Course Description

This is a four-day instructor-led program designed for engineers who will be implementing and managing the Cisco ACI solution. This is a hands-on course in which attendees will bring-up and using ACI constructs deploy applications on an ACI fabric.

Learning Objectives

After this course you should be able to understand:

+ ACI Concepts and Architecture
+ Describe ACI hardware components
+ Application Policy Infrastructure Controller (APIC)
+ Fabric bring up and Operations
+ Application Deployment using ACI constructs
+ VMM domain (VMware) Integration
+ Programmability features available on ACI
+ Describe Integrating L4-7 services
+ ACI connectivity to external (L2/L3) networks
+ Programmability features of ACI for DevOps

Who Should Attend

+ Data Center Architects
+ Cloud Infrastructure Architects
+ Network Engineers
+ System Administrators
+ Storage Administrators

Prerequisites

+ L2 and L3 Networking Concepts
+ Familiarity with Server Virtualization
+ VMware Administration and Networking (vSwitch, DVS) Concepts
+ L4-7 Services Concepts
+ Familiarity with Cisco UCS
ACI Design and Deployment
(4 Days)

Course Content

Module 1: ACI Overview
+ SDN Primer
+ ACI Overview and Terminology
+ What is ACI trying to solve

Module 2: ACI Fabric Switches
+ Nexus 9000 Hardware Overview
+ Hardware Installation

Module 3: ACI Policy Model
+ Understanding the ACI Policy Model
+ Enforcing Policy through Contracts

Module 4: Application Policy Infrastructure Controller (APIC)
+ APIC Software and Hardware Architecture
+ Fabric Discovery and Initialization
+ OpFlex- Declarative policy information model
+ APIC Northbound API
+ APIC GUI / CLI Familiarization

Module 5: Fabric Forwarding and Operations
+ Fabric Overview
+ Fabric Addressing
+ Endpoint Learning & Lookup
+ Fabric Forwarding
+ Fabric Innovations

Module 6: ACI Hypervisor Integration
+ ACI VMware Integration
+ Microsegmentation
+ ACI Hyper-V Integration

Module 7: Fabric and Access Policies
+ Fabric Policies
+ Access Policies

Module 8: APIC APIs and Open Source Initiatives
+ ACI APIs Overview
+ REST API
+ UCS Director Integration
+ Integration with OpenStack

Module 9: Connecting to External Networks
+ Concepts of Inside and Outside
+ Connecting to external Layer-2/3 Networks

Module 10: Integrating L4-7 Services with ACI
+ Services Insertion Overview
+ Device Packages

Module 11: ACI Day 2 Operations
+ Monitoring
+ Management
+ Troubleshooting

Lab 1: ACI Fabric Discovery and GUI Familiarization
Lab 2: Application Network Profile Creation (GUI)
Lab 3: Application Network (CLI)
Lab 4: VMM Integration with VMware
Lab 5: Extending EPG to Bare Metal Host Share Services
Lab 6: Configuring external L2 connection
Lab 7: Configuring external L3 connection
Lab 8: Service Graph
Lab 9: Day 2 Operations

To register for an ePlus cloud training course, contact us today.

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