Overview

**HP 3PAR Software Products**

HP 3PAR Software offerings include both the operating system and additional software products that run on the HP 3PAR Storage System and on Microsoft Windows®, Linux, or UNIX® hosts.

**HP 3PAR StoreServ Software Suites**
HP 3PAR StoreServ provides the opportunity to purchase software bundled into a series of suites designed to be affordable and simple to purchase. Select software titles can also be purchased separately, as indicated below.

**Additional HP 3PAR Software**
Additional HP 3PAR Software Additional software products available for HP 3PAR Storage Systems offer enhanced capabilities including thin storage technologies, secure partitioning for virtual private arrays, and virtual and remote copy capabilities.

**HP 3PAR Host Software**
Host-based software products from HP 3PAR enable the next-generation HP 3PAR platform to address the needs of specific application environments, multipathing, and historical performance and capacity management.

**What’s New**
- HP 3PAR StoreServ 20800, 20850 and 20450
- HP 3PAR StoreServ 8200, 8400, 8440 and 8450
- HP 3PAR File Persona Software Suite for HP 3PAR 8200/8400/8440/8450/20450/20800/20850
HP 3PAR Operating System Software Suite

Overview: HP 3PAR Operating System Software Suite is the foundation software of HP 3PAR StoreServ Storage, combining advanced virtualization capabilities with simple storage management, high efficiency, and world class performance. The included comprehensive thin provisioning capabilities allow your storage to start thin, get thin and stay thin. System Tuner and Autonomic Rebalance help maintain high performance over time. Migrating your existing data from HP EVA and 3PAR systems to HP 3PAR StoreServ Storage is easy with the included 180 day Online Import license. HP 3PAR SmartStart Software, included in the suite for HP 3PAR StoreServ 7xxx series, guides you through the configuration of the service processor, StoreServ Storage and the application hosts – making storage setup virtually effortless. HP 3PAR Operating System Software Suite is a required purchase.

The Operating System Suite includes the following functionality and features:

- HP 3PAR Operating System Software
- HP 3PAR StoreServ Management Console
- HP 3PAR 3PAR Online Import (180 days)
- HP 3PAR Host Explorer
- HP 3PAR System Reporter*
- HP 3PAR SmartStart (not included in HP 3PAR StoreServ 10000 and 20000)
- HP 3PAR Virtual Service Processor (not included in HP 3PAR StoreServ 10000 and 20000)

* System Reporter is included in the 3PAR OS Suite for HP 3PAR StoreServ 8000/20000 only; other platforms require Reporting Suite


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HP 3PAR Operating System Software

Overview

The software foundation of 3PAR® Utility Storage is the HP 3PAR Operating System, which utilizes advanced internal virtualization capabilities to increase administrative efficiency, system utilization, and storage performance.

The HP 3PAR OS includes the following functionality and features:

- HP 3PAR Web Services API
- HP 3PAR OS Administration Tools
- HP 3PAR Rapid Provisioning
- HP 3PAR Autonomic Groups
- HP 3PAR Scheduler
- HP 3PAR Persistent Cache
- HP 3PAR Persistent Ports
- HP 3PAR Persistent Checksum*
- HP 3PAR RAID MP (Multi-Parity)
- HP 3PAR Full Copy
- HP 3PAR Access Guard
- HP 3PAR LDAP Support
- HP 3PAR Adaptive Flash Cache
- HP 3PAR Thin Technologies

*Available on HP 3PAR StoreServ 8000 and 20000 platforms only

Product Highlights

HP 3PAR Access Guard

Access Guard is an HP 3PAR OS feature that delivers user-configurable volume security at logical and physical levels by enabling you to secure hosts and ports to specific virtual volumes.

HP 3PAR Autonomic Groups

HP 3PAR Autonomic Groups is an HP 3PAR OS software feature that brings a new provisioning paradigm to clustered and virtual server environments by building on the same innovation featured by HP 3PAR Rapid Provisioning.
Autonomic Groups is designed to reduce room for human error by eliminating manual repetition of tedious commands, thereby making the provisioning process more reliable. This software feature also simplifies reporting by enabling users to pull boot and data disk utilization statistics from different clusters with just a single command.

In addition, when used together with HP 3PAR Virtual Domains, Autonomic Groups allows multiple independent virtual domains to be grouped as a single logical entity to simplify storage administration while maintaining the integrity of individual virtual domains. For example, backing up an autonomic domain group actually backs up all virtual domains in the group to a single backup server while still maintaining the security and isolation associated with each individual domain.

**HP 3PAR Full Copy**

Full Copy is an HP 3PAR OS feature that allows you to create point-in-time clones with independent service level parameters. Full Copy offers online operations so that the destination clone can be immediately exported, rapid resynchronizations and thin provisioning-awareness.

**HP 3PAR Persistent Cache**

HP 3PAR Persistent Cache is a resiliency feature built into the HP 3PAR OS that allows "always on" application and virtual server environments to gracefully handle an unplanned controller failure. Persistent Cache eliminates the substantial performance penalties associated with traditional arrays and "write-through" mode so that 3PAR StoreServ Storage Servers can maintain required service levels even in the event of a cache or controller node failure. HP 3PAR Persistent Cache leverages the clustered HP 3PAR Architecture with its unique Mesh-Active design to preserve write-caching by rapidly re-mirroring cache to the other nodes in the cluster in the event of a failure. Persistent Cache is supported on all quad-node and larger HP 3PAR arrays, including StoreServ 7400 and the InServ F400—making 3PAR HP the only vendor to incorporate this industry-leading service level protection capability into midrange as well as high-end arrays.

**HP 3PAR Persistent Ports**

HP 3PAR Persistent Ports is a Tier 1 resiliency feature that allows for non-disruptive online software upgrades on HP 3PAR StoreServ Storage systems without relying on multipathing software. This feature, available on all HP 3PAR StoreServ models, brings increased Tier 1 resiliency, across the StoreServ product line including the midrange platform by ensuring that host paths remain online throughout the software upgrade process. The use of standard NPIV (N_Port ID Virtualization) technology as defined by the Technical Committee T11 in the Fibre Channel -Link Services (FC-LS) specification enables a single host-facing StoreServ port to assume the identity of additional pre-designated partner ports, thus enabling transparent switchover of host path connections. Persistent Port Technology is also designed to work with iSCSI and FCoE connectivity. Starting from HP 3PAR OS 3.1.3 Persistent Ports also autonomically fails over a front-end controller node port that experiences physical connection loss from a cable pull or a failed switch; this unique capability, for now is available for FC connectivity only.

**HP 3PAR Persistent Checksum**

HP 3PAR Persistent Checksum: Persistent Checksum is a data integrity feature built in to the HP 3PAR
OS that ensures data integrity to ensure end to end data protection via a T10 Data Integrity Field (DIF). Persistent Checksum addresses media and transmission errors that can be caused by any component in the I/O stack and provides additional protection above FC/Iscsi/ CRC transmissions. With supported HBA's on hosts T10- DIF tags are added and verified on the HP 3PAR StoreServ Storage system and when host HBA's are not supported T10-DIF tags are added and verified on the array target ports and backend HBA's before dat is written to the array drives. This technology is available on systems with GEN5 ASIC only.

**HP 3PAR Autonomic Rebalance**

HP 3PAR Autonomic Rebalance provides the ability to analyze how volumes on the HP 3PAR Storage System are using physical disk space and makes intelligent, autonomic adjustments to ensure optimal volume distribution when new hardware is added to the system. The best practice is to run the Autonomic Rebalance (Also known as tunesys) after new hardware is added to the system.

**HP 3PAR Web Services API**

HP 3PAR Web Services API delivers a programming interface for implementing durable automation of storage management tasks with HP 3PAR StoreServ Storage systems. Web Services API provides a well-defined application programming interface that customers can use for incorporating the storage infrastructure into their platform for end-to-end automation of their service delivery and management. The Web Services API implementation is based on RESTful Web API service using HTTPS, principles of REST, and data structures represented with JSON (JavaScript Object Notation).

**HP 3PAR OS Administration Tools**

The HP 3PAR Operating System offers industry-leading ease of use through a simple, unified InForm Management Console and an extremely powerful, scriptable InForm Command Line Interface (CLI). Manage your entire utility storage deployment from a single window, including remote replication to disaster recovery sites. The 3PAR Remote CLI gives you powerful customization capabilities that are simple to configure, eliminating the need for extra tools and consulting. Open administration support is provided via SNMP and the Storage Management Initiative Specification (SMI-S).

**HP 3PAR LDAP**

Support Native support for lightweight directory access protocol (LDAP) within the HP 3PAR OS delivers centralized user authentication and authorization using a standard protocol for managing access to IT resources. With support for LDAP, you can now integrate HP 3PAR Utility StoreServ Storage with standard, open enterprise directory services. The result is simplified security administration with centralized access control and identity management.

**HP 3PAR RAID MP (Multi-Parity)**

HP 3PAR RAID MP (Multi-Parity) introduces Fast RAID 6 technology backed by the accelerated performance and Rapid RAID Rebuild capabilities of the 3PAR ASIC. 3PAR RAID MP is supported on all HP 3PAR StoreServ models and delivers extra RAID protection that prevents data loss as a result of double disk failures. RAID MP delivers this enhanced protection while maintaining performance levels within 15% of RAID 10 and with capacity overheads comparable to popular RAID 5 modes. For this reason, 3PAR RAID MP is ideal for large disk drive configurations—for example, Serial ATA (SATA) drives above 1 TB in capacity.
**HP 3PAR Rapid Provisioning**

The HP 3PAR OS eliminates array planning by delivering instant, application-tailored provisioning through the fine-grained virtualization of lower-level components. Provisioning is managed intelligently and autonomically. Massively parallel and fine-grained striping of data across internal resources assures high and predictable service levels for all workload types. Service conditions remain high and predictable as the use of the system grows or in the event of a component failure while traditional storage planning, change management, and array-specific professional services are eliminated.

**HP 3PAR Scheduler**

HP 3PAR Scheduler also helps automate storage management, reduce administration time, and decrease the chance of administrative error. Scheduler does this by giving users full control over creation and deletion of virtual copy snapshots—a process that is now completely automated with HP 3PAR Utility StoreServ Storage. When used in conjunction with Autonomic Groups, HP 3PAR Scheduler automates virtual copy snapshots across multiple boot and data volumes with full write consistency across all these different volumes.

**HP 3PAR Adaptive Flash Cache**

Adaptive Flash Cache provides DRAM cache extension by leveraging HP 3PAR first in class virtualization technologies. This functionality allows dedicating a portion of SSDs capacity as an augmentation of the HP 3PAR Array primary cache, reducing application response time for read-intensive I/O workloads and improving write throughput in mixed workload environments.

**HP 3PAR Thin Technologies**

**Overview**

HP 3PAR Thin Suite is the most comprehensive thin software suite available. With the Thin Suite, virtual and cloud data centers can:

- **Start Thin:** HP 3PAR Thin Provisioning is the most comprehensive thin provisioning software solution available. Since its introduction in 2002, 3PAR Thin Provisioning has become widely considered the gold standard in thin provisioning. It leverages HP 3PAR’s dedicate-on-write capabilities to make organizations more efficient and more green, allowing them to purchase only the disk capacity they actually need and only as they actually need it.

- **Get Thin:** With HP 3PAR Thin Conversion, a technology refresh no longer requires a terabyte-for-terabyte replacement, but instead offers the opportunity to eliminate up to 75% of your legacy capacity, simply and rapidly. This savings alone can save up to 60% on the cost of a technology refresh. HP 3PAR Thin Conversion software makes this possible by leveraging the zero-detection capabilities within the HP 3PAR ASIC and Thin Engine - HP 3PAR’s unique virtualization mapping engine for space reclamation - to power the simple and rapid conversion of inefficient, "fat" volumes on legacy arrays to more efficient, higher-utilization "thin" volumes on any HP 3PAR Storage System featuring Thin Built In™.
**Stay Thin:** With 3PAR Thin Persistence, customers can now leverage next-generation space reclamation technology to minimize storage TCO and maintain environmental responsibility targets they have worked so hard to achieve.

HP 3PAR Thin Technologies includes the following features:

- Thin Provisioning
- Thin Conversion
- Thin Persistence
- Thin Copy Reclamation
- Thin Deduplication
- Thin Clones
- Thin Copy Reclamation

More details about HP 3PAR Thin Technologies can be found in the HP 3PAR Thin Technologies White paper available here.

**HP 3PAR StoreServ Software Suites**

The HP 3PAR StoreServ Storage family provide the opportunity for you to purchase software bundled into a series of suites designed to be affordable and simple to purchase. Select software titles can also be purchased separately, as indicated below.

**HP 3PAR File Persona Software Suite**

**Overview**

The HP 3PAR File Persona Software Suite is a licensed feature of the 3PAR OS that enables a rich set of file protocols and core file data services on a 3PAR StoreServ system. As a feature of the 3PAR OS, the File Persona inherits the industry leading architecture and Block Persona benefits of 3PAR StoreServ. It extends the spectrum of primary storage workloads natively addressed by 3PAR StoreServ from virtualization, databases, and applications via the Block Persona to also include client workloads such as enterprise file sync and share, home directory consolidation, group/department shares, and corporate shares via the File Persona – all with truly Converged Controllers, truly agile capacity, and truly unified management.

The File Persona is supported on the HP 3PAR StoreServ 7000c, 8000 and 20450/20800/20850. It requires the installation of 1GbE or 10GbE network cards.

**Models**

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QuickSpecs

Technical Specifications

HP 3PAR 20800 File Persona Software Suite 1TB LTU  
HP 3PAR 20850 File Persona Software Suite 1TB LTU  

NOTE: Insert AE at the end of a part number above for an electronic LTU (eg. XXXXAAE). E-Delivery should be ordered with any Standalone or Upgrade software order.

Product Highlights

- Rich file protocols including SMB 3.0, 2.1, 2.0, and 1.0 plus NFSv4.0, and v3.0 to support a broad range of client operating systems.
- Object Access API that enables programmatic data access via a REST API for cloud applications from virtually any device anywhere.
- Transparent failover for clients via SMB 3.0 and NFS to allow for non-disruptive 3PAR OS upgrades or in the event of a controller failure.
- Performance acceleration leveraging Adaptive Flash Cache for read intensive workloads.
- Data compaction via Thin Built-In Zero Detect and Thin Provisioning, plus data optimization via the separately licensed Adaptive Optimization and Dynamic Optimization.
- Comprehensive data protection with point-in-time File Store snapshots for user driven file recovery, support for third party antivirus software, network share and NDMP-based backup/restore, and disaster recovery replication via the separately licensed Remote Copy.
- Security of FIPS 140-2 validated Data At Rest Encryption as an optional additional measure to prevent unauthorized data access.
- Seamless integration with a broad range of IT infrastructure. This includes Active Directory, Folder Redirection, Offline Files, Roaming User Profiles, DFS-Namespace, and Microsoft Management Console for Microsoft-based IT infrastructure. It also includes LDAP and local user authentication for Linux-based IT infrastructure.
- Single management interface for file and block through the 3PAR StoreServ Management Console (SSMC) GUI with a performance dashboard, custom reports capability and the 3PAR OS CLI.

HP 3PAR Data Optimization Software Suite

Overview The HP 3PAR Data Optimization Software Suite v2 combines capabilities that provide autonomic storage tiering and dynamic data mobility with assured quality of service. Adaptive Optimization provides highly reliable, non-disruptive, cost-optimized storage tiering at the sub-volume level to deliver the right QoS to the right data at the right time on a large scale and Dynamic Optimization delivers it at the volume level. Peer Motion software enables seamless technology refresh and cost-optimized asset lifecycle management, and lowers technology refresh capital expenditure. Priority Optimization software allows customers to ensure quality of service on HP 3PAR StoreServ Storage Systems. With Priority Optimization, customers can protect their tenants and environments from unpredictable burst of I/O and maintain predictable SLA for multiple tenants. The Data Optimization Suite v2 bundles the following products:

The Data Optimization Suite v2 bundles the following products:

- HP 3PAR Adaptive Optimization
- HP 3PAR Dynamic Optimization
- HP 3PAR Priority Optimization
HP 3PAR Peer Motion

The Data Optimization Software Suite is offered on HP 3PAR StoreServ 7000, 7450 and 10000 Storage Systems

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**HP 3PAR Replication Software Suite**

**Overview** The HP 3PAR Replication Software Suite offers automatic replication, transparent failover and Point-in-Time (PIT) copies enabling seamless disaster recovery for critical data. These features provide an agile, efficient and simple solution to protect against the unpredictable. This suite is ideal for virtualized data centers demanding data availability and business continuity 24x7. Remote Copy Software dramatically reduces the cost of remote data replication and disaster recovery by leveraging thin copy technology, enabling multi-site and multi-mode replication with both midrange and high-end arrays, and reducing the need for professional services. Virtual Copy enables rapid application recovery—while containing costs with a “thin-aware” implementation that minimizes the amount of physical capacity that is actually being consumed by your data—and without sacrificing
performance, availability, or versatility. HP 3PAR Peer Persistence software enables HP 3PAR StoreServ systems located at metropolitan distances to act as peers to each other, presenting a nearly continuous storage system to VMware vSphere hosts connected to them.

The Replication Suite includes the following functionality and features:

- HP 3PAR Virtual Copy
- HP 3PAR Remote Copy
- HP 3PAR Peer Persistence
- HP 3PAR Cluster Extension (CLX)*

* CLX is included in the Replication Suite for HP 3PAR StoreServ 8000 and 20000 only

For more information see

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Technical Specifications

HP 3PAR 8450 Replication Software Suite Base LTU L7C21A
HP 3PAR 8450 Replication Software Suite Drive LTU L7C22A

NOTE: Insert AE at the end of a part number above for an electronic LTU (eg. XXXXBAE). E-Delivery should be ordered with any Standalone or Upgrade software order.

HP 3PAR Security Software Suite

Overview HP 3PAR Security Software Suite provides secure administrative segregation of users and hosts, allowing individual user groups and applications to confidently share a HP 3PAR StoreServ Storage system. It also allows you to secure volumes and copies so they cannot be deleted, even by a HP 3PAR StoreServ Storage user with the highest level privileges. When coupled with reservationless, non-duplicative, read-only virtual copies (snapshots), the Virtual Lock feature enables you to retain frozen, point-in-time copies of your data to assist internal data retention and simplify compliance with internal governance procedures.

The Security Suite includes the following products:

- HP 3PAR Virtual Domains
- HP 3PAR Virtual Lock

For more information see http://h18006.www1.hp.com/storage/software/3par7000/ss/index.html

Models HP 3PAR 10400 Security Software Suite Base LTU BD242A
HP 3PAR 10400 Security Software Suite Magazine LTU BD243A
HP 3PAR 10800 Security Software Suite Base LTU BD254A
HP 3PAR 10800 Security Software Suite Magazine LTU BD255A
HP 3PAR 7200 Security Software Suite Base LTU BC751A
HP 3PAR 7200 Security Software Suite Drive LTU BC752A
HP 3PAR 7400 Security Software Suite Base LTU BC779A
HP 3PAR 7400 Security Software Suite Drive LTU BC780A
HP 3PAR 7440c Security Suite Base LTU BD384A
HP 3PAR 7440c Security Suite Drive LTU BD385A
HP 3PAR 7450 Security Software Suite Base LTU BC908A
HP 3PAR 7450 Security Software Suite Drive LTU BC909A
HP 3PAR 20800 Security Software Suite Base LTU L7C49A
HP 3PAR 20800 Security Software Suite Drive LTU L7C50A
HP 3PAR 20850 Security Software Suite Base LTU L7C97A
HP 3PAR 20850 Security Software Suite Drive LTU L7C98A
HP 3PAR 20450 Security Software Suite Base LTU L7C73A
HP 3PAR 20450 Security Software Suite Drive LTU L7C74A
HP 3PAR 8200 Security Software Suite Base LTU L7B53A
HP 3PAR 8200 Security Software Suite Drive LTU L7B54A
HP 3PAR 8400 Security Software Suite Base LTU L7B77A
HP 3PAR 8400 Security Software Suite Drive LTU L7B78A
HP 3PAR Security Software Suite

NOTE: Insert AE at the end of a part number above for an electronic LTU (eg. XXXXBAE). E-Delivery should be ordered with any Standalone or Upgrade software order.

HP 3PAR Reporting Software Suite

Overview
HP 3PAR Reporting Suite provides flexible, simple-to-use performance and capacity management tools that aggregate fine-grained, performance and capacity usage data. It also provides useful information on the volume mapping between the HP 3PAR StoreServ Storage and the application host.

The Reporting Suite includes the following products:

- HP 3PAR System Reporter
- HP 3PARinfo (electronic download here)

For more information see http://h18006.www1.hp.com/storage/software/3par7000/rs/index.html

Models

- HP 3PAR 10400 Reporting Suite LTU BD244B
- HP 3PAR 10800 Reporting Suite LTU BD256B
- HP 3PAR 7200 Reporting Suite LTU BC767B
- HP 3PAR 7400 Reporting Suite LTU BC795B
- HP 3PAR 7440c Reporting Suite LTU BD375A
- HP 3PAR 7450 Reporting Suite LTU BC914B

NOTE: Insert AE at the end of a part number above for an electronic LTU (eg. XXXXBAE). E-Delivery should be ordered with any Standalone or Upgrade software order.

NOTE: Reporting Suite is not necessary for HP 3PAR StoreServ 8000 and 20000 platforms as System Reporter is part of the 3PAR Operating Suite

Individual HP 3PAR StoreServ Software

HP 3PAR OS Additional Software is also offered as individual titles:

- Virtual Copy
- Remote Copy
- Peer Persistence*
- Adaptive Optimization
- Dynamic Optimization
- Priority Optimization
- Virtual Domains*
- Virtual Lock*
- Peer Motion
- Online Import
- System Reporter
**File Persona Software Suite **

*These individual titles are not available a-la-carte on HP 3PAR StoreServ 8000 and 20000 platforms, they must be purchased via a suite.

** HP 3PAR FilePersona Software Suite is available for HP 3PAR StoreServ 7000c, 8000 and 20000 storage only.

** HP 3PAR Virtual Copy Software

Overview

Built on thin copy technology, HP 3PAR Virtual Copy is a reservationless, non-duplicative, copy-on-write software product that allows you to protect and share data from any application, affordably. Snapshots are available on demand, instantly, in read-only and/or read-write form. With Virtual Copy, snapshots are reservationless because capacity is never reserved up-front and non-duplicative since changed data is never duplicated within the snapshot tree.

Coupled with consistency groups and support for hundreds of snapshots per base volume, Virtual Copy efficiency delivers affordable, CDP-like rapid application recovery from multiple points in time. With a single command, you can revert a base volume to any selected snapshot-without impacting other snapshots in the tree. And when you delete a snapshot, this never affects peer snapshots.

Virtual Copy also integrates with HP 3PAR Autonomic Groups and HP 3PAR Scheduler—both features which are built into the HP 3PAR Operating System—to automate the creation and deletion of virtual copy snapshots while giving users fine-grained control over the process. When used in conjunction with Autonomic Groups, Scheduler automates the creation of virtual copy snapshots across multiple boot and data volumes with full write consistency across all these different volumes. In combining these software capabilities, storage management is automated to reduce administration time and decrease the chance of human error.

** HP 3PAR 10400 Virtual Copy Software Base LTU BD199A
** HP 3PAR 10400 Virtual Copy Software Magazine LTU BD210A
** HP 3PAR 10800 Virtual Copy Software Base LTU BD221A
** HP 3PAR 10800 Virtual Copy Software Magazine LTU BD232A
** HP 3PAR 10400 Virtual Copy Software 1TB Provisioned LTU BD186A
** HP 3PAR 10800 Virtual Copy Software 1TB Provisioned LTU BD187A
** HP 3PAR 7200 Virtual Copy Software Base LTU BC753A
** HP 3PAR 7200 Virtual Copy Software Drive LTU BC754A
** HP 3PAR 7400 Virtual Copy Software Base LTU BC781A
** HP 3PAR 7400 Virtual Copy Software Drive LTU BC782A
** HP 3PAR 7440c Virtual Copy Base LTU BD386A
** HP 3PAR 7440c Virtual Copy Drive LTU BD387A
** HP 3PAR 7450 Virtual Copy Software Base LTU BC896A
** HP 3PAR 7450 Virtual Copy Software Drive LTU BC897A
** HP 3PAR 20850 Virtual Copy Base LTU L7D01A
** HP 3PAR 20850 Virtual Copy Drive LTU L7D02A
** HP 3PAR 20800 Virtual Copy Base LTU L7C53A
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Technical Specifications

HP 3PAR 20800 Virtual Copy Drive LTU L7C54A
HP 3PAR 20450 Virtual Copy Base LTU L7C77A
HP 3PAR 20450 Virtual Copy Drive LTU L7C78A
HP 3PAR 20000 Virtual Copy Software 1TB Provisioned LTU L7D54A
HP 3PAR 8200 Virtual Copy Base LTU L7B57A
HP 3PAR 8200 Virtual Copy Drive LTU L7B58A
HP 3PAR 8400 Virtual Copy Base LTU L7B81A
HP 3PAR 8400 Virtual Copy Drive LTU L7B82A
HP 3PAR 8440 Virtual Copy Base LTU L7C05A
HP 3PAR 8440 Virtual Copy Drive LTU L7C06A
HP 3PAR 8450 Virtual Copy Base LTU L7C29A
HP 3PAR 8450 Virtual Copy Drive LTU L7C30A

NOTE: Insert AE at the end of a part number for an electronic LTU (eg. XXXXBAE). E-Delivery should be ordered with any Standalone or Upgrade software order. (except for BD186A and BD187A)

Product Highlights

- Snapshots available instantly, in read-only and/or read-write form.
- Developer-controlled mySnapshot functionality securely replaces/refreshes selected snapshots to speed development without burdening storage administrators.
- Support for consistency groups assures data integrity across volumes.
- Reservationless snapshots. Fine-grained capacity consumed only for changed data.
- Thin copy-on-writes. Changed data is never duplicated within a snapshot tree.
- Snapshots of snapshots for fast, flexible sharing of data sets without the need for additional base volumes.
- Revert to any snapshot with a single command, at any time.
- 256 read/write and 500 read-only snapshots per virtual volume. Affordable CDP-like rapid application recovery from multiple points in time.
- Thin copy-on-write technology and massive parallelism mean little to no performance impact.
- Freely delete snapshots without affecting peer snapshots.

HP 3PAR Remote Copy Software

Overview

HP 3PAR Remote Copy is a unique replication technology that allows you to protect and share data from any application more simply, efficiently, and affordably. Remote Copy dramatically reduces the cost of remote data replication and DR on several fronts by leveraging HP 3PAR's unique thin copy technologies, enabling the use of both mid-range and high-end arrays, and eliminating the need for professional services. In addition, HP 3PAR is the first storage vendor to offer autonomic DR configuration that enables you to set up and test your entire DR deployment—including multi-site replication using both mid-range and high-end arrays—in just minutes, from a single window.

Models

- HP 3PAR Remote Copy 90-day Evaluation LTU TE081B
- HP 3PAR 10400 Remote Copy Software Base LTU BD200A
- HP 3PAR 10400 Remote Copy Software Magazine LTU BD211A
- HP 3PAR 10800 Remote Copy Software Base LTU BD222A
- HP 3PAR 10800 Remote Copy Software Magazine LTU BD233A
### Product Highlights

- **Autonomic Configuration**: With the HP 3PAR StoreServ Management Console, even multi-site DR can be set up and tested in just minutes, and from a single window. Built-in, autonomic configuration capabilities unique to 3PAR Remote Copy enable DR to automatically and intelligently configure itself. With just a few clicks, you can set up and test remote replication with HP 3PAR StoreServ, or a combination of arrays at multiple sites.

- **Multi-Protocol Support**: With Native IP as well as Fibre Channel (FC) support, 3PAR Remote Copy delivers out-of-the-box connectivity over your IP network, enabling you to replicate data more cost-effectively by leveraging your existing infrastructure. Achieve robust DR without the expensive converters and management of a separate, special-purpose infrastructure.

- **Host-Independent Replication**: HP 3PAR Remote Copy is a host-independent, array-based data mirroring solution that boosts performance by offloading host servers of replication tasks. HP 3PAR Virtual Volumes (VVs) are mirrored from one HP 3PAR array to another over variable distances using the mode of operation that best fits your needs.

- **Flexible, Modular Architecture**: HP 3PAR Remote Copy is supported on all StoreServ arrays.
(both high-end and mid-range), all of which are scalable to meet your precise requirements. This flexibility gives you the ability to implement right-sized systems that meet the unique needs of each location. No more purchasing and managing high-end arrays even in DR configurations where smaller mid-range arrays could suffice. HP 3PAR Remote Copy also allows you to configure remote mirrors with different RAID properties from their source volumes so you can more precisely tailor protection levels and cost.

- **Balanced Performance**: HP 3PAR Remote Copy's line-trunking capability simplifies data transmission by making the most efficient use of all configured network links. Data transfers are autonomously balanced across all links, thus avoiding bottlenecks. Line-trunking also increases availability by automatically rebalancing the load in case of a link failure.

- **Long Distance Replication with Zero Data Loss**: HP 3PAR Remote Copy offers a unique Synchronous Long Distance mode that allows you to meet low RTOs and zero-data loss RPOs with complete distance flexibility while saving on hardware.

- **Thin Provisioning Awareness**: HP 3PAR Remote Copy is "thin provisioning-aware", so target volumes provide the same cost and ease-of-use benefits as thin source volumes. With the combination of HP 3PAR Thin Provisioning and HP 3PAR Remote Copy, both primary and remote sites can share in the benefits of allocating volumes just once while consuming only necessary physical capacity. The result is unprecedented efficiency in data replication.

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**HP 3PAR Peer Persistence**

**Overview**

HP 3PAR Peer Persistence software allows companies to federate their 3PAR StoreServ Storage systems across geographically separated data centers. This inter-site federation of storage allows customers to use their data centers more effectively by allowing them to move applications from one site to another as per their business need, and more importantly, without any application downtime. Peer Persistence leverages the robust high availability solutions already available on HP 3PAR StoreServ systems, and extends it even further by enabling a peer relationship between two 3PAR StoreServ Storage systems located at geographically separated sites. Peer Persistence enables failover/failback between two sites/data centers to be transparent to hosts and without any disruption to applications running on them. Peer Persistence is deployed with Remote Copy without the need for any additional hardware or appliance.

- HP 3PAR 10400 Peer Persistence Software Base LTU
  - BD204A
- HP 3PAR 10400 Peer Persistence Software Magazine LTU
  - BD215A
- HP 3PAR 10400 Peer Persistence Software 1TB Provisioned LTU
  - BD188A
- HP 3PAR 10800 Peer Persistence Software Base LTU
  - BD226A
- HP 3PAR 10800 Peer Persistence Software Magazine LTU
  - BD237A
- HP 3PAR 10800 Peer Persistence Software 1TB Provisioned LTU
  - BD189A
- HP 3PAR 7200 Peer Persistence Software Base LTU
  - BC800A
- HP 3PAR 7200 Peer Persistence Software Drive LTU
  - BC801A
- HP 3PAR 7400 Peer Persistence Software Base LTU
  - BC802A
- HP 3PAR 7400 Peer Persistence Software Drive LTU
  - BC803A
- HP 3PAR 7440c Peer Persistence Base LTU
  - BD400A
- HP 3PAR 7440c Peer Persistence Drive LTU
  - BD401A
- HP 3PAR 7450 Peer Persistence Software Base LTU
  - BC898A
- HP 3PAR 7450 Peer Persistence Software Drive LTU
  - BC899A
NOTE: Insert AE at the end of a part number for an electronic LTU (eg. XXXXBAE). E-Delivery should be ordered with any Standalone or Upgrade software order.

**HP 3PAR Adaptive Optimization**

**Overview**

HP 3PAR Adaptive Optimization Software gives enterprise and cloud datacenters the ability to optimize service levels autonomically, on a large scale, and for a lower total cost than any other solution available today. Adaptive Optimization takes a fine-grained approach to autonomic storage tiering that optimizes service levels by pairing data at the sub-volume level with the most cost-efficient resource capable of meeting its particular service level requirement. Policy-driven, granular data movement takes place autonomically, on an ongoing basis - so the right Quality of Service (QoS) is delivered to the right data at the right time, at all times.

Adaptive Optimization is also included in the Optimization Suite on HP 3PAR StoreServ 10000 Storage Systems and in the Data Optimization Software Suite v2 on HP 3PAR StoreServ 7000 and 7450 Storage.

- HP 3PAR Adaptive Optimization 90-day Evaluation LTU
- HP 3PAR 10400 Adaptive Optimization Software Base LTU
- HP 3PAR 10400 Adaptive Optimization Software Magazine LTU
- HP 3PAR 10800 Adaptive Optimization Software Base LTU
- HP 3PAR 10800 Adaptive Optimization Software Magazine LTU
- HP 3PAR 7200 Adaptive Optimization Software Base LTU
- HP 3PAR 7200 Adaptive Optimization Software Drive LTU
- HP 3PAR 7400 Adaptive Optimization Software Base LTU
- HP 3PAR 7400 Adaptive Optimization Software Drive LTU
- HP 3PAR 7440c Adaptive Optimization Base LTU
- HP 3PAR 7440c Adaptive Optimization Drive LTU
- HP 3PAR 7450 Adaptive Optimization Software Base LTU
- HP 3PAR 7450 Adaptive Optimization Software Drive LTU
- HP 3PAR 20800 Adaptive Optimization Base LTU
- HP 3PAR 20800 Adaptive Optimization Drive LTU
- HP 3PAR 20850 Adaptive Optimization Base LTU
- HP 3PAR 20850 Adaptive Optimization Drive LTU
- HP 3PAR 20450 Adaptive Optimization Base LTU
- HP 3PAR 20450 Adaptive Optimization Drive LTU
- HP 3PAR 8200 Adaptive Optimization Base LTU
- HP 3PAR 8200 Adaptive Optimization Drive LTU
- HP 3PAR 8400 Adaptive Optimization Base LTU
- HP 3PAR 8400 Adaptive Optimization Drive LTU
- HP 3PAR 8440 Adaptive Optimization Base LTU
- HP 3PAR 8440 Adaptive Optimization Drive LTU
QuickSpecs

Technical Specifications

**HP 3PAR 8450 Adaptive Optimization Base LTU**

**HP 3PAR 8450 Adaptive Optimization Drive LTU**

**NOTE**: Insert AE at the end of a part number for an electronic LTU (eg. XXXXBAE). E-Delivery should be ordered with any Standalone or Upgrade software order.

**Product Highlights**

- **Reduce Cost by**:
  - Delivering sub-volume level, bi-directional data optimization.
  - Enabling broad deployments with application-specific controls.

- **Gain Agility by**:
  - Offering application prioritization modes with QoS gradients.
  - Autonomically delivering policy-driven data optimization.

- **Minimize Risk by**:
  - Leveraging a proven, fine-grained data movement engine.
  - Controlling data movement timing.

**HP 3PAR Dynamic Optimization**

**Overview**

HP 3PAR Dynamic Optimization is an autonomic storage tiering tool that give your organization the ability to react quickly to changing application and infrastructure requirements. Used together, these unique 3PAR utilities alleviates the problem of costly and time-consuming quality of service (QoS) level optimization–even in the largest and most demanding environments.

Dynamic Optimization is also included in the Optimization Suite on HP 3PAR StoreServ 10000 Storage Systems and in the Data Optimization Software Suite v2 on HP 3PAR StoreServ 7000 and 7450 Storage.

- **HP 3PAR Dynamic Optimization 90-day Evaluation LTU**
- **HP 3PAR 10400 Dynamic Optimization Software Base LTU**
- **HP 3PAR 10400 Dynamic Optimization Software Magazine LTU**
- **HP 3PAR 10800 Dynamic Optimization Software Base LTU**
- **HP 3PAR 10800 Dynamic Optimization Software Magazine LTU**
- **HP 3PAR 7200 Dynamic Optimization Software Base LTU**
- **HP 3PAR 7200 Dynamic Optimization Software Drive LTU**
- **HP 3PAR 7400 Dynamic Optimization Software Base LTU**
- **HP 3PAR 7400 Dynamic Optimization Software Drive LTU**
- **HP 3PAR 7440c Dynamic Optimization Base LTU**
- **HP 3PAR 7440c Dynamic Optimization Drive LTU**
- **HP 3PAR 7450 Dynamic Optimization Software Base LTU**
- **HP 3PAR 7450 Dynamic Optimization Software Drive LTU**
- **HP 3PAR 20850 Dynamic Optimization Base LTU**
- **HP 3PAR 20850 Dynamic Optimization Drive LTU**
- **HP 3PAR 20800 Dynamic Optimization Base LTU**
- **HP 3PAR 20800 Dynamic Optimization Drive LTU**
- **HP 3PAR 20450 Dynamic Optimization Base LTU**
- **HP 3PAR 20800 Dynamic Optimization Magazine LTU**
- **HP 3PAR 20450 Dynamic Optimization Magazine LTU**
## HP 3PAR Software Products

### Technical Specifications

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Part Number</th>
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<tbody>
<tr>
<td>HP 3PAR 20450 Dynamic Optimization Drive LTU</td>
<td>L7C80A</td>
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<td>HP 3PAR 8200 Dynamic Optimization Base LTU</td>
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**NOTE:** Insert AE at the end of a part number for an electronic LTU (e.g. XXXXBAE). E-Delivery should be ordered with any Standalone or Upgrade software order.

### Product Highlights

**Dynamic Optimization:**

- Autonomically applies the right storage resources to the right volume at the right time without scheduling, planning, or impacting application performance.
- Eliminates the cost of over-provisioning to accommodate usage spikes and manual migration of data to lower-cost storage resources.
- Enables service level change orders on demand.
- Aligns appropriate storage resources as needed with the changing value of data.
- Autonomically, intelligently and non-disruptively rebalances entire system with a single button.
- Allows for large-scale performance optimizations after adding new resources to the system or moving a large number of volumes between tiers.

### HP 3PAR Virtual Domains

**Overview**

HP 3PAR Virtual Domains is virtual machine software that delivers secure access and robust storage services for different applications and user groups, also known as virtual private arrays. By providing secure, administrative segregation of users and hosts within a consolidated, massively parallel HP 3PAR StoreServ, Virtual Domains allows individual user groups and applications to affordably achieve greater storage service levels (performance, availability, and functionality) than previously possible.

HP 3PAR Virtual Domains is ideal for enterprises or service providers looking to leverage the benefits of consolidation and deploy a purpose-built infrastructure for their private or public cloud.

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP 3PAR 10400 Virtual Domain Software Base LTU</td>
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<td>HP 3PAR 10400 Virtual Domain Software Magazine LTU</td>
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<td>HP 3PAR 10800 Virtual Domain Software Base LTU</td>
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<td>HP 3PAR 7440c Virtual Domains Base LTU</td>
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</table>
QuickSpecs

Technical Specifications

HP 3PAR 7440c Virtual Domains Drive LTU  BD397A
HP 3PAR 7450 Virtual Domain Software Base LTU  BC910A
HP 3PAR 7450 Virtual Domain Software Drive LTU  BC911A

NOTE: Insert AE at the end of a part number for an electronic LTU (eg. XXXXBAE). E-Delivery should be ordered with any Standalone or Upgrade software order.

Product Highlights

- Provides secure, isolated storage (virtual private arrays) to multiple applications, departments, and customers
- Delivers the robust service levels available from a wide-striped, massively parallel array without sacrificing security
- Retains the economic benefits of a virtualized storage infrastructure and storage consolidation
- Enables users or departments to securely and independently administer their own individual virtual private arrays
- Integrates fully with all HP 3PAR OS software products and features including 3PAR Remote Copy, System Reporter, LDAP support, and Autonomic Groups

HP 3PAR Virtual Lock Software

Overview

The need for secure data retention is a fact of doing business in the information age. HP 3PAR Virtual Lock gives you an efficient and cost-effective way to comply with internal governance and provides a foundation for performing electronic discovery (eDiscovery).

HP 3PAR Virtual Lock prevents deletion of virtual volumes (including thin volumes created with HP 3PAR Thin Provisioning software) and volume copies (such as those created with HP 3PAR Virtual Copy or HP 3PAR Full Copy software) for a specified period of time. Applying a user-configurable retention period, Virtual Lock secures volumes and copies so they cannot be deleted, even by a HP 3PAR Store Serv user with the highest level privileges.

When coupled with reservationless, non-duplicative, read-only virtual copies (snapshots), Virtual Lock enables you to retain frozen, point-in-time copies of your data to assist internal data retention and simplify compliance with internal governance procedures.

HP 3PAR 10400 Virtual Lock Software Base LTU  BD203A
HP 3PAR 10400 Virtual Lock Software Magazine LTU  BD214A
HP 3PAR 10800 Virtual Lock Software Base LTU  BD225A
HP 3PAR 10800 Virtual Lock Software Magazine LTU  BD236A
HP 3PAR 7200 Virtual Lock Software Base LTU  BC765A
HP 3PAR 7200 Virtual Lock Software Drive LTU  BC766A
HP 3PAR 7400 Virtual Lock Software Base LTU  BC793A
HP 3PAR 7400 Virtual Lock Software Drive LTU  BC794A
HP 3PAR 7440c Virtual Lock Base LTU  BD398A
HP 3PAR 7440c Virtual Lock Drive LTU  BD399A
HP 3PAR 7450 Virtual Lock Software Base LTU  BC912A
HP 3PAR 7450 Virtual Lock Software Drive LTU  BC913A
NOTE: Insert AE at the end of a part number for an electronic LTU (eg. XXXXBAE). E-Delivery should be ordered with any Standalone or Upgrade software order.

**HP 3PAR Peer Motion**

**Overview**

HP 3PAR Peer Motion Software is the first non-disruptive, do-it-yourself data migration tool for enterprise Storage Area Networks. With Peer Motion, HP 3PAR StoreServ Storage System customers can load balance I/O workloads across systems at will, perform technology refresh seamlessly, cost-optimize asset lifecycle management, and lower technology refresh capital expenditure. Unlike traditional block migration approaches, Peer Motion enables customers to migrate storage volumes between any HP 3PAR StoreServ Storage Systems online, non-disruptively, and without complex planning or dependency on extra tools. Peer Motion leverages HP 3PAR Thin Built In™ technology to power the simple and rapid conversion of inefficient, “fat” volumes on source arrays to more efficient, higher-utilization “thin” volumes on the destination HP 3PAR StoreServ Storage System. To ensure a simple and fool-proof data migration and data mobility for workload balancing experience, orchestration of all stages of data mobility is available via either 3PAR Management Console or 3PAR Peer Motion CLI, which is an easy to use, scriptable command line interface tool.

- **HP 3PAR 10400 Peer Motion Software Base LTU** BD201A
- **HP 3PAR 10400 Peer Motion Software Magazine LTU** BD212A
- **HP 3PAR 10800 Peer Motion Software Base LTU** BD223A
- **HP 3PAR 10800 Peer Motion Software Magazine LTU** BD234A
- **HP 3PAR 7200 Peer Motion Software Base LTU** BC761A
- **HP 3PAR 7200 Peer Motion Software Drive LTU** BC762A
- **HP 3PAR 7400 Peer Motion Software Base LTU** BC789A
- **HP 3PAR 7400 Peer Motion Software Drive LTU** BC790A
- **HP 3PAR 7440c Peer Motion Base LTU** BD394A
- **HP 3PAR 7440c Peer Motion Drive LTU** BD395A
- **HP 3PAR 7450 Peer Motion Software Base LTU** BC906A
- **HP 3PAR 7450 Peer Motion Software Drive LTU** BC907A
- **HP 3PAR 20800 Peer Motion Base LTU** L7C59A
- **HP 3PAR 20800 Peer Motion Drive LTU** L7C60A
- **HP 3PAR 20850 Peer Motion Base LTU** L7D07A
- **HP 3PAR 20850 Peer Motion Drive LTU** L7D08A
- **HP 3PAR 20450 Peer Motion Base LTU** L7C83A
- **HP 3PAR 20450 Peer Motion Drive LTU** L7C84A
- **HP 3PAR 8200 Peer Motion Base LTU** L7B63A
- **HP 3PAR 8200 Peer Motion Drive LTU** L7B64A
- **HP 3PAR 8400 Peer Motion Base LTU** L7B87A
- **HP 3PAR 8400 Peer Motion Drive LTU** L7B88A
- **HP 3PAR 8440 Peer Motion Base LTU** L7C11A
- **HP 3PAR 8440 Peer Motion Drive LTU** L7C12A
- **HP 3PAR 8450 Peer Motion Base LTU** L7C35A
HP 3PAR Online Import Software

**Overview**

HP 3PAR Online Import Software is the first do-it-yourself data migration tool for enterprise Storage Area Networks. Unlike traditional block migration approaches, Online Import Software enables customers to migrate storage volumes from either HP EVA Storage, EMC CX4 or EMC VNX Storage to HP 3PAR StoreServ Storage systems online and without complex planning or dependency on extra tools.

**Models**

- HP 3PAR 7200 Online Import Software 180 day LTU [BD191A]
- HP 3PAR 7400 Online Import Software 180 day LTU [BD192A]
- HP 3PAR 7440c Online Import 180-day LTU [BD407A]
- HP 3PAR 7450 Online Import Software 180 day LTU [BD195A]
- HP 3PAR 10400 Online Import Software 180 day LTU [BD194A]
- HP 3PAR 10800 Online Import Software 180 day LTU [BD193A]
- HP 3PAR 20800 Online Import 180-day LTU [L7C64A]
- HP 3PAR 20850 Online Import Software 180-day LTU [L7D12A]
- HP 3PAR 20450 Online Import 180-day LTU [L7C88A]
- HP 3PAR 8200 Online Import 180-day LTU [L7B68A]
- HP 3PAR 8400 Online Import 180-day LTU [L7B92A]
- HP 3PAR 8440 Online Import 180-day LTU [L7C16A]
- HP 3PAR 8450 Online Import 180-day LTU [L7C40A]

**NOTE:** Insert AE at the end of a part number for an electronic LTU (eg. XXXXBAE). E-Delivery should be ordered with any Standalone or Upgrade software order.

HP 3PAR Priority Optimization

**Overview**

HP 3PAR Priority Optimization Software enables service levels for applications and workloads as business requirements dictate. HP 3PAR Priority Optimization enables customer to provision storage performance as they can provision storage capacity; this allows them to create SLAs to protect mission critical applications in enterprise environments by assigning a minimum goal for I/O per second, bandwidth and latency so performance for that specific tenant or application is assured. Or assign performance max limits on workloads with lower service level requirements. Provide high priority applications with all the resources they need to meet service levels. Enable certainty and predictability for all applications and tenants. Configure service level objectives - I/O per Seconds limit and I/O Bandwidth limit, on a Virtual Volume Set (VVset) or between different Virtual Domains. A Virtual Volume Set may contain a single volume or multiple volumes. A Virtual Volume may also belong to multiple Virtual Volume Sets allowing user to create hierarchical rules. All host I/O on the VVset is monitored and measured against the Service Level objective. HP 3PAR Priority Optimization control is implemented within the HP 3PAR StoreServ Storage System and can be modified in real time. No host agents are required. Further, no physical partitioning of resources within the storage array is required.

**Models**

- HP 3PAR Priority Optimization Software 90-Day Evaluation LTU [BC992A]
**QuickSpecs**  
**HP 3PAR Software Products**

**Technical Specifications**

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<td>HP 3PAR 20850 Priority Optimization Base LTU</td>
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**NOTE:** Insert AE at the end of a part number for an electronic LTU (eg. XXXXBAE). E-Delivery should be ordered with any Standalone or Upgrade software order.

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**HP StoreOnce Recovery Manager Central (RMC)**

Protect your business critical applications without impacting performance using HP StoreOnce Recovery Manager Central (RMC). This automated, non-intrusive software combines the simplicity and performance of snapshots with the reliability and cost-effective retention of deduplicated backups. RMC integrates 3PAR StoreServ primary storage and StoreOnce Backup for converged data protection that delivers assured recovery of application-consistent recovery points with flexible recovery options. RMC offers a simple, efficient and fast backup and recovery solution, which augments traditional backup applications.

HP StoreOnce RMC for VMware is a license that enables RMC customers to protect VMware Virtual Machine Disks (VMDKs) and data stores using application-consistent snapshots for rapid online recovery. At the same time, the Express Protect feature (enabled by the StoreOnce Catalyst license) offers a second-tier of data protection by facilitating direct backup from 3PAR StoreServ to...
QuickSpecs

Technical Specifications

StoreOnce. Backups to StoreOnce are self-contained volumes, deduplicated to save space, and can be used to recover back to the original or a different 3PAR StoreServ array, even if the original base volume is lost. VMware administrators can access all of this functionality from within the familiar VMware vCenter management console.

HP StoreOnce Recovery Manager Central – Application plug-ins

Overview

HP StoreOnce Recovery Manager Central provides integration with specific hypervisor/application environments through the following plug-ins.

HP StoreOnce Recovery Manager Central for VMware: allows VMware administrators to create hundreds of VM-aware consistent snapshots and initiate rapid online recovery directly from within the VMware vCenter™ Server virtualization management console. Using the StoreOnce RMC Express Protect feature, customers can also backup to StoreOnce directly. The backups are self-contained volumes that can be restored back to the original or different 3PAR StoreServ array in the event of a disaster.

OneView for VMware vCenter plug-in: gives VMware administrators enhanced visibility of storage resources and precise insight into how individual virtual machines are mapped to datastores and individual storage volumes. When used in conjunction with StoreOnce Recovery Manager Central for VMware, this plug-in gives administrators the power of seamless, rapid online recovery from either snapshots or backups directly from within the vcenter Server virtualization management console.

Note: additional application-specific plug-ins will be made available through subsequent releases of the HP StoreOnce RMC software.

SKUs at-a-glance

| HP StoreOnce Recovery Manager Central LTU / E-LTU | D4U75A / D4U75AAE |
| HP StoreOnce Recovery Manager Central with VMware for 3PAR StoreServ 72xx/82xx LTU / E-LTU | D4U64A / D4U64AAE |
| HP StoreOnce Recovery Manager Central with VMware for 3PAR StoreServ 10xxx/20xxx LTU / E-LTU | D4U65A / D4U65AAE |
| HP StoreOnce Recovery Manager Central with VMware for 3PAR StoreServ 74xx/84xx LTU / E-LTU | D4U66A / D4U66AAE |
| HP StoreOnce Recovery Manager Central Media | D4U76A |

HP 3PAR Application Software Suite for Exchange

Overview

HP 3PAR Application Suite for Exchange provides administrators the power of seamless, rapid online recovery of Microsoft Exchange application. It is an extension to Virtual Copy which enables creation of application consistent snapshots without sacrificing performance, availability or versatility.

The Application Suite for Exchange includes the following functionality and features:

- HP 3PAR Recovery Manager for Exchange
- HP 3PAR VSS hardware provider


Models

| HP 3PAR 10400 Application Suite for Microsoft Exchange LTU | BD246B |
| HP 3PAR 10800 Application Suite for Microsoft Exchange LTU | BD258B |
QuickSpecs

HP 3PAR Software Products

Technical Specifications

HP 3PAR 7200 Application Suite for Microsoft Exchange LTU  BC769B
HP 3PAR 7400 Application Suite for Microsoft Exchange LTU  BC797B
HP 3PAR 7440c Application Suite for Exchange LTU  BD377A
HP 3PAR 7450 Application Suite for Microsoft Exchange LTU  BC916B

NOTE: Insert AE at the end of a part number above for an electronic LTU (eg. XXXXBAE). E-Delivery should be ordered with any Standalone or Upgrade software order.

HP 3PAR Application Software Suite for SQL

Overview

HP 3PAR Application Suite for SQL provides administrators the power of seamless, rapid online recovery of Microsoft SQL application. It is an extension to Virtual Copy which enables creation of application consistent snapshots without sacrificing performance, availability or versatility.

The Application Suite for SQL includes the following functionality and features:

- HP 3PAR Recovery Manager for SQL
- HP 3PAR VSS hardware provider

For more information see http://h18006.www1.hp.com/storage/software/3par7000/as-sql/index.html

Models

HP 3PAR 10400 Application Suite for Microsoft SQL LTU  BD247B
HP 3PAR 10800 Application Suite for Microsoft SQL LTU  BD259B
HP 3PAR 7200 Application Suite for Microsoft SQL LTU  BC770B
HP 3PAR 7400 Application Suite for Microsoft SQL LTU  BC798B
HP 3PAR 7440c Application Suite for SQL LTU  BD378A
HP 3PAR 7450 Application Suite for Microsoft SQL LTU  BC917B

NOTE: Insert AE at the end of a part number above for an electronic LTU (eg. XXXXBAE). E-Delivery should be ordered with any Standalone or Upgrade software order.

HP 3PAR Application Software Suite for Microsoft Hyper-V

Overview

HP 3PAR Application Suite for Hyper-V provides administrators the power of seamless, rapid online recovery of Microsoft Hyper-V VMs. It is an extension to Virtual Copy which enables creation of application consistent snapshots without sacrificing performance, availability or versatility.

The Application Suite for Hyper-V includes the following functionality and features:

- HP 3PAR Recovery Manager for Hyper-V
- HP 3PAR VSS hardware provider

NOTE: HP 3PAR Virtual Copy Software is a prerequisite, purchased independently or in the HP 3PAR Replication Software Suite.

Models

HP 3PAR 10400 Application Suite for Microsoft Hyper-V LTU  BD182B
HP 3PAR 10800 Application Suite for Microsoft Hyper-V LTU  BD183B
HP 3PAR 7200 Application Suite for Microsoft Hyper-V LTU  BD178B
HP 3PAR 7400 Application Suite for Microsoft Hyper-V LTU  BD179B
HP 3PAR 7440c Application Suite for Hyper-V LTU  BD380A
QuickSpecs

HP 3PAR Software Products

Technical Specifications

HP 3PAR 7450 Application Suite for Microsoft Hyper-V LTU

Insert AE at the end of a part number above for an electronic LTU (eg. XXXXBAE). E-Delivery should be ordered with any Standalone or Upgrade software order.

HP OneView for Microsoft System Center

Overview HP OneView for Microsoft System Center provides comprehensive integration with Microsoft System Center (SCOM and SCVMM) to enable management and monitoring of HP 3PAR Storage running in Microsoft Hyper-V environments. It includes:

- HP 3PAR Management Pack for SCOM (to discover and monitor pre-defined rules to display events/alerts, capacity & health dashboards)
- HP Storage UI Add-in for SCVMM software (integrated view of VMs, Hosts, LUNs, CPGs and associated storage resources on HP 3PAR Storage)

HP 3PAR Storage also enables all Storage Management functionality provided by Microsoft System Center Virtual Machine Manager (SCVMM) via SMI-S providers.

For more information see https://h20392.www2.hp.com/portal/swdepot/displayProductInfo.do?productNumber=System_Center

HP 3PAR Application Software Suite for Oracle

Overview HP 3PAR Application Suite for Oracle provides administrators the power of seamless, rapid online recovery of Oracle database application. It is an extension to Virtual Copy which enables creation of application consistent snapshots without sacrificing performance, availability or versatility.

The Application Suite for Oracle database includes the following functionality and features:

- HP 3PAR Recovery Manager for Oracle

For more information see http://h18006.www1.hp.com/storage/software/3par7000/as-oracle/index.html

Models

- HP 3PAR 10400 Application Suite for Oracle LTU
- HP 3PAR 10800 Application Suite for Oracle LTU
- HP 3PAR 7200 Application Suite for Oracle LTU
- HP 3PAR 7400 Application Suite for Oracle LTU
- HP 3PAR 7440c Application Suite for Oracle LTU
- HP 3PAR 7450 Application Suite for Oracle LTU

NOTE: Insert AE at the end of a part number above for an electronic LTU (eg. XXXXBAE). E-Delivery should be ordered with any Standalone or Upgrade software order.

HP Storage plug-in for SAP LVM

Overview HP Storage plug-in for SAP Landscape Virtualization Manager (LVM) is a high-performance and easy-to-use software to manage SAP landscapes in physical, virtual and cloud environments using HP 3PAR Storage. It enables customers to Clone/Refresh SAP Systems and also relocate them across physical and virtual infrastructure reducing the administrative effort to manage the SAP landscape and improve productivity. It enhances the flexibility in making development and test data consistent with the production data and provides
simple visualization to monitor and manage SAP Systems running on HP 3PAR Storage.
For more information see:

**HP StoreFront Remote SaaS Portal**

*Overview* The HP StoreFront Remote SaaS Portal provides proactive tools and integrated data collection from the HP 3PAR StoreServ Storage arrays that call home to deliver unique insights and analytics all in one dashboard. Identify capacity and performance issues early through intuitive capacity and performance trend analysis and forecasting. These valuable analytics help maximize asset utilization and optimize the datacenter with recommendations and remedial actions when issues arise. Users can log into http://www.storefrontremote.com to claim their arrays and get access for free.

**HP 3PAR Host Software**

*Overview* The following are host-based software products from HP 3PAR.

**HP 3PAR Host Explorer:** Running as an agent on the server, 3PAR Host Explorer automates host discovery and collection of detailed host configuration information critical to speeding provisioning and simplifying maintenance. Host Explorer automatically and securely communicates host information such as Fibre Channel Worldwide Name (WWN) and host multipath data to the array to reduce manual administration.

**HP 3PAR Multipath I/O for IBM AIX:** 3PAR MPIO for IBM AIX provides multipathing for IBM®AIX® hosts featuring multiple active/active paths, load balancing, and automatic failover and recovery.

**HP 3PAR Multipath I/O for Microsoft Windows 2003:** 3PAR MPIO for Microsoft Windows 2003 provides multipathing for Microsoft Windows® hosts featuring multiple active/active paths, load balancing, and automatic failover and recovery.

**HP 3PAR Cluster Extension Software:** HP 3PAR Cluster Extension Software offers rapid automated protection against application downtime from fault, failure, or site disaster. CLX integrates with the Windows OS clustering software and HP 3PAR Remote Copy to automate failover and failback between sites. The HP 3PAR Cluster Extension Software is part of the HP 3PAR Replication Suite for 8000 and 20000 models, however host based license is needed for the 7000 and 10000 models.

**HP 3PAR Policy Server**

HP 3PAR Policy Server works to implement customer-configurable remote service access policies. Installed on a customer-provided host, Policy Server provides the customer with ultimate flexibility and control to allow or deny outbound communication or remote service connections to and from an HP 3PAR StoreServ Storage system. Policy Server also serves as the centralized point for collecting and storing audit logs of all diagnostic data transfers and authorized remote service connections to and from all configured HP 3PAR Storage systems.
HP 3PAR Policy Server provides the following benefits:

- The customer has complete control over policy administration.
- A centralized policy administration for all HP 3PAR Storage systems is provided.
- A centralized audit log to facilitate security audits is provided.

Models

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<td>HP 3PAR MPIO for Microsoft Windows Evaluation LTU</td>
<td>TE090B</td>
</tr>
<tr>
<td>HP 3PAR MPIO for Microsoft Windows Software</td>
<td>TE083B</td>
</tr>
<tr>
<td>HP 3PAR MPIO for IBM AIX Evaluation LTU</td>
<td>TE091B</td>
</tr>
<tr>
<td>HP 3PAR MPIO for IBM AIX Media Kit</td>
<td>TE088B</td>
</tr>
<tr>
<td>HP 3PAR Cluster Extension Windows LTU</td>
<td>TC355A</td>
</tr>
<tr>
<td>HP 3PAR Cluster Extension Software Windows Array Media LTU</td>
<td>BC885B</td>
</tr>
<tr>
<td>HP 3PAR Policy Manager Software</td>
<td>TE400B</td>
</tr>
</tbody>
</table>

NOTE: Insert AE at the end of a part number for an electronic LTU (eg. XXXXBAE). E-Delivery should be ordered with any Standalone or Upgrade software order.

Please note that the current HP 3PAR CLX for Windows Array LTU/e-LTU will only support HP 3PAR CLX for Windows v4.0 and above.

HP 3PAR StoreServ 10000 Software Suites Upgrade Options

Overview The HP 3PAR StoreServ 10000 Storage now provides the opportunity for you to upgrade your individual software title(s) to an appropriate lower priced and simpler to use software suite. The upgrade can be done by the purchase of upgrade LTUs corresponding to the software titles already available in your system, as indicated below.

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<th>Models</th>
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<td>BD293A</td>
</tr>
<tr>
<td>HP 3PAR 10400 Remote Copy Virtual Copy to Replication Software Suite Upgrade LTU</td>
<td>BD281A</td>
</tr>
<tr>
<td>HP 3PAR 10800 Remote Copy Virtual Copy to Replication Software Suite Upgrade LTU</td>
<td>BD294A</td>
</tr>
<tr>
<td>HP 3PAR 10400 Remote Copy Peer Persistence to Replication Software Suite Upg LTU</td>
<td>BD282A</td>
</tr>
<tr>
<td>HP 3PAR 10800 Remote Copy Peer Persistence to Replication Software Suite Upg LTU</td>
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<tr>
<td>HP 3PAR 10400 Virtual Copy to Replication Software Suite Upgrade LTU</td>
<td>BD283A</td>
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<tr>
<td>HP 3PAR 10800 Virtual Copy to Replication Software Suite Upgrade LTU</td>
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HP 3PAR 10800 Dynamic Optimization Peer Mn to Data Optimization SW St v2 Upg LTU BD301A
HP 3PAR 10400 Adpt Opt Dyn Opt Peer Mn to Data Optimization SW St v2 Upg LTU BD289A
HP 3PAR 10800 Adpt Opt Dyn Opt Peer Mn to Data Optimization SW St v2 Upg LTU BD302A
HP 3PAR 10400 Virtual Domain to Security Software Suite Upgrade LTU BD290A
HP 3PAR 10800 Virtual Domain to Security Software Suite Upgrade LTU BD303A
HP 3PAR 10400 Virtual Lock to Security Software Suite Upgrade LTU BD291A
HP 3PAR 10800 Virtual Lock to Security Software Suite Upgrade LTU BD304A
HP 3PAR 10400 Optimization Suite to Data Optimization Software Suite v2 Upg LTU BD292A
HP 3PAR 10800 Optimization Suite to Data Optimization Software Suite v2 Upg LTU BD305A

NOTE: Insert AE at the end of a part number above for an electronic LTU (eg. XXXXBAE). E-Delivery should be ordered with any Standalone or Upgrade software order.

HP 3PAR StoreServ Software Media

Overview
The part numbers below are media kits for all 3PAR Software products. Electronic and physical media kits options are available

Models
HP 3PAR StoreServ Management and Core Software Media BD362A
HP 3PAR 7000/7450 Operating System Suite Media BD363A
HP 3PAR 10000 Operating System Suite and Service Processor Software Media BD364A
HP 3PAR StoreServ Reporting Suite Media BD373A
HP 3PAR StoreServ Application Suite for Microsoft Exchange BD368A
HP 3PAR StoreServ Application Suite for Microsoft Hyper-V Media BD369A
HP 3PAR StoreServ Application Suite for Oracle Media BD370A
HP 3PAR StoreServ Application Suite for Microsoft SQL Media BD371A
HP 3PAR StoreServ Application Suite for VMware Media BD372A
HP 3PAR 7000 Service Processor Software Media BD365A

NOTE: Insert AE at the end of a part number above for an electronic media (eg. XXXXAAE).

Note on HP 3PAR Software Licensing Schemes

HP 3PAR follows multiple licensing schemes for different software offerings. There are four different licensing schemes those are largely employed across the HP 3PAR software portfolio. They are the spindle based licensing, simplified spindle based licensing, capacity based licensing and frame based licensing. The frame based licensing approach requires that the HP 3PAR software offering is licensed only once for the system. This form of licensing is common to all the HP 3PAR Storage platforms. The following list shows the HP 3PAR software products which follow the frame based licensing approach:

- HP 3PAR Online Import Software
- HP 3PAR Reporting Software Suite
- HP 3PAR Recovery Manager for VMware vSphere
- HP 3PAR Recovery Manager for Microsoft Exchange
- HP 3PAR Recovery Manager for Oracle
- HP 3PAR Recovery Manager for Microsoft SQL Server
- HP 3PAR Application Software Suite for VMware
- HP 3PAR Application Software Suite for Exchange
- HP 3PAR Application Software Suite for SQL
QuickSpecs

Technical Specifications

- HP 3PAR Application Software Suite for Microsoft Hyper-V
- HP 3PAR Application Software Suite for Oracle

The spindle based licensing approach requires a HP 3PAR software offering to be licensed based on each drive or drive magazine installed on the HP 3PAR Storage system. There are two different models followed based on this licensing mechanism - the spindle based licensing and the simplified spindle based licensing.

In the spindle based licensing approach, there is a different SKU available for each combination of drive capacity and drive type. Based on the specific drives being purchased for a HP 3PAR Storage system, the corresponding software SKU needs to be purchased. This purchase should be done for all the drives on the system irrespective of the number of drives or nodes or capacity of the system.

In the simplified spindle based licensing approach, every software title has a Base LTU which needs to be purchased once for a system. For every drive or drive magazine added to the system thereon, a drive LTU (for 7000) or a drive magazine LTU (for 10000) has to be purchased for the system respectively. The drive LTU or the drive magazine LTU for a particular platform is a single SKU irrespective of the drive type or drive capacity. Furthermore, based on the type of HP 3PAR Storage system, there is a specific number of drives beyond which any software title is not required to be purchased for that system.

The following table shows the maximum drive limits for each of the HP 3PAR Storage systems that support the simplified spindle based licensing approach:

<table>
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<tr>
<th>HP 3PAR StoreServ Storage</th>
<th>Maximum number of drives for licensing*</th>
<th>Comments</th>
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</thead>
<tbody>
<tr>
<td>HP 3PAR StoreServ 7200 Storage</td>
<td>48 drives</td>
<td>-</td>
</tr>
<tr>
<td>HP 3PAR StoreServ 7200c Storage</td>
<td>48 drives</td>
<td>-</td>
</tr>
<tr>
<td>HP 3PAR StoreServ 7400 Storage</td>
<td>168 drives</td>
<td>-</td>
</tr>
<tr>
<td>HP 3PAR StoreServ 7400c Storage</td>
<td>168 drives</td>
<td>-</td>
</tr>
<tr>
<td>HP 3PAR StoreServ 7440c Storage</td>
<td>320 drives</td>
<td>-</td>
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<tr>
<td>HP 3PAR StoreServ 7450 Storage</td>
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<td>168 drives</td>
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<td>HP 3PAR StoreServ 20800 Storage</td>
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<td>HP 3PAR StoreServ 20450 Storage</td>
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<td>HP 3PAR StoreServ 8200 Storage</td>
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<tr>
<td>HP 3PAR StoreServ 8400 Storage</td>
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</tr>
<tr>
<td>HP 3PAR StoreServ 8440 Storage</td>
<td>320 drives</td>
<td>-</td>
</tr>
<tr>
<td>HP 3PAR StoreServ 8450 Storage</td>
<td>168 drives</td>
<td>-</td>
</tr>
</tbody>
</table>

*For a simplified spindle based software offering no further licensing is required for a system beyond these drive counts

The capacity based licensing approach is limited to specific software titles and restricted to specific 3PAR StoreServ model. For
the replication software titles available on 3PAR StoreServ 10000 and 3PAR StoreServ 20000, the capacity based licensing approach involves licensing the software product based on the provisioned usable capacity in the system that is marked for any of the replication functions. For example, if a customer plans to user HP 3PAR Remote Copy for replication of a 16TB volume (Fully provisioned) to a DR site, then 16TB of HP 3PAR Remote Copy licenses need to be purchased for that particular system. Please note that the provisioned usable capacity of volume allocated as target of replication on the DR site, should also be licensed in the same way. Capacity based licensing is also available for the HP 3PAR File Persona Software Suite. The software title has a 1TB software LTU for each HP 3PAR StoreServ 7000c, 8000 and 20000 series models. The 1TB software LTU for a particular platform is a single SKU irrespective of the drive type or drive capacity. Specific number of 1TB LTUs need to be purchased for every TB used by that software title.

The following table shows the licensing models used in the various HP 3PAR Storage platforms:

<table>
<thead>
<tr>
<th>Licensing Scheme</th>
<th>Spindle Based Licensing</th>
<th>Simplified Spindle Based Licensing</th>
<th>Capacity Based Licensing</th>
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<tbody>
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<td>Yes**</td>
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<tr>
<td>HP 3PAR StoreServ 8000 Storage</td>
<td>No</td>
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<td>Yes**</td>
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<tr>
<td>HP 3PAR StoreServ 10000 Storage</td>
<td>Yes*</td>
<td>Yes</td>
<td>Yes***</td>
</tr>
<tr>
<td>HP 3PAR StoreServ 20000 Storage</td>
<td>No</td>
<td>Yes</td>
<td>Yes****</td>
</tr>
</tbody>
</table>

* Discontinued in favor of Simplified Spindle Based Licensing.
** Only for the HP 3PAR File Persona Software Suite
*** Only for replication related titles – Peer Persistence, Remote Copy, Virtual Copy & Replication Suite
**** Only for replication related titles – Peer Persistence, Remote Copy, Virtual Copy & Replication Suite and File Persona Software Suite title

Please note that HP 3PAR Software suites are available only in the form of simplified spindle based licensing and capacity based licensing.

The list below shows the software titles available in the form of spindle based licensing, simplified spindle based licensing and capacity based licensing:

<table>
<thead>
<tr>
<th>HP 3PAR Software Title</th>
<th>Spindle Based Licensing</th>
<th>Simplified Spindle Based Licensing</th>
<th>Capacity Based Licensing</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP 3PAR Operating System Software</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>HP 3PAR Thin Provisioning</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>HP 3PAR Thin Conversion</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>HP 3PAR Thin Persistence</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>HP 3PAR Virtual Copy</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes (10000 and 20000)</td>
</tr>
<tr>
<td>HP 3PAR Remote Copy</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes (10000 and 20000)</td>
</tr>
<tr>
<td>HP 3PAR Peer Persistence</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes (10000 and 20000)</td>
</tr>
<tr>
<td>HP 3PAR Adaptive Optimization</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>HP 3PAR Dynamic Optimization</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>HP 3PAR Priority Optimization</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>HP 3PAR System Turner</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>HP 3PAR Virtual Domains</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
## Technical Specifications

<table>
<thead>
<tr>
<th>Software Suite</th>
<th>Available on HP 3PAR StoreServ 10000</th>
<th>Available on HP 3PAR StoreServ 8000</th>
<th>Available on HP 3PAR StoreServ 7000c</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP 3PAR Virtual Lock</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>HP 3PAR Peer Motion</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>HP 3PAR Operating System Software Suite</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>HP 3PAR Replication Software Suite</td>
<td>No</td>
<td>Yes</td>
<td>Yes (10000 and 20000)</td>
</tr>
<tr>
<td>HP 3PAR Optimization Software Suite*</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>HP 3PAR Data Optimization Software Suite V2</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>HP 3PAR Security Software Suite</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>HP 3PAR File Persona Software Suite</td>
<td>No</td>
<td>No</td>
<td>Yes (7000c, 8000 and 20000)</td>
</tr>
</tbody>
</table>

* Optimization Software Suite is available only on HP 3PAR StoreServ 10000 Storage
QuickSpecs

Service and Support

Service and Support  Services to accelerate time to results

HP Storage Services bring you a rich portfolio of consulting and support services designed to add value to our core storage products and solutions. We have the know-how and experience to put storage technology to work for you. We work closely with you as your strategic partner, leveraging our full services portfolio to make sure that everything works to optimize your enterprise.

Choose from services aligned to our storage product offerings and lifecycle. From mission-critical onsite services to innovative web-based remote support, you choose the precise level of attention and support your business demands.

Discover, plan, and design

Choose from a rich portfolio of services to make the most of 3PAR Application Software Suite for Microsoft Exchange (Malpe - PL 43), so you can efficiently and affordably consolidate, manage, and extract value from unstructured data.

Start here to understand your data protection options. Next, develop a methodical plan and design the optimal 3PAR Application Software Suite for Microsoft Exchange (Malpe - PL 43) Storage that addresses your unique technology requirements.

**HP Storage Efficiency Analysis** - HP Storage Efficiency Analysis (SEA) combine tool-based fact gathering and HP's expertise for a quick path to identify immediate issues and their resolution, and helps customer realize the benefits of HP Storage Technology

**HP Storage Impact Analysis** - This service provides assessment service to analyze your current storage and evaluate the impact of change to the infrastructure. It is ideal for customers looking to achieving top utilization of your storage technology and assessing the likely impact of data growth and future projects that require storage.

HP Storage Modernization service Storage Modernization helps customers seamlessly position themselves to integrate the latest technological advancements in storage effectively. It helps clients modernize, reduce costs, and improve quality of service through the execution of process and technology changes to achieve demand management.

**Deploy and integrate**

Implement 3PAR Application Software Suite for Microsoft Exchange (Malpe - PL 43) Storage correctly-right from the start-so you can count on reduced risk and accelerated deployment, while implementing a best-practice configuration from day one.

**HP 3PAR StoreServ Storage Installation and Startup Service** - Onsite installation and testing installs and tests HP 3PAR StoreServ Storage, including configuration and deployment, properly integrated into your environment
**HP 3PAR Software Installation and Startup Service** - Support for deployment of licensed HP 3PAR software products into operation

**HP Storage Data Migration Service** - End-to-end data migration service providing seamless discovery, assessment, planning, and design, completely customizable to your organization’s storage area network (SAN) or network attached storage (NAS) environment and using innovative software to help you migrate to HP storage quickly and efficiently

**HP EVA to HP 3PAR StoreServ Acceleration Service** - An alternative to do-it-yourself data migration options with guidance from our storage migration specialists, designed to help you execute an HP EVA to HP 3PAR StoreServ Storage data migration at your own pace and with lowered cost
http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA4-4234ENW.pdf

**HP Data Replication Solution Service** - Configuration of real-time data mirroring or snapshot capabilities of 3PAR Remote Copy and 3PAR Virtual Copy to safeguard your critical business information

**HP Enhanced Implementation Service for SANs** - Complete design and implementation service for Fibre Channel, FCoE, FCIP, SAS, and iSCSI SAN connectivity components

**HP 3PAR Adaptive Optimization Policy Implementation Service** - Analysis, recommendations, and implementation of HP 3PAR Adaptive Optimization policies to enable storage tiering using data collected from your HP 3PAR storage over time

**HP Storage Virtual Volume Design and Implementation Service** - Activities your organization needs to design and implement a new LUN, virtual volume, or virtual disk (Vdisk) configuration

**HP Proactive Select** - A flexible way to purchase services to fit your environment with an extensive menu of HP Proactive Select event and technical services, such as onsite firmware upgrades, health checks, assessments, and education

**HP Thin Volume Conversion Service** - Evaluation and execution of conversion from standard to thin provisioned volumes for HP 3PAR StoreServ Storage for when you are looking to optimize the utilization of HP 3PAR StoreServ Storage by improving capacity utilization and performance

**HP 3PAR StoreServ Health Check** - Assessment of the overall health and supportability of your HP 3PAR StoreServ Storage

**HP Performance Analysis Service** - Data collection, detailed input/output (I/O) analysis, and enhancement recommendations to improve HP 3PAR StoreServ Storage disk array performance, stability, and availability by identifying potential problems and understanding the possible solutions
that will help avoid them

**HP 3PAR Rebalance Service** - Planning and coordinating activities led by HP Storage Services professionals to deliver a successful disk array rebalance, including creation and implementation of a rebalance service plan, verification tests to confirm product functionality, and an orientation session to review changes made to the system
http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA4-0280ENW.pdf

**HP 3PAR Storage Assessment Service** - Assessment check based on a point-in-time snapshot of system configuration, capacity, supportability, and interoperability for a single HP 3PAR Storage, ideal when you are experiencing rapid growth or need to establish a baseline understanding of your current HP 3PAR StoreServ environment
http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA4-0280ENW.pdf

**Operate and Support**

Choose the right support to maximize uptime, free up your resources, and achieve improved value-as you get the most out of the existing IT assets while accelerating time-to-revenue.

**HP Critical Service** - Proactive activities and 24x7 monitoring of your environment-ideal for when uninterrupted uptime is essential

**HP Proactive Care 24x7** - Hardware and software support services designed specifically for your technology with rapid access to Advanced Solution Center Specialists plus firmware and software management and best practice advice

**HP Proactive Care Personalized Support** - An option-if you have HP Proactive Care- to bring increased personalization of the Proactive Care support experience through the assignment of an Account Service Manager (ASM) who provides IT best practice advice to help address IT issues and projects.

**HP Education Services** - Comprehensive training for new, as well as experienced, storage administrators designed to expand your skills and keep you up to speed with the latest storage and virtualization technology from HP Storage.
http://education.hp.com/curr-storsan.htm

**Optimized Care** - delivers best performance and stability through deployment and proactive management practices

Choose from three levels of operate and support care

**HP Critical Service**

Additional options - 10 HP Proactive Select credits per year, per array

**Standard Care** - maintains high level of uptime, along with expert help to cut the cost and complexity of implementation and support

**HP Proactive Care 24x7-Plus, 20 credits per year per array**

Additional options - HP Proactive Care Personalized Support (once per Proactive Care support new environment), an additional day of HP Personalized Support, and 10 additional HP Proactive Select credits per year, per array
Service and Support

**Basic Care - Minimum recommended support**

**HP Proactive Care 24x7, plus 10 HP Proactive Select credits per year, per array**

Additional options - HP Proactive Care Personalized Support (once per Proactive Care support new environment), an additional day of HP Personalized Support, and 10 additional HP Proactive Select credits per year, per array

**Remote Support Automation**

HP Automation provides 24x7 coverage, proactive problem prevention, accurate problem diagnosis and faster problem resolution, as well as interactive support portals and tools. This is an integral, and cost-free, part of your HP support relationship and we are continually investing in additional cutting-edge capabilities to make it better.

**For more information**

http://www.hp.com/services/storage

To learn more on HP Storage Services, please contact your HP sales representative or HP Authorized Channel Partner

**HP Care Pack Services are sold by HP and HP Authorized Service Partners:**

- Services for customers purchasing from HP or an enterprise reseller are quoted using HP order configuration tools.
- Customers purchasing from a commercial reseller can find HP Care Pack Services at: http://www.hp.com/go/lookuptool
# QuickSpecs

## HP 3PAR Software Products

### Summary of Changes

<table>
<thead>
<tr>
<th>Date</th>
<th>Version History</th>
<th>Action</th>
<th>Description of Change:</th>
</tr>
</thead>
<tbody>
<tr>
<td>02-Oct-2015</td>
<td>From Version 30 to 31</td>
<td>Added</td>
<td>Added The HP StoreFront Remote SaaS Portal</td>
</tr>
<tr>
<td>26-Aug-2015</td>
<td>From Version 29 to 30</td>
<td>Changed</td>
<td>Added SW SKUs for 8000 and 20000 models in all sections.</td>
</tr>
<tr>
<td>05-Jun-2015</td>
<td>From Version 28 to 29</td>
<td>Changed</td>
<td>Changes made throughout the entire QuickSpec.</td>
</tr>
<tr>
<td>30-Mar 2015</td>
<td>From Version 27 to 28</td>
<td>Changed</td>
<td>Entered the File Persona SW SKUs. Updated the limited availability comments. Updated Models on the Technical Specifications Section.</td>
</tr>
<tr>
<td>20-Feb-2015</td>
<td>From Version 26 to 27</td>
<td>Changed</td>
<td>Added HP 3PAR 10400 Peer Persistence Software 1TB Provisioned LTU - BD188A</td>
</tr>
<tr>
<td>12-Dec-2014</td>
<td>From Version 25 to 26</td>
<td>Changed</td>
<td>Change the control release statement on pg 30.</td>
</tr>
<tr>
<td>1-Dec-2014</td>
<td>From version 24 to 25</td>
<td>Added</td>
<td>Added section about HP 3PAR File Persona Software Suite</td>
</tr>
<tr>
<td>10-Nov-2014</td>
<td>From Version 23 to 24</td>
<td>Changed</td>
<td>Changes made throughout the entire QuickSpec.</td>
</tr>
<tr>
<td>20-Aug-2014</td>
<td>From Version 22 to 23</td>
<td>Changed</td>
<td>Changes made to the Overview section.</td>
</tr>
<tr>
<td>18-Aug-2014</td>
<td>From Version 21 to 22</td>
<td>Changed</td>
<td>Changes made throughout the entire QuickSpec.</td>
</tr>
<tr>
<td>27-Jun-2014</td>
<td>From version 19 to 20</td>
<td>Changed</td>
<td>Changes made throughout the entire QuickSpec.</td>
</tr>
<tr>
<td>10-Jun-2014</td>
<td>From Version 18 to 19</td>
<td>Changed</td>
<td>Product descriptions were revised throughout.</td>
</tr>
<tr>
<td>18-Apr-2014</td>
<td>From Version 17 to 18</td>
<td>Changed</td>
<td>Removed a note.</td>
</tr>
<tr>
<td>14-Apr-2014</td>
<td>From Version 16 to 17</td>
<td>Changed</td>
<td>Product Specifications was revised.</td>
</tr>
<tr>
<td>31-Mar-2014</td>
<td>From Version 15 to 16</td>
<td>Changed</td>
<td>Product Specifications was revised.</td>
</tr>
<tr>
<td>17-Jan-2014</td>
<td>From Version 14 to 15</td>
<td>Changed</td>
<td>Product Specifications and Technical Specifications were revised.</td>
</tr>
<tr>
<td>09-Dec-2013</td>
<td>From Version 13 to 14</td>
<td>Changed</td>
<td>Product Specifications and Technical Specifications were revised.</td>
</tr>
<tr>
<td>04-Oct-2013</td>
<td>From Version 11 to 13</td>
<td>Added</td>
<td>Added Note on HP 3PAR Software Licensing Schemes to the Technical Specification section.</td>
</tr>
<tr>
<td>26-Aug-2013</td>
<td>From Version 10 to 11</td>
<td>Added</td>
<td>Added HP 3PAR StoreServ 10000 Software Suites Upgrade Options.</td>
</tr>
</tbody>
</table>
## Summary of Changes

<table>
<thead>
<tr>
<th>Date</th>
<th>Version Range</th>
<th>Action</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>11-Jun-2013</td>
<td>From 9 to 10</td>
<td>Added</td>
<td>Added a new part number BC959A to the HP 3PAR Operating System Software section.</td>
</tr>
<tr>
<td>10-Jun-2013</td>
<td>From 8 to 9</td>
<td>Changed</td>
<td>Changes made throughout the entire QuickSpec.</td>
</tr>
<tr>
<td>08-Mar-2013</td>
<td>From 7 to 8</td>
<td>Changed</td>
<td>Updated the following: Overview - added branding to Host Software; Inform OS Highlights - added HP; Additional 3PAR Software - added Virtual Lock, Peer Motion and Peer Persistence; Product Specifications - replaced Vrt Cpy with Virtual Copy; 3PAR Remote Copy - added HP branding; 3PAR Dynamic Optimization and Policy Advisor - added HP branding, replaced V-Class with StoreServe 10000; 3PAR System Tuner - added HP branding, replaced V-Class with StoreServe 10000; 3PAR Virtual Domains - replaced InServ with StoreServ and added HP branding; 3PAR Virtual Lock - replaced InServ with StoreServ and added HP branding; Peer Motion - added HP branding; 3PAR Host Software; removed &quot;Inform&quot; and changed intro paragraph; Added Models - System Reporter, Host Explorer, MPIO; Models - Cluster Extension SW</td>
</tr>
<tr>
<td>19-Feb-2013</td>
<td>From 6 to 7</td>
<td>Added</td>
<td>Added the Service and Support section.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Changed</td>
<td>Changes made throughout the Product Specifications sections.</td>
</tr>
<tr>
<td>04-Dec-2012</td>
<td>From 5 to 6</td>
<td>Changed</td>
<td>Changes made throughout the entire QuickSpec.</td>
</tr>
<tr>
<td>30-Aug-2011</td>
<td>From 4 to 5</td>
<td>Changed</td>
<td>Changes made throughout the entire QuickSpec.</td>
</tr>
<tr>
<td>21-Apr-2011</td>
<td>From 3 to 4</td>
<td>Changed</td>
<td>Part numbers were revised and added.</td>
</tr>
<tr>
<td>05-Apr-2011</td>
<td>From 2 to 3</td>
<td>Changed</td>
<td>Part numbers were revised and Insert AE at the end of a part number for an electronic LTU note was added.</td>
</tr>
<tr>
<td>23-Feb-2011</td>
<td>From 1 to 2</td>
<td>Changed</td>
<td>Changed the Overview information for the HP 3PAR Adaptive Optimization section.</td>
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</tbody>
</table>