

CSDAW

Cisco SD – Access Workshop

Course Overview:

This workshop is an introduction to Cisco SD – Access and DNA Center. Learn concepts, features, benefits, terminology and the way this approach innovates common administrative tasks on today's networks.

Prerequisites:

The knowledge and skills that the learner should have before attending this course are as follows:

- Knowledge level equivalent to Cisco CCNA Routing & Switching
- Basic knowledge of Software Defined Networks
- Basic knowledge and experience with Cisco IOS, IOS XE and CLI

Course Objectives:

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

- Differentiate and explain each of the building blocks of SD – Access Solution
- Explain the concepts of Fabric and the different node types that conform it (Fabric Edge Nodes, control plane nodes, border Nodes).
- Describe the role of the LISP in control Plane and VXLAN in Data Plane for SD access Solution
- Understand the role of DNA Center as solution orchestrator and intelligent GUI
- Be familiar with work flow approach in DNA Center and its 4 Steps: Design, Policy, Provision and Assurance

Course Outline:

Module 1: Introductions to Cisco Software Defined Access (SD - Access)

- SD-Access Overview, SD-Access Benefits, SD-Access Key Concepts, SD-Access Main Components
- Campus Fabric
- Wired
- Wireless
- Nodes
- Edge
- Border
- Control Plane
- DNA Controller
- ISE (Policy)
- NDP (Analytics and Assurance)

Module 2: SD – Access Campus Fabric

- The concept of Fabric
- Node types
- Fabric Edge Nodes
- Control Plane Nodes
- Border Nodes
- LISP as protocol for control Plane
- VXLAN as protocol for Data Plane
- Concept of Virtual Network
- Fabric – enabled WLAN
- Fabric Enabled WLC
- Fabric Enables AP's

Module 3: DNA Center and Workflow for SD-Access

- Introduction to DNA Center
- Workflow for SD Access in DNA Center
- Design Step overview
- Policy Step Overview
- Provision Step Overview
- Assurance Step Overview
- Integration with Cisco ISE for Policy Enforcement
- Integration with Cisco NDP for Analytics and Assurance
- Relationship with APIC – EM controller

Module 4: DNA Center Workflow First Step – Design

- Creating Enterprise and Sites Hierarchy
- Discuss and demonstrate General network settings
- Loading maps into GUI
- IP address Administration
- Administering Software images
- Network device profiles

Module 5: DNA Center Workflow Second Step – Policy

- 2-level Hierarchy
- Macro Level: Virtual Network (VN)
- Micro Level scalable Group
- Policy types
- Access Policy
- Access Control Policy
- Traffic Copy Policy
- ISE Integration with DNA Center
- Cross domain policies

Module 6: DNA Center Workflow Third Step – Provision

- Device Onboarding
- Discovering Devices
- Assigning Devices to a site
- Provisioning device with profiles
- Fabric Domains
- Understanding Fabric Domains
- Using Default LAN fabric Domains
- Creating Additional Fabric Domains
- Adding control planes
- Adding border nodes

Module 7: DNA Center Workflow fourth Step – Assurance

- Introductions to analytics
- NDP Fundamentals
- Overview of DNA Assurance
- Components of DNA Assurance
- DNA Center Assurance Dashboard

Course Outline (cont.):

Module 8: Implementing WLAN in SD – Access Solution

- WLAN Integration Strategies in SD-Access Fabric
- CUWN Wireless Over the Top (OTT)
- SD Access wireless (Fabric enabled WLC and AP)
- SD-Access Wireless Architecture
- Control Plane: LISP and WLC
- Data Plane: VXLAN
- Policy Plan and segmentation: VN and SGT
- Sample Design for SD – Access Wireless

Module 9 Campus Fabric External Connectivity for SD – Access

- Enterprise Sample Topology for SD – Access
- Role of Border nodes
- Types of Border Nodes
- Border
- Default Border
- Single Border vs Multiple Border
- Collocated Border and Control Plane Nodes
- Distributed (Separated) border and Control Plane Nodes