IBM

Software Announcement

IBM US Software March 25, 1997 *IBM Use Only*

IBM Communications Server for Windows NT, Version 5.0 Offers Robust Communications, Networking, and System Management

Overview

Communications Server for Windows® NT, Version 5.0 is a new member of the IBM Software Server series, a family of modular application servers. These servers enable you to rapidly implement client/server applications and extend application capabilities to meet future business requirements.

Communications Server for Windows NT interconnects diverse networks and should prove to be a winner for your business. With Communications Server, workstation users and applications can communicate with other workstations and central computer applications, regardless of the networking protocols. Communications Server can help you get users communicating between networks of all sizes, from small workgroups to large corporate headquarters.

Communications Server for Windows NT provides an industrial-strength networking solution for your workstation for host terminal emulation, client/server and distributed applications, or connectivity across LANs and WANs.

For true networking flexibility, a wide range of connectivity services and options are provided. Workstations and gateways can communicate using protocols such as TCP/IP and SNA. The connection can be over WANs using SDLC or X.25 protocols on switched or nonswitched lines or over LANs using IBM Token-Ring or Ethernet protocols. Mobile users can directly access their host system or another Communications Server using public telephone networks.

Communications Server supports a variety of APIs and protocols ideal for client/server applications and distributed processing. Communications Server also protects your investment in applications by providing compatible APIs for clients and servers. Programs using these APIs can run on any node in the network, whether it is a client or server.

Communications Server for Windows NT provides businesses with the opportunities to:

- Expand the use of applications while protecting current network investments
- Reduce operation and management costs by connecting networks without impacting existing applications
- Reduce costs of central computer and peer-to-peer connectivity by sharing communication resources
- Gain efficiency in response times by assigning priority to short, interactive data transmissions rather than to batch-oriented, bulk data traffic
- Increase productivity and convenience by providing employees access to applications from either the office or mobile environments

Intended Customers

For customers who need a full range of communications and connectivity offerings on the Windows NT platform

Key Prerequisites

- Windows NT 3.51, or Version 4.0
- 100MHz Intel® Pentium®-based processors with 32MB RAM (recommended minimum)

Planned Availability Date

March 28, 1997

Ship Date

March 28, 1997

At a Glance

Use applications written for one protocol in networks using another protocol, without changing the applications.

- A broad range of communication, connectivity, and networking options
- A powerful SNA gateway
- A wide variety of 32-bit APIs
- Local and wide-area connectivity support
- Extensive APPN® support
  - End and Network node
  - High Performance Routing
  - Discovery of service providers
  - Dependent LU Requester
- TCP/IP-attached clients can access SNA APIs without SNA protocols between the client and server
- Extensive multiprotocol support
  - AnyNet® SNA over TCP/IP and Sockets over SNA (access node and gateway)
  - TN3270E Server
  - Host On-Demand
- Local and remote configuration and administrative support
- Web-based server administration
- Entry-level terminal emulation function

Part Number

Description	Part Number
Communications Server for Windows NT, Version 5.0	4231747

Marketing Information

Marketing Channels

- IBM Business Partner — Distributor for Workstation Software
- IBM Business Partner — Reseller for Workstation Software
- IBM NA Field Sales
- IBM Direct (U.S. Telesales)

Marketing Activity Required

Promotional Material: INEWS contains references to promotional materials that support this announcement.

Promotional materials are also available on MKTTOOLS in the CSNTMKT package.

The following brochures are available:

- IBM Communications Server for Windows NT (G325-3684)
- IBM Communications Server for Windows NT Top 10 Reasons (G325-3683)
- IBM Communications Server (G325-3565)
- IBM Communications Server Family (G325-5207)
- IBM Enterprise Communications Family Folder (G325-5220)

Presentation Material: A Communications Server Family Overview presentation is available on MKTTOOLA under CSFAM. The presentation covers the benefits of the advanced technologies integrated into Communications Server, overviews Communications Server solutions across platforms, and then looks at how the solutions solve customer problems by looking at customer reference implementations. The package contains a presentation and script for the Communications Server family of products:

- Communications Server for OS/2 Warp
- Communications Server for Windows NT
- Communications Server for AIX®
- NetWare for SAA®
- NetWare for SAA: AS/400® Edition

Additional product information is available under CSFAM including a summary comparison of the functional characteristics of the family of Communications Servers.

Evaluation Kit: End users can request a no-charge Evaluation Kit for Communications Server for Windows NT. The kit is available to assist end users in evaluating the product. It is not intended for production use and will expire 90 days after installation. After this period, IBM or the dealer should be contacted to order the product.

Initially the Evaluation Kit will be available in English only. Other languages will be provided when the translated versions of the Communications Server are available.

Additional information about the Evaluation Kit and the Communications Server for Windows NT can be obtained via the World Wide Web at URL:

http://www.networking.ibm.com/csn/csnprod

HONE Information

Proposal material will not be available through HONE.

Configurator Information: Configurator aids CFPC and PSC-USA support this announcement.

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Product Description

Advanced Peer-to-Peer Networking® (APPN)

APPN is a networking extension to Advanced Program-to-Program Communications (APPC) that simplifies configuration and enhances management of a group of workstations using APPC or Common Programming Interface for Communications (CPI-C) using transaction programs. An APPN network consists of end nodes and network nodes. The end node serves an end point in an APPN network and maintains directory information for local resources and the registration of these resources with a network node. The network node contains the full category of APPN functions and provides directory services, route selection, and management service to all the end nodes.

APPN provides customers and network administrators with a decreasing configuration workload and greater flexibility in managing networks. With APPN, you can:

- Add, delete, or move nodes within the network with limited system definition at the affected node and no other definition at other nodes
- Use defaults for reducing required system definition
- Significantly improve the performance of communications between APPC and CPI-C applications, especially in a LAN environment
- Use APIs to automate configuration changes and add network management capabilities

Dependent LU Requester (DLUR)

DLUR lets you transport dependent LU traffic through an APPN network. A DLUR is an APPN end node or network node that uses dependent LUs but requests that a Dependent LU Server (DLUS) provide the system service control point (SSCP) for those dependent LUs through an APPN network. A DLUS controls conversion from a subarea environment to an APPN environment, allowing central management control of remote dependent LUs to be maintained while benefiting from an APPN network.

DLUR and VTAM's DLUS function enables dependent LUs (1, 2, 3, and dependent LU6.2) to operate unchanged in an APPN network without changing applications. It supports dynamic and multiple paths through the network and eliminates the need for dependent LUs (or their gateway) to be adjacent to the VTAM® host.

Discovery of Service Providers

Discovery is a LAN address resolution protocol that can be used by a node on the LAN to find another node that matches specific search criteria. By specifying the search parameters, a node can search for APPN network nodes, nodes that provide SNA boundary function, AS/400s, SNA gateways, or user-defined classes of server. Discovery support further simplifies configuration by automatically finding network nodes for the end nodes.

A Communications Server for Windows NT server can respond to requests from clients as a network node server, PU2.0 gateway, or as a user-defined class of server.

SNA Gateway

The full-function SNA gateway allows multiple LAN-attached workstations to access one or more System/370™, System/390®, or AS/400® host systems through one or more physical connections. The gateway acts as an intermediary between the workstation and the host system and reduces the cost of host connections per workstation. From the host perspective, the gateway appears as an SNA PU2.0 node, supporting one or more LUs per workstation, with all LUs belonging to the gateway PU. To the supported workstations, the gateway appears like an SNA PU4 communications controller and forwards such host requests as BIND and UNBIND. The workstation LUs are not aware of the SNA gateway. The gateway, however, is aware of all LUs at the workstation.

SNA gateway capabilities include:

- LU types 0, 1, 2, 3, and dependent LU6.2
- Any type of downstream workstations that support standard IBM SNA connectivity protocols
- Support for LUs 0, 1, 2, and 3 to an AS/400 host system using SNA passthrough; the AS/400 host passes the data through to a System/390 host
- Support for the forwarding of network management vector transports (NMVTs) between the workstations and the host system
- LU pooling, a condition where the LUs defined in the gateway can be grouped together in a "pool" for multiple workstations providing benefits such as reduced configuration, and load balancing/backup
- Multiple LU pools, each pool associated with a specific application
- Common pools associated with multiple hosts
- Up to 254 LUs per PU, with no limit on the number of PUs

SNA API Client Support

The SNA API client support allows TCP/IP-attached clients to access SNA APIs without requiring SNA protocols to flow between the clients and the server. This remote API allows most SNA configurations to take place at the central server. The SNA clients provide support for CPI-C, EHNAPPC, LUA RUI, APPC, and limited support for NOF, MS, and Common Services interfaces, while providing the actual SNA processing at the server. These clients are delivered as part of the server but are actually installed and configured at the client.

A Communications Server Software Developers Toolkit (which can be separately installed from the Communications Server for Windows NT CD-ROM) is also available for application developers to use. The toolkit contains samples, header files, library files, and online manuals for each of the APIs.

Communications Server for Windows NT supports SNA API clients on Windows 95, Windows NT, Windows 3.x, and OS/2® platforms.

32-bit APIs

Communications Server for Windows NT supports a wide range of 32-bit APIs on the server for the application program developer. These APIs provide convenient ways for application programs to access Communications Server functions and allow applications to address the communication needs of connections to both IBM and other computers. In addition, the interfaces provided support SNA protocols so standardization is ensured.

API support includes:

- APPC
- CPI-C
- Conventional LU Application Interface (LUA) RUI
- WinSock
- Network Operator Facility
- Management Services
- Common Services

AnyNet SNA over TCP/IP (Access Node and Gateway)

The AnyNet SNA over TCP/IP function allows SNA applications to communicate over interconnected TCP/IP and SNA networks. The SNA over TCP/IP access node allows SNA applications to communicate between workstations or a host to a workstation across a TCP/IP network. This function supports independent LU6.2 and dependent LU 0, 1, 2, 3, or 6.2. In addition, the SNA over TCP/IP access node can be used with SNA gateway to enable SNA gateway sessions over a TCP/IP network.

The SNA over TCP/IP gateway function extends the reach of SNA applications by allowing these applications in an SNA network to communicate with SNA applications in an IP network. This gateway supports independent LU6.2 sessions.

AnyNet Sockets over SNA (Access Node and Gateway)

The Sockets over SNA access node function enables TCP/IP application programs using the WinSock 1.1 and Winsock 2.0 socket interface to communicate over an SNA network.

The Sockets over SNA gateway function enables sockets applications in SNA and TCP/IP networks to communicate. Sockets over SNA gateways are often used to connect isolated TCP/IP networks using an SNA backbone network.

TN3270E Server

TN3270E Server provides a method, based on standards, that allows TCP/IP clients easy access to the large number of existing legacy applications residing on IBM host systems without changing to the application programs.

The TN3270E Server is compliant with the industry-standard Request for Comment (RFC) 1576, 1646, and 1647. This capability provides 3270 terminal and printer emulation to TCP/IP users in an open, standard environment. TN3720E defines a new Telnet option and subnegotiations that allow a client or server to negotiate exactly which terminal type and features are supported. Clients and servers supporting TN3270E can now negotiate to pass SNA responses to guarantee end-to-end printer confirmation.

TN3270E Server supports any downstream TN3270 or TN3270E client which adheres to the RFCs stated above.

Local and Remote Configuration and Administration

A configuration GUI provides a user interface for entering configuration data. Local configuration is supported at both the client and server level.

The Node Operations application allows users to remotely or locally stop, start, and monitor resources in the network. The Node Operations application is also supported from any Windows NT client.

Web-based Server Administration

Communications Server for Windows NT includes a new Web-based tool that provides a remote integrated cross-server administration capability. IBM takes Web-based server administration to a new dimension. A simple GUI provides a convenient, at-a-glance status of Communications Server while a consistent user interface preserves a common look and feel across server platforms.

Host On-Demand

Continuing to advance our strategy of providing network computing solutions, Communications Server for Windows NT provides Host On-Demand, designed to provide fast and easy access to host information from intranets and the Internet. Host On-Demand is a Java™-based solution that incorporates industry-standard Telnet 3270 protocols. It provides a high-performance, low-cost solution for intranet and Web users who need occasional access to their central computer applications or databases from any Java-enabled user platform.

The license for Communications Server for Windows NT, Version 5.0 includes the use of the product Host On-Demand. Host On-Demand can be used to support as many concurrent users/clients as allowed by the terms of the associated Communications Server for Windows NT license.

For additional information on Host On-Demand refer to URL:

http://www.networking.ibm.com/hex/hexprod_en.html

Entry-Level Emulator

Communications Server for Windows NT includes an entry-level version of the popular Personal Communications 3270 and 5250 emulator for administrative purposes. This emulator provides basic 5250 and 3270 support and provides a subset of the features and functions in the full-function IBM Personal Communications family of emulators. The emulator is authorized to run on the server only.

The entry-level emulator functions include:

- Color mapping
- Command line transfer (3270 only)
- Full font set
- Various screen sizes (Models 2 through 5)
- Two sessions

Data Security

Communications Server for Windows NT provides basic and enhanced security support at the session and conversation levels. Security features limit which Windows NT users can access SNA resources through the SNA API clients. Conversation security includes support for password substitution. Enhanced LU-LU security is also provided.

Previous Versions: There was no previous version of Communications Server for Windows NT, Version 5.0.

Open Enterprise

Communications Server for Windows NT supports the Multiprotocol Transport Network (MPTN) from X/Open.

Marketing Information

Marketing Programs

The 30-day, money-back guarantee provides the end user with an unconditional money back guarantee. If for any reason the end user is not satisfied with our products or our program packages, the products can be returned to the IBM authorized resellers for a full refund. The products must be returned within 30 days from the date of acquisition with a valid proof of entitlement. Only products obtained directly from an IBM authorized resellers are eligible for this program.

Marketing Support

Remarketer Support: Marketing and technical information will be provided to IBM authorized resellers by the IBM Personal Computer Company Personal Systems HelpCenter® either by telephone or through the PartnerLink™ System. The hours of operation of the IBM PC Company Personal Systems HelpCenter are 9:00 a.m. to 9:00 p.m. eastern time, Monday through Friday, except holidays.

Technical Information

Specified Operating Environment

Hardware Requirements: Communications Server for Windows NT Server, Version 5.0 can be used on all Intel-based systems supported by Windows NT Version 3.51 or Version 4.0. A 100MHz processor and 32MB RAM is recommended; depending on the network environment, a faster processor and larger memory can be necessary. Disk space of 10MB is required on a startup drive for temporary use and 70MB on any hard drive for permanent use.

The Communications Server for Windows NT Remote Administration clients and the SNA API clients will run on any hardware required by Windows 3.1, Windows 95, OS/2, and Windows NT (Intel only).

Communications Adapters: One or more network communication adapters (and appropriate cable) can be required.

Communications Server for Windows NT, Version 5.0 is compatible with the following adapters:

- IBM ISA/EISA WAN Adapters
  - Multiprotocol Communications Adapter for SDLC over leased and switched connections
  - Wide Area Connector for SDLC, X.25 over leased and switched connections
  - Serial/Parallel Adapters (synchronous port) for SDLC
- IBM Micro-Channel WAN Adapters
  - Multiprotocol Communications Adapter for SDLC over leased and switched connections
  - Wide Area Connector for SDLC, X.25 over leased and switched connections
  - Serial/Parallel Adapters (asynchronous port) over asynchronous connections
- IBM PCI and PCMCIA WAN Adapters
  - Serial/Parallel Adapters (asynchronous port) over asynchronous connections
- Non-IBM ISA/EISA WAN Adapters
  - BusTech, Inc., (Bus and Tag and ESCON® adapters) over SNA channel connections
  - Eicon Technology for Frame Relay over leased and switched connections

Note: The Communications Server for Windows NT also is compatible with a wide variety of LAN adapters including any adapters with NDIS drivers supported by Microsoft® Windows NT. For current and complete information relative to hardware and software compatibility for LAN and WAN adapters, refer to the Communications Server Web pages at URL:

http://www.networking.ibm.com/csn/csnprod.html

Software Requirements: Communications Server for Windows NT requires either Windows NT Server, Version 3.51 or Windows NT Server, Version 4.0. Additionally:

- When using Windows NT Server, Version 3.51, Service Pack 4, or above, is required to support the SNA API clients
- TCP/IP is required for communication with the Remote Administration and SNA API clients

Remote Administration Clients require either Windows NT Workstation or Server Versions 3.51 or 4.0. TCP/IP is required for communications with Communications Server for Windows NT (Server).

SNA API Clients requires either:

- OS/2 Warp Version 3.0, or later
- Windows 3.1.1, or later
- Windows 95, with service pack 1 and the following fix:
  - Microsoft Knowledge Base article ID: Q128366
  - Creation date: March 11, 1996
  - Web site for downloading fix:

    www.microsoft.com/windows/software/krnlupd.htm
- Windows NT Workstation or Server
- Windows NT Server 3.51 with service pack 4, or above
- Windows NT Server 4.0
- TCP/IP is required for communications with Communications Server for Windows NT (Server)

Host On-Demand requires any Web server capable of serving Java applets to be installed on the same machine as Communications Server for Windows NT.

Compiler Requirements: The compilers for applications under Communications Server for Windows and SNA API clients for Windows 95 and Windows NT, Versions 3.51 and 4.0 are:

- VisualAge™ for C++ for Windows, Version 3.5
- Microsoft Visual C++ for Windows NT, Version 4.1

The compiler for applications under SNA API clients for OS/2 is VisualAge for C++ for OS/2, Version 3.

The compiler for applications under SNA API clients for Windows 3.1 is Microsoft Visual C++, Version 1.51 or 1.52.

Compatibility: Communications Server for Windows NT, Version 5.0:

- Compatible with Transaction Server for Windows NT, Version 4
- Supports both APPN and traditional SNA functionality as a type 2.1/2.2 node
- API client software for OS/2, Microsoft Windows 3.1, Windows 95, and Windows NT support SNA application programs without requiring a full SNA product on each workstation
- Will interoperate completely with any other full SNA product

Communications Server for Windows NT does not support other implementations of partial-stack SNA clients.

Limitations: Communications Server for Windows NT, Version 5.0 runs only on the Windows NT operating system in the Intel environment.

Performance Considerations: Performance can be affected by:

- Type of connection and network characteristics
- Number of users and concurrent sessions
- Type of tasks
- Available installed memory
- Reliability, availability, serviceability (RAS) and/or trace activity

Communications Server Family Technology Highlights: The following summarizes the functional contents of the IBM Communications Server family of products:

	CS/2 4.1	CS/NT 5.0	CS/AIX 4.2	OS/400	Net-Ware 2.2	CS/MVS OS/390
Industry-leading SNA support:						
o 3270 SNA gateway	X	X	X		X	
o APPN EN and NN function	X	X	X	X		X
o High Performance – Intermediate node routing – HPR connection endpoint	X X	X X	X	X		X X
o 3270 support over APPN (DLUS/DLUR)	X	X	X			X
Multiprotocol support:						
o TN3270E server	X	X	X		X	
o Sockets over SNA access node	X	X	X	X		X
o APPC over TCP/IP access node			X	X		
o SNA over TCP/IP access node	X	X				X
o Sockets over SNA gateway	X	X	X		X	
o APPC over TCP/IP gateway			X	X		
o SNA over TCP/IP gateway	X	X				X
o IPX over SNA gateway	X				X	
o IPX over TCP/IP gateway	X					
o NetBIOS over SNA gateway	X					
o NetBIOS over TCP/IP gateway	X					
NetWare Directory Services integration					X	

Planning Information

License Management: Communications Server for Windows NT includes a tool for license management. This license is included in the program package on the CD-ROM and is installed along with the product. During installation, you are prompted to enter the number of concurrent licenses purchased. Each workstation counts as one licensed user regardless of the number of sessions that are active with the Communications Server.

If the number of concurrent users exceeds the number of concurrent licenses purchased, then an error message is logged. No product function is disabled even in the case of the licenses being exceeded. Further connections are still allowed with an error message being logged for each connection as long as the license count is exceeded. You are expected to monitor the log and purchase additional licenses if you consistently exceed your initial license quantity.

Packaging: The Communications Server for Windows NT package includes:

- One CD-ROM
- Hardcopy publication: Quick Beginnings
- IBM International Program License Agreement (IPLA) Booklet
- IPLA Pointer Sheet
- License Information
- Proof of Entitlement

There is no registration card in the program package. The product contains the software registration tool, Axtive Registration Tool.

This tool should be used to register the Communications Server for Windows NT.

Administrative Information

Ordering Information

All orders for software are submitted via purchase orders through Electronic Data Interchange (EDI) or fax. For questions about ordering procedures, contact your Customer Operations Account Representative at 800-828-6693.

All Software Advantage orders must be submitted to the Software Advantage Administration Center (SAAC) in Raleigh, North Carolina.

Physical Characteristics and Packaging

SKU	Units/ Carton	Cartons/ Pallet	Unit Weight	Unit Depth	Unit Width	Unit Height	UPC Code
4231747	8	45	1.9 lb	2.5″	8″	9.5″	0-87944 -33131-5

Terms and Conditions

Licensing

This licensed program will be available on a one-time charge basis to IBM Business Partner — Reseller for Workstation Software and IBM Business Partner — Distributor for Workstation Software for remarketing under the terms and conditions of the IBM International Business Partner Agreement.

This program is licensed under the terms and conditions of the IBM International Program License Agreement (IPLA) (Z125-3301). A copy of the IPLA is packaged and shipped with each program. End user customers are advised that their first use of the program constitutes their acceptance of the IPLA. No customer signature is required. Should end user customers not agree to acceptance of the IPLA terms, they are advised to return the complete program to the point of acquisition for a refund.

Use Authorizations: IBM has acceptance terms for Use Authorizations for this program. Under these terms, customers may now acquire use authorizations for this program by ordering them. The Proof of Entitlement is the customer's authorization to make a single copy of the program. The use authorizations may be ordered in any quantity. The customer must have obtained an original program package in order to acquire use authorizations. The terms and conditions of the IPLA supplied with the original program package apply to the use authorizations. No machine-readable code is included with the Proof of Entitlement package.

Returns

Inventory Adjustments: The announced product is eligible for return as stated in the Inventory Adjustments section of the Remarketer Terms for Workstation Software. Quantities may be returned once per month. All invoices should be paid in full until credit is issued.

30-Day, Money-Back Guarantee: IBM will provide a credit for any program package returned to its point of acquisition, provided it was acquired in the 30 days before the date of return and it includes the accompanying documentation and media.

Upon receipt of the program package, the reseller will sign the Request to Destroy Unsalable Software form and submit it to IBM. IBM will process the credit upon receipt of the form.

Limited Warranty

Programs: Yes. The warranty terms of the IPLA apply.

Program Services: Program services will be available until March 28, 1999.

Upgrades

Upgrades to Communications Server for Windows NT, Version 5.0 from any IBM or non-IBM communications server product may be obtained through IBM Business Partner — Reseller for Workstation Software and IBM Business Partner — Distributor for Workstation Software. End user customers may acquire upgrades up to the number of qualifying programs for which they are currently authorized.

Software Advantage for Workstations Eligible Programs: The use authorizations and use authorization upgrades described in this announcement are included in the Eligible Program List for the Software Advantage for Workstations Exhibit.

Optional Software Advantage Media and Documentation packs are only available through an authorized Software Advantage remarketer and do aggregate for Software Advantage credit but are not eligible for Software Advantage discounting.

Charges

Description	Part Number	One-Time Charge*	Remarketer Charge	Education Customer Charge
Communications Server for Windows NT, V5.0				
Program Package	4231747	$995	$697	$925
Media Pack	4231758	10	7	
Documentation Pack	4231759	5	4	

Upgrade Charges

Upgrade To	Upgrade From	Part Number	One-Time Charge for Upgrade	Remarketer Charge	Education Customer Charge
Upgrade to Communic-ations Server for Windows NT, V5.0	any IBM or non-IBM communic-ations server product	4231755	$419	$293	$390

Use Authorization Charges

Description	Part Number	One-Time Charge	Remarketer Charge	Education Customer Charge
Communications Server for Windows NT, V5.0				
Use Authorization	4231748	$ 965	$ 676	$897
Use Authorization — Software Advantage	4231749	965	676	
User Authorization				
1-Pack	4231750	69	48	64
5-Pack	4231751	328	230	
10-Pack	4231752	642	449	
50-Pack	4231753	3,174	2,220	
Software Advantage	4231754	69	48	

Use Authorization for Upgrade Charges

Description	Part Number	One-Time Charge	Remarketer Charge	Education Customer Charge
Communications Server for Windows NT, V5.0				
Use Authorization (Right to Copy)	4231756	$389	$272	$362
Use Authorization (Right to Copy) — Software Advantage	4231757	389	272	
User Authorization (Resources)	4231784	29	20	27
User Authorization (Resources) — Software Advantage	4231785	29	20	

Upgrade Protection Charges

Description	Part Number	Upgrade Protection Charge
Communications Server for Windows NT, V5.0		
Program Package		
Full Charge	4231760	$289.00
Quarterly Charge	4231761	36.13
User Authorization for Users		
Full Charge	4231780	21.00
Quarterly Charge	4231781	2.63

* One-Time Charge reflects the license charge for a single unit acquired from IBM and is subject to change without notice. These charges are for information purposes only and shall not limit in any way the remarketers' or resellers' ability to set their own charges for IBM programs.

Trademarks