Power virtualization enhancements for IBM PowerVM, IBM Hardware Management Console, and IBM PowerKVM

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At a glance

Improvements in Power® virtualization for IBM® PowerVM®, IBM PowerKVM and IBM Hardware Management Console (HMC) help improve usability, extend maintenance offerings, and enhance the flexibility of the virtualization offerings.

Enhancements:

- HMC and PowerVM POWER8™ Enterprise system support
- One-year software maintenance offering for IBM PowerVM for IBM PowerLinux™ Edition
- HMC V8.20, which offers an improved user experience for PowerVM
- PowerKVM V2.1.1, which provides support for new Linux™ distributions, additional I/O support, and availability improvements.

For ordering, contact your IBM representative, an IBM Business Partner, or IBM Americas Call Centers at 800-IBM-CALL (Reference: RE001).

Overview

Power virtualization allows organizations to deliver services more efficiently by consolidating workloads onto fewer servers. This consolidation optimizes utilization of server and storage resources. Power virtualization offerings include IBM PowerVM and IBM PowerKVM. The management of PowerVM typically requires IBM Hardware Management Console (HMC).

Power virtualization enhancements include the following improvements for PowerVM, PowerKVM, and HMC:

- PowerVM support for Power Enterprise Systems featuring the IBM POWER8 processor
- An additional option for one-year software maintenance for PowerVM for IBM PowerLinux Edition
- HMC V8.20, which offers an improved user experience for PowerVM
- PowerKVM V2.1.1, which provides support for new Linux distributions, additional I/O support, and availability improvements.
Planned availability date

- October 24, 2014: 5765-PVE and 5771-PVL product infrastructure update and PowerKVM V2.1.1
- November 11, 2014: PowerVM VIOS V2.2.3 SP, PowerVM for PowerLinux V2.2.3 SP
- November 18, 2014: HMC V8.20

Description

IBM Hardware Management Console (HMC) V8.2 enhancements improve the usability of IBM PowerVM and support the new Power Enterprise Systems.

Functionality improvements:

- Improved virtualization user experience with HMC V8.2
- Enhanced and simplified HMC management of PowerVM virtualization enables automation and helps simply the setup and operation of PowerVM*
- Improved no-touch VIOS virtualization management enables complete virtualization administration from HMC*
- Delivers one-touch VIOS deployment that enables VIOS images to be deployed from HMC to help simplify the setup of I/O virtualization and PowerVM*
- Has system and partition templates that enable site-specific virtual machine configurations to be consistently deployed and can be used to enforce virtualization best practices for various configurations*
- Includes simplified Remote Restart, removing need for storage area network (SAN) (LUNs)
- Contains operating system-level shutdown for IBM i partitions, providing parity with existing support for VIOS, IBM AIX®, and Linux
- Has technology preview of the concurrent activation and network install graphical user interface for partition operating system
- Has technology preview for new UI capabilities such as quick search, gallery views, graphical topology, and improved resource views
- Delivers enhanced manual and automatic First Failure Data Capture (FFDC) on Live Partition Mobility (LPM) abort
- Includes, with HMC V8.2, IBM POWER8 Enterprise hardware support

Note: The virtualization improvements implemented by the HMC require HMC V8.2.

* Function already available in HMC V8.10 SP1.

PowerKVM V2.1.1 contains additional support for new Linux distributions, additional I/O support, and availability improvements.

Enhancements:

- PCI Pass through I/O support allows more options for performance.
- Mixed Endian virtual machine support on a single PowerKVM host provides increased flexibility.
- PCI Hot Plug support provides expanded availability by allowing new devices to be added dynamically.
- Support for SUSE Linux Enterprise Server 12 and Ubuntu 14.10 provides a larger choice of Linux versions.

Accessibility by people with disabilities

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

Section 508 of the US Rehabilitation Act

IBM PowerVM V2.2 is capable as of October 24, 2014, when used in accordance with IBM's associated documentation, of satisfying the applicable requirements of Section 508 of the Rehabilitation Act, provided that any assistive technology used with the product properly interoperates with it. A US Section 508 Voluntary Product Accessibility Template (VPAT) can be requested on the following website:


Business Partner information

If you are a Direct Reseller - System Reseller acquiring products from IBM, you may link directly to Business Partner information for this announcement. A PartnerWorld ID and password are required (use IBM ID).


Statement of direction

IBM intends to bring the virtualization capability of PowerVM to the expanding littleEndian Linux distribution ecosystem supported on POWER8 based systems. These new Linux distributions allow for easy porting of Linux applications to the Power platform.

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.

Program number

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<tr>
<td>5765-PVE</td>
<td>V2.2.3</td>
<td>PowerVM Enterprise Edition</td>
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<td>5771-PVL</td>
<td>V1.1.0</td>
<td>PowerVM for Linux 1yr SWMA</td>
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<td>V2.2.3</td>
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<td>V2.2.3</td>
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Product identification number

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<td>5765-KVM</td>
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Reliability, availability, and serviceability (RAS)

The reliability of the IBM Power Systems™ starts with components, devices, and subsystems that are designed to be fault-tolerant. IBM Power Systems uses lower voltage technology in the processor Single Chip Modules (SCMs) that improves reliability stacked latches to reduce soft error (SER) susceptibility. During the design and development process, subsystems go through rigorous verification and integration testing processes. During system manufacturing, systems go through a thorough testing process to help ensure high product quality levels.

The processor and memory subsystem contain a number of features designed to avoid or correct environmentally induced, single-bit, intermittent failures as well as handle solid faults in components, including selective redundancy to tolerate certain faults without requiring an outage or parts replacement.

Offering Information

Product information is available via the Offering Information website

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

Publications

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Technical information

Specified operating environment

Hardware requirements

No-charge software license feature number for 5765-PVE (PowerVM Enterprise edition) is only valid on POWER8 Enterprise Systems (9119-MME) and (9119-MHE)

Software requirements

The program’s specifications and specified operating environment information may be found in documentation accompanying the program, if available, such as a readme file, or other information published by IBM, such as an announcement letter. Documentation and other program content may be supplied only in the English language.

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Planning information

Direct customer support
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http://www.ibm.com/support

Packaging
The PowerVM Enterprise Edition package contains DVDs that include product installation documentation and files.

Your Proof of Entitlement (PoE) for this program is a copy of a paid sales receipt, purchase order, invoice, or other sales record from IBM or its authorized reseller from whom you acquired the program, provided that it states the license charge unit (the characteristics of intended use of the program, number of processors, number of users) and quantity acquired.

Information about how you may obtain program services will be provided by the party (either IBM or its authorized reseller) from whom you acquired the program.

Security, auditability, and control

PowerVM Enterprise Edition V2.2 uses the security and auditability features of the host hardware or software. The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

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IBM Software Services has the breadth, depth, and reach to manage your services needs. You can leverage the deep technical skills of our lab-based, software services team and the business consulting, project management, and infrastructure expertise of our IBM Global Services team. Also, we extend our IBM Software Services reach through IBM Business Partners to provide an extensive portfolio of capabilities. Together, we provide the global reach, intellectual capital, industry insight, and technology leadership to support a wide range of critical business needs.

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http://www.ibm.com/software/sw-services/

Ordering information

IBM PowerVM Enterprise Edition adds no charge features to support IBM POWER8 Enterprise Servers.

IBM PowerVM Enterprise Edition V2.2 (5765-PVE)
This software license offers one or three year Software Maintenance, previously referred to as Software Subscription and Technical Support.

Extending coverage for a total of three years from the date of acquisition may be elected. Order the program number, feature number, and quantity to extend coverage for your software licenses. If maintenance has expired, specify the after license feature number.

The SWMA for the offerings in this announcement are already released. The update here is for PowerVM Enterprise edition for Linux 5771-PVL pid, IBM will now offer one year SWMA with the initial purchase.

### Charge metric

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<th>Program name</th>
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<td>PowerVM EE</td>
<td>5765-PVE</td>
<td>per processor core</td>
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<tr>
<td>PowerVM EE for Linux 1yr Reg/Ren</td>
<td>5771-PVL</td>
<td>per processor core</td>
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</table>

**Note:** The PIDs listed here are announced.

### Processor Core (or Processor)

Processor Core (or Processor) is a unit of measure by which the program can be licensed. Processor Core (or Processor) is a functional unit within a computing device that interprets and executes instructions. A processor core consists of at least an instruction control unit and one or more arithmetic or logic unit. With multicore technology, each core is considered a Processor Core. Entitlements must be acquired for all activated Processor Cores available for use on the server.

In addition to the entitlements required for the program directly, licensee must obtain entitlements for this program sufficient to cover the processor cores managed by program.

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**License Information number**

LC23-4407: PowerVM editions

The program’s License Information will be available for review on the IBM Software License Agreement website


**Limited warranty applies**

Yes

**Limited warranty**

IBM warrants that when the program is used in the specified operating environment, it will conform to its specifications. The warranty applies only to the unmodified portion of the program. IBM does not warrant uninterrupted or error-free operation of the program or that IBM will correct all program defects. You are responsible for the results obtained from the use of the program.

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**Money-back guarantee**

If for any reason you are dissatisfied with the program and you are the original licensee, you may obtain a refund of the amount you paid for it, if within 30 days of your invoice date you return the program and its PoE to the party from whom you
obtained it. If you downloaded the program, you may contact the party from whom you acquired it for instructions on how to obtain the refund.

For clarification, note that for programs acquired under any of IBM's On/Off Capacity on Demand (On/Off CoD) software offerings, this term does not apply since these offerings apply to programs already acquired and in use by you.

Other terms

Volume orders (IVO)
Yes. Contact your IBM representative.

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Passport Advantage applies
No

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Yes. All distributed software licenses include Software Subscription and Support (also referred to as Software Maintenance) for a period of 12 months from the date of acquisition, providing a streamlined way to acquire IBM software and assure technical support coverage for all licenses. Extending coverage for a total of three years from date of acquisition may be elected.

While your Software Subscription and Support is in effect, IBM provides you assistance for your routine, short duration installation and usage (how-to) questions, and 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 Handbook at

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System i® Software Maintenance applies
No

Variable charges apply
Yes

Educational allowance available
Yes. A 15% education allowance applies to qualified education institution customers.

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IT system security involves protecting systems and information through prevention, detection, and response to improper access from within and outside your
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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.

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More accurate reporting: Because system information and error logs are automatically uploaded to the IBM Support center in conjunction with the service request, you 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, you can view system and support information in the My Systems and Premium Search sections of the Electronic Support website at

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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 your IBM ID. Premium Search combines the function of search and the value of Electronic Service Agent information, providing advanced search of the technical support knowledgebase. Using Premium Search and the Electronic Service Agent information that has been collected from your system, you are able to see search results that apply specifically to your systems.

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

Prices

The Software Maintenance Agreement for the offerings are already released with the exception of IBM PowerVM Enterprise Edition for Linux (5771-PVL). IBM now offers one-year or three-year Software Maintenance Agreement registration with the initial purchase.

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<th>Feature description</th>
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<th>OTC number</th>
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<tr>
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**Variable charges:** The applicable processor-based one-time charge will be based on the group of the designated machine on which the program is licensed for use. If the program is designated to a processor in a group for which no charge is listed, the charge of the next higher group listed applies. For movement to a machine in a higher group, an upgrade charge equal to the difference in the then-current charges between the two groups will apply. For movement to a machine in a lower group, there will be no adjustment or refund of charges paid.

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ENUS-214-383-LIST_PRICES_2014_10_06.PDF
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Reference: RE001

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**Corrections**

**Corrected on October 27, 2014**

Updated the Planned Availability Date section.