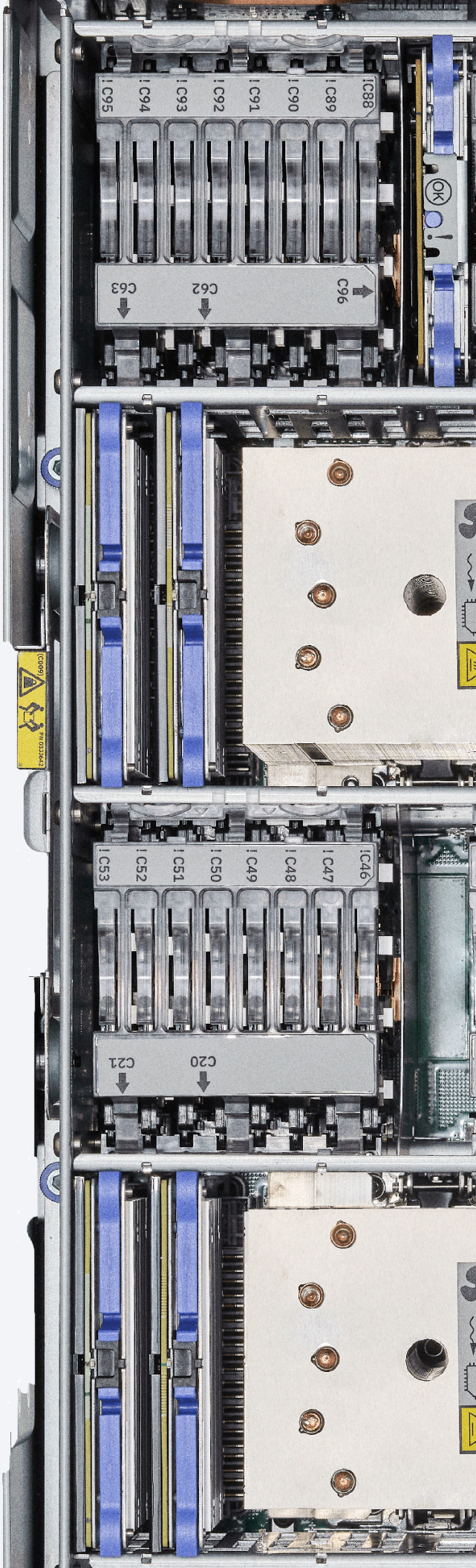
IBM Power

The IBM Power10 family of servers



IBM

Tri-Delta Resources

IBM® Power® servers are built to help clients respond faster to business demands, protect data from core to cloud and streamline insights and automation while maximizing reliability in a sustainable way. Power servers can modernize applications and infrastructure with a hybrid cloud experience to provide the agility companies need.

The new generation of IBM Power servers supports enhanced hybrid cloud capabilities for differentiated performance, security, serviceability and operating costs. That's why enterprises choose to run their core operations and analytical applications on IBM Power. IBM Power10 servers are designed to improve performance and security with the same class-leading reliability – whether responding faster to business demands or driving innovation. They're designed to deliver flexible IT without sacrificing performance. IBM Power servers are engineered for agility and empower our clients to:

Respond faster to business demands.
Create agility with efficient scaling and consistent pay-for-use consumption[1] across public and private clouds.

Protect from core to cloud.
Incorporate solutions that use memory encryption at the processor level designed to support end-to-end security across public and private clouds without impacting performance.

Streamline insights and automation.
Run AI inferencing directly in core and use IBM Watson® services on IBM Cloud®.

Maximize availability and reliability.
Use built-in advanced recovery and self-healing for infrastructure redundancy and disaster recovery on IBM Cloud.

IBM Power servers

IBM understands that applications and business processes have differing demands and that one size doesn't fit all. To ensure that technology aligns to business requirements rather than the other way around, IBM offers a full range of Power servers, each of which delivers leadership reliability, security, performance and scalability in its class. A totally integrated approach to the design, development and testing of each Power server ensures the resiliency required for today's enterprise IT infrastructure.

	IBM Power E1080	IBM Power E1050	IBM Power S1024	IBM Power S1022	IBM Power S1014
Chassis	5U system node and 2U system control unit	4U rack	4U rack	2U rack	4U rack or tower
Processor(s)	Up to 4 per node	Up to 4	Up to 2	Up to 2	1
Number of cores	Up to 240	Up to 96	Up to 48	Up to 40	Up to 8
Memory – (max.)	16 TB per node (up to 64 TB)	16 TB	8 TB	4 TB	1 TB
Supported operating systems	IBM® AIX® , IBM® i and Linux® operating systems	AIX, Linux	AIX, IBM i , Linux	AIX, IBM i , Linux	AIX, IBM i , Linux

Operating systems

AIX
Today, thousands of AIX users around the globe are running their core business on the AIX platform and using it to drive business growth and innovation. Clients can continue to modernize their AIX applications by deploying them in a hybrid cloud environment and automating common IT operations with Red Hat® Ansible® Automation Platform. They can also modernize their AIX business applications by extending to containerized Linux application components on the same co-resident system using microservices.

IBM i
At its core, the IBM i platform is designed to adapt to the ever-changing needs of both business and computing. Its defining characteristic, the integration represented by the "i" in IBM i, can help you gain more value from advanced technology with fewer resources and higher reliability. The IBM i 7.5 platform simplifies security and availability with the IBM® Db2® database software for IBM i integration, new options and tools — so you can focus on adding value to business applications instead of infrastructure availability.

Enterprise Linux
The Enterprise Linux operating system on IBM Power is a solid foundation for your open-source hybrid cloud infrastructure, allowing you to modernize applications efficiently. Built to be a solid foundation for your open hybrid cloud infrastructure, you can amplify the many benefits of open-source technology — reliability, security and scalability — with industry-leading cloud-native deployment options.

IBM Power S1014

Power software

PowerVM
IBM® PowerVM® software is designed to enable you to build for the cloud faster by using virtual machines (VMs) and storage. It is server virtualization without limits. Businesses are turning to PowerVM server virtualization to consolidate multiple workloads onto fewer systems, increasing server utilization and reducing cost. PowerVM provides a secure and scalable server virtualization environment for AIX, IBM i and Linux applications built upon the advanced reliability, availability and serviceability (RAS) features and leading performance of the IBM Power platform.

PowerVC
IBM® PowerVC software is based on virtual circuit (VC) technology and built on OpenStack. It provides simplified virtualization management and cloud deployments for IBM AIX, IBM i and Linux VMs running on the IBM Power platform. The offering is designed to build private cloud capabilities on Power servers and improve administrator productivity. It can further integrate with cloud environments through higher-level cloud orchestrators.

PowerSC
IBM® PowerSC is a security and compliance (SC) solution optimized for virtualized environments on IBM Power servers running AIX, IBM i or Linux. PowerSC sits at the top of the IBM Power server stack, integrating security features built at different layers. You can now centrally manage security and compliance on the Power platform for all IBM AIX and Linux operating systems and VMs on Power server endpoints. In this way you can get better support for compliance audits, including General Data Protection Regulation (GDPR).

PowerHA SystemMirror
IBM® PowerHA® technology positions you to address storage and high-availability (HA) requirements with a single integrated configuration through a simplified user interface. IBM Power is committed to investing in — and bringing to market — solutions designed to keep your IT environments resilient.

VM Recovery Manager
IBM® VM Recovery Manager for IBM Power Systems is an economical high-availability and disaster-recovery solution. Automation software, installation services and remote-based support are built in to help you streamline the process of recovery. Built-in functionality and IBM support can decrease the need for expert-level skills, shorten your recovery time objective, improve your recovery point objective, optimize backups and better manage growing data volumes.

IBM Power S1022

Modernize and build cloud-native applications

Red Hat OpenShift Container Platform
Red Hat® OpenShift® Container Platform is an enterprise-ready Kubernetes container platform with full-stack automated operations built to manage hybrid cloud deployments. The Red Hat OpenShift platform is optimized to improve developer productivity and promote innovation; it is fully supported on all IBM Power servers (that is, IBM® POWER8® processors or later). Designed to offer flexibility and choice for a variety of cloud-consumption models, the Red Hat OpenShift platform on Power technology is poised well for your core enterprise applications and for the next wave of digital transformation fueled by application modernization.

Red Hat Ansible Automation Platform
The Red Hat Ansible Automation Platform is enabled for IBM Power servers across AIX and IBM i environments running on Power systems private and public cloud infrastructures. Red Hat Ansible Certified Content for IBM Power helps you include workloads on the Power platform as part of your wider enterprise automation strategy through the Red Hat Ansible Automation Platform ecosystem. Enterprises already using Red Hat Ansible technology for other IT infrastructure — such as x86 or IBM® zSystems servers — can seamlessly integrate Power servers as well. The Ansible content helps enable DevOps automation through unified workflow orchestration with configuration management, provisioning and application deployment in one platform that's built to deliver an easy user experience.

Available on premises or in the cloud

IBM Power server customers have higher risk environments and need extremely low-risk infrastructure. Power systems are enterprise-class machines associated with trusted high performance. Expand your hybrid cloud journey with IBM Power Virtual Server for a consistent experience, modernizing at your pace and price point, on and off premises. IBM Power Virtual Server enables you to have an IT architecture like what you have on premises in a virtualized environment, allowing you to seamlessly move and manage workloads across cloud and on-premises environments.

IBM Power Virtual Server technology is built to allow you to:

- Connect to cloud-native services and architectural patterns to help transform business models.
- Provision logical partitions (LPARs) rapidly for efficient load-scaling.
- Run SAP HANA and SAP NetWeaver in an SAP-certified platform — on and off premises.
- Run containerized applications using the Red Hat OpenShift platform.

Workloads on IBM Power

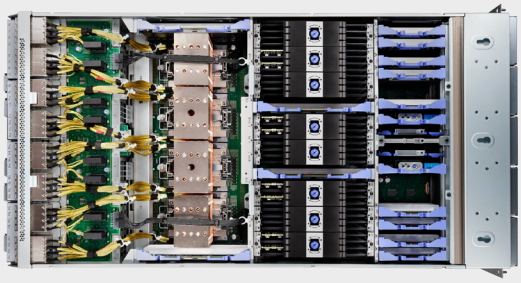
IBM Power for SAP HANA
IBM Power servers are designed for data-intensive and mission-critical workloads like SAP HANA so clients can simplify and accelerate their SAP HANA deployments from on-premises to IBM Power on IBM Cloud.

- **Provision faster**
  Get faster access to SAP HANA instances with simplified capacity allocation. Power systems come with built-in, firmware-based virtualization with negligible overhead. This lets you easily increase or decrease capacity and consolidate multiple production and development and testing (dev/test) environments.

- **Scale affordably**
  Power systems also allow clients to scale gradually by allowing granular capacity allocations. With finer capacity allocations in Power systems, you have the flexibility to incrementally allocate as low as 0.01 cores and 1 GB all the way up to 32 TB. This scalability enables you to allocate capacity that you really need instead of being forced to pay for unnecessary capacity.

- **Maximize uptime**
  IBM Power has delivered best-in-class reliability for the past 13 years according to ITIC[2]. It has consistently delivered more than 99.999% uptime and has built-in intelligent memory protection to detect and fix potential faults before they lead to system failure. In commodity architecture, comparable technology is optional and affects performance when used.

Learn more about SAP HANA on IBM Power →



IBM Power E1080

IBM Power for Oracle Database

A totally integrated approach to the design, development and testing of each IBM Power server ensures that they are simple to deploy and highly reliable as a foundation for Oracle Database. IBM Power technology is built to offer thousands of popular industry applications from ISVs running on a choice of Linux, AIX and IBM i operating systems. IBM has a full range of affordable Power servers, each of which delivers leadership performance and scalability in its class. For over 35 years, customers have relied on IBM Power solutions to deploy their Oracle Database and application workloads. Oracle certifies its products on IBM Power systems, delivering a host of benefits including comprehensive end-to-end support, portability and efficiency.

Learn more about IBM Power for Oracle Database →

Let us help you create business agility with a flexible and secure hybrid cloud infrastructure. Reach out to a Power sales representative, IBM Business Partner or the IBM Garage™ start the conversation today.

Endnotes

1. Power offers a consistent approach to buy pay-per-use capacity with Hybrid Cloud Credits. Credits can be bought once and can be used to consume capacity in on-premises private cloud and IBM Power Virtual Server
2. ITIC 2021 Global Server Hardware, Server OS Reliability Survey Results, ITIC, 30 November 2021

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