

PURE STORAGE TECHNICAL SERVICES

Customer Support Guide

Version 7.0.4

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Introduction

This guide provides an overview of the technical support and maintenance services offered by Pure Storage.

Contact Pure Storage Technical Services



Open a Case

pure1.purestorage.com/support

Via our Web Portal

See [this article](#) for more info.



Call Us

support.purestorage.com/?cid=ContactUs

+1-866-244-7121 (Global Toll)

+1-650-729-4088 (US)

See [this page](#) for Regional Numbers.

To request login credentials, email support@purestorage.com.

Support Services

We provide support for Pure products, systems, and environments via phone, email, and the web portal. We offer support in the following areas:

Services	
Usage	Assistance with day-to-day administration and implementation of Pure Storage best practices.
Diagnosis	Analyze error messages, identify root causes, and track existing issues.
Resolution	Solutions for problems, but also methods of avoiding trouble without compromising system performance or reliability.
Monitoring	Pure Storage Technical Services proactively monitor systems that are under "Premium" or "Advanced" maintenance plans that have Pure1® enabled.

For information on product supportability, please see our Pure Storage End-of-Product Lifecycle Overview (https://support.purestorage.com/?cid=Product_Life_Cycle_Overview).



Support Packages

Our maintenance and support packages are outlined in the following table:

	Basic	Advanced	Premium
Hotline	365 x 24 x 7	365 x 24 x 7	365 x 24 x 7
Response Time <i>(For Severity-1)</i>	-	15 Minutes	15 Minutes
Pure1	Yes	Yes	Yes
Online Training	Yes	Yes	Yes
Proactive Monitoring	No	Yes	Yes
SLA for Hardware Replacement¹	Same-day shipping: delivery times varies ²	Next-business-day delivery ³	Four-hour delivery
Included Controller Upgrades	Evergreen//Forever	Evergreen//Forever	Evergreen//Forever
Remote Software Upgrade Included	Defect fixes only	Unlimited	Unlimited
Optional DSE	No	No	No

¹ Determined by the Support Package purchased from Pure. Service Level Agreement (SLA's) are measured from the time the RMA Dispatch order is created, not after the support ticket is opened.

² With same-day shipping there is no time-delivery commitment. The RMA dispatch replacement order is placed on the same day the product was diagnosed as faulty. The part(s) are shipped from a regional distribution warehouse and may be subject to international transportation and customs clearance lead times. For international shipments the customer is responsible for coordination of importation of products and providing representation for Importer of Record.

³ Next-business-day part deliveries may be delivered any time up to 5PM local time on the scheduled day of delivery.



Evergreen Storage

The following is a breakdown of the different Evergreen subscriptions:

		Evergreen//Forever™ Subscription		Evergreen//Foundation™ Subscription		Evergreen//Flex™
Software Subscription	All-Inclusive Array Software	✓		✓		✓
	Future Array Software Features	✓		✓		✓
	Portworx CSI for FA & FB	✓		✓		
Hardware Subscription	Evergreen Architecture	✓		✓		✓
	Ever Modern Controllers*	✓		No hardware subscription features		✓
	Ever Agile Controllers**	Trade-in Credit				✓
	Capacity Consolidation**	Full trade-in Credit /w 4X Purchase				✓
	Forever Component Replacement	✓				✓
World-Class Customer Experience	Predictive Analytics & Services	✓		✓		✓
	Instant L2 Support Access	✓		✓		✓
	Support Managed Upgrades	✓		✓		✓
	Mobile/SaaS-Based Monitoring	✓		✓		✓
	Right Size & 30-Day Guarantees	✓		✓		✓
	Flat & Fair Renewals	✓		✓		N/A***

*See Evergreen Storage program terms **Requires purchase of qualifying capacity ***Evergreen//Flex subscription is based on capacity used

Technical Services

Pure Storage Technical Services proactively engages with customers when alerts in our Pure1 monitoring system brings attention to a problem, (see [Support Technologies](#) below). Additionally, customers encountering problems can reach out to us via telephone or email for assistance.

Once alerted to an issue, whether through an alert or customer contact, we create a case, start the clock, and begin work. Throughout the support process, we notify customers according to the severity level of the issue they face, (see [Severity Levels](#)).

When a problem is brought to Pure Storage Technical Services' attention through a Pure1 alert, we already know a lot about what's happening, because the alert includes a description of the problem, the time it began, and how critical it may become. The Technical Support Engineer (TSE) evaluates the alert to determine the appropriate response. If appropriate, they promptly email the customer's designated contact person, filling them in on the situation.

When a customer brings the issue to Pure Storage Technical Services' attention over the phone, a Customer Support Specialist (CSS) fields the call, performs basic analysis, and creates a case in our management and tracking system. The CSS then puts the case in the hands of a qualified TSE who works with the customer to gather information such as system logs and to analyze the problem in depth. If the customer request arrives through email, the TSE usually responds to that correspondence first but may follow up later by phone. In either scenario, to better diagnose the problem, the TSE may ask for a video conference and to connect to the device through our secure Remote Assist (RA) technology, (see [Support Technologies](#) below).

While the TSE typically resolves issues based on customer input and the evidence, high-severity cases may require escalation to specialists. At that point, team members with higher levels of expertise or specialization join the effort. The original TSE, however, remains as the point of contact for the customer.



In addition to contacting customers when problems arise, Pure Storage Technical Services also reaches out proactively when there is a need to upgrade a particular version of Purity software, as when a serious issue is discovered with a version that a customer is running. When setting up an upgrade or lending assistance with any other activity, such as configuring a new feature, we schedule a time that is both convenient and efficient.

While customers are notified of the progress of cases throughout an investigation or any other service, after the problem is resolved, customers confirm that they are completely satisfied with the issue's resolution before we close the case. We then ask them to fill out a brief survey where they may offer feedback.

Support Technologies

Pure operating environments have several built-in features that allow for quick, effective troubleshooting: Pure1 and Remote Assist. These tools enable our technicians to anticipate issues and work with problems often before they arise.

Pure1 is an essential part of Pure Storage's strategy, allowing the support team to monitor connected devices and proactively identify potential problems. It operates through a secure link where logs are transmitted every 30 seconds to a secure server, enabling detection of performance issues and error-rate trends. When a problem is discovered, an alert immediately reports the issue so that action can be taken quickly. Records of previous alerts and other diagnostic operations provide a history of significant events to inform the troubleshooting effort.

While Pure1 provides preliminary diagnostic information, in many cases, the most efficient way to service a Pure Storage product is by the direct intervention of a Technical Support Engineer (TSE). At that point, the operating environment's Remote Assist (RA) feature enables the TSE to communicate directly with the device through a secure link. Typically, RA sessions also include simultaneous video or phone conferences. Once begun, an RA session runs in the background of the server's operating environment until it is terminated by the customer, the TSE, or by automatically timing out.

To ensure security, connection to Pure1 only transmits diagnostic data. It never accesses any customer data. Only a customer's local administrator can open a Remote Assist session. Further, only one RA session can be active at any time, though many TSEs may be active on that one session.

A closer look at monitoring systems, alerts, and Pure1

The Pure1 system constantly monitors any FlashArray and FlashBlade platforms that are working under Premium or Advanced maintenance plans and that have Pure1 Cloud enabled. The system creates alerts when individual processes or components may need attention. Depending on the alert, the customer, Pure Storage Technical Services, or both are immediately informed.

Pure Storage Technical Services monitors alerts that indicate the following:

- A products' failure to function
- Data loss or access issues
- Product performance degradation
- Visible changes in state on the GUI or CLI

Specific features or processes that may cause alerts:

- Visible changes in the state on the GUI or CLI
- SSD loss or lack of space
- NVRAM loss
- Controller or component fault
- PSU fault
- Temperature or fan fault
- SAS cabling fault
- Path to drive loss (SAS Interposer)
- Throttling start and stop alerts
- Capacity limit alert
- Array startup

Find a full list of alerts here:

- FlashArray https://support.purestorage.com/?cid=PurityFA_Alerts
- FlashBlade https://support.purestorage.com/?cid=PurityFB_Alerts

When alerted to a problem, Pure Storage Technical Services starts analyzing the nature of the issue, using the diagnostic information sent with the alert.

With all critical alerts, after a TSE has completed an initial analysis, Pure Storage Technical Services contacts you regardless of the time of day or the day of the year, (unless specifically instructed not to do so by a no-contact order that was previously put in place by the customer).

Note: Because time may be spent on analysis after the initial alert is sent, the TSE's initial contact may be briefly delayed. Additionally, for non-critical alerts, we only contact customers as appropriate (usually during regular hours). For example, if we determine a failover occurred 'by design' without impacting I/O, we may follow up during regular business hours.

Prerequisites Required for Alerts

The customer must have Pure1 enabled on all Pure Storage servers, whether FlashArray or FlashBlade systems. Those sites that are not connected are considered "dark" sites. (See "Advice for Unconnected 'Dark' Sites," below).

All of the services described above occur 24 hours per day, seven days per week, and 365 days per year. For all critical alerts, Pure Storage Technical Services will contact the designated customer representatives. For that reason, we strongly recommend that customers provide an email alias and phone (or pager) number to alert the entire team that is in charge of the Pure server equipment. Doing so ensures that the alerts from Pure Storage Technical Services can reach the correct individuals without delay.

Customers not enrolled in the Business Critical Services (BCS) program will need to use Pure1 to apply self-service patches based on relevant alerts.

Unconnected "Dark" Sites Assets

"Dark" assets are typically not connected, and do not phone home to Pure1. Customer sites with strict security policies, such as restrictions on log exports or remote access, limit Pure Storage's ability to proactively resolve issues. It is essential to understand these restrictions to avoid impacting support delivery.

For more information on how Pure Storage supports our "Dark Sites", please [click here](#).

Pure Storage Support Portal

Visit Pure's advanced support portal at <https://support.purestorage.com>, accessible via desktop, tablet, or smartphone with single sign-on. Existing customers typically have pre-created accounts. For inquiries or support, contact community@purestorage.com.

Portal	Description
Manage	Easily monitor and manage your Pure Storage devices from anywhere.
Cases	Open, update, and view your support tickets with Pure Storage Technical Services.
Knowledge	Access release notes, user guides, installation guides, advice on best practices, troubleshooting, and more.
Community	Access peer-to-peer discussions with other members of the Pure Community. Ask questions, share tips and tricks, and communicate with other customers.

Support Contacts

Designated support contacts are the only people from customer sites who can speak to Pure Storage Technical Services technicians on behalf of their

companies. Implemented for the customer's security, this policy ensures that all information provided by our TSEs is received and implemented by the appropriate personnel within the customer's organization. Customers must designate all support contacts before opening their first case. Different types of customer contacts follow:

Callers	Description
Authorized Callers	A customer can designate up to five individuals as authorized callers for each site. Only these designated contacts can call and receive assistance from Pure Storage Technical Services. Customers may request portal accounts for these individuals through email to Pure Storage Technical Services.
Pure1 Admin	The Pure1 Admin is the person at the customer's site who is authorized to provide support for Pure Storage products. As the customer's resident Pure Storage expert, the Pure1 Admin is responsible for the administration of contacts and for assisting users. Knowledgeable about a wide range of product issues, this person determines whether a particular problem can be solved locally or needs to be referred to Pure Storage Technical Services.
Backup Contacts	Backup contacts should be located at the same site as the Pure1 Admin and be able to perform all the necessary duties on Pure Storage products, including contacting Pure Storage Technical Services and opening RA sessions when required.

Severity Levels

Pure Storage Technical Services will assign a severity level to each new case by using a formal ranking system that is based on the business impact of the problem. If the severity is raised, the new severity level continues through the life of the case. When tracking a case on the Pure1 Portal, this value can be as the "Case Severity."

Severity	Definition	Initial Response	Update Frequency
Severity 1 <i>Emergency</i>	Critical impact to a critical business system which is preventing business functions from operating, resulting in loss of productivity or financial impact, including data loss or data corruption.	15 Minutes	Continuous Updates
Severity 2 <i>Major</i>	Major impact on a critical business system with reduced or degraded functionality impacting productivity or financial loss.	30 Minutes	Updates daily or as agreed
Severity 3 <i>Minor</i>	Minor impact or degradation of service to business system impacting non-essential functions with minimal or no impact to the business	1 Business Hour	Every other business day or as agreed
Severity 4 <i>Informational</i>	Information inquiries including a request for documentation, questions on product functionality, or configuration.	2 Business Hours	Updates as agreed

Portworx Support Services

For assistance with Portworx products, contact Pure Storage Technical Services using the methods outlined in the [Contact Pure Storage Technical Services](#) section.

Portworx Support Levels

Severity 1	The classification used when the Software fails to function causing the system on which it is installed to go down or “crash” or data from Portworx volumes are unavailable. Portworx shall initially respond to the customer within one (1) hour.
Severity 2	The classification used when there is an error that does not render the system on which it is installed inoperable, but which materially interferes with the Software’s ability to perform. Portworx shall initially respond to the customer within six (6) hours.
Severity 3	The classification used when there is an issue that causes or results in substandard or erratic performance. Portworx shall initially respond to the customer within one (1) day.
Severity 4	The classification used when there is an issue that produces an inconvenient situation or when the customer requests an enhancement. Portworx shall initially respond to the customer within five (5) business days.

Hardware Replacements

Pure Storage Support provides quick replacement of any malfunctioning Pure hardware. When we determine that a hardware component needs to be replaced, the TSE initiates the shipping of the replacement part and, if required, dispatches a Field Technician to perform the replacement.

If a hardware issue arises during installation, a new shipment for the entire asset may be procured from the nearest available factory on the following business day, with expedited delivery.

If a field technician is required for hardware replacement, customers need to provide information on the location of the device, including the address of the datacenter and any pertinent information within it, such as grid coordinates. The customers also need to provide specifics for site security that may be required to effect repair of the device.

After replacement of a part, the customer must return the defective hardware component(s) to Pure Storage using the packaging in which the replacement part was delivered. **Pure prepays the transportation costs for the return of defective products. Depending upon the country where the product is installed, the customer will either get a prepaid returns label on the packaging of the replacement product or a returns kit that contains instructions on how to contact Pure's logistics provider to arrange collection.** For an additional charge, customers may choose to retain drives that were installed in the replaced products.

In some countries where Pure Storage does not have a Service spare parts depot, the Pure1 Basic Support plan may be an available option. With this plan, Pure Storage ships parts on the same day from a regional fulfillment center, however Pure does not guarantee a specific delivery time for the replacement part.

Business Critical Services (BCS) Program

The BCS service is a billable add-on option that is available for Evergreen subscriptions. The program provides two key personnel for each of its customers.

- A Support Account Manager (SAM) who provides account management services
- A Designated Support Engineer (DSE) who provides technical support services

The SAM becomes familiar with the customer's account and needs, acting as the primary communication point. The DSE remotely services the customer's FlashArray and FlashBlade systems, as well as providing expertise on the customer's environments, configurations, and procedures.

BCS Program Highlights

The following highlights show the value of the BCS program:

- Single point of contact for the management or technical support cases
- An intimate understanding of the customer's environment
- Remote assistance for the administration of applicable Pure products
- Proactive support, maintenance, and troubleshooting assistance
- Knowledge transfer and technical assistance with customer's staff

BCS Program Features and Benefits

Each customer has direct access to an experienced support engineer who understands the customer's IT environment as it relates to the Pure Storage products.

The SAM is the central point of contact for support management activities, including:



- Senior designated resource providing a communication conduit into Pure Storage Technical Services.
- Knowledge of customer environments, requirements, planning, and personnel.
- Defines business-critical success criteria prior to Implementation and then reports progress.
- Oversees the installation of Pure Storage technology by acting as a liaison to support.
- Engages technical expertise (Implementation, Integration, solution architects, technical training, etc.), as required.

The DSE helps the customer in the following ways:

- Participates in a weekly status call with the customer and summarizes outstanding issues along with the health and performance of the FlashArray and FlashBlade systems.
- Performs weekly proactive scans for known pathologies on the customer's FlashArray systems and presents any findings, sharing a plan of action for any issues found.
- Troubleshoots and resolves problems when they are found.

Reinstatements and Renewals

If we suspend support services for any period of time due to non-renewal or a violation of the Support Agreement, you may reinstate services by submitting the full amount of any lapsed payments, outstanding fees, and reinstatement penalties. Pure Storage may, in its sole discretion, deny reinstatement for the array if the Subscription is expired for more than 6 months. Our Renewals team will guide you through the process.



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