

Making Catalyst SD-WAN Easy

cisco Live !

Operational Simplification and User Experience

Nikolai Pitaev
Leader Technical Marketing Engineering

Abstract for our session from the session catalog

FULL CONFERENCE

IT LEADERSHIP

Making Catalyst SD-WAN Easy: Operational Simplification and User Experience - BRKENT-1313

Nikolai Pitaev, Technical Marketing Engineering Leader, Cisco - **Distinguished Speaker**

You are a Speaker

Monday, Jun 9 | 9:30 AM - 10:30 AM PDT

Cisco Catalyst SD-WAN (formerly Viptela) builds a secure, unified connectivity over any transport and provides simplified operations with centralized management, policy control, and application visibility across the enterprise network.

This introduction-level session will showcase how SD-WAN operations are made easier and more efficient with the introduction of new features and an enhanced user experience starting from 20.12 Release.

They address customer challenges in the areas of onboarding, configuration, user interface, troubleshooting, visibility, and AI.

Participants will become familiar with the new, intuitive, and consistent User Interface and will learn a fresh approach to configuration and guided workflows based on configuration groups, improved visibility, AI Assistant and new troubleshooting tools like Network Wide Path Insights (NWPI).

Also, a Conversion Tool from configuration based on device and feature templates (aka UX 1.0) to UX 2.0 based configuration using configuration and policy groups will be presented.

Several live demonstrations will be shown.

Agenda

- 01 Introduction
- 02 Configuration
- 03 Monitoring
- 04 Troubleshooting
- 05 Summary

Three Things to Remember

1. Workflows
2. Configuration Groups
3. Network-Wide Path Insights (NWPI)



Cisco Webex App

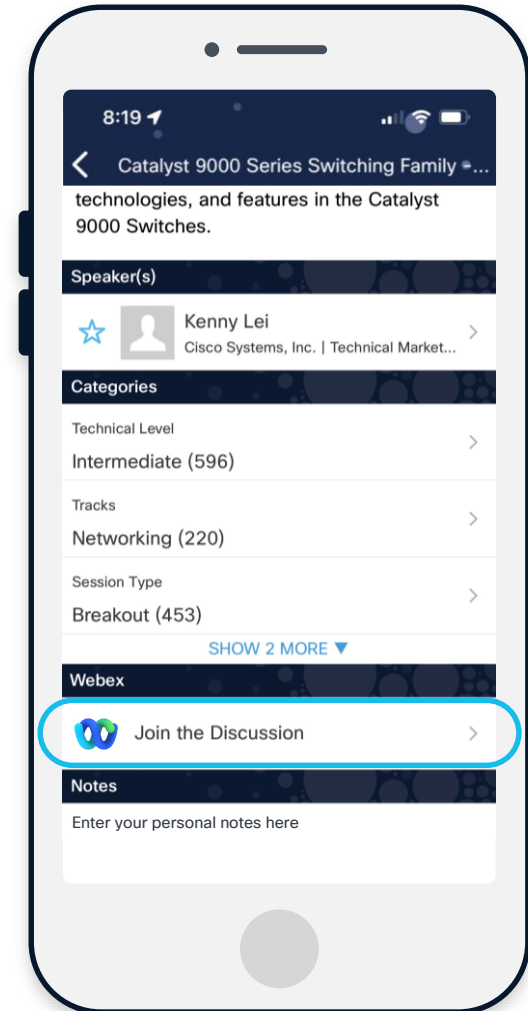
Questions?

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 June 13, 2025.



<https://ciscolive.ciscoevents.com/ciscolivebot/#BRKENT-1313>

Configuration Made Easy

4 Ways to configure SD-WAN



Workflow



Catalog



Manual



Export / Import



Same Result: Configuration and Policy Groups

Config Groups and Feature Profiles

Configuration Groups:

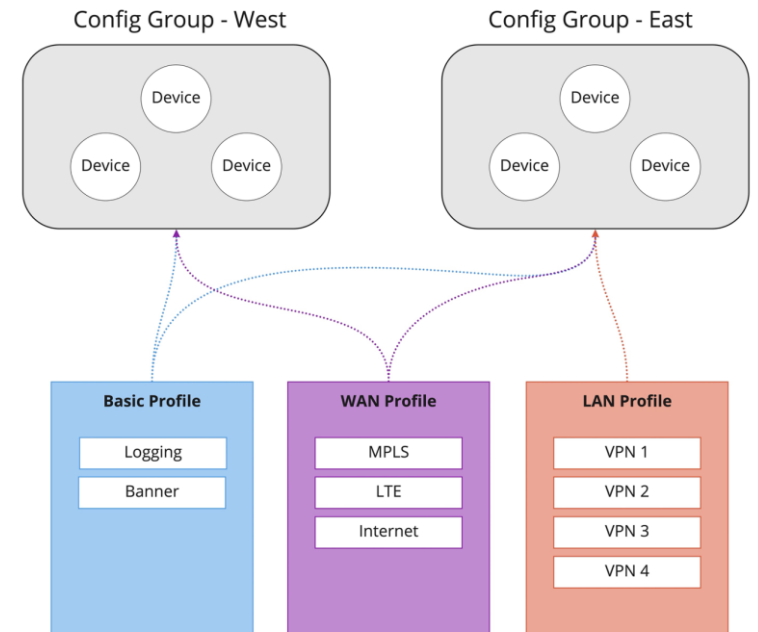
- Logical grouping of devices that share a common purpose within the WAN.
- The user defines and can customize this grouping based on *their* business needs.

Ex: East/West, Americas/APJC/EMEAR, Retail Store / Distribution Centre

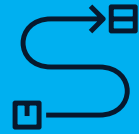
Feature Profiles:

- Flexible “buckets” of configuration that can be shared across Configuration Groups.
- Create Feature Profiles based on features that are required
- Put profiles together to complete device configuration, like building blocks

Ex: Basic Profile, WAN Profile, LAN Profile



4 Ways to configure SD-WAN



Workflow



Catalog

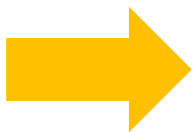


Manual



Export / Import

Workflow Library



Catalyst SD-WAN

Monitor
Configuration
Analytics
Workflows
Tools
Reports
Maintenance
Administration
Explore

Workflows

In Progress 4

Create NGFW Policy
Last edited 51 minutes ago
Create Configuration
Delete Resume

Configure ThousandEyes
Last edited 27 days ago
Create Configuration
Delete Resume

Software Upgrade
Last edited 23 hours ago
Network Operations
Delete Resume

Create NGFW Policy
Last edited 8 days ago
Create Configuration
Delete Resume

Library All

Create Configuration Group
Configure your WAN with smart configuration group(s). Use recommended settings to get the WAN up and running quickly.
Create Configuration
Start

Instantiate Service Chain
We detected the following Service Chain Configurations. Select one from below to start instantiating.
Create Configuration
Start

Define and Configure Service Chain
Define and configure a Service Chain for cloud, SD-WAN, campus, data center.
Create Configuration
Start

Create SD-Routing Config
Configure your WAN with smart SD-Routing Config. Use recommended settings to get the WAN up and running quickly.
Create Configuration
Start

Create NGFW Policy
Use this workflow to configure your security policy.
Create Configuration
Start

Create NFV Configuration Group
As a Network Architect create a device-independent NFV design for rapid deployment on Cisco's vCPE devices.
Create Configuration
Start

Configure Teleworker Devices
Get secure access to your corporate network from the comfort of your home.
Create Configuration
Start

Create Cellular Gateway Group
Enable high-speed 5G or LTE WAN connectivity with Cisco Catalyst Cellular Gateway.
Create Configuration
Start

Configure UC Voice
Configure Cisco Unified Communications (UC) voice services for supported routers.
Create Configuration
Start

Configure ThousandEyes
Simplify ThousandEyes Agent onboarding & test configuration.
Create Configuration
Start

Create WAN regions and assign controllers
Divide the SD-WAN fabric into smaller, easier to manage network areas or WAN regions. Assign Controllers to WAN regions for enhanced scalability, redundancy and fault tolerance.
Create Configuration
Start

Quick Connect
Onboard your devices.
Onboard Devices
Start

Deploy Configuration Group
Push configuration to devices in your WAN.
Deploy Configuration
Start

Attach Service Chain to SD-WAN Router
Attach Service Chain to SD-WAN Router.
Deploy Configuration
Start

Deploy Policy Group
Push configuration to devices in your WAN.
Deploy Configuration
Start

Firmware Upgrade
Upgrade the module firmware with the latest image.
Network Operations
Start



Workflow

Workflow for Device Configuration

Create now, deploy later

Create Configuration Group

Configure your WAN with smart configuration group(s). Use recommended settings to get the WAN up and running quickly.

Create Configuration

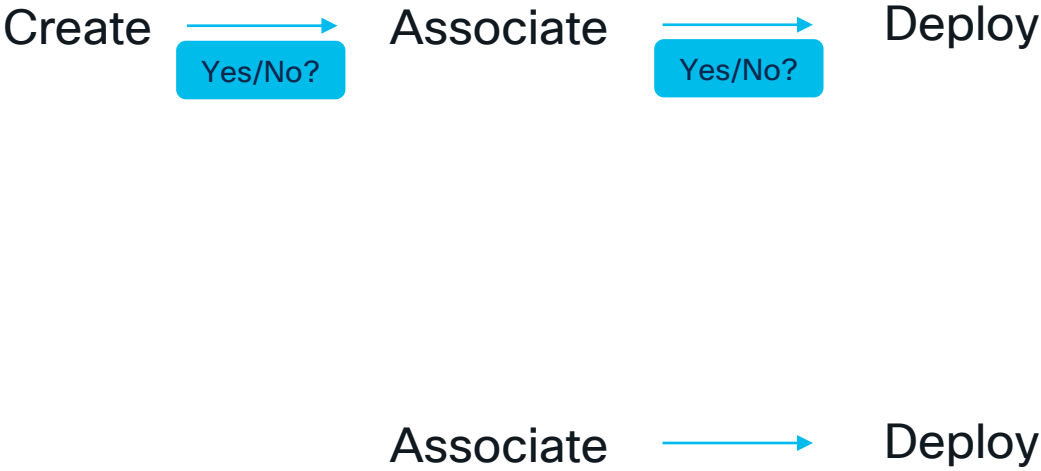
Start

Deploy Configuration Group

Push configuration to devices in your WAN

Deploy Configuration

Start



Demo

Workflow for Configuration Group creation:

1. Select Name
2. Pick up the deployment case
3. Use Smart Defaults



Monitor



Configuration



Analytics



Workflows



Tools



Reports



Maintenance



Administration



Explore

Monitor

All Sites

Overview

Devices

Security

Multicloud

Tunnels

Logs

Energy Management

Applications

Sites

Circuits



Control Components

2

Validator

2

Controller

1

Manager

WAN Edges

47

Reachable

1

Unreachable

Sites

28

Up

3

Down

Circuits

48

Up

4

Down

Certificate Status

0

Warning

0

Invalid

Licensing

75

Assigned

0

Unassigned

Reboot

2

Last 24 hrs

1 Hour

Actions

Application Experience

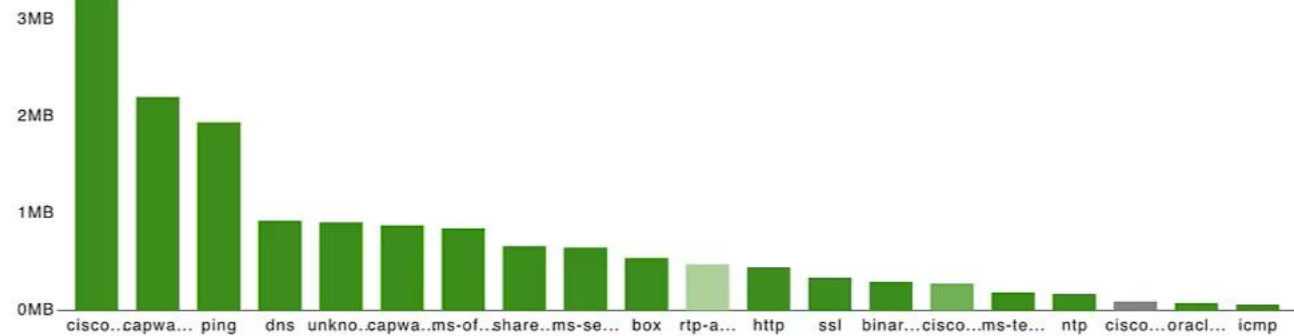
QoE

Usage (Total)



Top 20 by usage

Top 20 by usage 15 MB



Good QoE: 8 - 10 Fair QoE: 5 - < 8 Poor QoE: 0 - < 5 Unknown (No QoE)

Feedback

4 Ways to configure SD-WAN



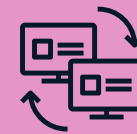
Workflow



Config Catalog



Manual



Export / Import

Cisco Self Service Catalog Service



Catalog

The screenshot displays the Cisco Self Service Catalog Service interface. The sidebar on the left contains navigation links: Monitor, Configuration, Analytics, Workflows, Tools, Reports, Maintenance, Administration, and Explore. The main content area is titled 'Configuration Catalog' and shows a grid of 'Catalog Entries'. Each entry card includes a title, a brief description, a 'View details' link, and a 'Content' field. The entries are categorized by labels such as 'sdwan', 'retail', 'dual-router', 'single-router', 'roadways', and 'labeled'. The entries include:

- Dual Router SD-WAN Branch with Dual Transport and TLOC-Ext**: This dual-router SD-WAN with dual transport configuration catalog entry assists with rapid deployments at medium to large-sized branch offices where high availability, simplicity, and standardization are key. Examples include large banks, healthcare facilities, and manufacturing facilities. It supports dual routers with N+1 redundancy for internet connectivity and utilizes WAN TLOC extensions for WAN Edge routers to access each other's transport. This configuration offers network segmentation via...
- IR1101 for Roadways**: This single-router SD-WAN configuration is for the Cisco Industrial Router IR1101. It is designed specifically for this platform with all its unique interface names and modules to aid in the rapid deployments at small to medium-sized locations where flexibility, simplicity and standardization are key. This catalog represents a Cisco Validated Profile (CVP) suited for deployments at roadways and intersections. This network configuration is a wired transport with single LTE connectivity as last resort...
- IR1101 wired with LTE backup in NAT mode**: This single-router SD-WAN configuration is for the Cisco Industrial Router IR1101. It is designed specifically for this platform with all its unique interface names and modules to aid in the rapid deployments at small to medium-sized locations where flexibility, simplicity and standardization are key. This catalog represents a Cisco Validated Profile (CVP) suited for deployments at locations like retail, Oil & Gas Pipelines, Roadways & Intersections. This network configuration is wired transport...
- IR1101 wired with LTE backup in routed mode**: This single-router SD-WAN configuration is for the Cisco Industrial Router IR1101. It is designed specifically for this platform with all its unique interface names and modules to aid in the rapid deployments at small to medium-sized locations where flexibility, simplicity and standardization are key. This catalog represents a Cisco Validated Profile (CVP) suited for deployments at locations like retail, Oil & Gas Pipelines, Roadways & Intersections. This network configuration is wired transport...
- IR1800 wired with LTE backup in NAT mode**: This single-router IR1800 SD-WAN configuration catalog entry assists with rapid deployments at small to medium-sized locations where flexibility, simplicity and standardization are key. This catalog entry represents a Cisco Validated Profile (CVP) suited for deployments at locations like retail, Oil & Gas Pipelines, Roadways & Intersections. This network configuration is wired transport with single LTE connectivity as last resort. This configuration offers network segmentation via 1 secure VPN...
- IR1800 wired with LTE backup in NAT mode and WiFi Hotspot**: This single-router IR1800 SD-WAN configuration catalog entry assists with rapid deployments at small to medium-sized locations where flexibility, simplicity and standardization are key. This catalog entry represents a Cisco Validated Profile (CVP) suited for deployments at locations like retail, Oil & Gas Pipelines, Roadways & Intersections. This network configuration is a wired transport with single LTE connectivity as last resort. It also provisions the WiFi module as a hot spot. This configu...
- IR1800 wired with LTE backup in routed mode**: This single-router IR1800 SD-WAN configuration catalog entry assists with rapid deployments at small to medium-sized locations where flexibility, simplicity and standardization are key. This catalog entry represents a Cisco Validated Profile (CVP) suited for deployments at locations like retail, Oil & Gas Pipelines, Roadways & Intersections. This network configuration is a wired transport with single LTE connectivity as last resort. This configuration offers network segmentation via 1 secure VPN...
- IR1835 for Roadways**: This single-router SD-WAN configuration is for the Cisco Industrial Router IR1835. It is designed specifically for this platform with all its unique interface names and modules to aid in the rapid deployments at small to medium-sized locations where flexibility, simplicity and standardization are key. This catalog represents a Cisco Validated Profile (CVP) suited for deployments at roadways and intersections. This network configuration is a wired transport with single LTE connectivity as last resort...
- Single Router SD-WAN Branch with Dual Transport**: This single-router SD-WAN configuration catalog entry assists with rapid deployments at small to medium-sized branch offices where flexibility, simplicity and standardization are key. Examples include gas stations, convenience stores, banks, and restaurants etc. This network configuration utilizes N+1 transport redundancy with dual WAN connectivity (URLS, Public Internet). This configuration offers network segmentation via 4 secure VPNs (Corporate, Users, Payment, Processing, Network, Local, Internet)...
- CVP1N IR1101 wired with LTE backup in NAT mode**: This single-router SD-WAN configuration catalog entry assists with rapid deployments at small to medium-sized branch offices where flexibility, simplicity and standardization are key. Examples include gas stations, convenience stores, banks, and restaurants etc. This network configuration utilizes N+1 transport redundancy with dual WAN connectivity (URLS, Public Internet). This configuration offers network segmentation via 4 secure VPNs (Corporate, Users, Payment, Processing, Network, Local, Internet)...

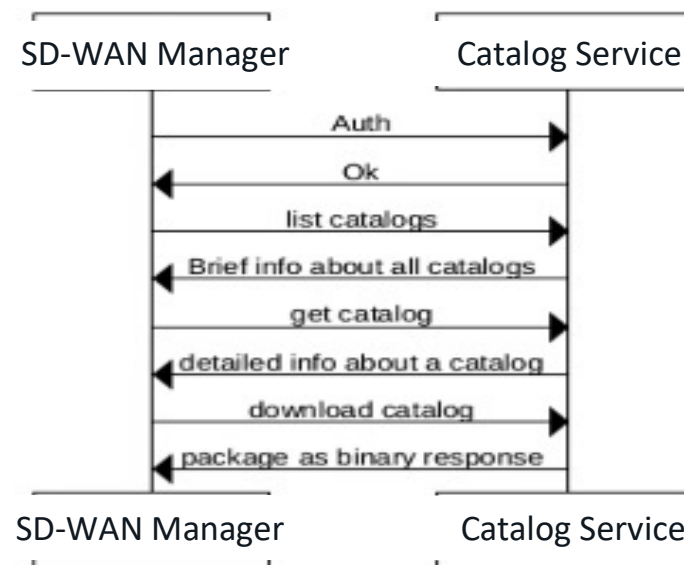
- A Cisco hosted and managed, catalog service containing various device configurations.
- SD-WAN Manager can communicate with this service and import the configuration.
- As an analogy, one can think of this catalog as a “Netflix-like movie selection”, categorized by use-cases.

4 Simple Steps to Use Configuration Catalog

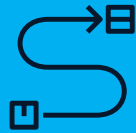
1. Enable Cloud Services in Settings (Smart Account needed)
2. Select the config from the catalog
3. Modify before install (change variables if needed)
4. Push the config to devices

Configuration Catalog

⚠ Cloud Services should be enabled before accessing Configuration Catalog. [Go to Settings Page](#)



4 Ways to configure SD-WAN



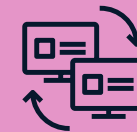
Workflow



Catalog



Manual



Export / Import

Create Configuration Group without workflow

Configuration Groups

SD-WAN

← Configuration Groups 1 System Profile 1 Transport & Management Profile 1 Policy Profile 1 Service Profile 1 CLI Add-on Pr →

Q Search

Name

Type

CVD2W

Single

Create Configuration Group

Export

Import

Create Configuration Group

Name

Description (optional)

☐ CLI Configuration Group

Site Type

Single Router

Cancel

Create

Origin

Updated By

Last Updated On

Actions

import

admin

Aug 3, 2024

Quick access to Associate & Deploy

Configuration Groups

SD-WAN

← Configuration Groups 1 System Profile 1 Transport & Management Profile 1 Policy Profile 1 Service Profile 1 CLI Add-on Pr →

Q Search

Last Updated

Status

Create Configuration Group

Export

Import

Name

Type

Profile

Provisioning Status

Origin

Updated By

Last Updated On

Actions

CVD2W

IR1800 with single LTE module. Wired with LTE as I...

Updated by admin

Updated Aug 3, 2024

Type: Single Router

System Profile

CVD2_System

Policy Profile (optional)

Default_Policy_Object_Profile

CLI Add-on Profile (optional)

CVD2W_CLI

Transport & Management Profile

CVD2_Transport

CVD2_Transport

+ Create New

CVD2_Apps

+ Add Profile

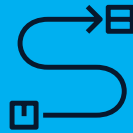
Deployment

Associated + Add

Provisioning N/A

Deploy

4 Ways to configure SD-WAN



Workflow



Catalog



Manual



Export / Import

Import and Export Config Groups

- Export on one SD-WAN Manager
- Import on another system
- Change variables and deploy

The screenshot displays the SD-WAN Manager interface. At the top, there are tabs for 'Profile 0', 'Service Profile 3', 'CLI Add-on Profile 0', and 'UC Voice Profile 0'. Below these tabs is a 'Create Configuration Group' button, followed by 'Export' and 'Import' buttons, which are highlighted with a red dashed box. Below the buttons, there are sections for 'Associate to' (Devices Up to Date / Number of Devices), 'Updated By' (Updated by admin), and 'Last Updated On' (Updated May 14, 2024). On the left, there is a 'Management Profile' dropdown menu with 't one' selected. On the right, there is a 'Deployment' section with 'Associated' (+ Add) and 'Provisioning' (N/A) options, and a 'Deploy' button.

Tagging Sites and Devices

- Create Config Group with Tag Rule.
- Add new Router to the Config Group just by adding Tag!
- New: Tags for Policies and Topology

Monitor

Configuration

Tools

Maintenance

Administration

Workflows

Reports

Analytics

Explore

Catalyst SD-WAN

Configuration

WAN Edge List

Control Components

Unclaimed WAN Edges

WAN Edge List (117)

Search Table

Export Bootstrap Configuration

Sync Smart Account

Upload WAN Edge List

Upload WAN Edge List

Add PAYG WAN Edges

As of: Apr 19, 2024 04:07 PM

Chassis Number	Site Name	Hostname	Tags	Config Locked	Managed By	Device Status	Actions
C8K-30C8F225-F3FB-3BE4-1AEA-E05825AF5AFC	SITE_9300	aws-aci-r02	Add Tag	No	Unmanaged	In Sync - Di	...
C8K-3CB9D74B-0E48-B4C5-7035-BAD6FC78FC80	AWS-US-East-CGW	AWS-US-East-CGW-			C8000V_Template_V01	In Sync	...
C8K-320BAC31-C503-7E88-F895-EEE413B494E9	SITE_9393	aws-us-west1-aci-r0				In Sync - Di	...
C8K-06B45DFC-6513-2F08-9E23-A2FE06C55C1A	CHI10105	BR5			empl-PoR-SaaS	In Sync	...
C8K-0BBB9778-9164-D6B1-85FF-F893540C5491	SITE_70	BR7-DRE-IntNode			BR7-DRE-Int-Node	In Sync	...
C8K-09080319-FE19-CCE7-512C-E629C8194CE3	SITE_90	BR9-DRE-ExtNode			C2-DRE-Ext-Node	In Sync	...
04096ee9-7ab2-41b7-9d92-a3f9d138468b	-	DataCenter2b			rs	In Sync	...

Global Config simplified with Network Hierarchy

Network Hierarchy

- Provides a notion of ‘hierarchy’, that is, Sites, Regions and Areas, for the network.
- This helps to define user-friendly site names which helps to achieve operational simplification.

Pools

- These pools automate System-IP and Site-ID assignments during device configuration deployment.
- You can define the IP pool for System-IP auto assignments. Site ID is assigned from the Global_Site pool.

The screenshot displays the Cisco Catalyst SD-WAN configuration interface. The left sidebar shows the navigation menu with options: Monitor, Configuration (selected), Analytics, Workflows, Tools, Reports, Maintenance, Administration, and Explore. The main content area is titled 'Global' and shows the 'Global (47 of 47 nodes)' hierarchy. The 'Pools' tab is selected, displaying a table of pools for the GLOBAL node.

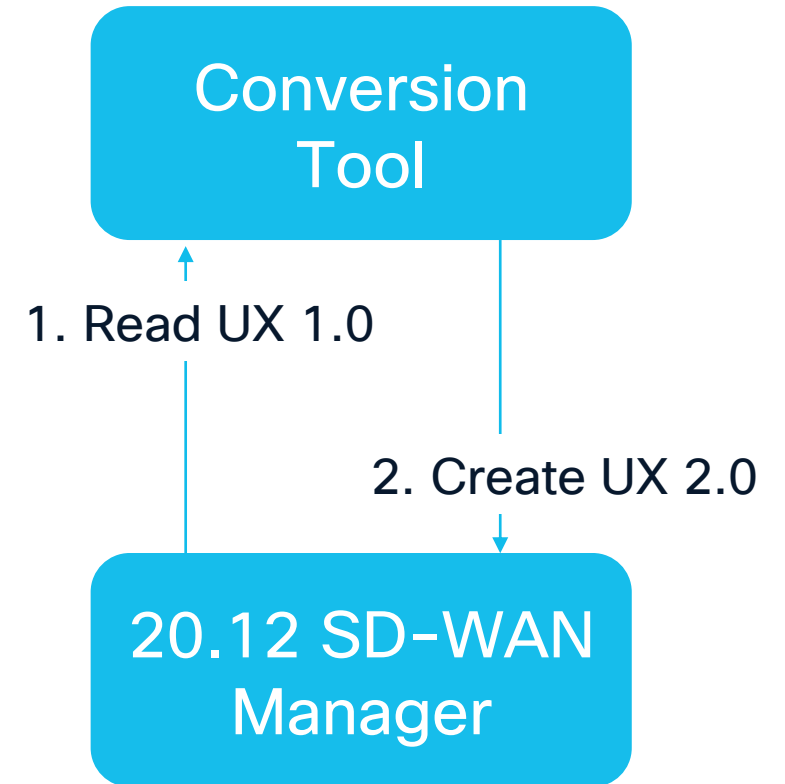
Name	Description	Type	Used	Actions
GLOBAL_REGION	Region pool for GLOBAL node	region	0.00%	...
ONBOARDING_POOL	-	system-ip	3.13%	...
GLOBAL_SITE	Site pool for GLOBAL node	site	< 0.01%	...

3 Records

UX Conversion Tool

From device templates (UX 1.0) to config groups (UX 2.0)

- Please read Quick Start first!
- Self-Service Tool in SSP: <https://ssp.sdwan.cisco.com/>
- Requires SD-WAN Manager running 20.12 or higher.
- Use Case: convert UX 1.0 configuration templates and policies to UX 2.0 configuration groups, policy groups, and topology groups.
- Policy conversion is NOT a 1:1 process.



Demo: Config Conversion

1. Read existing UX 1.0 config
2. Convert to config and policy groups
3. Write the new UX 2.0 config to SD-WAN Manager



Dashboard

As of : May 27, 2025 14:21

Overview

Fabric

Alerts

1
Total

WAN Edges

355
Reachable

190
Unreachable

Certificates

9
Warning

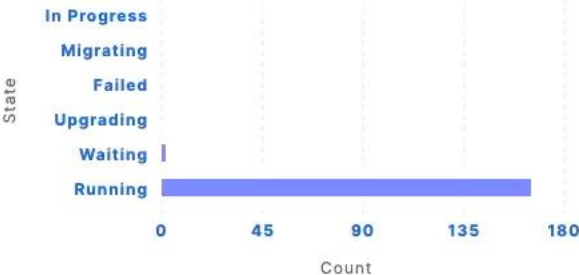
21
Expired

Please note that the information you are currently viewing may be outdated. [Click here to Refresh](#)

Actions

Fabrics

[View Details](#)



WAN Edge

[View Details](#)



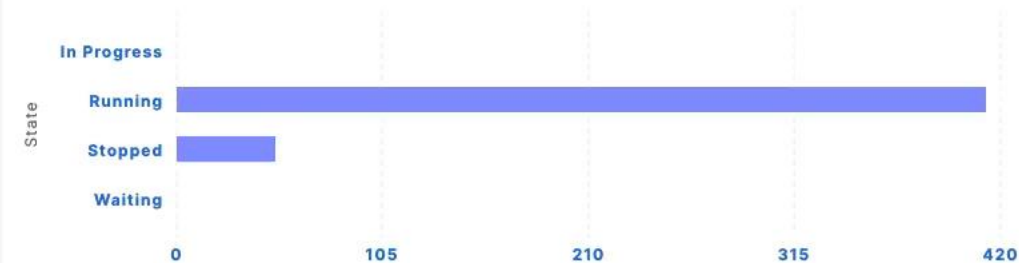
Router	Active	Inactive	
cEdge	541	0	
vEdge	4	26	

Active Inactive

Controllers

463 total

[View Details](#)



Adoption

Running 20.9?



Continue using Classic approach (templates) for current and new features



Evaluate New approach (configuration/policy groups) and provide feedback

Running 20.12?



Continue using Classic approach (templates) for current and new features



Assess New approach with configuration / policy groups and Consider adopting it



From 20.15



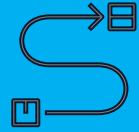
Proof of Concept with New approach using configuration / policy groups and Assess



Deploy with New approach using configuration and policy groups

Summary: SD-WAN Configuration Made Easy

4 Ways to Configure



Workflow



Catalog



Manual



Export / Import

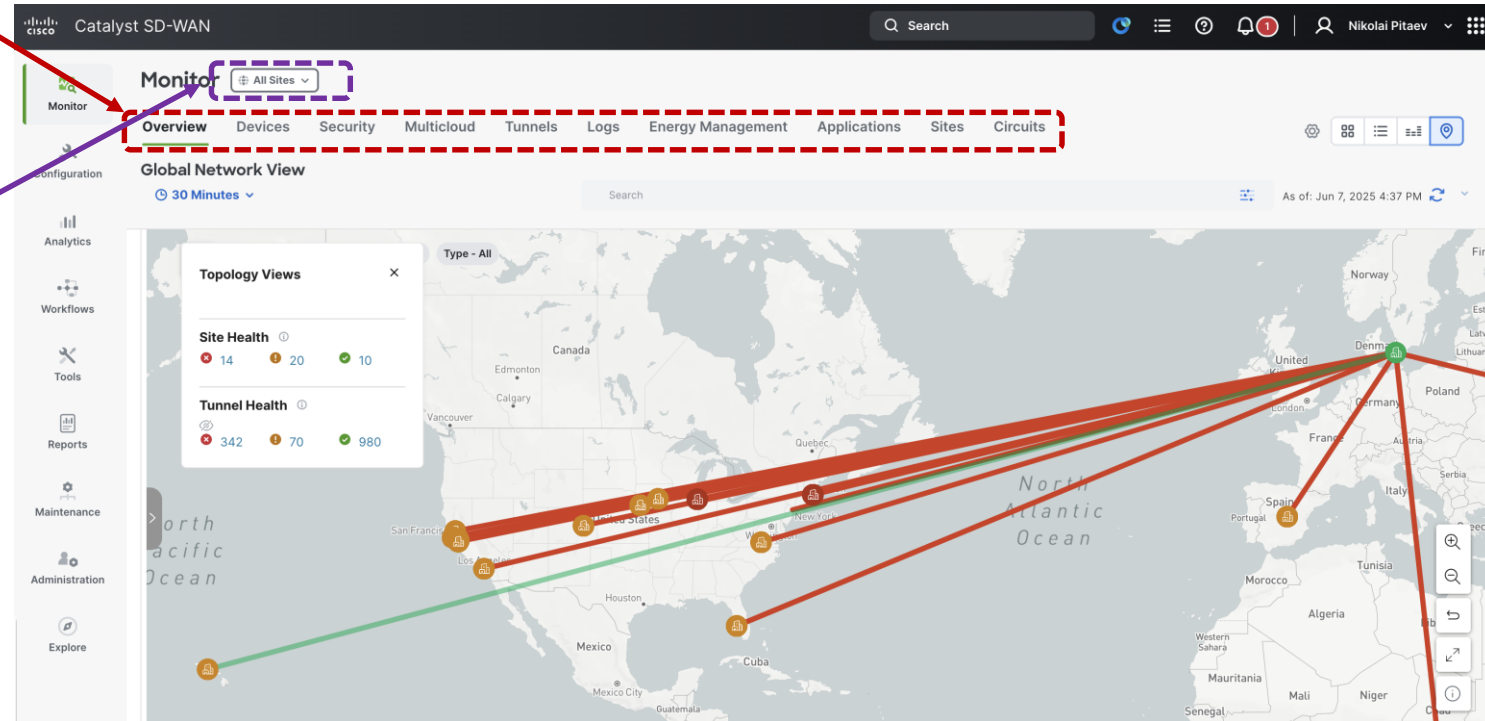
- Configuration Migration Tool – read [Quick Start](#) and Try!



SD-WAN Monitoring Made Easy

New Dashboards introduced in 20.12

- Toggle between different dashboards such as Security, Devices, Tunnels, and Applications
- Monitor your WAN from a global perspective or drill down to a site perspective.
- Customizable widgets.



Customize Your Dashboard

Smart: AWS suggested because cloud credentials detected.

10+ different Dashlets from Inventory to App-aware Routing.

The screenshot shows the Cisco Catalyst SD-WAN dashboard interface. On the left is a navigation menu with options: Monitor, Configuration, Tools, Maintenance, Administration, Workflows, Reports, Analytics, and Explore. The main dashboard area displays three dashlets: 'Site Health' (a donut chart showing 19 sites with Good, Fair, and Poor status), 'WAN Edge Health' (a donut chart showing 28 WAN Edges with Good, Fair, and Poor status), and 'Top Applications' (a bar chart showing usage in MB). An 'Add Dashlet' modal is open on the right, listing various dashlets. The 'Amazon Web Service' dashlet is selected and highlighted with a red dashed box. This modal also shows a preview of the 'Amazon Web Service' dashlet, which displays metrics for Cloud Gateways, Cloud Edge, Connected Branch Devices, Tunnels, Connected Tags, and Connected Host VPCs. The preview is also highlighted with a red dashed box. At the bottom right of the modal are 'Cancel' and 'Add' buttons.

Add Dashlet

- ☒ Amazon Web Service
- ☐ Google Cloud Platform
- ☐ Microsoft Azure
- ☐ Megaport
- ☐ Equinix
- ☐ Transport Health
 - Displays the aggregated average loss, latency, and jitter for all links and all combinations of colors.
- ☐ Site BFD Connectivity
 - Displays the state of sites BFD (data) connections. When a site has multiple WAN Edge routers, this pane displays the state for the entire site, not for individual devices.
- ☐ Transport Interface Distribution
 - Displays interface usage in the last 24 hours for all WAN Edge interfaces in VPN 0. This includes all TLOC interfaces whose Admin Status is up.
- ☐ WAN Edge Inventory
 - Displays an inventory of all the devices in the network specifying their states and the count.
- ☐ Application-Aware Routing
 - Displays the worst tunnels based on criteria specified - Loss, Latency, and Jitter.

Amazon Web Service

Cloud Gateways Down 0 Partial 0 Up 0

Cloud Edge Down 0 Up 0

Connected Branch Devices Up 0

Tunnels 0

Connected Tags 0

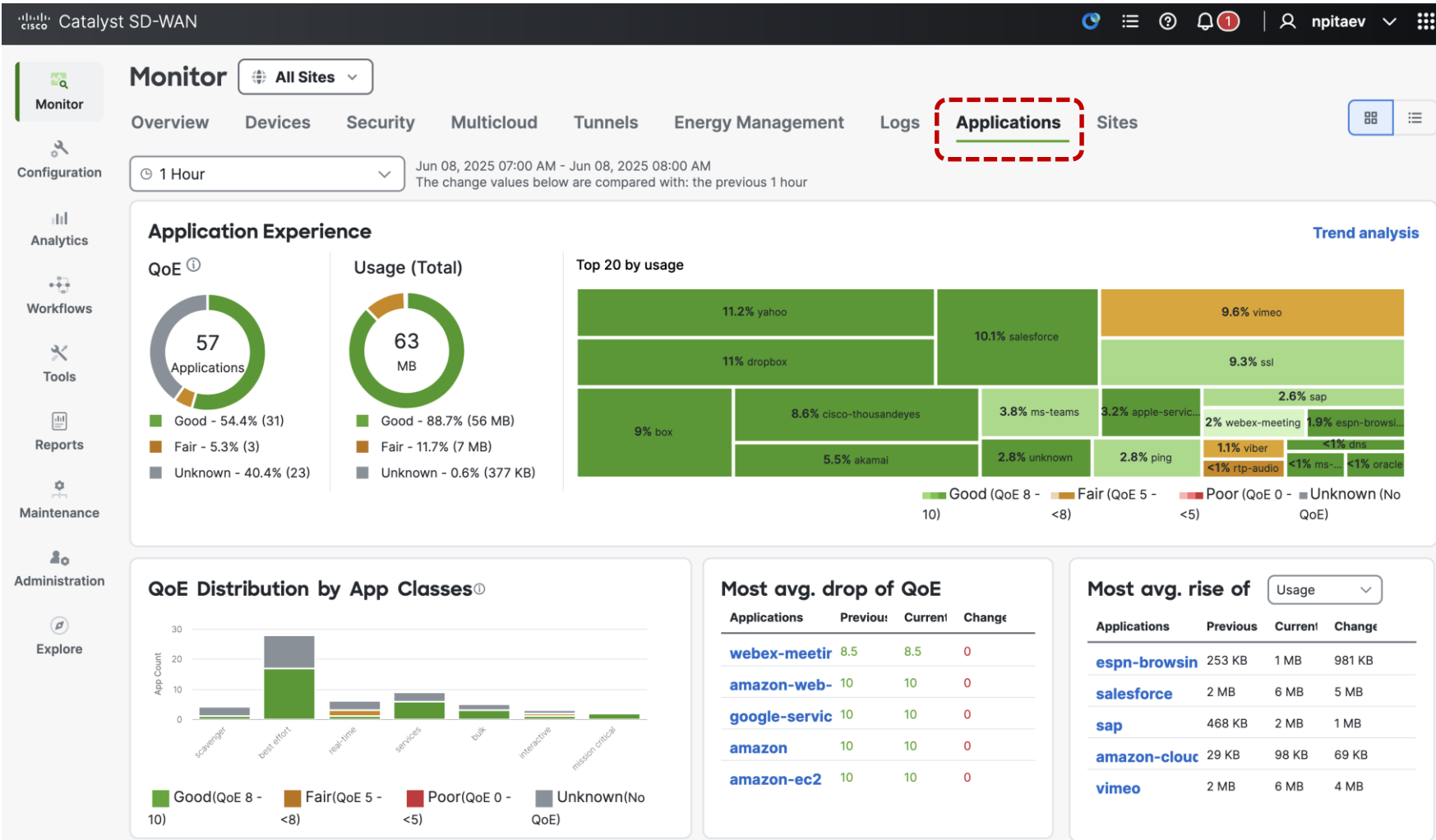
Connected Host VPCs 0

● Up ● Partial ● Down

Cancel Add

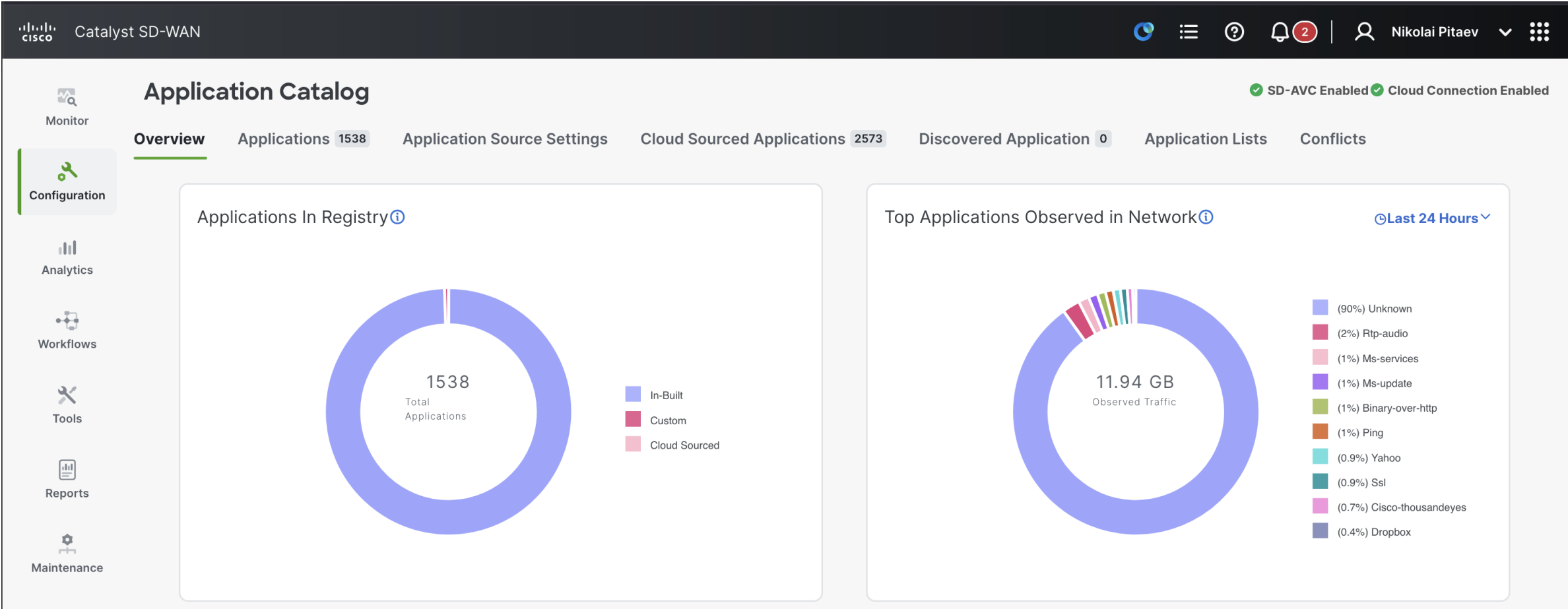
Application Dashboard

- Robust application data on apps that matter most.
- Troubleshoot problematic applications across the WAN or at individual locations.



Application Catalog

Shows Signature Pack Update and even recommends to update the policies!



SD-WAN Manager Upgrade Monitoring

Diagnostic Center in 20.18 (Aug. 25)

- Is shown during reboot or SW Upgrade
- Provides status information about the boot process in real time
- If needed, detailed service status information can be shown

The screenshot displays the Catalyst SD-WAN Manager Diagnostic Center interface. The left sidebar shows the 'Diagnostic Center' menu. The main content area is divided into 'Overview', 'Service', and 'System Errors' tabs. The 'Service' tab is active, showing a table of services and their status. A purple arrow points from the 'Service' tab to the 'Information' panel on the left, which provides details about the system's version, uptime, and status.

Information Panel:

- Version: 20.18.0.77
- Uptime: May 22, 2025 14:04:26
- Hypervisor: KVM
- Status: **Persons** COMPUTE_AND_DATA
- Config DB: **Online** Standalone
- Last committed TXID: 120708916
- Status DB: **Ready** Pending syncs: 0
- Messaging-server: **Ready** Pending syncs: 0
- Coordination-center: **Ready** Pending syncs: 0
- Tenant state: **Up** 5 Down
- vDiemon Mib: **Up** eth0
- TX: 4.88 MB RX: 5.65 MB

Service Status Table:

Name	Status	Health	Uptime	CPU	Memory	FD count	Docker name	Docker memory	Actions
upgrade-coordinator	Running	Booting	1 min 37 secs	0.00 %	2.81 MB	4	upgrade-coordinator	0.37 MB /	...
upgrade-coordinator	Running	Booting	1 min 37 secs	0.00 %	15.03 MB	16	upgrade-coordinator	0.37 MB /	...
application-server	Running	Booting	13 secs	28.10 %	1.01 GB	935	base-application-server	2.69 GB	...
configuration-db	Running	Healthy	59 secs	13.10 %	6.29 GB	1951	configuration-db	6.55 GB	...
state-db	Not enabled	-	-	-	-	-	-	-	...
service-proxy	Running	Healthy	38 secs	1.80 %	84.41 MB	285	base-application-server	2.69 GB	...
ratelimit	Running	Healthy	58 secs	0.00 %	21.84 MB	36	base-application-server	2.69 GB	...
coordination-server	Running	Healthy	1 min	0.00 %	192.26 MB	142	coordination-server	183.65 MB	...
host-agent	Running	-	1 min 31 secs	8.40 %	63.53 MB	24	cluster-orchestrator	316.30 MB /	...
cluster-oracle	Running	-	1 min 31 secs	2.80 %	279.87 MB	129	cluster-orchestrator	316.30 MB /	...
vault	Running	Healthy	3 mins 10 sec	2.80 %	188.44 MB	10	vault	77.57 MB	...
messaging-server	Running	Booting	18 secs	0.00 %	30.54 MB	41	messaging-server	13.78 MB /	...
cloudagent-v2	Running	Healthy	41 secs	0.00 %	94.35 MB	7	cloudagent-v2	84.63 MB	...
ndave	Not enabled	-	-	-	-	-	-	-	...
sdave-gw	Running	Healthy	42 secs	11.00 %	123.77 MB	68	-	-	...
dockerd	Running	-	3 mins 47 sec	10.70 %	86.28 MB	126	-	-	...
reporting	Running	Booting	1 min	0.00 %	38.54 MB	7	reporting	31.04 MB	...
device-data-collector	Running	Healthy	10 secs	0.00 %	21.38 MB	13	-	-	...
data-collection-agent	Not running	-	-	-	-	-	-	-	...
namgr	Running	-	6 mins 30 sec	0.00 %	35.25 MB	13	-	-	...
confd	Running	-	6 mins 51 sec	0.00 %	86.63 MB	148	-	-	...
vdwemon	Running	-	6 mins 43 sec	3.70 %	169.88 MB	256	-	-	...
cfgmgr	Running	-	6 mins 51 sec	0.00 %	15.19 MB	37	-	-	...
nss	Running	-	6 mins 40 sec	0.00 %	822.08 MB	103	-	-	...
vdhoped	Running	-	6 mins 39 sec	0.00 %	11.25 MB	19	-	-	...
vsrmpd	Running	-	6 mins 39 sec	0.00 %	10.97 MB	16	-	-	...



Catalyst SD-WAN

System Booting ...



18 of 19 critical services

Uptime: 4 mins 58 secs

Security Advisories

From 20.18 (Aug. 25) SD-WAN Manager dashboard is integrated to provide Insights on Security Advisories and Field notices applicable to your SD-WAN fabric.

Monitor

Configuration

Analytics

Workflows

Tools

Reports

Maintenance

Catalyst SD-WAN

Search

msuchand

Advisories Beta

All Sites

Settings

On-demand scan

Scan interval: Weekly

Last scanned: 5/6/25, 10:33 PM

Security advisory

Field notices

0 Critical

2 High

Devices 5

Advisories 9

Search Id / Title

High

Scan status

Chassis number	Site	Hostname	Tags	Affected advisor	Potentially affected ad	Last scanned
C8K-2CA9CB26-5E57-1D1E-14ED-101F49488C00	8	DC1-SanJose	-	0	9	May 6, 2025
C8K-08E51C72-C5A3-0DF6-CE9D-5506A740801	9	BR2-Seattle	-	0	9	May 6, 2025

C8K-2CA9CB26-5E57-1D1E-14ED-101F49488C00

Last Scanned May 6, 2025, 10:33 PM

Site 8

Reachability Reachable

Affected advisories 0

Potentially affected advisories 9

Advisories

Active

Acknowledged

Search Id / Title

Impact

Download

Advisory ID	Advisory title	CVSS score	Severity
cisco-sa-caf-3dXM8exv	Cisco IOx Application Framework Arbitrary File Creation Vulnerability	8.1	High
cisco-sa-c9300-spi-ace-yejYgnNQ	Cisco IOS XE Software for Cisco Catalyst 9300 Series Switches Secure Boot Bypass Vulnerability	6.1	High
cisco-sa-ratenat-pYVLA7wM	Cisco IOS XE Software Rate Limiting Network Address Translation Denial of Service Vulnerability	8.6	High

Agenda

01 Introduction

02 Configuration

03 Monitoring

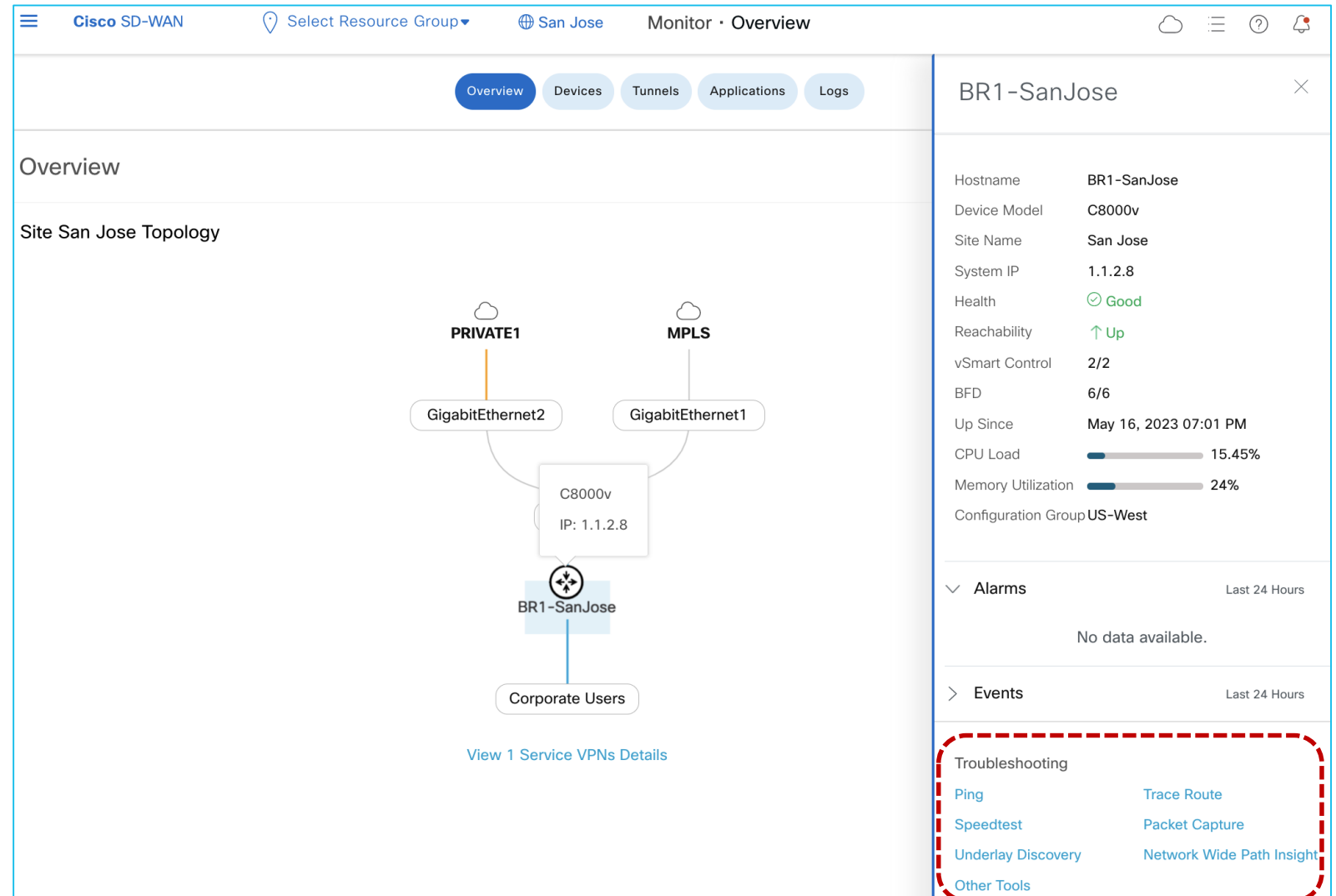
 **04 Troubleshooting**

05 Summary

SD-WAN Troubleshooting Made Easy

Interactive Topology for a Specific Site

- Dynamic status of transport circuits, devices and service VPNs.
- Troubleshooting tools at your fingertips
- Detailed Video on [YouTube](#)



Reports

Receive tidy, complete reports of WAN performance, on a scheduled basis.

Catalyst SD-WAN

Monitor

Configuration

Tools

Maintenance

Administration

Workflows

Reports

Analytics

Reports

Reports

My ReportsReport Templates

SUMMARY

- > Schedule
- > Status
- > Timeframe

My Reports (7)

Search Table

Report Name	Schedule	Status	Recipients
> SJC_DC1	On-Demand	Completed	-
> SDWAN-Demo-Report-Mar-2024	On-Demand	Completed	-
> CiscoLive2024	On-Demand	Completed	-
CiscoLive2024-Jan 24, 2024 3:29 AM			
> excreport240110	On-Demand	Completed	-
> demo-report	On-Demand	Completed	-
> Report-SA	On-Demand	Completed	-
> MyNetwork	On-Demand	Completed	-

7 Records

Executive Summary Report

Enter Report Name*

CiscoLive2024

Select Sites (28)

Edit

All Sites

Time Frame

7 Days

30 Days

Delivery (Optional)

Email Report

Schedule*

Run Now

Run Later (One-Time)

Run Recurring

Cancel

Update Report

Context-Aware Online Documentation

- Cloud-Delivered technical documentation.
- Intelligence to correlate content to the screen makes it easy to read related only content.

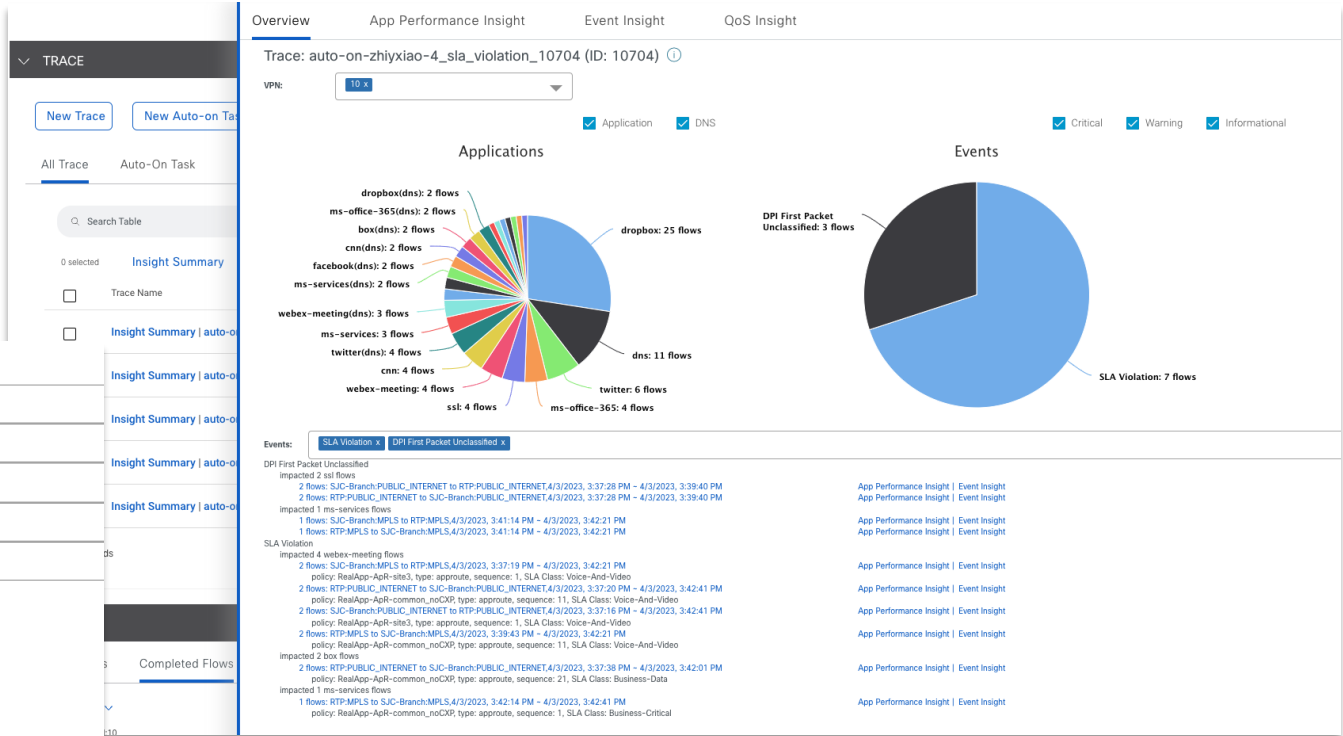
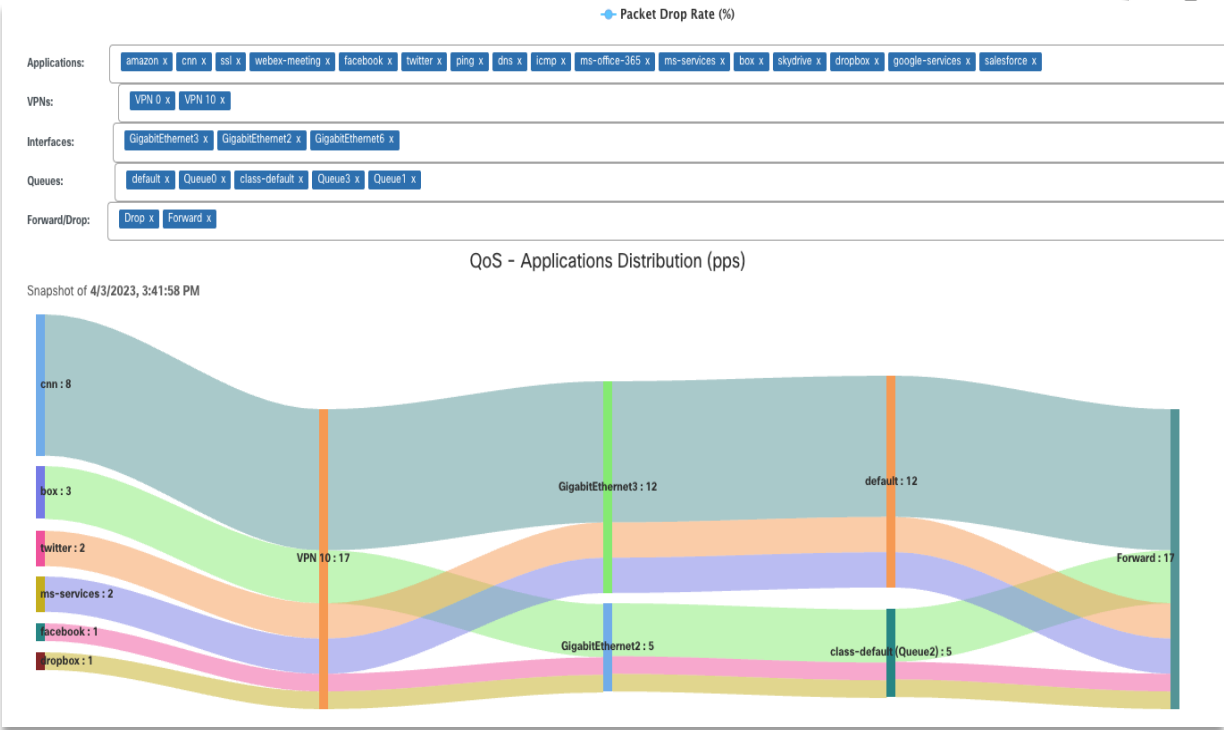
The screenshot shows the Cisco Catalyst SD-WAN configuration interface. The main panel displays the 'Configuration' section with a table of 'Configuration Groups (15)'. A sidebar on the right, titled 'Online Documentation', is open, showing a dropdown menu with options: 'Online documentation', 'SD-WAN User Guide', 'Ask Cisco Networking', and 'About'. A red arrow points from the 'Online documentation' option to the 'Online Documentation' sidebar. The sidebar content includes sections for 'Add a Configuration Group', 'Edit a Configuration Group', 'Copy a Configuration Group', and 'Delete a Configuration Group', each with numbered steps. A table with 'Field' and 'Description' is also present in the sidebar.

Name	Description	Type	Device Solution
cgw_cg	CGW default config group	Single Router	SD-WAN
npitaev-EQ-ConfGroup	npitaev-EQ-ConfGroup Config Group	Single Router	SD-WAN
DC2-SJC	Dual Edge DC - Dual Transport (npitaev-SJC24)	Single Router w/ CLI	SD-WAN
COLO1-DEN	Dual Edge Colo - Single Transport (ashtwill-SJC22)	Dual Device	SD-WAN
DC1-SFO	Dual Edge DC - Single Transport (ashtwill-SJC22)	Dual Device w/ CLI	SD-WAN
test-almuench	-	Single Router	SD-WAN
Voice_UX2.0	-	Single Router	SD-WAN
BR1-C8KV-CG	-	Single Router w/ CLI	SD-Routing
BR4-Branch_USWest	-	Single Router w/ CLI	SD-WAN
BR3-ConfigGroup	-	Single Router w/ CLI	SD-WAN
DC2-SC-Hub	Data Center 2 Service Chain Hub	Single Router	SD-WAN

Field	Description
New configuration group name	Enter a name for the new configuration group.
New configuration group description	Enter a description of the new configuration group.

Troubleshooting with Network Wide Path Insights (NWPI)

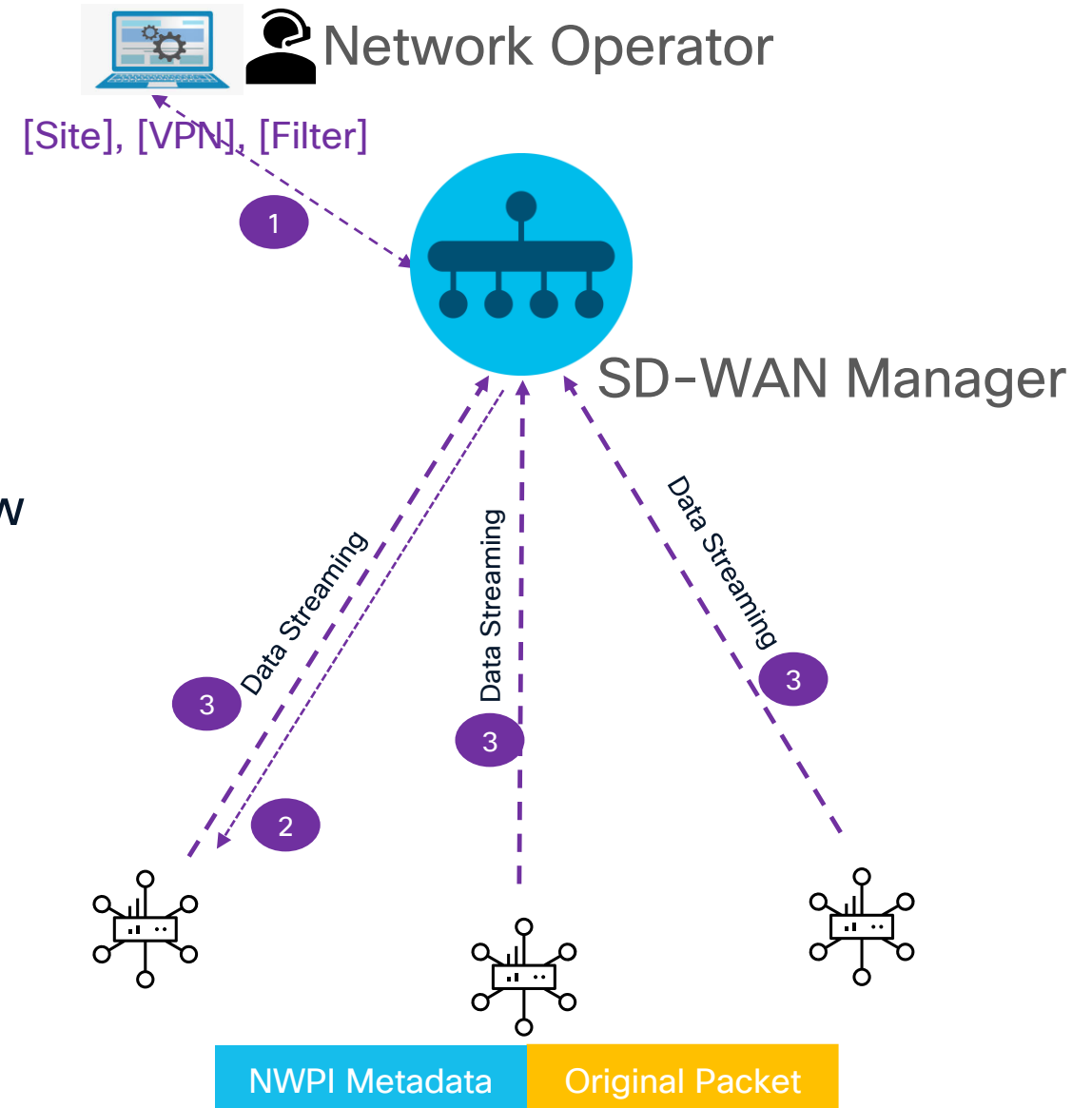
Deep insights into application and network performance



Understand the end user experience – discover the tool TAC uses.

How NWPI Works

1. Network operator creates trace.
2. SD-WAN Manager instructs first router to write NWPI metadata into SD-WAN header.
3. All routers in path use NWPI metadata to send flow information to SD-WAN Manager.
4. SD-WAN Manager correlates into a single view.



First Packet Match & Network Wide Path Insights

- Encrypted SaaS traffic
- If not detected on the 1st packet
-> suboptimal path
- Easy validation with NWPI
- Full demo: <https://youtu.be/ZcsSVckYdXA>

Hostname: BR5 Event List: FIRST_PACKET/DPL_DONE Collapse All Features
Version: 17.09.01a.0.240, Input: GigabitEthernet4, Output: GigabitEthernet3

Ingress Feature	Egress Feature
Remote System IP : 1.2.2.201 Interface : GigabitEthernet3 Candidate Path 4 : Type : SDWAN SESSION Local Color : public_internet Remote Color : public_internet Encap : IPSEC Remote System IP : 1.2.2.200 Interface : GigabitEthernet2 SDWAN App Route Policy >> View Policy << VPN ID : 1 VRF : 1 Policy Name : _SDWANDEMO-All_SDWANDEMO-AAR-Policy-SDW Seq : 151 Req SLA : SDWANDEMO-Bulk-Data (1) Act SLA : SDWANDEMO-Bulk-Data (1) Policy Flags : 0x20 Fallback to best Path : no SLA Strict : No Actual Color : mpls (2) Preferred Color : mpls (0x4) Tunnel Match Reason : MATCHED_SLA_AND_PREF_ENCAP_COLOR SDWAN Data Policy IN >> View Policy << VPN ID : 1 VRF : 1 Policy Name : _SDWANDEMO-All_SDWANDEMO-Traffic-Data-f	NBAR Packet number in flow: 4 Classification state: Final Classification name: CustomApp Classification ID: 3471 [21:3471] Candidate classification sources: SDAVC-DOMAINS: CustomApp [3471] Classification visibility name: CustomApp Classification visibility ID: 3471 [21:3471] Number of matched sub-classifications: 0 Number of extracted fields: 0 Is PA (split) packet: False TPH-MQC bitmask value: 0x1 Source MAC address: 00:50:56:A4:0B:A0 Destination MAC address: 00:50:56:A4:57:17 Traffic Categories: ms-office-365/category: unset ms-office-365/service-area: unset sdavc/feed-id: 0 webex/region: 0 IPsec Result : IPSEC_RESULT_SA Action : ENCRYPT SA Handle : 27 Peer Addr : 10.252.252.1 Local Addr: 10.252.252.17 Transmit Report

Policies Made Easy

New Policy Definition introduced in 20.12 Software

Configuration

Policy Group 6 Application Priority & SLA 7 Embedded Security 1 Secure Internet Gateway / Secure Service Edge 3 DNS Security 0

+ Add Policy Group Export Import

As of: May 16, 2024 at 3:29 PM

Name	Description	Number of Policies	Number of Devices	Devices Up to Date	Updated By	Last Updated On	Actions
BR3-SIG-Policy-Group	--	1	2	0	msuchand	April 15, 2024 at 1:50 PM	⋮
DC2-Security-Policy-Group	--	1	2	2	msuchand	March 6, 2024 at 8:43 AM	⋮
BR8-SSE-Policy-Group	--	1	2	2	ashtwill	May 14, 2024 at 9:14 AM	⋮

Policy Group Name * **Description(optional)**

Policy

Application Priority

Embedded Security

Secure Internet Gateway / Secure Service Edge

DNS Security

Device Solution: sdwan

Deployment

Associated to: 1 Device(s) [Edit](#)

Save Deploy

All Topics like SSE
or App Priority in
one place

Attach Devices (same as with Config Group)

Simplified QoS Policy

Monitor

Configuration

Tools

Maintenance

Administration

Workflows

Reports

Analytics

Explore

Policies > Application Priority & SLA

npitaev-qos-policy

Additional Settings

Advanced Layout

SDWAN Fabric Traffic Policy

Default Action ☐ Accept ☒ Drop

Gold
Business Relevant

Preferred Path
Select Preferred Path

When SLA not met
Default to Best Path

Backup Path
Not Applicable

Silver
Default

Preferred Path
Select Preferred Path

When SLA not met
Default to Best Path

Backup Path
Not Applicable

Bronze
Business Irrelevant

Preferred Path
Select Preferred Path

When SLA not met
Default to Best Path

Backup Path
Not Applicable

Internet Offload Traffic

Secure Internet Gateway

Application List
Select Application List

Fallback to Routing
☐

Direct Internet Access

Application List
Select Application List

Fallback to Routing
☐

Apply Policy

Target

Direction *
Enter Direction

VPN *
Select VPN

Interface *
Enter Interfaces

Value

Variable

Cancel

Save

All Classes summarized

Queues visualized

Queueing Model

8 Queues

Policy Name *

Enter Policy Name

Target Interface *

Interface_1

Value

Variable

Queue	Forwarding Class	Bandwidth %	Drops	Scheduling Type
0	Select one	10 %	Tail	Low Latency Queuing (LLQ)
1	Select one	5 %	Random Early	Weighted Round Robin (WRR)
2 (default)	Select one	20 %	Random Early	Weighted Round Robin (WRR)
3	Select one	30 %	Random Early	Weighted Round Robin (WRR)
4	Select one	10 %	Random Early	Weighted Round Robin (WRR)
5	Select one	4 %	Random Early	Weighted Round Robin (WRR)
6	Select one	20 %	Random Early	Weighted Round Robin (WRR)
7	Select one	1 %	Random Early	Weighted Round Robin (WRR)

Q0 10%

Q1 5%

Q2 20%

Q3 30%

Q4 10%

Q5 4%

Q6 20%

Q7 1%

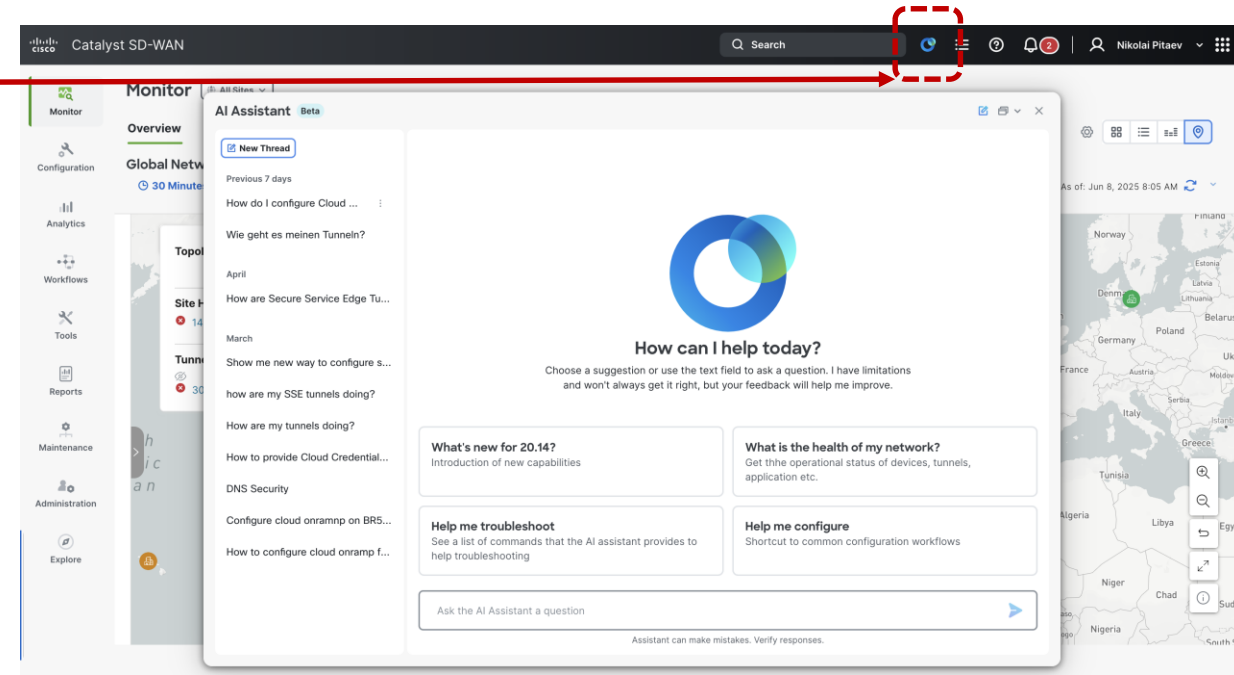
Bandwidth

AI Assistant for Networking

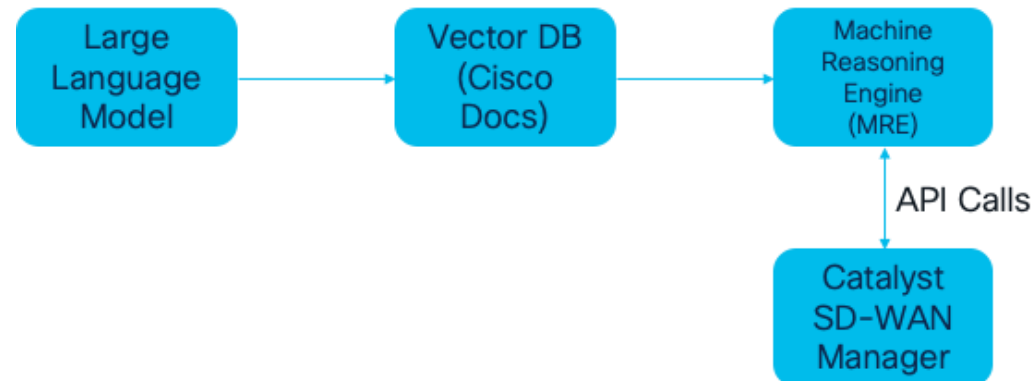
Introduced as Beta in 20.14

Different Use Cases:

- Documentation: How to Configure
- Monitoring: “How are my tunnels doing?”
- Troubleshooting: ”Can PPR solve my problem?”



Key Building Blocks:



All Sites ▾

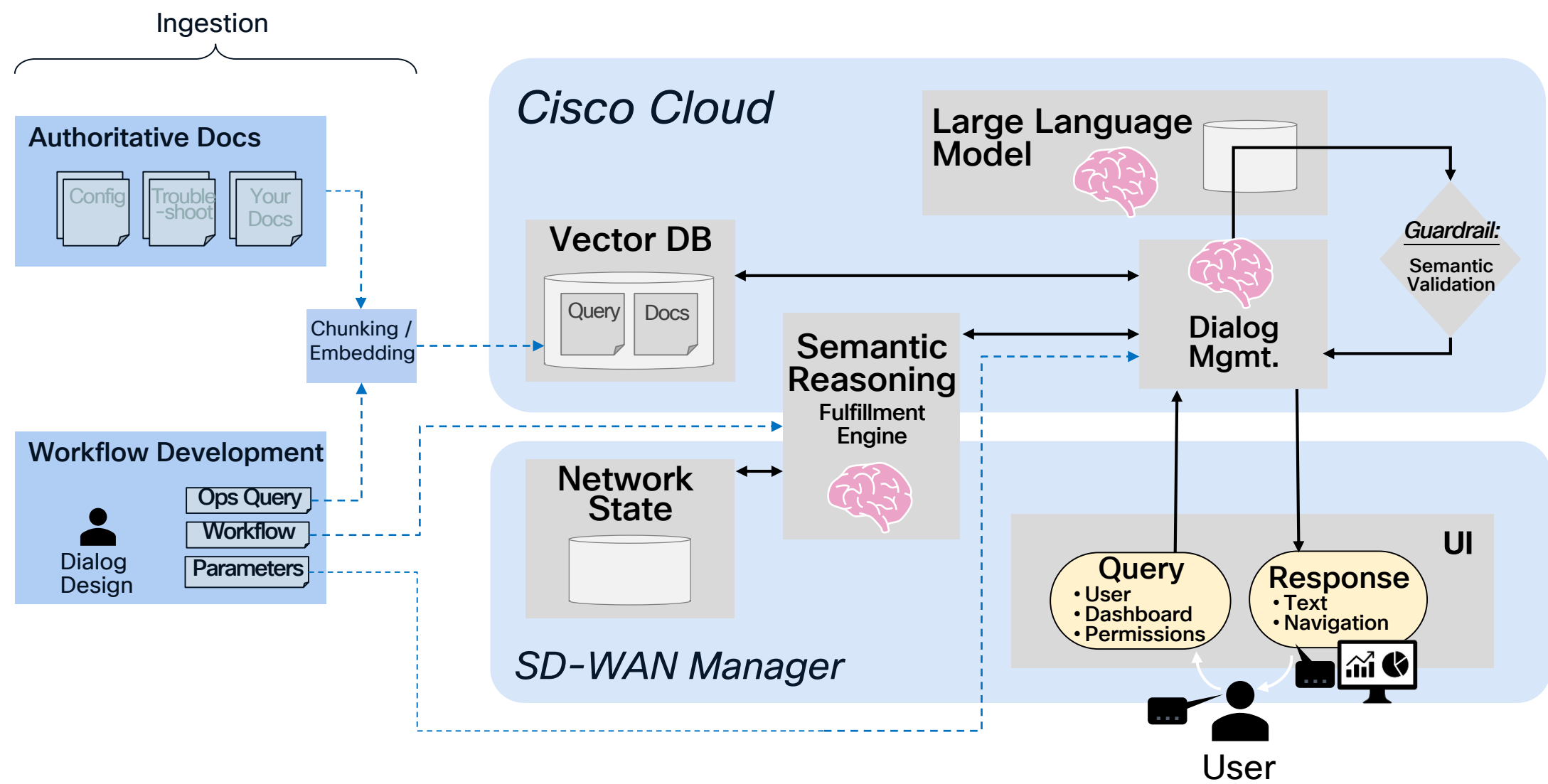
🕒 30 Minutes ▾

Q Search

As of: May 28, 2024 4:15 PM

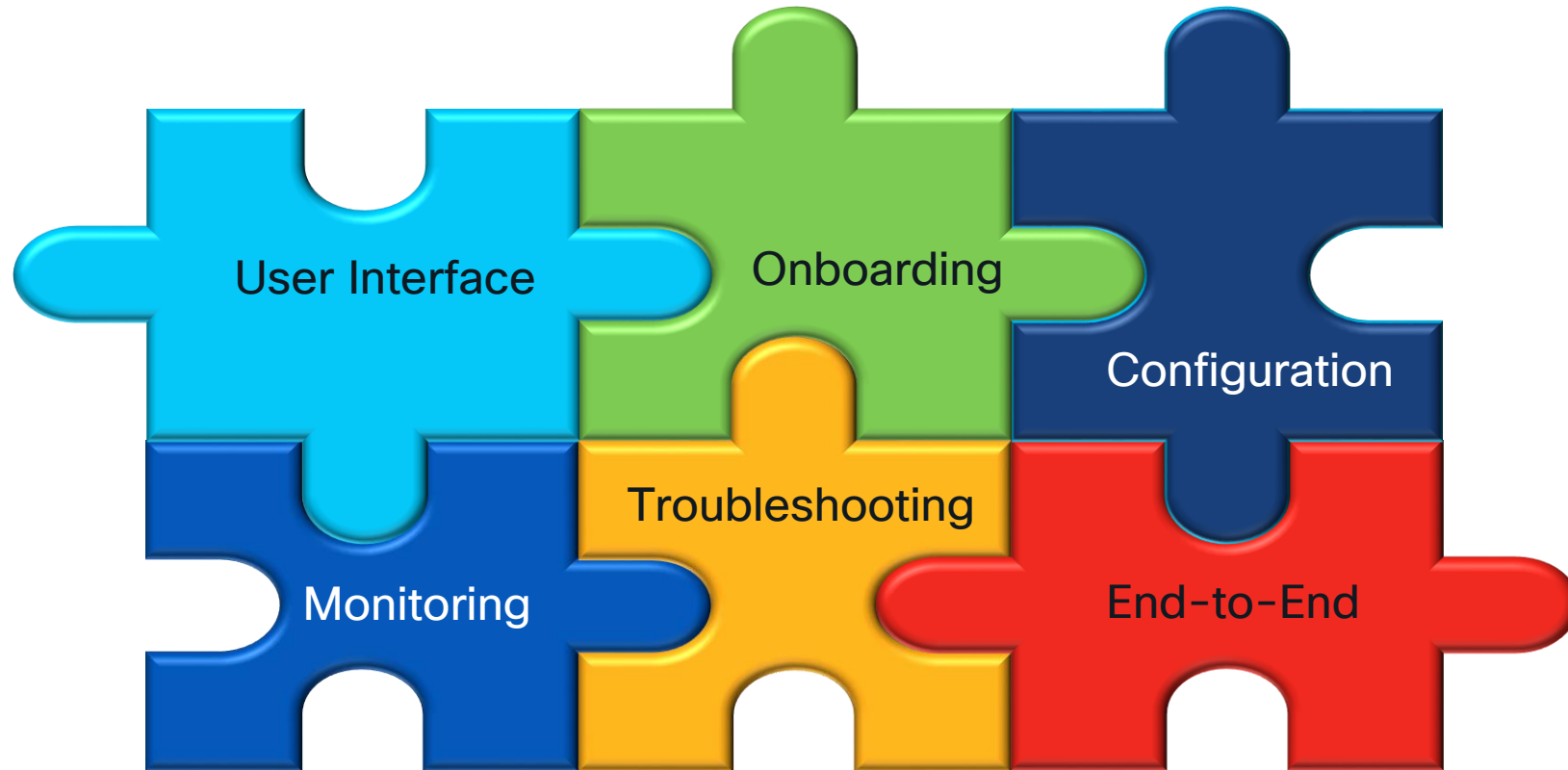


System Architecture



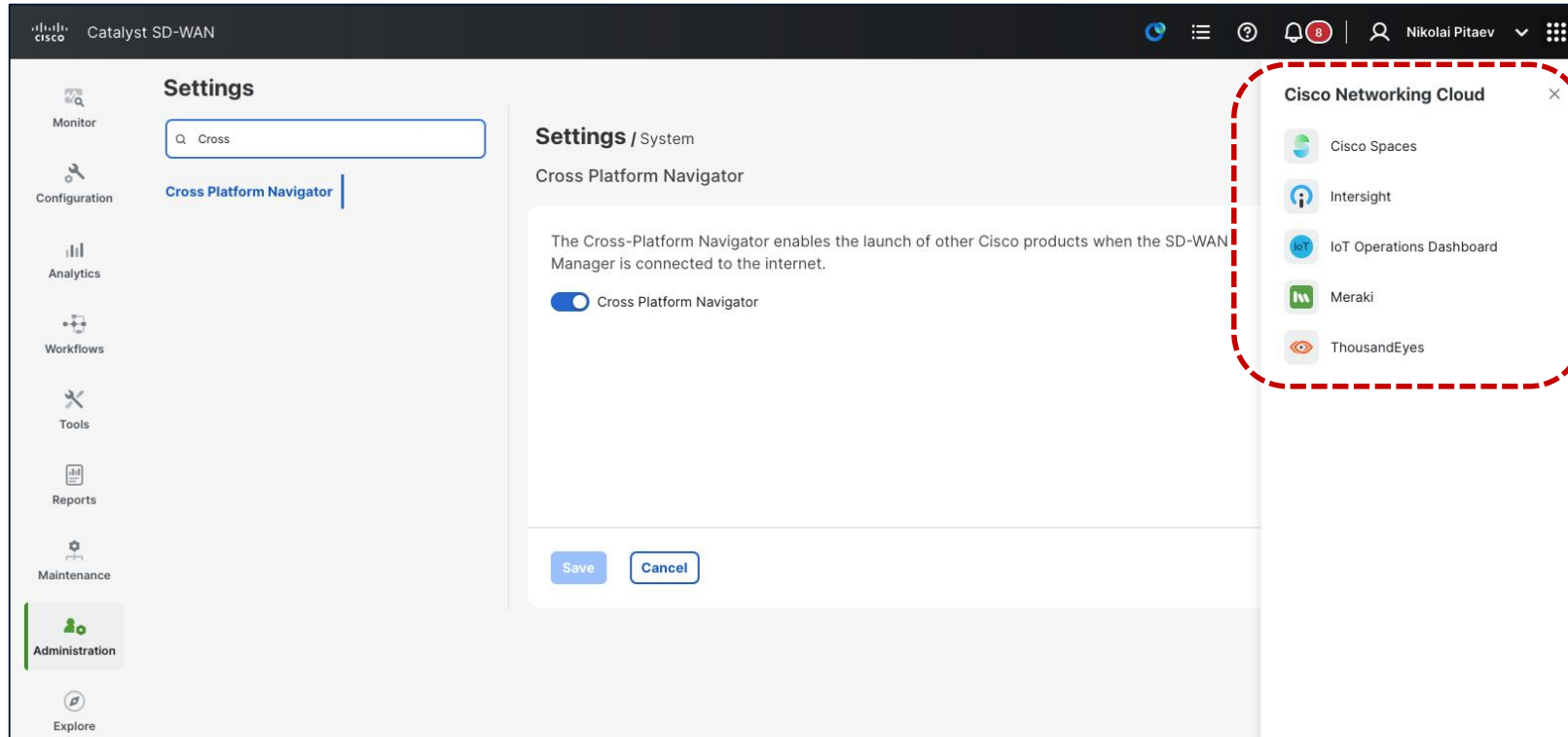
Summary

Key Pieces of simple SD-WAN



Unified User Experience

- Same UI framework (magnetic) across all Cisco Controllers
- Seamless navigation between different Controllers using SSO
- Cisco Networking Cloud across multiple Cisco Products



SD-WAN Made Easy



Intuitive and Guided workflows



Reduced Configuration sprawl
(model agnostic, re-use, structure)



Quicker and easier with smart defaults



Modify now, deploy selectively later



New dashboards, Applications/Sites
performance monitor



Site and Global Topology,
Troubleshooting tools guidance

3 Things to Remember and one Action Item

1. Workflows
2. Configuration Groups
3. Network-Wide Path Insights (NWPI)

Action Item: please read [UX Quick Start Guide!](https://www.cisco.com/c/en/us/support/docs/routers/sd-wan/222297-quick-start-guide-simplified-configuration.html)

<https://www.cisco.com/c/en/us/support/docs/routers/sd-wan/222297-quick-start-guide-simplified-configuration.html>



Learning Map for SD-WAN

Networking

SD-WAN

Learn how to confidently deploy and operate Cisco SD-WAN solutions. These sessions provide a journey from fundamentals to the latest SD-WAN innovations focusing on design, troubleshooting, and integrations with Cloud, SASE, and Assurance/Analytics.

START

Monday, June 9 | 8:00 a.m.

[BRKENT-2108](#)

Cisco Catalyst SD-WAN: Start Here

Monday, June 9 | 10:00 a.m.

[BRKENT-2708](#)

Elevating the Security in your SD-WAN

Monday, June 9 | 3:30 p.m.

[BRKENT-2660](#)

Customer Case Studies: Lessons Learned from the Cisco SD-WAN Design Council

Monday, June 9 | 4:00 p.m.

[BRKENT-2176](#)

Meraki MX Next-Gen SD-WAN and SD-Internet Connectivity Dual-Stack

Tuesday, June 10 | 3:00 p.m.

[BRKENT-1656](#)

Beginner's Guide to ThousandEyes

FINISH

Tuesday, June 10 | 4:00 p.m.

[BRKENT-2283](#)

7 Steps: Master the art of unifying Multicloud secure Connectivity and Design - Cisco SD-WAN + Multicloud Defense

Wednesday, June 11 | 10:30 a.m.

[BRKENT-2351](#)

How Catalyst SD-WAN Analytics & Insights Powers Faster Mean Time to Innocence!

Wednesday, June 11 | 2:30 p.m.

[BRKENT-2166](#)

End to End Segmentation with Cisco Catalyst SD-WAN and ISE

Thursday, June 12 | 10:30 a.m.

[BRKENT-3797](#)

Advanced Catalyst SD-WAN Policies Troubleshooting

CISCO Live !

San Diego, CA
June 8-12, 2025

If you are unable to attend a live session, you can watch it in the On-Demand Library after the event.

Complete your session evaluations



Complete a minimum of 4 session surveys and the Overall Event Survey to be entered in a drawing to win 1 of 5 full conference passes to Cisco Live 2026.



Earn 100 points per survey completed and compete on the Cisco Live Challenge leaderboard.



Level up and earn exclusive prizes!



Complete your surveys in the Cisco Live mobile app.

Continue your education



Visit the Cisco Showcase for related demos



Book your one-on-one Meet the Engineer meeting



Attend the interactive education with DevNet, Capture the Flag, and Walk-in Labs



Visit the On-Demand Library for more sessions at www.CiscoLive.com/on-demand

Contact me at: <https://ciscolive.ciscoevents.com/ciscolivebot/#BRKENT-1313>

Thank you

cisco Live !

