HPE 3PAR StoreServ 8000, 9000, and 20000 Storage Installation and Startup Service

HPE Lifecycle Event Services

Designed to provide a smooth startup, HPE 3PAR StoreServ 8000, 9000, and 20000 Storage Installation and Startup Service provides deployment of your HPE 3PAR StoreServ 8000, 9000, and 20000 Storage, helping to ensure proper installation in your storage environment as well as helping you increase the benefit from your storage investment.

The service provides activities required to help you deploy your HPE 3PAR StoreServ 8000, 9000, and 20000 Storage into operation. With the assistance of your designated IT storage administrator, a Hewlett Packard Enterprise service specialist deploys your array as more fully described in the **Service features** table.

When ordered with hardware upgrade products, the service also provides deployment of hardware upgrades to your existing HPE 3PAR StoreServ 8000, 9000, and 20000 Storage.

The service includes the following:

• For new arrays, configuration and presentation of a test virtual volume using nonproduction data for up to two hosts

• For array upgrades, installation and configuration of the array upgrade products as further detailed in the following sections

Reconfiguration of your existing array—for example, virtual volumes, hosts, or a SAN—is outside the scope of this service.

For installation of the array into a rack, supply, assembly, configuration, and positioning of the rack are excluded from this service. Please refer to additional exclusions in the **Service limitations** section.

Service benefits

• Allows your IT resources to stay focused on their core tasks and priorities

• Can help reduce implementation time, as well as the impact on and risk to your storage environment

• Designed to help ensure a successful implementation by providing HPE installation planning and coordination

• Provides service delivered by a trained specialist and based on HPE recommended configurations and best practices

• Helps you more effectively utilize your HPE 3PAR StoreServ Storage, thanks to the knowledge you gain from the service specialist during delivery of the service

Service feature highlights

• Service planning and coordination

• Service deployment

• Installation verification tests (IVTs)

• Customer orientation session

Service features

Feature	Delivery specifications
Service planning and coordination	A Hewlett Packard Enterprise service specialist will plan all the necessary activities, including the identification of any prerequisites (see the **Service eligibility** section), and schedule the delivery of the service at a time mutually agreed upon by Hewlett Packard Enterprise and the Customer, which shall be during local HPE standard business hours excluding HPE holidays, unless otherwise agreed by HPE. Any services provided outside of HPE standard business hours may be subject to additional charges. The service specialist will provide the planning and coordination activities detailed in the following either remotely or on-site, at HPE's discretion.
	The service specialist will perform the following installation planning and coordination activities:
	• Communicate with the Customer, which includes fielding the Customer's queries regarding service delivery as well as requesting any information needed from the Customer
	• Verify, using a predelivery checklist, that all service prerequisites have been met, including that the Customer has completed verification that the Customer's host and SAN environment are compatible with any required HPE 3PAR Operating System upgrades or patches prior to delivery of the installation services
	• Schedule the array deployment at a mutually agreed upon time
	• Facilitate a brief discussion to guide the Customer in defining array configuration objectives based on application performance, availability needs, virtual volume layout, and HPE best practices
Service deployment	The service specialist will perform the following array deployment activities:
	• Coordinate the installation.
	• Install HPE 3PAR StoreServ Storage hardware and upgrades according to the product specifications.
	• Upgrade to the latest release of HPE 3PAR Operating System and confirm that the HPE 3PAR Operating System is at a supported and appropriate version.
	• Initialize the array.
	• Assist the Customer with installation of HPE 3PAR StoreServ Management Console software on a Customer-provided server, if requested by Customer.
	• Verify that the license keys for the purchased HPE 3PAR Operating System Software Suite array-based features are installed that the Customer has access to appropriate product documentation, and that the Customer understands how to obtain additional optional integration assistance if required.
	• For initial installation of an array, create and present a test virtual volume using nonproduction data for up to two hosts.
	• For hardware performance, capacity, and functionality upgrades, as applicable, verify that the required HPE 3PAR Operating System version or patches are installed; if they are not installed and the Customer is entitled to updates, install the required HPE 3PAR Operating System updates or patches, and install and initialize any purchased upgrade components.
	• For HPE 3PAR software beyond the HPE 3PAR Operating System Software Suite, provide the Customer with instructions on how to access appropriate product documentation and how to obtain additional optional integration assistance if required.
	• As applicable, provide limited integration of up to two hosts (physical or virtual) running a single OS into a preexisting operational SAN/network consisting of switch technologies that meet the supportability standards of the **HPE SAN Design Guide** or another HPE supported configuration; integration of a host is defined as performance of the following essential tasks necessary to establish and confirm visibility of a test virtual volume to the intended host:
	– Advise the Customer of zoning and multipathing requirements based on the host implementation guides, including, as applicable, limited use of HPE Smart SAN to demonstrate zoning for the two hosts referenced previously if the Customer's environment is HPE Smart SAN capable and the array being deployed via this service has HPE Smart SAN licensed
	– Verify that the Customer has read/write access to virtual volumes from the target hosts
	– Confirm that the Customer has path failover and failback functionality to the target hosts
	• For the HPE 3PAR StoreServ Service Processor:
	– For the HPE 3PAR StoreServ 8000 and 9000 Storage, install and configure Virtual Service Processor software on a supported host provided by the Customer, or
	– For the HPE 3PAR StoreServ 8000, 9000, and 20000 Storage, install the HPE 3PAR StoreServ Service Processor host into the same rack with the HPE 3PAR StoreServ Storage product and configure the Service Processor software
	• Configure the appropriate supported HPE remote support and monitoring solution.

Service features (continued)

Feature	Delivery specifications
IVT	The service specialist will perform the appropriate installation verification tests to confirm product functionality, including verification that: • The event logs are accumulating data. • Visibility of a test virtual volume using nonproduction data for up to two hosts, as applicable, can be confirmed. • The remote support and monitoring solution is installed and operational, as applicable.
Customer orientation session	For installation of a new array, the service specialist will conduct an orientation session of up to 1-hour duration for the HPE 3PAR StoreServ 8000 Storage and up to 4-hour duration for HPE 3PAR StoreServ 9000 and 20000 Storage, with the goal of reviewing the configuration information and demonstrating basic operation of the installed HPE 3PAR StoreServ Storage product. During the orientation session, the service specialist may: • Provide the Customer with information about how to obtain array configuration information • Demonstrate the creation of a virtual volume • Highlight the basic operation of the virtual or physical service processor, array hardware, and HPE 3PAR Operating System • Verify that the Customer understands how to gain access to product documentation • Provide an overview of the system architecture • Inform the Customer how to contact Hewlett Packard Enterprise for support • Hold a brief question and answer forum with the Customer For upgrade installation, the service specialist will conduct an orientation session of up to 1-hour duration, with the goal of reviewing the configuration following service delivery. The orientation session is provided on the same day as installation. The session is informal and is typically conducted at a Management Console with selected members of the Customer's staff. It is not intended as a classroom activity or substitute for formal product training.

Service limitations

Unless specified in this document or in a separate Statement of Work, activities such as, but not limited to, the following are excluded from this service:

• Full site inspection, such as comprehensive analysis of the Customer's power, cooling and humidity, airborne contaminant, and vibration levels, and determination of whether the data center's raised floor has sufficient structural capacity to accommodate the weight of the array to be installed; separate services are available for these tasks

• Integration with any hardware or software components not supported by the HPE 3PAR StoreServ Storage product

• Implementation of software revisions, including hotfixes, patches, service packs, or upgrades from prior versions, on the Customer's existing SAN and host environment

• Implementation of major revisions to the HPE 3PAR StoreServ Storage factory configuration; if needed, such revisions may require additional services

• Compatibility planning to ensure that required HPE 3PAR Operating System upgrades or patches are compatible with the Customer's host and SAN environment

• Configuration, consulting, Customer orientation, and training for HPE 3PAR software such as HPE 3PAR File Persona Software Suite, HPE 3PAR Security Software Suite, HPE 3PAR Application Software Suite, HPE 3PAR Reporting Software, HPE 3PAR Adaptive Optimization Software, HPE 3PAR Dynamic Optimization Software, HPE 3PAR Peer Motion Software, HPE 3PAR Virtual Copy Software, and Multipath I/O (MPIO); separate services are available for these products

• Redesign or reconfiguration of the existing array for hardware upgrades or software add-ons, including hardware reconfiguration, for example, to accommodate a physical service processor added as an upgrade

- Extensive racking, reracking, or cabling activities, including cabling activities involving conduits, raceways, patch panels, and movement/ configuration of computer room floor panels

- Software downgrades to HPE 3PAR Operating System; downgrades are limited to currently supported versions compatible with the HPE 3PAR StoreServ Storage hardware configuration only

- Reconfiguration of existing environments, such as removal or movement of array disk drives and adapter cards, conversion and reformatting of existing storage between RAID levels or emulation types, or installation of extensive Fibre Channel and/or SAS cabling

- Design or implementation of high availability and other complex configurations, such as host clustering

- Design or implementation of host-based logical volumes and associated file system structures

- Deployment activities, including planning, design, assessment, and configuration of switch technology related to the implementation of a new SAN or the redeployment or extension of an existing SAN

- Performance testing or modeling

- Installation or configuration of any hardware or software products external to the array subsystem, including, but not limited to, servers, host operating systems, host agent software, multipathing software, tape libraries, host bus adapters (HBAs), network, SAN fabric, and enterprise backup software

- Migration of existing data to the new array or to a new configuration within an existing array, such as the migration of existing data to thin-provisioned virtual volumes

- Loading, management, or manipulation of the Customer's data

- Operational testing of applications or troubleshooting of interconnectivity, network, compatibility, or problems not related to the HPE 3PAR StoreServ Storage product

- Assembly, configuration, and positioning of the Customer-supplied rack for the rackmount version of the array product; this limitation is applicable to any rack (including generic HPE racks)

- For the HPE 3PAR StoreServ 8000 and 9000 Virtual Service Processor software; assembly, configuration, and racking of the Customer-supplied host

- Design or implementation of seismic bracing or supports

- Relocation services—Relocation is available as a separate service that is scheduled separately

For installation of the HPE 3PAR StoreServ Storage product, additional activities such as, but not limited to, the following are excluded from this service:

- Integration of more than two hosts (physical or virtual) into a preexisting operational SAN, consisting of switch technologies that meet the supportability standards of the **HPE SAN Design Guide** or another HPE supported configuration

- Virtual volume design or implementation beyond validation, for up to two hosts, that a test virtual volume is visible; if a virtual volume or host implementation is required, the HPE Storage Virtual Volume Design and Implementation Service is available separately

For installation of HPE 3PAR StoreServ Storage upgrades, additional activities such as, but not limited to, the following are excluded from this service:

- Physical movement of existing drives or data movement between drives within the array to rebalance data; HPE 3PAR Rebalance Service is available separately for this purpose

- Integration of hosts (physical or virtual) into a preexisting operational SAN

- SAN reconfiguration activities, including migration of hosts from HBAs replaced during a node upgrade process; SAN services are available separately

Service eligibility

The Customer must meet certain hardware and software prerequisites prior to on-site delivery of the service. These prerequisites include, but are not limited to, the following:

• The Customer's existing computing operating system platform(s) must be supported by and compatible with the HPE 3PAR StoreServ Storage product being installed.

• The Customer's SAN environment must be fully operational in a configuration supported by Hewlett Packard Enterprise, and connectivity must be available and operational in the location where the array will be installed.

• The Customer must provide and verify a suitable physical operating environment for the array product, including implementation of any power, cooling, and other environmental requirements.

• For the rackmount version of the array product, the Customer is responsible for assembling and configuring the Customer-supplied rack and positioning it in the location where the array will be installed. This requirement is applicable to any rack (including generic HPE racks).

• For array upgrade installation, the HPE 3PAR StoreServ Storage product must be fully operational, in a supported configuration, and physically located where the upgrade will be installed.

• The Customer is responsible for determining and installing any HPE required host- or SAN-based software upgrades, patches, device drivers, or multipathing software.

• The Customer is responsible for providing servers/workstations and network provisioning that meet the requirements for software products as applicable, such as Virtual Service Processor and HPE 3PAR StoreServ Management Console.

• The Customer must provide appropriate network provisioning to enable the HPE remote support and monitoring solution.

Customer responsibilities

The Customer will:

• Contact a Hewlett Packard Enterprise service specialist within 90 days of date of purchase to schedule the delivery of the service

• Coordinate service deployment on third-party-maintained products (if applicable) with Hewlett Packard Enterprise

• Ensure that all service prerequisites as identified in the **Service eligibility** section have been met prior to service delivery

• Complete and return the prerequisite HPE predelivery checklist to the service specialist at least two weeks prior to the start of the service, including array configuration information for upgrade installations, as necessary

• Assign a designated person from the Customer's staff who, on behalf of the Customer, will grant all approvals, provide information, and otherwise be available to assist Hewlett Packard Enterprise in facilitating the delivery of this service

• Ensure that all hardware, firmware, and software that the service specialist will need in order to deliver this service are available and that software products are properly licensed

• Ensure the availability, at all times during service delivery, of one or more individuals who will provide administrator-level access to the systems where the work is to be performed

• Provide all network and administration assistance necessary to enable connectivity to the HPE 3PAR StoreServ Storage product in order to allow HPE remote monitoring and support tools to communicate with the HPE Support Center

• Provide all administration necessary to enable end-to-end connectivity of the HPE 3PAR StoreServ Storage product, including network, SAN fabric, and host

• Provide server and network provisioning that meet the requirements for additional software products, such as HPE 3PAR StoreServ Management Console

• Ensure that any and all prerequisite firmware or driver dependencies for the environment are handled before on-site service delivery begins

• Place HPE 3PAR StoreServ Storage products in the immediate location where the installation service will take place; HPE will unpack products to be installed in a Customer-supplied rack

- Assemble and configure the Customer-supplied rack for the rackmount version of the array product and position it in the location where the array will be installed; this requirement is applicable to any rack (including generic HPE racks) other than the enclosure that is factory integrated with the array

- Ensure, for the HPE 3PAR StoreServ 8000 or 9000 Virtual Service Processor software that the Customer-supplied host is fully assembled, configured, installed in the same rack as the HPE 3PAR 8000 or 9000 Storage product, and ready for Hewlett Packard Enterprise to install and configure the HPE Virtual Service Processor software

- Adhere to licensing terms and conditions regarding the use of any HPE service tools used to facilitate the delivery of this service or support tools used to provide ongoing remote monitoring, if applicable

- Prior to upgrade installation by Hewlett Packard Enterprise and installation of any required HPE 3PAR Operating System upgrades or patches, ensure that HPE 3PAR Operating System upgrades or patches are compatible with the Customer's host and SAN environment

- Be responsible for all data backup and restore operations

- Provide a suitable work area for delivery of the service, including access to an outside telephone line, power, and any network connections required

- Allow Hewlett Packard Enterprise full and unrestricted access to all locations where the service is to be performed

- Perform other reasonable activities to help Hewlett Packard Enterprise identify or resolve problems, as requested by HPE

General provisions/other exclusions

- The service is delivered on a single HPE 3PAR StoreServ Storage product at one physical site.

- Hewlett Packard Enterprise reserves the right to reprice this service if the Customer does not schedule and provide for subsequent delivery within 90 days of purchase.

- Hewlett Packard Enterprise reserves the right to charge, on a time and materials basis, for any additional work over and above the service package pricing that may result from work required to address service prerequisites or other requirements that are not met by the Customer.

- Hewlett Packard Enterprise's ability to deliver this service is dependent upon the Customer's full and timely cooperation with HPE, as well as the accuracy and completeness of any information and data the Customer provides to HPE.

- The service is delivered during local HPE standard business days and hours, excluding HPE holidays. Service delivery outside these hours is available and subject to additional charges.

- This service is delivered as a single, contiguous event. If Customer resource availability or other Customer restrictions delay installation or require additional visits beyond the defined scope of the service, additional charges may apply.

- The service is delivered remotely or on-site, at HPE's discretion.

- Travel charges may apply; please consult a local HPE office.

Activities such as, but not limited to, the following are excluded from this service:

- Service deployment on hardware not covered by an HPE warranty or service maintenance contract

- Service deployment on hardware covered by an unauthorized third-party maintenance contract

- Services that, in the opinion of Hewlett Packard Enterprise, are required due to unauthorized attempts by non-HPE personnel to install, repair, maintain, or modify hardware, firmware, or software

- Service required due to causes external to the HPE maintained hardware or software

- Any services not clearly specified in this document

- Customer acknowledges and agrees that HPE may use resources outside the country of purchase for delivery of these services unless otherwise specified as part of a service feature description.

Ordering information

To obtain further information or to order HPE 3PAR StoreServ 8000, 9000, and 20000 Storage Installation and Startup Service, contact a local Hewlett Packard Enterprise sales representative and reference the following product numbers:

For the HPE 3PAR 8000:

• HA114A1#5XN for HPE 3PAR 8200 2-Node Storage Centric Base Installation and Startup Service (see Note 1 for more information)

• HA114A1#5XP for HPE 3PAR 8200 2-Node Storage Base Installation and Startup Service (see Note 1 for more information)

• HA114A1#5XQ for HPE 3PAR 84XX 2-Node Storage Centric Base Installation and Startup Service (see Note 1 for more information)

• HA114A1#5XR for HPE 3PAR 84XX 2-Node Storage Base Installation and Startup Service (see Note 1 for more information)

• HA114A1#5XS for HPE 3PAR 84XX 4-Node Storage Centric Base Installation and Startup Service (see Note 1 for more information)

• HA114A1#5XT for HPE 3PAR 84XX 4-Node Storage Base Installation and Startup Service (see Note 1 for more information)

• HA114A1#5XU for HPE 3PAR 8200 2-Node Field Integrated Base Installation and Startup Service (see Note 1 for more information)

• HA114A1#5XV for HPE 3PAR 84XX 2-Node Field Integrated Base Installation and Startup Service (see Note 1 for more information)

• HA114A1#5XW for HPE 3PAR 84XX 4-Node Field Integrated Base Installation and Startup Service (see Note 1 for more information)

• HA114A1#5XX for HPE 3PAR 84XX Upgrade Node Pair Installation and Startup Service (see Note 1 for more information)

• HA114A1#5XZ for HPE 3PAR 8000 Field Integrated Drive Enclosure Installation and Startup Service (see Note 1 for more information)

• HA124A1#5MQ for HPE 3PAR 8000 Expansion Rack Factory Integrated Installation and Startup Service

• HA124A1#5XY for HPE 3PAR 8000 Adapter Installation and Startup Service

• HA124A1#5Y0 for HPE 3PAR 8000 Field Integrated Drive and Drive Enclosure Installation and Startup Service (see Note 2 for more information)

For the HPE 3PAR 9000:

• HA124A1#5JX for HPE 3PAR 9000 Base Factory Integrated Installation and Startup Service

• HA124A1#5JY for HPE 3PAR 9000 Expansion Rack Factory Integrated Installation and Startup Service

• HA124A1#5KT for HPE 3PAR 9000 Base Field Integrated Installation and Startup Service

• HA124A1#5KZ for HPE 3PAR 9000 Drive Enclosure Field Integrated Installation and Startup Service

• HA124A1#5LU for HPE 3PAR 9000 Adapter Field Integrated Installation and Startup Service

• HA124A1#5LV for HPE 3PAR 9000 12 Count Drive Field Integrated Installation and Startup Service (see Note 3 for more information)

• HA124A1#5LJ for HPE 3PAR 9000 Upgrade Node Installation and Startup Service

For the HPE 3PAR 20000:

• HA124A1#5X0 for HPE 3PAR 20000 4-Node Base Factory Integrated Installation and Startup Service

• HA124A1#5WZ for HPE 3PAR 20000 8-Node Base Factory Integrated Installation and Startup Service

• HA124A1#5X1 for HPE 3PAR 20000 Expansion Rack Factory Integrated Installation and Startup Service

• HA124A1#5X4 for HPE 3PAR 20000 4-Node Base Field Integrated Installation and Startup Service

• HA124A1#5X3 for HPE 3PAR 20000 8-Node Base Field Integrated Installation and Startup Service

• HA124A1#5X5 for HPE 3PAR 20000 Drive Enclosure Field Integrated Installation and Startup Service

• HA124A1#5X7 for HPE 3PAR 20000 Upgrade Unit of Service Installation and Startup Service (see Note 4 for more information)

For all HPE 3PAR storage:

• HA124A1#5ZF for HPE 3PAR Standalone Service Processor Installation and Startup Service (see Note 5 for more information)

Notes

1. Excludes field integration of drives into a storage base or drive enclosure. For field integration of drives, order the appropriate quantity of HPE 3PAR 8000 Field Integrated Drive and Drive Enclosure Installation and Startup Service (HA124A1#5Y0).

2. Includes field integration of up to 12 drives in a storage base, upgrade node pair, or drive enclosure. Order an increment of service HA124A1#5Y0 for each drive enclosure and for each quantity of 12 drives that require field integration into a single HPE 3PAR StoreServ 8000 Storage array.

3. Includes field integration of up to 12 drives in a drive enclosure. Order an increment of service HA124A1#5LV for each quantity of 12 drives that require field integration into a single HPE 3PAR StoreServ 9000 Storage array.

4. For HPE 3PAR 20000 hardware upgrades, order the appropriate quantity of HPE 3PAR 20000 Upgrade Unit of Service Installation and Startup Service (HA124A1#5X7).

5. Quoted only when the HPE 3PAR Service Processor is deployed at a later time than the HPE 3PAR StoreServ Storage product, for example, when transitioning from a Virtual Service Processor to a physical service processor.

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