

Micron® Accelerated All-Flash VMware vSAN™ 6.7 U1 Solution



Make vSAN Easy to Build, Easy to Grow with Our All-Flash vSAN Reference Design

VMware vSAN provides great flexibility to respond to changing business demands. However, a vSAN platform with the most expensive hardware might mean overspending, and selecting the cheapest hardware may not meet your performance requirements. Successful configuration planning is crucial.

Micron's newest vSAN 6.7 U1 Reference Architecture targets a configuration based on the [VMware AF-8 specification](#). It optimizes key software and hardware elements to make vSAN easy to build and easy to grow, while keeping costs under control.

Micron Reference Architectures using technologies like our workload-specific Micron® 5200 series SATA SSDs and advanced DRAM, in conjunction with Dell R740xd 2-socket rackmount servers, multicore processors, and state-of-the-art virtualization software like VMware vSAN, help you build today while keeping your sights firmly set on tomorrow.

Cache SSDs
Micron 5200 MAX
960GB (x3)



Capacity SSDs
Micron 5200 ECO
3.84TB (x9)



Platform
Dell R740xd with Intel® CPUs
(2U, 2-socket)



Key Features

Balanced All-Flash Performance

Micron's all-flash vSAN 6.7 U1 solution with workload-specific SATA SSDs is optimized at the platform level for results and value.

Cache Tier: Write-intensive SATA SSDs

bring high IOPS, low latency and workload-tuned endurance to the vSAN cache tier, maximizing results and providing consistent, economical, and fast cache throughput.

Capacity Tier: Read-intensive SATA SSDs

bring immense virtualized platforms and data closer to the most demanding applications. This all-SSD capacity tier unlocks pent up value so your infrastructure stays one step ahead of your application demands and data growth.

Flexibility and Choice

Micron's solution enables you to build with confidence. Engineer-designed and lab-validated, these solutions enable fast time to deployment with predictable results.

Easier Deployment

Micron's solution helps free your deployment teams from the drudgery of experimentation, testing and reconfiguration, enabling them to focus on higher-value tasks like rapid deployment, faster time to value and building your bottom line.

Major Components: Micron SSDs, Dell R740xd Servers with Micron DRAM



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What's New: vSAN 6.7 U1

According to VMWare's [Virtual Blocks blog \(October 16, 2018\)](#)¹, vSAN 6.7 U1 adds:

Simplified Operations (Cluster Quickstart)

The Quickstart guided cluster creation wizard gives administrators a streamlined mechanism for deploying vSAN (and non-vSAN) clusters. Its easy to use step-by-step configuration wizard makes creating a production-ready vSAN cluster easy.

Driver and Firmware Updates Using Update Manager

Updated in vSAN 6.7 U1, all ESXi, driver, and firmware update functions previously handled by the Configuration Assist workflow have been moved to [vSphere Update Manager](#).

Decommissioning and Maintenance Mode Safeguards

Since each vSAN host in a cluster contributes to the cluster storage capacity, entering a host into maintenance mode takes on an additional set of tasks when compared to a traditional architecture.

Reference Architecture Configuration

Component	Details
Server platform	Dell R740xd
Cache SSDs	Micron 5200 MAX (960GB, SATA) (x3)
Capacity SSDs	Micron 5200 ECO (3.84TB, SATA) (x9)
OS drive	Micron SSD (1.92TB, SATA)

Component	Details
CPU	Intel Xeon® Gold 6142 2.60 GHz (x2)
Memory	Micron 32GB 2666 MHz ECC DDR4 (x12)
Networking	Broadcom BCM57414 25 GbE
Storage controller (per node)	Dell HBA330

Get Started with All-Flash vSAN 6.7

An all-flash vSAN can bring amazing benefits. Get started today by downloading our detailed [Reference Architecture](#) and learn about the complete bill of materials, platform and disk group configuration, software tuning, performance measurements and deployment.

Visit Micron's [SATA SSD page](#) to learn more about our complete product line of workload-optimized solid state drives: <https://www.micron.com/products/solid-state-storage/bus-interfaces/sata-ssds#/>

For more details on vSAN 6.7, visit [VMware's vSAN page](#).

1. See <https://blogs.vmware.com/virtualblocks/2018/10/16/whats-new-in-vsan-6-7-update-1/> for additional details on vSAN 6.7 U1 features

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Micron's Accelerated All-Flash Solution Delivers

Balanced Storage, DRAM and CPUs

Engineered and lab-tested by Micron vSAN and platform experts to optimize each node for memory and I/O-intensive applications, our Accelerated All-Flash solution releases the full potential of vSAN 6.7 U1 for demanding large-scale, mixed-workload environments.

A Complete, Deployable Reference Architecture

The reference architecture linked below provides deployment and testing details for a compelling all-flash vSAN configuration that's performance- and density-optimized using Micron's workload-tuned combination of enterprise SATA SSDs.

Faster Time to Happy Applications

Storage (SSDs and DRAM) can represent up to 70% of the value of today's advanced solutions. As a leading designer, manufacturer and supplier of advanced storage and memory technologies with extensive in-house software, application, workload and system design experience, Micron's Accelerated All-Flash solutions help you build and deploy faster with confidence.