

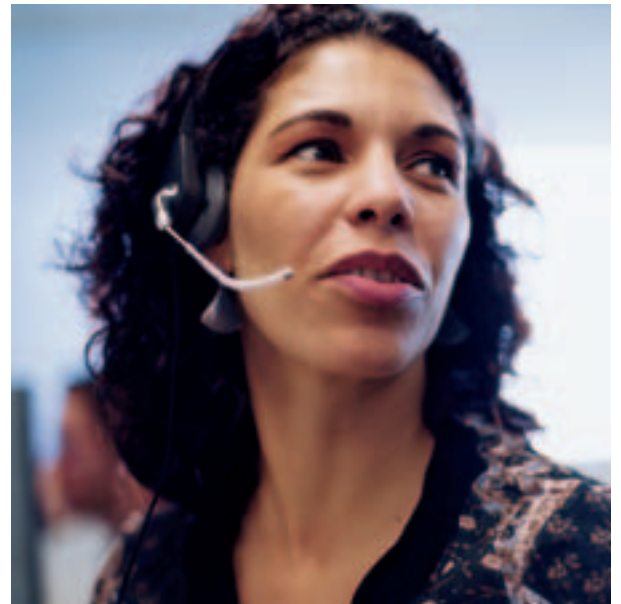
HP StorageWorks Enterprise Virtual Array (EVA)

Technical data

HP Customer Support Per Event Services



The HP StorageWorks EVA Service Solutions provide you with combinations of EVA hardware technology and specialized services to help you deploy and maintain a solid storage platform.



The HP StorageWorks EVA Service Solutions provide you with combinations of EVA hardware technology and specialized services to help you deploy and maintain a solid storage platform. With the HP StorageWorks Enterprise Virtual Array (EVA), you have the opportunity to choose between the Foundation, Proactive, and Enhanced Proactive Service Solutions.

The Foundation Service, provided with all EVA models, includes the planning, virtual disk design, and installation services designed to help bring your array into operational condition, along with 24x7, 4-hour onsite hardware response and phone-in Virtual Controller Software support, and automated event notification with remote problem intervention.

The Proactive Service supplements the Foundation offerings with ongoing support features such as an assigned account manager, change management, and operational advice and assistance. Complementing the Proactive Service Solution features, the Enhanced Proactive Service adds scaled HP SAN Solution Services. The SAN integration and implementation services in this package enable your EVA to employ Fibre Channel switching in the SAN environment.

For EVA storage environments demanding a mission-critical level of support, Critical Services is available for purchase.

Service benefits

- Foundation Service helps deploy a base EVA storage platform into production and provides ongoing hardware and Virtual Controller Software reactive support.
- Proactive Service provides the features required to help maintain a stable and highly available storage platform.
- Enhanced Proactive Service with the HP SAN Solution Service additional implementation and integration features assists in deploying an Enterprise Virtual Array in a SAN infrastructure.

Service feature highlights

Foundation Service Solution

The EVA Foundation Service Solution includes three (3) years of EVA 4-hour hardware onsite service and VCS phone-in support and updates, along with the one-time planning and deployment services required to help bring your base Enterprise Virtual Array product online. A certified HP Service Specialist will oversee the deployment of the array and perform the activities required.

Deployment

- Installation and startup
 - Service planning
 - Service deployment
 - Installation verification testing
 - Customer orientation session

Proactive

- Virtual Controller Software product updates
 - New version license rights
 - Media and documentation distribution service

Reactive

- 24x7 4-hour onsite hardware response
- 24x7 Virtual Controller Software phone-in support with 2-hour callback response commitment
- Automated event notification and remote problem intervention

Proactive Service Solution

Along with the above Foundation Service Solution features, the EVA Proactive Service Solution provides three (3) years of ongoing proactive services and support required to help sustain a stable storage platform. The Proactive and Enhanced Proactive Service Solutions are recommended for Customers who desire the additional measures for problem avoidance.

Customer support team

- Installation and startup
 - Service planning
 - Service deployment
 - Installation verification testing
 - Customer orientation session
- Assigned account manager
- Assigned Response Center account advocate

Proactive

- Virtual Controller Software product updates
 - New version license rights
 - Media and documentation distribution service
- Operational and technical advice
- Account support plan
- Quarterly support activity reviews
- Semi-annual support planning and review
- Storage array preventive maintenance
- Semi-annual storage/SAN firmware and software recommendations
- Storage high availability evaluation
- Site environmental survey
- HP electronic information support
- Education planning assistance

Reactive

- 24x7 4-hour onsite hardware response
- 24x7 Virtual Controller Software phone-in support with 2-hour callback commitment
- Automated event notification and remote problem intervention
- Escalation management

Enhanced Proactive Service Solution

Along with the above Proactive Solution Service features, the EVA Enhanced Proactive Solution Service includes an additional one-time HP SAN Solution Service during the deployment process. The HP SAN Solution Service provides for the integration of HP-supported Fibre Channel switches in a SAN environment. These services are scaled based on the model of the EVA that is purchased. Additional services may be required for implementation beyond the specified scope of these pre-defined activities. Additional services will be subject to separate charges.

HP StorageWorks EVA

EVA 5000 model 2C2D

Supported environment

Service encompasses a SAN that is resident within a single building and that has up to 32 physical ports and up to 6 hosts on one heterogeneous OS computing platform.

Service features

- Detailed design
- Implementation planning and scheduling
- Site preparation
- Product configuration
- Installation verification tests

EVA 5000 model 2C6D

Service encompasses a SAN that is resident within a single building or a single campus environment and that has up to 64 physical ports and up to 14 hosts on two heterogeneous OS computing platforms. The campus environment is limited to up to 10 km if using direct Fibre Channel with no converters.

All features provided for the 2C2D model, plus:

- Project management
- Environment assessment
- High-level design
- High-availability installation verification tests

EVA 5000 model 2C12D

Service encompasses a SAN that is resident within a single building or a single campus environment and that has up to 96 physical ports and up to 22 hosts on two heterogeneous OS computing platforms. The campus environment is limited to up to 10 km if using direct Fibre Channel with no converters.

All features provided for the 2C2D model, plus:

- Project management
- Environment assessment
- High-level design
- High-availability installation verification tests

Service feature

Delivery specifications

Installation and startup

Service planning

An HP service specialist will plan all the necessary activities and schedule the delivery of the service at a mutually agreed-upon time between HP or an HP certified channel partner and the the Customer, which shall be during local standard business hours, excluding holidays, unless otherwise agreed. Any services provided outside of standard business hours may be subject to additional charges. The service planning activities include:

- Communication with the Customer and responses to the Customer's queries regarding service delivery
- Verification of the Customer's fulfillment of prerequisites using the pre-delivery checklist
- Scheduling of the service delivery at a mutually agreed-upon time
- Creation of a written installation plan, which serves as the project plan for the installation and startup portion of this service

Service deployment

The deployment activities include:

- Presentation of the service delivery agenda
- Confirmation of appropriate operating-system patch levels on a select number of hosts identified in the installation plan
- Development of a customized virtual disk design as necessitated by predisposed application and business requirements designated by the Customer IT storage administrator, database administrator, or any pre-identified IT staff
- Installation of array hardware and activation of select software per the product specifications
- Initialization of the array
- Custom installation of the approved virtual disk design as detailed in the installation plan to address the Customer's unique configuration requirements
- Limited SAN integration for up to 8 pre-existing SAN inter-connect ports (includes switch, hub, and SCSI bridge technology)
- Installation of remote diagnostic tools
- Verification by the Customer of the implemented solution as documented in the installation plan

Installation verification testing (IVT)

After the array has been installed and is operational, HP will perform the appropriate installation verification tests to confirm product functionality and adherence to HP installation quality standards.

Customer orientation session

After the completion of the service deployment, the HP storage specialist will, at a mutually agreed-upon time, provide a 2-hour onsite orientation on the installed HP StorageWorks array, including:

- Presentation and review of the documentation outlining the newly implemented storage virtual disk design map and related host configuration
- Highlights of the basic operation of the array hardware and any associated fundamental software components
- Brief question-and-answer forum

Virtual Controller Software product updates

Periodically, enhancements are made to the VCS that may provide additional functionality or address identified problems. Customers will receive new versions, media, and documentation for software updates—and the scheduled implementation of this software on the Customer array—as these are made available to similar VCS contract license holders. Optional value-added VCS software products require additional support and are not included under this service feature.

24x7 Virtual Controller Software phone-in assistance

HP will provide remote assistance to the HP Response Center for Virtual Controller Software problems for authorized callers. Callers can expect a response within 2 hours. This coverage is available 24 hours per day, 7 days per week. Support for all other HP StorageWorks EVA software products must be purchased separately.

24x7 four-hour onsite hardware response

HP will provide onsite response to hardware problems within 4 hours of the Customer's call or of an automated event notification logged to the support center. This coverage is available 24 hours per day, 7 days per week and is subject to geographic limitations. If, during the course of fault isolation on the Customer's EVA, it is determined that the problem lies with a third-party product under another vendor's valid support agreement, HP will, upon Customer request, assist the Customer in forwarding the support request to that vendor. In such events, the 4-hour response time shall not apply.

Response times based on physical location are as follows:

Distance from primary HP support responsible office	Response time
0–100 miles (0–160 km)	4 hours
101–200 miles (161–320 km)	8 hours
Beyond 200 miles (320 km)	Established at time of order

Travel to sites within 200 miles (320 km) of a primary HP support responsible office is provided at no additional charge. If the Customer site is more than 200 miles from the primary HP support responsible office, the Customer will be charged for travel based on the distance to the Customer location. Travel zones and charges may vary in some geographic locations.

At HP's discretion, service will be provided using remote diagnosis and support, services delivered onsite, or other service delivery methods, or a combination of these. Other service delivery methods may include the delivery via a courier of customer-replaceable parts such as a keyboard or mouse or, for some products, an entire replacement unit. HP will determine the appropriate delivery method required in order to provide effective and timely support.

An onsite response time commitment will not apply if the service can be delivered via the use of remote diagnosis, remote support, or other service delivery methods as described above.

Automated event notification and remote problem intervention

Proactive electronic notification of array status is provided by a secure link to an HP storage technical center (STC) monitoring facility, 24 hours a day, 365 days a year. This allows HP to provide online proactive problem intervention and scheduling of onsite visits for routine maintenance. These services are performed in the background, completely transparent to the operation of the Customer's business. Please contact a local HP representative to determine availability of this service in your area.

Specifications
Proactive Service Solution

Service feature	Delivery specifications
Assigned account manager	A Customer assigned account manager will help provide technical focal point for the ongoing support of the Customer's EVA. To help address the Customer's objectives, the HP account manager works with the Customer to develop and routinely review a mutually agreed-upon account support plan. Working closely with the Customer's technical staff and IT management, the HP account manager serves as the Customer's primary contact to assist and coordinate support issues in a timely manner. The account manager also coordinates onsite software support services, manages the delivery of technical services, conducts support reviews, and, as applicable, offers information on HP best practices. The account manager will provide deliverables either remotely or onsite, at HP's discretion. The account manager is available Monday through Friday, excluding HP holidays, during standard HP business hours. If requested, the HP assigned team may be available at other times as mutually agreed-upon and scheduled in advance. (Support outside standard business hours is subject to availability and additional costs. Please check with the local HP office for details).
Assigned Response Center account advocate	A Response Center account advocate (RCAA) monitors calls placed to the HP Response Center and identifies trends and potential problems. The RCAA also generates a quarterly support activity report. Furthermore, the RCAA may contact the Customer if a software-class problem arises and work with Customer to manage the implementation in order to correct the problem.
Operational and technical advice	The HP account manager builds a strong working relationship with the Customer team. HP will help the Customer to align its IT goals with Customer resources and utilize the capabilities of the Customer's IT infrastructure. In addition to the guidance and advice provided by the Customer's account manager during ongoing operations, HP can assist the Customer with change management advice.
Account support plan	<p>The account support plan is developed by the account manager after meeting with the Customer's IT staff. It describes the services HP will provide, defines roles and responsibilities, provides site-specific information, and documents the Customer environment. The plan is updated semi-annually during the contract period.</p> <p>At the beginning of the Proactive Service Solution support period, HP will record technical configuration information specific to the covered environment, including storage configuration data and virtual disk maps. This information supports the Customer's daily operations, assists in future planning efforts, and serves to accelerate fault isolation. The technical configuration information is refreshed semi-annually and documented in the account support plan for the Customer's referral.</p>
Quarterly support activity reviews	Quarterly, the Response Center advocate provides the Customer with a support activity report documenting the Customer's organization reactive support calls, call trends, and potential risk factors.
Semi-annual support planning and review	The assigned customer support team conducts semi-annual onsite support planning and review sessions. During the review, the Customer and the team discuss the quarterly support activity report, evaluate ongoing support activities, review agreed-upon measures, and detail changes in the Customer environment. The in-depth review also provides an opportunity to review trends, discuss planned changes to the Customer environment and business, and assess the impact these changes will have on the Customer's support requirements. These sessions are open communication forums.
Semi-annual storage/SAN firmware and software analysis and management	<p>HP monitors all general revision updates and, on a semi-annual basis, provides recommendations to the Customer regarding Virtual Controller Software updates for the Customer EVA. Onsite installation of Virtual Controller software updates is also provided.</p> <p>Recommendations are provided only for supported SAN devices that are directly attached to the EVA. Installation of the recommended firmware requires the purchase of support for the identified SAN device.</p>
Storage array preventive maintenance	HP provides proactive Customer site visits at scheduled intervals, at HP's discretion. During these visits, a hardware specialist performs routine maintenance of electronic system components in accordance with the storage array operational specifications.
Storage high-availability evaluation	Annually, HP performs a high-availability assessment on the Customer EVA. The assessment includes a detailed availability evaluation analysis of the physical environment, the array's configuration, and its firmware and software versions. Upon completion of the assessment, HP provides the Customer with a report and briefing to review the findings and recommendations.
Site environmental survey	This feature provides a review of the Customer's physical environment, including temperature, humidity, electromagnetic fields, electrical systems, radio frequency interference, and emergency systems. A comprehensive report identifies conditions that are out of specification for the Customer array and recommends ways to reduce downtime due to physical and environmental factors. This service is usually performed in conjunction with other scheduled onsite activities.
HP electronic information support	HP provides a comprehensive online resource for instant, customized knowledge, tools, and service. This one-stop IT site offers self-solve tools; personalized, reliable assistance; new online training and forums; as well as instant access to the most comprehensive multivendor, multiplatform IT content available. This site may be accessed on the Web at www.itrc.hp.com .
Education planning assistance	The Customer can receive customized course recommendations designed to improve the Customer's IT staff technical and process knowledge. The account manager can assist the Customer in contacting the HP Customer Education Center.
Escalation management	HP has established formal escalation procedures to solve complex hardware problems. Local HP management coordinates escalation activities and engages the required resources needed to resolve problems quickly.

Specifications
Enhanced Proactive Solution—EVA 5000 2C2D SAN Solution Service

Service feature	Delivery specifications
Detailed design	Provides review and verification of the logical and physical design of the SAN and its components
Implementation planning and scheduling	An HP service specialist will plan all the necessary activities and schedule the delivery of the service at a mutually agreed-upon time, which shall be during local HP standard business hours, excluding HP holidays, unless otherwise agreed. Any services provided outside of standard business hours may be subject to additional charges. The service planning activities will include: <ul style="list-style-type: none"> • Communication with the Customer and responses to the Customer's queries regarding service delivery • Verification of the Customer's fulfillment of prerequisites using the pre-delivery checklist • Scheduling of the service delivery for a mutually agreed-upon time • Creation of a written installation plan, which serves as the project plan for this service
Site preparation	Provides a facilities review and verification of the SAN environment, including the identified array(s), tape libraries, and hosts to be integrated
Product configuration	Provides configuration of the Fibre Channel switches and connections to the array, tape libraries, and hosts per the design documented in the implementation plan
Installation verification tests (IVT)	After the array has been installed and is operational, HP will perform the appropriate installation verification tests to confirm product functionality and adherence to HP installation quality standards, including: <ul style="list-style-type: none"> • Hardware and firmware diagnostics • Diagnostic tests to confirm that the desired storage devices are visible and accessible to the appropriate hosts
Customer orientation session	In addition to the Enterprise Virtual Array Customer orientation session, an HP service specialist will provide the following during the orientation session: <ul style="list-style-type: none"> • Introduction to the process of verifying devices through appliance or host-based tests • Review of the SAN implementation, configuration, and documentation • Review of the Customer's support procedures

Enhanced Proactive Service Solution—EVA 5000 2C6D and 2C12D SAN Solution Service

Service feature	Delivery specifications
Project management	The project manager will: <ul style="list-style-type: none"> • Manage any HP resources required for the delivery of the service • Develop a project plan that defines the scope of the services to be delivered • Identify the Customer's responsibilities and other requirements in order to facilitate the delivery of this service • Act as the liaison and single point of contact between HP and the Customer • Develop the project schedule and manage the project against the defined timelines
Environmental assessment	Provides an analysis of the overall customer storage environment and how the SAN will integrate into that environment
High-level design	Includes creation and documentation of the SAN design to match the Customer's environment and business needs
Detailed design	Includes review and verification of the logical and physical design of the SAN and its components
Installation verification tests (IVT)	After the array has been installed and is operational, HP will perform the appropriate installation verification tests to confirm product functionality and adherence to HP installation quality standards, including: <ul style="list-style-type: none"> • Hardware and firmware diagnostics • Diagnostic tests to confirm that the desired storage devices are visible and accessible to the appropriate hosts • Execution of tests to demonstrate failover capabilities, if included in the design
Site preparation	Includes facilities review and verification of the SAN environment (arrays, tape libraries, hosts)
Product configuration	Includes the configuration of the Fibre Channel switches and connection to the array, including the identified array(s), tape libraries, and hosts to be integrated

Customer responsibilities

To assist the HP representative in delivering these services, the Customer must provide the following, when applicable:

- Any pertinent operational objectives or special requirements
- Identification of application raw or logical partitions to be configured for virtual disk configuration for delivery of deployment services
- Any prerequisite equipment or materials
- Participation of Customer IT storage administrator, database administrator, third-party vendors, and other personnel as needed
- Verification by Customer-designated IT storage administrator that stated objectives were met after implementation
- Internet connection approved for automated event notification and remote problem intervention

Service limitations

The Foundation Service Solution is included with all EVA3000 and EVA5000 models. The Proactive and Enhanced Proactive Service Solutions are available for the EVA5000 2C2D, 2C6D and 2C12D models. Services provided within the scope of an individual product Service Solution are restricted to a single EVA model at one location. Services provided within the scope of one support contract are restricted to the IT environment under the direct day-to-day management of one IT manager. Unless otherwise specified or arranged, proactive and consultative services are performed during normal HP business hours.

Automated Event Notification and remote problem intervention is subject to regional limitations and availability. Please contact the local HP representative for further details.

Ordering information

344818-B21	EVA3000 Controller pair w/Foundation Service Solution
344820-B21	EVA3000 2C2D 16x36 GB/15k w/Foundation Service Solution
344821-B21	EVA3000 2C2D 8x72 GB/10k w/Foundation Service Solution
344822-B21	EVA3000 2C2D 8x72 GB/15k w/Foundation Service Solution
344823-B21	EVA3000 2C2D 8x146 GB/10k w/Foundation Service Solution
309620-B23	EVA5000 2C2D-C 60hz w/Foundation Service Solution
309620-B24	EVA5000 2C2D-C 50hz w/Foundation Service Solution
283198-B23	EVA5000 2C6D-C 60hz w/Foundation Service Solution
283198-B24	EVA5000 2C6D-C 50hz w/Foundation Service Solution
283199-B23	EVA5000 2C12D-C 60hz w/Foundation Service Solution
283199-B24	EVA5000 2C12D-C 50hz w/Foundation Service Solution
283263-B23	EVA5000 8C8D-C 60hz w/Foundation Service Solution
283263-B24	EVA5000 8C8D-C 50hz w/Foundation Service Solution
A7360A	EVA5000 2C12D-C 50hz Enhanced Proactive Service Solution
A7361A	EVA5000 2C12D-C 50hz Proactive Service Solution
A7362A	EVA5000 2C12D-C 60hz Enhanced Proactive Service Solution
A7363A	EVA5000 2C12D-C 60hz Proactive Service Solution
A7364A	EVA5000 2C6D-C 50hz Enhanced Proactive Service Solution
A7365A	EVA5000 2C6D-C 50hz Proactive Service Solution
A7366A	EVA5000 2C6D-C 60hz Enhanced Proactive Service Solution
A7367A	EVA5000 2C6D-C 60hz Proactive Service Solution
A7368A	EVA5000 2C2D-C 50hz Enhanced Proactive Service Solution
A7369A	EVA5000 2C2D-C 50hz Proactive Service Solution
A7370A	EVA5000 2C2D-C 60hz Enhanced Proactive Service Solution
A7371A	EVA5000 2C2D-C 60hz Proactive Service Solution

For more information

For additional information, please contact your local HP representative, or visit our Web site at: www.hp.com/hps

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