IBM Power Systems: New features offered on selected products

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At a glance

IBM® Power Systems™ enhancements:

- Four new processors on the IBM Power® 750 Express® server
- New processor on the IBM Power 755 server
- Additional memory and storage features on the Rack-mount Hardware Management Console in support of the new IBM Systems Director Management Console software offering

Overview

New features are available on the IBM Power 750, Power 755, and Power 780 servers:

The following new processors and processor activations are available on the Power 750 Express server:

- 8-core 3.6 GHz POWER7™ Processor Card (#EPA1), Processor Activation (#EPB1), and Zero-priced Processor Activation (#EPF1)
- 6-core 3.7 GHz POWER7 Processor Card (#EPA2), Processor Activation (#EPB2), and Zero-priced Processor Activation (#EPF2)
- 4-core 3.7 GHz POWER7 Processor Card (#EPA3), Processor Activation (#EPB3), and Zero-priced Processor Activation (#EPF3)
- 8-core 3.2 GHz POWER7 Processor Card (#EPA4), Processor Activation (#EPB4), and Zero-priced Processor Activation (#EPF4)

Factory deconfiguration of processor cores to assist with optimization of software licensing is now available on the Power 750 Express Server with feature number 2319. In addition, this feature is now available on the Power 730 and Power 740 configured with a 12-core or 16-core processor.

When either PowerVM™ Standard or PowerVM Enterprise is installed in the Power 750, the system maximum of 160 dynamic LPARs is now increased to 320. When installed on the Power 770 or Power 780, the system maximum of 254 dynamic LPARs is now increased to 640. The latest system firmware (7.3.0) available May 2011 is a prerequisite.

Certain configurations of Power 730, 740, 750, and 755 are Energy Star qualified.

Refer to this website for detailed information
http://www-03.ibm.com/systems/hardware/energy_star/index.html

The following new processor and processor activation is available on the Power 755 server:

- 8-core 3.6 GHz POWER7 Processor Card (#EPA1) and Zero-priced Processor Activation (#EPF1)

In support of the new IBM Systems Director Management Console (SDMC) software offering, the following hardware features are available on the IBM 7042 Rack-mounted Hardware Management Console:

- IBM SDMC indicator (#0963)
- Additional 4 GB (2 x 2 GB) DDR3 Memory DIMMs (#1946)
- Additional 500 GB SATA hard disk drive, 2.5 inch (#1998)

For more information on the IBM SDMC software offering, refer to Software Announcement ZP11-0129, dated April 12, 2011.

The following new Trial PowerVM Live Partition Mobility feature (ELPM) is announcing on multiple POWER7 machine type models, which will enable clients to upgrade from PowerVM Standard Edition to PowerVM Enterprise Edition at no charge for 60 days. Live Partition Mobility, available only with PowerVM Enterprise Edition, allows for the movement of a running partition from one Power System server to another with no application downtime, resulting in better system utilization, improved application availability, and energy savings.

**Key prerequisites**

Refer to the specific feature description for the required operating system level support.

**Planned availability date**

- April 22, 2011, for feature numbers 0010 and 0011
- July 29, 2011, for feature numbers 1109, 1148, and 1151
- May 20, 2011, for all other features

Availability of programs with an encryption algorithm in France is subject to French government approval.

**Description**

**New Power 750 processor options**

The following new processors and processor activations are available on the Power 750 Express server:

- 8-core 3.6 GHz POWER7 Processor Card (#EPA1), Processor Activation (#EPB1), and Zero-priced Processor Activation (#EPF1)
- 6-core 3.7 GHz POWER7 Processor Card (#EPA2), Processor Activation (#EPB2), and Zero-priced Processor Activation (#EPF2)
- 4-core 3.7 GHz POWER7 Processor Card (#EPA3), Processor Activation (#EPB3), and Zero-priced Processor Activation (#EPF3)
- 8-core 3.2 GHz POWER7 Processor Card (#EPA4), Processor Activation (#EPB4), and Zero-priced Processor Activation (#EPF4)

Beginning July 12, 2011, the following processor features on the Power 750 Express server are only available on MES orders:
IBM Editions

Additional IBM Editions are now available on the Power 750 to support the new processor options.

IBM Editions are available only as initial order.

If you order a Power 750 Express server IBM Edition as defined below, you can qualify for half the initial configuration's processor core activations at no additional charge.

The total memory (based on the number of cores) and the quantity/size of disk, solid-state drive (SSD), Fibre Channel adapters, or Fibre Channel over Ethernet (FCoE) adapters shipped with the server are the only features that determine if a client is entitled to a processor activation at no additional charge.

Specifically, with an IBM Edition, processor activations for the new processor card options are:

- **3.6 GHz 8-core processor cards (#EPA1)**
  - 4 x #EPB1 (chargeable) and 4 x #EPF1 (no-charge) with 8-core (1 x #EPA1) configuration
  - 8 x #EPB1 (chargeable) and 8 x #EPF1 (no-charge) with 16-core (2 x #EPA1) configuration
  - 12 x #EPB1 (chargeable) and 12 x #EPF1 (no-charge) with 24-core (3 x #EPA1) configuration
  - 16 x #EPB1 (chargeable) and 16 x #EPF1 (no-charge) with 32-core (4 x #EPA1) configuration

- **3.7 GHz 6-core processor cards (#EPA2)**
  - 3 x #EPB2 (chargeable) and 3 x #EPF2 (no-charge) with 6-core (1 x #EPA2) configuration
  - 6 x #EPB2 (chargeable) and 6 x #EPF2 (no-charge) with 12-core (2 x #EPA2) configuration
  - 9 x #EPB2 (chargeable) and 9 x #EPF2 (no-charge) with 18-core (3 x #EPA2) configuration
  - 12 x #EPB2 (chargeable) and 12 x #EPF2 (no-charge) with 24-core (4 x #EPA2) configuration

- **3.7 GHz 4-core processor cards (#EPA3)**
  - 2 x #EPB3 (chargeable) and 2 x #EPF3 (no-charge) with 4-core (1 x #EPA3) configuration
  - 4 x #EPB3 (chargeable) and 4 x #EPF3 (no-charge) with 8-core (2 x #EPA3) configuration
  - 6 x #EPB3 (chargeable) and 6 x #EPF3 (no-charge) with 12-core (3 x #EPA3) configuration
  - 8 x #EPB3 (chargeable) and 8 x #EPF3 (no-charge) with 16-core (4 x #EPA3) configuration

- **3.2 GHz 8-core processor cards (#EPA4)**
  - 4 x #EPB4 (chargeable) and 4 x #EPF4 (no-charge) with 8-core (1 x #EPA4) configuration
  - 8 x #EPB4 (chargeable) and 8 x #EPF4 (no-charge) with 16-core (2 x #EPA4) configuration
  - 12 x #EPB4 (chargeable) and 12 x #EPF4 (no-charge) with 24-core (3 x #EPA4) configuration
  - 16 x #EPB4 (chargeable) and 16 x #EPF4 (no-charge) with 32-core (4 x #EPA4) configuration
When you purchase an IBM Edition, you can purchase an AIX®, IBM i, or Linux® operating system license, or you may choose to purchase the system with no operating system. The AIX, IBM i, or Linux operating system is processed using a feature number on AIX 5.3, AIX 6.1, or AIX 7.1, IBM i 6.1.1 or IBM i 7.1, Red Hat Enterprise Linux, and SUSE Linux Enterprise Server. If you choose AIX 5.3, AIX 6.1, or AIX 7.1 for your primary operating system, you can also order IBM i 6.1.1 or IBM i 7.1 and SUSE Linux Enterprise Server or Red Hat Enterprise Linux. The converse is true if you choose an IBM i or Linux subscription as your primary operating system.

These sample configurations can be changed as needed and still qualify for processor entitlements at no additional charge. However, selection of total memory or DASD/SSD/Fibre Channel/FCoE adapter quantities smaller than the totals defined as the minimums disqualifies the order as an IBM Edition and the no-charge processor activations are then removed.

Processor activations are only available to Solution Delivery Integration (SDIs) as MES orders.

Processor cards ordered separately after the initial order are not eligible for no-charge processor activations.

**Edition minimum memory definition details:**

A minimum of 4 GB memory per core is needed to qualify for the IBM Edition, except on the 6-core IBM Edition where there is a 32 GB minimum memory requirement. For example, a 6-core minimum is 32 GB, an 8-core minimum is 32 GB, and a 12-core minimum is 48 GB. There can be many different valid memory configurations that meet the minimum 4 GB per core requirement. For example:

- **4-core (16 GB minimum)**: 2 x 8 GB (2 x 4 GB DIMMs) Memory (#4526)
  - Also, 2 x 16 GB (2 x 8 GB DIMMs) Memory (#4527)
  - Also, 1 x 32 GB (2 x 16 GB DIMMs) Memory (#4528)

- **6-core (32 GB minimum)**: 4 x 8 GB (2 x 4 GB DIMMs) Memory (#4526)
  - Also, 2 x 16 GB (2 x 8 GB DIMMs) Memory (#4527)
  - Also, 1 x 32 GB (2 x 16 GB DIMMs) Memory (#4528)

- **8-core (32 GB minimum)**: 4 x 8 GB (2 x 4 GB DIMMs) Memory (#4526)
  - Also, 2 x 16 GB (2 x 8 GB DIMMs) Memory (#4527)
  - Also, 1 x 32 GB (2 x 16 GB DIMMs) Memory (#4528)

- **12-core (48 GB minimum)**: 6 x 8 GB (2 x 4 GB DIMMs) Memory (#4526)
  - Also, 3 x 16 GB (2 x 8 GB DIMMs) Memory (#4527)
  - Also, 2 x 32 GB (2 x 16 GB DIMMs) Memory (#4528)

- **16-core (64 GB minimum)**: 8 x 8 GB (2 x 4 GB DIMMs) Memory (#4526)
  - Also, 4 x 16 GB (2 x 8 GB DIMMs) Memory (#4527)
  - Also, 2 x 32 GB (2 x 16 GB DIMMs) Memory (#4528)

- **18-core (72 GB minimum)**: 9 x 8 GB (2 x 4 GB DIMMs) Memory (#4526)
  - Also, 5 x 16 GB (2 x 8 GB DIMMs) Memory (#4527)
  - Also, 3 x 32 GB (2 x 16 GB DIMMs) Memory (#4528)

- **24-core (96 GB minimum)**: 12 x 8 GB (2 x 4 GB DIMMs) Memory (#4526)
  - Also, 6 x 16 GB (2 x 8 GB DIMMs) Memory (#4527)
  - Also, 3 x 32 GB (2 x 16 GB DIMMs) Memory (#4528)

- **32-core (128 GB minimum)**: 16 x 8 GB (2 x 4 GB DIMMs) Memory (#4526)
  - Also, 8 x 16 GB (2 x 8 GB DIMMs) Memory (#4527)
  - Also, 4 x 32 GB (2 x 16 GB DIMMs) Memory (#4528)

**Note:** You can also mix different size memory features on the same server and meet the minimum memory requirements for the IBM Edition benefit as long as...
at least 4 GB per core is attained. For example, the 1 x 16 GB memory feature (#4527) can replace the 2 x 8 GB feature (#4526). However, all memory features on an individual processor card must be identical.

**Edition minimum Disk/SSD/Fibre Channel/FCoE definition details:**

- A minimum of two DASD, or two SSD, or two Fibre Channel adapters, or two FCoE adapters. You only need to meet one of these disk/SSD/FC/FCoE criteria. Partial criteria cannot be combined.
- Two SAS disk drives: Any capacity drives located in the system unit; feature 5802 I/O drawer or feature 5886 disk drawer qualify.
- Two SAS SSDs: drives located in the system unit; feature 5802 I/O drawer or feature 5886 disk drawer qualify.
- Two Fibre Channel adapters: Either PCI-X or PCI-E adapters located in the system unit or 12X-attached I/O drawer.
- Two Fibre Channel over Ethernet adapters: Either PCI-X or PCI-E adapters located in the system unit or 12X-attached I/O drawer.

**New Power 755 processor options**

The following new processor and processor activation are available on the Power 755 server:

- 8-core 3.6 GHz POWER7 Processor Card (#EPA1) and Zero-priced Processor Activation (#EPF1)

**IBM Systems Director Management Console hardware features**

In support of the new IBM Systems Director Management Console (SDMC) software offering, the following hardware features are available on the IBM 7042-CR6 Rack-mounted Hardware Management Console (HMC):

- IBM SDMC software indicator (#0963): Either feature 0963 (SDMC) or feature 0962 (HMC Licensed Machine Code) must be selected on initial orders.
- Additional 4 GB (2 x 2 GB) DDR3 Memory DIMMs (#1946): The HMC ships with 4 GB of memory. Ordering feature 1946 adds an additional 4 GB of memory, resulting in a total 8 GB of memory.
- Additional 500 GB SATA hard disk drive, 2.5 inch (#1998): The HMC ships with 500 GB of storage. Ordering features 1998 adds an additional 500 GB of storage, resulting in a total 1 TB of storage.

**Notes:**

- The following features must be ordered if the client wants to run IBM SDMC
  - #0963 - SDMC indicator
  - #0031 - No modem indicator
  - #1946 - Additional memory
  - #1998 - Additional storage

  Neither an external modem (#0032) nor an internal modem (#0033) may be selected with IBM SDMC (#0963).

  To run HMC LMC (#0962), you cannot order the additional storage (#1998); however, you can order the additional memory (#1946) if wanted.

For more information on the IBM SDMC software offering, refer to Software Announcement **ZP11-0129**, dated April 12, 2011.

**Accessibility by people with disabilities**

A US Section 508 Voluntary Product Accessibility Template (VPAT) containing details on accessibility compliance can be requested at
Statement of general direction

IBM plans to offer the new POWER7 processor-based Power 775 Supercomputer that is planned to accelerate high performance computing innovation in smarter computing projects such as climate prediction, medical and life sciences, financial services, petroleum reservoir modeling, and industrial design. The Power 775 Supercomputer is planned to be a highly integrated, densely packaged, high performance supercomputer in a rack solution, including compute nodes, storage, interconnect fabric, and featuring energy-efficient water cooling technology.

Preview announcements provide insight into IBM plans and directions. General availability, prices, ordering information, and terms and conditions will be provided when the product is announced. IBM's statements regarding its plans, directions, and intent are subject to change or withdrawal without notice at IBM's sole discretion. Information regarding potential future products is intended to outline our general product direction and it should not be relied on in making a purchasing decision. The information mentioned regarding potential future products is not a commitment, promise, or legal obligation to deliver any material, code or functionality. Information about potential future products may not be incorporated into any contract. The development, release, and timing of any future features or functionality described for our products remains at our sole discretion. Some products in this preview may have significant lead times between order and delivery.

Product number

The following are newly announced features on the specific models of the IBM Power Systems 7042, 7778, 7779, 7809, 7989, 7998, 8202, 8203, 8204, 8205, 8231, 8233, 8236, 8406, 8492, 8493, 9117, 9119, and 9179 machine type:

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Service Director Mgmt Indic
IBM E'Net Switch J48E
EX4500 10GB Optical Transceive
Juniper EX4500 E'Net Switch
4GB (2x2GB) Memory
500GB SATA HDD, 2.5in
Factory Deconfiguration of 1 c
4.3m (14') PWR Cord 63A P+N+G
4.3m (14') PWR Cord 60A 2P+G
Trial Live Partition Mobility
8 core 3.6 GHz POWER7 Proc
6 core 3.7 GHz POWER7 Proc
4 core 3.7 GHz POWER7 Proc
8 core 3.2 GHz POWER7 Proc
One Processor Activation EPA1
One Processor Activation EPA2
One Processor Activation EPA3
One Processor Activation EPA4
Zero priced Proc Activat #EPA1
Zero priced Proc Activat #EPA2
Zero priced Proc Activat #EPA3
Zero priced Proc Activat #EPA4
Cobol Tracking Code-Power 710
C/C++ Tracking Code-Power 710
Cobol Tracking Code-Power 730
C/C++ Tracking Code-Power 730
Cobol Tracking Code-Power 750
C/C++ Tracking Code-Power 750
The following are features already announced for the IBM Power Systems 9117 machine type:

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Publications

No publications are shipped with the announced product.

Services

**Global Technology Services**

IBM services include business consulting, outsourcing, hosting services, applications, and other technology management.

These services help you learn about, plan, install, manage, or optimize your IT infrastructure to be an On Demand Business. They can help you integrate your high-speed networks, storage systems, application servers, wireless protocols, and an array of platforms, middleware, and communications software for IBM and many non-IBM offerings. IBM is your one-stop shop for IT support needs.

For details on available services, contact your IBM representative or visit

http://www.ibm.com/services/

For details on available IBM Business Continuity and Recovery Services, contact your IBM representative or visit

http://www.ibm.com/services/continuity

For details on education offerings related to specific products, visit


Select your country, and then select the product as the category.

Technical information

**Specified operating environment**

**Software requirements**

Refer to the specific feature description for the required operating system level support.

**Planning information**

**Cable orders**

No cables are required.

**Security, audibility, and control**

This product uses the security and auditability features of host hardware, host software, and application software.

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

Contact your IBM representative for the list of selected services available in your country, either as standard or customized offerings, for the efficient installation, implementation, or integration of this product.

IBM Electronic Services

Electronic Service Agent™ and the IBM Electronic Support web portal are dedicated to providing fast, exceptional support to IBM Systems customers. The IBM Electronic Service Agent tool is a no-additional-charge tool that proactively monitors and reports hardware events, such as system errors, performance issues, and inventory. The Electronic Service Agent tool can help you stay focused on your company’s strategic business initiatives, save time, and spend less effort managing day-to-day IT maintenance issues. Servers enabled with this tool can be monitored remotely around the clock by IBM Support all at no additional cost to you.

Now integrated into the base operating system of AIX 5.3, AIX 6.1, and AIX 7.1, Electronic Service Agent is designed to automatically and electronically report system failures and utilization issues to IBM, which can result in faster problem resolution and increased availability. System configuration and inventory information collected by the Electronic Service Agent tool also can be viewed on the secure Electronic Support web portal, and used to improve problem determination and resolution by you and the IBM support team. To access the tool main menu, simply type "smitty esa_main", and select "Configure Electronic Service Agent." In addition, ESA now includes a powerful web user interface, giving the administrator easy access to status, tool settings, problem information, and filters. For more information and documentation on how to configure and use Electronic Service Agent, refer to

http://www.ibm.com/support/electronic

The IBM Electronic Support portal is a single Internet entry point that replaces the multiple entry points traditionally used to access IBM Internet services and support. This portal enables you to gain easier access to IBM resources for assistance in resolving technical problems. The My Systems and Premium Search functions make it even easier for Electronic Service Agent tool-enabled customers to track system inventory and find pertinent fixes.

Benefits

**Increased uptime:** The Electronic Service Agent tool is designed to enhance the Warranty or Maintenance Agreement by providing faster hardware error reporting and uploading system information to IBM Support. This can translate to less wasted time monitoring the "symptoms," diagnosing the error, and manually calling IBM Support to open a problem record. Its 24x7 monitoring and reporting mean no more dependence on human intervention or off-hours customer personnel when errors are encountered in the middle of the night.

**Security:** The Electronic Service Agent tool is designed to be secure in monitoring, reporting, and storing the data at IBM. The Electronic Service Agent tool securely transmits either via the Internet (HTTPS or VPN) or modem, and can be configured to communicate securely through gateways to provide customers a single point of exit from their site. Communication is one way. Activating Electronic Service Agent does not enable IBM to call into a customer’s system. System inventory information is stored in a secure database, which is protected behind IBM firewalls. It is viewable only by the customer and IBM. The customer's business applications or business data is never transmitted to IBM.

**More accurate reporting:** Since system information and error logs are automatically uploaded to the IBM Support center in conjunction with the service request, customers are not required to find and send system information, decreasing
the risk of misreported or misdiagnosed errors. Once inside IBM, problem error data is run through a data knowledge management system and knowledge articles are appended to the problem record.

**Customized support:** Using the IBM ID entered during activation, customers can view system and support information in the "My Systems" and "Premium Search" sections of the Electronic Support website at

http://www.ibm.com/support/electronic

My Systems provides valuable reports of installed hardware and software using information collected from the systems by Electronic Service Agent. Reports are available for any system associated with the customer’s IBM ID. Premium Search combines the function of search and the value of Electronic Service Agent information, providing advanced search of the technical support knowledge base. Using Premium Search and the Electronic Service Agent information that has been collected from your system, customers are able to see search results that apply specifically to their systems.

For more information on how to utilize the power of IBM Electronic Services, contact your IBM Systems Services Representative, or visit

http://www.ibm.com/support/electronic

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**Terms and conditions**

**Field-installable feature**

Yes

**Warranty period**

The warranty period for features announcing on the 7042-CR6, 8233-E8B, 8236-E8C, 9117-MMB, 9119-FHB, and 9179-MHB is one year.

The warranty period for features announcing on the 7998-60X, 8202-E4B, 8205-E6B, 8406-70Y, 8406-71Y, and 8493-T42 is three years.

An IBM part or feature installed during the initial installation of an IBM machine is subject to a full warranty effective on the date of installation of the machine. An IBM part or feature which replaces a previously installed part or feature assumes the remainder of the warranty period for the replaced part or feature. An IBM part or feature added to a machine without replacing a previously installed part or feature is subject to a full warranty effective on its date of installation. Unless specified otherwise, the warranty period, type of warranty service, and service level of a part or feature is the same as the machine it is installed in.

**Customer setup**

Yes

**Machine code**

Same license terms and conditions as base machine.

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**Prices**

For all local charges, contact your IBM representative.

**Announcement countries**

All European, Middle Eastern, and African countries except Iran, Sudan, and Syria.
**Trademarks**

Power Systems, POWER7, PowerVM and Electronic Service Agent are trademarks of IBM Corporation in the United States, other countries, or both.

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For the most current information regarding IBM products, consult your IBM representative or reseller, or visit the IBM worldwide contacts page

http://www.ibm.com/planetwide/