Configure vEdge Device Parameters by the Use of SDWAN Template

Contents

Introduction Prerequisites Requirements Components Used Configure Verify Troubleshoot

Introduction

This document describes how to push new configurations via Templates from vManage.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Basic Knowledge of SDWAN architecture
- Basic Knowledge of vManage dashboard

Components Used

This document is not restricted to specific software and hardware versions.

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.

Configure

To configure common parameters of **vEdge** devices from **vManage** controller, you can use Templates.

The example in the image shows you how to use the feature template to configure a new VPN 20 and loopback interface and push it to **vEdge** devices.

Log in to **vManage**. You can see that the SD-WAN fabric includes vSmart controllers, WAN Edge routers, vBond orchestrator, and one vManage Network Management Systems (NMS).

=	cisco Cisco	vManage								
	DASHBO/	ARD MAIN DASHBOARD								
□ ¢	•	2 个 vSmart - 2	×	6 个 WAN Edge - 6		3	1 个 vBond - 1		1 Ø vManage	
٩	Control Stat	us (Total 8)			Site H	ealth (Total 4)			-	
÷	Control Up			8	0	Full WAN Conne	ectivity		4 sites	
<u></u>	Partial			0	0	Partial WAN Co	nnectivity		0 sites	
	Control Dov	vn		0	0	No WAN Conne	ctivity		0 sites	
	WAN Edge II	nventory			WAN	Edge Health (Tota	al 6)			
	Total			12		\frown	\frown	-		
	Authorized			12	(6)	(0	0		
	Deployed			6						
	Staging			0		Normal	Warning	Error		

Click the Gear icon (Configuration) in the left menu bar and choose Templates. Click the Feature tab.

≡	Cisco vManage		
		MPLATES	
	Device Feature		
\$	Add Template		
ચ	Template Type Non-Default	- Q	
	Name	Description	Туре
*			
*			

Click Add Template and choose vEdge Cloud from the list of possible devices under the Select Devices option and click the VPN template.

=	cisco vManage		•	Ð	*	0	admin	-
	CONFIGURATION TEMPLATES							
	Device Feature							
•	Feature Template > Add Template							
•	Select Devices	Select Template						~
2	Search by device name							
•	LI ISRV	BASIC INFORMATION						
*	VEdge 100	AAA Archive		BFD				
8	VEdge 100 B			5.5				
	VEdge 100 M	NTP OMP		Securit	у			
	VEdge 100 WM							
	VEdge 1000	System						
	U vEdge 2000							
	□ vEdge 5000	VPN						
	VEdge Cloud	Secure Internet Gateway (SIG)	VF	PN Interface	Bridge			
	VManage	WAN		LAN				~
	vSmart	¢					>	

Type these template details:

Template Name: vEdge_ServiceVpn20Template

Description: vEdge service VPN 20 Template

In the **Basic Configuration** section, enter **20** in the VPN field and click **Save**.

=	Cisco vManage						
	CONFIGURATION TEMPLA	TES					
	Device Feature						
-	Feature Template > Add Templa	te > VPN					
•	Deulas Tune	vEdge Cloud					
٩	Device Type	veage cloud					
÷	Template Name	vEdge_Servi	iceVpn20Template				
	Description	vEdge servi	ce VPN 20 template				
-							
	Basic Configuration	DNS	Advertise OMP	IPv4 Route	IPv6 Route	Service	Service Rout
	Global Route Leak						
	BASIC CONFIGURATION	1					
							_
	VPN			20			
	Name			⊘ .			
	Enhance ECMP Keying			🎯 🗸 🔿 On	Off		
	Enable TCP Optimization			🖉 🖌 🔿 On	Off		
						Save Cancel	

Click **Add Template** again and choose **vEdge Cloud**. Click **VPN Interface Ethernet** and enter these parameters:

Template Name: vEdge_ServiceVpn20InterfaceTemplate

Description: vEdge service VPN20 interface template

In the Basic Configuration section, enter these parameters:

Shutdown (Global): No

Interface Name (Global): loopback20

Scroll down to the **IPv4 Configuration** section and choose **Device Specific** as the IPv4 Address, and then click **Save**.



Click the Devicetab and apply the new feature templates tovEdgeSite1_DeviceTemplate in this

way:

- Click the More Options (...) icon forvEdgeSite1_DeviceTemplateand chooseEdit.
- Click Service VPN> + Add VPNto add a service VPN.
- Choose the new VPN 20 template and move it to the right pane. ClickNext.
- Click**VPN Interface**under the**Additional VPN Templates**section in the right pane. This process must add a new VPN Interface field in the left pane.
- Click the new VPN interface drop-down arrow and choosevEdge_ServiceVpn20Interface Template. ClickAdd. This process returns you to theService VPN option inside the service VPN 20 template.
- ClickUpdate.

Before you click **Update**, you can see that the new service VPN has been added to the list:

4	Servi	ce VPN					
-	0 Row	rs Selected O Add VPN O Remove VPN	Search Options 🗸				O O
•				Template Name		Sub-Templates	
		90605345-036a-413e-021d-34c1506825ab 531de90d-145e-4ef3-be7c-2719258c0baf		vEdge_ServiceVpn20Template		OSPF, VPN Interface VPN Interface	
					•		

Click the Download arrow icon to download and save the

templatevEdgeSite1_DeviceTemplate.csvfile. The file is saved automatically to the SD-WAN folder on the Jump Host.

On the Jump Host, browse to the SD-WAN folder and open

the**vEdgeSite1_DeviceTemplate.csv**file. Add the **IP address** for loopback 20 for the template's devices as:

- vEdge11: 10.20.11.1/24
- vEdge12: 10.20.12.1/24

	ohol cisc	Cisco vManage					•	Û		0	admin v
Γ	\$ 0	CONFIGURATION TEMPLATES									
	Devi	ce Template vEdge_DeviceTemplate									00
	Q		Search Optio	ns ¥						1	fotal Rows: 2
L	s.,	Chassis Number	System IP	Hostname	IPv4Address(vpn_if_ipv4_address)	IPv4 Address(vpn_if_ipv4_address)		IPv4 Add	fress(vpn_if	.jpv4_eddr	ess)
L	0	3d4920ab-0ddf-4529-a952-df91ca4d2155	10.255.255.12	vEdge12							
4		1106ab14.4420.4457.8344.144107804376	10.255.255.11	vEdge11							

	vEdgeSite1_DeviceTemplate.csv - LibreOffice Calc 📓 - 🗇 🗙													
File	File Edit View Insert Format Styles Sheet Data Tools Window Help													
🖬	🖻 · 🖻 · 🛃 · 🛃 🚱 🔯 🐇 🖫 🏚 · 🏄 🕰 🦘 · 🛷 · 🕱 🏘 🎟 · 🎚 · 🎼 · 🎼 · 🎼 · 🎼 🖓 🐼 📾 🔮 🔯 🚱 😰 $\Omega \approx \mathcal{P} \equiv$													
Lib	Liberation Sans \vee 10 🔍 🍓 🖉 🧧 🚍 · 🚍 · 🚍 🖶 🚍 🚍 🗯 🖺 🗉 🖃 💭 💖 0.0 🔯 比 🔐 🚈 🖽 🖭 · 🕞 · 📮 ·													
D1	× <u>‰</u> Σ = /20/Ι	oopback20/in	terface/ip/add	dress			-	1						
	A	B	C	D	E	F	G	1 -						
1	csv-deviceId	csv-deviceIP	csv-host-name	/20/loopback20/interface/ip/address	/10/ge0/2/interface/ip/address	/512/eth0/interface/ip/address	/0/ge0/1/interface/ip/addres							
2	3d4920ab-0ddf-4529-a952-df91ca4d2155	10.255.255.12	vEdge12	10.20.12.1/24	10.1.1.12/24	10.0.0.112/24	172.18.0.12/16							
3	1196ab1d-4d29-4d57-83d4-14d197804376	10.255.255.11	vEdge11	10.20.11.1/24	10.1.1.11/24	10.0.0.111/24	172.18.0.11/16	T						
4														
5														

Save the updated .csv file.

Click the **Upload** arrow icon on vManage and upload the **vEdgeSite1_DeviceTemplate.csv** file.

If vManage times out while you edit the **CSV** file, repeat the previous step to re-enable the new service VPN and VPN interface.

Upload CSV I	File	×
CSV File	Choose File vEdgeSite1_DeviceTemplate.csv	
	0%	
	Upload Cancel	

Click **Next** to deploy the configuration changes.

Ξ.	cisco	Cisco vManage				•	E 🗚 0	admin v
	\$ 0	ONFIGURATION TEMPLATES						
	Devic	e Template VEdgeSite1_DeviceTem	mplate					
-								00
۰								
۹.	Q,		Search Optio	ne V			,	plat Popers: 2
~	s.,	Chassis Number	System IP	Hostname	IPv4 Address(vpn_f_jpv4_address)	IPv4 Address(vps_If_lpv4_address)	Pv4 Address(vps_if_)pv4_addre	an)
•	0	3d4920ab-0ddf-4529-a952-df91ca-8d2158	10.255.255.12	vEdge12	10.20.12.1/24	10.1.1.12/24	10.0.0112/24	
45	•	11954016-6429-6657-8364146197804376	10.255.255.11	vEdge11	10.20.11.1/24	10.1.1.11/24	10.0.0111/24	
						Next Gancel		

Click **Configure Devices** and confirm the configuration changes. Monitor the deployment status. The configuration is pushed to vEdge11 and vEdge12.

Proceed to the next step once vManage displays a Success status for both devices.

=	alialia cisco	Cisco vManage					•	Û	* ®	0	admin 👻
5	Ê TAS	SK VIEW									
	Push F	eature Template Configu	ration 🥑 Validation Suc	cess *					Initiated By: a	idmin Fro	m: 10.0.0.251
~	Total T	ask: 2 Success : 2									
Ĩ											00
4	0										Total Rows: 2
÷.	Q			Search Options 🗸							10101110110.2
	2	Status	Message	Chassis Number		Hostname	System IP			vManage IF	
<u> </u>	>	Success	Done - Push Feature	3d4920ab-0ddf-4529	vEdge Cloud	vEdge12	10.255.255.12	1		10.255.255	.1
15	>	Success	Done - Push Feature	1196ab1d-4d29-4d5	vEdge Cloud	vEdge11	10.255.255.11	1		10.255.255	.1

Verify

Click the **Monitor icon** and choose **Network**. Click **vEdge11** from the list of devices and click **Real-Time** at the bottom of the left pane. In the **Device Options** field, choose **IP Routes** and choose **Show Filters**. Choose **20** from the VPN drop-down list and click **Search**. Verify the state of the VPN 20 routing table on vEdge11. Now, you can only see the VPN 20 Loopback 20 interface on the local router.

=	dhahe Cisco vManage									•	<u>a</u>	#	0	admin 🕶
8	MONITOR Network >	Real Time												
	Select Device v vEdge11 10.255.255.11 Site ID: 1 Device Model: vEdge Cloud 1													
-	Tunnel	Device Options: Q IP R	outes											
.	Security Monitoring TRiter VIPW ID: 20													00
<u>`</u>	Firewall		Search Options 🐱								Te	otal Rows: 1		
*	Intrusion Prevention	Next Hop If Name	VPN ID	AF Type	Prefix	Protocol	Next Hop Address	Next Hop VPN	TLOC IP		1	LOC Color	TLOC	Encep
**	URL Filtering	loopback20	20	ipv4	10.20.11.0/24	connected	-	-	-				-	
8	Advanced Malware Protection													

Troubleshoot

There is currently no specific troubleshoot information available for this configuration.