IBM®

IBM SecureWay Host On-Demand Moves Beyond Terminal Emulation

Overview

SecureWay™ Host On-Demand Version 4 (V4) gives you secure access to your host applications and data, using a simple, Java™-enabled Web browser.

SecureWay Host On-Demand provides you the power of Java to open the doors to your host data whenever you need it, wherever you need it, straight from your browser. Just click on the hyperlink to launch the Host On-Demand Java applet.

SecureWay Host On-Demand gives you secure, scalable, and reliable access to your host data, with S/390® (TN3270), AS/400® (TN5250), and DEC/UNIX® (VT52/100/220) emulation in a single package. CICS® Gateway for Java access is also provided. Users may access any number of host sessions and still use their browser for other tasks.

Host On-Demand maximizes user productivity with standard desktop utilities. A GUI simplifies the user experience for users unfamiliar with host green screens. Administrators can be more efficient with support for managing groups in addition to individual users.

Host On-Demand requires no client installation or middle tier server. Centralized administration means users always have the latest version, and software maintenance costs are minimized.

To improve usability and increase user productivity, SecureWay Host On-Demand V4 adds several enhancements:

- 3270 Host Graphics
- Hot Standby ─ Load Balancing support (SLP)
- SSL Client Authentication for increased security
- ActiveX Controls
- Ability to share and distribute Host On-Demand session configurations

- Support for LDAP storage and access to user/group information
- Conversion of IBM Personal Communication's host connection settings

If you have AS/400 servers in your organization, Host On-Demand V4 is your first choice for providing users with connectivity back to the AS/400 system, with new enhancements such as:

- Host Print Transform mode of 5250 Host Print
- 5250 File Transfer
- Simplified Install for the AS/400 system

Host On-Demand V4 enhances application programming support providing an extensive tool kit for developing custom e-business applications. The tool kit includes the Host Access Beans for Java, the Host On-Demand Host Access Class Library API, the AS/400 Toolbox for Java, and new for Version 4, IBM Host Access ActiveX Controls.

Version 4 is available in 21 languages, including double-byte languages. Keyboard and code-page support, including the euro currency symbol, is provided for many more languages. This is available on the same CD-ROM media for installation on personal computers and workstations. AS/400 Host On-Demand is on its own CD-ROM. Tape media is provided for installation on S/390.

Key Prerequisites

Server: A Web server, a Java Virtual Machine (JVM) 1.1.6, and TCP/IP.

Client: A Web browser with JVM 1.1.6, access to a Web server, and a Telnet server supporting one or more of the TN3270, TN5250, VT52/100/220 protocols, or a CICS Java Gateway (if required).

Planned Availability Date

July 30, 1999

Description

Simplest Way to Reach Host Data

Host On-Demand's browser-based access is the simplest way ever for users to reach critical host data. This is because the user is not required to load or configure any software. For users, Host On-Demand helps eliminate the confusing host and port names, as all of the configuration is easily provided by the administrator. Users just click on a hyperlink that launches a session with the host.

Any number of sessions can be launched with multiple hosts, so users can create it at maximum efficiency. What's more, Host On-Demand launches its own window, so the user can continue to access Web-based data with their browser while connected to the host.

Settings can be defined for groups (or users), and users can be made members of one or more groups, to reduce configuration and administration work. User preferences, such as session configurations, macros, and keyboard and color mappings, are saved on the Host On-Demand server and are made available from anywhere that the user logs on.

Eliminate Costly Client Software Updates

Host On-Demand also reduces your software maintenance costs. Because Host On-Demand is a Java applet, there is no code installed on user workstations. A new version of the applet is downloaded each time a user clicks for access, so system administrators no longer need to schedule maintenance upgrades for user workstations.

Server maintenance is also less complex with Web-based configuration and administration. With today's rapid rate of change in workstation software, simplified administration alone justifies a switch to Host On-Demand.

Secure Access Across the Global Internet

Host On-Demand extends secure host data access across the intranet, the extranet, and Internet by communicating with Secure Sockets Layer (SSL) Version 3.0. SSL V3 encryption provide secure connections between the emulators and telnet servers, such as the IBM Communications Servers. Host On-Demand Version 4 adds support for SSL client authentication for increased security, and authentication with supporting telnet servers. Mobile workers can simply access the Web site, be authenticated, and establish communication with their secure enterprise hosts. Version 4 adds increased security with support for Client Authentication.

Multi-platform Support for the Ultimate in Scalability

Host On-Demand can be installed in nearly any server platform, to fit nearly any size organization or branch office. Because Host On-Demand is Java compatible, it is supported by your choice of platform, ranging from Windows NT®, AIX®, and Linux servers, to AS/400 and S/390 Super Servers.

Host On-Demand significantly improves productivity and greatly diminishes your training costs because users have a single interface to all their TN3270, TN5250, VT 52/100/220 and CICS applications. Users can define host access preferences, which are stored on the server and returned with the Java applet, each time they click for access. National language versions are also available, including double-byte character set language versions.

Deliver Custom e-Business Applications

Host On-Demand provides a rich tool set for you to deliver custom e-business applications to meet your specific business needs.

The first element of this tool kit is the Host Access Class Library API, which provides access to 3270, 5250, and Virtual Terminal data streams. These class libraries allow you to utilize mission-critical information in new ways, such as integrating data from one application to another.

The second element is the Host Access Beans for Java, which provides emulator functions via simple component-based development tools, such as Visual Age for Java. You can use these beans to rapidly create custom applications that deliver the specific functions you want to include in your host access applications. Because they are object-oriented, you can minimize development efforts through software reuse with Java technology.

New for Version 4 are the IBM Host Access Controls, a set of ActiveX controls that deliver the features of the Host Access Beans for Java for application developers who are already familiar with ActiveX controls and the programming tools.

Host On-Demand Components

Server: The server, which must be installed on a Web server, provides the client applets, and manages user accounts and various server subsystems. It is managed through an administration applet that can be used, through a browser, on the server itself or on a client workstation.

Redirector: The Redirector is one of the components of a Host On-Demand server. It allows clients to connect to telnet servers that are not installed on the same machine as the Host On-Demand server, even if the client browser does not support signed applets. On Windows NT and AIX, it also provides the support for SSL security between clients and the server.

Express Server: The Express Server is a Windows NT only component of a Host On-Demand server. Together with the Express Client, the Express Server provides enhanced performance on slower connections, such as telephone lines, by compressing and caching data. It also provides redirection and SSL support.

Download Clients: There are several clients that can be downloaded to a workstation from a Host On-Demand server, through a Web browser. No program files are installed on the workstation.

Locally Installed Client: On Windows 95, Windows 98, and Windows NT, the client can be optionally installed on a workstation. The primary use for a locally-installed client is on a workstation that would otherwise have to download the client applets over a slow link such as a telephone line. This client has the option of using the Express Client/Server to improve the performance of host-session connections.

Host Access Toolkit: The Toolkit consists of the Host Access Class Library and the Host Access Beans for Java.

The Host Access Class Library provides a core set of classes and methods that allows the development of platform-independent applications that can access host information without the need for a graphical display.

The Host Access Beans provide emulator functions that can be used by developers to rapidly develop custom applications that deliver the specific functions they want.

For up-to-date information, regularly visit the SecureWay Host On-Demand Web site at:

> **http://www.software.ibm.com/secureway/ hostondemand**

Host On-Demand Version 4.0 Functional Enhancements

Functional enhancements that have been added to Host On-Demand Version 4.0 are:

Security

Client Certificate Authentication

- Support for SSL V.3 Client Authentication

- Server verification of the client before granting a secure connection

- In combination with a Certificate Authority and Certificate Revocation List, can control user access to hosts

Status Bar and Lock Icon for SSL

- Easily and graphically ensure a user has a secure connection

- Check SLP and other connection status easily

For AS/400

5250 Host Print

- Print from AS/400 data and applications

- Host Print Transform mode of host print supports OS/400 V4R2, and later

5250 Device ID

- Supports Device ID on AS/400 for printing, Workstation ID and others

- Easily identify host resources with an easy to understand ID

- Supports 5250 Host Print session as well as Display session

5250 File Transfer

- Upload PC files to the AS/400 and download files from the AS/400

- Browse through the entire Integrated File System (IFS) of the AS/400 and select the files to be transferred

- Transfer in either binary or text mode depending on the AS/400 file type

AS/400 Simplified Install: AS/400 users and administrators can use familiar AS/400 installation routines to install Host On-Demand on the AS/400-located Web server.

Enterprise Management and Administration

User Change Password: Host On-Demand Administrators now have the option of allowing users to define their own passwords.

User Self-Definition of User ID: Administrators can now allow users to create their own User IDs, allowing large numbers of users to "self-manage."

User Group Tree: A familiar "tree view" used in the Administrator panel allows all user and group information to be displayed in one screen for the utmost in ease of management of Host On-Demand Users and Groups.

LDAP Support for User Group Configuration: Host On-Demand Version 4 will support an LDAP server to hold Host On-Demand configuration information, instead of the built-in Host On-Demand configuration server.

- LDAP storage of all user, group, and session configuration information including keyboard mappings, macro definitions, and session parameters

- Migration facility for existing Host On-Demand profiles

Import/Export Host On-Demand Session Configurations: Host On-Demand Version 4 allows users and administrators to save existing Host On-Demand configurations to their local file systems (for example, a floppy), and import sessions from these files. With this feature, users can:

- Backup their sessions
- Share sessions with coworkers
- Distribute session information between servers

Import Personal Communications Configuration Information: Users can easily convert Personal Communications settings to Host On-Demand sessions in one easy step!

- Convert session profiles, Printer sessions and other settings.

Support for IBM License Use Management: License Use Management (LUM) is a IBM strategic product for customers to manage access to and use of a software product.

- The Host On-Demand administrator can choose to use LUM to manage Host On-Demand licenses and the Host On-Demand Client will communicate with the License Servlet.

- Optionally, the Host-On-Demand administrator can choose to use the Host On-Demand License Count feature, and select any available Host On-Demand Server to count Host On-Demand users and the Host On-Demand Client will communicate with the selected Host On-Demand server.

SLP Load Balancing: Service Location Protocol (SLP) is an Internet Engineering Task Force (IETF) standards-track protocol defined by RFC 2165 which enables the client to discover the location of an enabled server. SLP eliminates the need for the user to know the destination address and port for a specific server because it locates the enabled server dynamically.

Host On-Demand can use the SLP protocol to automatically discover TN3270 and TN5250 telnet servers in a network and balance the session load among those servers, connecting to the least loaded server.

User Benefits

File Transfer Improvements: The Host On-Demand File Transfer panels have been improved for easier use and reduced training, as well as incorporation of AS/400 File Transfer.

3270 Host Graphics (Vector Graphics): Host On-Demand will now support 3270 GDDM® Vector Graphics for greater support of your 3270 applications.

Application Development: **ActiveX Controls Support:** Host On-Demand Version 4 adds ActiveX controls that provide the functionality of the Host Access Beans using a VB/ActiveX control interface. This provides developers who have experience with Visual Basic the ability to create and deploy Visual Basic-based applications today, while they add skill and knowledge with Java for future, enterprise class applets that function in heterogeneous environments.

OHIO Code: Host On-Demand Version 4.0 contains prototype code for the OHIO specification. This code is an implementation of the draft (version 01) Open Host Integration Objects (OHIO) Application Programming Interface provided in the \org\ohio and \doc\ohio directories and is prototype code.

IBM will provide no Program Services or other support for this Prototype. For more information on warranty and terms and conditions for the code, please refer to the Host On-Demand License Information Booklet.

Macro Enhancements: Host On-Demand Macro and MacroManager beans have been enhanced in Version 4. These beans will support:

- Looping and conditional logic support
- HACL screen recognition usage
- Enhanced debugging and tracing

With these enhancements, developers now have the ability to handle multiple screen paths in a host application, and loop through repeating screens.

Year 2000

These products are Year-2000-ready. When used in accordance with their associated documentation, they are capable of correctly processing, providing, and/or receiving date data within and between the twentieth and twenty-first centuries, provided that all products (hardware, software, and firmware) used with the products properly exchange accurate date data with them.

The service end date for these Year-2000-ready products is July 30, 2001.

Euro Currency

These programs are not impacted by euro currency.

Product Positioning

The Internet, or World-Wide Web (WWW), reaches more and more users every day. SecureWay Host On-Demand 4.0 is targeted to customers who want to provide easy, secure, and cost-effective host access to users in Internet-based environments. It enables businesses to reach new users who may be unfamiliar with or have no access to traditional terminal emulators.

Host On-Demand is an Internet-to-host connectivity solution that provides secure browser access to host applications and Java-based emulation. With support for TN3270, TN5250, VT52/100/220 and CICS Java Gateway access, users have a single interface to most of their key host data.

In addition, customers can save significant expense in product deployment and maintenance with Host On-Demand using web server installation. In Host On-Demand 4.0, a default GUI is provided to simplify the user experience for users who are unfamiliar with host "green screens." Customers who want to provide customized GUI screens can purchase Screen Customizer for Host On-Demand.

Host On-Demand 4.0 also provides a rich Java toolkit, which enable customers to rapidly create custom e-business applications. Because of this support, Host On-Demand is also targeted to independent software vendors.

Host On-Demand is recommended for users requiring Java-based emulation. SecureWay Personal Communications is recommended for full function emulation, more extensive APIs, and a wider range of protocols or connectivities. Both products are components of the SecureWay Host Integration solution.

More information about the Host Integration Solution and these two products can be found at URL:

http://www.ibm.com/software/network/hostsolution/

Trademarks

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Windows NT is a registered trademark of Microsoft Corporation.

Java is a trademark of Sun Microsystems, Inc.

UNIX is a registered trademark in the United States and other countries exclusively through X/Open Company Limited.

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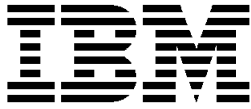
Technical Information

Specified Operating Environment

Hardware Requirements: Server installation:

- For Windows NT® — 160 MB of disk space

- For AIX®, 202 MB (includes the additional security files)

- For all other operating systems — 192 MB of disk space

This disk space must be available on the server to support applet files, the Host On-Demand redirector function, and Host On-Demand Express Server.

A PC or workstation computer with sufficient processor speed, memory, and disk space to run a complex browser/Java™ environment is required.

Software Requirements: Host On-Demand can be installed on the following servers which must have a JVM 1.1:

- Windows NT 4.0 with SP4

- AIX V4.2.1

- OS/2® Warp Version 4 and Warp Server

- Novell Netware Version 5 with JVM 1.1.7.b

- Sun Solaris SunOS Release 2.6

- OS/400® V4R2, V4R3, or V4R4

  − TCP/IP Connectivity Utilities for AS/400® (5769-TC1)

  − Java for AS/400 (OS/400 — QShell Interpreter) (5769-JV1)

  − QSHELL Interpreter (5769-SS1, option 30)

  − Recent cumulative service is recommended

  − One of the following Web Servers:

    -- IBM HTTP Server (OS/400 V4R3 and V4R4) (5769-DG1)

    -- IBM Internet Connection Secure Server (OS/400 V4R2) (5769-NC1 or 5769-NCE)

- HP-UX 10.20

- RedHat Linux 5.2

- OS/390® Version 2 Release 6

  − Java for OS/390 Version 1.1.6

  − IBM TCP/IP V3R5 for MVS™

    -- Domino™ Go Web Server for OS/390 Version V5R0M0

To make a secure (SSL) connection to CS/390, one of the following encryption features, as described in *OS/390 eNetwork™ Communications Server: IP Planning and Migration Guide, SC32-8512,* is required:

FMID	Feature
JTCP35L	IP Security SSLDES (56-bit) (Export)
JTCP35K	IP Security Triple DES (U.S.)

With an appropriate browser and JVM support, Host On-Demand is supported on any of the following desktop platforms when downloaded from a server:

- Windows™ 95
- Windows 98
- Windows NT 4.0 with SP4
- AIX V4.2
- OS/2 Warp Version 4
- HP-UX 10.20
- Solaris 2.5.1
- RedHat Linux 5.2 for SBCS only

With an appropriate browser and JVM support, Host On-Demand is supported on any of the following desktop platforms when installed locally as a client:

- Windows 95
- Windows 98
- Windows NT 4.0 with SP4

Browser requirements:

A browser that provides a JVM 1.1 is required.

Tested browsers for Applet download (Remote Server Access) include:

- Netscape Navigator 4.08 or 4.5 (Windows 95, Windows 98, Windows NT, UNIX®)

- Netscape Navigator 4.04 (OS/2) (remote server only)

- Microsoft™ Internet Explorer 4.01 with SP1® or 5.0 (Windows 95, Windows 98, Windows NT)

Tested browsers (on locally installed clients) include:

- Netscape Navigator 4.08 with JVM 1.1.5
- Microsoft Internet Explorer 4.01 with SP1

Host On-Demand can be used as a Java client to the CICS® Java Gateway V1.1.3.

Limitations

- Because terminal and printer devices require a specific language code page to process data correctly, data between different language-dependent devices may not be completely compatible.

- VT52, VT100, and VT220 emulation support is SBCS only.

- The euro currency symbol is not supported in VT or CICS Java Gateway. To print the euro currency symbol in Host print, the printer must be

euro-currency-symbol-enabled. The print screen function requires that the browser and underlying operating system be euro-currency-symbol-enabled.

- The following are 3270 host print limitations:
  - LU1 and LU3 printer sessions are PDT mode only.
  - PostScript printing is not supported.
  - Color printing is not supported.
  - Host print is not supported in Cyrillic, Latin-2, Turkish, and Greek languages.

- ResQ!Net Version 3.2 does not support SecureWay™ Host On-Demand Version 4.0. The follow-on product is known as Screen Customizer and is in Beta test right now.

- Database On-Demand and the ResQ!Net interface do not support Arabic, Hebrew, and Thai.

Performance Considerations: Host On-Demand is a Java applet and performance is a function of the speed of the network and the processing power of the workstation, as well as the characteristics of the browser being used.

Planning Information

Customer Responsibilities: If you plan to have a Host On-Demand server supporting SSL encryption and authentication that will be supporting users outside the U.S. and Canada as well as U.S. and Canadian users, then you may use the Host On-Demand product intended for international use. You may also use the U.S./Canada version concurrently for U.S. and Canadian customers. Refer to the **Security, Auditability, and Control** section for considerations of use when Host On-Demand is downloaded across international boundaries.

Direct Customer Support: Direct customer support is provided by Personal Systems SupportLine. This fee service enhances customers′ productivity by providing voice and electronic access into the IBM support organization. The Personal Systems SupportLine will help answer questions pertaining to usage, and suspected software defects for eligible products.

Installation and technical support is provided by Global Services. For more information call 800-IBM-4YOU (426-4968).

Packaging: The SecureWay Host On-Demand Version 4.0 program package is distributed with the following materials:

- Workstation program package:
  - CD-ROM for PC and workstation with all NLV languages
  - CD-ROM for AS/400
  - Proof of Entitlement (PoE)
  - License Information
  - International Program License Agreement

- Host program package:
  - 9/6250 Magnetic Tape, 3480 Tape Cartridge, or 4-mm DAT for OS/390 with Program Directory
  - PoE
  - License Information
  - International Program License Agreement
  - IPLA Pointer

All CD-ROM and S/390® tapes media provide all National Language on the same media type.

Security, Auditability, and Control

SecureWay Host On-Demand uses the security and auditability features of the host operating system and other functions, included with the product, to enhance data security and privacy.

Host On-Demand provides SSL V3 encryption support using non-exportable 128-bit (designated U.S./Canada use only) and exportable 40-bit encryption algorithms for international use.

In customer configurations where Host On-Demand might be downloaded across national boundaries, the customer is responsible for ensuring that the non-exportable Host On-Demand applets are not made available outside the U.S. and Canada. Both the non-exportable and exportable Host On-Demand products can be used in combination to allow the appropriate Host On-Demand applet to be downloaded based on different URLs.

You are responsible for any desired firewall support to meet your security requirements.

The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

Ordering Information

Host On-Demand may be installed on either a server or a client. Each program package includes authorization for one user. In addition, concurrent user access can be acquired authorizing concurrent use of a single program package license up to the quantity of concurrent use acquired. Media packs acquired through the Passport Advantage program do not include a use authorization. For client installations, or for server installations where there is downloading of the applet, the customer must acquire concurrent user authorizations sufficient to support their maximum number of concurrent users.

Special upgrade prices are available for previous users and users of other qualifying programs including a price for upgrades for additional install authorizations up to the quantity of licenses previously owned.

Description	Order Type	Feature Number	Part Number
SecureWay Host On-Demand Version 4.0			
Program Package			
CD-ROM English — U.S./Canada use only	5801-AAR	5438	41L1765
CD-ROM French — U.S./Canada use only	5801-AAR	5446	41L1769
CD-ROM English — International use	5801-AAR	5442	0704814
CD-ROM French — International use	5801-AAR	5447	41L1770
9/6250 Mag Tape for OS/390 U.S./Canada use only	5801-AAR	5439	41L1766
3480 Tape Cartridge for OS/390 U.S./Canada use only	5801-AAR	5440	41L1767
4-mm Tape for OS/390 U.S./Canada use only	5801-AAR	5441	41L1768
9/6250 Mag Tape for OS/390	5801-AAR	5443	0704820

International use

Description	Order Type	Feature Number	Part Number

SecureWay Host On-Demand Version 4.0

Description	Order Type	Feature Number	Part Number
3480 Tape Cartridge for OS/390 International use	5801-AAR	5444	0704824
4-mm Tape for OS/390 International use	5801-AAR	5445	0704825
1 Concurrent User	5807-AAR	1336	41L1783

Upgrades

Program Package

Description	Order Type	Feature Number	Part Number
CD-ROM English — U.S./Canada use only	5803-AAR	2421	41L1773
CD-ROM French — U.S./Canada use only	5803-AAR	2429	41L1777
CD-ROM English — International use	5803-AAR	2425	0704842
CD-ROM French — International use	5803-AAR	2430	41L1778
9/6250 Mag Tape for OS/390 U.S./Canada use only	5803-AAR	2422	41L1774
3480 Tape Cartridge for OS/390 U.S./Canada use only	5803-AAR	2423	41L1775
4-mm Tape for OS/390 U.S./Canada use only	5803-AAR	2424	41L1776
9/6250 Mag Tape for OS/390 International use	5803-AAR	3236	0704844
3480 Tape Cartridge for OS/390 International use	5803-AAR	2427	0704845
4-mm Tape for OS/390 International use	5803-AAR	2428	0704846
1 Concurrent User for Upgrade	5808-AAR	0595	41L1784

Passport Advantage

Description	Part Number
VPO Instl SecWay Hst On Dem 1 User	D17PXML
VPO Instl/SW Sub SecWay Hst On Dem 1 User 1 Year	D17PYML
VPO Instl/SW Sub SecWay Hst On Dem 1 User 2 Years	D17PZML
VPO SW Sub Rnwl SecWay Hst On Dem 1 User	E070BML
VPO SW Sub Act SecWay Hst On Dem 1 User	D17Q1ML
VPO SW Sub SecWay Hst On Dem 1 User 1 Year	D17Q3ML
VPO SW Sub SecWay Hst On Dem 1 User 2 Years	D17Q4ML
CO Instl/SW Sub SecWay Hst On Dem 1 User 1st Anniv	D17Q5ML
CO Instl/SW Sub SecWay Hst On Dem 1 User 2nd Anniv	D17Q6ML
CO SW Sub Rnwl SecWay Hst On Dem 1 User	E070HML
CO SW Sub Act SecWay Hst On Dem 1 User	D17UGML

Description	Part Number
CO SW Sub SecWay Hst On Dem 1 User 1st Anniv	D17UHML
CO SW Sub SecWay Hst On Dem 1 User 2nd Anniv	D17UIML
CO Supt SecWay Hst On Dem 1 User 1st Anniv	AQ74VML
CO Supt Rnwl SecWay Hst On Dem 1 User	E074NML
CO Instl/SW Sub/Supt SecWay Hst On Dem 1 User 1st Anniv	D17UJML
CO Instl/SW Sub/Supt SecWay Hst On Dem 1 User 2nd Anniv	D17UKML
CO SW Sub/Supt SecWay Hst On Dem 1 User 1st Anniv	D17ULML
CO SW Sub/Spt Rnwl SecWay Hst On Dem 1 User 1st Anniv	E074SML
AVP Instl SecWay Hst On Dem 1 User	D17UMML
AVP SW Sub SecWay Hst On Dem 1 User 1 Year	D17UNML
AVP SW Sub Rnwl SecWay Hst On Dem 1 User	E074VML

Passport Advantage Media Packs: Media packs are available. Each pack contains all of the National Language support.

Description	Part Number

SecureWay Host On-Demand Version 4.0

Description	Part Number
CD-ROM US/Canada only English	BE6YKNA
9/6250 Mag Tape for OS/390 US/Canada only English	BE6YPNA
3480 Tape Cartridge for OS/390 US/Canada only English	BE6YQNA
4-mm Tape for OS/390 US/Canada only English	BE6YSNA
CD-ROM All NLV languages	BE6ZWIE
9/6250 Mag Tape for OS/390 International use	BE6YZIE
3480 Tape Cartridge for OS/390 International use	BE6ZEIE
4-mm Tape for OS/390 International use	BE6ZIIE

Upgrade Protection (Entitled Customers): Customers who have previously acquired Software Advantage Upgrade Protection, and have not migrated to the Passport Advantage Offering as shown in the table below, will automatically receive their entitlement to the new Media Pack shortly after general availability.

Software Advantage Upgrade Entitlement eNetwork Host On-Demand Version 3.0 CD-ROM

Current Part Number	New Program/Package Part Number
31L0861	41L1765
31L0863	0704814
31L0862	41L1769
31L0864	41L1770
31L0865	41L1771
31L0866	41L1772
31L0882	41L1789
31L0880	41L1787

Current Part Number	New Program/Package Part Number
31L0883	41L1790
31L0881	41L1788
31L0877	0704832
31L0872	0704827
31L0878	0704833
31L0871	0704826
31L0874	0704829
31L0875	0704830
31L0879	0704835
31L0873	0704828
31L0876	0704831

Program Upgrade

Upgrade is allowed to Host On-Demand Version 4.0 from any of the following qualifying programs:

- IBM 3270 or 5250 emulator programs

  - eNetwork Host On-Demand Version 2.0 and Version 3.0

  - eNetwork Host On-Demand for OS/390 Version 2 and Version 3.0

  - Communications Manager/2 V1.x

  - Communications Manager/2 V1.x DF

  - Personal Communications/3270 for DOS/Windows — all versions

  - Personal Communications/3270 V4.0 for OS/2

  - Personal Communications AS/400 and 3270 V4.x — all platforms

  - 3270 PC any version

  - 5250 PC any version

  - 5250 Workstation Feature any version

  - Personal Communication/5250-Windows any version

  - Personal Communication/5250-OS2 any version

  - Any other IBM 3270 or 5250 full function emulator program for OS/2 or Windows

  - AS/400 Client Access Family

- Any non-IBM 3270 or 5250 full function emulator programs including, but not limited to:

  - OpenConnect Systems OC://WebConnect
  - OpenConnect Systems OC://WebConnect Pro
  - Attachmate HostView Server
  - Wall Data Cyberprise Products
  - Persoft Persona Insight
  - Computer Network Technology Enterprise/View Pro
  - Tuebner & Associates Corridor
  - NetManage OnWeb Host
  - EXTRA!
  - Rumba
  - IRMA Workstation
  - Rally
  - Rumba for AS/400
  - IRMA/400
  - CGS

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Money-back Guarantee: 30-day, money-back guarantee

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