IBM ^ zSeries
Announcement
January 2002

zSeries Announcement for January 2002 — zSeries Offering for Linux

Frequently Asked Questions

Worldwide

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Announcement Overview

Question:
What is being announced?

Answer:
The newest IBM® ^ zSeries™ Offering delivers key infrastructure elements of a world-class Linux® environment greatly increasing the flexibility in the deployment of your Linux solutions.

The IBM ^ zSeries Offering for Linux is designed from ground up for server consolidation workload giving the customer unparalleled Total Cost of Ownership through consolidation of UNIX®, Microsoft® Windows NT®, and Linux applications onto the world class Linux environment on zSeries.

Question:
Why is IBM introducing this offering?

Answer:
Over the past few years, many IBM customers have experienced the value of combining zSeries technology with Linux, via our Integrated Facility for Linux hardware features. IBM ^ zSeries Offering for Linux builds on the strong Linux momentum in the industry and strengthens it by the delivery of a zSeries platform that is fully powered by Linux.

Question:
What is different about this offering, from prior Linux on zSeries offerings?

Answer:
It is the first mainframe designed from the ground up for consolidation. This ground-breaking offering is the first mainframe to run Linux with virtualization technology without the need for other traditional operating systems.

IBM zSeries Offering for Linux

Question:
What is the IBM ^ zSeries Offering for Linux?

Answer:
IBM zSeries Offering for Linux is a comprehensive solution package which includes a dedicated zSeries Linux server, IBM's unique virtualization technology (z/VM™ version 4), 3 years of maintenance and 3 years of z/VM subscription and support.

The zSeries Offering for Linux provides a complete solution for an industrial-strength Linux environment with excellent performance at a very attractive price. The offering is a fixed-price package combining:

- IBM zSeries hardware with a 1, 2, 3 or 4-way IBM ^ zSeries 800 model 0LF
- z/VM virtualization technology
- z/VM subscription and support
- Hardware warranty and maintenance

Additional optional elements include TOTAL Solution Financing service from IBM Global Finance (IGF) and IBM Global Services (IGS) portfolio of zSeries Linux services.

Linux distributions are available from our Linux distribution partners. The zSeries Offering for Linux does not include any of these distributions. This gives you the broadest choice for your preferred Linux installation. For more information, please refer to our distribution partner Web sites at www.redhat.com, www.suse.com and www.turbolinux.com

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Question:
What types of workloads is this offering intended for?

Answer:
The IBM ^ zSeries Offering for Linux is mainly targeted to server consolidation workloads of 20 to many hundreds of servers. The offering is designed from the ground up for server consolidation giving you unparalleled Total Cost of Ownership through consolidation of UNIX, Windows NT and Linux applications to Linux on zSeries.

Furthermore, it is an excellent application development platform for large customers or Independent Software Vendors (ISVs) requiring a 64-bit target platform. It provides an ideal lower-entry-price, new workload platform for customers who want the qualities of service provided by zSeries processors.

Question:
Who would be interested in the zSeries Offering for Linux?

Answer:
The offering would be of interest to any organization (those new to the platform or those already familiar with the product) interested in porting applications and consolidating servers to Linux in order to take advantage of the performance, economies of scale and simplified systems management that only zSeries can provide.

For example: Enterprises considering server consolidation of distributed Windows NT and UNIX application servers.

- Service Providers initiating server consolidations or requiring additional zSeries footprints, as well as
- Software Vendors (ISVs) and others requiring a 64-bit target platform for application development

In addition, the offering would be of interest to new customers who are seeking a Linux-based mainframe.

Question:
How does the zSeries Offering for Linux differ from the IBM ^ iSeries™ Offering for Linux?

Answer:
The iSeries Offering for Linux offers a smaller server consolidation platform than zSeries. On an iSeries workload can be consolidated into 1 up to 15 Linux partitions. iSeries processors are ideal for consolidating infrastructure servers in order to lower costs of computing. iSeries also provides increased flexibility designed to meet your business growth needs with one to four Linux processors, and it offers improved scalability, availability, and high speed connectivity through advanced iSeries architecture.

Question:
How do I order the zSeries Offering for Linux?

Answer:
Please see your IBM sales or Business Partner representative to order a zSeries Offering for Linux.

Question:
Where can I go for more detailed information about the zSeries Offering for Linux or Linux on zSeries?

Answer:
See the following links for additional information:

- Linux at IBM: ibm.com /linux
- IBM zSeries: ibm.com /eserver/zseries
- Linux on zSeries: ibm.com /eserver/zseries/linux
- z/VM: ibm.com /zseries/zvm
- IBM DeveloperWorks : ibm.com /developerworks
- Linux Distribution:
  - Red Hat: www.redhat.com
  - SuSE: www.suse.com
  - Turbolinux: www.turbolinux.com
- IBM Global Finance: ibm.com /financing/
- IBM Global Services: ibm.com /services/

zSeries Offering for Linux — Hardware

Question:
How is the zSeries Offering for Linux different from running Linux on a IBM ^ zSeries 900?

Answer:
The offering is similar to a customer running Linux in an Integrated Facility for Linux on z900 today. On the zSeries for Linux Offering, though, there are no standard engines to run traditional workloads.

The zSeries Offering for Linux is a solution offering. The solution includes hardware, software, support and services in a single deliverable and makes running Linux workloads on a zSeries more attractive than before. The new IBM ^ zSeries 800 0LF server model as part of the zSeries Offering for Linux is a terrific entry server for workload consolidation scenarios.

The zSeries 800 Model 0LF differs from a z900 in engine, channel, and memory configuration, and connectivity options. The standard configurations are listed below. Connectivity options are discussed later in this section.

Question:
What are the standard zSeries hardware configurations delivered with the offering?

Answer:
The zSeries 800 model 0LF can have up to 4 IFL engines enabled - their standard configurations are listed below. Only Linux or z/VM Version 4 or higher can be run from these engines. Other S/390® and zSeries operating systems like OS/390®, z/OS™, VSE/ESA™, VM/ESA®, z/VM Version 3, and TPF are not supported.

			Cards			Ports		
Model/ FC	Active IFL	Memory	ESCON®	OSA	FICON™	ESCON	OSA	FICON
0LF/ 3605	1	8	2	2	2	28	4	4
0LF/ 3606	2	8	2	2	2	28	4	4
0LF/ 3607	3	16	2	2	2	28	4	4
0LF/ 3608	4	16	2	2	2	28	4	4

Question:
Is there an upgrade path between the 1, 2, 3 and 4-way offerings?

Answer:
Yes, you can upgrade within the zSeries Offering for Linux configurations - increasing the number of engines.

Question:
Is there an upgrade path from existing S/390 G5/G6, Multiprise® or zSeries servers to this offering?

Answer:
No, there is no upgrade path to into this offering.

Question:
Does the z800 model 0LF support HiperSockets™?

Answer:
Yes, the z/Architecture™ HiperSockets function for high-speed TCP/IP communication among virtual machines and logical partitions within the same zSeries 800 (z800) is supported.

z/VM 4.2 supports HiperSockets for use by guest operating systems and the TCP/IP for z/VM server virtual machine. z/VM support for HiperSockets requires enabling PTFs corresponding to APARs VM62938 (z/VM) and PQ51738 (TCP/IP). Thus, VM programs using TCP/IP can communicate via HiperSockets with other VM programs using TCP/IP and with guest operating systems and other logical partitions using TCP/IP.

Question:
The zSeries 800 Model 0LF does not list parallel channels as part of its standard configuration. What if I have to connect to a parallel device?

Answer:
Parallel channels are not supported on this processor. The October 2000 and October 2001 announcements stated that the zSeries 900 server would be the last mainframe to support parallel channels.

Support for parallel channels is made possible thought the use of an ESCON-to-Parallel converter box — the 34600 FXBT from Optica. Each Optica 34600 FXBT convertor box supports one parallel channel. Maintenance can be supplied through Optica or IBM.

Contact Optica at www.opticatech.com, Optica Sales at 800-953-4773 ext 63, or your IBM Sales Rep or IBM Business Partner for more information.

Question:
IBM has stated that at a future date it will no longer offer a native FDDI adapter (SOD in the October 2001 announcement stated "The z900 will be the last family of servers to provide a FDDI feature."). I still have FDDI connectivity needs, what are my options for the z800?

Answer:
Ethernet migration should be considered as the industry trend is toward Ethernet. If FDDI connectivity is still desired in the customer environment, then ancould be ALCATEL.

Alcatel's Omni Switch/Router (OS/R) FDDI backbone switch modules offer connectivity into legacy FDDI network backbones. Additionally, the flexibility of the OS/R to support gigabit, 10/100, ATM 155 and ATM 622 allows current FDDI networks to migrate to newer technologies gradually within the same OS/R.

An Open Systems Adapter-Express (OSA-Express) Ethernet, Fast Ethernet, Gigabit Ethernet, or ATM feature on the z800, in combination with the Alcatel Omni Switch/Router FDDI modelue might be used to provide connectivity to the FDDI Local Area Network (LAN). Note z800 model 0LF, the zSeries Offering for Linux, does not support ATM

For more information refer to the following Web site:
ind.alcatel.com/catalog/index.cfm?cnt=osr_catalog

Question:
Even without parallel channels and FDDI attachment, there still is a broad range of connectivity, how can I be sure I have the right cables to attach my Linux processor to my infrastructure?

Answer:
We agree — The fiber requirements are changing and getting more complex. In order to help manage the complexity and plan your environment, cables attaching your zSeries to your IT infrastructure will come in the form of the zSeries Fiber Cabling Service offered through IBM Global Services. This services offering allows you to plan for your environment as a whole instead of product by product. You need a strategy for cabling your data center or you will spend your people’s time and dollars to change. The zSeries Fiber Cabling Service helps you effectively manage your connectivity needs.

Question:
What are these new zSeries Fiber Cabling Services?

Answer:
The zSeries fiber cabling services are designed to provide you with the most flexible and best solution to meet your data center fiber cabling requirements. The fixed price services contract provides IBM planning to access your current fiber cabling, the z800 channel configuration and the devices to be connected to. Based on your requirements and future directions, the appropriate list of required fiber cables is then created and ordered. IBM will install, label and plug the cables, then deliver a documented list of the installed cables to you. In order to fit each z800 channel configuration, there are 24 predefined service contracts available. Each predefined contract includes a set number of fiber cables (conversion kits. MCP kits or duplex jumper cables up to 31 meters in length). The IPR/Connectivity Specialist and SSR/CE that you know and trust today are the same ones responsible for performing the work.

Question:
Why change? Cabling today is provided by the server and that works just fine.

Answer:
The fiber planning required today in the data center goes beyond conversion kits and mode conditioning patch kits. The fiber installed today may or may not be able to support the next channel upgrade. The function and performance enhancements in connectivity, whether it is for direct attached I/O or networking, are evolving at a very fast pace. FICON, Fibre Channel Protocol and Gigabit Ethernet are just three examples of this new function and performance. The fiber optic connectivity infrastructure has also evolved to accommodate new function and performance. Short wave, long wave, 50 micron, 9 micron, small form factor connectors, conversion kits, mode conditioning kits, jumper cables, and trunking solutions are just some of the new terms that are now used in today's connectivity discussions. There is no simple solution, such as a configuration tool, that can have the level of expertise needed to configure a customers I/O environment. Planning is of the essence. The zSeries fiber cabling service is designed to help our customers integrate into this new, complex environment efficiently and effectively.

Question:
Why are you still offering z900 cable features?

Answer:
Our direction is to offer a standardized level of cabling to give you a connectivity solution for the entire environment. We are introducing the zSeries fiber cabling service first on our new z800 family. If you would like to use the zSeries fiber cabling service with your z900, we can easily accommodate your request. This gives you, our customers, the opportunity to begin a single fiber cable infrastructure strategy across your data center environment to support servers, switches, SANs, traditional I/O like disk, tape, and networking.

Question:
How does the price of the zSeries fiber cabling service compare to the z900 price of cables?

Answer:
The two are comparable. In z900 you pay for the cabling by buying cable features and the planning/installation is covered in the product cost. In z800 you buy a cabling service contract which includes cables, planning and install hours.

Question:
What if I don't want to use the zSeries Fiber Cabling Services?

Answer:
As was the case with previous mainframes, you can provide your own cables and do the planning and installation yourself. We strongly recommend that you use IBM qualified cables to ensure the continued operational integrity of all your equipment. You will be responsible for the fiber cable planning and installation. If you request IPR/Connectivity Specialist and/or SSR/CE involvement it will be billable.

Question:
Are these services offered world wide? Where can I get more information on the zSeries Cabling Services?

Answer:
These services are offered world wide. Contact your IBM Sales Representative or IBM Business Partner for details or contact ResourceLink at: ibm.com/servers/resourcelink.

zSeries Offering for Linux — Services and Support

Question:
What services are available with the offering? Is their price different for users of the zSeries Offering for Linux than for other users?

Answer:
Optional elements of the offering are services from IBM Global Finance as well as from IBM Global Services. For pricing information please contact your IGF or IGS representative.

Question:
What are the IBM Global Financing Services?

Answer:
The TOTAL Solution Financing provides innovative and tailored financing designed to make the acquisition of IBM ^ zSeries Offering for Linux manageable and affordable helping to overcome current budget restraints and eliminating large upfront cost.

Question:
What services are available for Linux from IBM Global Services?

Answer:
IBM Global Services offers a comprehensive portfolio of Linux services like:

- IBM Operational Support Services — Support Line for Linux which provides comprehensive around-the-clock enterprise-level remote usage and defect support for major distributions of the Linux Operating System as well as all IBM and many non-IBM applications that operate in a Linux environment.
- IBM Migration Services — Consolidates file/print and Web Serving Workloads to Linux for zSeries. This services offering helps customers to consolidate workloads from distributed server farms by providing an assessment of which workloads can be consolidated onto Linux on zSeries, and then completing the consolidation for them.
- IGS Locally Delivered Services including Linux Rapid Deployment solutions which provide the installation of Linux, the installation, setup and enablement of TCP/IP and the installation and configuration of Samba or Apache.

All IBM Global Services offerings can be combined with the zSeries Offering for Linux.

Question:
What kind of warranty do I get together with the offering?

Answer:
Three years of hardware support for the z800 Model 0LF hardware (one year of hardware warranty and two years of hardware maintenance) are included.

Question:
What kind of support for z/VM is included in the offering?

Answer:
The offering covers z/VM Subscription and Support License for three years. This not only includes defect support included with the IPLA license of z/VM 4.2 under the basic warranty (provided via e-mail, fax or postal service), but also covers Subscription and Support (S&S) which adds telephone assistance (voice support for defects during normal business hours) and access to updates, releases, and new versions of the program for as long as license is maintained.

Question:
What kind of support is covered by the optional component "IBM Support Line Software Services for Linux?"

Answer:
The IBM Linux Support Line is designed to provide a comprehensive around-the-clock enterprise-level remote usage and defect support for major distributions of the Linux Operating System as well as all IBM and many non-IBM applications that operate in a Linux environment.

Question:
What Linux and VM education is available?

Answer:
The following classes are designed to introduce you to Linux and give you the hands-on experience you need to install and configure a Linux on zSeries system and related applications.

- Linux Basics (QLX13*) 4 days Linux for S/390 Installation (ZL100*) 3 days

In addition, the following class is designed to assist you in acquiring the necessary VM skills to support the Linux environment:

- VM Basics for Linux (ZV050*) 2 days

*These class numbers refer to education available in the US. Please check with your local office to find out what classes are available in your country.

For additional information or to enroll in these classes call 1-800-IBM-TEACH or visit:
ibm.com /services/learning

zSeries Offering for Linux — z/VM V4R2

Question:
What is zSeries virtualization technology?

Answer:
zSeries virtualization technology allows customers to virtualize processor, communications, storage and I/O devices thus avoiding the overhead of planning, purchasing and installing new hardware to support new workloads.

Question:
What benefits does z/VM V4R2 provide for my Linux environment?

Answer:
z/VM V4 enables you to run a large number of Linux server images on a single S/390 or zSeries server. It is ideally suited for those who want to move Linux and/or UNIX workloads deployed on multiple servers onto a single S/390 or zSeries server, while maintaining the same number of distinct server images. These Linux images can be deployed on standard processor engines or IFL processor features. Server consolidation often results in cost savings realized by managing large server farms deployed on virtual servers instead of multiple hardware servers.

Question:
If I paid OTC for z/VM on my 9672 can I move that license to z800 and use it in the zSeries Offering for Linux?

Answer:
No. z/VM Version 4 is an Initial Program License Agreement (IPLA) product and is not transferable from one serial number to another.

Question:
Does z/VM V4 work with all distributions of Linux?

Answer:
z/VM V4 works with the currently existing distributions of Linux:

- Red Hat: www.redhat.com
- SuSE: www.suse.de/en/produkte/susesoft/s390/
- Turbolinux: www.turbolinux.com

Question:
Where do I get more information on z/VM?

Answer:
For the most current information about z/VM, refer to the VM Web site at:
ibm.com/eserver/zseries/zvm

Statements of Direction

Question:
What does the Fibre Channel Protocol (FCP for SCSI) support for Linux on zSeries Statement of Direction mean?

Answer:
This SOD signals IBM's intent to enhance the zSeries FICON Express features to support FCP under Linux on zSeries. When available, FCP will be offered as a microcode load and new mode of operation for the FICON-Express features.

Presently IBM is not making a statement of direction for future z/OS support of FCP.

Question:
What would be the benefit of FCP support?

Answer:
The FCP feature means that IBM's zSeries would be capable of attaching to industry standard open storage devices and may access these devices from Linux on zSeries. Although there are other protocols defined for fibre channel besides FCP (e.g., SBCCS or FICON), FCP is the most widely used higher level fibre channel protocol in the industry.

Question:
If I already have FCP-attached storage, does this mean that zSeries is going to support it?

Answer:
Not necessarily. When FCP for Linux on zSeries is generally available, the initial list of supported devices and topologies will be limited. It will be our intention to expand the list of supported devices and topologies over time based on customer requirements.

IBM Corporation
Marketing Communications, Server Group
Route 100
Somers, NY 10589

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