WebFacing Lab Exercise 3

Packaging, Deploying and Testing a WebFaced Application within WebSphere Application Server – Express for iSeries

Overall Lab Guide

The objective of this lab to package the WebFaced Application and deploy it in WebSphere Application Server Express for iSeries. The Lab also shows how to install web application using the WebSphere Application Server – Express for iSeries administrative console.

Note: The pictures in these labs show a similar application being built. Some of the names and icons may be different from the environment you are working with.

The Steps in this Lab

1. Package the WebFaced Application
2. Creating a Enterprise Application in the WebSphere Application Server – Express for iSeries
3. Run the WebFaced application

1. Package the WebFaced Application

In this exercise we describe how to create WAR file, which will be used to deploy application on WebSphere Applications Server – Express for iSeries.

__ 1.   Go back to Web Facing Perspective from Server Perspective

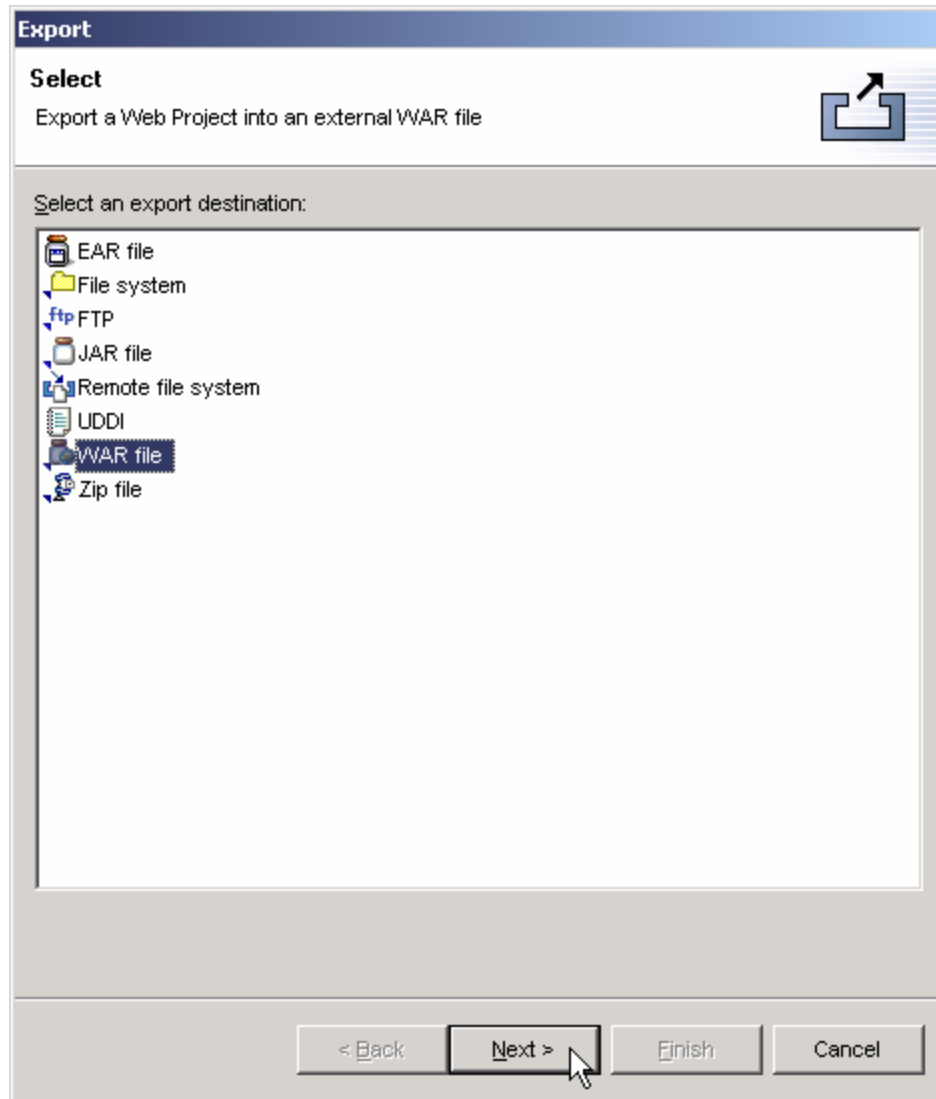Click on WebFacing Perspective icon in the left icon bar.
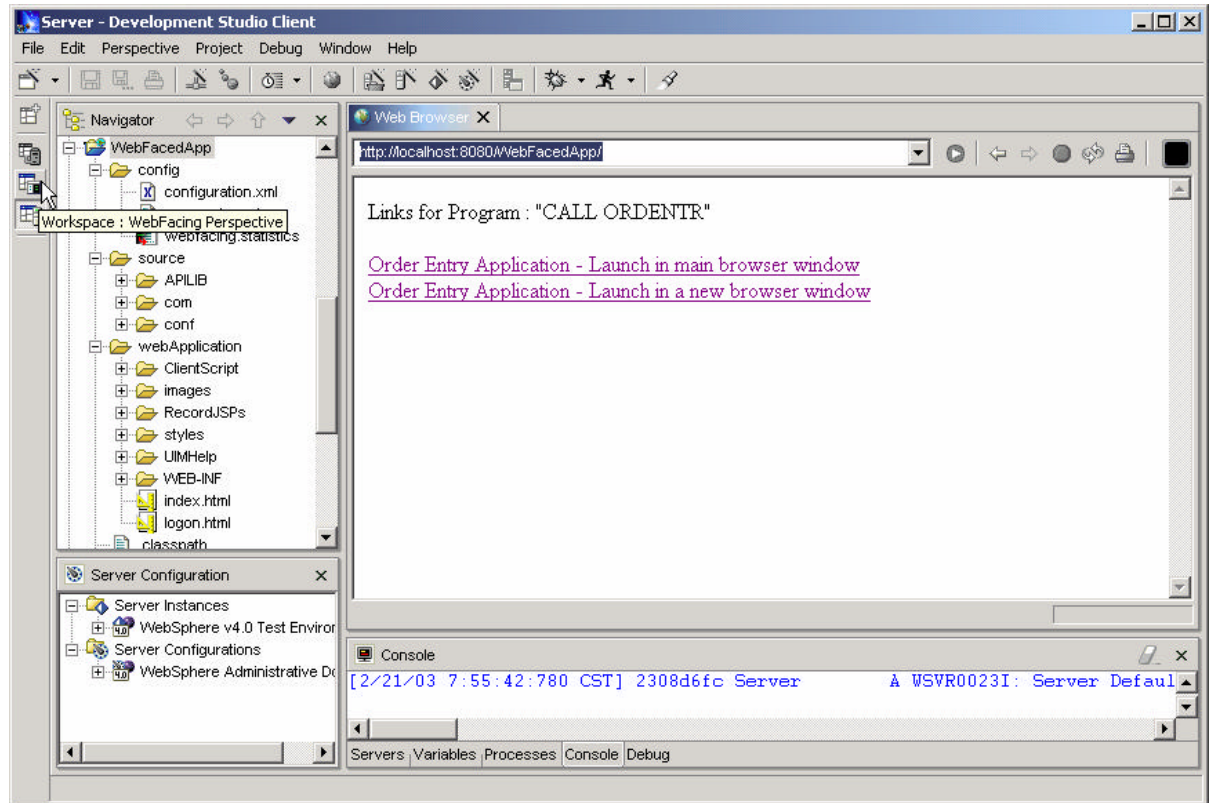
__ 2.   Make sure you have mapped drive to iSeries Server so that you can create the WAR file in your user directory on iSeries.

__ 3.   Select **WebFacedApp** project under WebFacing Projects

From Menu option select **File -> Export**

__ 4.   Select WAR file in Export window

(this is the **W**eb **AR**chive format needed for WebSphere Application Server).

Export

Select

Export a Web Project into an external WAR file

Select an export destination:

- EAR file
- File system
- FTP
- JAR file
- Remote file system
- UDDI
- WAR file
- Zip file

| < Back | Next > | Finish | Cancel |

Click on Next button

__ 5.   WAR Export

Select **WebFacedApp** for what resources do you want to export ?

Where do you want to export resources to ?

Click the **Browse** button to choose a location to export your project to.

Go to your user directory on iSeries System using mapped network drive from previous step.
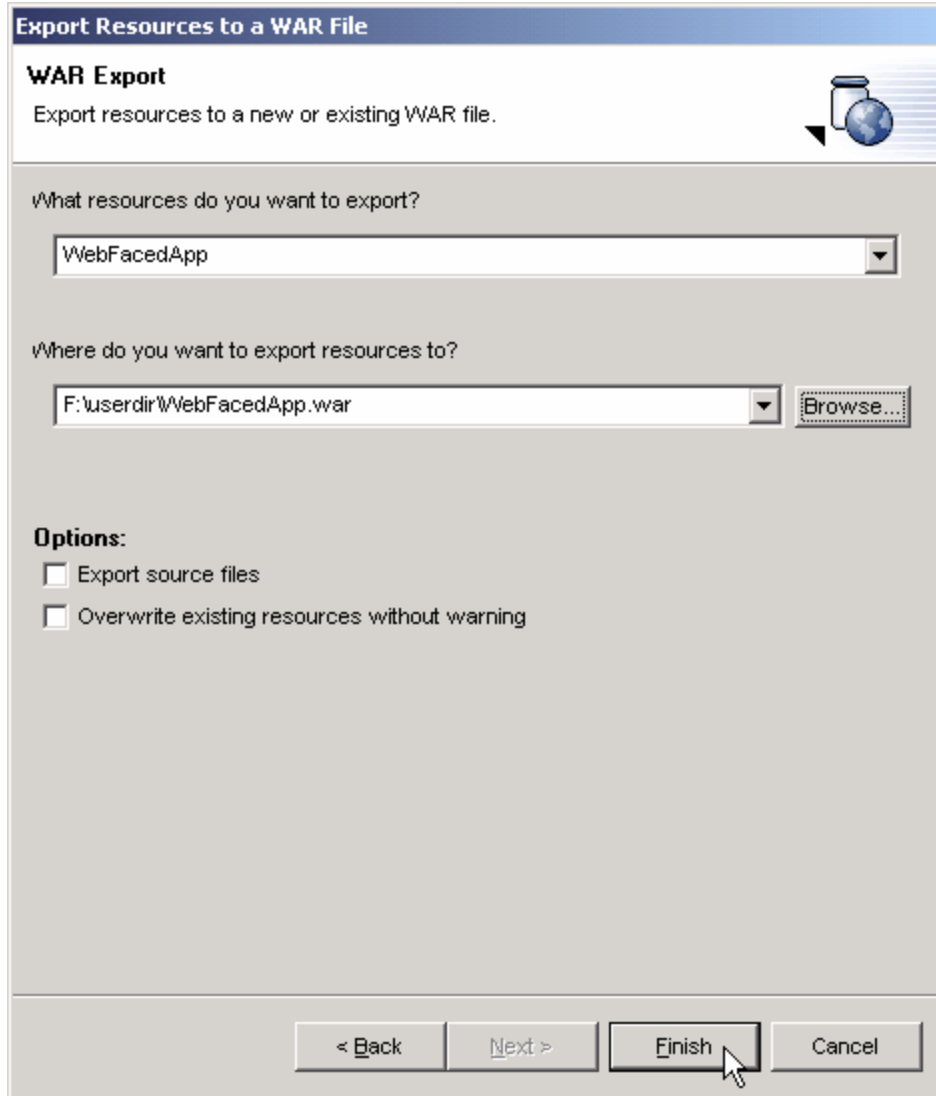
Select your **user directory** and Click on open
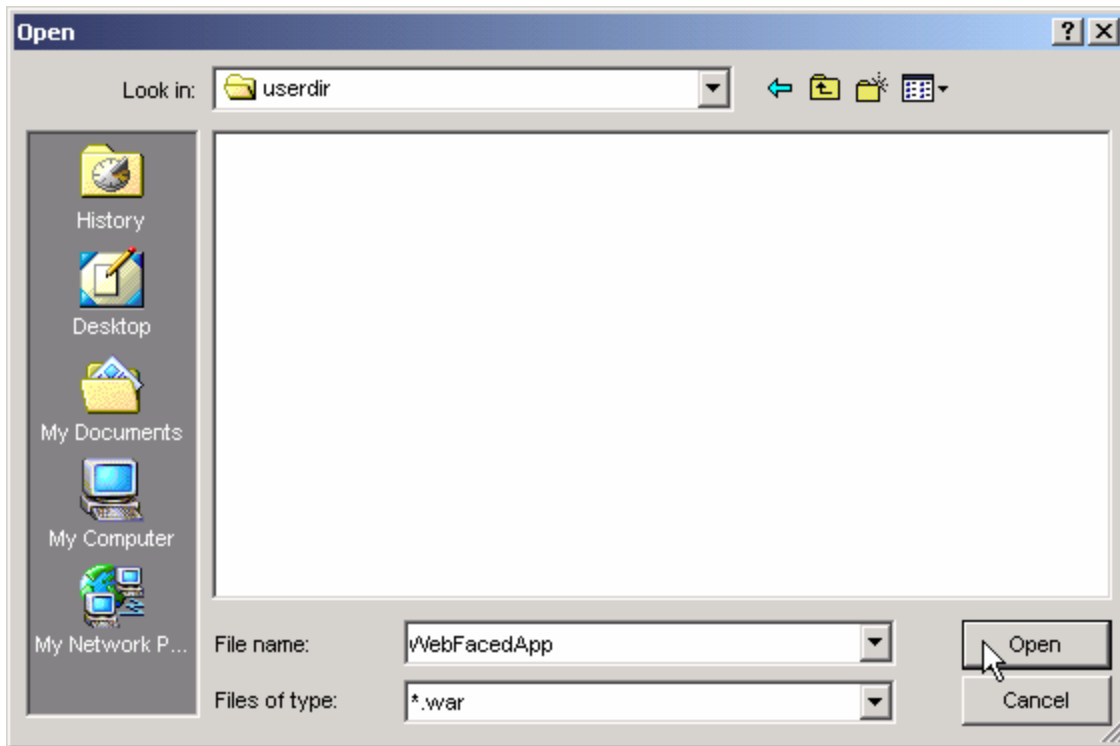
Enter filename: **WebFacedApp** and click on Open

Back in WAR export window

Click on **Finish**.

This export to a WAR file will take a little while. It is copying the project information to your mapped drive, but also creating the descriptors and formatting required for a WAR file.

__ 6. **Validate what you just published on the mapped drive.**

If you do not have an **Windows Explorer** session going, **right mouse click** on the **Start** button (lower left hand corner of the laptop display), select **Explorer**. Or you can click the icon that looks like this 🔍 on the bottom left edge of your PC display. Otherwise, just use the session you already have running.

Check your user directory on to ensure that the WebFacedApp.war file is there.

2. Creating a WAS Enterprise Application

Creating an Enterprise Application with the WAS Admin interface

During this exercise you will start the WAS Administrative Browser Console. The console allows you to manage your Websphere application server environment. The following tasks will be covered in this lab:

- Starting the admin. Browser console
- Navigating through the WAS environment using the console
- Install the WebFacedApp WAR file as an Enterprise Application using the Wizard
- Starting the Application

As a result of this exercise, you will create the Enterprise Application needed to run your WebFaced user interface.

What You Should be Able to Do

As a result of this exercise you will learn how to use the **WAS Browser Admin console.** You will be able to start it and gain an understanding of the different parts in the console. You will be able to go through all steps needed to define all pieces needed to run WebFaced applications in WAS:

- Use the WAS browser console
- Navigate through the Console environment
- Use the WAS browser console and its Wizards to create an enterprise application needed to run the WebFaced application.
- Use the WAS browser console to start the application

__ 1. Starting the WAS Express browser Admin

To start the WAS Admin, open up a browser. To do this, look on the bottom left of your laptop and find an icon like this:

for Internet Explorer (recommended, you can use Netscape, but don't resize the window in the middle of an activity, you risk loosing it). Click on it to bring up a browser.

When the browser comes up enter this URL:

http://<iSeries_system_name>: 2001

- When prompted, enter your iSeries userid and password

- ***Click on IBM WebSphere Application Server - Express for iSeries,*** IBM WebSphere Application Server – Express for iSeries page should appear.

- ***Click on Manage tab*** and ***Select your WAS Express Server instance*** (**WASEXP**) in the Server list box on the top
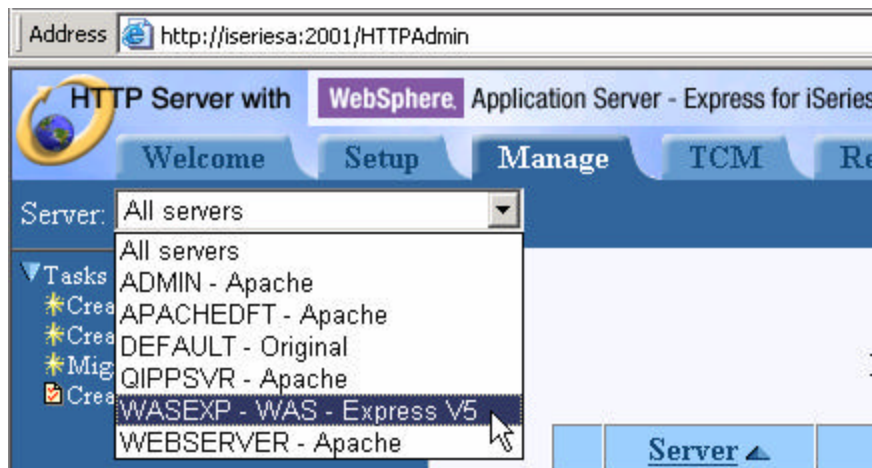
__ 2.   Install WebFaced Application
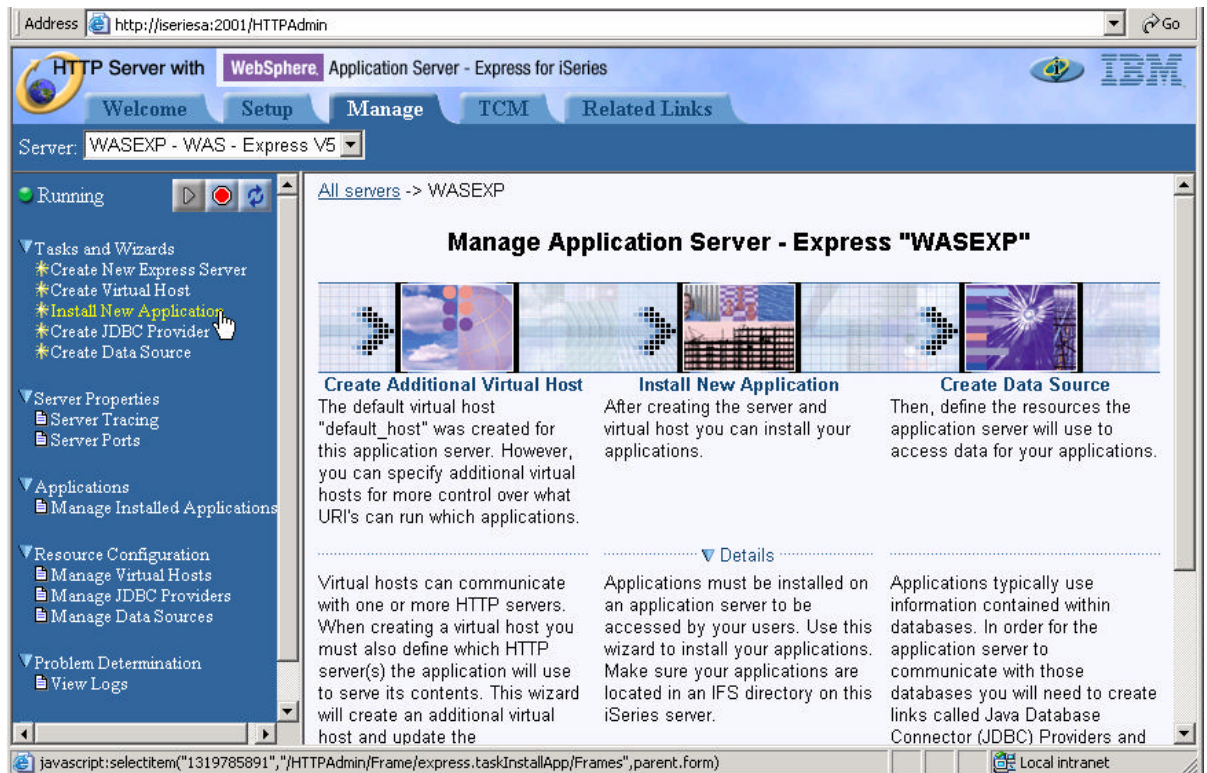
- ***Click on Install New Application link*** in left navigation pane

- **Specify Application Location**

    i. *Select Application is Contained in a WAR file* radio button

    ii. **IFS Path of WAR file**

        1. *Click on browse* and navigate to your user directory
        2. *Select WebFacedApp.war* file created in the previous step
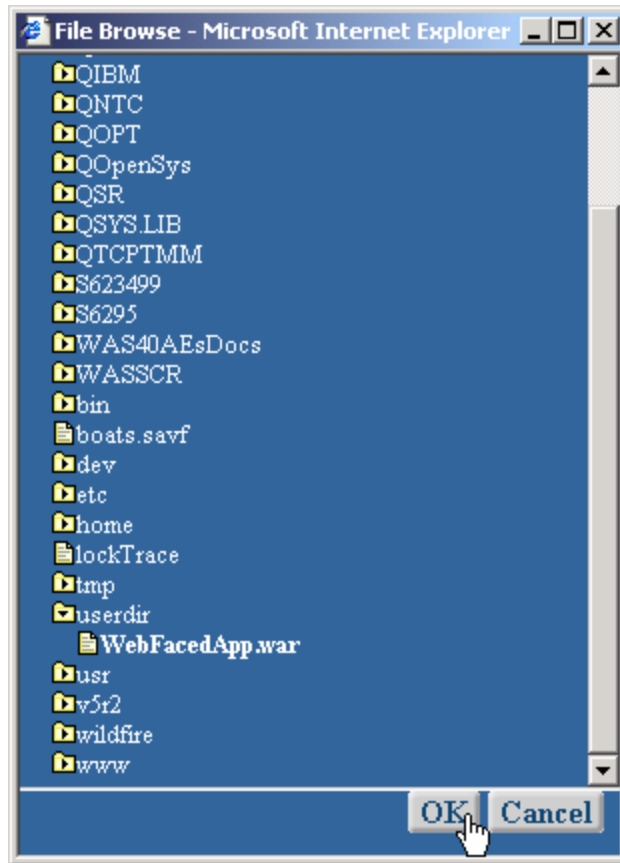
        3. *Click on OK* in file browse window.

    iii. **Context Root** input field enter **/WebFacedApp** this is part of the URL for invoking the application from a browser. We will just point to the application itself.
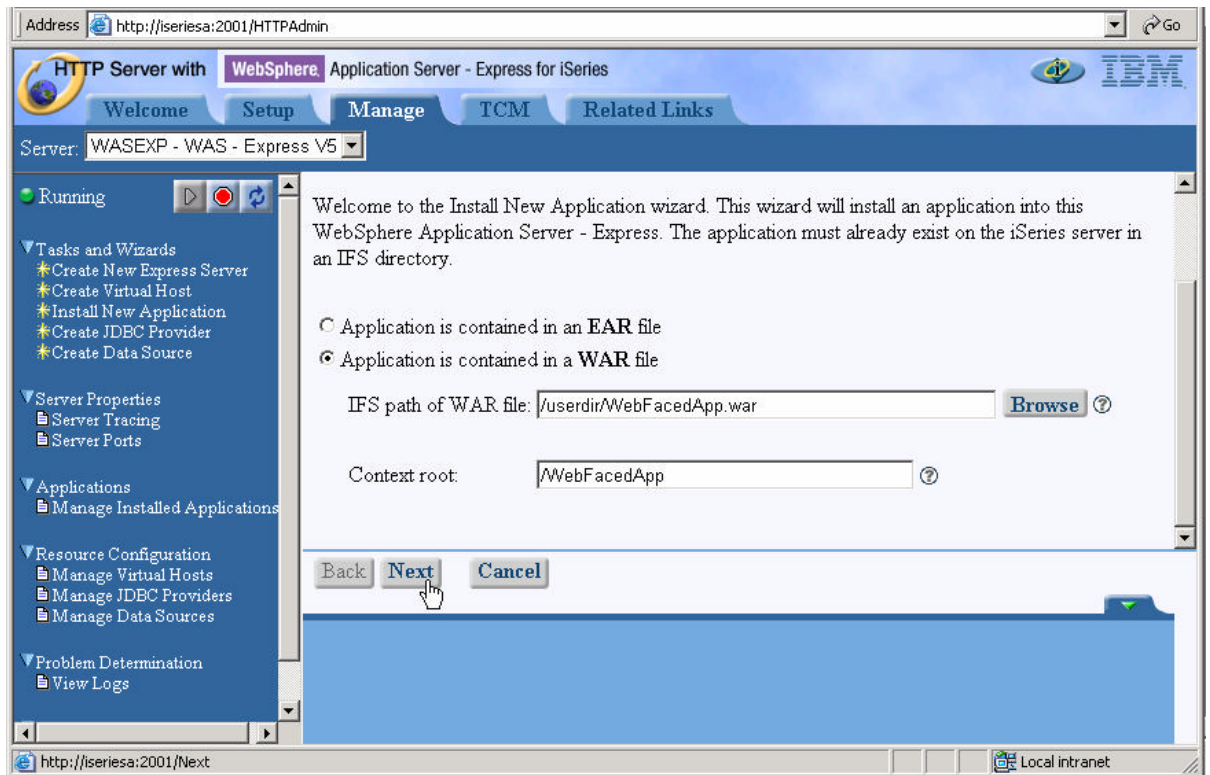
   iv. Click on **Next**.

- **Provide Options to Perform Install**

    i. Application Name: Enter **WebFaced Application** do not select Pre-Compile JSPs option (Take Default)
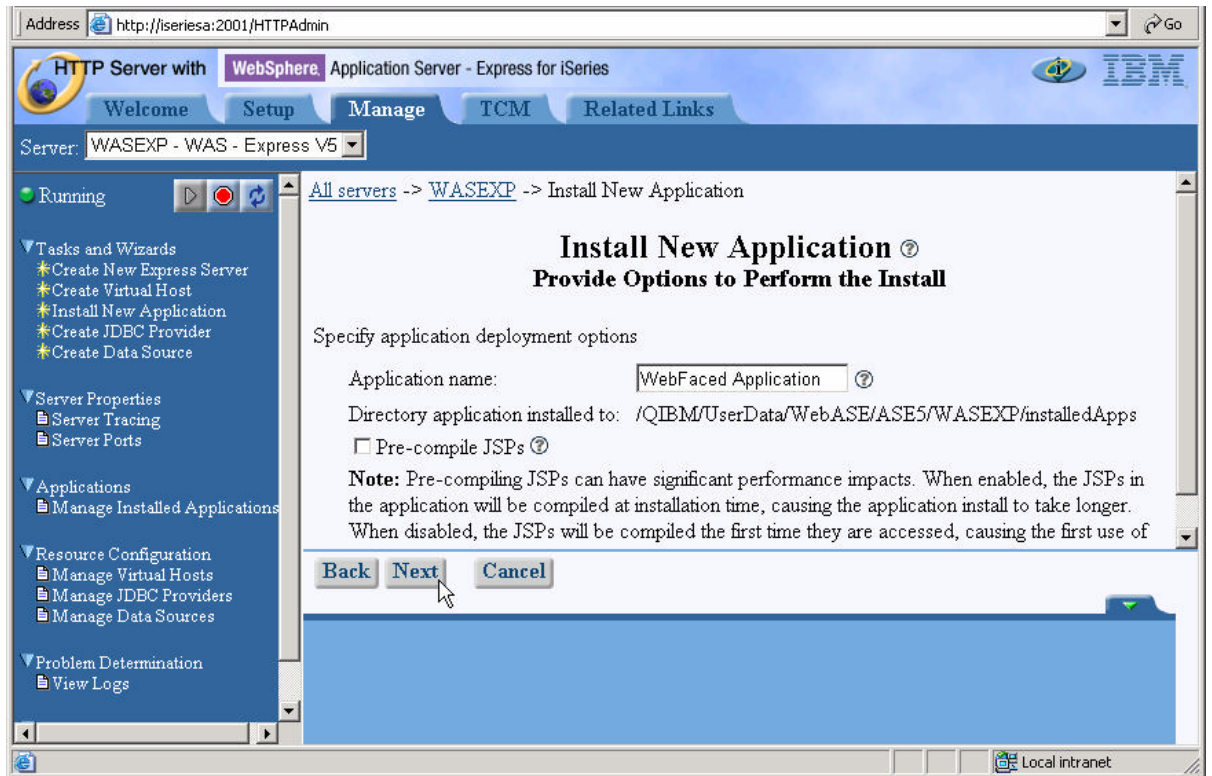
    ii. **Click on Next**.

- **Map Virtual Hosts for Web Modules**

    i. Virtual Host: Select **default_host** (already selected)
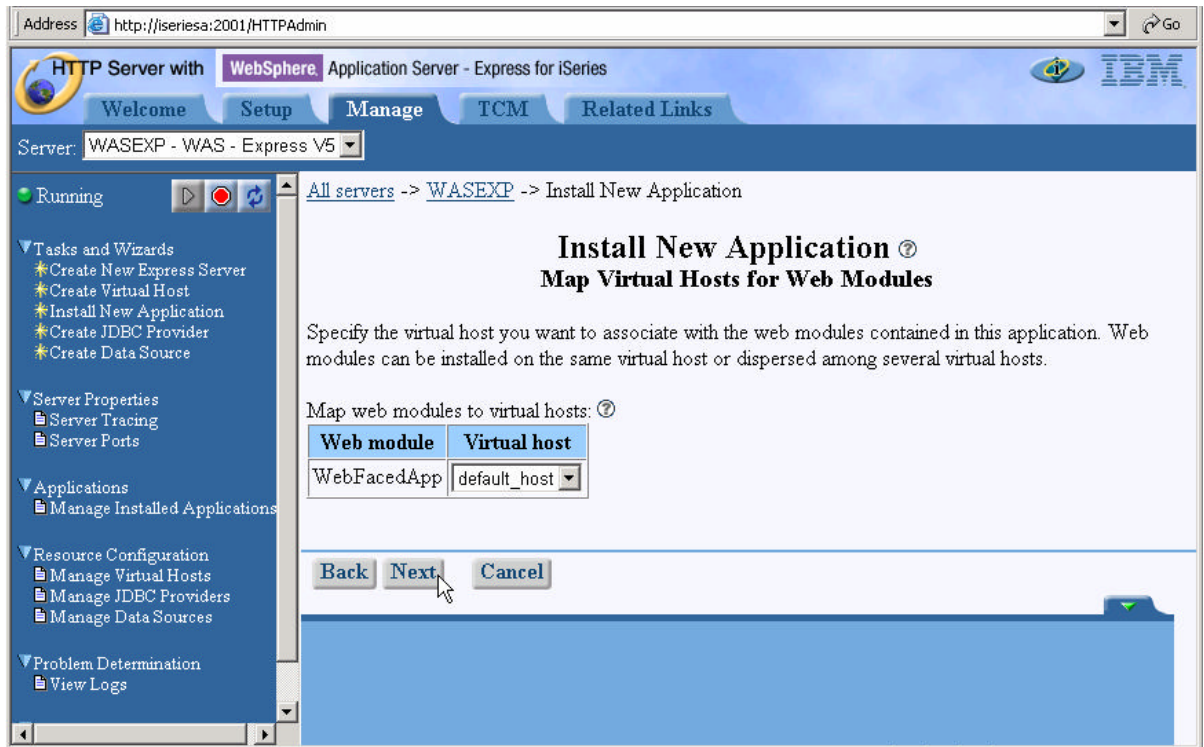
    ii. **Click on Next**

- **Summary**

   i. Review the Summary
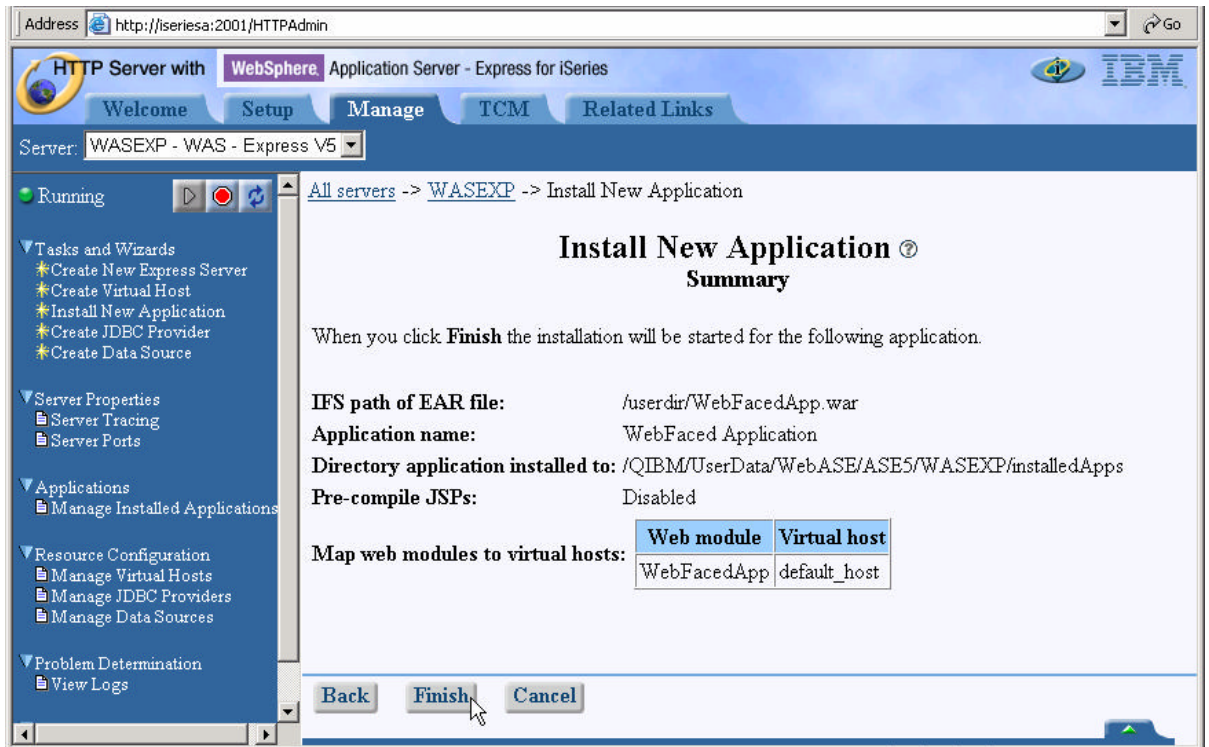
   ii. **Click on Finish**

- **Wait until Application Installation is over ….**
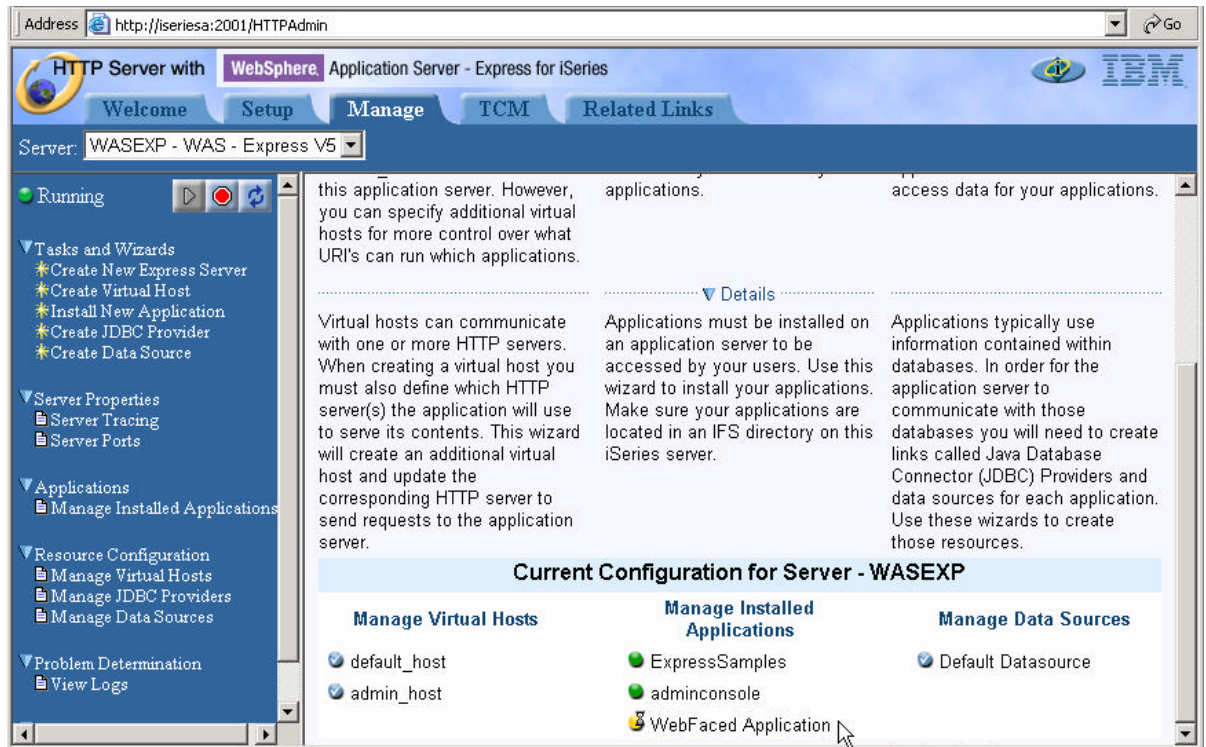
Yellow dot with hour glass next to application name

Indicates that it is currently installing the application.

Click on Refresh Button ( ) in left navigation pane to refresh the status and wait until it turns to red dot.
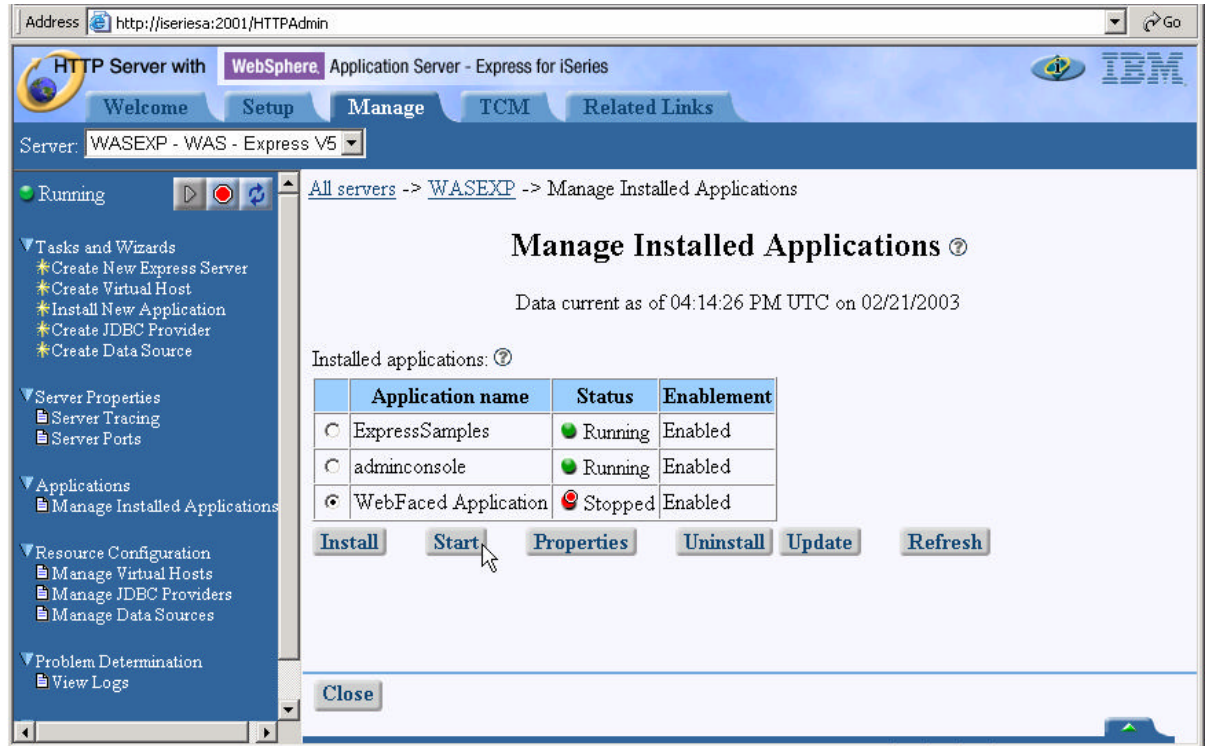

This indicates that Application is Installed but currently in Stopped Status.

__ 3.   Start WebFaced Application

- ***Click on Manage Installed Application link*** in left navigation pane

- ***Select Web Faced Application***

- ***Click on Start*** and wait until Status shows Running (🟢 Running).
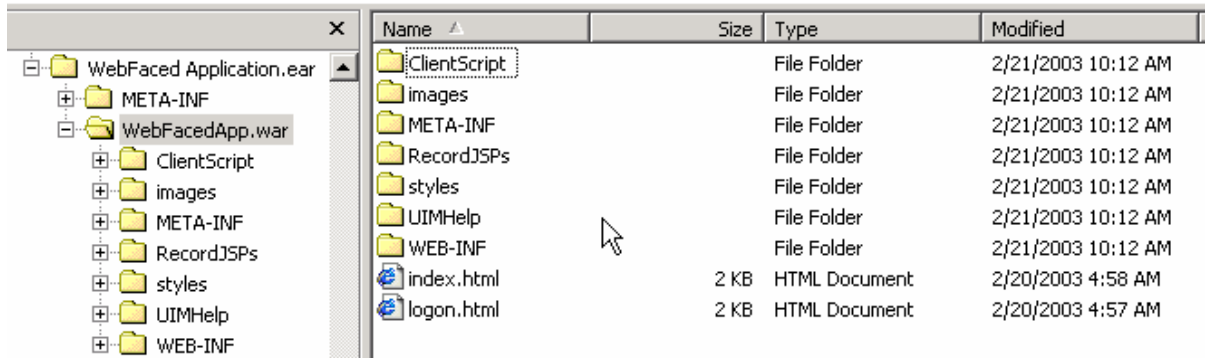
__ 4.   Application Components on the Server

Let's look at where the enterprise application ended up in your WebSphere instance files. Use your Windows Explorer to expand the IFS directories down to your instance.

/QIBM/UserData/WebASE/ASE5/WASEXP/InstalledApps/<system_name>_WAS EXP/WebFaced Application.ear

Name △	Size	Type	Modified
ClientScript		File Folder	2/21/2003 10:12 AM
images		File Folder	2/21/2003 10:12 AM
META-INF		File Folder	2/21/2003 10:12 AM
RecordJSPs		File Folder	2/21/2003 10:12 AM
styles		File Folder	2/21/2003 10:12 AM
UIMHelp		File Folder	2/21/2003 10:12 AM
WEB-INF		File Folder	2/21/2003 10:12 AM
index.html	2 KB	HTML Document	2/20/2003 4:58 AM
logon.html	2 KB	HTML Document	2/20/2003 4:57 AM

Tree view:
- WebFaced Application.ear
  - META-INF
  - WebFacedApp.war
    - ClientScript
    - images
    - META-INF
    - RecordJSPs
    - styles
    - UIMHelp
    - WEB-INF

We are now ready to test our application.

7. Running the WebFaced application

During this exercise you will start Internet Explorer, specify the URL to show the **index.html** page generated by the WebFacing tool. Then select the WebFaced application and start it. The following tasks will be covered in this lab:

- Starting Internet Explorer
- Specifying the correct URL to load the **Index.html** page
- Selecting the correct link to invoke the WebFaced application
- Using the WebFaced application

As a result of this exercise, you will point the browser to the Web application you just created. From the initial web page you will select the link created by the WebFacing conversion to invoke the WebFaced application.

What You Should be Able to Do

As a result of this exercise you will be able to invoke the web application in IE. You also will be able to start the WebFaced application and understand how to navigate through the converted User Interface.

- Use the Internet Explorer to point to the Web Application
- Select the Link specified in earlier exercises to invoke the RPG application
- Use the browser to step through the WebFaced application
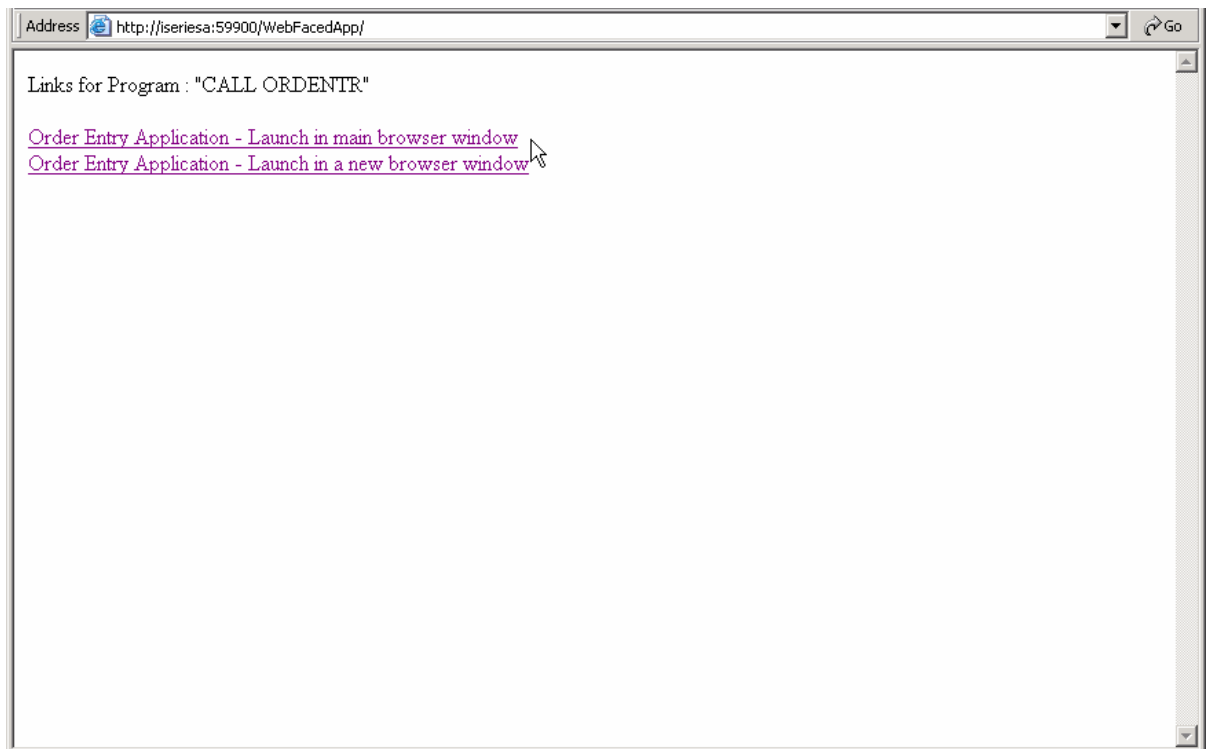
__ 1. **Display Index page**

Use an Internet Explorer (recommended) browser to show the Index.html page (this is the preferred browser for the webfacing output.

Choose *Start*→*Programs*→*Internet Explorer*   or use the shortcut

The browser will appear on your desktop. Specify the following URL:

http://<system name>:59900/WebFacedApp

If the application server is running and the URL is correct you should see the

**index.html** page that has been generated by the WebFacing program.

Address	http://iseriesa:59900/WebFacedApp/		Go

Links for Program : "CALL ORDENTR"

Order Entry Application - Launch in main browser window
Order Entry Application - Launch in a new browser window

__ 2. **Testing the webfaced application**

- Go to your browser window and click one of the **Order Entry** links,

  If everything is in place you should get the first screen of your application.
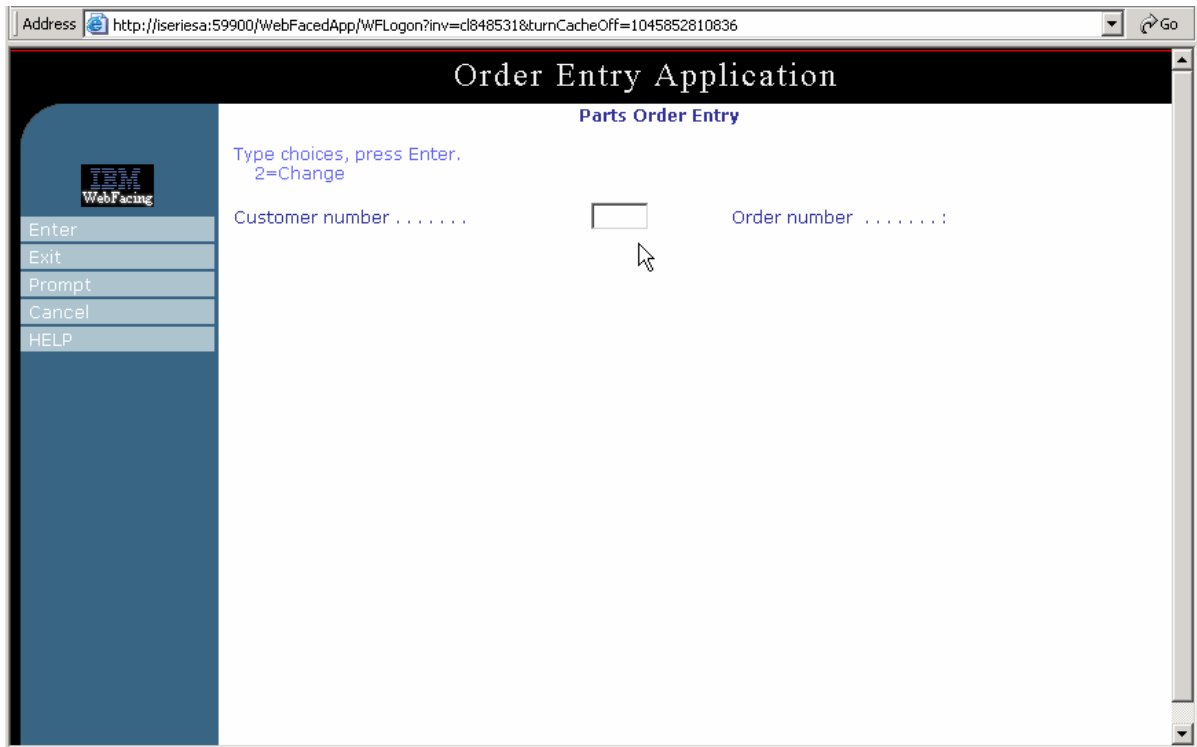
Please note, the first time a screen is invoked, it is being compiled as a JSP. This takes time. Further accesses to the same screen should appear faster.

Press the Prompt push button or F4 in Customer number field

Did you receive an Application Error? – WF0116 – The encoding check field was received incorrectly by the Application Server ….
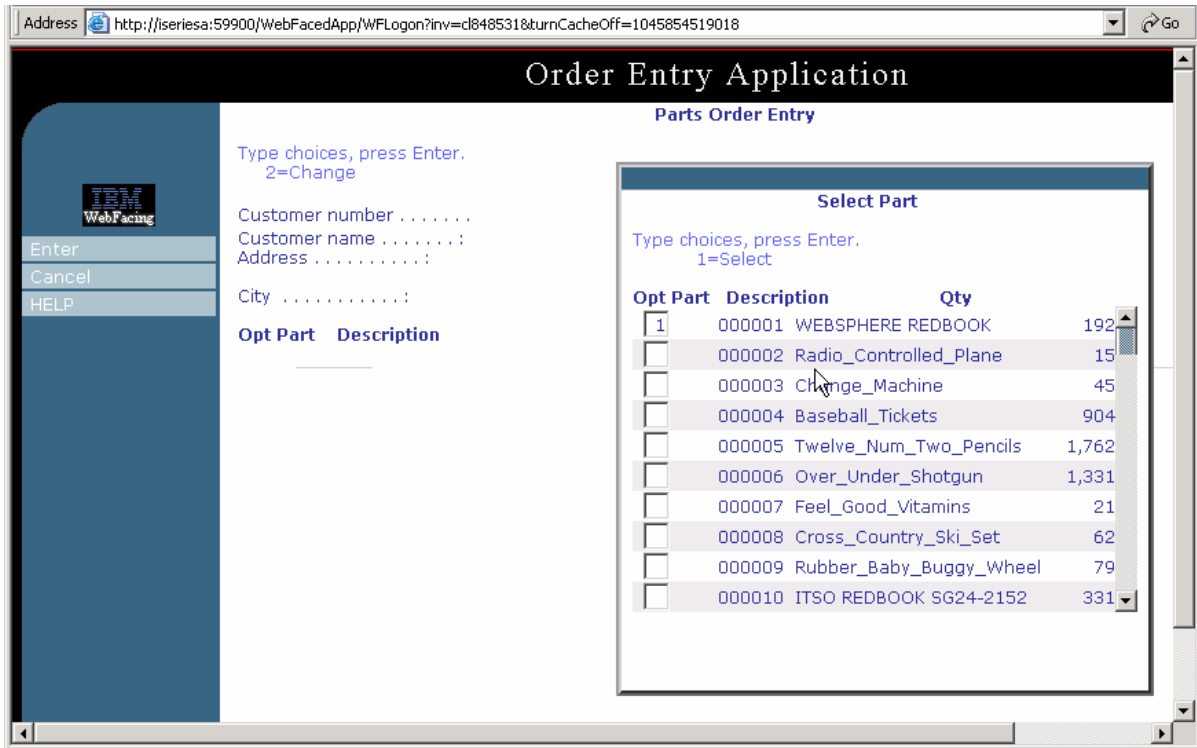
Go to page titled "Enabling Client Encoding for WebSphere Application Server – Express for iSeries".

Select a **customer** from the pop-up list (Sub-file)

Press the Prompt push button or F4 in Part number field

Select Product from Product the pop-up list (Sub-file)
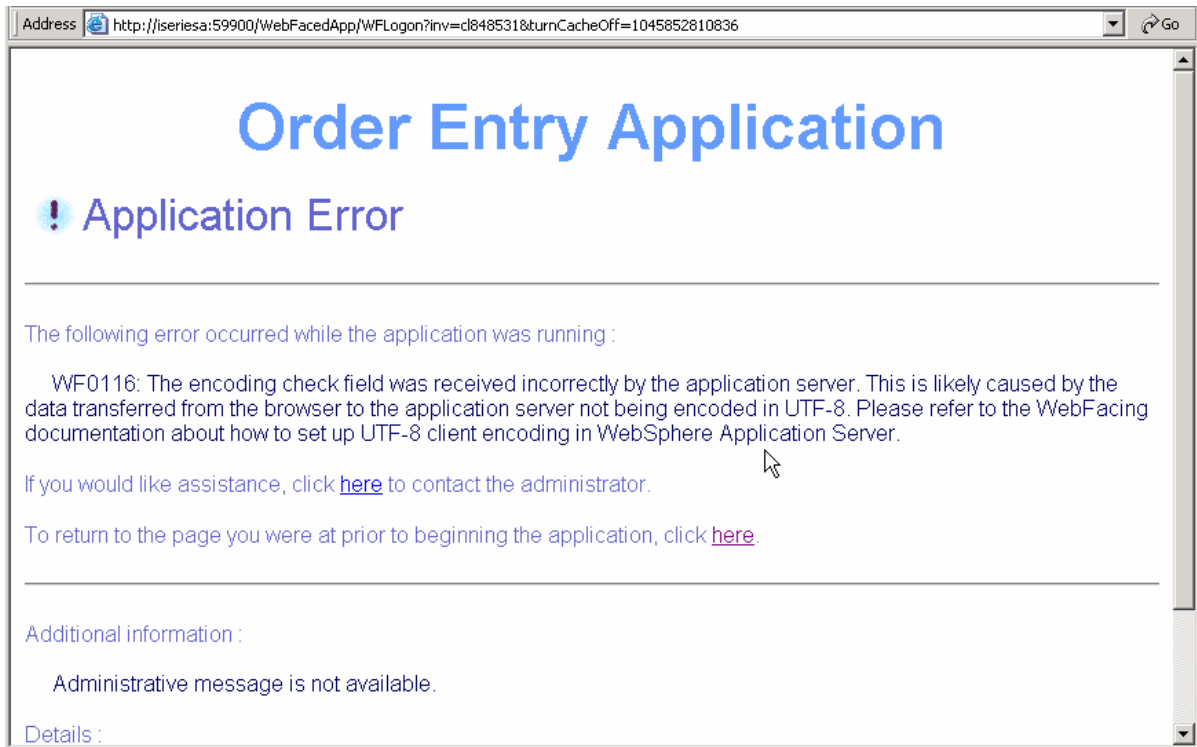
Change quantity to 1 or 2.

Order details:

Accept the order by pressing Accept Order or F6 key.

You have successfully tested the WebFaced Application within WebSphere Application Server Express for iSeries!!!

Enabling Client Encoding for WebSphere Application Server – Express for iSeries

The WebFacing Tool creates Web applications with multiple language support. Because languages use different character sets, data streams between the browser and WebSphere Application Server (WAS) are UTF-8 encoded. For WebFacing to work correctly, UTF-8 support must be configured in the WAS administrative console.
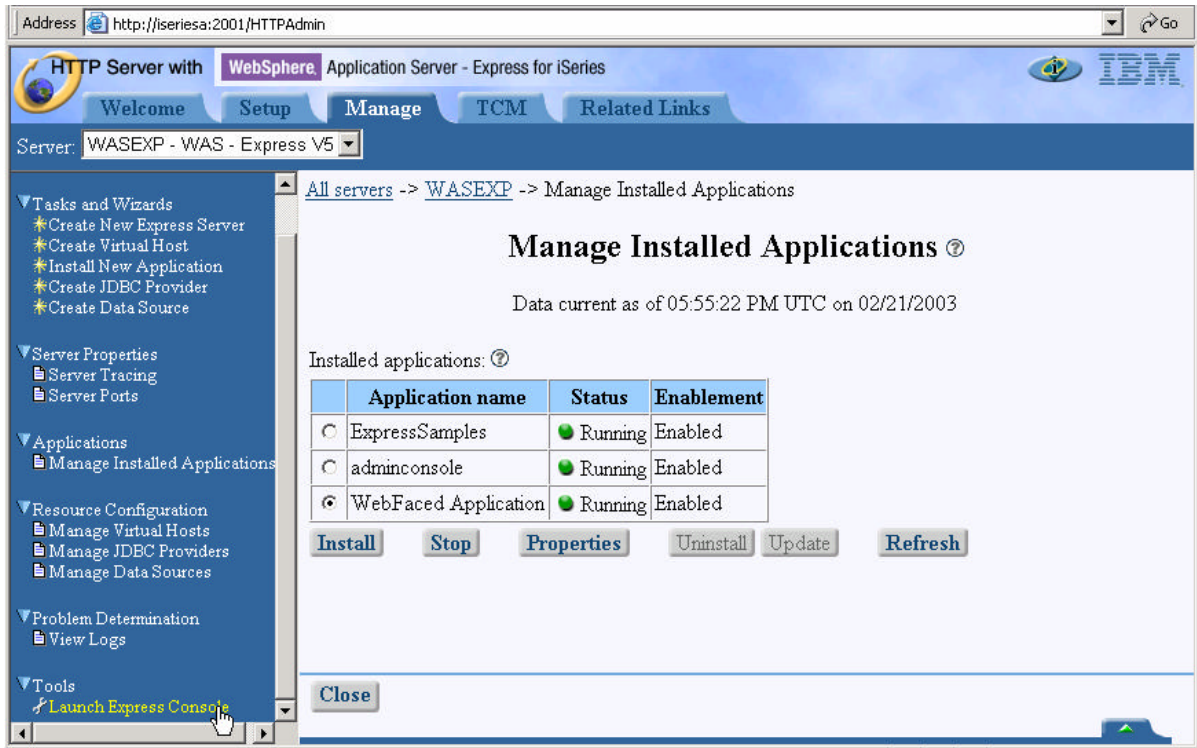
We need to set following system property (same as WDSc WAS Test Environment Setting)

client.encoding.override = UTF-8

Go back to HTTP Admin. Configuration browser window:

Click on Launch Express Console …enter your iSeries userid when prompted and do the following steps:

__ 1. Navigate down as follows:

Expand Servers (Click on + sign)

Click on Application Servers

Click on your instance WASEXP in right hand side pane.

Scroll down and **Click on Process Definition** under Additional Properties

Additional Properties	
Web Container	Specify thread pool and dynamic cache settings for the container . Also, specify session manager settings such as persistence and tuning parameters, and HTTP transport settings.
Logging and Tracing	Specify Logging and Trace settings for this server.
ORB Service	Specify settings for the Object Request Broker Service.
Custom Properties	Additional custom properties for this runtime component. Some components may make use of custom configuration properties which can be defined here.
Administration Services	Specify various settings for administration facility for this server, such as administrative communication protocol settings and timeouts.
Diagnostic Trace Service	View and modify the properties of the diagnostic trace service.
Debugging Service	Specify settings for the debugging service, to be used in conjunction with a workspace debugging client application.
IBM Service Logs	Configure the IBM service log, also known as the activity log.
Server Components	Additional runtime components which are configurable.
Process Definition	A process definition defines the command line information necessary to start/initialize a process.
Performance Monitoring Service	specify settings for performance monitoring, including enabling performance monitoring,

Click on Java Virtual Machine under Additional Properties

Scroll down and **Click on Custom Properties**

Click on New and Enter following property (Please note that the entries are case sensitive)

Name: client.encoding.override

Value: UTF-8

Click on OK button.

Note the message stating that:

Click on save to apply changes to the master configuration.

Application Servers > WASEXP > Process Definition > Java Virtual Machine >

Save

Save your workspace changes to the master configuration

Save to Master Configuration

Click the Save button to update the master repository with your changes. Click the Discard button to discard your changes and begin work again using the master repository configuration. Click the Cancel button to continue working with your changes.

Total changed documents: 1

⊞ View items with changes

| Save | Discard | Cancel |

Click on Save to Save to Master Configuration

Click on Logout and close the browser window.

__ 3. **Re-start your WebSphere Express Instance**

Since we have changed the configuration of the WebSphere Application Server, it needs to be re-started.

Go back to HTTP Admin browser window.

Stop your WebSphere Instance by clicking on Stop Button (🔴)

Hit refresh to check the status is Stopped:

🟡 Stopping

Click on Start button to start the instance:

🔴 Stopped

Go back and test the web faced application again.