

Reference guide

IBM Host Access Client Package



WebSphere® software



### **IBM Host Access Client Package**

IBM Host Access Client Package software allows you to efficiently manage the migration of Web-to-host technologies at your own pace. With one package, you can support a diverse user community, avoid working with multiple vendors and provide access to legacy applications.

With tools that are available today, you can start to build your on demand business applications for the future. You can rapidly create Web-based host-access applications based on your legacy systems. These tools can help you to achieve a competitive advantage in your marketplace, reduce expenses and leverage your existing investments.

Host Access Client Package can help you reach your on demand business goals by:

- *Providing market-leading host connectivity and emulation.*
- *Capitalizing on existing investments and extending enterprise applications to Web-based technologies.*
- *Extending the reach of your enterprise's host applications with Java™ technology-based host access.*
- *Providing multiple security options for access across the Internet.*

### **Customizable solutions to meet your host access needs**

IBM Host Access Client Package provides access to applications and data residing on IBM **@server**® iSeries (5250), IBM **@server** zSeries® (3270) and DEC UNIX® (VT) hosts to support traditional and Web users in Systems Network Architecture (SNA) and intranet environments. If you require only IBM **@server** iSeries server access, IBM Host Access Client Package for IBM **@server** iSeries systems is a more appropriate solution.

Both packages provide the solution for your host connection needs and include *IBM Personal Communications* for traditional emulation and *IBM WebSphere® Host On-Demand* software for browser-based emulation. You can also create custom Web-based applications with the comprehensive set of application programming interfaces (APIs) included in each package.

#### **• IBM Personal Communications**

Get access to applications and data residing on midrange and host systems. IBM Personal Communications is one of the leading emulators and contains comprehensive tools that help simplify connectivity and access to host data. It offers features such as multiprotocol environments, including High-Performance Routing (HPR) over IP, Internet Protocol Version 6 (IPv6) support (and secure Telnet session support) using Microsoft® Crypto API (MSCAPI) or IBM Global Security Kit (GSKit). Personal Communications software also includes Host Access Beans for Java software and a Java interface for Host Access Class Library (HACL)—technologies that help reduce rework. These technologies also help enable your applications to remain fully functional as your business evolves.

#### **• IBM WebSphere Host On-Demand**

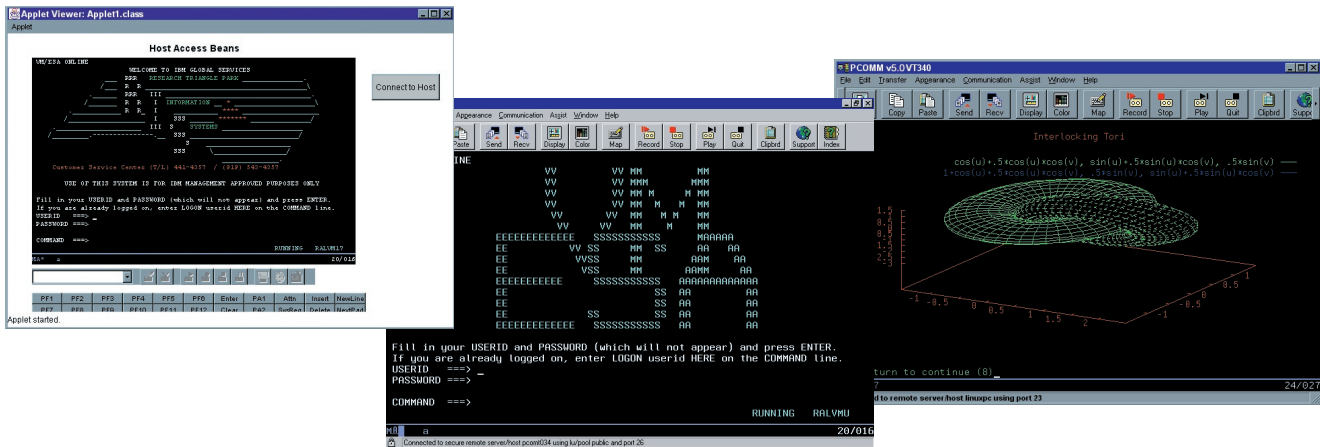
Gain secure Web-to-host access and Web-based application programming support with one interface to your TN3270E, TN5250, VT52, VT100, VT220, VT320, VT420 and IBM CICS® applications, consistently across platforms.

Maximize your productivity with standard desktop utilities, file transfer and host print. Using the deployment wizard, administrators have the option of creating custom HTML files containing different configuration information for host sessions. Create custom Web-based applications using Host Access Beans for Java software and HACL. Web-server installation means users almost always access the latest version. WebSphere Host On-Demand supports your choice of client and server platforms and does not require midtier servers.

### **Personal Communications**

Personal Communications is a host communication and terminal emulation package that features 3270, 5250 and VT emulation; SNA application support; and SNA and TCP/IP connectivity. It is a key component of Host Access Client Package and IBM WebSphere Host Integration Solution—and it helps enable security-rich access to mission-critical business systems for virtually every user.

Personal Communications can bring robust personal networking functions to the workstation and can exploit your existing networking capabilities. These capabilities include SNA applications and technologies, such as Advanced Program-to-Program Communication (APPC) and HPR. It also offers TCP/IP support capabilities and an extensive API set, including HACL and Emulator High-Level Language Applications Programming Interface (EHLLAPI), through programming languages such as C++, VBScript and Java.



Multiple Personal Communications sessions illustrate SSL support, VT340 graphics and a custom application using Host Access Beans for Java.

Personal Communications can assist you in reaching your on demand business goals by:

- *Providing market-leading host connectivity and emulation.*
- *Including tools to easily combine host and desktop applications.*
- *Helping to capitalize on existing investments and extend applications to Internet Protocol (IP) network technologies.*
- *Enabling users to have access to mission-critical business systems.*

Personal Communications enhancements include:

- *Support for MSCAPI (Microsoft Crypto API)*
- *5250 printer association support*
- *IPv6 support for Enterprise Extender (EE)*
- *Support for TN3270 contention resolution*
- *Federal Processing Information Standard Mode (FIPS)*
- *Primary Interop Assemblies for Microsoft .NET*

### *Industry-leading emulation*

Personal Communications continues to set the standard for terminal access to business-critical applications and data on different host systems, taking advantage of FTP, 3270, 5250, TN3270E, TN5250, VT52, VT100, VT220 and VT340 emulation. The Personal Communications industry-standard APIs include 32-bit EHLLAPI APIs, as well as Windows HLLAPI (WinHLLAPI) APIs.

### *Improved development capabilities*

Personal Communications supports Host Access Beans for Java (based on the JavaBeans specification), Microsoft Visual Basic automation objects and VBScript. Building on the Personal Communications leadership in object-oriented programming, the HACL API provides a Java programming interface that enables you to create applications for both Personal Communications and WebSphere Host On-Demand. This capability allows flexibility while preserving your future investments.

### *Security when you need it the most*

With Personal Communications, you can be confident that you have access to a security-rich environment when you need it the most. Personal Communications supports Secure Sockets Layer (SSL), Version 3.0 and Transport Layer Security (TLS), Version 1.0. When combined with support for load-balancing Service Location Protocol (SLP)—found in products such as IBM Communications Server—Personal Communications can be configured to connect to only SSL-enabled servers, helping to provide more network security.

### *Accelerate the transition to on demand business*

Personal Communications helps ensure that you are ready to make the transition to on demand business with tools that you can use today:

- *Network integration*

Personal Communications is designed to handle a wide variety of protocols—including Integrated Services Digital Network (ISDN), HPR, SNA and IP—to help you connect users to the data they need to access mainframe applications and data.

- *Connectivity*

Personal Communications offers a fast, network-efficient connection to employees, customers, suppliers and trading partners. Replace outdated, disparate communication tools with one solution for access to mission-critical business systems.

- *On demand business tools*

Personal Communications Java Interface for HACL helps you make the change to a Web-to-host environment more easily and efficiently. Using this tool can help you preserve your application development investment, as you make the move to other WebSphere Host Integration Solution products.

- *Industry-standard solutions*

From EHLLAPI to TCP/IP to SNA, Personal Communications provides industry-standard solutions to help extend your investments into the future.

- *Extensive language support*

Personal Communications is multilingual. Available in 22 languages, it includes double-byte character set (DBCS) languages, supports the euro sign, and includes extensive keyboard and code-page support.

- *Microsoft certification*

The Designed for Microsoft Windows® XP certification ensures that Personal Communications can take advantage of the new features in Windows XP, and that Personal Communications has been extensively tested to meet Microsoft XP quality standards.

- *SNA-over-IP backbone*

Through the use of EE in Personal Communications, you can maintain the integrity of SNA LU6.2, Common Programming Interface for Communications (CPI-C), APPC and LU0 applications over an IP network, allowing these applications to run unchanged even as the network changes. The IP network infrastructure does not need to change to handle these applications. Everything is done at the end points, and the routers forward the IP packets as if they were native IP applications.

## IBM Personal Communications for Windows, Version 5.8 features and functions

	3270	5250	VT
<i>Installation and customization</i>			
IEEE 802.2	x	x	
3174 peer communication (LAN over coaxial); not supported on Windows 2000 or later	x	x	x
IPX/SPX		x	
Communications Server API client			
• APPC	x	x	
• LUA	x		
TCP/IP	x	x	x
SNA Distributed Function Terminal (DFT)	x		
Non-SNA DFT	x		
Twinaxial		x	
IBM @server iSeries and S/3x Console (asynchronous and twinaxial)		x	
Synchronous Data Link Control (SDLC) (including auto-dial capability)	x	x	
Wide Area Connector (WAC)	x	x	x
SNA over asynchronous	x		
Asynchronous	x		
Asynchronous for IBM Global Network® (IGN)	x		
Home3270	x		
Hayes Autosync	x	x	
Hayes Autosync II (Windows 95 and Windows 98 only)	x	x	
Microsoft SNA Server			
• FMI	x		
• Windows APPC		x	
• Windows LUA	x		
APPC3270 (LU2 over APPC)	x		
IBM AnyNet® (SNA over TCP/IP)	x	x	
ISDN, X.25	x	x	
PCI MPA	x	x	
Enterprise Extender	x	x	
3270 pass-through over twinaxial	x		
Original equipment manufacturer (OEM) adapter support	x	x	x
Application-initiated detect and repair	x	x	x
Silent installation	x	x	x
Microsoft Systems Management Server (SMS) support	x	x	x
Installation and configuration from LAN server	x	x	x
Simultaneous sessions with different code pages and keyboard languages	x	x	x
Microsoft Windows 2000 or Windows/XP certified	x	x	x

## IBM Personal Communications for Windows, Version 5.8 features and functions (continued)

	3270	5250	VT
<i>Installation and customization</i>			
Automatic logon	x		
Twenty-six display and printer emulation sessions	x	x	x
Selectable display sizes	x	x	x
VT52/VT100/VT220/VT340 emulation			x
Toolbar customization	x	x	x
Text configuration files	x	x	x
Configuration update files	x	x	
Initial configuration definitions	x	x	
System policy	x	x	x
Microsoft Windows Installer	x	x	x
<i>Secure session support</i>			
GSKit	x	x	x
MSCAPI	x	x	x
FIPS Mode	x	x	x
TLS, Version 10	x	x	x
SSL, Version 3	x	x	x
Smart card support	x	x	x
Client Certificate Authentication	x	x	x
<i>Print support</i>			
Host print	x	x	
• 3812 printer emulation	x		
• Host print transform		x	
• ASCII transparent	x	x	x
• Printer definition table (PDT)	x	x	x
• 5250 printer association		x	
Screen print	x	x	x
Associated printer support	x	x	
ZipPrint	x		
<i>Networking function</i>			
SNA data compression (emulator sessions)	x	x	
SNA data compression (LU 6.2 sessions)	x	x	
VPD/EVPD, Alert	x		
Response time monitor (RTM)	x		
Command start/stop/query SNA node	x	x	
SLP	x	x	
SSL, Version 3.0	x	x	x
TLS 1.0	x	x	x
Client certification authentication for SSL	x	x	x
HPR over IP for nondisruptive backup	x	x	

## IBM Personal Communications for Windows, Version 5.8 features and functions (continued)

	3270	5250	VT
<i>Utilities</i>			
Administration tools	x	x	x
Information bundler for problem determination	x	x	x
Internet service	x	x	x
Enhanced log or trace viewer	x	x	x
Macro conversion tool for WebSphere Host On-Demand	x	x	x
Product update tool	x	x	x
Certificate Manager	x	x	x
Certification Migration	x	x	x
<i>User interface</i>			
Graphical, customizable toolbar feature	x	x	x
Rule line	x	x	x
Menu-bar customization	x	x	x
Pop-up keypad and hot keys	x	x	x
3-D hot spots	x	x	x
Macro record and play	x	x	x
Graphical keyboard remapping	x	x	x
• National language support (NLS) key-caps support	x	x	x
• DBCS unique keyboard support	x	x	
Customizable mouse	x	x	x
Drag-and-drop color remapping	x	x	x
Crisp fonts, automatic sizing, fixed font size	x	x	x
Display setup, view setup, window setup	x	x	x
Internet hot spots	x	x	x
OLE/ActiveX objects	x	x	x
APL support	x		
Automation and scripting utility (CMMOUSE)	x	x	x
Accessibility for handicapped users	x	x	x
Status bar	x	x	x
Euro sign	x	x	x
Intelligent spreadsheet support	x	x	x
Blink attribute support	x	x	x
VT history			x
Multilanguage support	x	x	x
<i>IBM@server iSeries application support</i>			
PC organizer and text assist		x	
Enhanced nonprogrammable terminal user interface (ENPTUI)		x	



## IBM Personal Communications for Windows, Version 5.8 features and functions (continued)

	3270	5250	VT
<i>Programming interfaces</i>			
HACL	x	x	x
DOS EHLLAPI	x	x	x
EHLLAPI, DDE, PCSAPI	x	x	x
WinHLLAPI support	x	x	x
32-bit HLLAPI	x	x	x
REXX EHLLAPI support	x	x	x
Visual Basic scripting	x	x	x
SRPI	x		
REXX PSCAPI PCSAPI	x	x	x
TCP62	x	x	
Request Unit Interface (RUI)	x		
Session Level Interface (SLI)	x		
Convert macro to VBScript or XML	x	x	x
Host Access Beans for Java	x	x	x
Microsoft Open Database Connectivity (ODBC) 3.0 for SNA, using IBM DB2 <sup>®</sup> Connect <sup>™</sup>			x
CPIC and APPC APIs supporting both dependent and independent LU6.2	x	x	
Node operator facility (NOF)	x	x	
<i>File transfer</i>			
File transfer through emulator session	x	x	x
Command line invocation	x	x	x
Lists	x	x	x
Templates	x	x	x
Import and export	x		
Data transfer (IP and SNA)		x	
ASCII—host file transfer			
• Xmodem			x
• XModem1K			x
• Ymodem			x
• YModemG			x
<i>Host graphics</i>			
Graphics Data Display Manager (GDDM) and Graphic Objects Content Architecture (GOCA)	x		
Programmed symbol set	x		
Vector	x		
Copy graphics images	x		
VT340 ReGIS and Sixel support			x

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## IBM Personal Communications for Windows, Version 5.8 at a glance

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### Hardware requirements

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Memory and fixed storage capacity

- 16MB RAM minimum, 32MB recommended for Microsoft Windows NT® and Windows 98
- 24MB RAM minimum, 32MB RAM recommended for Microsoft Windows ME
- 64MB RAM minimum, 128MB RAM recommended for Windows XP and Microsoft Windows 2000 Professional
- 128MB RAM minimum, 256MB RAM Microsoft Windows Server 2003
- 125MB of fixed disk space minimum; more space might be required depending on the installation options selected

IBM and IBM-compatible workstations with at least an Intel® Pentium® microprocessor (or equivalent) is strongly recommended. If Personal Communications is to be locally installed, the workstation must also have a CD-ROM drive.

### Software requirements

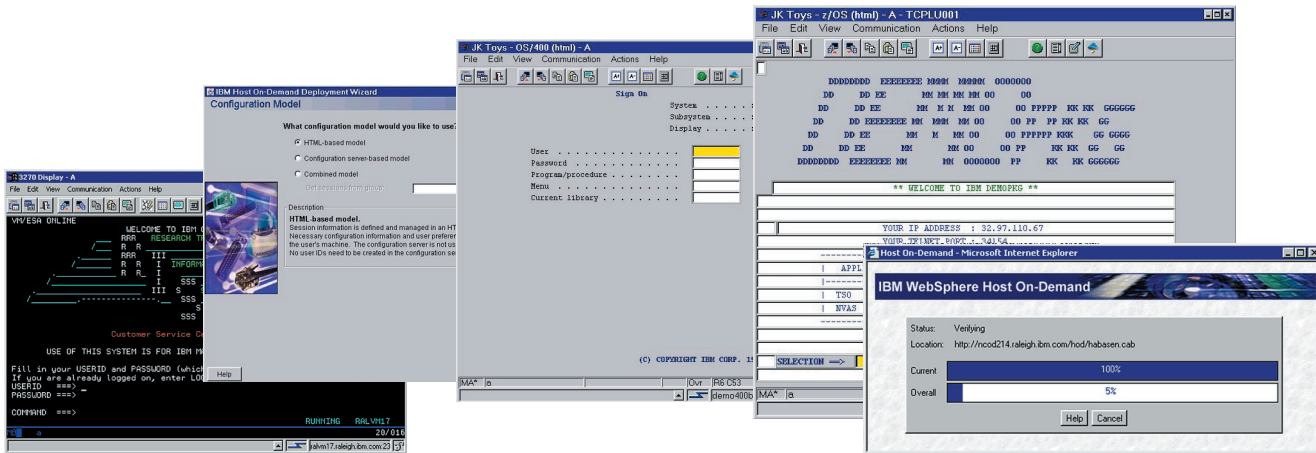
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Supported by the following desktop platforms:

- Windows 98
- Windows ME
- Windows 2000 Professional, Server and Advanced Server
- Windows XP Professional and Home Edition - (32 bit)
- Windows NT, Version 4 with Service Pack (SP) 6, and later
- Windows Server 2003
- Terminal Services (Windows Terminal Server, Version 4 and Windows Terminal Services for Windows 2000 and Windows XP)
- Citrix Metaframe, Version 1.8 for Windows Terminal Server, Version 4.0 and Windows 2000 Server
- Citrix Metaframe XP Presentation Server (Versions s, a, e) for Windows Microsoft SNA Server Client (optional)
- IBM Communications Server for Windows NT and Windows 2000 Version 6.1 and Version 6.1.2 API Client (optional)
- IBM Communications Server for Linux, Version 6.2 Client on Windows (optional)
- IBM Communications Server for Linux on zSeries, Version 6.2 Client on Windows (optional)

IBM Personal Communications for Windows, Version 5.8 communicates with the following types of servers or gateways:

- IBM Communications Server for Windows, Version 6.1 and Version 6.1.2
  - Microsoft SNA Server, Version 4 with Service Pack 4 (SP4)
  - Microsoft Host Integration 2000 Server, Version 5
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With IBM WebSphere Host On-Demand, you can easily access and manage your 3270, 5250 or VT host applications.

IBM WebSphere Host On-Demand provides cost-effective and secure browser-based and nonbrowser-based host access to users in intranet and Internet environments. WebSphere Host On-Demand is installed on a Web server, simplifying administrative management and deployment. The WebSphere Host On-Demand applet is downloaded to the client browser, providing user connectivity to critical host applications and data.

**WebSphere Host On-Demand**

WebSphere Host On-Demand leverages Java technology to help open the doors to your host data directly from your browser. Just click a hyperlink to launch the WebSphere Host On-Demand Java applet. This Web-to-host WebSphere host connectivity solution helps provide security-rich Web-browser access to host applications to the Web, without any programming required.

With support for FTP, TN3270E, TN5250, VT100, VT220, VT320, VT420 and IBM CICS Transaction Gateway access, users have a single interface to their key host data. Because WebSphere Host On-Demand is Java technology-based, its interface has the same look and feel across various types of operating environments. It also provides an alternate terminal option to help simplify the experience for users unfamiliar with traditional green screens.

WebSphere Host On-Demand can help you attain your on demand business goals by:

- *Extending the reach of your enterprise's host applications with Java technology-based host access.*
- *Supporting FTP, TN3270E, TN5250, VT52, VT100, VT220, VT320, VT420 and CICS Transaction Gateway access.*
- *Enabling you to quickly create new on demand business applications using Host Access Beans for Java, Host On-Demand Connector, JavaScript API and reusable components.*
- *Providing multiple security options for access across the Internet.*

- *Allowing installation on a Web server for centralized management and deployment.*
- *Providing an alternate terminal option for users unfamiliar with traditional host screens.*
- *Supporting host access to IBM @server iSeries and zSeries servers.*
- *Providing File Transfer Protocol (FTP) and VT access to all FTP- and VT-supported server types. A cost-effective approach*

#### *A cost-effective approach*

Using WebSphere Host On-Demand can help you save money in product deployment and maintenance, helping eliminate the need to deploy software to individual user desktops. Users can connect directly to a host system, such as an IBM @server iSeries or zSeries system, without the need for extra hardware and software between the client and the Telnet server. You can install WebSphere Host On-Demand on nearly any server platform, accommodating various-size organizations and branch offices.

As software updates occur, the latest version of WebSphere Host On-Demand is downloaded each time a user accesses the software, helping eliminate the need to install an entire product on client workstations. With the cached client feature, users download the product (or software) only once.

Subsequent sessions then originate from user hard drives, while code updates are handled in the background, through the cached client. As a result, users can be more productive and access the newest version of the code, with reduced business distribution costs.

#### *Connect directly to any Telnet server*

With WebSphere Host On-Demand, the client applet contains an emulation functionality, eliminating the need for a midtier server — helping to enhance your performance. After the applet has been served to the client, it's easy to connect directly to any standard Telnet server that provides the most efficient access to the required data. You can change the Telnet connection as needed, to accommodate user requirements for new data. You can also access many host sessions concurrently.

#### *Create new on demand business applications*

A rich Java tool set — including Host Access Beans for Java, HACL API, WebSphere Host On-Demand Connector, Programmable Host On-Demand and JavaScript API — allows you to rapidly create custom on demand business applications. Because WebSphere Host On-Demand is part of the WebSphere product family, you can incorporate applications developed using the tool set as part of other WebSphere software projects. This helps you preserve your WebSphere Host On-Demand investment, while providing a jump-start to moving to the Web and on demand business.

The HACL API specifically provides access to 3270, 5250 and VT data streams. This class library allows you to use mission-critical information in new ways, including integrating data from one application with another.

Host Access Beans for Java provides host connectivity and emulator functions through simple, component-based development tools, such as IBM WebSphere Studio Application Developer. Use Host Access Beans for Java or Host On-Demand Connector to rapidly create custom applications and deliver the specific functions that you want to include in your on demand business applications. Using the JavaScript API, you can integrate a WebSphere Host On-Demand session within your company's Web page.

With Programmable Host On-Demand, you can create custom applets or applications to suit your needs, without having to start from scratch, using the Host Access Beans.

#### *Security-enhanced access across the Internet*

Using the TLS Protocol or SSL, Version 3.0, WebSphere Host On-Demand software extends host data access across intranets, extranets and the Internet with added security. Mobile workers can establish security-enhanced communication with an enterprise host. With client and server certificate support, WebSphere Host On-Demand can present a digital certificate (X.509, Version 3) to the Telnet server—such as IBM Communications Server for OS/390—to facilitate authentication. Certificates can be kept in the client's browser, a dedicated security device—such as a smart card—or in a local or network-accessed file in PKCS12 or PFX format, which is protected by a password.

#### *Deployment options*

WebSphere Host On-Demand provides access to host applications from a Web browser. The browser downloads the WebSphere Host On-Demand Java applet from the Web server and then connects to most standard Telnet servers to access host applications. The WebSphere Host On-Demand applet needs configuration information to determine which host to connect to and to identify other host session properties. This configuration information can be provided to the WebSphere Host On-Demand applet from an HTML file or by using the WebSphere Host On-Demand configuration server.

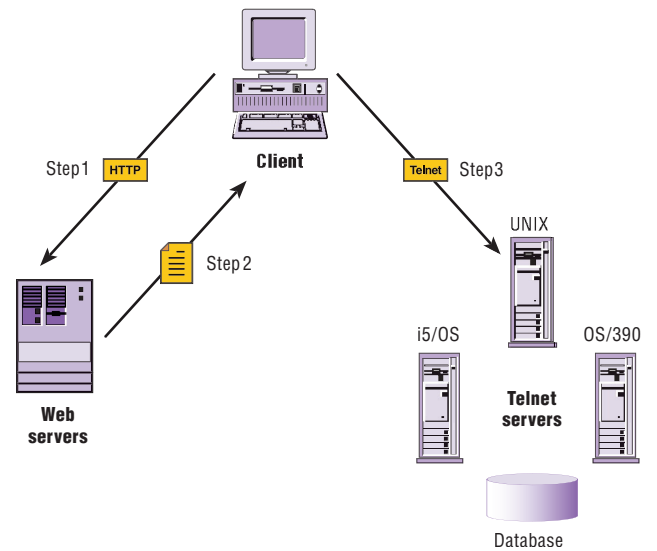
#### *Flexible configuration models support your unique needs*

If you don't want to manage WebSphere Host On-Demand, you can use the deployment wizard to create HTML files that contain configuration information for host sessions. This means that you are not required to use the WebSphere Host On-Demand configuration server to specify sessions. If you allow users to save changes to host-session configuration information, the changes are stored on the local file system where the browser is running.

If you need to manage WebSphere Host On-Demand users, host-session information is maintained on the configuration server, using the administration utility. You can define preferences using a user and group structure. The configuration server normally stores its data locally on the WebSphere Host On-Demand server, though it can be configured to use Lightweight Directory Access Protocol (LDAP) instead. Users access their configurations using either custom HTML files created in the deployment wizard or by using one of several HTML files provided as part of WebSphere Host On-Demand. If you allow users to save changes, WebSphere Host On-Demand stores user preferences based on user IDs in the configuration server.

### Simple host access from IBM

Users can access 3270, 5250 or VT applications from IBM WebSphere Portal software without any programming. By combining WebSphere Host On-Demand and WebSphere Portal software, you can create custom Host On-Demand portlets for simple host application access. Users can also create custom portlets using Host On-Demand deployment wizard or using one of the sample portlets available on the IBM Service Key site.



*IBM WebSphere Host On-Demand is a two-tier solution that eliminates the need for a middle-tier server. **Step 1.** The user opens a browser and clicks a hyperlink. **Step 2.** IBM WebSphere Host On-Demand applet is downloaded to the client workstation. **Step 3.** When the applet is downloaded, IBM WebSphere Host On-Demand connects directly to any Telnet server to access host applications.*

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## IBM WebSphere Host On-Demand, Version 9.0 at a glance

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### Hardware requirements

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Disk space must be available on the server to support applet files, the WebSphere Host On-Demand redirector function and WebSphere Host On-Demand service manager. These requirements are based on a typical installation and are only estimates. Sizes can vary by operating system and the languages installed.

Server space per additional user:

- For Windows NT and Windows 2000, 375MB of disk space for one user interface language, plus an additional 8MB of disk space for each additional user interface language
- For the IBM AIX® operating system, 375MB of disk space (includes English as a user interface language and additional security files), plus an additional 8MB of disk space for each additional user interface language
- For the Sun Solaris operating environment, Linux® and HP-UX, 400MB of disk space (includes English as a user interface language), plus an additional 8MB of disk space for each additional user interface language
- All other operating systems, 525MB (all languages installed)

### Software requirements

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Can be installed on the following servers:

- Windows NT 4.0 with SP6, or later
- Windows 2000 (Professional, Server and Advanced Server)
- Windows XP Professional (32 bit) (Note: This should not be used for a large-scale production server)
- Windows 2003 Server and Enterprise (32 bit)
- IBM AIX 5L™, Version 5.1 and Version 5.2
- IBM OS/2® Workstation Asset Reduction Program OS/2 Warp Server Version 4, IBM OS/2 Warp® Server, Version 4 and OS/2 Warp Server for e-business, Version 4.5
- Novell NetWare, Version 4.2, Version 5.1, Version 6 and Version 6.5
- Sun Solaris operating environment, Version 7, Version 8 and Version 9
- IBM OS/400® Version 5.1, Version 5.2, and Version 5.3, and IBM i5/OS™, Version 5.3
- IBM OS/390®, Version 2.10
- IBM z/OS®, Version 1.2, Version 1.3 and Version 1.4
- HP-UX, Version 11.0, and Version 11i
- Red Hat Enterprise Linux Version 2.1 and Version 3.0
- Red Hat Linux, Version 9.0 Personal and Version 9.0 Professional
- SuSE Linux, Version 8.0, Version 8.1 Professional, Version 8.2, and Version 9.0
- SCO OpenLinux Workstation, Version 3.1.1
- SCO OpenLinux Server, Version 3.1.1
- SCO Linux, Version 4.0
- TurboLinux, Version 8.0 Workstation and Server

**Note:** The version for support for Linux on S/390 and Linux on zSeries is the same as listed for Red Hat, SuSE and TurboLinux.

Supported on the following desktop operating environments when downloaded from a server:

- Windows 98
- Windows ME
- Windows NT, Version 4.0 with SP6 or later
- Windows 2000 (Professional)
- Windows XP Professional and Home Edition (32-bit)
- Windows Server 2003 Enterprise, Standard and Web (32-bit)
- AIX 5L, Version 5.1 and Version 5.2
- OS/2 Warp, Version 4
- Sun Solaris, Versions 7, 8 and 9
- HP-UX, Version 11.0 and Version 11i
- Red Hat Enterprise Linux AS, Version 2.1 and 3.0 (WS, ES, AS)
- Red Hat Linux, Version 9.0 Personal and Version 9.0 Professional
- SuSE Linux, Version 8.0, Version 8.1 Professional, Version 8.2 and Version 9.0
- SCO OpenLinux Workstation, Version 3.1.1
- SCO OpenLinux Server, Version 3.1.1
- TurboLinux, Version 8.0 Workstation and Version 8.0 Server, and TurboLinux, Version 10 Desktop
- Windows NT Server, Version 4.0 Terminal Server Edition and Windows Terminal Services for Windows 2000 and Windows 2003
- Citrix Metaframe, Version 1.8 for Windows Terminal Server, Version 4.0 and Metaframe, Version 1.8 for Windows 2000 Server
- Citrix Metaframe XP Presentation Server (Versions s, a, e) for Windows
- Apple Mac OS X, Version 10.2.1 and Version 10.3

**Note:** A local client is only supported on Windows 32-bit platforms (Windows XP, 2003, 2000, NT, Millennium and 98)

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## IBM WebSphere Host On-Demand, Version 9.0 at a glance (continued)

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### Supported browsers

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The following browsers are supported for download of the WebSphere Host On-Demand clients from a remote WebSphere Host On-Demand server, or to run WebSphere Host On-Demand on a locally installed client:

#### *Windows platform*

- Netscape Navigator Version 4.7, 6.1, 6.2, 7.0, 7.1
- Internet Explorer 4.01, 5.01, 5.5, 6.0
- Mozilla 1.0.2, 1.4.0, 1.4.1

#### *OS/2 platform*

- Netscape Navigator for OS/2, Version 2.01
- Netscape Navigator, Version 4.61
- Mozilla 1.0.2, 1.4.0, 1.4.1

#### *Mac platform*

- Microsoft Internet Explorer 5.2 and Safari V1

#### *Linux, UNIX, AIX and HP-UX platforms and Sun Solaris operating environment*

- Netscape Navigator, Version 6.1, 6.2, 7.0, 7.1
- Mozilla 1.0.2, 1.4.0, 1.4.1

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### Supported Web servers

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- iPlanet Web Server Enterprise Edition V6.0
- IBM HTTP Server Version 1.3.28, Version 2.0.42 and Version 2.0.47
- Microsoft IIS V4, 5, 5.1, 6
- Apache HTTP Server 1.3, 2.0
- IBM Lotus® Go 4.6
- IBM Lotus Domino® 6, 6.5

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### Supported development environments

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- WebSphere Studio Application Developer Version 5.0 and Version 5.1
- Borland/Inprise JBuilder V8.0

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### Supported LDAP servers

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- IBM Directory Server Version 4.1, Version 5.1 and Version 5.2
- Netscape Directory Server V4.0 (both on Windows NT and AIX), Version 6.11 (Windows NT, Windows 2000, Sun and HP-UX 11i)
- IBM LDAP Server running on OS/390, Version 2 Release 10
- IBM LDAP Server running on z/OS, Version 1 Release 2, Version 1 Release 3 and Version 1 Release 4

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### Web application servers

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- WebSphere Application Server Version 5.0, Version 5.0 - Express, Version 5.0.2 and Version 5.1
- iPlanet Application Server, Version 6.0
- Lotus Domino 6

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### Web Express Logon

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- IBM Tivoli® Access Manager for e-business Version 4.1, V5.1
- Netegrity SiteMinder V5.5
- IBM DB2® Universal Database™, Version 7 and Version 8

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### Miscellaneous supported software

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- IBM WebSphere Portal for Multiplatforms, Version 4.1, Version 4.2 and Version 5.0
- Acrobat Reader (or Acrobat), Version 5.0 and Version 6
- CICS Transaction Gateway, Version 5.1 and later

*Note: Acrobat Reader (or Acrobat), Version 5.0 or later is required for DBCS PDF support.*

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## **IBM WebSphere Host On-Demand, Version 9.0 features at a glance**

### Productivity

#### *Database integration and enhancements*

Recognizing the need to integrate data (stored in a database) with data for a host application, emulator sessions offer the ability to perform Structured Query Language (SQL) queries and upload files to a database. You can extract data from queries and use it within a macro, write the data to a file to be used with another application or copy data to the clipboard. Previously, you could only perform these functions using the separate Database On-Demand applet.

Other database enhancements include the ability to store query results in XML format, to provide better support for data exchange and improved compatibility with newer versions of Microsoft Excel. In addition, administrators can access support to filter tables to improve performance and limit user access to tables.

#### *Multiple print screens*

For 3270 sessions, you can now queue print jobs so that the user can collect them and send them to the printer at one time. When using Java 2, you can review and change the print collection before processing. You can also choose to use the Java print capabilities (or expanded print capabilities) such as writing to a printer definition file (PDT) or using PDTs that were formerly only available to host print sessions.

#### *Macro enhancements*

Continuing to expand the macro programming language, WebSphere Host On-Demand has added the following capabilities:

- *Actions for database access to facilitate database integration*

- *The ability to pass parameters into a macro to make them even more dynamic*
- *The ability to specify prompt actions that can be marked as required*
- *Library functions to support common functions, such as searching for strings and formatting strings and numbers*

Because users often use more than one host session, you can now record and replay macros that interact with more than one session. For example, users can extract data from an inventory system running on one host and pass that data to a billing system running on a different host. This new capability can be used to evolve to extremely powerful macros that simplify repetitive tasks.

#### *VT enhancements*

To strengthen emulator support for VT hosts, Host On-Demand offers the following productivity enhancements for VT sessions:

- *Menu option to copy the entire history window and the ability to log the history window to a file*
- *Support for the VT 420 command set*
- *VT font improvements*
- *ANSI colors support*

#### *Sharing and reusing transfer lists and SQL queries*

Administrators and users can now share and reuse host file transfer lists, FTP transfer lists and SQL queries between sessions. This helps increase productivity because administrators no longer need to reconfigure these objects for each individual session or HTML file, and users can share a single object across multiple sessions.

### *ZipPrint enhancements*

ZipPrint enhancements include the ability to cancel a print job, provide an option to print or not print the bottom line for the last page, and automate a way to specify keywords, a top string and a bottom string.

## Security

### *TLS and SSL support for Linux Redirector*

Whereas previous versions of WebSphere Host On-Demand provided secure connections to the WebSphere Host On-Demand Redirector for Windows and AIX servers, WebSphere Host On-Demand Version 9 extends TLS and SSL support to Intel processor-based and zSeries platforms running Linux. This capability allows system administrators to consolidate more functionality onto one platform.

### *Support for Linux smart cards*

Linux clients on 32-bit Intel platforms can now use smart cards to authenticate the client to the host, providing the same capability that was previously only available to Microsoft Windows clients.

### *Web Express Logon enhancements*

Web Express Logon, which offers the ability for users to access host systems and host applications without having to provide a user ID and password, now supports WebSphere Portal environments—as well as 3270 environments that use client certificates for user authentication. In WebSphere Portal environments, you can configure Web Express Logon to use the portal server ID to retrieve the host credentials from the Portal Servers Credential Vault (or from some other Host Credential Mapper database, such as IBM DB2). In 3270 application environments using client certificates, you can

configure Web Express Logon to automate the logon process using the certificates. This type of Web Express Logon is called *Certificate-based Web Express Logon*, and unlike Certificate Express Logon (formerly known as Express Logon Feature, or ELF), it does not require an Express Logon-enabled TN3270 server.

### *Ability to hide information from end users*

To protect your host system better, you can hide certain information that would normally be visible to your users, such as the destination address and port number.

### *SSH enhancements*

To provide faster, more secure protection for sensitive data, Host On-Demand now supports the Advanced Encryption Standard (AES) algorithm, the latest data encryption standard developed by the National Institute of Standards and Technology (NIST). Host On-Demand also supports keyboard-interactive authentication to allow users to customize Secure Shell (SSH) server authentication, using Pluggable Authentication Module (PAM) plug-ins.

### *Federal Information Processing Standard Mode*

This feature, when enabled, enforces that only FIPS-approved ciphers are used in a secure connection.

## Technology

### *Redirector IPv6 support*

To accommodate the increasing acceptance of IPv6, the Host On-Demand Redirector provides IPv6 support on Linux, AIX, the Sun Solaris operating environment and certain Microsoft Windows platforms.

### *WebSphere Host On-Demand portlet improvements*

To integrate with IBM WebSphere Portal more seamlessly, IBM Host On-Demand, Version 9 portlets have been designed with the following improvements:

- *Support for multiple WebSphere Host On-Demand portlets on a page*
- *The ability to save preferences to WebSphere Portal, to help enable roaming capabilities*
- *A GUI-based option to hide the WebSphere Host On-Demand desktop (making only the emulator session visible)*
- *Better integration with other portlets on the page, such as the ability to create a common look and feel by using the same font types and foreground and background colors*

### Usability

#### *Web Server Independence*

To eliminate the Web server as the single point of failure for users when accessing their host systems, WebSphere Host On-Demand now offers the Web Server Independence feature, which provides the capability for the Web start client and the cached client to operate even when the Web server is unavailable. With this feature, files are retrieved from the Web server (when the server is available) and then stored locally. If the Web server becomes unavailable, users can use these files to access their host systems.

#### *Keyboard Remap enhancements*

For clients using IBM Java Development Kit (JDK), Version 1.4 or later, the Key Remap function now provides independent mappings for keys that are defined in more than one location

on the keyboard, such as the right and left Control keys and the Enter key on the main keyboard and the numeric keypad. These enhancements offer increased flexibility to users who want duplicate keys to behave independently.

#### *Ready-to-use emulator clients*

Host On-Demand provides a sample Deployment Wizard-generated HTML file that you can install to create a session definition to a 3270, 5250, VT and FTP host. Users simply provide the correct destination address (and any other connection-related properties) to connect to their host systems. This HTML sample file might be useful when you want to provide a quick demonstration of a working WebSphere Host On-Demand emulator session, or when you need to give users immediate access to host data.

#### *z/OS installation improvements*

To allow users to customize the z/OS installation directory more easily, WebSphere Host On-Demand now provides a single shell script that specifies the install directory. Because all other Host On-Demand shell scripts extract the installation directory from this one script, users no longer need to customize each shell script individually.

### **For more information**

To learn more about IBM Personal Communications, visit:

**ibm.com**/software/network/pcomm

To learn more about IBM WebSphere Host On-Demand, visit:

**ibm.com**/software/webservers/hostondemand

To learn more about IBM Host Access Client Package, visit:

**ibm.com**/software/network/host access



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