
Transforming to a Cisco Intent-Based Network

DURATION: 5 DAYS

COURSE CODE: IBNTRN

FORMAT: LECTURE/LAB

COURSE DESCRIPTION

Transforming to a Cisco Intent-Based Network (IBNTRN) is a 5-day instructor-led, virtual instructor-led, or e-learning course that teaches students how to successfully deploy Cisco SD-Access solution within their greenfield or brownfield Enterprise networks.

The course will discuss how Cisco SD-Access fits into Cisco Digital Network Architecture (DNA). The course covers Cisco SD-Access fundamentals, provisioning, policies, wireless integration, and border operations. Other topics covered by the course include: operating, managing, and integrating Cisco DNA Center, and understanding programmable network infrastructure.

WHO SHOULD ATTEND

System engineers
Network engineers
Technical architects
Technical support personnel
Channel partners and resellers

PREREQUISITES

It is recommended, but not required, to have the following skills and knowledge before attending this course:

- Understanding of network routing and switching principles equivalent to a CCNP Enterprise level
- Understanding of Cisco Unified Wireless Network technologies
- Understanding of Cisco ISE, 802.1x, and Cisco TrustSec
- Understanding of segmentation technologies such as VLAN sand VRFs
- Basic understanding of overlay technologies such as VXLAN
- Basic understanding of Locator ID Separation Protocol (LISP)

Here are recommended Cisco learning offerings that may help students meet these prerequisites:

- Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR)
- Configuring Cisco ISE Essentials for SD-Access (ISESDA)
- Understanding Cisco Wireless Foundations (WLFNDU)

LEARNING OBJECTIVES

The goal of this course is to learn how to deploy Cisco SD-Access solution within greenfield or brownfield Enterprise networks and how to operate, manage, and integrate Cisco DNA Center.

Identify the Cisco Digital Network Architecture solution by describing the vision, strategy, general concepts, and components

Describe the DNA Center design application, hierarchical network design, and basic network settings, and describe the integration of Cisco DNA Center with Cisco ISE for Automation and Assurance

Describe the DNA Center Inventory and the available mechanisms for discovering and adding network devices and explore the device compatibility with Cisco DNA Center and SD-Access

Describe the Cisco DNA Center automation features such as configuration templates, software image maintenance, and PnP device onboarding

Explore the Cisco DNA Center user interface, the available workflows for onboarding devices, and how to design and manage a network

Introduce Cisco SD-Access, describe the different node types in the fabric and the two-level segmentation provided by the solution, and take a deep dive into the control and data plane protocols used in Cisco SD-Access

Describe the DNA Center workflow for deploying Cisco SD-Access, defining all the prerequisite network settings and profiles, defining the required policies, creating fabric domains and sites and provisioning fabric nodes

Create and manage fabric domains and sites, provision fabric devices, and onboard your endpoints in a single site or distributed fabric campus network

Describe the feature available for automating and monitoring wireless networks with Cisco DNA Center and describe the available deployment models with their benefits and limitation, such as wireless OTT and SD-Access Wireless

Describe the Cisco SD-Access Extension for IoT solution, its architecture and components, and the benefits and limitations of the solution

Discover, deploy, and operate legacy brownfield and fabric enabled wireless network with Cisco DNA Center

Describe the use cases and migration scenarios for migrating users from traditional campus to SD-Access networks

Describe the support for Multicast traffic in Cisco SD-Access Fabric networks

Describe the available integrations in Cisco DNA Center and their use cases and benefits

Deploy Layer 2 borders for migrating existing users into the SD-Access fabric, deploy multicast traffic support in the fabric, and integrate Cisco DNA Center with external services such as Cisco StealthWatch and Cisco APIC

Introduce programmable network infrastructure, and enterprise network programmability with Cisco IOS-XE and Cisco DNA Center APIs

Describe the tools and processors available for operating, diagnosing, and troubleshooting Cisco DNA Center and the DNA infrastructure

Explore Cisco DNA Center Intent and Assurance APIs

COURSE OUTLINE

1. Introducing Cisco DNA Architecture

- IBN Introduction
- Cisco DNA Introduction
- Cisco DNA Center Automation Overview
- Cisco DNA Center Assurance Overview
- Cisco DNA Center Platform Overview

2. Cisco DNA Center Design

- Hierarchical Network Design
- Integration of Cisco DNA Center and Cisco ISE

3. Cisco DNA Center Inventory

- Device Inventory Overview
- Device Compatibility Overview

4. Cisco DNA Center Automation

- Configuration Management Overview
- Onboarding of Network Devices
- Cisco DNA Center Software Image Management Overview

5. Explore Cisco DNA Center and Automate Network Changes

- Discovery 1: Explore Cisco DNA Center and Automate Network Changes

6. Introducing Cisco Software-Defined Access

- Cisco SD-Access Overview
- Cisco SD-Access Fabric Networking
- Cisco SD-Access Fabric Nodes
- Cisco SD-Access Packet and Event Flows
- Cisco SD-Access Distributed Campus

7. Deploying Cisco Software-Defined Access

- Cisco SD-Access Deployment Workflow Overview
- Deploying Cisco SD-Access- Policy Workflow
- Deploying Cisco SD-Access- Provision Workflow
- Deploying the Fusion Router

8. Deploy Wired Fabric Networks with Cisco DNA Center

- Discovery 2: Deploy Wired Fabric Networks with Cisco DNA Center

9. Cisco SD-Access for Wireless

- Wireless SD-Access Overview
- Implementing Legacy Wireless Networks
- Implementing Fabric Enabled Wireless Networks
- Guest Wireless Access Overview
- SD-Access Wireless HA Overview

10. Cisco SD-Access Extension for IoT

- Deploying Cisco SD-Access Extension for IoT

11. Deploy Brownfield and Fabric Wireless Network with Cisco DNA Center

- Discovery 3: Deploy Brownfield and Fabric Wireless Network with Cisco DNA Center

12. Migrating to Cisco SD-Access

- Cisco SD-Access Migration Overview
- Migrate to Cisco SD-Access Fabric

13. Cisco SD-Access Multicast

- Cisco SD-Access Multicast Overview
- Deploying Cisco SD-Access Multicast

14. Integrating Cisco DNA Center

- Cisco DNA Center Integration Overview
- Cisco DNA Center Multi-vendor SDK Overview

15. Deploy SD-Access Layer 2 Borders and Multicast and Integrate Cisco DNA Center with External Services or Applications

- Discovery 4: Deploy SD-Access Layer 2 Borders and Multicast and Integrate Cisco DNA Center with External Services or Applications

16. Understanding Programmable Network Infrastructure

- Enterprise Network Programmability
- Cisco DNA Center REST API Overview

17. Operating and Managing Cisco DNA Infrastructure

- Diagnosing Cisco DNA Center System-Level Issues
- Troubleshooting LAN Automation
- Verifying Group-Based Access Control
- Verifying Reachability with SD-Access Fabric
- Troubleshooting Route Redistribution Between BGP and LISP

18. Test Drive Cisco DNA Center APIs

- Discovery 5: Test Drive Cisco DNA Center APIs