

# 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 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.

## 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 skills and hands-on practice implementing Cisco Nexus 9000 Series Switches in ACI mode
- Prepare for the Implementing Cisco Application Centric Infrastructure (300-620 DCACI) exam
- Qualify for professional-level and expert-level data center job roles

## What to expect in the exam

The 300-620 DCACI exam certifies your knowledge of Cisco switches in ACI mode including configuration, implementation, and management. The exam will be available beginning February 24, 2020.

After you pass 300-620 DCACI:

- You earn the **Cisco Certified Specialist – Data Center ACI Implementation** certification
- You will have satisfied the concentration exam requirement for new **CCNP Data Center** certification. To complete **CCNP Data Center**, you also need to pass the **Implementing and Operating Cisco Data Center Core Technologies (350-601 DCCOR)** exam or its equivalent

## Who should enroll

- 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

## How to enroll

- For instructor-led training, visit the [Cisco Learning Locator](#).
- For private group training, visit [Cisco Private Group Training](#).
- For digital library access, visit [Cisco Learning Library](#).
- For individual e-learning, visit the [Cisco Learning Network Store](#).
- For other ways to purchase e-learning, contact us at: [learning-bdm@cisco.com](mailto:learning-bdm@cisco.com)

## 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

These are the recommended Cisco learning offerings that may help you meet these prerequisites:

- **Implementing and Administering Cisco Solutions (CCNA) v1.0**
- **Understanding Cisco Data Center Foundations (DCFNDU) v1.0**
- **Introducing Cisco Data Center Networking (DCICN) v6.2**
- **Introducing Cisco Data Center Technologies (DCICT) v6.2**
- **Interconnecting Cisco Networking Devices: Accelerated (CCNAX) or Interconnecting Cisco Networking Devices Part 1 (ICND1) and Interconnecting Cisco Networking Devices Part 2 (ICND2)**

## 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)




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