



WebSphere® software

# IBM WebSphere Host Access Transformation Server, Version 4.0

## Highlights

- **Extends 3270 and 5250 host applications to Web browsers**
- **Converts host screens to graphical user interfaces on the fly**
- **Employs an advanced rules-based transformation engine, making it unnecessary to customize each individual screen**
- **Exploits the security and scalability of industry-leading WebSphere Application Server**
- **Delivers HTML directly to the desktop, requiring zero-footprint and zero-download**
- **Enables the use of legacy content in enterprise portals through integration with WebSphere Portal Server**

IBM WebSphere® Host Access Transformation Server (HATS) gives you the tools you need to quickly and easily extend your legacy applications to business partners, customers and employees. HATS makes your 3270 and 5250 applications available through the most popular Web browsers, while at the same time converting your host screens to a Web-like look and feel. HATS provides a zero-footprint Web-to-host solution—the only software needed on the client is a Web browser.



Figure 1. With IBM WebSphere Host Access Transformation Server, you can get on the Web quickly and add customization at your own pace.

But HATS most valuable feature is its ease of use. Host screens are converted to graphical user interfaces on the fly, in realtime. And with HATS rules-based transformation engine, you can have your host application online with a familiar Web interface within a day of loading the program—without having to make any changes to your host application.

### **Improve your graphical user interface**

HATS can add drop-down lists, tables, radio buttons, tabbed folders and much more to your host screens. Users can click PF keys with the mouse instead of being required to use the keyboard. Or they can click the word that describes the key's function, such as clicking the word Help when they need assistance. Users can go to input fields with the mouse instead of having to use tabs or arrow keys to navigate the screen. Your users can point and click their way through your entire host application—just like on the Web. With IBM WebSphere Host Access Transformation Server, users of your legacy applications will have the same type of experience they have using other Web applications.

### **Improve presentation with HTML**

Not only can HATS make your graphical user interface more functional, it can also improve its appearance. Adding HTML to your host screens is easy—logos, graphics, pictures or backgrounds. With HATS, you can give your host applications the same look and feel as your Web applications. You can add Web links along the side of your screen or anywhere else you like. You not only have the power to design screens how you choose, you can present your business in a way that is professional and appropriate, rather than being constrained by the presentation of your legacy applications.

### **Rules-based transformation engine**

The power of HATS lies in its ability to accurately recognize host screens and transform them in realtime to a Web interface according to a set of predetermined rules. A collection of default rules is included with the product. It is easy to modify these rules according to your specific needs and tastes.

HATS allows you to assign different rule sets to different end-user communities. You can give a single host application a variety of looks that are appropriate for different user group. Alternatively, you can use a single rule set on different applications, which will enable you to reuse your work across multiple legacy applications.

HATS Studio includes a variety of options, or widgets, to transform host-screen elements into HTML screen components. Widgets include drop-down lists, radio buttons, hot-link lists, button tables and bar graphs. You can also customize these widgets or create your own to meet your specific requirements.

HATS macro support lets you provide programmed navigation through multiple legacy screens. For example, you can take your end users directly to the first screen they need to see, bypassing all screens in between. Or you can combine data from multiple host screens into a single HATS screen. HATS macros are easy to generate and allow you to streamline user interactions with host applications. HATS can also use macros created in IBM WebSphere Host On-Demand or IBM WebSphere Host Publisher.

### **Printing and keyboard support**

Local print support is an important capability when extending legacy applications to new users, and HATS delivers this support in an innovative and user-friendly way. HATS converts legacy print output into industry-standard PDF format. The PDF file is then sent to an end-user's browser, where it can be viewed, printed locally or saved to disk.

HATS provides strong host keyboard functionality. Although running in a browser environment, HATS provides support for most keyboard functions employed by the host application, including function keys, enter keys, clear keys and system request keys.

### **Security functions and scalability with WebSphere Application Server**

HATS exploits the security features and scalability of industry-leading IBM WebSphere Application Server. Secure HTTP (HTTPs) and Secure Sockets Layer (SSL) let you safely extend host applications to your remote users' Web browsers. HATS appears as a standard user to host applications, so you can take advantage of your existing security systems like IBM Resource Access Control Facility (RACF®).

HATS runtime components are generated by HATS Studio and deployed to the WebSphere Application Server, which provides support for the workload management features required for enterprise-class scalability and availability. Load balancing and failover support functions, such as vertical and horizontal cloning, are handled by the WebSphere Workload Manager. Vertical cloning allows requests to be distributed across multiple Java™ virtual machines (JVMs), providing fault tolerance. If one JVM fails, a user request can be processed by one of the remaining clones.

### **Enterprise portals**

Portals are becoming increasingly popular as a way to provide maximum flexibility with a minimum of screen space. WebSphere Portal solutions provide a personalized, single point of access to enterprise information. The HATS portlet makes it possible for legacy applications to be included in enterprise portals, enabling you to consolidate your mission-critical applications at one single point of access.

### **An Eclipse technology-based development environment**

HATS Studio is fully integrated within Eclipse technology-based IBM WebSphere Studio. It offers an intuitive interface and easy-to-use wizards for customizing the rules for transformation of legacy screens. The Eclipse platform is an industry-standard application development environment, providing the benefits of a common framework and reusable skill set for development of Eclipse technology-based applications. Integration within WebSphere Studio delivers a common tooling family for your e-business needs.

### **An extensible solution with HATS open architecture**

Out of the box, HATS is a powerful tool. But HATS benefits are not limited to just improving your graphical user interface. Because it's built on industry-leading WebSphere software using Java 2 Platform, Enterprise Edition (J2EE) architecture, HATS has virtually unlimited flexibility and extensibility. Using custom Java development you can extend HATS to integrate with other legacy systems or J2EE applications. For example, you can use Enterprise Java Beans (EJB) to add business logic to a HATS project. Or you can use the functions found in IBM WebSphere Host Publisher to transfer data from one application to another. HATS also supports global variables, allowing you to streamline your applications and reduce the amount of input required by your end users. With additional customization, global variables provide further capabilities for moving data between your host application and other applications and databases. HATS open architecture provides almost unlimited flexibility for improving the productivity of your host applications.

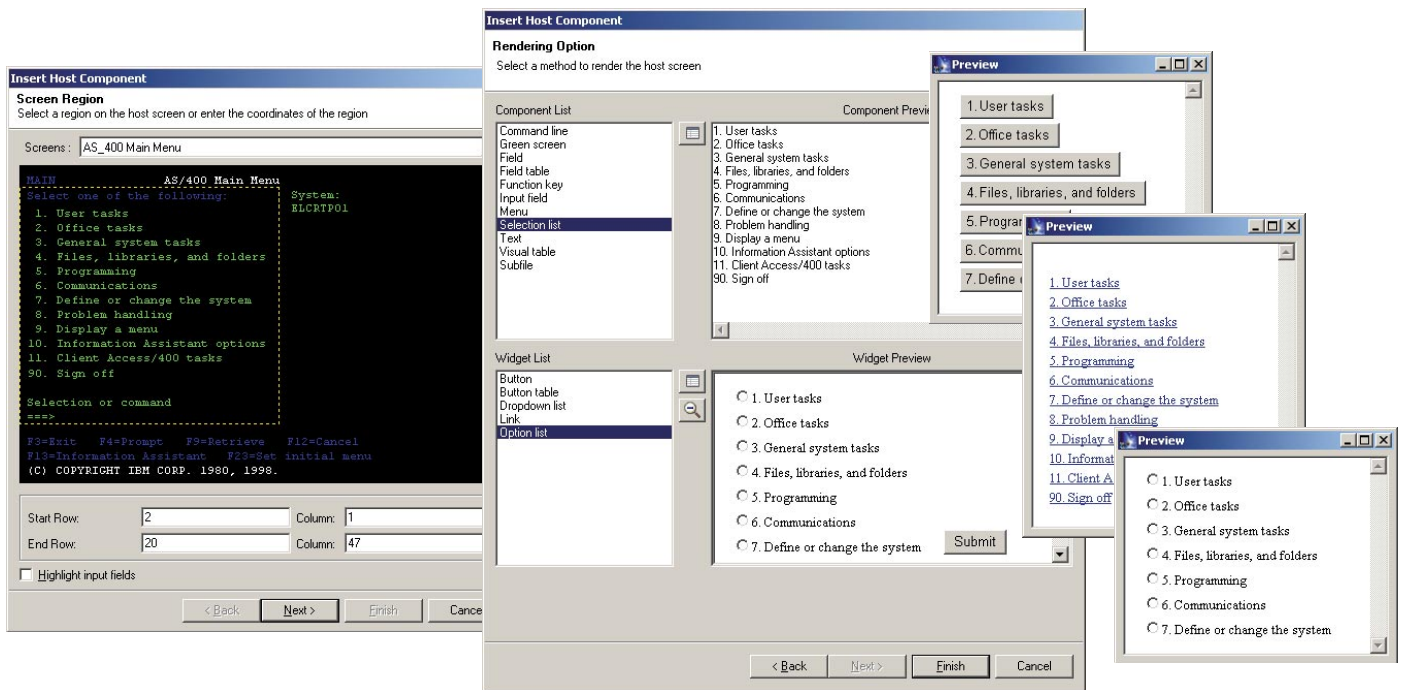


Figure 2. WebSphere Host Access Transformation Server Studio lets you quickly and easily customize your host applications.

## Get on the Web quickly

When you begin a HATS project, a wizard prompts you for basic information, such as the host address. You then select a template for the project. In HATS terminology, a template is an HTML file that serves as the background for all your screens. You can choose one of the templates included with HATS or you can use your own HTML file that may include such elements as logos, graphics, animations or Web links. You can also choose not to use a template—for example, you might want HATS to look like a traditional emulator. After choosing your template, you can deploy the project on your WebSphere Application Server. That's it. You're finished.

Your host application can now be delivered as HTML to your users' Web browsers. All your screens are converted on the fly according to HATS default rules. Your menus and lists display as hot links, and your input fields as HTML text input boxes. Your PF keys will be buttons, with only the active ones displayed, and your logos and graphics will appear as they would on any other Web page.

## Customize at your own pace

Once you have deployed your host application you may decide to add customization to the project. HATS gives you the ability to select individual screens or groups of screens to be uniquely

customized. Because HATS is rules-based, a set of rules you create to customize a single host screen can easily be applied to numerous screens that share similar customization requirements. So while you may create just a few rule sets, you can customize an unlimited number of screens according to these rules. HATS allows you to spend time on the high-traffic and high-value screens—the screens where most of the action and most of the value resides in your host application. Other screens can be converted to a GUI according to the project's default rules.

Your rule sets can be created with HATS easy-to-use graphical studio tools. To create a rule set, you simply select the HATS option for the topic you want to work with on the screen — like a selection list. And select the option that describes how you want to HATS to transform that screen element if it is found — convert it to an option list, for example (see Figure 2). You can also insert HTML elements, such as graphics and Web links, in any rule set.

HATS offers tremendous flexibility for extending your Web-to-host implementation over time. One significant advantage of HATS is that you need to invest only minimum time and resources to get started. You can use HATS to quickly deploy your legacy applications to the Web and deliver immediate value to your business. Later, you can add user productivity enhancements at your own pace. Unlike other customization software, HATS does not require you to customize each screen. HATS uses the default rules to convert any unassigned host screens to GUIs, while customizing all assigned screens according to the rule sets you have created. Therefore HATS will not break down if you make changes to the host application.

### **Boost productivity, help reduce training costs**

Training new users on host applications costs time and money. Today's mobile workforce often does not have the time or inclination to learn to navigate complex legacy systems. Your business partners and customers want a familiar interface on which they can become productive right away. HATS allows you to present them with a graphical interface that makes your company look modern and up-to-date.

Host applications are performing mission-critical roles in your organization. With a little help on the front end, they can continue to be valuable contributors for many years. Why replace your legacy applications when all you need to replace is the graphical user interface? With a minimum of time and resources, IBM WebSphere Host Access Transformation Server can rejuvenate your host applications, allowing your organization to continue to benefit from its substantial investment in legacy systems for years to come.

### **IBM WebSphere Host Integration Solution**

IBM WebSphere Host Access Transformation Server is the newest member of the market-leading IBM Host Integration family of host access and Web-to-host solutions. HATS complements WebSphere Host On-Demand and WebSphere Host Publisher products and is available exclusively within IBM WebSphere Host Integration Solution.

### **WebSphere software platform: building on a firm foundation**

IBM WebSphere Host Access Transformation Server is part of the IBM WebSphere software platform — a comprehensive set of integrated, award-winning e-business solutions. No matter where you are in the e-business cycle, the WebSphere software platform can allow you to grow — at the speed the market demands. Building on this robust platform, you can connect diverse IT environments to maximize your current investments and leverage existing skills. Deliver your core business applications to the Web using industry standards like Java technology, XML and Web services. And create next-generation applications that differentiate you from the competition. Advance to a powerful platform for integrated e-business — the WebSphere software platform.

### **For more information**

To learn more about IBM WebSphere Host Access Transformation Server, visit [ibm.com/software/webservers/hats](http://ibm.com/software/webservers/hats).

To learn more about how IBM WebSphere software platform can help you succeed in e-business, contact your IBM representative, IBM Business Partner or visit [ibm.com/websphere](http://ibm.com/websphere).

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## **IBM WebSphere Host Access Transformation Server, Version 4.0 system requirements at a glance**

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### **HATS Studio requirements**

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- Intel® Pentium® II processor or higher
- 384MB of RAM (512MB of RAM recommended)
- 200MB of available disk space
- Microsoft® Windows® XP or Windows 2000 operating environments
- High-resolution display with a minimum screen resolution of 1024x768
- WebSphere Studio Site Developer Advanced, Version 4.0.3 (included), or
- WebSphere Studio Application Developer, Version 4.0.3, or
- WebSphere Studio Application Developer Integration Edition, Version 4.1

### **HATS server requirements**

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WebSphere Application Server, Advanced Edition; or WebSphere Application Server, Advanced Edition Single Server, Version 4.0.3

#### *AIX operating environment*

- IBM AIX®, Version 4.3.3 or 5.1
- 512MB of RAM (1GB recommended)
- 130MB of available disk space

#### *Windows NT operating environment*

- Windows NT® Server, Version 4 with Service Pack 6a
- 512MB of RAM (1GB recommended)
- 130MB of available disk space

#### *Windows 2000 operating environment*

- Windows 2000 Professional Server or Advanced Server
- 512MB of RAM (1GB recommended)
- 130MB of available disk space

#### *Sun Solaris operating environment*

- Sun Solaris, Version 2.6, Version 7.0 or Version 8.0 operating environment, running on a SPARC hardware system with native threads
  - 512MB of RAM (1GB recommended)
  - 130MB of available disk space
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## IBM WebSphere Host Access Transformation Server features at a glance

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### Back-end data sources

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Supports 3270 and 5250 accessible applications through any Telnet (TN) server

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### Performance and scalability

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Provides load balancing and failover functions through exploitation of WebSphere Application Server, Advanced Edition workload management capabilities

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### Compatibility and usability

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- Supports IBM WebSphere Application Server, Advanced Edition, Version 4.0.3
  - Delivers HTML directly to the desktop with zero-footprint and zero-download
  - Provides on-the-fly rejuvenation of 3270 and 5250 screens
  - Supports macros and global variables for increased end-user productivity
  - Enables new business logic using industry-standard Java development tools
  - Provides a load-and-go HTML emulator
  - Employs an Eclipse technology-based studio that plugs into IBM WebSphere Studio
  - Generates industry-standard J2EE applications
  - Delivers legacy content as new enterprise portal content
  - Provides J2EE technology-compliant Web application development and deployment
  - Creates HTML pages, which can be enhanced using WebSphere Studio (included) or any other industry-standard HTML editor
  - Provides an extensible J2EE architecture, allowing virtually unlimited customization and integration
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### Security

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- 128-bit data encryption (RC/2; RC/4; Data Encryption Standard, or DES; and Triple DES)
  - SSL 3.0 support (X.509 certificate)
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09-02  
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