

Cisco ACI Migration (ACIMIG)

Course Outline

Module 1: ACI Migration

- Lesson 1: Network Centric
 - ACI Deployment as a L2 Fabric
 - ACI Deployment as a L3 Fabric
 - Network Centric ACI Migration
 - Nexus 9000 Migration from Standalone to ACI mode
- Lesson 2: Hybrid (Network and Application Centric) ACI Migration
 - Virtual Environment Migration
 - ACI Virtual Migration Assistant
- Lesson 3: Application Centric
 - ACI Deployments for Known Application Profiles
 - ACI Approach to Application
 - Operational Challenges
 - Application Profiling Methodology
 - Advanced Services: Application Profiling for ACI

Module 2: Hardware and Software Migration

- Lesson 1: Repurposing existing hardware
- Lesson 2: Determine hardware requirements for migration
- Lesson 3: Migration from NXOs to ACI on a Nexus 9000
- Lesson 4: Reverting to NXoS
- Lesson 5: Migrating from VMware DVS to AVS
- Lesson 6: Migrating from Nexus 1000V to AVS

Module 3: Multi-POD ACI Deployments

- Lesson 1: Connecting Two ACI Fabrics
- Lesson 2: Single Fabric Scenarios
 - Multi-Site (Stretched) Fabric
 - Synchronization of Fabric Policy

Module 4: Migrating a Brownfield Network to ACI

- Lesson 1: L2 Connectivity with VLAN to EPG Static Mapping>
- Lesson 2: Virtual Workloads Migration Considerations
- Lesson 3: Default Gateway Migration Considerations
- Lesson 4: L3 Routing Between Brownfield and Greenfield Networks
- Lesson 5: Migration of L4-L7 Network Services

Module 5: Managing Flooding Within the Fabric

- Lesson 1: Multi-Destination Protocol Traffic
- Lesson 2: Configure ACI Bridge Domain settings
- Lesson 3: Migrate Workloads

- Lesson 4: Complete the Migration

Module 6: Managing the Default Gateway

- Lesson 1: Migrating Default Gateway to the ACI Fabric
- Lesson 2: Extension and Connecting
- Lesson 3: Gradual Migration
- Lesson 4: Simple Policy During Migration - Any-to-Any Configuration
- Lesson 5: Dynamic ACL's
- Lesson 6: vPC & ACI Co-Existence

Module 7: L4-L7 Migration

- Lesson 1: ACI Service Insertion via Policy
- Lesson 2: Automation for Service Insertion and Configuration
- Lesson 3: Service Automation Through Device Package
- Lesson 4: L4-7 Service graph with "unmanaged" device
- Lesson 5: Standard Architecture with Services
- Lesson 6: Services Switch

Module 8: Layer 3 Migration

- Lesson 1: Migrating the Connectivity to the Core
- Lesson 2: ACI Routing Capabilities
- Lesson 3: Route Export and External EPG Configuration
- Lesson 4: VPC and Routing Protocols

Module 9: Migrating WAN and DCI to ACI

- Lesson 1: Single Fabric (Multi-Site (Stretched) Fabric)
- Lesson 2: Integration of Stretched ACI Fabric with LISP
- Lesson 3: Integrating with OTV
- Lesson 4: Same Pervasive GW IP & MAC on independent fabrics
- Lesson 5: Multi-Site Leveraging IP Based EPG
- Lesson 6: mBGP EVPN - Ethernet VPN
- Lesson 7: Multi-Fabric Scenarios
 - Extending BGP VXLAN to the PE
 - Multi-Pod +ASR9K and N7K Border Lea

Module 10: Migrating Virtual Switching

- Lesson 1: ACI Provides Automated Integration for all workloads
- Lesson 2: VMWare Integration 5.1, 5.5, 6.x, vCenter Plugin and vRealize
- Lesson 3: Microsoft Interaction with ACI
- Lesson 4: Openstack and OVS Integration with ACI

Module 11: Application Virtual Switch

- Lesson 1: Hypervisor Integration with ACI APIC
- Lesson 2: VMWare Integration
- Lesson 3: ACI Hypervisor Integration – VMware DVS/vShield
- Lesson 4: Application Virtual Switch with OpFlex in ACI Fabri

- Lesson 5: Extending ACI to Existing Virtual & Physical Networks
- Lesson 6: Remote VTEP (Virtual) via AVS
- Lesson 7: Hypervisors vs. Linux Containers
- Lesson 8: Docker and ACI

Module 12: FabricPath to ACI Migration

- Lesson 1: Advantages to Adopting ACI over FabricPath
- Lesson 2: Initial Design Considerations
- Lesson 3: Migration Strategy
- Lesson 4: Infrastructure Deployment Considerations
- Lesson 5: Migration Scenario 1
- Lesson 6: Migration Scenario 2