

Course Outline of Cisco SDA & ISE Integration

Module 1: Cisco ISE Integration for SD Access

- Introduction to Cisco ISE
- Using Cisco ISE as a Network Access Policy Engine
- Introducing Cisco ISE Deployment Models
- Introducing 802.1x and MAB Access: Wired and Wireless
- Introducing Identity Management
- Configuring Certificate Service
- Introducing Cisco ISE Policy
- Configuring Cisco ISE Policy Sets
- Introduction to Cisco TrustSec for segmentation
- The Concept of Security Group (SG) and Security Group Tag (SGT)
- Cisco TrustSec Phases - Classification, Propagation, Enforcement
- Methods for Classification - Static Classification, Dynamic Classification
- Methods for SGT tag propagation - Inline Tagging, SGT Exchange Protocol (SXP)

Module 2: Introduction to Cisco's Software Defined Access (SD-Access)

- SD-Access Overview
- SD-Access Benefits
- SD-Access Key Concepts
- SD-Access Main Components - Campus Fabric, Wired and Wireless
- Nodes - Edge, Border, Control Plane
- DNA Controller (APIC-EM Controller)
- Introducing Cisco ISE 2.x px
- 2-level Hierarchy - Macro Level: Virtual Network (VN), Micro Level: Scalable Group (SG)

Module 3: DNA Center Workflow

- DNA Center Refresher
- Creating Enterprise and Sites Hierarchy

- Configuring General Network Settings
- Loading maps into the GUI
- IP Address Management
- Software Image Management
- Network Device Profiles
- Introduction to Analytics
- NDP Fundamentals
- Overview of DNA Assurance

Module 4: SD-Access Campus Fabric

- The concept of Fabric
- Node types (Breakdown)
- LISP as protocol for Control Plane
- VXLAN as protocol for Data Plane

Module 5: 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 Designs
- Collocated Border and Control Plane Nodes
- Distributed (separated) Border and Control Plane Nodes

Module 6: Implementing WLAN in SD-Access Solution

- WLAN Integration Strategies in SD-Access Fabric - Fabric CUWN, SD-Access Wireless (Fabric enabled WLC and AP)
- SD-Access Wireless Architecture - Control Plane: LISP and WLC, Data Plane: VXLAN, Policy Plane and Segmentation: VN and SGT
- Sample Design for SD-Access Wireless

Labs

- Lab 1: ISE basic setup and Navigating GUI
- Lab 2: Configuring TrustSec in ISE
- Lab 3: Connecting and getting familiar with DNA Center GUI

- Lab 4: Performing SD-Access Design Step in DNA Center
- Lab 5: Integrating ISE and DNA Center for Policy Deployment and Enforcement
- Lab 6: Performing SD-Access Policy Step in DNA Center and ISE
- Lab 7: Performing SD-Access Provision Step in DNA Center
- Lab 8: Performing SD-Access Assurance Step in DNA Center
- Lab 9: Integrating WLAN services through SD-Wireless architecture
- Lab 10: Integrate ISE with Active Directory
- Lab 11: Achieving External Connectivity to remote locations through Border Node