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# Installing, Configuring, Monitoring, and Troubleshooting Cisco SD-Access (CT-SDA)

***WHERE GREAT TRAINING HAPPENS EVERYDAY!***

# Installing, Configuring, Monitoring, and Troubleshooting Cisco SD-Access (CT-SDA)

## Course Duration

5 Days

## Course Price

$4,495.00
TBA CLCs

## Methods of Delivery

In-Person ILT
Virtual ILT
Onsite ILT

## About this Class

In this 5-day In-Depth Cisco SD-Access course, provides a comprehensive, hands-on exploration of Cisco Catalyst Center and Intent-Based Networking within enterprise campus environments. Students design, deploy, secure, automate, and troubleshoot a full fabric architecture using real-world implementation workflows. The course covers underlay and overlay design, LISP control-plane operations, VXLAN data-plane forwarding, segmentation using Virtual Networks and Scalable Group Tags, fabric wireless integration, multicast, distributed campus design, external connectivity, assurance analytics, and API-driven programmability. Through structured labs and production-based scenarios, participants gain the skills required to deploy scalable, policy-driven, resilient campus networks aligned with modern security and operational requirements.

# Installing, Configuring, Monitoring, and Troubleshooting Cisco SD-Access (CT-SDA)

## How you will benefit

This class will help you:

- This course delivers practical, production-ready skills — not just configuration exposure.
- Design scalable underlay and overlay architectures using IS-IS, LISP, and VXLAN
- Deploy complete SD-Access fabrics, including Edge, Border, and Control Plane nodes
- Implement macro segmentation with Virtual Networks (VRFs)
- Enforce micro segmentation using Scalable Group Tags (SGTs) and TrustSec
- Integrate Cisco ISE for identity-driven policy and dynamic onboarding
- Configure Fabric-Enabled Wireless with consistent wired and wireless enforcement
- Design external connectivity using IP Transit, Fusion routers, SD-WAN transit, and WAN integration
- Deploy multicast within fabric environments
- Migrate legacy Layer 2 environments using L2 Border strategies
- Troubleshoot underlay, overlay, policy, wireless, multicast, and control-plane issues
- Use Cisco Catalyst Center Assurance for health monitoring, path trace, and root cause analysis
- Automate fabric provisioning and policy using REST APIs
- By the end of the course, you will confidently deploy and support scalable, secure, policy-driven campus networks in real-world enterprise environments.

## Why Attend with Current Technologies CLC

- Our Instructors are the top 10% rated by Cisco
- Our Lab has a dedicated 1 Gig Fiber Connection for our Labs
- Our Labs run up to Date Code for all our courses

# Installing, Configuring, Monitoring, and Troubleshooting Cisco SD-Access (CT-SDA)

## When you attend with CTCLC, you receive:

- Instruction from experienced enterprise engineers actively deploying Cisco solutions
- Real-world lab scenarios, including distributed campus and multi-site designs
- Structured troubleshooting exercises where fabrics are intentionally broken and restored
- Deep coverage of border design, fusion integration, WAN breakout, and external services
- Advanced Cisco ISE integration and policy troubleshooting workflows
- API-based automation labs reflecting modern Infrastructure-as-Code practices
- Design guidance for high availability, redundancy, and scaling
- Our focus is operational mastery — ensuring you understand how SD-Access behaves in production environments under load, failure, and migration scenarios.

## Who Should Attend

The job roles best suited to the material in this course are:

- This course is designed for experienced networking professionals responsible for enterprise campus design, automation, and segmentation.
- Ideal attendees include:
- Network Administrators
- Enterprise Network Engineers
- Network Architects
- Infrastructure Engineers deploying Cisco Catalyst Center
- Security Engineers integrating Cisco ISE
- NOC Engineers supporting SD-Access fabrics
- Consulting Engineers implementing distributed campus designs
- IT professionals transitioning from traditional VLAN-based networks to intent-based architectures
- IT Managers looking to understand SD-Access Fundamentals and Fabrics

# Installing, Configuring, Monitoring, and Troubleshooting Cisco SD-Access (CT-SDA)

## Course Outline

### Module 1: Introduction to Cisco CatalystCenter (v3:1:5)

#### Lesson 1: Platform Evolution and Architecture Positioning

- Transition from Cisco DNA Center branding to Catalyst Center
- Alignment with Cisco's Intent-Based Networking (IBN) strategy
- Centralized control for campus and branch fabrics
- Controller-based architecture vs traditional CLI-based management
- Integration point for SD-Access, SD-WAN, and Assurance
- Role in policy abstraction and automation workflows

#### Lesson 2: System Architecture and Microservices

- Modular microservices architecture
- Northbound REST APIs for orchestration platforms
- Southbound protocols (NETCONF, SNMP, SSH, HTTPS)
- Internal services bus for inter-process communication
- Elasticsearch for telemetry indexing
- Cassandra/Postgres databases for state persistence

#### Lesson 3: Appliance Models and Sizing

- Physical appliance options (small, medium, large)
- Throughput and device-scale guidance
- VM deployment on ESXi
- CPU core allocation requirements
- RAM sizing recommendations
- Storage IOPS considerations

#### Lesson 4: Deployment Models

- Single-node deployment (lab/POC)
- 3-node cluster design
- Horizontal scaling model
- Cluster quorum and resiliency
- Inter-node communication ports
- Backup and restore architecture

# Installing, Configuring, Monitoring, and Troubleshooting Cisco SD-Access (CT-SDA)

## Course Outline

### Lesson 5: Installation and Initial Configuration

- Pre-install checklist (DNS, NTP, certificates)
- ISO-based installation workflow
- Maglev configuration wizard
- Admin credential creation
- Smart Licensing registration
- System patching and upgrade lifecycle

### Lesson 6: Core Functional Pillars

- Design workflows
- Policy abstraction
- Provision automation
- Assurance analytics
- Image lifecycle management
- Role-based access control (RBAC)

### Module 2: Introduction to Cisco SD-Access

### Lesson 1: Need for SD-Access

- Traditional Network Challenges
- How SDA simplifies the network
- SDA zero-trust workplace
- Controller-based orchestration

### Lesson 2: Fabric Architecture Fundamentals

- Underlay IP transport
- Overlay VXLAN encapsulation
- LISP control-plane separation

# Installing, Configuring, Monitoring, and Troubleshooting Cisco SD-Access (CT-SDA)

## Course Outline

### Lesson 3: SD-Access Roles

- Catalyst Center controller
- Cisco ISE for identity services
- Fabric edge nodes
- Fabric control-plane nodes
- Fabric border nodes
- Fabric wireless integration
- Extended Nodes
- Transit Control Plane node

### Lesson 4: Fabric Construct

- Virtual Networks –Layer 3 and Layer 2
- Layer 3 and Layer 2 handoff
- Security Group Tag
- Host Pools
- Anycast gateway

### Lesson 5: Fabric Fundamentals – Control Plane

- LISP introduction and fundamentals
- Host Registration and resolution
- LISP in SDA
- Advantages of using LISP

### Lesson 6: Fabric Fundamentals – Data Plane

- VXLAN data-plane encapsulation
- VXLAN header
- VXLAN in SDA

# Installing, Configuring, Monitoring, and Troubleshooting Cisco SD-Access (CT-SDA)

## Course Outline

### Lesson 7: Fabric Fundamentals – Policy Plane

- Security Group Tag
- Macro and micro segmentation
- Access Control Policies
- Group-Based Access Control Policy

### Lesson 8: Cisco SD-Access Use Cases

- Different use cases with benefits

### Module 3: SDA – Discovery and Design

### Lesson 1: Device Discovery

- SNMP-based discovery
- CLI-based collection
- NETCONF-based provisioning
- Credential profiles
- Inventory validation
- Reachability testing

### Lesson 2: LAN Automation

- Seed device designation
- DHCP-based PnP onboarding
- Automated IS-IS configuration
- Loopback provisioning
- IP pool consumption
- Underlay validation

### Lesson 3: Network Design Models

- Greenfield deployment
- Brownfield migration
- Underlay protocol selection (IS-IS)
- MTU planning

# Installing, Configuring, Monitoring, and Troubleshooting Cisco SD-Access (CT-SDA)

## Course Outline

### Cont. Lesson 3

- Loopback allocation
- IP pool segmentation

### Lesson 4: Site Hierarchy

- Global site configuration
- Area definitions
- Building segmentation
- Floor-level mapping
- Policy inheritance
- Location-based analytics

### Lesson 5: IP Address Management

- Internal IP pool creation
- Underlay vs overlay pools
- DHCP server integration
- IPAM external integration
- Address reservation logic
- Pool scaling considerations

### Lesson 6: Software Image Management

- Golden image designation
- Image compliance monitoring
- Upgrade scheduling
- Maintenance windows
- Device compatibility checks
- Rollback procedures

# Installing, Configuring, Monitoring, and Troubleshooting Cisco SD-Access (CT-SDA)

## Course Outline

### Module 4: SDA – Policy

#### Lesson 1: Virtual Networks (Macro Segmentation)

- VRF instantiation
- Business unit isolation
- Traffic separation
- Inter-VN communication controls
- External VRF handoff
- Routing table segmentation

#### Lesson 2: Scalable Groups (Micro Segmentation)

- SGT assignment
- Role-based classification
- Endpoint identity mapping
- Tag propagation
- TrustSec enforcement
- Policy scalability

#### Lesson 3: Policy Matrix Model

- SG-to-SG contracts
- Allow/Deny semantics
- Directional enforcement
- Logging policies
- Contract granularity
- Enforcement location

#### Lesson 4: Access Control Integration

- 802:1X authentication
- MAB fallback
- Dynamic SGT assignment
- ISE authorization profiles

# Installing, Configuring, Monitoring, and Troubleshooting Cisco SD-Access (CT-SDA)

## Course Outline

### Cont. Lesson 4

- RADIUS communication
- Endpoint profiling

### Lesson 5: Application Policy

- NBAR2 classification
- QoS marking
- DSCP rewriting
- Application prioritization
- Traffic shaping
- Business application SLAs

### Lesson 6: Enforcement Mechanisms

- Edge node enforcement
- Border enforcement
- Wireless enforcement
- SGT inline tagging
- VXLAN policy metadata
- Policy audit verification

### Module 5: SDA – Provision

### Lesson 1: Device Role Assignment

- Edge designation
- Border role selection
- Control-plane node assignment
- Fabric site association
- Device personality conversion
- Validation checks

# Installing, Configuring, Monitoring, and Troubleshooting Cisco SD-Access (CT-SDA)

## Course Outline

### Lesson 2: Template-Based Provisioning

- Day-0 templates
- Day-N templates
- Variable binding
- Template version control
- Compliance enforcement
- Rollback support

### Lesson 3: Fabric Enablement

- Underlay validation
- Overlay configuration push
- LISP configuration
- VXLAN enablement
- Anycast gateway provisioning
- Policy activation

### Lesson 4: Device Validation

- Reachability checks
- Control-plane adjacency validation
- VXLAN tunnel verification
- SGT enforcement validation
- Telemetry streaming validation
- Fabric membership confirmation

## Module 6: SDA – Fabric Provisioning

### Lesson 1: Fabric Domains

- Logical grouping of sites
- Shared control-plane services
- Policy scope definition

# Installing, Configuring, Monitoring, and Troubleshooting Cisco SD-Access (CT-SDA)

## Course Outline

### Cont. Lesson 1

- Domain scaling limits
- Resource allocation
- Inter-site communication

### Lesson 2: Adding Fabric Nodes

- Edge onboarding workflow
- Border node configuration
- Control-plane deployment
- Loopback assignment
- Anycast gateway enablement
- Policy push validation

### Lesson 3: IP Transit Options

- IP-based transit
- SD-Access transit
- Transit control-plane role
- Route redistribution design
- Underlay reachability
- Scaling implications

### Lesson 4: External Connectivity

- Fusion router integration
- BGP/OSPF redistribution
- VRF handoff
- NAT considerations
- Internet breakout design
- DMZ integration

# Installing, Configuring, Monitoring, and Troubleshooting Cisco SD-Access (CT-SDA)

## Course Outline

### Lesson 5: Micro and Macro Segmentation

- VRF isolation
- SGT contracts
- Identity mapping
- Policy enforcement location
- Contract logging
- Audit validation

### Lesson 6: ISE Dynamic Onboarding

- Endpoint profiling
- Posture validation
- Dynamic SGT mapping
- Authorization policies
- Certificate trust chain
- pxGrid integration

### Module 7: SDA – Fabric External Connectivity

### Lesson 1: Border Node Design

- Single vs dual border
- Active/active deployment
- ECMP considerations
- High availability design
- North-south flow optimization
- Scaling thresholds

### Lesson 2: LISP Pub/Sub Model

- Map-server role
- Map-resolver role
- EID-to-RLOC mapping
- Control-plane scaling

# Installing, Configuring, Monitoring, and Troubleshooting Cisco SD-Access (CT-SDA)

## Course Outline

### Cont. Lesson 2

- Map-server role
- Map-resolver role
- EID-to-RLOC mapping
- Control-plane scaling
- Route convergence
- Failure detection mechanisms

### Lesson 3: Fusion Router Role

- External VRF mapping
- Policy enforcement boundary
- Route leaking
- Firewall integration
- Service insertion
- Legacy interconnect

### Lesson 4: High Availability

- Dual control-plane
- Border redundancy
- Underlay ECMP
- Overlay failover
- ISE redundancy
- Controller clustering

### Lesson 5: Traffic Engineering

- Path optimization
- QoS enforcement
- Policy-based routing
- WAN breakout design
- Redundant transit
- Application prioritization

# Installing, Configuring, Monitoring, and Troubleshooting Cisco SD-Access (CT-SDA)

## Course Outline

### Lesson 6: External Service Integration

- Internet breakout
- MPLS integration
- SD-WAN interconnect
- Firewall insertion
- IDS/IPS integration
- Cloud connectivity

### Module 8: Fabric-Enabled Wireless

### Lesson 1: Wireless Challenges

- Central tunneling bottlenecks
- Policy inconsistency
- Roaming complexity
- Guest isolation issues
- Latency concerns
- Operational overhead

### Lesson 2: Fabric Wireless Architecture

- WLC fabric integration
- VXLAN encapsulation
- Control-plane mapping
- AP integration
- Wireless SGT tagging
- SSID-to-VN binding

### Lesson 3: Policy Consistency

- Unified SGT enforcement
- Wired/wireless parity
- Dynamic identity mapping
- Guest policy isolation
- BYOD onboarding
- Role-based access

# Installing, Configuring, Monitoring, and Troubleshooting Cisco SD-Access (CT-SDA)

## Course Outline

### Lesson 4: Traffic Flow

- Local breakout
- Central breakout
- East-west wireless flow
- Roaming within VN
- Roaming across sites
- Mobility anchoring

### Lesson 5: Deployment

- WLC configuration
- SSID creation
- Fabric enablement
- AP placement
- RF tuning
- Policy validation

### Lesson 6: Troubleshooting

- Client onboarding failures
- SGT misassignment
- VXLAN tunnel issues
- WLC communication faults
- Roaming failures
- Assurance validation

## Module 9: SD-Access Multicast

### Lesson 1: Multicast Fundamentals

- PIM operation
- RP selection
- IGMP snooping
- Source trees
- Shared trees
- Multicast scaling

# Installing, Configuring, Monitoring, and Troubleshooting Cisco SD-Access (CT-SDA)

## Course Outline

### Lesson 2: Fabric Multicast Architecture

- VXLAN replication
- LISP control-plane integration
- Multicast group mapping
- Overlay replication
- Underlay PIM requirements
- RP placement

### Lesson 3: Deployment Steps

- Enable multicast in fabric
- Configure RP
- Assign group ranges
- Validate replication
- Monitor traffic
- Test failover

### Lesson 4: Verification

- PIM neighbor checks
- Multicast routing table
- LISP mapping
- VXLAN encapsulation validation
- RP reachability
- Client subscription checks

### Lesson 5: Design Considerations

- Scale planning
- RP redundancy
- Traffic engineering
- WAN multicast
- Border replication
- Control-plane scaling

# Installing, Configuring, Monitoring, and Troubleshooting Cisco SD-Access (CT-SDA)

## Course Outline

### Lesson 6: Troubleshooting

- RP misconfiguration
- Overlay replication failure
- IGMP join issues
- LISP mapping failure
- Underlay adjacency failure
- Border multicast filtering

### Module 10: L2 Border

### Lesson 1: L2 Border Fundamentals

- VLAN extension
- L2 flooding domain
- ARP handling
- VXLAN bridging
- Legacy adjacency
- STP considerations

### Lesson 2: Migration Strategies

- Phased VLAN migration
- Hybrid coexistence
- Incremental VN mapping
- Brownfield integration
- Downtime minimization
- Rollback strategy

### Lesson 3: Traffic Flow Considerations

- East-west forwarding
- North-south routing
- ARP suppression
- MAC learning
- Broadcast containment
- Loop avoidance

# Installing, Configuring, Monitoring, and Troubleshooting Cisco SD-Access (CT-SDA)

## Course Outline

### Lesson 4: Design Constraints

- Scale limitations
- VLAN mapping rules
- Policy enforcement impact
- Border redundancy
- L2 loop prevention
- Failure domains

### Lesson 5: Operational Verification

- MAC table validation
- VXLAN bridge checks
- ARP table verification
- Policy validation
- Path trace testing
- Endpoint mobility testing

### Lesson 6: High Availability

- Dual L2 borders
- ECMP uplinks
- Rapid convergence
- Redundant links
- Anycast gateway stability
- Failure testing

## Module 11: Distributed Campus Design

### Lesson 1: Distributed Campus Architecture

- Multi-site fabrics
- Centralized policy
- Distributed control-plane
- Transit integration
- Policy consistency
- Scale-out design

# Installing, Configuring, Monitoring, and Troubleshooting Cisco SD-Access (CT-SDA)

## Course Outline

### Lesson 2: Transit Types

- IP-based transit
- SD-Access transit
- SD-WAN transit
- BGP integration
- Route advertisement
- Failure detection

### Lesson 3: Fabric Domains

- Policy scope
- Site isolation
- Control-plane sharing
- Resource allocation
- Domain scaling
- Inter-domain connectivity

### Lesson 4: WAN Integration

- MPLS handoff
- Internet breakout
- Dual WAN design
- QoS preservation
- Route summarization
- SLA monitoring

### Lesson 5: Fabric-in-a-Box

- Collapsed control-plane
- Single-node fabric
- Branch deployment
- Small campus design
- Scaling constraints
- Deployment workflow

# Installing, Configuring, Monitoring, and Troubleshooting Cisco SD-Access (CT-SDA)

## Course Outline

### Lesson 6: High Availability in Distributed Campus

- Redundant borders
- Dual transit
- ISE redundancy
- Controller clustering
- Overlay convergence
- WAN failover testing

### Module 12: Troubleshooting

### Lesson 1: Underlay Validation

- IS-IS adjacency
- MTU consistency
- Loopback reachability
- IP pool exhaustion
- Routing convergence
- ECMP validation

### Lesson 2: Overlay Validation

- VXLAN tunnel status
- LISP database check
- EID-to-RLOC mapping
- SGT propagation
- VRF routing table
- Endpoint mobility test

### Lesson 3: Control-Plane Issues

- Map-server status
- Pub/Sub sync
- LISP registration failures
- Policy mismatch
- Controller communication
- Certificate trust issues

# Installing, Configuring, Monitoring, and Troubleshooting Cisco SD-Access (CT-SDA)

## Course Outline

### Lesson 4: Layer 2 Issues

- Host onboarding failure
- ARP suppression errors
- MAC duplication
- SGT inline tag errors
- VLAN/VN mismatch
- Port authentication failure

### Lesson 5: Multicast Issues

- RP down
- Group mapping errors
- Overlay replication failure
- IGMP timeout
- PIM neighbor loss
- Border filtering

### Lesson 6: Wireless Issues

- Fabric SSID misconfig
- WLC-VXLAN failure
- Roaming failure
- SGT mismatch
- AP join issues
- RADIUS timeout

### Module 13: SDA Assurance

### Lesson 1: Telemetry Collection

- NetFlow ingestion
- SNMP polling
- gRPC telemetry
- Wireless analytics
- Application performance metrics
- Health scoring engine

# Installing, Configuring, Monitoring, and Troubleshooting Cisco SD-Access (CT-SDA)

## Course Outline

### Lesson 2: Health Monitoring

- Device health
- Client health
- Application health
- Network path health
- Wireless experience
- WAN experience

### Lesson 3: Path Trace

- Forward path visualization
- Reverse path verification
- Policy validation
- SGT enforcement visibility
- Latency measurement
- Drop location identification

### Lesson 4: Root Cause Analysis

- AI-driven correlation
- Event timeline
- Anomaly detection
- Historical trend comparison
- Suggested remediation
- Alert prioritization

### Lesson 5: Policy Verification

- Contract validation
- Enforcement location
- Log correlation
- Deny hit analysis
- Compliance monitoring
- Audit export

# Installing, Configuring, Monitoring, and Troubleshooting Cisco SD-Access (CT-SDA)

## Course Outline

### Lesson 6: Operational Dashboards

- Executive summary view
- NOC monitoring
- SLA tracking
- Custom reports
- Historical analytics
- API-based data extraction

### Module 14: SDA Programmability

### Lesson 1: API Architecture

- REST endpoints
- Token-based authentication
- API rate limits
- Pagination
- Versioning
- Error handling

### Lesson 2: Automation Use Cases

- Automated site creation
- VN provisioning
- Policy matrix creation
- Image upgrade scheduling
- Device inventory extraction
- Compliance auditing

### Lesson 3: Fabric Provisioning via API

- Create fabric site
- Assign device roles
- Enable fabric
- Configure transit
- Push policy
- Validate deployment

# Installing, Configuring, Monitoring, and Troubleshooting Cisco SD-Access (CT-SDA)

## Course Outline

### Lesson 4: Integration with External Systems

- ITSM ticket automation
- Orchestration platform integration
- Ansible playbooks
- Python scripting
- Webhook notifications
- CI/CD pipelines

### Lesson 5: Security and Governance

- API RBAC
- Audit logs
- Token expiration
- Role scoping
- Secure transport (HTTPS)
- Certificate validation

### Lesson 6: Advanced Automation Strategy

- Infrastructure-as-Code model
- Git-based version control
- Automated rollback
- Scheduled health checks
- Event-driven automation
- Closed-loop remediation

# Installing, Configuring, Monitoring, and Troubleshooting Cisco SD-Access (CT-SDA)

## Lab Outline

- **Lab 1: Cisco Catalyst Center dashboard walkthrough**

- **Lab 2: Cisco Catalyst Center and ISE integration using PxGrid**

**Lab 3: Design Workflow**

- Create site hierarchy
- Configure network settings
- Configure device credentials – CLI and SNMP
- Configure IP pools at the global level
- Reserve IP pools at the area/building level
- Configure telemetry settings

**Lab 4: Device Discovery and Provision**

- Discover the core switch manually
- Assign the core switch to the building level and provision shared resources
- Verify shared resources on the core switch
- Discovery edge switch using LAN automation at the building level
- Verify the ISIS neighborship between the core and edge switch

**Lab 5: Configure Virtual Networks and SGT**

- Migrate existing SGT's from ISE to Catalyst Center
- Configure Employee, Contractor, and Guest VN on catalyst center and verify on ISE
- Configure two SGT's under Employee VN and one SGT under each contactor and guest VN

**Lab 6: Configure Fabric**

- Configure SDA fabric at the building level
- Configure IP-based transit
- Define 9300 as the control plane/border node
- Enable L3 handoff along with IP-based transit and extend Employee, Contractor, and Guest VN

# Installing, Configuring, Monitoring, and Troubleshooting Cisco SD-Access (CT-SDA)

## Course Outline

**Cont. Lab 6**

- Define 3850 as an edge switch
- Deploy control plane/border node and edge node
- Configure Anycast gateways and map IP pools and SGTS
- Verify output for anycast gateways on the edge switch

**Lab 7: External Connectivity Configuration – Fusion Router**

- Configure fusion router interfaces for different VN's for employees, contractor and guest traffic
- Configure BGP on the fusion device for IPv4 and VPNv4 address families
- Configure route leaking of shared resources like DHCP, DNS, and ISE on Fusion for different VRFs
- Verify BGP neighborship on both fusion and border devices
- Perform route redistribution between BGP and underlay ISIS on the border device

**Lab 8: Host Onboarding**

- Configure authorization profiles on ISE for employees, contractors, and guest users
- Configure authorization policies on ISE for employees, contractors, and guest users

**Lab 9: Micro-Segmentation Testing**

- Connect fabric user 1 part of employee VN and finance domain SGT
- Connect fabric user 2 part of employee VN and HR domain SGT
- Test connectivity between two fabric users part of the same VN but different SGT's
- Configure access contracts to block traffic for certain applications
- Configure group-based policies with an access contract inside it to block unidirectional traffic between two SGT's but part of the same VN

# Installing, Configuring, Monitoring, and Troubleshooting Cisco SD-Access (CT-SDA)

## Course Outline

### Lab 10: Macro Segmentation Testing

- Connect fabric user 1 part of employee VN and finance domain SGT
- Connect fabric user 2 part of contractor VN and external staff domain SGT
- Test connectivity between two fabric users part of different VN
- Configure route leaking on the fusion device to ensure different VN users can talk to each other:

### Lab 11: Fabric-Enabled Wireless

- Discovery C9800 controller and assign it to the building
- Configure fabric-enabled Employee and Guest SSID
- Configure network profile and map SSIDs to it
- Deploy shared services, including SSIDs to the C9800 controller
- Assign C9800 with wireless role as part of Fabric
- Configure anycast gateway for Infra VN and map AP pool with it
- Test fabric-enabled wireless for both employee and guest SSIDs

### Lab 12: SDA Multicast

- Enable PIM in underlay
- Configure RP
- Enable multicast in fabric
- Test multicast stream
- Validate overlay replication
- Simulate RP failure

### Lab 13: L2 Border Migration

- Enable L2 border
- Map VLAN to VN
- Validate ARP suppression
- Migrate legacy VLAN
- Test coexistence
- Validate broadcast containment

# Installing, Configuring, Monitoring, and Troubleshooting Cisco SD-Access (CT-SDA)

## Course Outline

### Lab 14: Distributed Campus

- Deploy second fabric site
- Configure SD-Access transit
- Validate policy propagation
- Test multi-site roaming

### Lab 15: Troubleshooting

- Break IS-IS adjacency
- Remove SGT contract
- Misconfigure IP pool
- Disable LISP registration
- Break RADIUS authentication
- Restore full functionality

### Lab 16: Assurance

- Perform path trace
- Validate health scores
- Identify root cause
- Review anomaly detection
- Export report
- Automate alert generation

### Lab 17: Programmability

- Generate API token
- Create VN via API
- Push policy via API
- Retrieve inventory
- Automate site creation
- Integrate with ITSM webhook