Hewlett Packard Enterprise

HPE Integrity Superdome X

Transform your mission-critical environment

Rethink the server. Think compute.
With HPE Integrity Superdome X you can:

- Move at the speed of business with groundbreaking performance and scalability

- Increase competitive differentiation and reduce risk through a superior x86 availability experience

- Redefine the economics of mission-critical compute with industry standard efficiencies

Redefine mission-critical compute with HPE Integrity Superdome X

Are your mission-critical applications running on a costly proprietary system—and are you concerned about x86 reliability and availability, or are you using standard x86 servers but need extra scalability, performance, or uptime? HPE Integrity Superdome X sets new high standards for x86 availability, scalability, and performance, the ideal platform for your critical Linux® and Windows® workloads. Superdome X blends x86 efficiencies with proven HPE mission-critical innovations for a superior uptime experience and groundbreaking performance.

Breakthrough scalability of up to 16 sockets and 24 TB of memory handle your in-memory databases and large scale-up x86 workloads. Through our unique hard partitioning technology, HPE nPars, Superdome X adds agility and delivers 20X greater reliability than platforms relying on software partitioning alone.

Whether you want to maximize your applications uptime, standardize, or consolidate, Superdome X helps you transform your mission-critical environment to move at the speed of business.

Deploy critical workloads on x86 with confidence
HPE Integrity Superdome X sets new high standards for x86 availability, scalability, and performance, making it the ideal platform for your critical enterprise x86 workloads.

- Greater scalability and performance—to move at the speed of business

- Higher levels of availability—to deliver continuous services

- More flexibility and efficiencies—to reduce complexity and cost

Partner with Hewlett Packard Enterprise for the right compute, for the right workload, at the right economics—every time.

Key features and benefits

Deploy your mission-critical workloads on an industry-standard x86 platform

The HPE BladeSystem Superdome Enclosure is the building block for Superdome X. Each compute enclosure supports 15 fans, 12 power supplies, associated power cords, and four HPE Crossbar Fabric Modules (XFMs). Configurations of one-to-eight mission-critical, scalable x86 blades can be populated in an enclosure with support for hard partitions (HPE nPars) containing one, two, three, four, six or eight blades. Multiple nPars of different sizes are supported within a single enclosure.

With breakthrough innovations such as the fault-tolerant Crossbar Fabric, now delivering 33% more bandwidth, and Error Analysis Engine coupled with hard partitioning capabilities, Superdome X sets the standard for mission-critical x86 computing.

Features

Superdome X offers scalability that surpasses the market, flexibility through HPE nPars, and mission-critical reliability, availability, and serviceability (RAS). Key features include:

- Support for up to 16 sockets of Intel® Xeon® processor E7 v4 and E7 v3 families

- 384 DIMM slots with up to 24 TB of memory, providing a large memory footprint for demanding applications

- Support for HPE nPartitions (nPars), electrically isolated hard partitions in configurations of one, two, three, four, six or eight blades and multiple nPars within a single Superdome Enclosure

- 16 FlexLOM slots (2 per blade)

- 24 mezzanine PCIe Gen3 slots (3 per blade)

- Built-in DVD-ROM, accessible from partitions

- Error Analysis Engine

Benefits

Superdome X revolutionizes x86 computing by enabling you to:

Move at the speed of business with groundbreaking performance and scalability

- Power your most demanding workloads with the fastest x86 platform for ERP business applications[1]

- Start small and grow your environment seamlessly with a scalable, efficient bladed form factor, from one up to eight blades

- Scale your largest x86 workloads to new heights with a powerful scale-up 16-socket, 24 TB memory solution[2]

- Grow confidently without compromising performance with a 1.77X scalability factor, from 4 to 8 and from 8 to 16 sockets.

- Boost database performance with up to 58% performance gains with the HPE-ATX software utility[3]

Increase competitive differentiation and reduce business risk through a superior x86 availability experience

- Deploy your critical workloads with confidence as Superdome X is designed from the ground up to achieve high levels of RAS, and provides five nines (99.999%) single-system availability[4]

- Improve the uptime of your critical x86 applications with up to 20X greater reliability from HPE nPars, when compared with platforms that rely on software virtualization alone[5]

- Lower your downtime up to 60 percent compared to other x86 platforms with a comprehensive set of RAS features[6]

- Benefit from up to 95 percent reduction in memory outages over standard x86 with HPE "Firmware First" architecture and memory RAS improvements over Intel® base code[7]

- Experience proven diagnostics, self-healing capabilities, and superior fault management with the built-in Error Analysis Engine, unique on x86 environments

Redefine the economics for mission-critical compute with industry standard efficiencies

- Increase cost efficiencies with a 41 percent lower TCO than IBM Power[8] and 45 percent lower TCO than Oracle Exadata[9]

- Reduce IT infrastructure costs for footprint, power, cooling, patching, and firmware with intelligent management to simplify your environment

- Optimize software licensing costs by using HPE nPars

- Increase infrastructure flexibility with a wide core count span, from 8-core to 48-core blades[10]

- Protect your investment with the ability to mix Gen8 and Gen9 blades within a single enclosure

[1] Based on the SAP® SD Standard Application Benchmark Results, Two-Tier Internet Configuration, February 2016. See **sap.com/benchmark** for up-to-date information

[2] See **Superdome X QuickSpecs**.

[3] Based on HPE internal testing. Performance results with HPE-ATX (patent pending) on Superdome X, April 2016.

[4] Based on Hewlett Packard Labs availability analysis and actual measured availability results, June 2015.

[5, 6] Based on internal Hewlett Packard Labs, high availability and field data modeling, August 2013.

[7] Based on Hewlett Packard Labs simulation, May 2014.

[8] Based on HPE internal analysis results using publicly available competitive data, May 2016.

[9] Based on HP, now Hewlett Packard Enterprise, internal analysis results using publicly available competitive data, April 2015.

[10] See **Superdome X QuickSpecs**.

HPE Integrity Superdome X

Compute	Support for up to 16 sockets via 1-to-8 two-socket server blades, each with 2X FlexLOM slots, 3X mezzanine slots, and 48 DIMM slots
Processors	**BL920s Gen9:** Intel Xeon Processor E7 v4 Family E7-8890 v4 (24c/2.2 GHz/60M/165 W); E7-8880 v4 (22c/2.2 GHz/55M/150 W); E7-8891 v4 (10c/2.8 GHz/60M/165 W); E7-8855 v4 (14c/2.1 GHz/35M/140 W); E7-8893 v4 (4c/3.2 GHz/60M/140 W) **BL920s Gen9:** Intel Xeon Processor E7 v3 Family E7-8890 v3 (18c/2.5 GHz/45M/165 W); E7-8880 v3 (18c/2.3 GHz/45M/150 W); E7-8891 v3 (10c/2.8 GHz/45M/165 W); E7-4850 v3 (14c/2.2 GHz/35M/115 W); E7-8893 v3 (4c/3.2 GHz/45M/140 W)
Maximum processors/cores per system	**BL920s Gen9:** 16 processors/384 cores
Partitioning	Support for HPE nPartitions (nPars), electrically isolated hard partitions. Configurations of 1, 2, 3, 4, 6, or 8 blades and multiple HPE nPartitions (nPars) within a single Superdome Enclosure
Memory	Up to 384 DIMM slots, 48 DIMM slots per server blade/Error checking and correcting (ECC) on memory and caches/double-chip spare **BL920s Gen9:** maximum memory, 24 TB (384 x 64 GB DIMMs), minimum memory, 256 GB (16 x 16 GB DIMMs) **BL920s Gen9:** supports HPE 64 GB, 32 GB and 16 GB DDR4 LRDIMM memory kits
Certified operating environments	Red Hat® Enterprise Linux (RHEL); SUSE Linux Enterprise Server (SLES) Microsoft® Windows Server® 2012 R2 (including Microsoft SQL Server 2014); VMware® vSphere Note: See the OS Support Matrix for details on certified operating environments. **hpe.com/info/ossupport**
FlexLOM slots	2 dual-port 20GbE NIC FlexLOM daughter cards per blade (up to 8 blades)
Mezzanine I/O slots	1 PCIe x8 Gen3 mezzanine (Type A) slot per blade (up to 8 blades) 2 PCIe x16 Gen3 mezzanine (Type B) slots per blade (up to 8 blades)
I/O interconnect bays	Up to 8 I/O interconnect bays may contain 10GbE switch modules, 10GbE pass-thru modules, 16 Gb Fibre Channel and InfiniBand interconnect modules
High availability—standard server features	2N (N+N) redundant power supplies/N+1 fans (or greater depending on the load)/Online, replaceable, and redundant OA, utilities, clock, and service processor subsystems/Fault Tolerant Crossbar Fabric built on dynamic multi-pathing and end-to-end retry technology/Enhanced MCA recovery (Automated Processor Recovery) with Intel Cache Fail-Safe Technology/ECC on caches, Memory ECC, and double-chip spare/ECC, re-tries, and Link Width Reduction on data paths/Automatic de-configuration of memory and processors/I/O Advanced Error Recovery, and I/O isolation off Crossbar Fabric/Redundant network paths/Redundant Fibre Channel paths
SUV I/O	Interfaces VGA and 2 USB ports for local human interface/1 RS-232 serial port and 10/100BASE-T LAN for Integrity Integrated Lights-Out (iLO 4) management
Power and cooling	Each compute enclosure supports 15 fans, 12 power supplies, associated power cords, and four HPE Crossbar Fabric Modules (XFMs)
Removable media	Built-in DVD-ROM, accessible from partitions
Form factor	18U enclosure/42U HPE 600 mm wide rack
Warranty	HPE branded hardware and options qualified for the Superdome X are covered by global limited warranty and supported by HPE Services and a worldwide network of HPE Authorized Channel Partners. HPE branded hardware and options diagnostic support and repair is available for three years from date of purchase, or the length of the server they are attached to, whichever is greater. Additional support may be covered under the warranty or available through additional support packages. Enhancements to warranty services are available through HPE Care Pack services or customized service agreements.

HPE Services

HPE Technology Services support delivers confidence, reduces risk, and helps you realize agility and stability so you can focus on the business. Learn more at **hpe.com/services**

Parts and Materials

HPE will provide HPE-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements.

Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product quick-specs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services. The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by HPE due to malfunction.

Recommended: HPE Proactive Care Advanced Service— 24x7 coverage

Receive personalized and proactive support working with a local assigned Account Support Manager who will share best practice advice and personalized recommendations designed to help improve availability and performance to increase stability and reduce unplanned downtime. In addition, receive enhanced call handling with start to finish call management and for business critical incidents, critical event management to help reduce mean time to resolution. This also includes hardware and software support.

HPE Proactive Care* with 24x7 coverage, three year Support Service HPE Proactive Care gives customers an enhanced call experience. When your products are connected to HPE, Proactive Care helps prevent problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice This Service combines three years proactive reporting and advice with our 24x7 coverage, four hour hardware response time when there is a problem. This service also includes collaborative software support for Independent Software Vendors (ISVs), (Red Hat, VMWare, Microsoft, etc.) running on your HPE servers.

HPE Datacenter Care service

HPE Datacenter Care helps improve IT stability and security, increase the value of IT, and enable agility and innovation. It is a structured framework of repeatable, tested, and globally available services "building blocks." You can deploy, operate, and evolve your datacenter wherever you are on your IT journey. With HPE Datacenter Care, you benefit from a personalized relationship with HPE via a single point of accountability for HPE and others' products. For more information, visit **hpe.com/services/datacentercare**.

HPE Flexibly Capacity, a building block of HPE Datacenter Care is a pay per use model for on premise infrastructure, giving you the technology you want, the ability to manage capacity when you need it, with no upfront payment. Flexible Capacity provides the needed room to grow your environment, but only pay for actual metered use. Technology transitions with refresh can be built in, and infrastructure and services are billed monthly, enabling you to align costs to business use.

HPE Consulting—If you are building a new mission critical x86 environment or migrating from UNIX® workloads to Superdome X, TS Consulting Services can help you define your IT strategy and roadmap, identify and perform required migration activities, and assist in the planning and deployment of your mission-critical x86 solution.

HPE Server Installation and Startup— HPE Factory Express and HPE Installation and Startup services provide the integration and onsite startup that helps you get your system up and running minimizing data center and IT staff disruption.

HPE Technology Services Support Credits offer flexible services and technical skills to meet your changing IT demands. With a menu of service that is tailored to suit your needs, you get additional resources and specialist skills to help you maintain peak performance of your IT. Offered as annual credits, you can plan your budgets while proactively responding to your dynamic business.

HPE Education Services—IT training is proven to increase the value of technology, with increased efficiencies and better business outcomes and is key to transforming IT and the business.

Connect your devices to Hewlett Packard Enterprise—Unlock all of the benefits of your HPE technology investment. By connecting, receive 24x7 monitoring, pre-failure alerts, automatic call logging, and automatic parts dispatch. HPE Proactive Care service customers will benefit with tailored proactive reports including analysis, recommendations, and advice to help prevent issues and maintain peak performance.

Learn more at
hpe.com/info/superdomex
hpe.com/servers/superdomex

---

f   y   in   ✉

Sign up for updates

★ Rate this document

Hewlett Packard Enterprise