

ASF 3.3 with CICS Document Connect for ASF

Installation on Windows Server
Using WebSphere Application Server V5.1

Server-to-Host Connection using
WebSphere MQ

Edition: 1.1

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1 Prerequisites

1. WebSphere Application Server (WAS) V5.1 has been installed, is operational, and has been started

Note: The installation path is assumed to be
D:\Program Files\WebSpheres

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
D:\Program Files\IBM HTTP Server

3. WebSphere MQ (or WebSphere MQ Express) has been installed and the connections to the host (CICS) are available. This means the queues and channels are available and the input queue is connected to CICS via the CICS adapter and the CICS bridge.

Note: The MQ installation path is assumed to be
D:\MQExpress

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

D:\Program Files\IBM\IBM Document Connect for ASF

2 Name Space Bindings

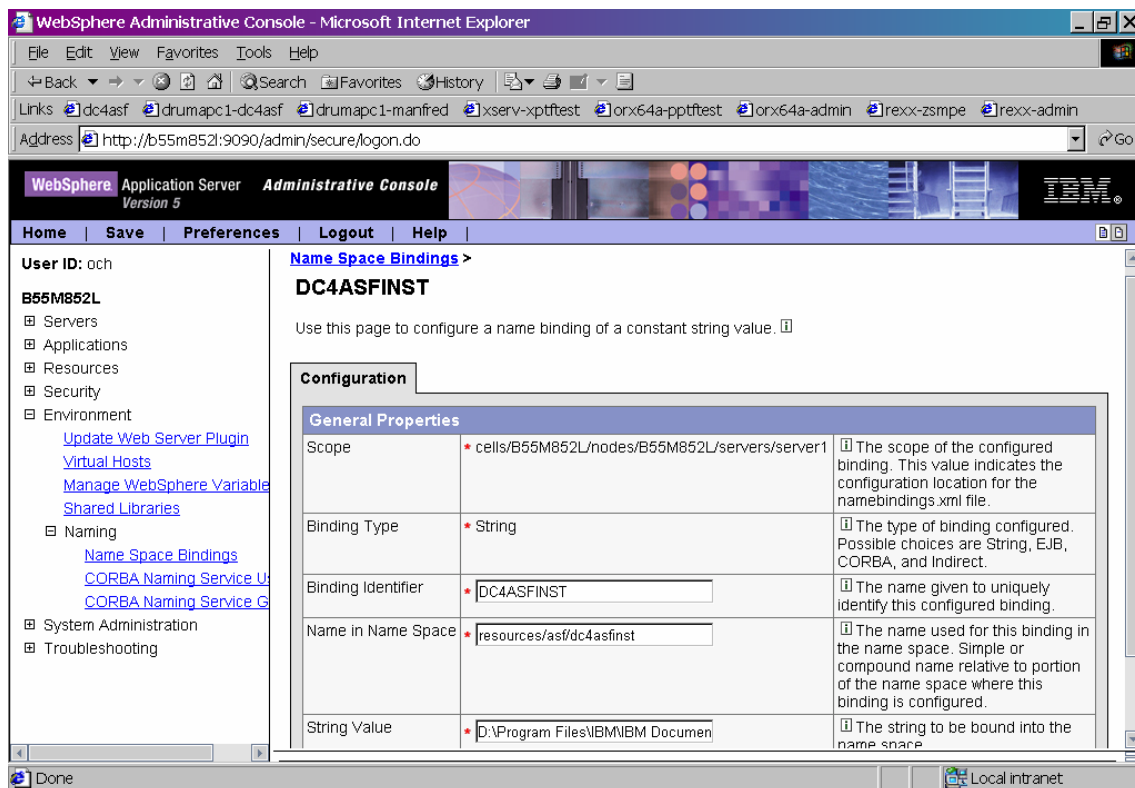
Two name space bindings must be created. To do this, open the WebSphere Administrative Console:

Open [Environment](#) > [Naming](#) > [Name Space Bindings](#)

Note: Ensure you are in the Server scope.

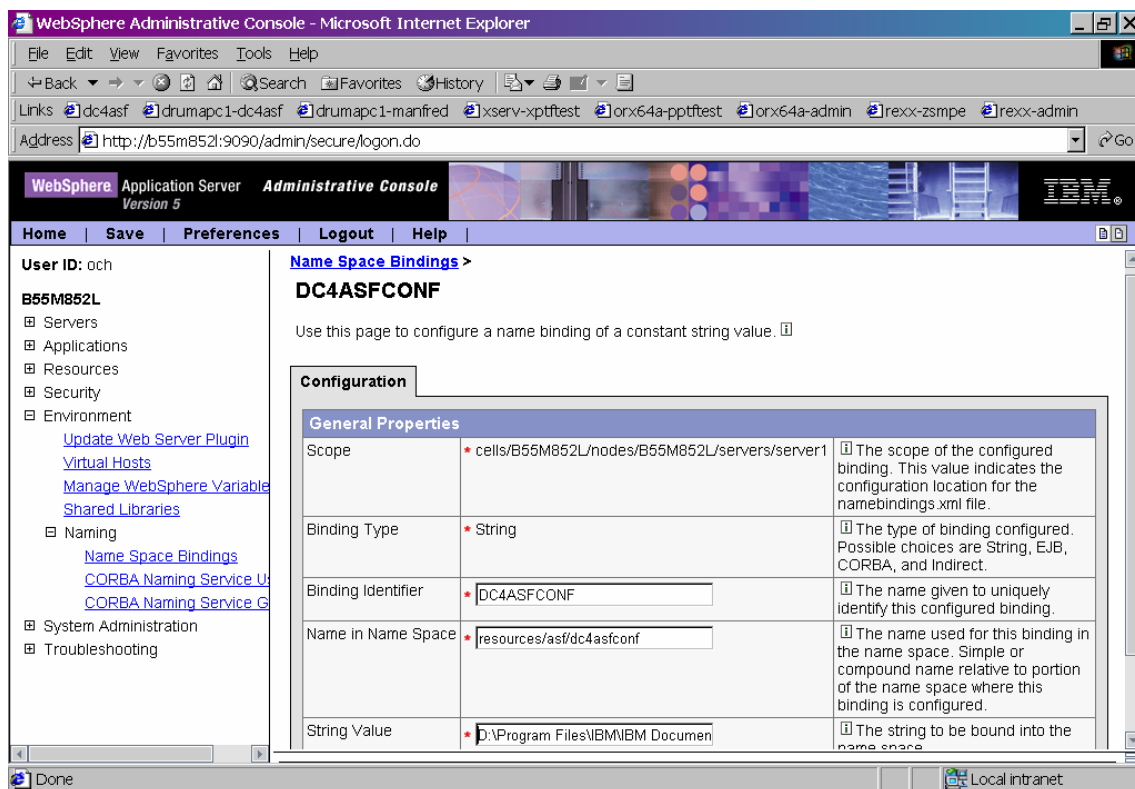
2.1 Define Name Space Binding for DC4ASFINST

- a) Press button **New** to create a new Binding
- b) Choose type **String** for the binding and press button **Next**
- c) Enter
 - the Binding Identifier
(for example DC4ASFINST)
 - Name in Name Space
(for example resources/asf/dc4asfinst)
 - and the path to your ASF installation directory
(D:\Program Files\IBM\IBM Document Connect for ASF)
- d) Press button **Next** to go to the Summary Panel
- e) On the Summary Panel press button **Finish** to complete the Name Space Binding.



2.2 Define Name Space Binding for DC4ASFCONF

- a) Press button **New** to create a new Binding
- b) Choose type **String** for the binding and press button **Next**
- c) Enter
 - the Binding Identifier
(for example DC4ASFCONF),
 - Name in Name Space
(for example resources/asf/dc4asfconf)
 - and the path to your ASF configuration file
(D:\Program Files\IBM\IBM Document Connect for ASF\config\DocConfiguration.xml)
- d) Press button **Next** to go to the Summary Panel
- e) On the Summary Panel press button **Finish** to complete the Name Space Binding.



Save the two name space bindings created in the master configuration.

3 Installation of the application

Preparing for the application installation

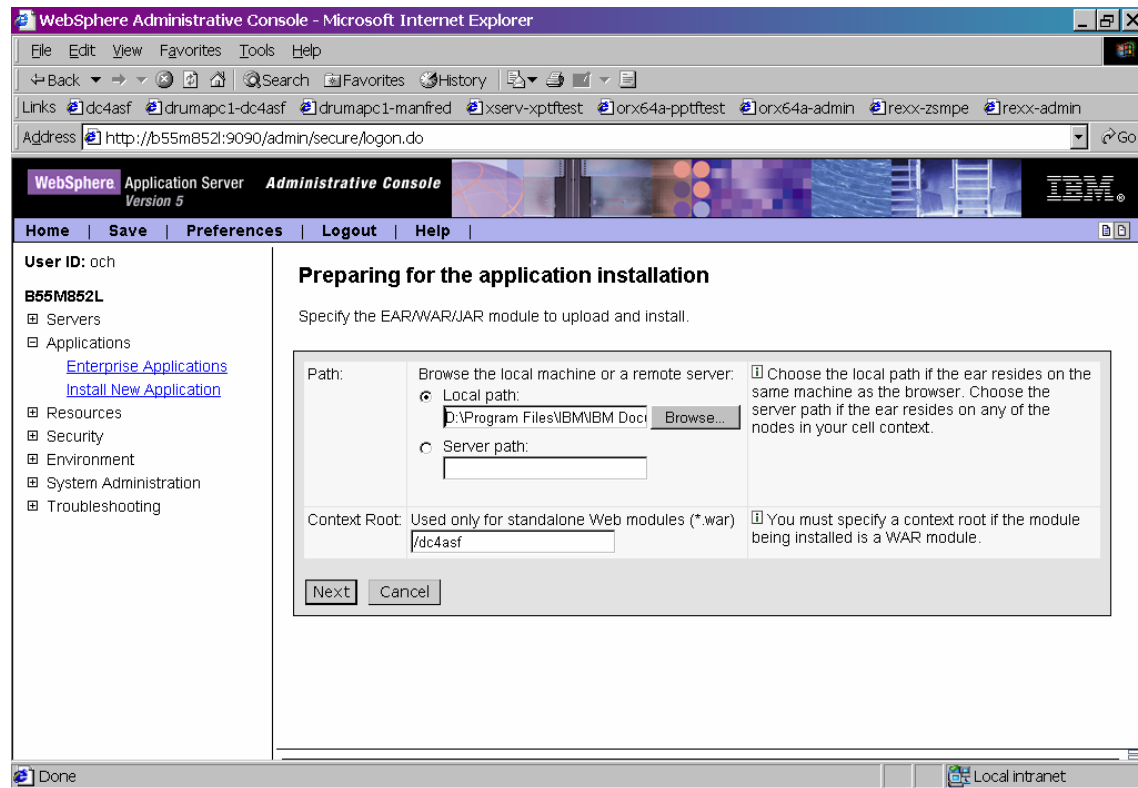
Open [Application](#) > [Install New Application](#)

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

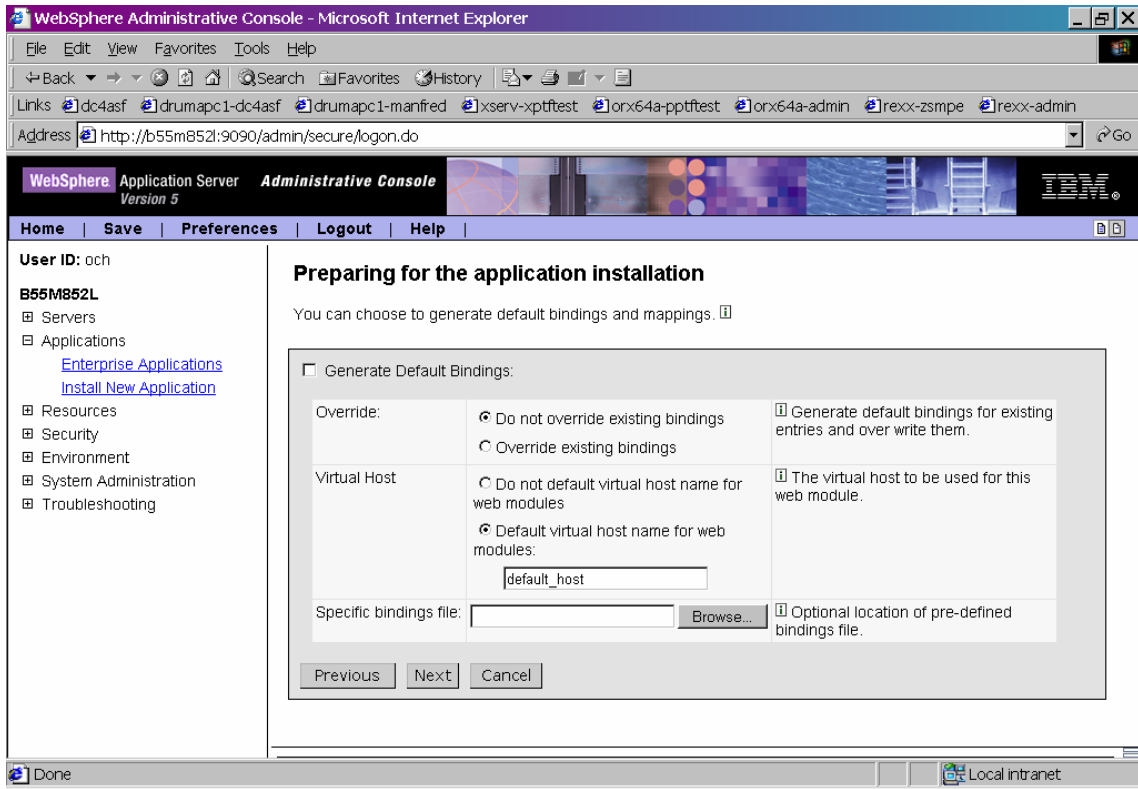
D:\Program Files\IBM\IBM Document Connect for ASF\war\dc4asf.war

Enter the context root, for example /dc4asf

Press button [Next](#). The file dc4asf.war is now loaded on the server.



Press button [Next](#).



Press button **Next**.

Install new application (Step 1)

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

Installation directory:

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

D:\Program Files\WebSphere\AppServer\installedApps\B55M852L\dc4asf.ear

where

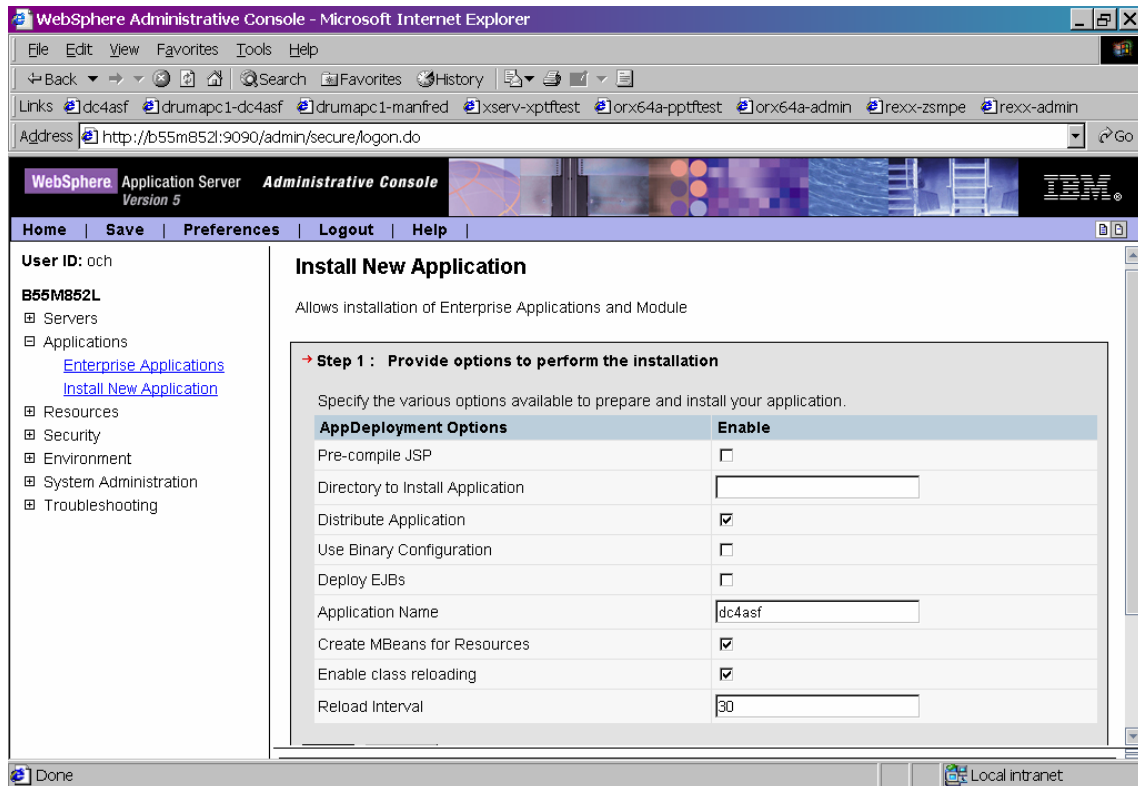
- 'B55M852L' is the cell name and
- 'dc4asf' is the application name.

Application Name:

Specify a unique name, for example 'dc4asf'.

Class Reloading:

Specify a value in seconds, for example '30'.



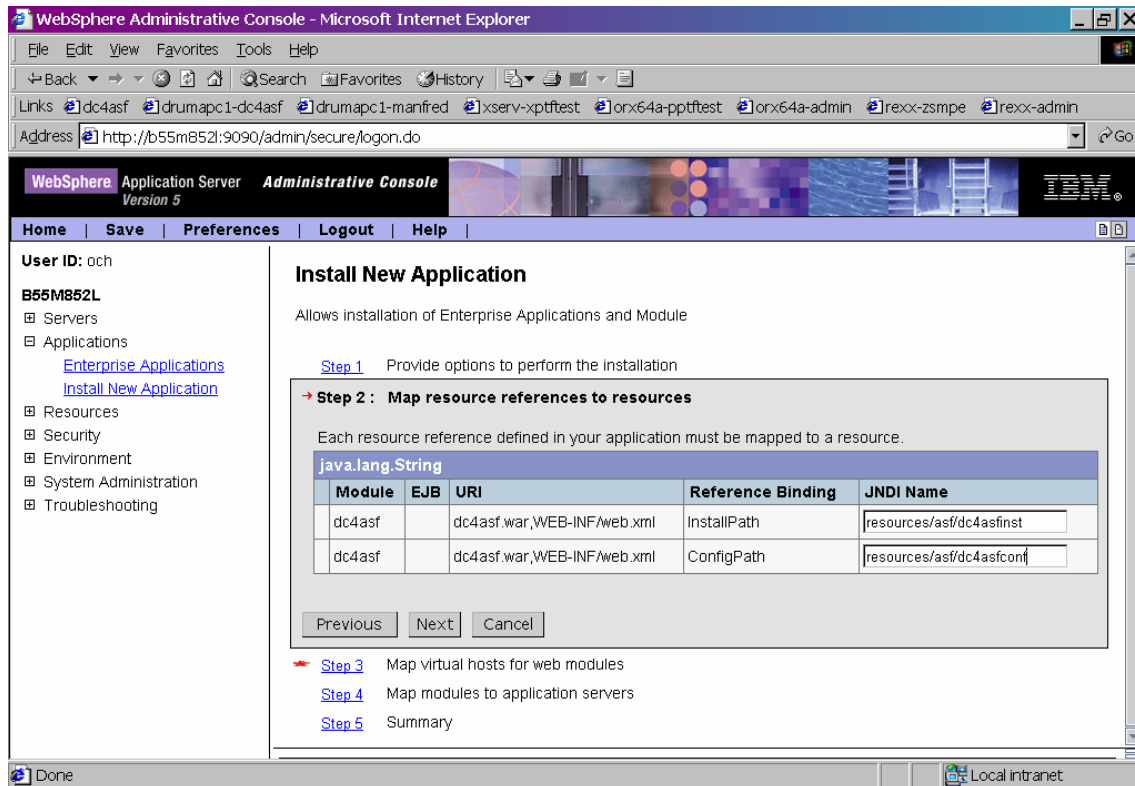
The screenshot shows the WebSphere Administrative Console interface in Microsoft Internet Explorer. The browser address bar shows the URL: `http://b55m852l:9090/admin/secure/logon.do`. The console header includes 'WebSphere Application Server Administrative Console Version 5'. The left sidebar shows a navigation tree with 'Applications' selected, containing links for 'Enterprise Applications' and 'Install New Application'. The main content area is titled 'Install New Application' and contains the following text: 'Allows installation of Enterprise Applications and Module'. Below this is a section for 'Step 1: Provide options to perform the installation' with the instruction: 'Specify the various options available to prepare and install your application.' A table lists the options:

AppDeployment Options	Enable
Pre-compile JSP	<input type="checkbox"/>
Directory to Install Application	<input type="text"/>
Distribute Application	<input checked="" type="checkbox"/>
Use Binary Configuration	<input type="checkbox"/>
Deploy EJBs	<input type="checkbox"/>
Application Name	<input type="text" value="dc4asf"/>
Create MBeans for Resources	<input checked="" type="checkbox"/>
Enable class reloading	<input checked="" type="checkbox"/>
Reload Interval	<input type="text" value="30"/>

Press button **Next** to finish Step 1 and go to Step 2.

Install new application (Step 2)

Enter **resources/asf/dc4asfinst** for the InstallPath Reference Binding (JNDI Name) and **resources/asf/dc4asfconf** for the ConfigPath Reference Binding (see “Name Space Bindings”).



The screenshot shows the WebSphere Administrative Console interface. The browser window title is "WebSphere Administrative Console - Microsoft Internet Explorer". The address bar shows "http://b55m852l:9090/admin/secure/logon.do". The console header includes "WebSphere Application Server Administrative Console Version 5" and navigation tabs: Home, Save, Preferences, Logout, Help. The left sidebar shows a tree view with "User ID: och", "B55M852L", and various system management options. The main content area is titled "Install New Application" and contains the following text:

Allows installation of Enterprise Applications and Module

[Step 1](#) Provide options to perform the installation

→ **Step 2: Map resource references to resources**

Each resource reference defined in your application must be mapped to a resource.

java.lang.String				
Module	EJB	URI	Reference Binding	JNDI Name
dc4asf		dc4asf.war,WEB-INF/web.xml	InstallPath	<input type="text" value="resources/asf/dc4asfinst"/>
dc4asf		dc4asf.war,WEB-INF/web.xml	ConfigPath	<input type="text" value="resources/asf/dc4asfconf"/>

Buttons: Previous, Next, Cancel

→ [Step 3](#) Map virtual hosts for web modules
[Step 4](#) Map modules to application servers
[Step 5](#) Summary

Press button **Next** to finish Step 2 and go to Step 3.

Install new application (Step 3)

The screenshot shows the WebSphere Administrative Console interface in Microsoft Internet Explorer. The browser's address bar displays the URL `http://b55m852l:9090/admin/secure/ogon.do`. The console header includes the text "WebSphere Application Server Administrative Console Version 5" and navigation links for Home, Save, Preferences, Logout, and Help. On the left, a sidebar lists navigation options such as Servers, Applications, Resources, Security, Environment, System Administration, and Troubleshooting. The main content area is titled "Install New Application" and contains the following text:

Allows installation of Enterprise Applications and Module

- [Step 1](#) Provide options to perform the installation
- [Step 2](#) Map resource references to resources
- Step 3: Map virtual hosts for web modules**
- [Step 4](#) Map modules to application servers
- [Step 5](#) Summary

Under Step 3, the instructions state: "Specify the virtual host where you want to install the Web modules contained in your application. Web modules can be installed on the same virtual host or dispersed among several hosts." Below this, there is a checkbox for "Apply Multiple Mappings" and a table with two columns: "Web Module" and "Virtual Host". The table contains one row with the value "dc4asf" in the "Web Module" column and "default_host" in the "Virtual Host" column. At the bottom of the form are buttons for "Previous", "Next", and "Cancel".

No updates are required for Step 3. Press button [Next](#) to go to Step 4.

Install new application (Step 4)

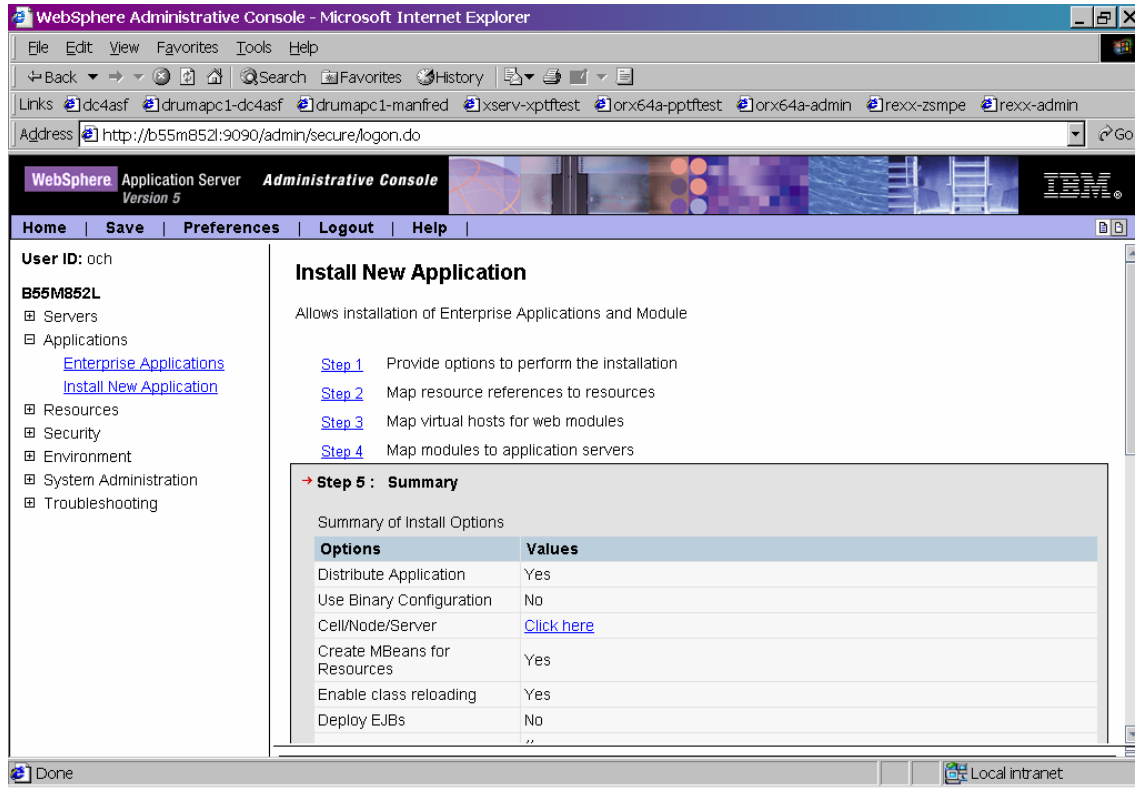
The screenshot shows the WebSphere Administrative Console interface in Microsoft Internet Explorer. The browser's address bar displays `http://b55m852l:9090/admin/secure/login.do`. The console header includes the IBM logo and navigation links: Home, Save, Preferences, Logout, and Help. On the left, a sidebar shows the user ID 'och' and a tree view for 'B55M852L' with categories like Servers, Applications, Resources, Security, Environment, System Administration, and Troubleshooting. The main content area is titled 'Install New Application' and contains instructions for installing Enterprise Applications and Modules. It lists three steps: Step 1 (Provide options), Step 2 (Map resource references), and Step 3 (Map virtual hosts). Step 4, 'Map modules to application servers', is the active step, with instructions to specify the application server for modules. A text box contains the server path: `WebSphere: cell=B55M852L, node=B55M852L, server=server1`. Below this is a table for mapping modules to servers:

<input type="checkbox"/>	Module	URI	Server
<input type="checkbox"/>	dc4asf	dc4asf.war, WEB-INF/web.xml	WebSphere: cell=B55M852L, node=B55M852L, server=server1

Buttons for 'Previous', 'Next', and 'Cancel' are visible. A 'Next' button is highlighted in pink in the original image. At the bottom of the console, there is a 'Step 5 Summary' link. The status bar at the bottom of the browser shows 'Done' and 'Local intranet'.

No updates are required for Step 4. Press button **Next** to go to Step 5.

Install new application (Step 5)



The screenshot shows the WebSphere Administrative Console interface in Microsoft Internet Explorer. The browser's address bar displays `http://b55m852l:9090/admin/secure/login.do`. The console header includes the IBM logo and navigation links: Home, Save, Preferences, Logout, and Help. The left sidebar shows a tree view with 'Applications' expanded to 'Install New Application'. The main content area is titled 'Install New Application' and contains a summary table for Step 5.

Install New Application
Allows installation of Enterprise Applications and Module

- [Step 1](#) Provide options to perform the installation
- [Step 2](#) Map resource references to resources
- [Step 3](#) Map virtual hosts for web modules
- [Step 4](#) Map modules to application servers

Step 5: Summary

Summary of Install Options

Options	Values
Distribute Application	Yes
Use Binary Configuration	No
Cell/Node/Server	Click here
Create MBeans for Resources	Yes
Enable class reloading	Yes
Deploy EJBs	No
	..

Check the settings on this page and press button **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

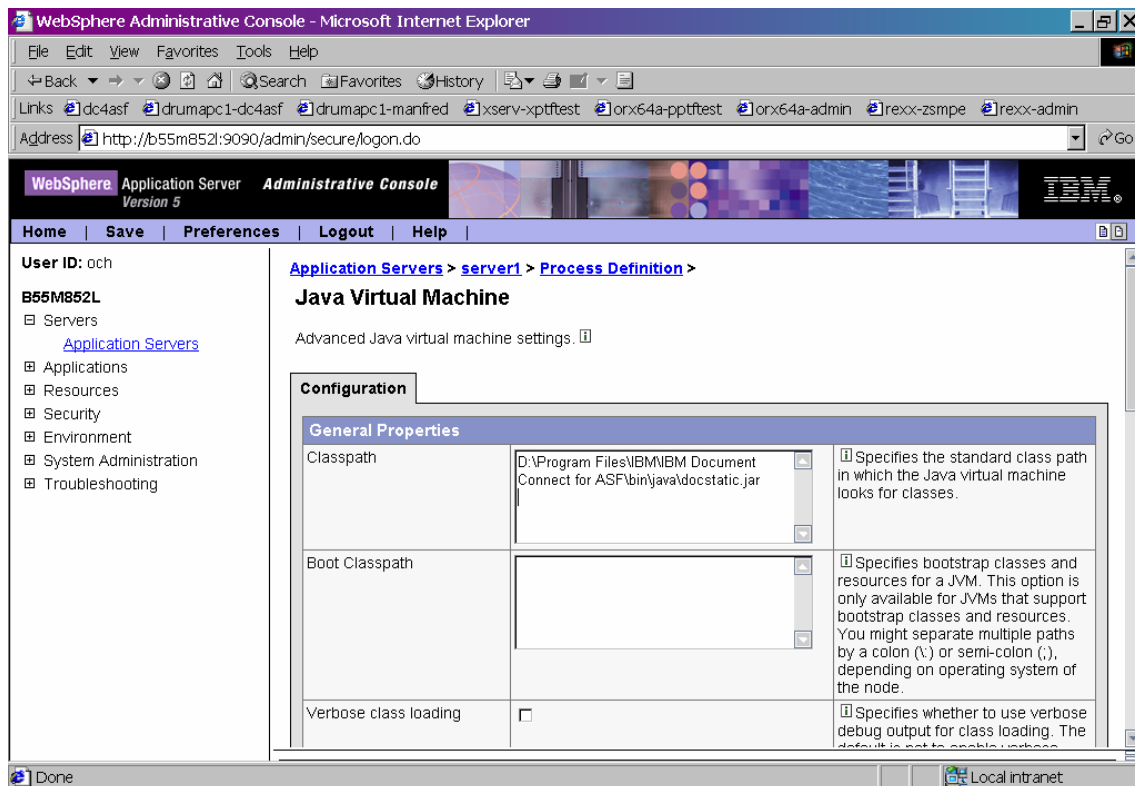
Open [Applications](#) > [Enterprise Application](#), select your dc4asf application, and select **Start** to start the application.

4 Spellcheck Installation

To activate spell check you must set the Classpath variable and define a LIBPATH variable to the WAS environment.

Open [Servers](#) > [Application Servers](#) > *server name* > [Process Definition](#) > [Java Virtual Machine](#)

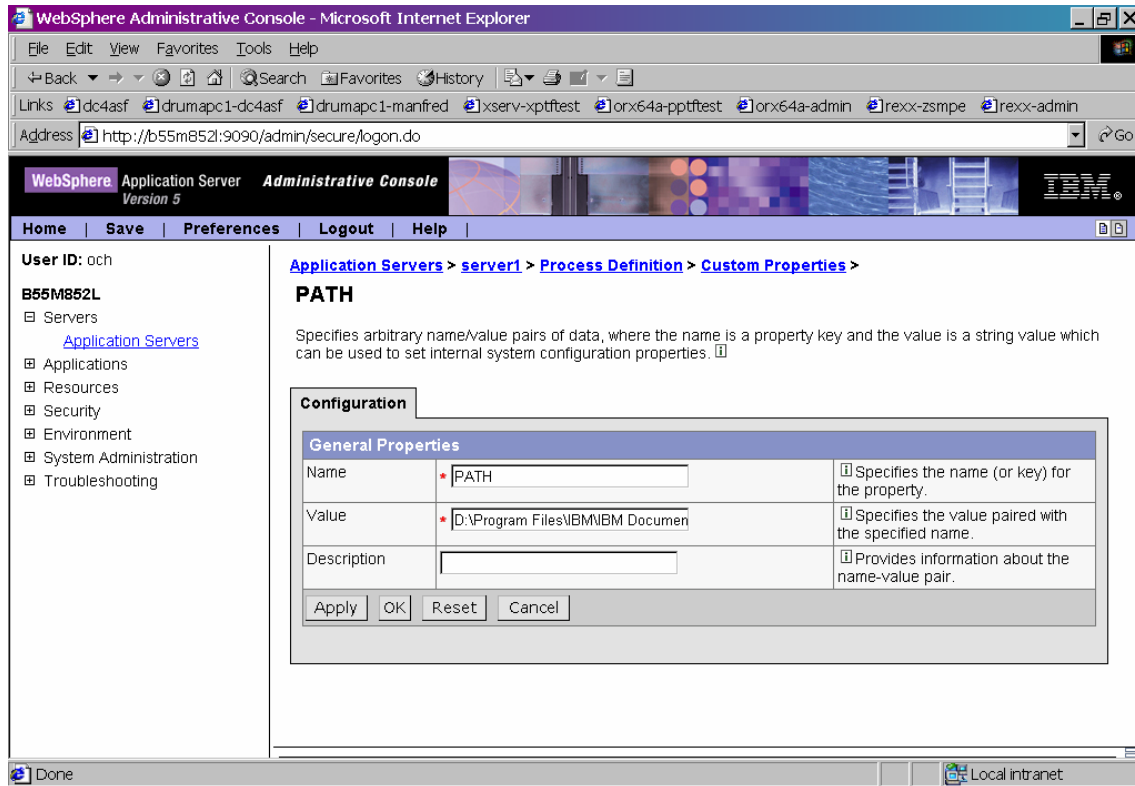
Add the file *docstatic.jar* delivered with DC4ASF to the Classpath (D:\Program Files\IBM\IBM Document Connect for ASF\bin\java\docstatic.jar).



Press button [Apply](#) first and then press button [OK](#).

Open [Servers](#) > [Application Servers](#) > *server name* > [Process Definition](#) > [Environment Entries](#)

Create the variable **LIBPATH**. Set its value to the Document Connect for ASF shared library path (D:\Program Files\IBM\IBM Document Connect for ASF\bin).



Press button [Apply](#) first and then press button [OK](#).

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

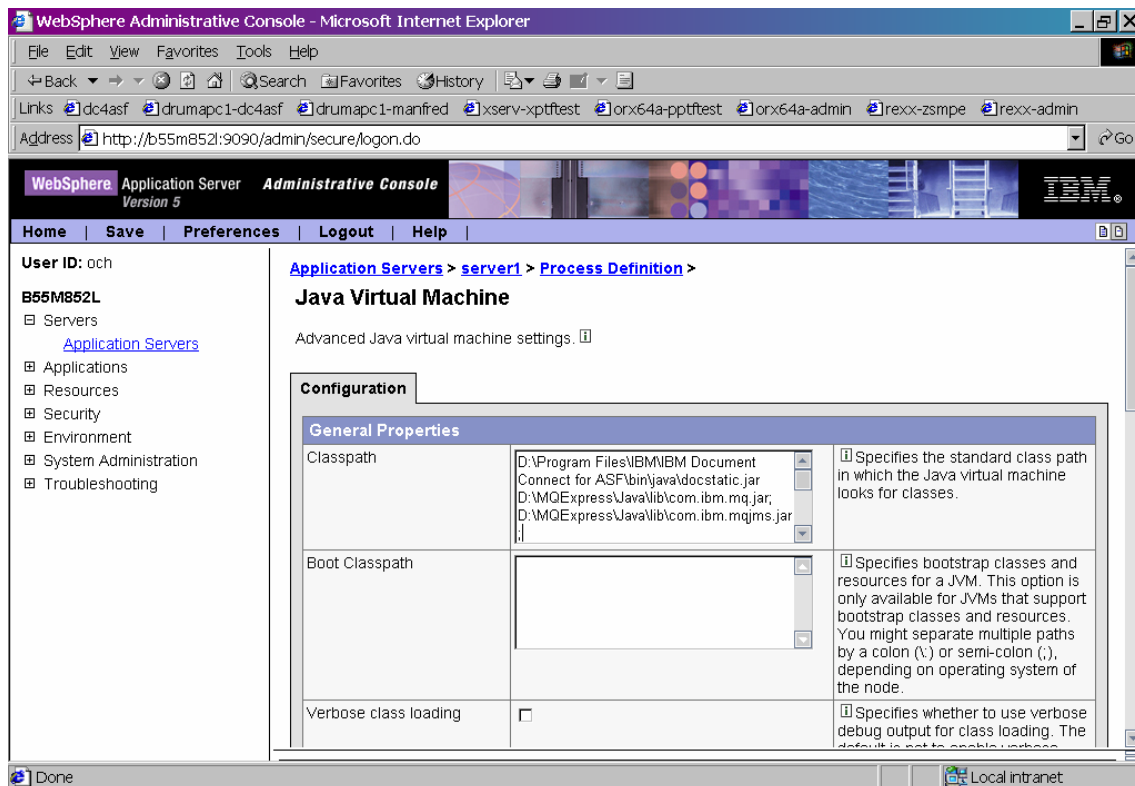
5 Enable MQ Connection

To enable the MQ connection between server and host you must change the Classpath and the LIBPATH variable in the WAS environment.

Open [Servers](#) > [Application Servers](#) > *server name* > [Process Definition](#) > [Java Virtual Machine](#)

Add the files [com.ibm.mq.jar](#) and [com.ibm.mqjms.jar](#) delivered with WebSphere MQ or WebSphere MQ Express to the Classpath (e.g.

D:\MQExpress\Java\lib\com.ibm.mq.jar;D:\MQExpress\Java\lib\com.ibm.mqjms.jar;)

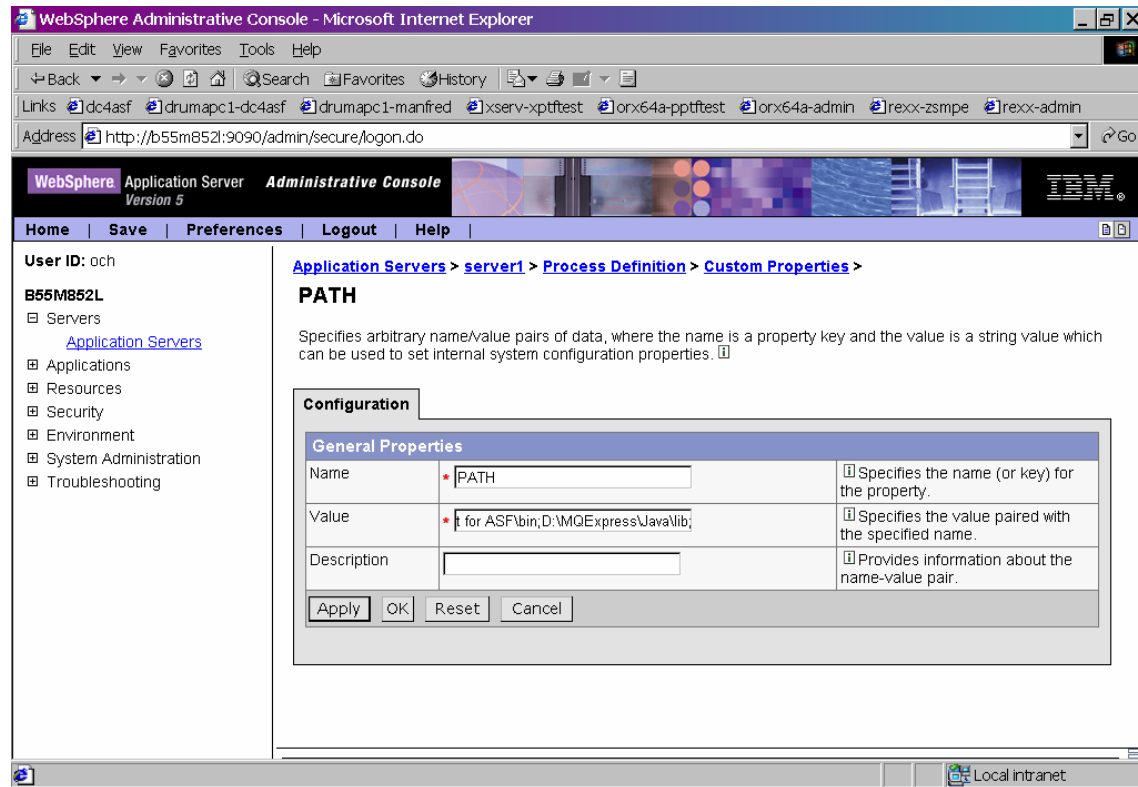


Press button [Apply](#) first and then press button [OK](#).

Open [Servers](#) > [Application Servers](#) > *server name* > [Process Definition](#) > [Environment Entries](#)

Add the WebSphere MQ shared library path (D:\MQExpress\Java\lib) to the value for the variable **LIBPATH**.

Note: Separate the path values with a semicolon.



Press button **Apply** first and then press button **OK**.

Save the changes to the master configuration.

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

6 HTTP Server Changes

Configure the WebSphere PLUGIN

Using Dynamic Link Library (DLL) "mod_ibm_app_server_http.dll".

Make sure you have installed the Dynamic Link Library (DLL) mod_ibm_app_server_http.dll. This DLL is usually installed with WAS by selecting the HTTP server installation. It resides in the bin directory of the WAS installation.

Modify the configuration file "plugin-cfg.xml"

Generate the plugin configuration file "plugin-cfg.xml" using the WebSphere Administrative Console:

Open [Environment](#) > [Update Web Server Plugin](#)

Press button **OK** to generate the file [plugin-cfg.xml](#) .

Note: Usually the xml file is placed in the D:\Program Files\WebSphere\AppServer\config\cells directory of the IBM WebSphere Application Server installation.

Copy the file "plugin-cfg.xml" into the "conf" directory of the IBM HTTP Server. Open the copy with an editor and modify it as follows:

a) Locate the following string (which may be customized with your installation values):

```
<Uri AffinityCookie="JSESSIONID" Name="/dc4asf/*"/>
```

Note:

dc4asf is the context root as described in "Preparing for the application installation".

b) Insert the text string "servlet/" before the asterisk:

```
<Uri AffinityCookie="JSESSIONID" Name="/dc4asf/servlet/*"/>
```

c) Add the following lines after the line specified in b) above:

```
<Uri AffinityCookie="JSESSIONID" Name="/dc4asf/html/*"/>
<Uri AffinityCookie="JSESSIONID" Name="/dc4asf/xsl/*"/>
<Uri AffinityCookie="JSESSIONID" Name="/dc4asf/javascript/*"/>
<Uri AffinityCookie="JSESSIONID" Name="/dc4asf/java/*"/>
<Uri AffinityCookie="JSESSIONID" Name="/dc4asf/css/*"/>
<Uri AffinityCookie="JSESSIONID" Name="/dc4asf/preview/*"/>
<Uri AffinityCookie="JSESSIONID" Name="/dc4asf/DocASFServerConfigServlet/*"/>
<Uri AffinityCookie="JSESSIONID" Name="/dc4asf/DocASFNetworkConfigServlet/*"/>
<Uri AffinityCookie="JSESSIONID" Name="/dc4asf/DocASFNetworkConfigProcessServlet/*"/>
<Uri AffinityCookie="JSESSIONID" Name="/dc4asf/DocASFFileServlet/*"/>
```

Note:

You will find these lines in the file plugin-cfg.xml.add delivered with DC4ASF in the /install directory.

d) Save the file

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) Add the following lines:

Alias /dc4asf/	"D:/Program Files/IBM/IBM Document Connect for ASF/www/"
Alias /dc4asf/transfer/	"D:/Program Files/IBM/IBM Document Connect for ASF/www/transfer/"
Alias /dc4asf/help/	"D:/Program Files/IBM/IBM Document Connect for ASF/www/help/"
Alias /dc4asf/helpconfig/	"D:/Program Files/IBM/IBM Document Connect for ASF/www/helpconfig/"
Alias /dc4asf/images/	"D:/Program Files/IBM/IBM Document Connect for ASF/www/images/"
Alias /dc4asf/custom/	"D:/Program Files/IBM/IBM Document Connect for ASF/www/custom/"
Alias /dc4asf/samples/	"D:/Program Files/IBM/IBM Document Connect for ASF/www/samples/"

Note:

You will find these lines in the file http.conf.add delivered with DC4ASF in the /install directory.

c) Restart the HTTP server to activate the changes.

7 Configure the Connections

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

Specify your host reply queue (optional), host queue manager (optional), Windows queue manager, the input queue, the output queue, the CICS program name FSNWRFRC, the defined User ID used for CICS logon, the corresponding password, and the MQ wait interval.

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

Notes:

- The password specified will be encrypted and stored in file “hnp.txt” in the /config subdirectory.
- If you do not specify the host reply queue (which is a remote queue in z/OS which corresponds to the server output queue) and the host queue manager, you need a transmission queue in z/OS with the queue manager name in Windows (REXXQ).

Host nickname	Host connection data
<input type="text" value="CiDB2mq"/>	Connection type: CICS MQ
	Host reply queue: <input type="text"/>
	Host queue manager: <input type="text"/>
	Queue manager: REXXQ
	Server out-queue: REPLY.ASF33DB2
	Server in-queue: ASF33DB2.ALIAS
	CICS program: FSNWRFRC
	User ID: CICSuser
	New Password: *****
	Confirm new password: *****

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

8 Installing a second Application

The steps above describe how to install the application dc4asftest in WebSphere Application Server.

IBM recommends to generate a second application instance of Document Connect for ASF for use by administrators, for example “dc4asftest”.

To create a second instance, execute the batch file “docinstusr.bat” available in directory D:/Program Files/IBM/IBM Document Connect for ASF/[install](#).

When being prompted specify an alternate installation path, for example

“D:/Program Files/IBM/IBM Document Connect for ASF/[dc4asftest](#)”

After successful completion perform the following steps using the WebSphere Administrative Console:

1. Add two name space bindings as described in “Name Space Bindings” with different values, for example:

Binding Identifier	DC4ASFINSTTEST
Name in Name Space	resources/asf/dc4asfintstest
Path	“D:/Program Files/IBM/IBM Document Connect for ASF/ dc4asftest ”

Binding Identifier	DC4ASFCONFTEST
Name in Name Space	resources/asf/dc4asfconfstest
Path	“D:/Program Files/IBM/IBM Document Connect for ASF/ dc4asftest /config/DocConfiguration.xml”

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

In paragraph “Preparing for the application installation”, specify the following path for the location of the war file:

“D:/Program Files/IBM/IBM Document Connect for ASF/[dc4asftest](#)/war/dcf4asf.war”

and specify the following path for context root:

[/dc4asftest](#)

In paragraph “Install new application (Step 1)”, use “[dc4asftest](#)” as the application name

In paragraph “Install new application (Step 2)”, use the following new name space bindings:

resources/asf/dc4asfintstest

resources/asf/dc4asfconfstest

Now perform the steps described in “HTTP Server Changes“ with the context root [/dc4asftest](#).

The file `plugin-cfg.xml` will then contain the following lines:

```
<Uri AffinityCookie="JSESSIONID" Name="/dc4asf/html/*"/>
<Uri AffinityCookie="JSESSIONID" Name="/dc4asf/xsl/*"/>
<Uri AffinityCookie="JSESSIONID" Name="/dc4asf/javascript/*"/>
<Uri AffinityCookie="JSESSIONID" Name="/dc4asf/java/*"/>
<Uri AffinityCookie="JSESSIONID" Name="/dc4asf/css/*"/>
<Uri AffinityCookie="JSESSIONID" Name="/dc4asf/preview/*"/>
<Uri AffinityCookie="JSESSIONID" Name="/dc4asf/DocASFServerConfigServlet/*"/>
<Uri AffinityCookie="JSESSIONID" Name="/dc4asf/DocASFNetworkConfigServlet/*"/>
<Uri AffinityCookie="JSESSIONID" Name="/dc4asf/DocASFNetworkConfigProcessServlet/*"/>
<Uri AffinityCookie="JSESSIONID" Name="/dc4asf/DocASFFileServlet/*"/>

<Uri AffinityCookie="JSESSIONID" Name="/dc4asftest/servlet/*"/>
<Uri AffinityCookie="JSESSIONID" Name="/dc4asftest/html/*"/>
<Uri AffinityCookie="JSESSIONID" Name="/dc4asftest/xsl/*"/>
<Uri AffinityCookie="JSESSIONID" Name="/dc4asftest/javascript/*"/>
<Uri AffinityCookie="JSESSIONID" Name="/dc4asftest/java/*"/>
<Uri AffinityCookie="JSESSIONID" Name="/dc4asftest/css/*"/>
<Uri AffinityCookie="JSESSIONID" Name="/dc4asftest/preview/*"/>
<Uri AffinityCookie="JSESSIONID" Name="/dc4asftest/DocASFServerConfigServlet/*"/>
<Uri AffinityCookie="JSESSIONID" Name="/dc4asftest/DocASFNetworkConfigServlet/*"/>
<Uri AffinityCookie="JSESSIONID" Name="/dc4asftest/DocASFNetworkConfigProcessServlet/*"/>
<Uri AffinityCookie="JSESSIONID" Name="/dc4asftest/DocASFFileServlet/*"/>
```

The file `http.conf` will then contain the following lines:

```
Alias /dc4asf/           "D:/Program Files/IBM/IBM Document Connect for ASF/www/"
Alias /dc4asf/transfer/ "D:/Program Files/IBM/IBM Document Connect for ASF/www/transfer/"
Alias /dc4asf/help/     "D:/Program Files/IBM/IBM Document Connect for ASF/www/help/"
Alias /dc4asf/helpconfig/ "D:/Program Files/IBM/IBM Document Connect for ASF/www/helpconfig/"
Alias /dc4asf/images/   "D:/Program Files/IBM/IBM Document Connect for ASF/www/images/"
Alias /dc4asf/custom/   "D:/Program Files/IBM/IBM Document Connect for ASF/www/custom/"
Alias /dc4asf/samples/  "D:/Program Files/IBM/IBM Document Connect for ASF/www/samples/"

Alias /dc4asf/           "D:/Program Files/IBM/IBM Document Connect for ASF/dc4asftest/www/"
Alias /dc4asf/transfer/  "D:/Program Files/IBM/IBM Document Connect for ASF/dc4asftest/www/transfer/"
Alias /dc4asf/help/     "D:/Program Files/IBM/IBM Document Connect for ASF/dc4asftest/www/help/"
Alias /dc4asf/helpconfig/ "D:/Program Files/IBM/IBM Document Connect for ASF/dc4asftest/www/helpconfig/"
Alias /dc4asf/images/   "D:/Program Files/IBM/IBM Document Connect for ASF/dc4asftest/www/images/"
Alias /dc4asf/custom/   "D:/Program Files/IBM/IBM Document Connect for ASF/dc4asftest/www/custom/"
Alias /dc4asf/samples/  "D:/Program Files/IBM/IBM Document Connect for ASF/dc4asftest/samples/"
```

9 Applying Maintenance

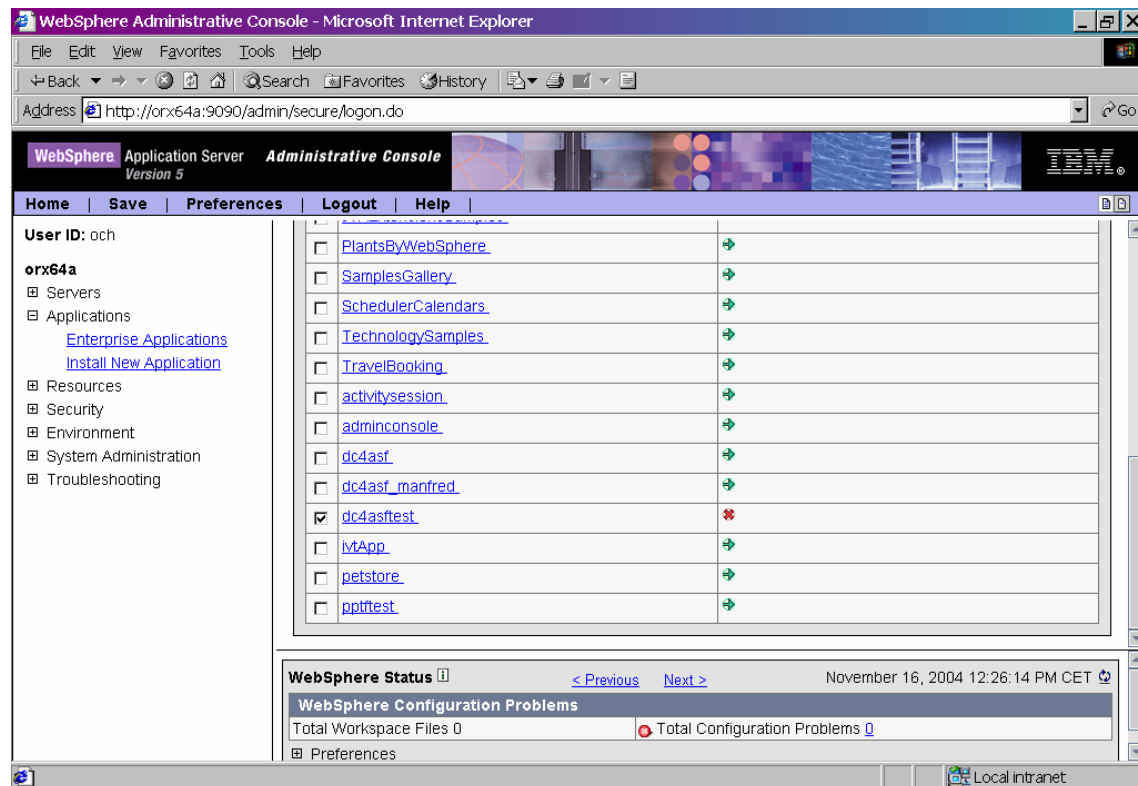
Launch the delivered Windows executable program to install a maintenance update. Follow the installation wizard and select “repair” to update DC4ASF.

Use the batch program “docinstusr.bat” available in directory “D:/Program Files/IBM/IBM Document Connect for ASF/install” to apply the update to the appropriate application, for example [dc4asftest](#).

Open the WebSphere Administrative Console:

[Open Application > Enterprise Application](#)

Select application “dc4asftest” and select [Update](#).



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

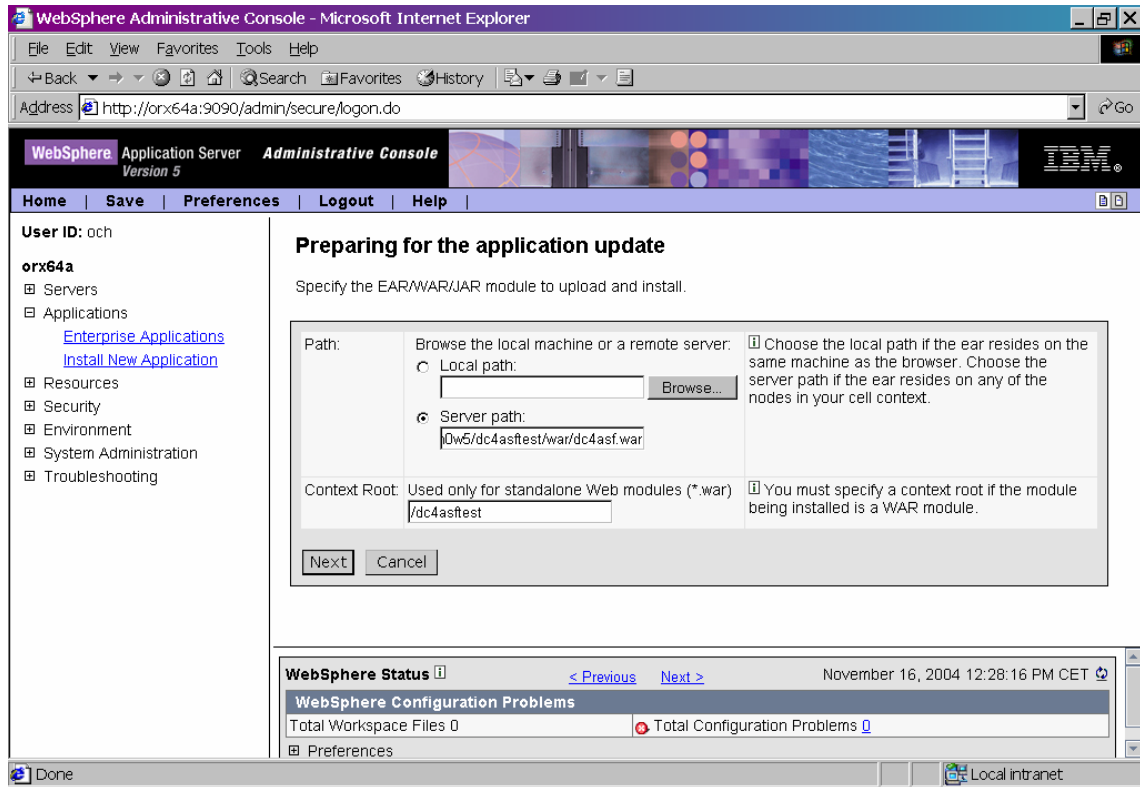
D:/Program Files/IBM/IBM Document Connect for ASF/dc4asftest/war/dc4asf.war

Enter the context root: /dc4asftest

Note:

The context root must be the same as the context root specified during installation (see “Preparing for the application installation”). If you do not remember the context root of your installation, check the file plugin-cfg.xml:

```
...
<Uri AffinityCookie="JSESSIONID" Name="/dc4asftest/servlet/*"/>
<Uri AffinityCookie="JSESSIONID" Name="/dc4asftest/html/*"/>
...
```



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

Open [Applications](#) > [Enterprise Application](#) and select your application dc4asftest. Select **Stop** and then select **Start** to restart the application.