Your Window to a Cloud-Ready Data Center Future is Open

With the rise of the cloud in enterprise data center management, more and more businesses are looking for low-friction ways to transform their existing IT management and deployment infrastructures to more closely align with those being employed by the big hyper-scale providers. For those businesses heavily invested in Microsoft Windows®-based technologies, one route to a cloud-based solution for an off-premises cloud infrastructure is Microsoft Azure™. Recently, Microsoft released a new set of products and services called Azure Stack that enable businesses to bring Azure services into their local data centers, resulting in a hybrid-cloud solution that supports moving workloads easily between on-premises and off-premises resources.

A key building block of Microsoft's hybrid-cloud strategy is Microsoft Hyper-V® with Storage Spaces Direct. Together, these two technologies support an easily deployed and managed hyper-converged infrastructure (HCI) solution that can scale to meet most enterprise needs.

As a leader in advanced solid state drive (SSD) storage solutions, Micron understands the benefits of SSD technology for scalable workloads. Bringing Micron's storage expertise together with Microsoft's innovative HCI solution, we've created a reference architecture (RA) that provides key information on how to build a high-performance HCI infrastructure building block that can be used as part of a private or hybrid-cloud infrastructure for your overall data center strategy. This RA illustrates a simple, single-tiered all-flash configuration using Micron enterprise SATA SSDs and advanced DRAM to support Hyper-V virtual machines at scale.

Performance test results show Micron's HCI/SDS RA can provide high IOPS at low latencies across a wide range of storage I/O profiles. Small block random I/O performance of up to 1.5 million IOPS is possible for read-intensive virtualized solutions[1].

Key Features

Value

Our all-flash, all-SATA Microsoft hyper-converged infrastructure (HCI) with Storage Spaces Direct reference architecture (RA) is optimized at the platform level to provide the results you need at an acceptable cost. With direct, engineer-to-engineer collaboration, our RA leverages domain expertise across software, flash storage, memory and platforms. Realize the benefits of an all-flash Virtual SAN without breaking your budget. Using our most performant series of SATA SSDs, our HCI/SDS RA provides optimized solutions using collaborative engineering tuning that tightly integrates compute, networking and storage into a scalable platform.

Flexibility

Micron's HCI/SDS RA is designed to run on your choice of Intel®-based off-the-shelf servers. Focusing on higher-level architectures and Micron's value rather than on specific OEM offerings, this software-defined storage solution allows you to choose the option that's best for you.

Easy Deployment

We provide configuration details along with measured performance analysis to help you make solution decisions and support ease in deployment.


Dramatic Small Block Performance with Low Latency
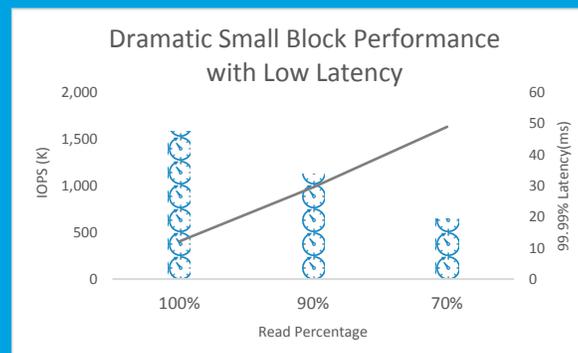
Microsoft HCI Solutions with Micron Enterprise SATA SSDs Deliver Density

Optimized CPUs and DRAM: Hyper-converged infrastructure solutions are CPU- and memory-intensive. Our Hyper-V with Storage Spaces Direct RA designs are CPU- and DRAM-optimized to unleash the full potential of these advanced features, enabling high-density deployments that maximize performance and reduce costs.

A Second Layer of Data Protection: The Micron 5100 ECO SSD adds a second layer of data resiliency with its internal, transparent data path protection[1].

Reduced Command/Access Latency: Firmware enhancements in the 5100 ECO SSD help reduce data access times for better responsiveness and lower latency.
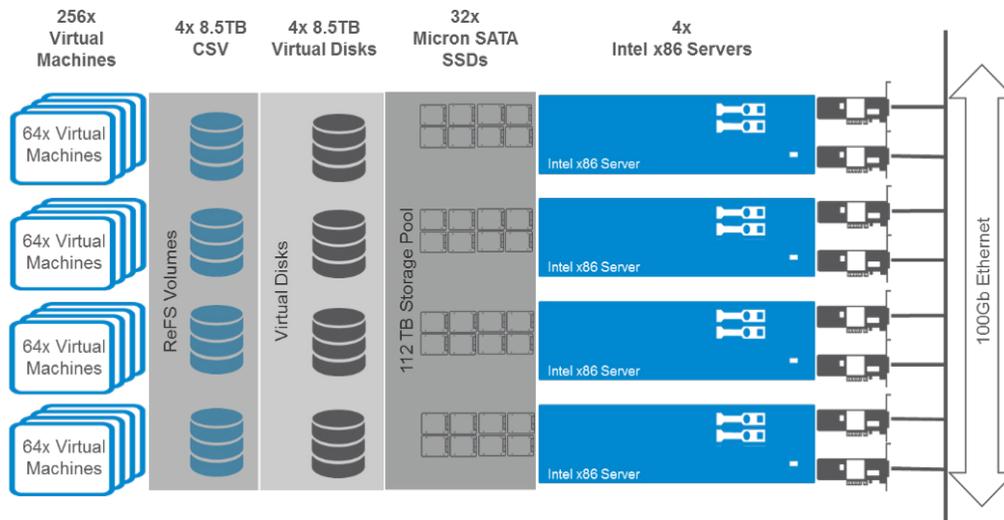
Hyper-Converged Infrastructure Using Microsoft Hyper-V and Storage Spaces Direct with Micron Enterprise SATA SSDs

Learn More

Visit micron.com to learn more about the Hyper-Converged Infrastructure Using Microsoft Hyper-V and Storage Space Direct with Micron® enterprise SATA SSDs.

See all of our Micron Accelerated Solutions at **http://www.micron.com/accelerated-solutions**.

Micron's Reference Architectures

Micron Reference Architectures are optimized, pre-engineered, enterprise-leading platforms developed by Micron with industry leading hardware and software companies.

Designed and tested at Micron's Storage Solutions Center by our software and platform partners, these best-in-class solutions enable end users, channel participants, independent software vendors (ISVs), and OEMs to have a broader choice in deploying next-generation solutions with reduced time investment and risk.

1. Performance is based on configuration documented in the Micron Hyper-Converged Infrastructure Using Microsoft Hyper-V and Storage Spaces Direct with Micron Enterprise SATA SSDs Reference Architecture mentioned and linked in this solution brief. Your workload and solution configuration may result in different performance than documented in this brief.

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