ONTAP SAN Implementation & Administration (SANIA)

Course Description

Learn how to implement and administer NetApp ONTAP SAN solutions by examining SAN protocols and architecture. Learn about ONTAP capabilities for iSCSI, FCP and NVMe over IP and FC fabric.

Course Duration:

2 days.

Prerequisites:

- Working knowledge of ONTAP 9 software and SAN
- ONTAP Cluster Fundamentals
- ONTAP SAN Fundamentals
- ONTAP Cluster Administration

Objectives:

This course focuses on enabling you to do the following:

- Define and describe SAN environments that use iSCSI, FC, FCoE, and NVMe protocols
- Explain ONTAP block protocol features and recommendations
- Examine FC switch fabric, LUN masking, and zoning
- Configure Microsoft Windows Server, Linux, and ONTAP based SAN storage systems for IP and FC connectivity
- Illustrate SAN configuration and provisioning
- Demonstrate block storage space efficiency configurations in a SAN environment
- Discover ONTAP availability strategies and data protection for LUNs and namespaces
- Examine SAN performance considerations
- Perform SAN-specific manageability configurations

Course Outline:

Module 1: ONTAP SAN Configuration overview

- IP SAN configuration
- FC SAN configuration
- LUN provisioning

Module 2: ONTAP iSCSI configuration concepts

- iSCSI configuration recommendations
- iSCSI feature overview
- iSCSI configuration workflow

Module 3: ONTAP FC configuration concepts

- FC configuration recommendations
- FC and FCoE zoning
- Cisco switches
- Brocade switches

Module 4: NVMe-Of configuration

- NVMe
- NVMe-oF
- NVMe integration into ONTAP software

Module 5: NetApp ONTAP SAN resource provisioning

- Volume and LUN provisioning
- Additional ONTAP CLI considerations

Module 6: Host integration

- Host considerations
- Windows hosts
- Linux and UNIX hosts
- LUN offset

Module 7: IP SAN connectivity

- Windows iSCSI configuration
- Windows iSCSI implementation
- Linux iSCSI configuration
- Linux iSCSI implementation

Module 8: FC SAN connectivity

- Configure a Windows host for FC
- Identify the WWNN and WWPN on a Windows host
- Implement and verify multipath FC connectivity on a Windows host
- Configure a Linux host for FC
- Identify WWPNs on a Linux host
- Implement and verify multipath FC connectivity on a Linux host

Module 9: SAN availability and data protection

- High availability and host multipathing
- Data protection in SAN environments

Module 10: Management of NetApp ONTAP SAN environments

- LUN mobility
- Volume and LUN reconfiguration
- SAN performance recommendations

Appendix A: ONTAP SAN fundamentals

- Implementing iSCSI, FCP, and NVMe in ONTAP software
- SAN architecture
- Interoperability Matrix tool
- SAN scalability and maximums

Who Should Attend:

Administrator, engineer, and architect