

ASF 3.3 with IMS Document Connect for ASF

Installation on z/OS Server
Using WebSphere Application Server V6

Server-to-Host Connection using
WebSphere MQ

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1	PREREQUISITES	3
2	INSTALLATION OF THE APPLICATION	4
	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
3	ACTIVATION OF DICTIONARIES FOR SPELLCHECKING	10
4	ENABLE MQ CONNECTION	11
5	WEB SERVER CHANGES	12
	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
6	CONFIGURE THE CONNECTIONS	13
7	SINGLE CONFIGURATION FILE	14
8	RACF-CONTROLLED ACCESS TO THE CONFIGURATION SERVLETS	16
9	AFP RESOURCES	17
	Copy the AFP Resources into USS	17
	Direct Read from Partitioned Datasets	18
10	INSTALLING A SECOND APPLICATION	19
11	APPLYING MAINTENANCE	20

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
`/local/WebSphere/V6R0`

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
`/etc`

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

Note: The MQ installation path is assumed to be
`/usr/lpp/mqm/V6R0M0`

4. Document Connect for ASF (DC4ASF) has been installed via SMP/E in the following directory:

`/usr/lpp/dc4asf/IBM`

which means the DC4ASF war file resides in the directory:

`/usr/lpp/dc4asf/war`

2 Installation of the application

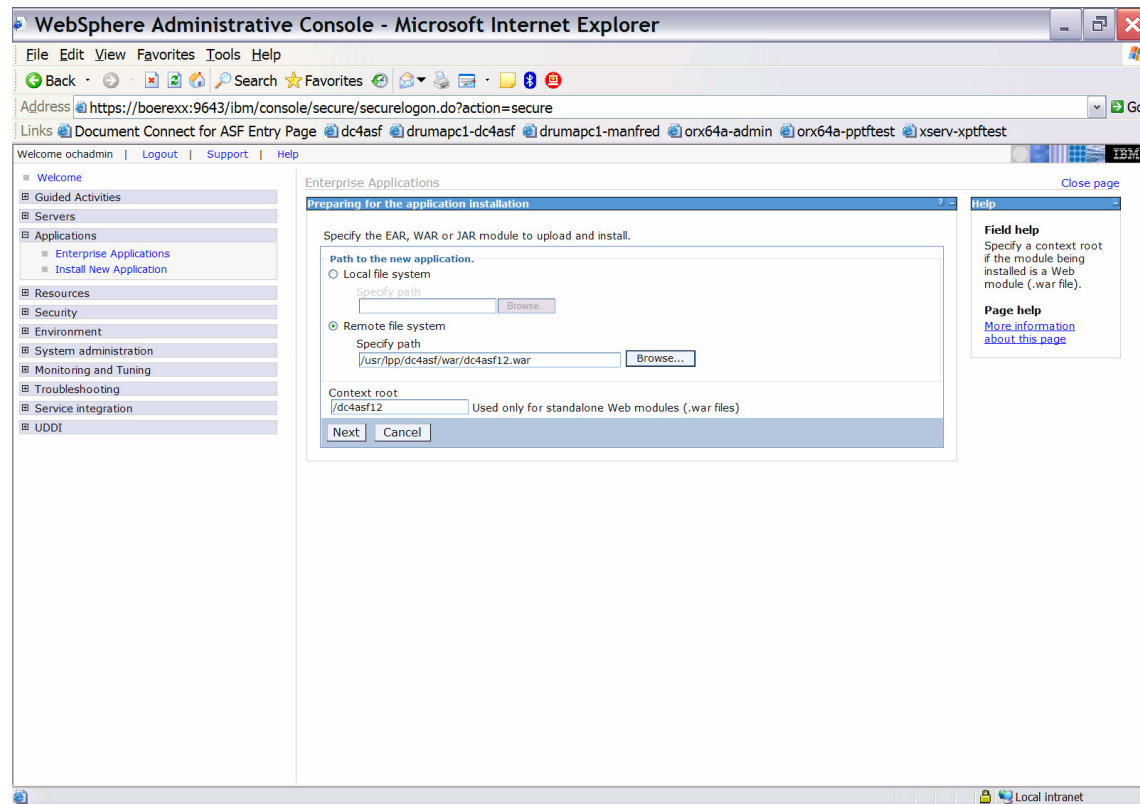
Preparing for the application installation

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

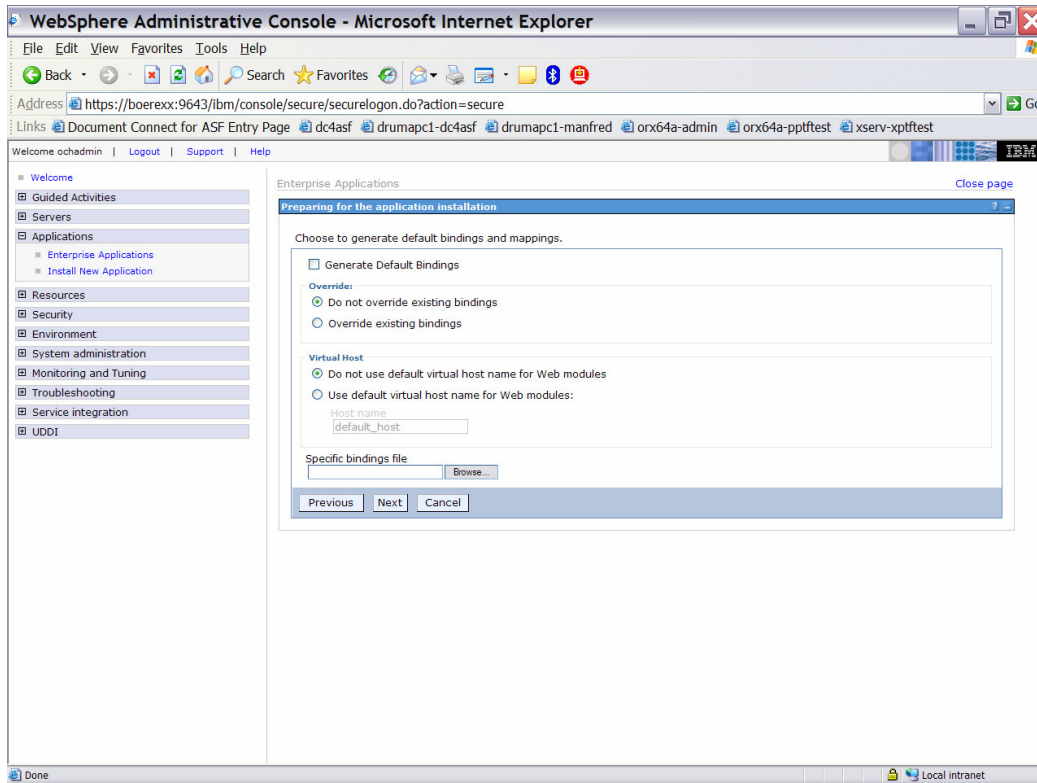
Enter the path (local path or server path) where the DC4ASF war file is located:

`/usr/lpp/dc4asf/war/dc4asf12.war`

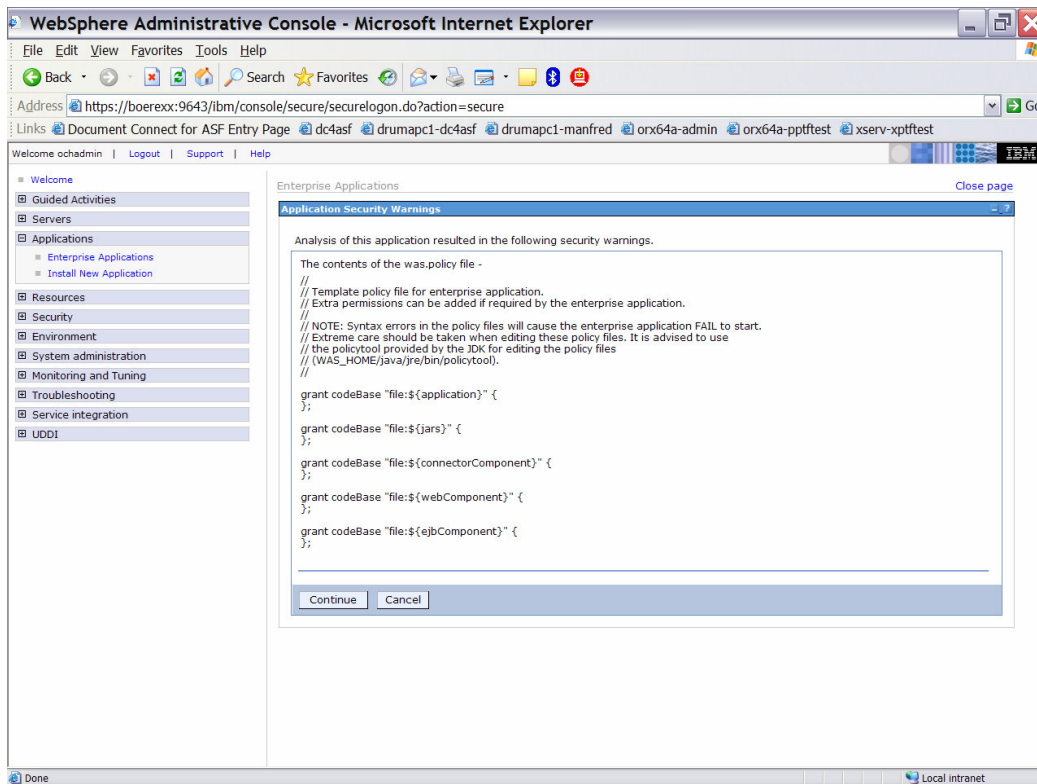
Enter the context root, for example “ /dc4asf12”



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

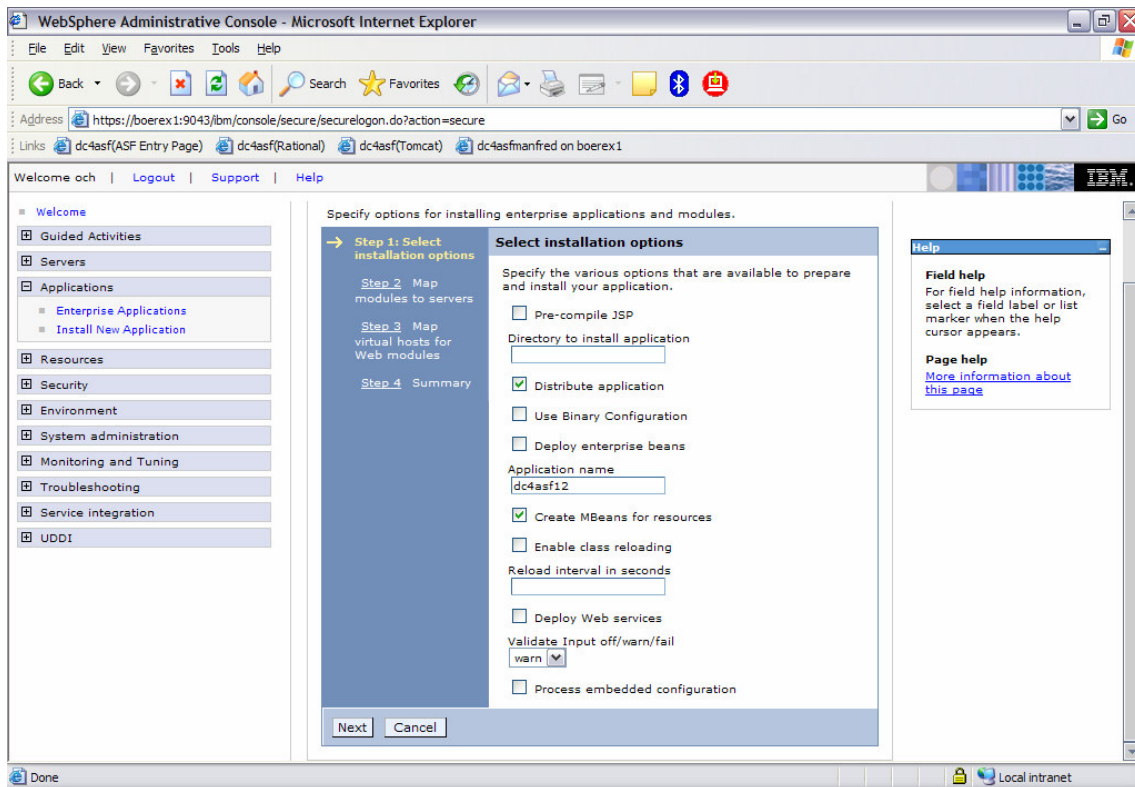
- APP_INSTALL_ROOT is a path map variable which for example is set to
/local/WebSphere/V6R0/AppServer/profile/default/installedApps/
- 'xxxxx' is the cell name and
- 'dc4asf12' is the application name.

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 a Microsoft Internet Explorer browser window. The address bar displays the URL: `https://boerexx:9643/ibm/console/secure/securelogin.do?action=secure`. The left-hand navigation pane is expanded to 'Applications' > 'Enterprise Applications' > 'Install New Application'. 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'. The instructions for this step are: 'Specify targets such as application servers or clusters of application servers where you want to install the modules contained in your application. Modules can be installed on the same application server or dispersed among several application servers. Also, specify the Web servers as targets that will serve as routers for requests to this application. The plug-in configuration file (plugin-cfg.xml) for each Web server is generated based on the applications which are routed through it.'

Below the instructions, there is a section for 'Clusters and Servers' with a text input field containing: `WebSphere:cell=crexx6,node=nrexx6,server=server6` and `WebSphere:cell=crexx6,node=webserver1_node,server=webserver1`. An 'Apply' button is next to the input field.

Below the input field is a table with the following columns: 'Select', 'Module', 'URI', and 'Server'. The table contains one row:

Select	Module	URI	Server
<input type="checkbox"/>	dc4asf12	dc4asf12.war,WEB-INF/web.xml	WebSphere:cell=crexx6,node=nrexx6,server=server6

At the bottom of the wizard, there are three buttons: 'Previous', 'Next', and 'Cancel'. A 'Help' sidebar is visible on the right side of the page.

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 window. The browser's address bar displays the URL: `https://boerexx:9643/ibm/console/secure/securelogin.do?action=secure`. The console interface includes a left-hand navigation menu with categories like Welcome, Guided Activities, Servers, Applications, Resources, Security, Environment, System administration, Monitoring and Tuning, Troubleshooting, Service integration, and UDDI. The main content area is titled "Enterprise Applications" and features a "Install New Application" wizard. The current step is "Step 3: Map virtual hosts for Web modules". The wizard's instructions state: "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 the instructions, there is a checkbox for "Apply Multiple Mappings" and a table for selecting web modules and virtual hosts. The table has two columns: "Web module" and "Virtual host". One row is visible with the web module "dc4asf12" and the virtual host "default_host". At the bottom of the wizard, there are "Previous", "Next", and "Cancel" buttons. A "Help" sidebar on the right provides field and page help information.

WebSphere Administrative Console - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address `https://boerexx:9643/ibm/console/secure/securelogin.do?action=secure`

Links Document Connect for ASF Entry Page dc4asf drumapc1-dc4asf drumapc1-manfred orx64a-admin orx64a-pptftest xserv-xptftest

Welcome ochadmin | Logout | Support | Help

Enterprise Applications

Install New Application

Specify options for installing enterprise applications and modules.

Step 1 Select installation options

Step 2 Map modules to servers

→ Step 3: Map virtual hosts for Web modules

Step 4 Summary

Map virtual hosts for Web modules

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

Apply Multiple Mappings

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

Previous Next Cancel

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

Page help
[More information about this page](#)

Done Local intranet

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 Microsoft Internet Explorer. The browser address bar displays `https://boerexx:9643/ibm/console/secure/securelogin.do?action=secure`. The console interface includes a navigation tree on the left with 'Enterprise Applications' selected, and a main content area titled 'Enterprise Applications' containing the 'Install New Application' wizard. The wizard is at Step 4: Summary, with a 'Summary' table of installation options. A warning message at the bottom states: '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. To change this option, select the Map modules to servers step.' The 'Finish' button is highlighted.

Options	Values
Use Binary Configuration	No
Create MBeans for resources	Yes
Cell/Node/Server	Click here
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

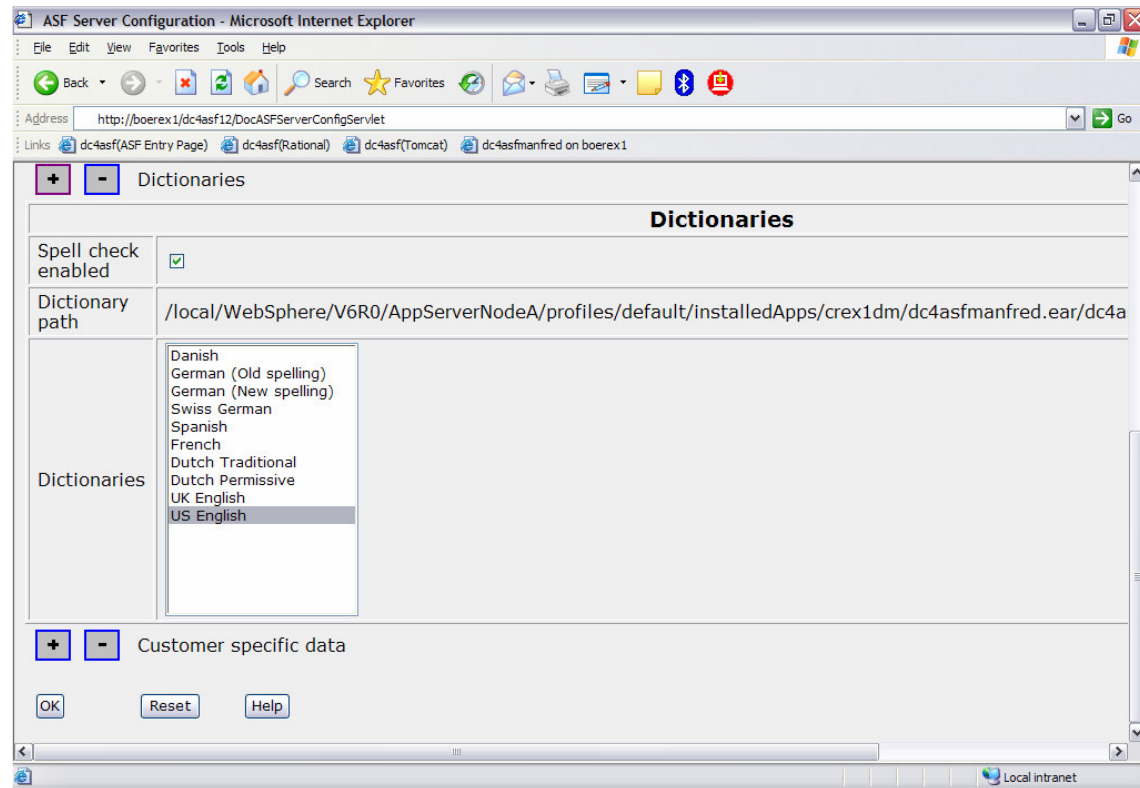
Check the settings on this page and select **Finish** to start the installation of your application. When the installation of the application has been completed it must be **saved** in the master configuration.

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

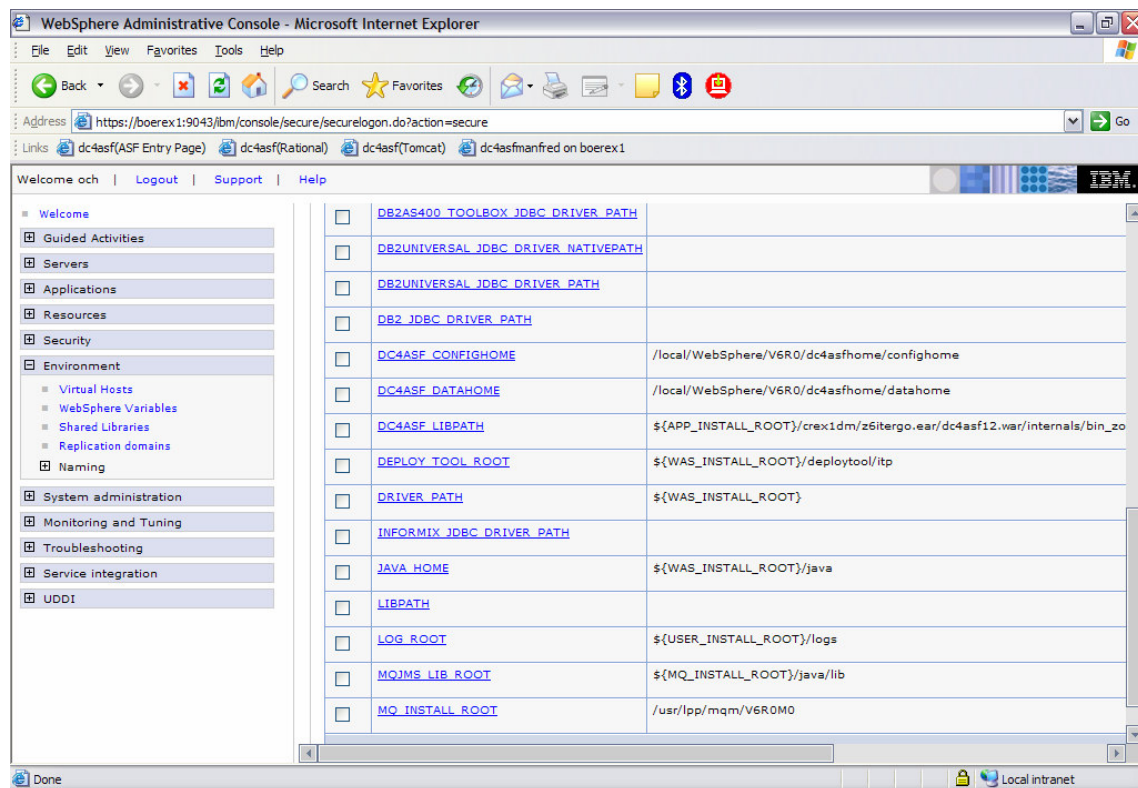
To enable the MQ connection between server and host you must have installed WebSphere MQ as JMS provider. For more information refer to:

http://publib.boulder.ibm.com/infocenter/wasinfo/v6r0/topic/com.ibm.websphere.base.doc/info/aes/ae/mj_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/lpp/mqm/V6R0M0) 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 "ihs390WAS60Plugin_http.so"

Make sure you have installed the Shared Object (SO) library [ihs390WAS60Plugin_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":

```
ServerInit /local/zWebSphere/V6R0/bin/ihs390WAS60Plugin_http.so:init_exit /etc/plugin6-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 IMS transaction code, the defined RACF user ID used for IMS 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.
- If you specify a 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 a IMS transaction code, this transaction code is used for all requests.

Host nickname	Host connection data
sc1I8mq	Connection type: IMSMQ
	Conversational IMS Processing: <input type="checkbox"/>
	Host reply queue: <input type="text"/>
	Host queue manager: <input type="text"/>
	Server queue manager: QE71
	Server reply queue: REPLY.ZOS.ASF3318
	Server request queue: QUERY.ZOS.ASF3318
	XCode prefix: <input type="text"/>
	XCode: SC1E
	RACF user ID: IMSuser
	New Password:
	Confirm new password:
	MQ Wait interval: 25

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

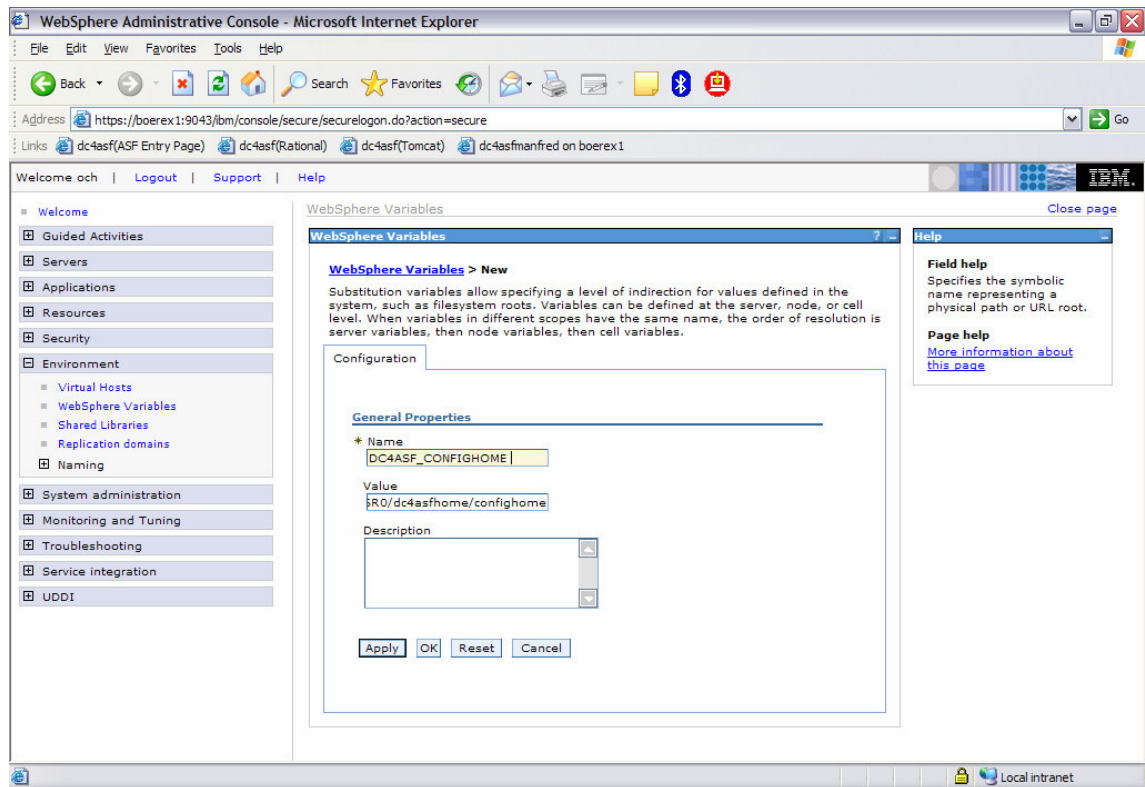
7 Single Configuration File

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 /local/WebSphere/V6R0/dc4asfhome/confighome and /local/WebSphere/V6R0/dc4asfhome/datahome



- Create the three directories

```
$(CONFIG_HOME)      like /local/WebSphere/V6R0/dc4asfhome/confighome
$(DATA_HOME)/log    like /local/WebSphere/V6R0/dc4asfhome/datahome/log
$(DATA_HOME)/preview like /local/WebSphere/V6R0/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>
```

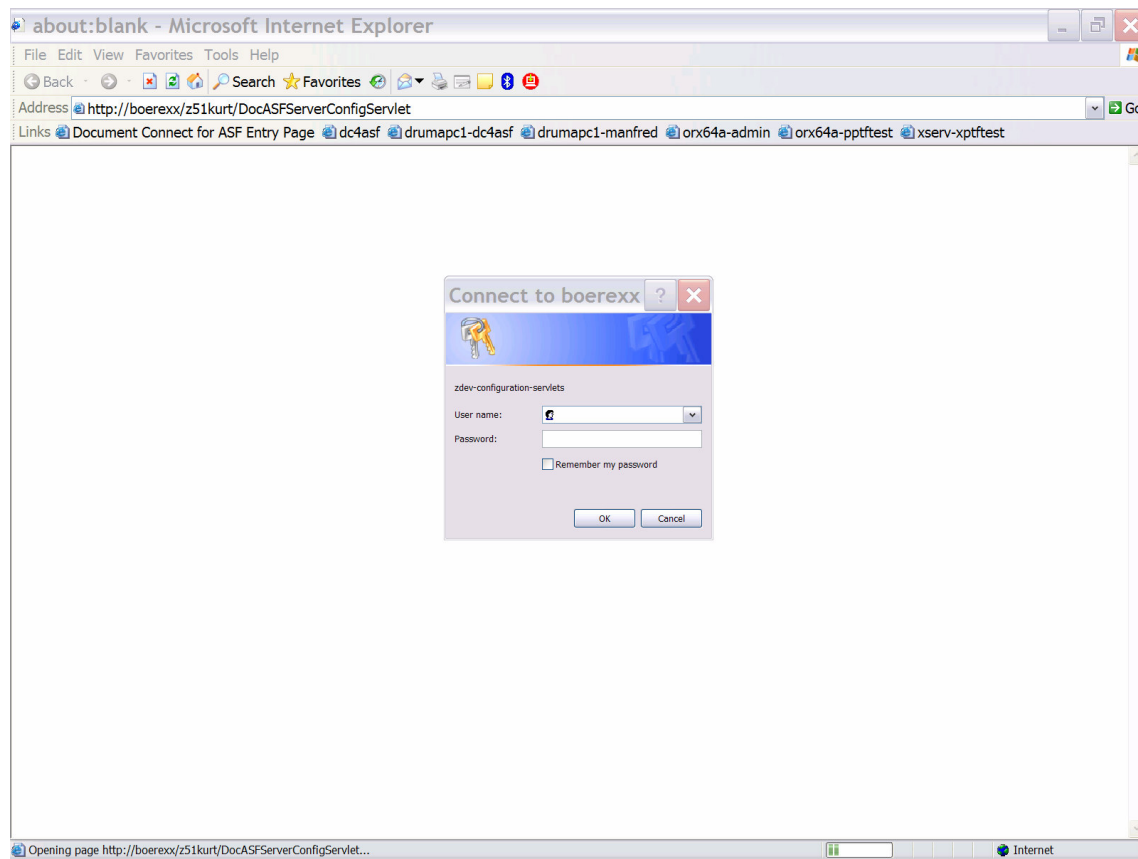
8 RACF-controlled access to the Configuration Servlets

To control access to the DC4ASF configuration servlets by specification of RACF user Id and password you have to configure the IBM HTTP Server 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) Add the following lines:

```
Protection                                config_servlets {
                                           ServerID      zdev-configuration-servlets
                                           AuthType      Basic
                                           PasswdFile    %%SAF%%
                                           Mask          vol, och, som
                                           }
Protect /zdev/DocASFServerConfigServlet*  config_servlets
Protect /zdev/DocASFNetworkConfigServlet* config_servlets
Protect /zdev/DocASFNetworkConfigProcessServlet* config_servlets
```

Where the “Protect” lines indicate the servlets to be protected and the “Mask” lines contains the user Ids which are allowed to invoke the specified servlets.



9 AFP Resources

To make the AFP resources (page segments and overlays) available on the server for resolution during “Print review” requests there are two possibilities:

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

Copy the AFP Resources into USS

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

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

[/local/WebSphere/V6R0/AppServer/profile/default/installedApps/xxxxx/dc4asf12.ear/dc4asf12.war/AFPResources/pseg](#)

Note:

the extension of the overlays must be “**pseg**” specified in lower case while the resource names must be specified in upper case).

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

[/local/WebSphere/V6R0/AppServer/profile/default/installedApps/xxxxx/dc4asf12.ear/dc4asf12.war/AFPResources/ovl](#)

Note:

the extension of the overlays must be “**ovl**” specified in lower case while the resource names must be specified in upper case).

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

Selection	Values
<input checked="" type="checkbox"/> AFP	Extension: afp Transformation class: <input type="text"/> Transformation path: /usr/fsn/v3r3m0w5/dc4asf/www/AFPResou Transformation command: <input type="text"/> URL: http://boerexx/dc4asf/AFPResources
<input type="checkbox"/> InfoPrint PDF	Extension: pdf Transformation class: com.ibm.doc.util.DocInfoPrintTransform Transformation path: <input type="text"/> Transformation command: /usr/fsn/v3r3m0w5/pptftest/bin/pdfconvert

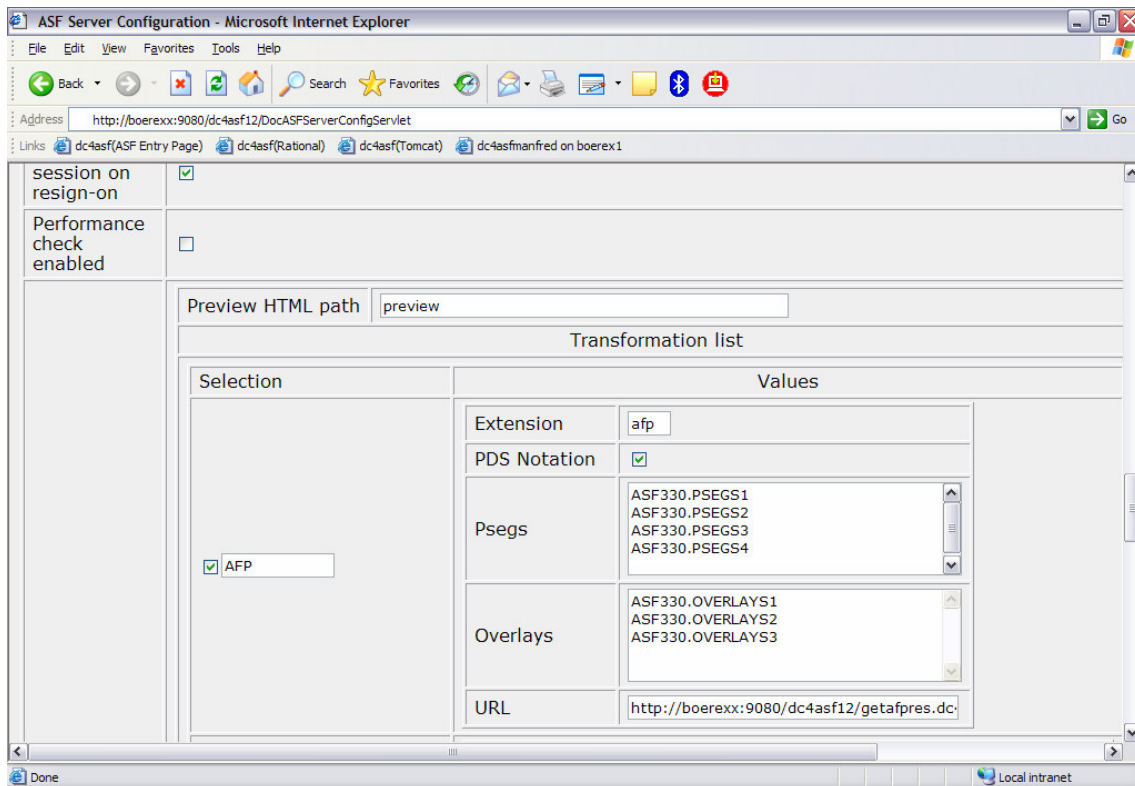
Press button **OK** to save your changes.

Direct Read from Partitioned Datasets

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

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

where xxxx and appl must be changed to your installation for example //boerexx:9080/dc4asf12.



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

Use SMP/E to apply a PTF containing a new tar file. SMP/E will copy the zip file into directory

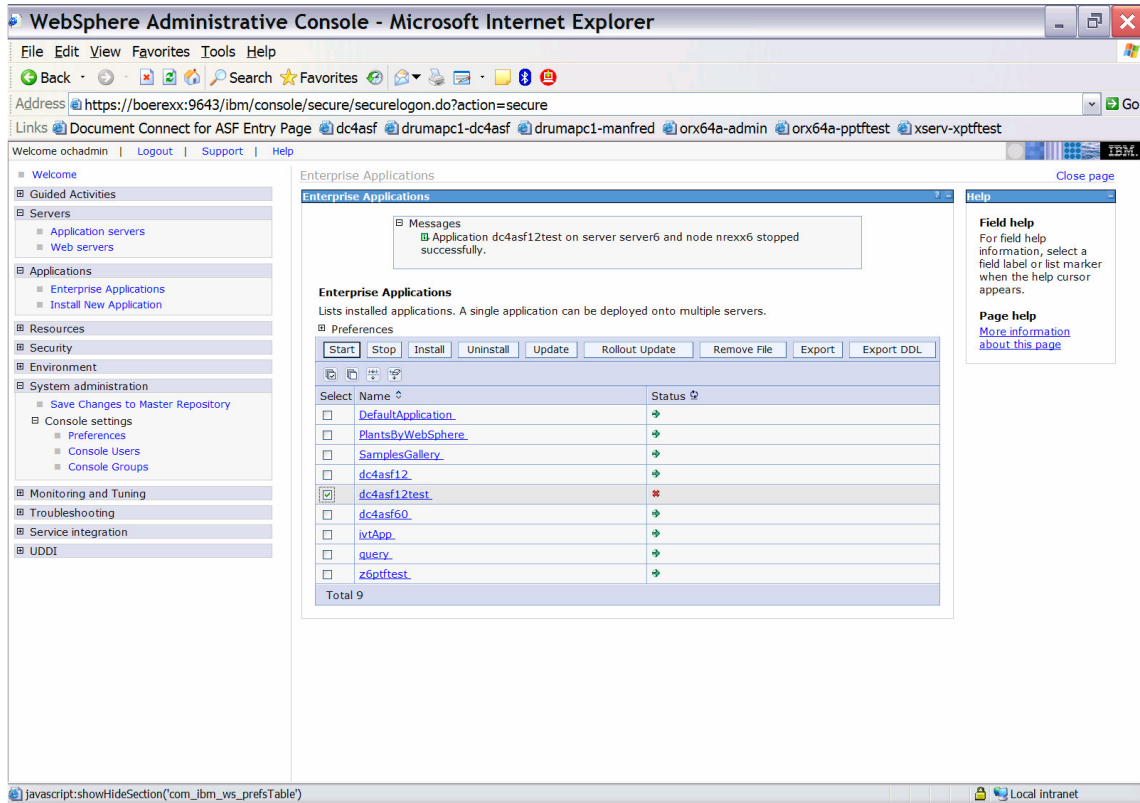
[/usr/lpp/dc4asf/ptf](#)

Open the WebSphere Administrative Console:

[Open Application > Enterprise Application](#)

Stop the applicable application, for example “dc4asf12test”.

Select application “dc4asf12test” and enter **Update**.



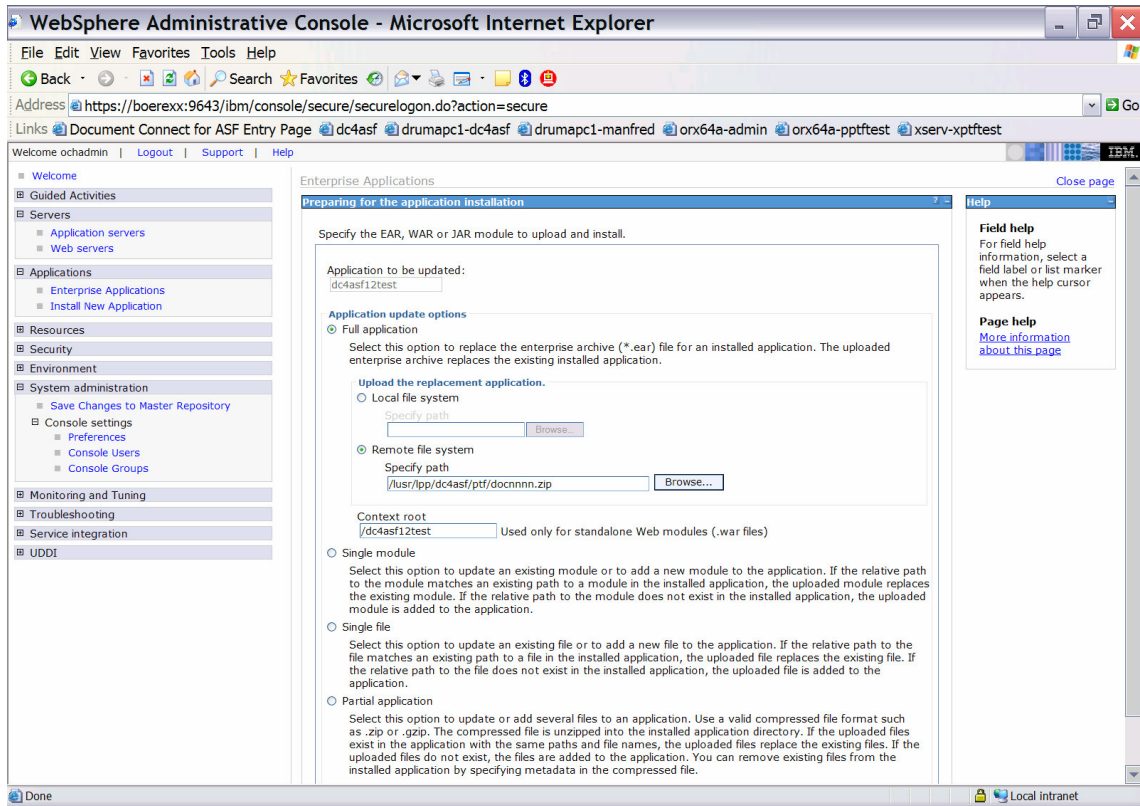
Enter the path (local path or server path) where the new DC4ASF zip file is located:

[/usr/lpp/dc4asf/ptf/docnnnn.zip](#)

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.