Cisco Digital Network Architecture Implementation Workshop (DNAIW)

ID DNAIW   **Price** 3,290.— €(excl. tax)   **Duration** 4 days

Course Overview

This hands-on workshop gives participants a comprehensive insight into the Cisco Digital Network Architecture (DNA) and its solution components. The course highlights the need for digitization in networks and the guiding principles of DNA.

The course focuses on the implementation of the following DNA solution components:

- Automation with Cisco DNA Center and its integrated applications such as network design, provisioning, automation and assurance.
- Security with Cisco TrustSec and Cisco Identity Services Engine (ISE).
- Enterprise Network Fabrics and SD-Access.
- Assurance and Analytics
- SD-Access Wireless

The workshop also offers hands-on exercises to demonstrate DNA automation with Cisco DNA Center and virtualization with Cisco SDA.

Cisco DNA lab with the latest DNAC hardware/software

Our DNA hands-on workshop comprises many hands-on lab exercises on current hardware like Cisco Catalyst 9300 switches, Catalyst 9120, Aironet 2800 and 4800 access points, Cisco WLC 9800-CL, ISR "Fusion" routers, Catalyst 3650 switches, ISE 3.1 and wireless/wired clients as well as Windows DC Server.

Each student has access to his own **Cisco DNA Center in version 2.3** and the above mentioned components.

The DNAIW course is part of Cisco Black Belt Academy Aligned Content. It belongs to the stage: EN - Cisco DNA Deployment Stage 2.

Who should attend

- Experienced network engineers who work for enterprise customers who are early adopters of Cisco's SDA and digital network architecture.
- Channel partner employees who support DNA trials and early deployments.
- Modern IT teams and decision makers who want to plan and implement intention-based networks early.

Prerequisites

The knowledge and skills that a learner must have before attending this curriculum are as follows:

- Network fundamentals and IP Connectivity
- Establishing Internet and WAN connectivity
- Managing network device security
- Troubleshooting IP connectivity
- Configuring and troubleshooting ISI-IS and BGP
- Configuring devices for SNMP, syslog, and NetFlow access
- Managing Cisco device configurations, Cisco IOS XE images, and licenses
- Configuring and troubleshooting Cisco ISE
- Configuring and troubleshooting AAA, Access Policy, Access Control Policy

Course Objectives

After completing this course you will be able to:

- describe the vision and the strategy as well as the general concepts and components of the Digital Network Architecture solution,
- describe and realize the network automation with Cisco DNA Center and the integrated applications such as network design, provisioning, automation and assurance,
- implement the network virtualization in enterprise networks for wired and wireless clients with Cisco SD-Access,
- implement the network security with Cisco TrustSec and Cisco Identity Services Engine (ISE),
- set up software, license and inventory management with Cisco DNA Center,
- describe and implement Assurance & Analytics with Cisco

DNA Center.

Course Content

- Course Introduction
- Module 1: DNAC from Scratch
- Module 2: Under the Hood
- Module 3: Fabric Fundamentals
- Module 4: Wireless Integration SDA
- Module 5: SDA Building Overlay

Detailed Course Outline

Lab Exercises

Introduction

- Learning Objectives
- Scenario

Discovery 0: Accessing the Remote Lab Environment

- Lab Topology
- Connect to the Lab Environment
- Lab Devices

Discovery 1: DNA Center Preparation

- Task 1: DNA Center GUI Overview
- Task 2: Adding ISE to DNA Center

Design

Discovery 2: Get Started using DNA Center Design

- Task 1: Design the Network Hierarchy

Discovery 3: Configure Network Settings

- Task 1: Configure Network Services
- Task 2: Configure Device Credentials
- Task 3: Configure IP Pools
- Task 4: Configure Network Profiles
- Task 5: Configure Global Wireless Settings and SSIDs

Network Discovery

Discovery 4: Network Discovery and Inventory

- Task 1: Discover the SD-Access Underlay
- Task 2: Change Device Role Types
- Task 3: Assign Devices to Sites
- Task 4: Provision Devices

- Task 5: Use LAN Automation to Discover and Configure the Fabric Edge Underlay

Discovery 5: Inventory and Management

- Task 1: Viewing the Topology
- Task 2: Apply Smart Licensing to Devices
- Optional: Investigate Configuration Compliance
- Optional: Software and Image Management (SWIM)
- Optional: Create and Deploy a Basic Configuration Template

Fabric

Discovery 6: SD-Access Fabrics and IP Transit/Peer Networks

- Task 1: Configure Scalable Security Groups
- Task 2: Configure Virtual Networks
- Task 3: Configure Fabric Domains and Fabric Sites
- Task 4: Configure the Internet Transit and BGP on the Fusion Router

Discovery 7: Client Onboarding

- Task 1: Configure Host Onboarding
- Task 2: Verify Wired Connectivity
- Task 3: Verify Wireless Connectivity

Policy

Discovery 8: Additional Security

- Task 1: Deploy and Verify a TrustSec Policy
- Task 2: Create a Layer-4 Custom Contract

Assurance & Analytics

Discovery 9: Assurance and Analytics Introduction

- Task 1: Investigate Health and Assurance Settings
- Task 2: Investigate Client Health
- Task 3: Investigate Network Health
- Optional: Investigate Cluster Health & Tools
- Optional: Investigate Audit Logs
- Task 4: Subscribe to Event Notifications
- Optional: Get Network Insights with Reports

Optional

- Discovery 10: Optional: Additional Tasks
- Optional: Platform API Overview
- Optional: Maglev CLI Overview
- Optional: Configure Role Based Access Control (RBAC)

Advanced Topics

Discovery 11: SD-Access Transit Fabrics

- Task 1: Discover and Enable the Branch Fabric-Site
- Task 2: Setup the SDA Transit Site
- Task 3: Configure Fabric Roles in the Branch Site (Fabric In A Box)
- Task 4: Test the SD-Access Transit Network

Discovery 12: SD-Access Migration (Brownfield)

- Layer-2 Border Handoff
- Discovery 13: Miscellaneous
- AWS Integration
- Perform a Configuration Backup of DNA Center
- Multicast - Headend Replication
- Multicast - Native Multicast

Appendix

- Additional Resources
- IOS-XE Command Reference
- DNA Center Installation Procedure

About Fast Lane

Fast Lane is a global, award-winning specialist in technology and business training as well as consulting services for digital transformation. As the only global partner of the three cloud hyperscalers- Microsoft, AWS and Google- and partner of 30 other leading IT vendors, Fast Lane offers qualification solutions and professional services that can be scaled as needed. More than 4,000 experienced Fast Lane professionals train and advise customers in organizations of all sizes in 90 countries worldwide in the areas of cloud, artificial intelligence, cyber security, software development, wireless and mobility, modern workplace, as well as management and leadership skills, IT and project management.

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