

***Using the IBM WebFacing Tool with
FLGHT400***

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Abstract

The objective of this lab is to work with an existing 5250 application and use the IBM® WebFacing Tool and IBM WebSphere® Developer Studio Client to create a browser-based user interface, and then run this application as an e-business application. At the end of the lab, you will know how to use the IBM WebFacing Tool. The lab will guide you through most of the steps involved in the Web-facing process.

Introduction

The IBM WebFacing Tool creates Web front ends to IBM iSeries™ system applications that use data description specifications (DDS) for their green-screen transactions. You choose a Web style for the new graphical interface, generate a set of JavaServer™ Pages (JSPs™) and XML files that interact with the program logic, and then easily test your application in the test environment provided by the IBM WebSphere Studio Workbench. When you are ready to deploy the application, you can generate standard Java 2 Enterprise Edition (J2EE™) Web archive (WAR) and enterprise archive (EAR) files that you can install on a WebSphere Application Server.

The steps in this lab are:

1. Reviewing the Flight Reservation System application components
2. Creating a Web-faced application
3. Testing the Web-faced application
4. Packaging, installing, and testing the Web-faced application on the iSeries system
5. Customizing the Web-faced application
6. Creating a Web-faced portlet
7. Testing the Web-faced portlet

Prerequisites

The following information will be listed on the lab information sheet:

- <team_number>: Team number of your choice
- <iSeries_Server>: Your iSeries system host name
- <iSeries_userid>: Your iSeries user ID
- <iSeries_password>: Your iSeries password

The list of systems and software required to complete the lab are:

- An iSeries system and a PC
- The FLGHT400 library restored and on the iSeries library list

Note: The code is available from the *iSeries Developer Roadmap: End-to-end* demo Web site listed in the **Resources** section.

- WebSphere Development Studio Client Version 6 installed on the PC
- *Optional:* WebSphere Application Server installed and configured on the iSeries system

Tips: Here are a few things to keep in mind as you are completing this lab:

1. WebSphere Development Studio Client is a dynamic development environment capable of a large amount of user customization. Because of this, the screen captures in this document might not exactly match what you see when following the steps in this lab.
2. In the lab instructions, substitute your **<team_number>** for xx.
3. All exercises depend on the availability of specific software on your PC and iSeries system.

Reviewing the Flight Reservation System application components

In this section, you will review the Flight Reservation System application components through opening a perspective, defining a connection, and reviewing the system components.

Part 1: Starting WebSphere Development Studio Client

Follow these steps:

1. Go to **Start > All Programs > IBM Rational > IBM WebSphere Development Studio Client Advanced Edition for iSeries V6.0 > WebSphere Development Studio Client Advanced Edition for iSeries.**
2. In the Workspace Launcher window (Figure 1), enter `c:\teamxx` (Where xx is your <team_number>) in the workspace field and press **OK**. (Make sure that **Use this as a default and do not ask again** is not checked.)

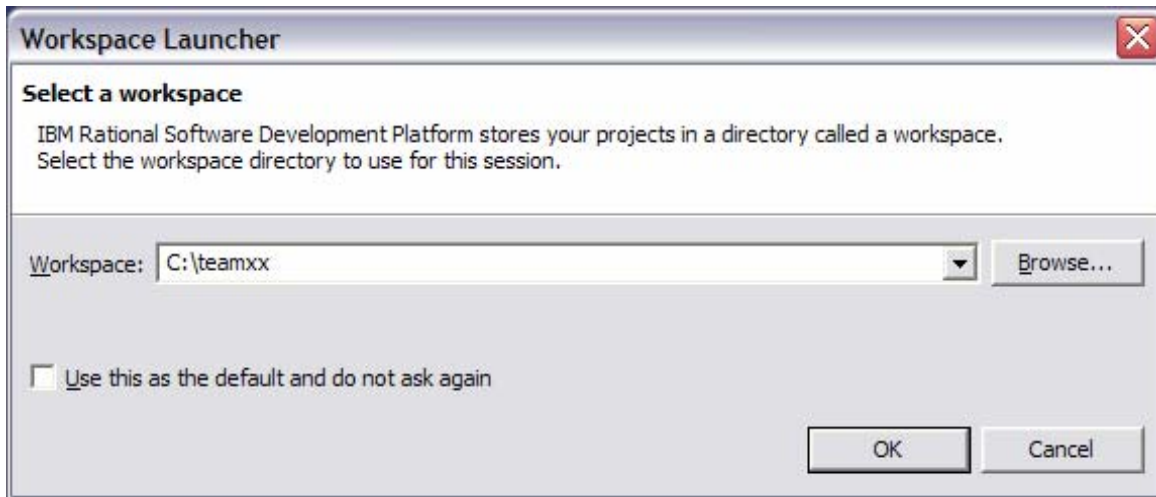


Figure 1: Select a workspace

You will see a **Welcome** page (Figure 2) if you have not used WebSphere Development Studio Client before.

3. Click **X** to close the **Welcome** page.

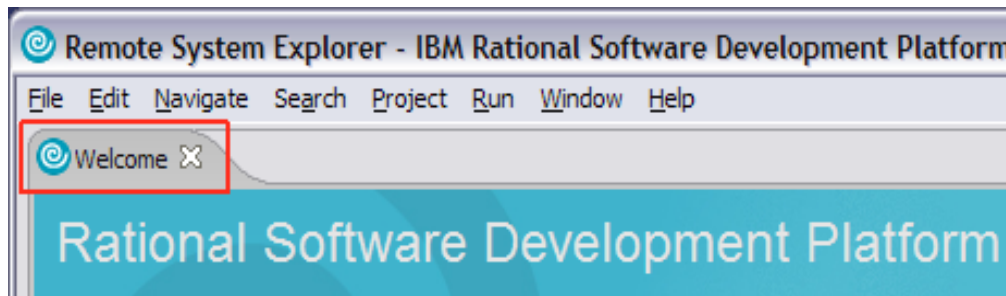


Figure 2: Welcome page

Part 2: Opening the Remote System Explorer perspective

Open the **Remote System Explorer** perspective by following these steps:

1. Click the **Open perspective** icon on the right-hand side or go to **Window > Open Perspective**.

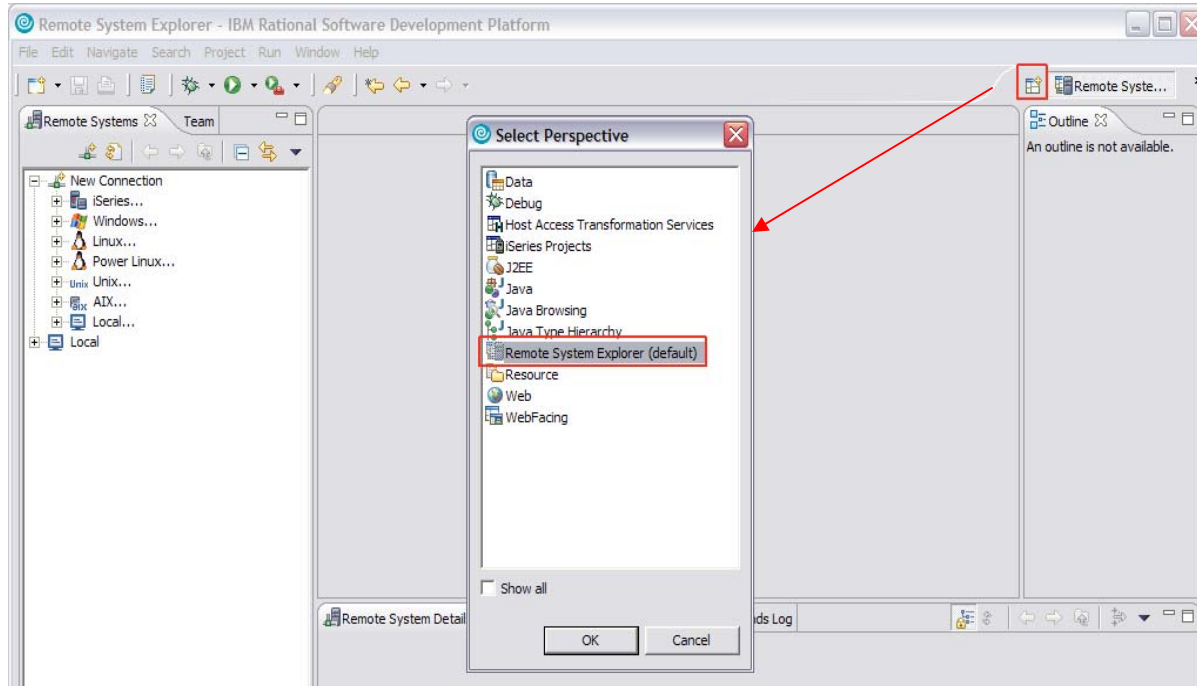


Figure 3: Select Perspective

2. Select **Other**.
3. In the *Select Perspective* window, select **Remote System Explorer** (Figure 3) and click **OK**.

Part 3: Defining a connection to the iSeries system

Now you will define a connection to the iSeries system by following these steps:

1. Click the **+** sign next to **iSeries** under **New connection** in the **Remote Systems** view.
2. If WebSphere Development Studio Client has not been used before, you will see the **name personal profile** screen.
3. Enter **teamxx** as the profile (Where xx is your <team_number>) and press **Next**.
4. On the **Define connection information** screen, enter the host name as **<iSeries_Server>** (where <iSeries_Server> is your iSeries system).

5. Enter the connection name (Figure 4) as **<iSeries_Server>** connection and click **Finish**.

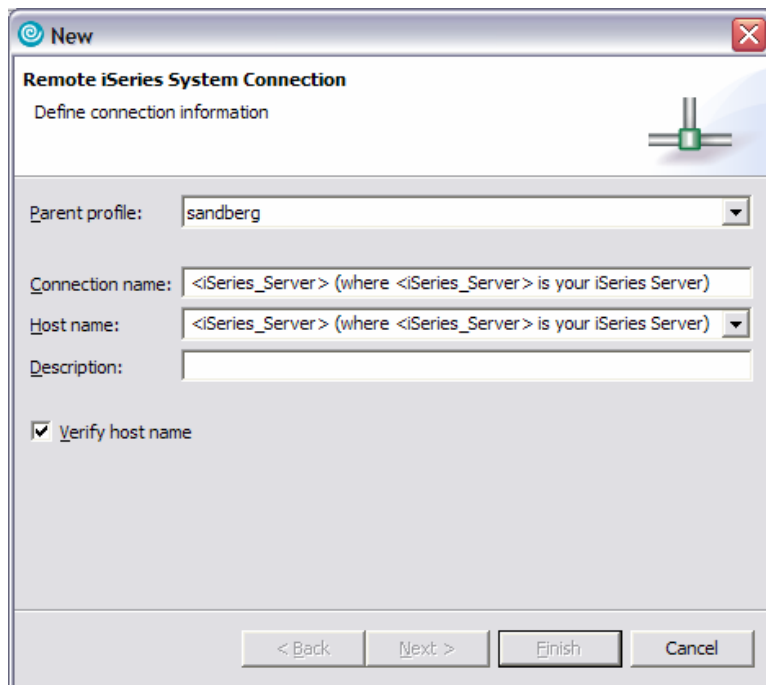


Figure 4: Enter connection name

6. You will see a new connection defined in the **Remote Systems** view.
7. Right-click **iSeries Objects** under **New Connection**.
8. Select **Connect** (Figure 5) to connect to the iSeries system.

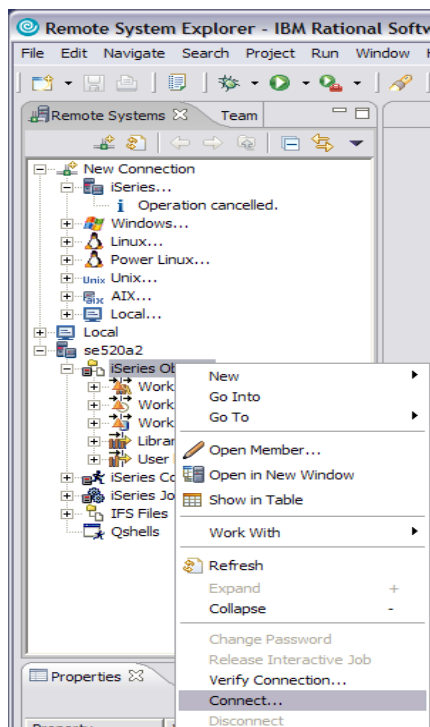


Figure 5: Remote Systems view

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9. In the *Enter password* window, type your **<iSeries_userid>** and **<iSeries_password>**.
10. Select the **Save user ID** and **Save password** check boxes and click **OK**.
11. After a successful connection, you will see a green arrow next to the iSeries connection as well as the iSeries objects and other subsystems.

Part 4: Reviewing the Flight Reservation System application components

In this section of the lab, you will review the application components by following these steps:

1. Click the **+** sign next to **iSeries Objects**.
2. Click the **+** sign next to **Library list**.
3. Right-click **Library list** and select **Add Library List Entry** (Figure 6).

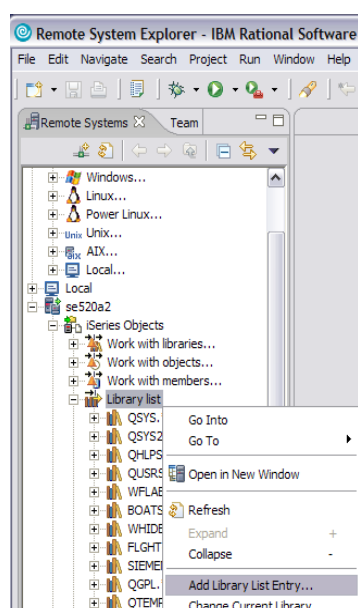


Figure 6: Add Library List Entry screen

4. In the **Add Library List Entry** window, enter **FLGHT400** and click **OK**.
5. Click the **+** sign next to **FLGHT400**.
6. You will see **RPG, CL program objects** from **FLGHT400**.

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7. Scroll down and click the **+** sign next to the **QDDSSRCD *file pf-src** object (Figure 7) to see DSPF source members used in the Flight Reservation System application.

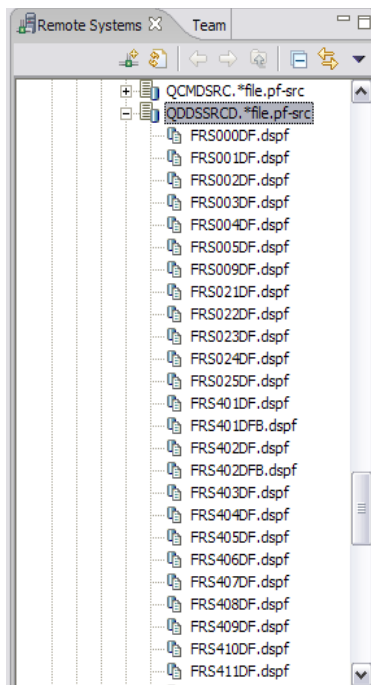


Figure 7: DSPF source members

8. You can double-click any member to open it in the editor view. **Note:** Do not make any changes or save the changes.
9. Scroll down and click the **+** sign next to **QMNUSSRC *file pf-src** to see the MNUDDS source members used in the Flight Reservation System application.

Creating the Web-faced application

In this section, you will create the Web-faced application by opening, creating, and converting the project.

Part 1: Opening the IBM WebFacing Tool perspective

Follow these steps to open the IBM WebFacing Tool perspective:

1. Click the **Open perspective** icon on the right-hand side or go to **Window > Open Perspective**.
2. Select **WebFacing**.
3. You will see the **WebFacing Project** view on the left-hand side.

Part 2: Creating an IBM WebFacing Tool Project

Follow these steps to create the IBM WebFacing Tool project:

1. Select **File > New > WebFacing Web Project**.
2. In the **WebFacing Web Project** window, enter the project name **Fight400** (Figure 8).
3. Click the **Show advanced** button (Figure 8) to see the advanced options and click **Next**.

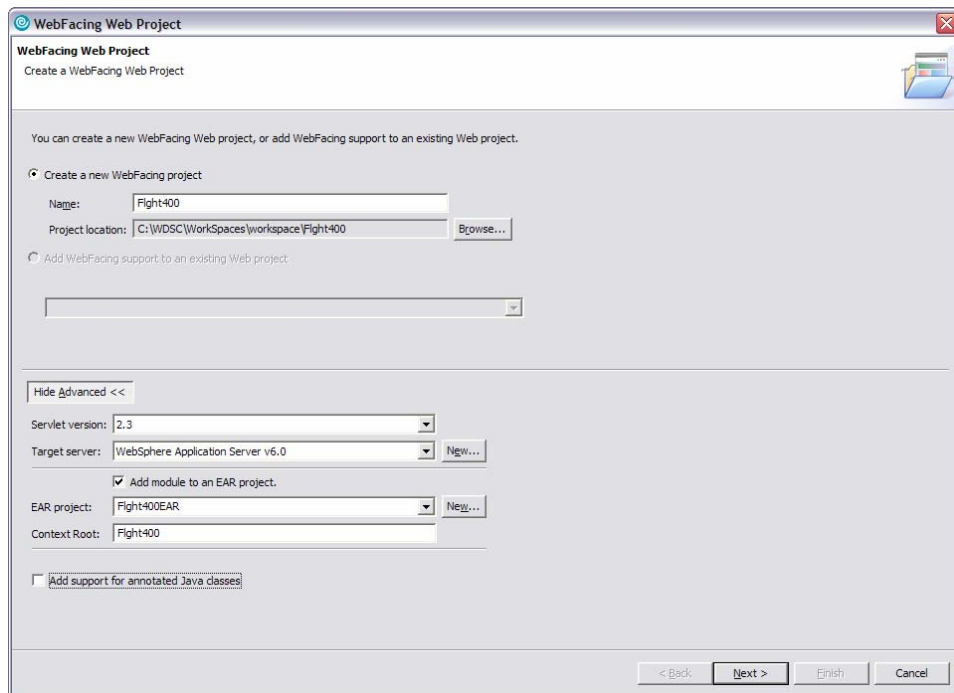


Figure 8: WebFacing Web Project

4. In the **WebFacing Features** window, check **Add system screen support** and click **Next**.
5. In the **Select display file members to convert** window, select the previously defined connection as **<iSeries_Server> connection**.
6. In the **Library** field, enter **FLGHT400**, and click the **Refresh DDS list** button.
7. Click the **+** sign next to FLGHT400 to expand the tree.

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8. Click the **+** sign next to **QDDSSRCD** to display all DSPF members.
9. Select all display file members under **QDDSSRCD**.
10. Click the first member.
11. Scroll down, press the **SHIFT** key and click the last member. (Alternatively, you can select individual display file members by pressing the CTRL key and clicking the individual members.)
12. Click the arrow button to move to the right hand side box (Figure 9).
13. You can also select all the MNUDDS members under **QMNUSRC**.
14. Click **Next**.

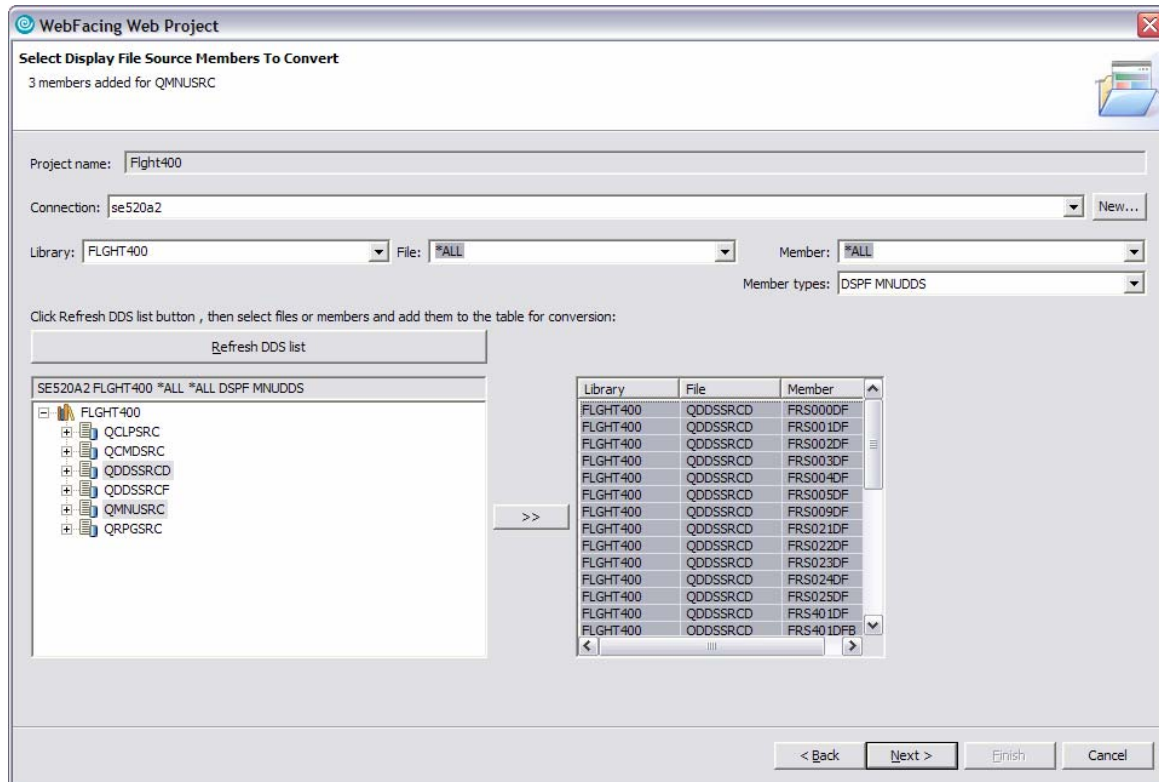


Figure 9: Select display file members

15. In the **Select UIM source members to convert** window, click **Next**.
(There are no UIM help members as a part of this application.)
16. In the **Specify CL command** window, enter the command line **go FLGHT400/FRSMAIN**.

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17. Change the command label to **Flight Reservation System** (Figure 10) and click **Add**.

WebFacing Web Project

Specify CL Commands
Enter the CL commands that are used in your application, the command labels you want to use, and the signon preference for the generated hypertext links.

Project name: Flight400

WebFacing generates hypertext links that you can use to launch your application from the web. In order to do this, it needs to know the text that will be shown for each link and the CL command that each link will invoke. On this page you can define multiple links, in case several CL commands are used to launch your application.

If your program requires parameters, you can enter them as variables in the CL command. For example: to invoke program MYPGM with a part number parameter, you would enter CALL MYPGM PARM(%part) as the CL command. The variable "%part" will be replaced when you click on the invocation link. For details, refer to the generated index.html file. The invocation name is used to uniquely identify each hyperlink in the index.html file.

CL command: go FLGHT400/FRSMMAIN
Command label: Flight Reservation System
Invocation name: INV1

Prompt for signon
 Specify OS/400 signon values

User ID:
Password: Confirm password:

CL Command	Command Label	Invocation name	User ID
GO FLGHT400/FRSMMAIN	Flight Reservation S...	INV1	*PROMPT

Buttons: Add, Modify, Delete, Move Up, Move Down, < Back, Next >, Finish, Cancel

Figure 10: Specify command label information

18. Click **Next**.

19. In the **Choose a Web Style** window, select any **Classic WebFacing Style** of your choice and click **Next**.

20. In the **Complete WebFacing project** window, select the default option (**No. I only want to create project now**) and click **Finish**.

21. After a while, you will see your project in the IBM WebFacing Tool projects view.

22. Click the **+** sign next to your project to see the project details.

23. When you select an item in the **WebFacing Projects** view (Figure 11), it shows properties in the properties view.

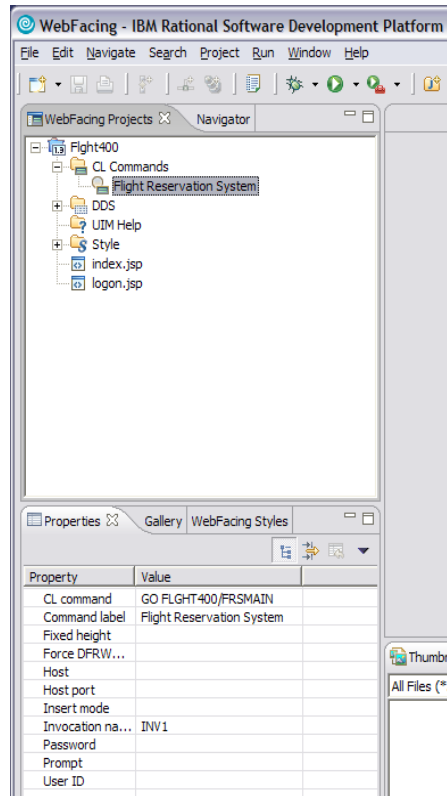


Figure 11: WebFacing Projects view

Part 3: Converting the project

In this part, you will convert the project by following these steps:

1. In the **WebFacing Projects** view, right-click **DDS** and select the **Convert** option.

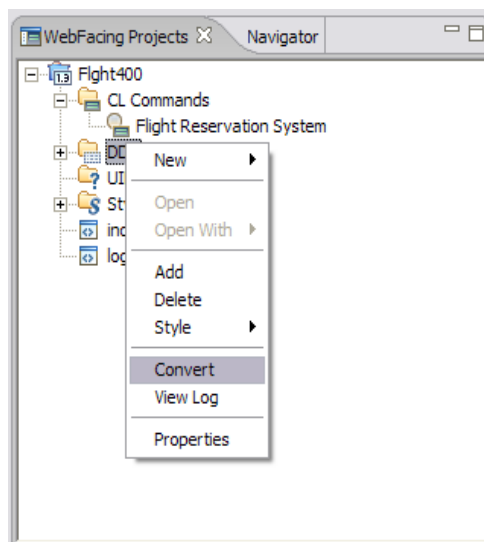


Figure 12: WebFacing Projects view, Convert option

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2. Conversion might take a while as the IBM WebFacing Tool retrieves the source code from the iSeries system and creates all Web application components (namely the JSPs and XML documents for each record format).
3. After conversion, the **DSPF Conversion Log** is displayed in the log view.
4. Select any **Display File** (Figure 11) to look at the record formats.

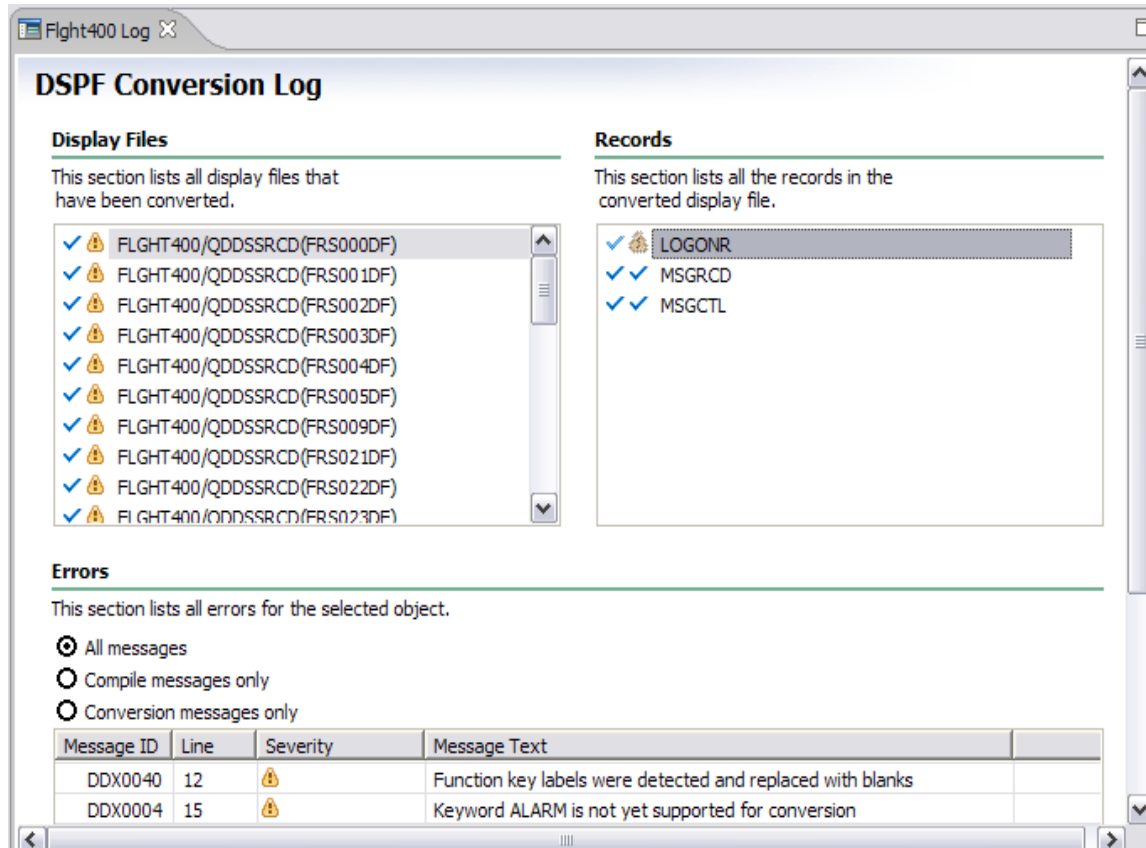


Figure 13: Select display file

5. To look at the referenced keywords, click the **Referenced Keywords** tab.

6. Click any display file member to display the keywords (Figure 12).

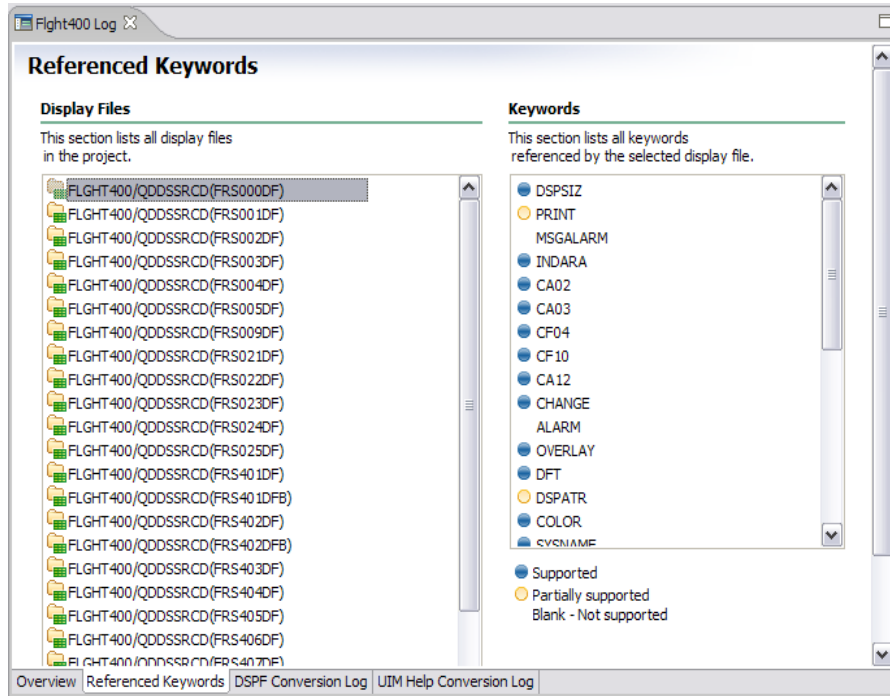


Figure 14: Display keywords

Testing the Web-faced application

In this section, you will test the Web-faced application in a WebSphere Application Server test environment by following these steps:

1. In the **WebFacing Projects** view, right-click your project and select the **Run > Run on Server** option (Figure 15).

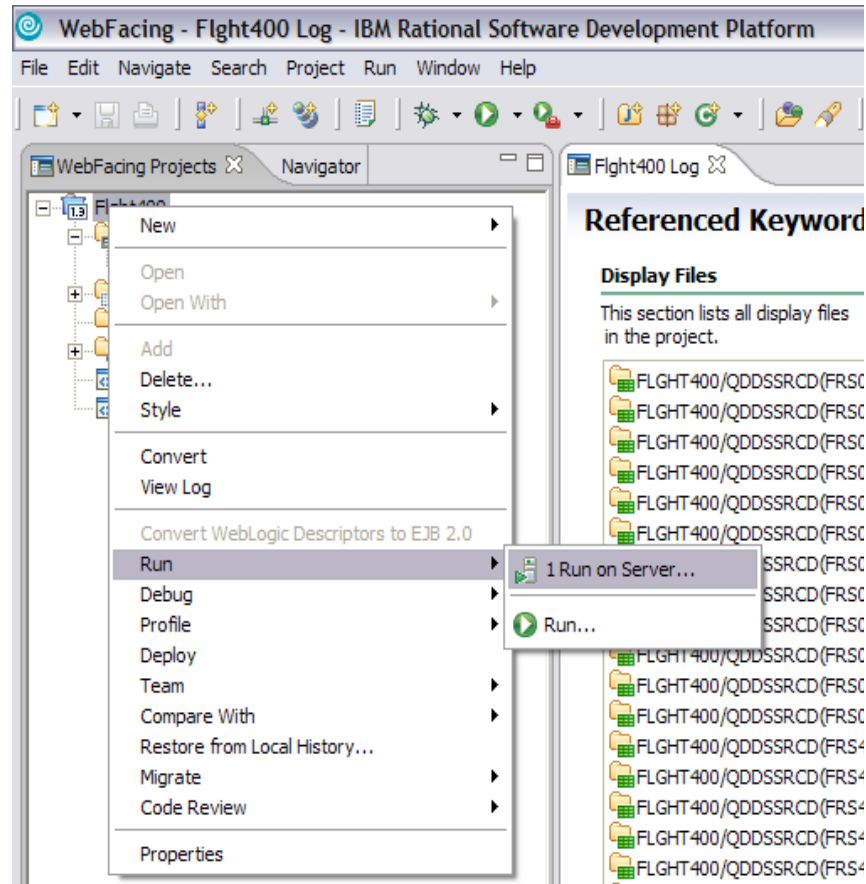


Figure 15: Run on Server option

2. In the **Server Selection** window, choose an existing server.
3. Select **WebSphere Application Server V6.0** under local host and click **Finish**.
4. After a while, you will see a browser displaying the index page of your Web-faced application.

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5. Click **Launch** (Figure 16) to invoke the Web-faced application.

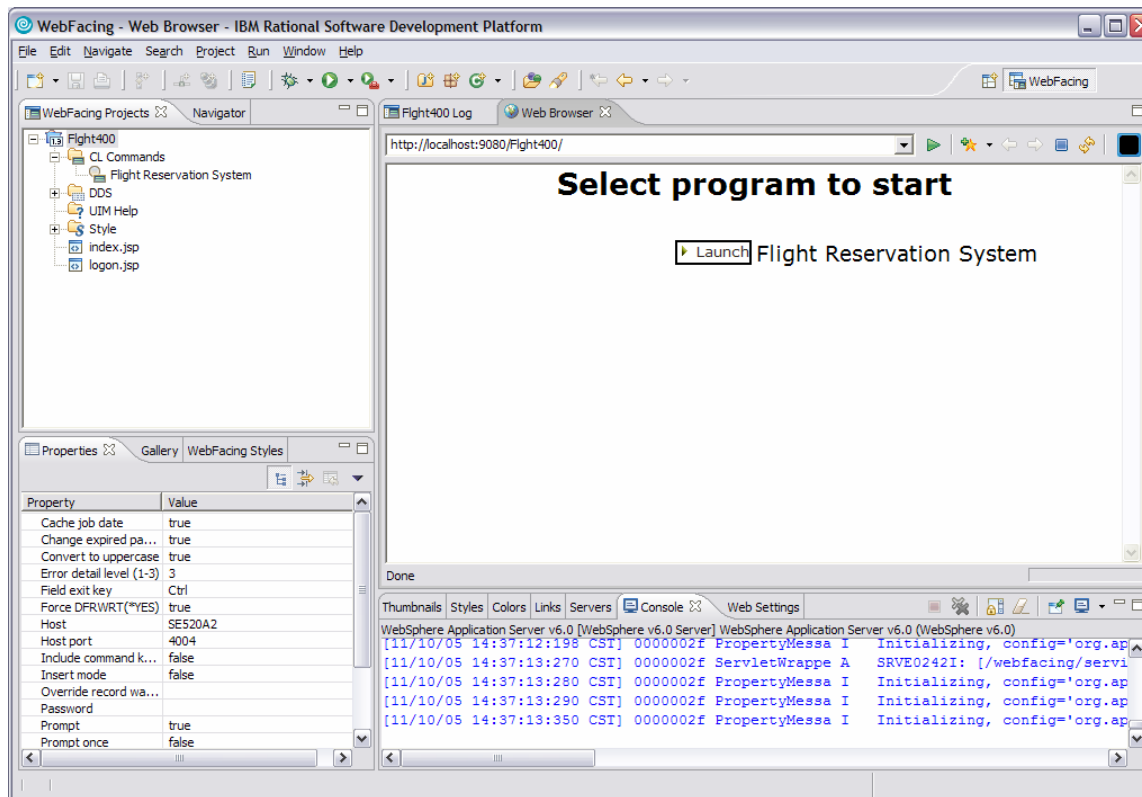


Figure 16: Select program

6. When prompted for user ID and password, enter `<iSeries_userid>` and `<iSeries_password>` and click **Logon**.
7. You will see a **Flight Reservation System** logon screen.

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8. Double-click the **Web Browser** tab (Figure 17) to expand the window.

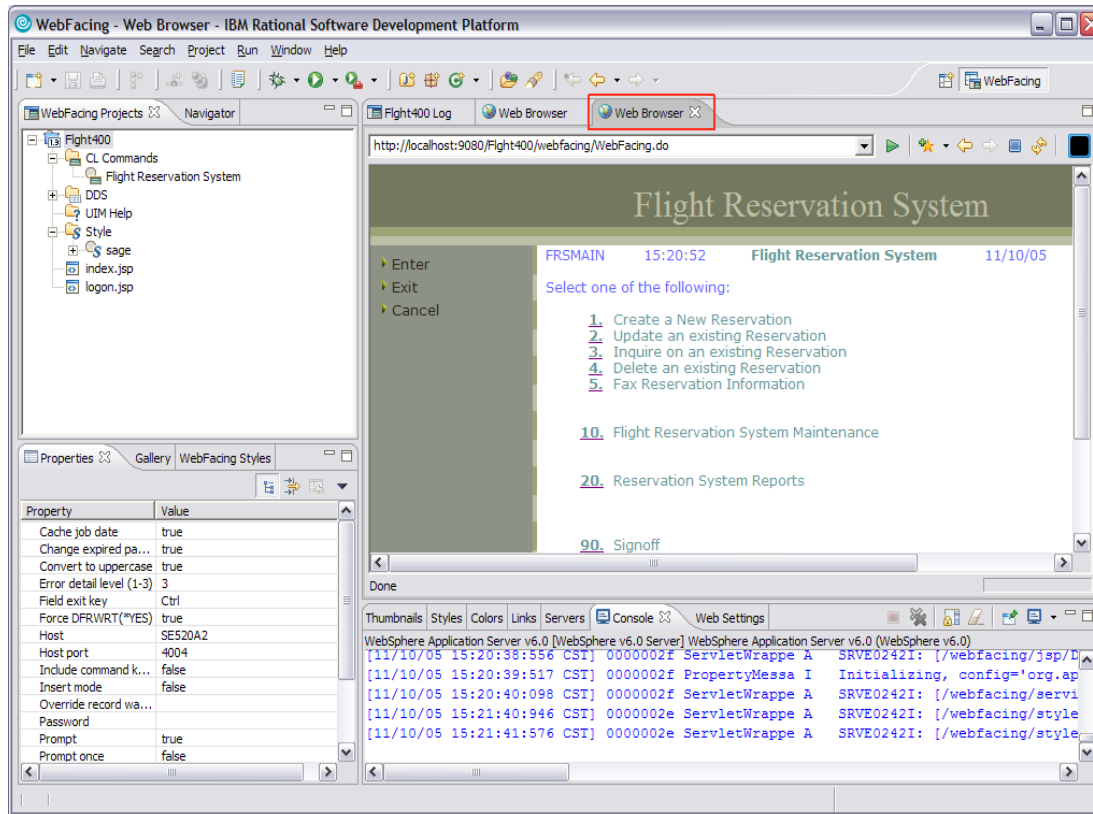


Figure 17: Expand Flight Reservation System window

9. Press **Enter** to continue.

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10. You will see the main menu (Figure 18) of the **Flight Reservation System** application.

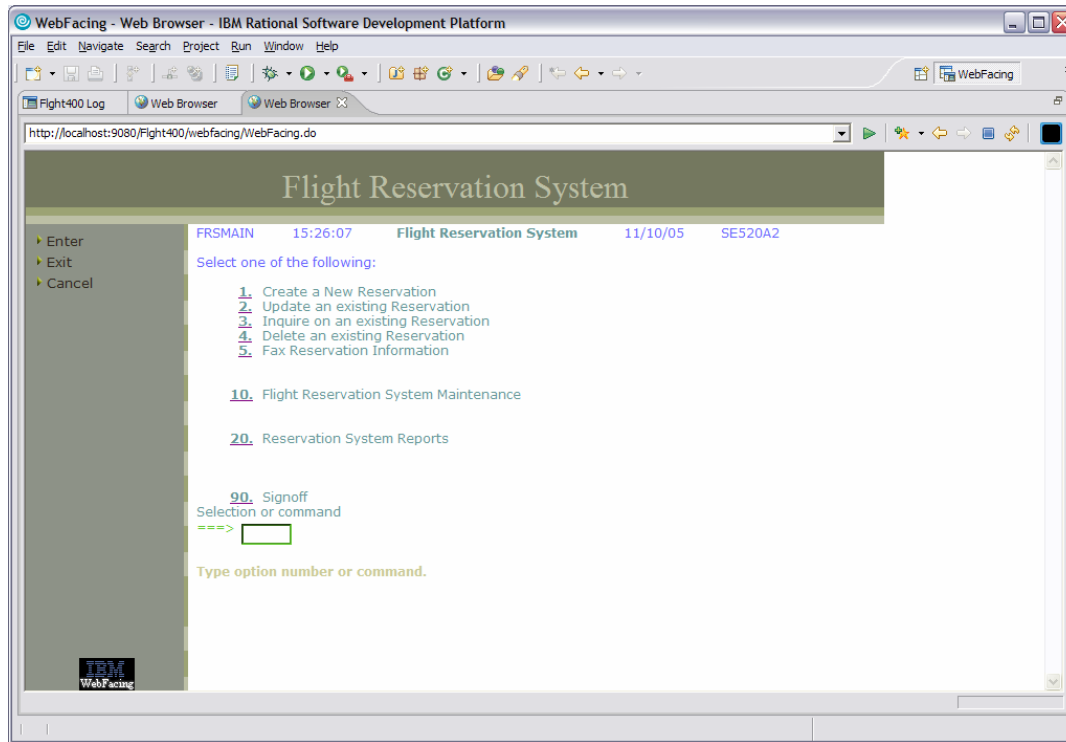


Figure 18: Flight Reservation System application screen

11. Go back to the **Personal Communications Session** to look at the interactive job.

12. Sign on using **<iSeries_userid>** and **<iSeries_password>**.

13. In **Personal Communications Session**, enter the command line **WRKSBSJOB SBS(QINTER)** (Figure 19). The QQF job is supporting the Web-faced application.

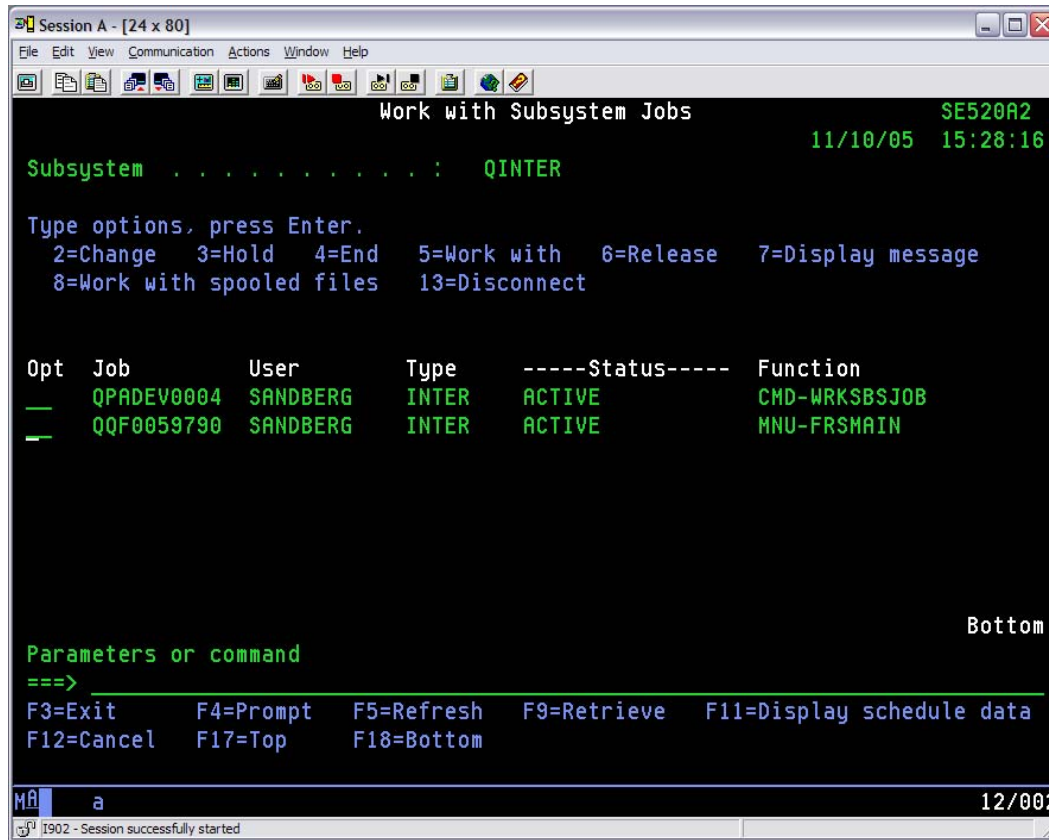


Figure 19: Enter command line information

14. Try various options in the **Flight Reservation System** application.
15. Try **Report** options to see system screen support (option 2 under the **Reports** menu).
16. Click **90** to sign off and exit the *Flight Reservation System* application.
17. Double-click the **Web Browser** tab to go back to the original window size.

Optional: Packaging, installing, and testing the Web-faced application on an iSeries system

The objective of this section of the lab is to show how to package a Web-faced application into a required J2EE format (EAR file) as well as how to install the application to your WebSphere Application Server instance via the iSeries Web Administration console.

Note: To complete this section you must have WebSphere Application Server installed and configured on your iSeries system.

Part 1: Exporting the EAR file

Export the EAR file by following these steps:

1. Make sure you have mapped the network drive to the iSeries system so that you can create the EAR file in your team directory on the iSeries system.
2. Select **Flight400 project** under **WebFacing Projects**, from the menu option select **File > Export**.
3. In the **Export** window, select **EAR file** (Enterprise Archive file option) and click **Next**.
4. In the **EAR Export** window (Figure 20), select **Flight400EAR** in the **EAR project** field.

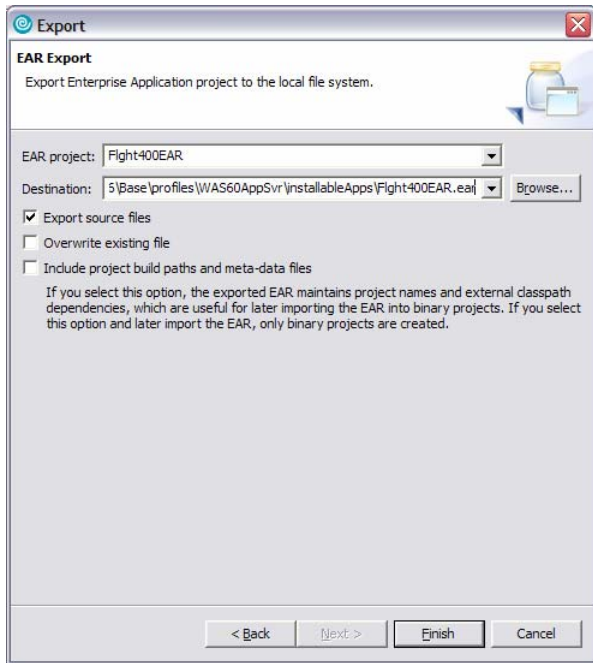


Figure 20: EAR Export window

5. Click **browse** next to the **Destination** field (Figure 20)
6. Select a location on your iSeries system using the mapped network drive to the iSeries system.

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In this example:

```
\QIBM\UserData\WebSphere\AppServer\V6\Base\profiles\WAS60AppSvr\installableApps\  
Flght400EAR.ear
```

is used, where **WAS60AppSvr** is the name of the WebSphere Application Server profile created to run the IBM WebFacing Tool application.

7. Check the **Export source files** option and click **Finish**.

The export process might take awhile, depending on the network speed.

Part 2: Checking the contents of the EAR file

Verify the contents of the EAR file by following these steps:

1. Using Microsoft® Windows® Internet Explorer, go to where you exported the EAR file on the mapped network drive (Figure 21).

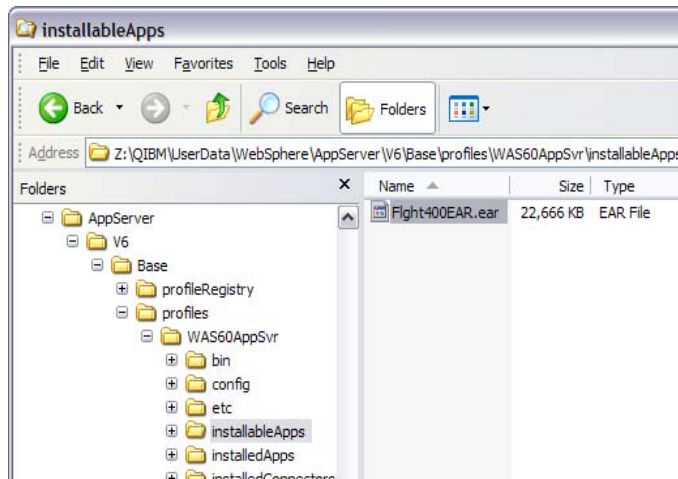


Figure 21: The EAR file on the mapped network drive

2. **Optional:** Right-click the **Flight400EAR.ear** file and open it with any ZIP utility to see the contents of the EAR file. You will see a **Flight400.war** modules and application descriptor (application.xml) file (Figure 22).

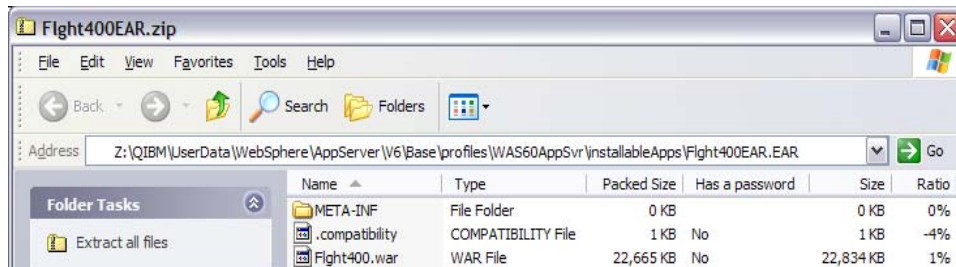


Figure 22: Flight400.war module

3. Exit the ZIP utility.

Part 3: Installing the Web-faced application using the IBM Web Administration for iSeries console

To install the Web-faced application with the IBM Web Administration for iSeries console, follow these steps:

1. Go to the iSeries task menu:
2. In Windows Internet Explorer, type **http://<iSeries_Server>:2001**.
3. When prompted, enter your **<iSeries_userid>** and **<iSeries_password>**.
4. Click **IBM Web Administration for iSeries**.
5. Click the **Manage > Application Servers** tab (Figure 23).
6. Select your WebSphere Application Server profile in the **Server** list box (Figure 23) where you want to deploy your Web-faced application.

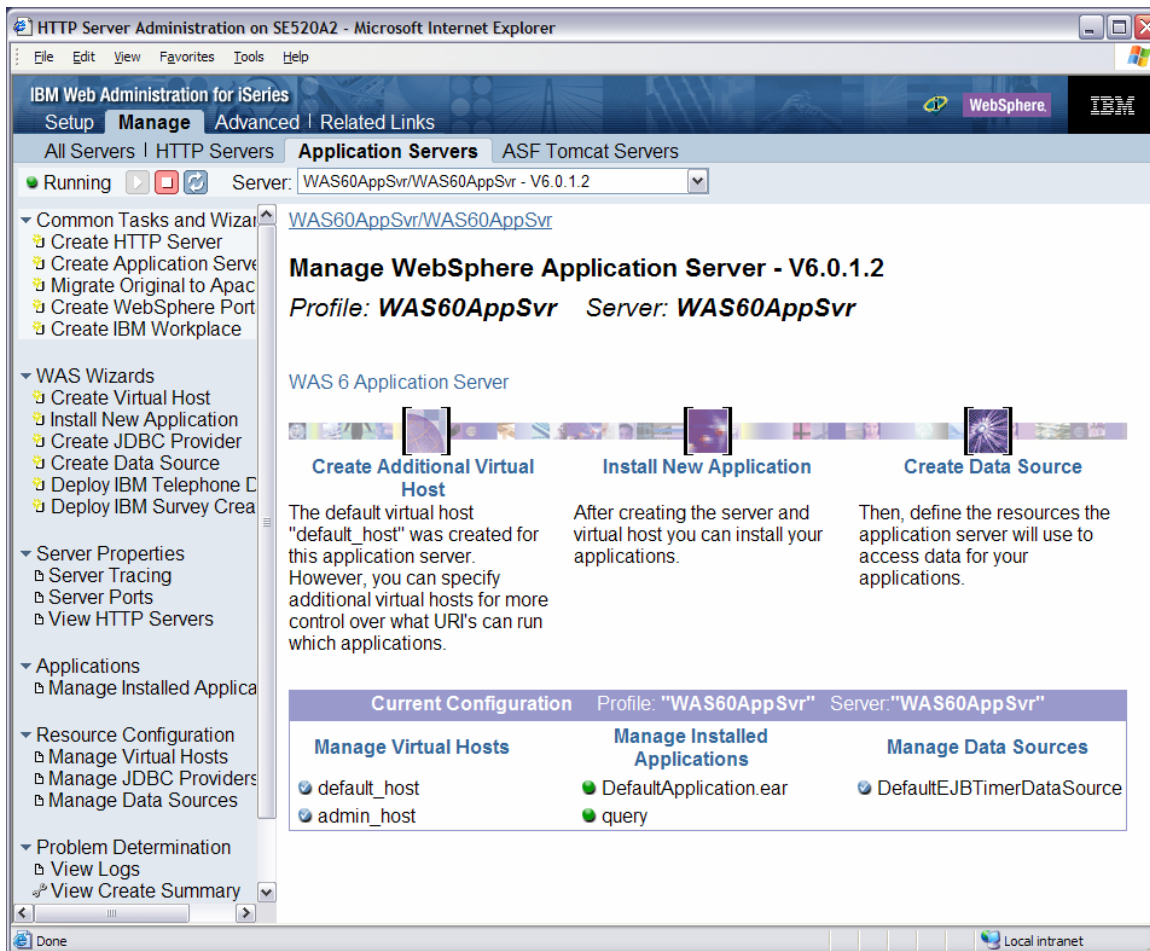


Figure 23: Select WebSphere Application Server profile

7. Click **Install New Application** under **WAS Wizards** in the left-hand panel (Figure 23).

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8. Delete the default path shown and navigate to the location where you deployed your EAR file in the integrated file system (IFS).

In this example the path is:

```
/QIBM/UserData/WebSphere/AppServer/V6/Base/profiles/WAS60AppSvr/  
installableApps/Flight400EAR.ear
```

9. Select the **Flight400EAR.ear** file (Figure 24) and click **OK**.

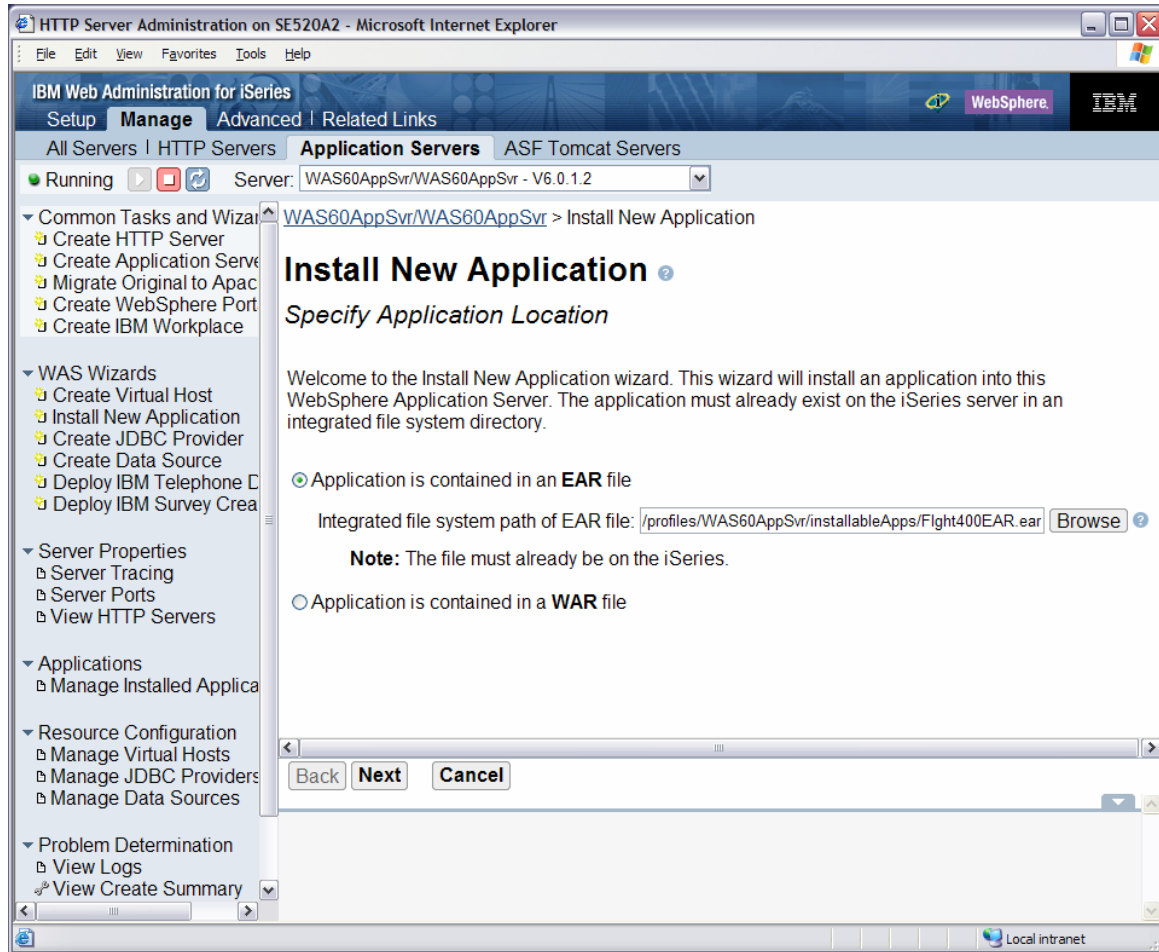


Figure 24: Install New Application window

10. In the **Install new application** wizard, click **Next** (Figure 24).
11. On the **Application deployment options** step, take the defaults and click **Next**.
12. On the **Map virtual host to Web modules** step, click **Next**.

13. On the **Summary** screen (Figure 25), click **Finish**.

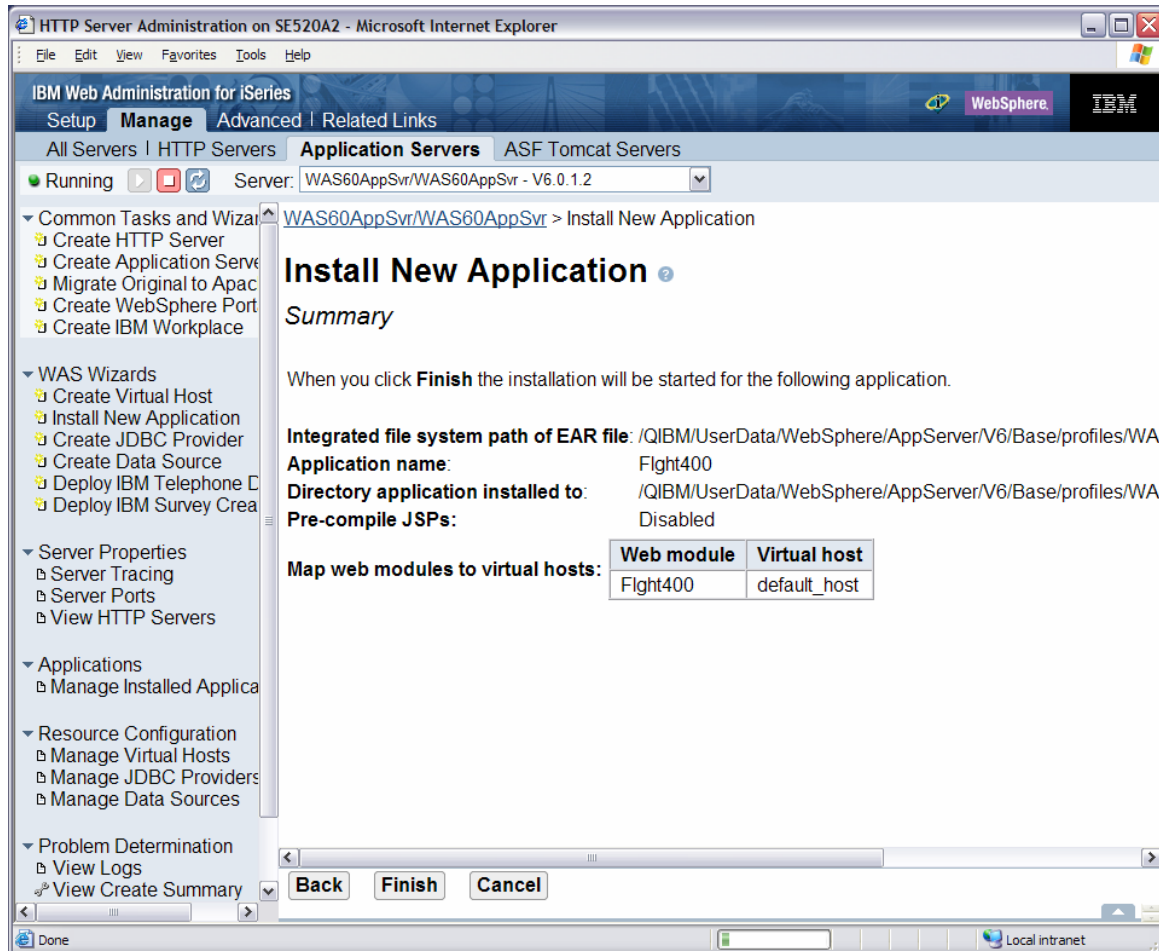


Figure 25: Summary screen

14. A yellow hourglass will indicate that the application is currently being installed. Wait until the installation is complete.

15. You can press the **Refresh** button to update the status.

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16. Wait until the status changes (Figure 26) to a red dot (stopped status).

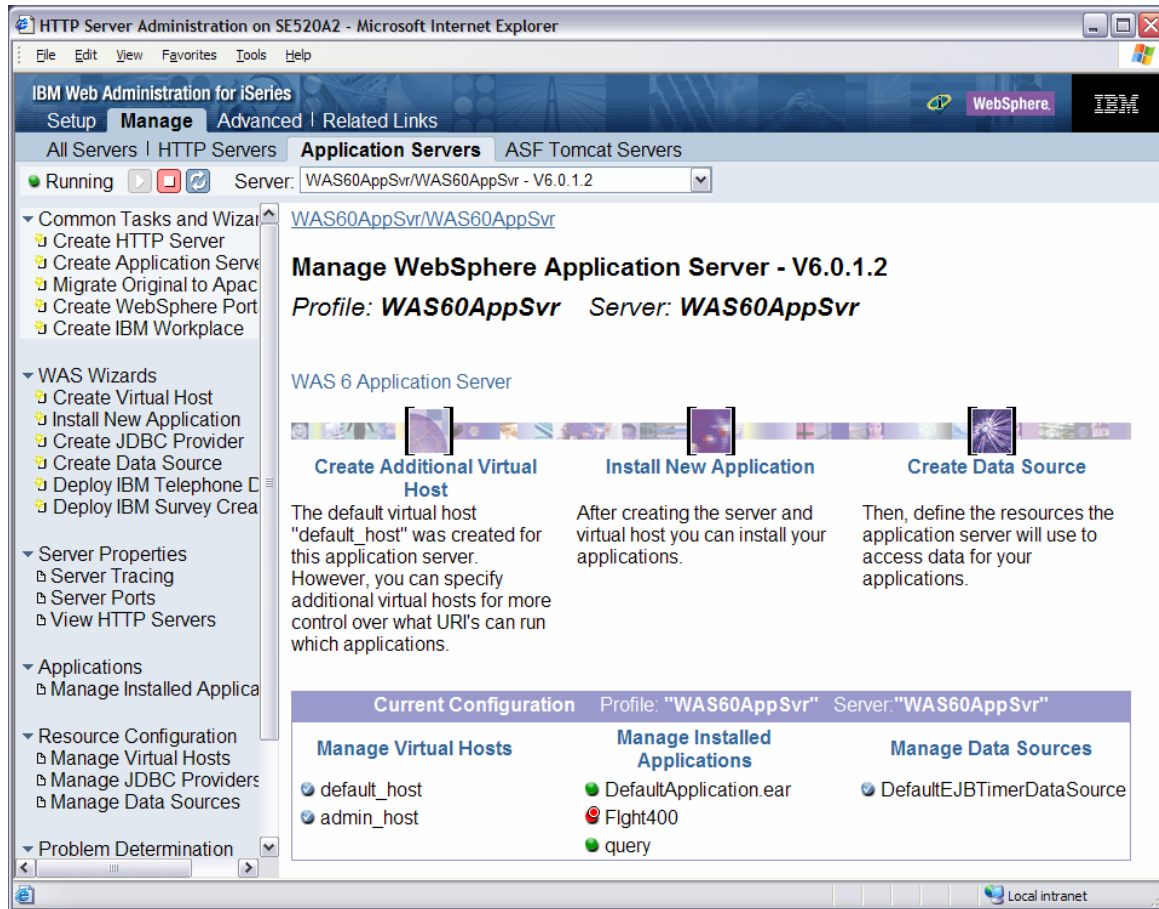


Figure 26: Stopped status

Part 4: Starting the Web-faced application

To start the newly Web-faced application, follow these steps:

1. Click the **Managed Installed Applications** link under **Applications**.
2. Click the check box next to **Flight400** (Figure 27) and click the **Start** button.

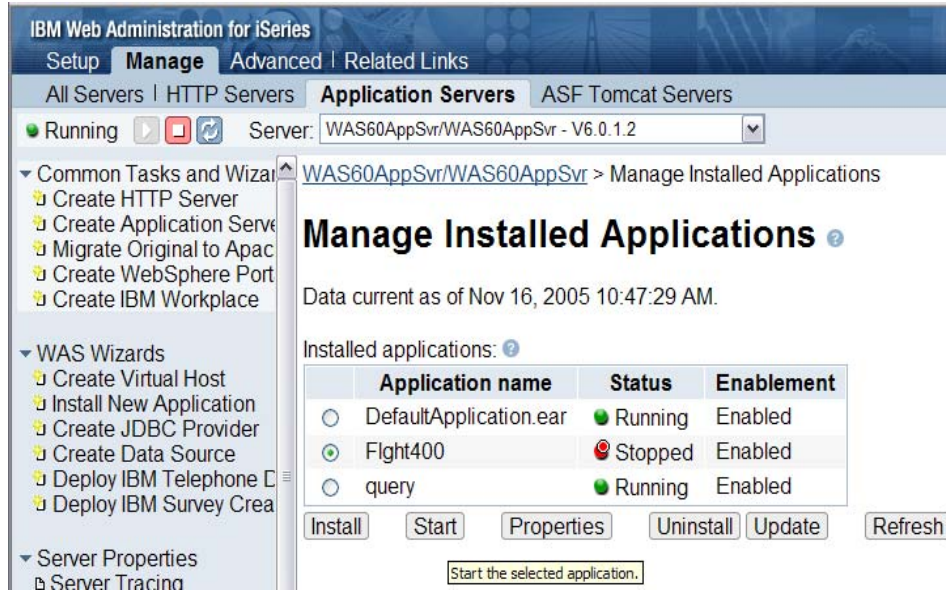


Figure 27: Select Flight400

3. You will see a green dot next to the application once it starts.

Part 5: Testing the Web-faced application

Test the Web-faced application by following these steps:

1. In Windows Internet Explorer, type **http:// <iSeries_Server>:<http_port>/Flight400** and press **Enter**.
2. You will see the index page of your Web-faced application.
3. Click **Launch** to invoke the application.
4. On the logon page, enter your **<iSeries_userid>** and **<iSeries_password>** and click **Logon**.
5. On the **Flight Reservation System** logon page, press **Enter**.

6. Try the **Create a New Reservation** report option (Figure 28).

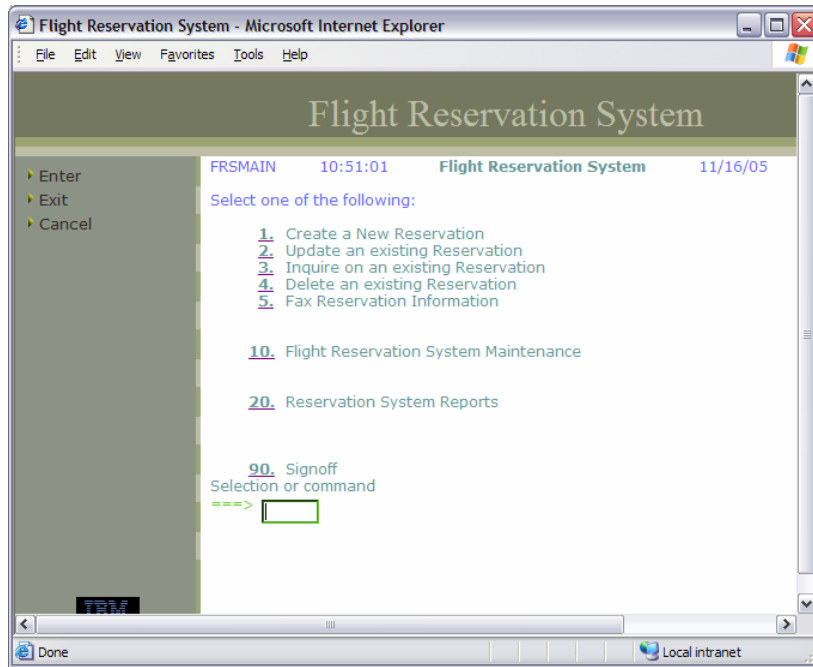


Figure 28: Create a New Reservation report option

7. Click **90** to signoff and exit the **Flight Reservation System** application.

Customizing the Web-faced application

This lab is an extension of the *IBM WebFacing Tool Conversion and Testing Lab*, which demonstrates how to use the IBM WebFacing Tool to generate the base application. You will learn customization techniques that you can employ to enhance the base application. This lab assumes that you already have or are familiar with how to use the IBM WebFacing Tool to create this base application.

Changing style properties

The style wizard changes the Web-faced application user interface. During this exercise you will change the user interface of your application by using the **Style** properties that are part of the IBM WebFacing Tool environment. You will apply the style changes on a project level, so all pages in a project will contain the changes. In this lab you will change the text color and font for all highlighted fields.

1. Right-click the **Flight400** Web-facing project and select the **properties** option.
2. Select the **Style > DDS field display attributes** node in the list on the left side.
3. Click the .. option in the **High intensity** box (Figure 29).

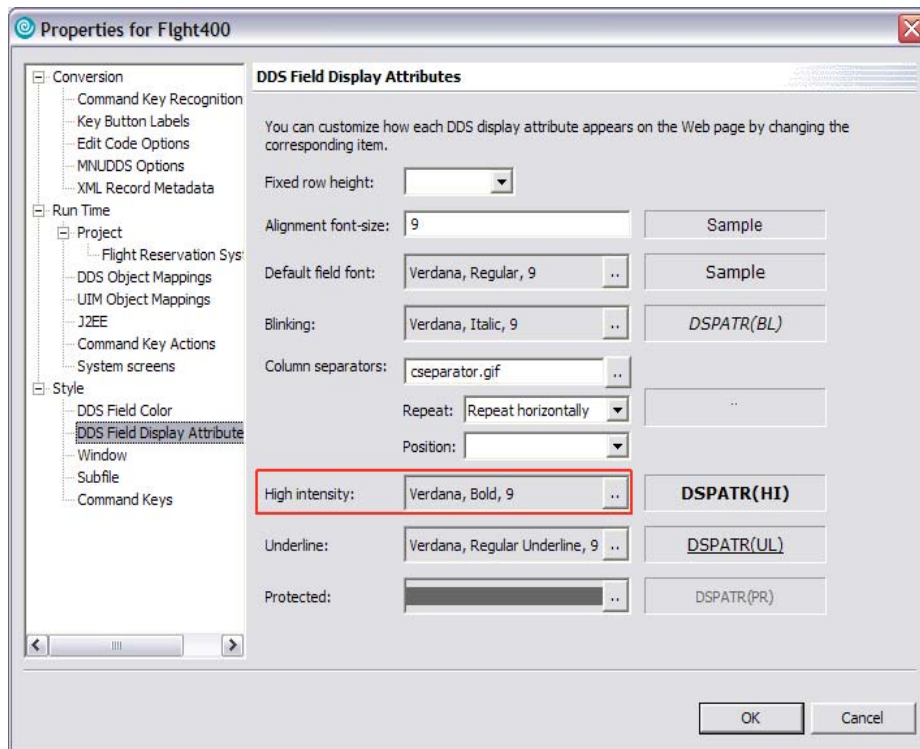


Figure 29: High intensity box option

4. In the **font** dialog: select **Comic Sans MS** as the font, make the font style **Bold**, select the font size as **14**, and click **OK** (Figure 30).

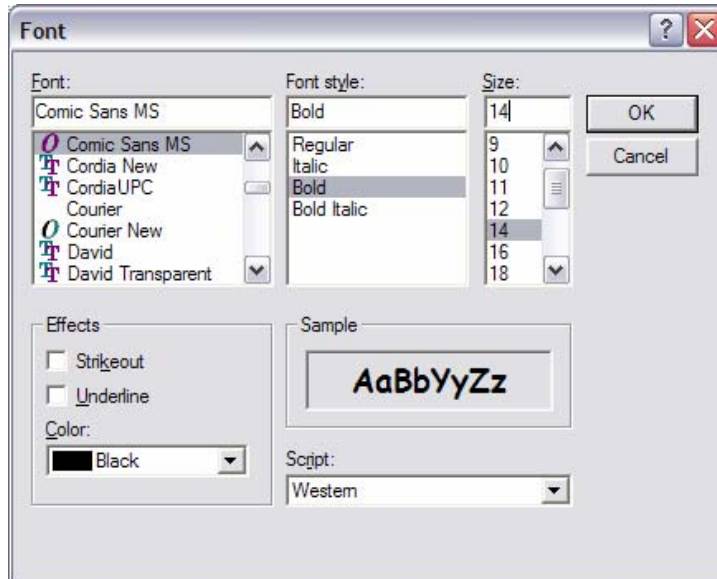


Figure 30: Select font options

5. Click **OK** on the properties dialog.
6. In the **WebFacing projects** view, right-click your project and select the **Run > Run on Server** option.
7. In the **Server selection** window, choose an existing server, select **WebSphere Application Server V6.0** under local host, and click **Finish**.
8. On the index page display, click the **launch** button to launch the Flight Reservation System application.
9. When prompted, enter your **<iSeries_userid>** and **<iSeries_password>**.

Using the IBM WebFacing Tool with FLGHT400 lab

10. Notice the different fonts and font sizes of some of the text in the highlighted areas of your new graphical screen (Figure 31).

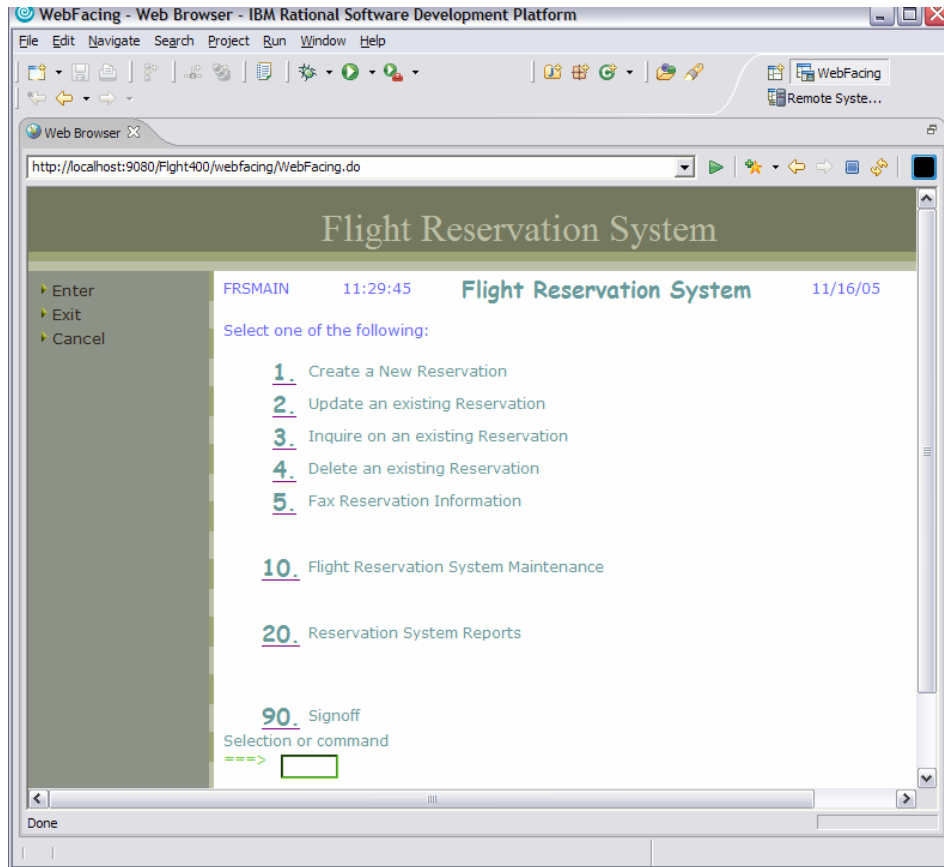


Figure 31: New font name and font size

Employing Web settings (hyperlinks)

In this exercise, you will use Web settings to change the user interface of the Web-faced application. In WebSphere Development Studio Client V6.0, Web settings are part of the LPEX editor (an earlier part of WebSphere CODE designer). Web settings are stored as comment lines in the DDS source. The conversion picks up these specific DDS source comment lines and applies them to the Web-faced user interface.

During this exercise, you will use the LPEX editor to add some Web settings to the DDS source. You will improve the Web user interface for the city selection window. In this window, currently users must enter a 1 in the options field to select a specific city from the subfile. You will change this because it is not how things are typically selected in a Web interface. On a Web page, a link will be more natural in the way it allows the selection of a record to happen. You will change the second column (city name) in the subfile, from a simple text field to a link. The conversion will add logic to the user interface to accomplish the following: When the user clicks this link, under the covers of the screen interface, the options field will be filled with a 1, indicating that the Enter key has been pressed (Figure 32).

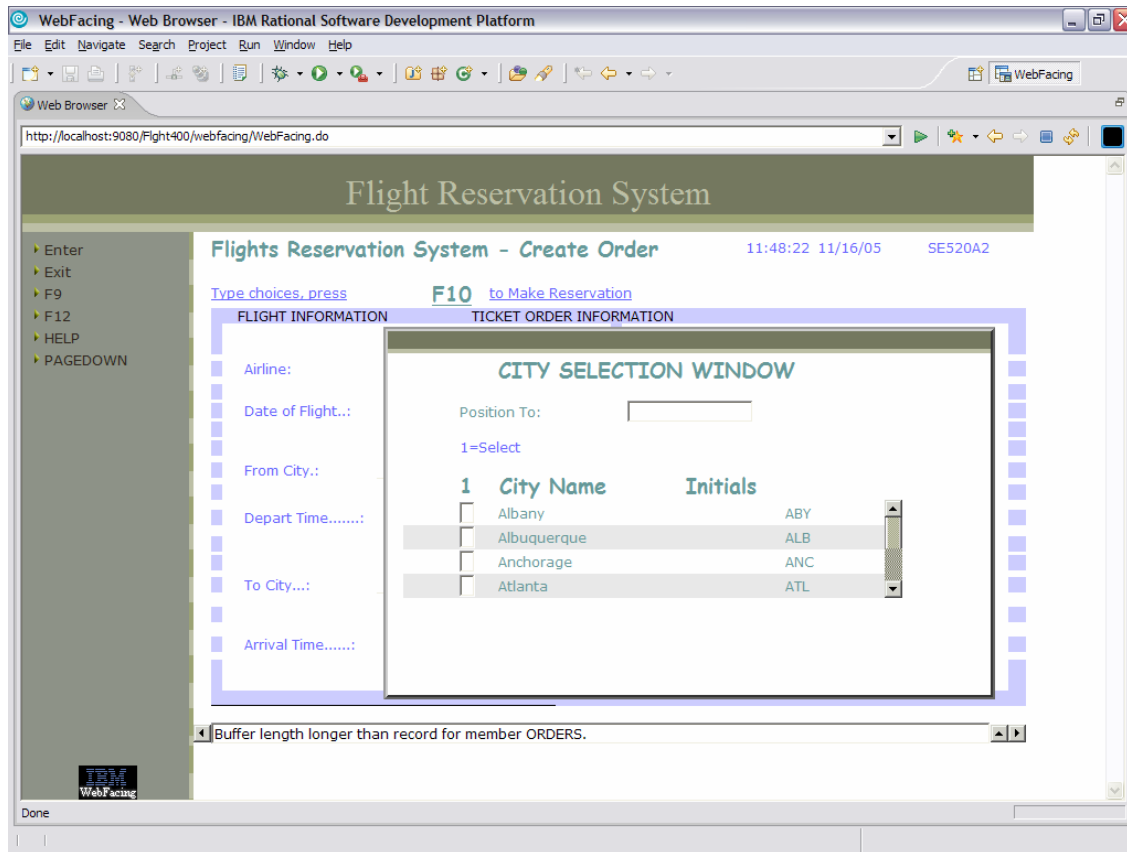


Figure 32: Invoke **Enter** key

1. The changed user interface still returns to the application the same information as before the Web setting was applied, but the user interface appears more Web-like to the user. The application itself does not have to be changed.
2. The DDS source for city selection subfile is **FRS402DF**.
3. In the **WebFacing projects** view, click the **+** sign next to DDS to expand DDS members.

Using the IBM WebFacing Tool with FLGHT400 lab

4. Scroll down to locate **FRS402DF** and double-click DDS to open it in the LPEX editor (Figure 33).

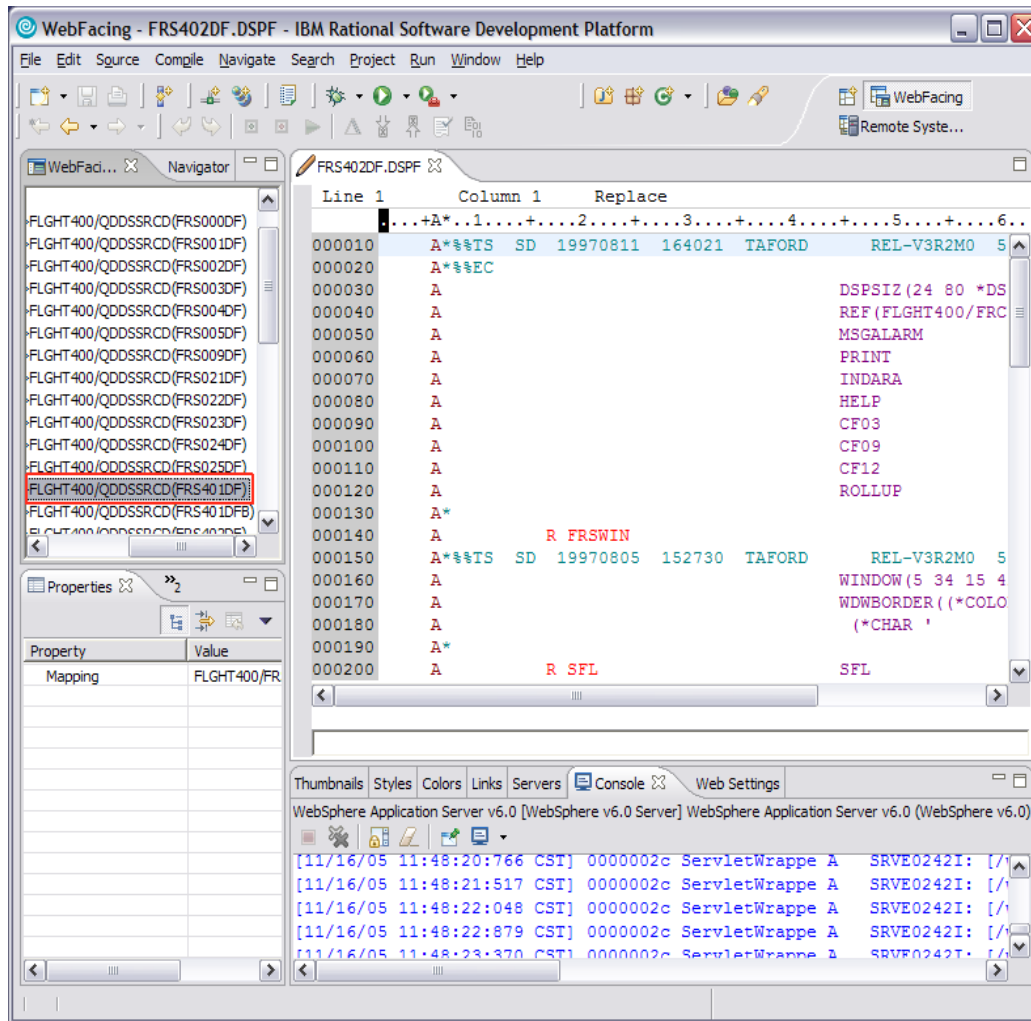
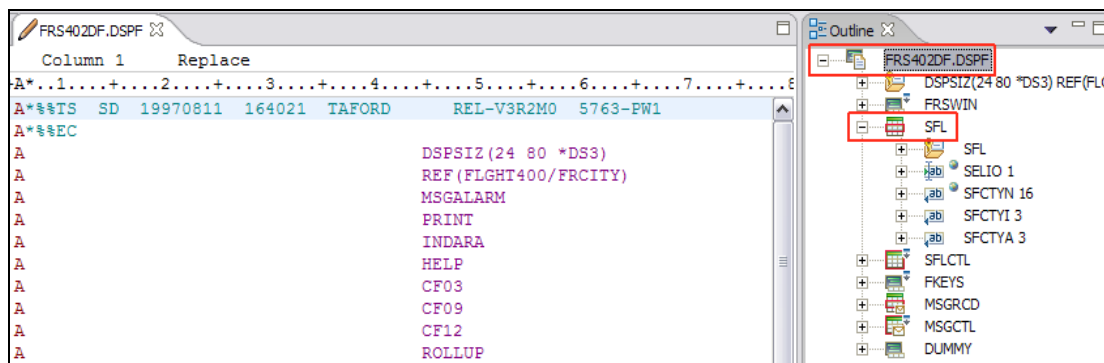


Figure 33: Locate and open DDS in the LPEX editor

5. In the outline view, click the + sign next to **FRS402DF** to expand the DSPF node.



6. Expand **SFL** node to display fields in the subfile.

Using the IBM WebFacing Tool with FLGHT400 lab

7. Select the **SFCTYN 16** field under SFL in the **Outline** box. You will see the **Web Settings** view in the lower part of the window (Figure 34).

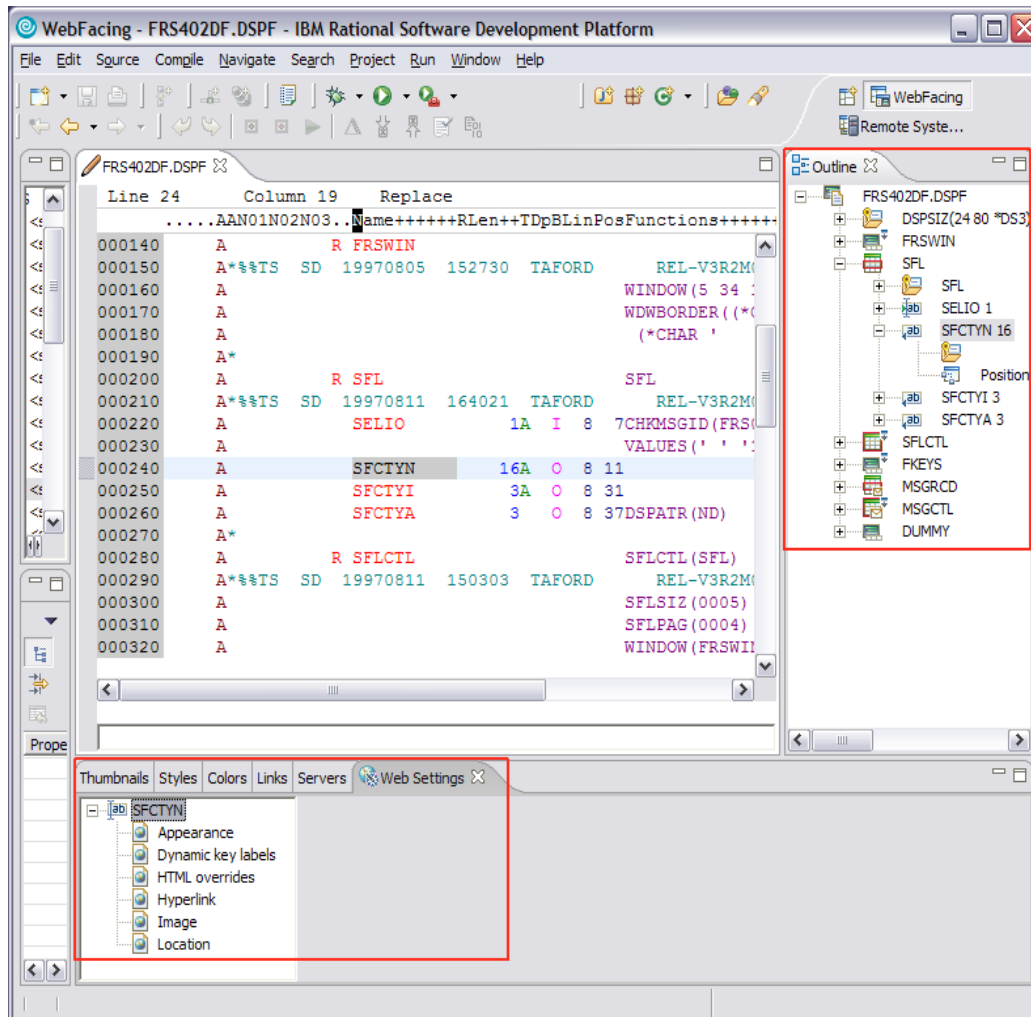


Figure 34: Web settings view

8. Click **Hyperlink** in the *Web Settings* view (Figure 34).
9. Select the **Enable hyperlink** check box.

Using the IBM WebFacing Tool with FLGHT400 lab

10. Notice the change in the DDS source line as you select the **Enable hyperlink** check box (Figure 35).

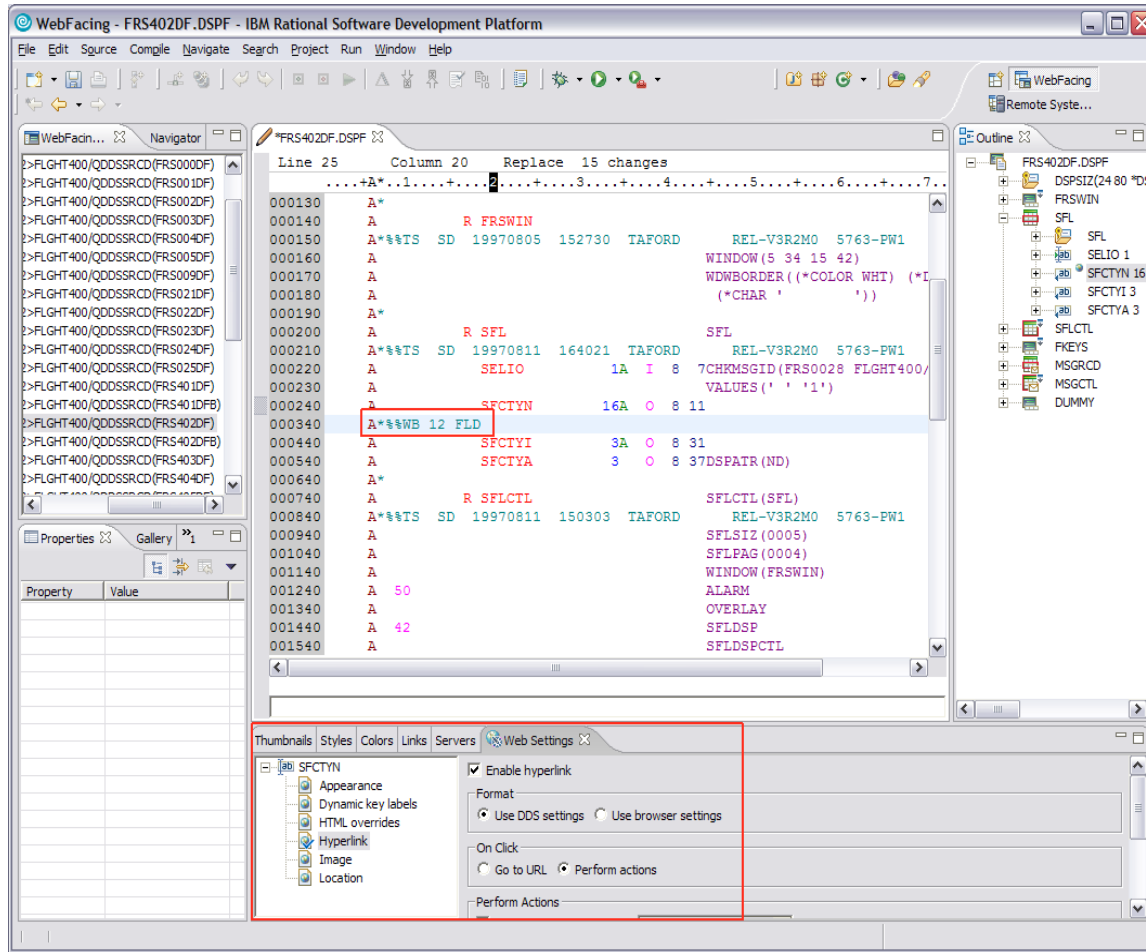


Figure 35: DDS source line change

Using the IBM WebFacing Tool with FLGHT400 lab

11. Under **On Click**, select the **Perform actions** check box (Figure 36).
12. Select the **Position cursor to field** check box and choose **&{SFL.SELIO.REF}** in the list box (Figure 36).
13. Select the **Set field value to** check box and enter **1** in the field (Figure 36).
14. Select the **More actions** check box (Figure 36).
15. Select the **Submit function key** radio button and choose **Enter** from the list (Figure 36).

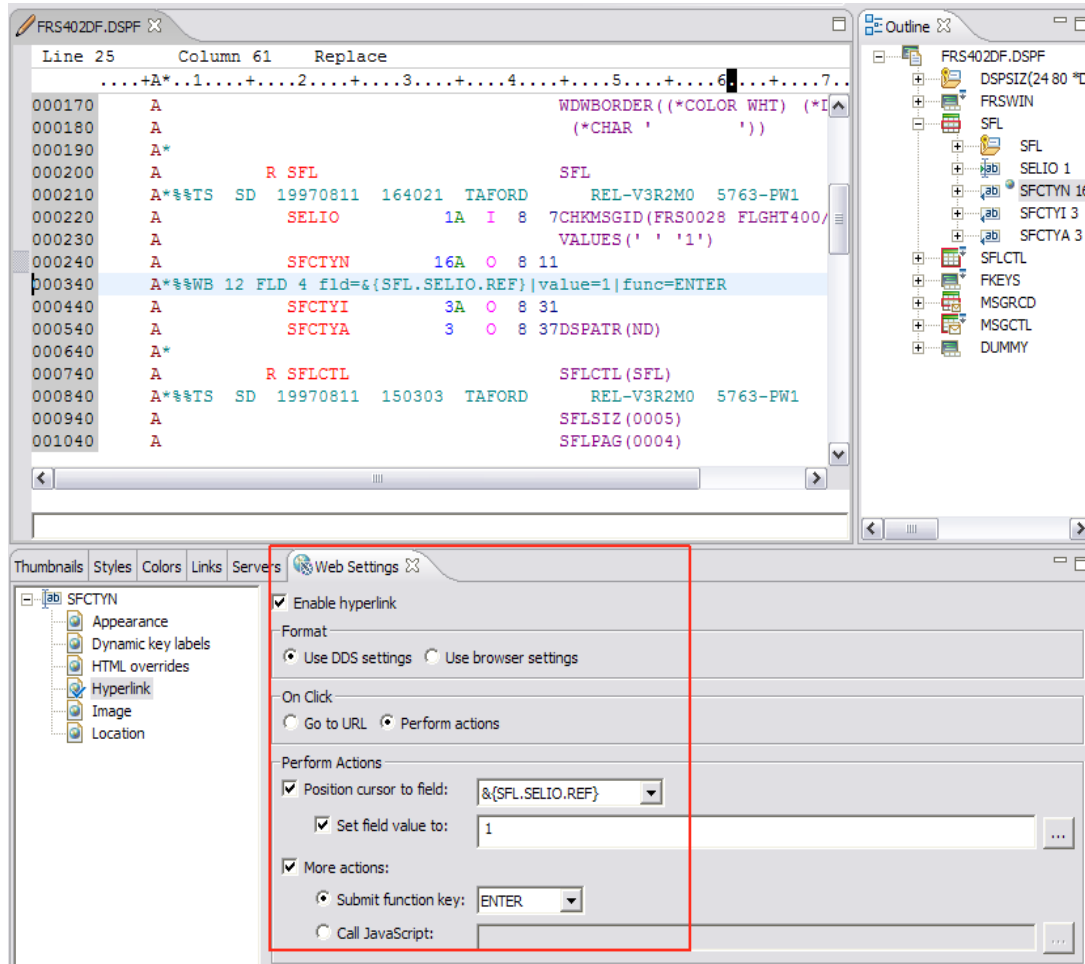
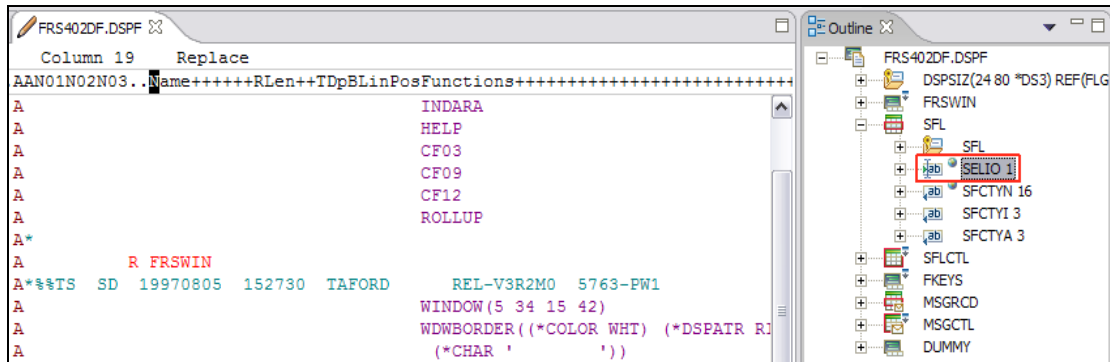


Figure 36: Select Web Settings

16. Go to **File > Save** (or **CTRL+S**) to save the DSPF source.

Using the IBM WebFacing Tool with FLGHT400 lab

17. As the SELIO field is not required for selection, select the **SELIO 1** field in the outline view.



18. Select **Appearance** in the *Web Settings* view and choose the **Hidden** radio button under visibility (Figure 37).

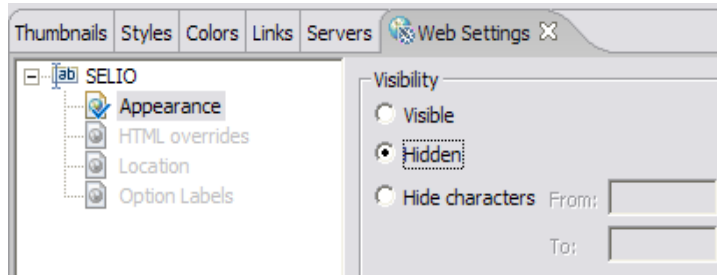


Figure 37: Hide SELIO view

19. To hide 1, select the text (Figure 38).

20. Select **1=Select** (outlined in red in Figure 38) under SFLCTL node.

21. Select **Appearance** in the *Web Settings* view (Figure 38).

22. Select the **Hidden** radio button under visibility (Figure 38).

Using the IBM WebFacing Tool with FLGHT400 lab

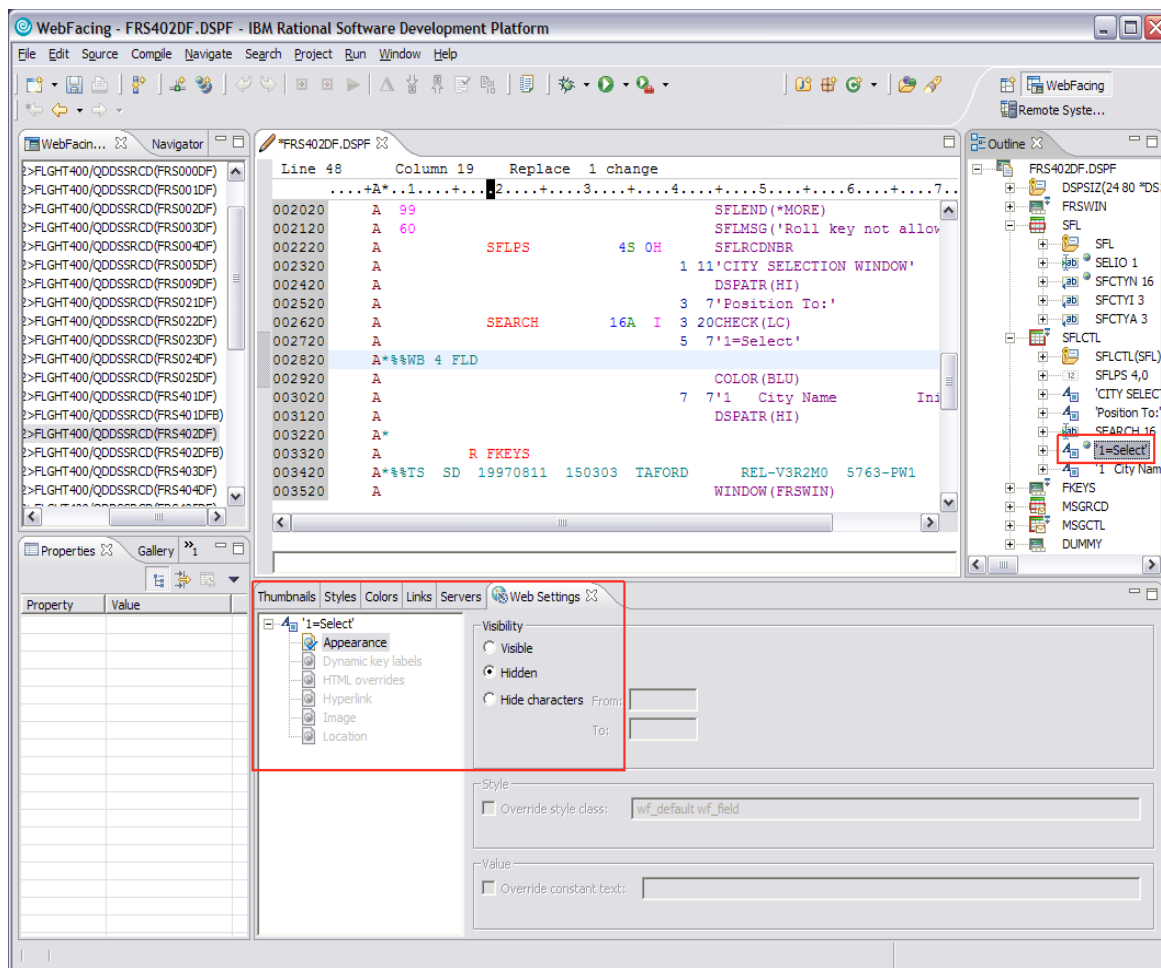


Figure 38: Select and hide text

23. Choose **File > Save** (or **CTRL+S**) to save the DSPF source.
24. Click **X** to close the DSPF editor window.

Reconvert the modified DSPF member:

25. Right-click **FRS402DF** and select **convert**.
26. In the **WebFacing projects** view, right-click your project and select the **Run > Run on Server** option to test the modifications.

The city selection subfile will show the hyperlink selection, which includes hidden selection fields and text (Figure 39).

Using the IBM WebFacing Tool with FLGHT400 lab

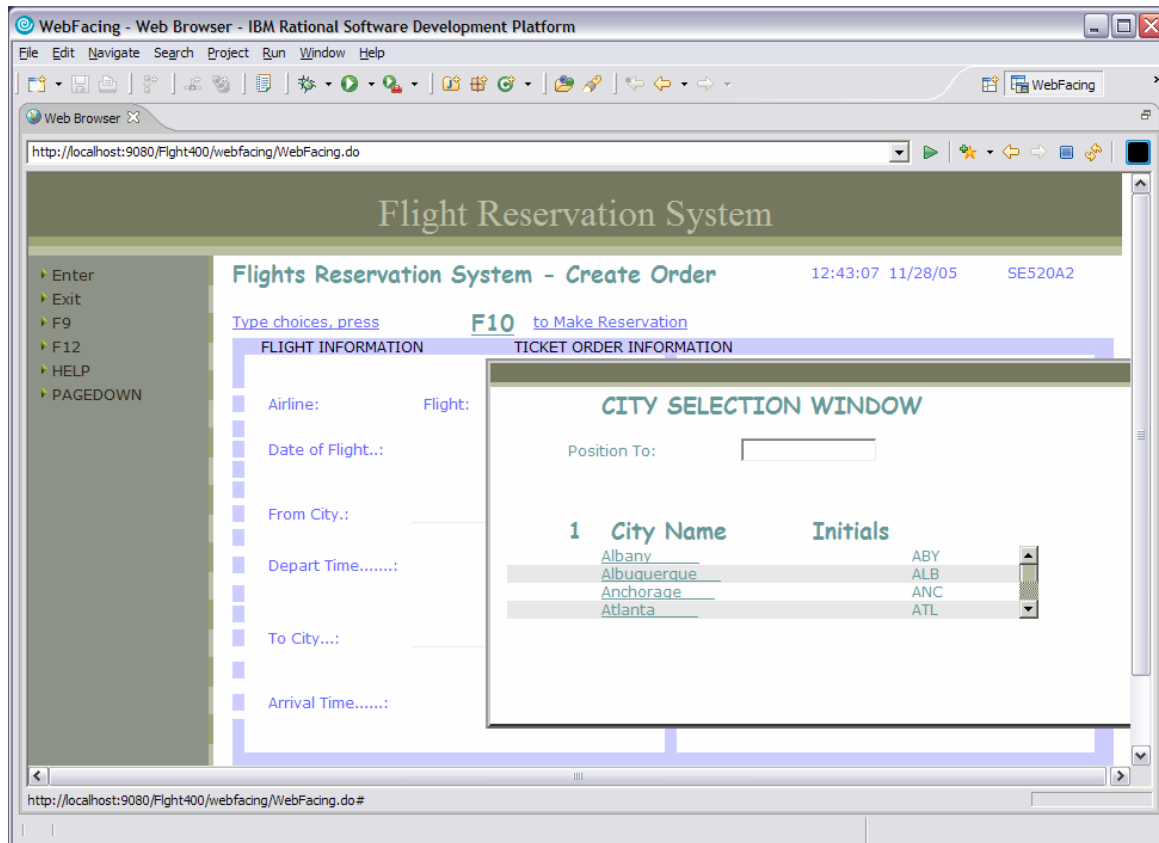


Figure 39: City Selection Window

Using JavaScript to add a clock

During this exercise, you will use the Web tools in the WebSphere Studio Workbench to add a clock to the status bar of the browser window of the Web-faced application.

Execute all JavaScript™ in the **Client Script\usr** folder at the time of loading the page. This makes it easy to add JavaScript to an application that has been enhanced by the IBM WebFacing Tool. For this example, you will add **Clock.js** to the **\ClientScript\usr** folder of the project. **Clock.js** will display the current date and time in the status bar of the browser.

1. Go to the **WebFacing** perspective.
2. Switch to the *Navigator* view by selecting the **Navigator** tab.
3. Expand the **Flight400** project.
4. Go to the following folders: **WebContent** > **webfacing** > **ClientScript** > **usr** (shown in Figure 40).

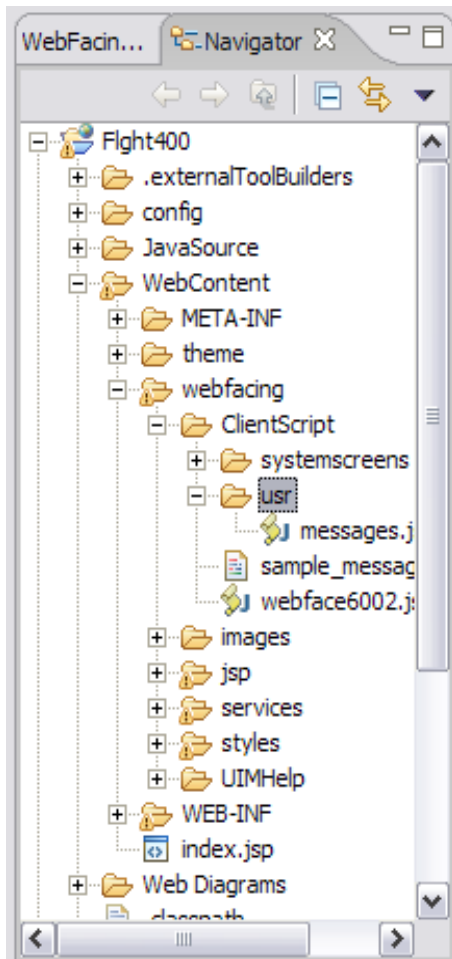


Figure 40: Flight400 folders

5. Right-click the **WebContent/webfacing/ClientScript/usr** directory.
6. From the **Pop-up** menu select **New > Other**.

Using the IBM WebFacing Tool with FLGHT400 lab

7. In the **select wizard** window, select **Web > JavaScript File** and click **Next**.
8. For the filename enter **clock** and click **Finish**.
9. Change the **clock.js** file source code **EXACTLY** as shown below:

```
// clock.js

// newFunction
function doClock() {
    window.setTimeout("doClock()",1000);
    today = new Date();
    self.status = today.toString();
}
doClock()
```

10. Save the changes by clicking **File > Save** from the menu bar.
11. Close the **clock.js** file in editor by clicking the **X** on the **clock.js** window.
12. Click the **WebFacing projects** view.

Using the IBM WebFacing Tool with FLGHT400 lab

13. Right-click your project and select the **Run > Run on Server** option to test the modifications.

Notice that in the status bar of the browser window the clock is displayed and is updated every second (Figure 41).

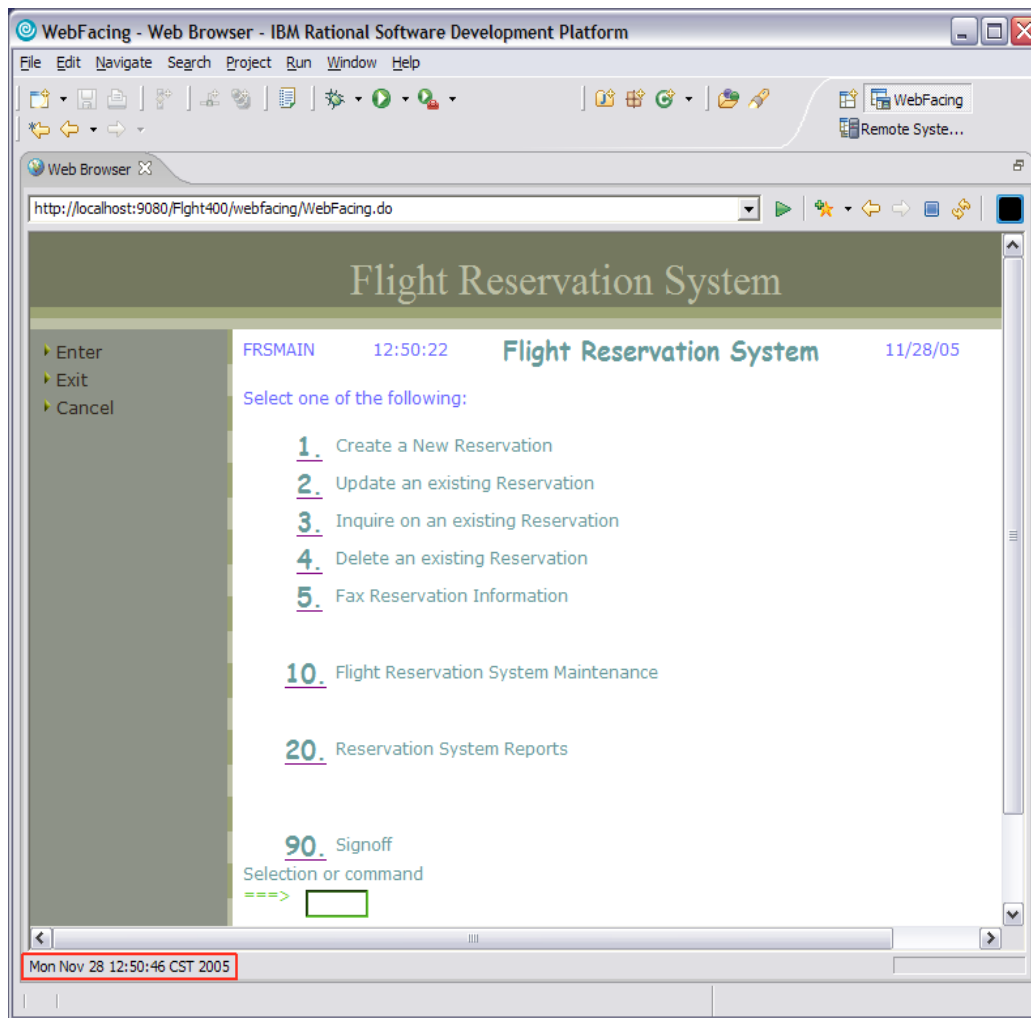


Figure 41: Display clock

14. If you do not see the date and time displayed at the bottom of the window, it will be because of the page caching. To overcome this you might re-start the project.
15. Select the **Servers** view from the bottom tabs on the right-hand side window.
16. Right-click the WebSphere Application Server V6.0 and select **Restart project > Flight400EAR** (your project).
17. You will see lot of messages in the console view indicating that the application is started.
18. Run the application again.

Creating a Web-facing portlet

This section of the lab will take you through the Web-facing portlet wizard to create a Web-facing portlet project. The **WebSphere Portal Test Environment** must be installed into WebSphere Development Studio Client for iSeries to complete this lab.

Creating a Web-facing portlet project

In this part you will create the Web-facing portlet project by following these steps:

1. In the WebSphere Development Studio Client window, go to the **WebFacing** perspective.
2. Select **File > New > WebFacing Portlet Project**.
3. In the **WebFacing Portlet Project** window (Figure 42), enter the project name **Flight400portlet**.
4. Click the **Show advanced** button to see advanced options. In the target server field select **WebSphere Portal V5.1 stub** and click **Next**.

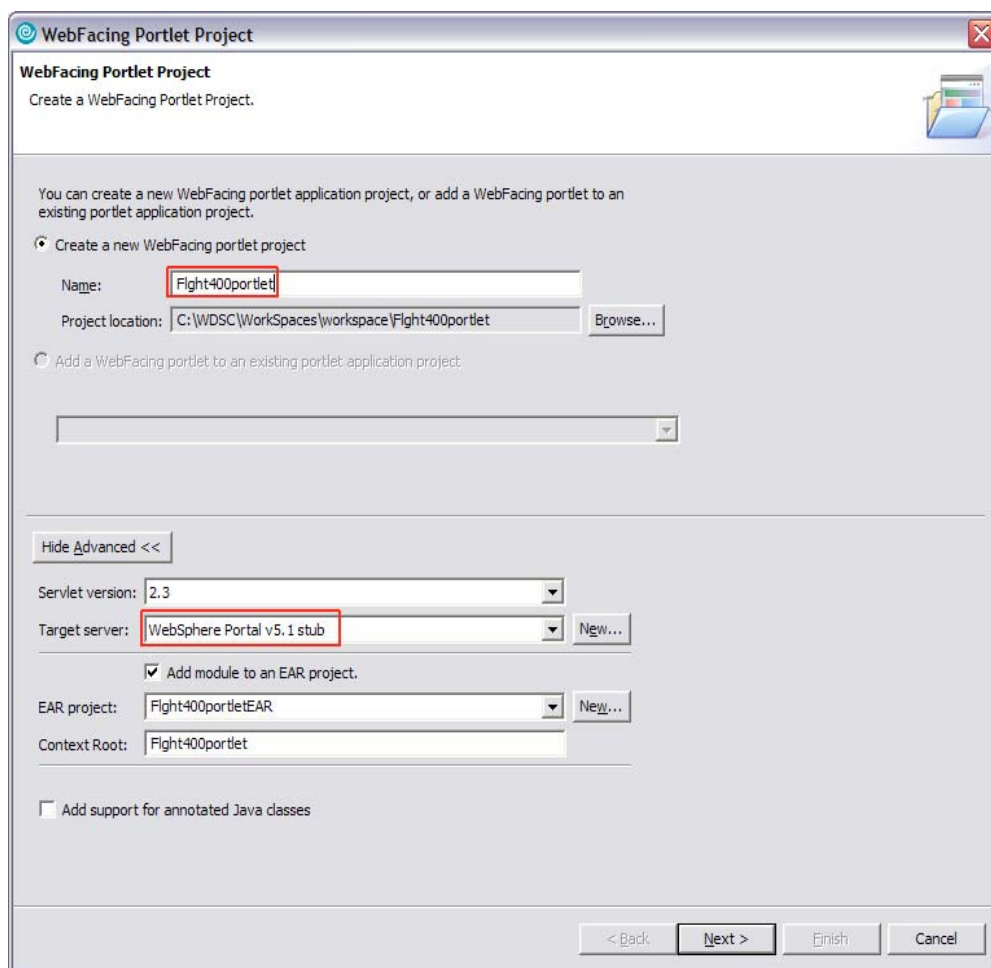


Figure 42: WebFacing Portlet Project window

5. In the **WebFacing Features** window, check **Add system screen support** and click **Next**.

Using the IBM WebFacing Tool with FLGHT400 lab

6. In the **Select Display File Members To Convert** window, select previously defined connection: **<iSeries_Server> connection**.
7. In the **Library** field, enter **FLGHT400** and click the **Refresh DDS list** button.
8. Click the **+** sign next to **FLGHT400** to expand the tree.
9. Click the **+** sign next to **QDDSSRCD** to display all DSPF members.
10. Select all display file members under QDDSSRCD.

To do this, click the first member, scroll down, press **Shift**, and select the last member.
(Alternatively, you can select individual display file members by pressing the **Ctrl** key while picking the individual members.)

11. Click the **arrow button** to move these to the right-hand side box (Figure 42).

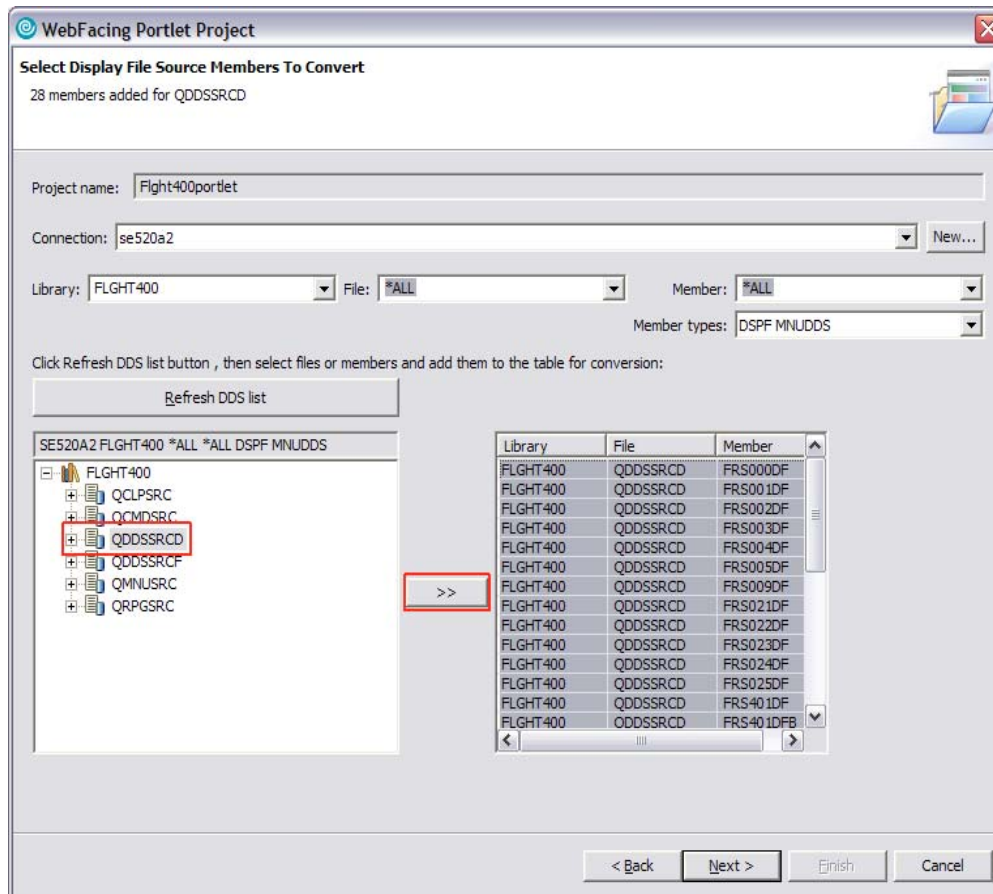


Figure 43: Select QDDSSRCD display file members

12. Similarly, select all **MNUDDS** members under QMNUSRC and click **Next**.
13. In the **Select UIM Source Members To Convert** window, click **Next**.
(**Note:** There are no UIM help members as a part of this application.)

Using the IBM WebFacing Tool with FLGHT400 lab

14. In the **Specify CL Commands** window (Figure 44), enter the command:
go FLGHT400/FRSMAIN

15. Change the command label to **Flight Reservation System** and click **Add**.

WebFacing Portlet Project

Specify CL Commands

Enter the CL commands that are used in your application, the command labels you want to use, and the signon preference for the generated hypertext links.

Project name: Flight400portlet

WebFacing generates hypertext links that you can use to launch your application from the web. In order to do this, it needs to know the text that will be shown for each link and the CL command that each link will invoke. On this page you can define multiple links, in case several CL commands are used to launch your application.

If your program requires parameters, you can enter them as variables in the CL command. For example: to invoke program MYPGM with a part number parameter, you would enter CALL MYPGM PARM(&part) as the CL command. The variable "&part" will be replaced when you click on the invocation link. For details, refer to the generated index.html file. The invocation name is used to uniquely identify each hyperlink in the index.html file.

CL command: go FLGHT400/FRSMAIN

Command label: Flight Reservation System

Invocation name: INV1

Prompt for signon

Specify OS/400 signon values

CL Command	Command Label	Invocation name	User ID
GO FLGHT400/FRSMAIN	Flight Reservation S...	INV1	*PROMPT

< Back Next > Finish Cancel

Figure 44: Specify CL Commands window

16. Click **Next**.

17. In the **Choose a Web Style** window, select the Web style of your choice and click **Next**.

18. In the **Complete WebFacing project** window, select the default option
(No. I only want to create project now) and click **Finish**.

19. After awhile, you will see your Web-facing portlet project in the **WebFacing Projects** view.

20. Click the **+** sign next to your portlet project to see the project details.

Converting the Web-facing project

1. In the **WebFacing Projects** view, right-click **DDS** and select **Convert** (Figure 45).

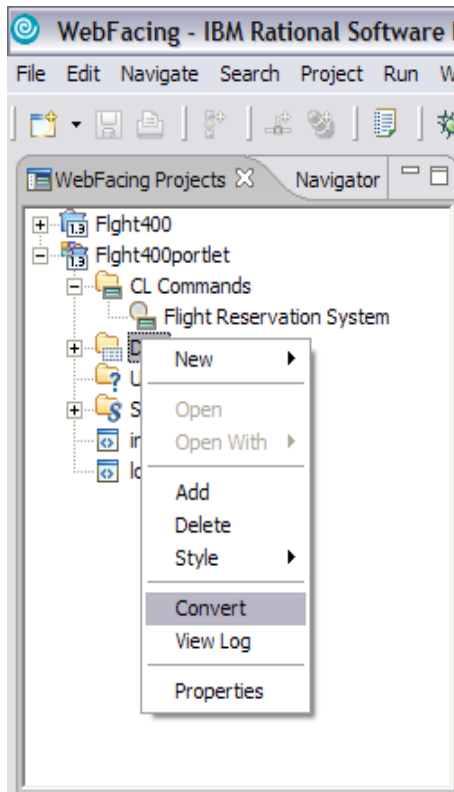


Figure 45: Select the Convert option

2. Conversion might take awhile because, during conversion, the IBM WebFacing Tool retrieves the source code from the iSeries system and creates all the portlet application components (namely JSPs and XML documents) for each record format.

Using the IBM WebFacing Tool with FLGHT400 lab

3. After conversion, you will see the **DSPF Conversion Log** displayed in the log view. Select any display file to review the record formats (Figure 46).

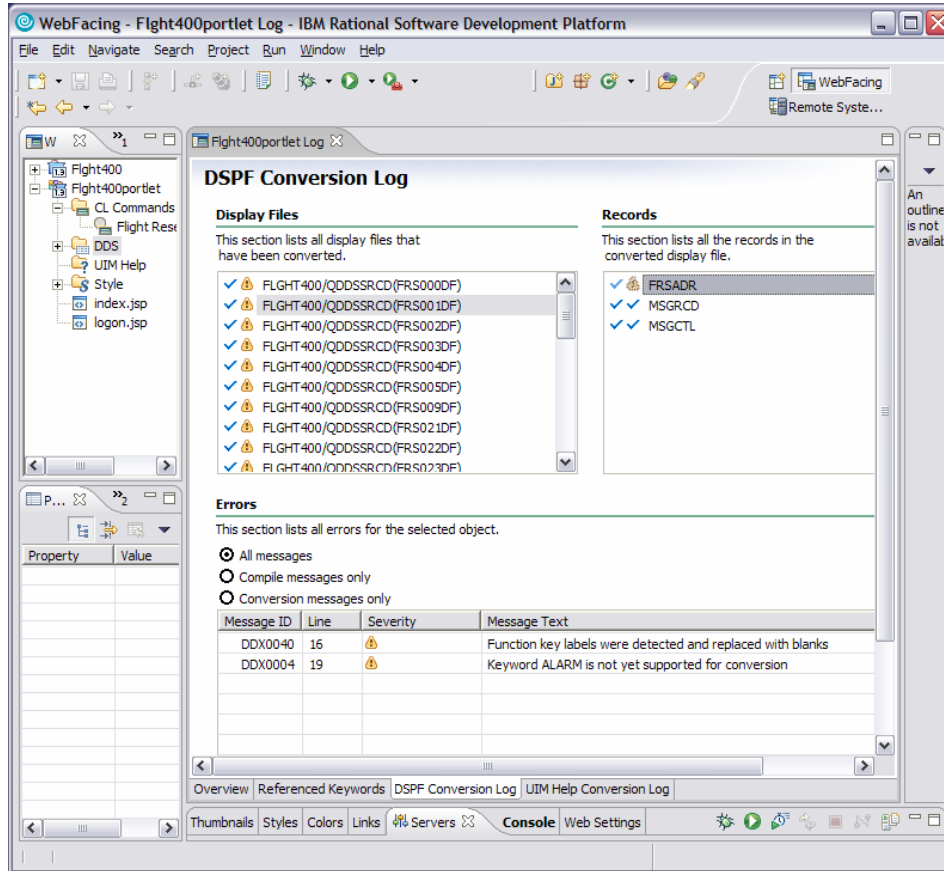


Figure 46: DSPF Conversion Log window

4. To look at the referenced keywords, select the **Referenced Keywords** tab at the bottom of the conversion log window.

Using the IBM WebFacing Tool with FLGHT400 lab

5. In the **Referenced Keywords** window, click any display file member to display the keywords (Figure 47).

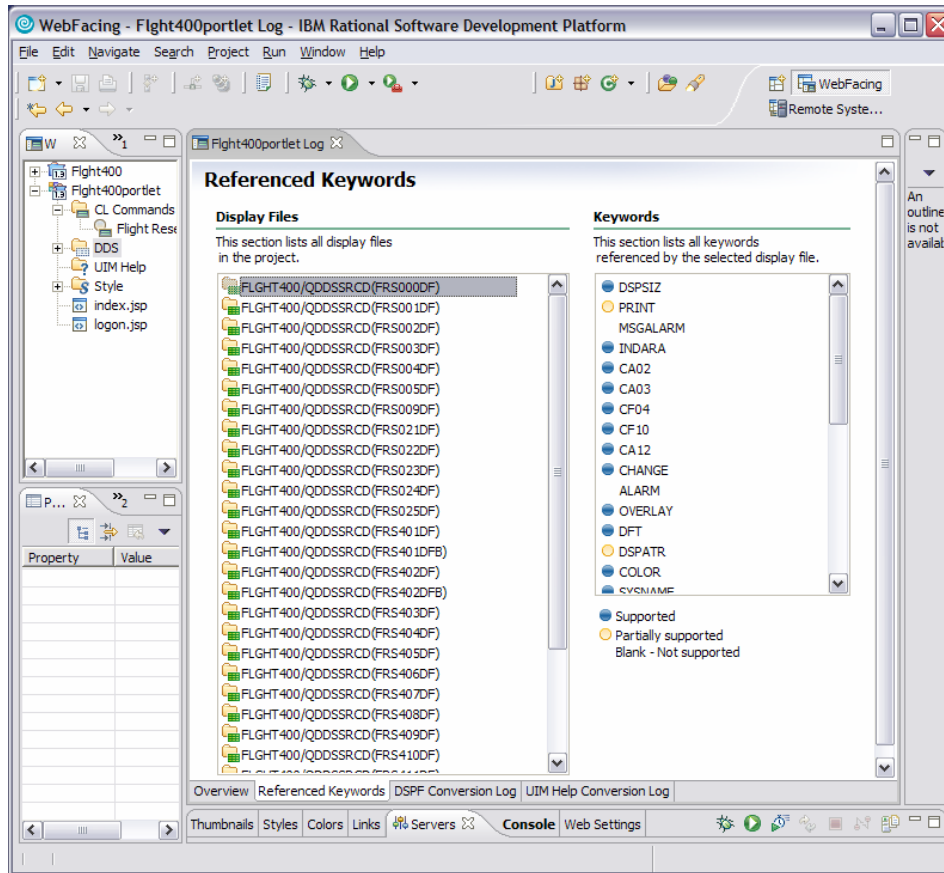


Figure 47: Referenced Keywords window

Testing the Web-facing portlet

In this section, you will test the Web-facing portlet you created in the previous step in the WebSphere Portal Server test environment.

Testing the Web-facing portlet in the WebSphere Portal test environment

1. In the **WebFacing Projects** view, right-click your portlet project and select the **Run > Run on Server** option.
2. In the **Server Selection** window (Figure 48), check **Manually define a server** and select **WebSphere Portal Server V5.0 Test Environment** (below server type) and click **Finish**.

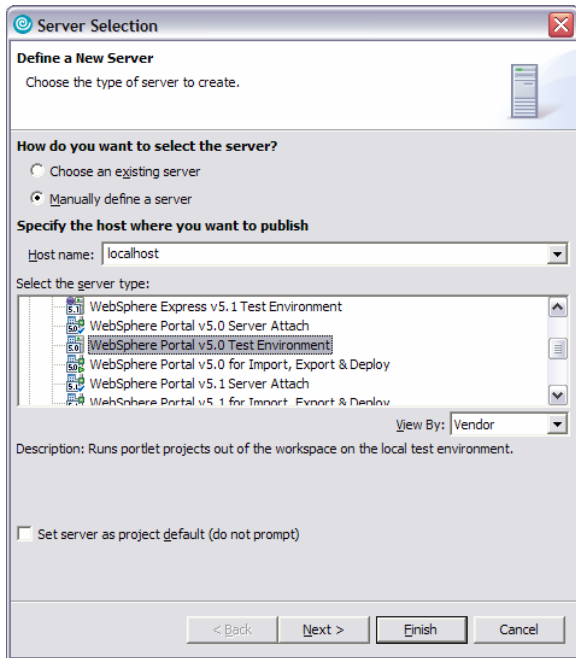


Figure 48: Server Selection window

3. After awhile, you will see a browser displaying the index page of your Web-faced portlet application.

Using the IBM WebFacing Tool with FLGHT400 lab

4. Click **Launch** (Figure 49) to invoke the Web-faced application.

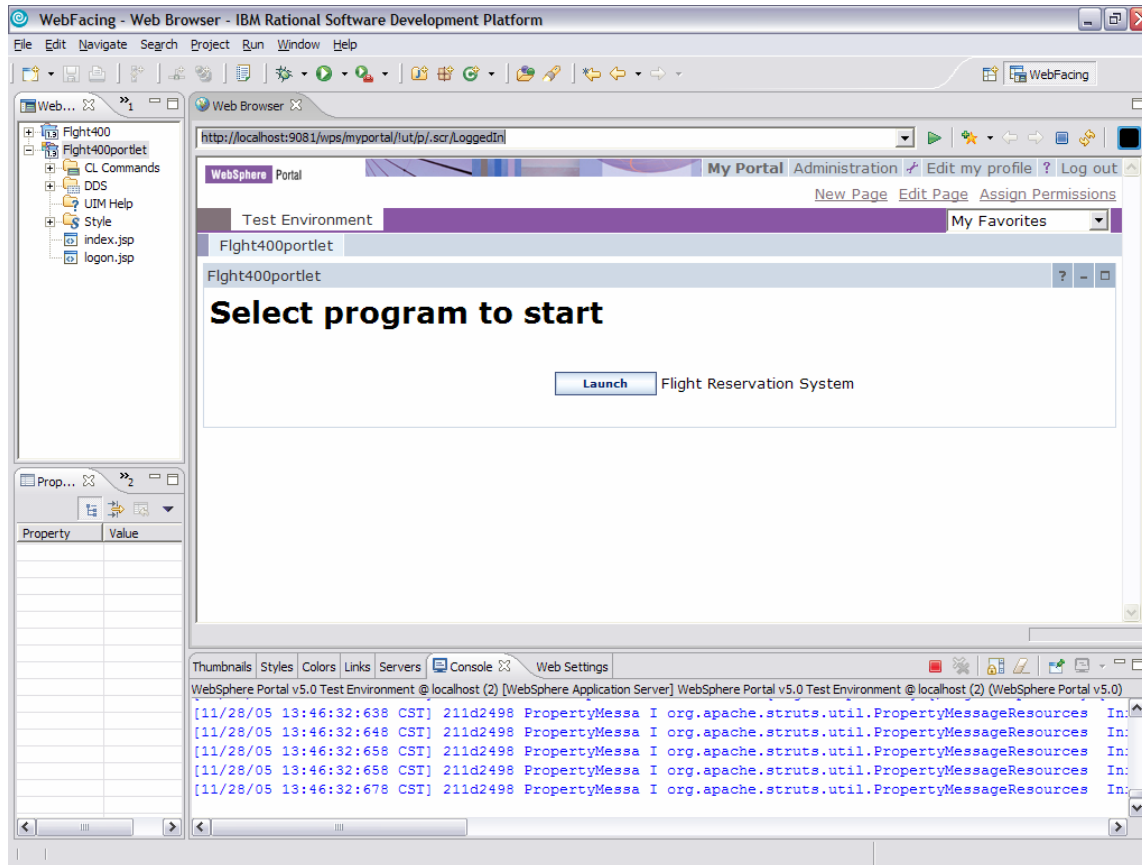


Figure 49: Launch the Web-faced application

5. When prompted for the user ID and password, enter the `<iSeries_userid>` and `<iSeries_password>` and click **Logon**.

Using the IBM WebFacing Tool with FLGHT400 lab

6. You will see a Flight Reservation System logon screen.
7. Double-click the **Web Browser** tab (Figure 50) to expand the window.

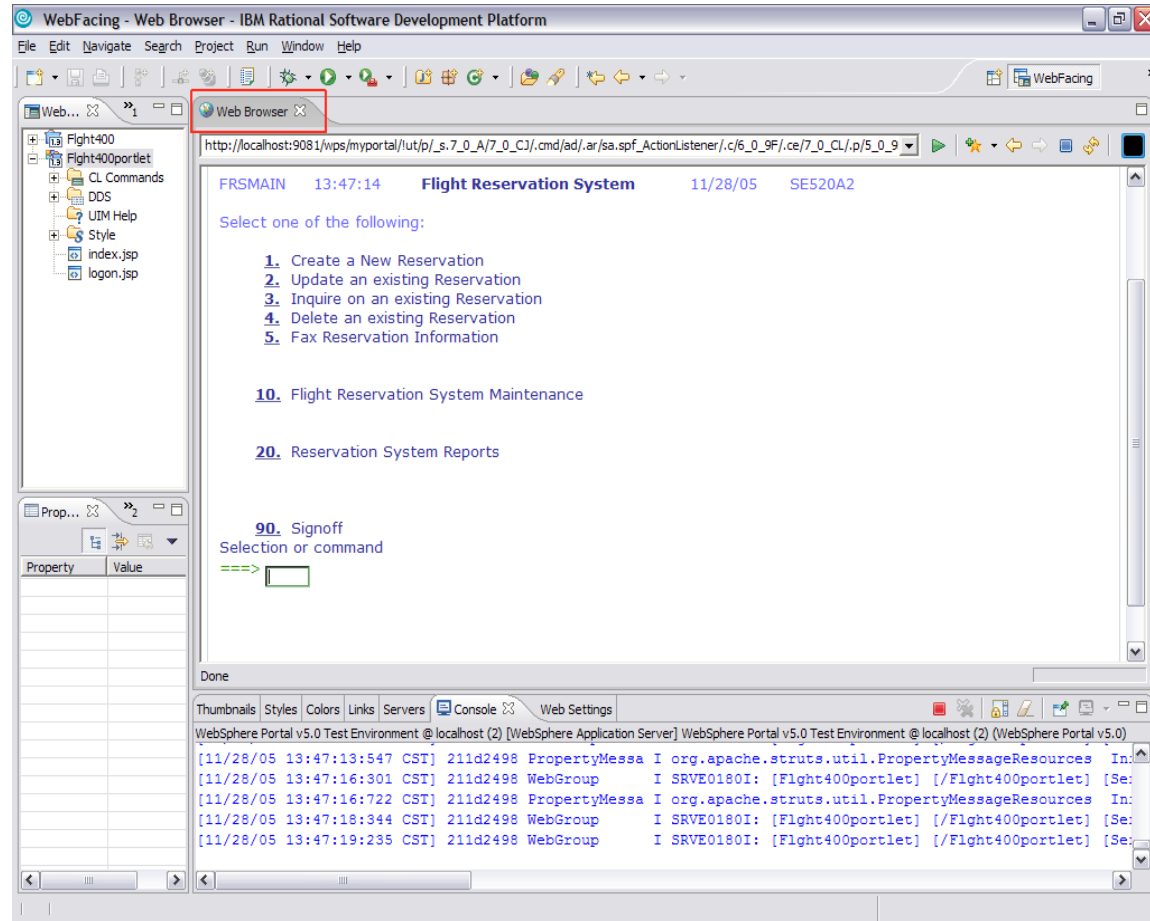


Figure 50: Web Browser tab

8. Go back to **Personal Communications Session** to look at the interactive job. Sign on with your `<iSeries_userid>` and `<iSeries_password>`.
9. In the **Personal Communications Session** window, enter on the command line: **WRKSBSJOB SBS(QINTER)**. The QZF job is supporting the Web-faced application.
10. In the WebSphere Development Studio Client window, try various options in the Flight Reservation System application. (Try **Report options** to see system screen support [option 2 under the **Reports** menu].)
11. Click **90** to sign off and exit the Flight Reservation System application.
12. Double-click the **Web Browser** tab to go back to the original window size.

END OF LAB

Summary

In this lab, you practiced the following:

- Created and tested a Web-faced application with the IBM WebFacing Tool
- Packaged and installed the Web-faced application on an iSeries system using the IBM Web Administration for iSeries console
- Customized the Web-faced application with tools in WebSphere Development Studio Client
- Created and tested the Web-faced portlet using the Web-facing portlet project wizard

Resources

These Web sites provide reference materials to supplement the information contained within this lab:

- IBM eServer™ i5 Information Center
publib.boulder.ibm.com/infocenter/series/v5r3/ic2924/index.htm
- IBM eServer p5 Information Center
publib.boulder.ibm.com/infocenter/pseries/index.jsp
- IBM Publications Center
www.elink.ibm.link.ibm.com/public/applications/publications/cgibin/pbi.cgi?CTY=US
- IBM Redbooks™
ibm.com/redbooks
- Follow a roadmap: *iSeries Developer Roadmap: End to End Demo*
ibm.com/servers/enable/site/ideveloper_j2ee/etoe

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