

# Cisco® Implementing Cisco® Data Center Virtualization and Automation v6.0 (DCVAI)

## Course Overview

This is a 5-day class

This course is designed to help students prepare for the Cisco CCNP Data Center certification and for professional-level data center roles.

## Who Should Attend

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Systems and field engineers  
Consulting systems engineers  
Technical solutions architects  
Cisco integrators and partners who install and implement the Cisco Nexus 7000 and 5000 Series switches and the Cisco Nexus 2000 Series fabric extenders  
Data center engineers and managers  
Program managers  
Project managers

## Course Objectives

After completion of this course, students will be able to...

Implement infrastructure virtualization solutions, such as VDC, VRFs, Cisco Nexus 1000v, and Cisco AVS  
Identify programmability methods and program Cisco Nexus switches using XML, Python, and NXAPI  
Implement a Cisco ACI solution that provides fabric connectivity to bare-metal hosts, virtual machines, and external Layer 2 and Layer 3 domains  
Integrate Cisco ACI with virtual machine managers, such as VMware vCenter  
Enforce application policies in intra- and intertenant scenarios  
Deploy Cisco AVS and microsegmentation  
Program Cisco ACI using Python, RESTful APIs, and Arya  
Orchestrate Cisco ACI using the Cisco UCS Director  
Insert L4-L7 services into the Cisco ACI fabric  
Monitor Cisco ACI deployment using atomic counters and other monitoring tools.

## Course Outline

### 1 INFRASTRUCTURE VIRTUALIZATION IMPLEMENTATION

Configuring Logical Device Separation  
Configuring Virtual Switching Technologies

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## 2 NX-OS CONFIGURATION AUTOMATION

- Implementing Configuration Programmability
- Implementing Configuration Profiles
- Using Scripting Tools

## 3 APPLICATION-CENTRIC INFRASTRUCTURE

- Describing Cisco ACI Fabric
- Describing Management
- Describing Cisco ACI Fabric Access Policies

## 4 ACI CONSTRUCTS

- Describing Tenant-Based Policies
- Describing VMM Domain Integration
- Describing Contracts Within an Application Profile

## 5 APPLICATION-CENTRIC INFRASTRUCTURE MONITORING AND PROGRAMMABILITY

- Configuring Monitoring
- Configuring Security Domains and Role Mapping
- Describing Cisco ACI Programmability

## 6 CISCO ACI ENHANCED FEATURES

- Implementing Inter-Tenant Communication
- Describing vPC
- Deploying Cisco AVS

## 7 APPLICATION-CENTRIC INFRASTRUCTURE NETWORKING

- Describing Packet Flow Internal to the ACI Fabric
- Describing External Layer 3 Network Integration
- Describing External Layer 2 Network Integration
- Configuring Service Insertion and Redirection