Implementing Cisco Application Centric Infrastructure

DURATION: 5 DAYS   COURSE CODE: DCACI   FORMAT: LECTURE/LAB

COURSE DESCRIPTION

The Implementing Cisco Application Centric Infrastructure (DCACI) v1.0 course show you how to deploy and manage the Cisco® Nexus® 9000 Series Switches in Cisco Application Centric Infrastructure (Cisco ACI®) mode. The course gives you the knowledge and skills to configure and manage Cisco Nexus 9000 Series Switches in ACI mode, how to connect the Cisco ACI fabric to external networks and services, and fundamentals of Virtual Machine Manager (VMM) integration. You will gain hands-on practice implementing key capabilities such as fabric discovery, policies, connectivity, VMM integration, and more. This course helps you prepare to take the exam, Implementing Cisco Application Centric Infrastructure (300-620 DCACI), which leads to CCNP® Data Center and Cisco Certified Specialist – Data Center ACI Implementation certifications.

PREREQUISITES

Understanding of networking protocols, routing, and switching

Familiarity with Cisco Ethernet switching products

Understanding of Cisco data center architecture

Familiarity with virtualization fundamentals

WHO SHOULD ATTEND

Network Designer

Network Administrator

Network Engineer

Systems Engineer

Data Center Engineer

Consulting Systems Engineer

Technical Solutions Architect

Cisco Integrators/Partners

Field Engineer

Server Administrator

Network Manager

Storage Administrator

Cisco integrators and partners

LEARNING OBJECTIVES

Describe Cisco ACI Fabric Infrastructure and basic Cisco ACI concepts

Describe Cisco ACI policy model logical constructs

Describe Cisco ACI basic packet forwarding

Describe external network connectivity

Describe VMM Integration

Describe Layer 4 to Layer 7 integrations

Explain Cisco ACI management features

COURSE OUTLINE

1. Introducing Cisco ACI Fabric Infrastructure and Basic Concepts

What Is Cisco ACI?

Cisco ACI Topology and Hardware

Cisco ACI Object Model

Faults, Event Record, and Audit Log

Cisco ACI Fabric Discovery

Cisco ACI Access Policies

2. Describing Cisco ACI Policy Model Logical Constructs

Cisco ACI Logical Constructs

Tenant

Virtual Routing and Forwarding

Bridge Domain

Endpoint Group

Application Profile

Tenant Components Review

Adding Bare-Metal Servers to Endpoint Groups

Contracts

3. Describing Cisco ACI Basic Packet Forwarding

Endpoint Learning

Basic Bridge Domain Configuration Knob

4. Introducing External Network Connectivity

Cisco ACI External Connectivity Options

External Layer 2 Network Connectivity

External Layer 3 Network Connectivity

5. Introducing VMM Integration

VMware vCenter VDS Integration

Resolution Immediacy in VMM

Alternative VMM Integrations

6. Describing Layer 4 to Layer 7 Integrations

Service Appliance Insertion Without ACI L4-L7 Service Graph

Service Appliance Insertion via ACI L4-L7 Service Graph

Service Graph Configuration Workflow

Service Graph PBR Introduction

7. Explaining Cisco ACI Management

Out-of-Band Management

In-Band Management

Syslog

Simple Network Management Protocol

Configuration Backup

Authentication, Authorization, and Accounting

Role-Based Access Control

Cisco ACI Upgrade

Collect Tech Support

DISCOVERY LABS

1: Validate Fabric Discovery

2: Configure Network Time Protocol (NTP)

3: Create Access Policies and Virtual Port Channel (vPC)

4: Enable Layer 2 Connectivity in the Same Endpoint Group (EPG)

5: Enable Inter-EPG Layer 2 Connectivity

6: Enable Inter-EPG Layer 3 Connectivity

7: Compare Traffic Forwarding Methods in a Bridge Domain

8: Configure External Layer 2 (L2Out) Connection

9: Configure External Layer 3 (L3Out) Connection

10: Integrate Application Policy Infrastructure Controller (APIC) With VMware vCenter Using VMware Distributed Virtual Switch (DVS)