

*A powerful communication infrastructure  
for electronic commerce*



# Communications Server, Release 2 for MVS/ESA

## Highlights

**Launches applications quickly and economically to address new business opportunities and needs**

**Deploys IMS applications easily with the Open Transaction Manager Access Facility**

**Exploits electronic commerce and deploys client/server applications utilizing a rich set of communication programming interfaces**

**Enhances network performance with high-performance data transfer for APPC applications and multipath channel connections**

**Provides higher availability for crucial applications with multinode persistent sessions across parallel sysplex**

**Extends benefits, simplifies migration, and improves network availability with HPR**

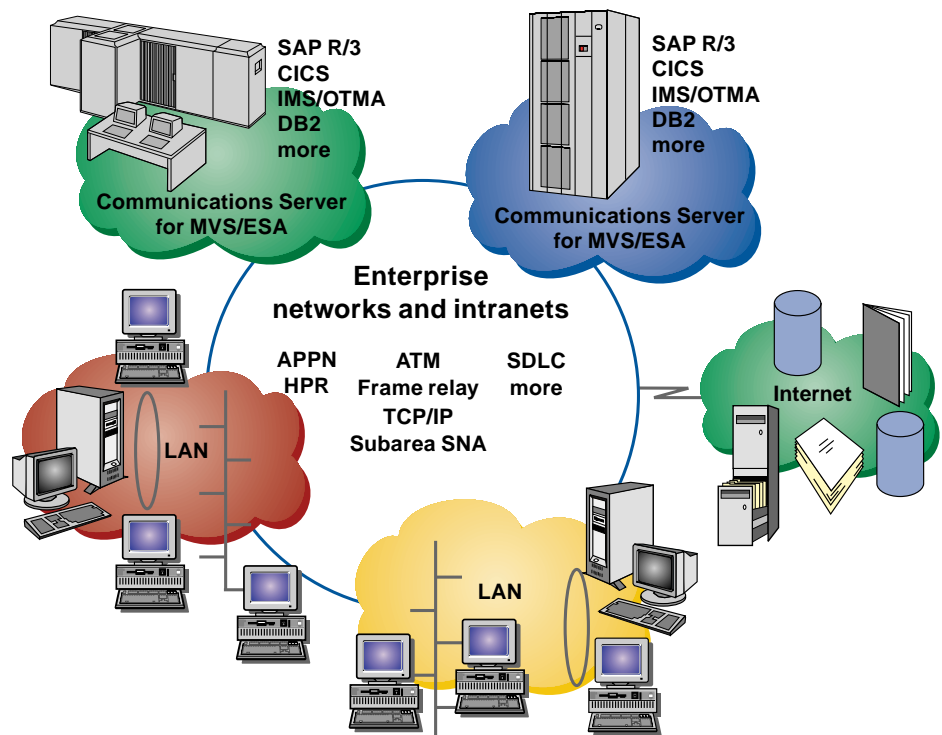
**Improves availability and performance with RIP, Version 2**

## Providing a powerful communication infrastructure for electronic commerce

IBM Communications Server for MVS/ESA, Release 2, (CS for MVS/ESA) is a powerful communication gateway to connect diverse application and networking environments. With its leading-edge open networking support and SNA services, CS for MVS/ESA serves business-to-business and business-to-consumer communication across local area networks (LANs) and enterprise wide area networks (WANs), intranets, and the Internet.

Built on the classic strength of MVS/ESA and S/390, Communication Server for MVS/ESA is the best solution available, providing support to vital applications in environments requiring cross-network communication and electronic commerce.

Networking is essential to effective business systems. And effective business systems are the central nervous system of your business.



*Communications Server for MVS/ESA is a powerful communication server to connect diverse application and network environments for the enterprise.*

### **Launches applications quickly and economically**

CS for MVS/ESA supports all major network types and application interfaces. Your users can choose from applications written to advanced program-to-program communication (APPC), Common Programming Interface for Communications (CPI-C), and sockets, including ported UNIX applications through MVS/OpenEdition. With CS for MVS/ESA, you can use existing network protocols for new applications.

Avoiding potential network protocol changes, you're free to choose applications based on the needs of your business and quickly deploy them to users.

CS for OS/390 Information Management System (IMS) Sockets Interface is enhanced to support the Open Transaction Manager Access Facility (OTMA)\*. This capability allows users to more easily deploy IMS/OTMA applications across TCP/IP networks.

### **Offers rich communication programming interface**

CS for MVS/ESA provides a rich set of communication programming interfaces. Choose an APPC, an OpenEdition Distributed Computing Environment (DCE) remote procedure call (RPC), or a Berkeley Software Distribution (BSD) Sockets Interface. CS for MVS/ESA supports your choice of interface to serve your network needs for electronic commerce and client/server applications.

In addition, Advanced Peer-to-Peer Networking (APPN) eliminates coordinated SNA network definitions so client/server implementation capitalizes on the strengths of SNA APPN and APPC networking functions. The Interactive System Productivity Facility (ISPF) client/server solution provides easy access to a client/server graphical interface.

### **Includes native ATM capability on S/390**

As the major hub for business transactions and information exchange, network access to S/390 resources by employees, suppliers, and customers should not be constrained by the connection protocol or brand or type of equipment in use. CS for MVS/ESA, which includes the new VTAM, Version 4 Release 4, with the Open System Adapter-2 (OSA-2), provides a native asynchronous transfer mode (ATM) communication capability on the S/390 server. This expands an already wide range of connectivity and equipment options available to the S/390 user.

Native ATM support in CS for MVS/ESA includes best-effort virtual circuit and reserved-bandwidth virtual circuit. This allows users to optimize link capacity and more effectively manage bandwidth.

### **Capitalizes on high-speed networking**

To better capitalize on high-speed networking, CS for MVS/ESA introduces high-performance data transfer (HPDT) services and a new programming interface to optimize performance for VTAM APPC applications, especially those transferring large data objects.

HPDT services are available to applications written to VTAM APPC command (APPCCMD) interface where sessions connect two intrahost applications or where sessions cross high-speed network attachments. These attachments can include OSA-2 connected to native ATM networks, APPN node-to-node channel connections, cross-system coupling facility in sysplex, 2216 Multiaccess Connector, Model 400, and 3746 N Ways Multiprotocol Controller, Model 900 or 950.

HPDT interface allows applications requiring efficient bulk data transfer to gain performance improvements and eliminate entirely the data copy as data is transferred between the APPCCMD and VTAM. A new communication storage manager allows VTAM and applications to exchange ownership of commonly addressable storage so there is no need to copy data at the APPCCMD application programming interface (API).

VTAM multipath channel (MPC) is enhanced to include HPDT MPC (also referred to as MPC+) connections which provides a more efficient transfer of data. This is because HPDT services enable data packing without data improvement and improved scheduling of channel programs. Both data packing without data movement and improved scheduling of channel programs reduce CPU cycles used for communication by as much as two-thirds. Improvements will vary, depending on factors, such as system configuration, size, and type of data objects.

### **Provides higher availability for crucial applications**

With VTAM multiple node persistent sessions (MNPS), CS for MVS/ESA has the capability to preserve sessions across application outages in configurations where the hosts are connected through the S/390 coupling facility. Because session information is preserved, the workload and extra network traffic to reestablish connections are avoided. Coupled with High-Performance Routing (HPR), MNPS allows you to build networks and applications that are fault tolerant.

CS for MVS/ESA now supports Routing Information Protocol (RIP), Version 2\*. RIP, Version 2, allows users to more efficiently route around network failures. It improves performance and routing control by providing multicasting, variable subnetting, immediate next hop, and packet authentication.

### **Extends benefits, simplifies migration, and improves network availability**

HPR benefits are extended to support configurations where HPR session endpoints traverse APPN networks and subnetworks, providing HPR value to a larger user population.

Migration to HPR from environments using APPN over subarea connections is simplified now that HPR is supported across these connections.

HPR improves APPN network availability by eliminating single points of failure and effects of network outages. Also, improved network management informa-

tion, Network Control Program (NCP) performance, and storage savings serve to improve network availability.

### **Improves usability, serviceability, and performance**

Telnet is enhanced to notify users of syntax or command errors by redisplaying the USSMSG10 screen with appropriate error message.\*

Dynamic update of the BeginVTAM/EndVTAM section of the TCP/IP profile is now supported on TCP/IP, Version 3.2.\*

TCP/IP exploits the hardware checksum instruction set on S/390 for improved performance.\*

### **Supports S/390 application needs today and tomorrow**

Communications Server allows your business to move forward, taking advantage of leading-edge networking solutions while protecting your investments in existing S/390 applications running on VTAM or TCP/IP.

Communications Server comprises the following program products for MVS/ESA:

- VTAM, Version 4.4 (includes integrated AnyNet function)
- TCP/IP, Version 3.2

Communications Server carries identical coexistence and interoperability to these products. Application interfaces are

upward compatible so applications that run on earlier releases of VTAM or TCP/IP can continue unchanged.

### **For more information**

If you'd like more information about IBM Communications Server for MVS/ESA, Release 2, or any of the Communications Server line of products, contact your IBM representative. Or, visit the IBM Networking Home Page at

<http://www.networking.ibm.com/netsoft.html>

---

## **IBM Communications Server for MVS/ESA, Release 2, at a glance**

---

### **Features**

---

Key features of IBM Communications Server for MVS/ESA, Release 2

- APPN connectivity
  - HPR connectivity
  - TCP/IP connectivity
  - VIPA connectivity
  - Application interfaces for APPC, CPI-C, BSD Sockets, and MVS/OpenEdition
  - AnyNet to connect any application to any network
  - Key TCP/IP applications like FTP, Telnet, Print, and Simple Mail Transfer Protocol (SMTP)
  - World-class network management agents and interfaces
  - CICS and IMS (OTMA) Sockets support for TCP/IP users
  - RIP V2 support for TCP/IP users
  - Native ATM Support (coupled with OSA/2 adapter)
- 

### **Benefits**

---

- Widest range of application choices—IBM subsystems, user-written applications, and off-the-shelf applications
    - Easy integration of new applications with existing applications and networking infrastructure
    - Easy integration of UNIX-based applications through support for MVS/OpenEdition
    - Includes FTP, APPC-FTP, TelNet 3270, APPC-3270, and SMTP
  - Widest range of open connectivity of any single server in the industry—SNA (APPN, HPR), TCP/IP, and Internet
    - Support for multivendor networking (APPN, HPR, and TCP/IP)
    - Support for connection to networks with integrated high availability features to ensure full-time server access by all clients
    - Support for easy management of network resources, including APPN, HPR, and TCP/IP dynamics
    - Support for all major physical connectivity requirements, such as ATM, token ring, and frame relay
    - Continued support for SNA, APPN, and HPR value-add, such as predictable response times, guaranteed data delivery, and class of service
  - Open standards-based network management
- 

### **IBM Communications Server for MVS/ESA, Release 2, system requirements at a glance**

---

- IBM S/370 (308x, 3090, or 43xx), System/390, or ES/9000 processor supporting MVS/ESA Service Point (SP), Version 4.3 or higher.
- MVS/ESA SP, Version 4.3 or higher.



© International Business Machines Corporation 1997

IBM Corporation  
Department B2FA  
P.O. Box 12195  
Research Triangle Park, NC 27709  
USA

Printed in the United States of America  
2-97

All rights reserved

IBM, Advanced Peer-to-Peer Networking, AnyNet, APPN, 400, CICS, DB2, ES/9000, IMS, OpenEdition, S/390, VTAM, MVS/ESA are trademarks of International Business Machines Corporation.

UNIX is a registered trademark in the United States and other countries licensed exclusively through X/Open Company Limited.

DCE is a trademark of The Open Software Foundation; SAP R/3 is a trademark of SAP AG.

Other company, product, and service names may be trademarks or service marks of others.



Printed on recycled paper

\*These functions are available as program temporary fixes (PTFs).



G325-3668-01