

# Implementing Cisco Data Center Virtualization and Automation (DCVAI)

- **Formato do curso:** Presencial
- **Localidade:** Lisboa
- **Data:** 25 Nov. 2019 a 29 Nov. 2019
- **Preço:** 2720€
- **Horário:** Laboral - das 09h00 às 17h00
- **Duração:** 35 horas

Course focused on the implementation and deployment automation of Cisco Application Centric Infrastructure (ACI) and Cisco Nexus switches. It provides rich, hands-on experience in building a data center solution based on Cisco ACI. Learners are introduced to the automation capabilities offered by Python and RESTful APIs in combination with Cisco ACI and Cisco Nexus switches.

## Destinatários

Individuals involved in the deployment of an ACI based data center

## Pré-requisitos

**Attendees should meet the following prerequisites:**

- Good understanding of the VMware environment
- Attended or ave knowledge equivalent to **DCICN**, **DCICT** and **DCAC9K**

## Objetivos

**After completing this course you should 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
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## Programa

### **Infrastructure Virtualization Implementation**

- Configuring Logical Device Separation
- Configuring Virtual Switching Technologies

### **NX-OS Configuration Automation**

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

### **Application-Centric Infrastructure**

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

### **ACI Constructs**

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

### **Application-Centric Infrastructure Monitoring and Programmability**

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

### **Cisco ACI Enhanced Features**

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

### **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

**Labs:**

- Lab 1: Implement Cisco NX-OS Configuration Automation
- Lab 2: Discover and Initialize the ACI Fabric
- Lab 3: Implement Cisco ACI Fabric Connectivity for Bare-Metal Hosts
- Lab 4: Implement Cisco ACI Fabric Connectivity for VMs
- Lab 5: Implement Application Policies
- Lab 6: Monitor Traffic with Atomic Counters
- Lab 7: Implement Inter-Tenant Connectivity
- Lab 8: Program Cisco APIC Using Python and Arya
- Lab 9: Implement vPC to Hypervisors
- Lab 10: Deploy Cisco AVS and Microsegmentation
- Lab 11: Enable Connectivity to External Layer 3 Networks
- Lab 12: Enable Connectivity to External Layer 2 Networks
- Lab 13: Provision Cisco ACI Using Cisco UCS Director
- Lab 14: Deploy Service Graph ASA NGFW