

Lenovo Hyperconverged Solutions Powered by DataCore

Solution Benefits:

- Fastest response time in the industry
- Highest availability with the fewest nodes
- Lowest TCO to scale-up or scale-out
- Single platform for virtualized and non-virtualized applications
- World leader in price / performance

SIMPLE, POWERFUL, AND SCALABLE SOLUTIONS FOR BUSINESS-CRITICAL APPLICATIONS

Companies need better performance and higher SLAs from their key applications. Hyperconverged infrastructure promises a faster and more reliable architecture for these applications. Lenovo™ hyperconverged solutions Powered by DataCore™ software cost-efficiently deliver a highly available and high performance infrastructure for virtualized applications. These solutions offer the following advantages:

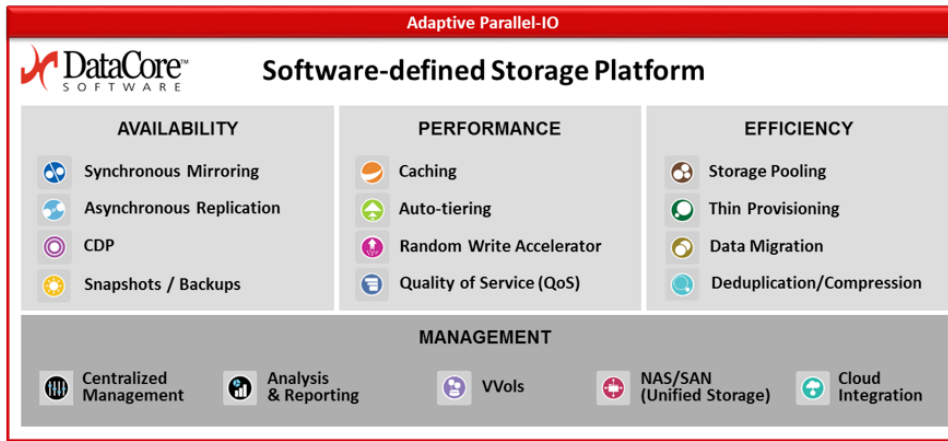
- **Go Faster:** Faster applications (databases, critical applications, VDI, etc.) means more transactions processed in less time, more data analyzed faster and happier users, leading to more revenue.
- **Always on:** Highly-available infrastructure reduces disruptions to business operations and decreases risk.
- **Do more with less:** Run more workloads, with better performance and availability, on far fewer servers and utilize the infrastructure you already have, for remarkable cost savings, both direct and indirect (less power, cooling and space).
- **More efficiency:** Integrated infrastructure means it's easy to manage everything, with fewer people.
- **Future-proof:** Hardware-independent software ensures services live beyond current generation of infrastructure technology and change.

The net result is greater consolidation savings, better performance and higher availability for databases, VDI, and other virtualized applications.

USE CASES

	Data Center Consolidation and Simplification	Remote Office / Branch Office (ROBO) Sites	High-performance Applications
NEEDS	IT infrastructure is complex and decentralized, taking too much time, space, and power/cooling.	Simplify remote infrastructure and centrally manage with enterprise-level availability.	Predictable performance and scalability for a wide variety of mission-critical workloads such as databases (Oracle, and SQL Server)
CHALLENGES	Performance for virtualized apps has been inadequate, leading to scale out servers and storage.	Necessary redundancy for high availability at remote sites is too expensive and difficult to set up and manage.	Infrastructure for reliable performance of latency-sensitive apps is expensive and difficult to scale.
SOLUTIONS	Industry best response times means infrastructure can be massively consolidated, eliminating complexity.	Provide a highly available storage infrastructure with only two servers to reduce TCO and eliminate storage complexity.	Industry best response times means critical apps improve response times, enabling businesses to run faster.









Case Study: Application Acceleration for Government Agency

A government agency responsible for emergency communications had concerns with the latency of their key communications application, built on Microsoft SQL Server. Multiple times a day the application had latencies of 200ms, primarily due to poor I/O performance. In addition, they were concerned about the availability of their infrastructure as their SAN was a single point of failure. Lastly, with 50 VMs running on 4 hosts and a small IT staff, the organization was looking to reduce their infrastructure, simplify management and cut costs.

They chose a two node DataCore Hyper-converged Virtual SAN solution. In their proof-of-concept, they tested the solution on their SQL benchmark. They found performance was 20x their current level, easily addressing their concerns about responsiveness. In addition, as opposed to other hyper-converged products that required a minimum of 3 nodes for high availability, DataCore only needed 2 nodes for full N+1 redundancy. With 2 nodes they were able to increase their VM density 100%, decrease the amount of infrastructure and reduce their license costs by 50%. In the end, they had faster applications, more resilience, a smaller footprint, easier management and a lower TCO.

Base Hardware Configuration for one node; two nodes minimum for high availability

			
System x3650 M5	System x3650 M5	System x3650 M5	System x3650 M5
ENTRY MODEL	MIDRANGE MODEL	ULTRA MODEL	ENTERPRISE MODEL
CPU 2 x Intel® Xeon® E5-2620 v4 series processors (16 Cores total)	CPU 2 x Intel® Xeon® E5-2620 v4 series processors (16 Cores total)	CPU 2 x Intel® Xeon® E5-2650 v4 series processors (24 Cores total)	CPU 2 x Intel® Xeon® E5-2695 v4 series processors (36 Cores total)
Memory 192GB RAM	Memory 320GB RAM	Memory 576GB RAM	Memory 768GB RAM
Network iSCSI and/or FC ports optional	Network iSCSI and/or FC ports optional	Network iSCSI and/or FC ports optional	Network iSCSI and/or FC ports optional
Storage 8.4TB usable capacity	Storage 16.8TB usable capacity	Storage 33.6TB usable capacity	Storage 103.6TB usable capacity



Learn more at solutions.lenovo.com/heart-of-the-datacenter.

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