HPE 3PAR Replication Software Suite Installation and Startup Service

HPE Lifecycle Event Services

HPE 3PAR Replication Software Suite Installation and Startup Service provides a limited implementation of the HPE 3PAR Remote Copy, Virtual Copy, and Peer Persistence components of HPE 3PAR Replication Software Suite. HPE 3PAR Replication Software Suite is designed to provide enhanced availability and disaster recovery protection.

To help ensure a timely, cost-effective deployment that can help you to reduce risk and shorten your time to results, Hewlett Packard Enterprise service professionals efficiently handle your implementation tasks.

The service, which provides installation and startup for the HPE 3PAR Remote Copy, Virtual Copy, and Peer Persistence functionality of HPE 3PAR Replication Software Suite in your storage environment, is designed to help you get HPE 3PAR Replication Software Suite up and running quickly and to provide a demonstration of the product's key features using sample or test data only.

The following are excluded from this service but are available via the HPE Data Replication Solution Service for HPE 3PAR Remote Copy, Virtual Copy, and Peer Persistence software:

- Implementation and testing of the HPE 3PAR Remote Copy, Virtual Copy, and Peer Persistence software configuration using production volumes or a production application

- Other services that address the unique requirements of your organization, such as verification of multiple applications you have configured; scripting; or integration and configuration by Hewlett Packard Enterprise of your applications, backup environment, or databases

- Implementation and configuration of host or host cluster failover

For HPE 3PAR 8000 and 20000 Replication Software Suite, this service excludes implementation of the HPE Cluster Extension Software component of the suite, which provides host cluster failover. Deployment of the Cluster Extension software component is provided by ordering HPE Cluster Extension Solution Implementation Service (see publication 4AA1-2456ENW).

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

- Designed to help reduce implementation time, as well as the impact and risk to your storage environment

- Helps ensure a successful implementation by providing Hewlett Packard Enterprise installation planning and coordination

- Provides service delivered by a trained specialist and based upon Hewlett Packard Enterprise recommended configurations and HPE best practices

- Helps you more effectively utilize your HPE 3PAR software, through knowledge-sharing with the service specialist during onsite delivery of the service

Service feature highlights

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

Table 1. Service features

Feature	Delivery specifications
Service planning and coordination	A Hewlett Packard Enterprise service specialist will schedule the delivery of the service at a time mutually agreed upon between HPE and the Customer, which shall be during local HPE standard business days and 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 perform the following installation planning and coordination activities:
	• Schedule and coordinate the service
	• Communicate with the Customer, including handling queries from the Customer regarding service delivery
	• Verify, using a predelivery checklist, that all service prerequisites that the Customer is responsible for have been met
	• Provide the planning activities associated with working through the prerequisites of implementing HPE 3PAR Virtual Copy, Remote Copy, and Peer Persistence, identifying volumes (non-production) that will be used for a sample copy set, and identifying a suitable host that will be used for the quorum witness virtual machine component of HPE 3PAR Peer Persistence
	• Collect preliminary documentation for the installation plan on the array, volumes, and hosts involved; volumes may be virtual (Remote Copy IP snapshots) or physical copies (Remote Copy FC), as designated by the Customer
Service deployment	Deployment activities include:
	• Reviewing the engagement with the Customer using the predelivery checklist and verifying that all service prerequisites have been met
	• Activating 3PAR Replication Software Suite licensing if necessary
	• For HPE 3PAR Remote Copy:
	– Configuring dependent SAN switches to establish connectivity between the HPE 3PAR Storage environment as needed for Remote Copy FC (for Remote Copy IP, a dedicated subnet is required)
	– Configuring Remote Copy connectivity on a single source and target array pair and establishing Remote Copy functionality between the arrays for the single source-target relationship
	– Creating a sample Remote Copy group compatible with the Customer's array configuration
	The sample group will contain a maximum of one Remote Copy source-target relationship, two hosts (one associated with the source array and another associated with the target array), and sample/test volumes of up to a total of 500 GB containing no production data.
	• For HPE 3PAR Virtual Copy:
	-Implementing a sample Virtual Copy job using test or sample data containing no production data limited to 500 GB or less
	• For HPE 3PAR Peer Persistence:
	– Assisting the Customer with deployment of a quorum witness virtual machine on a suitable host provided by the Customer
	– Assisting the Customer with configuration of a quorum witness virtual machine for automatic transparent failover between the primary and secondary HPE 3PAR Storage arrays
	– Configuring sample volumes for transparent failover between the source and target arrays, where the sample group will contain a maximum of one Peer Persistence source-target relationship, one standalone host or host cluster (where the standalone host or host cluster is associated with both the primary and secondary arrays), and sample/test volumes of up to a total of 500 GB containing no production data
	– Documenting the installed configuration details in the installation report
Installation verification tests (IVT)	The service specialist will perform the appropriate installation verification tests to confirm product functionality, as follows:
	The IVT will be performed with the Customer's system administrator using replication jobs. It will be followed by comprehensive testing on the sample volumes (with no application integration or testing), which will verify the operation of HPE 3PAR Remote Copy, Virtual Copy, and Peer Persistence volumes.

- For HPE 3PAR Remote Copy, testing will verify Remote Copy operational status, including replication, failover, and failback, using the sample copy group, and switching from a primary to an alternate management server, and includes such tasks as:
  - Demonstration of the secondary site becoming the primary one for the sample group after a line failure occurs
  - Demonstration of role reversal of the primary and secondary sites for the sample group with resynchronization after a simulated failback
- For HPE 3PAR Virtual Copy, testing will include demonstrating and verifying the operation of common Virtual Copy functions (volume copy creation, promotion, and deletion for virtual copies of sample volumes on a source server):
  - Exporting sample volumes to a target server with the same OS and verifying data accessibility
- For HPE 3PAR Peer Persistence, testing activities include demonstrating and verifying the operation of common Peer Persistence functions:
  - Demonstration from the standalone host or host cluster of a transparent failover operation of Peer Persistence volumes from the primary to a secondary array, as applicable
  - Demonstration from the standalone host or host cluster of a transparent failback from a secondary to the primary array for the Peer Persistence volumes, as applicable

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Customer orientation session

Upon completion of the service, the Hewlett Packard Enterprise service specialist will provide one (1) orientation session of up to two (2) hours' duration on the product and/or technology. During this process, the Hewlett Packard Enterprise service specialist may cover the following topics:

- Familiarize the Customer with HPE 3PAR Management Console (MC) and HPE 3PAR Command Line Interface (CLI)
- Review the HPE 3PAR Remote Copy, Virtual Copy, and Peer Persistence MC interface and review the basic features of each software product with the Customer, as applicable
- Review the installation report and configuration details with the Customer, as implemented
- Verify that the Customer understands how to gain access to product documentation
- Confirm that the Customer is aware of how to obtain service documentation and support
- Hold a brief question and answer forum with the Customer

The orientation session is informal, provided on the same day as the installation, and 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. The Customer's participation in the product deployment and installation verification testing is also a key component of the orientation session.

Service limitations

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

- Configuration of HPE 3PAR Cluster Extension Software; deployment of the HPE Cluster Extension Software component of the HPE 3PAR 8000 and 20000 Replication Software Suite is provided with HPE Cluster Extension Solution Implementation Service (see publication 4AA1-2456ENW)

- Configuration of HPE 3PAR Remote Copy with Customer production data, test or sample data of more than 500 GB, more than a single source-target relationship, or more than two hosts running more than a single operating system

- Configuration of HPE 3PAR Virtual Copy with more than 500 GB of test data, with the Customer's production data, or with more than two hosts running more than a single operating system

- Configuration of HPE 3PAR Peer Persistence with Customer production data, test or sample data of more than 500 GB, or more than a single standalone host or host cluster

- Implementation and configuration of host or host cluster failover; separate products and services are required to implement host or host cluster failover

- Any implementation of applications or products that integrate with HPE 3PAR Replication Software Suite via APIs (e.g., SAP or HPE Data Protector) or extensive customer-specific scripting (unless provided for in a separate SOW)

- Planning, design, implementation, or assessment of the Customer's overall network, SAN, or fabric architecture

- Installation or configuration of any hardware or software products other than HPE 3PAR Replication Software Suite including, but not limited to, servers, host operating systems, host agent software, multipathing software, tape libraries, host bus adapters, network, SAN fabric, Enterprise Backup software, and Application Suite software

- Migration of existing data to the new array or to a new configuration within an existing array

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

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

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

- HPE 3PAR Operating System upgrades required for supported version of HPE 3PAR Replication Software Suite

- Installation or configuration of network gateways or any hardware or software products not specified in this data sheet

- Performance testing or modeling

- Any services or documentation not clearly specified in this document

- Integration with any hardware or software components not supported by HPE 3PAR Replication Software Suite

- Configuration, consulting, and training for optional HPE 3PAR software such as Data Optimization Software Suite, Security Software Suite, Application Software Suite, Reporting Software Suite, Adaptive Optimization Software, Dynamic Optimization Software, Peer Motion Software, Policy Manager Software, Virtual Lock Software, Virtual Domains Software, System Tuner Software, and multipath I/O; separate services are available for these products

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

- Operational testing of applications or troubleshooting of interconnectivity, network compatibility, or problems not related to HPE 3PAR Replication Software Suite

Service eligibility

In order to be eligible for this service, the Customer must:

- Provide access to the HPE 3PAR management interface and CLI

For HPE 3PAR Remote Copy:

- Provide an operational management station with IP connectivity to both source and target arrays

- Ensure that the HPE 3PAR Storage, SAN, and host environment (i.e., HPE 3PAR Operating System, topology, firmware, patches, etc.) are compatible with HPE 3PAR Remote Copy, operational, and verified by Hewlett Packard Enterprise

- Ensure that network requirements are met, including provisioning of physical Ethernet ports and subnets, as required; for example, for Remote Copy IP (RCIP), a dedicated subnet is required

- Ensure that connectivity is implemented and operational between source and target locations and/or arrays, as applicable

- Ensure that sufficient bandwidth is provided to support the expected sustained and maximum I/O rates

For HPE 3PAR Virtual Copy:

- Ensure that the HPE 3PAR Storage environment is compatible with HPE 3PAR Virtual Copy, operational, and HPE supported, and is at HPE 3PAR Operating System and firmware revision levels specified by Hewlett Packard Enterprise

- Provide operational management stations with connectivity to the HPE 3PAR Storage system that meets the minimum requirements of HPE 3PAR Virtual Copy and management software

- Install any recommended host- or SAN-based software upgrades, patches, device drivers, or multipathing software

For HPE 3PAR Peer Persistence:

- Ensure that the host cluster used with HPE 3PAR Peer Persistence is running a supported OS, is operational, and has network connectivity to both primary and secondary 3PAR Storage systems

- Ensure that the host used for the quorum witness virtual machine is running a supported OS, is operational, and has network connectivity to both primary and secondary 3PAR Storage systems

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 in the 'Service eligibility' section have been met prior to service delivery

- Assign a designated person from the Customer's staff who, on behalf of the Customer, will grant all approvals; provide information; 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 that software products are properly licensed; and otherwise be available to assist HPE in facilitating the delivery of this service

- Ensure that prerequisite volume capacity is available in the HPE 3PAR Storage environment to support the implementation of HPE 3PAR Virtual Copy and in the HPE 3PAR storage target/secondary array to support the implementation of HPE 3PAR Remote Copy and Peer Persistence

- Be responsible for all data backup and restore operations

- 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, as necessary

- Ensure that the latest HPE 3PAR MC and CLI are installed and operational

- Ensure that any and all prerequisite HPE 3PAR Operating System, firmware, or driver dependencies for the environment are completed before onsite service delivery begins

- Ensure that all hardware 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 the test and sample data used in delivery of the service, and for HPE 3PAR Peer Persistence also provide a host for the quorum witness virtual machine that meets minimum requirements

- 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

- Coordinate deployment activities on third-party-maintained hardware or software (if applicable) with the service specialist

- Provide all necessary network and administration assistance to enable connectivity to the HPE 3PAR Storage environment to allow HPE remote monitoring and support tools to communicate with the HPE Support Center

- 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

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

General provisions/Other exclusions

- The on-site service delivers deployment of a single instance of HPE 3PAR Replication Software Suite product at one physical site

- 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.

- 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.

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

- Travel charges may apply; please consult a local Hewlett Packard Enterprise 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

Ordering information

To obtain further information or to order HPE 3PAR Replication Software Suite Installation and Startup Service, contact a local Hewlett Packard Enterprise sales representative and reference the following product numbers:

- HA124A1#5TN (U6Y03E) for HPE 3PAR 7000 Replication Software Suite Installation and Startup Service (see Notes for more information)

- HA124A1#5Y8 for HPE 3PAR 8000 Replication Software Suite for Virtual Copy, Remote Copy, and Peer Persistence Installation and Startup Service (see Notes for more information)

- HA124A1#5UD for HPE 3PAR 10000 Replication Software Suite Installation and Startup Service (see Notes for more information)

- HA124A1#5XF for HPE 3PAR 20000 Replication Software Suite for Virtual Copy, Remote Copy, and Peer Persistence Installation and Startup Service (see Notes for more information)

Notes:

- Service is limited to demonstration of the product's key features using sample or test (non-production) data only. Please refer to additional exclusions in the Service Limitations section.

- For a more advanced implementation of HPE 3PAR Remote Copy or Virtual Copy, see the HPE Data Replication Solution Service for 3PAR Remote Copy (publication 4AA3-8627ENW/ENN) and the HPE Data Replication Solution Service for 3PAR Virtual Copy (publication 4AA3-8107ENW/ENN).

- For advanced implementation of HPE 3PAR Peer Persistence software that provides deliverables beyond the installation and startup service, order product number HA115A1#5U3 for HPE 3PAR Peer Persistence Level 3 Implementation Service.

- For implementation of HPE Cluster Extension Software, see the HPE Cluster Extension Solution Implementation Service (publication 4AA1-2456ENW/ENN), and order custom quote service product number HA115A1#57M.

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

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