



# HPE XP7 Storage software



## **Is your data safe and available at all times?**

Business risk comes in many shapes and sizes, from site disaster and human error to unpredictable cost and data growth. Your business today depends on information technology more than ever before. In this IT-driven environment, information availability is critical to your business success, while the consequences of any outage are far reaching. How can you deliver uninterrupted availability while controlling costs?

HPE XP7 Storage software has been engineered to reduce your exposure to these risks, and solve your need for 24x7 operations and storage consolidation cost savings. It combines a completely redundant hardware platform with unique data replication capabilities that are integrated with clustering solutions for complete business continuity.

**Take a virtual rack tour and understand how the XP7 Storage can help your business.**

Designed as a bulletproof storage for a mission-critical converged infrastructure, the XP7 Storage:

- Enables zero storage downtime for applications with a mission-critical converged infrastructure
- Maintains performance for mission-critical applications
- Facilitates simple management and installation
- Lowers power and cooling costs, and uses less floor space, with higher disk-drive density
- Offers better total cost of ownership (TCO) with storage virtualization and policy-based HPE XP7 Smart Tiers software

In addition to the hardware, state-of-the-art features of the integrated software and firmware make the XP7 Storage an ideal choice for organizations that have no tolerance for downtime, want to manage service-level agreements (SLAs) within their budgets, and utilize isolated resources and stranded capacity effectively. HPE XP7 Storage software offers a comprehensive, flexible storage software portfolio comprising storage replication and device management software—to help organizations address storage management challenges across the enterprise, today and in the future.



**Bulletproof storage for mission-critical  
converged infrastructure**

# HPE XP7 Storage software family

The HPE XP7 Storage software family products come with a bundle of benefits to help you improve your IT infrastructure.

## HPE XP7 Array Manager Suite

Reduces costs by efficiently managing and virtualizing your HPE XP7 Storage software while you confidently conduct business knowing your critical data is protected from unauthorized access or alteration.

Are you looking for a simpler way to allocate disk array resources on your XP7 Storage software?

HPE XP7 Array Manager Suite now includes HPE XP7 Thin Provisioning software, HPE XP7 External Storage software, and HPE XP7 Resource Partition software and XP7 Command View Advanced Edition Suite (XP7 CVAE Suite).

HPE XP7 Array Manager Suite improves efficiency and maintains quality of service (QoS) by allowing you to manage data volumes and allocate HPE XP7 Storage resources so that your applications receive the proper level of support. Create LUNs, expanded LUNs, small custom size volumes, and establish host access to them. You can efficiently control replication volumes with a host-based CLI and improve performance by reserving areas of cache to store frequently accessed data. Isolate applications by subdividing the XP7 Storage into smaller segments, each consisting of dedicated cache, disks, and ports.

HPE XP7 Thin Provisioning software reduces your cost, accelerates your return on investment (ROI), and reduces the environmental impact of your HPE XP7 Storage. It allows you to supply disk storage capacity to your applications from a pool of virtualized storage. By enabling you to allocate your anticipated future storage capacity needs from virtual disk storage, HPE XP7 Thin Provisioning software reduces the amount of physical disk capacity initially required. As utilization of disk space increases over time, you can purchase more disk capacity as it is needed and install it without affecting your applications. It reduces both your initial storage acquisition cost, and TCO, by allowing you to defer some storage purchases to a later date. Configure large logical volumes using a minimum of physical capacity, only paying for and installing storage when it is needed.

In today's business world, mergers, acquisitions, and technology changes have created IT environments where varieties of dissimilar servers and storage must co-exist. HPE XP7 External Storage software decreases the stress and reduces the cost of owning heterogeneous data storage by simplifying and centralizing common SAN management tasks through storage virtualization. In addition, it simplifies movement of data between dissimilar arrays. It provides these benefits by giving you the ability to access, monitor, and manage data residing on a variety of different disk arrays as if all of the data were residing on an HPE XP7 Storage.

Through advanced virtualization technology, HPE XP7 External Storage software enables the hosting of XP7 Storage data on externally attached disk arrays. Servers can see the capacity of the various arrays, but are insulated from the physical attributes.

HPE XP7 Command View Advanced Edition Suite is a fully featured device manager for the HPE XP7. It monitors storage resources quickly and easily, automates storage management processes, and delivers more efficient utilization and control across distributed enterprise storage. You can enable logical, physical, and host management capabilities for HPE XP7 Storage and XP Disk Arrays, provisioning and storage pooling for both internal and external storage, capacity analysis based on physical storage class, and offers multiple levels of security for storage administrators.

HPE XP7 Array Manager Suite protects your data by controlling access, preventing unauthorized alteration, and deleting data with improved security. Configure security to prevent unauthorized servers from accessing the data.

**Key features and benefits**

Effectively manage your HPE XP7 Storage resources.

- The HPE XP7 Array Manager Suite makes the most effective use of your HPE XP7 Storage for configuration and management of data volumes. You can create LUNs, expanded LUNs, small custom-size volumes, configure ports, and add or delete host I/O paths.
- Efficiently manage HPE XP7 Continuous Access Suite and HPE XP7 Business Copy Software volumes with a host-based CLI. Additionally, you can use the CLI to configure and manage read-only and archive volumes.
- Improve file access times and accelerate data transfers by reserving areas of cache to store frequently accessed information. Assigning data to on-board cache improves performance because cache-resident data is available at host data transfer speeds for both read and write operations.
- The HPE XP7 Array Manager Suite includes both HPE XP7 Thin Provisioning software and HPE XP7 External Storage software and XP7 Command View Advanced Edition Suite (CVAE).

Configure your HPE XP7 Storage for your business demands.

- The HPE XP7 Array Manager Suite allows you to rest easy knowing that the critical applications have the resources required to deliver the expected performance.
- Reduce risk of unauthorized access to your online data using HPE XP7 Array Manager Suite to configure, manage, and protect all host accesses to the HPE XP7 Storage.
- Protect critical data for archiving or data retention purposes. Create read-only volumes, prevent data replication, control read and write access, and protect data sets from query, I/O scan and file system inquiry operations.

Save time by automating routine tasks.

- The HPE XP7 Array Manager Suite saves time and reduces errors by automating array configuration and management tasks using the CLI and scripts. Interface with Storage Resource Management (SRM) software platforms using the SMI-S provider.
- Protect your information at the end of its lifecycle by securely deleting it. Based on DoD 5220.22-M, the standard defined by the U.S. Department of Defense, the XP7 Array Manager Suite allows you to completely delete data on specified volume by repeatedly overwriting the volume with dummy data.

**HPE XP7 Business Copy software**

Maintains near continuous business operations for your enterprise data centers using HPE XP7 Storage products by creating multiple real-time, online copies of critical data.

Does your data need to reside in multiple locations within your storage environment?

HPE XP7 Business Copy software is a local replication solution that provides data copies within a single HPE XP7 Storage unit, or in storage systems attached to an XP7 as external storage. Using array-based replication technologies that do not interfere with host-level operations, allows customers to spend time conducting business rather than worrying about how backup and testing operations will impact performance.

XP7 Business copy software provides both snapshots and mirrors, reducing the cost of backups, accelerating recovery from failures, providing deployment flexibility, and simplifying application testing. Create full copies in physically separate locations within the array so that accesses to the copy will have no impact on the original production volume. Use the space-efficient snapshot capability to create frequent point-in-time copies of volumes so that you can quickly restore data to an earlier version if necessary.

**Key features and benefits**

Manage data availability requirements for your business without compromising on performance.

- The HPE XP7 Business Copy software maintains multiple copies of critical data at local and remote sites, allowing recovery from planned and unplanned downtime. It integrates with HPE XP7 Continuous Access Suite providing an extra measure of confidence that your data is available when you need it.
- You can create multiple copies of production data and make them available to backup applications. While the backup application utilizes the copy, the primary data remains available for the production application with minimal impact from the backup process.
- Both HPE Storage Data Protector Software and Veritas NetBackup have been tightly integrated with HPE XP7 Business Copy software to provide zero downtime and split-mirror backup solutions for HPE XP7 Storage in a variety of server environments.
- With the snapshot feature you can create regular point-in-time copies of production data, permitting fast disk-based restores in the event of any problems with the primary data.

Manage replication across internal or external storage to gain cost efficiency.

- The HPE XP7 Business Copy software creates separate copies of production data that can be independently accessed and modified without affecting production data.
- Copies can be used as source data to test new applications before introducing them to production. One product provides multiple capabilities. You can mirror open systems volumes and mirror mainframe volumes, and you can create snapshots of open systems volumes, all in one convenient cost-effective product.
- Quickly and easily understand complex data replication environments with HPE XP7 Replication Manager software, a centralized Web-based replication management tool.
- You can use HPE XP7 Business Copy software with external storage, providing flexibility to choose the performance and cost characteristics of data copies.

## HPE XP7 Continuous Access Suite

Maintain near continuous business operations, even in the event of a disaster, using efficient array-based remote replication to create online copies of critical data at a distant location.

Do you need to have automatic failover to another HPE XP7 Storage system for your enterprise mission-critical data?

HPE XP7 Continuous Access Suite provides real-time, array-to-array data replication for the HPE XP7 Storage. The software is part of the HPE comprehensive suite of business continuity and availability solutions that enable you to maintain constant access to your data, even if access to a site is lost. HPE XP7 Continuous Access Suite products are integrated with server clustering software solutions to provide the highest levels of availability and disaster tolerance. To protect your business from disasters of any size, whether local or wide-area, you can create three data center disaster recovery solutions, with one data center located a continent away. If you simply need to move data from one location to another, or from one generation of HPE XP7 Storage to another, HPE XP7 Continuous Access Suite provides a reliable high-performance data migration solution.

### Key features and benefits

Achieve high data availability for your most critical data easily and efficiently.

- The HPE XP7 Continuous Access Suite maintains operations in times of crisis by keeping online copies of your critical data at alternate data centers.
- Coordinate server cluster node failover/failback with storage failover/failback so that your applications can continue without disruption in the event of a failure.
- Protect your business from both local- and wide-area disasters, by using HPE XP7 Continuous Access Journal software in combination with XP7 Continuous Access Synchronous software to provide two simultaneous copies of the same source data and create a three-data-center disaster recovery solution. Simplify data center moves and storage system upgrades by using HPE XP7 Continuous Access Suite to migrate data between sites and between HPE XP7 Storage. Combine XP7 Continuous Access Suite with XP7 External Storage to migrate data between a variety of dissimilar arrays.
- HPE XP7 Continuous Access Suite bundles XP7 Continuous Access Journal and XP7 Continuous Access Synchronous software.

Cost-effective replication technology.

- The HPE XP7 Continuous Access Suite saves money on telecommunication costs with HPE XP7 Continuous Access Journal. With a high-capacity disk-based side file, XP7 Continuous Access Journal allows you to size telecommunication links close to the average I/O rate and you can tolerate longer link outages.
- Choose the remote replication technology that meets your performance, telecommunication link, and data coherency requirements. You can choose between HPE XP7 Continuous Access Synchronous and HPE XP7 Continuous Access Journal software.
- You can use array-based replication in your mainframe environment. Mainframe versions of the remote replication products are bundled in with the open systems titles.

## HPE XP7 High Availability software

HPE XP7 High Availability (HA) software is an Active-Active High Availability Solution offering on HPE XP7 Storage. The high availability feature leverages the Multi-Array Virtualization (MAV) capability of XP7 Storage.

The HA Virtual Storage Machine feature is new to the XP product line. MAV provides the virtualization architecture software to set up local or clustered mirrored volumes that look the same to any supported Host multi-path/cluster software. MAV replicates the data across XP7 arrays up to a synchronous distance and provides delta resync capability in case of failure/maintenance.

### Key features and benefits

XP7 High Availability software provides 100 percent storage uptime from a DR configuration even when an array and/or entire data center goes offline.

The software enables non-disruptive, transparent VM and/or clustered application mobility between hosts or servers at the same or different sites.

High Availability (HA) is a program product for creating volume pairs and storing the same data in two storage systems. Both HA pair volumes can be used for I/O from servers.

HA can be combined with any of the other traditional mirroring program product like BC, Fast Snap to make additional copies.

The HA volumes can be configured up to Sync distance (~100 km).

XP7 High Availability software is supported by the XP7 management software Command View Advanced Edition (CVAE) Suite. Thus all the HA volume management can be done through the CVAE GUI giving customers an integrated user experience.

Host can use generic multi-path solutions for VM or clustered application mobility, load balancing as the Virtual Storage Machine hides and handles HA complexity.

## HPE XP7 Three Data Center High Availability Suite

With the HPE XP7 3DC HA solution, XP7 Storage arrays on two sites replicate data synchronously while configured for Active-Active High Availability, while the XP7 Storage on a third site many miles away protects against a regional disaster that hits the first two. Lose any of the sites and the other two keep going. When the “down” sites come back up the data is resynched again to the full 3DC HA solution.

The solution combines the high availability and synchronous replication at metropolitan distances with the long distance capability of journal replication. This solution protects against local and wide area disasters. A wide area disaster could disable both data centers 1 and 2. Operations can be shifted to data center 3. A campus/metropolitan HA implementation allows for data currency due to Active-Active configuration at data center 1 and 2 with no impact to application availability or performance.

### Key features and benefits

The High Availability with Synchronous replication at Site 1 and 2

- The HA pair volume are configured for Active-Active setup to provide for 14 9s availability

The CA Journal delta resync at Site 3

- The journal for delta resync pair holds the differential data between the S-VOLs on local and remote sites and is used to synchronize during primary site failure

Advantage over traditional 3DC solution

- No manual intervention required to maintain 3rd site if primary site goes down
- Simplified set-up and operation, no remote command devices required

## **HPE XP Cluster Extension software**

Reduce system downtime with automatic failover of application services and perform read or write enabling of remotely mirrored storage over metropolitan distances.

HPE XP Cluster Extension software is an integrated solution that delivers true hands-free failover or failback of servers and storage in the event of a disaster. The software requires no server reboots, logical unit number (LUN) presentation, or mapping changes during failover.

HPE XP Cluster Extension software supports the entire XP family of array at the primary and secondary sites. HPE Cluster Extension software provides comprehensive disaster tolerance for Microsoft® Windows® environments.

### **Key features and benefits**

- Meet recovery-point objective (RPO) and recovery-time objective (RTO).
- Automate failover and failback decision-making as HPE XP Cluster Extension software detects failures and automatically manages recovery without human intervention.
- Reduce reboots, LUN presentation, and mapping changes during failover between sites.
- Perform read or write enabling of remotely mirrored storage.
- Achieve automatic failover of application services over metropolitan distances; extend single cluster solution over metropolitan distances across either two or three data centers.

Comprehensive and reliable.

- Offload data replication tasks from the host.
- Achieve high standards of data integrity by taking advantage of HPE Continuous Access XP software.

Multiple environment support.

- Integrate with Microsoft Cluster Service on Windows.
- Integrate with Microsoft Hyper-V Live Migration to achieve end-user transparent application migration across data centers.
- Integrate with Windows Cluster Shared Volume for automatic management of virtual machine migration.

## **HPE Metrocluster with XP Continuous Access software**

Integrate the remote replication capabilities of XP7 Storage seamlessly with HPE Serviceguard on HP-UX.

HPE Metrocluster with XP7 and XP7 Continuous Access software provide automatic and bidirectional failover or failback of business-critical data and applications between data centers. It supports XP7 Storage in a two-data-center configuration.

When combined with the HPE Continentalclusters product, the Metrocluster can also be used to replicate data and perform application recovery across three data centers using the following Storage: HPE XP7 Storage, HPE P9500 Storage, HPE XP24000 Storage, HPE XP20000 Storage, HPE XP12000 Storage, and HPE XP10000 Storage.

**Key features and benefits**

Enhanced business continuity.

- Mitigate risk by extending the protection provided by a Serviceguard cluster to cover disasters that affect an entire data center.

**HPE Continentalclusters software**

Get high-level disaster tolerance by removing the cluster as a single point of failure.

HPE Continentalclusters software uses data replication technologies to provide application recovery across multiple, widely separated HP-UX Serviceguard clusters. The Continentalclusters product provides the ability to monitor a Serviceguard cluster and recover mission-critical applications to a remote Serviceguard cluster, should the monitored cluster becomes unavailable or if there is a disaster at the cluster site. Continentalclusters allows for a semi-automatic push-button type of recovery. When a cluster failure or a site disaster is detected, Continentalclusters generates a notification. An operator, upon receipt of a notification, can start the recovery of applications at a recovery cluster using a single Continentalclusters command that automates the recovery procedure.

Continentalclusters supports mutual recovery across two clusters. In a mutual recovery pair, each cluster is configured to recover the mission-critical applications running in the other cluster.

Applications can be configured in Continentalclusters for disaster tolerance using XP7 Storage and the XP7 Continuous Access data replication technology.

**Key features and benefits**

Provide high availability to mission-critical applications across widely separated HPE Serviceguard for HP-UX.

**HPE XP7 Dynamic Link Manager Advanced Suite**

Provides robust path failover and load balancing for the enterprise, improving the availability of HPE XP7 Storage by distributing the load across multiple paths.

Do you struggle with host-based failover and load balancing? Is managing host-based failover and load balancing difficult in your HPE XP7 Storage?

HPE XP7 Dynamic Link Manager software provides path failover, failback, and automatic load balancing, delivering higher data availability and accessibility for VMware®, Windows, Linux®, IBM AIX, and Oracle Solaris environments. If one path fails, the path failover feature automatically switches the I/O to an alternate path, and your data remains available for access. It also helps maintain outstanding system performance by balancing workloads across available paths.

HPE XP7 Dynamic Link Manager software supports HPE XP7 Storage, HPE XP Disk Arrays, and the equivalent Hitachi storage systems. It enables easy management of paths through a browser-based connection to the server. With its path failover capability, it switches to an alternate path if a failure occurs on the active path, allowing processing to continue without interruption. The software can be operated remotely by linking with HPE XP7 Command View Advanced Edition Suite.

HPE XP7 Global Link Manager software is included in the HPE XP7 Dynamic Link Manager Advanced Suite and uses multi-path management software path control functionality to provide integrated path management for large-size system configurations. While multi-path management software manages paths for a host, HPE XP7 Global Link Manager software batch manages paths for multiple hosts.

When using a large-size system configuration containing many hosts, the workload for managing paths from each host grows in proportion to the size of the system. XP7 Global Link Manager software enables you to reduce the workload by providing unified management of the path information for multiple hosts.

### **Key features and benefits**

Guard against path failures and achieve a high level of data availability.

- The HPE XP7 Dynamic Link Manager software provides path failover that reduces the risk of financial loss due to the failure of a critical application. Automatic failover and failback provide a high level of data availability. You can leave applications online while a path is taken offline. System performance is improved by spreading the storage I/O workload across available paths.

Simplify and automate path management with GUI and CLI.

- The HPE XP7 Dynamic Link Manager software can be set to run at administrator-specified intervals. The software monitors the status of data paths and takes a path offline automatically if needed.
- A GUI and a CLI are included, simplifying path management.
- The XP7 Dynamic Link Manager software supports Windows, Linux, IBM AIX, Oracle Solaris, and VMware.

## **HPE XP7 Performance Advisor software**

Provides enterprises with HPE XP7 Storage performance information and automatic alerts to help you maintain system performance.

Do you need a quick and easy way to identify performance issues with your HPE XP7 Storage?

HPE XP7 Performance Advisor software identifies performance bottlenecks before they impact your business by collecting and displaying performance data for your HPE XP7 systems. It helps mitigate risk by providing performance alarm notification through email, SNMP, or user-defined scripts and helps avoid impending outages due to unavailable or misallocated storage resources. You get report generation and scheduling capability improving IT processes and maintaining array performance by immediately identifying any storage bottlenecks.

HPE XP7 Performance Advisor software reduces complexity and accelerates resolution of problems by collecting information from multiple arrays across multiple sites, and allows you to drill down to the exact problem area. Collect up to 300 GB of historical data enabling detailed trend analysis and making it easier to analyze performance data at regular intervals.

### **Key features and benefits**

Accelerate business growth by identifying performance bottlenecks before they impact your business.

- The HPE XP7 Performance Advisor software provides an easy-to-use GUI providing a system view of all HPE XP7 Storage resources.

- Provides an extensive reporting capability and a large 300 GB database repository for detailed trend analysis.
- Migrate data away from hot spots by using HPE XP7 Performance Advisor software with HPE XP7 Tiered Storage Manager software.
- The HPE XP7 Performance Advisor software supports HPE XP7 Storage.

Mitigate risks with automatic alarm notification through email, SNMP, or user-defined scripts.

- Monitor the performance of the XP7 Storage resources with automatic event notification through email, SNMP, and user-generated scripts. Quickly identify and resolve problems.
- Stay informed by running reports for periods as short as an hour and using charts to examine current performance.

Reduce costs of performance problems by quickly drilling down to the problem area.

- The HPE XP7 Performance Advisor software allows you to quickly resolve problems with XP7 Watch, a CLI utility. XP7 Watch is designed for focused trouble-shooting and can capture data as frequently as every 10 seconds.
- XP7 Performance Advisor software helps you prevent costly problems for overall cost reductions.

## **HPE XP7 Auto LUN software**

Reduces costs by maintaining peak performance of your HPE XP7 Storage with data volume workload monitoring and balancing.

Do you need an automatic monitoring and load-balancing solution for your HPE XP7 Storage system?

HPE XP7 Auto LUN software provides automatic monitoring and load balancing for your XP7 Storage. It makes the most efficient use of your disk arrays by moving high-priority tasks to underutilized volumes, replicating volumes for backup and recovery, and viewing the health of your arrays. You set performance goals and limits, and XP7 Auto LUN software does the rest. It proposes a migration plan and estimates how much your storage performance can improve when it's done. You can evaluate disk array usage and determine whether resources are overloaded or out of balance.

### **Key features and benefits**

- The HPE XP7 Auto LUN software obtains usage statistics for disk drives, logical volumes, processors, and other resources in your HPE XP7 Storage so that you can keep your application working at peak efficiency.
- Allows you to migrate data from overloaded resources to underutilized resources, while your application continues to access the data. Performance is improved without disruption. The XP7 Auto LUN software significantly lowers your IT expenditure with meter-based term licenses by purchasing software only for the period you use them.

## HPE XP7 Smart Tiers software

Achieves desired performance with lower costs by keeping only the heavily accessed data in fast tiers on your HPE XP7 Storage with dynamic rule-based tier relocation.

Do you need to make sure that your mission-critical data is always on the fastest storage devices?

HPE XP7 Smart Tiers software improves storage performance and controls costs by transparently migrating data to appropriate tiers of storage within the HPE XP7 Storage system. It manages data in Thin Provisioning pools. You can monitor performance at the page level and can migrate the data online to a different tier, automatically or manually, based on policies. HPE XP7 Smart Tiers software supports up to three tiers per pool.

XP7 Smart Tiers software helps utilize different types of storage media (SSD, 15K SAS, 7.2K SAS, etc.) optimally. With page-level movements across tiers, it enables the most effective utilization of expensive tiers such as SSD by helping facilitate that only the most frequently accessed data is stored there.

### Key features and benefits

Achieve desired application performance with lower costs.

- The HPE XP7 Smart Tiers software achieves lower response time for heavily accessed data and significantly improves performance of I/O intensive applications.
- Enhance the performance of your virtualized (thin provisioned) storage and achieve superior performance at lower costs.
- For your mainframe environment, XP7 Smart Tiers software is also bundled with HPE XP7 Mainframe Tiering Suite bundle.

Better utilization of storage media resources.

- The HPE XP7 Smart Tiers software utilizes different types of storage media (SSD, 15K SAS, 7.2K SAS, etc.) optimally.
- Page movements across tiers enable the most effective utilization of expensive tiers such as SSD.
- Saves money with fewer rotating disks through fewer cabinets, less floor space, and less power and cooling.

Automatic or manual tier relocation of Thin Provisioning pages.

- The HPE XP7 Smart Tiers software retains excellent performance even in peak load conditions with dynamic rule-based tier relocation.
- You can relocate data from a slow tier to a fast tier at a page level instead of at a LUN level resulting in finer control of data movement and better performance.

## HPE XP7 Tiered Storage Manager software

Improves HPE XP7 Storage efficiency and maintains QoS by transparently migrating data between tiers of storage to match QoS requirements with storage attributes.

Do you want to non-disruptively migrate data between tiers of storage?

HPE XP7 Tiered Storage Manager software is a plug-in application for HPE XP7 Command View Advanced Edition Suite. It allows you to non-disruptively migrate HPE XP7 Storage data between tiers of storage while your applications remain online. You can match key user QoS requirements, like cost, performance, and data protection level, to the storage attributes of HPE XP7 Storage controlled storage. The software works not only with internal HPE XP7 Storage data, but also with external storage, such as an HPE Modular Smart Array (MSA) or HPE Enterprise Virtual Array (EVA) Storage arrays, connected to the HPE XP7 Storage.

HPE XP7 Tiered Storage Manager software saves you time while removing disruptions when you need to migrate ageing data to another tier of storage. With this product, you can move the data while it remains online and ready for access. It improves data manageability and is perfect for applications which cannot be stopped or even paused.

### Key features and benefits

Manage changing business needs with data in the right tiers of storage.

- The HPE XP7 Tiered Storage Manager software migrates data without disrupting user applications.
- Match QoS requirements to data storage attributes, meeting user needs for tiered storage of ageing data over long periods of time.
- HPE XP7 Tiered Storage Manager software saves time by grouping volumes that have similar storage requirements and performing operations on the group rather than dealing with each volume individually.

#### Efficient resource utilization using virtualization

#### Simplified device and configuration management

Use case-based GUI design.

- Convenient GUI saves you time when setting up groups and tiers of storage.
- The HPE XP7 Tiered Storage Manager software has the flexibility to meet changing user needs.

## HPE XP7 Command View Advanced Edition Suite

Improve efficiency and simplify management tasks with full-featured device manager software that allows you to manage your HPE XP7 Storage from a single console.

Are you looking for an easier way to discover, monitor, and configure your HPE XP7 Storage?

HPE XP7 Command View Advanced Edition Suite is a fully featured device manager for the HPE XP7. It monitors storage resources quickly and easily, automates storage management processes, and delivers more efficient utilization and control across distributed enterprise storage. You can enable logical, physical, and host management capabilities for HPE XP7 Storage and XP Disk Arrays, provisioning and storage pooling for both internal and external storage, capacity analysis based on physical storage class, and offers multiple levels of security for storage administrators.

HPE XP7 Command View Advanced Edition Suite also includes the HPE XP7 Replication Manager software. XP7 CVAE Suite is bundled with XP7 Array Manager Suite and is not required as a stand alone purchase.

HPE XP7 Replication Manager Software enables you to create, manage, and maintain HPE XP7 Storage and HPE XP Disk Array replication pairs. It provides centralized management of replication applications, decreases storage administration complexity, increases productivity, and improves service levels by providing a single enterprise view of the replication environment. It allows you to view replication status graphically in real-time, improving your efficiency.

In addition to replication status, XP7 Replication Manager Software also provides early warning of impending problems. It reduces tedious data entry that can cause outages and simplifies difficult replication tasks. Plus, it reduces costs and training expenses associated with replication management.

You also have access to an optional plug-in application that provides tiered storage management for multiple arrays. It also provides a platform from which to launch other disk-array-based application such as HPE XP7 Auto LUN software.

### **Key features and benefits**

Easily and efficiently manage your XP7 Storage.

- CVAE Suite is bundled with XP7 Array Manager Suite
- The HPE XP7 Command View Advanced Edition Suite provides an easy-to-use, intuitive, and consistent GUI showing detailed physical and logical views. It uses wizard-driven dialog for active management of HPE XP7 Business Copy software and HPE XP7 Continuous Access software pairs from a single screen.
- Delivers extensive reporting capabilities with reports in HTML and CSV formats while supporting provisioning and storage pooling for your primary and external storage. Provides advanced CLI for automated script generation and consolidated external storage pool management.
- SMI-S and XML interface deliver active provisioning and monitoring of HPE XP7 Storage and XP Disk Arrays and provide HPE XP7 and XP Disk Array discovery and management from a higher level within the enterprise software stack.

Multi-array management tool of choice.

- The HPE XP7 Command View Advanced Edition Suite supports your installed base of HPE XP7 Disk Arrays along with the next generation HPE XP7 Storage product line. With HPE XP7 Command View Advanced Edition Suite, you can remotely manage HPE XP7 Storage.
- Storage is organized logically along business lines and departments.
- Remote Web Console (comes free with the XP7 Storage) giving access to core array management from the SVP, which can be accessed directly from the HPE XP7 Command View Advanced Edition Suite GUI.
- Identifies storage issues with alerts before they become problematic, while automating repetitive tasks with scripting and wizards.

Save time by automating your regular tasks.

- The HPE XP7 Command View Advanced Edition Suite allows operations to be automated with scripts. Supports large, time-consuming configuration changes through batch operations while providing advanced users the ability to make configuration changes quickly and access data rapidly.

Resiliency of management station operation means fewer single points of failure.

- Increases the volume of storage manageable by storage administrators by providing single management station control over multiple XP7 and XP arrays, delivering consistent and automated management across storage anywhere within the enterprise SAN.

## **HPE XP7 DKA Encryption software**

Enables the encryption capability for all the data that is stored on the internal drives of the HPE XP7 Storage.

Do you need to encrypt the hard drives of your HPE XP7 Storage system?

HPE XP7 DKA Encryption software enables the encryption capability for all the data that is stored on the internal drives of the HPE XP7 Storage. The enhanced DKA encrypts the data on disk drives so that data cannot be read off a disk drive that is removed from the HPE XP7 Storage. Only data on the disk drives is encrypted (Data in cache is not encrypted.).

**Key features and benefits**

Enterprise data encryption for the data center.

- XP7 provides enhanced data security with FIPS 140-2 Level 2 encryption compliance.<sup>1</sup> Enabled through license key on Level 2 compliant eDKAs, the encryption protects customer records against large scale attacks and data breaches and meets industry compliance and regulatory requirements.
- The HPE XP7 DKA Encryption software provides enhanced DKA encryption on the data contained on the disk drives so that the data cannot be read off a disk drive that is removed from the HPE XP7 Storage system.
- Only data on the disk drives is encrypted (Data in cache is not encrypted).

**Improved mainframe connectivity****HPE XP7 Mainframe Basic Suite**

Provides customers in mainframe environments with a suite of basic tools to manage their HPE XP7 Storage including volume management, usage monitoring, and improving system wide performance.

Do you need tools for managing your HPE XP7 Storage in mainframe environments?

HPE XP7 Mainframe Basic Suite provides features including volume management, resource allocation, access control, and data security for your XP7 Storage. The suite also provides features to monitor usage and workload for various components. It includes cache partition to improve performance by reserving areas of cache to store frequently accessed data. The suite also bundles HPE XP7 Thin Provisioning software and HPE XP7 External Storage software.

**Key features and benefits**

Basic volume management, improved performance, and virtualization.

- The HPE XP7 Mainframe Basic Suite provides basic functionalities including volume management, usage monitoring, and cache partition for managing your HPE XP7 Storage in mainframe environment.
- Improves performance by reserving areas of cache to store frequently accessed data. The cache can be divided into up to 32 partitions as well as be configured as a dedicated cache for critical applications to improve their performance.
- Improves performance by reserving areas of cache memory for frequently accessed data (also known as cache LUN).
- Monitor usage, workload, and performance of drives, volumes, processors, and host interfaces in the XP7 Storage and view the information in graphical formats.
- HPE XP7 Thin Provisioning software and HPE XP7 External Storage software packages are included to reduce the number of disk drives required and support external drive configurations for additional flexibility.

<sup>1</sup> The certification for FIPS 140 2 Level 2 is under process

## HPE XP7 Mainframe Performance Suite

Provides HPE XP7 Storage with a suite of software packages to increase performance in mainframe environments. Do you need software tools to increase performance of HPE XP7 Storage running in a mainframe environment?

The HPE XP7 Mainframe Performance Suite is a bundle that consists of HPE XP7 for Compatible Parallel Access Volumes (PAV) software, HPE XP7 Compatible Hyper Parallel Access Volumes (HyperPAV), and HPE XP7 High Performance FICON software. PAV and HyperPAV are designed to enable high performance concurrent access of mainframe volumes by permitting a mainframe host system to issue multiple I/O requests in parallel to individual logical devices within the XP7 Storage. High Performance FICON for System z is an enhancement of the FICON channel architecture delivering compatibility. Enhancements have been made to the z/Architecture and the FICON interface architecture to deliver improvements for online transaction processing (OLTP) workloads.

### Key features and benefits

Improved data access and OLTP workload performance.

- HPE XP7 for Compatible PAV software and HPE XP7 for Compatible HyperPAV software enable high-performance, concurrent access of mainframe volumes by permitting a mainframe host system to issue multiple I/O requests.
- High Performance FICON for System z or zHPF, an enhancement of FICON channel architecture gives compatibility with Fibre Channel Framing and Signaling standard (FC-FS), Fibre Channel-Switch Fabric (FC-SW) and Switch Control Requirements, and Fibre Channel Single-Byte-4 (FC-SB-4) standards.

## HPE XP7 Mainframe Tiering Suite

Achieve higher random I/O performance thereby increasing the return on IT investment.

Do you have stringent I/O performance and cost control goals? Do you need to provide various levels of storage performance across your mainframe?

HPE XP7 Mainframe Tiering Suite is aimed at customers using tiering in their mainframe environment. The XP7 Mainframe Tiering Suite consists of HPE XP7 Smart Tiers software and HPE XP7 Smart Manager for Mainframe software. XP7 Smart Tiers software improves storage performance and controls costs by transparently migrating data to appropriate tiers of storage within the HPE XP7 Storage. XP7 Smart Manager for Mainframe software provides centralized management of Smart Tiers volumes in a mainframe environment.

### Key features and benefits

Cost-effective tiering and centralized management of tier volumes.

The HPE XP7 Mainframe Tiering Suite achieves lower response time for heavily accessed data and significantly improve performance of I/O intensive applications.

Use the XP7 Mainframe Tiering Suite for centralized management of Smart Tiers volumes in a mainframe environment.

HPE XP7 Smart Tiers software and HPE XP7 Smart Manager for mainframe software are bundled in HPE XP7 Mainframe Tiering Suite for managing tiering in mainframe environments.

Saves time and money.

The convenient GUI of the HPE XP7 Mainframe Tiering Suite saves you time when setting up groups and tiers of storage.

Saves time by grouping volumes that have similar storage requirements and performing operations on the group rather than dealing with each volume individually.

## **HPE XP7 Business Continuity Manager software**

Simplifies and centralizes management of HPE XP7 Storage based replication capabilities for the mainframe environment.

Does your HPE XP7 Storage environment need a centralized and automated method for mainframe replication activities?

HPE XP7 Business Continuity Manager software enhances productivity by centralizing and simplifying management of HPE XP7 Storage local and remote replication functionality in mainframe environments. Provides simplified and centralized enterprise-wide management of the XP7 Storage based mainframe replication capabilities provided by HPE XP7 Business Copy for Mainframe, HPE XP7 Continuous Access Synchronous for Mainframe, and HPE XP7 Continuous Access Journal for Mainframe. You also get scripting capability and group control commands, allowing administrators to manage multiple volumes easily. Through a linkage with XP7 Replication Manager software, mainframe replication information can be displayed by HPE XP7 Command View Advanced Edition software.

### **Key features and benefits**

Centralized replication management for mainframe customers.

- The HPE XP7 Business Continuity Manager software provides simplified and centralized enterprise-wide management of the HPE XP7 Storage based mainframe replication provided by Business Copy for Mainframe, Continuous Access Synchronous for Mainframe, and Continuous Access Journal for Mainframe.
- By automating configuration and disaster recovery tasks in multi-site configurations, HPE XP7 Business Continuity Manager software reduces human error, saves time, and improves data availability.

## **HPE XP7 Extended Remote Copy software**

Provides disaster protection for data stored on the HPE XP7 Storage by providing IBM mainframe compatible, asynchronous, remote replication.

Do you need to perform remote replication between IBM mainframes and your HPE XP7 Storage?

HPE XP7 Extended Remote Copy (XRC) software provides your enterprise with disaster protection and data migration capability for data stored on an HPE XP7 Storage by implementing IBM mainframe compatible asynchronous remote replication. It provides the same functionality as IBM Extended Remote Copy (now called IBM TotalStorage z/OS Global Mirror) and is compatible with system data mover (SDM) mainframe software. When data is written to the local HPE XP7 Storage, Extended Remote Copy temporarily stores a time stamped copy of it in a side file. SDM in one of the mainframe hosts that asynchronously reads the side file data from the local XP7 Storage and then writes the data to the remote disk array.

It can be combined with other XP7 Storage replication products for additional availability. When combined with XP7 Continuous Access Suite, XP XRC supports three data center disaster recovery solutions.

**Key features and benefits**

Disk array data protection.

- Designed with the functionality of IBM Extended Remote Copy and compatible with SDM, HPE XP7 XRC software provides the business continuity capability of asynchronous remote copy for HPE XP7 Storage in the mainframe environment.
- Temporarily stores a time-stamped copy of it in a side file. SDM in one of the mainframe hosts that asynchronously reads the side file data from the local XP7 Storage and then writes the data to the remote disk array.
- XRC software provides disk array to disk array data migration capability.

**HPE XP7 FlashCopy Mirroring software**

Enhances data availability and productivity for the enterprise by providing IBM mainframe compatible point-in-time local copies for data stored on an HPE XP7 Storage system.

Are you searching for a way to conveniently copy mainframe volumes into your storage environment?

HPE XP7 FlashCopy Mirroring software enhances data availability for mainframe data and improves productivity by providing IBM FlashCopy compatible point-in-time copies within an HPE XP7 Storage. As soon as you have a copy created, it becomes available for use. The copy can be either virtual or physical. If a virtual copy is specified, it remains a pointer-based copy that only saves the changes from the original. However, if a physical copy is specified, a full copy can be completed in the background while both the source and the copy remain available for access.

For additional availability, XP7 FlashCopy Mirroring software can be combined with Business Copy for Mainframe, Continuous Access Synchronous for Mainframe, Continuous Access Journal for Mainframe, and HPE XP7 XRC software.

**Key features and benefits**

Enhanced data availability and improved productivity for your mainframe environments.

- HPE XP7 FlashCopy Mirroring software enhances data availability for mainframe data and improves productivity by providing IBM FlashCopy compatible point-in-time copies within an HPE XP7 Storage.
- Improves productivity by creating instantly available point-in-time copies of production data for backup, testing, or for use by other applications.
- Save space with FlashCopy Space Efficient software utility.
- The HPE XP7 FlashCopy Mirroring software reduces physical capacity of S-VOLs and use storage based on the actual data being copied, not based on the P-VOL size.
- For additional availability, XP7 FlashCopy Mirroring software can be combined with Business Copy for Mainframe, Continuous Access Synchronous for Mainframe, Continuous Access Journal for Mainframe, and HPE XP7 XRC software.
- Save storage space required by copies made with FlashCopy Space Efficient software utility.

## HPE XP7 Data Exchange software

Improves efficiency by sharing XP7 Storage data between mainframe and open systems or between different open systems computing platforms.

Do you need to exchange data between your different computing platforms?

HPE XP7 Data Exchange software gives you the ability to seamlessly exchange data between mainframe and open systems or between different open systems hosts. Store and manage mainframe and open systems data on a single XP7 Storage system. It provides management of data format and code conversions, and allows information sharing across computing platforms. HPE XP7 Data Exchange software supports HP-UX, Windows, Linux, Oracle Solaris, IBM AIX, and mainframe operating systems.

### Key features and benefits

More efficient data management.

- The HPE XP7 Data Exchange software lets you efficiently use your storage resources by storing mainframe and open systems data on the same HPE XP7 Storage system.
- Automatically performs data format and code conversions to enable you to share information across computing platforms.
- HPE XP7 Data Exchange software supports HP-UX, Windows, Linux, Oracle Solaris, IBM AIX, and mainframe operating systems.

## HPE Technology Services

**Expert HPE storage consultants and service professionals** sit down with you and your team to map your storage needs. Not only can we help you accelerate implementation and reduce deployment risk, but we can also help you realize the full value of your storage purchases as you transform storage for the New Style of IT.

### Advice, transform, and integrate

Navigate through the complexities of storage, backup, archive, disaster recovery, and Big Data with advisory, transformation, and integration consulting.

### Deploy and implement

Access expertise to support deployment, operations, relocation, sanitization, and disposal, plus improvement-focused education.

### Operate and support

Find the level of personalized, proactive, and simplified support right for your business.

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### Note

Specific service availability varies by product.

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## Family data sheet

HPE Factory Express provides customization and deployment services along with your storage and server purchases. You can customize hardware to your exact specifications in the factory—helping speed deployment.

[hp.com/go/factoryexpress](http://hp.com/go/factoryexpress)

Gain the skills you need with ExpertOne training and certification from HPE. With HPE Converged Storage training, you can accelerate your technology transition, improve operational performance, and get the best return on your HPE investment. Our training is available when and where you need it, through flexible delivery options and a global training capability.

[hp.com/learn/storage](http://hp.com/learn/storage)

Customize your IT lifecycle management, from acquisition of new IT, management of existing assets, and removal of unneeded equipment.

[hp.com/go/hpfinancialservices](http://hp.com/go/hpfinancialservices)

**Visit our enterprise business channel to understand how the HPE XP family of products can make technology work for your business.**

### HPE Foundation Care

System-level IT hardware and software support delivers flexible coverage window and response time for more choice and simplicity.

### HPE Proactive Care

Combined reactive and proactive services provide easy-to-purchase, cost-efficient system-level support coupled with personalized expert advice and products connected to HPE to help prevent problems and reduce downtime.

**HPE Proactive Care Advanced** builds and incorporates on Proactive Care and also gives customers personalized technical and operational advice from an assigned, local Account Support Manager for personalized technical collaboration, flexible access to specialist skills to help optimize business critical IT and enhanced Critical Incident Management to help so the business is not affected if there is a system or device outage.

### HPE Datacenter Care

Get the support you need to deploy, operate, and evolve your data center environment to be hybrid-cloud ready with single-point-of-accountability for HPE and others' product.

Get connected and get back to business—HPE Storage Technology Services provide the path to get your HPE Storage solutions and your business connected to HPE. Once connected, our experts are able to scan your system and run health checks, then use that data to create personalized reports and recommendations for actions to take to prevent problems and downtime.

For more information, visit [hp.com/services/storage](http://hp.com/services/storage).

Learn more at  
[hp.com/storage/xp7software](http://hp.com/storage/xp7software)



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