IBM Power System S914

Superior on-premise infrastructure for hybrid multicloud architectures and mission-critical applications

Highlights

- Full PCIe Gen4 architecture enables seamless maximum speed and throughput between on-premise and multiple public cloud infrastructures
- Unmatched memory bandwidth and memory storage in the market together with up to 14 NVMe adapters allow VM, container and bare metal consolidation, saving data center space and networking costs
- Supports multiple OS instances without processor overhead
- PowerVM hypervisor is included built-in at no additional cost
- Migrate easily from previous IBM Power Systems servers with a no-cost temporary IBM PowerVM license for your previous server
- Boot from PCIe Gen4 NVMe devices supported for native IBM i deployments
- New cost-effective 800 GB data center NVMe device supported for AIX, IBM VIOS or Linux environments

IBM Power Systems S914

Leveraging IBM's unique, comprehensive approach to the cloud, the new Power System S914 server delivers a seamless and light-speed throughput I/O between multiple on-premise and public cloud applications, and cloud-like agility and economics by supporting the IBM Power Systems Private Cloud Solution with Shared Utility Capacity.

Powered by a full PCIe Gen4 architecture (slots, switches and lanes) and up to 14 NVMe supported devices, the IBM Power System S914 server is a powerful 1-socket server. It is primed with a POWER9 processor, a technology designed from the ground up for data-intensive workloads. The system is built with innovations that deliver the highest security and reliability standards for all types of enterprises.

The IBM Power System S914 is ideal for small and medium business-critical applications, operational databases, advanced analytics and I/O intensive workloads, medium and large footprints of microservices architectures, high-density virtualization, and distributed and edge computing operations.

When it comes to virtualization technology, IBM Power System S914 is unmatched. With the built-in PowerVM hypervisor, clients have been relying on IBM for years to provide consumability and agility in IT data centers. It's the only choice for mission-critical operations with industry-leading end-to-end security (hardware, firmware, hypervisor) and no virtualization vulnerabilities.

Check the server features below, and contact IBM or one of its authorized Business Partners to start your journey to becoming a hybrid multicloud enterprise.

- Up to 1024 GB of DDR4 memory
- Storage backplane options:
  - Eighteen SFF-3 Bays/Dual IOA with Write Cache
  - Twelve SFF-3 Bays/RDX Bays
  - Split feature to 6+6 SFF Bays: Add a second SAS Controller
  - Twelve SFF-3 Bays/RDX Bay/2 EXT PT
- Optional PCIe4 NVMe carrier card with two U.2 module slots
- Expansion capabilities for the EXP24SX SFF Gen2 bay Drawer
- Hot-swap PCIe Gen4 and Gen3 slots
- Integrated:
  - Service processor
  - EnergyScale technology
  - Hot-swap and redundant cooling
  - USB 3.0 ports
  - Two HMC ports
  - One system port with RJ45 connector
- Two hot-plug, redundant power supplies
- 19-inch rack-mounting hardware (4U) and tower option

The new S914 - Industry leading integrated security and reliability as well as a built-in cloud-optimized hypervisor, PowerVM, at no cost

Power System S914 (9009-41G) at a Glance

System Configurations

Processor Options	1-socket, populated with the following POWER9 processor modules: • 4-core, 2.3 to 3.8 GHz (max) • 6-core, 2.3 to 3.8 GHz (max) • 8-core, 2.8 to 3.8 GHz (max)- rackmount only
Level 2 (L2) Cache Per Core	512 K
Level 3 (L3) Cache Per Core	10 MB
Memory Options (RAM)	Up to 1.0 TB of system memory distributed across 16 DDR4 DIMM slots. Supports different memory DIMMs sizes such as 16 GB, 32 GB, and 64 GB, running at different speeds of 2133, 2400, and 2666 Mbps
Internal Disk Storage	Up to 18 SAS HDD/SSD, or 6 SAS HDD/SSD + 2 hot-plug NVMe U.2 drive slots, or 4 hot-plug NVMe U.2 drive slots
Processor-to-Memory Bandwidth	Up to 170 GB/s per socket
NVMe Enterprise Devices	Up to 11 devices with up to 6.4 TB each, and 70.4 TB of NVMe data storage space
Media Bays	Optional RDX drive with 12 SFF Bay option only,
PCIe 4.0 Slots	1 PCIe x16 Gen4, full-height, half-length slot (CAPI) 1 PCIe x8 Gen4, full-height, half-length slot (CAPI) 2 PCIe x16 Gen4, full-height, half-length slots 4 PCIe x8 Gen4, full-height, half-length slots (one is required for a base LAN adapter) 4 front PCIe Gen4 capable NVMe U.2 drive slot Total: 12 PCIe Slots Support concurrent maintenance of PCIe adapters

Power System S914 (9009-41G) at a Glance

Standard Features

I/O Ports	• One front USB 3.0 port • Two rear USB 3.0 ports • Two HMC 1GbE RJ45 ports • One system port with RJ45 connector • 1x USB 3.0 front, 2x USB 3.0 rear, 2x HMC 1 GB Eth RJ45 ports, one system port with RJ45 connector, 2x High Speed 25 Gb/s ports
Advanced Virtualization	A PowerVM hypervisor license is built-in the system at no additional cost
Reliability, Availability and Serviceability (RAS) Features	• POWER9 processor has the ability to do processor instruction retry for some transient errors • Memory subsystem RAS with error detection and correction circuitry • Chip kill memory • Service processor with proactive fault monitoring • Dynamic Processor Deallocation • Alternate Processor Recovery • Cache availability: L2 and L3 cache protected with ECC • Special Uncorrectable Error (SUE) handling prevents immediate system termination • PCI extended error handling (EEH) that allows the affected device driver to reset and continue without a system reboot • Uncorrectable error recovery, when enabled, allows the system to automatically restart, reducing downtime • Mutual surveillance: Service processor monitors the operation of firmware and the hypervisor monitors the service processor • Environmental monitoring does ambient and over temperature monitoring and reporting • Concurrent maintenance of PCIe adapter, power supplies, cooling fans and HDD/SSD drives • First Failure Data Capture (FFDC): Fault root cause is captured without the need to re-create the problem • Mobile access to important customer service functions available by scanning a QR label
Operating Systems	• Red Hat Enterprise Linux (RHEL) • SUSE Linux Enterprise Server (SLES) • IBM i • IBM AIX • IBM VIOS • Check for supported versions on the OS vendor's hardware compatibility lists
Power and Energy Features	Four power supplies supporting a tower or rack installation: 2+2 900W 100-127V or 200-240V AC Two power supplies supporting a rack installation: 1+1 1400W, 200-240V AC Operating frequency: 47/63 Hz IBM EnergyScale technology: Dynamically optimize the processor frequency at any given time based on CPU utilization and operating environment conditions
System Dimensions	19-inch rack-mount hardware • Form Factor: 4U • Width: 482 mm (18.97 in.) • Depth: 769.6 mm (30.3 in.) • Height: 173.3 mm (6.8 in.) • Weight: 36.3 kg (80 lb) Tower hardware: • Width: 182.4 mm (7.18 in.) • Width with stand: 328.5 mm (12.93 in.) • Depth: 751.7 mm (29.59 in.) • Depth with front-rotatable door: 814.7 mm (32.07 in.) • Height: 486.1 mm (19.14 in.) • Height with handle: 522 mm (20.55 in.) • Weight: 46.94 kg (103.5 lb)
Warranty and Hardware Maintenance	Standard warranty comes with 3 years of on-site, customer replacement unit, 9x5 coverage with Next Business Day response. Warranty may vary by country. Check for IBM Hardware Maintenance upgrades and Service Packs with your IBM representative or IBM Business Partner.

Why IBM?

IBM is leading the cognitive and cloud space— integrated cloud capabilities in POWER9 go in line with IBM's cloud strategy and enable clients to connect their enterprise applications with cloud-based AI or analytics offerings like Watson. IBM gives you best in class on-premise cloud deployment possibilities with this announcement in addition to the off-premise portfolio already maintained. And we're applying that innovation to cognitive infrastructure, helping our customers on their journey to AI.

IBM aligns cutting-edge innovation with enterprise dependability- IBM has over 105 years of aligning continuous innovation with our customers' business needs.

The POWER9 scale-out family will be the first set of servers that will come completely cloud enabled out of the box with integrated PowerVM® Enterprise capabilities. Additionally, we introduced on-chip analytics and algorithms that help customers run their workloads at an always optimized processor frequency for performance and throughput. In combination with the memory footprint of 1TB, IBM provides systems to clients that are unmatched by the competition in terms of security and virtualization capabilities. The price-performance of this new server makes it very attractive to current and future customers. Live Partition Mobility capabilities are built-in to cloud-enable your POWER9 infrastructure and help you migrate from previous Power Systems. Every new S914 also has the option of a temporary PowerVM license for your old server to support a seamless move of workloads to POWER9.

The new S914 has built-in security and is ready for current and future security threats.

For More Information

To learn more about the Power System S914, please contact your IBM representative or IBM Business Partner or visit the following website: https://www.ibm.com/products/power-system-s914

Additionally, IBM Global Financing provides numerous payment options to help you grow your business. We provide full lifecycle management of IT products and services, from acquisition to disposition. For more information, visit: https://www.ibm.com/financing

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