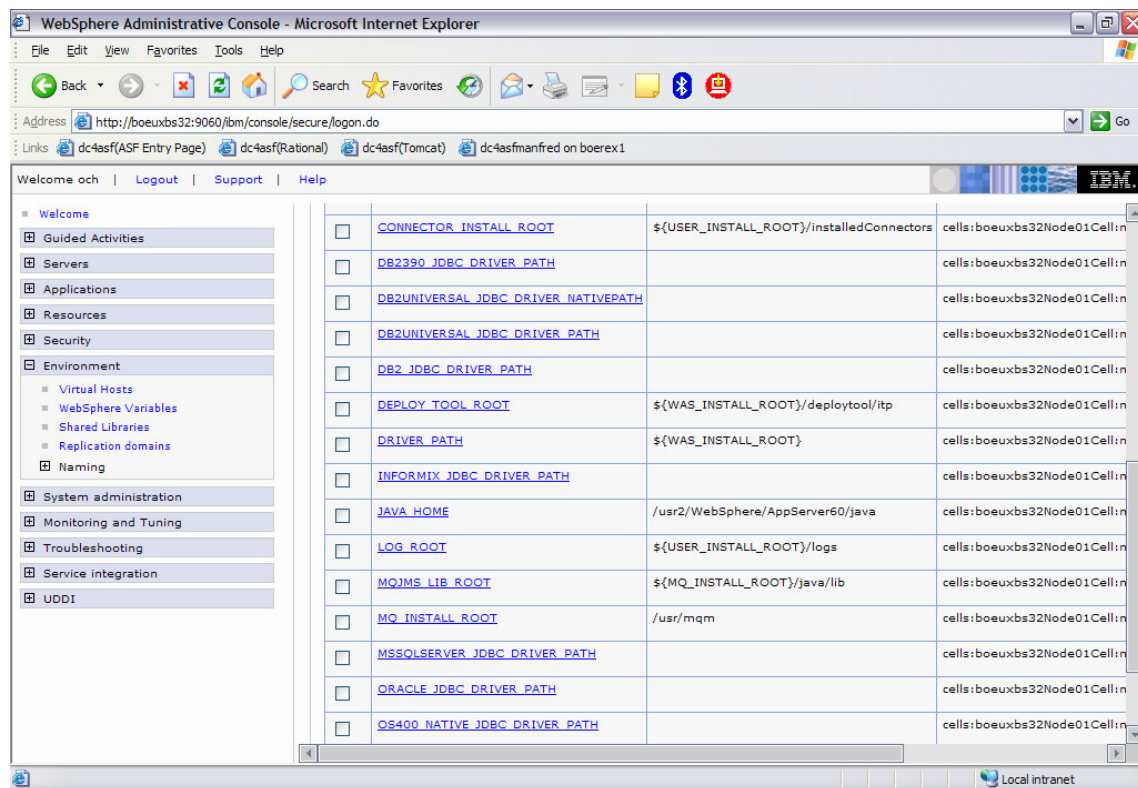
To enable the MQ connection between server and host you must have installed WebSphere MQ as JMS provider. For more information refer to:

[http://publib.boulder.ibm.com/infocenter/wasinfo/v6r0/topic/com.ibm.websphere.base.doc/info/aes/ae/tmj\\_instm.html](http://publib.boulder.ibm.com/infocenter/wasinfo/v6r0/topic/com.ibm.websphere.base.doc/info/aes/ae/tmj_instm.html)

Set the MQJMS\_LIB\_ROOT environment variable to the directory where WebSphereMQJava\lib is installed. IBM WebSphere Application Server uses the MQJMS\_LIB\_ROOT to locate the WebSphere MQ libraries for the WebSphere MQ JMS Provider.

Open [Environment](#) > [WebSphere Variables](#)

Set the MQ\_INSTALL\_ROOT environment variable to your WebSphere MQ installation path (e.g. /usr/mqm) and the MQJMS\_LIB\_ROOT to \${MQ\_INSTALL\_ROOT}/java/lib.



Select [Apply](#) first and then select [OK](#).

[Save](#) the changes to the master configuration.

After modifying the environment variables, you must stop and restart WebSphere Application Server.

## 5 Web Server Changes

### *Using the IBM HTTP Server*

#### 5.1.1 Configure the WebSphere PLUGIN

##### Using Shared Object library " mod\_ibm\_app\_server\_http.so "

Make sure you have installed the Shared Object (SO) library [mod\\_ibm\\_app\\_server\\_http.so](#). This SO is usually installed with WAS by selecting the HTTP server installation. It resides in the bin directory of the WAS installation.

##### Generate the configuration file "plugin6-cfg.xml"

Generate the plugin configuration file "plugin6-cfg.xml" using the WebSphere Administrative Console. For more information refer to

<http://publib.boulder.ibm.com/infocenter/ieduasst/v1r1m0/index.jsp>

chapter "Create Web Server Definition and Map Applications"

#### 5.1.2 Configure the IBM HTTP Server

You need to configure your IBM HTTP Server to run properly with DC4ASF. Proceed as follows:

- a) Open the HTTP server configuration file "httpd.conf". Usually it is located in the conf directory of the HTTP server installation.
- b) Verify that the Shared Object (SO) library points to the configuration file "plugin6-cfg":

```
LoadModule was_ap20_module /usr2/WebSphere/Plugins60/bin/mod_was_ap20_http.so
WebSpherePluginConfig
/usr2/WebSphere/AppServer60/profiles/server1/config/cells/boeuxbs32Node01Cell/nodes/webserver1_node/servers/webserver1/plugin-
cfg.xml
```

- c) If you changed the file "httpd.conf" then restart the HTTP server to activate the changes.

### *Using the Microsoft Internet Information Server (IIS)*

## 6 Configure the Connections

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

Specify the queue manager, the server reply queue, the server request queue, the CICS program name FSNWRFRC, the defined RACF user ID used for CICS logon, the corresponding password, and the MQ wait interval.

Press button **OK** to save your changes.

### Note:

- The password specified will be encrypted and stored in file “hnp.txt” in the /config subdirectory.
- Do not specify the host reply queue and the host queue manager if within one MQ system (server reply queue and server request queue are both local). If you go to IMS via different MQ systems (you have remote queues and channel definitions) you must specify the host queue manager and the host reply queue. Both are in the target system which is connected to your IMS system.

Host nickname	Host connection data
CiDB2mq	Connection type: CICS MQ
	Host reply queue: <input type="text"/>
	Host queue manager: <input type="text"/>
	Server queue manager: QE71
	Server reply queue: REPLY.ASF33DB2
	Server request queue: QUERY.ASF33DB2.ALIA
	CICS program: FSNWRFRC
	RACF user ID: Ciuser
	New Password: ●●●●●●
	Confirm new password: ●●●●●●
	MQ Wait interval: 25

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

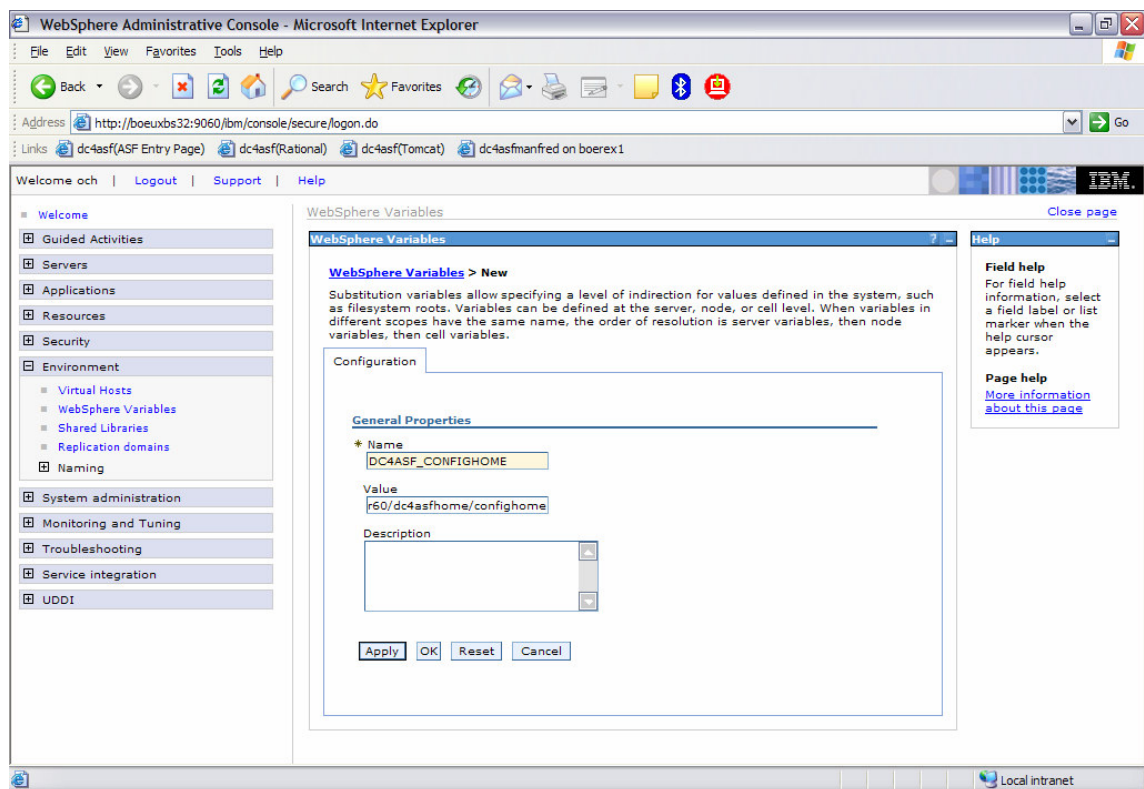
## 7 Single Configuration File

If you are running DC4ASF in a multi-node environment or you have more than one instance of DC4ASF but you want to have 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 for example to /usr2/WebSphere/AppServer60/dc4asfhome/confighome and /usr2/WebSphere/AppServer60/dc4asfhome/datahome



- Create the three directories

```
$(CONFIG_HOME)      like /usr2/WebSphere/AppServer60/dc4asfhome/confighome
$(DATA_HOME)/log    like /usr2/WebSphere/AppServer60/dc4asfhome/datahome/log
$(DATA_HOME)/preview like /usr2/WebSphere/AppServer60/dc4asfhome/datahome/preview
```

- Copy the configuration files

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

From `$(APP_INSTALL_ROOT)/boeuxbs32Node01Cell/dc4asf12.ear/dc4asf12.war/internals/config` to `$(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>
```

## 8 Protect access to the Configuration Servlets

To restrict the access to the configuration servlets for DC4ASF two prerequisites must be met:

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

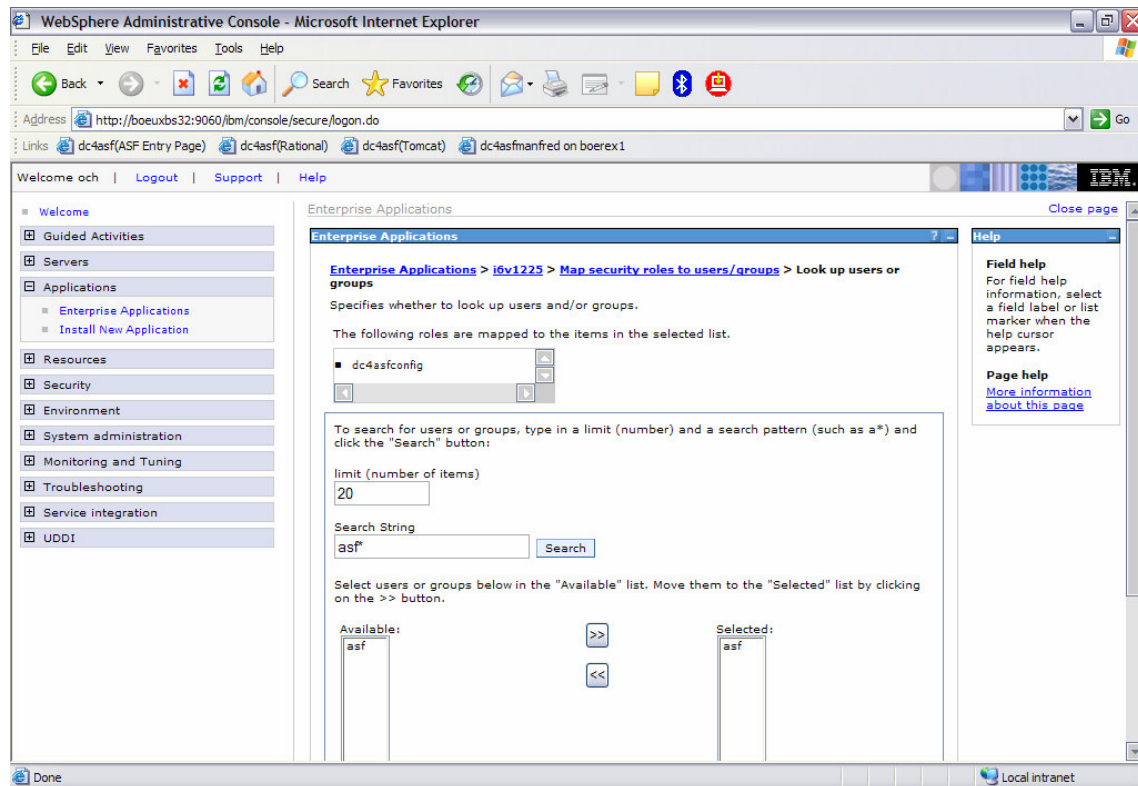
For more information refer on “Global Security” visit the online help of the WebSphere Application Server.

- At least DC4ASF maintenance level 1.2.2.5 is installed.

If the prerequisites are met, follow the steps below:

Open [Applications](#) > [Enterprise Applications](#) > [dc4asf12](#) > [Additional properties](#) > [Map security roles to users/groups](#)

Select the role “dc4asfconfig” and click the button [Lookup users](#). Type in a limit and a search pattern for users and click the button [Search](#). Select the users and click on the button with the arrows to move them to the “Selected” list. Press [OK](#). Then click the button [Lookup groups](#). Type in a limit and a search pattern for groups and click the button [Search](#). Select those groups to whom the selected users belong to and click on the button with the arrows to move them to the “Selected” list. Press [OK](#). Press again [OK](#).



[Save](#) the changes to the master configuration, then [Stop](#) and [Start](#) the WebSphere Application Server.

To verify the successful implementation of security launch both the DC4ASF configuration servlet DocASFServerConfigServlet and the DC4ASF network configuration servlet DocASFNetworkConfigServlet. You will be prompted to enter your user ID and password.



## 9 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 (f.e. via ftp) into the directory

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

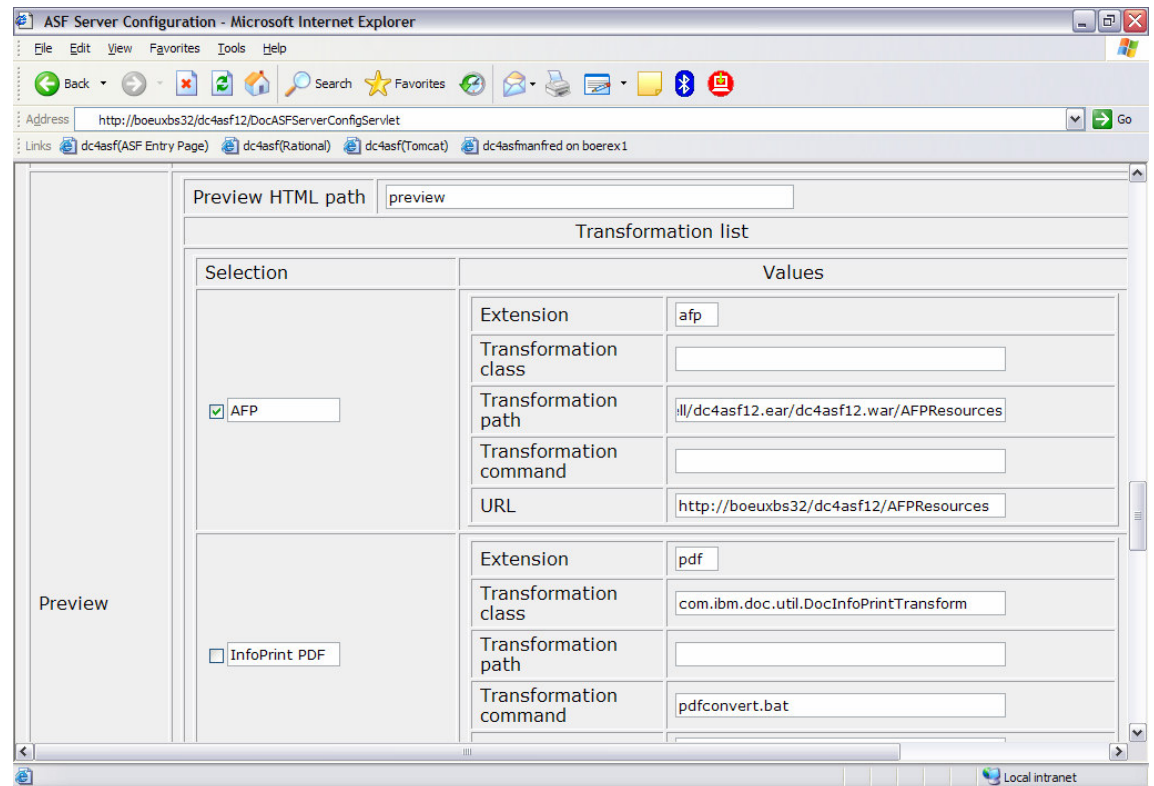
The page segments must have the extension “**psg**” (lower case and the names must be in upper case).

- Copy the overlays from the host system (f.e. via ftp) into the directory

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

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

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



Press button **OK** to save your changes.

## 10 Installing a second Application

The steps above describe how to install the application dc4asf12 in WebSphere Application Server.

**IBM recommends that you generate a second application instance of Document Connect for ASF for use by administrators, for example “[dc4asf12test](#)”.**

1. Perform the steps described in “Installation of the application” with the following changes:

In the paragraph “Preparing for the application installation” specify the following context root:

[/dc4asf12test](#)

In the paragraph “Install new application (Step 1)”, use “[dc4asf12test](#)” as the application name.

2. Perform the steps described in “Configure the Connections”

# 11 Applying Maintenance

Download the PTF containing a new war file into directory

[/usr/swrepository/dc4asf/was60/war/1.2.2.1/ptfs](#)

Open the WebSphere Administrative Console:

[Open Application > Enterprise Application](#)

**Stop** the applicable application, for example “dc4asf12test”.  
Select application “dc4asf12test” and enter **Update**.

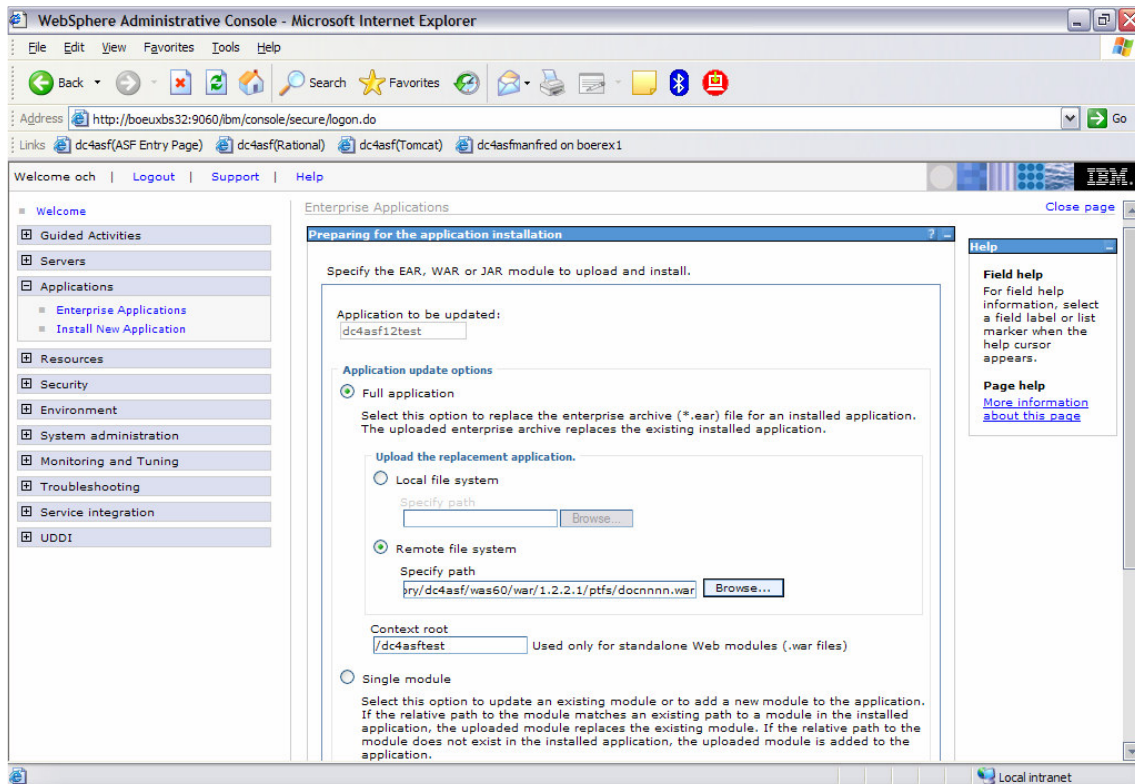
Enter the path (local path or server path) where the new DC4ASF zip file is located:

[/usr/fsn/usr/swrepository/dc4asf/was60/war/1.2.2.1/ptfs/docnnnn.war](#)

Enter the context root: “/dc4asf12test”

Note:

The context root must be the same as the context root entered during installation (see “Preparing for the application installation”).



On each of the next panels select **Next** and finally select **Finish**. After the update of the application has been completed save the master configuration.

Open [Applications > Enterprise Application](#) and select your application dc4asf12test. Select **Start** to restart the application.