COMMVAULT®

Commvault® Reference Design Specification

COMMVAULT HYPERSCALE™ SOFTWARE ON HPE APOLLO 4200 GEN10

INTRODUCTION TO COMMVAULT HYPERSCALE™ SOFTWARE

With Commvault HyperScale™ Technology, you can build a unified, modern backup, recovery, and data management solution that delivers cloud-like services on premises. The purpose of this technical specification document is to detail the HPE Apollo 4200 Gen10 server components for the Commvault 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 through 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 products and data silos

By shifting the secondary storage, data management, and backup 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 limiting and legacy backup tools with a modern cloud-enabled data protection solution at the cost of replacing legacy purpose-built backup appliances (PBBA). More importantly, this architecture, which extends into the public cloud, allows enterprises to offer consistent sets of services to all workloads running on premises or in the public cloud, independent of the underlying infrastructure for true cloud-based backup, recovery, and data management solution.

RELEASE CANDIDATE DESIGNATION

This configuration is classified as a release candidate, which means it is not yet fully validated and is subject to 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 and match performance requirements for every customer. Further testing is required before this configuration is fully validated and serves

Evolve your on-premises environment so that it mirrors the business benefits you've achieved using cloud. When that happens, you'll have a modern data protection platform that can store and protect your data for years to come.

as the final configuration that Commvault is currently testing against. This configuration is currently orderable for customer deployment and supported through Commvault support channels.

REFERENCE DESIGN WITH HPE

HPE Apollo servers are purpose-built for large-scale deployment of a software-defined modernized infrastructure. The HPE Apollo 4200 Gen10 represents an ideal platform for Commvault HyperScale™ Software to expand and transform capabilities for customers in today's evolving software-defined world. The ultra-dense and rack scale HPE Apollo 4200 Gen10 has a wide range of storage capacities to ensure scalability while streamlining acquisition and deployment, all in a 2U platform.

HOW TO USE THIS DOCUMENT

This document details the necessary design components of the Commvault HyperScale™ Technology architecture, providing the relevant key components required when configuring and purchasing the infrastructure for a Commvault HyperScale™ Software solution. Commvault Reference Designs deliver validated configurations with leading hardware vendor technology that provide validated designs 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 density requirements. Each subsection provides guidance for ordering configurations.

This document does not cover overall architecture design of the Commvault HyperScale solution, however, and should be considered as a supplement specific to HPE.

Commvault HyperScale™ Software with HPE Enterprise Servers Solution Brief

Our offering allows customers to significantly decrease complexity and cost while increasing scalability and IT agility.

READ NOW

PDF

HPE APOLLO 4200 GEN10 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
Motherboard Chipset	Intel® C621
Processors	Intel Xeon-Silver 4114
Memory	256GB RAM (8x 32GB RDIMM)
Networking	HPE Ethernet 10Gb 2-port 562SFP+ Adapter
Storage Controller	HPE Smart Array P816i-a SR Gen10

BOOT AND METADATA STORAGE OPTIONS

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 and metadata can be either configured together as a single unit or housed separately.

NOTE: At present there is a single option available for boot/metadata storage. Additional options are planned for a future release. This reference design will be updated when those new components become available and orderable.

There have been times that specific hardware components, such as flash storage, have extended order cycles. These instances are typically beyond HPE's or the partner's control.

BOOT/METADATA CONFIGURATIONS	TECHNICAL SPECIFICATION
COMBINED BOOT/METADATA	4x1.92TB SATA SSD LFF, 6G -RAID 5

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 is able to accommodate.

When deploying nodes inside the same block (e.g., 3-node initial configuration), choose identical hard disk drives (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 wasted 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 Technology sizing documentation to determine the drive size (and node quantity) required for each specific deployment.

DATA STORAGE CONFIGURATION	TECHNICAL SPECIFICATION
STORAGE CONFIGURATION	
Data Storage/Storage Type	4TB, NL-SAS or SATA, 24 Drives 6TB, NL-SAS or SATA, 24 Drives 8TB, NL-SAS or SATA, 24 Drives 10TB, NL-SAS or SATA, 24 Drives 12TB, NL-SAS or SATA, 24 Drives

NOTE: Drive sizes and interfaces can change. Please view Data Store Options section.

BILL OF MATERIALS (BOM)

This BOM represents the configuration supported as part of the Commvault Validated Reference Design Program. There are three main sections of this document: core components, data storage options, and optional components.

QTY	PART NUMBER	DESCRIPTION
1	P07244-B21	HPE Apollo 4200 Gen10 24LFF Configure-to-order Server
1	P08046-L21	HPE Apollo 4200 Gen10 Intel Xeon-Silver 4114 (2.2GHz/10-core/85W) FIO Processor Kit
1	P08046-B21	HPE Apollo 4200 Gen10 Intel Xeon-Silver 4114 (2.2GHz/10-core/85W) Processor Kit
8	815100-B21	HPE 32GB (1x32GB) Dual Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit
1	869083-B21	HPE Smart Array P816i-a SR Gen10 (16 Int Lanes/4GB Cache/SmartCache) 12G SAS Modular LH Controller
1	P01367-B21	HPE 96W Smart Storage Battery (up to 20 Devices) with 260mm Cable Kit
2	727055-B21	HPE Ethernet 10Gb 2-port 562SFP+ Adapter
2	865414-B21	HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
1	BD505A	HPE iLO Advanced 1-server License with 3yr Support on iLO Licensed Features
1	867809-B21	HPE Gen10 2U Bezel Kit
1	822731-B21	HPE 2U Shelf-Mount Adjustable Rail Kit
1	P07943-B21	HPE Apollo 4200 Gen10 4LFF Rear Cage Kit
1	813546-B21	HPE 2nd Cage FIO Controller Mode for Rear Storage
4	P09726-B21	HPE 1.92TB SATA 6G Mixed Use LFF (3.5in) LPC 3yr Wty Digitally Signed Firmware SSD

DATA STORAGE OPTIONS

For data storage, choose the appropriate part number and do not mix part numbers within a block. The drives listed for this configuration are 6Gbps SATA, but 12Gbps or NL-SAS variants of these drives are acceptable, and they may be deployed as part of this design. Currently all known variants of 6/12Gbps and NL-SAS/SATA drives are validated.

QTY.	PART NUMBER	DESCRIPTION
24	861683-B21	HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty Digitally Signed Firmware HDD
24	861742-B21	HPE 6TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty 512e HDD
24	834028-B21	HPE 8TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty 512e Digitally Signed Firmware HDD
24	857650-B21	HPE 10TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty Helium 512e Digitally Signed Firmware HDD
24	881787-B21	HPE 12TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty Helium 512e Digitally Signed Firmware HDD

OPTIONAL I/O ADD-ON CARDS

QTY.	PART NUMBER	DESCRIPTION
1	P9M76A	HPE StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
1	Q0L12A	HPE StoreFabric SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter

ADDITIONAL RESOURCES

Additional information regarding the HPE Apollo 4200 Gen10 can be found on HPE's website at the following locations:

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

COMMVAULT

COMMVAULT.COM | 888.746.3849 | GET-INFO@COMMVAULT.COM