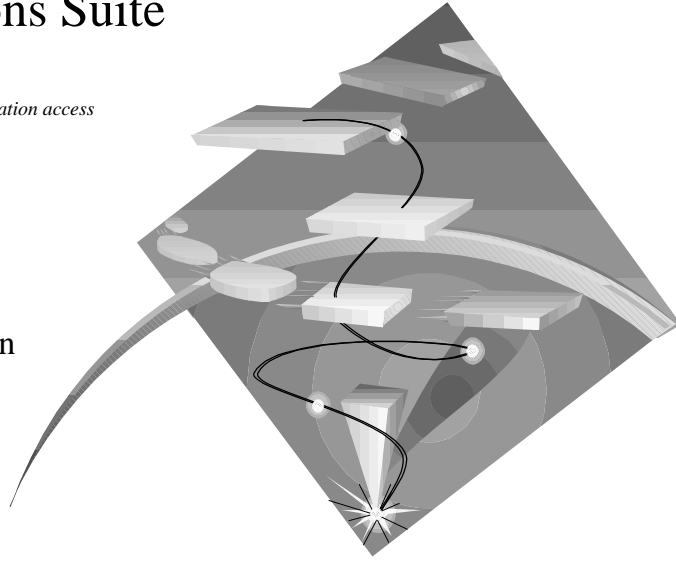




eNetworkTM Communications Suite

One easy answer for universal information access

Customer Presentation



IBM Software

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Today's Problem

To meet your enterprise-wide information access needs...



Update monthly
departmental report
(*NFS file sharing*)

Obtain latest product specs
from business partner
(*Internet file transfer*)

Find market data and research
(*Web browsing on the
corporate intranet*)

Complete personnel reviews
(*3270 host application*)

Send e-mail from home
(*Lotus Notes Mail remote
access*)

...you currently need many different products from multiple vendors,
causing complexity and additional cost:

Multiple products to
purchase and install

Too many different
vendors to call for
support

Expensive to purchase
and support multiple
products

New purchase as users
migrate to Windows 95
and Windows NT

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Our 'client's' problem, as described on this chart, is just a snapshot of some of the things that she needs to accomplish during a typical day. In order to complete personnel reviews and give one of her hardworking staff members a raise, she needs to access a legacy MVS system over SNA.

Later that morning, our 'client' needs to process some of the hundreds of e-mail notes she received in the last 24 hours. Her company has standardized on Lotus Notes for e-mail and calendaring and she accesses the Domino server over a TCP/IP connection.

Additionally, our 'client' needs to work on her department's monthly report. Joe, however, has the master copy on his machine, and he is out today. Fortunately, Joe is running a TCP/IP NFS server and our client can access his disk using her NFS client to make the necessary updates.

Our client's busy day is now half over. After lunch, she needs to obtain the latest product specs from her business partner. The business partner happens to be in Toledo, however. This is not a problem, as she has access to her partner's FTP server and can obtain the specs by doing a file transfer with her FTP client.

Finally, in the early evening, our client has some time to do some research for a new product rollout. She dials in from home and she finds the data she needs on the Internet by doing a number of searches with her Netscape browser, as well as visiting some web sites that her FirstFloor Smart Bookmarks have flagged as being updated with new information.

How was our 'client' able to accomplish all these tasks so easily and efficiently? The answer is by her having the **new IBM eNetwork Communications Suite** installed on her desktop.

IBM Communications Suite

A total desktop communications solution:

- IBM Personal Communications AS/400 and 3270
- Lotus Notes Mail
- FTP Software TCP/IP protocol stacks and applications
- Netscape Navigator and plug-ins

Featuring:

- Complete Windows support: Windows 3.1, Windows 95, and Windows NT 4.0
- A wide range of connectivity options and protocol support
- An extensive set of application programming interfaces (APIs)

All in a single package to provide you with:

- One order, one installation interface, one vendor for support
- One solution from a world-class vendor for your enterprise desktop communications needs

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Product Versions

- **IBM Personal Communications V4.1**
- **Lotus Notes Mail V4.5**
- **FTP Secure Client V3.0 (Windows 95)**
- **FTP Network Access V3.0 (Windows 95 & NT)**
- **FTP OnNet 16 V2.5 (Windows 3.1)**
- **Netscape Navigator V3.01**
- **FirstFloor Smart BookMarks V2.0**

Note: The applications included from FTP Software are a subset of their products. FTP's Mail and 3270/5250 applications are not included.

Support for Windows 3.1, Windows 95 and Windows NT all on a single CD. There is no need to purchase a different version of Communications Suite when you change Windows operating systems.

Connectivity Options: TCP/IP, SNA (PCOMM), IPX/SPX, and more

APIs: Supported APIs include but are not limited to WinSock 2.0, CAPI (Added Common-ISDN-API) OPEN Object, OPEN Script and APPC (Advanced Program-to-Program Communication).

With Communications Suite single installation interface, you can install everything or just the functions you need.

Host Communications and Collaboration

IBM Personal Communications

- Premier 5250 and 3270 emulation
- Simple, familiar, and highly productive user interface
- Easy to customize and develop applications using productivity enhancements and a wide range of APIs



Lotus Notes Mail

- Simple to organize, navigate, locate, and preview mail and documents
- Distributed replication and synchronization
- Enterprise calendaring and scheduling
- Best-of-breed messaging with manageability and reliability at every level



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The specific features and functions of PCOMM and Lotus Notes Mail will be discussed on later charts.

TCP/IP Applications and Web Browsing

FTP Software

- 16 and 32 bit TCP/IP protocol stacks with next-generation technology such as IP version 6 (IPv6)
- Rich set of applications to reach and share information
 - Terminal emulation for VT52-420, Wyse 50/60, and others
 - Easy-to-use NFS client seamlessly integrates file sharing
 - File transfer and print client/server applications



Netscape Navigator & Plug-ins

- Fast, efficient, and secure Web browsing
- State-of-the-art integrated e-mail and news services
- Productivity plug-ins including:
 - FirstFloor Smart Bookmarks
 - Adobe Acrobat Reader



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FTP Software 16 & 32-Bit TCP/IP Stacks

Communications Suite includes protocol stacks from FTP Software for both Windows 3.1 and Windows 95. A Windows NT stack is under development at FTP Software and IBM will have rights to it when available.

IP Version 6

The kernel from FTP Software is the first client desktop implementation of next generation IPv6 technology. As members of the IETF (Internet Engineering Task Force), FTP Software has helped define and drive this emerging TCP/IP Standard.

FTP Software Applications

Text mode terminal emulation for access to UNIX, DEC and other hosts.

NFS (Network File System), FTP and other applications will be discussed in more detail on a later chart.

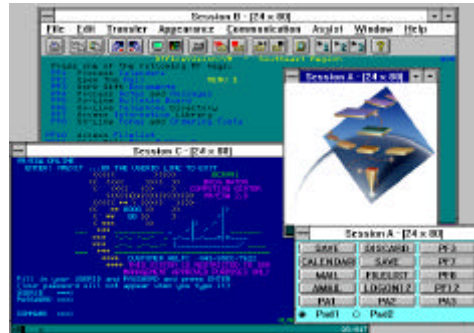
Netscape Navigator & Plug-ins

The e-mail support provided by the Netscape Navigator allows receipt and delivery of mail directly from the Internet when supported by a POP3 mail server (Post Office Protocol). The Lotus Notes Mail client in Communications Suite does not support POP3. Internet mail must be routed through the Domino server.

IBM Personal Communications AS/400 & 3270



- Full-function 3270 and 5250 emulation
- SNA-based client support
- Client/server and peer-to-peer computing
- Multiple client APIs
- Automation tools:
 - CM Mouse
 - ZipPrint
- Powerful System Admin. Tools



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Features/Functions

Repetitive tasks can be automated with the use of macros, and sessions can be dynamically added or changed. Pop-up keypads, graphical, customizable toolbar, 3D Hotspots, file transfer

APIs

EHLAPI(Emulator High-Level Language API), DDE, SRPI (Server-Requester Programming Interface), PCSAPI (Personal Communications API), CPI-C (Common Programming Interface for Communications), APPC

CM Mouse

Industry-leading mouse support lets users interactively define mouse buttons to perform everyday tasks, such as printing, file transfers, and file deletions.

ZipPrint

Provides one-button capability to print notes, calendars, and documents for 3270 users.

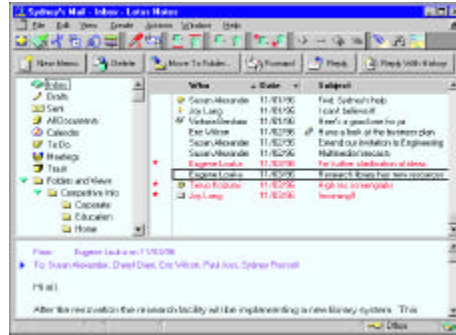
Admin. tools

GUI Trace facility even end user can use, menu bar customization, GUI fix utility for applying CSDs, APARS, and creating a dump for transfer to system administrator to debug problems

Lotus Notes Mail V4.5

Lotus™

- Share information within your organization, as well as with customers, suppliers and business partners
- Enterprise calendaring and scheduling
- Proven, powerful interface
- Mobility
- Personal Web Navigator
- Universal file viewers
- Task Management
- Document Libraries
- Discussions
- Richest Rich Text
- OfficeVision to Lotus Notes Clients



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Calendaring & Scheduling

Flexible, intuitive interface for easy management of personal calendars, access to real-time calendar information across all Notes platforms, and even time zone adjustments. Share free time data with OV (OfficeVision) and Lotus Organizer users securely.

Powerful Interface

Navigate through volumes of information quickly and easily. See views, folders, document relationships and preview documents all on the same screen.

Mobility

The industry's best replication. Remote users can download all or part of specific messages or other information from the LAN.

Personal Web Navigator

Users can browse the WWW and seamlessly include both live Internet links and active Web pages in Notes Mail messages.

Universal File Viewers

Preview and print attachments created with popular desktop applications, whether you have the application or not - even if the file came from another platform.

Task Management

Create, manage, and delegate To Do lists for yourself and others. Assign tasks and track their completion.

Document Libraries

For SmartSuite and Microsoft Office to help you store, share, route and track important work including presentations, expense reports, and more.

Discussions

Set up virtual meeting places where workgroups can share ideas conveniently and securely. Trace the sequence of replies in a discussion without having to wade through irrelevant documents.

Richest Rich Text

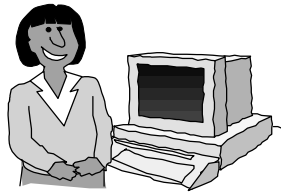
Include formatted text, graphics, scanned images, tables, video clips, sound bites, URLs, OLE 2.0 objects, and other attachments in your messages.

OfficeVision to Lotus Notes Clients - see next chart

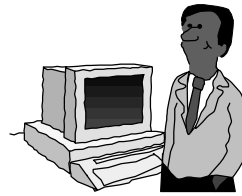
OfficeVision to Lotus Notes Clients



Tried & True
3270/5250
Emulation
with
PCOMM



Notes User Interface
OfficeVision E-mail & Calendar
with
OfficeVision to Lotus Notes
Clients
(OVSLNC)



Workgroup
Capability
with
Lotus Notes
Mail

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Communications Suite provides all the client software you need as you migrate from a host based environment to a Workgroup environment. The power and flexibility of Lotus Notes Mail V4.5 are now at your fingertips, even if you're using OV/VM or OV/MVS for your mail and calendar system. With IBM OVSLNC, you can continue to leverage your investment in the host's infrastructure while providing new function to your end users.

Using any of a number of connection protocols in Communications Suite (TCP/IP or HLLAPI) a task runs behind the scenes to connect your Lotus Notes Mail client to your OV system. Another task running on your VM or MVS system communicates with OV to access the data you need. From your perspective, all you see is Lotus Notes Mail. You send and receive mail, organize your mail into folders, and work with your calendar using the simple-to use Notes interface. Here's what you get:

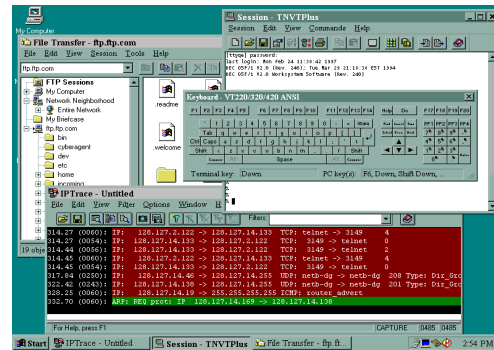
- **One GUI client as you move from host infrastructure to LAN infrastructure:** Since the connection to OV/VM is managed through code that runs underneath a standard Notes 4.x client, there is no need to reinstall Notes if/when you choose to use Domino servers for your mail and calendar.
- **No LAN administration is required:** Since OV/VM performs all of the server functionality for mail and calendar distribution, no LAN-based servers are required.
- **Users get integration & functionality such as file attachments/launching, fonts/colors, OLE2:** this brings greater integration with desktop productivity applications, allowing easier sharing of data with your teams.
- **Users can work off-line:** Since Notes is fundamentally built with disconnected operations in mind, you can create mail and calendar entries while off-line and have them automatically sent when you reconnect.
- **Users could begin to work with Notes servers for discussion databases, etc.**

Note: OVSLNC will be available for Communications Suite at a later date, visit the Communications Suite web page (<http://www.networking.ibm.com/ecs>) for more details.

FTP Software TCP/IP Applications



- Terminal Emulation:
 - VT52, VT100, VT220, VT320, VT420
 - IBM PC
 - SCO ANSI
 - WYSE-50/60
- Dialer
- FTP Client
- FTP Server
- Print Client
- Print Server
- NFS Client
- Time Client



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Terminal Emulation

- Faster painting, scrolling, host applications, improved font support, such as blinking and bold Dialer

- OLE scripting. Easily write object-based scripts to customize dialup for purposes like log-in and security
- TAPI (Telephony API) support. Keeps track of your dialing environment like prefix, country, calling card, etc.
- Intelligent phone list. Automatically dials alternate phone numbers that you set up for modem pools or local ISPs.
- Dial-on-demand. Opens up a dialup session with just one click of an application.
- Plug-and-play support. Prevents you from having to reconfigure if you have a portable with docking station.

FTP Client

- Works like Windows 95 explorer. Once users learn how to use the operating system interface, they can intuitively learn how to share files. Same for NFS
- Integrated into Network Neighborhood. No need for end users to think about protocols (FTP or NFS) or the network operating systems to locate files and do work.
- OLE Drag-and-Drop. Easily move files from remote and local systems around the desktop, even from the FTP Client into other applications that support OLE.
- Copy not only single files, but the entire directory tree.
- Create multiple simultaneous connections between hosts. Transfer files not only to and from a PC and a remote system, but even between two remote systems.

FTP Server

- Integration into Operating system Services, event, and performance monitor, integration with NT Domain security
- Restart option for mobile users
- Password protect specified directories

Print Client (LPR)

Print files on remote printers across the hall or across the world over the Internet.

Print Server (LPD)

Let others print files on your printer.

NFS Client

- 32-bit kernel space clients optimized for both Windows 95 and NT. This kernel space design tightly integrates drivers into operating system architecture, and cannot be interrupted by other applications.
- User interface integrates seamlessly into operating system Network Neighborhood and Explorer interface, lowering rollout and training costs.
- Aliasing and Name Mapping - UNC (universal naming convention) support - uses Microsoft naming conventions. Aliasing now supports more than 24 Simultaneous Remote Drives. This allows users to identify mount points with intuitive names. Client software clearly displays complex directory or file names found on the server system.
- Automatic server discovery detects servers on a subnet. This reduces the need for administrators to hand-configure servers on every desktop.

TIME Client

Synchronize your computer's time clock over the network

FTP Software TCP/IP Technology



- Next-generation, 32-bit TCP/IP for Windows 95:
 - IP Version 6 Support (IPv6)
 - IP Multicasting
 - WinSock 2.0 Interface Support
 - SNMP MIB II
 - IPSECurity
 - WinISDN
 - SOCKS
- Network tools for Windows 3.1 and Windows 95 such as:
 - IPTrace
 - Ping
 - Query
 - Remote Command, Remote Copy
 - Retriever

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IP Version 6 - Poises an organization for critical emerging developments in Internet infrastructure technology.

Security - New IP extensions provide greater support for authentication and privacy.

Mobility - Mobile IP lets users move from LAN to LAN without needing to reconfigure their IP addresses.

Expanded Addressing - IPv6 solves the problem of address space becoming scarce with the growth of the Internet. IPv6 addressing will become essential for not only enterprise connectivity, but also to accommodate growth of PDAs, Cellular, and CATV.

Multimedia - IPv6 provides enhanced support for multimedia and real time applications, such as video and audio conferencing.

Lower Configuration Costs through Auto Configuration - IPv6 provides easier addresses configuration and management, reducing configuration cost.

IP Multicast

is a critical feature to enable multimedia applications, such as video conferencing, to run over the Internet. It allows packets and data to be broadcast at one time, rather than one at a time.

WinSock 2.0

This guarantees that network applications such as Netscape Navigator and even Microsoft PowerPoint will work with the FTP Software protocol stack.

SNMP MIB II

Simple Network Management Protocol, Management Information Base. Remotely monitor a PC's TCP/IP status.

IPSECurity

Create protected networks between two hosts, or between a host and a firewall. Security at the kernel level allows administrators to provide transparent protection to all levels of applications.

SOCKS

Transfer files over firewalls, such as IBM's Firewall for AIX, with easy built-in password prompting. Network over SOCKS firewalls with all FTP Software applications that use TCP.

Network Tools

IPTrace - Diagnose network traffic flow to and from a PC at any layer of network operation - stack through application.

Ping - Easy interface to debug networking problems from the user desktop.

Query - Find out about user names or machine addresses on your network.

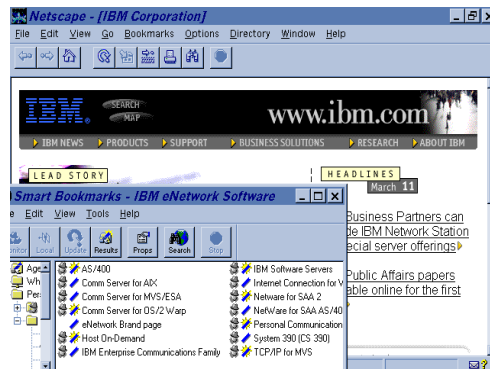
Remote Command/Copy - Graphical RCP and RCMD support, allows you to perform remote UNIX commands and copies.

Retriever - Powerful tool to support end users and easily debug configuration and networking problems.

Netscape Navigator and plug-ins



- Netscape Navigator
 - HTML 3.0
 - Framing
 - SSL support
 - Java support
- Netscape Mail
 - SMTP, POP3
 - MIME, IMAP4
- Netscape News
- Plug-ins
 - FirstFloor Smart Bookmarks
 - manage bookmarks
 - scheduled web site monitoring and updating
 - Adobe Acrobat Reader



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Navigator

HTML 3.0 features: Framing and Java support

SSL - Secure Sockets Layer protocol. Keep your communication confidential.

Netscape Mail

- SMTP- Simple Mail Transfer Protocol, "*Send Mail To People*"
- POP3 - Post Office Protocol, V3.0
- MIME - Multipurpose Internet Mail Extensions
- IMAP4 - Internet Mail Access Protocol, V4.0

Netscape News

- share information with others on the Internet through newsgroups

FirstFloor Smart Bookmarks

- search the Internet and retrieve information
- perform scheduled Web-site monitoring and updating
- manage bookmarks

Adobe Acrobat Reader

- seamlessly view, search, and download PDF (Portable Document Format) files without leaving Navigator

Competitive Advantages

1. Emulation, communication, web access, and TCP/IP-in one package
2. Universal access
3. Premier, full-function terminal emulation
4. World-class client/server messaging
5. Next-generation 32-bit TCP/IP technology
6. Investment protection and savings
7. World-leading Web browser and plug-ins
8. Common communications desktop across the enterprise
9. Single package, single installation interface, and single source of support
10. Extensive set of APIs

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1. IBM eNetwork Communications Suite delivers complete, easy access to all of your corporate intranets and host data, Lotus Notes, and the Internet.
2. Communications Suite addresses your business needs by providing an extensive range of connectivity options to let you communicate from anywhere.
3. Personal Communications (PCOMM) allows you to access S/390 and AS/400 applications with a powerful graphical user interface that is easy to use, effortless to learn, and has a common look and feel. Communications Suite also includes terminal emulation from FTP Software for VT52 through 420, Wyse 50/60, SCO ANSI, and IBM PC.
4. With Lotus Notes Mail, you can communicate and share information with your colleagues, customers and suppliers.
5. Communications Suite includes all the next-generation TCP/IP protocol stacks and applications from FTP Software that you need for complete access to your intranets and the global Internet.
6. With Communications Suite's unique combination of rock-solid mission critical applications such as PCOMM, Lotus Notes, and next-generation technology, such as Internet Protocol Version 6 from FTP Software, your investment in desktop communication software is protected. You can easily upgrade as your needs grow.
7. Netscape Navigator provides fast, efficient, and secure Web browsing, plus much more. Your productivity and effectiveness on the Web can be increased by using Communications Suite additional Netscape plug-ins, such as FirstFloor Smart Bookmarks and Adobe Acrobat Reader.
8. Communications Suite support for Windows 3.1, Windows 95 or Windows NT 4.0, allows you to focus on your application needs and not your operating system restrictions as you migrate from Windows 3.1 to Windows 95 or Windows NT. There is no need to purchase a different version of Communications Suite when you change Windows operating systems.
9. Communications Suite eliminates the need to obtain multiple desktop software packages to solve your enterprise communication needs. With Communications Suite's single installation interface, you can install everything or just the functions you need.
10. Software developers can use Communications Suite rich set of application programming interfaces (APIs) to develop powerful applications. Supported APIs include but are not limited to WinSock 2.0, Added Common-ISDN-API (CAPI), OPEN Object, OPEN Script, and APPC.

TCP/IP Features you won't find in Windows 95

- Applications
 - Terminal Emulation (3270, 5250, VT220, etc.)
 - NFS
 - Graphical FTP client/server
- Integrated Security
 - IPSECurity
 - Firewalls (SOCKS)
- Complete Mobile Solutions
 - ISDN (WinISDN, CAPI)
 - Dialer scripting - one click access
- Next Generation IP Foundation
 - IPv6
 - Mobile IP
- WinSock 2.0 Interface

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Basic Function

Windows 95 only provides basic TCP/IP protocol support which is mainly limited to the actual protocol stack and Internet Explorer Web browser.

Release Cycle

Microsoft's cycle of shipping TCP/IP is on an operating system releases (not current with your needs in Web years). That means 3 years between TCP/IP releases.

Support

Microsoft warranty does not include their TCP/IP code, Communications Suite does. Additionally, Microsoft does not support TCP/IP in Windows 3.x, Communications Suite does.

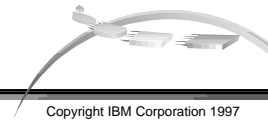
Information Week, 8/26/96 summed it up this way:

"The answer is simple: You get what you pay for. Windows 95 doesn't do much to ease connections to the non-Windows LAN world. In fact, Microsoft has done little to dress up its Windows 95 TCP/IP protocol stack."

Communications Suite Pricing

Description	Program Number	Feature Number	Part Number	One Time Charge (\$)
Pgm Pkg.	5801AAR	2435	39F1693	449
Use/Copy	5802AAR	1839	39F1722	419
5 Pack	5802AAR	1840	39F1723	1,999
10 Pack	5802AAR	1841	39F1724	3,899
50 Pack	5802AAR	1842	39F1725	19,275
Use/Copy SWA	5802AAR	1890	39F1726	419
UPG Protection	5809AAR	1620	39F1728	126
Pgm Pkg. UPG	5803AAR	1231	39F1716	199
Use/Copy UPG	5804AAR	0577	39F1741	169
Use/Copy UPG SWA	5804AAR	0578	39F1742	169

SWA - IBM Software Advantage
 UPG - Upgrade
 Prices are IBM Direct



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IBM Communications Suite

The solution for companies who want:

- One-stop shopping--one package, one order, one installation interface, one world-class vendor to call for support
- Enterprise-class dependability
- "Plug and go" secure access from anywhere to your mission-critical data
- To standardize on a common networking client desktop throughout their enterprise or organization
- Easy access to data on the host, intranet, Notes, and Internet over many connectivity scenarios (LAN and WAN; local and remote)
- Simplicity and one easy answer for universal information access!

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For more information

- ✓ 1-800-IBM-CALL
- ✓ <http://www.networking.ibm.com/ecs>
- ✓ Brochure/Specification Sheet - G325-1193
- ✓ 10 Reasons - G325-1194

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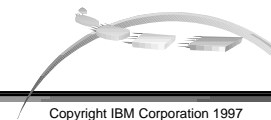
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NFS, Network File System are trademarks of Sun Microsystems, Incorporated;
VT52, and VT100 are trademarks of Digital Equipment Corporation;
Windows NT is a trademark of Microsoft Corporation;
Wyse is a trademark of Wyse Technology, Incorporated;
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