COMMVAULT

DATASHEET

Commvault Validated Reference Design specification

Commvault HyperScale™ X Software on HPE Servers

Introduction to Commvault HyperScale X Software

Commvault HyperScale X Software is an intuitive and easy to deploy integrated data-protection solution with a distributed scale-out file system that provides unmatched scalability, security, and resilience. Its flexible architecture allows you to get up and running quickly and grow as your needs demand. Commvault Validated Reference Designs accelerate hybrid cloud adoption and deliver:

- Simple, flexible data protection for all workloads including containers, virtual, and databases
- High performance backup and recovery with enhanced recovery capabilities
- Optimized scalability to easily grow capacity in single-node increments as needed, on-prem and in the cloud
- Enhanced resilience with intelligent load balancing of data across disks and nodes and the ability to support concurrent hardware failures
- Built-in ransomware protection via intelligent monitoring to detect data anomalies and alert users

By shifting the secondary storage and data management infrastructure to a scale-out architecture, enterprises can help transform their data centers to be as operationally efficient, resilient and scalable as public cloud infrastructure. Commvault HyperScale X allows organizations to replace limited and legacy backup tools with a modern hybrid cloud-enabled data management solution that eliminates expensive forklift upgrades. The purpose of this technical specification from Commvault's Validated Reference Design program is to provide details on HPE servers for running Commvault HyperScale X Software.

Release candidate designation

This configuration is classified as a release candidate, meaning it is not yet fully validated and could change. However, it is built to the design specification with HPE and is intended to become the final reference design. Validated Reference Designs are developed to provide optimized costs, resiliency, and performance. Further testing is required before this configuration is fully validated and serves as the final configuration from Commvault for HyperScale X Reference Architecture. This configuration is currently orderable for customer deployment and supported through Commvault support channels.

How to use this document

This document details the necessary design components of the Commvault HyperScale™ Technology architecture, providing the key components required when purchasing and configuring the infrastructure for a Commvault HyperScale X Software solution. Commvault Reference Designs deliver validated configurations with leading hardware vendor technology complemented by best practices that will accelerate ROI, reduce complexity, and add customer value.

The document is broken into a high-level component section detailing the configuration and specific component options that can be selected to satisfy storage capacity and connectivity requirements. The reader is referred to a HPE link for details on individual server configurations, validated with Commvault's HyperScale X Software. This document does not cover overall architecture and design of the Commvault HyperScale™ solution, and should be considered as a supplement specific to HPE servers.

HPE Gen 10 general summary

Server overview

Technical specifications	ProLiant DL360 Gen 10	ProLiant DL380 Gen 10	Apollo 4200 Gen 10
Form factor	Validated 1RU server, each with 4x LFF HDD's	Validated 2RU server, each with 12x LFF HDD's	Validated 2RU server, each with 24x LFF HDD's
Motherboard chipset	Intel® C620 series	Intel® C620 series	Intel® C620 series
Processors	Dual Intel® Xeon® Silver 4208 CPU's	Dual Intel® Xeon® Silver 4216 CPU's	Dual Intel® Xeon® Silver 4216 CPU's
Memory	256GB RAM (8x 32GB RDIMM)	512GB RAM (16x 32GB RDIMM)	512GB RAM (16x 32GB RDIMM)
Free PCIe Slots*	Please see notes in the "Flex Component" section for details	Please see notes in the "Flex Component" section for details	Please see notes in the "Flex Component" section for details

*Free PCIe slots

This is the remaining PCIe slots available for use in each server, after the core components such as RAID controller and ethernet network interface cards (NIC) have been installed. Please ensure any additional cards added will physically fit in the server.

Note: Smaller form factor cards can fit in larger form factor slots. However, larger form factor cards cannot fit into smaller form factor slots. For example, an x4 size card can fit in an x8 size slot, however an x8 size card cannot fit in an x4 size slot.

Boot and metadata storage options

Boot storage houses the operating system and core Commvault HyperScale™ binaries. The metadata storage provides caching areas for such operations as deduplication, indexing, logs and extents. The design specifies dedicated storage for Commvault metadata.

Data storage options

Data storage houses the protected data. Data storage selection dictates the amount of data that each node can accommodate. Initial deployments of Commvault HyperScale X require a 3-node configuration, each with identical hard disk drive (HDD) capacities. Subsequent expansion of the Storage Pool can be done with individual or multiple nodes. Overall sizing and retention varies per customer and therefore is beyond the scope of this document. Please refer to Commvault HyperScale Technology sizing documentation to determine the drive size (and node quantity) required for the specific deployment.

Networking Options

A minimum of two (2x) 10GB ports are required per node for Commvault HyperScale installs, one for protected data and one for storage communication between the nodes. It is recommended to have a total of four (4x) ports per node, two (2x) for data and two (2x) for storage for resilience against network failures. These builds have been designed with this recommendation.

Optional I/O add-on cards

The design includes all core components to support Commvault HyperScale X Technology. Flexibilities to accommodate specific customer use-cases comes in the form of number of available PCIe slots in the selected server and is limited to the available options in the "Flex Component Guidelines" section. For example, optional I/O cards for SAS, Ethernet or Fiber Channel connectivity require a free PCIe slot in the server being considered. SAS Connectivity is typically used for direct tape integration, while Fiber Channel (FC) cards are used for Commvault IntelliSnap® technology operations or tape libraries. Additional Ethernet cards may be required for dedicated replication network or to connect to Clients in isolated networks. Where there are validated substitutes, there is a recommended set of components and other "options". Thus, multiple valid configurations are possible within the confines of the published reference design.

Bill of Materials

The Bill of Materials list all components required to configure Commvault HyperScale™ nodes. Each component has been tested and validated. Substitutions cannot be supported. Country-specific components such as power cables are not listed and can be changed as required. Please select the server model of interest from the link titled "HPE Complete BOM Guidelines: Commvault HyperScale", for the list of parts for each supported configuration.

Additional considerations

Please note that due to the differences in each customer environment, some components are not included in the design but must be ordered separately to ensure full functionality and connectivity. These parts include the FC and Ethernet transceivers, as well as the Ethernet, FC, and power cables.

Additional resources

Additional information regarding the HPE Gen10 servers can be found on the following HPE websites:

- HPE Apollo 4200 Gen10 Server details and general configuration (US version).
- HPE Apollo 4200 Gen10 Quick Specifications Guide can be found at this link (US version).
- HPE ProLiant DL380 Gen10 details and general configuration
- HPE ProLiant DL380 Gen10 QuickSpecs
- HPE ProLiant DL360 Gen10 QuickSpecs