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## SOLUTION BRIEF

# BENEFITS OF SAP HANA ON VMWARE VSAN

## EXECUTIVE SUMMARY

SAP customers have seen data center trends change, yet all still have one significant and common challenge; they are looking at more efficient ways to reduce complexity, maintenance, and costs of data center operations. With SAP HANA projects, customers are deeply reviewing their current infrastructure and its transformation to a more innovative solution such as hyperconverged infrastructure (HCI) recently Supermicro has certified by SAP for production systems.

Hyperconverged infrastructure brings compute, storage, and the hypervisor together into a single system, which reduces data center complexity and increases scalability to break through all obstacles of conventional architecture, especially SAN and NAS storage, including their networking. HCI is a software-defined infrastructure model that delivers performance, reduces network overhead, and mainly comes with a simpler IT management and supports dynamic growth by adding all needed resources by merely adding one additional HCI node.

With the certification of SAP HANA on hyperconverged infrastructure powered by VMware vSAN, Supermicro's customers can bring down their data center TCO by leveraging our best of breed systems.



**Figure 1.** Supermicro SYS-6029U-E1CR4T

## SOLUTION

This document describes Supermicro's HCI Solution Supermicro PowerBlocks powered by VMware vSphere & vSAN for SAP HANA on the Ultra SuperServer 6029U-E1CR4T and 2029U-E1CRT. These systems are designed for large in-memory computing and mission-critical enterprise applications in density optimized 2U chassis. Those servers support enterprises that require the highest operational efficiency and maximum performance.

## WHY SAP HANA ON HCI

With HCI, storage components share compute and memory with the server infrastructure. This eliminates the need for separate storage arrays, controllers, memory, SANs, and more. All storage technologies are fully integrated into the virtualization cluster. It's like creating a SAN storage out of the internal storage of vSAN cluster members.

SAP HANA customers can take advantage of HCI, which is extremely simple, flexible, with a much higher degree of scalability to help reducing costs compared to old SAP infrastructure. With SAP support, customers are now ready to migrate or install their virtualized mission-critical SAP HANA systems on top of Hyperconverged Infrastructure powered by VMware vSAN.

## SUPERMICRO SOLUTIONS INTEGRATED WITH VMWARE VSAN

Supermicro has a long-standing experience with VMware products such as vSphere and vSAN and which was constantly shown in ReadyNode™ certification of many different systems. It focuses on deploying VMware vSAN, a hyper-converged solution, as quickly as possible. Working with VMware, Supermicro delivers an alternative to traditional Fiber Channel SAN based storage infrastructure, which is known for its complexity and interoperability challenges. vSAN provides you with the ability to provision and manage compute, network and storage resources from a single pane of management:

1. vSAN integrated management panel with vSphere provides the simplicity, consistent user interface, ease of management and flexibility to spin up HANA instances quickly as required across the vSAN cluster.
2. vSAN enables the software defined storage with flexible customer defined per VM policy based management that can be tailored to test, development, QA instances and provides high availability as required.

Especially with all flash deployments, Supermicro vSAN ReadyNode™ introduces a new high-performance storage tier optimized for enterprise-class virtual environments that is simple, resilient and efficient that reduces the total cost of ownership. It is a perfect solution for enterprises to efficiently grow and manage virtualized infrastructure for maximum ROI.

## SUPERMICRO HCI SOLUTION FOR SAP HANA

The Supermicro HCI for SAP HANA certified systems are based on Supermicro vSAN ReadyNode™ systems with proven reliability and stability in high end environment. Because the SAP HANA certification has more demanding and different KPIs to meet, Supermicro assembled the most appropriate components to easily meet all certification requirements and pass the certification.

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

Benefits of the solution include: standardized and highly optimized for SAP HANA database workload SuperServer, combined with VMware vSAN for better TCO. Through SAP support portal, Supermicro is the single point of contact for HCI joint solution covering triage whenever needed

SUPERMICRO POWERBLOCKS FOR VMWARE VSAN: CERTIFIED SOLUTION	
HCI MODELS INCLUDED	SYS-2029U-E1CRT , SYS-6029U-E1CR4T
CPUS (TOTAL/HANA)	2/2
CPU RANGE	Xeon SP (Cascade Lake) silver, gold, platinum
RAM PER CPU-SOCKET	up to 1,5 TiB
RANGE OF HCI NODES	4-64
RANGE HYPERVISOR	vSphere 6.5, 6.7
RANGE SDS VERSION	vSAN 6.6



**Figure 1.** Supermicro SYS-2029U-E1CRT

The Ultra SuperServer SYS-2029U-E1CRT that is designed for large in-memory computing and mission critical enterprise applications in a density optimized 2U chassis. This server is designed for enterprises that require the highest operational efficiency and maximum performance. The system supports two 2nd Generation Intel® Xeon® Scalable Processors (Cascade Lake-SP) with up to 28 cores, support CPU TDP support 205W, dual UPI up to 10.4 GT/s, 24 DDR4-2993MHz DIMM slots (fast DDR4 technology with up to 3 TB), up to 24 Hot-swap 2.5" drive bays including high performance NVMe drives, and 7 PCI-E 3.0 slots for diverse expansion options.

For more information see:

<https://www.supermicro.com/en/products/system/2U/2029/SYS-2029U-E1CRT.cfm>

The Ultra SuperServer 6029U-E1CR4T system information can be found here:

<https://www.supermicro.com/products/system/2U/6029/SYS-6029U-E1CR4T.cfm>



Supporting sources:

Press Release: [Supermicro Expands Enterprise Server SAP HANA-Based Solutions for VMware Hyperconverged Infrastructure \(HCI\)](#)

## ABOUT SUPER MICRO COMPUTER, INC.

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.

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