IBM

Host Access Transformation Server - Limited Edition

HATS LE

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IBM

What is HATS LE?

Host Access Transformation Server Limited Edition (HATS LE)

Part of iSeries Access Family - 5722-XW1

- **Available 6/30/03**
  - ▸ Will automatically ship with new orders for 5722-XW1
  - ▸ Existing iSeries Access Family customers (at V5R1 or V5R2) can order no-charge Feature Number 2646 of 5722-XW1 to receive HATS LE

HATS Limited Edition

Runs in a browser
- ▸ Delivers HTML to the desktop
- ▸ Only software needed on the client is a Web browser
- ▸ Uses browser SSL features

Works on all 5250 screens
- ▸ Stock Templates included so you can quickly personalize your web page to your company look and feel

Screens are converted on the fly, in real time
- ▸ Selection lists can be converted to hot links, buttons, drop-down menus, or option lists (radio buttons)
- ▸ PF keys are can be converted to buttons or hot links

No programming necessary
- ▸ Doesn't break if changes are made to 5250 application
- ▸ No need to access source code
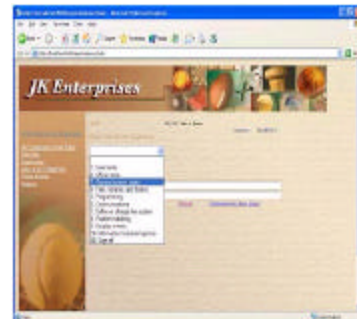
A quick and easy way to put iSeries applications on the Web

Notes: HATS LE overview

HATS LE is a reduced-function version of HATS V4. HATS LE is delivered in the form of a J2EE enterprise application. Customers will need to install this application on their application server. Once the application has been installed, started, and configured, web browser clients will be able to connect to and use it.

HATS LE is targeted for a lower skill set by eliminating the dependence on needing to use WebSphere Studio client tools to set up and run it. HATS LE gives customers the ability to quickly get their host applications to the web by reducing the number of steps to configure the application, removing the requirement to install and understand WebSphere Studio client tools, and removing the complexity of customizing screens. HATS LE does not require administrators to have any HTML or Java skills.

HATS LE provides a new HTML-based Configuration Wizard to allow the administrator to set connection parameters, configure templates (including the ability to add corporate logos), and to change the default transformation settings.   HATS LE uses the existing default transformation from the standard HATS V4, and there is no ability to create custom transformations. The Configuration Wizard is based on the HATS V4 Studio Project Wizard and Editor.

HATS LE: Real-time Screen Conversion


Traditional green screen

Drop-down menu

HATS LE on-the-fly conversion using customer-provided HTML (logo and graphics)

Client and Server Requirements

HATS LE can be installed on iSeries on any of the following web application servers:

- ► WebSphere Application Server Advanced Edition 4.043 and higher
- ► WebSphere Application Server Advanced Edition Single Server 4.03 and higher
- ► WebSphere Application Server Version 5.0
- ► WebSphere Application Server Version 5.0 Express
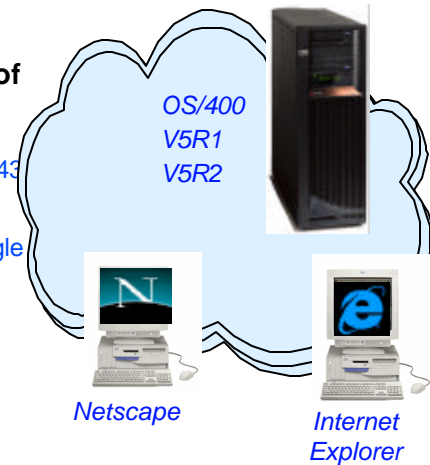
HATS LE can be accessed from any of the following browsers:

- ► Netscape 6.0 or later
- ► Internet Explorer 5.0 or later
- ► Netscape 4.72
  - − Function keys not supported

OS/400
V5R1
V5R2

Netscape

Internet Explorer

Can run on any desktop operating system that has Netscape or Internet Explorer supported browsers

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HATS LE - server/client requirements

Server Requirements

HATS LE is designed to run on any platform supported by HATS V4, however, testing will be limited to iSeries only. The following application servers are supported:

- WebSphere Application Server Advanced Edition 4.043 and higher
- WebSphere Application Server Advanced Edition Single Server 4.03 and higher
- WebSphere Application Server Version 5.0
- WebSphere Application Server Version 5.0 Express

Client Browser Requirements

Clients connecting to HATS LE will have the same browser requirements as those users connecting to a standard HATS application:

- Netscape 6.0 + and IE 5.0 +
- Netscape 4.72 (no Function Key keyboard support)

HATS LE administrators will have the same browser requirements as client browsers connecting to the application.

Internationalization
- GB18030 phase 1 certification.
- Support for all languages and code pages at runtime.
- BiDi support
- DBCS characters will be supported in the customization wizard as well as connecting to DBCS codepage host applications.

The web- accessible Administrative Console, and Configuration Wizard will be translated into the following Group 1 languages:
- English
- French
- German
- Spanish
- Italian
- Portuguese/Brazilian
- Japanese
- Traditional Chinese
- Korean
- Simplified Chinese

Portlet Support
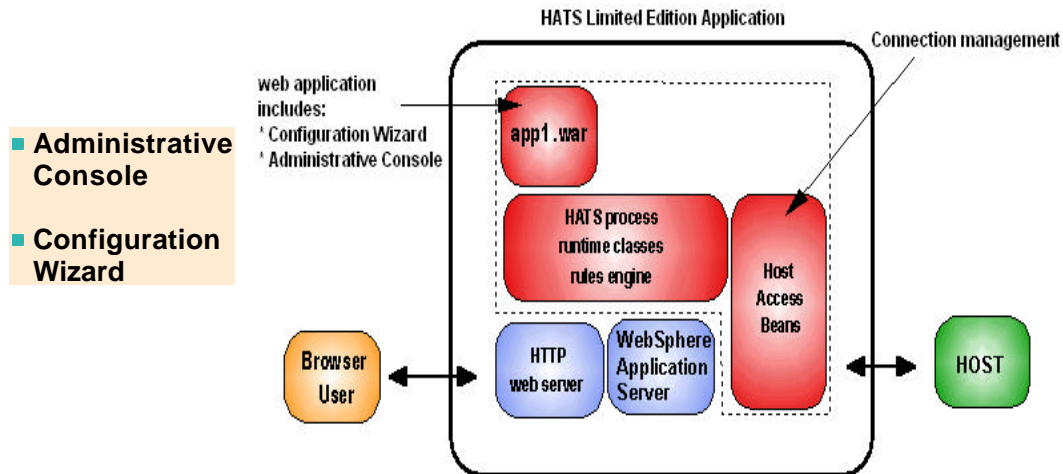HATS LE does not run in the WebSphere Portal Server. You need to upgrade to HATS to take advantage of portals.

Online Help and Documentation
The following online information will be provided:
- Readme/installation. PDF and HTML.Translated
- Online help for wizard/dialog panels. HTML.Translated.
Online help will be available on all pages of the Configuration Wizard and, the Administrative Console, and the Application Builder. Context sensitive help will not be supported (as it currently exists in the HATS Studio) because this concept is not consistent with normal web-based applications. A link on each wizard panel will open online help for that panel in a new window. A readme file, specific to HATS LE will be available to the administrator in the Administrative Console and to the user prior to installing the product.

HATS LE - internal view

HATS Limited Edition Application

Connection management

web application includes:
* Configuration Wizard
* Administrative Console

app1.war

- **Administrative Console**

- **Configuration Wizard**

HATS process runtime classes rules engine

Host Access Beans

Browser User

HTTP web server

WebSphere Application Server

HOST

HATS LE is a J2EE enterprise application. Once it is installed/configured/started on the iSeries, web browser clients will be able to connect to a url and start using it.
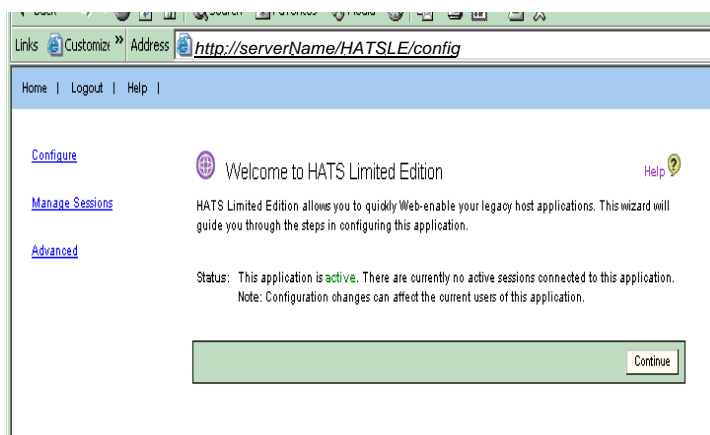
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HATS LE - Configuration Wizard

Configuration Wizard

➤ A web-based tool to enable the administrator to configure HATS LE

➤ Navigate to URL http://serverName/HATSLE/config

➤ Requires SECADM authority

Steps that need to be performed are:

➤ Set up connection settings

➤ Define default template to be used

➤ Set up default transformation settings, such as:
  - Converting PF keys into buttons
  - AS/400 subfile support
  - Color remapping
  - Other minor enhancements

Links | Customize » Address | http://serverName/HATSLE/config

Home | Logout | Help |

Configure

Manage Sessions

Advanced

Welcome to HATS Limited Edition   Help ?

HATS Limited Edition allows you to quickly Web-enable your legacy host applications. This wizard will guide you through the steps in configuring this application.

Status: This application is active. There are currently no active sessions connected to this application.
Note: Configuration changes can affect the current users of this application.

Continue

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Notes: Installing and using Configuration Wizard

The Configuration Wizard is a web-based wizard used to configure and prepare the HATS LE for use by clients. The administrator can access the Configuration Wizard directly by:

Navigating to the URL http://serverName/HATSLE/config

Clicking the "Configure" option in the Administrative Console, or by

Navigating to the URL http://serverName/HATSLE/entry before the application has been configured.

The first time HATS LE is accessed (or before it has been configured), a log-in page will be displayed. The administrator will need to supply a user name and password before beginning configuration. After the administrator has successfully logged in, a Welcome page will be displayed tol inform the administrator that he/she is about to begin configuring the application.

The Configuration Wizard is the main functional component of HATS LE, and all configuration takes places after the enterprise application has been installed on the application server, but before it can begin servicing clients, it needs to be configured. The main objective of the wizard is to quickly and easily capture the needed information to get the application in service. The wizard is easy to understand and interact with and provides enough flexibility to make it useful.

Steps to be performed by the administrator in the Configuration Wizard:

Configure host connection parameters.

Select a default template, choose whether to show application or host keypads, and select whether to enable browser keyboard support.

Configure default transformation settings.

The Configuration Wizard has navigation buttons (eg, Next, Back, and Finish buttons) along the bottom of each page which allow the administrator to navigate between pages of the wizard. The navigation buttons will appear at the bottom of the wizard as needed. For example, the "Next" button will not appear on the final page of the wizard because there are no further steps to complete.These buttons will be enabled/disabled depending on whether the developer has supplied enough information to continue. Validation of form values supplied by the administrator will be performed only on the server when the page has been submitted (either by clicking "Next", "Back", or "Finish"). The administrator will not be allowed to continue on to the next step until the current step has been successfully validated.

HATS LE - Connection Settings

Connection Settings

- Host name
  - Put the iSeries name in here that you want users to connect to. Doesn't have to be system where WAS or HATS LE is running
- Port
- Code page
- Workstation ID
  - Server assigned (default)
  - Set to a value
  - Set from an HTTP session variable
  - Prompt user
- Security - SSL

Step 1 : Configuring the Connection Settings

The first step of the Configuration Wizard is to ask the administrator to supply the host connection parameters. These settings define which host server the user connects to when he/she accesses the HATS LE. The administrator needs to supply the host name (or IP address) of the host system (a default value of "localhost" will be prefilled in this field), the port number (a default value of "23" will be prefilled in this field), and the code page. The administrator also needs to select how HATS will gain the workstation ID for each connection when that connection is initiated. The three options are:

- Server assigned (default)
- Set to a value - this value can either be a hard-coded string (not recommended) or a string containing HOD-supported workstation ID wild cards and characters (see the HOD documentation for more information).
- Set from an HTTP session variable - a variable containing the workstation ID may have already been supplied (or calculated) in another JSP or servlet in the application, this option allows the developer to use this variable's value as the workstation ID for the connection.
- Prompt user - ask the user to supply a workstation ID when he/she starts the application. A web-based dialog will be displayed to the user on application start prompting him/her for his/her workstation ID. The value supplied by the user will be stored as a cookie on the client browser and used to pre-fill the dialog on the next connection attempt. This dialog will be displayed in the preferred language of the client browser (unless that language is not supported).

The administrator also has the option to allow or not allow the user to supply a workstation ID in the URL (by supplying a value for the "workstationID" parameter). If this option is on, a supplied workstation ID in the URL will override any value (or configuration option) supplied by the administrator. For example, if the administrator has chosen to prompt the user for a workstation ID, but the user supplied a workstation ID in the URL, the user will not be prompted to supply a workstation ID, and the value in the URL will be used to initiate the connection.

The administrator can also select whether to enable SSL (secure sockets layer) security between the host server and the application server (if applicable). If SSL is enabled, the administrator can supply an optional security certificate.

Once all fields on the page have been filled in with valid values, the administrator is allowed to continue onto the next page. At this point, all required information will have been gathered from the developer and the Finish button will become visible. The administrator can choose to continue configuring the application or proceed to using the application.

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HATS LE - Select a Template

Templates included in HATS LE
- Blank
- Classic Terminal
- Corporate Banner
- One that looks similar to iSeries Access for Web

Keypads, keyboard functions

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13-14

Step 2 : Selecting and Configuring the Template

The second step of the Configuration Wizard is to ask the administrator to select a default template, or look, for the application. The following templates will be provided:

    Blank
    Classic Terminal
    Corporate Look
    One that looks similar to iSeries Access for Web

Selecting a template in the list will cause a thumbnail preview of that template to be displayed. The administrator can tailor such things as the company name, company logo, The administrator can also edit the JSP source of the template from the web to provide better consistency with current web applications. The feature will not be made available in the wizard, but only shown in the Administrative Console.

The administrator can also choose whether to show the application keypad and host keypad, and whether to allow end users to use their keyboards (when using a compatible browser) to interact with the host system (ie support for function keys and other designated key combinations). Detailed configuration of the application and host keypads will not be made available in this wizard. By default, the application keypad, host keypad, and keyboard support options will be enabled.

Once the administrator selects a template, it can then be customized (if it has any customizable options) and previewed. Clicking the "Preview" button will show a preview of the template in a new browser with a sample host screen; to quickly see how the template will appear to the end user. Clicking the "Configure..." button will show the "Configure Template"

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Customizing a Template

Use the 'Corporate' Template to look more like your current Corporate Site

Set up your:

▸ Company name

▸ Logo

▸ Corporate Links

▸ ...

2a

Configure Template : CorporateBanner.jsp   Help ?

Configure this template to look more like your corporate Web site. Click Finish if you are done configuring your application, or Next to continue to the next step.

Window title: Welcome to the Carole's Widgets Web Site

Company name: Carole's Widgets

Company logo: Corporate1top.gif   Upload...   Preview

Style sheet: creambackground.css   Upload...

To preview how your customized template will appear, click the Preview button.

Preview

Back   Next   Finish   Cancel

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Previewing my template...

Step 2a : Customizing a Template

Each template shipped with HATS LE has a set of configurable settings (the size of this set depends on the complexity of the template). This will give the administrator the ability to customize the look of HATS LE. Special JSP tags in the templates will be read at design time and a dynamic page of options will be displayed to the administrator.

An example of this JSP tag is as follows: `<HATSLE:Template name="COMPANY_NAME" description="%company_name" type="String" defaultValue="My Company Name" configurable="true" />`

The tag consists of these attributes:
- name - the internal name, or key, of the attribute name (non-translated). Required.
- description - the translated string displayed to the administrator during configuration. A description value preceded with a "%" will be looked up in an appropriate translated resource file. Required.
- type - the type of the value. Valid values include String, Image (gif/jpeg supported), Link List, and Stylesheet. Not required. Default value is "String".
- defaultValue - the default value used if no value is specified by the user OR if the "configurable" flag is set to false. Not required. Default value is "".
- configurable - a flag used to determine whether the administrator is given the ability to modify the value of this configurable option in the Configuration Wizard. Not required. Default value is "true".

HATS LE - define end user 'look and feel'

3

Transformation features include detection of:

- ▸ Function (PF) keys on the host screen
- ▸ Selection lists
- ▸ Tables
- ▸ Subfile rendering
- ▸ Preserves Field colors

Can also configure:

- – What determines a PF key on the host screen (ie, delimiters, etc) and how those PF keys will be rendered (either as buttons or links).
- – How to display selection lists (ie, button, button table, pulldown list, link, option list)

Transformation Settings   Help ?

Select how to render your transformed host screens.

☑ Detect PF keys   [Settings...]

☑ Detect selection lists   [Settings...]

☐ Detect tables   [Settings...]

☑ Detect subfiles

☑ Preserve field colors

Use character by character rendering: Never ▾

[Back] [Next] [Finish] [Cancel]

Notes: Step 3. Configuring Default Transformations

The third step of the Configuration Wizard is to customize how HATS LE will appear to the end user. The administrator can turn on/off automatic detection of certain host screen components. Default transformation features in a HATS Limited Edition application:

- ▪ Automatic selection list rendering
- ▪ Automatic detection of PF keys on the host screen
- ● Automatic subfile rendering
- ▪ Automatic table detection

Any or all of these features can be turned off by the administrator. The administrator can also configure different properties for each feature. For example, ability to configure what determines a PF key on the host screen (ie, delimiters, etc) and also how those PF keys will be rendered (either as buttons or links).

HATS Limited Edition will take advantage of the default screen transformation technology already available in HATS. The set of options for default transformation in HATS LE will be smaller than the set currently in HATS V4. The set of options is smaller because HATS Limited Edition is specifically targeting 5250 host applications which are generally more consistent in nature than mainframe hosts.

Connecting to the Application
The final interactive step of the Configuration Wizard is to allow the administrator to view the settings -- this includes host connection parameters, default template, customization settings, etc. The administrator can then accept these settings by clicking the Finish button. This will save the changes to the appropriate files. The administrator then chooses whether to activate HATS LE. It cannot be accessed by client browsers until it is actived. This option will be turned on by default. Once the administrator clicks Finish, HATS LE will connect to the host and start; and the administrator will be presented with the signon page (presumably) of the host system.

Once the administrator has configured HATS LE, an end user can connect to the application by navigating to the URL, http://serverName/HATSLE/entry or simply http://serverName/HATSLE.

If HATS LE has been activated by the administrator, the user will see the first host screen on the configured host (assuming the connection parameters supplied by the developer were correct).

HATS LE - Configuration Summary

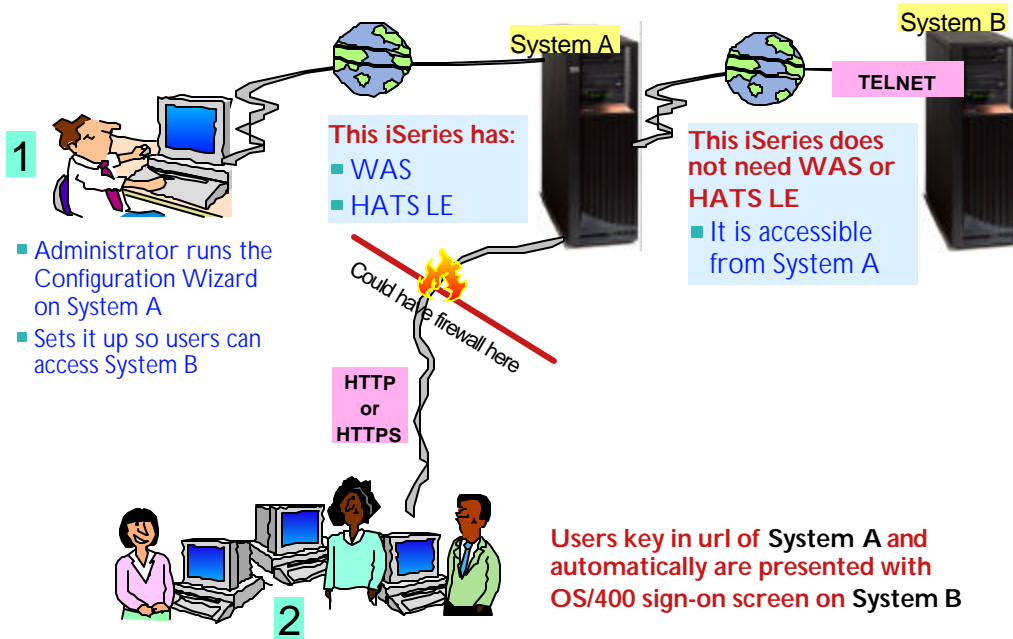**Review the configuration settings you have selected**

If you have the 'Activate Application' box checked, then as soon as you press the 'Finish' button, users will be able to start accessing your iSeries through HATS LE

Can set up to connect to any iSeries...

System A

System B

TELNET

This iSeries has:
- WAS
- HATS LE

This iSeries does not need WAS or HATS LE
- It is accessible from System A

1
- Administrator runs the Configuration Wizard on System A
- Sets it up so users can access System B

Could have firewall here

HTTP or HTTPS

2

Users key in url of System A and automatically are presented with OS/400 sign-on screen on System B

Users can now access iSeries through HATS LE

Customize » Address 🌐 http://myiseries.ibm.com/HATSLE

Workstation ID: cminer

OK

- End user connects to HATS LE by navigating to a URL:
- *http://serverName/HATSLE/entry*
  - ➤ or simply
- *http://serverName/HATSLE*

Carole's Widgets

```
                                    Sign On        System  . . . . . :   rochester
                                                    Subsystem . . . . :   QINTER
                                                    Display . . . . . :   CMINER

                              User  . . . . . . . . . . . . .   cminer
                              Password  . . . . . . . . . . .   *******
                              Program/procedure . . . . . . .
                              Menu  . . . . . . . . . . . . .
                              Current library . . . . . . . .


                                    RELEASE: V05R01M00
                                    DRIVER:  220603

          USE OF THIS SYSTEM IS FOR IBM MANAGEMENT APPROVED PURPOSES  ONLY.
              USE IS SUBJECT TO AUDIT AT ANY TIME BY IBM MANAGEMENT.


          CPF1296 - SIGN-ON INFORMATION REQUIRED.
```

Reset   Default   Refresh   Disconnect   Keyboard

- In my sample Configuration I indicated users had to enter a Workstation ID before signing onto OS/400
- Next screen is then OS/400 Sign On screen

Newly created template...

- Different default settings
  - Links, Pulldowns, Buttons, Option lists...
  - Different Keypads

Carole's Widgets

```
MAIN                    OS/400 MAIN MENU
                                                SYSTEM:  MySecondSeries
SELECT ONE OF THE FOLLOWING:

 1. USER TASKS
 2. OFFICE TASKS
 3. GENERAL SYSTEM TASKS
 4. FILES, LIBRARIES, AND FOLDERS
 5. PROGRAMMING
 6. COMMUNICATIONS
 7. DEFINE OR CHANGE THE SYSTEM
 8. PROBLEM HANDLING
 9. DISPLAY A MENU
10. INFORMATION ASSISTANT OPTIONS
11. CLIENT ACCESS/400 TASKS
90. SIGN OFF
SELECTION OR COMMAND
===>

EXIT      PROMPT      RETRIEVE
SET INITIAL MENU
(C) COPYRIGHT IBM CORP. 1980, 2000
         PF1  PF2  PF3  PF4  PF5
         PF13 PF14 PF15 PF16 PF17
```

Carole's Widgets

```
MAIN                    OS/400 MAIN MENU
                                                SYSTEM:  rochester
SELECT ONE OF THE FOLLOWING:

Select one of the following:       Submit
Select one of the following:
1. USER TASKS
2. OFFICE TASKS
3. GENERAL SYSTEM TASKS
4. FILES, LIBRARIES, AND FOLDERS
5. PROGRAMMING
6. COMMUNICATIONS
7. DEFINE OR CHANGE THE SYSTEM
8. PROBLEM HANDLING
9. DISPLAY A MENU
10. INFORMATION ASSISTANT OPTIONS
```

CANCEL   INFORMATION ASSISTANT

Reset   Refresh   Disconnect   Keyboard o

HATS LE - Administrative Console

Address http://myiseries.ibm.com/HATSLE/admin

Home | Logout | Help |

Configure

Manage Sessions

Advanced

🌐 Administrative Console

This application is active. Deactivate

Application started:	Mar 19, 2003 10:49.50 AM
Number of active sessions:	1
Peak number of session over the last hour:	1
Peak number of sessions since the application was started:	4

Connection Settings

Host name:	9.999.99.9
Port:	23
Code page:	420 Arabic speaking
Workstation ID:	Server assigned
SSL enabled:	No

A web-based tool to:
- Manage active connections
- Tweak configuration changes
- Activate/deactivate the application
- Launch the Configuration Wizard

Different than the WAS administrative console

Requires SECADM authority

The Administrative Console can be accessed by navigating to http://serverName/HATSLE/admin

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Notes: Administrative Console

This is the default page shown for Administrative Console. The administrator using either the Administrative Console or the Configuration Wizard will be prompted to enter a user name and password, and must have "SECADM" authority associated with his/her account.

The **overview page** is the first page displayed to the administrator when they enter the console. This page will:
Show the status of the application (inactive/active)
Allow the administrator to change the status of the application
Show when the application was started
Show the current number of active connections
Show the peak number of active connections (and the date/time when that occurred)
Show host connection settings (IP address, port, etc)

Configure - the Configure section will allow the administrator to configure the application; (using the Configuration Wizard). the Configuration Wizard will be launched in the right-hand side of the Administrative Console window.

Manage Connections - the Manage Connections section will allow the administrator to manage all active connections to the application.
This page will:
Show all active connections (in the form of a sortable table)
Show when each connection started, how long since the connection was used, the IP address of the client, and the internal name of the session, the name/version of the browser the client has connected with, and the workstation ID of the connection.
Allow the administrator to view the current host screen of the user
Allow the administrator to terminate (stop) the session for one or more active connections

Advanced - the Advanced section will allow the administrator to configure more advanced settings of the application. This includes:
Editing the application.hap (for tweaking purposes)
Editing a selected template
Exporting the application (for importing into HATS)

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Manage Sessions

From this page you can:

- Review the list of sessions connected to your application
  - ► Click the refresh icon to refresh the list.

- Sort the list by any column by clicking the column heading
  - ► Click the same heading again to sort in the opposite direction. The arrow icon identifies the column and direction used for sorting.

- Click a session ID to view detailed information about the session.

- Disconnect a session
  - ► Check the box on the line representing that session and click Disconnect
  - ► You can select all the sessions by checking the box in the title bar

Home | Logout | Help |

Configure

Manage Sessions

Advanced

Manage Sessions   Help

The table below lists all current, connected sessions to this application. There are currently 1 active connection(s).

Disconnect

Session ID	IP Address	Status	Start Time
TQT2C10CERZSQEKR4PBY0LQ_13	9.10.110.84	Ready	4/1/03 10:34 AM

This page lists the sessions connected to your application.

TQT2C10CERZSQEKR4PBY0LQ_13 - Microsoft Internet Explorer

Session ID:	TQT2C10CERZSQEKR4PBY0LQ_13
Client IP address:	9.99.999.99(cminer.rochester.ibm.com)
Communication status:	Ready
Host name:	myiseries.rochester.ibm.com
Port:	23
Connection status:	Client side processing
Session started:	Tue Apr 01 10:34:08 EST 2003
Session modified:	Tue Apr 01 10:38:01 EST 2003

Close

Differences
HATS
vs
HATS LE

Powered by Eclipse™ technology
Windows®

WebSphere Welcome to IBM WebSphere Host Access Transformation Server (HATS)

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JAVA

Packaging

Available through Passport

WebSphere Host Integration Solution
- IBM Personal Communications
- WebSphere Host On-Demand
- **WebSphere Host Publisher**
- **WebSphere Host Access Transformation Server (HATS)**
- IBM Communications Servers
- IBM Screen Customizer
- WebSphere Studio Professional Edition
- WebSphere Application Server Advanced Edition 4.0 for Windows (development)

Available through iSeries

iSeries Access Family
- iSeries Access for Windows
- iSeries Access for Web
- **WebSphere Host Publisher**
- iSeries Access for Wireless
- **HATS Limited Edition**

same product

HATS LE subset of HATS
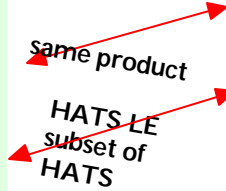
Host Access Transformation Server (HATS)

Converts green screens to GUIs
on the fly, in real time
- A web-to-host 3270, 5250 HTML emulator...
- Preserves existing application flow...
- Translates system screens too...

Easy Web-to-host first step
- Has a rules-based transformation engine...
- "Near" load-n-go implementation
- Low skills requirement

Zero footprint on the desktop

Industry-standards
- HTML, HTTP, HTTPs
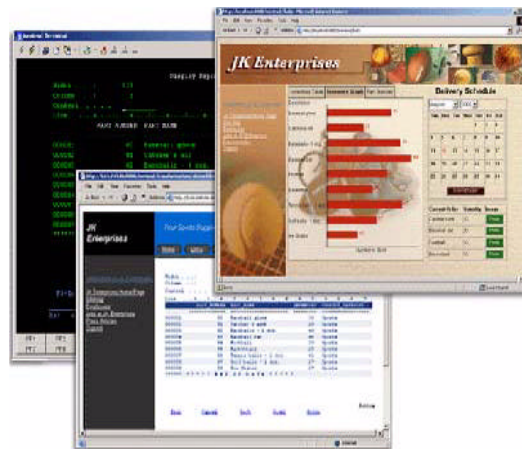
Capabilities ...

Designer is plug-in to WebSphere Studio Development Tools

Eliminates need to customize every screen
- ► Rules-based data stream translator

Additionally customizable
- ► Customize individual screens
- ► Play and record macros
- ► Add tabbed folders and graphs
- ► Store and retrieve global variables
- ► Can integrate with WebSphere Portal
- ► Skip and combine screens
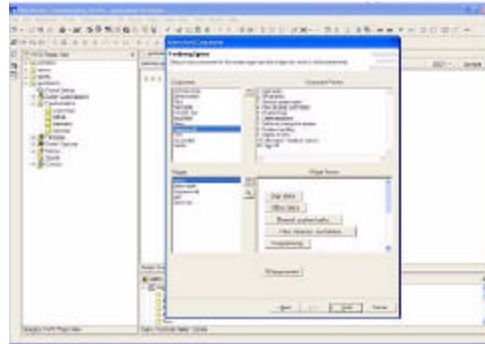
HATS Studio plugs into the Eclipse-based WebSphere Studio, and provides an easy-to-use wizard-based environment for converting host screens to a web-like appearance and functionality

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Notes: Key Selling Points - HATS

Host screens are converted to GUIs on the fly, in real time
- On-the-fly screen conversion using the rules-based transformation engine. HATS does not "break down" when changes are made to the host application.

Easy Web-to-host first step
- Default rules allow your host application to be on the Web within hours of loading the software. There is no requirement for programming skills, and there is no need to customize every screen. If further customization is rrequired this can be done at the customers own pace.

Eliminates need to customize every screen
- Due to the rules-based transformation engine not all screens require customization, and when changes are made to the host application HATS will continue to work without modification.

Low skills requirement
- HATS Studio, which plugs in to the Eclipse-based WebSphere Studio, is an easy to use wizard-based environment for converting host screens to a web-like appearance and functionality. No programming skills are required.

Preserves existing application flow
- HATS does not require any changes to the Host Application.

Rules-based, customizable
- HATS Studio provides easy-to-use wizards for customizing how host components are displayed. Use the WebSphere Studio or any industry-standard HTML editor to add: logos, graphics, backgrounds, Web links and other HTML elements.

Customizations are saved as reusable rule sets that can be applied to any host screens that share similar requirements.
- HATS can apply: an individual rule set to each host application; different rules sets to a single host application for different end user communities; the same rule set to multiple host applications.

"Near" load-n-go implementation
- Default rules allow your host application to be on the Web within hours of loading the software.

Zero footprint on the desktop
- Only software needed on the client is a Web browser, which provides support for 3270 and 5250 hosts.

Virtually unlimited functionality
- Adding customization by using Macros, Global variables, Tabbed folders, Graphs, Java Widgets (e.g. calendar,calculator).
- Open J2EE architecture allows virtually unlimited flexibility and extensibility.

HATS requires all configuration to be done in the HATS Studio (a plugin to WebSphere Developer Studio). Once configuration has been completed in the Studio, the application is assembled into an enterprise application and installed on a WebSphere Application Server. Once it is started, it can begin to service clients.

Example

Traditional Green Screen
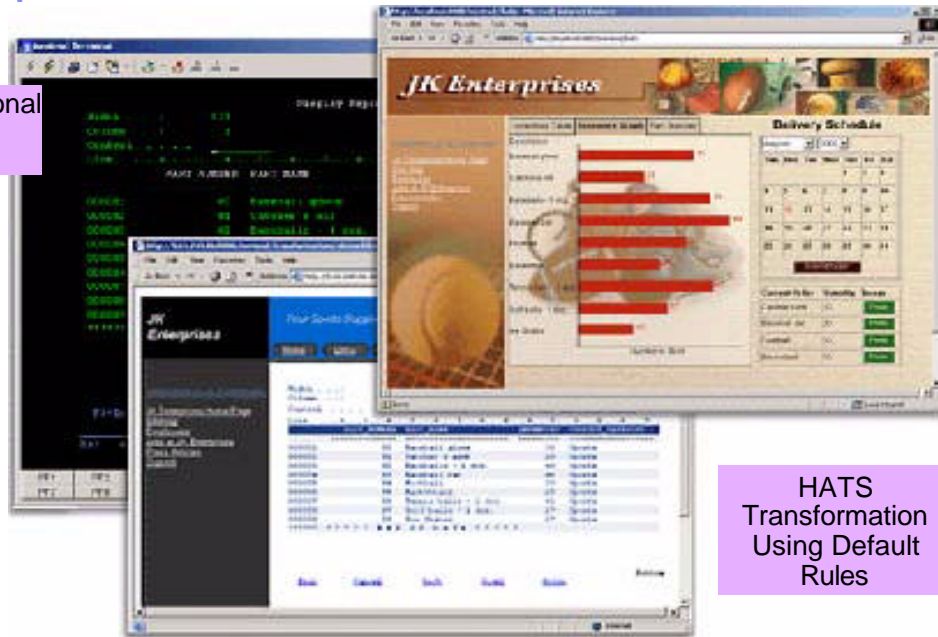
HATS Transformation Using Default Rules

Notes: HATS

HATS is shipped as part of the Host Integration Solution bundle

Announcement Date - 9/24/2002

General Availability

- Available now - Windows NT, Windows 2000, AIX, Solaris, iSeries
- 2Q03 Linux, zLinux
- 4Q03 - zSeries

HATS Benefits

- Increases productivity and reduces training costs
- Extends legacy applications to the widest possible audience...
  - ▶ Delivers HTML to Web browsers...
  - ▶ Presents host screens as familiar Web interfaces.
- Host application user interfaces can be quickly delivered over the Web
  - ▶ Green screens converted to GUIs according to HATS default rules...
  - ▶ Further customization added as time and resources permit.
- HATS Studio
  - ▶ Plugs in to the Eclipse-based WebSphere Studio
  - ▶ Easy to use wizard-based environment for converting host screens to a web-like appearance and functionality
- No programming skills are required

33-34

Differences - HATS vs HATS LE

Features in both HATS and HATS LE
- Default host screen transformation
- Configuration of host connection settings
- Ability to chose a standard template
- Ability to turn on/off application and host pads
- Keyboard support
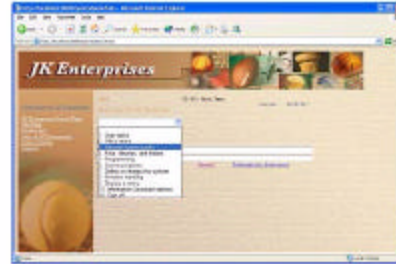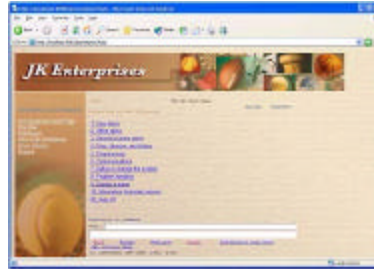
Features in HATS, not in HATS LE
- Customize individual screens
- Play and record macros
- Add tabbed folders and graphs
- Store and retrieve global variables
- Integrate with WebSphere Portal
- Skip and combine screens

Customers will be able to order a chargeable upgrade to full HATS offering

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*Differences
iSeries Access for Web
vs
HATS LE*

iSeries Access for Web provides many functions besides 5250...

My Personal Folder

Print
- Printer output
- Printers
- Internet Printers
- Printer shares
- Output Queues

Database
- Tables
- My Requests
- Run SQL
- Copy Data to Table
- Import Requests

5250 ⭐
- Start 5250 Session

Commands
- Run commands (Batch)
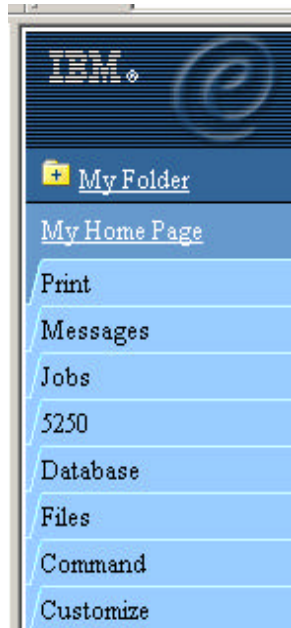
Files
- Browse Files (in IFS)
- File Shares (in NetServer)

Messages
- Display Messages
- Send Messages
- Operator Messages
- Message Queue

Jobs
- User Jobs
- Server Jobs

Customize
- Administrator controls access to functionsu by user or group of users:
  - Can customize front page
  - Can limit what tasks can be performed

(Navigation menu shown: My Folder, My Home Page, Print, Messages, Jobs, 5250, Database, Files, Command, Customize)

We will look only at differences between the 5250 interface here...

The iSeries Access Family now provides two unique ways to start a 5250 session to an iSeries.

1. **Access for Web**
   - Product 5722-XH2, refreshed in V5R2, and runs on both V5R1 and V5R2 iSeries servers
   - Includes a new, integrated, and improved 5250 emulation function.

2. **HATS LE**
   - Offers 5250 emulation that is quick and easy to set up and define
   - Runs on both V5R1 and V5R2 iSeries servers

So now you may be wondering which one to use.

Differences - iSeries Access for Web vs HATS LE

Access for Web (5250 emulation)	HATS LE (5250 emulation)
If using many other Access for Web functions • Can select 5250 or other functions from the Navigation Bar. Less set-up to simply select 5250 tab for emulation needs than to also install/set up HATS LE	**Better is only want 5250 session** • If the only function you want to make available to users is 5250 emulation, then it would be easier to use HATS LE as that is all the only function it provides. Its Configuration Wizard is easy and quick to set up.
Can connect to multiple iSeries • End user can easily configure multiple 5250 sessions to multiple iSeries servers. • For HATS LE, the Administrator must go through special setup to enable users to access multiple iSeries servers.	**One customization applies to all users** • You only need to go through the customization once and it applies to all users connecting to that instance of HATS LE.
Better Browser Back/Forward control • Access for Web ensures that users do not get out of sync with their OS/400 applications when using the browser back and forward buttons. • HATS LE requires the administrator to insert a script into the HATS application template to disable use of the browser Back button to avoid unpredictable results.	**Function Keys work with Netscape too** • HATS LE enables Netscape users, as well as Internet Explorer users, to work with keyboard Function keys, etc • Access for Web only supports use of Function Keys and page up/down when using Internet Explorer.
Includes Macro support • The macro support can be used to eliminate the entering of repetitive commands or even bypass the second sign-on screen. • HATS LE has no macro support	**Rules-based transformation capabilities provide a more enhanced GUI-look** • All system screens and application screens can have drop down lists. HATS LE can detect selection lists and tables and provide an enhanced GUI look not possible with Access for Web 5250 emulation.
	Templates included • Sample templates included, and are easy to modify.

Notes: Differences Access for Web Vs. HATS LE

The iSeries Access Family now provides two unique ways to start a 5250 session to an iSeries.
1. Access for Web (Product 5722-XH2, refreshed in V5R2, and runs on both V5R1 and V5R2 iSeries servers) now includes a new, integrated, and improved 5250 emulation function.
2. HATS LE offers 5250 emulation that is quick and easy to set up and define.

So now you may be wondering which one to use. Here might be a few points to help you with these choices:

Access for Web
• iSeries Access for Web provides many functions in addition to 5250 emulation, ie, work with spool files, printers, database, IFS, commands, etc. HATS LE provides 5250 emulation only -- no other functions.
• So this comparison is just of the 5250 emulation portion.

Access for Web 5250 emulation

• If you're using the Access for Web default menus and its Navigation Bar, where the 5250 tab is included, it is probably more straight-forward to simply use the 5250 tab for your 5250 emulation needs .
• Access for Web 5250 emulation GUI and keypads can be customized for specific users or groups of users - whereas HATS LE's configuration applies to all users connecting to that instance of HATS LE. Thus, Access for Web provides the flexibility of enabling users to make different choices for their GUI look.
• Access for Web 5250 emulation allows an end user to easily configure multiple 5250 sessions to access multiple iSeries servers. HATS LE would need to be deployed and running in multiple instances of WAS to enable users to access multiple iSeries servers.
• Access for Web 5250 emulation provides macro support; HATS LE does not. The macro support can be used to eliminate the entering of repetitive commands or even bypass the second sign-on screen.
• Access for Web ensures that users do not get out of sync with their OS/400 applications when using the browser back and forward buttons. HATS LE requires the administrator to insert a script into the HATS application template to disable use of the browser Back button to avoid unpredictable results.

Notes: Differences Access for Web Vs. HATS LE

HATS LE 5250 emulation

- If the only function you want to make available to users is 5250 emulation, then it would be easier to use HATS LE as that is all the only function it provides, and its Configuration Wizard is easy and quick to set up.
- You only need to go through the customization once and it applies to all users of HATS LE.
    - However, if you had multiple iSeries servers you would like to have users connect to, or you would like a different look for some users versus other users, then you need to do some additional steps.
    - The first alternative would be to create multiple instances of WAS on the iSeries server and deploy HATS LE to each of those instances and configure each deployment to connect to a different iSeries server. From the end user view, they would need to specify a different port in the browser URL because each instance of WAS that was created would use a different HTTP server...which requires a different port.
    - The second alternative is set an override within the HATS LE configuration file (application.hap). It can be updated with an override value like this:

            <class name="com.ibm.hats.SessionOverride">
             <setting name="host" value="true"/>
             </class>
    - The "host" setting allows you to pass in the name of the server to connect to. The browser URL would look like this:

            http://<servername>/HATSLE/entry?host=<servername to connect to>
    - So from one deployment, update appliation.hap file, the user can connect to different iSeries servers.
    - Note: Setting this override value is not surfaced in the HATS LE configuration wizard GUI so it can only be done by updating the application.hap configuration file.
- HATS LE, with its rules-based transformation capabilities, can provide a more enhanced GUI-look for system screens as well as host applications than the Access for Web 5250 emulation function. For example, all system screens and application screens can have drop down lists. HATS LE can detect selection lists and tables and provide an enhanced GUI look not possible with Access for Web 5250 emulation.
- HATS LE enables Netscape users, as well as Internet Explorer users, to work with keyboard PF keys, etc, while Access for Web only supports use of PF and page up/down keys when using Internet Explorer.

Combining use of HATS LE 5250 with Access for Web

- You could combine the use of the two products by using the Access for Web Customization functions. This would enable users to come to the Access for Web front page, and click on a link and transparently be switched to use the 5250 emulation program in HATS LE.
- Both HATS LE and Access for Web 5250 emulators use the OS/400 TELNET function - thus both require 5250 OLTP (interactive feature). All other functions of Access for Web, such as working with spool files, printers, database, running commands, etc, run batch.

Could combine the use these products...
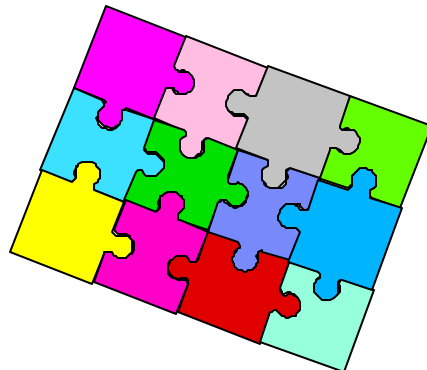
iSeries Access for Web - sample 'customized' front page

Could include a link in here that started HATS LE and a 5250 application -- maybe on another system...

RPG Application - AS/400 WSG BOAT DEMO

Using iSeries Access for Web 5250 interface

Using HATS LE interface

Boats applications - Host Publisher
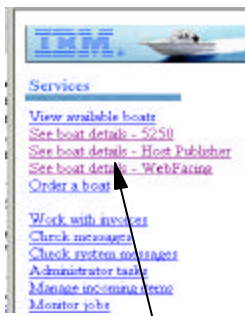
Could completely reface application using WebSphere Host Publisher

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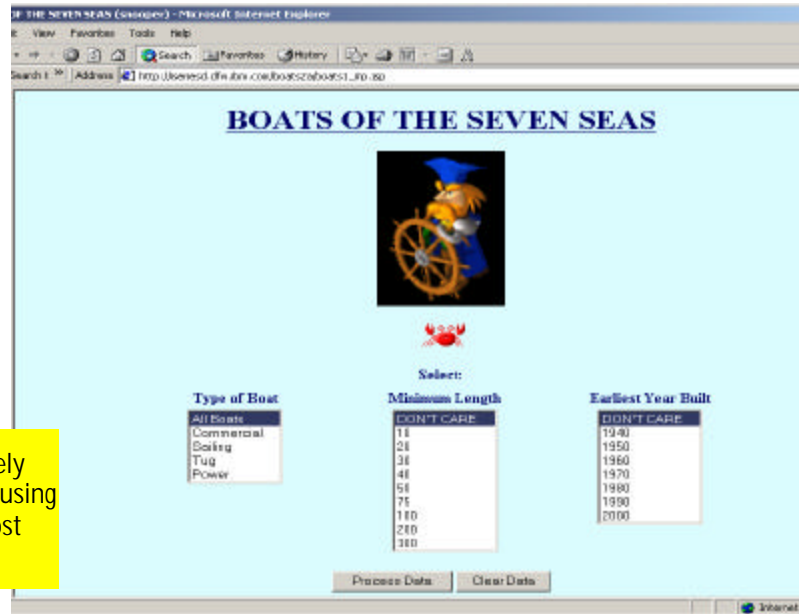
Main Features

	iSeries Access for Web	HATS LE	Host Publisher	IBM WebFacing Tool	HATS
• **Web-enables existing Applications** • **Based on Java Technology** • **Presentation**	• Yes • Yes • HTML, JSPs, Servlets	• Yes • Yes • HTML, JSPs, Servlets	• Yes • Yes • HTML, JSPs, ServletsYes	• Yes • Yes • HTML, JSPs, Servlets	• Yes • Yes • HTML, JSPs, Servlets
Runtime Environment	• WAS • ASF Tomcat	• WAS	• WAS	• WAS	• WAS
Supported Browsers	• MS Internet Explorer 5.0 + • Netscape 4.7 (AIX, Linux) and 6.2 (Windows • Opera 5.0 (Linux), and 6.0 (Windows)	• MS Internet Explorer 5.0 + • Netscape 6.0 • Netscape 4.72 (no keyboard support)	• MS Internet Explorer 5.0 + • Netscape 4.x or later versions	• MS Internet Explorer 5.0 +	• MS Internet Explorer 5.0 + • Netscape 6.0 • Netscape 4.72 (no keyboard support)
Interactive Feature Required	No - unless using 5250	Yes	Yes	No - with V5R2 and new hardware	Yes
Supported Host Interfaces	5250	5250	5250, 3270, VT52, VT100, VT220	5250 - from DDS Source. Source must be available for each screen format	5250, 3270
Web-enables System Functions	Yes	Yes	Yes	No - limited support for selected commands in WDS V5	Yes

45-46

Main Features (continued)

	iSeries Access for Web	HATS LE	Host Publisher	IBM WebFacing Tool	HATS
Host Application modernization	No, other than runs in browser	No, other than runs in browser	Yes	Yes	Yes
SQL Database Access	Yes	No	Yes	No	No
Code Changes Required	No	No	No	No - although may choose to optimize for the Web	No
Programming effort to convert host interface to Web interface	None	None	Using Studio: 1. Record host screen navigations and create IOs that encapsulate those navigations. 2. Build JSP pages that require IO input and render IO output	None - unless DDS keywords are not supported by WebFacing	Two methods: 1. default parameters - no pgming effort 2. customization - tracing application execution path, defining rules
Customization	Can customize what iSeries functions user can access	Customize screen look and keyboards	Yes - JSP pages can be customized, and IOs can be reused in a WAS application (Servlet, Web Services, EJB)	1. CODE designer 2. Cascading style sheets 3. Web Tools	1. Web Tools
Allows exposure of Java artifacts to other tools	No	No	No	Yes	No - may create Java extensions to the application
Merge/split of application screens	No	No	Yes - handled by macro recorder	Yes - with programming changes	Yes - handled by macro recorder

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