


Hewlett Packard
Enterprise

YOUR AS-A-SERVICE BUILDING BLOCK FOR DIGITAL TRANSFORMATION

HPE Superdome Flex 280 Server

The background of the entire page is a complex, glowing blue digital network. It features numerous interconnected nodes, represented by small white and blue dots, and a dense web of thin, light blue lines. Overlaid on this network are several thick, bright white and blue curved lines that sweep across the frame, creating a sense of dynamic movement and data flow. The overall aesthetic is futuristic and high-tech, with a color palette dominated by various shades of blue and white.

- Handle SAP HANA®, Oracle, SQL Server, and Epic user demand while delivering real-time analytics
- Comb through massive IoT and AI datasets at the edge or in the core
- Tackle complex HPC problems holistically as a standalone workhorse or within petascale clusters

ADVANCING DIGITAL TRANSFORMATION

Customer experience is the new battleground for businesses and it's where digital transformation is separating the winners from the losers. Engaging, understanding, and keeping the modern buyer depends greatly on the digital customer experience you offer. It is, therefore, not surprising that worldwide spending to enable digital transformation will exceed \$1 trillion in 2020.¹

If digital transformation initiatives are falling behind, you're not alone—but the gap is widening, as remote workforces, virtual engagements, and online-everything further shape digital interaction. Holding on to legacy IT systems won't close the gap. Cloud projects and the search for the perfect deployment model add complexity to the mix—but remember cloud is a means, not the answer. It's better to pursue a cloud experience independent of location. That's why companies continue to re-evaluate their cloud plans and adopt hybrid models as the go-forward strategy.

Digital transformation encompasses modernization of both applications and the entire infrastructure supporting them. It includes new methodologies to extract value from vast amounts of data, such as in-memory analytics, Internet of Things (IoT) data processing, and artificial intelligence (AI) that converge new data with existing business-critical and high-performance computing workloads. Applications with different requirements in size, performance, connectivity, and availability often needed to run on discreet, monolithic servers, leading to silos and administrative complexity, as well as cost premiums to ensure server capacity.

To address these challenges, Hewlett Packard Enterprise introduced the widely adopted HPE Superdome Flex—a breakthrough server for diverse, data-intensive, and converging workloads, with a modular, building-block architecture for cost-efficient growth. Now, the HPE Superdome Flex family is expanding with the introduction of HPE Superdome Flex 280, a new as-a-service building block for digital transformation.

HPE SUPERDOME FLEX 280

Designed for small and medium enterprise environments, HPE Superdome Flex 280 is your system to power digital transformation. Featuring 3rd generation Intel® Xeon® Scalable processors, HPE Superdome Flex 280 is designed based on the unique, modular HPE Superdome Flex architecture. You can start with two processors and grow to eight in 2-socket increments as a single system. Choose from a variety of Intel® Xeon® Gold or Intel® Xeon® Platinum processors, depending on application needs or to optimize software licensing. The server is designed to deliver 64 GB to 24 TB of shared memory using high-performance DRAM or in combination with Intel® Optane™ Persistent Memory 200 series for HPE.

HPE Superdome Flex 280 utilizes a modular, scale-up 5U building block/chassis featuring two or four sockets. Two building blocks can be connected leveraging six Intel® UPI links per socket, twice the links of the prior generation. This doubling of the fabric interconnect capacity means higher bandwidth and faster data rates for data-intensive applications.

To provide rich solution flexibility and optimum performance, a balanced I/O system delivers up to 32 PCIe 3.0 cards. You can choose 16 slots (all low profile) or 12 slots (full height/full width) per chassis. In the 16-slot model, each CPU supports two x8 and two x16 PCIe cards, while the 12-slot chassis can support one x16 PCIe slot and one 300W GPU per CPU. For machine learning, graphics, or other computational workloads requiring GPUs, HPE Superdome Flex 280 supports up to eight NVIDIA® Quadro GPUs or up to 16 Tesla GPUs.

¹ Worldwide Semiannual Digital Transformation Spending Guide, IDC, May 2020
[idc.com/getdoc.jsp?containerId=prUS46377220](https://www.idc.com/getdoc.jsp?containerId=prUS46377220)



HPE Superdome Flex 280 at-a-glance

- 2–8 sockets, scale in 2-socket increments
- 3rd generation Intel Xeon Scalable processors
- Modular scale-up 5U building block/chassis (two or four sockets per chassis)
- Designed to deliver 64 GB–24 TB of shared memory using DRAM or in combination with persistent memory
- Extreme Superdome Flex RAS and superior security
- As-a-service consumption with HPE GreenLake

The HPE Superdome Flex 280 delivers system administration, control, and platform management using the scalable, modular HPE Superdome Flex family architecture. An embedded rack management controller (RMC) provides a single management interface. Through its management system, HPE Superdome Flex 280 incorporates many of the industry-leading RAS features of the HPE Superdome Flex family of servers, including fault-resilient boot and a built-in analysis engine.

The RMC has a standards-based Redfish API for scripting and automation, as well as a new HPE web GUI for common tasks such as system inventory, health, configuration, RMC security, and LAN settings. It also provides a powerful CLI for easy access to all RMC functions, providing potential scripting and power-user convenience. The Redfish API can be used in many ways including directly in simple scripts to obtain inventory and monitoring information. HPE OneView can also be used to manage multiple HPE systems concurrently.

PROTECT VALUABLE DATA AND GUARD AGAINST DOWNTIME

When it comes to business-critical applications, HPE Superdome Flex delivers unique reliability, availability, and serviceability (RAS) capabilities to help organizations achieve high service levels. These capabilities include a unique **firmware-first** approach to problem diagnosis where firmware with detailed knowledge of the HPE Superdome Flex 280 system is first on the scene when problems occur, to quickly and accurately analyze and fix them. This approach results in appropriate actions being taken on the platform before any interruption can occur at the OS layer.

In addition, an **analysis engine** embedded in the management system offers outstanding predictive fault handling and initiates self-repair without operator assistance. It constantly monitors all system hardware, analyzes log and telemetry data, and determines corrective actions for high system uptime, often performing them without any user intervention.

The analysis engine is designed to be combined with HPE Insight Remote Support or HPE OneView to connect back to HPE for the fastest-possible service response times. On fatal errors, an error logging service initiates out-of-band error collection, creates logs and alerts an offline system analyzer that provides post-failure analysis for complex error conditions. HPE estimates the analysis engine results in up to 15X faster² mean time to repair than servers without this capability.

Finally, HPE Superdome Flex 280 offers **advanced and unique resiliency capabilities across the memory, I/O, and processor** subsystems for prompt error detection and system self-healing. To help ensure business continuity, support for **HPE Serviceguard for Linux®**, high availability and disaster recovery clustering technology is also provided.

To protect valuable data and workloads, the security strategy of HPE Superdome Flex 280 focuses on minimizing threat exposure to vulnerabilities, including those found in common firmware. Its server management architecture is air-gapped, and provides many security advantages, including rarely trusting the operating system, which is a major source of vulnerabilities, as well as bundled firmware updates.

Silicon root of trust protection implemented directly in specialized HPE-controlled hardware enables detection of potentially compromised firmware and prevents its execution. **Trusted Platform Module (TPM) 2.0** is supported. Finally, HPE has end-to-end control over the entire HPE Superdome Flex 280 supply chain.

² HPE R&D internal measurements, April 2020





CONSUME AND FINANCE ON YOUR TERMS

With HPE moving to offer everything as a service, you can consume HPE Superdome Flex 280 server on your terms. Get just what your business needs, now. HPE GreenLake lets you scale easily, adding capacity in minutes, not months. You pay only for what you actually require, creating true pay-per-use outcomes-including faster time to value with solutions that are ready quickly and evolve ahead of your needs. You get better economics with a flexible, pay-per-use model that offers simplicity and financial clarity and proper control over compliance, performance, and security with an on-premises deployment.

To address the most pressing challenges you're facing, HPE Financial Services offers a variety of financial and asset lifecycle options. You can capitalize on the resources and flexibility offered by these options to further preserve cash and align payments with deployment, helping you protect your day-to-day business and prepare for the future.

YOUR ONE SYSTEM TO POWER DIGITAL TRANSFORMATION

Designed for small or medium size enterprise environments, HPE Superdome Flex 280 can handle SAP HANA, Oracle, Microsoft SQL Server, and Epic user demand while delivering real-time analytics. Comb through massive IoT and AI datasets at the edge or in the core and tackle complex HPC problems holistically, as a standalone workhorse or within petascale clusters. HPE Superdome Flex is getting smaller to help your business improve customer experience, accelerate innovation, and think bigger.

Make the right purchase decision.
Contact our presales specialists.



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hpe.com/us/en/servers/superdome.html



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