

PANASAS® PROFESSIONAL SERVICES

Panasas ActiveStor® hybrid scale-out NAS appliances drive enterprise and research innovation by accelerating workflows and simplifying data management. Because ActiveStor is designed to minimize the IT efforts associated with storage hardware and the data that is on it, Panasas customers often succeed in managing multiple petabytes of storage with only a fraction of one full time employee. As easy as ActiveStor is to deploy and manage, the Panasas professional services team is ready to step in and lend a hand whenever additional help is needed. All services are performed by highly trained Panasas Storage Engineers (PSEs) who are recognized experts in their field.

EASY ENGAGEMENT PROCESS

Panasas professional services engagements typically start by working together to define the specific requirements in a Statement of Work (SoW). Panasas will then provide a quote based on the overall scope and costs involved. As soon as the contract is in place, PSEs become an extension of your IT team for the duration of the engagement.

Scale-out storage is typically deployed into complex environments and frequently is connected to multiple network facilities in the organization. As a result, PSEs also attempt to diagnose and solve networking and interoperability issues outside of the Panasas system itself on an as-needed basis as part of their efforts.

Four standard packages are available in addition to customized services tailored to satisfy your specific needs.

- System Installation Service
- System Relocation Service
- System Health Assessment Service
- System Recertification Service
- Custom Professional Services

SYSTEM INSTALLATION SERVICE

Seamless integration of the ActiveStor hybrid scale-out NAS solution into your computing environment is what the system installation service delivers. One or more PSEs will install the storage, work with your network and compute administrators to fully integrate the storage into your environment, and then test and certify the system for proper operation. The end result is a Panasas solution that performs as designed and expected.

SYSTEM HEALTH ASSESSMENT SERVICE

The system health assessment service takes a holistic view of the Panasas storage solution, evaluating the configuration and state of every storage hardware component to ensure reliable performance and high availability. In addition, this may include volume rebalancing, storage network analysis, and even pursuing strategic goals such as meeting

business continuity requirements and preparing for dataset growth. It concludes with the PSE delivering a comprehensive report detailing all findings and recommendations.

SYSTEM RELOCATION SERVICE

Whether you need to move your Panasas storage from one rack to the next or from one data center to another, the system relocation service is a complete turnkey solution to complete the move in a safe and predictable manner. Hiring Panasas can substantially reduce risk. Appropriate packaging is always used and optional insurance is available.

With this offering, a PSE evaluates the condition and operation of the system in its current location and then works with you to determine the most expeditious method with the least amount of risk. The normal requirement is to move the existing hardware without modifying the configuration or your data, however Panasas can also reconfigure the hardware as part of the redeployment as needed. After the move, the PSE reevaluates the condition of the system to ensure that nothing has degraded as a result of the relocation.



SYSTEM RECERTIFICATION SERVICE

This service recertifies systems to ensure that they are suitable for production use. It is required before purchasing a support and maintenance agreement from Panasas for storage systems that have been off contract, purchased on the used equipment market, or transferred from one entity to another. Hardware components that are failed or about to fail must then be replaced (at additional cost) before the system is eligible for coverage under a Panasas support agreement.

CUSTOM PROFESSIONAL SERVICES

When requirements fall outside the scope of predefined service packages, Panasas may still be able to provide assistance via a custom professional services contract. For custom engagements, the first step is to understand the goals of the project and determine if Panasas has an appropriate level of expertise. Panasas would then bid the custom engagement based on a Statement of Work written by the consulting PSE. Examples of potential custom services include performing data migration, locating application or network performance bottlenecks, or even running storage or application I/O benchmarks.

TYPICAL PROCEDURES BY SERVICE

PROFESSIONAL SERVICES PACKAGE	TYPICAL SCOPE
System Installation Service	<ul style="list-style-type: none"> • Unboxing, racking, and powering on the ActiveStor solution • Connecting the system to the existing network infrastructure • Installation of the Panasas DirectFlow protocol on compatible Linux compute nodes • Baseline testing to ensure optimum performance • New customer orientation to basic system administration • New customer orientation to Panasas technical support
System Health Assessment Service	<ul style="list-style-type: none"> • Storage hardware and software configuration assessment • Full diagnostic data collection and offline analysis • Baseline testing to ensure optimum performance • Battery life evaluation • Detailed per drive disk report leveraging SMART statistics • Evaluation of current backup strategies • Data set growth analysis
System Relocation Service	<ul style="list-style-type: none"> • Evaluation of the installed storage hardware and software prior to movement • Pre-configuration of networking elements and storage (if it will be different in the new location) • Ensure that a backup of the data is completed • Proper shutdown of the system • Disassembly and packing of system components (if needed) • Coordinating bulk shipping of equipment from start location to end location (if required) • Re-installation, power on, and appropriate reconfiguration as required at the new location • Baseline testing to ensure optimum performance in the new environment • Panasas certifies that the storage is operational and supportable
System Recertification Service	<ul style="list-style-type: none"> • Perform PanFS storage operating system software and hardware firmware upgrades (if needed) • Full diagnostic data collection and offline analysis • Baseline testing to ensure optimum performance • Battery life evaluation • Detailed per drive disk report leveraging SMART statistics • Opportunity provided to replace weak or unsupported components at a discounted cost
Custom Professional Services	<ul style="list-style-type: none"> • Executed off a customized Statement of Work negotiated to meet your specific requirements