firefly

Demystify Technology

IASNS

Length:
5 Days

Format:
Lecture/Lab

Course Version:
4.4r1

Product Version:
NX-OS 5.2.6

Learning
Business
Partner

Learning
Specialized
Partner

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ATLANTA

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SINGAPORE

Why Firefly

GLOBAL LEARNING PARTNER OF THE YEAR **2012**

We take care to keep our courseware current and reflect as close as possible the latest general release of the technology. With this release, IASNS labs are now based on newer code than our competitors are delivering with the Cisco off-the-shelf courseware. This version of the firmware (NX-OS 5.2.6) also positions our customers to be ready for the DC-CCIE Lab exam. Key IASNS v4.4r1 updates covered in this course that are not covered in the standard version of this course include: DCNM-SAN Server installation Lab and Performance Manager using DCNM-SAN Lab.

Course Description

IASNS is a five-day lecture/lab course that provides learners with advanced skills in implementing and troubleshooting Cisco MDS 9000 storage networks running the NX-OS 5.2.6 code. This course focuses on advanced storage networking topics, including SAN virtualization, embedded storage services, advanced SAN security, advanced performance tuning, configuration of enterprise-class SAN management services, and iSCSI. Troubleshooting Cisco MDS fabrics is also covered in depth. A significant portion of this course is devoted to hands-on exercises.

Who Should Attend

This course provides advanced technical training for system engineers, network engineers, and field engineers who need to deploy, configure, and manage MDS 9000 Series switches.

Prerequisites

You will gain the most from this course if you have the following knowledge: Implementing Cisco Storage Networking Solutions (ICSNS).

Learning Objectives

- Describe intelligent fabric services on the MDS 9000 platform
- Use the Cisco Data Mobility Manager to enable transparent data migration
- Design and deploy an enterprise SAN management infrastructure
- Describe I/O consolidation using FCOE Implementing DCNM-SAN and Federated DCNM
- Describe SSH, (AAA) with Role-based Access control (RBAC)
- Describe how to configure port and fabric security and IPSEC
- Describe how to configure Storage Media Encryption
- Implement RMON, logs and Performance Manager
- Describe how to configure I/O Acceleration (IOA)
- Describe how to configure QoS to prioritize application data flows
- Describe how to capture and view FC protocol traces using SPAN and RSPAN
- Describe how to troubleshoot issues deploying Generation 1, 2, and 3 linecards
- Implement iSCSI-to-FC connectivity
- Explain iSCSI HA and security options
- Describe how to Configure iSCSI server load balancing (iSLB)

Module 1: Managing Enterprise SANs

Lesson 1: Intelligent Fabric Services
MDS Intelligent Services Modules
Fabric-Based Applications
SANTap
Network-Accelerated Serverless Backup
Data Security Services
Data Mobility
I/O Acceleration

Lesson 2: Data Mobility Manager
Overview of Data Mobility Manager
Configuring Data Mobility Manager
Cisco DMM SAN Topologies

Lesson 3: Management Infrastructure Implementation
Command Line Interface Commands
Command Line Interface Variables and Aliases
Overlay VSANs
Fabric-Device Management Interface
Implementation
Cisco Discovery Protocol
CiscoWorks Resource Manager Essentials
Implementation

Lesson 4: Fibre Channel over Ethernet
FCoE Consolidated Data Center Design
I/O consolidation Using the Nexus 5000
Current FCoE Architecture
FCOE ENode MAC Address
FCoE Initialization Protocol
Converged Enhanced Ethernet
Priority Flow control
Data Center Bridging Exchange
Cisco Nexus 5K Interfaces

Lesson 5: Federated DCNM-SAN Servers
DCNM-SAN Server Install
Federated DCNM-SAN Servers
DCNM-SAN Installation Prerequisites

Module 2: Securing the SAN

Lesson 1: Management Security
Configuring SSH
AAA Solutions and Services
Implementing AAA Services
AAA Service Options
CFS Distributing AAA Configurations
Implementing RBAC
Configuring RBAC and User Accounts
Distributing RBAC Configurations

Lesson 2: Implementing Port and Fabric Security
Port Security Features
Port Security Configuration
Distributing Port Security
Fabric Binding for Fibre Channel
FC-SP (DHCHAP) Overview
Configuring FCSP
Overview of IP ACLs
Configuring IP ACLs
Configuring Certificate Authorities (CA) and Digital Certificates
Configuring IPsec Network Security
TRustSec Link Encryption feature

Lesson 3: Storage Media Encryption
Overview of SME
Key Management
Implementing SME

Module 3: Tuning SAN Performance

Lesson 1: Monitoring SAN Performance
RMON
System Message Logging
Onboard Failure Logging
Command Scheduler
Configuring the Embedded Event Manager
Performance Manager and DCNM-SAN Web Browser view

Lesson 2: I/O Acceleration
Protocol Acceleration Overview
MDS 9000 I/O Accelerator Package
Configuring I/O Accelerator
Verifying IOA Configuration

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