IBM®

IBM eNetwork Host On-Demand Moves Beyond Terminal Emulation

Overview

Get secure browser access to host information, Java™-based emulation, and e-business application programming support with **IBM eNetwork™ Host On-Demand Version 3.0.**

Host On-Demand provides users one interface to all their TN3270E, TN5250, VT50/100/220 and CICS® applications, consistent across end-user environments! Users may access any number of host sessions and still use their browser for other tasks. With Version 3, users can also access AS/400® databases.

Host On-Demand maximizes user productivity with standard desktop utilities, such as copy, cut and paste, and with file transfer and the new host print support. A new graphical user interface simplifies the user experience for users unfamiliar with host "green screens". Administrators can be more efficient with new support for managing groups in addition to individual users.

Host On-Demand Version 3.0 enhances application programming support with Host Access Beans for Java. Customers can use the JavaBeans® to rapidly develop custom e-business applications to meet their specific business needs.

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.

Host On-Demand 3.0 is available in 21 languages, including double-byte languages. Keyboard and code-page support, including the new Euro currency symbol, is provided for many more languages. All this is available on the same CD-ROM media for installation on personal computers, workstations, and AS/400s. Tape media is provided for installation on S/390®.

Intended Customers

Host On-Demand Version 3.0 should be directed at customers who want:

- Web-to-host access to their mission-critical information
- A very simple way to reach host data, requiring no client installation or configuration
- The ability to create custom host access applications
- A consistent user interface for every operating environment
- Secure access across the Internet
- Simple and cost-effective software distribution and maintenance

Key Prerequisites

As a server: A Web server, a Java Virtual Machine (JVM) 1.1, and TCP/IP.

As a client: A Web browser with JVM 1.1, 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

September 25, 1998

This announcement is provided for your information only. For additional information, contact your IBM representative, call 800-IBM-4YOU, or visit the IBM home page at: http://www.ibm.com.

Description

IBM eNetwork Host On-Demand provides access to host-system data through Java applets loaded into a Web browser. Version 3.0 provides emulation of TN3270, TN5250, VT52, VT100, VT220, CICS displays, and also 3287 printer emulation. This means users have a simple interface to their key host data. Database On-Demand, which is part of Version 3.0, allows simple access to data on AS/400 databases. The Java-based Host Access API and the new Host Access Beans for Java enable rapid development of custom e-business applications.

Many usability and administration enhancements have been made in Version 3.0, and a new client is introduced. A new graphical user interface (GUI) offers users an alternative to host "green screens."

Generally speaking, Host On-Demand clients are downloaded from a Web server. This means that administration, software updates, and support can be centralized. You can also use locally installed clients.

Because Host On-Demand is Java-based, users in different operating environments get the same look and feel. This consistency reduces training costs when users change operating environments, and reduces help desk costs, because each user, regardless of platform, is on the same version of the code.

Secure Sockets Layer (SSL) v3 encryption and server authentication provide secure connections between the emulators and telnet servers, such as the Host On-Demand Redirector, Communications Server for Windows NT® , and OS/390® Version 2 Release 6.

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.

Host On-Demand 3.0 is available in 21 languages, including double-byte languages. Keyboard and code-page support, including the new Euro currency symbol, is provided for many more languages. All this is available on the same CD-ROM media for installation on personal computers, workstations, and AS/400s. Tape media is provided for installation on S/390.

Host On-Demand has the following main 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

This 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

This 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 library represents an object-oriented abstraction of a host connection that includes reading and writing the host presentation space, enumerating the fields in the presentation space, reading the operator information area (OIA) for status information, transferring files, and performing asynchronous notification of significant events.

The Host Access Beans provide emulator functions as a set of JavaBeans® 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 eNetwork Host On-Demand Web site at:

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

Host On-Demand Version 3.0 Functional Enhancements

TN3270E Protocol Support

The TN3270E protocol support provides:

- 3287 printer emulation.

- "SNA-like" features, including the SNA Bind and Unbind Commands, responses, and sequence numbers.

- Standardization of the System Request and Attention keys.

- Access to the SSCP-LU session.

- Association of a printer session with a display session.

- Network virtual printer (NVT) support, enabling the use of a simple ASCII data stream in addition to Telnet3270. This can be useful when you connect to a firewall, for example.

3270 Host Printing

Host printing functions include:

- 3287 printer emulation (LU1 and LU3)
- Printing to a workstation or network printer
- Printer sessions run on clients

Host Access Beans for Java

Host On-Demand 3.0 provides emulator functions as a set of JavaBeans, referred to as the Host Access Beans for Java. Functions available in the beans include communication control, asynchronous events, display functions, macro capability, keyboard remapping, file transfer, and color remapping.

Database On-Demand

Database On-Demand lets you use a simple SQL interface to access data on AS/400 databases. It uses the OS/400® Java Database Connectivity (JDBC) client which has been integrated into Host On-Demand Version 3.0. JDBC client services enable applications to acquire data from other systems.

ResQ!Net/LE for Host On-Demand Graphical User Interface

In addition to the "green-screen" interface to the host system, an alternative graphical user interface called ResQ!Net/LE is available. This displays information in a dialog-oriented format. Users who are unfamiliar with the usual host-system presentation may find this interface more friendly and appealing. You can buy other ResQ!Net products that let you customize the interface to create a true GUI.

Function On-Demand Client

The Function On-Demand client is smaller than the standard client and therefore loads more quickly. It initially loads only basic functions; other functions are downloaded as required. There is no reduction in the function that is available. This client is available with both the normal "green-screen" and the ResQ!Net/LE interfaces.

Administration Enhancements

The administration client now uses a notebook format for its user interface. For more efficient and expanded user management, you can define groups and then assign users to the groups. Group characteristics, including customized sessions, are applied to all users in the group, simplifying the process of setting up and maintaining user accounts. Special user accounts can be shared by multiple users (guest users).

Color Remapping

Users can map colors individually or choose one of three schemes to customize color preferences for a host-session window.

Macro Record and Play

In addition to the recording and playback of keystrokes, the macro function includes the ability to use screen recognition during playback, the ability to prompt the user to enter variable information, and the ability to extract data from a specified area of the screen so that it can be inserted into another application.

Improved Session Launch

Enhancements to the way sessions can be launched include:

- Allowing the user to bookmark a page and bypass the logon process. The session can run embedded within an HTML page or in a separate window.

- Allowing administrators to create an HTML page that automatically launches a preconfigured session, or a page that launches a session that is configured by customized parameters that are specified in the page itself.

Getting Started

A Getting Started page is provided. It lists all the Host On-Demand applets and enables you to launch any of them directly from the page, getting you started quickly. The README file and the *Administrator's Guide* are also accessible from the Getting Started page.

Key-Management Graphical User Interface

Security management has been enhanced with the addition of a graphical user interface for the Key Management utility. This utility is used to create and manage the certificates used for session encryption and server authentication.

National Language Support

National language support is now included for Arabic, Hebrew, and Thai, as well as translations for Czech, Hungarian, Polish, and Slovenian. In addition, Host On-Demand 3.0 includes code-page support for the Euro, the new currency of the European Union.

Host Access Class Library

The following enhancements have been made to the Host Access Class Library:

- New screen recognition APIs
- PS event filtering and dirty region information
- New synchronous wait methods on ECLPS and ECLOIA
- New file transfer progress events

Performance

With Host On-Demand 3.0, a number of performance enhancements have been added, reducing memory requirements for the clients, improving the performance of datastream processing and screen drawing, and reducing download times.

Raster Fonts

When you configure a session, you can choose to have raster fonts used for the display. These fonts provide better definition and granularity of size. They are similar to the fonts used for IBM eNetwork Personal Communications.

AS/400 Toolbox for Java

AS/400 Toolbox for Java is a set of Java classes that allows you to access AS/400 data through a Java program. With these classes, you can write client/server applications and applets that work with data that resides on your AS/400. You also can run such applications on the AS/400 Java Virtual Machine (JVM).

Note: The eNetwork Host On-Demand product includes functionality intended to supplement emerging Web technologies and lack of SSL support provided by Telnet servers. The components are:

- Redirector
- Express Client/Server
- Locally installed client

As Web technologies mature and more functionality is added to standard Web browsers (for example, persistent caching) and as SSL is added to Telnet servers, the need for these components will diminish and they may not be provided in future releases of Host On-Demand.

Year 2000

This product is Year 2000 ready. Used in accordance with its associated documentation, it can correctly process, provide, or receive date data within and between the 20th and 21st centuries. All other products (for example, software, hardware, and firmware) used with the product must properly exchange accurate date data with it.

Product Positioning

The Internet, or World-Wide Web (WWW), reaches more and more users every day. eNetwork Host On-Demand 3.0 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. These users may be business partners, or suppliers and sales personnel who can help the business increase its competitiveness by having on-demand access to host applications such as sales catalogs and product inventories.

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, VT50/100/220 and CICS Java Gateway access, users have a single interface to most of their key host data. Because Host On-Demand is Java-based, the interface has the same look and feel across end-user operating environments. The consistency in look and feel minimizes retraining costs when users change environments, as well as minimizing help desk costs. In addition, customers can save significant expense in product deployment and maintenance with Host On-Demand using web server installation. In Host On-Demand 3.0, a default graphical user interface (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 ResQ!Net for Host On-Demand. For more information about the ResQ!Net products, see the **Reference Information section**.

Host On-Demand 3.0 also provides a rich Java toolkit, including the new Host Access Beans for Java and the eNetwork Host Access Class Library APIs 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. IBM eNetwork 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 IBM eNetwork Host Integration solution.

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

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

Reference Information

- Software Announcement 298-275, dated July 28, 1998 (ResQ!Net for Host On-Demand)

Trademarks

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CICS, AS/400, S/390, OS/390, AIX, and OS/400 are registered trademarks of International Business Machines Corporation in the United States or other countries or both.

Windows NT is a registered trademark of Microsoft Corporation.

Java is a trademark of Sun Microsystems, Inc.

JavaBeans is a registered trademark of Sun Microsystems, Inc.

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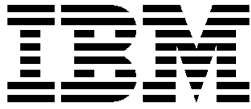
Publications

The following publication is provided with the program package and is also separately orderable:

- eNetwork™ Host On-Demand Version 3.0 Administrator's Guide: SC31-8627-1

Translated versions of this, and other documentation, are also provided on the CD-ROM/tape media.

Technical Information

Specified Operating Environment

Hardware Requirements: 150 MB of 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 to run a complex browser/Java™ environment.

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

- Windows NT® 4.0 with SP3, or later
- AIX® V4.2, or later
- OS/2® Warp Version 4 and Warp Server
- Novell Netware Version 4.x
- Sun Solaris SunOS Release 2.5.1
- OS/400® Version 4 Release 2, or later
- HP-UX 10.20
- Server OS/390®

  - OS/390 Release 1 (5645-001), or higher

    -- A Web Server

    -- Java for OS/390 Version 1.1.4 (5655-A46), or higher

    -- IBM TCP/IP V3R2 for MVS™ (5655-HAL), or higher

Web servers for OS/390 may be:

- IBM Internet Connection Server Version 1.1, or higher (for SBCS languages)

  or

- IBM Internet Connection Server Version 2.1, or higher (for DBCS languages)

  or

- Domino™ Go Web Server Version 4.6, or higher

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 SP3, or later
- AIX V4.2, or later
- OS/2 Warp Version 4
- HP-UX 10.20
- Solaris 2.5.1

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 SP3, or later

Browser Requirements: A browser that provides JVM 1.1 or later is required. Given that browser vendors are continually making improvements to the JVM functions that Host On-Demand uses, it is strongly recommended that the latest supported level of the browser be used. Tested browsers for Applet download (Remote Server Access) include:

- Netscape Navigator 4.06, or later, with JVM 1.1.5, or higher (Windows, AIX, UNIX®)

- Netscape Navigator 2.02, or later with JVM 1.1.6, or higher (OS/2)

- Microsoft™ Internet Explorer 4.01 with SP1®, or later (Windows, AIX, UNIX)

- Sun HotJava™ 1.1.4, or later (Windows, AIX, UNIX)

Tested browsers on locally-installed clients include:

- Netscape Navigator 4.06, or later with JVM 1.1.5
- Microsoft Internet Explorer 4.01 with SP1, or later
- Sun HotJava 1.1.4, or later

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

Limitations

1. 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.

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

3. 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.

4. The following are 3270 host print limitations:

   - LU1 and LU3 printer sessions are PDT mode only.

   - PostScript printing is not supported

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- Color printing is not supported

- Host print is not supported in Cyrillic, Latin-2, Turkish, Greek, and Thai languages

5. 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, 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 IBM eNetwork Host On-Demand Version 3.0 program package is distributed with the following materials:

- Media, depending on order:
  - CD-ROM for PC, workstation, or AS/400®
  - 9/6250 Magnetic Tape, 3480 Tape Cartridge, or 4-mm DAT for OS/390 with Program Directory

- Proof of Entitlement
- License Information
- International Program License Agreement
- IPLA Pointer
- Administrator′s Guide

Security, Auditability, and Control

eNetwork 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 licences previously owned.

Program Name/ Description	Order Type Number	Feature Number	Part Number
eNetwork Host On-Demand Version 3.0 Program Package CD-ROM English — U.S./Canada use only	5801-AAR	3700	31L0861
eNetwork Host On-Demand Version 3.0 Program Package CD-ROM French — U.S./Canada use only	5801-AAR	3701	31L0862
eNetwork Host On-Demand Version 3.0 Program Package CD-ROM English — International use	5801-AAR	3702	31L0863
eNetwork Host On-Demand Version 3.0 Program Package CD-ROM French — International use	5801-AAR	3703	31L0864
Host On-Demand Version 3.0 Program Package 9/6250 Mag Tape for OS/390 U.S./Canada use only	5801-AAR	3785	31L2154

Program Name/Description	Order Type Number	Feature Number	Part Number	Program Name/Description	Order Type Number	Feature Number	Part Number
Host On-Demand Version 3.0 Program Package 3480 Tape Cartridge for OS/390 U.S./Canada use only	5801-AAR	3786	31L2155	eNetwork Host On-Demand Version 3.0 Program Package Upgrade CD-ROM French — International use	5803-AAR	1517	31L0867
Host On-Demand Version 3.0 Program Package 4mm Tape for OS/390 U.S./Canada use only	5801-AAR	3789	31L2156	Host On-Demand Version 3.0 Program Package Upgrade 9/6250 Mag Tape for OS/390 U.S./Canada use only	5803-AAR	1589	31L2160
Host On-Demand Version 3.0 Program Package 9/6250 Mag Tape for OS/390 International use	5801-AAR	3790	31L2157	Host On-Demand Version 3.0 Program Package Upgrade 3480 Tape Cartridge for OS/390 U.S./Canada use only	5803-AAR	1592	31L2161
Host On-Demand Version 3.0 Program Package 3480 Tape Cartridge for OS/390 International use	5801-AAR	3792	31L2158	Host On-Demand Version 3.0 Program Package Upgrade 4mm Tape for OS/390 U.S./Canada use only	5803-AAR	1593	31L2162
Host On-Demand Version 3.0 Program Package 4mm Tape for OS/390 International use	5801-AAR	3793	31L2159	Host On-Demand Version 3.0 Program Package Upgrade 9/6250 Mag Tape for OS/390 International use	5803-AAR	1594	31L2163
eNetwork Host On-Demand Version 3.0 1 Concurrent User	5807-AAR	1145	31L2166	Host On-Demand Version 3.0 Program Package Upgrade 3480 Tape Cartridge for OS/390 International use	5803-AAR	1595	31L2164
Upgrades				Host On-Demand Version 3.0 Program Package Upgrade 4mm Tape for OS/390 International use	5803-AAR	1596	31L2165
eNetwork Host On-Demand Version 3.0 Program Package Upgrade CD-ROM English — U.S./Canada use only	5803-AAR	1508	31L0888	eNetwork Host On-Demand Version 3.0 1 Concurrent User for Upgrade	5808-AAR	0501	31L2167
eNetwork Host On-Demand Version 3.0 Program Package Upgrade CD-ROM French — U.S./Canada use only	5803-AAR	1515	31L0889				
eNetwork Host On-Demand Version 3.0 Program Package Upgrade CD-ROM English — International use	5803-AAR	1516	31L0890				

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 receive automatically their entitlement to the new Media Pack shortly after general availability.

Software Advantage Upgrade Protection Entitlement

Program Name/ Description	Current Part Numbers	New Program Package Part Numbers
Software Advantage Upgrade Entitlement		
eNetwork Host On-Demand V2.0 Version 2.0 CD-ROM	4122198 4122207 4073751 4122237	31L0861 31L0863 31L0862 31L0864

Program Upgrade

Upgrade is allowed to Host On-Demand Version 3.0 from any of the following qualifying programs:

- IBM 3270 or 5250 emulator programs

  – eNetwork Host On-Demand Version 2.0

  – eNetwork Host On-Demand for OS/390 Version 2

  – 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

Terms and Conditions

Licensing: IBM International Program License Agreement. Proofs of Entitlement (PoE) are required for all authorized use.

Program-unique Terms: The Program is authorized for use only by a single workstation at a time. If you install the Program on a server, you may acquire multiple authorizations to use the Program and allow a number of users, up to the total number of authorizations acquired, to access and use the Program concurrently.

The Host On-Demand Express feature of this Program is authorized for use in a wired network only. Use across a wireless network is expressly prohibited.

The Program may contain cryptography for data which is subject to special export licensing requirements of the US Department of Commerce or other countries. Refer to the Program documentation or consult your IBM representative for details on the available level of encryption. You are hereby notified that use by or transfer to users in different countries of the same Program, may be prohibited or subject to special import laws, regulations, or policies from the user's national government or special export laws, regulations, or policies from your national government. You assume all responsibility for ensuring that the Program is used or transferred in accordance with all applicable import and export laws, regulations, and policies.

The Program contains JavaBeans (referred to below as "Components") which, subject to this Agreement, may be used by you in other products within your enterprise. The complete list of Components can be found in the "Host Access Beans for Java" section of the readme file on the Program media.

- Subject to this Agreement and all terms and conditions in this section, IBM grants you the rights to reproduce these Components and include the unmodified Components in your products. ("Your Products"). Subject to the authorized use restrictions below, you may distribute Your Products solely within your enterprise and solely for use in your business by users authorized to use the Program.

- The total number of users allowed to access and use either the Program or Your Products concurrently is limited to the total number of authorizations acquired to access and use the Program concurrently. The use authorizations for Your Products are not in addition to the authorizations for the Program. A user who is using both the Program and Your Products at the same time counts as one user. The number of users accessing and using either the Program or Your Products may change at any time provided that you do not allow more total users than you have acquired use authorizations. For example, if you acquire authorizations to allow up to 100 users to access and use the Program concurrently, no more than 100 users may access and use the Program and/or Your Products concurrently. In the above example, if 80 users are accessing and using the Program, no more than 20 users may access and use Your Products concurrently.

Limited Warranty Applies: Yes

Program Services: Available until January 31, 2001

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

Copy and Use on Home/Portable Computer: Yes

Usage Restriction: Yes

Charges for this program are based upon the number of users connected. You must acquire one authorization for each user logged on. The total number of users logged on may not exceed the number authorized by the Applicable Proof of Entitlement. IBM intends to provide

tools that will allow you to determine actual use of the program. If the total number exceeds the quantity in the Proof of Entitlement, you must notify IBM or its reseller as stated in the IPLA.

Support Line: Personal Systems

Upgrades: Customers can acquire upgrades up to the currently authorized level of use of the qualifying programs.

Volume Orders: Yes, contact your IBM representative.

Passport Advantage Applies: Yes

AIX/UNIX Upgrade Protection Applies: No

Entitled Upgrade for Current AIX/UNIX Upgrade Protection Licensees: No

Variable Charges Apply: No

Charges

Program Name/Description	Part Number	One-Time Charge
eNetwork Host On-Demand Version 3.0 Program Package CD-ROM English — U.S./Canada use only	31L0861	$229
eNetwork Host On-Demand Version 3.0 Program Package CD-ROM French — U.S./Canada use only	31L0862	229
eNetwork Host On-Demand Version 3.0 Program Package CD-ROM English — International use	31L0863	229
eNetwork Host On-Demand Version 3.0 Program Package CD-ROM French — International use	31L0864	229
Host On-Demand Version 3.0 9/6250 Mag Tape for OS/390 U.S./Canada use only	31L2154	229
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