

## Article Overview

OSPF can be integrated with SD-WAN devices to enable dynamic routing across LAN and WAN interfaces, supporting route learning, redistribution, and redundancy.

## Overview of OSPF in SD-WAN

Open Shortest Path First (OSPF) is a widely used interior gateway protocol (IGP) that dynamically shares routing information between routers. In SD-WAN environments, OSPF allows edge devices to communicate with traditional routers and other SD-WAN nodes, ensuring efficient route propagation and network resilience . It operates by exchanging Link State Advertisements (LSAs) to build a network topology map, which is then used to calculate the shortest path to each destination .

## Key Configuration Considerations

- o Interface Types: OSPF can be enabled on LAN or routed interfaces. Some platforms, like VeloCloud, allow OSPF only on routed interfaces for full functionality, while Prisma SD-WAN requires enabling Layer 3 LAN Forwarding to use dynamic LAN routing .
- o OSPF Versions: OSPFv2 supports IPv4, and OSPFv3 supports IPv6. Ensure the SD-WAN device firmware supports the desired version .
- o Authentication: Message Digest 5 (MD5) authentication can be configured to secure OSPF neighbor relationships. Cisco vManage CLI templates allow specifying authentication per interface .
- o Route Types and Redistribution: OSPF routes can be classified as O1 or O2, and redistribution settings determine how learned routes are shared with other SD-WAN edges or BGP neighbors .
- o Neighbor Limits: Some SD-WAN appliances, like Aruba EdgeConnect, support up to 64 OSPF neighbors per appliance, with deterministic selection if limits are exceeded .

## Practical Steps for Deployment

- o Enable Layer 3 Forwarding: On devices like Prisma SD-WAN, enable L3 LAN Forwarding and L3 Direct Private WAN Forwarding to allow dynamic routing and MPLS traffic .
- o Configure Interfaces: Assign OSPF to the appropriate interfaces, specifying the area ID and cost if needed. For Cisco devices, use `ip ospf area` and `ip ospf cost` commands .
- o Set Authentication: Configure MD5 authentication on interfaces to secure OSPF sessions.
- o Define OSPF Areas: Segment the network logically using OSPF areas to optimize route calculation and reduce LSA flooding.
- o Verify and Monitor: Use SD-WAN orchestration portals or CLI commands to verify neighbor relationships, route propagation, and topology maps.

## Best Practices

- o Use passive interfaces for networks where OSPF advertisements are not required to reduce unnecessary traffic.
- o Apply route summarization to minimize routing table size and improve convergence.
- o Monitor OSPF metrics such as interface cost, link availability, and throughput to influence path selection.
- o Ensure compatibility with legacy routers in the network to maintain seamless integration. By following these guidelines, SD-WAN deployments in Serbia or elsewhere can leverage OSPF to maintain dynamic, resilient, and efficient routing across enterprise networks .

SD-WAN is Centrally Managed and Monitored Branch offices can be provisioned, monitored and managed

Strategic Considerations for Choosing an SD-WAN Vendor Choosing the right SD-WAN

This lesson explains how to configure OSPF between Cisco SD-WAN using device and feature templates and Cisco IOS devices.

The SD-WAN ecosystem & market is becoming an increasingly interesting area & a potential battleground.

From operating systems, through databases and other general technology elements to specific routing technologies, SD-WAN &

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Enhanced network protection SD-WAN comprises site endpoint devices managed by a central controller, utilizing encrypted tunnels

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SD-WAN definition: What is SD-WAN? SD-WAN, in a nutshell, is the application of software-defined

Recent Updates January 29, 2026 TLV672x device is added to the references, under Other Documents section. November 23, 2025

Open Shortest Path First, or OSPF, is one of the most commonly used dynamic routing protocols in enterprise

networks. As

Serbia SD-WAN (Software-Defined Wide Area Network) Market is expected to grow during 2025-2031

Use this dialog box to manage OSPF (Open Shortest Path First) on LAN and WAN interfaces. OSPF learns routes from routing

Panorama SD-WAN plugin is 3.1.2. The setup looks like this: Lab Setup There is OSPF running between all L3 devices and all the

About this Guide This design guide provides an overview of the Cisco Catalyst SD-WAN solution. It discusses the architecture and

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