

Dell PowerFlex Administration

Architecture, guided deployment and storage operations

FA-0600 · 2 days

DevOps, Cloud & Infrastructure

Explore Dell PowerFlex architecture and practise selected storage-management tasks in a prepared learning environment.

Introduction

This two-day course introduces Dell PowerFlex for infrastructure administrators and architects. It combines architecture and deployment planning with selected provisioning, monitoring, troubleshooting and integration exercises.

A prepared, authorised learning environment is required for hands-on tasks. Commands, supported topologies, hypervisor integration and management features depend on the selected PowerFlex release and official compatibility matrix. The course compares relevant legacy terminology with newer architecture; it does not promise complete deployment expertise, performance gains or downtime-free maintenance.

Learning outcomes

The course teaches participants to:

- Explain PowerFlex storage, client and metadata-management roles for the selected release.
- Identify deployment, network and compatibility prerequisites.
- Perform guided volume provisioning and basic management operations in a learning environment.
- Interpret selected health, performance and capacity indicators.
- Review maintenance, troubleshooting and integration requirements.
- Prepare a bounded deployment-readiness checklist.

Prerequisites

- Basic knowledge of storage concepts and principles.
- Familiarity with virtualization technologies and data center operations.
- Experience with managing and deploying IT infrastructure is beneficial.

Access to a prepared compatible training environment is needed for practical exercises; otherwise tasks are demonstrated.

Training outline

1. Day 1 – Architecture, Deployment and Basic Operations

PowerFlex foundations

- Overview of PowerFlex and its position in the software-defined storage market.
- Scalability, performance and flexibility as design considerations rather than unconditional comparative guarantees.

Architecture and protection

Release-specific roles: legacy SDS terminology and PowerFlex 5.x PDS/DGWT, SDC, MDM and NVMe-over-TCP/SDT concepts where applicable.

- Understanding data layout, protection mechanisms, and fault tolerance.

Deployment planning and guided setup

- Pre-deployment considerations and planning.
- Guided deployment workflow in an isolated prepared lab, including network requirements and initial setup.

Review supported VMware integration and deployment models against the selected release's matrix; do not assume older hyperconverged configurations apply to every current offering.

Management and provisioning

- Using the PowerFlex management interface for day-to-day operations.
- Creating and managing storage volumes, and allocating resources to hosts and applications.
- Monitoring system health and performance.

2. Day 2 – Optimisation, Maintenance and Integration

Configuration and capacity

- Best practices for performance tuning and capacity planning.
- Review release-supported QoS, provisioning and snapshot features and their operational trade-offs.

Troubleshooting and maintenance

- Common issues and how to troubleshoot them.

Plan maintenance and updates using release-specific procedures, health checks, recovery preparation and expected service impact; availability depends on topology and system health.

System integration

- Explore possible integration requirements for cloud, analytics and HPC workloads; suitability depends on deployment and compatibility.
- Integration with backup and disaster recovery solutions.

Illustrative scenarios and readiness review

Compare anonymised illustrative deployment choices and trade-offs rather than claim instructor/client deployment history.

- Assessing your organization's readiness for PowerFlex.
- Steps for a successful PowerFlex deployment and long-term strategy.

Review selected lab results and identify remaining specialist or vendor-support requirements.