



---

## VNX Unified Storage Performance Workshop

**Duration: 5 Days**    **Course Code: VNXP**

---

### Overview:

This Expert level course provides a thorough exposure to performance on the VNX Unified Storage platform. This is a workshop-format course, with heavy emphasis on performance analysis student activities and instructor debriefs. Topical areas include the use of Unisphere Analyzer, command outputs from Navisphere Secure CLI and File server\_stats, and the analysis of those performance statistics. Other topics include evaluating performance statistics utilizing different workload patterns, RAID and disk types. The performance implications of using VNX Replication Software such as SnapSure, Replicator, VNX Snapshots, SnapView and SAN Copy. Also covered are VNX features including data compression and deduplication, FAST VP, and FAST Cache, among others.

---

### Target Audience:

This course is intended for individuals who are responsible for architecting, managing, optimizing, and troubleshooting VNX Unified storage performance.

---

### Objectives:

- **Upon successful completion of this course, participants should be able to:**
  - Determine VNX Unified performance using metrics and workload analysis
  - Use Block and File performance tools for analysis and troubleshooting
  - Describe the performance implications regarding different drive types and LUN Layout
  - Identify AVM performance considerations
  - Describe the performance implications of data compression and deduplication, FAST VP and FAST Cache
  - Explain the performance impact of using File deduplication, SnapSure, and Replicator
  - Identify performance considerations when using SnapView and VNX Snapshots
  - Explain the impact in using SAN Copy and MirrorView on an application
  - Size and validate a VDI (Virtual Desktop Infrastructure) storage solution for application performance
- 

### Prerequisites:

- VNX Block and File configuration, provisioning, and management
  - VNX Unified architecture and features
  - Basic IP Networking
  - Basic understanding of VDI solutions (VMware Horizon View, Citrix XenDesktop, Microsoft VDI)
-

## Content:

The content of this course is designed to support the course objectives.

### Performance Overview

- Performance Review
- VNX Cache Considerations

### Analysis of Performance Data

- Unisphere Statistics and Secure CLI
- Unisphere Analyzer

### Disk Type and LUN Layout Impact on Performance

- Disk Considerations
- LUN Layout and metaLUN Considerations

### VNX File System Impact on Performance

- Automatic Volume Management
- Manual Volume Management

### Storage Efficiency Features and Performance

- Data Compression Performance Considerations
- Block Deduplication Performance Considerations

### FAST Suite Performance Considerations

- FAST Cache and FAST VP Performance

### Local Replication Performance Considerations

- VNX SnapSure, Snapshots, and SnapView Performance

### Remote Replication Performance Considerations

- VNX Replicator, SAN Copy, and MirrorView Performance

### Host Performance Considerations

- Host Performance
- EMC Xtrem Performance

### Storage Performance Planning and Sizing for Desktop-as-a-Service

- VDI Performance Overview
- Measuring Virtual Desktop IO

### Sizing the Number of VMs per RG/Pool

---

## Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

[info@globalknowledge.co.uk](mailto:info@globalknowledge.co.uk)

[www.globalknowledge.com/en-gb/](http://www.globalknowledge.com/en-gb/)

Global Knowledge, Mulberry Business Park, Fishponds Road, Wokingham Berkshire RG41 2GY UK