Implementing Cisco Application Centric Infrastructure (DCACI) v1.0

What you'll learn in this course

The **Implementing Cisco Application Centric Infrastructure (DCACI)** v1.0 course shows you how to deploy and manage the Cisco ® Nexus® 9000 Series Switches in Cisco Application Centric Infrastructure (Cisco ACI®) mode. You will learn how 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 the 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:

- **300-620 Implementing Cisco Application Centric Infrastructure (DCACI)**

Course duration

- Instructor-led classroom: 5 days in the classroom with hands-on lab practice
- Instructor-led virtual classroom: 5 days of web-based classes with hands-on lab practice
- E-learning: Equivalent of 5 days of instruction with videos, practice, and challenges

How you'll benefit

This course will help you:

- Gain the skills and hands-on practice integrating the enhanced, automated capabilities of Cisco Nexus 9000 Series Switches in ACI mode for quicker application deployment.
- Get the knowledge for protocols, solutions and designs to acquire professional -level and expert-level data center job roles.

What to expect in the exam

The **300-620 DCACI** exam certifies your knowledge of working with Cisco switches in ACI mode including configuration, implementation, and management.

After you pass **300-620 DCACI**, you earn the **Cisco Certified Specialist – Data Center ACI Implementation** certification and you satisfy the concentration exam requirement for the **CCNP Data Center** certification.

Who should enroll

- Network Designers
- Network Administrators
- Network Engineers
- Systems Engineers
- Data Center Engineers

- Consulting Systems Engineers
- Technical Solutions Architects
- Cisco Integrators/Partners
- Field Engineers
- Server Administrators
- Network Managers
- Storage Administrators
- Cisco integrators and partners

How to enroll

E-learning

- To buy a single e-learning license, visit the Cisco Learning Network Store.
- For more than one license, or a learning library subscription, c ontact us at learning -bdm@cisco.com.

Instructor-led training

- Find a class at the Cisco Learning Locator.
- Arrange training at your location through Cisco Private Group Training.

Technology areas

- Data center

Course details

Objectives

After taking this course, you should be able to:

- 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

Prerequisites

To fully benefit from this course, you should have the following knowledge and skills:

- Understanding of networking protocols, routing, and switching
- Familiarity with Cisco Ethernet switching products
- Understanding of Cisco data center architecture
- Familiarity with virtualization fundamentals

The following Cisco courses may help you meet these prerequisites:

- **Implementing and Administering Cisco Solutions (CCNA)** v1.0
- **Understanding Cisco Data Center Foundations (DCFNDU)** v1.0

Outline

- 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
- 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
- Describing Cisco ACI Basic Packet Forwarding
  - Endpoint Learning
  - Basic Bridge Domain Configuration Knob
- Introducing External Network Connectivity
  - Cisco ACI External Connectivity Options
  - External Layer 2 Network Connectivity
  - External Layer 3 Network Connectivity
- Introducing VMM Integration
  - VMware vCenter VDS Integration
  - Resolution Immediacy in VMM
  - Alternative VMM Integrations
- 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

- 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

Lab Outline

- Validate Fabric Discovery
- Configure Network Time Protocol (NTP)
- Create Access Policies and Virtual Port Channel (vPC)
- Enable Layer 2 Connectivity in the Same Endpoint Group (EPG)
- Enable Inter-EPG Layer 2 Connectivity
- Enable Inter-EPG Layer 3 Connectivity
- Compare Traffic Forwarding Methods in a Bridge Domain
- Configure External Layer 2 (L2Out) Connection
- Configure External Layer 3 (L3Out) Connection
- Integrate Application Policy Infrastructure Controller (APIC) With VMware vCenter Using VMware Distributed Virtual Switch (DVS)