



HPE Storage Virtual Volume Design and Implementation Service

HPE Lifecycle Event Services

Proper configuration of storage hardware is crucial to help improve the effectiveness of your storage devices. For virtual volume configurations beyond what is provided through the array installation and startup services, or for redeployments of your HPE storage equipment, the HPE Storage Virtual Volume Design and Implementation Service provides the activities your organization needs to design and implement a new LUN, virtual volume, or virtual disk (Vdisk) configuration.

With the assistance of your designated IT storage administrator, a Hewlett Packard Enterprise certified service specialist will engage in a discovery process designed to help Hewlett Packard Enterprise understand your organization's business and storage application needs. This collaboration provides the groundwork for planning, designing, and employing a customized storage array configuration. Once you have approved the configuration, the Hewlett Packard Enterprise certified service specialist will then apply the configuration plan and perform a suite of installation verification tests, as described below in the 'Service features' section.

This service is available for the following HPE storage systems on their respective supported operating systems:

- HPE P9000 XP disk arrays
- HPE P6000/EVA disk arrays
- HPE 3PAR storage systems

The service is limited to a single array and virtual volume configuration and presentation for up to 16 hosts. Additional services are required for larger environments.

Service benefits

- Design and implementation of the approved virtual volume configuration
- A customized virtual volume design and implementation plan to support your unique configuration requirements
- Availability of a Hewlett Packard Enterprise service specialist to answer basic questions related to the service during the orientation session

Service feature highlights

- Service planning
- Service deployment
- Installation verification tests (IVT)
- Customer orientation session

Table 1. Service features

Feature	Delivery specifications
Service planning	<p>A Hewlett Packard Enterprise certified service specialist will plan all the necessary activities and schedule the delivery of the service at a time mutually agreed upon between HPE or a Hewlett Packard Enterprise certified channel partner and the Customer, which shall be during local HPE standard business hours excluding HPE holidays, unless otherwise agreed by HPE or the Hewlett Packard Enterprise certified channel partner. Any services provided outside of HPE standard business hours will be subject to additional charges.</p> <p>The service planning activities will include:</p> <ul style="list-style-type: none"> • Communication with the Customer, including Customer queries about the service delivery • Verification, using a predelivery checklist, that all service prerequisites have been met • Scheduling of the service delivery at a mutually agreed-upon time • Creation of a written virtual volume implementation plan, which will serve as the project plan for the service
Service deployment	<p>The service deployment activities include:</p> <ul style="list-style-type: none"> • Presentation of the service delivery agenda • Development of a customized virtual volume design tailored to the Customer's software application and business requirements, as identified by the Customer's IT storage administrator, database administrator, or any preidentified Customer IT staff • Implementation of the Customer-approved virtual volume design • Configuration of additional paths in the Customer's existing, HPE-supported SAN • Creation of configuration documentation
Installation verification testing (IVT)	<p>Hewlett Packard Enterprise will perform the appropriate installation verification tests required for this service, including power-on self tests (POSTs) and verification of virtual volume visibility to the predesignated hosts.</p>
Customer orientation	<p>The service specialist will conduct an orientation session of up to two (2) hours' duration on the installed HPE disk array at a mutually agreed-upon time, which will include:</p> <ul style="list-style-type: none"> • A review of the configuration documentation mentioned above that outlines the topology of the storage virtual volume design and its related hosts • A brief question-and-answer forum <p>The orientation session is informal, is typically conducted at a management console with selected members of the Customer's staff, and is not intended as a classroom activity or substitute for formal product training.</p>

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:

- Virtual volume design and implementation on more than one storage array, more than 16 hosts, or more than five OS types; each array requires ordering a separate instance of the service, and hosts and OS types beyond the noted limits require additional services
- Hardware installation and removal or movement of array components, such as disk drives and adapter cards
- Planning and installation of array firmware upgrades
- Cabling installation involving conduits, raceways, patch panels, and movement/configuration of computer room floor panels
- Implementation of high-availability and other complex configurations, such as host clustering
- Implementation of host-based logical volumes and associated file system structures
- Installation of operating-system patches and any associated device drivers
- 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 volumes
- Installation and configuration of host-based array device manager software; installation of host-based array manager software that requires separate services

- Installation, configuration, or integration of HPE data replication products such as HPE Business Copy, Continuous Access, Remote Copy, and Virtual Copy software
- Installation of thin client software; appropriate thin client software must be properly licensed and installed
- Planning, design, implementation, or assessment of the Customer's overall SAN or fabric architecture
- Installation of new SAN devices or redeployment of existing ones, including, but not limited to, hubs, switches, and directors
- Project management of other vendors when third-party hosts, SAN appliances, or interconnect devices are attached to the designated storage system

Service eligibility

The Customer must meet the following prerequisites prior to delivery of this service:

- The Customer's HPE storage product must be installed, configured, operational, and in a configuration supported by Hewlett Packard Enterprise.
- The Customer's existing computing operating system platform(s) must be supported by and compatible with the HPE storage product on which the documented virtual volume configuration is being implemented.
- SAN connectivity must be available and operational in the location where the storage product is installed.
- The Customer must install any recommended host- or SAN-based software upgrades, patches, device drivers, or multipathing software.

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
- Ensure that all service prerequisites as identified below under 'Service eligibility' have been met
- 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 participation of the Customer's IT storage administrator, database administrator, and selected other staff in discussions of the Customer's business and operational objectives, as well as any special requirements
- Provide all necessary administration to enable end-to-end connectivity of the HPE storage product, including network, SAN fabric, and host
- Provide all necessary network and administrative assistance to enable connectivity to the HPE storage product and allow HPE remote monitoring and support tools to communicate with the HPE Support Center
- 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
- Provide a current storage map, if applicable
- 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
- Ensure that all hardware, firmware, and software that the Hewlett Packard Enterprise service specialist will need in order to deliver this service are available and, for software products, are properly licensed
- Ensure that any and all prerequisite firmware or driver dependencies for the environment are handled before onsite service delivery begins
- Provide server and network provisioning that meet the requirements for additional storage software products
- Coordinate service deployment on third-party-maintained products (if applicable) with Hewlett Packard Enterprise
- 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

- Be responsible for all data backup and restore operations
- Allow Hewlett Packard Enterprise full and unrestricted access to all locations where the service is to be performed
- Provide a suitable work area for delivery of the service, including access to an outside telephone line, power, and any network connections required
- Perform other reasonable activities to help Hewlett Packard Enterprise identify or resolve problems, as requested by HPE

General provisions/Other exclusions

- Hewlett Packard Enterprise reserves the right to re-price this service if the Customer does not schedule and provide for subsequent delivery within 90 days of purchase.
- The service is delivered during local HPE standard business hours. Service delivery outside these hours is available at additional cost.
- 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.
- Portions of the service are delivered remotely or onsite, at Hewlett Packard Enterprise's discretion.
- Travel charges may apply; please consult your local office.

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

- 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
- Service deployment on hardware not covered by an HPE warranty or service maintenance contract
- Service deployment on hardware covered by a third-party maintenance contract
- Any services not clearly specified in this document

Ordering information

To obtain further information or to order the HPE Storage Virtual Volume Design and Implementation Service, contact a local Hewlett Packard Enterprise sales representative and reference the following product numbers:

- HA124A1#5KA for HPE Storage Virtual Volume Design and Implementation Service for P9000/XP
- HA124A1#5KB for HPE Storage Virtual Volume Design and Implementation Service for P6000/EVA
- HA124A1#5KB for HPE Storage Virtual Volume Design and Implementation Service for 3PAR

For more information

For more information on Hewlett Packard Enterprise support services, contact any of our worldwide sales offices or visit the following website:

www.hpe.com/services/support
www.hpe.com/services/lifecycleevent

