

Cisco Catalyst SD-WAN Fundamentals

cisco Live !

Get to grips with SD-WAN!

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Lead Content Advocate, @PatrickGargano

Session ID: CISCOU-1604

Cisco Webex App

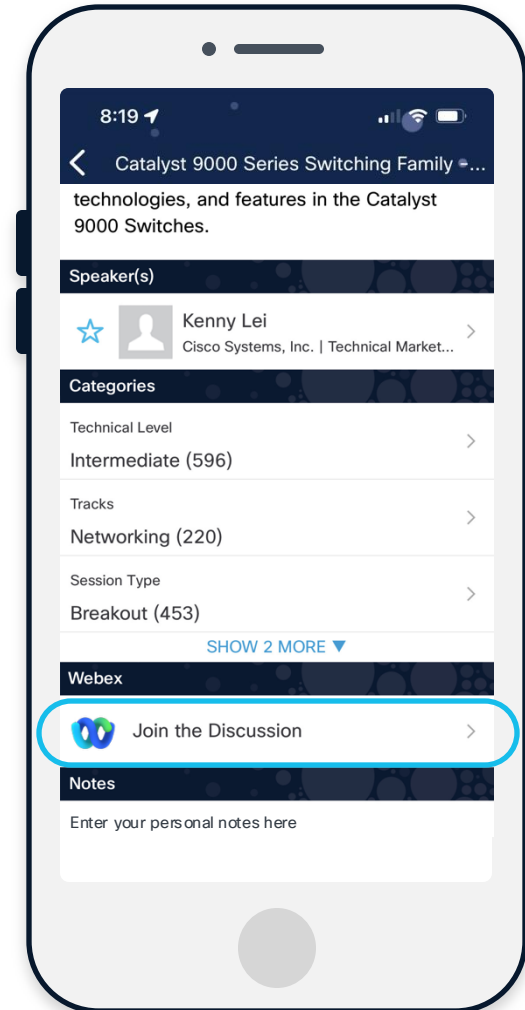
Questions?

Use Cisco Webex App to chat with the speaker after the session

How

- 1 Find this session in the Cisco Live Mobile App
- 2 Click “Join the Discussion”
- 3 Install the Webex App or go directly to the Webex space
- 4 Enter messages/questions in the Webex space

Webex spaces will be moderated by the speaker until November 14, 2025.



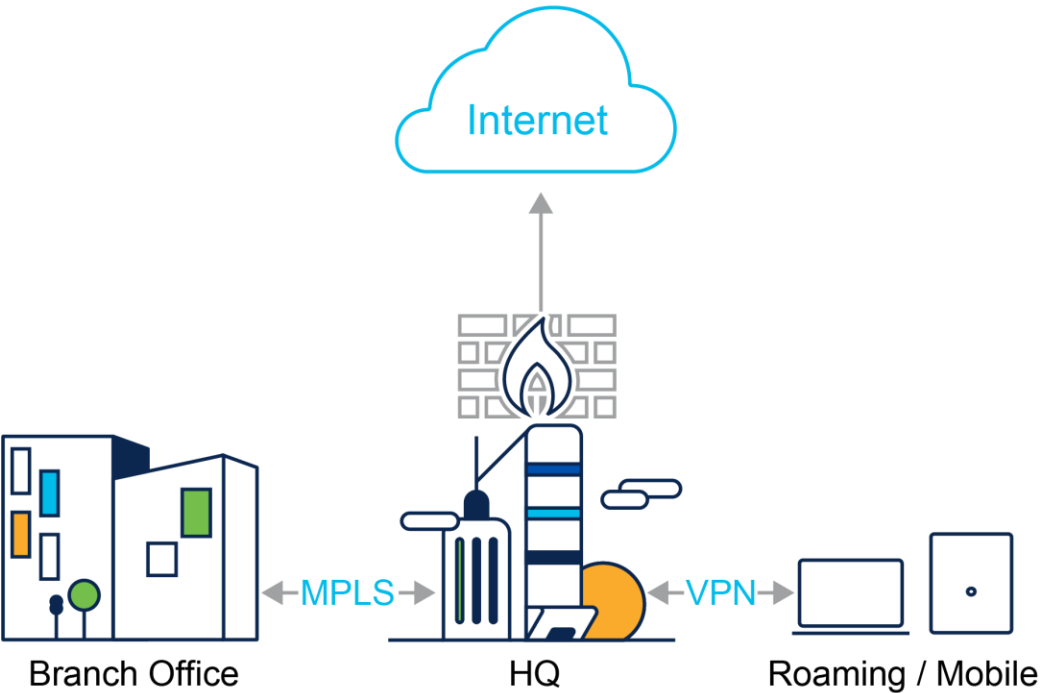
<https://ciscolive.ciscoevents.com/ciscolivebot/#CISCOU-1604>

Agenda

- 01 Cisco Catalyst SD-WAN Overview**
- 02 Training on Cisco U.**
- 03 Cisco Press Book Giveaway**

Cisco Catalyst SD-WAN Overview

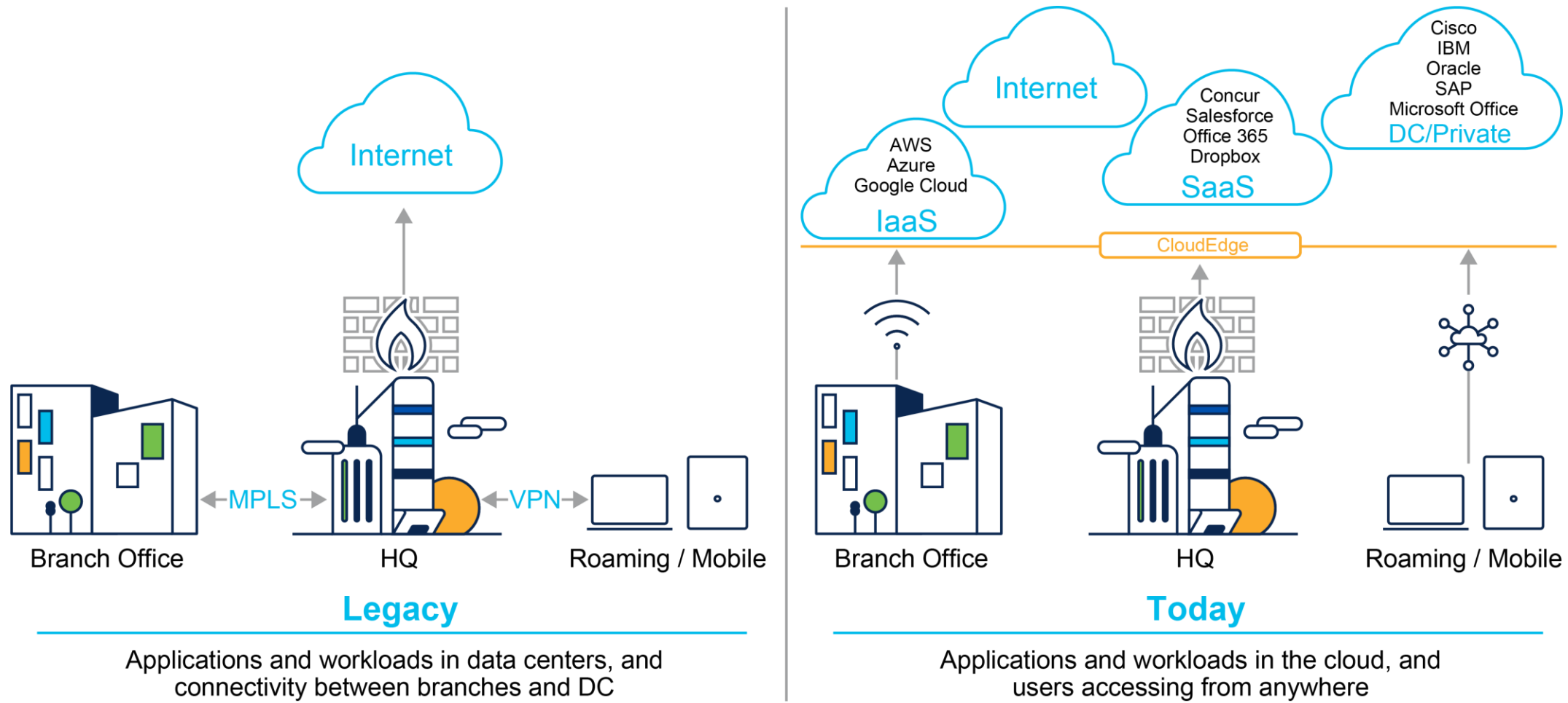
Traditional WAN Architecture



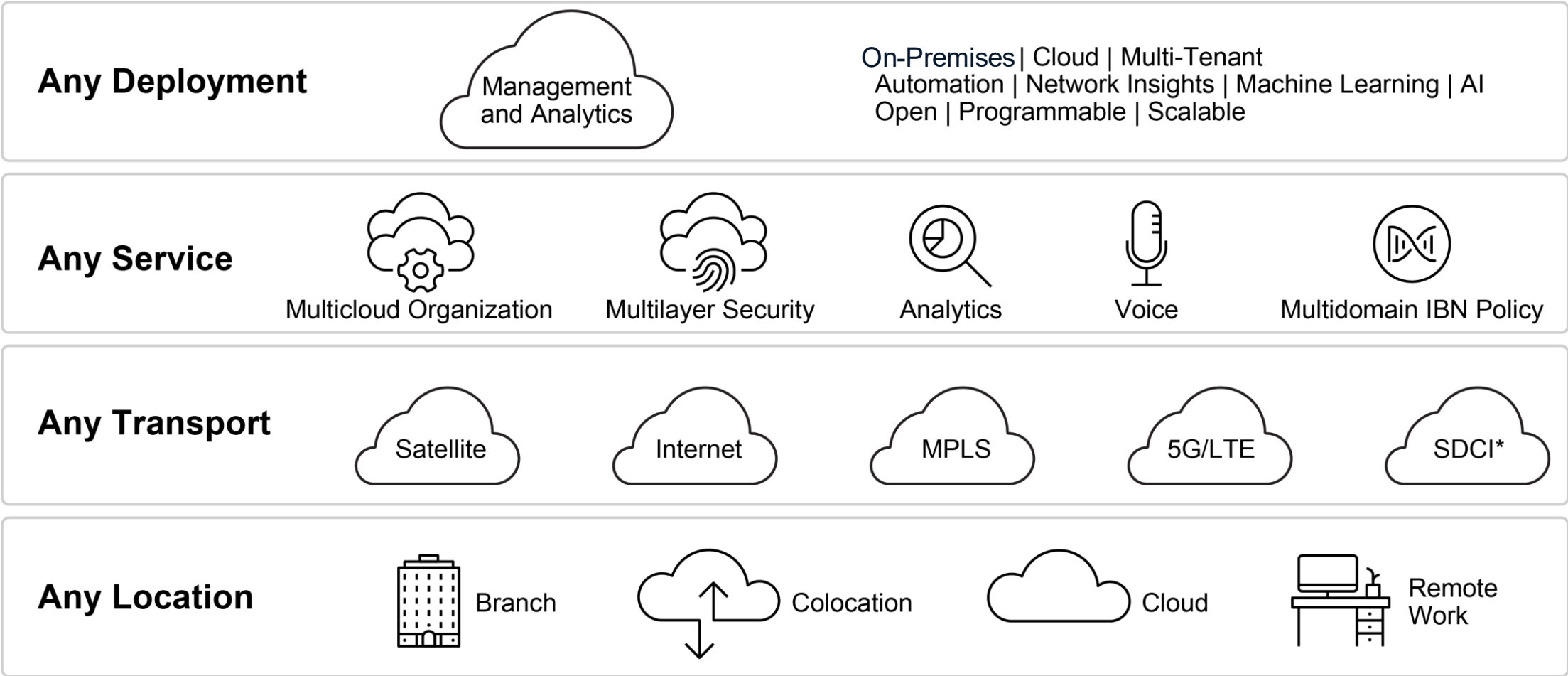
Legacy

Applications and workloads in data centers, and connectivity between branches and DC

Traditional WAN Architecture vs Today's WAN

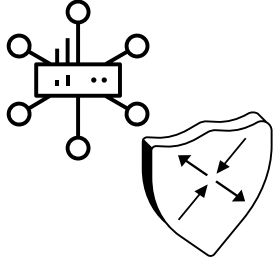


Cisco Catalyst SD-WAN

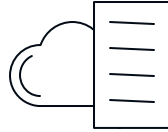


*Software-Defined Cloud Interconnect

Cisco Catalyst SD-WAN Features



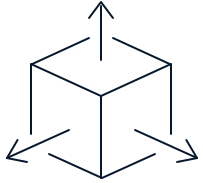
Physical or virtual secured routers



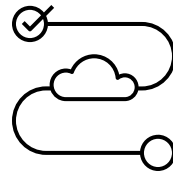
Redundant management in cloud or on premises



Zero-touch provisioning in minutes, not days



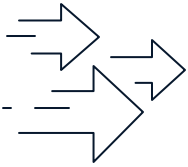
Separation of management, control, data for scaling



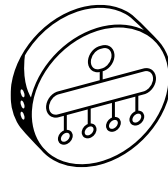
Choice of topologies with point-and-click



Flexible connectivity with any WAN Technology - MPLS, 5G, Internet



Secure segmentation support with VPNs/VRFs



Complete visibility from single pane of glass



Application Aware Routing and AppQoS



Data and Control plane security with IPsec and DTLS tunnels

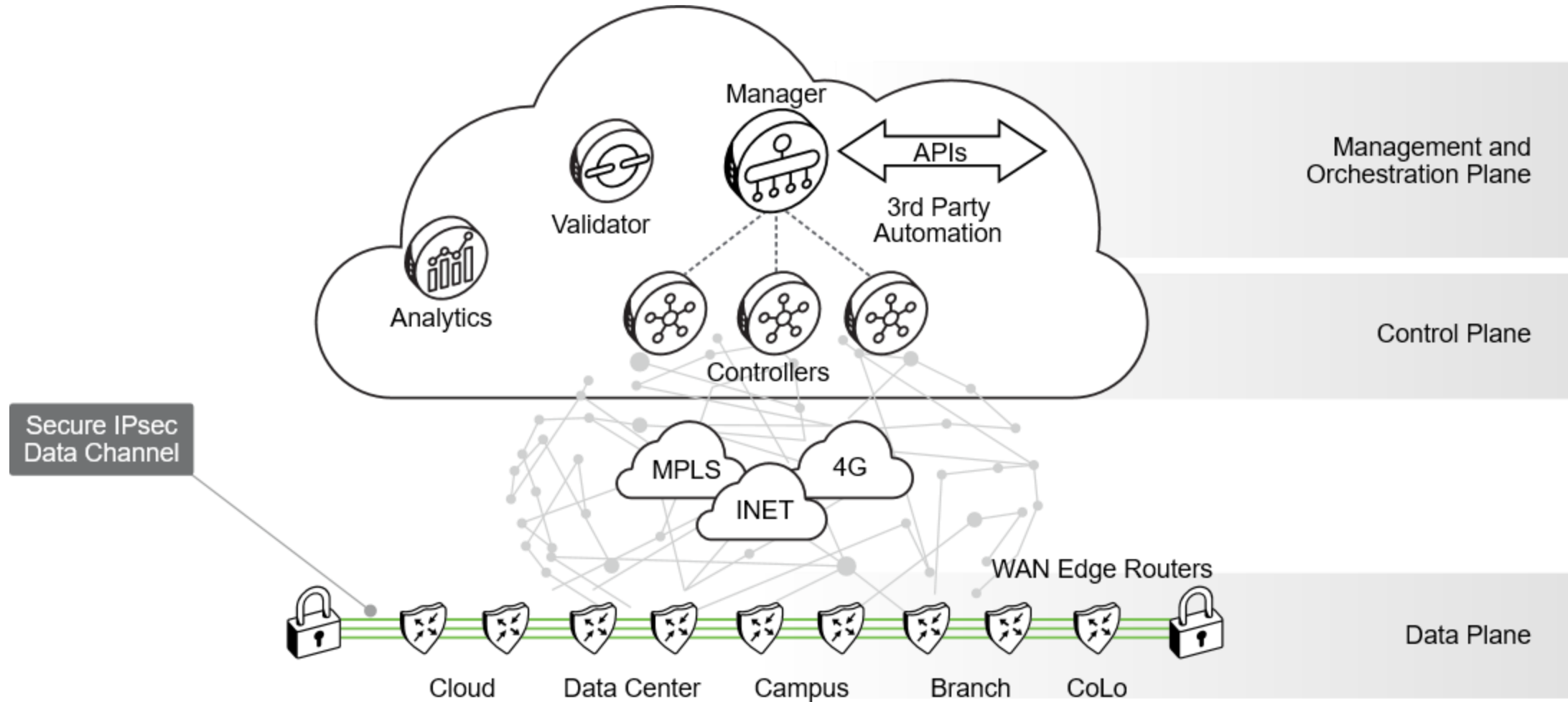


Multicloud optimization for O365, Dropbox, SAP, AWS, Azure, GCP, SDCI



Multilayer security with firewall, IPS, URL filtering, AMP, Umbrella, SSL decryption

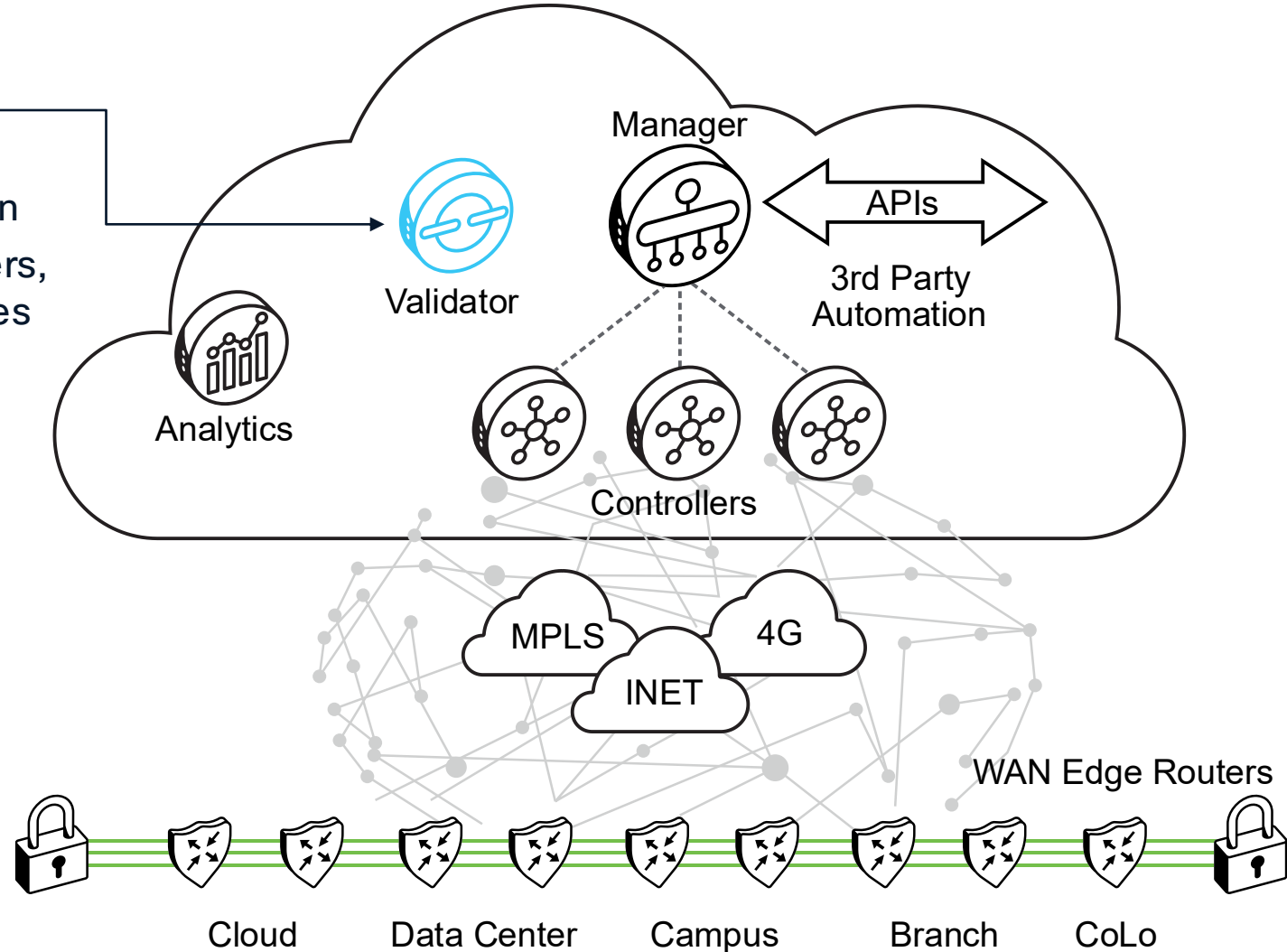
Cisco Catalyst SD-WAN Solution Overview



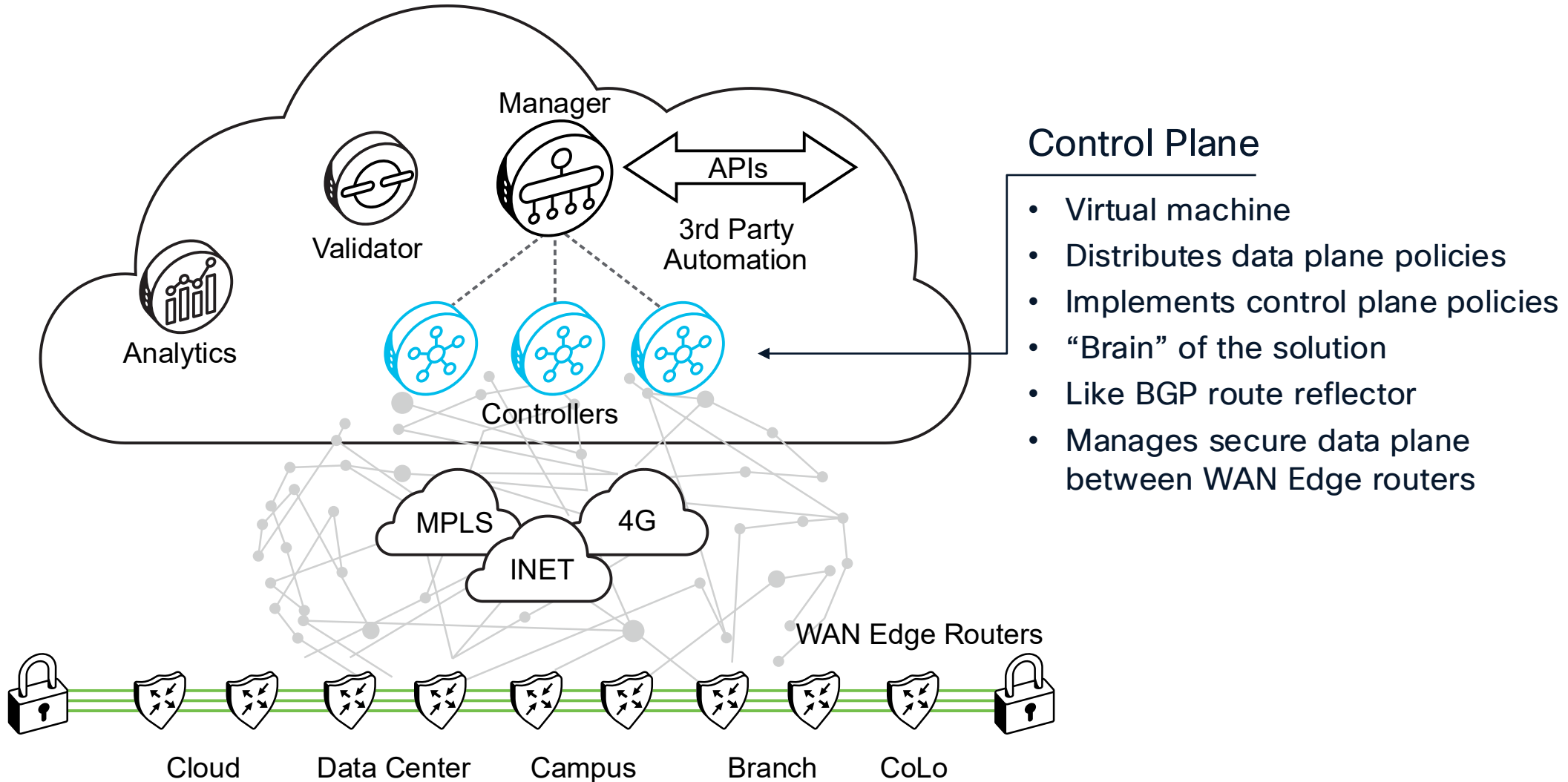
SD-WAN Validator

Orchestration Plane

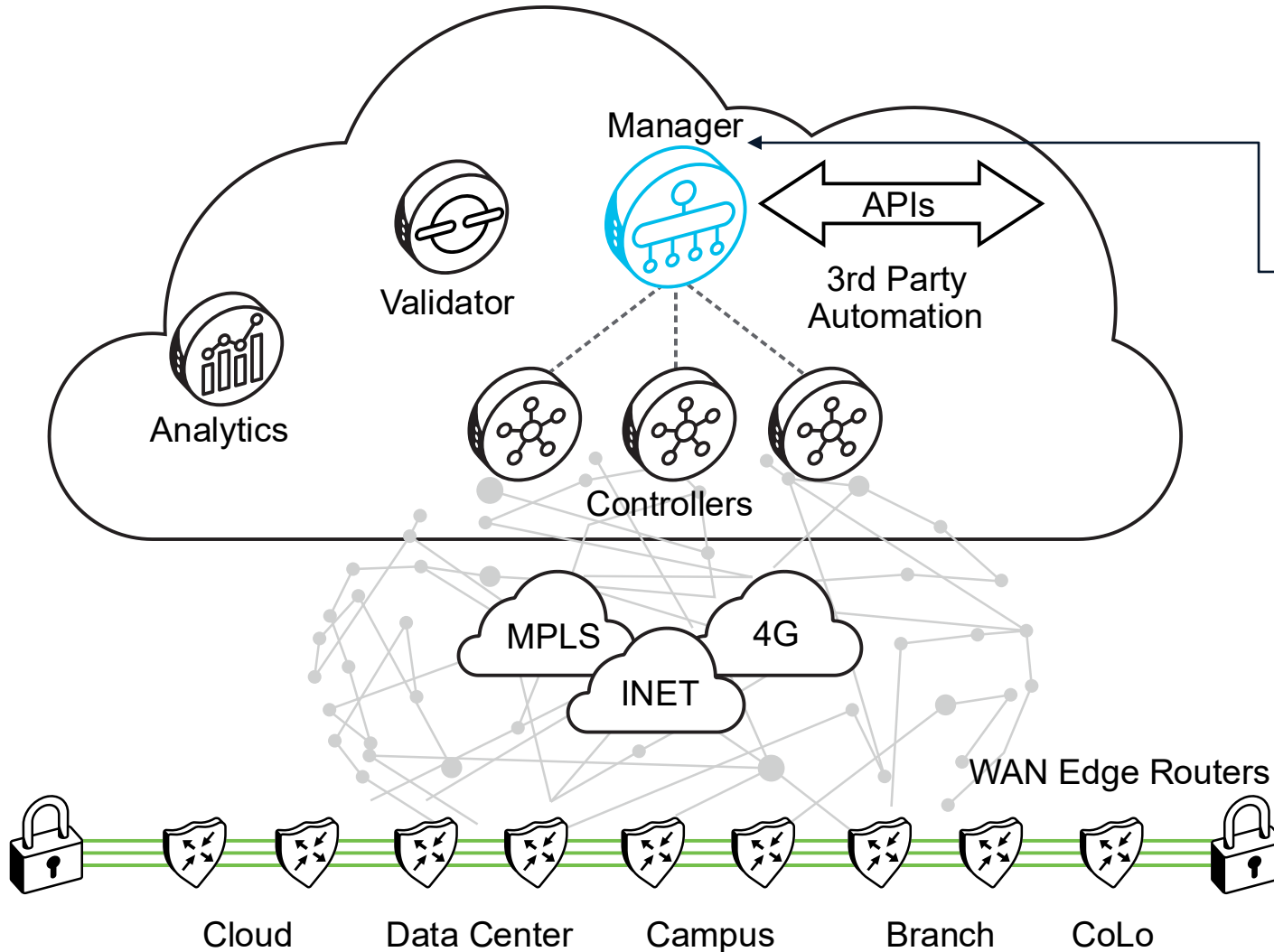
- Virtual machine
- First point of authentication
- Distributes list of Controllers, Managers to all WAN Edges
- Assists with NAT traversal



SD-WAN Controller



SD-WAN Manager



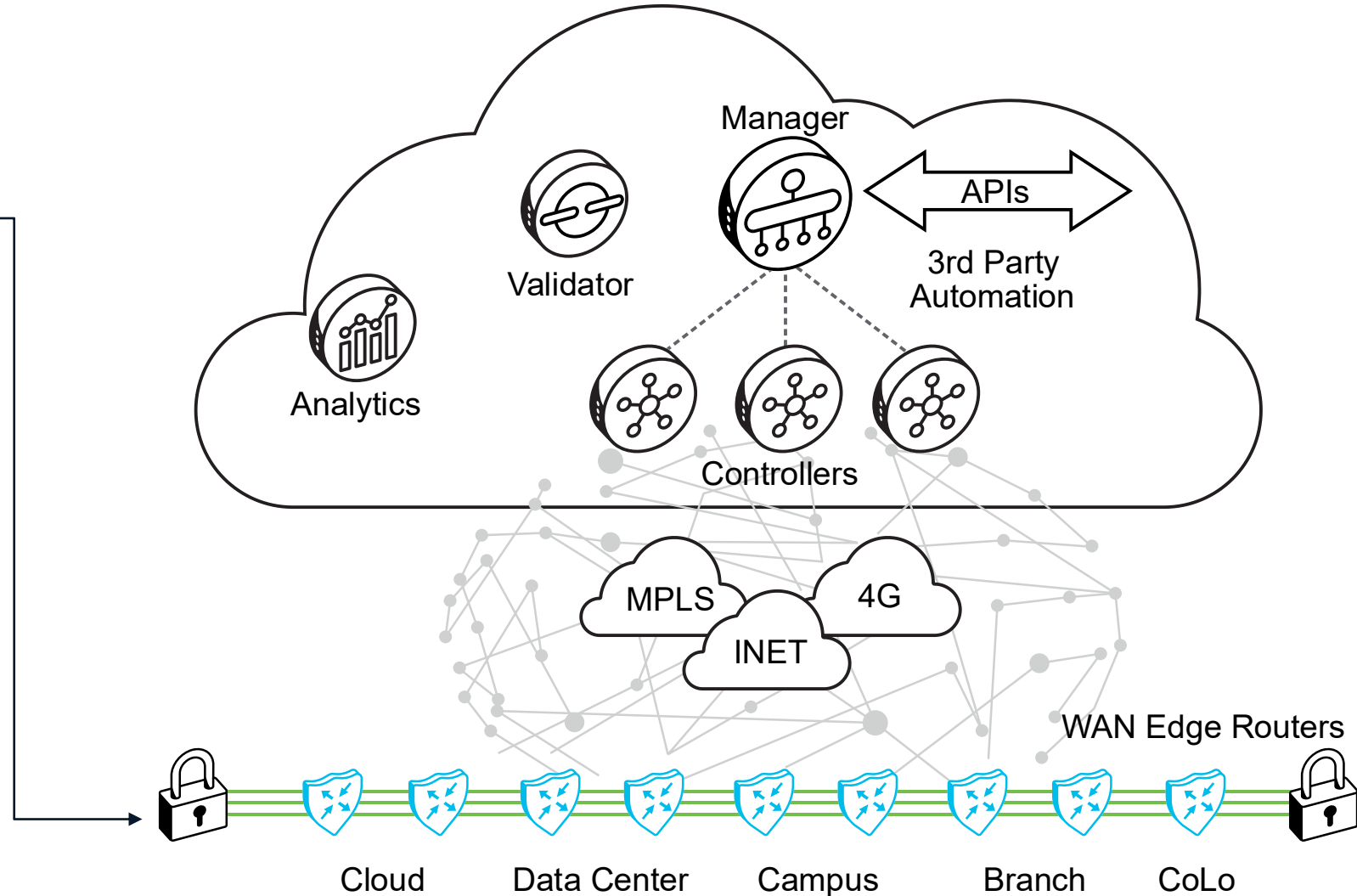
Management Plane

- Virtual machine
- Single pane of glass GUI
- Centralized provisioning, troubleshooting and monitoring
- Configuration standardization
- Policies and templates
- REST, NETCONF

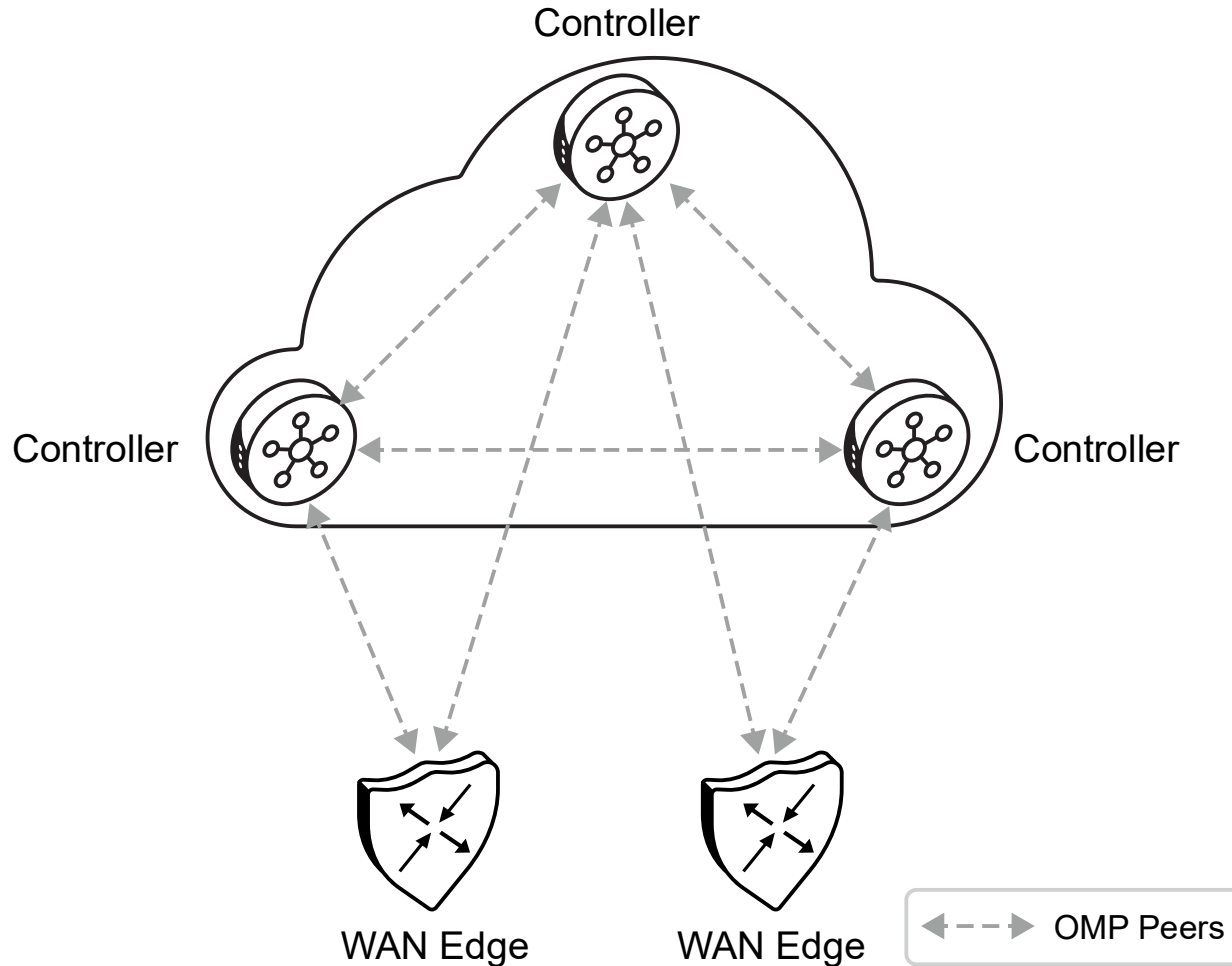
SD-WAN Edge Router

Data Plane

- Physical or virtual
- Viptela or IOS XE
- Zero Touch Provisioning
- Establishes secure fabric
- Implements data plane policies
- Exports performance statistics
- Supports BGP, OSPF, RIP EIGRP, Static routing, VRRP



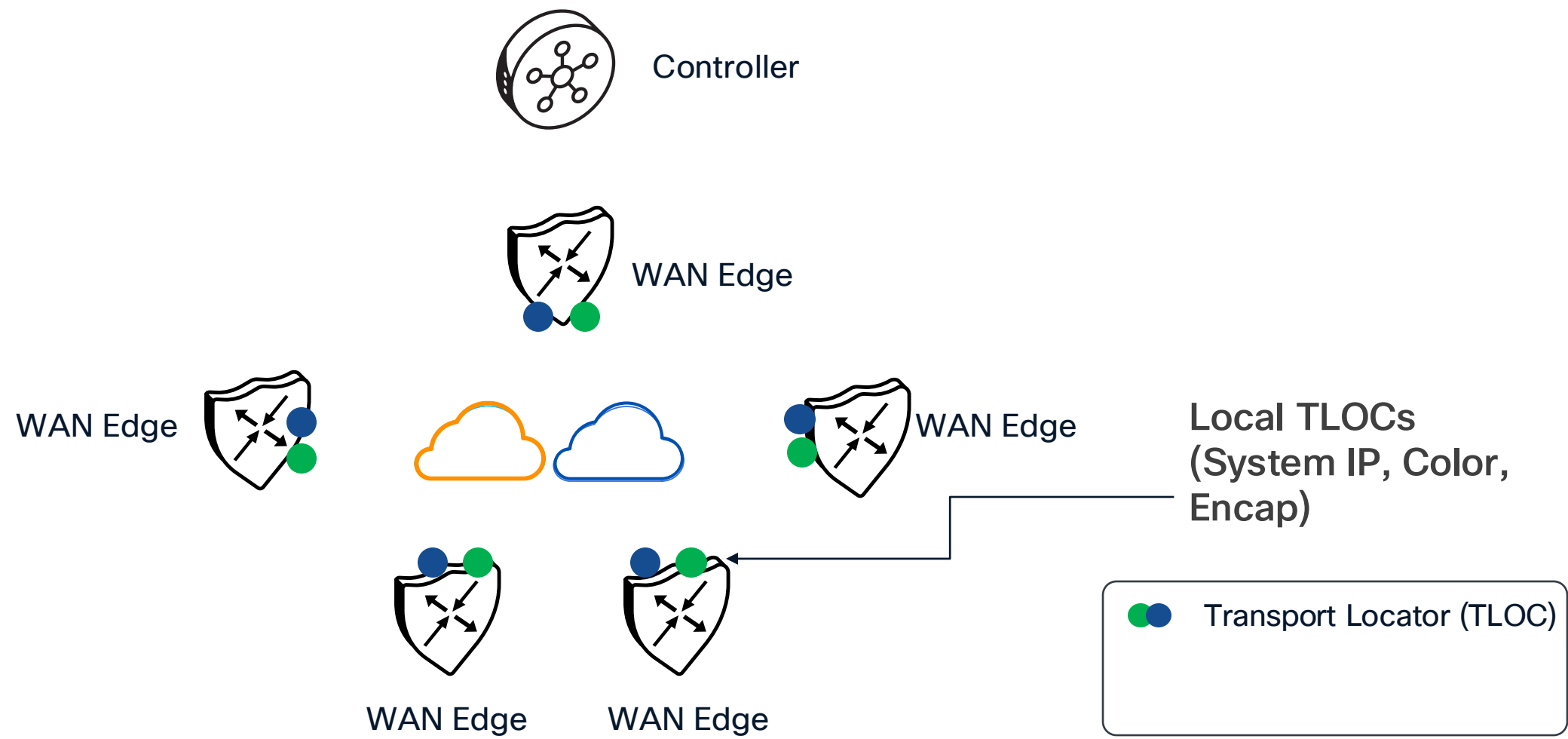
Overlay Management Protocol (OMP)



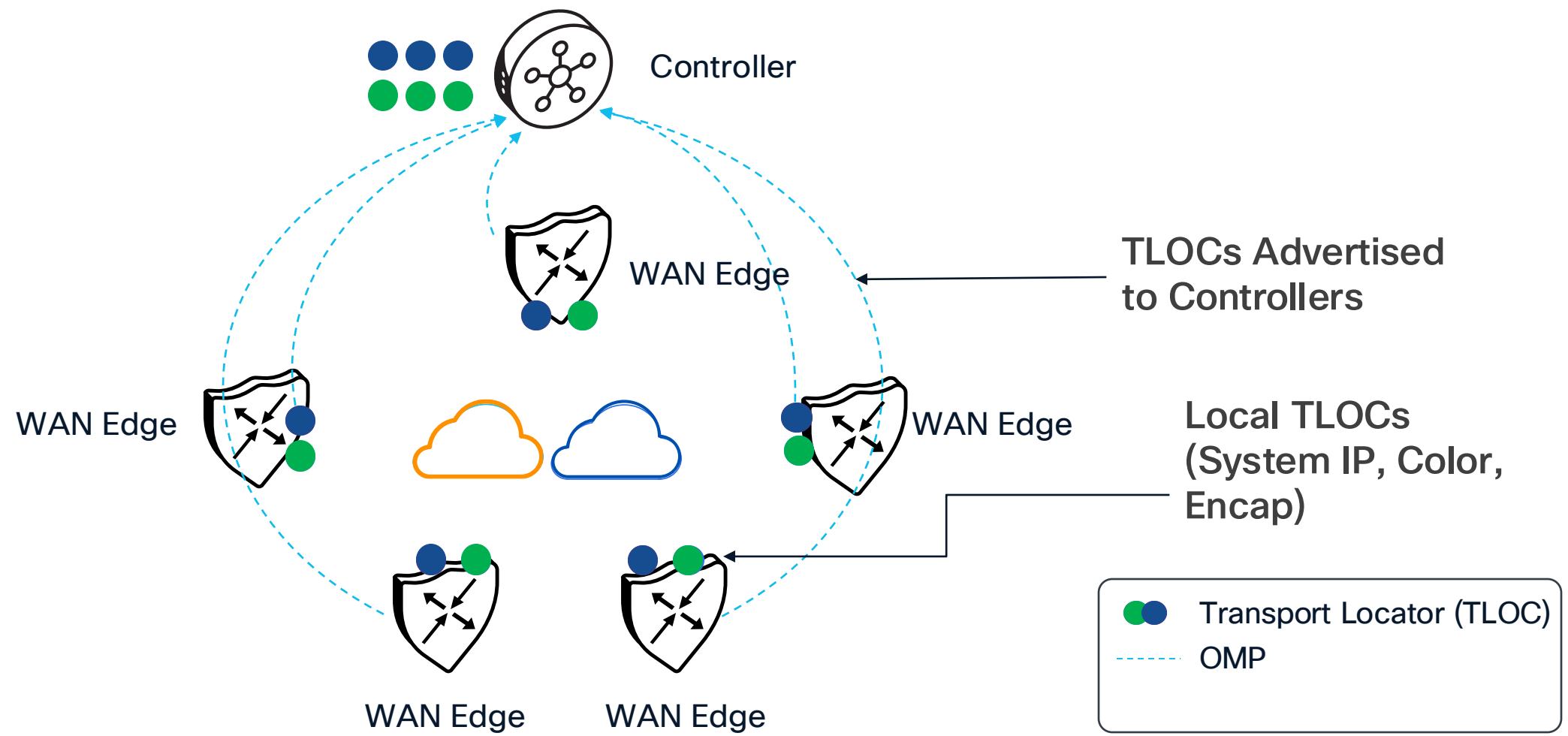
- Overlay Management Protocol (OMP)
- Control plane protocol
- Runs inside authenticated TLS/DTLS connections
- Advertises routing context and policies
- Advertises OMP routes, TLOC routes, service routes

Note: WAN Edge routers need not connect to all Controllers

Transport Locators (TLOCs)

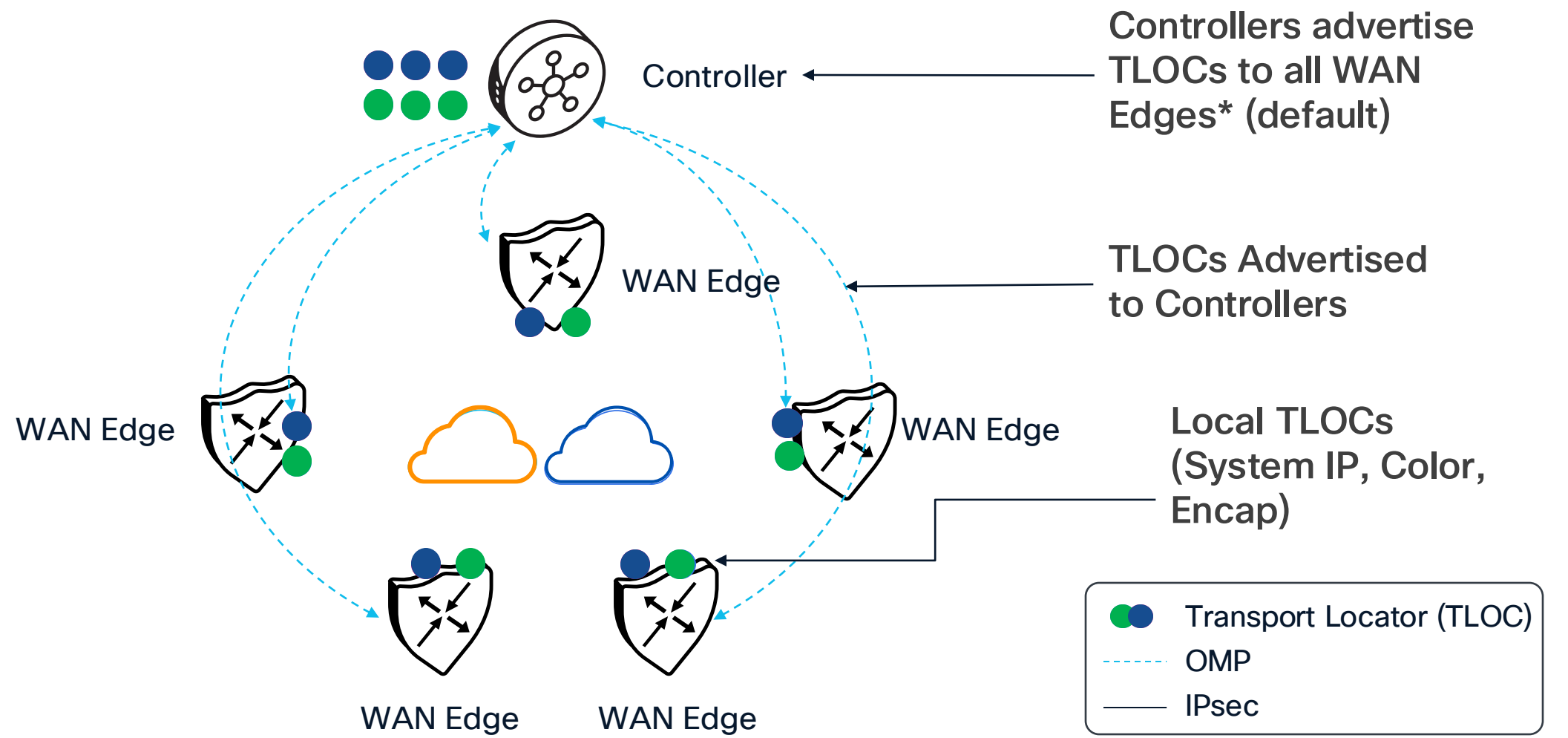


Transport Locators (TLOCs)



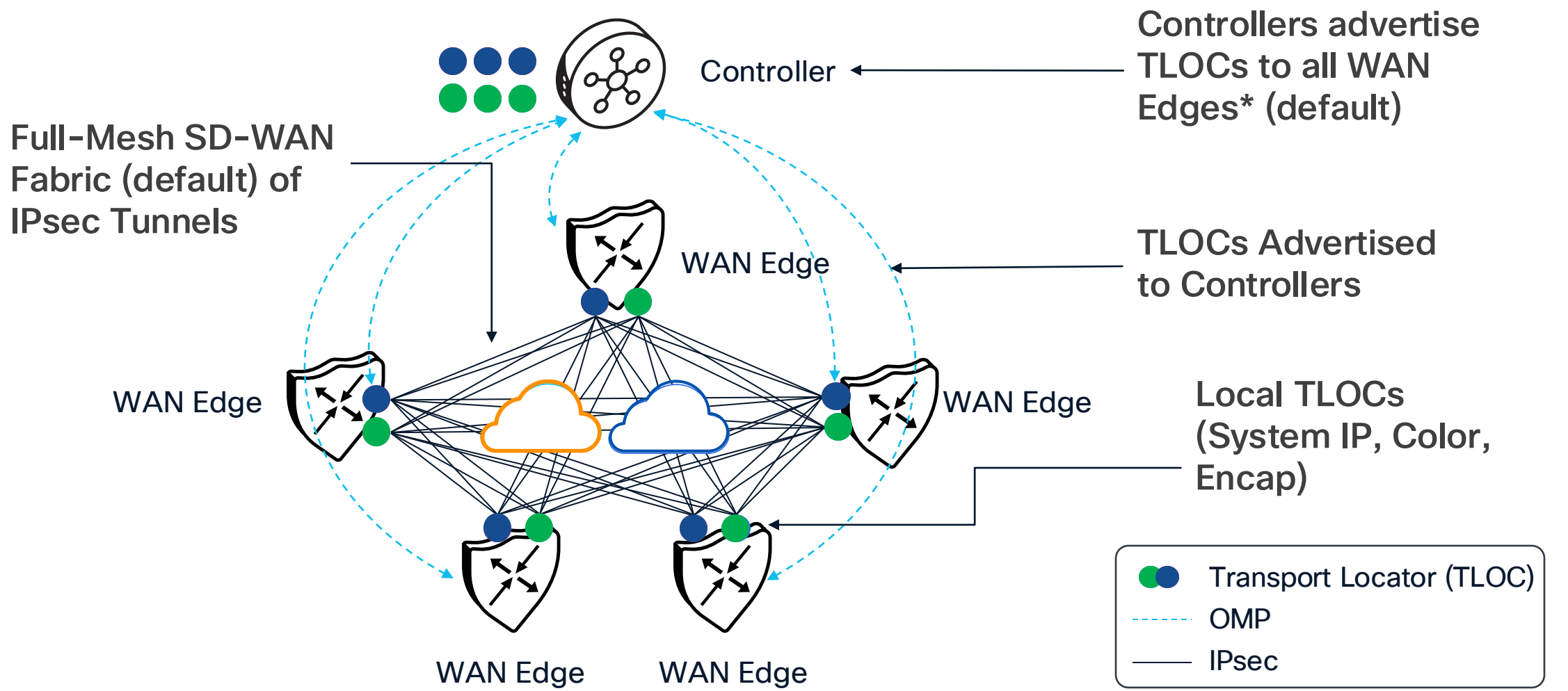
*Can be influenced by the control policies

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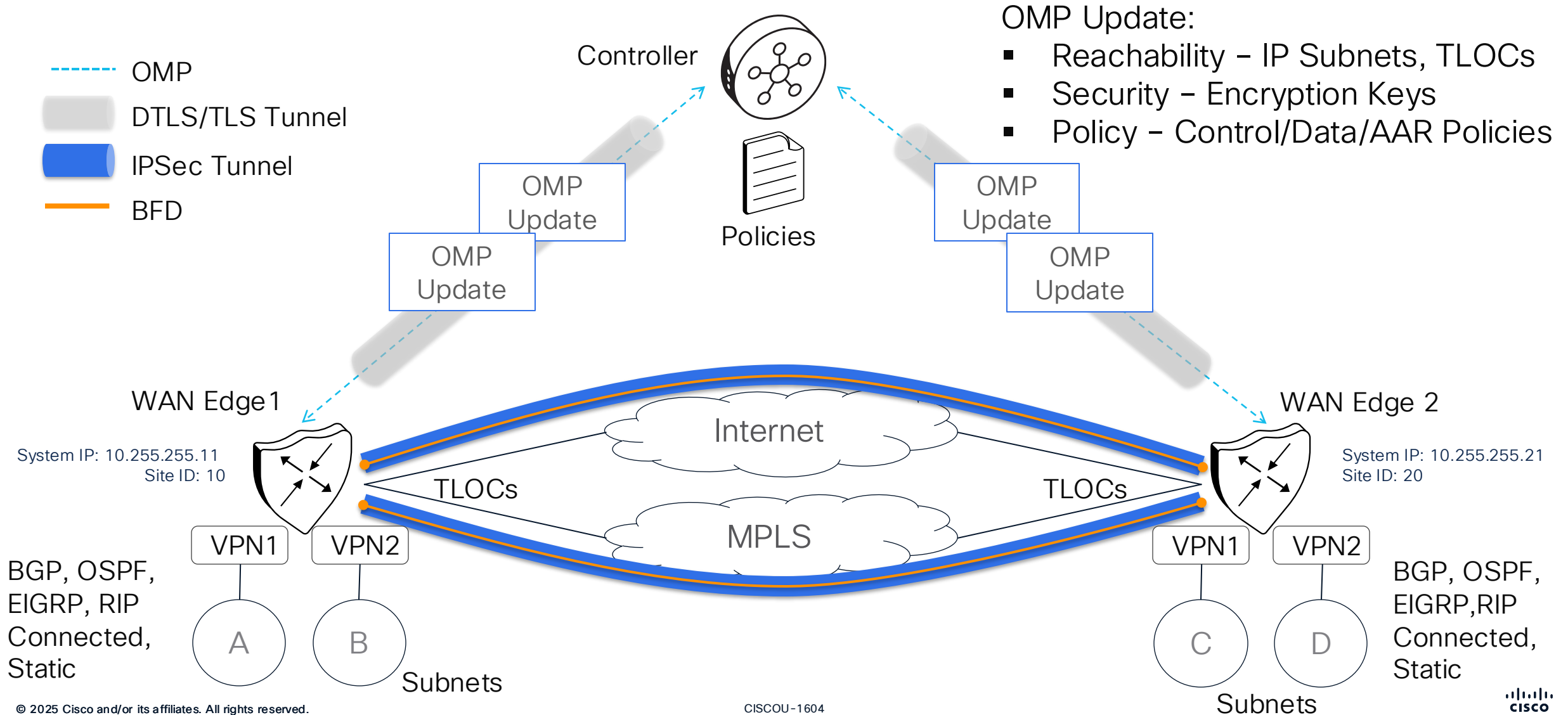
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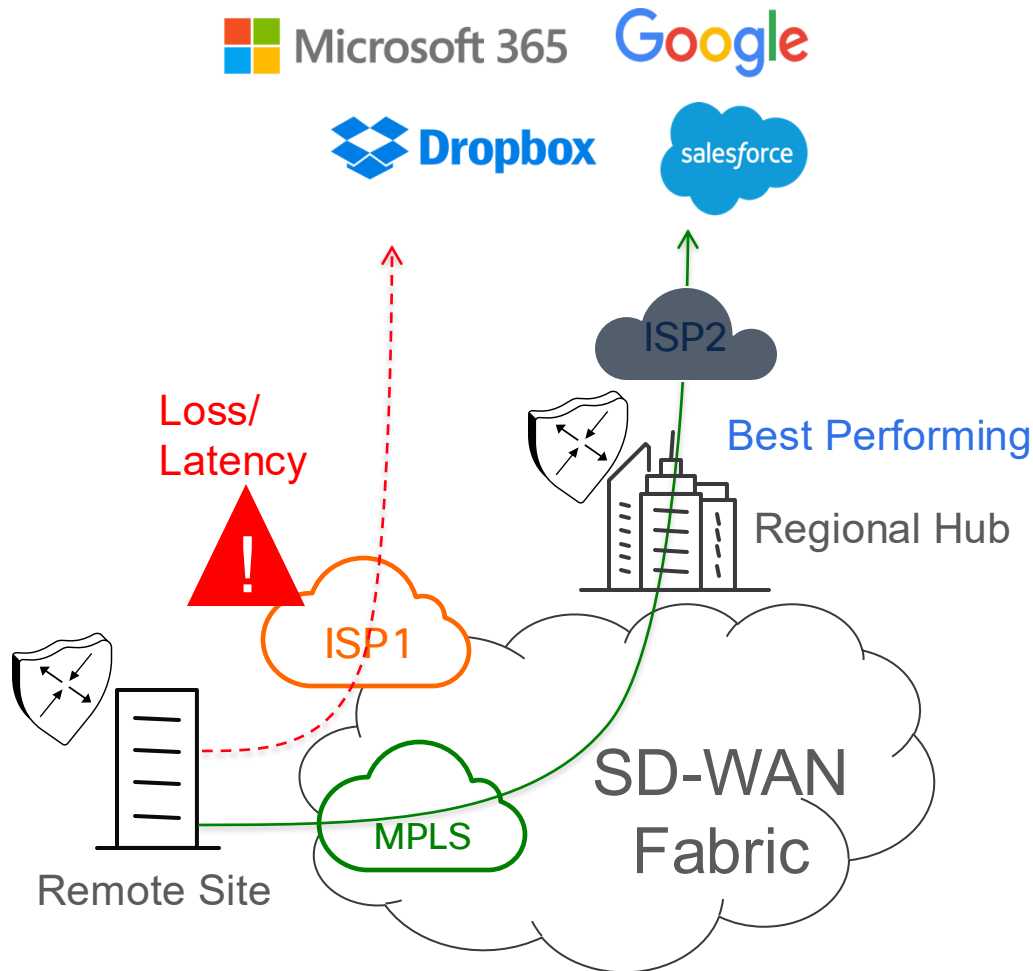


*Can be influenced by the control policies

Fabric Operation Walkthrough

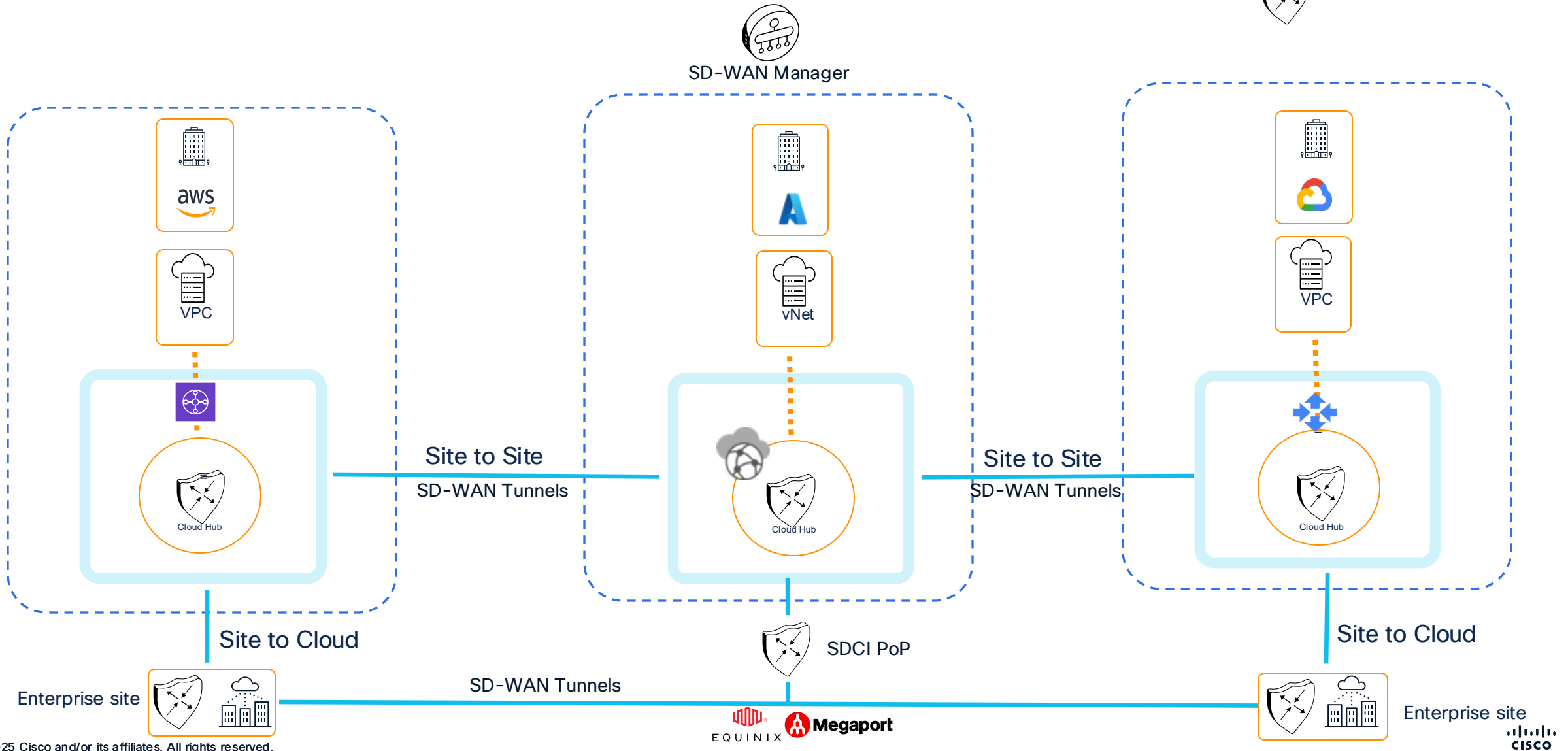


Cloud OnRamp for SaaS – DIA and Gateway

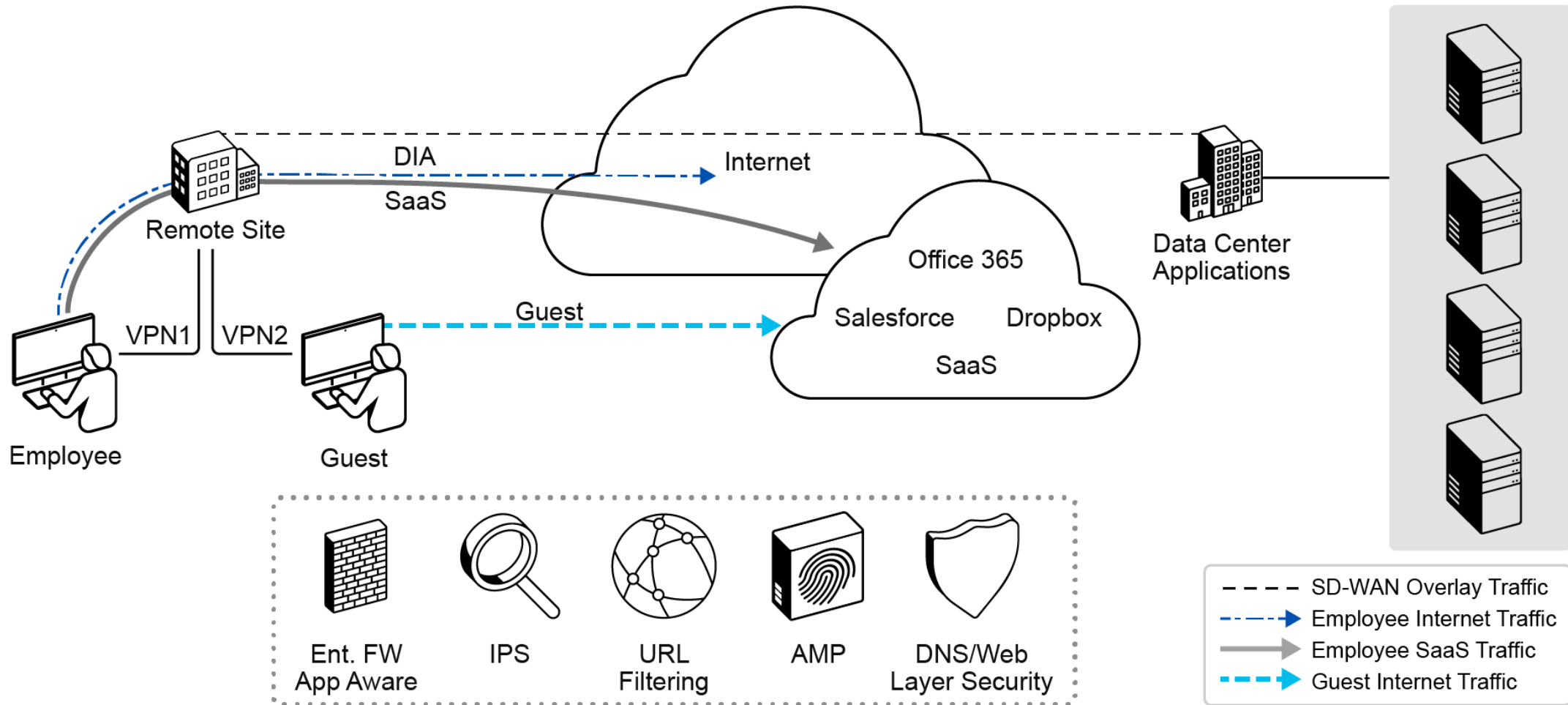


- Cloud OnRamp for SaaS continuously monitors “edge to SaaS” performance on both DIA and backhaul paths
- Picks best performing path based on performance metrics (loss & delay)
- Automatic failover in case of performance degradation
- Fully automated
- Supports 14 apps + custom application option with NBAR

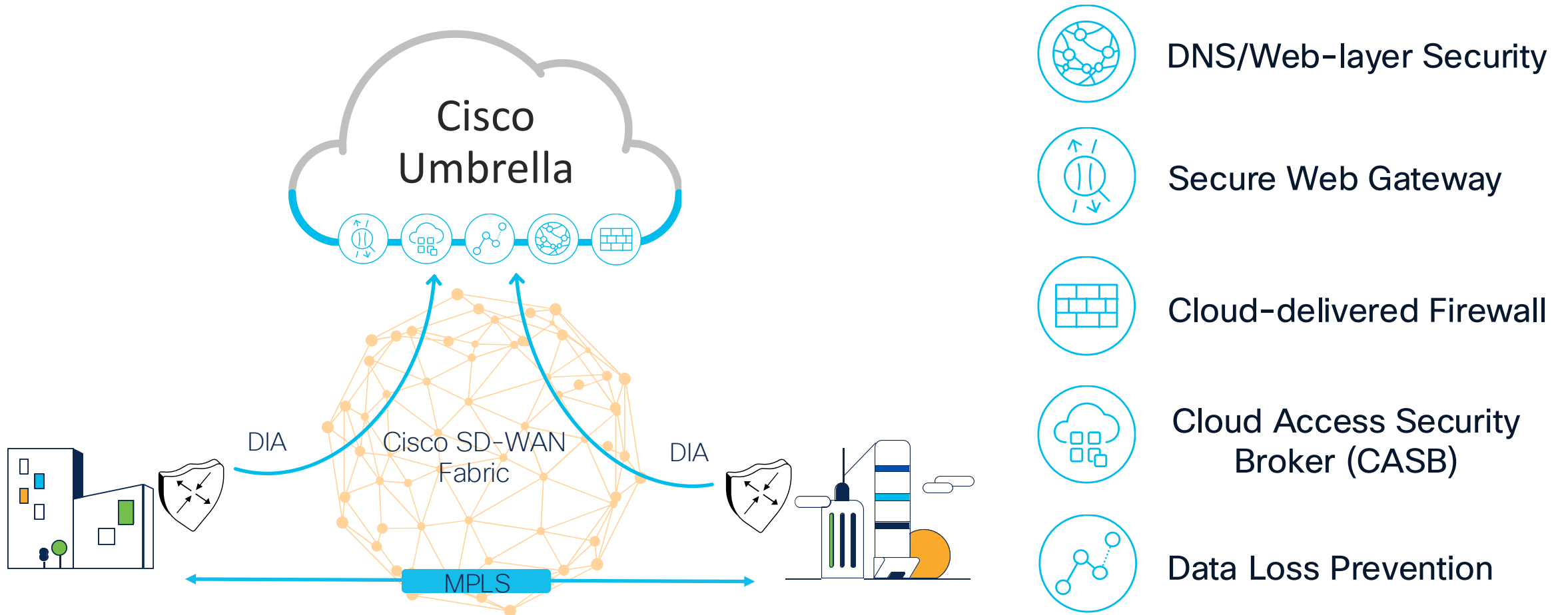
Unifying Multicloud Connectivity



Catalyst SD-WAN Integrated Security

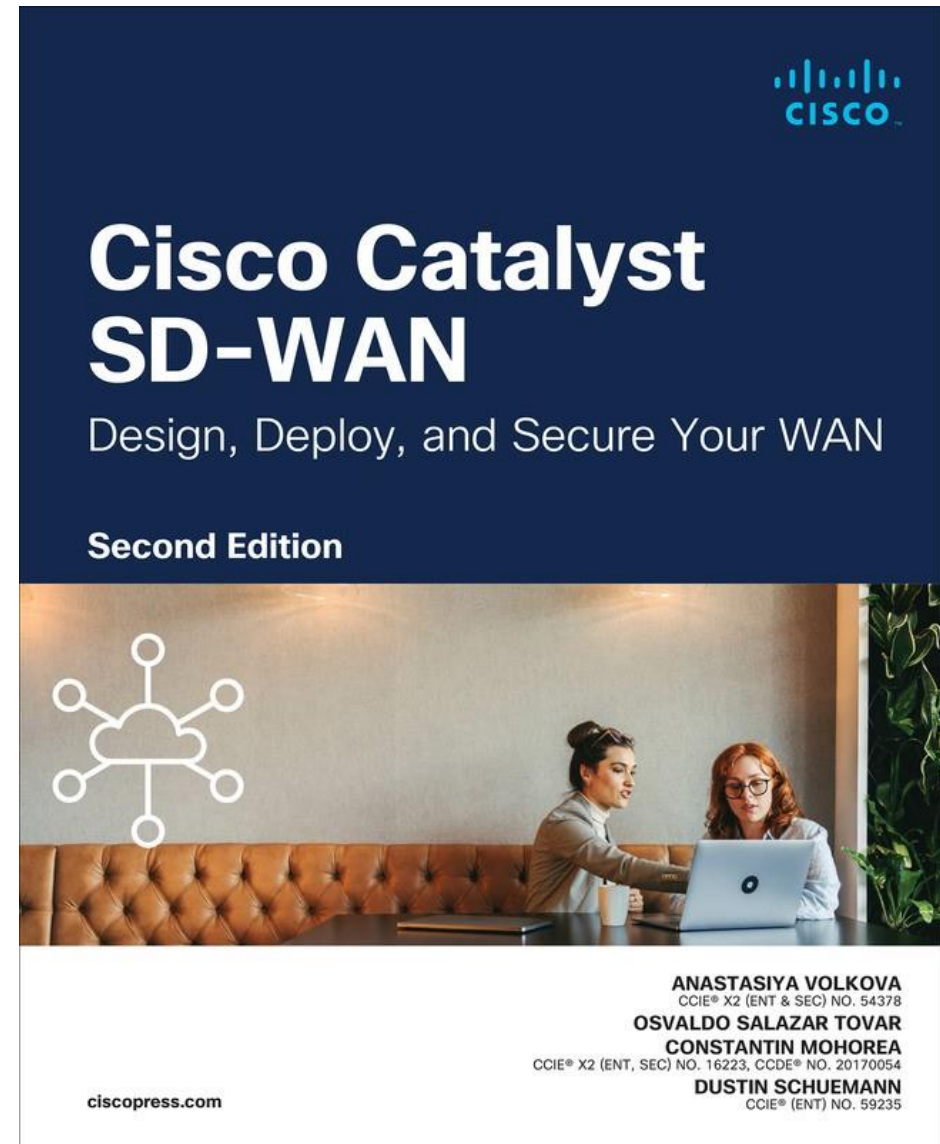


Cloud Security with Umbrella SIG (Cisco Secure Access)



Cisco Press Book Giveaway

Cisco Catalyst SD-WAN, 2nd Edition



Thank you

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