IBM PowerVM editions, IBM PowerVC, and IBM Cloud PowerVC Manager enhancements

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At a glance

IBM® PowerVM® V2.2.6, which delivers industrial-strength virtualization for IBM POWER® processor-based systems, is enhanced with the following new functions:

- SSP Flash Acceleration
- Live Partition Mobility (LPM) enhancements (PowerVM Enterprise only)
- VIOS packaging optimizations
- SEA failover / failback enhancement
- Software-defined storage

IBM PowerVM NovaLink V1.0.0.8, a software interface that is used for virtualization management, now supports:

- PowerVM Open I/O Software Defined Environments (SDE) mode
- Automated installation of Red Hat Enterprise Linux® (RHEL) by using a configured kickstart file
- Enhanced failure data collection for Live Partition Mobility operations
- SR-IOV adapters in the NovaLink installer

IBM PowerVC V1.4.0 provides simplified virtualization management and cloud deployments for IBM AIX®, IBM i, and Linux virtual machines (VMs) running on IBM Power Systems™. It is enhanced with:

- Image import and export
- Database as a Service (DBaaS) -- Tech Preview (IBM Cloud PowerVC Manager only)
- VM live capture
- PowerVC UI update
- Flexible SAN zone names
- Software-defined storage (Tech Preview mode only for IBM i)
- KVM on Power® support

Overview

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

IBM PowerVC is an advanced virtualization management and cloud offering for Power Systems servers based on OpenStack technology. This comprehensive
virtualization and cloud management offering is simple to install and use, and enables virtual machine setup and management.

**Key prerequisites**

- Any IBM system that includes an IBM POWER7\textsuperscript{th}, IBM POWER7 +, or IBM POWER8\textsuperscript{th} processor.
- PowerVM NovaLink requires systems with a POWER8 processor and FW840, or higher.

**Planned availability date**

- October 27, 2017, for PowerVM
- December 15, 2017, for PowerVM NovaLink and PowerVC

**Description**

**PowerVM V2.2.6**

PowerVM is enhanced with the following new functions:

- SSP Flash Acceleration enhancements
  - Flash-based caching technology that transparently accelerates AIX, Linux, and IBM i workloads
  - Supports active/active concurrent data access to shared SSP devices across the landscape and is LPM compatible
- Live Partition Mobility (LPM) enhancements (PowerVM Enterprise only)
- VIOS packaging optimizations
  - Removal of unnecessary content/packages (that is, out of support, not needed for VIOS operation, and so on) to reduce storage footprint and security vulnerabilities
- SEA failover/failback enhancement
  - Reverse ARP handling
- Software-defined storage
  - PowerVM now supports software-defined storage when paired with PowerVC and IBM Spectrum Scale\textsuperscript{TM} through PowerVM Open I/O.
  - Enables users to build a SAN-less PowerVM cloud.

PowerVM Integrated Virtualization Manager (IVM) will not be supported in the following PowerVM components in 2018:

- IBM POWER8 is the last Power processor with IVM support.
- VIOS 2.2 is the last version of VIOS to bundle and support IVM.

**PowerVM NovaLink, V1.0.0.8**

PowerVM NovaLink, which provides a scalable direct OpenStack cloud management connection for OpenStack solutions like PowerVC, has been enhanced with the following new functions:

- Support for PowerVM Open I/O software-defined environments (SDE) mode.
- Support for automated installation of RHEL by using a configured kickstart file. Users can automate NovaLink installations in the RHEL environment by using a configured kickstart file.
- Support for enhanced failure data collection for Live Partition Mobility operations. Automatically collect all available logs across different components when there is a Live Partition Mobility failure.
• Support for SR-IOV adapters in the NovaLink installer. Users can assign SR-IOV port in the NovaLink installer.

**PowerVC V1.4.0**

IBM PowerVC V1.4.0 enhancements include:

• Image import and export
  – Seamlessly move workload images between different storage arrays or even across data centers with one-click image import/export.
  – Enables hybrid cloud environments; easily share images between data centers.

• Database as a Service (DBaaS) -- Tech Preview (Cloud PowerVC Manager edition only)
  – Empower developers to use one-click deploy and manage their favorite database, create and delete databases, create and delete users, and so on.
  – Choose from a wealth of open source databases so that you can pick the right database for the job.
  – Faster time to market for user applications.

• VM live capture
  – Save time and without disruption capture workloads while they are running.

• PowerVC UI update
  – New look and feel for the PowerVC GUI.
  – Optimize key user interactions based on PowerVC user feedback.

• Flexible SAN zone names
  – Promotes flexibility by allowing custom naming patterns for the SAN zone names created by PowerVC

• Software-defined storage
  – Enables a flexible storage backend built on top of IBM Spectrum Scale.
  – PowerVC automates and optimizes the Spectrum Scale cluster creation.
  – Empowers users to abstract their backing storage devices behind Spectrum Scale.

• KVM on Power support
  – Support for KVM hypervisors on certain industry standard Linux distributions
  – Unified management of KVM and PowerVM resources from a single PowerVC installation
  – Utilizes PowerVC’s software-defined networking and storage support

**Reference information**

For additional information on Cloud PowerVC Manager for Software Defined Infrastructure, see Software Announcement 217-507, dated October 10, 2017.

**Program number**

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