CISCO TRAINING

Software Defined Access and ISE Integration for Policy Deployment and Enforcement

Learn to deploy and enforce network policies using Cisco SDA and ISE for secure, automated access.

DURATION
16 hours

LEVEL
Intermediate

FORMAT
Instructor-Led

- Globally Recognized Certification
- Expert-Led Hands-On Training
- Flexible Scheduling

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COURSE OVERVIEW

This intermediate-level course dives deep into the architecture and practical implementation of Cisco Software-Defined Access (SDA) integrated with Cisco Identity Services Engine (ISE). Participants will gain a comprehensive understanding of how to design, deploy, and manage a secure, policy-driven network environment. The curriculum emphasizes leveraging SDA's automation and segmentation capabilities in conjunction with ISE's robust authentication, authorization, and accounting (AAA) framework to enforce granular network access policies, ensuring compliance and enhancing security postures across diverse organizational infrastructures. You will learn to streamline network operations while significantly improving security. The course covers everything from understanding the foundational components of SDA and ISE to configuring advanced policy enforcement scenarios. By mastering these technologies, network professionals can transform traditional network management into a highly automated, secure, and scalable system, prepared for modern enterprise demands. The practical skills acquired are directly applicable to real-world network challenges, making graduates highly valuable in organizations adopting advanced network automation and security solutions. This specialized training is crucial for IT professionals looking to advance their expertise in next-generation networking and cybersecurity.

Duration	16 hours
Level	Intermediate
Vendor	Cisco

COURSE CURRICULUM

01 Module 1: Introduction to Software-Defined Access (SDA) and Identity Services Engine (ISE)

- Overview of Cisco Digital Network Architecture (DNA) and SDA
- Key concepts of network virtualization and segmentation in SDA
- Introduction to Cisco Identity Services Engine (ISE) and its role in policy
- Understanding AAA (Authentication, Authorization, Accounting) principles
- SDA fabric components: Underlay, Overlay, Control Plane, Data Plane, Policy Plane
- Overview of Policy Enforcement in SDA with ISE

02 Module 2: SDA Fabric Deployment and Core Components

- Cisco DNA Center architecture and setup for SDA
- Configuring network devices for SDA fabric roles (Border, Control, Edge nodes)
- Underlay network design and configuration considerations
- Building the SDA fabric: Host onboarding, virtual networks (VNs), and SGTs
- Understanding routing and forwarding within the SDA fabric
- Troubleshooting basic SDA fabric issues

03 Module 3: Cisco ISE Fundamentals for SDA Integration

- ISE deployment models and persona overview
- Configuring network devices for AAA with ISE (NAD configuration)
- Identity sources and user/endpoint provisioning in ISE
- Authentication policies: MAB, 802.1X (wired and wireless)
- Authorization policies: Policy Sets, authorization rules, and profiles
- Understanding policy elements: Conditions, results, and exceptions

04 Module 4: Integrating ISE with Cisco SDA for Policy Enforcement

- Configuring Cisco DNA Center for ISE integration
- Synchronizing users, groups, and SGTs between ISE and DNA Center

- Creating and assigning Scalable Group Tags (SGTs) for micro-segmentation
- Implementing policy enforcement with Security Group Access Control Lists (SGACLs)
- Applying attribute-based authorization for dynamic policy assignment
- Monitoring and validating policy enforcement in SDA via DNA Center and ISE

05 Module 5: Advanced SDA and ISE Policy Scenarios

- Guest access and BYOD policy implementation with SDA and ISE
- Profiling endpoints for granular access control
- Implementing macro and micro-segmentation strategies
- Securing IoT devices in an SDA environment
- Advanced troubleshooting of policy enforcement issues
- Reporting and auditing network access policies

CAREER PATHWAYS

Graduates of this program are prepared for the following roles:

> **Cisco Network Automation Engineer specializing in SDA deployments**

> **Enterprise Network Security Architect focused on policy enforcement with ISE**

> **Senior Network Operations Analyst responsible for secure access and segmentation**

FREQUENTLY ASKED QUESTIONS

Q: What specific skills will I gain that are crucial for managing modern enterprise networks after completing this course?

Upon completion, you will possess critical skills in designing and implementing software-defined network segmentation, deploying advanced network access control policies using Cisco ISE, and automating network provisioning with Cisco SDA. You'll be proficient in applying attribute-based authorization, configuring Scalable Group Tags (SGTs) for micro-segmentation, and troubleshooting complex policy enforcement scenarios in a converged wired and wireless environment. These skills are essential for enhancing network security, compliance, and operational efficiency in large-scale organizations.

Q: What are the recommended prerequisites for effectively undertaking the 'Software Defined Access and ISE Integration' course?

To get the most out of this course, participants should have a solid understanding of fundamental networking concepts, including routing and switching protocols (e.g., OSPF, EIGRP, BGP), VLANs, and basic wireless networking principles. Familiarity with general security concepts and prior exposure to Cisco IOS CLI for device configuration is highly recommended. While not strictly required, a basic understanding of network automation concepts or experience with Cisco DNA Center or ISE would be beneficial.

Q: How does this course directly contribute to enhancing network security and simplifying network management in a real-world enterprise setting?

This course directly addresses common enterprise challenges by teaching you how to centralize network policy management and enforce zero-trust principles using SDA and ISE. You will learn to eliminate manual configuration errors through automation, drastically reduce the attack surface via micro-segmentation, and dynamically adapt network access based on user and device context. This approach not only boosts your organization's security posture against internal and

external threats but also significantly simplifies network provisioning, policy updates, and compliance auditing, transforming complex network operations into a streamlined, secure, and agile process.

ABOUT COMPUTER PRIDE

East Africa's Premier IT Training Center

With over 15 years of excellence, Computer Pride delivers globally recognized certification programs from leading technology vendors. Located on Kenyatta Avenue in Nairobi's CBD, our state-of-the-art facilities and expert instructors have empowered thousands of professionals across East Africa.

15+	10,000+	50+
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READY TO ENROL?

Take the next step in your technology career.

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