Hewlett Packard Enterprise

Scaling Microsoft SQL Server to new limits

HPE Integrity Superdome X

Modernize your core mission-critical business processing environment

SQL Server enterprise readiness
Microsoft continues to build on the foundation of SQL Server 2012 and 2014 for mission-critical applications and enterprise readiness. Organizations considering SQL Server for traditional UNIX® environments or new critical applications are looking to ensure the availability of these vital applications while scaling their environment to new heights. Additionally, they need to provide security for critical data, and achieve the highest levels of performance while keeping their costs under control.

The journey is not complete: the SQL Server 2016 release focuses on enhancing mission-critical performance where scale is critical, empowering analytics through deeper insights across data and hyper-scale cloud. If you're eager to take advantage of the innovations and performance benefits of SQL Server 2016 and in-memory database technology, you will want to plan your system acquisitions in light of your adoption of SQL Server 2016.

Reaching for the next level

With the introduction of HPE Integrity Superdome X and the advanced capabilities of Microsoft® SQL Server, customers can take the Microsoft Windows® environment to a new level.

Whether deploying large SAP® environments, supporting high transaction rates for online transaction processing (OLTP) applications, or leveraging business transaction data for real-time analytics with mixed workloads on a single server, Superdome X provides the foundation. Additionally, Superdome X can dramatically simplify management of the environment by consolidating SQL Server instances onto one server.

Hewlett Packard Enterprise stands ready to help you take SQL Server to new levels. Microsoft and Hewlett Packard Enterprise have one of the longest-standing partnerships in the industry, 31 years—we provide end-to-end Microsoft solutions including consulting, servers, storage, networking, deployment, training, and support. In fact, HPE servers are a benchmark platform for Microsoft technologies. According to Microsoft, Hewlett Packard Enterprise is Microsoft's #1 OEM partner for Windows Server® and #1 Windows desktop deployment partner.

No matter what your requirements, if you plan to scale SQL Server, one choice is surprisingly easy: host your SQL Server database on Superdome X. A cost-efficient scale-up x86 design, Superdome X offers an industry-leading combination of reliability, performance, and capacity.

The need for speed

Enormous volumes of data, generated in our data-rich, globally connected, and always-on world, strain the capacity and performance of existing infrastructure. The resulting delays in reporting and responsiveness can turn business processing into a critical competitive weakness.

In this always-on, always-connected environment, the speed of transaction processing can be a core differentiator. Hewlett Packard Enterprise has achieved record-breaking performance for large OLTP workloads with SQL Server using industry-standard technologies. In fact, Superdome X takes this approach to deliver breakthrough performance—achieving a world-record SAP ERP benchmark utilizing the SQL Server database and a scale-up system design providing balanced performance from processors, memory, and I/O.[1]

99.999%
availability

20X greater
reliability and availability compared to general purpose x86 servers

459,580 SAPS
World-record 16-processor result on two-tier SAP SD standard application benchmark and SQL Server[2]

#1
overall price and performance for 8-socket servers @ 10000 GB TPC-H[3]

66%
lower TCO vs. Oracle alternatives such as Exadata

31-year
Microsoft-HPE partnership

[1, 2] 16-processor result on two-tier SAP Sales and Distribution (SD) standard application benchmark with SAP enhancement package 5 for SAP ERP 6.0, August 2015

[3] TPC-H results show the HPE Integrity Superdome X with a result of 680,841 QphH @ 10000 GB and $2.35 USD/QphH @ 10000 GB with system availability as of October 29, 2015; see **tpc.org/3316**. The TPC believes that comparisons of TPC-H results published with different scale factors are misleading and discourages such comparisons. See **tpc.org** for up-to-date information. Results as of October 30, 2015.

[4] Based on HP (now Hewlett Packard Enterprise) internal analysis and results using publicly available competitive data, November 2014

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

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Protecting your critical data

When dealing with sensitive customer data in OLTP databases, security is a paramount concern. Hewlett Packard Enterprise leverages the capabilities of SQL Server to monitor activity, as well as to control and provide access to critical data. This is in conjunction with transparent data encryption to protect key data.

Critical continuity

For many enterprises, it's fair to say that if your business-processing database isn't running, your business isn't either. Meeting the needs of customers and staff demands 24x7x365 availability. When every minute of downtime translates to significant costs, there's no room to take chances with your environment´s reliability or availability.

While standardizing on x86 platforms running Linux® or Windows is a compelling idea from a management and efficiency standpoint, it can be a risky choice for mission-critical applications if the underlying platform lacks the high availability of legacy UNIX platforms.

Superdome X is designed from the ground up to achieve very high availability—99.999 percent—with automated diagnostic tools, self-healing, and built-in fault management, replicating a UNIX-like experience on an x86 platform. It provides 20X greater reliability and availability compared to general purpose x86 servers.

Flexible, scalable

Supporting faster reporting and ever-higher transaction volumes will require a system that can flexibly grow with your business. Superdome X will meet your SQL Server needs now and in the future:

- Scalable from two to 16 sockets (8 to 288 processor cores)
- With up to 24 TB memory capacity, Superdome X can take full advantage of SQL Server's in-memory capabilities and dramatically speed up conventional database transactions by reducing storage latency

Flexible, electronically isolated partitions enable a single system enclosure to support different OS versions, SQL Server revisions, and diverse workloads, all running independent of each other. In fact, OLTP and data analytics workloads can co-exist in the same system to enable real-time analytics.

Maximizing the value

Superdome X offers relief from the inefficiencies of scale-out platforms and the escalating maintenance and support costs of proprietary servers:

- 32 percent lower total cost of ownership (TCO) compared to IBM Power[4]
- SQL Server on Superdome X provides a 66 percent TCO advantage over Oracle alternatives such as Exadata[5]

Exceed your expectations

Whether consolidating, deploying business processing or mixed workload environments, or migrating from UNIX servers to a SQL Server environment, HPE Integrity Superdome X enables agile business processing with superb performance, scalability, efficiency, and uptime.

Wherever you stand on your SQL Server journey, Hewlett Packard Enterprise will provide the solutions and support you need to succeed.

Learn more at
hpe.com/servers/superdomex

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