

Overview

HPE ProLiant for vSAN Ready Node

VMware vSAN™ is a software-defined storage product that pools direct-attached storage devices across a VMware vSphere server virtualization cluster to create a distributed, shared data store.

Hewlett Packard Enterprise supports, certifies, and offers VMware vSAN ReadyNode™ configurations based on HPE ProLiant servers through the use of Smart Templates and CTO Menus. These easy-to-order configurable bundles are built on HPE ProLiant servers and are certified under the HPE vSAN ReadyNode profile specifications, and multiple Build-Your-Own (BYO) vSAN Certified configurations available for vSAN Original Storage Architecture. All options available for our Smart Template base configurations are tested, certified, and listed in the Broadcom Compatibility Guide, taking the guesswork out of building vSAN ReadyNode configurations. These HPE configurations were built based on the published VMware vSAN ReadyNode Profiles. HPE has Smart Template configurations for all current shipping ProLiant systems with **VMware vSAN Express Storage Architecture** in ESXi 8.0 along with all flash SAS, SAS/SATA, SATA SSD options. HPE also has configurations optimized for either virtualization, data management and processing, accelerated infrastructure, or data warehousing, to provide ideal performance based on the customer's workload.

Notes: The use of Smart Templates does not enforce rules on changes to devices or options that the user could make. Any changes must be validated against the Broadcom Compatibility Guide. Please review CLIC warnings for further verification.

A complete list of supported and certified ProLiant servers is available either in the Hewlett Packard Enterprise support matrix at <http://www.hpe.com/servers/vmwarecert> or in the **Broadcom Compatibility Guide** ("BCG")

For vSAN Original Storage Architecture ReadyNodes please visit: [this link for HPE Servers](#).

For vSAN Express Storage Architecture ReadyNodes please visit [this link for HPE Servers](#).

What's New

- Broadcom has released an updated compatibility guide with new "Simplified BOM" for vSAN ReadyNodes
- HPE has added multiple new server platforms and NVMe devices to the vSAN Express Storage Architecture (ESA) list
- vSAN Tracking SKUs (2) for both "OSA" and "ESA" Architecture
- Reference Builds are now called "Smart Templates" – In OCA there is a new section for locating best-use vSAN ReadyNode configurations. While in OCA go to "Select From Smart Template", look for "Compute" and "Hyperconverged" and then search for available UCID's.
- New vSAN Express Storage Architecture ("ESA") builds for HPE ProLiant DL145 Gen11 Server, Intel's new 5th Gen Xeon processors, AMD's new 5th Gen EPYC processors, and newly announced HPE ProLiant Gen12 Servers.
- HPE ProLiant Gen12 Servers will not support vSAN Original Storage Architecture.
- HPE ProLiant Servers for vSAN ESA do not support the use of Multi-Vendor Mainstream NVMe SKUs for either Read Intensive (RI) or Mixed Use (MU). The use of these SKUs will create an unsupported configuration.

At A Glance

HPE vSAN ReadyNodes provide customers with the fastest path to optimized workloads, delivered on platforms that provide broad scalability and flexibility for each unique environment. The end-to-end solutions are covered by HPE Tech Care support and can be sourced entirely from Hewlett Packard Enterprise, inclusive of VMware software licenses. Key features and benefits include:

- HPE now offers Smart Template configurations that target mainstream use cases and forward-looking technology such as Express Storage Architecture ("ESA") as higher bandwidth networking and NVMe for next-gen storage. HPE maintains the list of supported platforms and devices on the Broadcom Support Compatibility Matrix

Overview

- Optimized solutions – vSAN ReadyNode offerings are optimized to provide ideal performance on the from a range of workloads including VDI, SQL, and more.
- Custom and scalable build- All nodes default to a configuration optimized for both cost and performance; however, each has a full suite of options to upgrade. The customer can tailor each server to fit their specific environment.
- All Smart Templates use HPE NS204i as boot source.
- Factory built -The hardware is assembled and configured in the HPE factory using extensively tested configuration guidelines.
- Solution-level support - Hewlett Packard Enterprise offers its HPE 4-hour 24x7 Tech Care Service as base support, with options for Tech Care Advanced as well as Complete Care. This solution-level support experience is designed to accelerate time to resolution and is delivered by an HPE Center of Excellence capable of supporting the complete solution, including the HPE hardware, software, VMware software, and Microsoft software. HPE solution support experts are well versed in all aspects of the offering. Customers also have the ability to select from various service level options such as HPE 6-Hour Call-to-Repair Hardware Support, or options for defective media retention.
- Tracking SKUs for OSA and ESA servers (AMD and Intel). For HPE ProLiant Gen12 Servers there will be only the vSAN ESA tracking SKU.
- Current Gen11 Controllers available for vSAN:

Notes:

1. These controllers are only to be used in Gen11 Servers if you are building OSA ReadyNodes or BYO. This is unsupported in HPE ProLiant Gen12 Servers.
2. The use of Tri-Mode controllers attached to NVMe devices is NOT supported by vSAN – DO NOT use the below controllers with NVMe devices as NVMe SSD is only allowed via direct attach. See “VMware by Broadcom Web Sites” section below for more information.)
 - HPE MR416i-p Gen11 16 Internal Lanes/8GB Cache SPDM PCI Plug-in Storage Controller P47777-B21
 - HPE MR416i-o Gen11 16 Internal Lanes/8GB Cache SPDM OCP Storage Controller P47781-B21
 - HPE MR216i-p Gen11 16 Internal Lanes/No Cache SPDM PCI Plug-in Storage Controller P47785-B21
 - HPE MR216i-o Gen11 16 Internal Lanes/No Cache SPDM OCP Storage Controller P47789-B21
 - HPE MR408i-o Gen11 8 Internal Lanes/4GB Cache SPDM OCP Storage Controller P58335-B21
 - HPE SR932i-p Gen11 32 Internal Lanes/8GB Wide Cache SPDM PCI Plug-in Storage Controller P47184-B21
 - HPE SR416ie-m Gen11 x16 Lanes 4GB Cache SPDM Mezzanine Storage Controller P39959-B21

HPE Web Sites

- Alliance page: <https://www.hpe.com/us/en/alliance/vmware.html>
- Support Matrix: <http://www.hpe.com/servers/vmwarecert>

VMware by Broadcom Web Sites

- Design and Sizing Guide: <https://techdocs.broadcom.com/us/en/vmware-cis/vsan/vsan/8-0/vsan-planning/designing-and-sizing-a-virtual-san-cluster/sizing-a-virtual-san-datastore.html>
- “BCG”: <https://compatibilityguide.broadcom.com/search?program=vsanesa&persona=live&column=vendor&order=asc&vsanEsaReadynodeVendors=%5BHewlett+Packard+Enterprise%5D&activePage=1&activeDelta=20>
- “What you can (and Cannot) Change in vSAN ESA”: <https://knowledge.broadcom.com/external/article?legacyId=90343>
- “Guidance regarding NVMe devices used in vSAN environments: <https://knowledge.broadcom.com/external/article/314305/vsan-support-of-nvme-devices-behind-trim.html>



Standard Features

Supported Media for vSphere 7/vSphere 8

Acquire your choice of Hewlett Packard Enterprise supported and qualified media. Please note that all devices will need to be imaged for vSphere 7/vSphere 8:

- Any HPE hard drive
 - HPE NS204i-p x2 Lanes NVMe PCIe3 x8 OS Boot Device
 - HPE NS204i-p v2 x2 Lanes NVMe PCIe3 x8 OS Boot Device
 - HPE NS204i-u Gen11 NVMe Hot Plug Boot Optimized Storage Device
 - HPE NS204i-d Gen11 Synergy Gen11 Boot Controller
-



Service and Support

HPE Services

No matter where you are in your digital transformation journey, you can count on HPE Services to deliver the expertise you need when, where and how you need it. From planning to deployment, ongoing operations and beyond, our experts can help you realize your digital ambitions.

<https://www.hpe.com/services>

Consulting Services

No matter where you are in your journey to hybrid cloud, experts can help you map out your next steps. From determining what workloads should live where, to handling governance and compliance, to managing costs, our experts can help you optimize your operations.

<https://www.hpe.com/services/consulting>

HPE Managed Services

HPE runs your IT operations, providing services that monitor, operate, and optimize your infrastructure and applications, delivered consistently and globally to give you unified control and let you focus on innovation.

[HPE Managed Services | HPE](#)

Operational services

Optimize your entire IT environment and drive innovation. Manage day-to-day IT operational tasks while freeing up valuable time and resources. Meet service-level targets and business objectives with features designed to drive better business outcomes.

<https://www.hpe.com/services/operational>

HPE Complete Care Service

HPE Complete Care Service is a modular, edge-to-cloud IT environment service designed to help optimize your entire IT environment and achieve agreed upon IT outcomes and business goals through a personalized experience. All delivered by an assigned team of HPE Services experts. HPE Complete Care Service provides:

- A complete coverage approach -- edge to cloud
- An assigned HPE team
- Modular and fully personalized engagement
- Enhanced Incident Management experience with priority access
- Digitally enabled and AI driven customer experience

<https://www.hpe.com/services/completecure>

HPE Tech Care Service

HPE Tech Care Service is the operational support service experience for HPE products. The service goes beyond traditional support by providing access to product specific experts, an AI driven digital experience, and general technical guidance to not only reduce risk but constantly search for ways to do things better. HPE Tech Care Service delivers a customer-centric, AI driven, and digitally enabled customer experience to move your business forward. HPE Tech Care Service is available in three response levels. Basic, which provides 9x5 business hour availability and a 2-hour response time. Essential which provides a 15-minute response time 24x7 for most enterprise level customers, and Critical which includes a 6-hour repair commitment where available and outage management response for severity 1 incidents.

<https://www.hpe.com/services/techcare>



Service and Support

HPE Lifecycle Services

HPE Lifecycle Services provide a variety of options to help maintain your HPE systems and solutions at all stages of the product lifecycle. A few popular examples include:

- Lifecycle Install and Startup Services: Various levels for physical installation and power on, remote access setup, installation and startup, and enhanced installation services with the operating system.
- HPE Firmware Update Analysis Service: Recommendations for firmware revision levels for selected HPE products, taking into account the relevant revision dependencies within your IT environment.
- HPE Firmware Update Implementation Service: Implementation of firmware updates for selected HPE server, storage, and solution products, taking into account the relevant revision dependencies within your IT environment.
- Implementation assistance services: Highly trained technical service specialists to assist you with a variety of activities, ranging from design, implementation, and platform deployment to consolidation, migration, project management, and onsite technical forums.
- HPE Service Credits: Access to prepaid services for flexibility to choose from a variety of specialized service activities, including assessments, performance maintenance reviews, firmware management, professional services, and operational best practices.

Notes: To review the list of Lifecycle Services available for your product go to:

<https://www.hpe.com/services/lifecycle>

For a list of the most frequently purchased services using service credits, see the [HPE Service Credits Menu](#)

Other Related Services from HPE Services:

HPE Education Services

Training and certification designed for IT and business professionals across all industries. Broad catalogue of course offerings to expand skills and proficiencies in topics ranging from cloud and cybersecurity to AI and DevOps. Create learning paths to expand proficiency in a specific subject. Schedule training in a way that works best for your business with flexible continuous learning options.

<https://www.hpe.com/services/training>

Defective Media Retention

An option available with HPE Complete Care Service and HPE Tech Care Service and applies only to Disk or eligible SSD/Flash Drives replaced by HPE due to malfunction.

Consult your HPE Sales Representative or Authorized Channel Partner of choice for any additional questions and services options.

Parts and Materials

HPE will provide HPE-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements.

Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product quick-specs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

How to Purchase Services

Services are sold by Hewlett Packard Enterprise and Hewlett Packard Enterprise Authorized Service Partners:

- Services for customers purchasing from HPE or an enterprise reseller are quoted using HPE order configuration tools.
- Customers purchasing from a commercial reseller can find services at <https://ssc.hpe.com/portal/site/ssc/>



Service and Support

AI Powered and Digitally Enabled Support Experience

Achieve faster time to resolution with access to product-specific resources and expertise through a digital and data driven customer experience

Sign into the HPE Support Center experience, featuring streamlined self-serve case creation and management capabilities with inline knowledge recommendations. You will also find personalized task alerts and powerful troubleshooting support through an intelligent virtual agent with seamless transition when needed to a live support agent.

<https://support.hpe.com/hpesc/public/home/signin>

Consume IT On Your Terms

HPE GreenLake edge-to-cloud platform brings the cloud experience directly to your apps and data wherever they are—the edge, colocations, or your data center. It delivers cloud services for on-premises IT infrastructure specifically tailored to your most demanding workloads. With a pay-per-use, scalable, point-and-click self-service experience that is managed for you, HPE GreenLake edge-to-cloud platform accelerates digital transformation in a distributed, edge-to-cloud world.

- Get faster time to market
- Save on TCO, align costs to business
- Scale quickly, meet unpredictable demand
- Simplify IT operations across your data centers and clouds

To learn more about HPE Services, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner. Contact information for a representative in your area can be found at "Contact HPE"

<https://www.hpe.com/us/en/contact-hpe.html>

For more information

<http://www.hpe.com/services>



Configuration Information

How to order

Customers can purchase VMware vSAN ReadyNodes directly from Hewlett Packard Enterprise or through Hewlett Packard Enterprise authorized resellers. There is a dedicated VMware vSAN solutions catalog within our Hewlett Packard Enterprise sales and authorized partner ordering tool [OCA]. Within the catalog, customers can use vSAN Ready Node Solution menus for vSAN ESA from the OCA catalog and all profiles and workload optimized solutions are listed within 'Smart Templates'.

Notes: The use of vSAN Ready Node Solution menus for vSAN ESA from the OCA catalogue uses rules controls (for profile sizing) and certified NVMe devices (from the Broadcom Compatibility Guide) only. The use of Smart Templates is a reference starting point, and can be modified although it does not enforce rules controls or restrict to only certified devices (always refer to BCG for updated components list if using this build option).

Start New Configuration

Product

☐ Obsolete

☐ Discontinued

☐ Pre-Release

☐ BTO

☒ CTO

☐ BOTH

Select Product

Type to search...

Select from Product Catalog

Select from Smart Template

Select from My Library

Options

Quotation Mode

☒ Normal

☐ HPE GreenLake

☐ Renew (Remanufactured)

☐ Use for add-ons

☐ Support only

Solution Type

☒ Single Solution

☐ Icon Separation

Services

☒ Flexible Services

☐ Fixed Services

Is this a Cross-BU Solution?

☒ No

☐ Yes

Sub-configuration

New sub-configuration

Next

Cancel



Configuration Information

Accessories	Smart Templates	Recent	My Library
	Compute (103) AI ML and Data Analytics (0) AI, ML, and data analytics - Compute (0) Containers (6) Core Compute (15) Edge Compute (1) HPE Preferred (1) HyperConverge - HPE ProLiant DL345 (2) HyperConverge - HPE ProLiant DL325 (1) HyperConverge - HPE ProLiant DL360 (6) HyperConverge - HPE ProLiant DL365 (1) HyperConverge - HPE ProLiant DL380 (6) HyperConverge - HPE ProLiant DL385 (3) HyperConverge - HPE Synergy 480 (1) Hyperconverged (4) Server - HPE ProLiant DL110 (1) Server - HPE ProLiant DL145 (2) Server - HPE ProLiant DL320 (5) Server - HPE ProLiant DL325 (3) Server - HPE ProLiant DL340 (2) Server - HPE ProLiant DL345 (1) Server - HPE ProLiant DL360 (16) Server - HPE ProLiant DL365 (2) Server - HPE ProLiant DL380 (12) Server - HPE ProLiant DL380a (3) Server - HPE ProLiant DL385 (3) Server - HPE ProLiant DL560 (1) Server - HPE ProLiant ML110 (1) Server - HPE ProLiant ML350 (3) Storage Platforms (0) Test subcat Compute (1)		HPE Private Cloud AI (28) Private Cloud (28) Software (0) Test (0) Test Subcat under Test Cat PRO (0)
HPE ProLiant vSAN Original Storage Architecture FIO Tracking HPE ProLiant vSAN ReadyNode Express Storage Architecture FIO Tracking			
			P63223-B21 P63226-B21



Technical Specifications

Guidance for vSAN ESA

KB article 90343

vSAN ESA ReadyNode Hardware Guidance

Description	vSAN-ESA-AF-0	vSAN-ESA-AF-2	vSAN-ESA-AF-4	vSAN-ESA-AF-6	vSAN-ESA-AF-8	vSAN-ESA-AF-HighDensity
Node Capacity (TB) (Min)	1.6	10	20	40	60	100
CPU (#cores) per Node (Min)	16	24	32	48	56	48
Memory (GB) (Min)	128	256	512	768	1024	768
Network (GbE) (Min)	10	25	25	25	100	50
Device Endurance	1 DWPD or higher				3 DWPD	1 DWPD or higher

Device Guidance

- Type (NVMe TLC): Read Intensive (1DWPD) or Mixed-Use Devices (3DWPD)
- Minimum Capacity: 1.6TB
- Performance Class: Class F or higher
- Endurance Class: Class D or higher (1DWPD or higher)

VMware vSAN ReadyNode Profiles for ESA

Notes:

- These are base default specifications for each server and match the VMware defined vSAN ReadyNode profile minimums. Processor, memory, storage, network interface controllers [NIC], and power supplies are configurable options but must meet or exceed minimums.
- AF-2 minimum requirements: CPU: 24 total cores; Memory: 256GB; Single tier total capacity: 10Tb or more (2 total drives minimum), NIC: 25GB or more
- Not all ESA nodes are listed here, please visit the below links for more configurations.
- For more detail on vSAN profiles please see:
<https://compatibilityguide.broadcom.com/search?program=vsanesa&persona=live&column=vendor&order=asc&vsanESaReadynodeVendors=%5BHewlett+Packard+Enterprise%5D&activePage=1&activeDelta=20>
- For more detail on vSAN ESA allowable changes please visit
<https://knowledge.broadcom.com/external/article?legacyId=90343>

Environment-friendly Products and Approach End-of-life Management and Recycling

Hewlett Packard Enterprise offers end-of-life product return, trade-in, and recycling programs in many geographic areas.

For trade-in information, please go to <http://www.hpe.com/info/recycle>.

To recycle your product, please go to <http://www.hpe.com/info/recycle> or contact your nearest Hewlett Packard Enterprise sales office. Products returned to Hewlett Packard Enterprise will be recycled, recovered, or disposed of in a responsible manner.

The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the HPE website at

<http://www.hpe.com/info/recycle>.

These instructions may be used by recyclers and other WEEE treatment facilities as well as HPE OEM customers who integrate and re-sell HPE equipment.

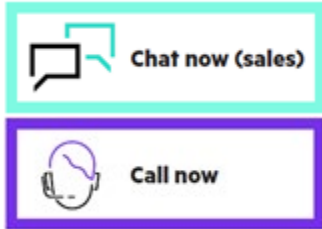


Summary of Changes

Date	Version History	Action	Description of Change
09-Jun-2025	Version 16	Changed	Overview section was updated. At-A-Glance, and How To Order sub-sections were updated.
17-Mar-2025	Version 15	Changed	Overview and Standard Features sections were updated. (Web Sites, Profiles, Gen12 Servers and DL145 Gen11).
02-Dec-2024	Version 14	Changed	Overview, Standard Features, Configuration Information and Technical Specifications.
12-Jan-2024	Version 13	Changed	Service and Support and Configuration Information sections were updated. SKU Changes and Obsolete SKUs were removed
20-Nov-2023	Version 12	Changed	HPE Services Rebranding
02-Oct-2023	Version 11	Changed	Read Intensive NVMe allowed, AF-0 Profiles added
10-Jul-2023	Version 10	Changed	Overview and Configuration Information sections were updated.
01-May-2023	Version 9	Changed	OSA/ESA Gen11 Tracking SKUs, SY480 Gen11 ESA node added, Gen11 HY certification for Broadcom HBA controllers
20-Feb-2023	Version 8	Changed	Overview, Standard Features, Configuration Information, and Technical Specifications sections were updated with ESXi 8.0 and Gen11 server information.
14-Nov-2022	Version 7	Changed	Overview, Standard Features, Configuration Information, and Technical Specifications sections were updated.
04-Apr-2022	Version 6	Changed	Overview and Technical Specifications sections were updated. Added ReadyNodes with more controller options, changes to SAS drives
07-Mar-2022	Version 5	Changed	Overview, Configuration Information, Service and Support and Technical Specifications sections were updated.
15-Nov-2021	Version 4	Changed	Service and Support section was updated.
01-Jun-2020	Version 3	Changed	Overview, Standard Features, Configuration Information, and Technical Specifications sections were updated.
30-Jul-2019	Version 2	Changed	Overview, Standard Features, Configuration Information, Service and Support and Technical Specifications sections were updated.
01-Jul-2019	Version 1	New	New QuickSpecs

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