

# **INFOSOFT IT SOLUTIONS**

**Training | Projects | Placements**

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## **Cisco SD-WAN**

### **Introduction to SD-WAN**

- Overview of traditional WAN vs. SD-WAN
- Benefits and use cases of SD-WAN
- Evolution of SD-WAN technologies

### **Cisco SD-WAN Architecture**

- Components of Cisco SD-WAN architecture (vEdge, vSmart, vBond, and controllers)
- Control and data plane separation in SD-WAN
- Zero-touch provisioning (ZTP) and secure bootstrapping

### **Deployment Models**

- Cisco SD-WAN deployment options (On-Premises, Cloud-Hosted, Hybrid)
- High availability and redundancy considerations
- Integration with existing network infrastructure

## **SD-WAN Overlay Network**

- Overlay network concepts and encapsulation (DMVPN, GRE, IPsec)
- Tunneling and forwarding mechanisms in SD-WAN
- Quality of Service (QoS) and traffic prioritization

## **SD-WAN Policies and Configuration**

- Application-aware routing policies
- Performance-based routing and traffic engineering
- Security policies and segmentation

## **SD-WAN Security**

- Built-in security features in Cisco SD-WAN
- Integration with third-party security services (e.g., Zscaler)
- Secure connectivity over public and private networks

## **. Management and Orchestration**

- Cisco vManage platform overview
- Centralized management and configuration of SD-WAN components
- Monitoring and troubleshooting tools

## **Cloud Integration**

- Integration with cloud services (e.g., AWS, Azure)
- Multi-cloud connectivity and optimization

- Cloud on-ramp strategies

## **Traffic Engineering and Optimization**

- WAN optimization techniques
- Path control and traffic steering mechanisms
- Performance monitoring and analytics

## **Multicast Support**

- Multicast fundamentals and SD-WAN support
- Multicast over SD-WAN considerations and best practices

## **Quality of Service (QoS)**

- QoS mechanisms in SD-WAN
- Traffic classification and marking
- Bandwidth allocation and congestion management

## **Integration with Other Cisco Technologies**

- Integration with Cisco routers and switches
- Cisco SD-WAN and Cisco DNA Center integration
- Cisco SD-WAN and Cisco Umbrella integration

## **Hands-on Labs and Practical Exercises**