

IBM Power Systems Enhances Hybrid Cloud Capabilities with Red Hat

New pre-configured private cloud platform, innovative cloud-consumption payment model, and more Red Hat software now supported on IBM Power Virtual Servers

ARMONK, N.Y., Feb. 23, 2021 /PRNewswire/ -- IBM (NYSE: [IBM](#)) announced availability of Red Hat software on [IBM Power Systems](#) as well as new IBM Power Systems hardware. These announcements further expand IBM Systems's commitment to help clients modernize by empowering them with the latest technology from Red Hat to develop cloud-native applications and deploy them into hybrid cloud environments.

Today's announcements include:

- **Expanded Red Hat Capabilities on IBM Power Systems** – IBM Power Systems now features Red Hat OpenShift on IBM Power Virtual Server leveraging OpenShift's baremetal installerⁱ, Red Hat Runtimes, and newly certified Red Hat Ansible Content Collections.
- **New IBM Power Private Cloud Rack Solution** – Providing clients an optimized, production-level OpenShift platform to modernize traditional environments with cloud-native applications, the IBM Power Private Cloud Rack combines on-premises hardware, a complete software stack of IBM and Red Hat technology, and installation from IBM Systems Lab Services to deliver 49% lower cost per request as compared to similarly equipped x86-based platformsⁱⁱ.
- **Extended Dynamic Capacity** – Enhancements to IBM Power System's dynamic capacity to quickly scale compute capacity across the hybrid cloud on Linux, IBM i, and AIX.

"Twelve months ago, IT practitioners faced a vastly different landscape before the world was transformed by the global COVID-19 pandemic," said General Manager of IBM Cognitive Systems Stephen Leonard. "But despite the challenges, they recognize that a hybrid cloud approach can offer 2.5x the value derived from a single public cloud, as measured by an IBM internal, assessment by [IBM's Institute of Business Value](#)ⁱⁱⁱ. IBM Power Systems, along with the greater IBM and Red Hat portfolio, plays a critical role in this transition to hybrid environments."

IBM Power Systems and Red Hat Drive Client Success with Hybrid Cloud

Shree Cement Ltd., one of India's largest cement producers with nearly \$2 billion in revenue last year, has selected IBM POWER9-based IBM Power Systems to run a combination of Red Hat Enterprise Linux and AIX to help them modernize their IT infrastructure with hybrid cloud. When Shree Cement needed to streamline their supply chain while also increasing its computing capacity, they knew they needed to refresh their existing x86-based infrastructure.

"We were in the midst of technology modernization and were looking for a dependable IT Infrastructure support that could deliver 24/7 capabilities and integrate the operations, logistics, resources, export-import supply chain," said Manoranjan Kumar, Chief Information Officer, Shree Cement Ltd. "The two operating systems on IBM Power Systems, namely IBM AIX and Red Hat Enterprise Linux, helped us move away from vertical business silo approach. This allows us to operate horizontally across the company to bring in synergy amongst multiple

manufacturing plants to drive business results and ensure business continuity even during the migrations."

Shree wanted to build around an infrastructure that would allow them to scale with future business expansion while maximizing the utility of their hardware, and by creating an IT infrastructure built around Red Hat on IBM Power Systems, Shree Cement has laid a foundation that positions them to capitalize on the expanding hybrid cloud capabilities from IBM Power Systems and Red Hat, such as:

- **Red Hat OpenShift on IBM Power Virtual Server** – Recognizing that Red Hat OpenShift can be a critical part in helping organizations build an agile hybrid cloud, the container platform is [now available on IBM Power Virtual Server](#) leveraging OpenShift's baremetal installerⁱ. The IBM Power Virtual Server is an enterprise Infrastructure-as-a-Service offering built around IBM POWER9 and offering access to over 200 IBM Cloud services. In addition, IBM Power Virtual Server clients can now run leading business applications like SAP HANA in an IBM POWER9-based cloud.
- **Red Hat Runtimes on IBM Power Systems** – To help organizations and developers create cloud-native applications, Red Hat Runtimes is now supported on IBM Power Systems. Red Hat Runtimes is a set of products, tools and components designed to develop and maintain cloud-native applications. Now, developers looking to create cloud-native applications on IBM Power Systems have access to leading open source frameworks and runtimes that provide a single development experience for hybrid applications spanning IBM Power Systems and other platforms.
- **New Red Hat Ansible Content Collections** – Red Hat Ansible Automation Platform, [made available on IBM Power Systems last year](#), provides an open source platform for simpler automation of common IT tasks, freeing up IT administrator time as well as compute resources to focus on other tasks. IBM has created an extensive set of Ansible modules for the IBM Power Systems user community. Since the start of the new year, IBM Power Systems added 22 new Ansible modules to the Collection that bring new automation capabilities for common tasks like patch management, security management, OS & application deployment, continuous delivery, centralized backup and recovery, and virtualization management & provisioning. Currently, there are 102 Ansible modules, downloaded more than 13,000 times since February 23, that support POWER available to the open source community on GitHub. Many of these same modules are available as production-ready, enterprise-hardened and certified Ansible Collections via Red Hat Ansible Automation Platform.^{iv}

Simplified Deployment and Management of Hybrid Cloud

To help clients not only deploy a hybrid cloud, but also scale with agility to respond to spikes in demand, IBM is announcing two new technologies designed to bring simplicity to hybrid cloud deployment and management:

- **The IBM Power Private Cloud Rack Solution** – A pre-configured on-premises system with compute, storage, networking and pre-installed software, like Red Hat OpenShift, to match an organization's existing infrastructure, be it based around Linux, IBM i, or AIX, to help organizations operationalize their cloud management and provide an IaaS environment to help clients accelerate development and operations for Kubernetes container-based cloud-native applications with Red Hat OpenShift Container Platform.
- **Cloud-like Capacity and Pricing Across the Hybrid Cloud** – IBM had already enabled flexible, elastic capacity for on-premises [Power Private Cloud with Dynamic Capacity](#), allowing those users to unlock additional compute cores as needed and get cloud-like consumption-based pricing. Now, IBM is extending that ability to the hybrid cloud by piloting hybrid capacity credits, which can be purchased and used to

unlock capacity on select on-premises IBM POWER9-based servers as well as IBM Power Virtual Servers, based on where the user needs the additional compute power. IBM is also working with other ecosystem partners to further extend dynamic capacity across multiple Linux distributions.

"IBM's latest expanded support of their hybrid cloud and application modernization initiatives will help enable our customers to easily attain the efficiencies and flexibility of combining on-premises and cloud solutions using the latest open source and tooling," said Jim Dixon, Vice President, Software & IBM Power Systems at Mainline Information Systems. "Availability of hybrid cloud credits along with new appliance-like options of hardware and Red Hat software, including Red Hat OpenShift to provide consistency between on-premises IBM Power Systems and off-premises clouds, can offer ease of entry into this new and important IT paradigm."

IBM IT Infrastructure Continues to Evolve for Hybrid Cloud

Later this year, the next generation of the IBM Power Systems servers based on [IBM POWER10 processor, which was built from the ground up for hybrid cloud](#), will debut. In addition, later this year the next generation for the AIX operating system, version 7.3, is expected to continue the legacy of innovation with enhanced capabilities that deliver the resiliency, security, and scale needed for the hybrid cloud.

To round out a hybrid cloud ready infrastructure, IBM Storage recently announced new entry-level IBM FlashSystem models with comprehensive container support as well as support for Red Hat OpenShift and Ansible Automation Platform, while IBM Z and IBM Power Systems also announced new [hybrid cloud container offerings](#) for IBM Z across Red Hat OpenShift and IBM Cloud Paks.

Statements regarding IBM's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only.

For more information on IBM, please visit <http://www.ibm.com>.

For more information on IBM IT Infrastructure, please visit <https://www.ibm.com/it-infrastructure>.

ⁱ Red Hat Knowledge Base article, "Deploying OpenShift 4.x on non-tested platforms using the bare metal install method – <https://access.redhat.com/articles/4207611> .

ⁱⁱ This is an IBM internal study designed to replicate multi-tier banking OLTP workload usage in the marketplace of an IBM E950 (40-core Model 9040-MR9) with a total of 1 TB memory extrapolated (based on IDC QPI performance metric) to 60 cores running on 3 nodes of IBM S922 (20-core Model 9009-22G) with a total of 768 GB memory. The OpenShift cluster consisted of three master nodes and two worker nodes using OpenShift version 4.5.5 and Red Hat Enterprise Linux CoreOS (RHCOS) for IBM Power across five PowerVM LPARs. A sixth PowerVM LPAR on the system ran the OpenShift load balancer. SMT8 mode was enabled across all Power LPARs. Results are based on an extrapolation to 3 servers from an x86 cluster configuration comprised of two servers running VMware ESXi 6.7 with eight VM guests (three masters, four workers, and one load balancer) using OpenShift version 4.5.6. Each worker node guest had access to all vCPUs on the physical server on which it was running. Compared x86 models for the cluster were 2-socket Cascade Lake servers containing 48 cores and 512 GB each for a total of 96 cores and 1 TB of memory. Both environments used JMeter to drive maximum throughput against four OLTP workload instances using a total of 500 JMeter threads. The results were obtained under laboratory conditions, not in an actual customer environment. IBM's internal workload studies are not

benchmark applications. Prices, where applicable, are based on U.S. prices as of 02/15/2021 from our website and x86 hardware pricing is based on IBM analysis of U.S. prices as of 09/20/2020 from IDC. Price comparison is based on a 3-year total cost of ownership including HW, SW, networking, floor space, people, energy/cooling costs and three years of service & support for production and non-production (dev, test and high availability) environments.

ⁱⁱⁱ Based on IBM internal, cross-industry assessment

^{iv} Number of downloads does not represent number of unique users

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