



▶ Commvault® Validated Reference Design Specification

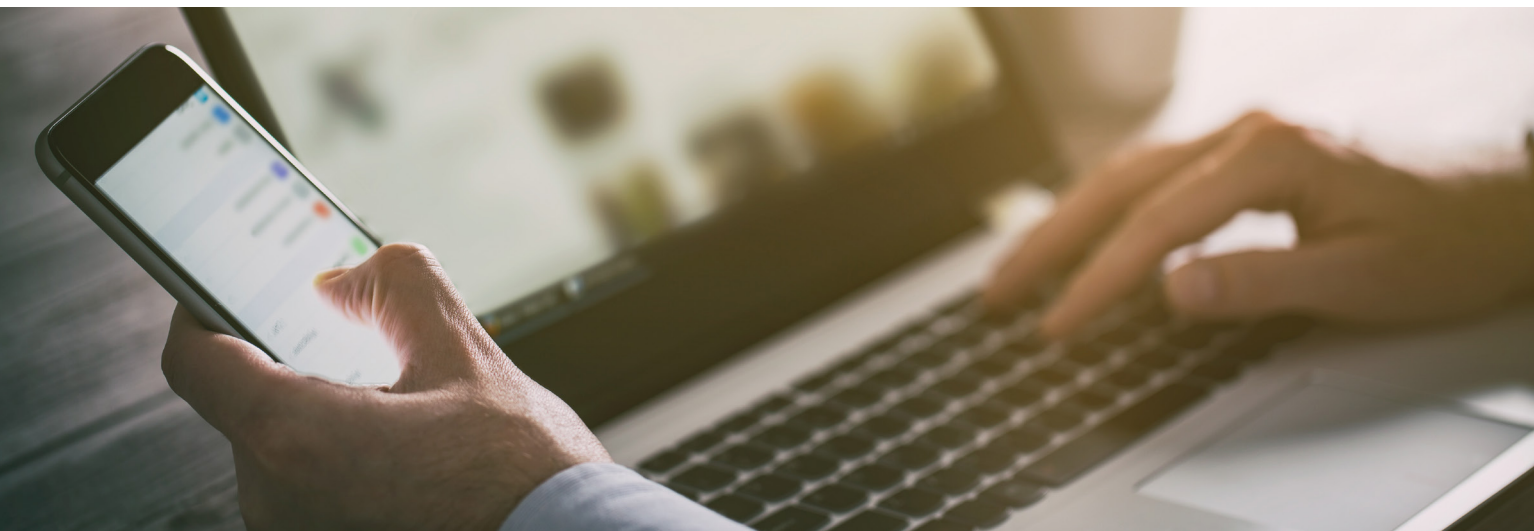
COMMVault HYPERSCALE™ SOFTWARE ON SUPERMICRO 6029P-E1CR12L

▶ INTRODUCTION TO COMMVault HYPERSCALE™ SOFTWARE

With Commvault HyperScale™ Technology, you can build a unified, modern data protection and management platform that delivers cloud-like services on premises. The purpose of this technical specification is to detail the Supermicro® 6029P-E1CR12L SuperStorage Server for the Commvault Validated Reference Design. By building these services on a scale-out infrastructure and leveraging Commvault capabilities, you'll enable:

- Cloud-like agility, resiliency and availability to on-premises data and applications
- Greater end-user efficiency with automation and self-service capabilities
- Improved hardware utilization and optimized costs from general-purpose hardware
- Seamless storage scalability with predictable performance without requiring forklift upgrades
- Better, more secure data protection, utilization and movement by eliminating point product and data silos

By shifting the secondary storage and data management infrastructure to this architecture, enterprises can go a long way in transforming their data centers to be as operationally efficient, resilient and scalable as public cloud infrastructure. Lower hardware costs, operational efficiencies and simplified support allows the replacement of limited and legacy backup tools with a modern cloud enabled data management solution at the cost of replacing legacy purpose-built backup appliance (PBBA). More importantly, this architecture, which extends into public cloud, allows enterprises to offer consistent sets of services to all workloads running on premises or in public cloud, independent of the underlying infrastructure for true cloud based data management.



▶ [Learn more about Commvault HyperScale™ Software.](#)

RELEASE CANDIDATE NOTATION

This configuration is classified as a release candidate as it has the potential to be the final reference design, unless a significant bug occurs. Validated Reference Designs are designed to provide optimized costs and match performance requirements for every customer. Although further testing is required for this configuration it is built to the design specification with the vendor and serves as the configuration that Commvault is currently testing against.

This configuration is currently orderable for customer deployment. During deployment any issues that are identified can be raised via regular support channels.

REFERENCE DESIGN WITH SUPERMICRO

The Supermicro SuperStorage servers improve upon their existing extensive portfolio of modern solutions to drive IT transformation in the data center. The SuperStorage 6029P-E1CR12L represents a suited platform for Commvault's HyperScale software to expand and transform capabilities for customers in today's evolving software-defined world. The highly optimized SuperStorage 6029P-E1CR12L will ensure that the acquisition, deployment, and upkeep are streamlined.

HOW TO USE THIS DOCUMENT

This document covers the design components of the HyperScale architecture, providing options for purchasing the infrastructure for a Commvault HyperScale solution. Commvault Validated Reference Designs deliver tested configurations with leading hardware vendor technology that provide validated designs complemented by best practice configurations that will accelerate ROI, reduce complexity, and add customer value.

The document is broken into a high-level component section detailing out the configuration and specific component options that can be selected depending on the storage density, metadata, and optional I/O components that are required. Each subsection provides guidance for ordering configurations.

This document does not cover overall architecture and design of the HyperScale solution and should be considered as a supplement specific to the applicable hardware vendor.

▶ SUPERMICRO SUPERSTORAGE 6029P-E1CR12L SPECIFICATION SUMMARY

CORE COMPONENTS

Core Components represent features of the build that do not change. They include Chassis, CPU, Memory and other critical elements that need to be ordered.

Country-specific components such as power cables are not listed and can be changed as required.

CORE COMPONENTS	TECHNICAL SPECIFICATION
FORM FACTOR	2U Rackmount
NODE FORM FACTOR	Medium Density – 12LFF
MOTHERBOARD CHIPSET	Intel® C624
PROCESSORS	Intel® Xeon® Silver 4110
MEMORY	256GB RAM (8x32GB RDIMM)
NETWORKING	Quad Port 10Gbps SFP+
STORAGE CONTROLLER	Broadcom 3008
OPTIONAL I/O CARDS CAPABLE	Yes

BOOT AND METADATA STORAGE OPTION

Boot storage houses the operating system and core Commvault HyperScale binaries, while the Metadata storage provides caching areas for such operations as deduplication, indexing, and extents.

BOOT/METADATA CONFIGURATIONS	TECHNICAL SPECIFICATION
BOOT CONFIGURATION	2x 480GB SATA SD, 6Gbps – RAID1
METADATA CONFIGURATION	1x 4TB Intel P4500

DATA STORAGE OPTIONS

Data storage houses the data footprint for the customer environment. Data storage configuration directly impacts the amount of data that each node in the solution is able to store.

When deploying nodes inside of the same block (e.g. 3 node initial configuration), choose identical HDDs. If the nodes in a block have different HDD sizes, the lowest size will be chosen for the data storage, which would lead to underutilized resources on nodes with larger HDDs.

Separate node blocks in the same grid may use different HDDs (e.g. mixing a 3 node 6TB block with a second 3 node 10TB block in the same grid).

Overall sizing and retention varies per customer and therefore is beyond the scope of this document. Please refer to Commvault HyperScale sizing documentation to determine the drive size (and node quantity) required for the specific deployment.

DATA STORAGE CONFIGURATION	TECHNICAL SPECIFICATION
STORAGE CONFIGURATION – DATA STORAGE STORAGE TYPE	4TB, NL-SAS or SATA, 12 Drives 6TB, NL-SAS or SATA, 12 Drives 8TB, NL-SAS or SATA, 12 Drives 10TB, NL-SAS or SATA, 12 Drives 12TB, NL-SAS or SATA, 12 Drives

► BILL OF MATERIALS

Commvault has partnered with Supermicro to create Supermicro SKU's for Commvault which are pre-validated Bill of Materials (BOMs) that allows easy quoting by Supermicro or a Supermicro partner while ensuring the configurations are validated and consistent. These SKU's include the core hardware components for the Commvault HyperScale architectures, items such as power cords and country specific region kits are required as part of the ordering process.

SUPERMICRO COMMVAULT SKU ID

QTY.	PART NUMBER	DESCRIPTION
1	SRS-CVHSEM-48-1201-SC071	Single HyperScale Node – Supermicro 6029P with 12 x 4TB Drives
1	SRS-CVHSEM-72-1201-SC071	Single HyperScale Node – Supermicro 6029P with 12 x 6TB Drives
1	SRS-CVHSEM-96-1201-SC071	Single HyperScale Node – Supermicro 6029P with 12 x 8TB Drives
1	SRS-CVHSEM-120-1201-SC071	Single HyperScale Node – Supermicro 6029P with 12 x 10TB Drives
1	SRS-CVHSEM-144-1201-SC071	Single HyperScale Node – Supermicro 6029P with 12 x 12TB Drives

OPTIONAL I/O ADD-ON CARDS

QTY.	PART NUMBER	DESCRIPTION
1	AOC-LPE12002M8	Emulex LPE12002M8 Dual port 8G Fibre Channel Card
1	AOC-LPE16002B-M6-0	Emulex LPE16002B-M6-0 Dual port 16G Fibre Channel Card
1	AOC-QLE2562	QLogic QLE2562 Dual port 8G Fibre Channel Card
1	AOC-QLE2672	QLogic QLE2672 Dual port 16G Fibre Channel Card



▶ **ADDITIONAL RESOURCES**

Additional information regarding the Supermicro 6029P-E1CR12L can be found on the Supermicro website:

- [Supermicro 6029P-E1CR12L Technical Specifications Guide \(US version\)](#)

- ▶ Bringing a scale-out infrastructure to the Commvault Data Platform, [Commvault HyperScale™ Technology](#) integrates with storage arrays, hypervisors, applications and the full range of cloud provider solutions to support the most diverse and dynamic environments.

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