



# System Administrator Training and Certification

This instructor led course delivers a complete introduction to the Panasas® ActiveStor™ System and allows the student to earn certification as a Panasas System Administrator. Topics covered include the ActiveStor™ hardware in addition to the PanFS™ storage operating system and DirectFlow® Protocol. This course provides a Systems Administrator or similar IT Team Member the knowledge to install, configure and maintain a Panasas ActiveStor system. Each student will gain a firm understanding of configuration, operation and maintenance of the Panasas suite of products and be provided instruction on how to diagnose and resolve various software and hardware error.

The redundant components of the Panasas hardware solution are discussed and reinforced with lab exercises and hands-on activities demonstrating how to service each field-replaceable unit. Object-based file-system theory, software upgrades and configuration scenarios will be discussed with the students. The instructor will focus on the fundamentals of the PanFS storage operating system, the DirectFlow® client access software for Linux®, the Panasas storage virtualization model, and the PanActive® Management interface (both CLI and GUI). Students will be introduced to the features available when deploying a Panasas storage system and how to best configure it to obtain optimal redundancy and performance.

## MODULES INCLUDED

- Introduction to the Panasas ActiveStor System and PanFS Storage Operating System
- Hardware Overview
- Out of Box Experience
- Accessing the ActiveStor System via DirectFlow, NFS and CIFS
- System Management
- Blade Set and Volume Management
- Alert Notifications and PanActive Link
- System Monitoring and Report Generation
- Network Reconfiguration
- System Upgrades
- Snapshots
- System Diagnostics
- Panasas Object Storage Architecture
- Troubleshooting with PanCLI
- Storage Blade Failures
- Predicted Failures and Draining Blades
- Director Blade Failures
- Troubleshooting DirectFlow Clients
- Certification Exam

## PREREQUISITES

All attendees must have a basic understanding of:

- General IP Networking
- Disk RAID concepts
- Familiarity of NFS and/or file-system usage
- Experience interfacing with UNIX® and/or Linux®

## EQUIPMENT

Each student is partnered with two or three other individuals to participate in hands-on lab exercises using Panasas equipment. Each student is expected to provide a laptop with wireless Internet access and an ssh client installed (such as PuTTY).

## TARGET AUDIENCE

- Storage Network Engineers
- Storage Specialists
- Storage Administrators and/or Data Center Operators

## INSTRUCTOR LED TRAINING

Courses are taught at Panasas' facilities in Pittsburgh, PA, and Sunnyvale, CA. In addition, we offer training at the customer's office provided specific accommodations are made for equipment and facilities. Regardless of location, all training classes are facilitated by Panasas personnel with diverse, hands-on technical backgrounds. Panasas equipment is used with course content directly developed by the Panasas Global Services team.

Please email: [training@panasas.com](mailto:training@panasas.com) to learn more about the training programs and options available.

## STUDENT CANCELLATION POLICY

Individual training registrants cancelling a scheduled class at a Panasas facility have the option to register for another class or receive a full refund, provided Panasas is notified at least 14 calendar days before the course start date. Any cancellation made within two weeks of the scheduled class start date will be charged the full training course fee. Registration may be transferred to another student provided they possess adequate knowledge of the prerequisite course material.

## CANCELLATION FOR CUSTOMER SITE TRAINING SESSIONS

Customers can cancel or reschedule customer site training without penalty up to 14 calendar days prior to the course start date. Full charges will apply if cancellation is made fewer than 14 calendar days before the course start date.

## COURSE CANCELLATION POLICY BY PANASAS

Panasas requires a minimum of four students per class for training delivered at a Panasas facility. We reserve the right to change course schedules, modify course content, or cancel a class when necessary. If we elect to cancel a class, we will make every effort to notify all registrants a minimum of 14 days prior to the scheduled start date. Panasas is not responsible for airline or hotel penalties incurred because of canceled courses.

## PREREQUISITES

Students are responsible for complying with all prerequisite material. Students who demonstrate a gap in the prerequisite knowledge may be requested to limit questions during class time so as to not impede the overall progress of the class.

## CLASS PARTICIPATION

Attendance is the responsibility of the registrant. In order to successfully complete a course, 100% attendance is required. If a registrant fails to appear for a scheduled class, or fails to complete the entire course, the full course fee is charged and certification is not guaranteed.

## CERTIFICATION

Successful completion of the Panasas System Administrator course ensures that your staff has been trained on daily system operation, configuration and maintenance. Students who attend all presentation material, pass the final exam and complete all practical application exercises are awarded a certificate of completion by Panasas Global Services.

## CONFIRMATION

Panasas will send you a confirmation letter upon registration. We recommend that you bring it to class to confirm class attendance eligibility.

### Panasas On-Site Course Details

Course Title:	Panasas System Administrator Training and Certification
Course Number:	SVC-EDU-100-PAN
Delivery Method:	Instructor-Led
Location:	Panasas offices in either Pittsburgh, PA, or Sunnyvale, CA
Content:	Training book, hands-on labs, technical papers
Duration:	Four days
Price:	Email: training@panasas.com for quote
Format:	2-3 Students per System (Panasas Supplied Equipment)
Min. Students per Class:	4
Max. Students per Class:	10
Class Frequency:	Once every 2-3 months

### Customer On-Site Course Details

Course Title:	Panasas System Administrator Training and Certification
Course Number:	SVC-EDU-100-CUST
Delivery Method:	Instructor-Led
Location:	Customer Site
Content:	Training book, hands-on labs, technical papers
Duration:	Four days
Price:	Email: training@panasas.com for quote
Format:	2-3 Students per System (Panasas Supplied Equipment)
Min. Students per Class:	1
Max. Students per Class:	12
Class Frequency:	As Required
Requirements:	Customer to supply Panasas shelves and clients
Panasas supplied equipment:	Available for an additional fee