

# SD-WAN Management [] Advanced



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### Introduction

Software-Defined Wide Area Network SD-WAN technology has transformed enterprise networking by enabling centralized control, enhancing performance, and reducing costs. This advanced course dives into the technical, strategic, and operational elements of SD-WAN management. It is designed for IT professionals who already have experience with WANs and want to master SD-WAN deployment, monitoring, optimization, and security.

## Course Objectives

By the end of this course, participants will be able to:

- Analyze and evaluate SD-WAN architectures and deployment models
- Configure advanced policies for application performance, security, and routing
- Optimize SD-WAN for high availability, scalability, and QoS
- Integrate SD-WAN with cloud services, SASE, and Zero Trust frameworks
- Implement SD-WAN monitoring, analytics, and troubleshooting methodologies

### **Course Outlines**

### Day 1: Advanced SD-WAN Architecture and Design

- Evolution of SD-WAN: From Traditional WANs to Al-Driven Networks
- Centralized Orchestration and Control: Deep Dive into Controllers and Edge Devices
- Multi-Cloud and Hybrid Integration: Architectural Considerations
- · Advanced Deployment Models Hub-and-Spoke, Full Mesh, Dynamic Path Selection

### Day 2: Application-Aware Routing and Policy Configuration

- Policy-Based Routing PBR: Advanced Rule Configuration
- Application Classification and Real-Time Optimization
- Dynamic Path Selection and Failover Strategies
- Segment Routing and MPLS/Internet Link Coexistence

#### Day 3: Security in SD-WAN Environments

- Integration with Secure Access Service Edge SASE Framework
- Next-Gen Firewall Features, IPS/IDS in SD-WAN Edge Devices
- End-to-End Encryption and Key Management
- Zero Trust Networking: Concepts and SD-WAN Implementation

### Day 4: Monitoring, Analytics, and Troubleshooting

- Real-Time Monitoring and Telemetry Tools
- SD-WAN Analytics: KPIs, Anomalies, and Predictive Insights
- Troubleshooting Connectivity and Performance Issues
- Using AI and ML for Autonomous Network Optimization





## Day 5: Advanced Use Cases and Future Trends

- Integration with IoT, Edge Computing, and 5G
- SD-WAN as a Service SD-WANaaS and Service Chaining
- Vendor Comparison and Open Standards MEF 3.0, ONUG, etc.
- Future Trends: Al-Driven Networking, Intent-Based Networking IBN

## Why Attend this Course: Wins & Losses!

- Master the latest in SD-WAN architecture and security [] or risk falling behind in managing complex enterprise networks
- Learn to integrate SD-WAN with cloud and Zero Trust frameworks [] or struggle with inefficient, fragmented systems
- Gain expertise in monitoring and analytics [] or remain reactive to performance issues
- Understand advanced deployment models  $\[ \]$  or face limited scalability and poor failover
- Stay ahead of future networking trends [] or miss critical innovation opportunities

### Conclusion

This course equips participants with the technical depth and strategic insight to lead SD-WAN implementations in modern enterprises.

From advanced deployment models to future-ready integrations, attendees will leave with actionable skills to enhance security, performance, and operational agility.





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