Energize your business network

IBM

Communications Server for OS/2 Warp

Highlights

Make application decisions, independent from existing network protocols, based on business needs

Access the information you need, when you need it, from the central computer or LAN

Improve your network systems management through consolidated traffic and reduced need for parallel networks

Reroute traffic around network outages—transparent to users

Provide TCP/IP users with easy access to IBM 3270 applications and print services through TN3720E Server

Get true remote installation capability

Get the widest range of connectivity in the industry

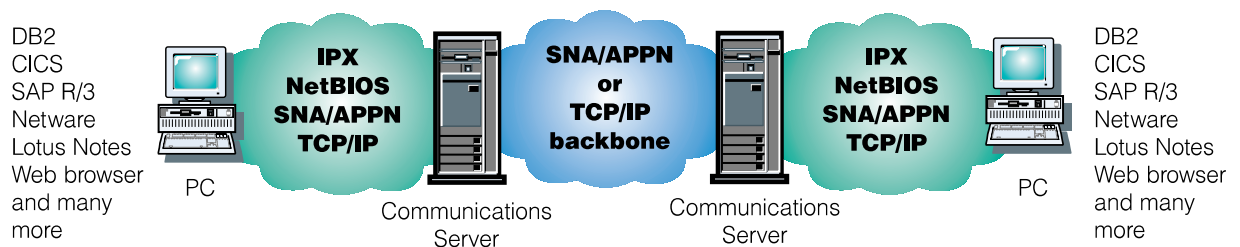**Maximize the power of your new and existing applications with 32-bit APIs**

Prioritize different kinds of data traffic for TCP/IP, SNA, IPX, or NetBIOS applications

Activate automatic backup links, so communication will not be interrupted if connections fail

Welcome to protocol independence!

The IBM Communications Server for OS/2 Warp (Communications Server) separates the choice of application from the choice of protocol—saving time and resources to focus on the heart of your business—rather than on the technologies and complexity behind the scenes.

Communications Server is a high-performance, multiprotocol gateway that incorporates the comprehensive support provided in today's Communications Manager/2 (CM/2) and AnyNet technology. Communications Server performs today in high-demand, critical, highly-stressed communication and network application environments.

DB2
CICS
SAP R/3
Netware
Lotus Notes
Web browser
and many
more

PC

**IPX
NetBIOS
SNA/APPN
TCP/IP**

Communications
Server

**SNA/APPN
or
TCP/IP
backbone**

Communications
Server

**IPX
NetBIOS
SNA/APPN
TCP/IP**

DB2
CICS
SAP R/3
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Lotus Notes
Web browser
and many
more

PC

IPX, NetBIOS, SNA, and TCP/IP applications run over SNA or TCP/IP networks

Feature	Benefit
Multiprotocol gateway	• Allows SNA applications to run unchanged over TCP/IP networks, and allows Sockets (TCP/IP) applications to run over SNA networks • Enables IPX and NetBIOS applications to communicate over TCP/IP and SNA WANs • Provides greater freedom and choices in mixing and combining network protocol, while protecting investments in user applications • Allows TCP/IP users easy access to IBM 3270 applications and print services through TN3270E Server
SNA gateway support	• Permits a workstation to function as a gateway, providing central computer access to multiple large computers on an IBM Token-Ring, Ethernet, Synchronous Data Link Control (SDLC), integrated services digital network (ISDN), X.25, asynchronous transfer mode (ATM) (LAN emulation), Fiber Distributed Data Interface (FDDI), or frame-relay network • Helps reduce costs and improve performance through data compression, transmission priority-setting, and full-duplex communication • Makes it possible to bring large-computer resources to many users, while keeping adapter and line costs down • Supports WAN lines up to 2 Mbps, or higher • Allows multipoint primary to downstream SDLC devices • Supports data encryption • Permits 16 (or more) SDLC links • Supports IBM and OEM Adapters
SNA phone connect	• Allows mobile workers to access a central computer, CM/2, Communications Server, or an OS/2 Access Feature • Takes advantage of enhanced WAN connectivity over switched and nonswitched lines, including automatic dialing support • Uses automatic switched call management on both incoming and outgoing calls • Supports SDLC, X.25, and ISDN • Supports Personal Computer Memory Card International Association (PCMCIA) adapters and modems • Supports synchronous, asynchronous, and AutoSync connectivity • Supports IBM and OEM Adapters
X.25 protocol	• Permits connection to packet-switched data networks (PSDN) worldwide • Supports AutoDial and AutoAnswer as defined in X.32 • Supports exchange identifier (XID) • Supports closed user group (CUG); one or more CUGs per workstation • Provides for inexpensive long-distance data transmission • Enables both SNA and non-SNA communication to be sent over the same physical link
Application programming interfaces (APIs)	• Allows the developer to exploit OS/2 Warp with 32-bit APIs • Lets application developers utilize any 32-bit language compiler • Continues to support 16-bit applications written to the Communications Manager/2 APIs
Advanced program-to-program communications (APPC)	• Delivers distributed processing capabilities by enabling different network nodes to share resources and tasks • Provides for peer-to-peer interaction and communication among various IBM systems • Supports basic and mapped conversations • Supports multiple logical units and multiple concurrent links • Includes persistent verification to improve security • Provides full-duplex, which enhances data transmission • Supports 20000 simultaneous LU 6.2 sessions
Common Programming Interface for Communications (CPI-C)	• Offers the function of APPC in a consistent form across multiple system platforms for CPI-C • Permits smooth movement of applications from one system platform to another (from an OS/2 platform to an OS/400 platform, for example) • Supports CPI-C, Release 2 • CPI-C support for WIN-OS/2, enabling use of CPI-C applications in a WIN-OS/2 environment
Advanced Peer-to-Peer Network (APPN)	• Brings you APPN network node and end node support, with the benefits of peer networking—including simplified configuration, better availability, dynamic routing, and easier maintenance • Offers a way for existing APPC and CPI-C applications to take advantage of peer networks • Allows 3270 applications to flow over APPN networks, with dependent LU requester (DLUR) enablement • Provides network node for intermediate routing services • Gives High-Performance Routing (HPR) for increased data routing performance and reliability • Enables automatic computer backup link • Offers nondisruptive routing around network outages

Feature	Benefit (continued)
3174 Peer Communications support	• Lets workstations use APPC to interact with centralized computer systems or other workstations over coaxial cable • Introduces LAN capabilities to the coaxial-wired environment, without requiring installation of LAN cabling
Logical unit application (LUA) interfaces	• Provide base communication and file transfers for LU 0, 1, 2, and 3 sessions • Facilitate movement of LU 0 applications to the OS/2 environment
Asynchronous Communications Device Interface (ACDI)	• Lets asynchronous emulators and file transfer programs exchange data over asynchronous links • Provides a high degree of independence from the adapter hardware used • Allows you to manipulate modem command strings and automate dialing procedures • Enables call redirection across a LAN to an asynchronous gateway
Configuration installation options	• Offers quick configuration enhancements • Includes IBM's configuration, installation, and distribution (CID) methodology • Provides smooth migration from previous CM/2 configuration • Allows administrators to use the TME 10 NetView program to issue OS/2 commands to remote servers, gateways, and workstations
Problem determination and systems management	• Offers quick access to integrated problem-determination functions • Allows many problem-determination functions to be performed under program control • Makes it easy to control and obtain status information on the SNA communication resources being maintained by Communications Server • Facilitates management of remote databases and servers; local operator need not be present

IBM Communications Server connectivity summary

Supported systems	Interface	Protocol	Connections[1]
IBM System/370 and System/390 architecture	APPC and Sockets	LU 6.2	• ATM (LAN emulation) • Ethernet (374x), PC network • FDDI • Frame relay • General Data Link Control (GDLC)/Asynchronous Network Device Interface Specification (ANDIS)[5] • LAN Gateway (IPX and NetBIOS) • SDLC • SNA phone connect for SDLC, X.25, ISDN, and NetBIOS • SNA over TCP/IP • Sockets over SNA • Token ring (3172, 37xx) • Token ring, using the 3174 3270 Gateway Feature for PU2 • Token ring, PC network, or Ethernet, using SNA gateway • X.25 (37xx PSDN, SNA gateway[2], point-to-point connection)
	LUA	LU 0, 1, 2, 3	• All of the preceding links • TN3270E
Personal computers	APPC and Sockets	LU 6.2	• ATM (LAN emulation) • Ethernet • FDDI • Frame relay • GDLC and ANDIS • ISDN • LAN gateway (IPX and NetBIOS) • PC network • SDLC • SNA over TCP/IP • Sockets over SNA • Token ring[2] • X.25

Supported systems	Interface	Protocol	Connections[1]
	Asynchronous Communications Device Interface (ACDI)	Asynchronous/ASCII[4]	• Asynchronous
	IEEE 802.2	IEEE 802.2	• Asynchronous Transfer Mode (ATM) LAN emulation • Ethernet • Fiber Distributed Data Interface (FDDI) • Frame relay • PC network • Token ring
IBM AS/400 and IBM System/36	APPC and Sockets (AS/400 only)	LU 6.2	• Ethernet (AS/400 only) • FDDI (AS/400 only) • GDLC and ANDIS • ISDN (IDLC) (AS/400 only) • SDLC • SNA phone connect SDLC, ISDN (AS/400 only), X.25 • SNA over TCP/IP (AS/400 only) • Sockets over SNA (AS/400 only) • Token ring • Twinaxial (AS/400 only, including remote connection through 5394 and 5494) • X.25
IBM System/38	APPC	LU 6.2	• SDLC • X.25
IBM Series/1	APPC	LU 6.2	• SDLC
IBM System/88	APPC	LU 6.2	• SDLC
IBM RS/6000	AIX 3270 Host Connect Program/6000	LU 6.2	• LAN • SDLC • X.25 • SNA over TCP/IP • Sockets over SNA
	APPC and Sockets	LU 6.2	• SDLC • X.25
Other large computers or workstations[3]	X.25 API	X.25 (non-SNA)	• X.25
	IEEE 802.2	IEEE 802.2	• Ethernet

Notes:

1. Communications Server supports combinations of these connections.

2. SNA gateway is attached to a System/390 computer through an SDLC, a token-ring, or an X.25 connection.

3. Appropriately programmed.

4. Sending an ASCII text file to another system.

5. GDLC and ANDIS for OEM adapters.

Provides connectivity

Communications Server is an all-in-one communications package that helps users by providing stability for critical applications, while enabling controlled growth in emerging network computing environments. In addition to providing the connectivity and 32-bit APIs, Communications Server offers the flexibility to accommodate change and growth.

Multifunction gateway

Communications Server extends IBM's communication technology to support Sockets over SNA, SNA over TCP/IP, and IPX and NetBIOS over TCP/IP and SNA. In addition, TN3270E server support allows clients on a TCP/IP network access to 3270 applications and print services.

Communications Server functions as a subarea gateway. It provides Advanced Peer-to-Peer Networking (APPN) network node and end node support for client/server and distributed networks. High-Performance Routing (HPR), our latest advanced open technology, significantly improves network performance and availability. Dependent LU requester (DLUR) enables dependent LUs to operate unchanged in an APPN network, without changing the application. The gateway supports pooled LUs, thus increasing the efficiency of the LUs and reducing the configuration setup. Automatic computer link backup enables each primary link to activate without human intervention when primary links fail.

Along with the multiprotocol support offered by Communications Server, its broad communication, network, and systems management facilities include data compression, data encryption, transmission priority-setting, and the ability to take advantage of full-duplex lines.

Growth capacity

The power of networking is brought to the desktop with versatile, high-capacity support for LAN-to-LAN, LAN-to-central computer, and LAN-to-Internet communication. Communications Server allows you to enlarge your network to as many as 2000 connections and 20000 simultaneous LU 6.2 sessions.

Communicate—now and in the future

With Communications Server, users can mix and match SNA- and TCP/IP-based network protocols as they expand or combine their network structures. You can provide continuing network support for existing applications and central computer-based data and still have the freedom to take advantage of new applications, such as Internet and mobile computing, as well as client/server and distributed networks.

This multiprotocol gateway can:

- Enable TCP/IP applications, such as Web browsers, SNMP, SAP R/3, and Lotus Notes, to communicate over connected TCP/IP and SNA networks

- Enable SNA applications, such as DB2, CICS, and emulator programs, to communicate over connected SNA and TCP/IP networks

- Connect SNA and TCP/IP networks, while reducing need for parallel networks

- Enable IPX and NetBIOS applications running on one LAN to communicate over an SNA or a TCP/IP WAN with like applications running on another LAN

- Enable TCP/IP users access to 3270 applications and print services, using the TN3270E Server function

Communications Server accommodates the changing network needs of your business through network protocol independence, flexibility of connectivity options, and increased gateway capacity. With this range of functions, you've just energized your network because Communications Server completely addresses today's rapidly changing network environments.

VTAM
S/390

SNA/APPN

Communications
Server

TCP/IP

TN3270E
Client

TN3270
Client
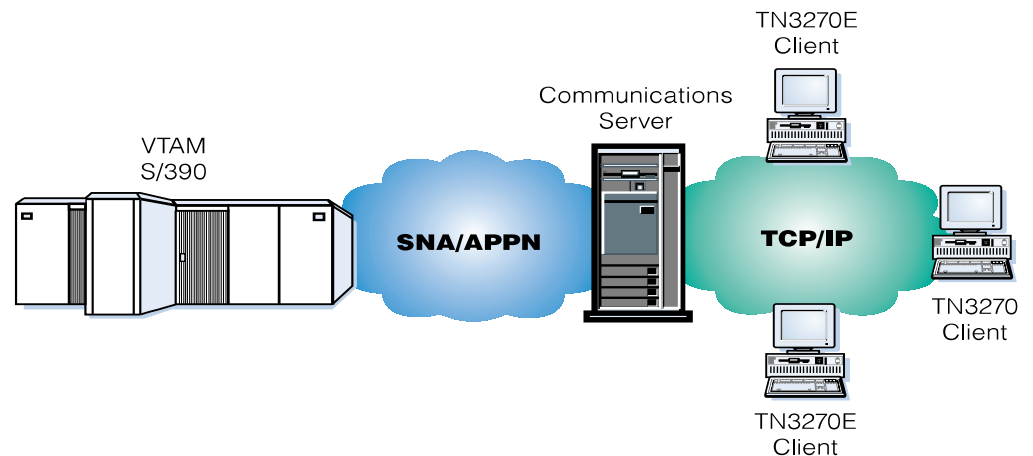
TN3270E
Client

TCP/IP clients have easy access to 3270 applications and print services with TN3270E support.

IBM Communications Server at a glance

System requirements	Intel 386 (or compatible microprocessor), or higher
Media	CD-ROM
Software requirements	IBM OS/2 Warp, Version 3.0, or higher
Memory requirements	4-8 MB of system random access memory (RAM)
Hard drive requirements	17 MB
Application Programming Interface (API)	Upward compatibility for applications that are written to utilize the APIs of OS/2 Extended Edition and Extended Services Communications Manager and CM/2 New 32-bit APIs
Communication line speeds supported	19.2-Kbps switched SDLC 57.6-Kbps asynchronous 64-Kbps ISDN 2-Mbps leased SDLC
Workstation and gateway capacity	LAN adapters per workstation = 16 Active workstations per LAN adapter = 254 Active LU 6. sessions = 20000 Active connections = 2000
Supported communication services and protocols	ACDI APPN (network node, end node, and LEN node) Asynchronous ATM Coaxial (LAN over coaxial) Ethernet FDDI Frame relay GDLC/ANDIS Hayes AutoSync IBM PC network IEEE 802.2 ISDN NetBIOS PCMCIA LAN adapters PCMCIA modems SDLC Token-ring network Twinaxial X.25
National language translations	Brazilian Portuguese, English, French, German, Italian, Japanese, Korean, Spanish, simplified and traditional Chinese

For more information

To learn more about the IBM Communications Server for OS/2 Warp and the Communications Server product line, contact your IBM representative or IBM business partner. Or visit our World Wide Web home page at URL:

http//www.raleigh.ibm.com/cm2/cm2prod.html

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For Position Only

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