DELLTechnologies

Dell's PowerEdge: Cloud Revolutionized

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XEON

Expand Boundaries Beyond Measure

Elevate your cloud infrastructure to new heights with the innovative Dell PowerEdge R770 and R670 CSP Editions servers, powered by the Intel® Xeon® 6 processors, offering optimized, open and secure platforms. Achieving your goals of securely bringing your organization into Advanced AI can be easier with Dell high Performance computing tailored for optimal power efficiency and cost effectiveness in a large and diverse data center. Intel® Xeon® 6 processors with built-in accelerators increase the capacity for AI, data analytics, networking, storage, and HPC, allowing you to do more with the same number of virtual cores. Experience new options to solve your real-world problems of deploying innovative platforms into complex environments, with open designs tailored for you, these servers equipped new management tools make a difference in your heavy lifts while providing the security you can trust.

Precision in Design?
We optimized for you.

We enable rapid innovation for hyperscalers and Cloud Service Providers (CSPs) across various services like IaaS, PaaS, SaaS, AI/ML, Big Data analytics, and IoT, ensuring uninterrupted availability with our latest innovative solutions. The Dell PowerEdge R770 and R670 CSP Editions offer cloud service providers the opportunity to scale services in high-density, scale-out workloads with designed in optimization, slashing energy costs while maintaining top-notch performance. Equipped with Intel Xeon 6 processors, designed to deliver exceptional performance per watt and Dell Smart Cooling Technology, they are perfect for large multi-vendor data centers seeking a balance between power efficiency and performance, We know how offering versatile configurations help you drive results. The PowerEdge R770 and R670 CSP Editions offer a range of configurations, including two-socket options, various storage form factors, and both front and rear I/O setups, to simplify manageability across your data center. These features facilitate swift deployment and easy serviceability. Imagine having the ability to simultaneously and securely update firmware across multiple servers; such streamlined system management can save you valuable resources.

Service from the front?
We configured for you.

The Front I/O configuration option in the PowerEdge R770 and R760 CSP servers, offers a strategic advantage for data center operations. By positioning I/O ports at the front, these servers enable technicians to service equipment directly from the cold aisle, enhancing both comfort and safety. This design not only expedites maintenance tasks but also streamlines cable management, leading to improved operational efficiency. Additionally, it facilitates better airflow and cooling, which can contribute to a more compact data center layout. As a result, the overall footprint of the facility may be reduced, yielding cost savings and a lower environmental impact. The Front I/O feature is a thoughtful innovation that addresses the critical demands of modern data center management, where minimizing downtime and maximizing efficiency are essential.

Tailored to fit?
We designed for you.

For the intricate needs of modern data centers, PowerEdge servers revolutionize cloud services by providing advanced computing power, carefully engineered for maximum energy efficiency and cost-effectiveness in diverse and expansive data landscapes.

Dell PowerEdge R770 CSP Edition 2U Server

Boost your datacenter's efficiency and performance for maximum virtualization with our 2U, dual-socket server engineered for virtualization and microservices, cloud-native applications, big data analytics, and distributed inferencing support. Choose from our diverse options including GPU support, Front I/O, DC-MHS hardware architecture, and Open Server Manager.

Dell PowerEdge R670 CSP Edition 1U Server

Drive efficiency in your datacenter through optimized power and balanced performance with our 1U, dual-socket server, designed for high-density deployments, virtualization and microservices, and cloud-native applications. Offered with flexible solutions featuring GPU support, Front I/O, DC-MHS hardware architecture, and Open Server Manager.
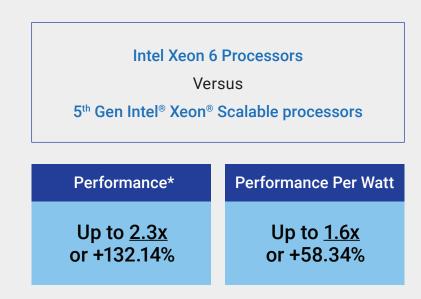
These new CSP Edition servers mark the debut of the Data Center – Modular Hardware System (DC-MHS) architecture in the Dell PowerEdge portfolio. This DC-MHS specification supports easier server integration into existing infrastructure by standardizing servers, improving design and customer choice. Part of the Open Compute Project, DC-MHS is a collaboration between six companies, including Dell Technologies and Intel, focused on redesigning hardware technology to make data center, edge and enterprise infrastructure more interoperable.

> "Intel is excited to have Dell Technologies at the forefront of our development on the latest generation of Intel® Xeon® 6 processor, enabling customers across industries to quickly and seamlessly deliver on the promise of high density, efficient compute for AI datacenters of the future,"
>
> **Ryan Tabrah,** Vice President & General Manager
> Intel® Xeon® Efficient-core Products, Intel Corporation.

- Equipped with up to two Intel® Xeon® 6 processors, these servers ensure swift and precise processing performance, supplemented by GPU support for enhanced computational power.
- Enhanced I/O flexibility is achieved with front I/O configurations, facilitating seamless serviceability in cold aisle environments.
- Embracing open ecosystems, the servers leverage Dell Open Server Manager built on OpenBMC™, facilitating adaptability and interoperability.
- Configurable to suit diverse needs, these servers adhere to Industry Standard open designs (DC-MHS), ensuring compatibility and scalability.
- Smart Cooling offers Intelligent cooling solutions featuring multi-vector cooling technology dynamically adapt to changing environmental conditions, complemented by robust power and thermal management tools, ensuring optimal performance and reliability.
- Energy efficiency is designed in for improved air-flow, hot-aisle and cold-aisle placement, and lowered power requirements. Driving down operational costs and TCO, helps you align to your sustainability objectives.

Intel Xeon 6 Processors

Versus

5th Gen Intel® Xeon® Scalable processors

Performance*	Performance Per Watt
Up to **2.3x** or **+132.14%**	Up to **1.6x** or **+58.34%**

First Xeon processor to use Intel's Efficient-cores and will be manufactured on the Intel 3 process. Intel designed Intel Xeon processors in collaboration with its hyperscale customers to further optimize TCO

Transitioning to an Open Ecosystem? We understand you.

Dell Technologies and Intel are long standing platinum members of the Open Compute Project (OCP), driving leadership by contributing to shared datacenter standards, aiming for universally compatible technologies. We believe open standards are vital for large-scale operations, notably in CSPs multi-vendor data centers. Dell PowerEdge CSP Edition offer Dell Open Server Manager on OpenBMC™ to address diverse management challenges. This simplifies system management by providing unified OpenBMC management for heterogeneous servers, ensuring seamless integration. Your administrators can efficiently manage all their servers through a consistent interface with secure, updatable, and expert-supported management interface. This step facilitates CSPs' management of diverse hyperscale environments, especially with increasing adoption of OpenBMC and other open standards.

Security on your mind? We strengthen you.

Discover the robust security features embedded in Dell PowerEdge servers, designed to advance cybersecurity and Zero Trust maturity within your infrastructure. Powered by Intel Xeon 6 processors, these servers are equipped with advanced hardware-based security capabilities, including virtual machine isolation with Intel Trust Domain Extensions and application protection with Intel Software Guard Extensions. Dell's cyber resilient technologies further safeguard your data center with cryptographic verification, system lockdown, intrusion detection, and robust UEFI boot and firmware protections, all anchored by a silicon Root of Trust and secure erase functionality. These comprehensive security measures not only protect against threats but also bolster your IT defenses, facilitating the swift adoption of a Zero Trust security strategy and ensuring that innovation is never hindered by security concerns.

Looking for the right partner? We can support you.[1]

Dell introduced an exclusive Hyperscale Next program tailored for Cloud Service Providers, including Hosters and B2B/B2C Service providers. Benefits include early access to new technology, pre-configured platforms with performance tuning for rapid deployment and scalability. Find your eligibility by contacting your Dell Account team.

Wanting to maximize the value of your servers? Our services can back you.

Dell Technologies Services offers global reach across 170 locations and deep expertise amongst 60,000+ employees and partners, our services speed time to value, maximize uptime and secure your servers from Day 1 and beyond. To simplify large deployments, our ProDeploy Factory Configuration service allows you to receive your servers pre-configured to your specifications, ready to install, saving over 115 hours[4] in admin time per 100 servers. To keep your scale servers up and running smoothly, ProSupport Plus for Infrastructure provides a 24x7 complete support solution with an assigned services account manager and priority access to senior support engineers. Dell also offers immediate access to critical parts through the Logistics Online Inventory Solution, providing an cloud-based online web tool that enables you to manage, monitory and automatically replenish your parts inventory stored at your global locations. Explore the range of services we offer at Dell.com/Services.

Dell PowerEdge cloud scale servers redefine cloud computing, delivering unparalleled performance, streamlined management, and integrated security. Elevate your cloud services today, visit us at Dell.com/CloudScale

[1] Open Compute, "Membership Directory," accessed September 28, 2023, https://www.opencompute.org/membership/membership-directory.

[2,3] Based on Dell analysis of submitted SPEC_CPU2017 score of 1300 achieved on a Dell PowerEdge R770 and a TDP of 330W with dual Intel Xeon 6780E compared to a score of 560 on Dell PowerEdge HS5620 and a TDP 225W with dual Intel Xeon Gold 6448Y processors. Actual performance will vary.

[4] Based on a June 2023 Principled Technologies study "A Principled Technologies report: Hands-on testing. Real-world results – Faster and easier server installation with Dell ProDeploy Factory Configuration or ProDeploy Plus Infrastructure services" https://www.delltechnologies.com/asset/en-us/products/cross-company/industry-market/principled-technologies-prodeploy-and-factory-configuration-services-for-poweredge-whitepaper.pdf

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