



HPE ProLiant Compute

Scalable compute platforms enable successful S/4 HANA migrations

HPE Compute platforms for SAP powered by Intel Xeon Scalable processors

Choose from a comprehensive portfolio of server platforms to ease your transition to SAP S/4HANA®.

Balancing challenges, choices, and benefits

SAP® enterprise resource planning (ERP) applications have been de facto standards for decades. Since its introduction in 2011, SAP HANA® has been the preferred in-memory database, revolutionizing data utilization to swiftly deliver invaluable insights. SAP HANA enables faster time to insight, empowering businesses to uncover crucial insights, fostering informed decisions, agility, and innovation in today's dynamic market.

Support for legacy SAP software will end in 2027, which gives limited time to select compute platforms in preparation for a S/4HANA migration strategy. Today, customers with critical workloads can take a significant step forward on their digital transformation journeys by transitioning to the next generation in SAP ERP — S/4HANA. This advanced software solution allows enterprises to complete transactions and analyze business data in real time. High-performance and efficient servers allow both legacy SAP and new S/4HANA workloads to maintain service level agreements (SLAs), reliability, and security while meeting industry-standard sustainability goals.

S/4HANA includes numerous advanced technologies — including artificial intelligence (AI), machine learning (ML), and advanced analytics — that enable S/4HANA to solve more complex problems and analyze more information in less time than previous SAP ERP products. With S/4HANA, enterprises benefit from greater flexibility and resiliency to respond to changing business requirements, new workloads, and customer demands.

HPE has the answers — today and tomorrow

Combining years of deep SAP expertise with solutions powered by the latest Intel® Xeon® Scalable Processors, Hewlett Packard Enterprise (HPE) is uniquely qualified to be your solution partner as you embark on (or continue) your migration to S/4HANA. With HPE, not only do you get optimized platforms designed to handle the full range of SAP workloads, but you also benefit from:

- **Power of choice**

- Evaluate a range of strategies.
- Deploy on-premises or in a colocation.
- Choose a traditional data center, infrastructure as a service (IaaS), or platform as a service (PaaS).
- Select your own systems integrator (SI) and/or managed service provider (MSP).

- **Proven HPE expertise**

- Thousands of customers.
- 50,000 HPE servers deployed for SAP HANA.
- 30+ years of SAP partnership.
- Providing services for strategy, systems integration, and ongoing system management.



Meeting your SAP S/4HANA infrastructure requirements

As you navigate your S/4HANA journey, HPE can help you address a core set of requirements relating to application performance, data volumes, expected data growth, uptime, the desired level of integration with the current IT environment, and cost parameters over the short and long terms. Equally important is matching your current and future workloads to the right-fit compute platforms. Doing so requires answers to a few important questions:

- How will you utilize S/4HANA initially?
 - Which application workloads will you migrate?
 - Which databases will you migrate?
- How much in-memory computing capacity do you anticipate needing based on your current database(s), anticipated growth, and whether you want to consolidate databases and eliminate silos?
- How do you want to consume S/4HANA? Do you want to run S/4HANA on-premises, off-premises, or in a hybrid cloud model?
- Do you want the IT infrastructure tailored to your environment and application needs, or do you prefer a preconfigured appliance?

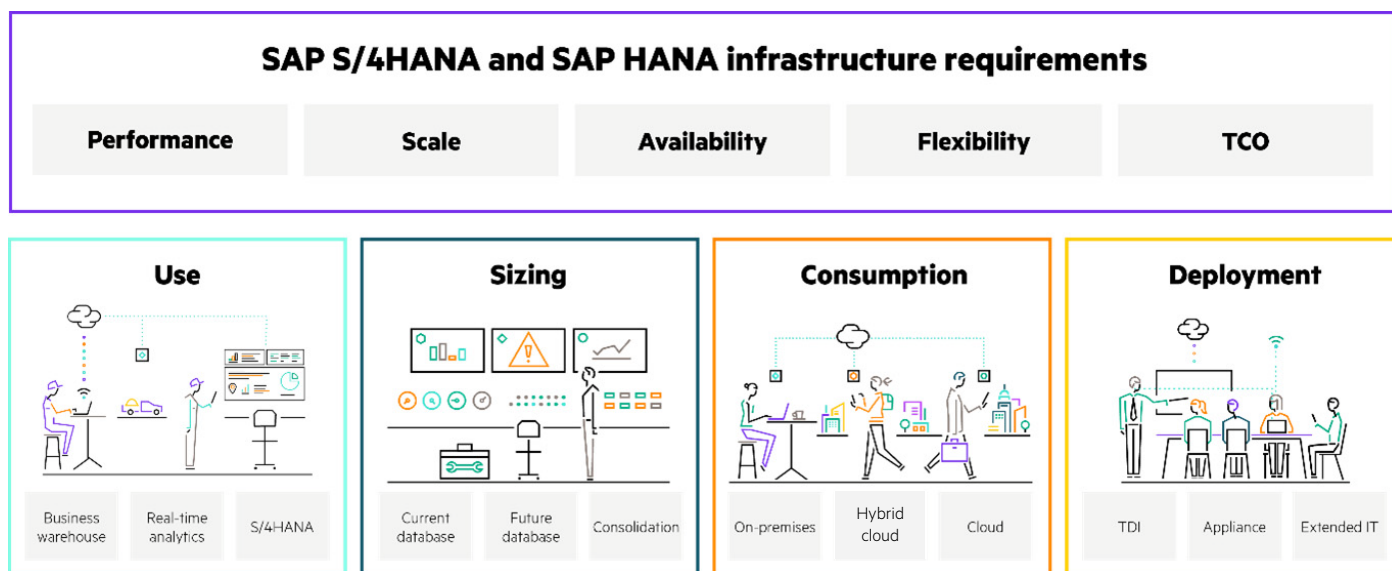


Figure 1. HPE optimized platforms meets your SAP S/4HANA and SAP HANA infrastructure requirements.

Once we have captured answers to these questions, we can frame your new SAP HANA and S/4HANA infrastructure with HPE optimized platforms that best meet your requirements.

Solution in action¹

SAIL is one of the world's largest raw steel manufacturers, producing more than 17 million tons annually and employing over 60,000 people. SAIL Durgapur Steel Plant (DSP) is one of the Integrated Steel Plants of SAIL, located in Durgapur, West Bengal, producing 2.5 MPTA of hot metal and critical finished products like Wheel and Axel for the railways.

Given the importance of its products to India's construction, manufacturing, automobile, and other industries, SAIL DSP's production facilities are critical infrastructure supporting the country's everyday operations and long term growth.

To enable growth, the company wanted to modernize its Oracle® Solaris-based SAP landscape, as well as the legacy Bespoke software landscape and implement a hybrid cloud infrastructure for all.

After evaluating several technology options, the SAIL team chose the HPE GreenLake edge-to-cloud platform to deploy a hybrid cloud for SAP and legacy software landscapes, which included an HPE ProLiant DL380 Gen11 server, HPE Alletra 9000 storage systems, and HPE StoreOnce systems.

HPE GreenLake offered SAIL DSP the ability to accommodate higher compute and storage capacity and throughput at a much smaller footprint to scale with on-demand capacity and unlock their SAP landscape from the legacy Oracle Solaris OS and unsupported Hitachi storage, thus greatly mitigating their business risk.

¹ "Modernizing steelmaking with data driven hybrid cloud," HPE, 2023.

Best-in-class mission-critical platforms

Mission-critical is a part of the HPE DNA. The HPE Superdome Flex and Compute Scale-Up Server families have delivered the most performant, scalable, and resilient platforms across three generations of Intel Xeon Scalable processors, making them the ideal cornerstone of your SAP environment.

HPE Superdome Flex, HPE Superdome Flex 280, and Compute Scale-up Server 3200 each hold the #1 SAP BW² edition for SAP HANA benchmarks,³ proving that HPE successfully harnesses the full potential of Intel®'s processing power in SAP environments. Running SAP HANA on HPE mission-critical servers offers you the fastest time to insight to drive informed business decisions and facilitate the desired outcomes for your business.

To ensure high performance, SAP HANA demands that your environment scale up as your database grows. The HPE Superdome Flex and Compute Scale-Up Server families feature unparalleled scalability, offering platforms that scale up to 32 processors and 32 TB of shared memory per node. Today, HPE is the only SAP hardware partner that can deliver an SAP Certified scale-up appliance with a 32 TB memory footprint, taking full advantage of SAP increased maximum memory.

The often-devastating financial consequences of an outage make high availability (HA) a requirement when running in-memory mission-critical applications like SAP HANA. The HPE Superdome Flex and Compute Scale-Up Server product lines feature unique RAS (reliability, availability, serviceability) features that have garnered recognition as the only Intel Cascade Lake and Sapphire Rapids platforms classified by IDC as Availability Level 4 systems.⁴

HPE mission-critical solution: Purpose-built for any SAP landscape

All HPE purpose-built mission-critical solutions are available as rigorously tested, turnkey, predefined configurations delivered racked, stacked, and cabled or as building blocks you can tailor to fit virtually any landscape.



HPE Compute Scale-up Server 3200 for SAP HANA

As the HPE flagship solution for SAP HANA, the HPE Compute Scale-up Server 3200 is a compute breakthrough that offers an unmatched combination of flexibility, performance, and reliability for SAP environments of any size. Optimized for performance, scalability, and resiliency, the HPE Compute Scale-up Server's unique modular architecture allows you to start small and scale up and scale out as your business grows.

Leveraging HPE Compute Scale-up Server 3200's groundbreaking performance and massive shared memory footprint, your business can process and analyze growing quantities of SAP data in memory at extraordinary speed. The HPE Compute Scale-up Server 3200:

- Outpaces evolving data demands with incredible flexibility
- Processes and analyzes ever-growing data volumes at extreme speed with groundbreaking performance at scale
- Protects mission-critical workloads with proven end-to-end reliability and trusted security

² BW stands for Business Warehouse.

³ As SAP Certified Scale-Up Appliances.

⁴ ["Mission-critical platforms deliver continuity in the shift to a 'digital-first' business," HPE, July 2023.](#)



HPE Compute Scale-up Server 3200 features:

- Unique modular architecture that scales seamlessly from 4 to 16 sockets in four-socket increments in a single system
- 128 GB to 32 TB of shared DDR5 memory in a single system
- 4th Gen Intel Xeon Scalable processors
- Up to 60 cores per processor,⁵ more than 1.5x the prior generation
- #1 scale-up BWH⁶ benchmarks⁷
- 1.5x the memory bandwidth of prior generations⁸
- 33% increased memory density; lowering TCO with up to a 60% smaller footprint compared to the previous generation

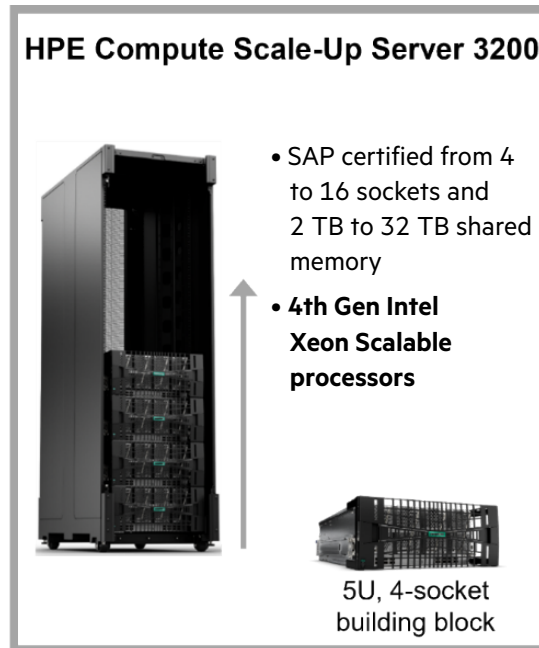


Figure 2. HPE Compute Scale-up Server 3200 at a glance

HPE Superdome Flex 280

Optimized to deliver the performance, reliability, and security to growing enterprises that need to support demanding SAP HANA and S/4HANA workloads at a low barrier to entry, the HPE Superdome Flex 280⁹ starts with two 3rd Gen Intel Xeon Scalable processors and scales cost efficiently up to eight to accommodate future growth.

HPE Superdome Flex 280 features:

- Modular architecture to scale seamlessly from two to eight sockets
- Up to 224 cores
- 64 GB to 24 TB of shared memory to better support in-memory analytics
- Support for large data volumes and network connectivity with a balanced I/O system supporting up to 32 PCIe 3.0 cards
- Protection against firmware attacks and malware with superior security capabilities, including the silicon root of trust from HPE

⁵ 3rd Gen Intel Xeon Scalable processors deliver up to 28 cores per processor.

⁶ BWH stands for "SAP BW edition for SAP HANA benchmark."

⁷ "New HPE Compute Scale-up Server 3200 takes OLAP performance world record with 4th Gen Intel Xeon Processors," HPE, September 2023.

⁸ The prior generation used DDR4 Memory with a speed of 3200 MT/s and the HPE Compute Scale-up Server 3200 uses DDR5 Memory with a speed of 4800 MT/s.

⁹ "HPE Superdome Flex 280 server data sheet," HPE, 2021.



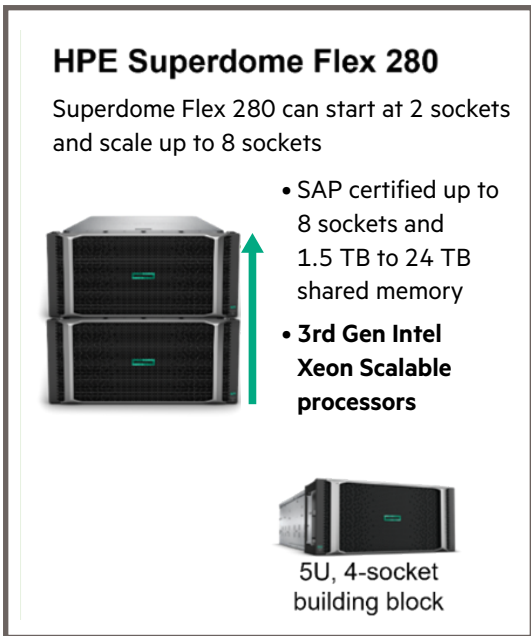


Figure 3. HPE Superdome Flex 280 server at a glance

HPE Superdome Flex

HPE Superdome Flex is purpose-built for mission-critical workloads like SAP HANA. With the capacity to accommodate up to 32 Intel Xeon processors and 48 TB of shared memory in a single node, HPE Superdome Flex offers the performance, scalability, and high availability essential for SAP HANA's demanding workloads

HPE Superdome Flex server features:

- Modular architecture that scales seamlessly from 4 to 32 sockets in four-socket increments in a single system
- Shared memory that scales from 768 GB up to 48 TB
- Ability to choose from 1st Gen or 2nd Gen Intel Xeon Scalable processors
- HPE unique x86 hard partitioning (HPE nPars) technology, which isolates workloads and/or consolidates multiple workloads onto a single managed complex so you can service or reconfigure individual partitions while other partitions continue to run undisturbed

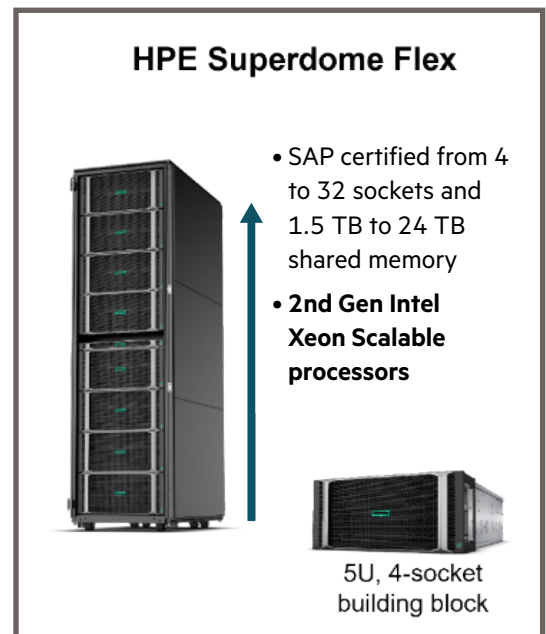


Figure 4. HPE Superdome Flex server at a glance



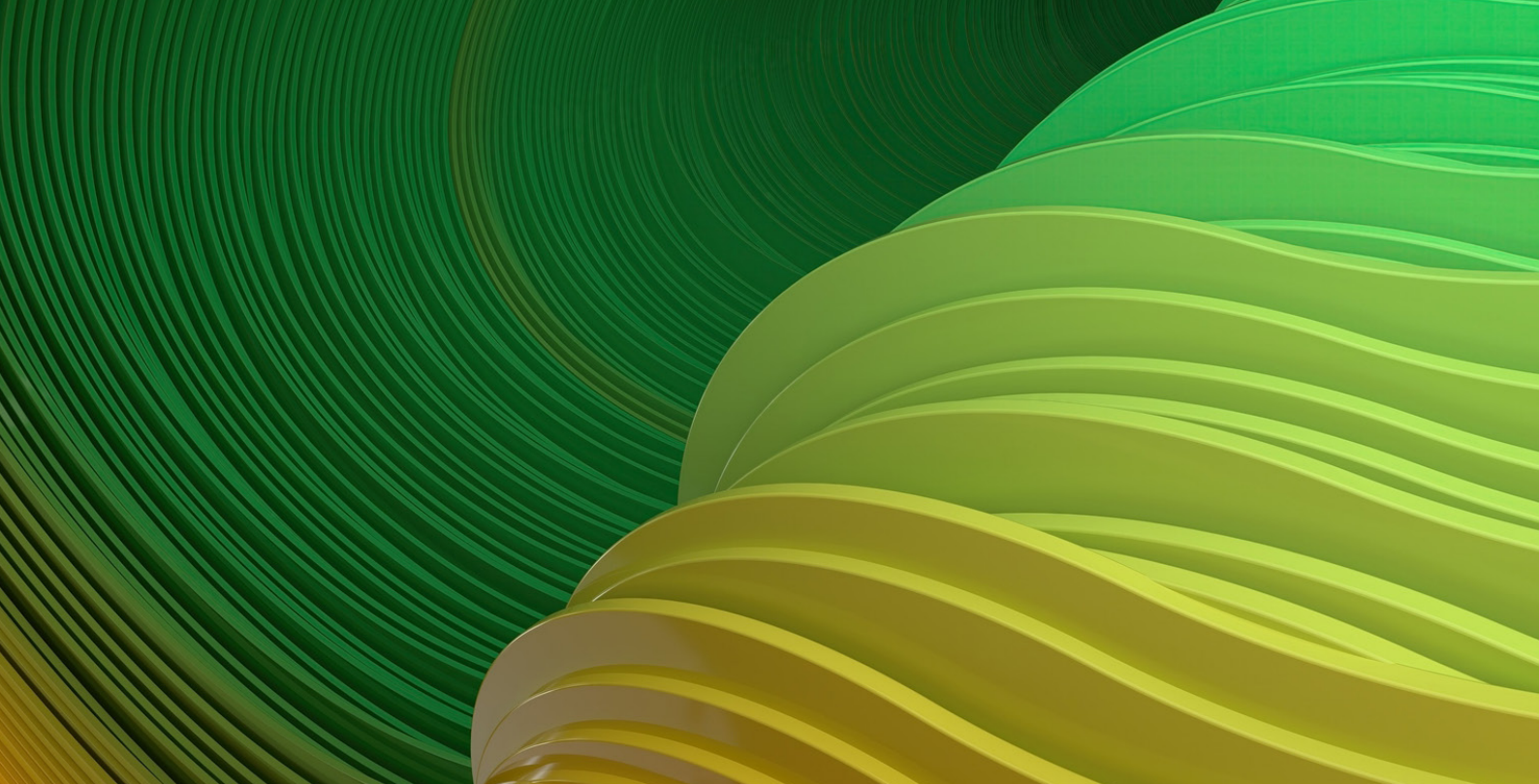


Table 1. HPE Compute for your SAP ecosystem

HPE Compute	Description	Ideal for application tier	Ideal for database tier
HPE Scale-Up Server 3200 4th Gen Intel Xeon Scalable processor	#1 most performant, secure, and reliable platform for the largest mission-critical SAP workloads at scale		✓
HPE Superdome Flex 2nd Gen Intel Xeon Scalable processor	Modular, resilient mission-critical platform for large SAP HANA environments		✓
HPE Superdome Flex 280 3rd Gen Intel Xeon Scalable processor	Scalable, highly available mission-critical platform for SAP workloads	✓	✓

HPE ProLiant Gen11 servers: Compute engineered for your hybrid world

Designed to unlock more value from your data and accelerate outcomes that deliver insights and innovation, the latest generation of industry-leading HPE ProLiant servers are built on three primary tenets:

- **Optimized performance for your workloads, including SAP:** Get the performance you demand to accelerate any workload in the data center. Achieve operational efficiencies and performance economics to accelerate innovation everywhere your data lives.
- **Intuitive cloud operation experience:** Simplify the way you control compute in the cloud with a cloud operating experience. Transform business operations and pivot your team from reactive to proactive with global visibility and insight through a unified management console.
- **Trusted by design:** Protect your infrastructure, workloads, and data with a trusted security architecture. HPE Compute core is hardened through a proven zero trust approach to security to minimize threats to hardware and risks from third-party software.

While mission-critical options are excellent choices for the SAP database tier, several HPE ProLiant Gen11 servers are optimal choices for the SAP application tier and for SAP business-critical medium- and lighter-size databases.



Table 2. HPE optimized platforms for medium-size tiers of your SAP ecosystem

HPE Compute

HPE ProLiant DL560 Gen11

4th Gen Intel Xeon Scalable processor



- Optimized to handle both business-critical SAP application and SAP HANA in-memory workloads
- Available as an SAP Certified Appliance or in a TDI configuration
- High density 2U form factor with 2- to 4-sockets
- Up to 16 TB of DDR5 memory to deliver greater SAP processing power
- Ideal server where data center space and flexibility are paramount

HPE ProLiant DL380 Gen11

4th and 5th Gen Intel Xeon Scalable processors



- Delivers exceptional compute performance for intensive SAP application workloads and small SAP HANA in-memory databases
- Available as an SAP Certified Appliance or in a TDI configuration
- 2U form factor with 2-sockets and up to 4 TB memory

HPE ProLiant DL360 Gen11

4th and 5th Gen Intel Xeon Scalable processors



- Optimal choice for SAP application workloads
- Available as a stand-alone server or delivered as part of a turnkey HPE Compute Scale-up Server 3200 predefined solution
- Density-optimized 1U form factor with 2 sockets and up to 4 TB memory
- Designed to fit into any IT environment

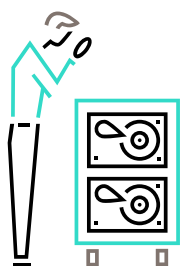
Get the support you need for transitioning to next-generation SAP

Transitioning to SAP HANA and S/4HANA is a journey — one you shouldn't travel alone. You can trust HPE to provide everything you need to complete your SAP HANA migration with confidence.

Platform identification

By working with HPE to identify the right platforms to support your SAP workloads now and in the future, you can realize the full range of benefits SAP HANA offers:

- Massively simplified data structure
- Better reporting capabilities
- Enhanced user experience
- Increased productivity
- Agility and innovation



Services and support

From operating SAP HANA with confidence to assessing and improving SAP performance to developing innovative services, you can leverage the experience HPE has gained while working at thousands of SAP environments for over three decades.





Take control of your S/4HANA migration strategy

For enterprises that have a cloud strategy for SAP but want to retain full control over their environment, HPE GreenLake for SAP provides a flexible, infrastructure-as-a-service private cloud solution. With this offering, you can:

- Simplify, with a fully managed and customizable solution.
- Control your data, infrastructure, and SAP software by locating the solution on-premises or in a colocation.
- Use your existing SAP licenses.
- Have a consumption-based, elastic cloud experience.
- Enhance insights by analyzing SAP data closer to where it is generated.
- Migrate to S/4HANA with confidence, leveraging HPE expertise in SAP solutions.

With HPE, you can also choose an SAP RISE private cloud solution. The SAP S/4HANA® Cloud: Private Edition, Customer Data Center option (PE CDC) allows you to move to RISE and keep your data on-premises or in a colocation.

Learn more at

[HPE.com/us/en/alliance/sap.html](https://hpe.com/us/en/alliance/sap.html)

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