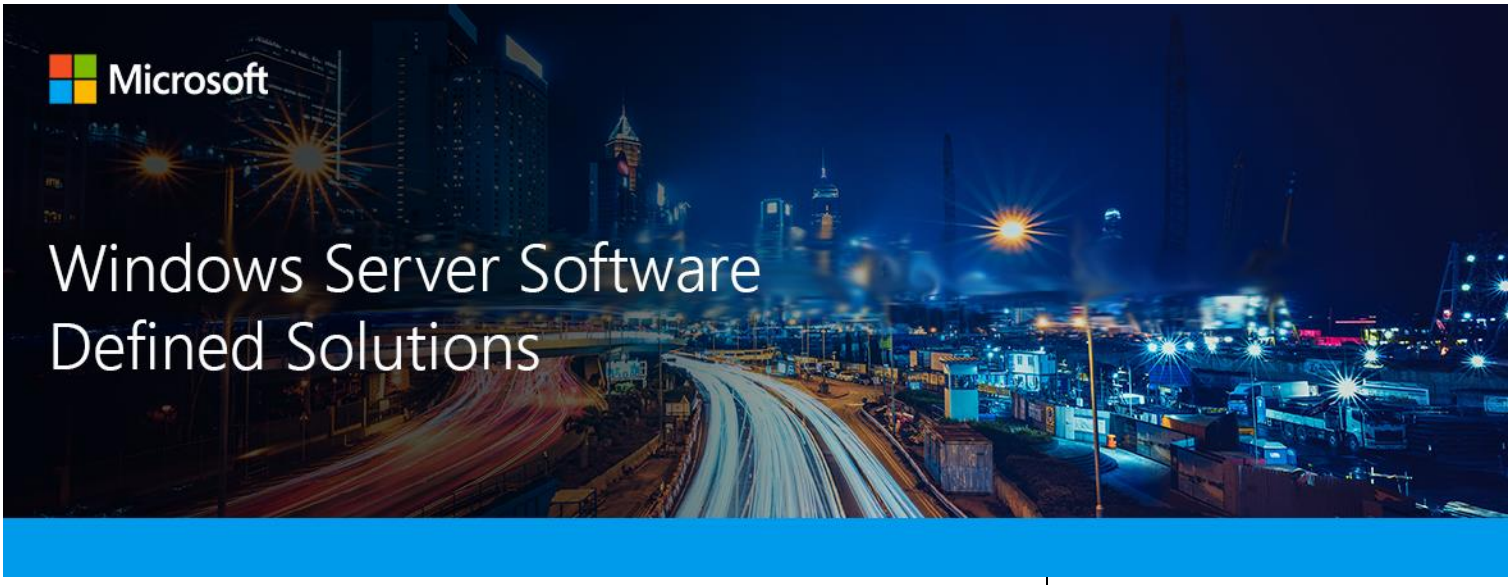

Supermicro Hyper Converged Infrastructure (HCI) Solution Using Microsoft Storage Spaces Direct (S2D)

Supermicro's HCI offerings are Windows Server Software-Defined (WSSD) validated software-defined data centers (SDDC) premium solutions that are built on Supermicro's industry leading All-NVMe/Hybrid systems and Windows Server 2016. The solution family includes 1U Ultra-10 NVMe, 2U TwinPro™ and 4U FatTwin™ servers that deliver the full capability of a comprehensive software-defined data center by leveraging NVMe SSD drives, RDMA (Remote Direct Memory Access) enabled network components, Storage Spaces Direct (S2D), and satisfy customers' different needs for performance, capacity and cost.

Highlights

Supermicro HCI premium solutions provide the following benefits,

- Performance: Over 3 million IOPS (4K, read) in a 4U rack space
- Density: Support 40 VMs per server node
- Features: Certified to support full Windows Server 2016 SDDC features
- Ease of use: Factory validated and certified for Microsoft HCI Premium
- Scalability: Easy to scale out with predictable storage efficiency and performance improvements

Super Micro Computer, Inc

Website:
https://www.supermicro.com

Company Size:
3000

Country or Region:
Incorporated in USA

Industry:
Computer and IT Infrastructure

Partner Profile:
Supermicro® (NASDAQ: SMCI), the leading innovator in high-performance, high-efficiency server technology is a premier provider of advanced server Building Block Solutions® for Data Center, Cloud Computing, Enterprise IT, Hadoop/Big Data, HPC and Embedded Systems worldwide.

Supermicro is committed to protecting the environment through its "We Keep IT Green®" initiative and provides customers with the most energy-efficient, environmentally-friendly solutions available on the market.

Solution Features

Below is the feature comparison between Supermicro HCI Premium Solutions and other WSSD offerings.

	Converged Software-Defined Storage	HCI Standard Solution	Supermicro HCI Premium Solutions
Security			
BitLocker, Shielded Virtual Machines			●
Windows Defender, Credential Guard, Device Guard	●	●	●
Compute			
Hyper-V		●	●
Network			
Software-defined networking capabilities			●
NIC teaming, vSwitches, SMB Direct	●	●	●
Storage			
Storage Spaces Direct software-defined storage	●	●	●
Management			
Virtual Machine Manager	●	●	●
Operations Manager	●	●	●
Servers			
x86 industry standard hardware	●	●	●

Supermicro's flagship server platforms are a perfect match to complement the flexibility and scalability offered by S2D with hot-swappable NVMe, SAS3 and SATA3 hybrid interfaces, so that the most cost and performance-optimized solutions can be customized and deployed at scale.

1U Ultra

Supermicro Ultra SuperServers are designed to deliver the highest performance, flexibility, scalability and serviceability to demanding IT environments, and to power mission-critical Enterprise workloads.

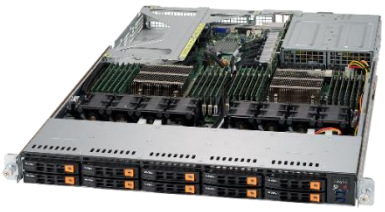

Figure 1: Supermicro 1U Ultra All-NVMe

2U TwinPro™

The Supermicro TwinPro architecture is based on the Supermicro proven Twin technology to provide exceptional throughput, storage, networking, I/O, memory and processing capabilities in a 2U form factor. Customers can further optimize Supermicro solutions to resolve the most challenging IT requirements and benefit from exceptional Total Cost of Ownership (TCO).

Figure 2: Supermicro 2U TwinPro™ 2-node Server System

Specification

Supermicro HCI premium solutions currently offer three SKUs. SYS-1028U-S2D is based on four 1U rackmount SYS-1028U-TN10RT+ Ultra servers; SYS-2028TP-S2D uses 2 2U SYS-2028TP-DNCTP TwinPro™ servers; SYS-F628R3-S2D has one 4U SYS-F628R3-RC0B+ FatTwin™ server. All three SKUs are equipped with dual Intel® Xeon® E5-2600 v4 processors, 128GB of DDR4 memory, NVMe SSDs (as cache devices), Supermicro 25GbE RDMA enabled network adapters on each server node.

Category	**Hyper-Converged Infrastructure Premium**								
Orderable BOM	**SYS-1028U-S2D**			**SYS-2028TP-S2D**			**SYS-F628R3-S2D**		
Server SKU	SYS-1028U-TN10RT+			SYS-2028TP-DNCTR			SYS-F628R3-RC0B+		
OS	Windows Server 2016 Datacenter Edition Included								
Profile	All-flash NMVe			Hybrid			Hybrid		
Scalability	4 nodes			4 nodes			4 nodes		
Form Factor	4x 1U			2x 2U			1x 4U		
RDMA	Yes			Yes			Yes		
TPM 2.0	Yes			Yes			Yes		
CPU	Intel® Xeon® processor E5-2600 v4 product family								
Memory	128GB (up to 3TB per node)			128GB (up to 3TB per node)			128GB (up to 2TB per node)		
HBA	N/A			LSI 3008			LSI 3008		
NIC	Supermicro AOC-S25G-m2S			Supermicro AOC-S25G-m2S			Supermicro AOC-S25G-m2S		
Storage	Type	Qty.	Form Factor	Type	Qty.	Form Factor	Type	Qty.	Form Factor
Caching	400GB NVMe	2	2.5" U.2	800GB NVMe	3	2.5" U.2	800GB NVMe	2	2.5" U.2
Capacity	2TB NVMe	6	2.5" U.2	2TB SATA3 HDD	6	2.5" U.2	6TB SAS3 HDD	6	3.5" U.2

4U FatTwin™

The Supermicro FatTwin™ represents a revolution in Green Computing and is highly efficient by design; this system supports customers' critical applications while reducing Data Center TCO in order to help preserve the environment, and extends the compute and storage capabilities of Supermicro's existing Twin SuperServer® systems to achieve increased performance and power efficiency.

Figure 2: Supermicro 4U FatTwin™ 4-node Server System

Supermicro HCI Family

Supermicro offers different S2D HCI SKUs for customers. For more information, please visit:
http://www.supermicro.com/wssd

Microsoft