

***IBM WebSphere Host Access
Transformation Services (HATS)
Version 6 lab on the IBM iSeries
platform***

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Abstract

The objective of this lab is to provide you with a basic understanding of creating and previewing an IBM® WebSphere® Host Access Transformation Services (HATS) application on the IBM iSeries™ platform. This will be done through the use of the WebSphere Development Studio Client with the HATS plug-in and the integrated WebSphere Application Server test environment.

What you will learn

At the end of the lab, you will be able to:

- Create a HATS application
- Preview your HATS project in the WebSphere Application Server test environment.
- Customize the HATS application by modifying the default template, changing the default rendering, customizing a screen, and working with macros and integration objects.
- Create a HATS portlet application.

Introduction

In this lab, you will create a HATS application in WebSphere Development Studio Client. After creating the HATS application, you will customize and enhance HATS while previewing it in the WebSphere Application Server test environment.

Also, you will create HATS portlet and preview it in WebSphere Portal Server Test Environment.

The steps in this lab are:

1. Creating a HATS application
2. Previewing the HATS project using Run On Server
3. Modifying the template
4. Changing the default rendering
5. Customizing a screen
6. Working with macros and integration objects
7. Creating a HATS portlet application
8. Testing the HATS portlet in WebSphere Portal Server

Required materials

The following information will be referred to in the lab:

- <team_number>: Team number of your choice
- <iSeries_Server>: Your iSeries system hostname
- <iSeries_userid>: iSeries system user ID
- <iSeries_password>: iSeries system 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 library list of the iSeries system
Note: The code is available from the iSeries Developer Roadmap: End-to-end demo Web site (www.ibm.com/servers/enable/site/ideveloper_j2ee/etoe/). This site is also listed in Appendix B.
- WebSphere Development Studio Client V6 installed on the PC
- HATS Studio V6 installed into WebSphere Development Studio Client on the PC

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

- WebSphere Development Studio Client is a very dynamic development environment capable of a large amount of user customization. Because of this, the screen captures in this lab might not exactly match what you see when you follow the steps of this lab.
- Host Access Transformation Services (HATS) comes with a wealth of documentation covering everything from getting started to advanced programming in HATS. This documentation can be accessed in WebSphere Development Studio Client through the HELP interface. It can be found on your PC in **IBM WebSphere HATS > Library** from the **Start** menu in the form of PDFs. This information is also available in the **Welcome to HATS** tab in WebSphere Development Studio Client in the *View the library of online information for HATS* section. In addition to the information that is shipped with HATS, there is additional information on the HATS V6 Information Center Web site (<http://publib.boulder.ibm.com/infocenter/hatsv6/index.jsp>). (This site is also listed in Appendix B.)
- Throughout this lab, different actions will cause the HATS **Tip** windows to pop up. These windows can provide useful information to the HATS novice. You can select to have a specific tip not show again as well as chose to not show any tips.
- In the lab instructions, substitute your <team_number> for xx.

Creating a HATS application

In this section you will start HATS Studio (WebSphere Development Studio Client) and create a basic HATS project. Afterward, the project will be previewed in the next section.

Starting WebSphere Development Studio Client

To initiate the WebSphere Development Studio Client, do the following steps:

1. Go to **Start > All Programs > IBM WebSphere HATS 6.0 > HATS Studio 6.0**.
2. In the workplace launcher window (Figure 1), enter:
C:\WDSC\WorkSpaces\teamxx (Where xx is your <team_number>) in the workspace field and press **OK**. (Please make sure that **Use this as a default and do not ask again** are not checked.)

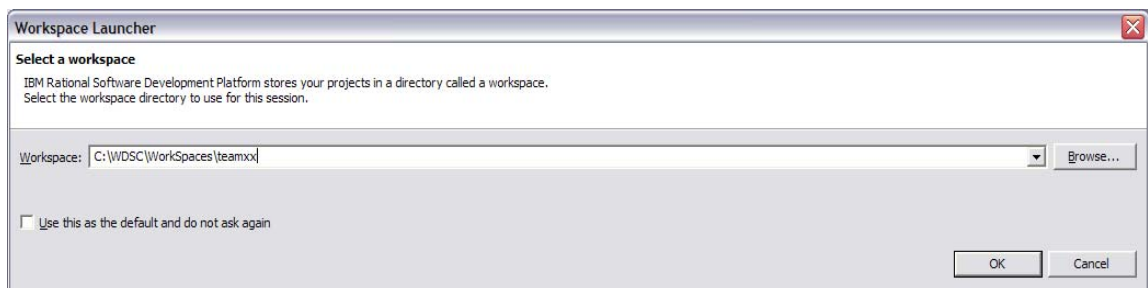


Figure 1: Workplace Launcher screen

3. After WebSphere Development Studio Client starts, you are greeted by the **Welcome to HATS** pop-up window (Figure 2).
4. Click **OK** in the *HATS Tip* pop-up.

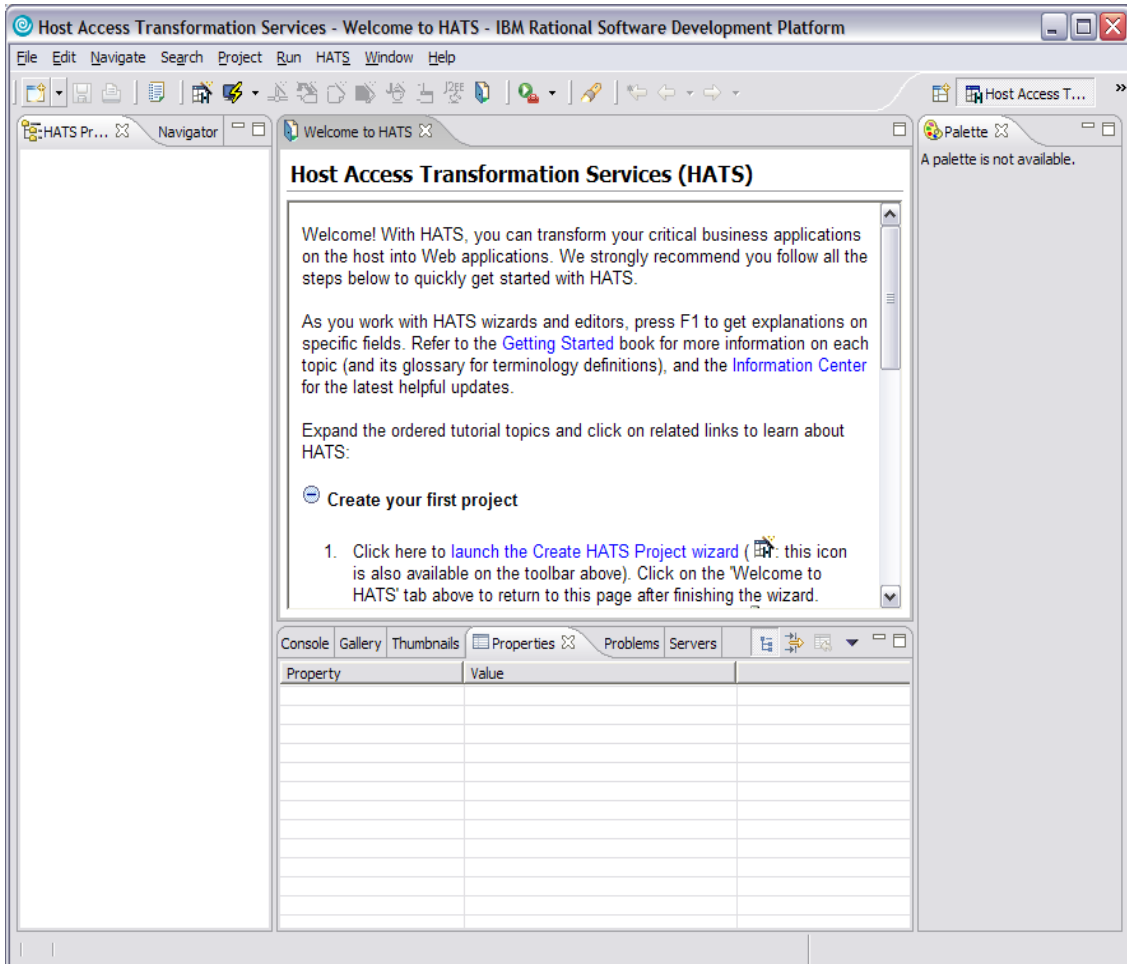


Figure 2: Welcome to HATS window

5. If you do not see the **Welcome to HATS** page, then open the HATS perspective.

Creating a HATS project

Once you have gotten into the HATS tool, do the following:

1. Click **launch the Create HATS Project** wizard. This will open the Create a Project window.
2. In the Name field, enter **Flight400HATS**.
3. Select **WebSphere Application Server V6.0** as the target server. The rest of the fields will remain at the default values.
4. Click **Next**.
5. Within the Connection Settings dialog box (Figure 3), in the Host name field, enter **iSeriesServer** for your iSeries server name.
6. In the Type field, select **5250** from the Type drop-down box.
7. Select **27 x 132** from the Screen size drop-down box.
8. Click **Next**.

Figure 3: Connection Settings screen

9. Choose the template that best fits your taste by selecting it from the **Template** drop-down box.
10. Click **Finish**.

Previewing the HATS project using *Run On Server*

In this section, you will use the *Run On Server* command to preview your HATS application in the integrated WebSphere Application Server test environment in WebSphere Development Studio Client. After verifying the project functions, you will enhance and customize it.

Running the application in a WebSphere Application Server test environment

To start your application in the WebSphere Application Server test environment, do the following:

1. Right-click your project in the **HATS Project View** window and select **Run on Server** (Figure 5).

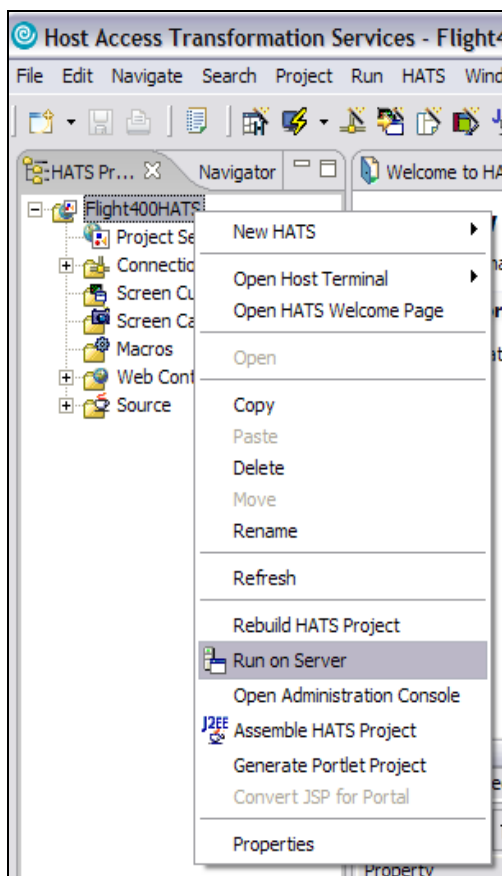


Figure 5: HATS project view; selecting *Run on Server*

2. Having selected *Run on Server*, the **Display Terminal** window opens.
3. Click **Yes** to see the host view in the display terminal.
4. In the **Server** selection window, choose an existing server and select **WebSphere Application Server V6.0** under localhost.
5. Click **Finish**.

Your HATS application will be displayed in the *Web Browser* tab created by the *Run on Server* command (Figure 6).

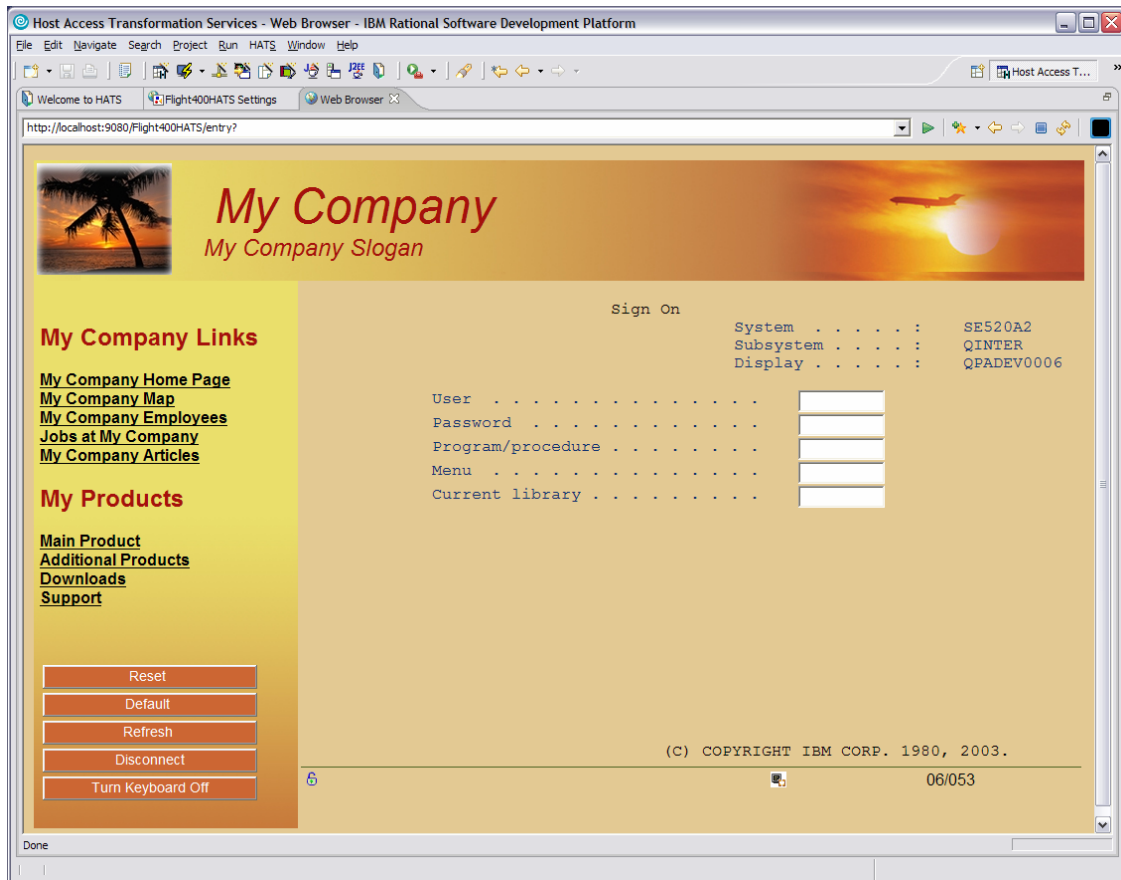


Figure 6: Web Browser tab

6. You can double-click the **Web Browser** tab to maximize it, double-clicking the tab again will reduce it to normal size.

7. You will see a host view in the display terminal window. As you execute commands on the HATS application, they will also appear in the display terminal window (Figure 7).

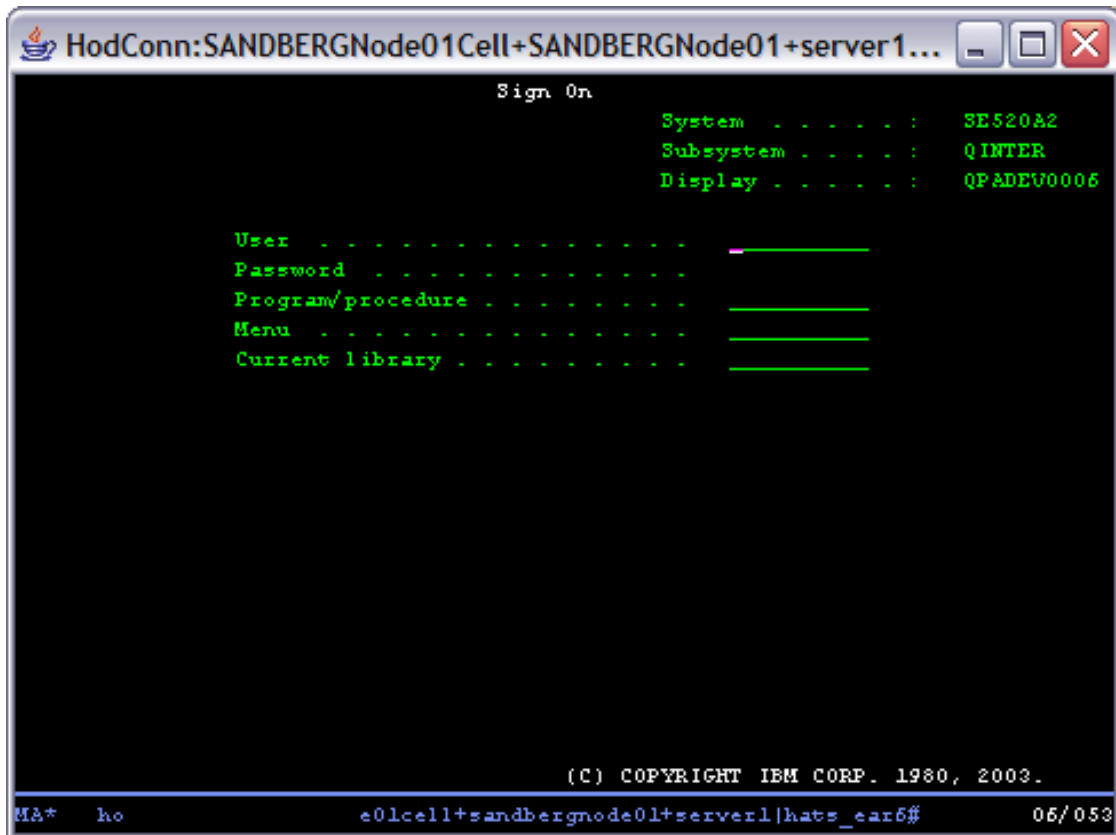


Figure 7: Display terminal window

8. Log into your HATS application by filling in the **<iSeries_userid>** and **<iSeries_password>**.
9. Once you have entered the values, push the **Enter** key on your keyboard.

- You are now previewing your HATS application running in the test environment. Remember that this is just a default transformation of the 5250 green screen. Take a look around and see what the default transformation gives you. In the screen shot below, the **Work with Active Jobs** screen is shown where the options have been transformed into a drop-down list, by default (Figure 8).

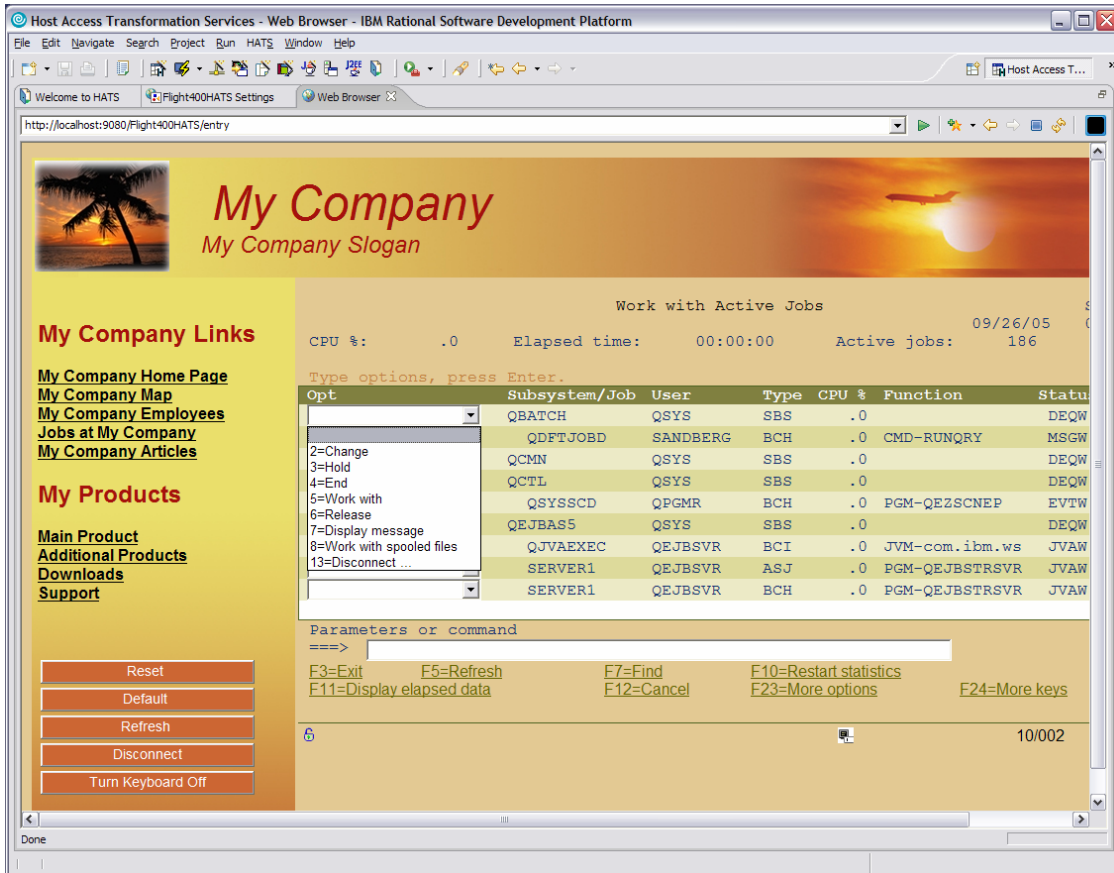


Figure 8: Work with Active Jobs screen

- Press **ALT-TAB** to switch to the display terminal window. You will see the same command displayed in that window (Figure 9).

```

HodConn:SANDBERGNode01Cell+SANDBERGNode01+server1...
Work with Active Jobs SE520&2
09/26/05 08:41:26
CPU %: .0 Elapsed time: 00:00:00 Active jobs: 186

Type options, press Enter.
 2=Change  3=Hold  4=End  5=Work with  6=Release  7=Display message
 8=Work with spooled files 13=Disconnect ...

Opt  Subsystem/Job  User      Type  CPU %  Function      Status
---  ---            ---      ---   ---    ---          ---
 1   QBATCH        QSYS      SBS   .0     DEQW          DEQW
 2   QDFTJOB      SANDBERG  BCH   .0     CMD-RUNQRY    MSGW
 3   QCMN         QSYS      SBS   .0     DEQW          DEQW
 4   QCTL         QSYS      SBS   .0     DEQW          DEQW
 5   QSYS3CD     QPGMR     BCH   .0     PGM-QE23CNEP EUTW
 6   QEJBAS5     QSYS      SBS   .0     DEQW          DEQW
 7   QJVAEXEC    QEJBSVR   BC1   .0     JVA-com.ibm.w JVAW
 8   SERVER1     QEJBSVR   ASJ   .0     PGM-QEJBSTRSVR JVAW
 9   SERVER1     QEJBSVR   BCH   .0     PGM-QEJBSTRSVR JVAW
More...

Parameters or command
===>

F3=Exit  F5=Refresh  F7=Find  F10=Restart statistics
F11=Display elapsed data  F12=Cancel  F23=More options  F24=More keys

M&A*  ho                               M01cell+sandbergnode01+server1|hats_ear6#  10/002
    
```

Figure 9: Work with Active Jobs display terminal window

Reviewing the Flight Reservation System application

To take a look at the Flight Reservation System application on the iSeries system, do the following:

1. In the command line, type: **GO FLGHT400/FRSMAN** to start the Flight Reservation System application.
2. Try **Create New Reservation and Reports** options and see the HATS default transformation (Figure 10). (Use for **Agent Name**: Mark, and for **Password**: mercury.) You will customize some of the defaults later on in this exercise.

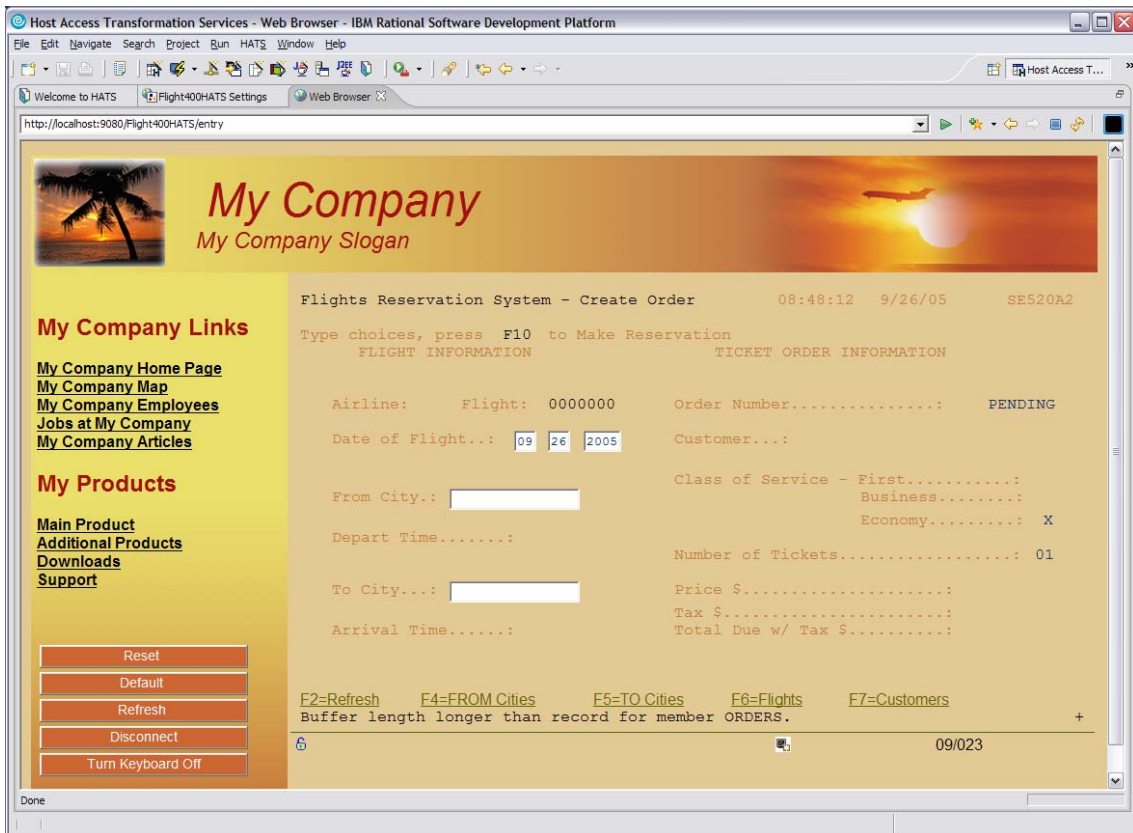


Figure 10: HATS default transformation

3. Exit the Flight Reservation System application.
4. Sign off from your iSeries system.

Modifying the template

The template you selected in the **Create HATS Project** wizard is the default used for each screen. In this section, you will locate the templates and then modify the default template.

Modifying the default template

Do the following:

1. Expand your HATS project, **Flight400HATS**.
2. Expand the **Web Content** folder.
3. Expand the **Templates** folder.

The template you selected during the creation of your HATS project will display (*default*) to the right of it. In the screenshot in Figure 11 below, the default template was **TropicalFlight** (default).

4. Double-click your (default) template. This will open the template in the editor.

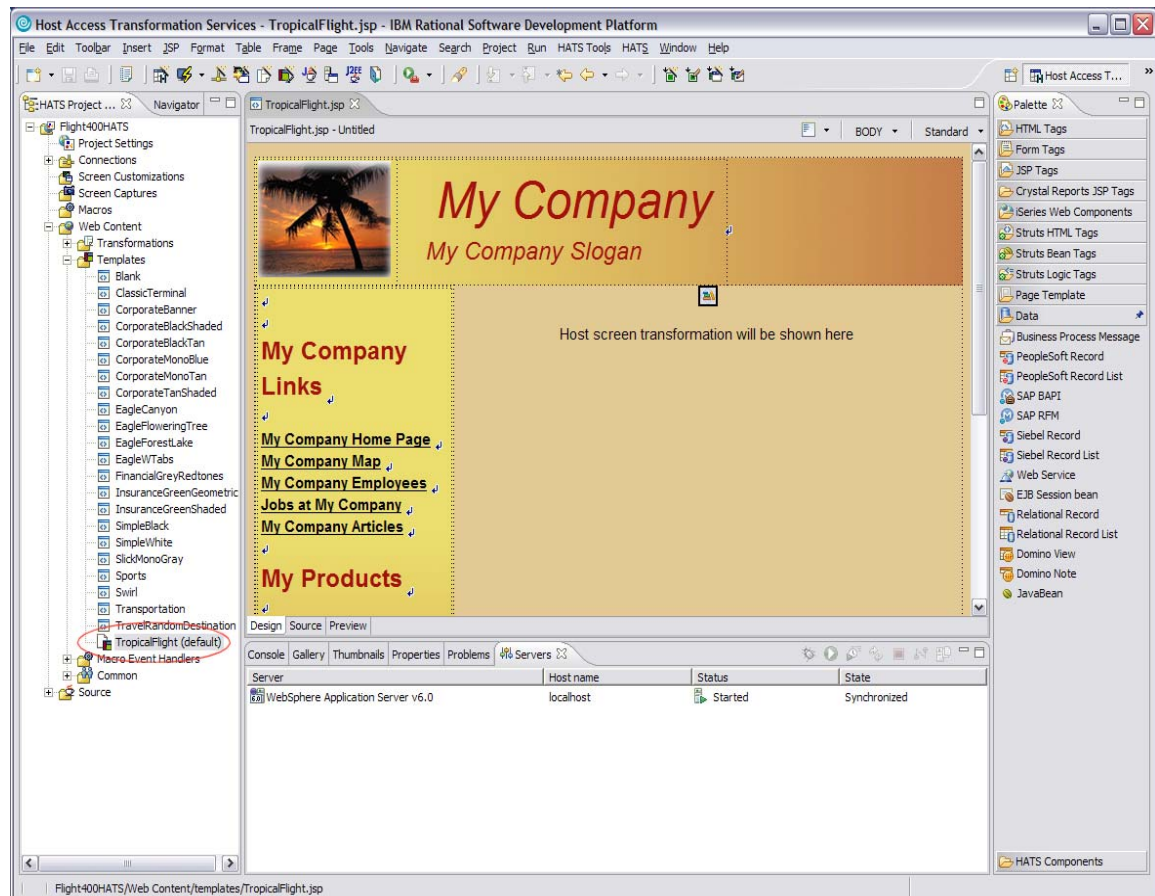


Figure 11: The default template

5. You will now see your default template in the editor. Notice that the editor has a **Design**, **Source**, and **Preview** view (see red circle in Figure 12). Take some time to familiarize yourself with the different views.
6. Return to the *Design* view by clicking **Design**.



Figure 12: Editor views

7. Click anywhere on **My Company** in the editor. Using the keyboard, replace the text with your company name. This example uses **IBM eServer iSeries**.

- Click anywhere on **My Company Slogan** in the editor. Using the keyboard, replace the text with a slogan of your choice. This example uses **"i" Stands for Integrated** (Figure 13).

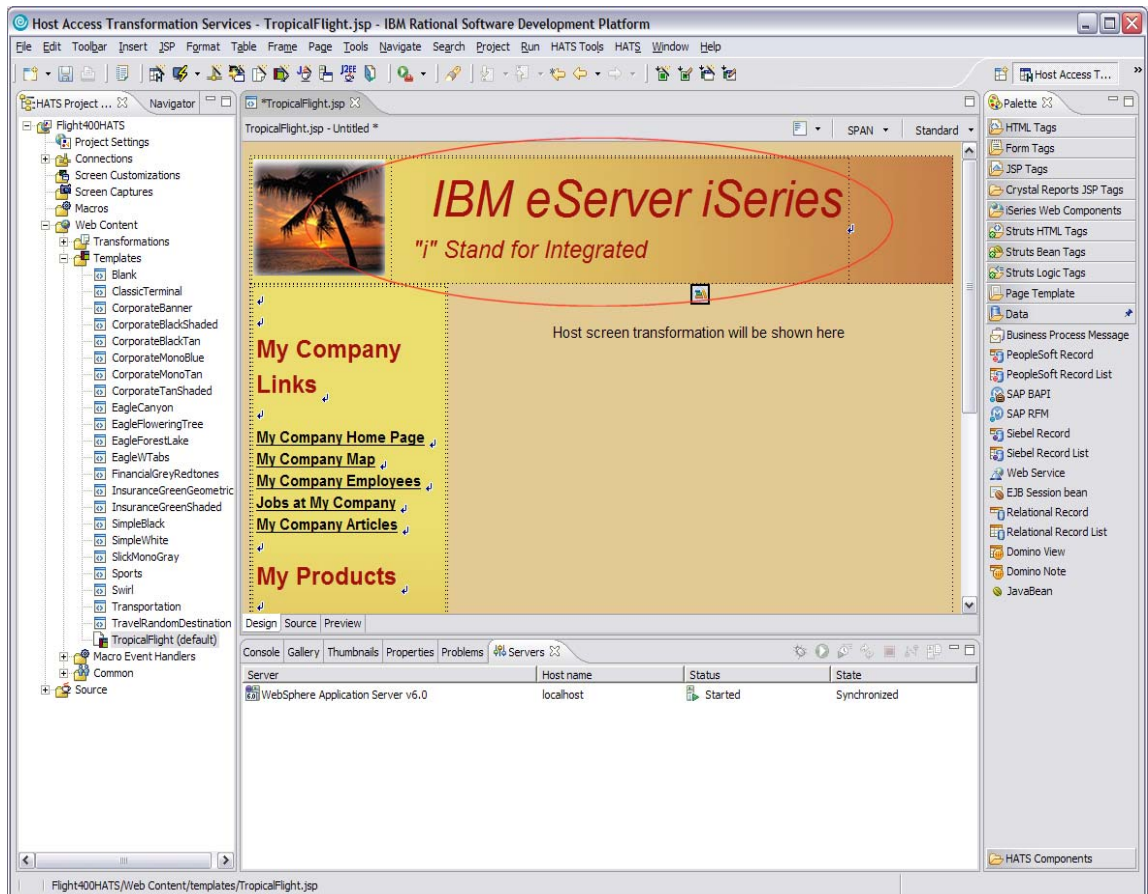


Figure 13: Changing company name and slogan

- Save the modifications done by going to **File > Save** or by pressing **CTRL+S**.

So far, you have only done a simple text change. On the default template, there are many other attributes for the fields.

- Right-click **My Company Home Page** and select *Properties* from the list. The bottom section will then show the *Attributes* for a HTML Link field. Notice that there is a **Link**, **Anchor**, and **Others** tab (Figure 14).

By selecting different fields, you will see the attributes change, depending upon the field selected. Try clicking different parts of the template to study the attributes.



Figure 14: My Company Home Page properties list

Next you will insert an image into the template.

- Click the **Gallery** tab at the bottom of the Web browser.

12. In the Gallery window, expand **Multimedia** and click **Animation**. This will automatically change you to the Thumbnails view (Figure 15) where you can see the contents of the Multimedia folder.

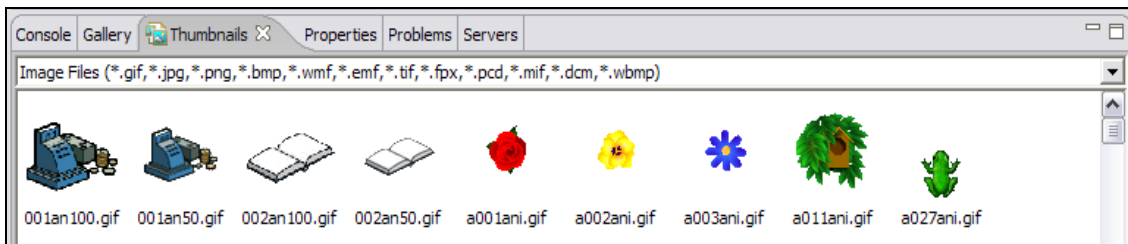


Figure 15: Thumbnail view

13. Scroll to the bottom of the **Thumbnails** window and locate u011ani.gif.
14. Click **u011ani.gif**, drag it onto your template, and drop it above My Company Links.

You can view how the template will be displayed by clicking the **Preview** tab at the bottom of the editor window (Figure 16).

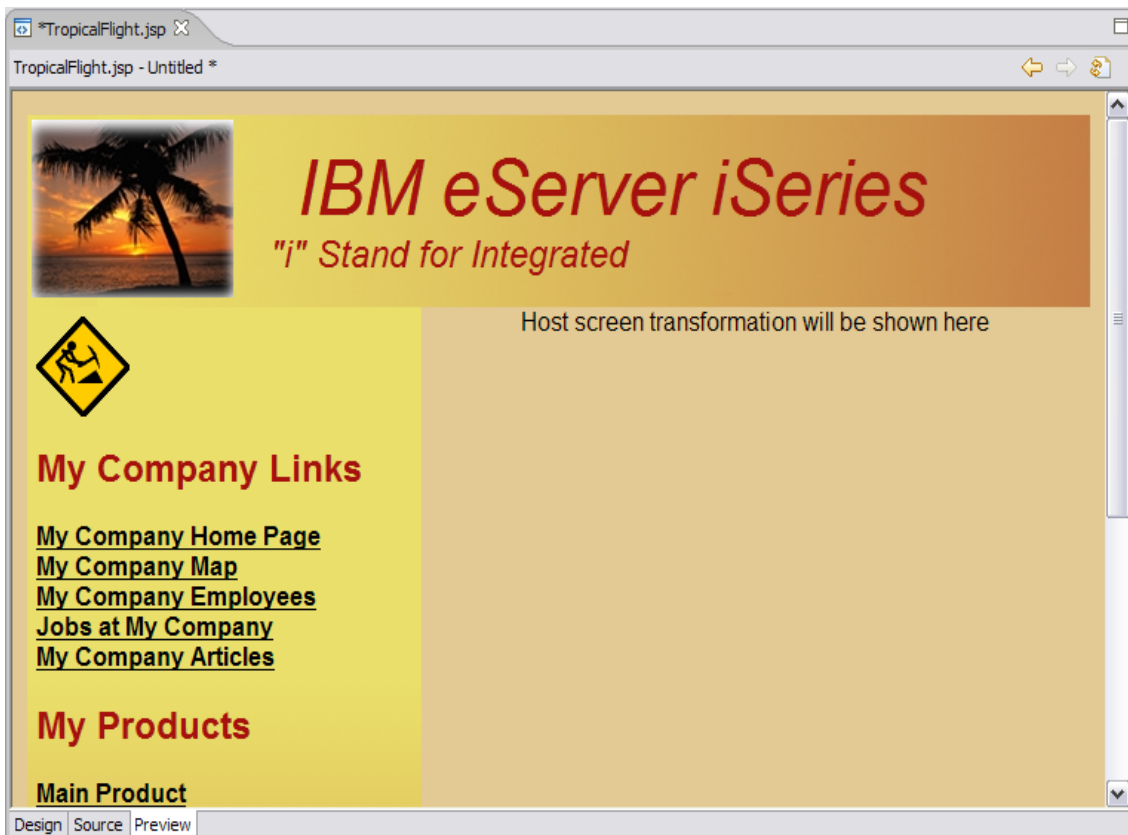


Figure 16: Preview thumbnail

15. Select **File > Save**, or press **CTRL+S**.

This will save the work you have completed so far. Once you have saved your work you can test the changes made.

Previewing your HATS application

Now you can glance at your HATS application by doing the following:

1. Right-click your project in the **HATS Project View** window and select **Run on Server** to open the *Display Terminal* window.
2. Click **Yes** to see the host view in the display terminal.
3. In the **Server** selection window, choose an existing server and under localhost select **WebSphere Application Server V6.0**.
4. Click **Finish**.

This will publish your modified application to the WebSphere Application Server test environment (Figure 17).

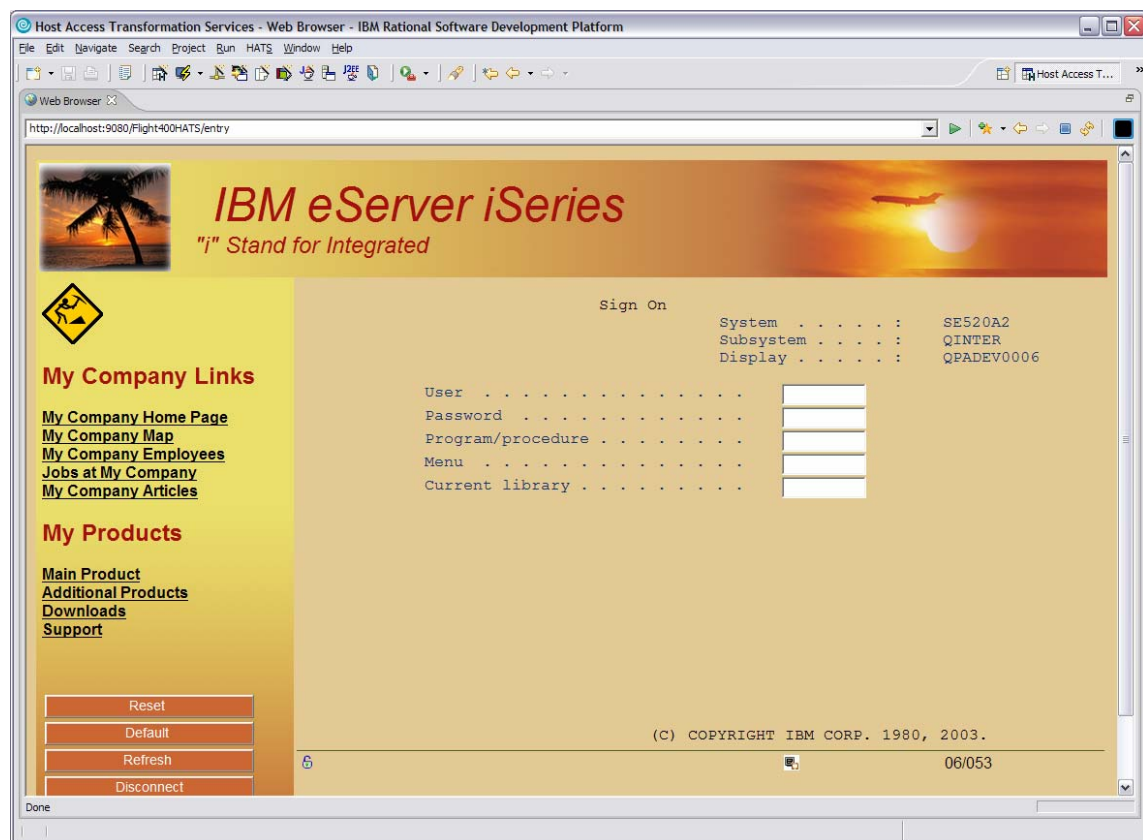


Figure 17: Modified application

You have now seen how the template can be easily modified and enhanced. New templates can even be created based on an existing Web site using the **Create HATS Template** wizard, allowing easy use of company style and content. Working with the template is the simplest method of changing the look of your HATS application. Much more powerful and dramatic enhancements are available working with the default rendering and global rules.

Changing the default rendering

The default rendering is an ordered set of conversion pairings and is used by the default transformation to change host components into HTML widgets. You saw the results in the previous steps when you ran your HATS application in the WebSphere Application Server test environment. In this section, you will view and modify the default renderings.

Project settings

Project settings can be modified by doing the following:

1. Expand your **Flight400HATS** project and double-click **Project Settings** (Figure 18). This will open the Flight400HATS settings to be viewed and modified.

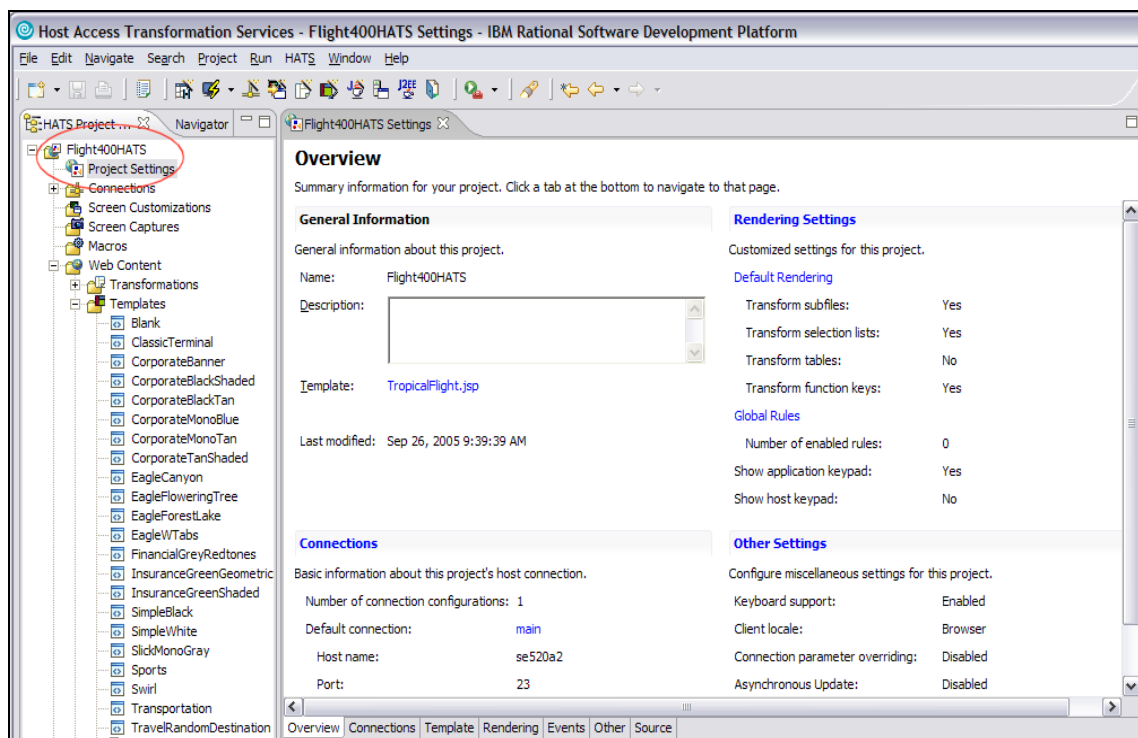


Figure 18: Project Settings view and tabs

Notice that like other windows in WebSphere Development Studio Client, the Flight400HATS Settings window has a set of tabs in the lower left corner of the window. In this example, the tabs are: **Overview**, **Connections**, **Template**, **Rendering**, **Events**, **Other**, and **Source**.

2. Click through the tabs and take some time to review the information available in each tab (shown at the bottom of Figure 18).

Changing the default rendering

The rendering that is produced by default can be modified. To do this, follow these steps:

1. Click the **Rendering** tab to work with the default rendering.

The default rendering works with the default transformation to change host components on the screen to widgets on the Web page. Certain host components map to specific widgets for conversion in the default transformation. A default list of mapping items is defined for projects. You can modify the list of items to suit your needs. These items are processed in the order in which they are listed. After a rendering item has been applied to a region of the host screen, that region is considered consumed and will not be processed again.

2. Double-click the **Flight400HATS Settings** window title to expand the window.
3. You will now change the default rendering for function keys. Click the **Transform function keys** box in the *Description* column (Figure 19).

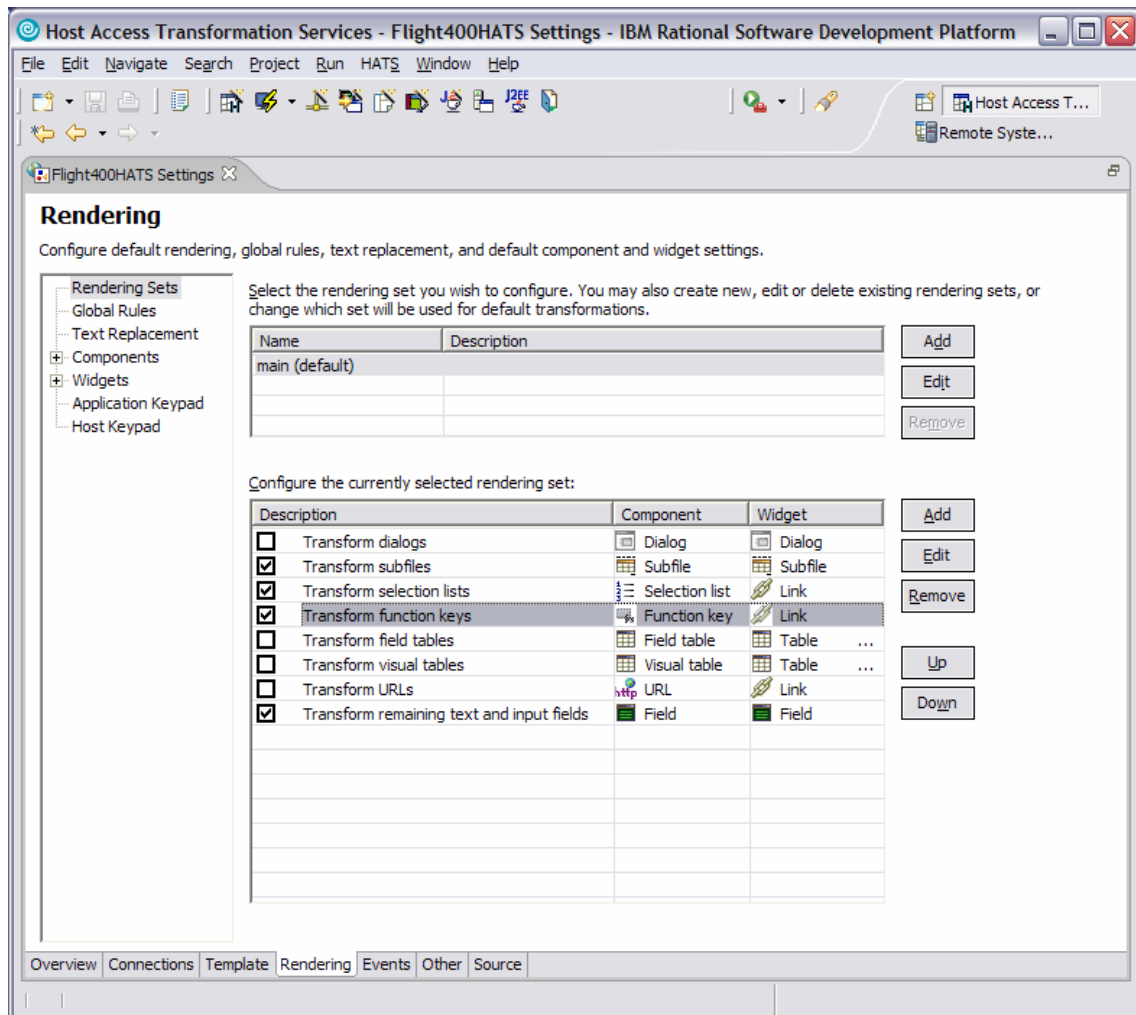


Figure 19: Select Transform function keys

4. Click the **Edit** button.

A window will pop up stating that you need to have a screen capture to add or edit a host component.

5. Click **Yes** to open the main Host Terminal window.
6. Click **OK** on the HATS **Tip** popup if displayed.

To work with function key transformation, you need to capture a screen with function keys (Figure 20).

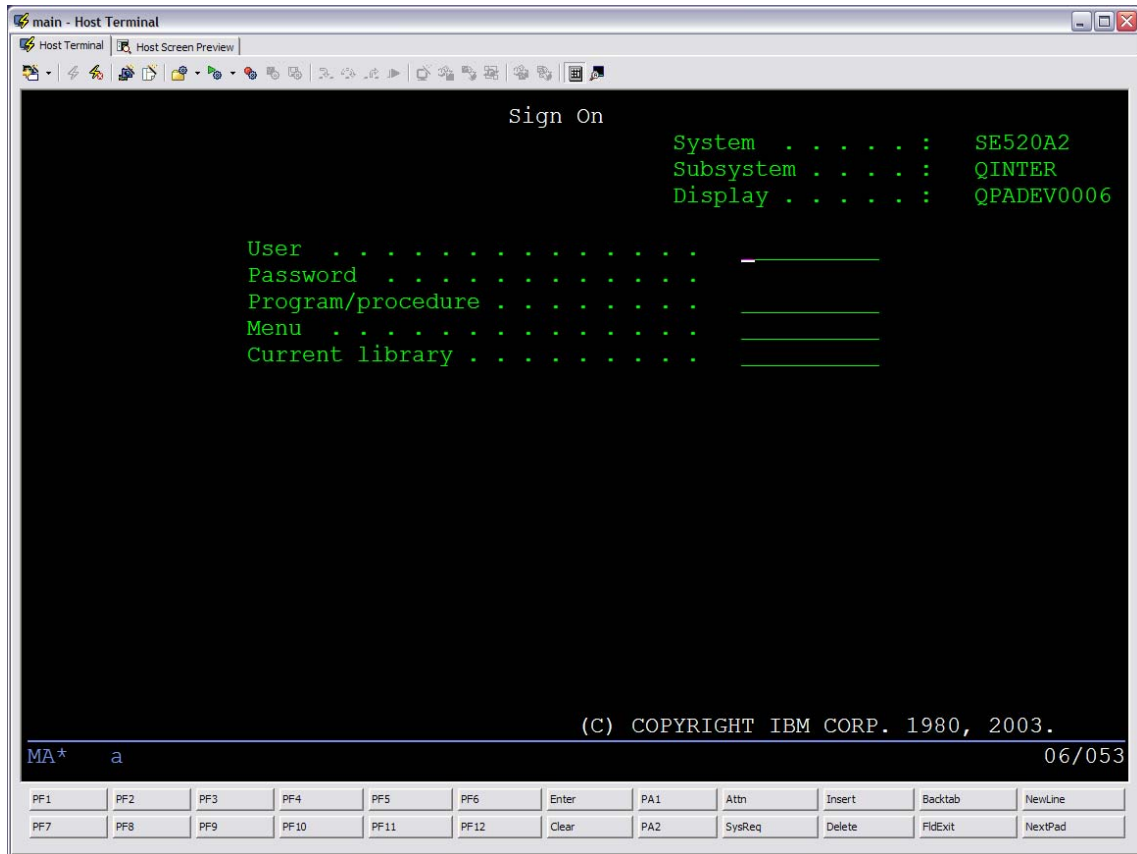


Figure 20: Screen with function keys

7. Sign on to the iSeries system using your **<iSeries_userid>** and **<iSeries_password>**.

After logging on to the iSeries system, you will see the IBM OS/400® Main Menu screen.

- Click the **Create Screen Capture** button (Figure 21).

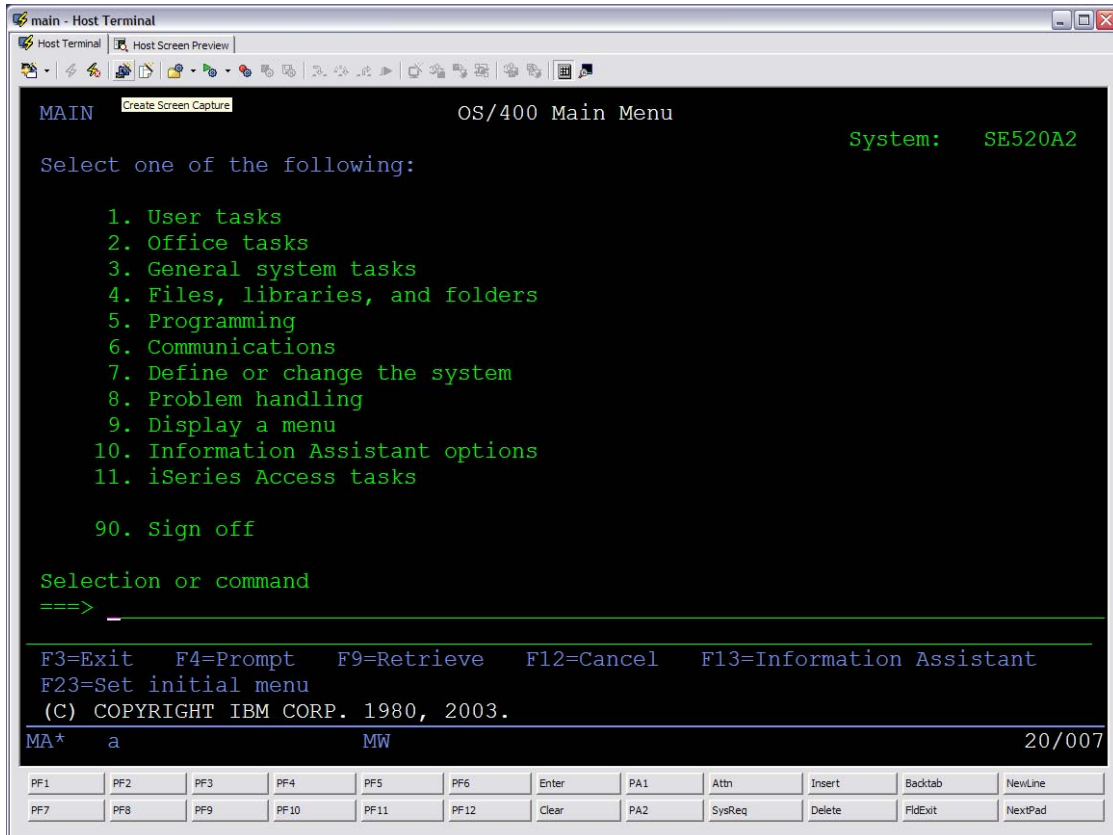


Figure 21: OS/400 Main Menu screen and Create Screen Capture button

- Accept the defaults on the *Create Screen Capture* window.
- Click **Finish**.
- Sign off of the iSeries Host Terminal session.
- Close the main Host Terminal window.

Now you can edit the Transform function keys' default rendering.

- Select the **Transform function keys** box.
- Click the **Edit** button (Figure 22).

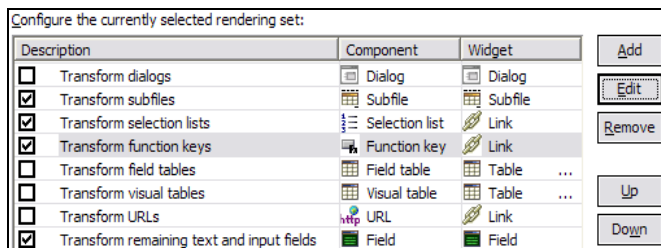


Figure 22: Configure the currently selected rendering set

15. Accept the default description in the **Edit a Default Rendering Item** window.
16. Click **Next**.
17. Accept the defaults in the **Select Screen Region**.
18. Click **Next**.

The Rendering Options screen is where you make the connection between components on the iSeries host screen and widgets that are displayed in the browser.

19. Click **Function key** under *Components*. You can then preview these in the Component Preview section (Figure 23).

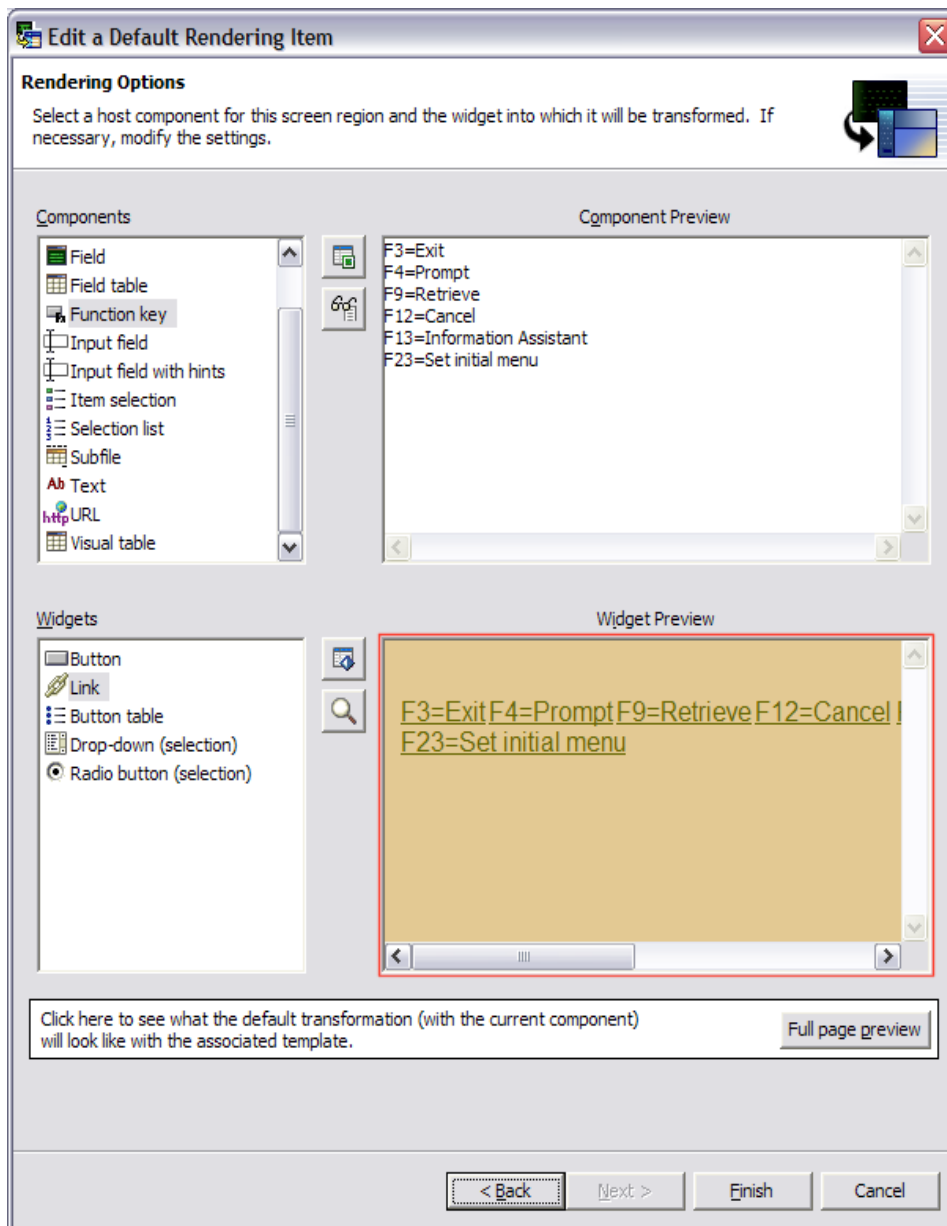


Figure 23: Function key component preview

20. Under *Widgets*, click **Button**, **Link**, **Button table**, **Drop-down (selection)**, and **Radio button (selection)** one after another.

A preview of each will be shown under the Widget Preview (Figure 24).

21. **Select** your preferred method for displaying Function Keys, then click **Finish**.

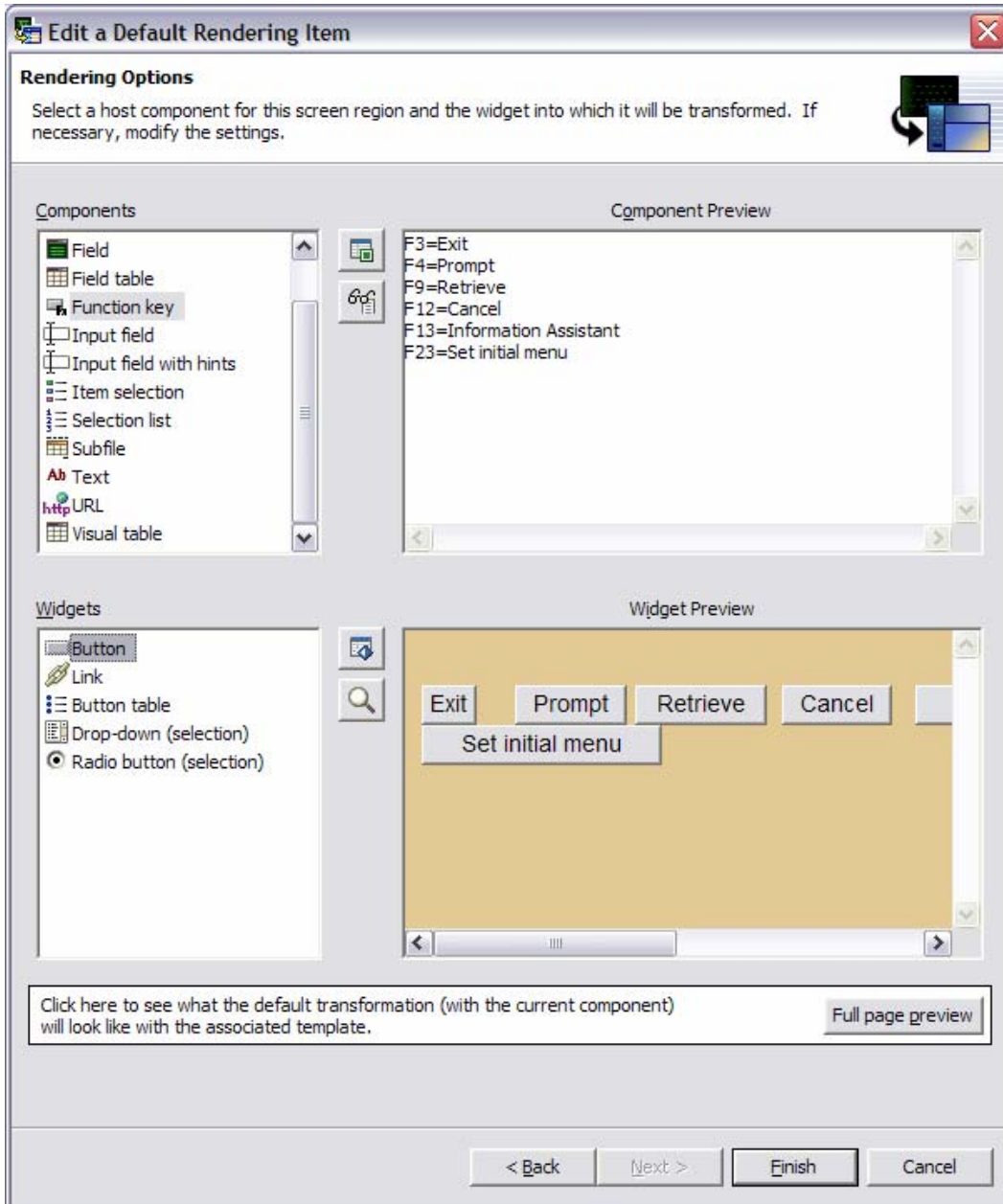


Figure 24: Widget component preview

22. Save the Flight400HATS Settings by going to **File > Save** or by pressing **CTRL+S**.
23. Double-click the **Flight400HATS Settings** window title to go back to the original size.

Previewing your HATS application

To visually experience your new HATS application, do the following:

1. Right-click your project in the HATS Project View window and select **Run on Server** to open the *Display Terminal* window.
2. Click **Yes** to see the host view in the display terminal.
3. In the Server Selection window, choose an existing server and select **WebSphere Application Server V6.0** under localhost.
4. Click **Finish**.

This will publish your modified application to the WebSphere Application Server test environment.

5. Sign on to the iSeries system using your **<iSeries_userid>** and **<iSeries_password>**.
6. On the command line type: **GO FLGHT400/FRSMAN** to start the Flight Reservation System application.
7. Try the **Create new reservation and Reports** options and see the modified transformation for the function keys. (Use for the Agent Name: **Mark** and for the Password: **mercury**.)

Function keys are now transformed into buttons instead of hyperlinks (default) (Figure 25).

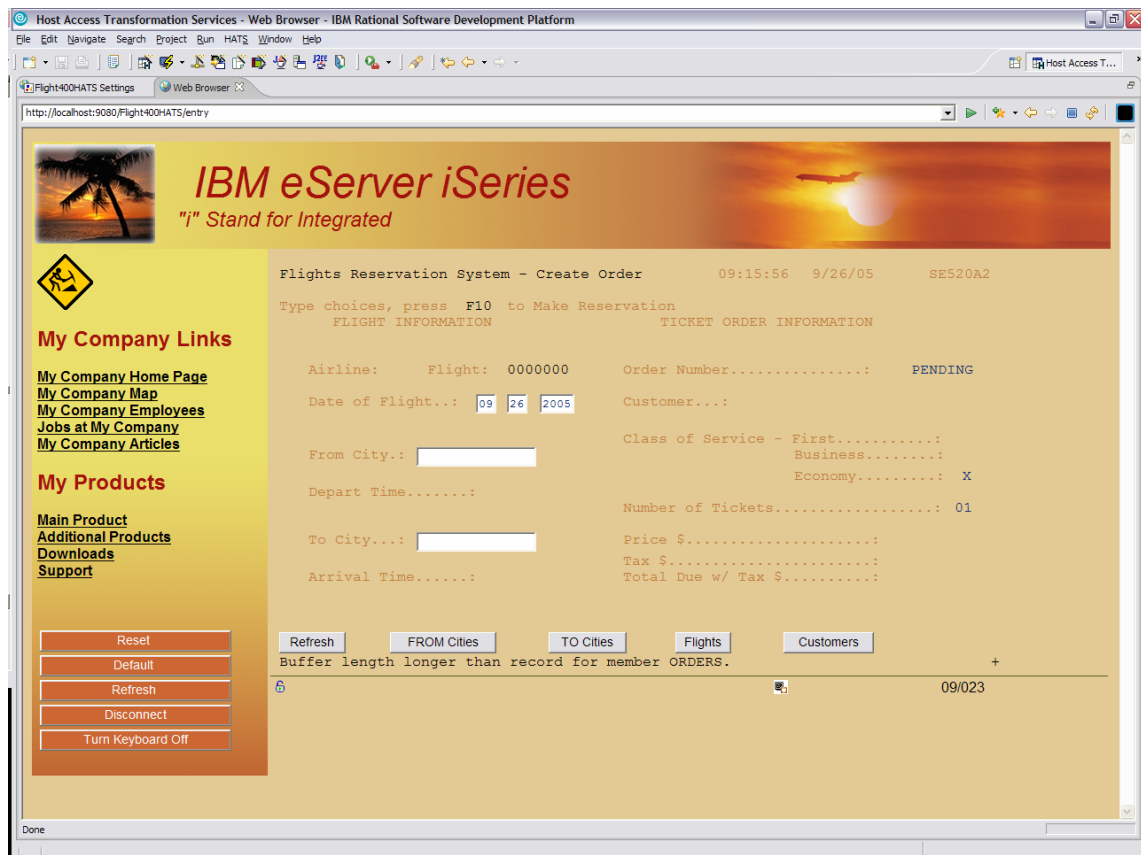


Figure 25: Transformed function keys

You have now changed the default rendering for function keys. As you saw working through the steps in this section, there are far more options than are presented in this lab.

In addition to default rendering, there are global rules. As default rendering works with the default transformation, global rules enable you to define component-to-widget mappings for all your transformations.

Although the mappings are similar to default rendering, global rules apply only to input field components. There are no default mapping items defined. When you define global rules, they take precedence over any default rendering items and components-to-widget mappings defined in specific transformations.

Customizing a screen

A screen customization has two parts:

- A set of criteria for matching host screens
- A list of actions to be taken when a host screen matches these criteria.

The screen customization is at the heart of the HATS application's rules-based processing of host screens. Each screen customization includes a set of criteria that determine which host screens are to be applied. When a host screen matches these criteria, the HATS application executes the actions that are defined in the screen customization. These actions can include the following:

- Applying a transformation to the host screen
- Extracting, setting, or inserting data or the value of a global variable
- Running a macro or macro transaction
- Calling Java™ methods to execute business logic
- Displaying a specified Web page (URL)
- Sending a key to the host application
- Forwarding control to a URL

In this section, you are going to customize the **Sign On** screen. You will do this by creating a set of criteria to recognize the screen and then develop a list of actions to be taken when the *Sign On* screen is recognized.

Creating a screen customization

You can customize the screen by doing the following:

1. Open the **HATS Host Terminal** by clicking the icon in the toolbar (Figure 26).

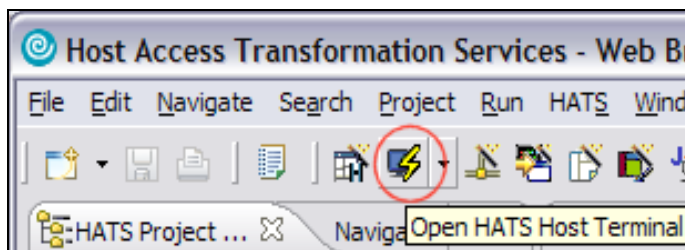


Figure 26: Open HATS Host Terminal

2. The main **Host Terminal** window will open to the *Sign On* screen of the iSeries system. (This is the screen that needs to be customized.)
3. Click the **Create HATS Screen Customization** icon (Figure 27).

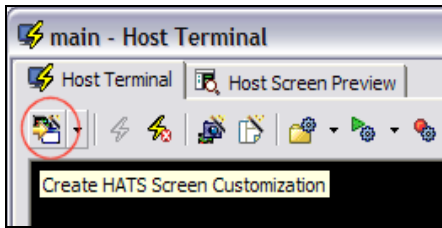


Figure 27: Create HATS Screen Customization

4. Accept the defaults on the New Screen Customization screen.
5. Click **Next**.
6. The next step in the wizard is **Select Screen Recognition Criteria**. You will identify your **Sign On** screen by the string value **Sign On**.
7. Under **Within a rectangular region** (Figure 28), enter the row and column values. Enter these values in their corresponding fields: Starting row **1**, Starting column **36**, Ending row **1**, Ending column **42**.
8. Click **Next**. (You can also use guides on the yellow dotted line box to change the size to match the coordinates.)

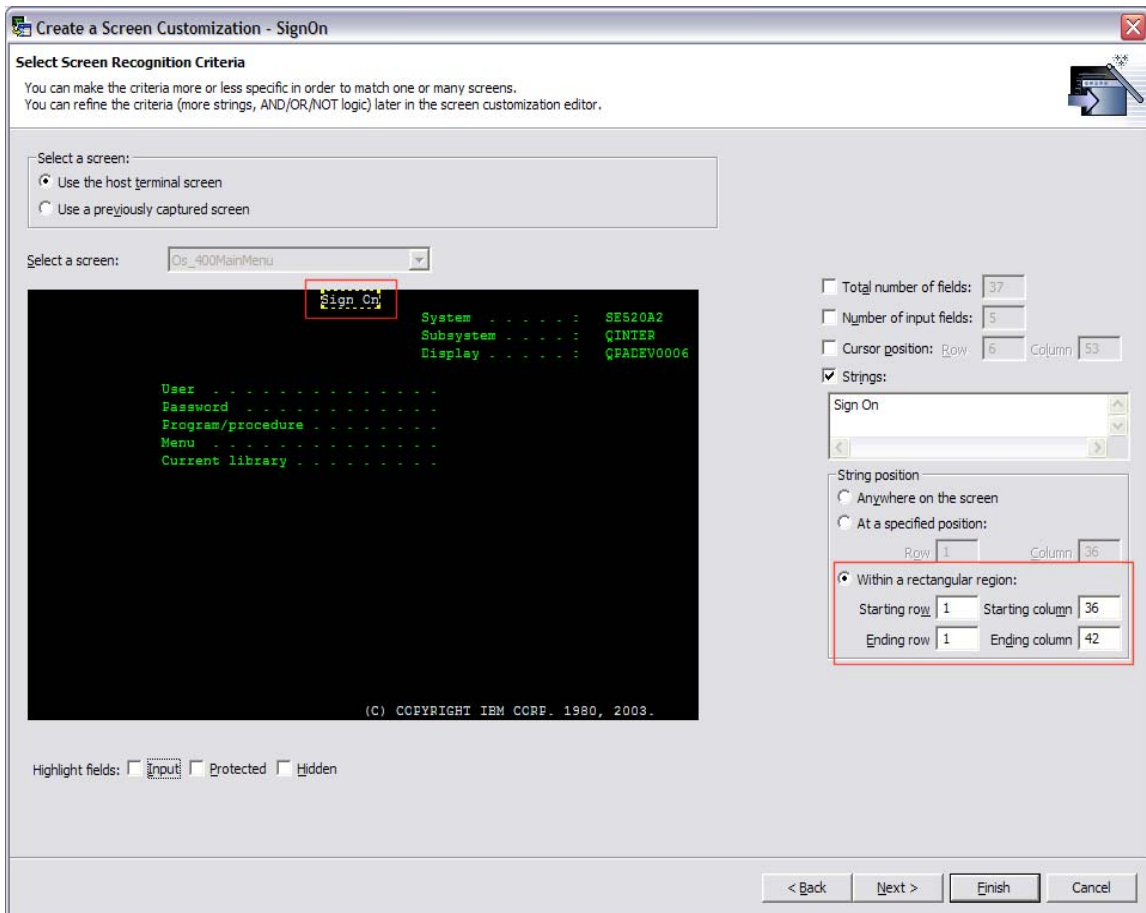


Figure 28: Define the rectangular region settings

9. Click the **Prepopulated** host components radio button (Figure 29).

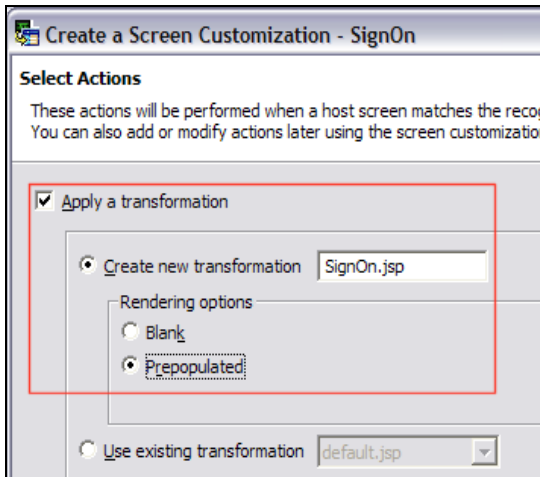


Figure 29: Prepopulated component

10. Click **Finish**.

11. SignOn.jsp is a JavaServer Page™ (JSP™) that opens up in the JSP editor with a view (Figure 30) of the HATS palette on the right side.
12. Click **HATS Components** to open that drawer.

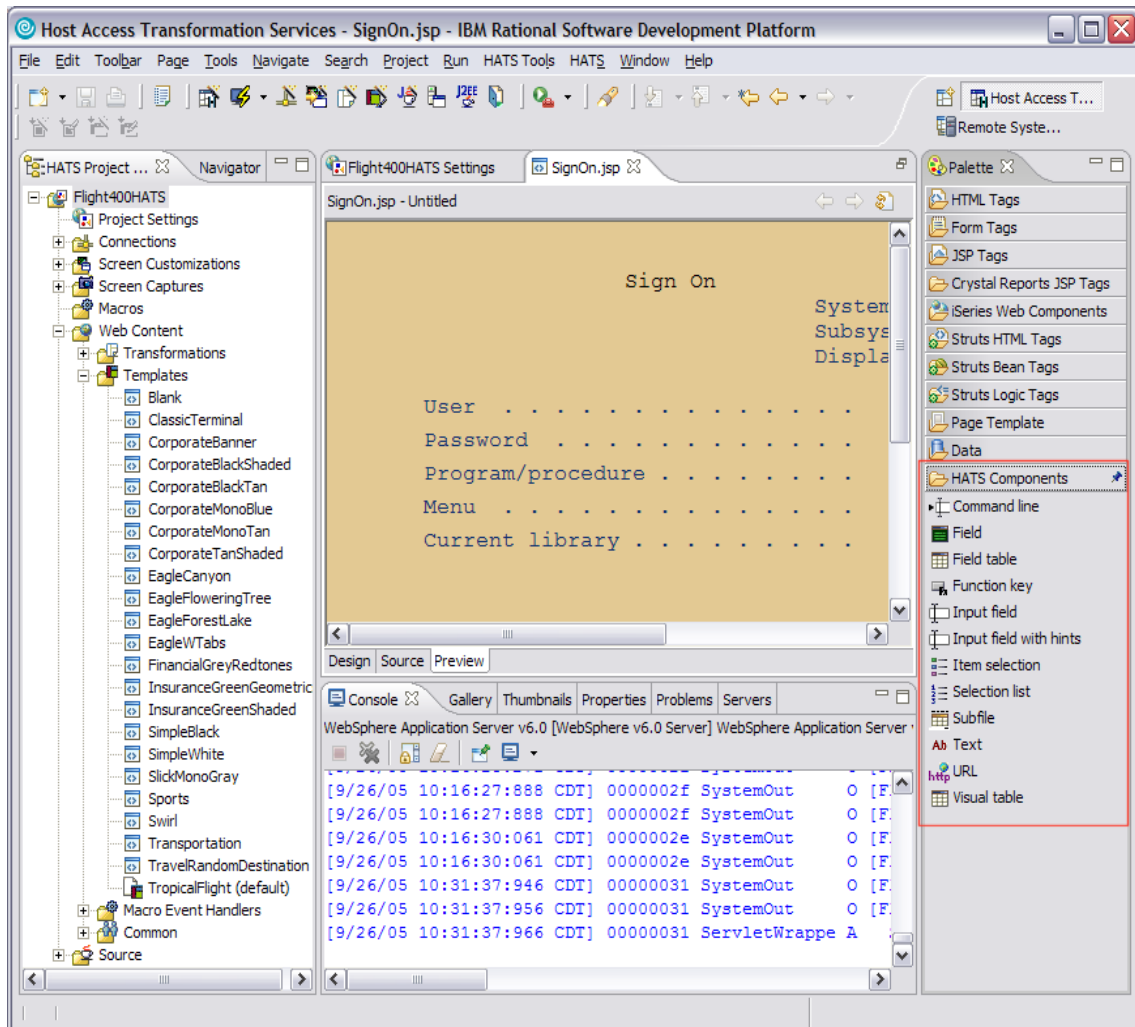


Figure 30: HATS components

13. In the JSP editor window, you can click any screen component (for example, the **Sign On** text).

- Click the **Properties** view at the bottom to see the properties for that screen component. In the properties view, you can see components and the widget applied to that screen component (Figure 31).

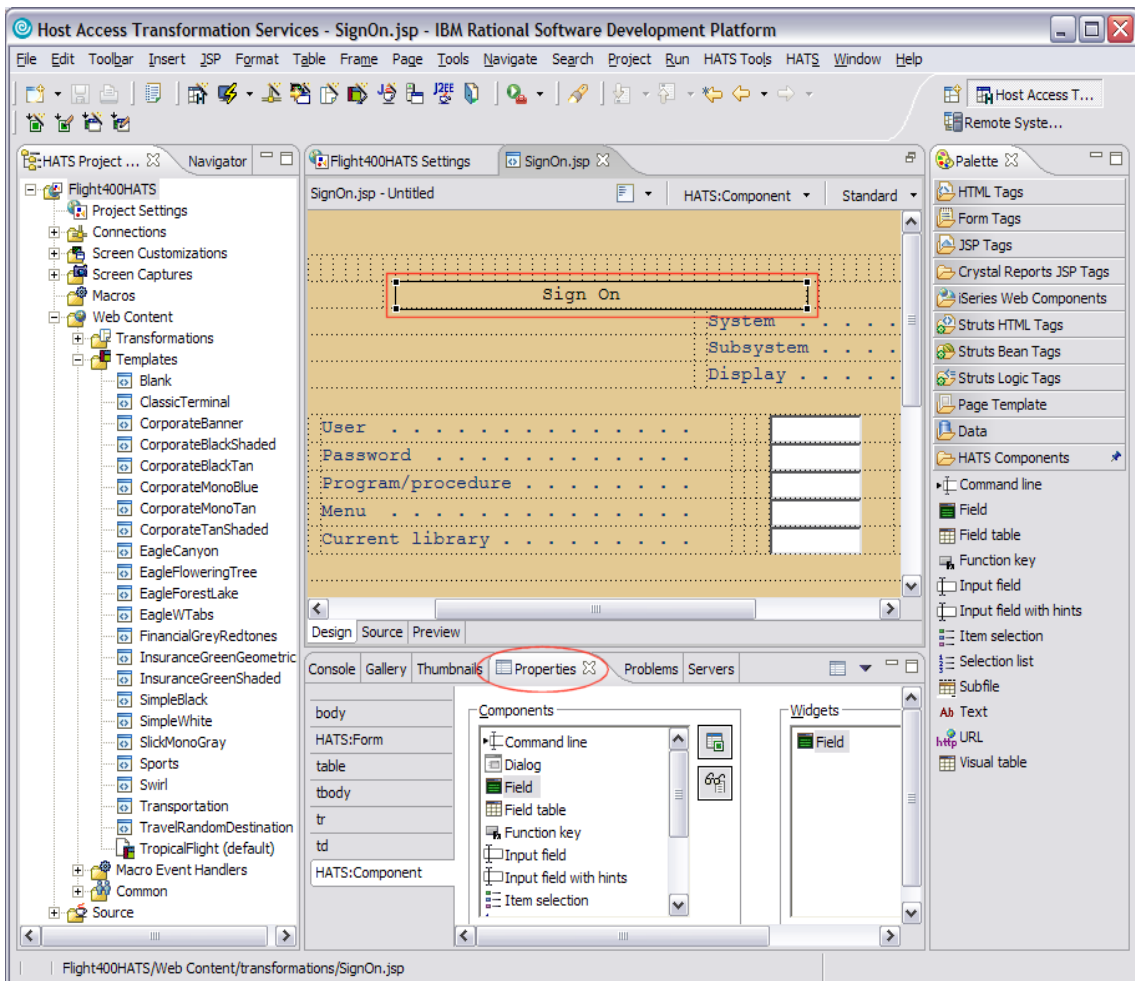


Figure 31: Screen component properties view

- To replace the **Sign On** text click the **Text Replacement** icon (Figure 32).

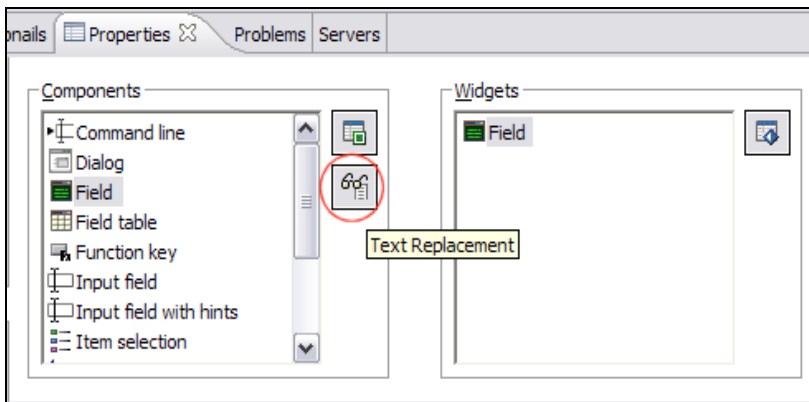


Figure 32: Replacing component text

16. Click **Add** in the Text Replacement window.
17. In the **Replace** text field, enter **Sign On** (Figure 33).
18. In the text field under **Text or HTML** enter **<h3>Welcome to the IBM eServer iSeries Sign On page, please log in.</h3>** .
19. Click **OK**.

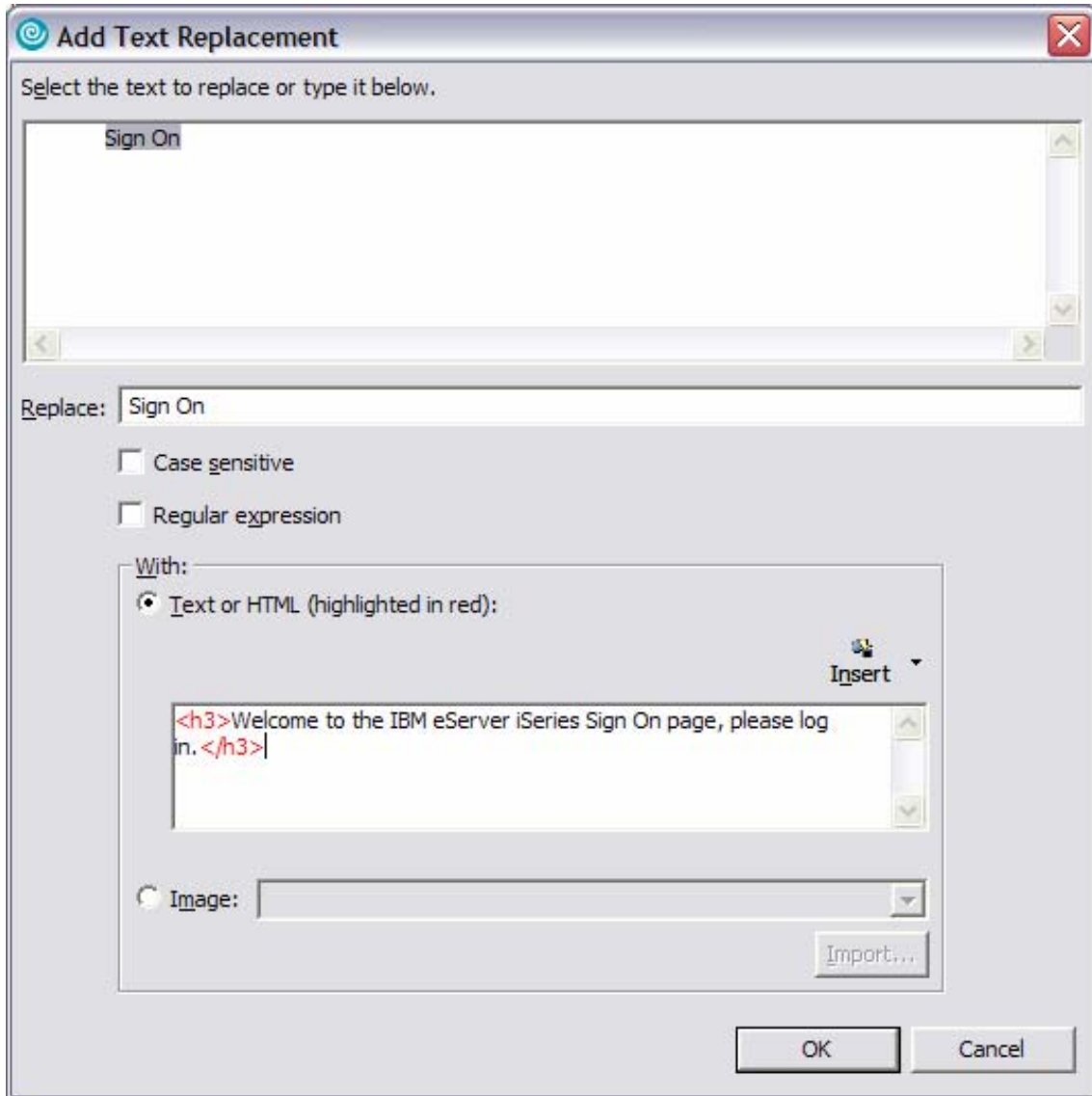


Figure 33: Replacing text

20. In the **Text Replacement** window, click **OK**. You will see the text replaced with new text (Figure 34).

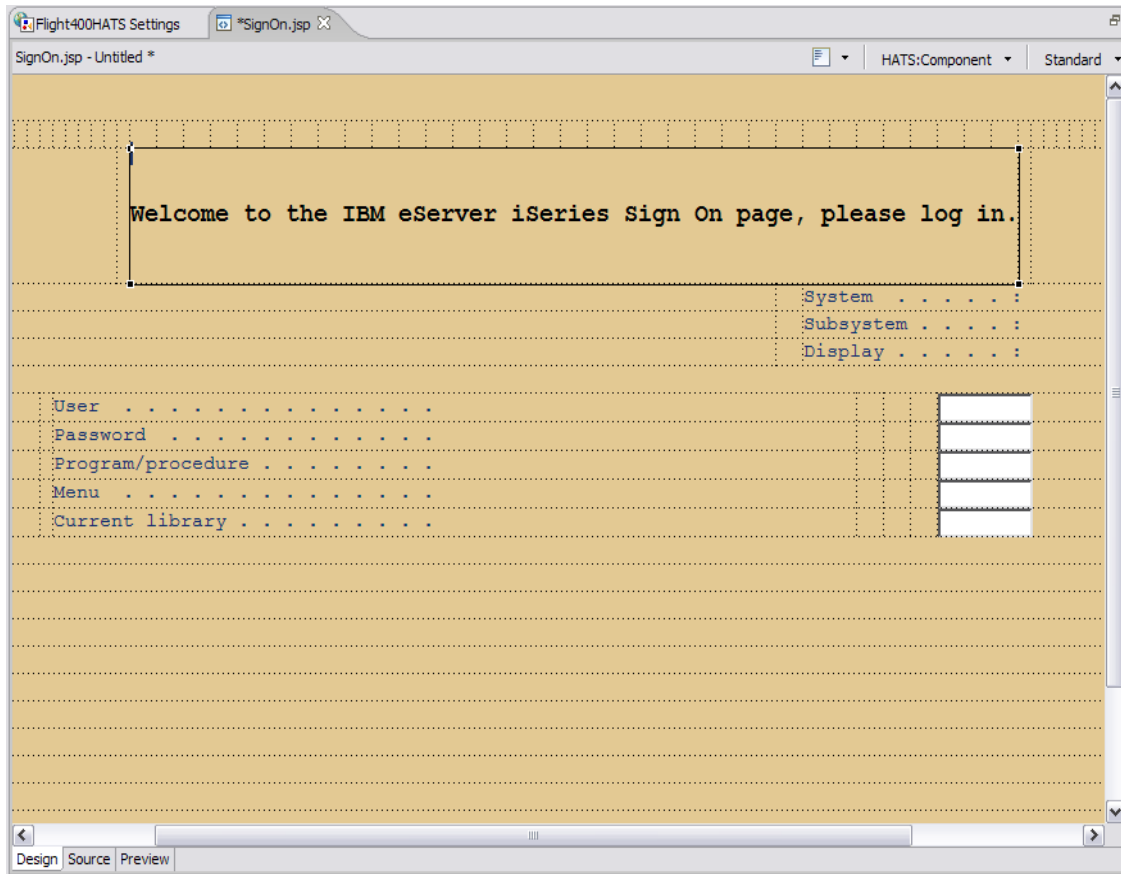


Figure 34: The new text

21. Save SignOn.jsp by going to **File > Save** or by pressing **CTRL+S**.
22. Click **X** to close the SignOn.jsp window.

Previewing your HATS application

Now you can look at you HATS application by doing the following:

1. Right-click your project in the HATS Project View window and select **Run on Server** to open the *Display Terminal* window.
2. Click **Yes** to see the host view in the display terminal.
3. In the **Server** selection window, choose an existing server and select **WebSphere Application Server V6.0** under localhost.
4. Click **Finish**. This will publish your modified application to the WebSphere Application Server test environment.

You will see the iSeries sign-on screen with the replacement text (Figure 35).

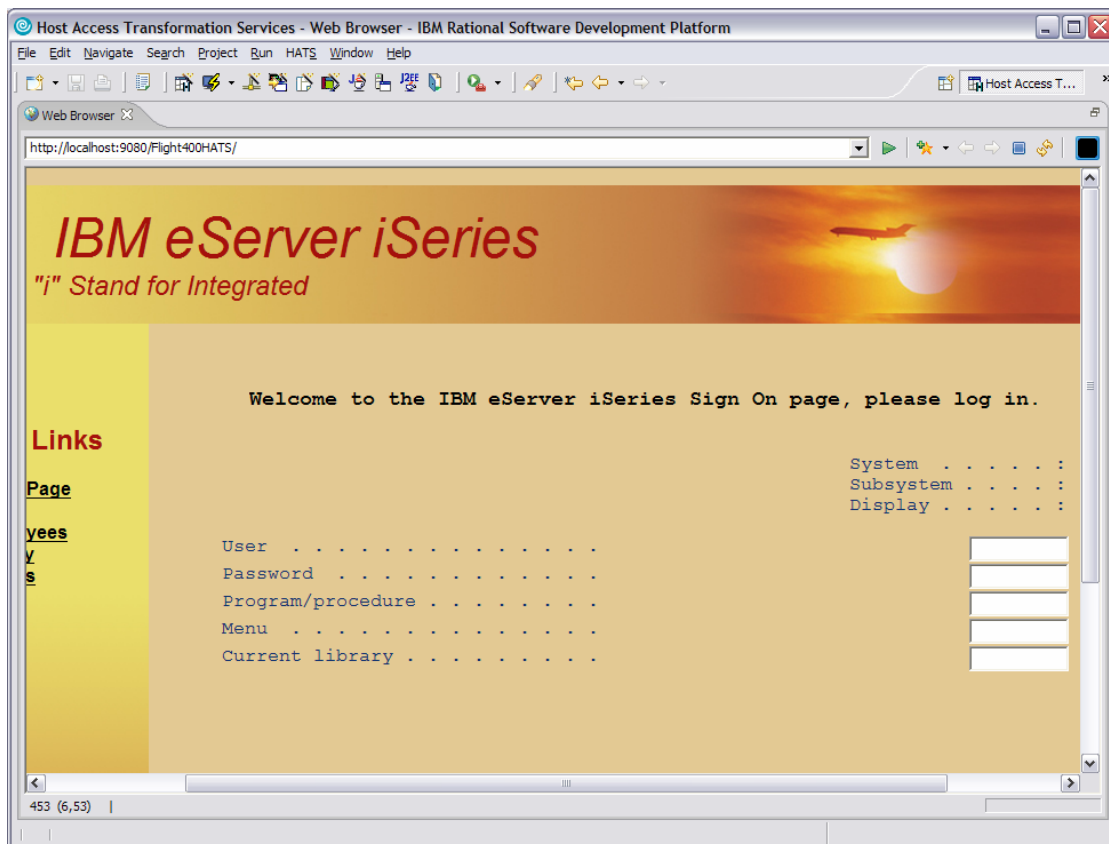


Figure 35: iSeries sign-on screen with new text

With **Screen Customization**, you can affect a single screen or sets of screens depending on the **Screen Recognition Criteria**. This very powerful technique combined with *Transformation* and other functions in HATS allows almost limitless customization of your application.

Working with macros and integration objects

Macros can be used for many useful purposes, such as:

- Skipping host screens
- Automating common user paths (including repetitive looping)
- Combining data from many host screens into one JSP
- Prompting for and extracting data

Integration objects are macros in a Java wrapper. You can create one by right-clicking over a macro in the navigation pane and selecting from the context menu. Macros and integration objects can be created on secondary connections rather than the HATS default (or primary) connection, which is used for all transformations. Secondary connections allow back-end data operations to be specified as actions in screen customizations or other events.

You will now create a simple macro logon macro.

Recording a macro

You can record a macro by doing the following:

1. Open the main Host Terminal by clicking the **Open HATS Host Terminal icon** in the toolbar (Figure 36).

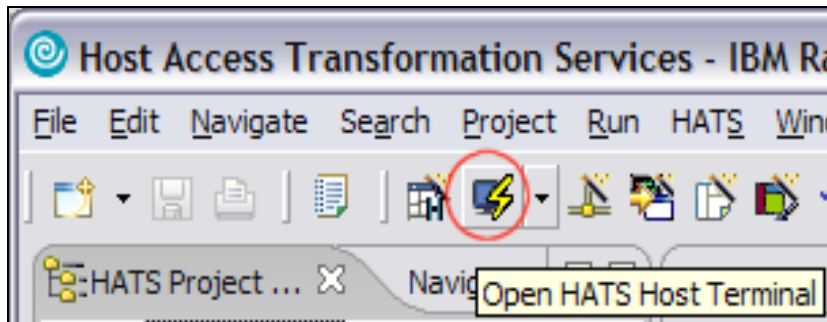


Figure 36: HATS Host Terminal

2. Click the **Record Macro Icon** (Figure 37).

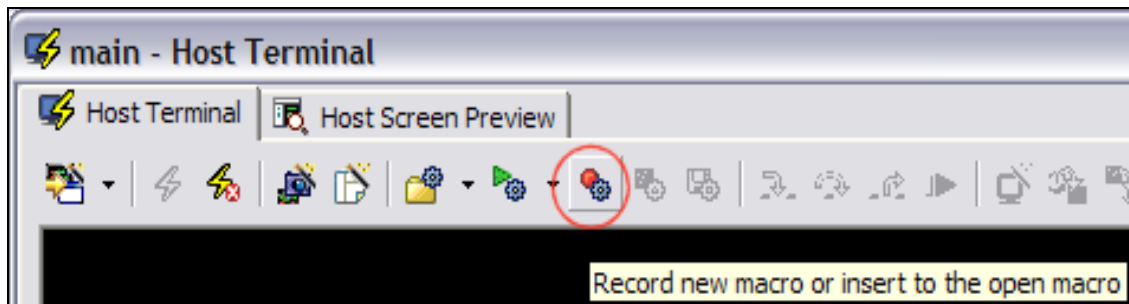


Figure 37: Record Macro icon

3. The *Record Macro* window will pop up.
4. Accept the defaults and click **Finish**.

5. On the **Define Screen Recognition Criteria** screen (Figure 38), define the starting screen of the macro window and accept the defaults.
6. Click **Finish**.

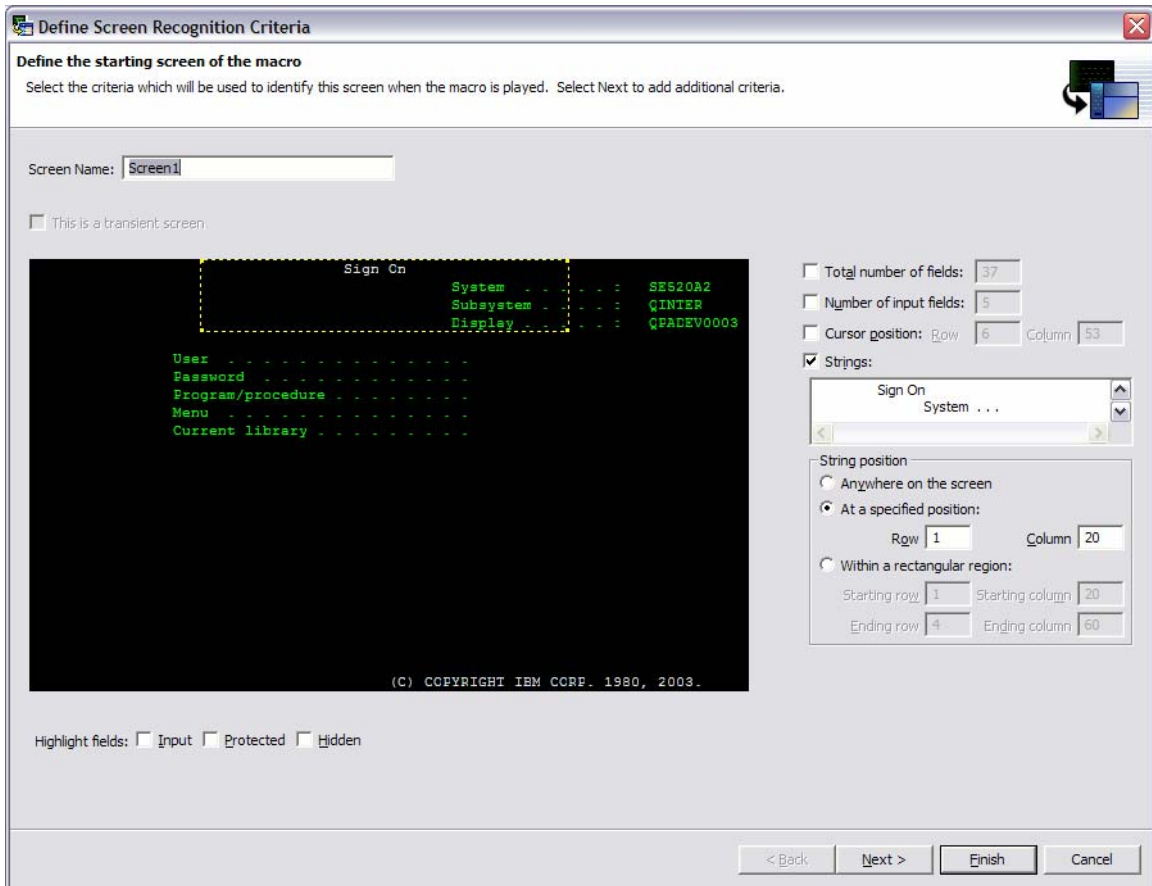


Figure 38: Define Screen Recognition Criteria screen

7. HATS is now recording what you do in the terminal session. Enter the following information (Figure 39):
 - User: enter your **<iSeries_userid>**. Check the macro information getting recorded in the Macro Navigator window.
 - Password: enter your **<iSeries_password>**
 - Menu: enter **FRSMAIN**
 - Current library: enter **FLGHT400**

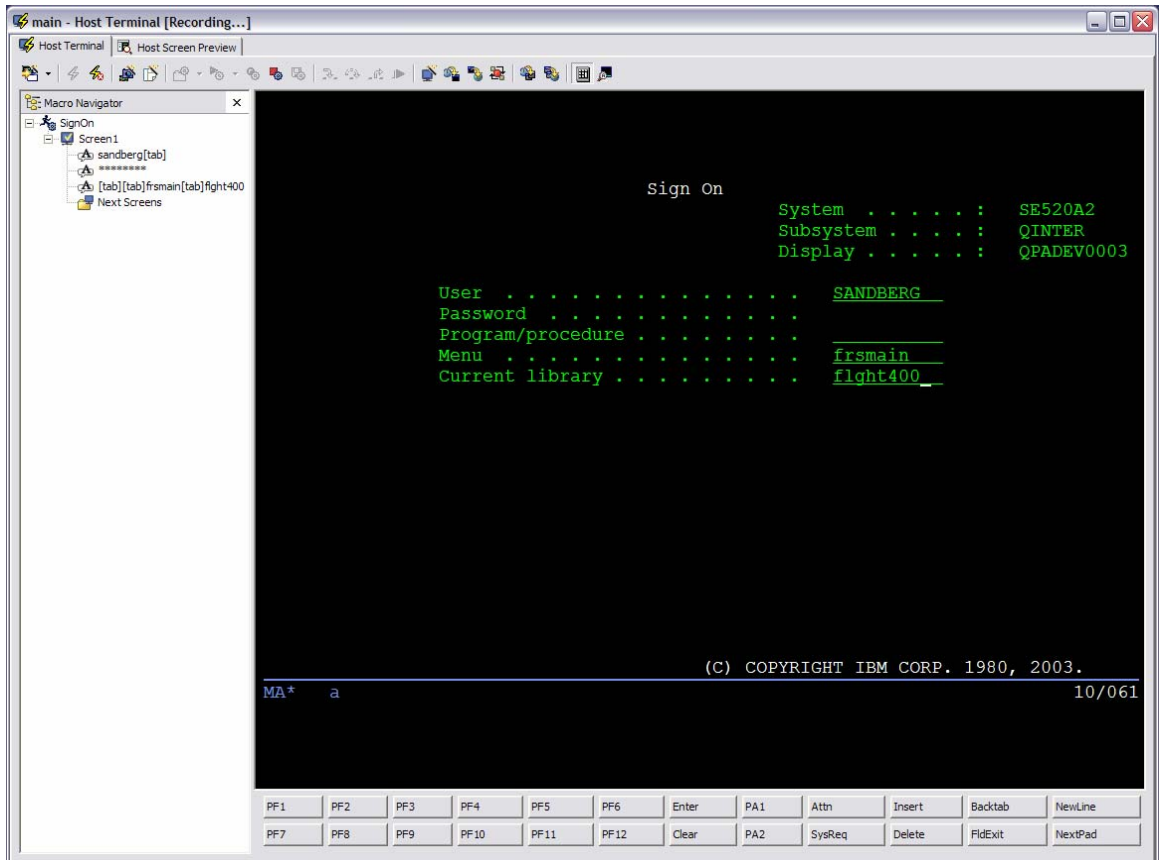


Figure 39: Enter sign-on information

8. Press the **Enter** key.
9. Click the **Stop Macro** icon (Figure 40).

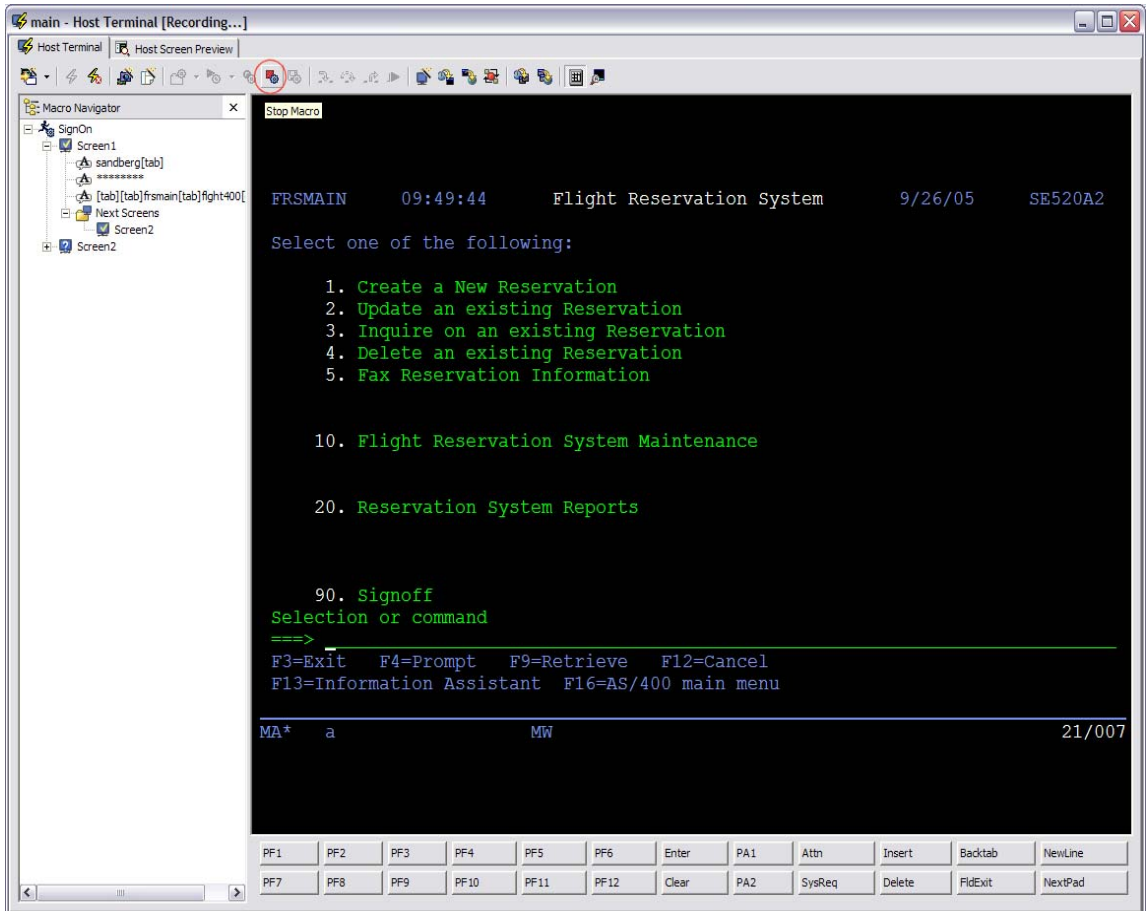


Figure 40: Stop Macro icon

After you click the **Stop Macro** icon, the *Define Screen Recognition Criteria / Define the Exit Screen* of the macro window pops up. You will identify the sign-on screen by the string value Flight Reservation System.

10. Under **Within a rectangular region** (Figure 41) enter the row and column values. Enter these values in their corresponding fields: Starting row **1**, Starting column **28**, Ending row **1**, and Ending column **52**. (You can also use the guides on the yellow dotted line box to change the size to match the coordinates.)
11. Click **Finish**.

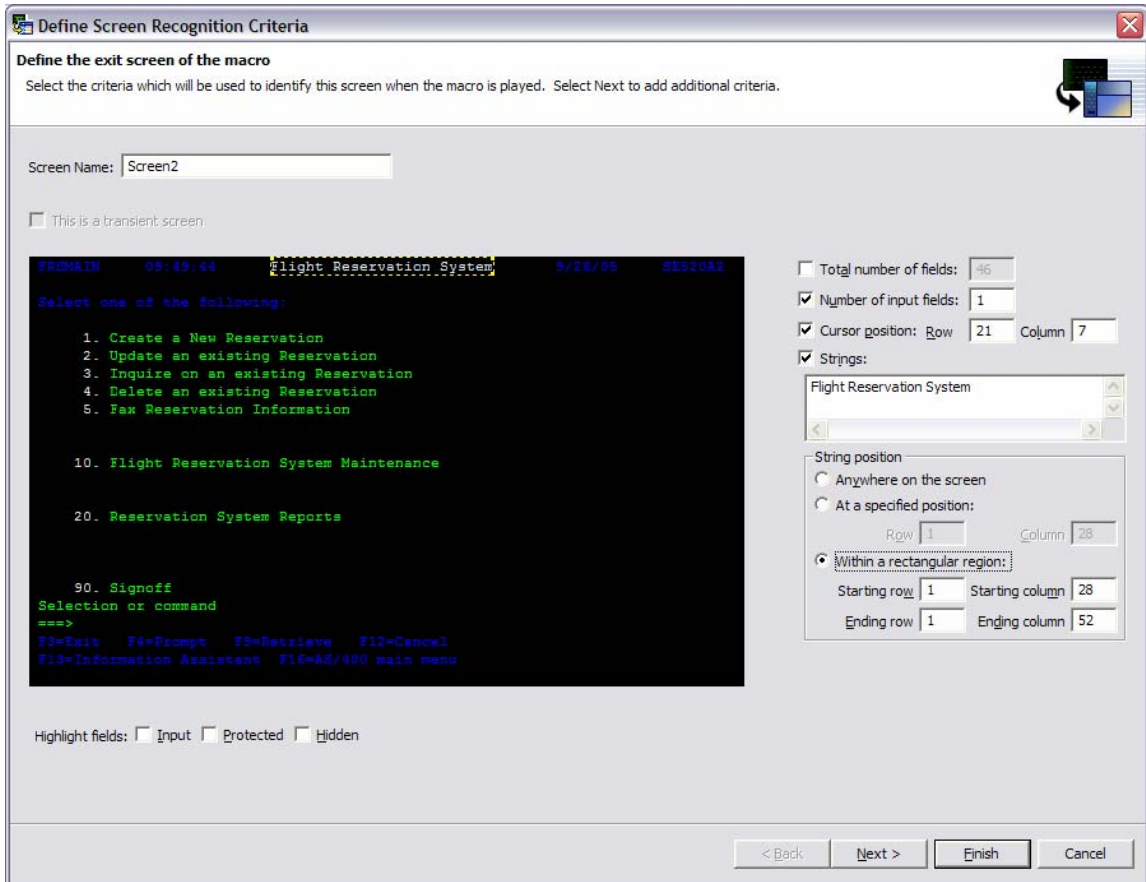


Figure 41: Enter the row and column values

12. Click the **Save Macro** icon (Figure 42).

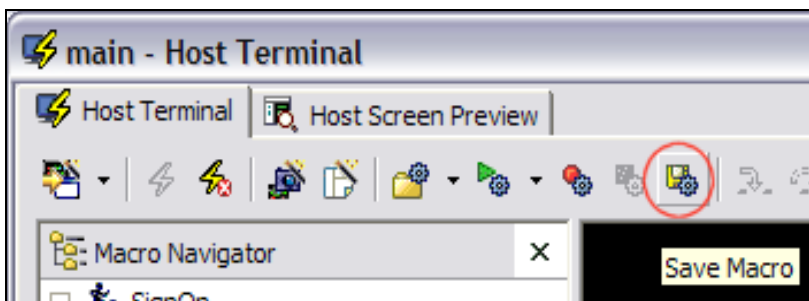


Figure 42: The save Macro icon

13. Sign off the 5250 session.

Testing the macro

At last, it is time to test the macro to ensure that it is working as expected. Do the following:

1. Sign off the 5250 session and then click the **Play Macro** icon (Figure 43). It will log you on to the iSeries system and take you to the Flight Reservation System main menu.

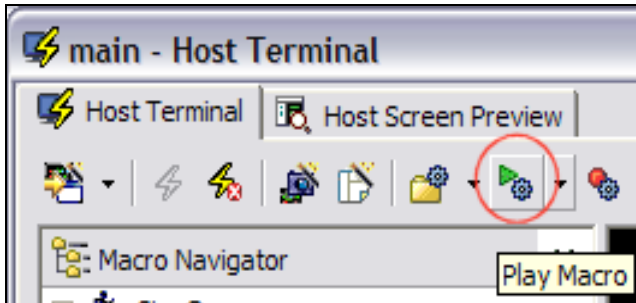


Figure 43: Play Macro icon

2. Click the **Host Screen Preview** tab to see the transformation preview (Figure 44).



Figure 44: Host Screen Preview tab

3. **Sign off** from the iSeries system.
4. **Close** the main *Host Terminal* window.

Adding your macro to the screen customization

You will now add your macro to your **SignOn Screen Customization** with these steps:

1. Navigate to SignOn under **Flight400HATS > Screen Customizations**.
2. Double-click **SignOn** (Figure 45).

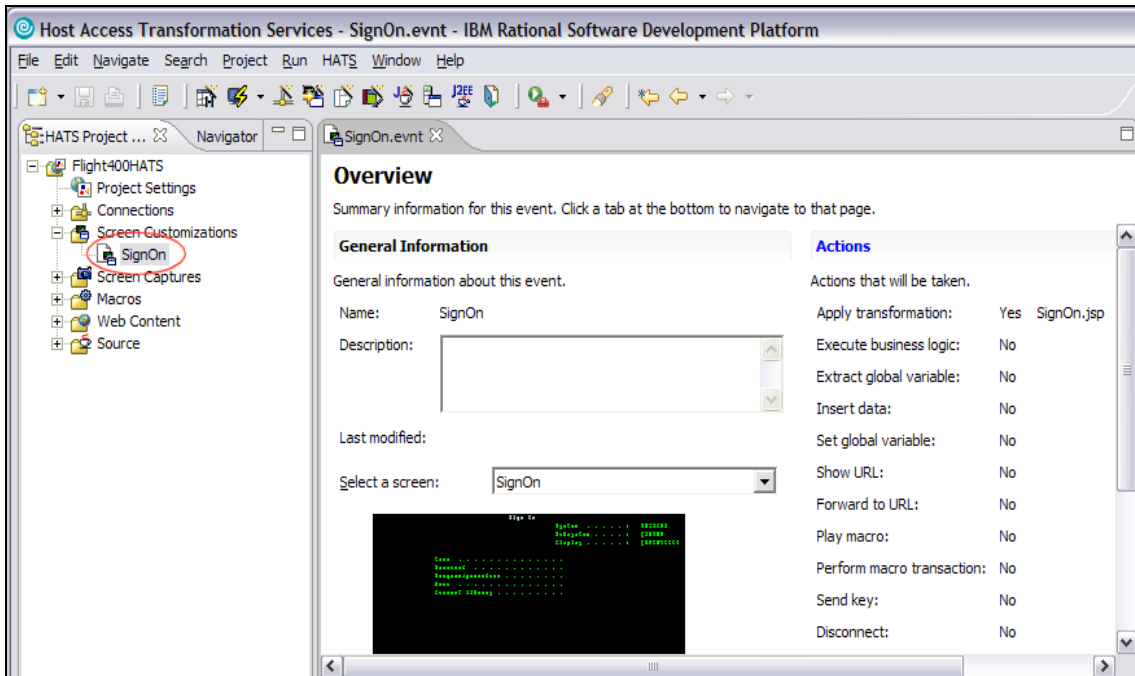


Figure 45: Screen Customizations SignOn tab

3. Click the **Actions** tab. Then select **Apply a transformation** (Figure 46).
4. Click the **Remove** button.

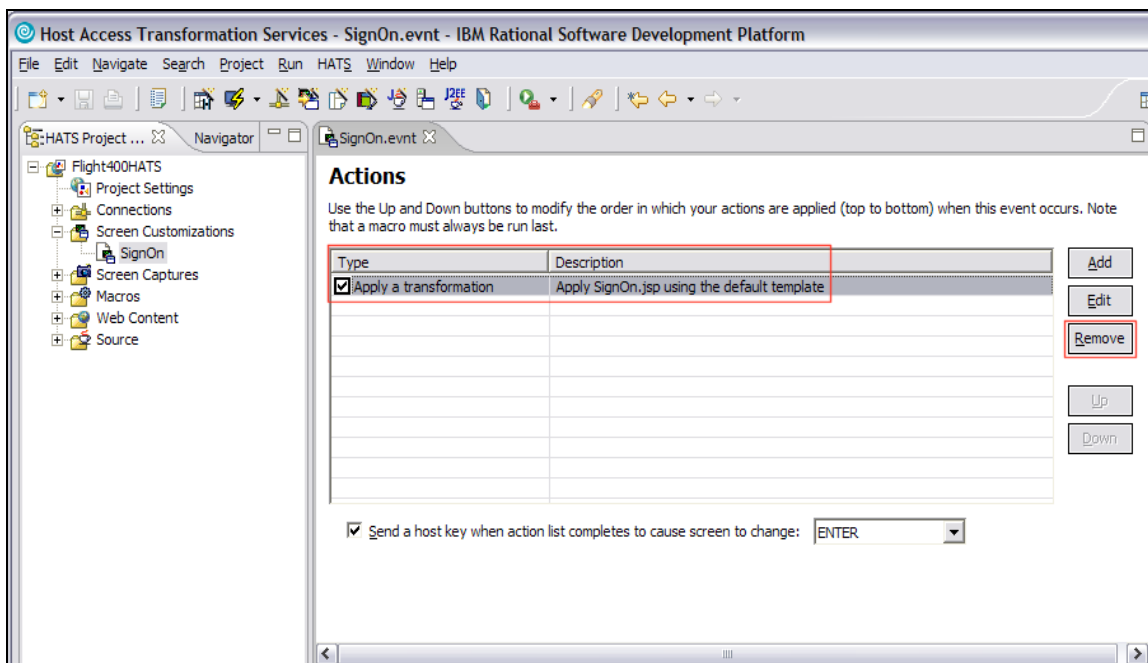


Figure 46: Apply a transformation check box

5. Click the **Add** button as shown in Figure 47.
6. Select the **Play macro** radio button. Then click **Next**.
7. Select **SignOn** from the Play a macro drop down list. Then click **Finish**.

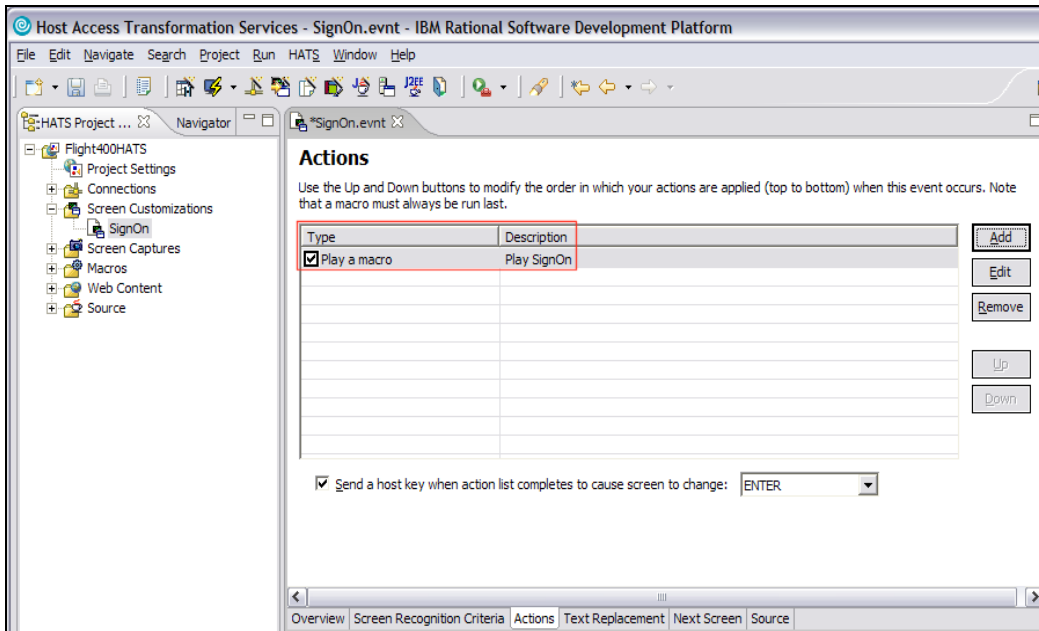


Figure 47: Adding an action

8. Save SignOn.evnt by going to **File > Save** or pressing **CTRL+S**.
9. Click **X** to close the SignOn.evnt window.

Previewing your HATS application

To take a look at the customized HATS application, do the following:

1. Right-click your project in the HATS Project View window and select **Run on Server** to open the *Display Terminal* window.
2. Click **Yes** to see the host view in the display terminal.
3. In the **Server** selection window, choose an existing server and select **WebSphere Application Server V6.0** under localhost.
4. Click **Finish**. This will publish your modified application to WebSphere Application Server test environment.
5. Your application can run using the macro logging you created. You will see the Flight Reservation System application main menu (Figure 48).

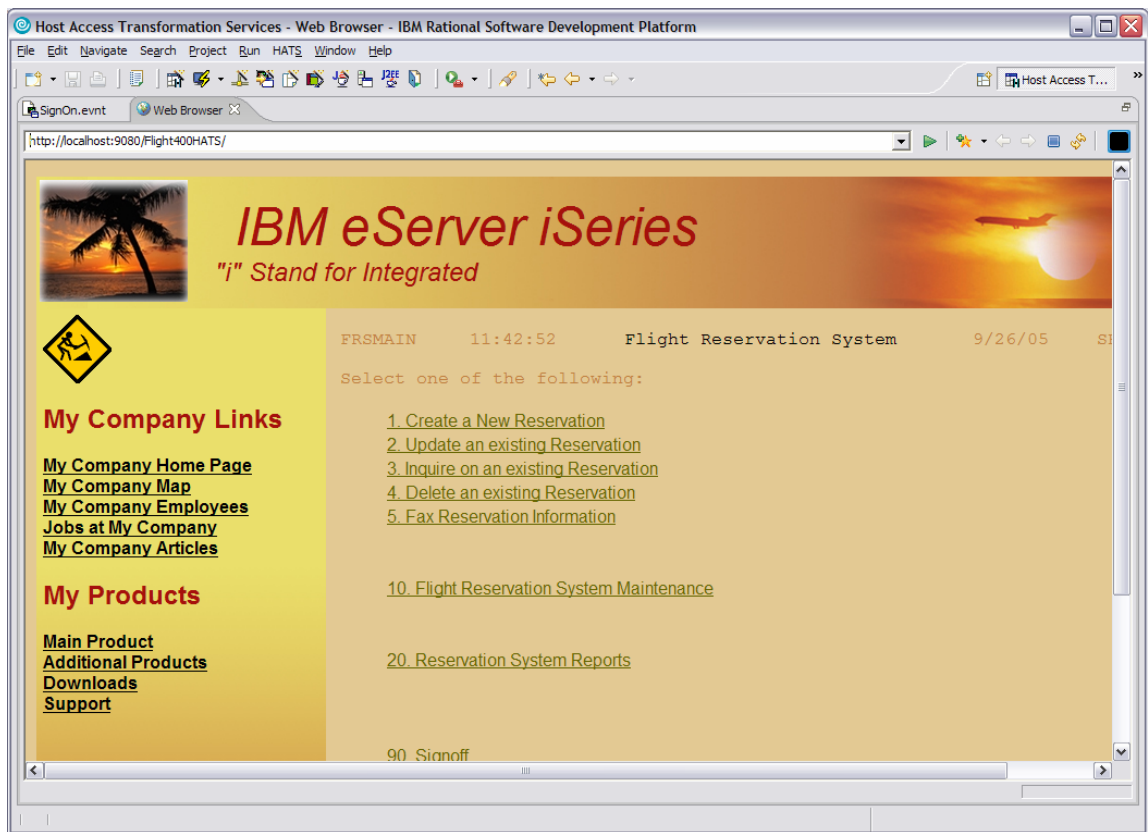


Figure 48: Flight Reservation System application

6. You have just used a macro to change the flow of a 5250 application.

It took only a few steps to create a macro and only a few more to integrate that macro into your screen customization. Not only are macros easy to use in HATS but the power of macros allow you to change the flow of your application. For example, you can export and deploy the HATS Portlet in WebSphere Portal Server on iSeries.

Summary

IBM WebSphere Host Access Transformation Services (HATS) gives you all the tools you need to quickly and easily extend your back-office applications to solution providers, customers, and employees. HATS makes your 3270 and 5250 applications available as HTML through the most popular Web browsers, while converting your host screens to a Web look and feel. This lab only touched on a small amount of the function available in HATS. With HATS it is easy to improve the workflow and navigation of your host applications without any access or modification to source code. The HATS rules-based transformation engine makes it possible to extend your host applications to the Web within hours of installing the software. HATS is a zero-footprint, zero-download, Web-to-host solution. The only software needed on the client is a Web browser.

Appendix A: iSeries Access for Windows and NetServer

IBM iSeries Access for Windows relies on iSeries Support for Windows Network Neighborhood (also known as IBM iSeries NetServer™) for Network Drive support. It is part of IBM i5/OS®, and is not part of iSeries Access for Windows. iSeries NetServer enables an iSeries system to perform file serving in a Windows network without the need to install additional hardware or software on an iSeries system. iSeries NetServer uses the Server Message Block (SMB) protocol to communicate with the network. Below, are steps to set up NetServer shares through iSeries Navigator to share network drives with a Microsoft® Windows® PC Network.

For more information on iSeries NetServer, see Appendix B.

For information on installing and configuring iSeries NetServer, see *Configuring iSeries NetServer on the iSeries server* at the iSeries Information Center Web site also found in Appendix B.

Creating a file share

A file share is a directory path that iSeries NetServer shares with PC clients on the iSeries network. A file share can consist of any integrated file system directory on iSeries. For this lab exercise, create a share to a directory somewhere under the root directory ('/'). For details, see the iSeries Information Center Web site.

Mapping a network drive

To access the file share created above using Windows, you can map a file share to logical drive. For details, see the iSeries Information Center Web site.

Appendix B: Resources

These Web sites provide useful reference materials to supplement the information contained within this document.

- IBM eServer iSeries Information Center
<http://publib.boulder.ibm.com/infocenter/series/v5r3/ic2924/index.htm?info/icmain.htm>
- iSeries Developer Roadmap: End-to-end demo
ibm.com/servers/enable/site/ideveloper_i2ee/etoe
- IBM Host Application Transformation Server (HATS) V6 Information Center
<http://publib.boulder.ibm.com/infocenter/hatsv6/index.jsp>
- iSeries Access for Windows and NetServer
ibm.com/eserver/series/netserver
- iSeries Tools for Developers (5799-PTL)
ibm.com/servers/enable/site/porting/tools
- Creating a file share under i5/OS and OS/400
<http://publib.boulder.ibm.com/infocenter/series/v5r3/ic2924/info/ifs/rzaaxcrfilesare.htm>
- Mapping a network drive
<http://publib.boulder.ibm.com/infocenter/series/v5r3/ic2924/info/rzahl/rzahlwinnsflshr.htm>
- IBM eServer iSeries Tools for Developers
ibm.com/servers/enable/site/porting/tools
- Configure iSeries NetServer on the iSeries server
<http://publib.boulder.ibm.com/infocenter/series/v5r3/ic2924/info/rzaij/rzaijconnetas.htm>

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