Software Announcement
May 25, 2004

IBM Communications Server for Linux on zSeries opens the door to independent protocol networking

Overview

The Communications Server for Linux on zSeries® can help meet your requirements for connecting diverse networks and consolidating communication workloads. With Communications Server, workstation users and applications can communicate with other workstations and central computer applications, independent of the networking protocols used in each system. The Communications Server can help you get users communicating with each other in networks of all sizes, from small workgroups to large corporate headquarters.

Through consolidation and infrastructure simplification, you can reduce hardware and skill requirements throughout your network while maintaining business-critical data running on your host. Communications Server for Linux on zSeries has the advantage of running in the IBM @server zSeries hardware. Some benefits include allowing you to replace lower speed network connectivity with gigabit OSA-Express hardware, to take advantage of z/VM® scalability for workload balancing, and to help increase security by limiting data flow outside the mainframe.

Communications Server for Linux on zSeries can provide all-in-one communications services between workstations and host systems, as well as other workstations. Its capabilities include:

- A full-function system network architecture (SNA) gateway
- TN3270E Server
- Telnet Redirector
- Advanced Peer-to-Peer Networking (APPN®), including end node, network node, and branch extender support
- Dependent LU requester (DLUR)
- High Performance Routing (HPR)
- Enterprise Extender (HPR over TCP/IP)
- MPC Channel-to-Channel support for connections to legacy VTAM®/VSE systems
- Branch Extender
- Support for many types of connections, such as: Ethernet, token-ring, and MPC connections
- A rich set of APIs
- Remote API support with client/server support to enable SNA over IP

Key prerequisites

- zSeries hardware system
- Linux operating system
- Microsoft™ Windows™ operating system

Refer to the **Hardware requirements** and **Software requirements** sections for details.

Planned availability dates

- May 28, 2004: Electronic software delivery
- June 18, 2004: Media and documentation

At a glance

New functions include:

- Enterprise Extender connectivity for legacy host systems such as VTAM
- Full-function SNA gateway support
- TN3270E Server and TN Redirector with SSL for consolidating secure connections
- Remote client API support to provide SNA application direct Internet Protocol (IP) connectivity to zSeries platforms

Description

The Communications Server for Linux on zSeries is an evolution of all the previous versions of the IBM Communications Server distributed family of products. For details about the functions and capabilities of the Communications Servers, refer to the following Web site

http://ibm.com/software/network/commserver/

Highlights of some of the functions included in Communications Server for Linux include:

Advanced Peer-to-Peer Networking® (APPN)

- Brings APPN network node and end node support with the benefits of peer networking — including simplified configuration, high availability, dynamic routing, and easier maintenance
- Provides Branch Extender to simplify APPN networks containing a large number of branch end nodes
- Offers a way for existing advanced program-to-program (APPC) and Common Program Interface for Communications (CPI-C) applications to take advantage of peer networks
- Allows 3270 applications to flow over APPN networks, with dependent LU requester (DLUR) enablement

High Performance Routing (HPR) and Enterprise Extender

- Can increase data routing performance and reliability
- Can offer nondisruptive routing around network outages with SNA gateway support
- Allows many SNA clients to access multiple computers through one or more physical connections
- Brings large computer resources to many users, while helping keep adapter and line costs down
- Can extend the reach of SNA applications over IP networks and provides the level of reliability and performance enjoyed by SNA users
- Allows VM and VSE SNA applications to be reached through IP

TN3270E server

- Allows TCP/IP users easy access to IBM3270 applications and print services through TN3270E server
- Supports Secure Sockets Layer (SSL) authentication and encryption, providing secure access across the TCP/IP network

Telnet Redirector

- Provides passthru TCP/IP host access to TN3270, TN3270E, TN5250, and VT clients
- Allows SSL support where necessary, and not on the entire client-to-server Telnet connection

SSL data encryption scalability

- Ensures that the data flowing between the Telnet server and Telnet emulator client is protected

Client authentication

- Helps assure communication with the intended server
- Offers more robust security for e-business

Application programming support

- Provides an excellent platform for programming and application integration
- Extension of CPI-C to support Java™ applications as well as standard C-language applications
- Includes Host Access Class Library (Host Access API) for Java providing a core set of classes and methods that allow the development of platform-independent applications that can access host information at the data stream level
- Provides LUA request unit interface (RUI) and session level interface (SLI) APIs, supporting dependent LU types 0, 1, 2, 3
- Provides CPI-C and APPC APIs supporting both dependent and independent LU 6.2 (This commonly used interface makes it easier to develop cross-platform applications.)
- Provides node operator facility (NOF) API, which allows custom applications to be written to perform system administration tasks
- Includes an APPC Application Suite — A set of applications that demonstrates the distributed processing capabilities of APPN networks, including AFTP, AREXEC, ATELL, ACOPY, and ANAME
- Remote SNA API client/server technology

Advanced program-to-program communication (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 and non-IBM systems
- Supports multiple logical units and multiple concurrent links
- Includes persistent verification to improve security

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 (for example, from a Communications Server for Windows or OS/2® to a Linux platform)
- Supports CPI-C, Release 2

Client/server support

Computers running Communications Server for Linux can be configured to communicate using client/server protocols. When client/server protocols are used in a network, all the computers using client/server protocols to communicate in that network are referred to as a domain.

The computers using Communications Server for Linux in a client/server configuration can take the following roles:

- A server contains an SNA node and its associated connectivity components. The server provides SNA connectivity to applications on the local system or on other computers in the Communications Server for Linux domain. Servers must use Linux systems.
- A client does not contain SNA node components, but accesses them through a server. A client can access

one or more servers at the same time, and can run concurrent applications as needed. Clients can be running Linux or Windows.

Servers and clients communicate across the Communications Server for Linux domain using TCP/IP. The protocols used are different from those used by Telnet clients and provide support for applications using the Communications Server for Linux APIs.

In a domain with multiple Communications Server for Linux servers, one server holds the master copy of the Communications Server for Linux domain configuration file. This server is known as the master server. You can define other servers in the domain to be backup servers, or leave them as peer servers.

Configuration, installation, and administration options

- Easy to install and configure
- Easy-to-use Motif-based Administrative interface
- Internationalization
- 64-bit support

Problem determination and systems management

- Offers quick access to integrated problem determination functions
- Allows problem determination and systems management functions to be performed under program control through the use of the NOF API
- Facilitates management of remote servers

Product positioning

Communications Server for Linux on zSeries is a business solution that can enable you to create an integrated enterprise-wide network that includes a mix of operating systems and computer hardware to connect business resources over wide geographic areas.

Communications Server for Linux on zSeries is the solution for companies that want to:

- Run multiprotocol or multiple networks
- Extend existing SNA applications over TCP/IP networks
- Improve data security over the Internet/intranet while improving network availability
- Use Branch Extender or Enterprise Extender advanced networking technologies to implement more cost effective networks
- Consolidate or change their backbone networks
- Replace token-ring network and ESCON® channels with ethernet network and gigabit OSA-Express hardware
- Provide SNA 3270 host access to TCP/IP users
- Allow VM and VSE SNA applications to be reached through IP via EE
- Move the outboard TN3270 server function to zSeries without major definition rework, allowing TN3270 traffic to flow over an IP network —versus SNA —to the data center
- Provide legacy VTAM/VSE systems Enterprise Extender connections and advanced networking
- Use the TN Redirector function within the box to avoid opening extra firewall ports
- Consolidate all servers onto a single box
- Consolidate SNA skills to a centralized location
- Take advantage of excess capacity on zSeries
- Maximize scalability and efficiency through z/VM technology which dynamically provisions additional virtual servers and controls the sharing of processor and other resources

Trademarks

IBM US Announcement Supplemental Information

May 25, 2004

Offering information

Product information is available via the Offering Information Web site

http://www.ibm.com/common/ssi

Also, visit the Passport Advantage® Web site

http://www.ibm.com/software/passportadvantage

Publications

No publications are shipped with this product. All documentation is available in softcopy.

Technical information

Specified operating environment

Hardware requirements

For Linux Server or Client

A 32-bit or a 64-bit IBM @server zSeries® system supported by one of the Linux distributions listed in the **Software requirements** section.

Use the "uname -m" Linux command to verify the CPU class. It must report "s390" to indicate a 31-bit environment or "s390x" to indicate a 64-bit environment.

For Windows™ Client

An Intel™ Pentium™ II, or later, 32-bit system supported by one of the Microsoft™ operating systems listed in the **Software requirements** section.

Software requirements

For Linux Server or Clients

- One of the following Linux operating systems:
  - Red Hat Enterprise Linux 3 for S/390®
  - Red Hat Enterprise Linux 3 for zSeries
  - SUSE LINUX Enterprise Server 8 (SLE8) for IBM Mainframes
- Linux Streams (LiS 2.16.18)
  - LiS package can be obtained from: ftp://ftp.gcom.com/pub/linux/src/LiS/LiS-2.16.18.tgz

For Windows Clients

- One of the following operating systems:
  - Microsoft Windows 2000 Professional, Server, Advanced Server
  - Microsoft Windows XP Professional
  - Microsoft Windows Server 2003 Standard Edition, Enterprise Edition

For a current, up-to-date status of technical requirements, refer to the following Web site

http://www-306.ibm.com/software/network/commserver/z_lin/sysreqs/

Planning information

Customer responsibilities: The customer is responsible for acquiring all prerequisite software and hardware associated with this program.

Installability: Software Maintenance, previously referred to as Software Subscription and Technical Support, is included in the Passport Advantage Agreement. Installation and technical support is provided by the Software Maintenance offering of the IBM International Passport Advantage Agreement. This fee service enhances customer productivity, with voice and electronic access into IBM support organizations.

Packaging

Communications Server for Linux on zSeries ships with the following:

- IBM International Program License Agreement (IPLA)
- IBM IPLA Pointer Sheet
- Product CD

Security, auditability, and control

Communications Server for Linux on zSeries does not include any security and auditability features.

The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

Ordering information

Product information

Licensed function title	Product group	Product category
IBM Communications Server for Linux zSeries	IBM Communications Server	Communications Server

The Communications Server for Linux on zSeries has one charge unit — per concurrent user.

A "User" is defined as a person. A concurrent User is any User that accesses and uses the Program at any given

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time. You must acquire a User authorization for every concurrent User that will directly or indirectly access and use the Program. Under this license, you may allow multiple concurrent Users, up to the number of User authorizations acquired, to access and use the Program either directly or indirectly (such as by accessing the Program via an intermediate machine or piece of software).

As an example, if a multiplexing program or application server (that is, Transaction Server, DB2®) connects to the Program providing access on behalf of multiple concurrent Users, then one authorization for each of these multiple concurrent Users is required.

In addition, for application programs that are not associated with actual users, but still utilize Communications Server services such as TN3270, SNA (APPN®, DLUR), and Enterprise Extender, a User authorization is required for each active upstream or downstream connection established to the Communications Server. In an APPN environment, a connection is an active link to an adjacent nodes.

The license to the Program includes an authorization for one concurrent User. Authorizations for additional concurrent Users may be acquired separately.

The intent of the concurrent user pricing with no server fee is to base cost on each user receiving value from Communications Server for Linux, while allowing flexibility in defining and modifying the number of servers used. For example:

1. When TN3270 clients are connected to Communications Server for Linux′s TN3270 Server, each concurrent TN3270 client is one User. If one person has multiple emulation sessions that are connected in through the same IP address, that is still one User; if multiple people go through one proxy to connect to the server, each person is a User. Some specific examples for TN3270 clients are as follow:
   - When 100 end users using TN3270 clients for display and printer go through Communications Server for Linux′s TN3270 Server, it is 100 User licenses.
   - When 100 end users go through two Windows Terminal Server with TN3270 clients and go through Communications Server for Linux′s TN3270 Server, it is 100 User licenses.
   - When end users use Web browsers via Host Access Transformation Services (HATS) to access the Communications Server for Linux′s TN3270 Server, it is the number of concurrent TN3270 clients (that is, Host On-Demand (HOD) is used by HATS to communicate to the Communications Server for Linux′s TN3270 Server). Therefore, if 100 HOD clients are defined to HATS then it is 100 User licenses.
2. User scenarios include downstream SNA clients, Web clients, remote API client/server, SNA gateway, network node and application clients using Communications Server for Linux application interfaces or other SNA applications. In these scenarios, each end-user client is one User. When multiple people go through one proxy or go through middleware applications to Communications Server for Linux′s application interface, each person is a User. Some specific examples for SNA clients are as follow:
   - When 100 end-user SNA clients running HACP (Personal Communications) go through Communications Server for Linux′s SNA Gateway, network node, or remote API client/server, it is 100 User licenses. If those 100 end users go through two Communications Server for Linux Communication Servers for load balancing or backup, it is still 100 User licenses
   - When 100 end-user TCP/IP clients go to a single TCP/IP-based middleware application server that uses Communications Server for Linux′s application interface to communicate to CICS®, IMS™, or some other SNA applications, it is 100 User licenses. When 5000 end users using Web browsers go to a middleware Web Server-based application server which uses 100 SNA sessions through Communications Server for Linux′s application interface to communicate to CICS, IMS, or some other SNA application, it is still 100 concurrent User licenses.
   - When 100 end users go to a middleware application server using a remote API client and another set of 100 end users go to a different middleware application server also using another remote API client, both middleware application servers go through a common Communications Server for Linux′s Server, it is 200 User licenses.

Passport Advantage program licenses

Communications Server for Linux on zSeries

Part description	Part number
IBM Communications Server for Linux on zSeries	
Comm Svr Linux zSeries Users SW Maintenance Annual Renewal	E01A3LL
Comm Svr Linux zSeries Users TRDUP License & SW Maintenance 12 Months	D53SALL
Comm Svr Linux zSeries Users License & SW Maintenance 12 Months	D53S8LL
Comm Svr Linux zSeries Users SW Maintenance Reinstatement 12 Months	D53S9LL

Tradeups

- Tradeups to Communications Server for Linux on zSeries are available to customers with an active Passport Advantage Maintenance and Support license of:
  - Communications Server for OS/2®
  - Communications Server for AIX®
  - Communications Server for Windows NT™ and Windows 2000
- Tradeups are also available from any non-IBM (competitive offering) SNA gateway or Communications Server product
- The tradeup is a user-to-user tradeup, for example, customers with 100 distributed Communications Server licenses can have up to 100 user licenses of Communication Server for Linux on zSeries.

Passport Advantage supply

Program name/description	Part number
Communication Server for Linux on zSeries V6.2.0	
Media Pack Multilingual (English International, French, Korean, Chinese — Simplified, Spanish, Brazilian Portuguese, German, Japanese, Chinese — Traditional) Linux for zSeries Enterprise Servers (Mainframes) CD-ROM Digital Disk — ISO 9660 Standard V6.2.0	BM02PML

Passport Advantage customer: Media pack entitlement details

Customers with active Maintenance or Subscription for the products listed are entitled to receive the corresponding media pack.

Communication Server for Linux on zSeries V6.2.0

Entitled maintenance offerings description	Media packs description	Part number
IBM Communications Server for Linux on zSeries per User	CommSvr Linux zSeries Multilingual (English International, French, Korean, Chinese — Simplified, Spanish, Brazilian Portuguese, German, Japanese, Chinese — Traditional) Linux for zSeries Enterprise Servers (Mainframes) CD-ROM Digital Disk — ISO 9660 Standard	BM02PML

Terms and conditions

This product is only available via Passport Advantage. It is not available as shrinkwrap.

Licensing: IBM IPLA. Proofs of Entitlement (PoE) are required for all authorized use.

Part number products only, offered outside of Passport Advantage, where applicable, are license only and do not include Software Maintenance.

License Information form numbers

Program name	Program number	Form number
Communications Server for Linux on zSeries	5724-I34	L-DDCA-5WJLSP

Limited warranty applies: Yes

Money-back guarantee: If for any reason you are dissatisfied with the program, return it within 30 days from the invoice date, to the party (either IBM or its reseller) from whom you acquired it, for a refund. This applies only to your first acquisition of the program.

Copy and use on home/portable computer

Product name	Copy and use on home/portable computer?
Communications Server for Linux on zSeries	Yes

Volume orders (IVO): No

Passport Advantage applies

Yes, and through the Passport Advantage Web site at

http://www.ibm.com/software/passportadvantage

Software Maintenance applies: Yes

Software Maintenance, previously referred to as Subscription and Technical Support, is now included in the Passport Advantage Agreement. Installation and technical support for the products announced in this letter is provided by the Software Maintenance offering of the IBM International Passport Advantage Agreement. This fee service enhances customer productivity by providing voice and/or electronic access into the IBM support organizations.

IBM includes one year of Software Maintenance with the initial license acquisition of each program acquired. The initial period of Software Maintenance can be extended by the purchase of a renewal option that is available.

While your Software Maintenance is in effect: IBM provides you assistance for your (1) routine, short duration installation and usage (how-to) questions; and (2) code-related questions. IBM provides assistance via telephone and, if available, electronic access, only to your information systems (IS) technical support personnel during the normal business hours (published prime shift hours) of your IBM support center. (This assistance is not available to your end users.) IBM provides Severity 1 assistance 24 hours a day, every day of the year. For additional details, consult your *IBM Software Support Guide* at:

http://techsupport.services.ibm.com/guides/handbook.html

Software Maintenance does not include assistance for (1) the design and development of applications, (2) your use of programs in other than their specified operating environment or (3) failures caused by products for which IBM is not responsible under this agreement.

For more information about the Passport Advantage Agreement, refer to the IBM International Passport Advantage Agreement Software Announcement 201-202, dated July 10, 2001, or visit the Passport Advantage Web site at

http://www.ibm.com/software/passportadvantage

IBM Operational Support Services — Support Line: No

iSeries™ software subscription applies: No

Educational allowance available: Not applicable

Prices

Passport Advantage

For Passport Advantage information and charges, contact your IBM representative or authorized IBM Business Partner. Additional information is also available at

http://www.ibm.com/software/passportadvantage

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