IBM PowerVM V3.1 offers industrial-strength enterprise virtualization for IBM POWER technology-based server models, with enhanced performance, resilience, security, and I/O integration, and IBM PowerVC adds support for IBM POWER9 server

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Overview

IBM® PowerVM® V3.1, which delivers industrial-strength enterprise virtualization for IBM AIX®, IBM i, and Linux® environments on IBM POWER® processor-based systems, has expanded function and new management capabilities.

PowerVM V3.1 represents a major update of the industrial-strength enterprise virtualization that is delivered with POWER technology-based server models. It includes significant enhancements to performance, resilience, security, and I/O integration. PowerVM effectively cloud-enables POWER technology-based servers by providing complete virtualization of resources and accelerated Live Partition Mobility (LPM). Included with PowerVM are an updated hypervisor and updated versions of the Virtual I/O Server (VIOS) and the NovaLink virtualization management agent.

IBM VIOS 3.1 offers improved security and resiliency through a streamlined selection of components and removal of legacy packages that results in a smaller footprint and enhanced performance. VIOS 3.1 enhancements include support for iSCSI (network storage) virtualization, storage multi-pathing, and USB flash drive installation.

When deployed on POWER9™ technology-based servers, PowerVM V3.1 uses on-chip compression/encryption capabilities to provide a more secure LPM option that encrypts and compresses VMs during mobility operations.

Key prerequisites

- For IBM PowerVM Linux Edition (5765-VL3): IBM POWER 7+, IBM POWER8®, or IBM POWER9 technology-based server
- For IBM PowerVM Standard Edition (5765-VS3): POWER 7+ or POWER8 technology-based server
- For IBM PowerVM Enterprise Edition (5765-VE3): POWER 7+, POWER8, or POWER9 technology-based server

Planned availability date
Description

An updated version of VIOS is included with PowerVM.

VIOS V3.1 offers improved security and resiliency, with a refreshed code base that features a streamlined selection of components and removal of legacy packages, resulting in a smaller footprint and enhanced performance.

New VIOS V3.1 capabilities include:

- Support for iSCSI (network storage virtualization) for AIX and Linux workloads
- Storage multi-pathing enhancement
- Native compatibility mode for POWER8 and POWER9
- USB flash drive installation

PowerVM V3.1 uses the POWER9 on-chip compression/encryption capabilities to provide a more secure LPM option that encrypts and compresses VMs during mobility operations. Depending upon the size of the VM, this capability can also accelerate LPM operations significantly, due to the compressed image size.

Automation tooling is provided to simplify the VIOS V3.1 upgrade process.


With PowerVM 3.1, the Integrated Virtualization Manager (IVM) is no longer included with VIOS.

IBM PowerVC is designed to simplify the management of virtualized and cloud resources in Power Systems™ environments.

The IBM PowerVC 1.4.2 provides:

- Support for all POWER9 enterprise servers
- Latest OpenStack 'Queens' support
- Support for SR-IOV (via HMC)
- Red Hat support for SDI-based NovaLink on POWER9 servers
- PowerVM feature: PAYG (Pay-As-You-Go) Pools
- AIX Secure Boot
- Support Network Node on RHEL 7.x
- Deeper IBM Cloud™ Private and Cloud Automation Manager integration
- Automated storage port load balancing using white lists
- Pluggable driver enablement for FC tape

The prior DBaaS Tech Preview is no longer included with PowerVC 1.4.2.

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<sup>1</sup> Maintenance PIDs are already announced. They are listed here for reference only.

### Offering Information

Product information is available on the [IBM Offering Information](https://www.ibm.com) website.

### Publications

None

### Services

#### Software Services

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. 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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### Technical information

#### Specified operating environment

**Hardware requirements**

- For PowerVM Linux Edition (5765-VL3): POWER 7+, POWER8, or POWER9 technology-based server
- For PowerVM Standard Edition (5765-VS3): POWER 7+ or POWER8 technology-based server
- For PowerVM Enterprise Edition (5765-VE3): POWER 7+, POWER8, or POWER9 technology-based server

**Software requirements**

Not applicable
Packaging
This offering is delivered through the internet as an electronic download at IBM's My Entitled Systems Support website.

Security, auditability, and control
IBM PowerVM uses the security and auditability features of the host hardware or software.

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

Ordering information
Consult your IBM representative.

Program description

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Program name | Part number or PID number | Charge metric
---|---|---
PowerVM Enterprise Edition | 5765-VE3 | Per Processor Core

**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.

**Notes:**

- Some programs may require licenses for the program and what is being managed. In that case, the following applies. 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 the program.
- Some programs may be licensed on a managed basis only. In that case, the following applies. Instead of the entitlements required for the program directly, licensee must obtain entitlements for this program sufficient to cover the processor cores managed by program.

**System Program Order (SPO)**

An order for SPO 5692-A6P is mandatory for shipments of program distribution. The individual licensed program orders are for registration and billing purposes only. No shipment occurs under these orders.

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Limited warranty

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Passport Advantage applies

No

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IBM Operational Support Services - SoftwareXcel

No

System i Software Maintenance applies

No

Variable charges apply

No

Educational allowance available

Yes. A 15% education allowance applies to qualified education institution clients.

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IT system security involves protecting systems and information through intrusion prevention, detection, and response to improper access from within and outside your enterprise. Improper access can result in information being altered, destroyed, or misappropriated or can result in misuse of your systems to attack others. Without a comprehensive approach to security, no IT system or product should be considered completely secure and no single product or security measure can be completely effective in preventing improper access. IBM systems and products are designed to be part of a regulatory compliant, comprehensive security approach, which
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### Benefits

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**Prices**

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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.

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IBM United States

**Corrections**

*(Corrected on October 29, 2018)*

Added prices.