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Installing, Configuring, Monitoring and Troubleshooting Cisco Catalyst SD-WAN for Government (SDWAN-GOV)

WHERE GREAT TRAINING HAPPENS EVERYDAY!

Installing, Configuring, Monitoring and Troubleshooting Cisco Catalyst SD-WAN for Government (SDWAN-GOV)

Course Duration

5 days

Course Price

$4,295.00
43 CLCs

Methods of Delivery

In-Person ILT
Virtual ILT
Onsite ILT

About this Class

In this Installing, Configuring, Monitoring and Troubleshooting Cisco Catalyst SD-WAN for Government 5-day immersive, hands-on Cisco Catalyst SD-WAN course is purpose-built for military and government network professionals responsible for operating secure, resilient, and mission-critical wide area networks. Using Cisco Catalyst SD-WAN (Viptela) version 20.18 / IOS-XE 17.18, the course emphasizes architectures and operational practices aligned with defense and public-sector environments, including high availability, deterministic performance, centralized control, and secure connectivity across classified, unclassified, cloud, and hybrid infrastructures. Learners develop the skills required to design, deploy, configure, manage, and troubleshoot SD-WAN fabrics that support distributed command locations, tactical sites, data centers, and cloud resources while maintaining strict security and operational requirements. The curriculum covers controller and WAN Edge deployment, Zero Touch Provisioning, device and feature template design, SD-WAN Manager operations, and the transition toward Configuration Groups and Policy Groups for improved scale, consistency, and administrative control. Advanced topics include OMP, BFD, quality of service, DRE, and comprehensive security integrations such as SASE, Cisco Umbrella, firewall, and IPS, enabling secure transport of mission applications and sensitive data. Hands-on labs reflect real-world military and government use cases, including onboarding ISR, vEdge, and Catalyst 8000 platforms, performing upgrades, enforcing centralized and localized policies, enabling Cloud OnRamp for SaaS applications, and leveraging analytics and troubleshooting tools like vManage and ThousandEyes. By the end of the course, students are prepared to operate and modernize SD-WAN environments that support continuity of operations, secure communications, and scalable mission execution across geographically dispersed government and defense networks.

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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

Who Should Attend

The course is highly recommended for

- Network Engineers
- System Administrators
- IT Professionals in Government Agencies
- Technical Support Staff
- Cisco Certified Professionals

Objectives

After taking this course, you should be able to:

- Catalyst SD-WAN for Government Overview
- Cisco SD-WAN Controllers for Government
- Catalyst SD-WAN Platforms in Government Environments
- Cisco SD-WAN WAN Edge Deployments for Government
- Configuring SD-WAN Manager
- for Government
- SD-WAN Software Upgrades in Government Environments
- SD-WAN OMP/Fabric for Government
- SD-WAN QoS / QoE in Government Networks
- SD-WAN Security for Government Networks
- Creating and Applying SD-WAN Templates and Configuration Groups for Government
- SD-WAN IPv6 Integration in the Government Environment
- SD-WAN Local Policy for Government
- SD-WAN Central Policies for Government
- Monitoring & Troubleshooting SD-WAN Government Networks

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Course Outline

Module 0: Introductions

- Module Topics
  - General Administration
  - Introductions
  - Webex Meeting Center Basics
  - Webex Training Basics
  - Lab Access
  - Questions Administrators are asking about their WAN
  - What is SD-WAN?
  - SD-WAN Desired Benefits
  - How does Cisco Define SD-WAN?
- Module Summary

Module 1: Catalyst SD-WAN for Government Overview

- Module Topics
- Lesson 1: SD-WAN Fed-Ramp Overview
- Module Summary

Module 2: Cisco SD-WAN Controllers for Government

- Module Topics
- Lesson 1: Cisco SD-WAN Controller Architecture for Government
- Lesson 2: Catalyst SD-WAN Portal for Government
- Lesson 3: AWS GOV Cloud Controller Deployment
- Lesson 4: On-Prem Controller Deployment in Government
- Lesson 5: Create Manager VM Instance on ESXi or KVM
- Lesson 6: Initial SD-WAN Manager for Gov Setup
- Lesson 7: Create Validator (vBond) VM Instance on ESXi
- Lesson 8: Create Controller (vSmart) VM Instance on ESXi
- Lesson 9: Add Controllers to Manager in Government
- Lesson 10: Enterprise CA Configuration for Government
- Lesson 11: Controller High Availability
- Lesson 12: Verify Control Plane in Government
- Module Summary

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Course Outline

Module 3: Catalyst SD-WAN Platforms in Government Environments

- Module Topics
- Lesson 1: SD-WAN Platform Overview
- Lesson 2: SD-WAN cEdge ISR 1k Platforms
- Lesson 3: Cisco ISR 4000 Series Router Platforms
- Lesson 4: Cisco ASR 1000 Routing Platforms
- Lesson 5: Catalyst 8000 Series Router Platforms
- Lesson 6: Catalyst 8500 Series Router Platforms
- Lesson 7: Catalyst 8300 Series Router Platforms
- Lesson 8: Catalyst 8200 Series Router Platforms
- Lesson 9: Catalyst 4K/8K SD-WAN Supported Modules
- Lesson 10: Catalyst 8000v Series Virtual Routers
- Lesson 11: Cellular Gateways for SD-WAN
- Lesson 12: SD-WAN WAN Edge High Availability
- Module Summary

Module 4: Cisco SD-WAN WAN Edge Deployments for Government

- Module Topics
- Lesson 1: Adding Devices to the PNP Portal
- Lesson 2: Device Initial Bootup and Image Selection
- Lesson 3: SD-WAN Zero Touch Provisioning for Gov
- Lesson 4: SD-WAN Quick Connect in Government
- Lesson 5: Manually Provision SD-WAN IOS-XE
- Lesson 6: Verifying WAN Edge Configuration
- Module Summary

Module 5: Configuring SD-WAN Manager for Government

- Module Topics
- Lesson 1: Dashboard Overview and Changes
- Lesson 2: SD-WAN Manager Monitoring Dashboard
- Lesson 3: SD-WAN Manager Configuration for Government

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Course Outline

Cont. Module 5

- Lesson 4: SD-WAN Manager Tools for Government
- Lesson 5: SD-WAN Manager Maintenance
- Lesson 6: Administrative Settings for Government
- Lesson 7: Resource Groups In Government Environments
- Lesson 8: Users and Groups For Government
- Lesson 9: RADIUS and TACACS in Government Environments
- Lesson 10: Single Sign-on / IDP Management
- Lesson 11: License Management for Government
- Module Summary

Module 6: SD-WAN Software Upgrades in Government Environments

- Module Topics
- Lesson 1: Upgrading the SD-WAN Environment for Government
- Lesson 2: Upgrade SD-WAN Controllers in Government
- Lesson 3: Software Upgrade Workflow in Government
- Module Summary

Module 7: SD-WAN OMP/Fabric for Government

- Module Topics
- Lesson 1: SD-WAN Fabric Overview and Terminology
- Lesson 2: SD-WAN Segmentation for Government
- Lesson 3: OMP / TLOCs / Routes
- Lesson 4: SD-WAN BFD in Government
- Lesson 5: On-Demand Tunnels
- Lesson 6: SD-WAN Fabric Verification
- Module Summary

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Course Outline

Module 8: SD-WAN QoS / QoE in Government Networks

- Module Topics
- Lesson 1: QoE / QoS Challenges in Government Networks
- Lesson 2: Quality of Experience (QoE) / Quality of Service (QoS)
- Lesson 3: QoS Configuration Workflow for Government
- Lesson 4: Per-Tunnel QoS
- Lesson 5: Adaptive QoS for Government
- Lesson 6: Per VPN QoS
- Lesson 7: Application Quality of Experience (AppQoE)
- Lesson 8: Forward Error Correction (FEC) / Packet Duplication
- Lesson 9: TCP Optimization
- Lesson 10: Data Redundancy Elimination (DRE) / Lempel-Ziv Compression (LZ)
- Lesson 11: SSL Optimization in Government Environments
- Lesson 12: Software-Defined Application Visibility and Control (SD-AVC)
- Module Summary

Module 9: SD-WAN Security for Government Networks

- Module Topics
- Lesson 1: Security Overview for Government
- Lesson 2: Security Network Analytics (Stealthwatch) Integration
- Lesson 3: SD-WAN Fabric Security
- Lesson 4: IPSec Key Exchanges in SD-WAN Fabric
- Lesson 5: SD-WAN Security Options
- Lesson 6: SD-WAN Integrated Security
- Lesson 7: SD-WAN Enterprise Firewall
- Lesson 8: SD-WAN Identity Firewall
- Lesson 9: SD-WAN Intrusion Prevention System
- Lesson 10: URL Filtering
- Lesson 11: Anti-Malware Protection / Threatgrid
- Lesson 12: TLS/SSL Decryption
- Lesson 13: Unified Security Policy
- Module Summary

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Course Outline

Module 10: Creating and Applying SD-WAN Templates and Configuration Groups for Government

- Module Topics
- Lesson 1: Template Overview for Government
- Lesson 2: Feature Templates
- Lesson 3: Device Templates for Federal Use
- Lesson 4: CLI Templates in Government
- Lesson 5: Create Device Templates using Feature Templates
- Lesson 6: Attaching Devices to Template
- Lesson 7: Configuration Groups Overview
- Lesson 8: Creating Configuration Groups
- Lesson 9: Deploy Configuration Group Workflow
- Lesson 10: View/Edit Configuration Groups
- Module Summary

Module 11: SD-WAN IPv6 Integration in the Government Environment

- Module Topics
- Lesson 1: SD-WAN IPv6 Overview and Terminology
- Module Summary

Module 12: SD-WAN Local Policy for Government

- Module Topics
- Lesson 1: Local Policy Overview
- Lesson 2: Local Policy Lists for Government
- Lesson 3: Local Data Policies for Government
- Lesson 4: Local Data Policy QoS Configuration
- Lesson 5: Local Data Policy Access Control Lists
- Lesson 6: Localized Control Policy for Government
- Lesson 7: Save and Apply Local Policy
- Module Summary

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Course Outline

Module 13: SD-WAN Central Policies for Government

- Module Topics
- Lesson 1: Central Policy Overview for Government
- Lesson 2: Policy Construction in Government
- Lesson 3: Central Control Policy for Government
- Lesson 4: Control Policy - Dis-contiguous Data Planes
- Lesson 5: Control Policy - Data Center Priority
- Lesson 6: Control Policy - VPN Topologies
- Lesson 7: Control Policy - VPN Membership Policy
- Lesson 8: Control Policy - Application-Aware Routing
- Lesson 9: Control Policy - Service Chaining
- Lesson 10: Central Data Policies
- Lesson 11: Central Data Policies - Use Cases
- Lesson 12: Central Data Policies - Cflowd
- Lesson 13: Creating Centralized Policies in Government
- Module Summary

Module 14: Monitoring & Troubleshooting SD-WAN Government Networks

- Module Topics
- Lesson 1: SD-WAN Troubleshooting Overview
- Lesson 2: SD-WAN Technical Support Access
- Lesson 3: Controller Failure Scenarios in Government
- Lesson 4: Troubleshooting Controllers
- Lesson 5: Troubleshooting Control Connections
- Lesson 6: Typical Control Connection Issues

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Course Outline

Cont. Module 14

- Lesson 7: Troubleshooting Data Plane for Government
- Lesson 8: Troubleshooting Routing in Government
- Lesson 9: Centralized Policies Troubleshooting
- Lesson 10: Packet Forwarding Troubleshooting
- Lesson 11: Device Configuration and Upgrades Failure
- Lesson 12: vDiagnose - Diagnostic Tool for SD-WAN
- Lesson 13: Troubleshooting cEdge for Government
- Lesson 14: Troubleshooting using SD-WAN Manager
- Lesson 15: Device Troubleshooting in Government
- Lesson 16: Using the GUI for cli show command Under Troubleshooting > Real-time
- Lesson 17: CLI Troubleshooting for Government
- Lesson 18: Network Wide Path Insights
- Lesson 19: NetFlow Collectors for Government
- Lesson 20: SNMP Overview in Government
- Lesson 21: SD-WAN Logs in Government
- Lesson 22: SD-WAN Reporting
- Lesson 23: SD-WAN Manager APIs & Programmability
- Module Summary