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**Learning Style: Virtual Classroom**

**Provider: Cisco**

**Difficulty: Intermediate**

**Course Duration: 5 Days**

## **Cisco Digital Network Architecture Implementation Essentials v2.0 (DNAIE)**

### **About this course:**

Evolve your network engineer skills with the Cisco DNA course: Digital Network Architecture Implementation Essentials (DNAIE) v2.0. This Cisco DNA training program provides students an insight into Cisco Digital Network Architecture (DNA) and its solution components. The Cisco DNA training course highlights the need for digitization in networks and the guiding principles of DNA. This DNAIE course also provides hands-on labs to demonstrate DNA automation using Cisco APIC-EM and virtualization using Cisco Network Functions Virtualization (NFV). View additional course details and objectives below, along with a brief explanation as to who the ideal course candidates might be.

### **Course Objective:**

Upon completing this course, the learner will be able to meet these overall objectives:

- Identify the Digital Network Architecture solution by describing the vision, strategy, general concepts, and components of it
- Implement network automation using Cisco APIC-EM and the built-in applications like Network Plug and Play, EasyQoS, IWAN, and Path Trace
- Implement network virtualization using Cisco Network Function Virtualization in Enterprise branch network
- Implement network analytics using Cisco Connected Mobile Experience (CMX) cloud
- Implement network security using Cisco StealthWatch, Cisco TrustSec, and Cisco Identity Services Engine (ISE)

## **Audience:**

The primary audience for this course is as follows:

- Experienced network engineers pursuing Cisco Digital Network Architecture (DNA)
- Field engineers supporting deployments of DNA

## **Prerequisite:**

- Knowledge level equivalent to Cisco CCNP Routing and Switching

## **Course Outline:**

### **Module 1: Identifying Role of Digital Network Architecture in Contemporary Network**

- Identifying Cisco Digital Network Architecture Vision
- Identifying Cisco Digital Network Architecture Solution Components
- Identifying the Role of Automation and Orchestration Controllers in Cisco DNA

### **Module 2: Implementing DNA Automation in Core Networks**

- Implementing Automation in Enterprise Networks
- Implementing Cisco Network Plug and Play Solution
- Implementing Cisco EasyQoS Solution
- Implementing Cisco Intelligent WAN Solution
- Troubleshooting Using Cisco APIC-EM Path Trace Application
- Implementing Cisco Enterprise Network Functions Virtualization
- Implementing Network Programmability in a Cisco DNA Architecture

### **Module 3: Implementing Security in a DNA Network**

- What Is Network Analytics in Cisco DNA?

- Cisco DNA Analytics Architecture
- Cisco DNA Analytics Proof Points
- Cisco Network Data Platform Architecture
- Cisco CMX on Premises
- Context-Aware Service Architecture
- Cisco CMX Connect
- Cisco CMX Analytics
- Cisco CMX API
- Cisco CMX Configuration
- Cisco CMX Cloud

## **Module 4: Implementing Security in a DNA Network**

- Pervasive Security
- Introduction to NetFlow
- Introduction to Cisco Stealthwatch
- Introduction to Cisco ISE
- Integrating Security Tools

## **Module 5: Implementing Enterprise Network Fabric in the DNA Architecture**

- Lesson 1: Understanding the Enterprise Fabric
- Lesson 2: Implementing DNA Secure Access

### **Lab**

- Lab 1: Introducing APIC-EM GUI: Network, Device and Topology Discovery using Cisco APICEM
- Lab 2: Implementing Network Plug and Play using Cisco APIC-EM.
- Lab 3: Implementing EasyQoS using Cisco APIC-EM
- Lab 4: Site Provisioning and Monitoring using Cisco IWAN Application
- Lab 5: Troubleshooting using Path Trace Application on Cisco APIC-EM
- Lab 6: Site Provisioning with NFVIS on Cisco UCS C220 M3 Server Using Orchestration, Automation and Management (OAM) Servers
- Lab 7: Initial Switch and WLC Configuration for Cisco CMX
- Lab 8: Adding Maps to Cisco Prime Infrastructure
- Lab 9: Continuing to Add Maps to Cisco Prime Infrastructure
- Lab 10: Exporting Maps from Cisco Prime Infrastructure
- Lab 11: Performing the Initial Configuration of CMX
- Lab 12: Using the System Settings Menu to Configure Cisco CMX
- Lab 13: Adding Outline Wall to CMX Floor Plan Maps
- Lab 14: Using Detect and Connect
- Lab 15: Continuing to Customize Detect and Locate in CMX
- Lab 16: Working with Analytics in Cisco CMX
- Lab 17: Working with Customized Reports in the Analytics Service
- Lab 18: Continuing to Add Widgets to a Customized Report in CMX
- Lab 19: Visualizing flows on SMC
- Lab 20: Segmentation Policy Enforcement
- Lab 21: ISE and SMC Integration for Mitigation

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