

CISC-24 - ENSDWI - IMPLEMENTING CISCO SD-WAN SOLUTIONS

Categoria: **Cisco**

INFORMAZIONI SUL CORSO



Durata:
5 Giorni



Categoria:
Cisco



Qualifica Istruttore:
Cisco Certified
Instructor



Dedicato a:
Professionista IT



Produttore:
Cisco

OBIETTIVI

- 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
- Review the Zero-Touch Provisioning (ZTP) process and examine technical specifics for onpremises deployment
- Review the device configuration template and describe new features of device 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
- Identify and implement advanced data policies, such as policies for traffic engineering and QoS
- 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 Cisco SD-WAN Day-2 operations, such as monitoring, reporting, logging, troubleshooting, and upgrading
- 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)

These Cisco courses are recommended to help you meet these prerequisites:

- CCNA - Implementing and Administering Cisco Solutions
- ENCOR - Implementing and Operating Cisco Enterprise Network Core Technologies

CONTENUTI

Examining the Cisco SD WAN Architecture

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

Examining Cisco SD-WAN Deployment Options

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

Deploying WAN Edge Devices

- ONboard WAN Edge Devices
- Deploy vEdge Cloud Devices
- Deploy Cisco CSR 1000v Devices
- Working with NAT

Onboarding WAN Edge Devices with ZTP and PnP

- ZTP Process Overview - Viptela OS vEdge
- On Premises Zero-Touch Provisioning
- Cisco Plug-and-Play Process Overview

Using Device Configuration Templates

- Device Configuration Template Overview
- Device Configuration Template Features

Exploring 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

- Underlay and Overlay Network
- Implement OSPF
- Implement BGP
- Implement EIGRP
- Implement TLOC Extensions
- Loop Prevention Mechanism

Understanding Cisco SD-WAN Policy Configuration Basics

- Policy Configuration Overview
- Policy Attachment, Distribution and Operation

Defining Advanced Control Policies

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

Defining Advanced Data Policies

- Data Policy Overview
- Implement Traffic Engineering
- Data Forwarding and Qos
- Implement Qos in Cisco SD-WAN
- VPN Membership Policies

Implementing AAR

- AAR Overview
- Implement AAR Policy

Examining Direct Internet Access and Cloud Deployment Options

- Implement DIA
- Cisco SD-WAN Cloud OnRamp for SaaS
- Cisco SD-WAN Cloud onRamp for IaaS
- Cisco SD-WAN Cloud OnRamp for Colocation

Exploring Cisco SD-WAN Security

- Cisco SD-WAN Intent Based Security Use Cases
- Cisco SD-WAN Security Components
- Cisco Umbrella DNS Security and SIG Integration
- Implement Application Firewall Policy
- Implement Zone-Based Firewalls - CLI Example

Designing and Migrating 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

Performing Cisco SD-WAN Network Management and Troubleshooting

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

Examining Cisco SD-WAN Multicast Support

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

Lab outline

- Deploy Cisco SD-WAN Controllers
- Add a WAN Edge Router Using ZTP
- Deploy Cisco SD-WAN Device Using Configuration Templates
- Configure Cisco SD-WAN Controller Affinity
- Implement Service Side Routing Protocols
- Implement Transport Location (TLOC) Extensions
- Implement Control Policies
- Implement Data Policies
- Implement Application-Aware Routing
- Implement Branch and Regional Internet Breakouts
- Migrate Branch Sites
- 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)