

Configure SD-WAN Edge Router with Configuration Groups

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Introduction

This document describes how to Configure Cisco SD-WAN Edge Routers with Configuration Groups.

Prerequisites

Cisco recommends that you have knowledge of these topics:

- Cisco Software-Defined Wide Area Network (SD-WAN)

Requirements

- Cisco vManage
- Cisco WAN Edge router

Components Used

The information in this document is based on these software and hardware versions:

- Cisco vManage version 20.9.3.2
- Cisco WAN Edge router version 17.9.3a

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

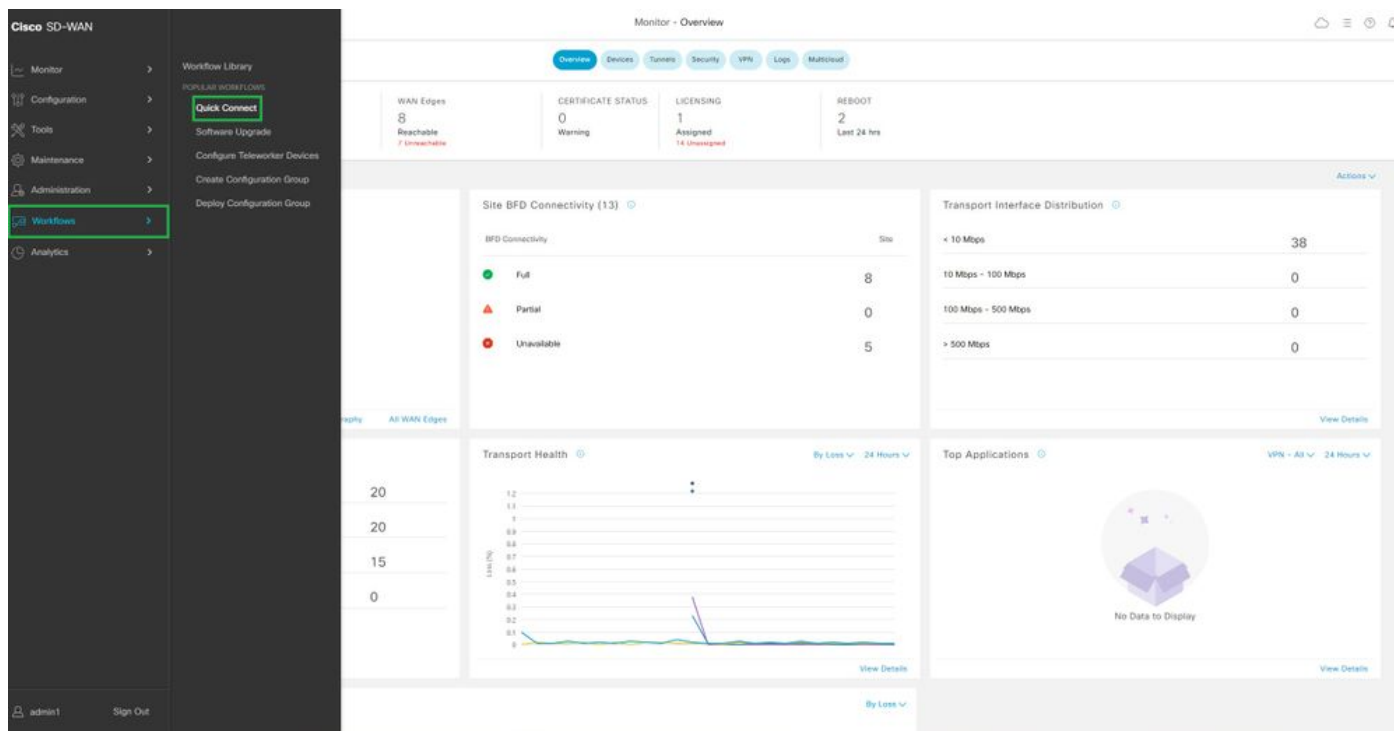
Background Information

Workflows are a library of guided workflows which consist of certain steps to perform specific tasks. They are designed to overcome the challenges faced with feature templates. In large network deployments, there is a huge number of feature templates deployed, making them harder to manage. Additionally, managing feature templates manually can be a slow and tedious process. Another limitation is that feature templates are device-specific, which limits their reusability.

With guided workflows, you simplify the configuration process by providing step-by-step instructions to the user. Configuration components can be reused across an entire device family, instead of being specific to one device model. Furthermore, you can group devices based on shared configurations.

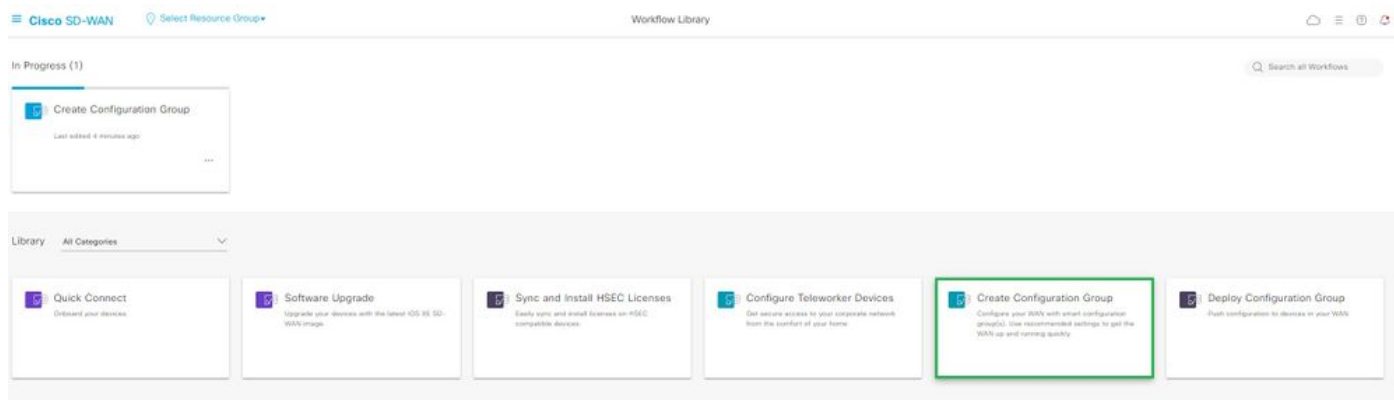
Configurations

Navigate to **Workflows > Quick Connect**.



Select Quick Connect

Navigate to **Create Configuration group**.



Select Create Configuration Group

Enter the Name and Description for Configuration Group.

Create Configuration Group

We'll guide you through the required settings to quickly configure your WAN. We'll also recommend smart defaults along the way.

Name
San_Jose_Branch
ex. EastCoastBranches

Description (Optional)
San Jose Branch
ex. Intended for East Coast location

Enter Name and Description

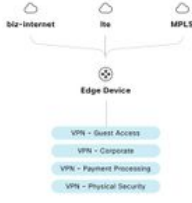
Create new basic profiles.

Site Configurations

Configuration Groups begin with smart default settings pre-populated for the user. You can modify or add to these settings as you wish.

Collaps All Expand All

Site Type
Configuration Group Type: Single Router



Site Settings

Local Device Access*
[dropdown] [password field] [confirm password field]
Example: mypassw0rd

Banner
You can configure two different banner text strings, one to be displayed before the login prompt (Login banner), the other to be displayed after a successful login to the device (MOTD/Message-of-the-Day)

MOTD* [dropdown] [text field] [dropdown] [text field]
Enter MOTD Message Enter Login Message

Add Basic Profile

Create WAN and LAN profiles. You can choose multiple WAN and LAN interfaces.

Cisco SD-WAN | Select Resource Group | Create Configuration Group

WAN Interfaces

DHCP Static

Transport Name: Internet Interface Color: public-internet

Show Advanced

Interface Name: [ipx_0_public-internet_0] Subnet: [ipx_0_public-internet_0_subnet]

IP Address: [ipx_0_public-internet_0_ip] Subnet Mask: [ipx_0_public-internet_0_subnet_mask]

WAN Routing

Add Routing

Static IPv4

Next Hop Null 0 DHCP

1 Next Hop

Show Advanced

LAN & Service VPN Profile

Add Multiple VPNs at Once

Segment Name: Corporate Users VPN: 10 Number of Interfaces: 1

Add Routing

Show Advanced

Exit Back Next

WAN and LAN Profile

Verify the summary of profiles and create configuration group.

Cisco SD-WAN | Select Resource Group | Create Configuration Group

Summary

Configuration Group Basic Details

Configuration Group Name	San_Jose_Branch
Description	San Jose Branch

Site Configuration

Site Type	LAN
Configuration Group Type	Single Router

Site Settings

BANNER	
MGID Message	System Default
Login Message	System Default
LOCAL DEVICE ACCESS	
Default Password	{admin_password}

WAN Interfaces

TRANSPORT 1	
Name	Internet
Type	public-internet
IP Address	Static
Shaping Rate (Kbps)	System Default

WAN Routing

WAN Routing	Static IPv4
-------------	-------------

LAN & Service VPN Profile

SERVICE VPN 1	
Name	Corporate Users

Exit Back **Create Configuration Group**

Summary

Associate the Devices to Configuration group.

Done!

Configuration Group was created successfully. You can check the details on the configuration group page.

What's Next?

[Go to Configuration Groups](#)

Associate Devices to Configuration Group

[View Configuration Group San_Jose_Branch's Details](#)

[Go Back to Workflows Home](#)



Associate Devices to Configuration Group

Select the devices you want to add to the San_Jose_Branch configuration group.

Choose devices
Select the devices you would like to add to the San_Jose_Branch configuration group.

Available Devices (10)

Search:

Device Number	Device Model	hostname	Assigned Config Group	System IP	Site ID	Serial No./Token
<input type="checkbox"/> CSR-1C78055-9436-5829-0583-0AA31C3A790C	CSR1000v	Dallas_HQ	-	10.10.10.13	15	090A40BC
<input type="checkbox"/> ASR1002-HR-JH023A209XR	ASR1002-HR	BBW_DC_Edge	-	10.50.50.52	502	04841D49
<input type="checkbox"/> ISR4331-K9-FD02021717N8	ISR4331	sEdge1	-	10.10.10.200	200	C9140A
<input type="checkbox"/> C1111-4P9A-F0L21499352	C1111-4P9A	BBW_Branch_Edge	-	10.50.50.51	501	01302808
<input type="checkbox"/> CSR-5480C823-2005-6093-C917-8EEFDEA684E2	CSR1000v	-	-	-	-	66487620114334649c73208921412387
<input type="checkbox"/> CRK-465956AD-895D-8C769144-57096684E33	CR600V	-	-	-	-	0a3f9f810a6b462a4671c9a29a9a42
<input type="checkbox"/> ISR4331-K9-FD02021D9B	ISR4331	sEdge2	-	10.10.10.201	200	A8CA42
<input type="checkbox"/> CRK-4C31DE37-5885-0A31-211A-6A23F7B7866	CR600V	-	-	-	-	a6012c91a75a0c0a69325a7192560a
<input checked="" type="checkbox"/> ISR4451-K9-FD0204887WU	ISR4451-K	Branch_1	-	101.101.101.109	1001	012FA7FA
<input type="checkbox"/> ISR4331-K9-FD0204021UE	ISR4331	Branch_2	ROB_Branch	202.202.202.202	2002	011A8782

Items per page: 25 1-10 of 10

Review

Select the Device

Review the information for the devices to be added. You can deploy now or later.

Summary

Review the information for the devices to be added. You can deploy now or later.

Devices To Be Added (1) [Edit](#)

Chassis Number	Device Model	Hostname	Assigned Config Group	System IP	Site ID	Serial No./Token
ISR4451-X/K9-FOC20468TWU	ISR4451-X	Branch_1	-	101.101.101.109	1001	012F47FA

Items per page: 25 1 - 1 of 1

[Exit](#)

[Back](#)

[Save](#)

Summary

Provision the device with configuration group.

Done!

The selected devices have been associated to the configuration group, San_Francisco.

What's Next?

[Provision Devices in your Configuration Group](#)

[View Configuration Group San_Francisco's Details](#)

[View List of Configuration Groups](#)

[Workflows Home](#)

[Go Back to Workflows Home](#)



Provision the Device

Select Devices to Deploy.

Select Devices to Deploy

Select the devices below to deploy

Edge Devices (1)

Search Table

1 selected Associate Devices

<input checked="" type="checkbox"/>	Chassis Numbers	Hostname	Tags	System IP	Site ID	Device Status	Added by Rule	Last Configured	Up To Date	Unsupported Features
<input checked="" type="checkbox"/>	ISR4451-X/K9-FOC20468TWU	Branch_1	-	101.101.101.109	1001	-	false	-	False	0

Select Devices to Deploy

Add and review the device specific configuration.

Add and Review Device Configuration

We've autogenerated minimal configurations to make it easier for you to bring up your devices. Modify them as needed and directly edit the table to add System IP and Site IDs.

Search

ISR4451-X/K9-FOC20468TWU
Branch_1 101.101.101.109

Import Export

Device Information

Site Id* 1001	System IP* 101.101.101.109	Rollback Timer (sec)* 300
Host Name* Branch_1	admin_password* *****	vpn_0_public-internet_if* GigabitEthernet0/0/0 <small>Value can be selected or edited</small>
vpn_0_public-internet_if_ip* 10.201.180.242	vpn_0_public-internet_if_subnet* 255.255.255.128	vpn_0_static_ipv4_network_addr* 0.0.0.0
vpn_0_static_ipv4_nexthop_ipaddr* 10.201.180.129	vpn_0_static_ipv4_subnet* 0.0.0.0	vpn_10_if_0* GigabitEthernet0/0/2 <small>Value can be selected or edited</small>
vpn_10_if_0_ipaddr* 10.10.1.1	vpn_10_if_0_subnet* 255.255.0.0	

Exit Review Back Next

Add and Review

Verify the Configuration pushed with CLI Preview and Deploy.

Summary

Please review the details.

Selected Devices (1) [Preview CLI](#) [Edit](#)

Device ID	Site Id	System IP	Rollback Timer (sec)	Host Name	admin_password	vpn_0_public_internet_if	vpn_0_public_internet_if_ip	vpn_0_public_internet_if_subnet	vpn_0_static_ipv4_network_addr	vpn_0_stat
ISR4451-X/K9-FOC20468TWU	1001	101.101.101.109	300	Branch_1	*****	GigabitEthernet0/0/0	10.201.180.242	255.255.255.128	0.0.0.0	10.201.180.242

1 Record Items per page: 25 1 - 1 of 1

Verify the Configuration with CLI Preview and Deploy

Verification

View Deployment Status.

Deployment request for device(s) has been submitted

What's Next?

[View Deployment Status](#)

[Deploy Another Configuration Group](#)

[View San_Francisco Associated Devices](#)



View Deployment Status

Navigate to **Configuration > Devices > Verify the Assigned Configuration Group.**

Cisco SD-WAN | Select Resource Group | Configuration - Devices

WAN Edge List | Controllers

Search

Change Mode | Upload WAN Edge List | Export Bootstrap Configuration | Sync Smart Account | Add PAYG WAN Edges

Total Rows: 20

Chassis Number	Tags	Hostname	Site ID	Region ID	Mode	Device Status	Assigned Config Group	Assigned Template	Device Model	Draft Mode	Serial No./Token	Reachability	C
ISR4331/K9-FD0204301UE	Add Tag	Branch_2	2002	-	vManage	In Sync	RCH_Branch	-	ISR4331	Disabled	011A87B2	reachable	...
ISR4451-X/K9-FOC2048RTWU	Add Tag	Branch_1	1001	-	vManage	In Sync	San_Francisco	-	ISR4451-X	Disabled	012F47FA	reachable	...

Assigned Config Group

Navigate to **Configuration > Templates > Configuration Groups**.

Cisco SD-WAN | Select Resource Group | Configuration - Templates

Configuration Groups | Feature Profiles | Device Templates | Feature Templates

Configuration Groups (2)

Search Table

Add Configuration Group

As of: Sep 26, 2023 03:04 PM

Name	Description	Device Solution	Number of Devices	Devices Up to Date	Number of Feature Profiles	Updated By	Last Updated On	Actions
San_Francisco	San_Francisco	sdwan	1	1	4	admin1	Sep 26, 2023, 2:45:16 PM	...
RCH_Branch	Richardson Site	sdwan	1	1	4	admin1	Sep 25, 2023, 7:43:16 AM	...

Configuration Groups

This captures the configuration template attached and device status.

<#root>

Branch_1#show sdwan system status

```

Personality: vEdge
Model name: ISR4451-X/K9
Device role: cEdge-SDWAN
Services: None

vManaged: true

```

<----- Managed by vManage

Commit pending: false

Configuration template: San_Francisco

<----- Configuration Group Attached
Chassis serial number: FJC2104D0PQ

Related Information

[Configuration Groups and Feature Profiles](#)