IBM Communication Controller for Linux on zSeries V1.1 enables NCP for operation in the Linux environment

Overview

Many companies are looking at Systems Network Architecture (SNA) migration strategies. They want to:

- Simplify their networks and move toward an on demand environment where an IP network infrastructure is a necessity
- Move off of limited networking connectivity hardware and be able to take advantage of new technology
- Help preserve their investment in their SNA application portfolio and continue to use these reliable solutions

IBM Communication Controller for Linux on zSeries® supports all of these requirements.

Communication Controller for Linux on zSeries enables the Network Control Program (NCP) software product to run in a new hardware environment. Communication Controller for Linux is software that emulates the IBM 3745 Communication Controller hardware. It runs in Linux on zSeries and NCP runs on top of it. The intent is to provide a migration path for customers who use traditional SNA, including SNA Network Interconnect (SNI), to communicate with their Business Partners. This solution can allow them to continue using some traditional SNA functions without a dependency on the 37xx hardware. The 37xx Communication Controllers are legacy hardware boxes which serve as front-end processors in a SNA network node. The 37xx products have been available worldwide for many years and are in use by many customers. The Communication Controller for Linux on zSeries product will emulate some of the 3745 function.

Communication Controller for Linux on zSeries was developed specifically as a migration path from 37xx Communication Controller hardware. IBM announced the discontinuance of marketing for the 37xx family of products in 2002, but many customers still depend on this hardware and the NCP software that runs in the 37xx for business-critical functions. The new Communication Controller for Linux on zSeries is not a new hardware product, but rather a virtualized communication controller that runs on an IBM zSeries machine running the Linux operating system. The result is the integration of legacy mission-critical communications with the leading-edge Linux on zSeries servers. You can continue to use the mature and stable NCP software you’ve come to depend on — NCP and SNA applications — but can now also take advantage of the openness of Linux and the security, scalability, and business resiliency of the zSeries.

In stark comparison to many other SNA migration strategies, a focus of the new Communication Controller for Linux on zSeries is ease of migration. The NCP product itself is unchanged. Moving NCP from the 37xx hardware into Linux on zSeries requires minimal definition changes, if any. The NCP functions supported include SNA Network Interconnection, used for inter-enterprise connectivity, particularly for business partner connections. Another advantage of this new solution is that there is no dependency on business partner coordination; one side of the SNA Network Interconnection (SNI) connection may move to the new Communication Controller for Linux independent of any changes on the other side of the connection. Boundary function support is also included and availability functions such as SSCP Takeover and Extended Recovery Facility will work as they do today.

At a glance

<table>
<thead>
<tr>
<th>Communication Controller for Linux on zSeries:</th>
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</thead>
<tbody>
<tr>
<td>• Consolidates function from the 37xx Communication Controller into Linux on zSeries</td>
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<tr>
<td>• Provides ease of migration of stable NCP software with minimal definition changes</td>
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<tr>
<td>• Enables use of Ethernet in place of token ring and ESCON® channel attached hardware</td>
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<tr>
<td>• Helps promotes infrastructure simplification, moving SNA technology and skills to the zSeries</td>
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<tr>
<td>• Supports consolidation of infrastructure to an IP-based on demand environment</td>
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<tr>
<td>• Helps preserves investment in critical SNA applications</td>
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<td>• Relieves the requirement for coordinated migration throughout the network or on the part of business partners required by other migration solutions</td>
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<tr>
<td>• Can provide advantages of Linux on zSeries such as scalability for workload balancing and duplication for high availability</td>
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<tr>
<td>• Supports the use of Integrated Facility for Linux (IFL) and its features</td>
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</table>

Moving these NCP functions into the zSeries can allow the SNA network to continue to consolidate into the server, which allows z/OS® applications and SNA to be tightly integrated with NCP, taking you another step toward network simplification while helping to extend the life of your critical SNA applications.
**Communication Controller for Linux on zSeries (CCL)**

**Planned availability dates**
- March 4, 2005: Electronic software delivery
- March 18, 2005: Media and documentation

**Functionality**
Communication Controller for Linux on zSeries can provide an alternative platform for running the Network Control Program (NCP) software product, in place of many configurations where customers currently use a 37xx hardware environment. Specifically, the functions in this release include:
- SNA Network Interconnection (SNI)
- Intermediate Network Node (INN)
- Boundary Network Node (BNN)
- Extended Recovery Facility (XRF) and Network Routing Facility (NRF)
- SSCP Takeover and Giveback
- Generation and utility support for NCP installed in the Communication Controller for Linux on zSeries environment through Advanced Communication Function (ACF) System Support Program (SSP)
- Monitoring, realtime analysis, and interactive tuning of internal NCP resources in the Linux environment through NTuneMON
- Support for NetView® Performance Monitor (NPM)
- Support of NCP dumping and restarting functions with faster availability
- Communication Controller for Linux on zSeries MOSS console via an easily-accessible browser

**zSeries strengths**
In addition to the NCP functionality, you now have the advantage of the product running in Linux on zSeries. You can run Communication Controller for Linux on zSeries with Linux running in native LPAR or as a guest running under z/VM®. zSeries offers an attractive option for customers who want to use IBM’s Integrated Facility for Linux (IFL) and z/VM which can support a range of ten to hundreds of images per processor. A controller can be created or started based on the demands of your network; if you need another controller, you just start another instance, which may be in the same Linux image. You may also run in different Linux images for high availability. In addition, to help reduce the dependency on 37xx hardware, lower-speed network connectivity such as token ring or ESCON hardware can be replaced with OSA-Express adapters coming into the zSeries machine. One of the new functions provided by Communication Controller for Linux on zSeries is Ethernet connectivity, which is transparently bridged to token ring for the NCP. NCP code remains unchanged.

**Simplified migration**
The support of existing, unmodified NCP software helps simplify migration to Communication Controller for Linux...
on zSeries from the 37xx Communication Controller. Definition updates, if required, are simple, for example adding a line definition for your OSA adapter. And the updates are required only at the NCP moving into Linux on zSeries; there are no coordinated changes required by business partners. From an operational point of view, Communication Controller for Linux on zSeries provides interfaces that allow you to load, operate, manage, and dump NCPs. Communication Controller for Linux on zSeries has its own MOSS console, which provides functions to manage and operate NCPs running on Linux on zSeries such as starting and stopping the Communication Controller, dumping NCP or the Communication Controller, and displaying and altering storage. These are now provided via an easily accessible browser interface.

Communication Controller for Linux on zSeries is a software product that emulates 3745 hardware. By providing an alternative platform for running NCP software, the Linux on zSeries platform, Communication Controller for Linux on zSeries can provide a possible migration path from the following 37xx hardware products:

- IBM 3705 Communication Controller
- IBM 3720 Communication Controller
- IBM 3725 Communication Controller
- IBM 3745 Communication Controller
- IBM 3746-900 Nways® Multiprotocol Controller

**Support information**

**NCP support:** IBM intends to support and maintain ACF/NCP and associated software products (EP, NPSI, NTuneMon) beyond the 3745 and 3746 product support dates.

All statements regarding IBM’s future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

**3745/3746 support:** IBM continues to provide service for the 3745 and 3746 controllers consistent with normal IBM Technical Services service plans and guidelines, which is typically five years after the end of marketing date. While IBM plans are subject to change at IBM’s sole discretion, IBM has no current plans to end service for these products before 2010. All statements regarding IBM’s future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only. When IBM announces end of service for these products, all existing 3745 and 3746 service contracts will be honored.

**Accessibility by people with disabilities**

**Vision impaired users**

- Supports interfaces commonly used by screen readers
- Can be operated using only the keyboard
- Supports customization of display attributes such as color, contrast, and font size
- Communicates all information independently of color
- Supports interfaces commonly used by screen magnifiers
- Supports the attachment of alternative output devices
- Provides documentation in an accessible format

**Users with mobility impairments or limited hand use**

- Can be operated using only the keyboard
- Supports the attachment of alternative input and output devices

This product does not have audio features in its interface, and does not flash the screen at rates that could induce epileptic seizures.

**Product positioning**

Communication Controller for Linux on zSeries is a business solution that specifically benefits NCP customers currently running a 3745 or 3746 Communication Controller, where supporting SNA Network Interconnect (SNI) for their business partners is critical.

Communication Controller for Linux on zSeries is the solution for companies that want to:

- Preserve their traditional SNA environment without IBM 3745 and 3746 Communication Controller hardware
- Extend existing SNA applications over TCP/IP networks
- Improve network availability by replacing token-ring network and ESCON channels with Ethernet network and OSA-Express hardware
- Consolidate all servers onto a single zSeries mainframe
- Consolidate SNA skills to a centralized location
- Migrate off of their 37xx hardware without requiring coordinated migration on the part of their business partners
- 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 processors and other resources

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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 hardcopy publications are shipped with this product. Documentation is provided in softcopy on the product media.

Technical information

Specified operating environment

Hardware requirements

Installation
• Runs on the following IBM servers, or equivalents:
  - IBM zSeries® z800, z890, z900, or z990
  - S/390 Parallel Enterprise Servers — Generation 5 (G5) and Generation 6 (G6) models
• OSA adapters — one of the following (or combination):
  - Two OSA-2 adapters in nonshared mode, or
  - Two OSA-Express ports, one LCS and one LSA (MCL 3.5 for z800/z900, MCL 5.50 for z890/z990)

OSA-2 and OSA-Express adapter support

<table>
<thead>
<tr>
<th>Processor type</th>
<th>Ethernet (feature number)</th>
<th>Token-ring (feature number)</th>
</tr>
</thead>
<tbody>
<tr>
<td>G5/G6</td>
<td>OSA-Express 2340 Fast Ethernet</td>
<td>OSA-2 ENTR 5201</td>
</tr>
<tr>
<td>z/800 z/900</td>
<td>OSA-Express 2366 Fast Ethernet</td>
<td>OSA-Express 2367</td>
</tr>
<tr>
<td>z/890 z/990</td>
<td>OSA-Express 1366 1000BaseT</td>
<td>OSA-Express 2367</td>
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</tbody>
</table>

Note: OSA-2 and OSA-Express adapters, in either LSA or LCS mode, require copper wire OSA. This does not require a copper-capable switch.

Memory and fixed storage capacity
• 50 MB DASD for Communication Controller for Linux™ on zSeries and Java™ code
• 300 MB DASD for Linux kernel source
• 80 MB to 100 MB DASD per Communication Controller for Linux on zSeries instance for traces, dumps, logs, and NCP load modules
• 20 MB RAM per Communication Controller for Linux on zSeries instance

Software requirements
• One of the following Linux on zSeries distributions with recent maintenance:
  - SUSE LINUX Enterprise Server 8 for IBM zSeries and IBM S/390® (SLES8)
  - SUSE LINUX Enterprise Server 9 for IBM zSeries and IBM S/390 (SLES9)
• NCP V7R5, or later, and an environment (VM, VSE, z/OS®) to generate NCP load modules
• OSA/SF to configure OSA-Express (if applicable)

Note: IBM is working with its distribution partners to enable them to provide the changes required to run CCL in future distribution releases. For the latest information, visit the following CCL Web site
http://www.ibm.com/software/network/ccl

In order to support Communication Controller for Linux on zSeries (CCL), VTAM® must support activation of CCL NCPs that are directly attached to the activating VTAM through an XCA major node (OSA). The following VTAM APARs provide this function:
• VM/VTAM V4R2 — APAR VM63677
• VSE/VTAM V4R2 — APAR DY46311
• OS/390® Communications Server V2R10 — APAR OA10425
• z/OS Communications Server V1R2, V1R4, V1R5, and V1R6 — APAR OA10425

Additional software supporting Communication Controller for Linux on zSeries:
• NTuneMON V2R4 and later (5648-141)
• NTuneMON V3 (5648-D72)
• Network Routing Facility V1R9 (5668-963)
• ACF/SSP V4R5 and later (5655-041, 5654-009, 5686-064)
Planning information

Customer responsibilities: The customer must acquire a separate ACF/NCP license for each image of Communication Controller for Linux on zSeries. In addition, an ACF/SSP must be available for configuring and downloading any ACF/NCP used in Communication Controller for Linux on zSeries.

For new ACF/NCP licenses:
• Order ACF/NCP V7R8.1 (program number 5648-063).
• Specify tier 2 (feature 2801 for a basic license or 2809 for a DSLO license).

For existing customers, ACF/NCP V7R5, and later, is supported in the Communication Controller for Linux on zSeries environment. To use an existing NCP license, you need to contact your IBM representative if your usage tier needs to be adjusted to the required tier 2.

Refer to Software Announcement 201-169, dated June 12, 2001, for detailed ACF/NCP and ACF/SSP ordering information.

Packaging: Communication Controller for Linux on zSeries ships with the following:
• IBM International Program License Agreement (IPLA)
• IBM IPLA Pointer Sheet
• Product CD

Security, auditability, and control

Communication Controller for Linux on zSeries uses the security and auditability functions features of the Linux operating system.

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

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

Product information

<table>
<thead>
<tr>
<th>Licensed function title</th>
<th>Product group</th>
<th>Product category</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM Communication Controller for Linux on zSeries</td>
<td>App Integration</td>
<td>App Integration</td>
</tr>
<tr>
<td></td>
<td>Middleware</td>
<td>Middleware</td>
</tr>
</tbody>
</table>

Communication Controller for Linux on zSeries has one charge unit — per processor.

Passport Advantage program licenses

Two sets of Passport Advantage license part numbers are provided for this program offering. One set is for IBM WebSphere® Software Sales and IBM Software Sales representatives. The other set is for IBM zSeries Software Sales representatives. The two sets provide the identical program supply and license authorization and are available to provide channel distribution tracking information.

Communications Controller for Linux on zSeries

Part description | Part number
---|---
IBM Communication Controller for Linux on zSeries — for WebSphere and Software Sales representatives
Comm Contr Linux zSeries V1 Per Processor License & SW Maintenance 12 Months | D54SSLL
Comm Contr Linux zSeries V1 Per Processor SW Maintenance Annual Renewal | E01P1LL
Comm Contr Linux zSeries V1 Per Processor SW Maintenance Reinstatement 12 Months | D54STLL
IBM Communication Controller for Linux on zSeries — for zSeries Software Sales representatives
Comm Contr Linux zSeries V1 Per Proc. zSeries License & SW Maint 12 Months | D54SWLL
Comm Contr Linux zSeries V1 Per Proc. zSeries SW Maint. Annual Renewal | E01P3LL
Comm Contr Linux zSeries V1 Per Proc. zSeries SW Maint. Reinstatement 12 Months | D54SYLL

Passport Advantage supply

Program name/ description | Part number
---|---
Comm Contr Linux zSeries V1.1.0 Media Pack English International Linux for zSeries Enterprise Servers (Mainframes) CD-ROM Digital Disk — ISO 9660 Standard V1.1.0 | BM03AIE

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.

Comm Contr Linux zSeries V1.1.0

Entitled maintenance offerings description | Media packs description | Part number
---|---|---
Communication Controller Linux zSeries per proc (S/390) | Comm Contr Linux zSeries English International Linux for zSeries Enterprise Servers (Mainframes) CD-ROM Digital Disk — ISO 9660 Standard | BM03AIE
Communication Controller for Linux on zSeries per Processor | Comm Contr Linux zSeries English International Linux for zSeries Enterprise Servers (Mainframes) CD-ROM Digital Disk — ISO 9660 Standard | BM03AIE
On/Off Capacity on Demand

IBM Communication Controller for Linux on zSeries

Part description
Comm Contr Linux zSeries V1
Processor Day Per Use-DAY,
On Off Capacity on

Part number
D54SULL

Terms and conditions

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

Licensing: IBM International Program License Agreement. Proofs of Entitlement (PoE) are required for all authorized use.

License information form numbers

<table>
<thead>
<tr>
<th>Program name</th>
<th>Program number</th>
<th>Form number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Controller for Linux on zSeries</td>
<td>5724-J38</td>
<td>L-LCOX-66ML8E</td>
</tr>
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</table>

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

Copy and use on home/portable computer?
No

Product name
Communication Controller for Linux on zSeries

Volume orders (IVO): No

Passport Advantage applies: Yes and through the Passport Advantage Web site at
http://www.ibm.com/software/passportadvantage

Usage restriction: Yes

The Communication Controller for Linux on zSeries program may be installed on either a main zSeries system or an Integrated Facility for Linux (IFL) on zSeries, or both. If the program is installed on a main zSeries system, a Proof of Entitlement must be acquired for each engine that makes up the main zSeries system. If the program is installed on an IFL on zSeries, a Proof of Entitlement must be acquired for each engine that makes up the IFL. If the program is installed on both a main zSeries system and an IFL, a Proof of Entitlement must be acquired for each engine that makes up both the main zSeries system and IFL together.

IBM Operational Support Services — Support Line: No

iSeries® Software Maintenance applies: No

Educational allowance available: Not applicable

On/Off capacity on Demand

To be eligible for On/Off Capacity on Demand pricing, customers must be enabled for temporary capacity on the corresponding hardware, and the required contract must be signed prior to use.

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

To order, contact the Americas Call Centers, your local IBM representative, or your IBM Business Partner.

To identify your local IBM Business Partner or IBM representative, call 800-IBM-4YOU (426-4968).

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