NetApp - Implementing and Administering the FlexPod Solution

Code:	NA-FPIMPADM
Length:	3 days
URL:	View Online

FlexPod Implementation and Administration is a 3-day instructor-led course where you will learn to set up, configure and administer the FlexPod architecture. The course provides a comprehensive understanding of the configuration requirements for FlexPod at the network, storage and compute layers of the architecture. You will also learn key implementation procedures, management and basic troubleshooting tasks on the Cisco Nexus 9372, Cisco Unified Computing System (UCS) and NetApp storage. This course uses the ONTAP 8.3 environment.

Skills Gained

- Describe the FlexPod solution
- Describe the deployment use case
- Describe network features
- Describe storage networking features
- Describe NetApp key features
- Describe Cisco UCS compute
- Describe compute node LAN connectivity
- Describe identity, resource pools and policies
- Describe service profiles and templates
- Describe hypervisor and application solutions
- Describe management and troubleshooting tools available for FlexPod components

Who Can Benefit

- Network engineers, Network administrators, System engineers and Server administrators

Prerequisites

- General knowledge of networking technologies
- CCNA / CCNP Data Center recommended
- Basic understanding of NetApp storage operations; NetApp NCDA is recommended
- Basic knowledge of server and server virtualization technologies such as VMware ESXi

Course Details

Module 1: FlexPod Overview

- FlexPod validated designs
- FlexPod architecture
- FlexPod platform solutions ◦ Cisco UCS Mini
- All FAS Flash
- OpenStack
- Hyper-V
- FlexPod platform ◦ Review of storage
- Review of network
- Review of compute
- FlexPod cooperative support
- Life-cycle management (LCM)
- Customer profile
- Customer challenges and goals
- Existing customer environment
- VMware vSphere 6.0 characteristics

Module 2: FlexPod Networking Implementation

- Cisco Nexus hardware
- VLAN requirements
- Port configuration options
- Access and trunk ports
- Port channels
- Virtual port channels (vPC)
- vPC building blocks
- vPC configuration requirements
- NPV and NPIV
- Fibre Channel fundamentals
- FCoE fundamentals
- Overview of VSAN
- VSAN information
- VSAN recommended practices
- Zoning implementation
- Zones and zone sets
- Zoning practices

Module 3: FlexPod Storage Implementation

- NetApp hardware
- Cluster configuration

- Switched/switchless clusters
- Management interfaces ◦ NetApp Oncommand System Manager
- NetApp OnCommand Unified Manager
- CLI
- Service Processor and RLM
- Management settings: CDP, Autosupports, and SNMP
- Aggregates
- SVM namespace and volumes
- NFS for VMware datastores
- SAN configuration
- Initiator groups (igroups), port sets, and ALUA
- High availability, including Storage Failover (SFO)
- IPspaces and broadcast domains
- ifgrps and VLAN tags
- LIFs

Module 4: Cisco UCS Implementation

- Cisco UCS hardware
- Cisco UCS features ◦ User interfaces
- Manager
- Central
- Finite-state machine (FSM)
- Fabric interconnect configuration ◦ Clustering
- Discovery process and monitoring using FSM
- I/O Uplinks and Bandwidth Oversubscription
- End-host and switching mode comparisons
- Port personality and port types
- Unified uplink ports and port channels
- Chassis links
- VLAN
- Resource pools
- Creating identity and resource pools
- MAC pools
- IP pools
- LAN connectivity policies
- WWNN and WWPN pools
- SAN connectivity policies
- Policies
- Benefits of service profiles
- Benefits of service profile template
- Expert Service Profile wizard

- Service profile associate/disassociate
- Management of IP address, KVM and virtual media Cisco hardware

Module 5: Virtualization and Application Solutions

- Key implementation factors for FlexPod applications and hypervisors
- VMware
- OpenStack
- Hyper-V

Module 6: FlexPod Management Tools Implementation

- Cisco UCS Director
- Cisco UCS Central
- NetApp OnCommand Unified Manager
- NetApp Virtual Storage Console (VSC)

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