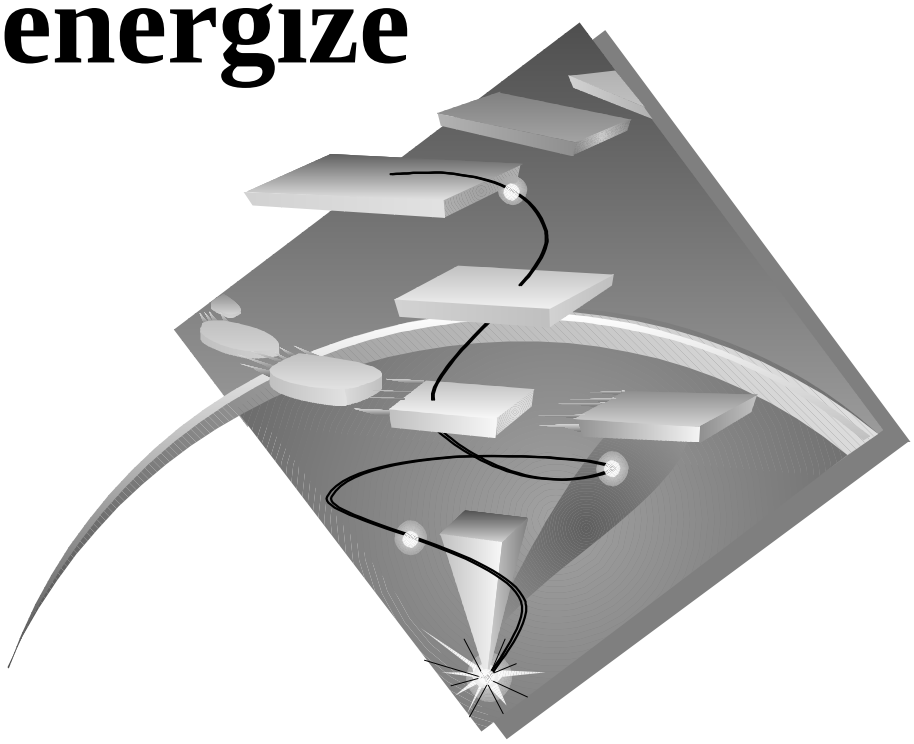
IBM Communications Server Product Line Overview

One easy answer to energize your network



IBM Software

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Abstract: Communications Server Family Overview

IBM's Communications Server is a powerful, multifunction gateway, providing the technology to integrate SNA, TCP/IP, and LAN-based networks with Internet and intranet solutions.

The Communications Server product line includes solutions for OS/2, AIX, Windows NT, OS/390 and NetWare server environments, and is fully interoperable with OS/400 networks. Communications Server incorporates comprehensive SNA and APPN support as well as several other open, advanced technologies:

- **AnyNet supports diverse application and network environments, enabling cost-effective deployment of applications such as web browsers, Lotus Notes, and SAP R/3 over SNA, and database applications such as CICS or DB2 over TCP/IP**
- **High Performance Routing (HPR) optimizes network availability and response time as well as supports network intensive applications**
- **Dependent LU Requester (DLUR) allows your 3270 emulators and printers to take advantage of APPN networks**

This session will overview Communications Server product line, including results of comparison tests between Communications Server and Microsoft SNA Server, and look at solutions for network integration.

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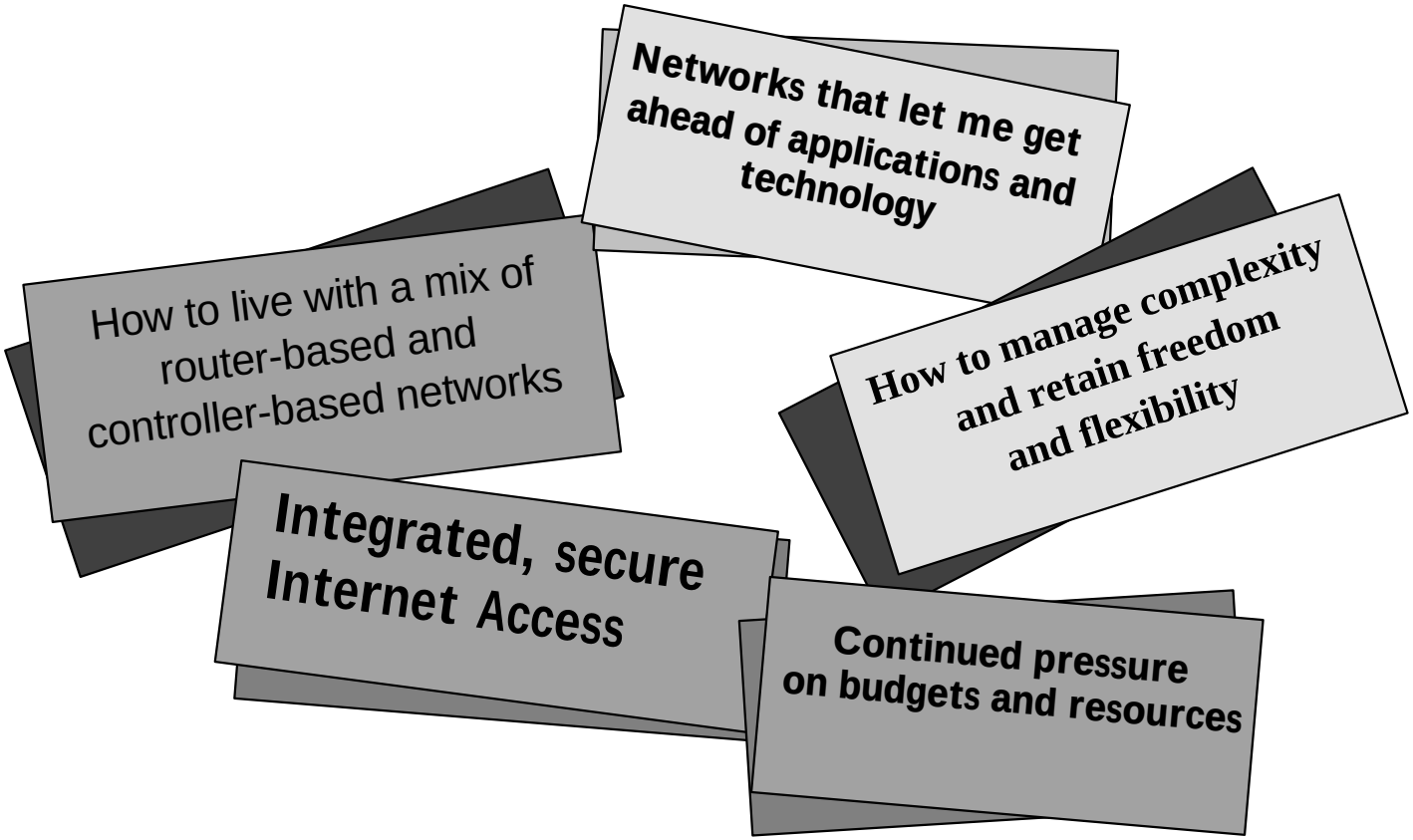
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Agenda

- **Communications Server Introduction**
  - Advanced Technologies
- **Host On-Demand Internet-to-SNA solution**
- **Platform Overviews**
  - Windows NT
  - OS/2
  - AIX
  - OS/390
  - NetWare
- **Solutions for Network Integration**
- **Technical Assistance**

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Old solutions are no longer sufficient ...



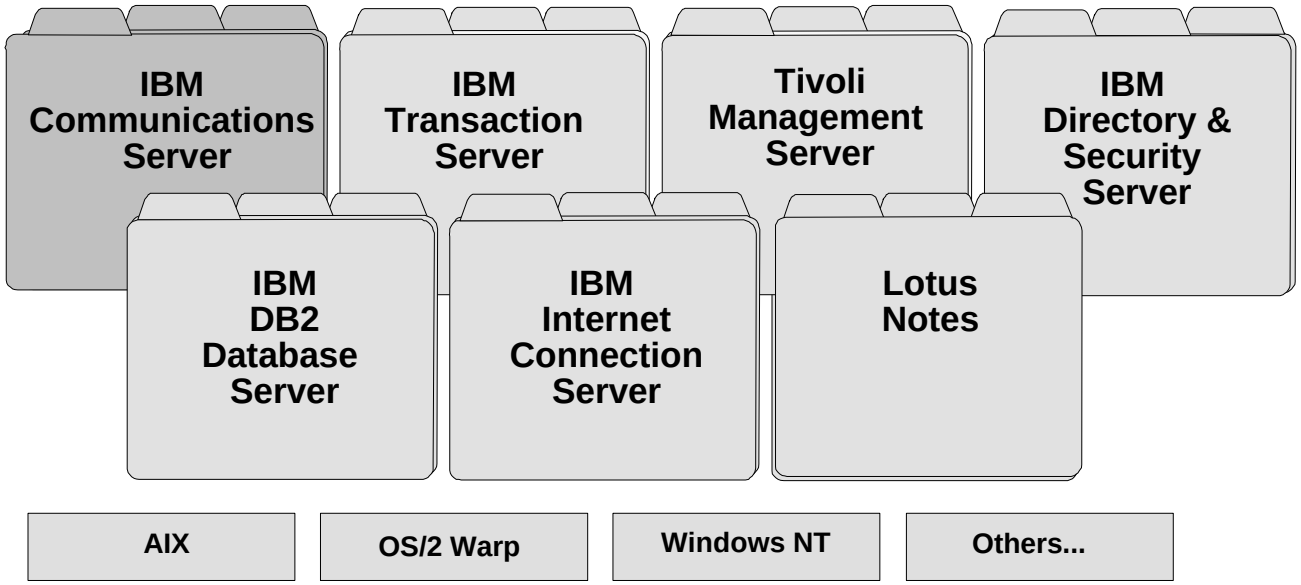
... New approaches are required.

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IBM Software Servers

- **The industry's most comprehensive software server family**
  - Seven modular application servers
  - Multiple platforms...the widest choice of operating systems & clients
  - Integration Tested



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Enterprise Communications Solutions

. . . for companies who want to:

- **Have the freedom to make application decisions based on business needs, not network protocols.**
- **Connect users to the intranet or Internet to exploit network computing advances**
- **Sharpen their competitive edge by deploying best-of-breed applications without updating their network or building parallel networks**
- **Leverage their current investiments and run SNA applications over TCP/IP networks and vice versa**
- **Improve their network's availability, efficiency, and performance.**
- **Be positioned for the applications and networks of the future**

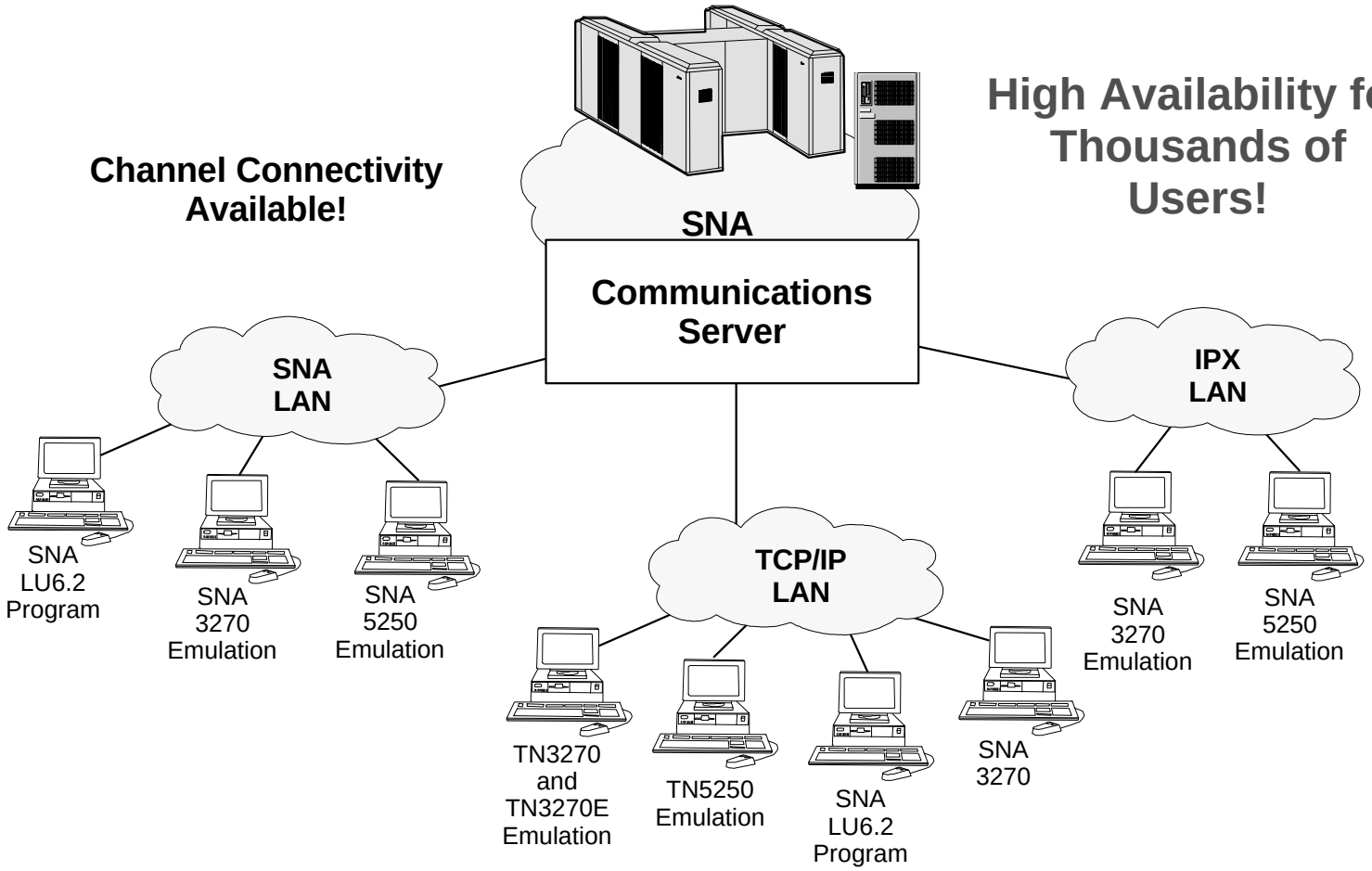
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What is a Communications Server?

- **Powerful, multifunction gateway:**
  - SNA gateway to host applications
  - Multiprotocol gateway supporting the integration of SNA, TCP/IP, IPX and NetBIOS environments
- **Multiplatform gateway:**
  - Server solutions for OS/390, AIX, OS/2, Windows NT, and NetWare server environments
  - Fully interoperable with OS/400 networks
- **Incorporates advanced technologies to build global, heterogeneous networks**

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SNA Gateway to Host Applications

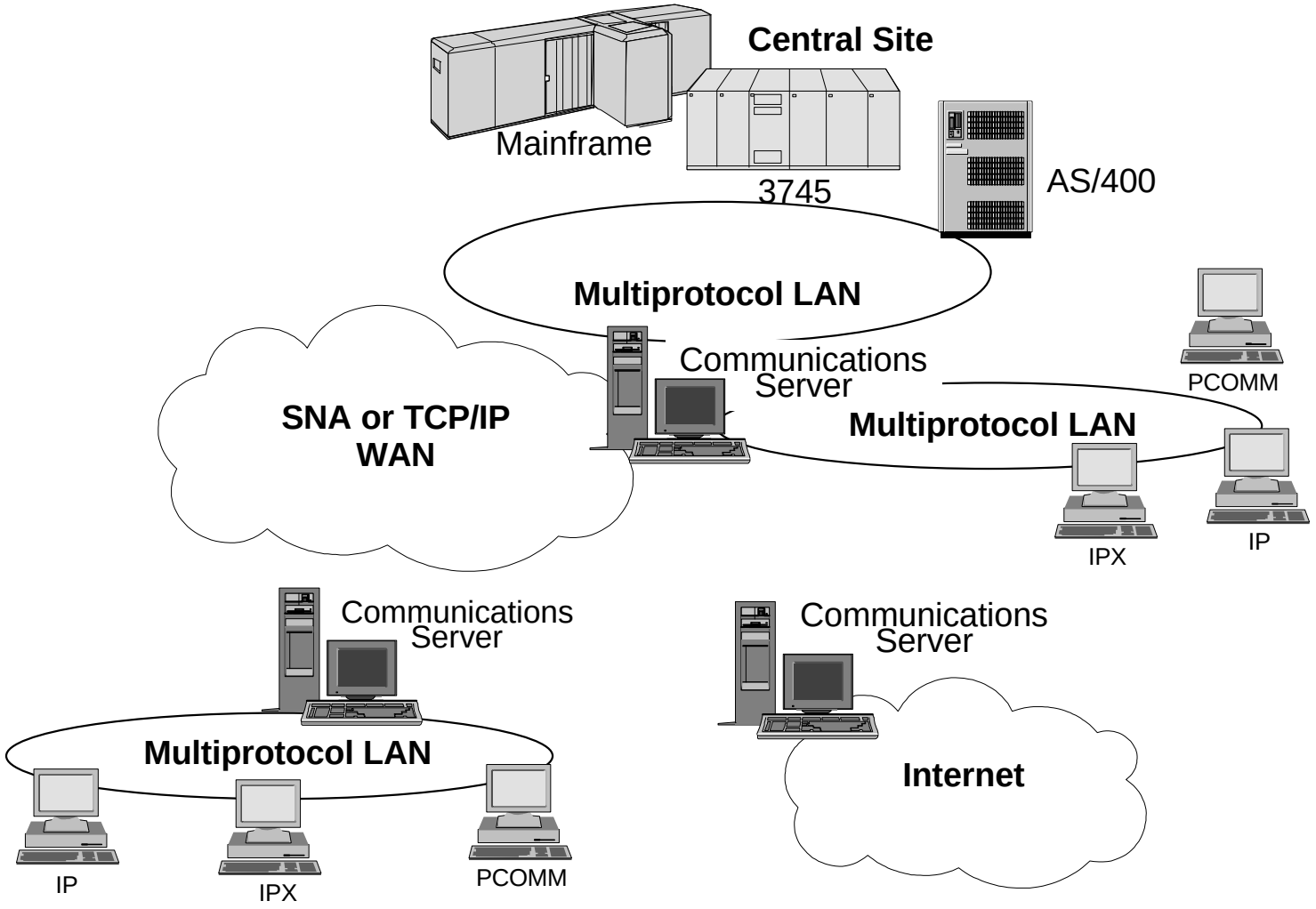


The best possible solution for integrating your LANs with your hosts

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Multiprotocol Gateway

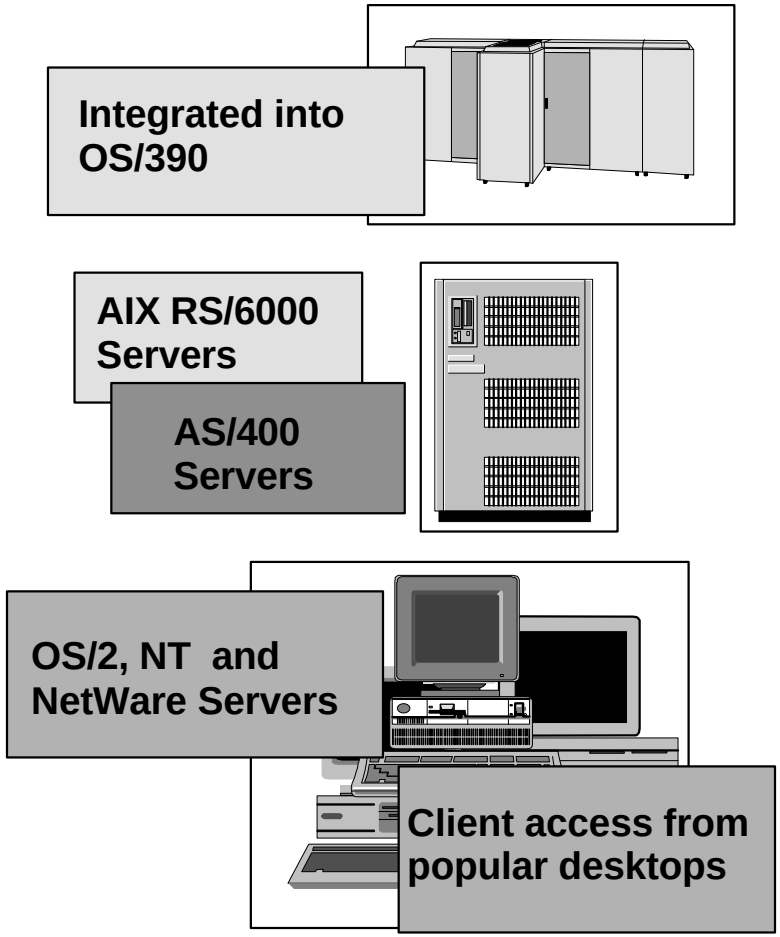


Advanced Networking function that allows the integration of different network types

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Communications Servers Plus Personal Communications Equals Solutions

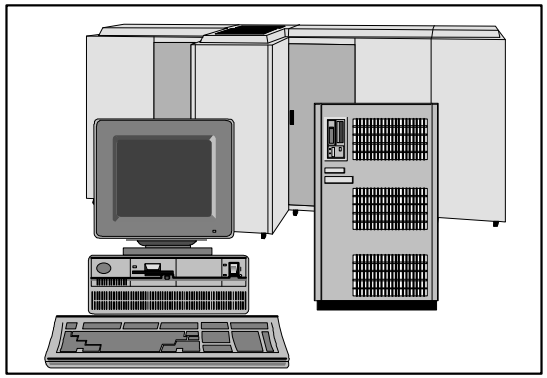


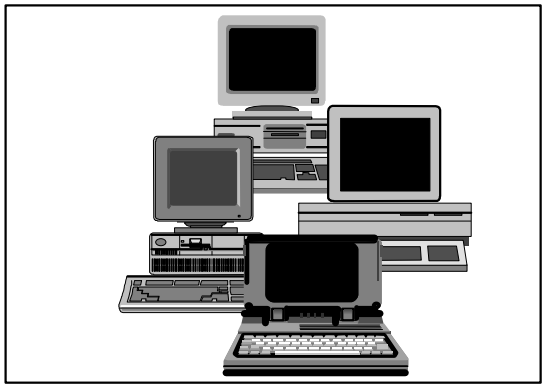
- **Span the enterprise from desktop to mainframe**
- **Make new application support easy**
- **Support secure Internet access from any desktop**
- **Designed for interoperability**
- **Ready for new technologies with advanced communication support**
- **Simplify networking without loss of flexibility**

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The IBM Enterprise Communication Family





Servers

Communications Server for OS/390
Communications Server for AIX
- **SNA Client Access for AIX**
- **SNA Application Access for AIX**

Communications Server for OS/2 Warp
Communications Server for NT
NetWare for SAA
NetWare for SAA: AS/400 Edition

Clients

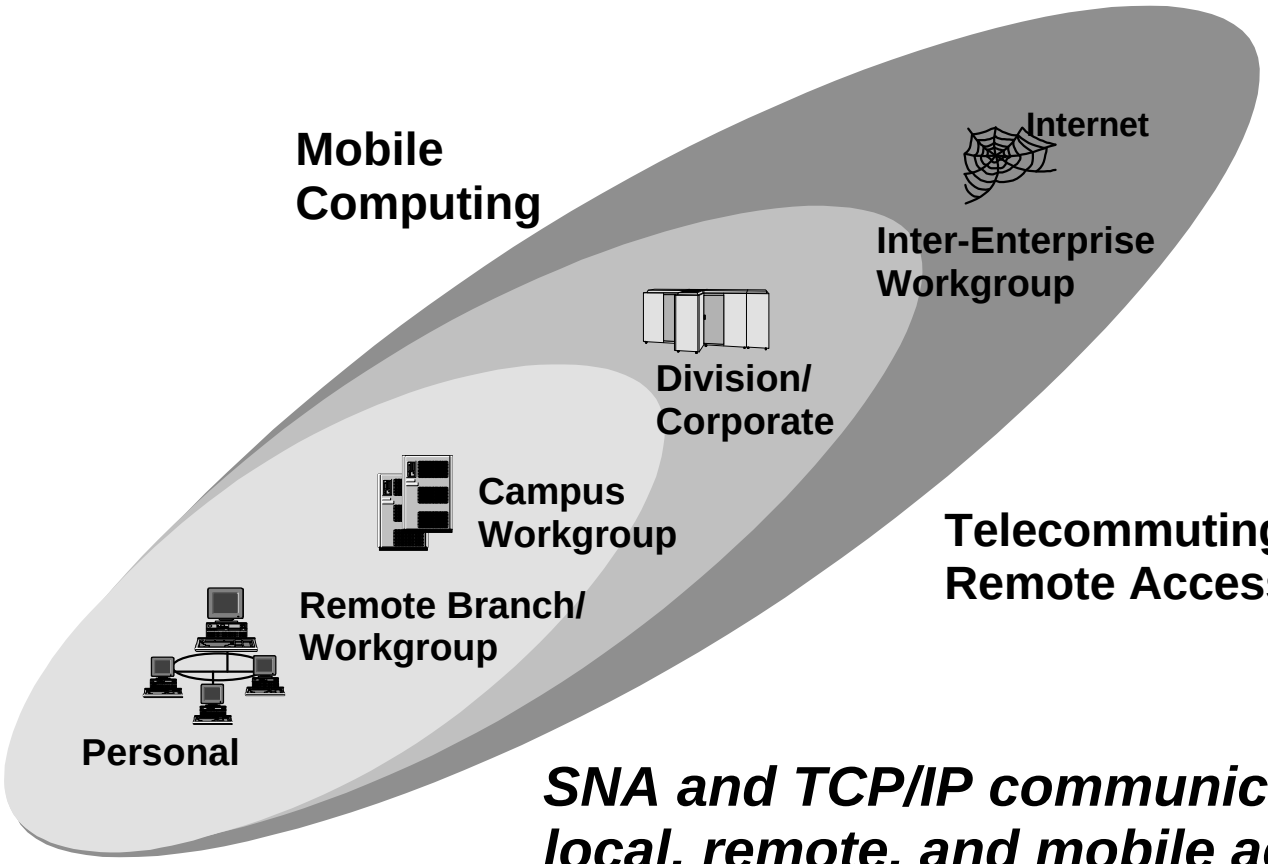
Personal Communications AS/400 and 3270
- **(for OS/2, Win 3.1, Win 95, Win NT)**

Personal Communications AS/400 (for OS/2, Win 3.1, Win 95, Win NT)
CS/2 Access Feature for OS/2
CS/2 Access Feature for Windows
Internet Connection for Windows

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Enterprise-wide Communications



SNA and TCP/IP communications for local, remote, and mobile access for all key systems and platforms

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Yes! IBM Supports It!

Ethernet, token-ring, and FDDI LAN Protocols

Wide range of IBM and ISV communication adapters and modems

Block Multiplexor Channel

ESCON Channel

Internet over IP

Internet over SNA

LU 0, *LU A,* LU 2
LU 6.2
PU 2.0, PU 2.1 APPN LEN
APPN EN, NN, HPR, DLUR/DLUS

DOS, Windows, OS/2, AIX, UNIX, NetWare for SAA, CA/400, or Macintosh Clients

SNMP, SNA management of clients and servers

3270 and 5250 Emulation
TN 3270
TN 5250

3270 to UNIX
APPC, CPI-C, X.25

SNA overTCP/IP, Sockets over SNA, IPX over SNA or IP, NetBIOS over SNA or IP

Load balancing, host offload

802.2 LLC
HDLC
SNA over ASYNC
X.25 QLLC IP
COAX/Twinax
ASYNC

ISDN
Frame Relay

Centralized, remote branch, and distributed configuration options

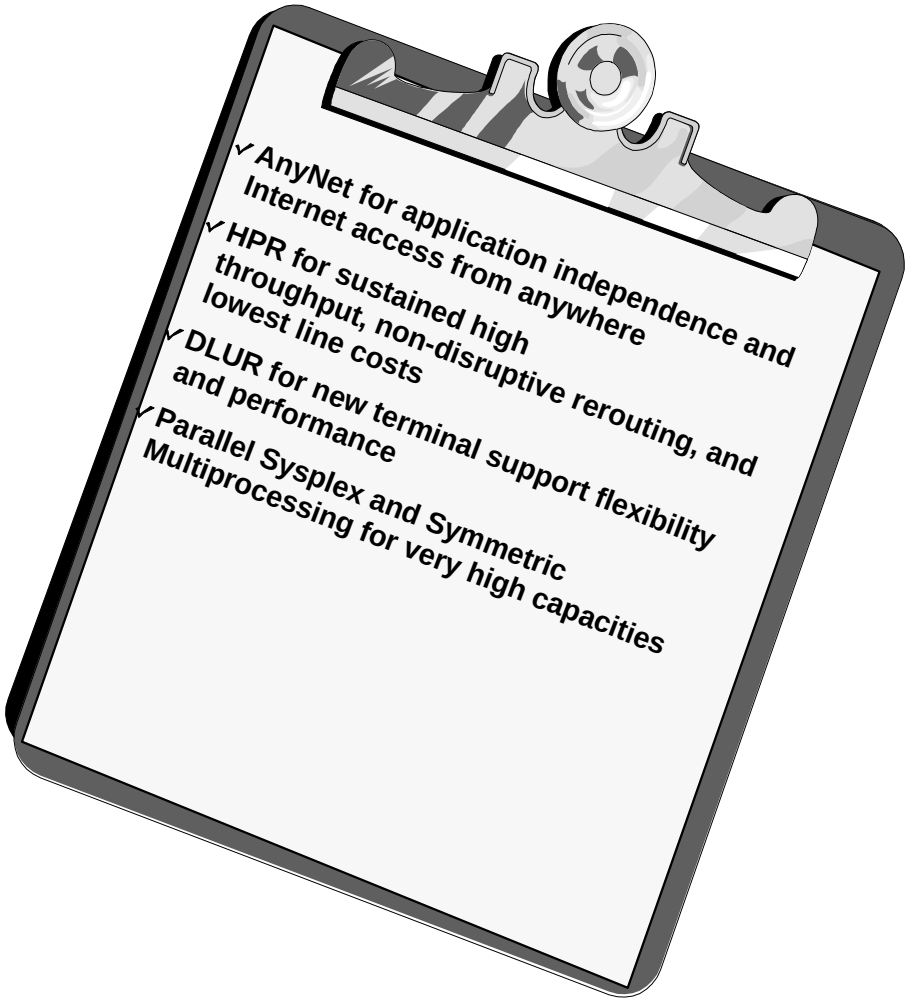
*** Not all products support all items listed here**

Unparalleled support for client and server platforms, LAN and WAN protocols, terminal types, programming interfaces, and communication equipment

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Built on Advanced Technologies

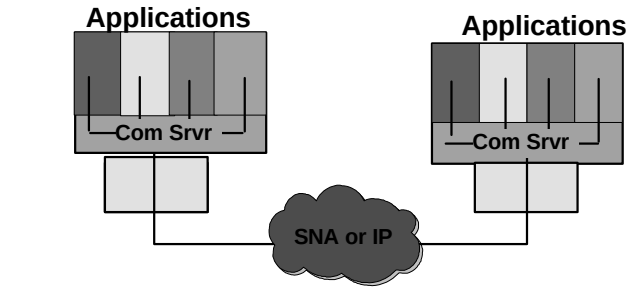


- **Allows rapid deployment of advanced business and consumer applications without disrupting existing applications**
- **Supports new users, applications, and mix of TCP/IP and SNA communications without disruptive network upgrades**
- **Provides higher reliability and availability**
- **Simplifies design, installation, and operations**

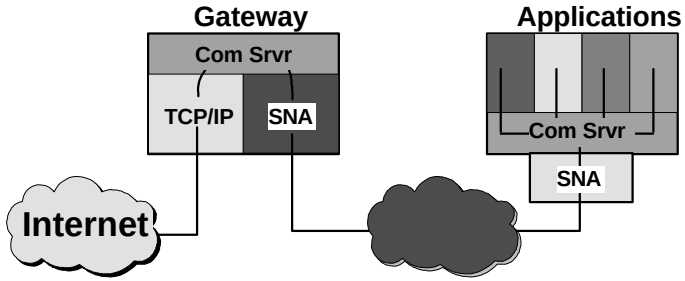
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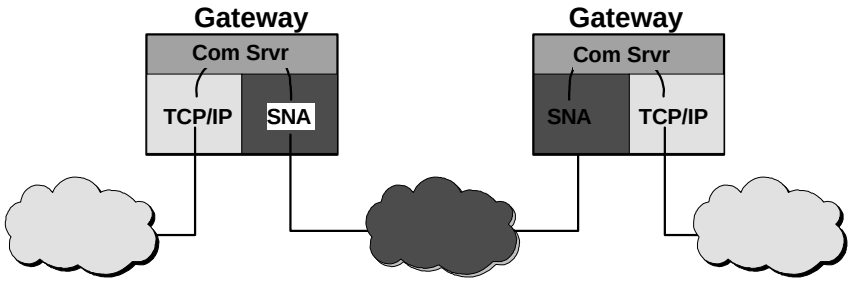
Advanced Multiprotocol Support



Supports nonnative application



Joins 2 unlike networks



Joins two like networks with unlike backbone

- **Simplifies application selection, network design, and operation**
  - **e.g. Internet access from SNA and IP**
- **Expands application scope and gives end users broader choice of applications**
- **Enhances existing router and controller networks**
- **Award-winning, standards-based, software solution**
  - **Compensates for differences in protocols**
  - **Solutions for SNA, TCP/IP (sockets), NetBIOS, and IPX**

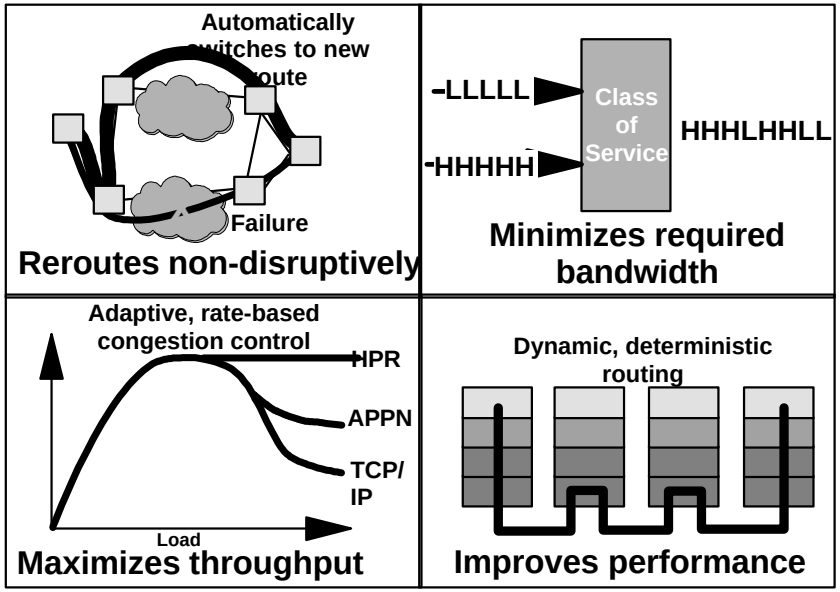




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High Performance Routing

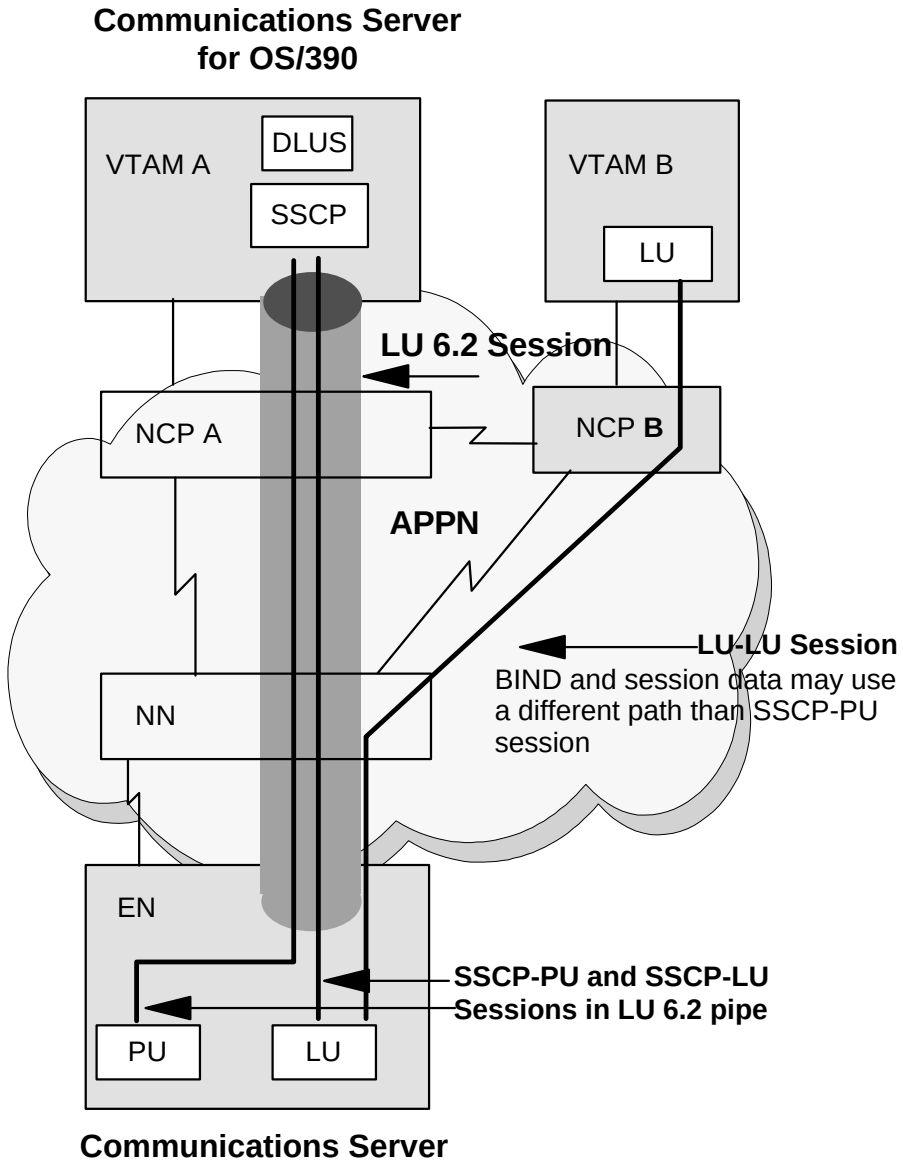


HPR is the most efficient and highest level of the protocol stacks"
Frank Dzubeck, LAN Times, 18 March 1996

- **Improves network service and saves money**
- **Enhances the best qualities of SNA and TCP/IP**
  - **Prepares SNA for high-speed, switched networking**
  - **Dynamic resource registration identifies changes automatically**
  - **Maximizes link utilization, even under load**
  - **Automatically reroutes around failures**
  - **Minimizes bandwidth and improves performance**
- **Ready for switched networks and ATM**
  - **Endorsed by Cisco, Bay Networks, 3Com**
  - **Selected for SNA over ATM by 41-vendor APPN Implementor's Workgroup (AIW)**

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Dependent LU Requester



- **Provides migration strategy for DLU from subarea to APPN**
- **DLUs can reside on nodes that are non-adjacent to the host**
- **APPN search logic used to provide the best path for LU-LU sessions**
- **Network management provided by DLUS and PUs that are not adjacent to SSCP can still be visible to host**
- **With AnyNet, DLU sessions can be established over TCP/IP**
- **Backup DLUS support if connection to primary DLUS fails**
- **Multi-subnet support allows DLUR, DLUS, and application all to be in different subnetworks**

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Communications Server Family Technology Highlights

	CS/2	CS/NT	CS/AIX	OS/400	NetWare	CS/MVS
Industry-leading SNA support:						
3270 SNA gateway	X	X	X	X	X	
APPN EN and NN function	X	X	X	X		X
High Performance routing						
intermediate routing	X	X	X	X		X
HPR connection endpoint	X	X				X
3270 support over APPN (DLUS/R)	X	X	X			X
Multiprotocol support:						
TN3270E server	X	X	X		X	
TN5250 server			X			
Sockets over SNA access node	X	X	X	X		X
APPC over TCP/IP access node	X	X	X	X		X
SNA over TCP/IP access node	X	X				X
Sockets over SNA gateway	X	X	X		X	
APPC over TCP/IP gateway	X	X	X			X
SNA over TCP/IP gateway	X	X				X
IPX over SNA gateway	X				X	
IPX over TCP/IP gateway	X					
NetBIOS over SNA gateway	X					
NetBIOS over TCP/IP gateway	X					
NetWare Directory Services integration					X	

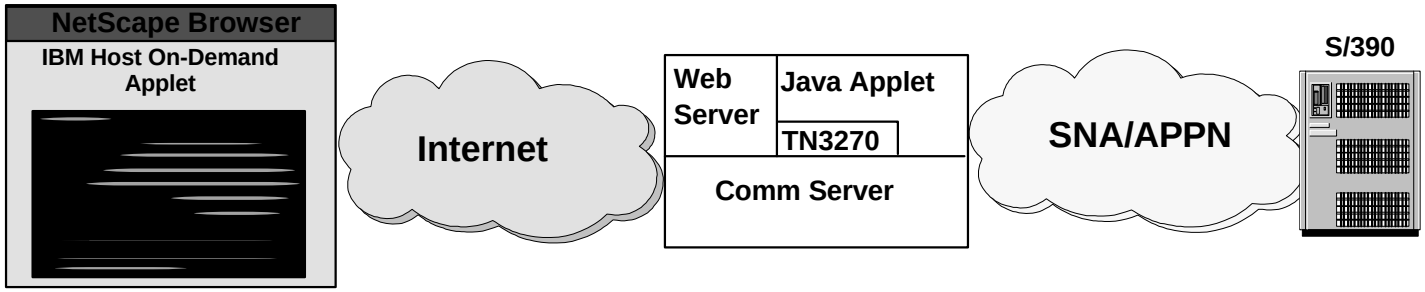
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Platform Overviews

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Host On-Demand - Internet to SNA Solution

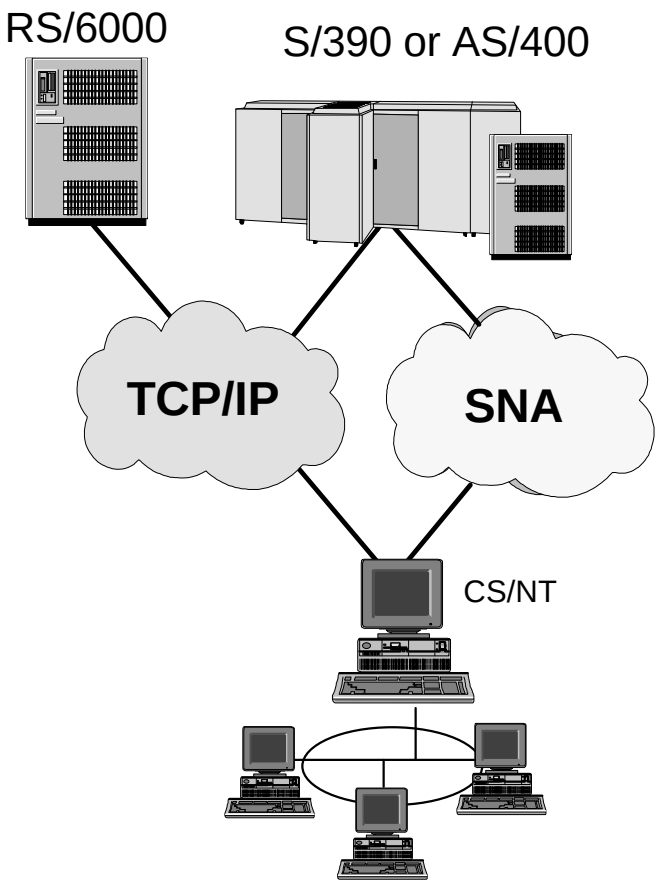


- **Provides fast and easy access to host 3270 SNA applications from intranets and Internet**
- **Java-based solution that uses TN3270 protocols**
- **Provides high-performance, low-cost solution for intranet and Web users who need occasional access to central site applications or databases**
- **Available for:**
  - CS/2 4.1, CS/AIX 4.2, NetWare for SAA V2.2, CS/NT, CS/MVS
- **http://www.raleigh.ibm.com/hex/hexprod_en.html**
- **Host On-Demand client software in Netscape Communicator Professional Edition**

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Communications Server for Windows NT

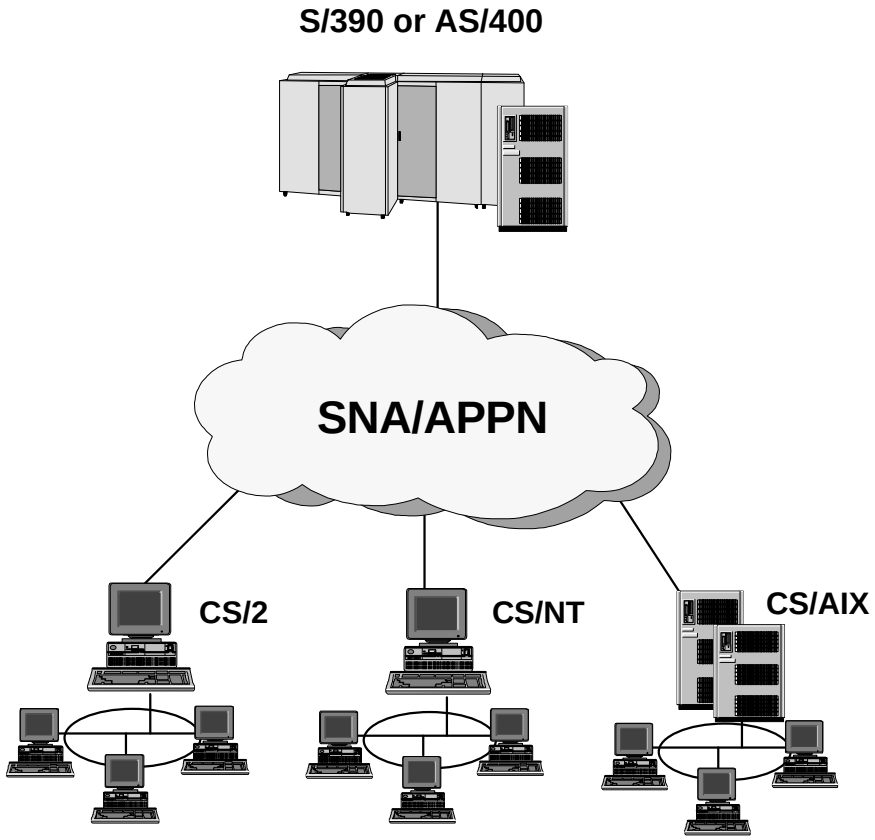


- **Industrial strength communications server**
  - Industry leading SNA, APPN, and HPR functions
  - Unparalleled reliability, performance, and availability for business applications
- **Integrated multiprotocol support**
  - Sockets over SNA and SNA over TCP/IP
  - Easy intranet/Internet deployment without application changes or new hardware
  - TN3270E Server
- **Supports wide range of clients**

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Communications Server for Windows NT SNA Function



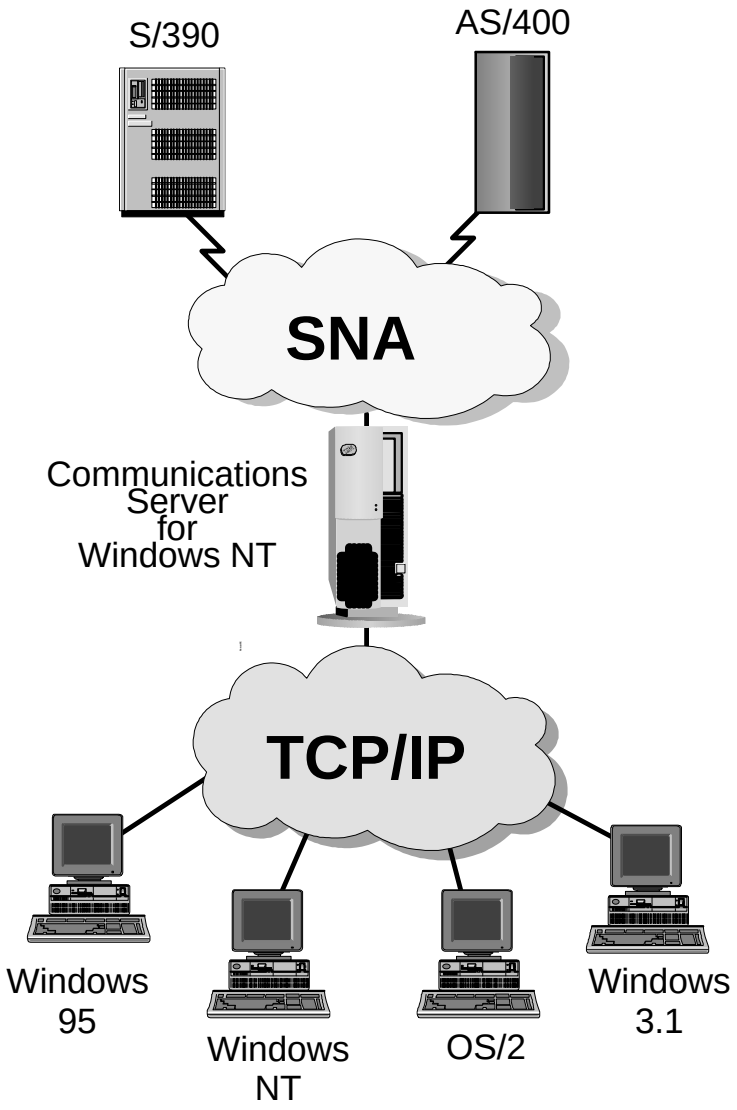
Peer Communications Server gateways for SNA clients and 3270 traffic

- **SNA Gateway**
  - Full peer to other Communications Servers
  - Route switching with other platforms
  - Discovery server
  - 3270 support over APPN with DLUR
- **APING, AFTP, APPC3270 support**
- **Connectivity**
  - SDLC, twinax, X.25, TR, Ethernet, FDDI, ATM (LAN emulation), channel
- **APIs**
  - LUA RUI, CPI-C, APPC

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Remote API Client Support

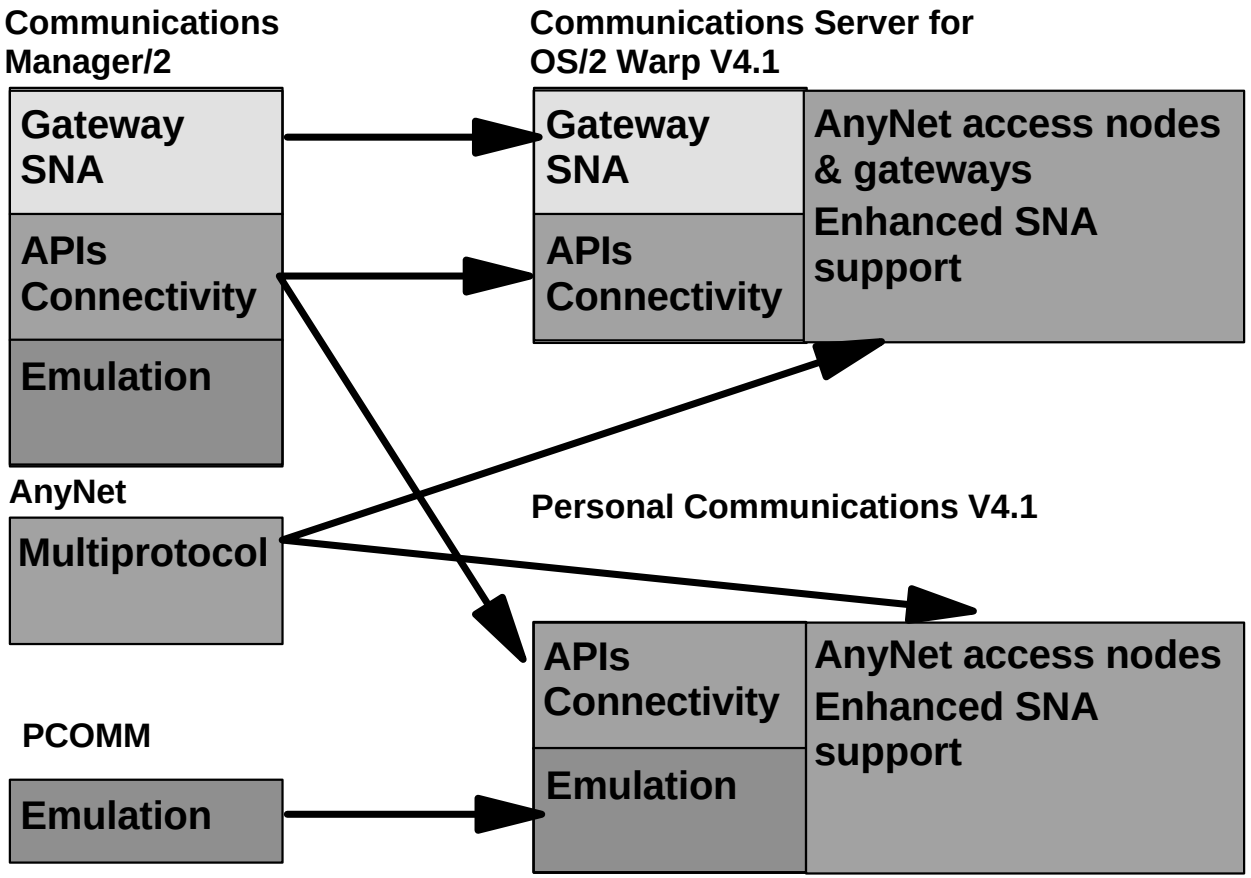


- **Allows TCP/IP attached clients to access SNA APIs without SNA protocol**
- **Supports the following clients**
  - Windows NT
  - Windows 95
  - Windows 3.1
  - OS/2
- **Clients provide API support for**
  - CPI-C APPC
  - EHNAPPC
  - LUA RUI
- **Clients shipped with server**
- **Client requires less storage and processing capability**

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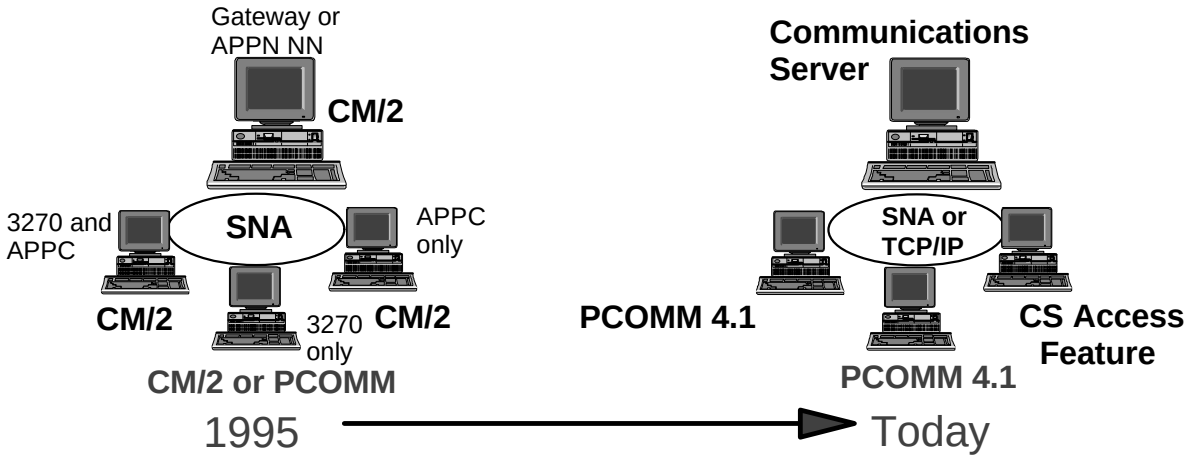
OS/2 Product Evolution



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Communications Server for OS/2 Warp V4



- **Server is multifunction gateway**
  - Much more than simple CM/2 repackage
  - One time charge; no per-seat or per-session charges
  - Continued gateway support for OS/2, DOS, Windows, Windows 95, Windows NT, Apple SNA gateway, NetWare for SAA gateway, etc.
- **OS/2 and Windows Access Features included**
  - Optionally installable; separately priced
  - OS/2: APIs, LAN and WAN connectivity, multiprotocol support
  - Windows: APPC APIs and APPC multiprotocol support
- **PCOMM clients available separately**

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CS/2 Key New Features

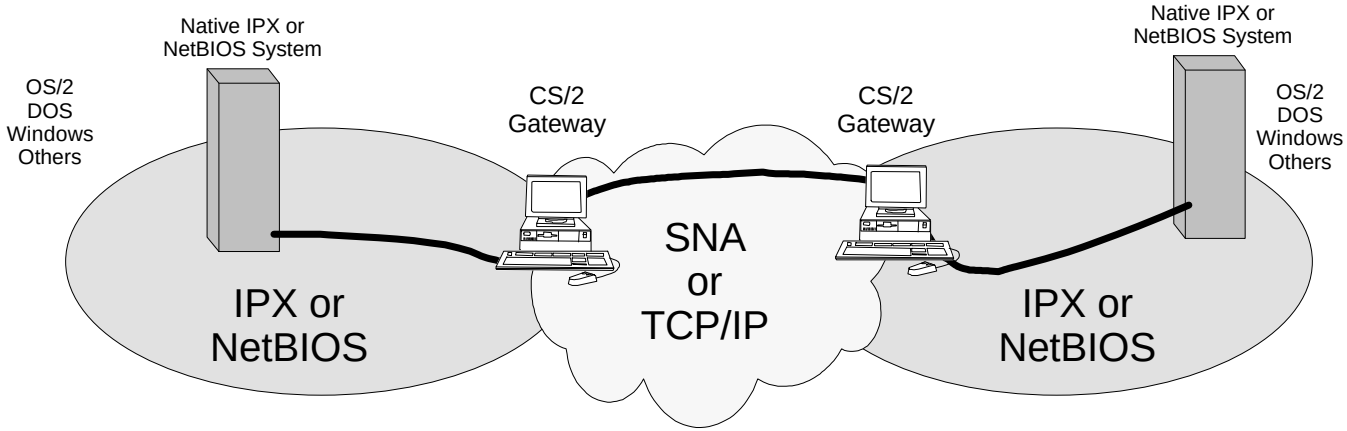
- **Integrated multiprotocol support expands application access**
  - Sockets over SNA gateway backup and load balancing
  - SNA over TCP/IP
  - IPX over SNA and TCP/IP, NetBIOS over SNA and TCP/IP
  - TN3270E server
- **New connectivity supports advanced campus workgroup gateway role**
  - Up to 20,000 sessions (honest!)
  - High-speed links up to 2.0 Mbps
  - Full-duplex communication
  - 16 SDLC lines
  - SDLC multipoint
  - ATM (LAN Emulation)
  - Open NDIS and Advanced NDIS for adapters with and without onboard DLC
  - 32-bit communication and system service APIs
  - Frame relay
  - Backup link

New in CS/2 4.1

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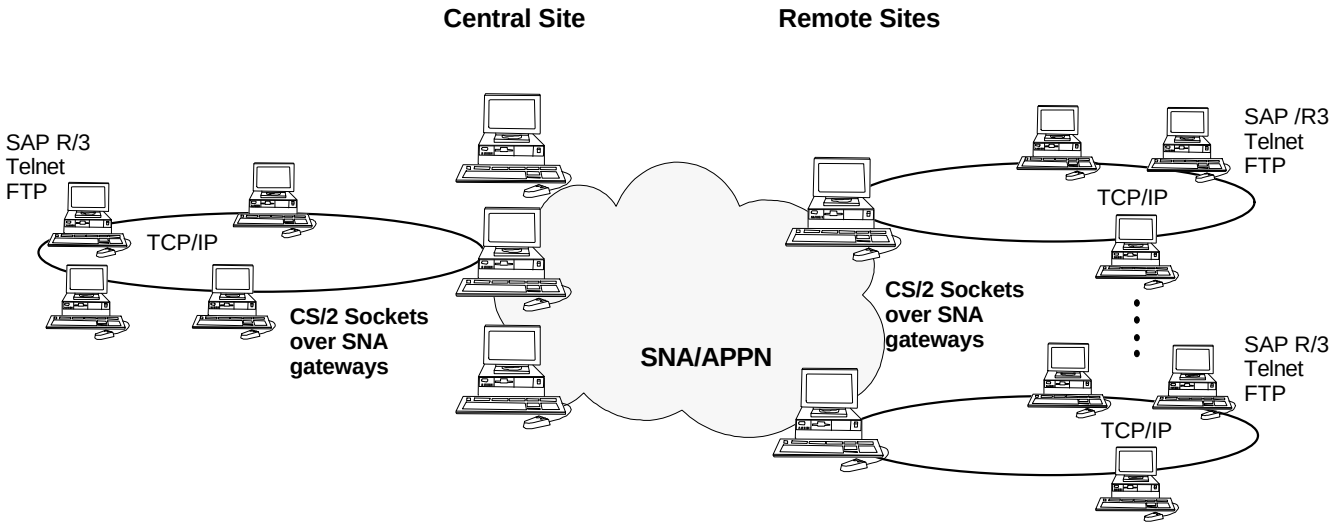
IPX/SNA, NB/SNA, IPX/IP, NB/IP Gateways



- **IPX over SNA Gateway and NetBIOS over SNA Gateway**
  - Compatible with LAN to LAN over WAN (LTLW) and 2217 Multiprotocol Concentrator
- **IPX over IP Gateway and NetBIOS over IP Gateway**
- **Protects SNA and IP backbones by filtering IPX and NetBIOS broadcasts and caching names**

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Sockets over SNA Gateway Backup and Load Balancing

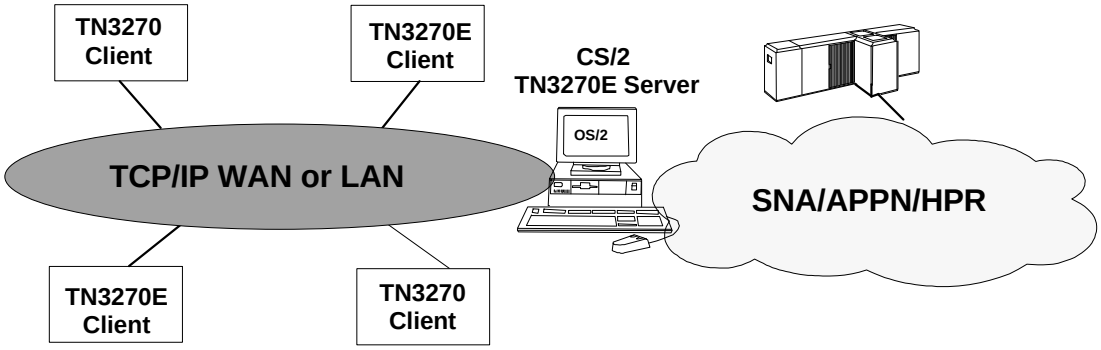


- **Remote locations can use SNA backbone to access Sockets applications**
- **Sockets applications can use existing SNA links and take advantage of SNA COS and data compression**
- **No new hardware and no application modifications**
- **Up to 2,000 connections per gateway**
- **Parallel gateways service same central site**
- **Load balancing and backup among gateways**

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TN327OE Server



- **Easy acess from IP clients to 3270 applications and print services**
  - No IP on host
  - No SNA on workstations
  - HPR-capable from gateway to host with non-disruptive sessions
- **Supports traditional TN3270, RFC1646, RFC1647**
  - LU1, LU2, and LU3 devices
  - LU name assignment
  - Print services
  - ATTN, SYSREQ keys
  - SNA response handling

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CS/2 Outperforms Microsoft in SNA Gateway Tests

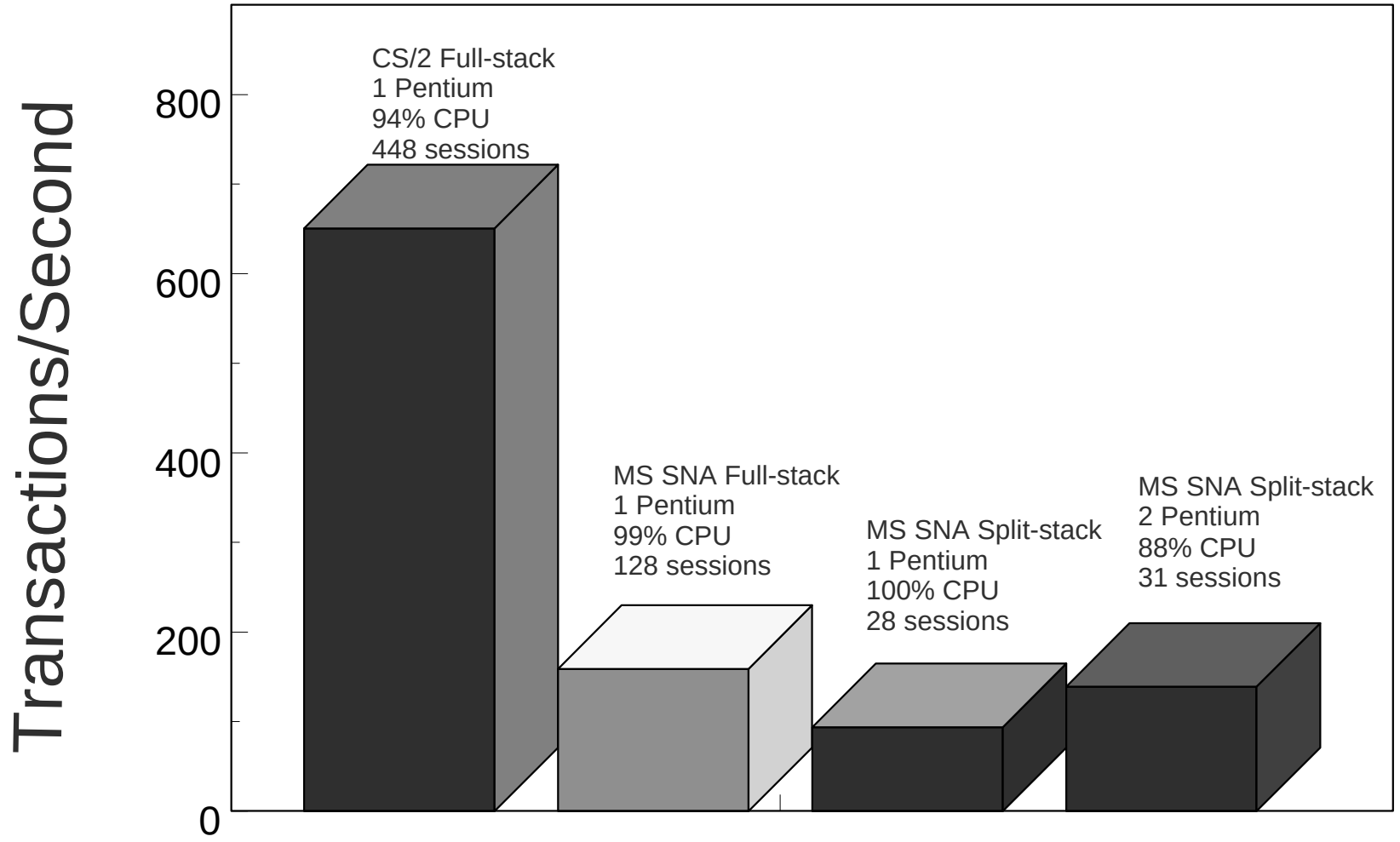
- **Head-to-head tests conducted by the Tolly Group, an independent testing firm, comparing throughput and response time of:**
  - Communications Server for OS/2 Warp Version 4.1
  - Microsoft SNA Server Version 2.11 Service Pack 1

- **SNA gateway transaction throughput and CPU utilization and response time measured for each product**

- **Test environment highlights:**
  - SNA gateways tested on 486 and multiprocessor Pentium platforms
  - 448 LU sessions on local LAN
  - 1,400 byte RU transmitted from mainframe simulator in response to a carriage return from 3270 emulator

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CS/2 Throughput

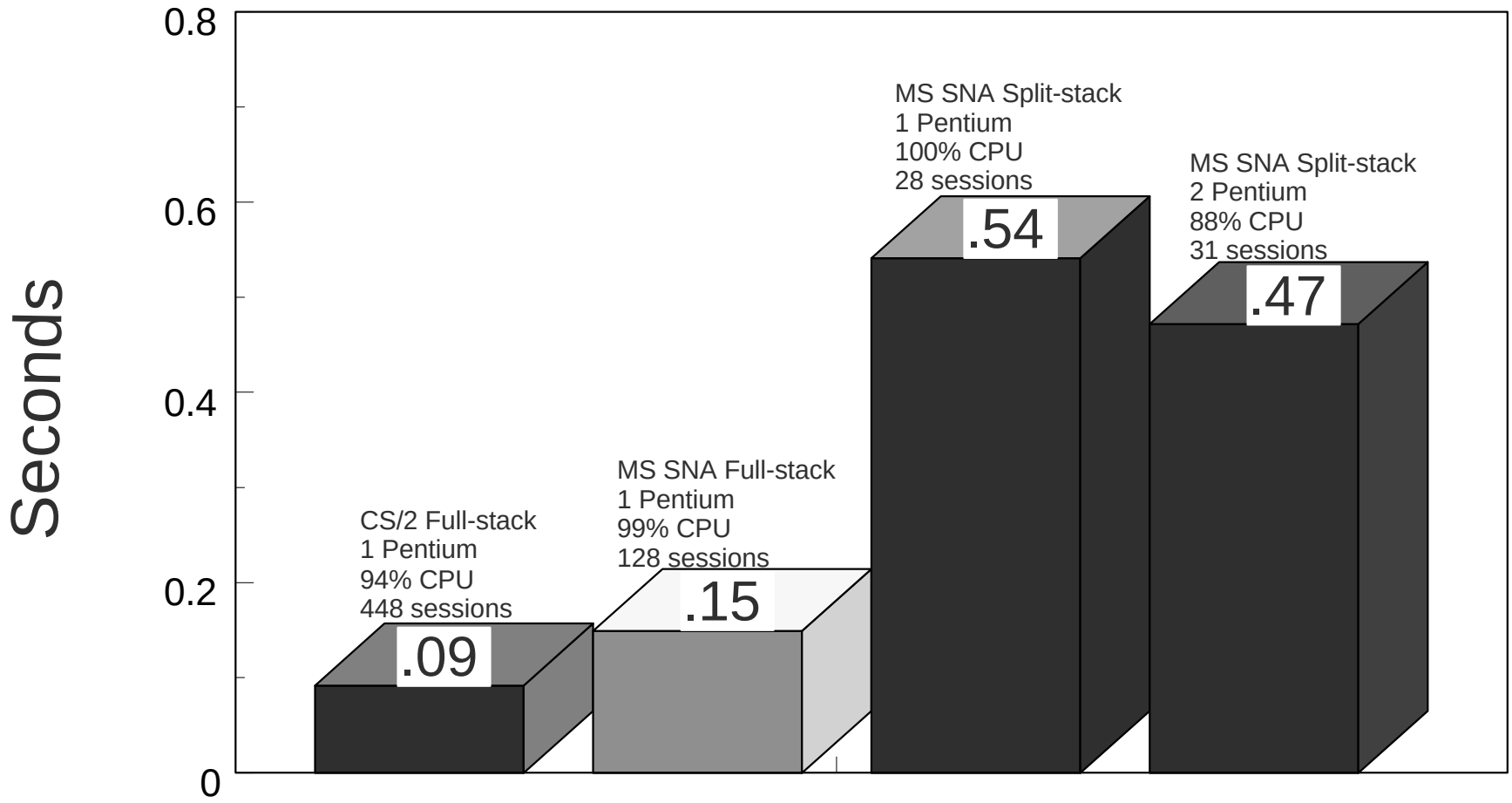


Note: High throughput and lower CPU utilisation is better, i.e. higher bars are better
Source: The Tolly Group, September 1996

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CS/2 Response Time



Note: Lower numbers are better.
Source: The Tolly Group, September 1996

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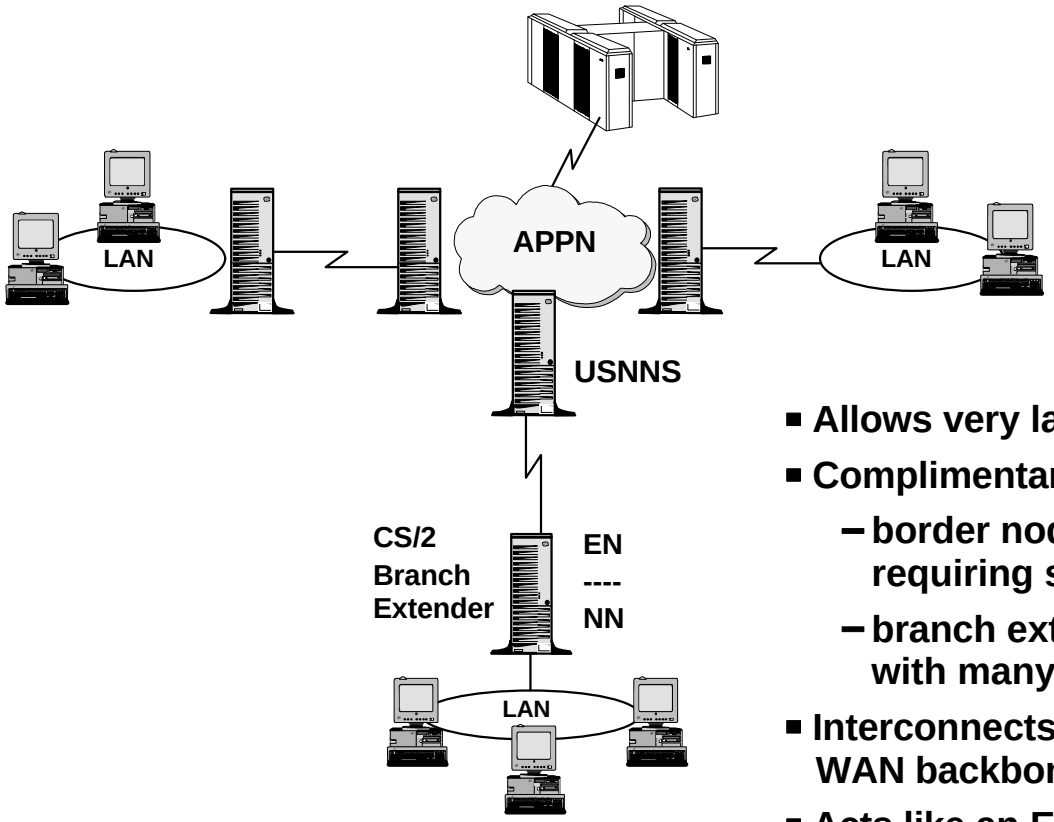
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CS/2 Clearly More Efficient

- **Communications Server delivers better throughput with lower CPU utilization than Microsoft SNA Server**
  - Communications Server throughput running on a 486 platform is higher than SNA Server on all 486, single-, and dual-Pentium configurations.
  - Communications Server single-Pentium processor configuration has twice the throughput of SNA Server dual-Pentium processor configuration
- **Communications Server delivers lower response time under all load conditions than SNA Server**
  - Communications Server on a singe-Pentium processor has lower response time than all configurations of SNA Server
  - Communications Server with single-Pentium processor preserves sub 100 ms response times at more than double the transaction load of SNA Server running quad-Pentium processors
- **Works well for both light loads and heavy loads**
  - SNA Server does not scale as well for heavy loads as Communications Server

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CS/2 Branch Extender for Large APPN Networks - Direction



- **Allows very large APPN networks**
- **Complimentary to border node:**
  - **border node for large internets requiring security, accounting**
  - **branch extender for large intranets with many branches**
- **Interconnects branch offices to APPN WAN backbone**
- **Acts like an EN to APPN backbone**
- **Acts like a NN server to LAN workstations**
- **Hides branch topology from WAN reducing WAN traffic**

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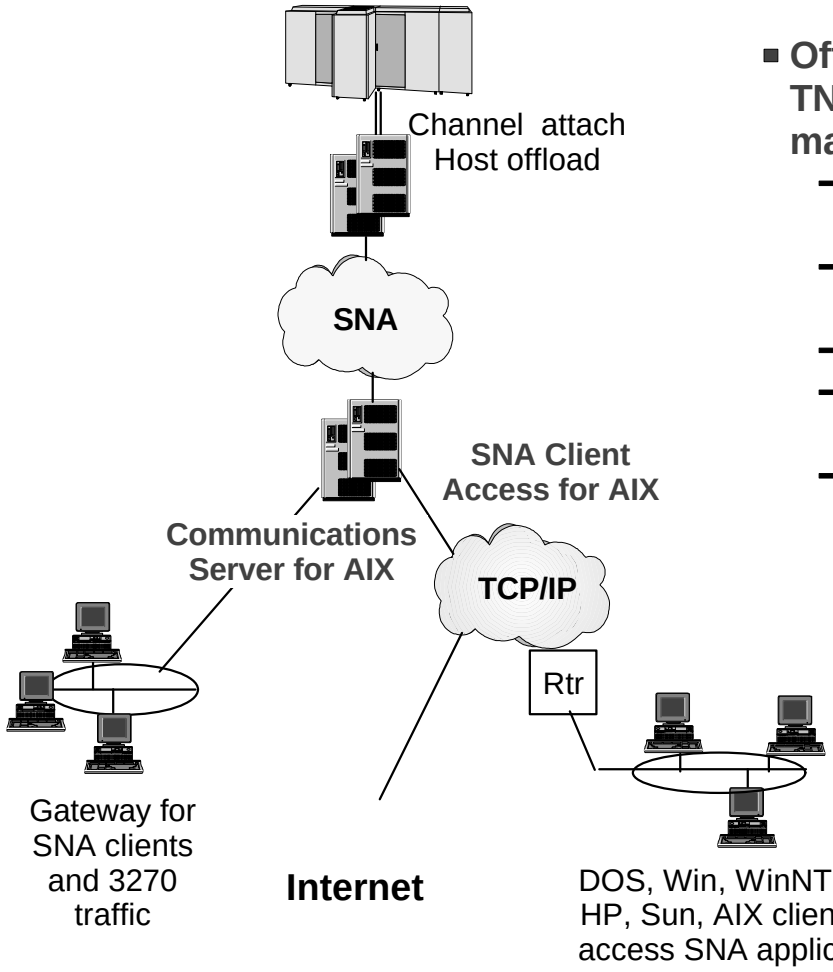
What's New with Communications Server for AIX V4

- **Packaging**
  - Enhanced/simplified Packaging
  - Expanded languages supported
  - Common installation with other IBM Software Servers for AIX
- **Multiprotocol support**
  - AnyNet APPC over TCP/IP gateway
  - AnyNet Sockets over SNA gateway
- **SNA/APPN enhancements**
  - High Performance Routing (HPR) intermediate node support
  - Dependent LU requester (DLUR)
  - Non-Blocking CPI-C APIs
- **Performance enhancements**
  - Support of V.35 links for SDLC increases throughput to 100 KBytes/sec
  - Supports up to 50,000 concurrent sessions
- **Sinlge Session IBM 3270 Host Connection (HCON)**

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Communications Server for AIX Version 4 and SNA Client Access for AIX

- **Full-function communications server**
  - 3270 and SNA gateway
  - APPN(including network node) and subareas
  - Internet access for SNA users
  - TCP/IP applications over SNA networks and vice-versa
  - Very high capacity, reliability and manageability
  - SMP efficient
  - Channel connectivity



- **Offload TN3270 and TN5250 from mainframe**
  - TN3270, TN3270E, TN5250 emulators
  - APPC APIs, 3770 RJE, and LU0
  - File transfer
  - Large numbers of clients
  - load balancing across multiple servers

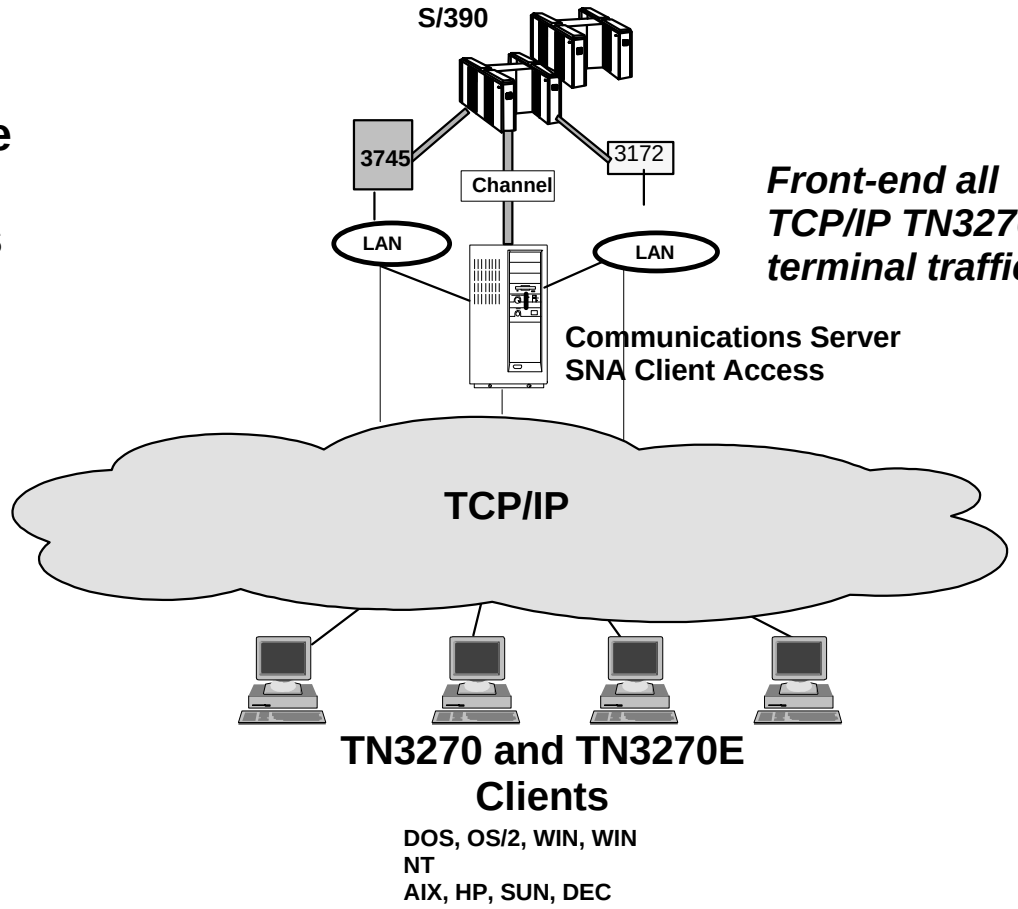
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SNA Client Access for AIX

- ►**Save mainframe cycles**
- ►**Optimize mainframe for other SNA and TCP/IP applications**
- ►**Client support for:**
  - **TN3270E**
  - **TN3270**
  - **TN5250**
  - **APPC APIs**
  - **3770 RJE**
  - **LU0**
- ►**Host print support on local printer**

TN3270 Server Offload

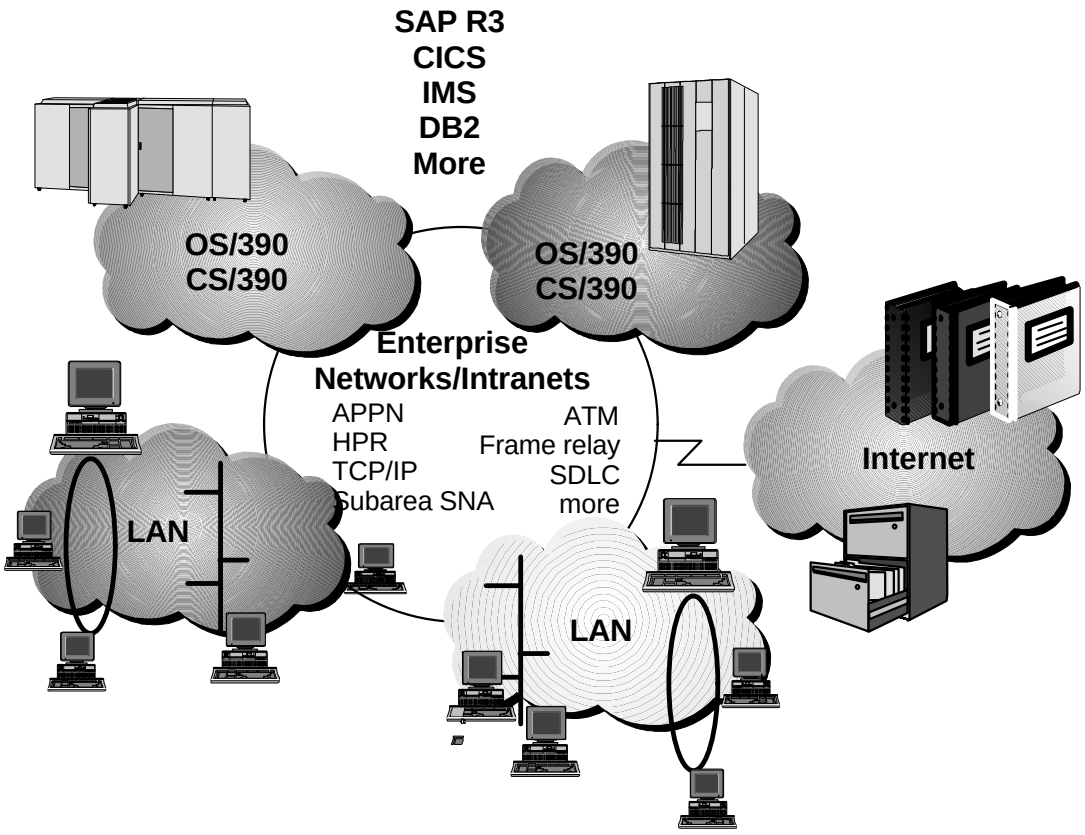


Front-end all TCP/IP TN3270 terminal traffic

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Communications Server for OS/390 and MVS/ESA

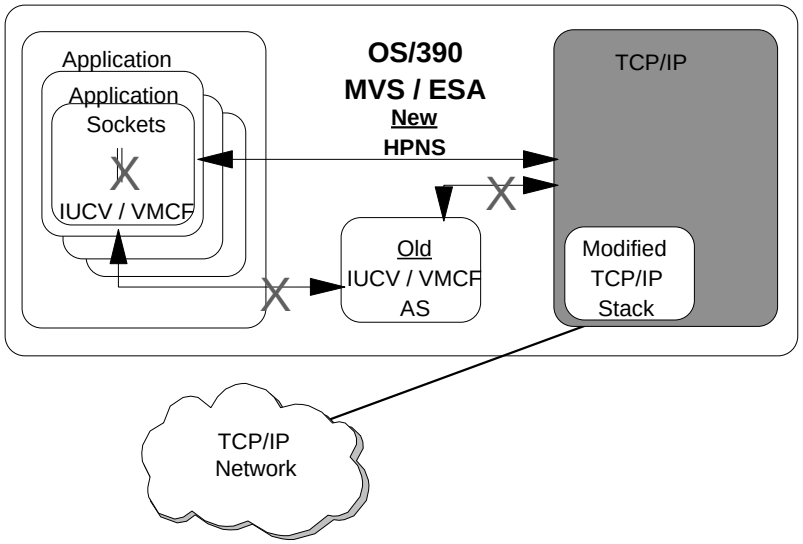


- Enterprise class multiprotocol communications server
- Built upon proven strengths of IBM networking support for S/390
  - VTAM V4R4
    - Ultra high capacity and availability through support for Parallel Sysplex
    - High speed networking with native ATM
    - Sockets over SNA enables host web server on SNA/APPN intranet
    - SNA over TCP/IP
  - TCP/IP V3R2
    - High Performance Native Sockets
    - Open Transaction Manager Access (OTMA)
    - Router Internet Protocol (RIP) V2
- Comprehensive management support

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Enhanced TCP/IP Function



■ High Performance Native Sockets (HPNS)

- Customer applications can run unchanged
- Improved performance, both path length and CPU time
- New data path for familiar APIs (Base, CICS, IMS)
- Improved cross memory communication
- Enhanced availability and serviceability

■ RIP V2 - Variable Subnetting

- Permits more efficient use of IP addresses
- Allows addressing schemes to be tailored to meet enterprise requirements
- Greater interoperability with network routers
- Improves availability by extending the capabilities of Virtual IP Addressing

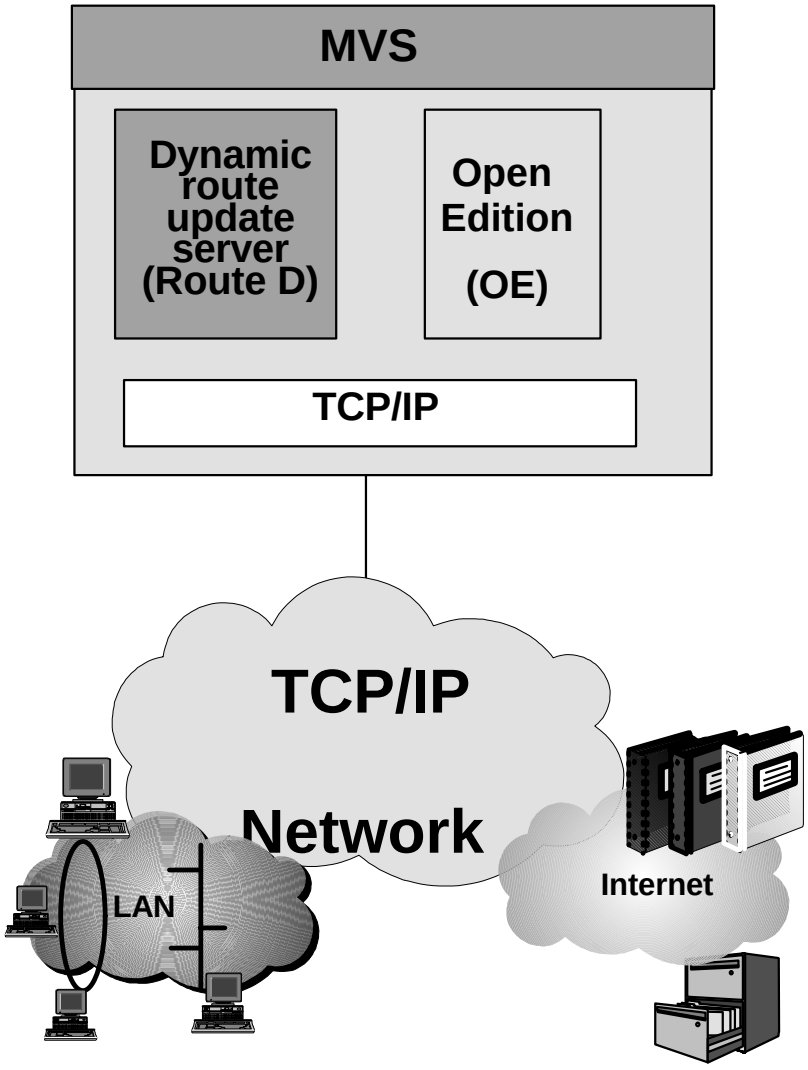
■ Open Transaction Manager Access(OTMA)

- Allows any TCP/IP client to access IMS without modification to IMS applications
- Supports RACF and MSC transactions
- Improves usability by sending output from IMS through IMS message queue
- Supports Web clients
- Improves system integrity through security enhancements

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Communications Server for OS/390 and MVS/ESA...



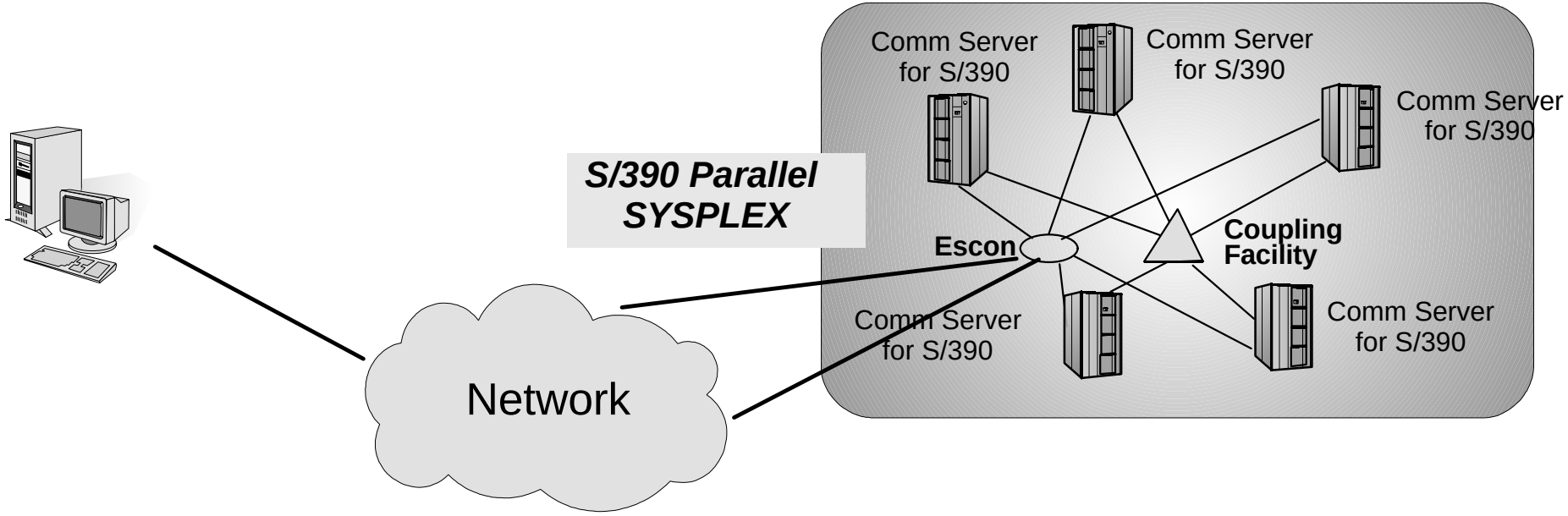
TCP/IP V3R3 (Preview OS/390 R4)

- **New TCP/IP stack for improved performance for OS/390 OpenEdition**
  - Note: To be available for non-OE applications in a future release of CS OS/390
- **Exploitation of VTAM DLC's for improved RAS and performance**
- **Serviceability and availability enhanced**
  - Uses MVS CTRACE
  - More than 256 bytes per trace record
  - Dynamic stack reconfiguration for new stack
- **ATM network management**
- **SNMP enhancements for more robust security**
- **Both 3.2 and 3.3 integrated in R4**
- **Early availability as feature for OS/390 R3**

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Enhanced VTAM Functions

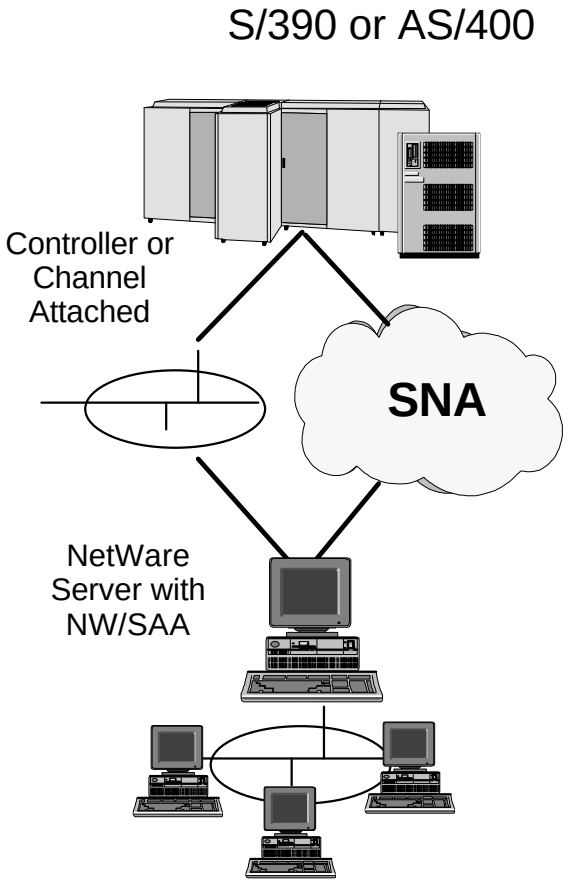


- Dramatic new availability support for the Parallel Sysplex minimizes impacts to end-users from application and processor failures
- High Performance Routing (HPR) now serves a broader range of network configurations
- Improved usability and availability results from providing a single systems image to TSO users of the Parallel Sysplex
- Applications can take advantage of high speed, Asynchronous Transfer Mode (ATM) connections in the network without application change
- New High Performance Data Transfer (HPDT) facilities offer improved throughput for APPC applications
- An array of security, servicability, and usability improvements are included

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NetWare for SAA 2.2

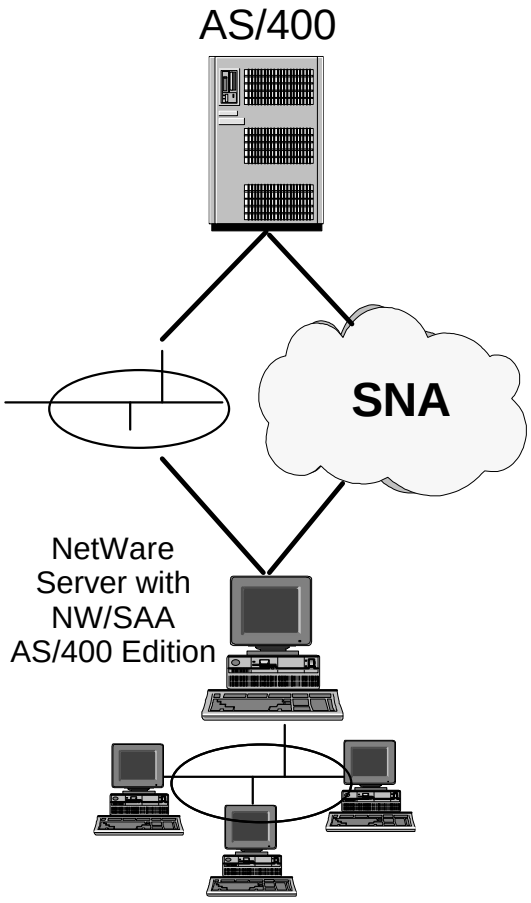


- **Comprehensive access to IBM S/390 and AS/400 applications**
- **Easy administration and management**
  - User based licensing
- **S/390 and AS/400 print solution**
- **Extensive suite of value-added applications**
- **Performance and reliability features for S/390 environment**
  - Load balancing
  - Hot standby
- **Full Integration with NetWare Directory Services**

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Netware for SAA -- AS/400 Edition



- Designed specifically for AS/400 users
  - Extension of NetWare for SAA 2.0
  - Only "AS/400-specific" NetWare SNA gateway product
  - User-based licensing
  - Certified to run on Integrated PC Server
- Easy to use, centralized administrative and management tools
  - Windows-based
  - Interoperate with NetWare and Managewise administrative and management tools
- Exploits NetWare Directory Services
  - Single NetWare security login
- AS/400 print solutions through HostPrint/400

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Solutions for

Network Integration

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What kind of customer problems are solved with multiprotocol solutions?

My company has merged with another company. We both use different protocols.

How can we streamline communications?

Our SNA clients want to build an intranet and also access the Internet

Can we do this?

Users in our branches want to use Lotus Notes to communicate with each other.

Can we do this with an SNA/APPN central site?

We'd like to consolidate to TCP/IP to simplify management, but we have a huge investment in our host SNA database applications.

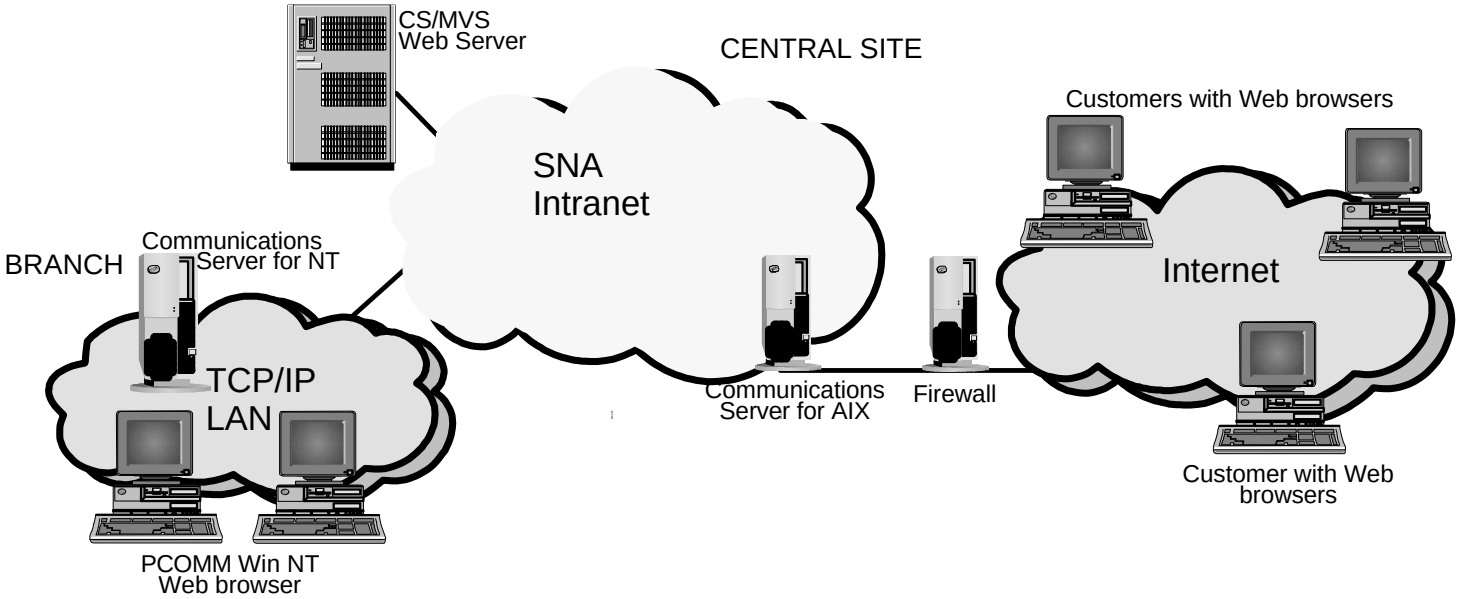
Can we consolidate but still access our databases?

All our retail stores need to access our central site financial systems. We'd like to use SAP R/3 but

Can it be deployed in our SNA backbone environment?

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Transportation Industry - Internet/ intranet access using SNA

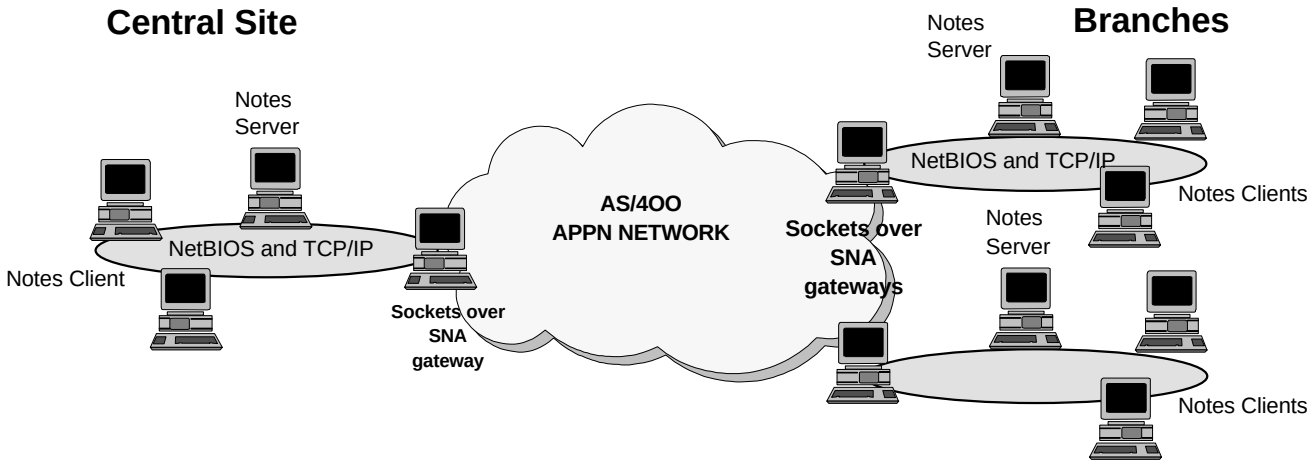


- **Environment:** Documentation distributed on paper, Customers call service reps to make reservations, Reps at branches use PCOMM and CS/2 to access central site S/390 reservations systems
- **Requirement:** Efficiently distribute documentation to reps
  Reduce transaction time
  Non-disruptive solution
- **Solution:** Use CS/MVS as Web server. Branch CS/NTs enable intranet access. New central site Comm Server allows customers to access pricing information
- **Benefits:** No major networking changes, productivity savings from intranet document distribution
- **Brochure:** G325-5102-01: Use your SNA or APPN network for Internet or intranet access
- **URL:** http://www.raleigh.ibm.com/any/anynew.html

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Zahid Tractor Implements Lotus Notes over APPN



Company: Zahid Tractors and Heavy Machinery Company, Ltd. in Saudi Arabia

Environment: Enterprise wide AS/400 APPN network

Requirement: Replication between Lotus Notes servers between branches using existing leased line SNA network with no impact to existing 5250 traffic

Solution: Branch LAN interconnection using Sockets over SNA gateways in Communications Server for OS/2 Warp #BATCH class of service used for Notes traffic so 5250 traffic is not impacted

Benefits: Freedom to use TCP/IP-based Internet applications while benefitting from SNA/APPN bandwidth utilization, traffic prioritization, etc.
No need to upgrade or disrupt existing network

Application brief: G325-3648

URL: http://www.raleigh. ibm.com/cm2/cm2test3.html
http://www.software.ibm.com/is/sw-servers/communications/cmssuc03.html

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Customer Quotes

"By simply deploying a few OS/2 gateways with Sockets over SNA multiprotocol function, we Internet enabled our whole SNA community."

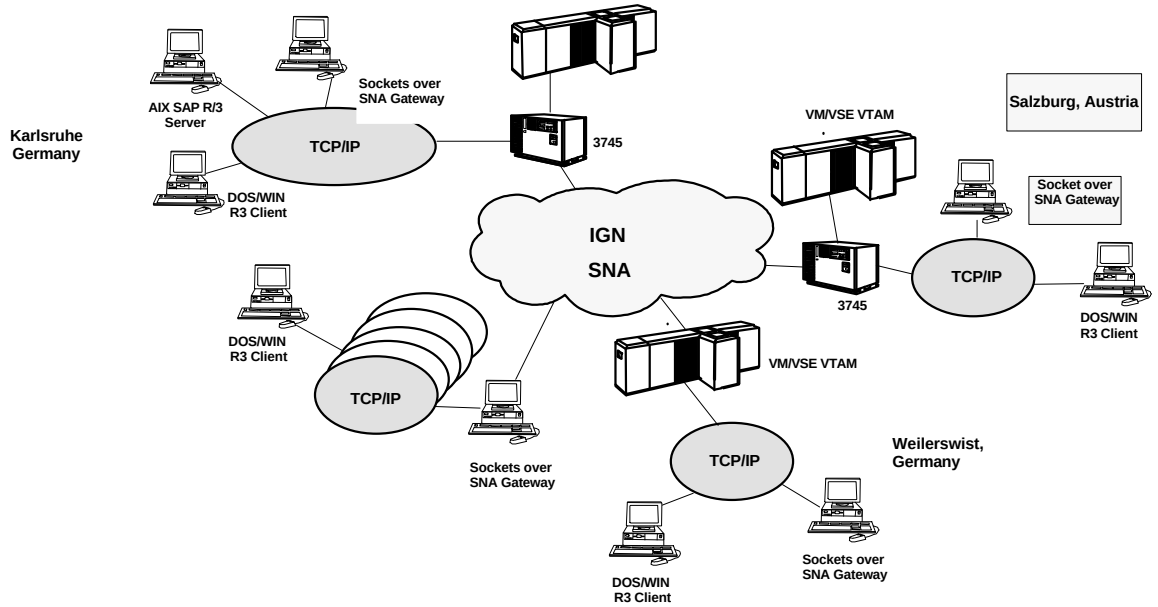
Hussein Tarhini, Technical Support Manager
Zahid Tractors

"I am particularly pleased that IBM can add multiprotocol function to our SNA network in such a non-disruptive manner. We were able to implement the Sockets over SNA gateway software solution within normal business hours without any interruptions to our user community."

Graham Ferguson, Technology Manager
Zahid Tractors and Heavy Machinery

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Filiadata: SAP R/3 over SNA



Company:	Filiadata, computer service center of Drogeriemarket in Germany
Environment:	IP-based operations in various locations in Austria, Germany, and Hungary
Requirement:	Enable access to SAP R/3 server in Karlsruhe from SAP R/3 clients in numerous remote IP offices
Solution:	Paired Sockets over SNA Gateways (available in Communications Server for OS/2 Warp) to connect remote store over IBM Global Network to SAP R/3 server site
	Clients on IP LANs can access SAP R/3 server over IGN
Benefits:	Traffic prioritization for SAP R/3
Brochures:	G325-3624 application brief, G325-3640 SAP R/3 over SNA solutions
URLS:	http://www.software.ibm.com/is/sw-servers/communications/cmssuc01.html http://www.software.ibm.com/is/sw-servers/communications/sna-spec.html

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Customer Quotes

"IBM's solution gave us the ability we needed to make the application decisions independently from existing network protocols so we could install SAP R/3."

Mr. Mueller, Network Administrator
Filiadata

"We are very satisfied with the response time and throughput of running SAP R/3 over SNA. Users at our store locations are taking advantage of the ability to use SNA's class of service (COS) for TCP/IP traffic prioritization."

Mr. Roman Melcher, Department Manager, Production Systems
Filiadata

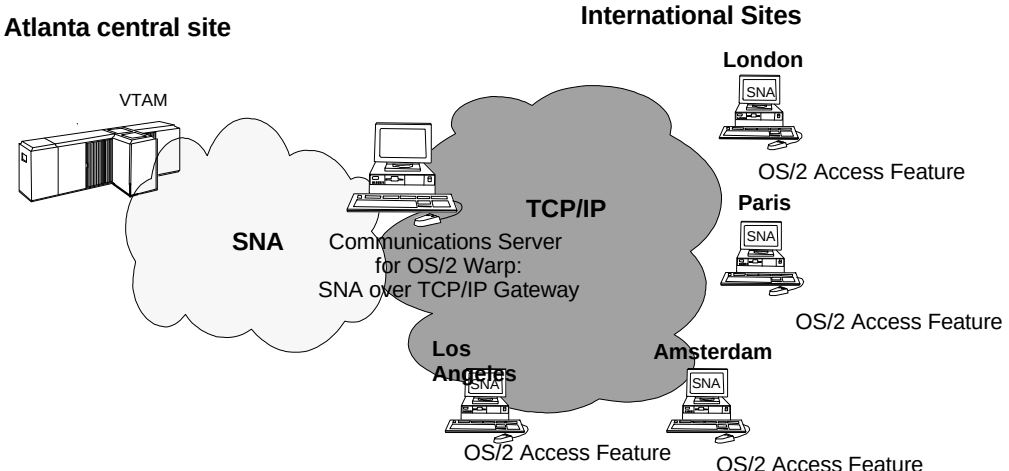
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Additional capabilities with LAN internetworking over SNA/APPN/HPR

- **Expand business solutions by adding new applications, unconstrained by network protocol**
- **Users in remote branch offices using any vendor's client can communicate with a similar application on a different network**
- **Preserve and leverage your investment in networking skills, management processes, and operating procedures**
- **Branch office users on IPX, NetBIOS, and TCP/IP LANs can take advantage of the features of SNA/APPN/HPR networks such as:**
  - cost-effective bandwidth utilization
  - traffic prioritization
  - predictable response times
  - data compression
- **SNA/APPN/HPR backbone fully protected as LAN broadcasts are filtered**
- **no need to rewrite applications**
- **no need to purchase new hardware**
- **no need to add communications lines**

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Turner Broadcasting System: SNA over TCP/IP



Company:	Major supplier of news and entertainment products worldwide
Environment:	SNA central site in Atlanta TCP/IP international locations
Requirements:	Reduce costs by eliminating parallel SNA lines to remote sites Keep SNA-based shipping and inventory application accessible to end-users
Solution:	Communications Server for OS/2 Warp at central site OS/2 Access Features on end-user workstations
Benefits:	Reduced line costs Easier management No modification to application
Application Brief:	G325-3585
URL:	http://www.software.ibm.com/is/sw-servers/communications/cmssuc02.html

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Customer Quotes

"With Communications Server, our existing SNA application remained accessible to end users over our IP router network, with no modification to the application. Routing traffic, rather than bridging it, resulted in easier management and more control. And our line costs are significantly reduced as the result of our network consolidation."

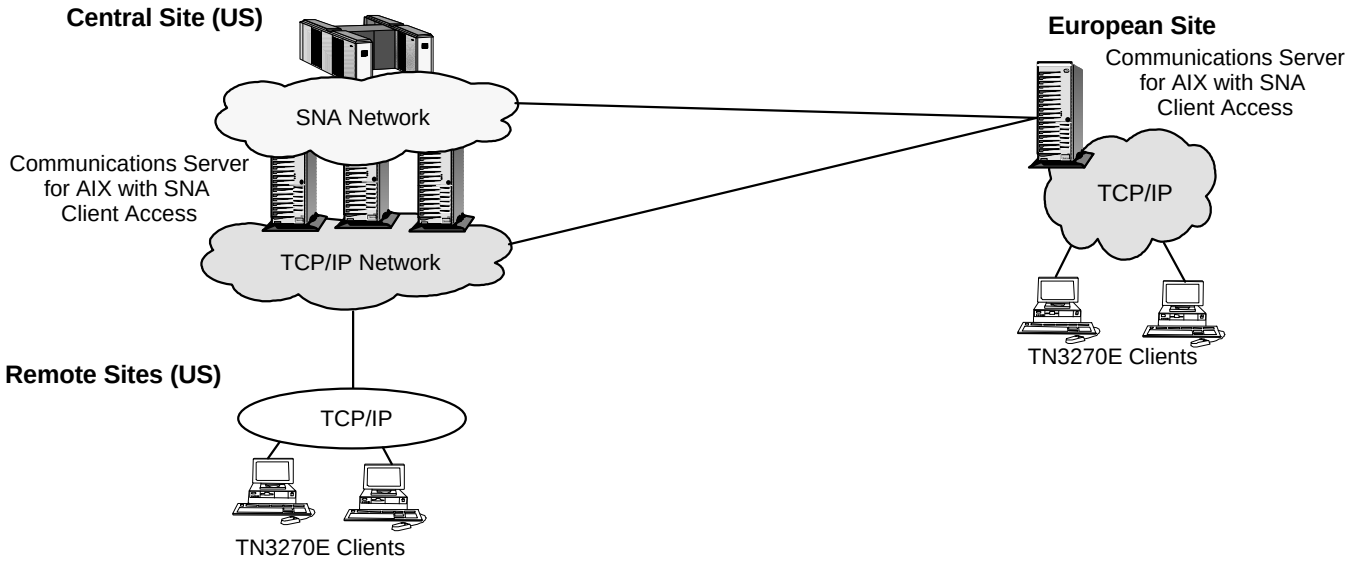
Juan Miqueli, Technical Specialist
Turner Broadcasting System

"As part of our network consolidation to TCP/IP, we needed to run our SNA-based international shipping and inventory system over TCP/IP. This system is used between TCP/IP locations in international cities including London, Amsterdam, Paris, and Los Angeles, to our VTAM mainframe in Atlanta. The multiprotocol function in Communications Server for OS/2 Warp gave us the ability to run our SNA application over TCP/IP."

Dan Chura, Manager of Legacy Systems
Turner Broadcasting System

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TN3270E - Manufacturing Industry



Company: Automobile manufacturer

Environment: US SNA-based central site. Multiple TCP/IP based US and European sites

Requirement: Support 30,000 TN3270E users who need access to central site SNA applications and data. Provide scalable solution, load balancing, and TN3270E at every user workstation.

Solution: TN3270E server (SNA Client Access) processing distributed among 4 RS/6000s. PCOMM on workstations provides TN3270E.

Benefits: High availability, fault resiliency, painless scalability

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Additional capabilities of TN3270E server solution

- **Give TCP/IP users easy access to mainframe S/390 or OS/400 SNA applications**
- **Maximum application performance as more of the central site's server capacity can be used for application and data processing rather than communications processing**
- **Scalability: as more users are added, the capacity can be incrementally increased by adding new servers**

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Customer Quotes

"We can enjoy all the benefits of a single SNA APPN backbone and feel that we can accommodate major protocols, such as TCP/IP, NetBIOS, and IPX, if we need them."

George Sarkis, Data and Communications Manager
Bank al Jazira

"The performance was more than acceptable. We couldn't detect any difference between the standalone network that they were using and AnyNet in the middle sending APPC data across TCP/IP. Our users didn't even know that AnyNet was running. So, the transparency was more important than anything. They didn't want to have to go through a lot of changes to make their applications work. Since they didn't have to, they were very happy."

Charles Hights, Senior Systems Analyst
Pacific Bell
Software Quarterly, Volume 3 - Number 1

"We see HPR and AnyNet as a way to easily converge multiprotocol traffic onto the APPN backbone we are currently building."

David Mayhew
Royal Bank of Canada

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Customer Quotes

"IBM's SNA Server for AIX worked flawlessly; and provides smooth, seamless communication between our APPN network and the external TCP/IP network."

Kazim Syne
Senior Manager of Technology Services
Royal Bank of Trinidad and Tobago

"The advantage of this client/server network is that it facilitates easy access to diverse applications and data from a variety of locations and networks, all from the workstation."

Kazim Syne
Senior Manager of Technology Services
Royal Bank of Trinidad and Tobago

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Communication Servers = Your Decision

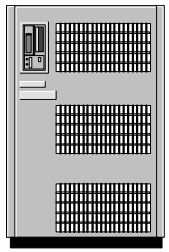
Communications Server for OS/390



Communications Server for AIX V4

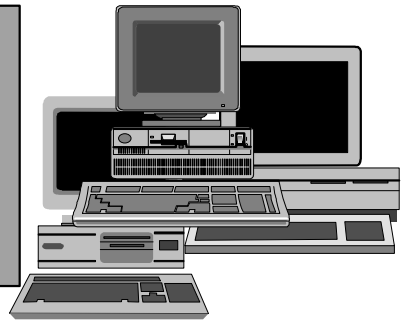
AIX Client Access

AIX Appl Access



Communications Server for OS/2 Warp V4

OS/2 and Windows Access Features



Communcations Server for NT

NetWare for SAA V2

NetWare for SAA: AS/400 Edition

- **Solution for network computing**
  - Global, heterogeneous networks
  - Diverse applications and networks
  - Comprehensive, simplified approach
- **Provides superior business flexibility**
  - Choose applications, networks, and platforms
  - Save time, money, and resources
  - Preserve and enhance investments
- **Positions networks for the future**
  - Consistent, compatible growth path
  - Bridge past, current, and emerging technologies

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For more information

URL	Content
http://www.networking.ibm.com/ecf/ecfover/html	IBM Enterprise Communications Family
http://www.networking.ibm.com/hex/hexprod_en.html	Host On-Demand
http://www.software.ibm.com/is/sw-servers/communications	IBM Software Servers
http://www.networking.ibm.com/csn/csnprod.html	Communications Server for Windows NT
http://www.networking.ibm.com/cm2/cm2prod.html	Communications Server for OS/2 Warp
http://www.networking.ibm.com/any/anyover/html	AnyNet
http://www.networking.ibm.com/asf/asfprod.html	Communications Server for AIX
http://www.networking.ibm.com/cs3/cs3over.html	Communications Server for MVS/ESA
http://www.s390.ibm.com	System 390 (CS/390)
http://www.networking.ibm.com/vta/vtaprod.html	VTAM MVS/ESA
http://www.networking.ibm.com/tcm/tcmprod.html	TCP/IP for MVS
http://www.as400.ibm.com	AS/400
http://www.networking.ibm.com/pcf/pcfprod.html	Personal Communications
http://host.novell.com/as400/	NetWare for SAA AS/400 Edition
http://iamg.novell.com/iamg/products/saa/nwsaatoc.htm	Netware for SAA 2
http://www.ics.networking.ibm.com/kit	Internet Connection for Windows

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Enterprise Communications Family

	IBM Pub Number
Cross Platform	
– Enterprise Communications Bill of Forms	GBOF-7018-00
– Enterprise Communications Family Folder	G325-5220-00
– Communications Server Family Brochure	G325-5207-01
– Communications Server Spec Sheet	G325-3565-01
– Use your SNA network for Internet access	G325-5102-01
– Integrate SAP R/3 into your SNA or APPN network	G325-3650-00
OS/390	
– Communications Server for OS/390	G325-5206-00
– TCP/IP for MVS V3R2	G325-3433-02
– VTAM V4R3 for MVS/ESA	G325-6574-00
AIX	
– Communications Server for AIX	G325-3572-02
– SNA Client Access for AIX	G325-3448-01
– SNA Application Access for AIX	G325-3447-01
– Royal Bank of Trinidad and Tobago branches out	G325-3655-00
OS/2	
– Communications Server for OS/2 Warp	G325-3596-01
– Communications Server for OS/2 Warp, OS/2 Access Feature	G325-3568-01
– Communications Server for OS/2 Warp, Windows Access Feature	G325-3566-00
– 10 Reasons to Buy Communications Server/2	G325-3564-01
– Turner Broadcasting System: SNA over TCP/IP	G325-3585-00
– Filiadata: SAP R/3 over SNA	G325-3624-00
– Zahid Tractors: Notes over APPN	G325-3648-00
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– NetWare for SAA 2.0	G325-6575-00
– NetWare for SAA: AS/400 Edition	G325-6581-00
PCOMM	
– Personal Communications AS/400 and 3270 Family of Desktop and Emulation Products	G325-3475-00
– North Carolina Farm Bureau Mutual Insurance: PCOMM	G325-3647-00
Windows	
– Internet Connection Corporate Kit for Windows 3.1 and Windows 95	G325-3458-02
– Communications Server for Windows NT brochure	G325-3684-00
– 10 Reasons to Buy Communications Server for Windows NT	G325-3683-00

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