

CISC-24 - ENSDWI - IMPLEMENTING CISCO SD-WAN SOLUTIONS V3.0

Categoria: Cisco

INFORMAZIONI SUL CORSO

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Durata: 5 Giorni

Categoria: Cisco Qualifica Istruttore: Cisco Certified Instructor

Dedicato a: Professionista IT Produttore:

OBIETTIVI

After completing this course you should be able to:

- -Describe the Cisco SD-WAN solution and how modes of operation differ in traditional WAN versus SD-WAN.
- -Describe options for Cisco SD-WAN cloud and on-premises deployment.
- -Explain how to deploy WAN Edge devices.
- -Compare the Zero-Touch Provisioning (ZTP) and traditional Plug-n-Play processes and examine technical specifics for on-premises deployment.
- -Describe configuration groups and feature profiles for configuration management.
- -Describe device and feature configuration templates.
- -Describe options for providing scalability, high availability, and redundancy.
- -Explain how dynamic routing protocols are deployed in an SD-WAN environment, on the service side and transport side.
- -Describe Cisco SD-WAN policy concepts, which includes how policies are defined, attached, distributed, and applied.
- -Define and implement advanced control policies, such as policies for custom topologies and service insertion.
- -Describe the Multi-Region SD-WAN fabric feature.
- -Define and implement advanced data policies, such as policies for traffic engineering and QoS.
- -Describe the Application Quality of Experience (AppQoE) capabilities available in Cisco SD-WAN.
- -Define and implement an Application-Aware Routing (AAR) policy.
- -Implement Direct Internet Access (DIA) and Cisco SD-WAN Cloud OnRamp options.
- -Describe Cisco SD-WAN security components and integration.
- -Describe how to design pure and hybrid Cisco SD-WAN solutions, as well as how to perform a migration to Cisco SD-WAN.
- -Describe the different tools and options available for managing a Cisco SD-WAN fabric.
- -Describe the different tools and options available for monitoring the Cisco SD-WAN fabric.
- -Describe Cisco SD-WAN support for multicast.

PREREQUISITI

Attendees should meet the following prerequisites:

- -Knowledge of Software-Defined Networking (SDN) concepts as applied to large-scale live network deployments
- -Strong understanding of enterprise WAN design
- -Strong understanding of routing protocol operation, including both interior and exterior routing protocol operation



- -Familiarity with Transport Layer Security (TLS) and IP Security (IPSec)
- Recommended prerequisites:
 - -CCNA Implementing and Administering Cisco Solutions
 - -ENCOR Implementing and Operating Cisco Enterprise Network Core Technologies

CONTENUTI

Examine the Cisco SD WAN Architecture

- -Software-Defined Networking for the WAN
- -SD-WAN Components and Functions
- -Underlay and Overlay Network
- -SD-WAN Terminology
- -Secure Control Plane
- -Secure Data Plane
- -SD-WAN Platforms
- -IOS XE and IOS XE SD-WAN Software

Examine Cisco SD-WAN Deployment Options

- -Flexible Controller Deployment Options
- -SD-WAN Cloud Deployment
- -SD-WAN Managed Service Provider Deployment
- -SD-WAN On-Premises Deployment
- -Using an Enterprise CA
- -Controller Placement and Challenges

Deploying WAN Edge Devices

- -Onboard WAN Edge Devices
- -Deploy Cisco Catalyst 8000v IOS XE Devices
- -ZTP Process Overview Pure Play Viptela operating system
- -Cisco Plug-and-Play Process Overview
- -Working with NAT

Manage Device Configuration

- -Configuration Groups Overview
- -Configuraion Group Feature Profile Overview
- -Device Configuration Template Overview
- -Device Configuration Template Features

Explore Redundancy, High Availability, and Scalability

- -Horizontal Solution Scale
- -Cisco vManage, vSmart and vBond Redundancy
- -Routed and Bridged Site Design

Enabling Service-Side and Transport-Side Routing

- -Implement OSPF
- -Implement BGP
- -Impement EIGRP
- -Implement TLOC Extensions



-Loop Prevention Mechanism

Explore SD-WAN Policy Configuration Basics

- -Policy Configuration Overview
- -Policy Attachment, Distribution and Operation

Define Advanced Control Policies

- -Control Policy Overview
- -Control Policy Application
- -Using Arbitrary VPN Topology
- -Using Hierarchical Topology
- -VPN Membership Policies
- -Multi-Region Fabric
- -Implementing Traffic Engineering
- -Implementing Service Insertion and Chaining
- -Implementing Shared Services
- -Dynamic On-Demand Tunnels

Define Advanced Data Policies

- -Data Policy Overview
- -Implementing Traffic Engineering
- -Data Forwarding and Qos
- -Implementing Qos in Cisco SD-WAN

Implement Application Quality of Experience

- -Application Quality of Experience Overview
- -TCP Optimization
- -Data Redundancy Elimination
- -Packet Duplication
- -Forward Error Correction
- -AppNav-XE

Implement Application-Aware Routing

- -AAR Overview
- -Implement AAR Policy

Examine Direct Internet Access and Cloud Deployment Options

- -Implement Direct Internet Access
- -Cisco SD-WAN Cloud OnRamp for SaaS
- -Cisco SD-WAN Cloud on Ramp for laaS
- -Cisco SD-WAN Cloud on Ramp for Multicloud
- -Cisco SD-WAN Cloud OnRamp for Colocation
- -Cisco Enterprise NFV Infrastructure Software (NFVIS) SD-Branch

Explore Cisco SD-WAN Security

- -Cisco SD-WAN Intent Based Security Use Cases
- -Cisco SD-WAN Security Components
- -Cisco Umbrella DNS Security and SIG Integration
- -Cisco Legacy and Unified Policy



-Describe Cisco SD-WAN TrustSec

Design and Migrate to Cisco SD-WAN

- -Design Considerations for Hybrid Scenarios
- -Enabling Cisco SD-WAN in the Data Center
- -Migrating the Branch to Pure SD-WAN
- -Migrating a Branch to a Hybrid Model

Perform Cisco SD-WAN Network Management and Troubleshooting

- -Managing Cisco SD-WAN
- -Monitoring Cisco SD-WAN
- -Troubleshooting Cisco SD-WAN
- -Upgrading Cisco SD-WAN Components

Examine Cisco SD-WAN Multicast Support

- -Multicast Overlay Routing
- -Multicast Protocol Support
- -Traffic Flow in Multicast Overlay Routing

Lab outline

- -Lab 1: Deploy Cisco SD-WAN Controllers
- -Lab 2: Manage Cisco SD-WAN Device Configuration
- -Lab 3: Configure Cisco SD-WAN Controller Affinity
- -Lab 4: Implement Service Side Routing Protocols
- -Lab 5: Implement Transport Location (TLOC) Extensions
- -Lab 6: Implement Control Policies
- -Lab 7: Implement Data Policies
- -Lab 8: Implement Application-Aware Routing
- -Lab 9: Implement Branch and Regional Internet Breakouts
- -Lab 10: Configure Application Firewall
- -Lab 11: Migrate Branch Sites
- -Lab 12: Perform Cisco SD-WAN Software Upgrade

INFO

Esame: 300-415 - Implementing Cisco SD-WAN Solutions

Materiale didattico: Materiale didattico ufficiale Cisco in formato digitale Costo materiale didattico: incluso nel prezzo del corso a Calendario

Natura del corso: Operativo (previsti lab su PC)