



TCP/IP Feature for VM/ESA

Highlights

Access to any CMS file

Permits Network File System (NFS) clients to use VM's Byte File System (BFS) and Shared File System (SFS), enabling VM to be a centralized file server for workstations and provide more comprehensive file sharing for end-user collaboration.

Connect to the Internet

Enables Internet services access to enterprise data through VM-based Web servers and browsers.

Interoperability of applications

Enables VM-based applications to communicate over the Internet with other MQSeries®-enabled applications and servers.

Guaranteed print delivery

Allows users to specify whether their remote print data will be processed for

delivery by TCP/IP or RSCS, providing guaranteed delivery and improved productivity.

Integrated mail services

Provides a more uniform and consistent method for CMS users to initiate mail across TCP/IP networks, making communication easier.

High-speed mail delivery

Improves performance of the Simple Mail Transfer Protocol (SMTP) server to speed mail processing.

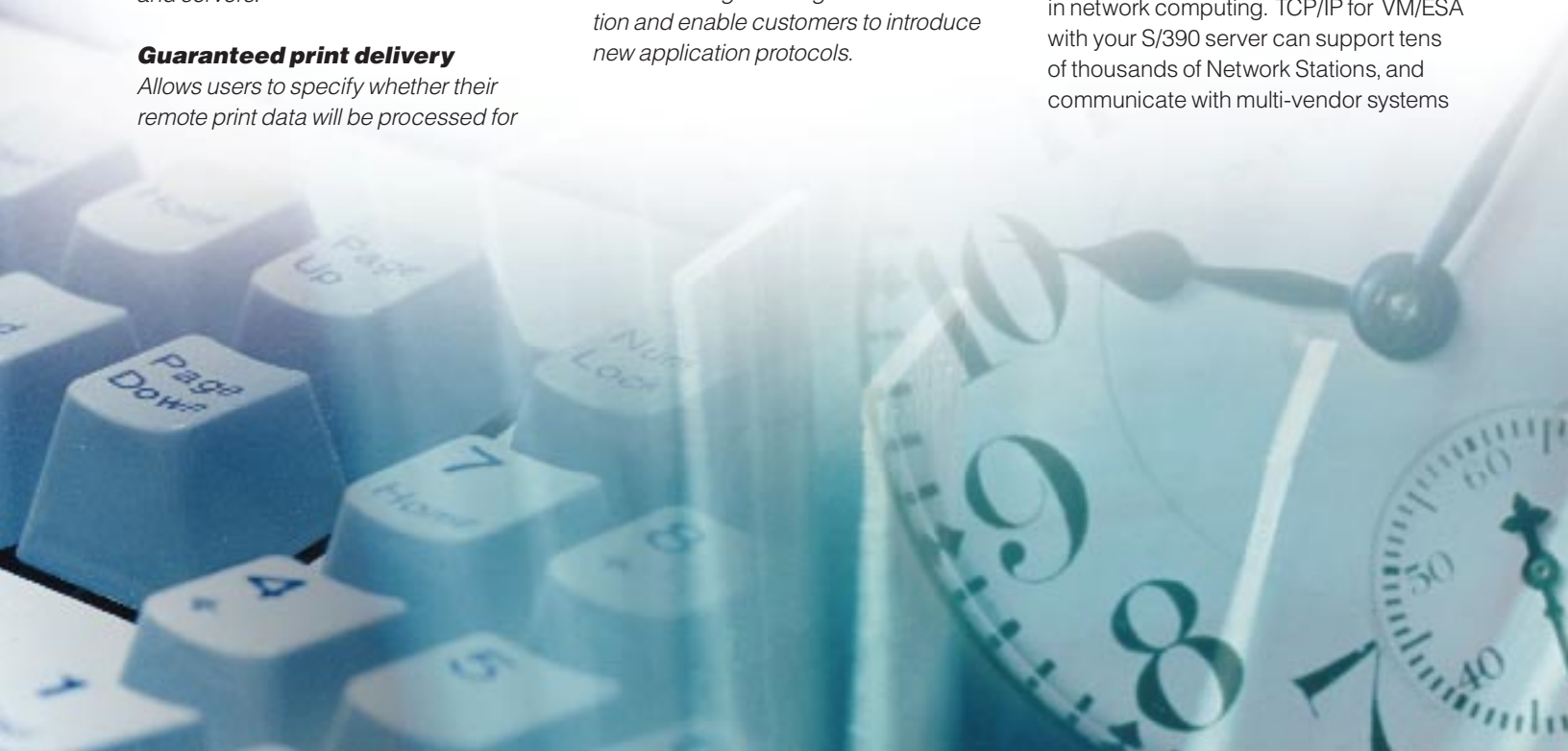
Simplified installation

Simplifies replication of existing TCP/IP servers through cloning to ease installation and enable customers to introduce new application protocols.

TCP/IP for VM/ESA is Built for Business

IBM® and S/390® servers are committed to providing customers with the functions, tools, and services they require to be successful in the world of network computing. Built on TCP/IP for VM Version 2 Release 4, the TCP/IP feature for VM/ESA® is a priced optional feature, packaged and shipped with VM/ESA Version 2 Release 3. This feature provides enhancements that deliver customers expanded Internet/intranet access, improved network computing performance, and extended function.

TCP/IP for VM/ESA brings the power and resources of your S/390 server to the Internet, providing added function and increasing the return on your investment in network computing. TCP/IP for VM/ESA with your S/390 server can support tens of thousands of Network Stations, and communicate with multi-vendor systems



within your enterprise via your intranet and around the world using the Internet. Applications can be shared transparently across VM, UNIX®, VAX™, and other environments.

TCP/IP programming APIs for VM/ESA are available and integrated into many VM/ESA products and functions (for example, Java™, REXX, Pipelines, C, Pascal and Assembler). VM is a leading application development platform for customers and commercial application software developers. VM users can send messages, transfer files, share printers, and access remote resources across a broad range of systems from multiple vendors. TCP/IP for VM/ESA offers an extensive set of client/server applications, programming interfaces, and connectivity options, plus the data integrity and performance that network users have come to expect from IBM.

High-Speed File Transfer

TCP/IP for VM includes support for File Transfer Protocol (FTP) and Trivial File Transfer Protocol (TFTP). FTP and TFTP clients running on VM or other systems can access files residing anywhere on the Internet. VM provides FTP support for access to VM's Shared File System (SFS), Byte File System (BFS), and minidisk file system, as well as TFTP support for the BFS.

Network File System

The Network File System (NFS) enables applications and users from the same system or across heterogeneous systems to access files stored on VM. VM's NFS server implementation provides access to files in VM's Byte File System (BFS), Shared File System (SFS), and CMS minidisk file system.

NFS support on VM is a natural extension of VM's file systems to the Internet. It enables Internet-based heterogeneous systems to use the enormous DASD resources available on VM. It also allows VM to be a centralized, transparent file server for PC servers and workstations.

Web Servicing

TCP/IP for VM/ESA enables the development and deployment of VM Web servers and Web applications currently available from IBM Partners in Development and Business Partners. Using TCP/IP interfaces, a Web server application gives users easy access to VM-based functions and host-based files, data, and system resources. For example, using a Web browser and a VM-based Web server, users can access their OfficeVision/VM™ mail, calendar, and notelogs or their relational data from DB2® for VSE and VM.

Application Development

With TCP/IP for VM you get a variety of application programming interfaces (APIs) and services. VM has integrated these APIs into many of its most popular

programming languages and services. These services were developed to help customers and commercial software developers create new and better applications for network computing; to enable customers to consolidate applications and servers across distributed systems (like UNIX) onto VM and regain control of their environments; to enable VM based applications to be displayed via Web browsers, Network Stations, and other high-quality graphics displays; and most importantly, to help customers get the most out of their existing application investments.

Authenticating Network users

TCP/IP for VM/ESA provides additional security with the Kerberos server for user authentication within a network environment.

Message Queueing Series

Message Queueing (MQ™) is a popular method for applications to communicate with one another across heterogeneous systems. MQ communications requires the client API support on the communicating platforms and a message queue manager (MQ server) somewhere on the network. The MQ server facilitates communications between applications without requiring them to actually connect to one another. VM provides the MQSeries Client support that allows VM-based applications to communicate over the Internet with other MQSeries-enabled applications and servers.

IBM TCP/IP Feature for VM/ESA at a glance

Minimum software requirements • VM/ESA Version 2 Release 3

Minimum hardware requirements • Any IBM system configuration that supports the operating system specified above in the software requirements section; storage varies depending on your configuration options

Relational Data Access

VM provides support for Network Database System (NDB), which is used to access relational database systems in a TCP/IP environment. NDB uses the RPC protocol to allow interoperability among a variety of workstation users and a host database management system such as DB2 for VSE and VM.

Mail Services

TCP/IP mail services provided by the Simple Mail Transfer Protocol (SMTP) server are now integrated with CMS mail functions. This provides a consistent method of mail and file transfer for TCP/IP and CMS users. In addition, SMTP server performance has been improved to provide faster mail service by reducing or eliminating synchronous minidisk and spool I/O.

Terminal Access

Access to 3270-based applications from UNIX and other systems is available with the Telnet tn3270 support provided by the TCP/IP feature for VM/ESA.

A Telnet session-connection user exit lets clients directly connect to VTAM®, PVM, VSE, or any other second-level system by creating the appropriate VM/ESA CP DIAL command in the user exit. This exit can also be used to control system access based on the client Internet address, the local port number, or both.

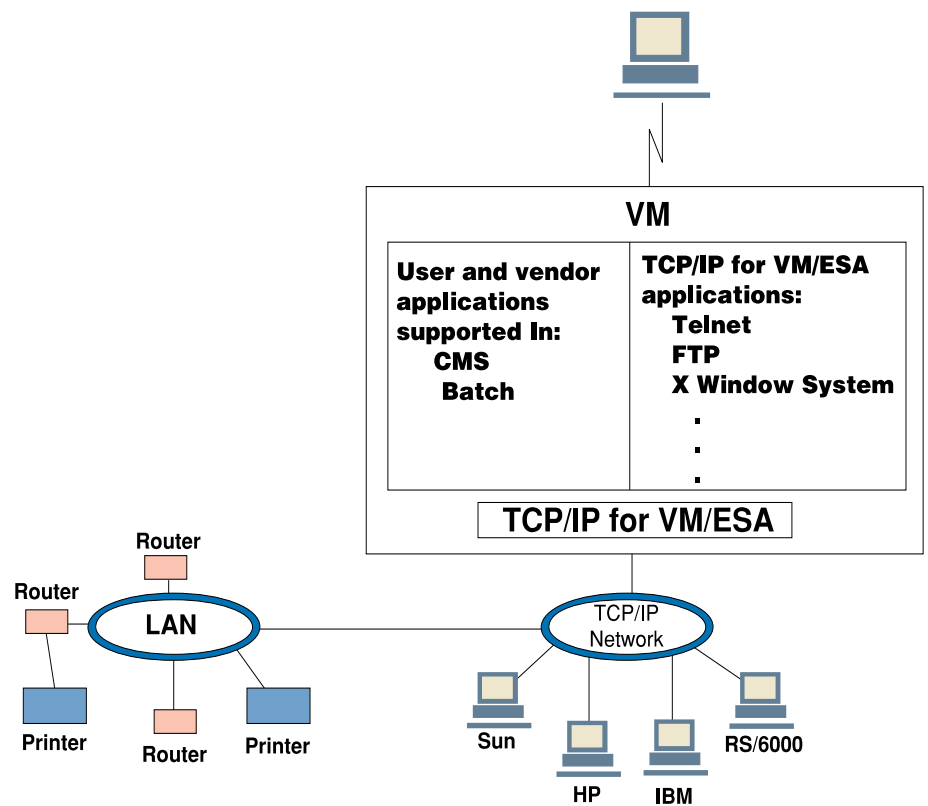
Remote Execution

VM provides support for TCP/IP remote execution protocol (REXEC). This enables users or applications to execute a command on a remote host and receive the results.

Remote Printing

TCP/IP for VM/ESA lets you print data from your VM system on remote printers in your TCP/IP network. With support for line printer router (LPR) and line printer

daemon (LPD), as well as TN3270E printer attachment, TCP/IP for VM/ESA delivers enterprise-wide network printer support. The LPD support on VM has been incorporated into VM's RSCS print server. Whether you run a small business or a large multi-national corporation, this support puts VM's proven, industrial-strength print serving capabilities to work handling your TCP/IP Internet printers, improving user productivity, and guaranteeing delivery of your print data.



Managing TCP/IP Network Resources

VM provides network management support with Simple Network Management Protocol (SNMP) and the IBM award winning TME 10™ NetView® family of products. You can manage TCP/IP for VM with any management product that supports SNMP, including TME 10 NetView for AIX and equivalent vendor programs. TCP/IP for VM also supports Routing Information Protocol (RIP), which helps automate the administration of routing tables. With an optional off-load feature, you can reduce central computer processor use by processing TCP/IP protocol in an attached 3172 interconnect controller model 3. You can also manage your 3172 controllers through the 3172 SNMP agent support provided by the TCP/IP feature for VM/ESA.

Development Collaboration

TCP/IP for VM product development is done by the same IBM organization that produces VM/ESA. This close relationship helps ensure that TCP/IP for VM will continue to support the needs of VM customers in the years to come. You can find additional information about TCP/IP for VM on the official IBM VM Web site at <http://www.ibm.vm.com> or by sending a note to USIB5K37 at IBMMAIL or vmesa@vnet.ibm.com.

To learn more

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