

## DCACIA

# Implementing Cisco Application Centric Infrastructure-Advanced

40 horas

Data Center &amp; Cloud

Cisco

Cisco Continuing Education Credits

**40 CE Credits**

## INTRODUÇÃO

The Implementing Cisco Application Centric Infrastructure-Advanced (DCACIA) v1.0 course shows you how to integrate the capabilities of 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 providing enhanced management and policy framework, along with the protocols used in the underlying fabric.

The course also covers how to use Cisco ACI as a policy-driven solution that integrates software and hardware, and how to implement Cisco ACI Multi-Pod and Multi-Site deployments. You will gain hands-on practice implementing advanced ACI capabilities such as Rogue Endpoint Feature, Transit Routing, VRF Route Leaking, Contracts and Zoning Rules, Policy Based Redirect to Layer 4-7 Service Node, Multi-Pod Fabric and Cisco ACI®Multi-Site Orchestrator.

This course will help you:

- Learn best practices for implementing and managing Cisco Nexus 9000 Series Switches in Cisco ACI mode;
- Leverage the integration software and hardware solutions to expand the capabilities of data center and cloud networks;
- Maximize the benefits of an application-centric approach to deliver automation and flexibility in IT services, and automate fabric deployment and configuration.

## OBJETIVO DO CURSO

After taking this course, you should be able to:

- Explain Cisco ACI advanced fabric packet forwarding;
- Explain advanced ACI policy and tenant configuration;
- Describe Cisco ACI Multi-Pod deployment;
- Explain the details and consideration of implementing and integrating traditional network with Cisco ACI;
- Describe Cisco ACI Service Graph Policy-Based Redirect (PBR);
- Describe Cisco ACI Multi-Site deployment.

## PÚBLICO-ALVO

Professionals interested in implementing, configuring, operating and management solutions using the Cisco ACI & Nexus 9000 ACI Mode Solutions.

## PRÉ-REQUISITOS

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

- Basic understanding of Cisco ACI;
- 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 Cisco Application Centric Infrastructure (DCACI) v1.0;
- Implementing and Administering Cisco Solutions (CCNA®) v1.0;
- Understanding Cisco Data Center Foundations (DCFNDU) v1.0.

## Course Introduction

Course Outline

Course Goals & Objectives

## Cisco ACI Advanced Packet Forwarding

Packet Forwarding Between Leaf Switches

Endpoint Learning

Network Interface Card (NIC) Teaming to ACI Fabric

Endpoint Learning Optimizations

Endpoint Loop Protection

Rogue Endpoint Control

## Using Advanced Cisco ACI Policy and Tenant Configuration

Layer 3 Outside Transit Routing

Using Tenant Common for Shared Services

Using Virtual Routing and Forwarding (VRF) Route Leaking for Shared Services

Using Layer 3 Outside configuration policy (L3Out) VRF Route Leaking for Shared Services

Detailed Contract Architecture with pcTag

Contract with vzAny

Contract Preferred Group

## Implementing Traditional Network in Cisco ACI

Integrating Switched Network with Cisco ACI

Migrating Existing Switched Network to Cisco ACI

Network- vs. Application-Centric Deployment Models

## Cisco ACI Service Graph PBR

Service Graph PBR Overview

PBR End-to-End Packet Flow

Service Graph PBR Requirements and Topologies

Service Graph PBR Tracking Options

## Cisco ACI Multi-Pod Deployment

Cisco ACI Multi-Pod Overview

Inter-Pod Network Overview

Multi-Pod Provisioning and Packet Flow Between Pods

Connectivity to External L3 Networks

Service Node Integration Considerations

Service Graph Considerations

## Cisco ACI Multi-Site Deployment

Cisco ACI Multi-Site Overview

Cisco ACI Multi-Site Orchestrator

Inter-Site Network Overview

Tenant Configuration Deployment from Multi-Site Orchestrator (MSO)

Packet Flow Between Sites

Multi-Site Stretched Components

Multi-Site vs Multi-Pod Comparison

## Lab outline

Lab 1: Examine Local and Remote Endpoint Learning

Lab 2: Verify Bounce Entries

Lab 3: Validate IP Learning

Lab 4: Mitigate IP and MAC Flapping with the Rogue Endpoint Feature

Lab 5: Enable Transit Routing

Lab 6: Implement VRF Route Leaking

Lab 7: Configure VRF Route Leaking with L3Out

Lab 8: Examine Contracts and Zoning Rules

Lab 9: Configure Policy-Based Redirect to Layer 4-7 Service Node

Lab 10: Deploy Multi-Pod Fabric

Lab 11: Provision Policies with Cisco ACI Multi-Site Orchestrator