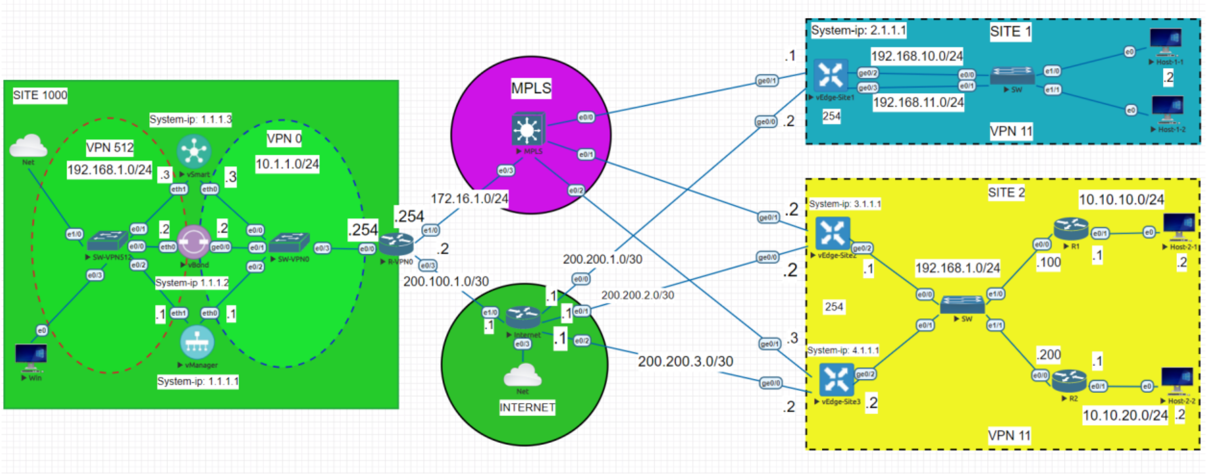
LAB - THỰC THI CHÍNH SÁCH APPLICATION AWARE ROUTING TRONG CISCO SD-WAN

I. Sơ đồ

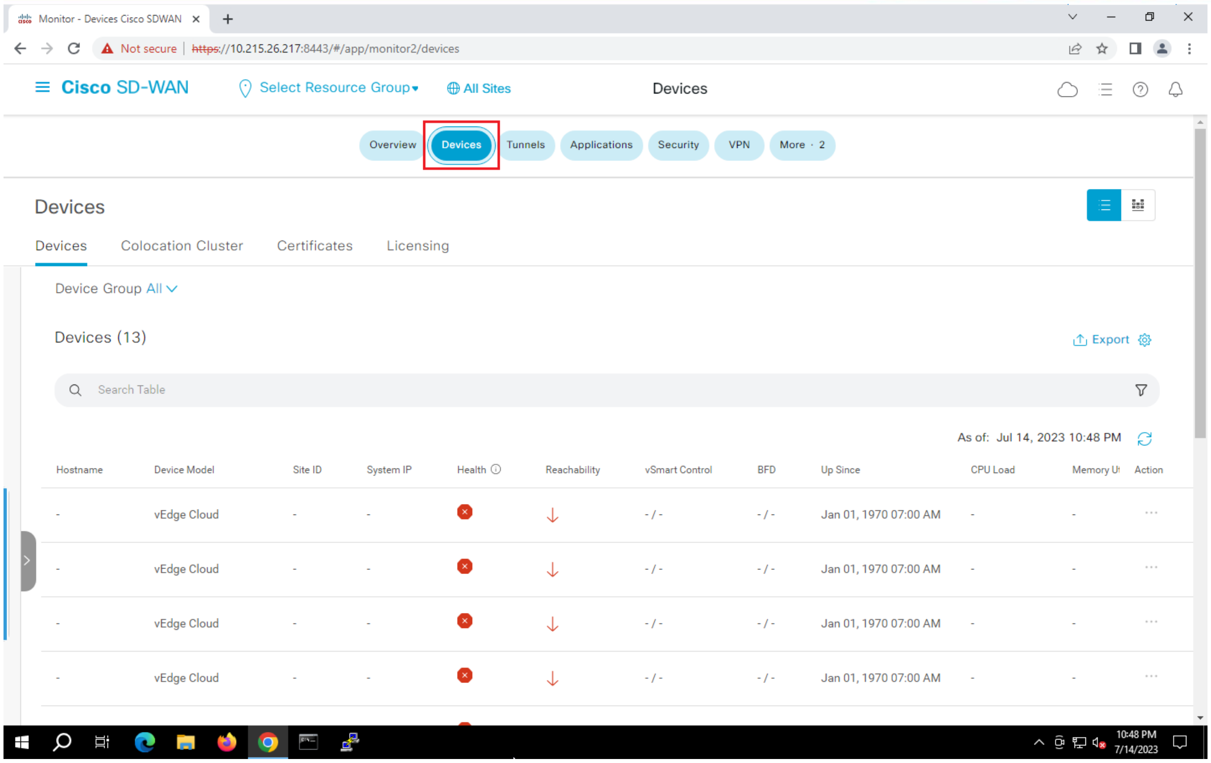


II. Yêu cầu kỹ thuật

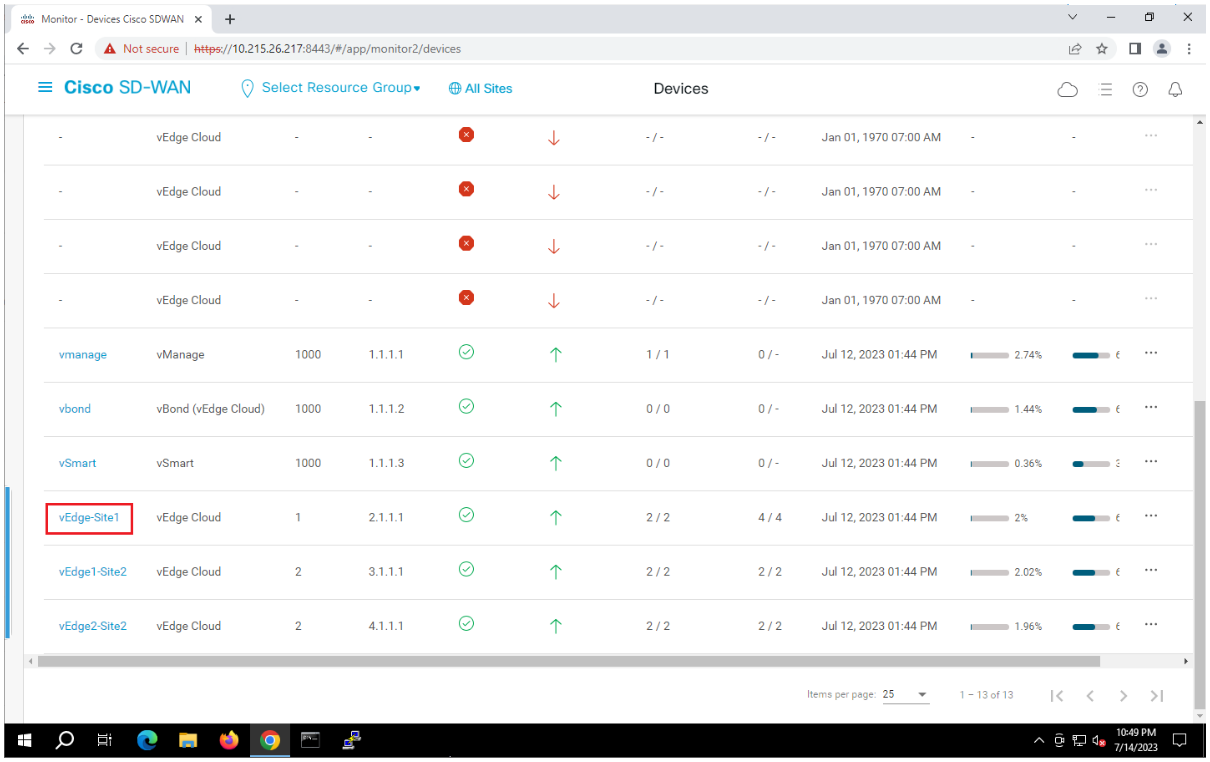
- Định nghĩa chính sách AAR trong Cisco SD-WAN, nó sẽ tự động chọn uplinks phù hợp cho lưu lượng đã chọn dựa trên hiệu suất của kênh.
- Kiểm tra lại bài lab.

III. Các bước thực hiện

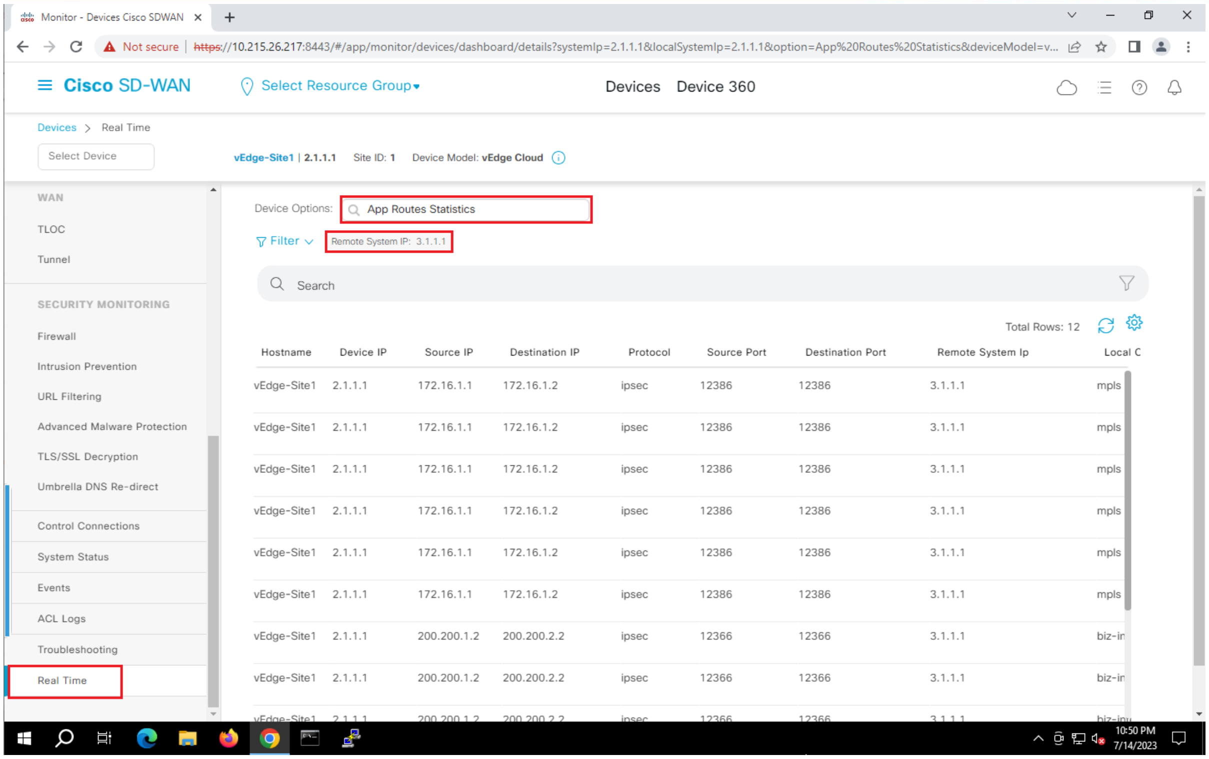
Kết nối tới **Windows** và truy cập vào **vManage UI.** Truy cập vào **Monitor > Network**. Chọn vEdge-Site1 và chọn mục **Real Time**. Vào **Device Options**, chọn **App Routes Statistics**. Phần **Remote System IP: 3.1.1.1 (vEdge1-Site2)**.



Hostname	Device Model	Site ID	System IP	Health	Reachability	vSmart Control	BFD	Up Since	CPU Load	Memory U	Action
-	vEdge Cloud	-	-	☒	↓	- / -	- / -	Jan 01, 1970 07:00 AM	-	-	···
-	vEdge Cloud	-	-	☒	↓	- / -	- / -	Jan 01, 1970 07:00 AM	-	-	···
-	vEdge Cloud	-	-	☒	↓	- / -	- / -	Jan 01, 1970 07:00 AM	-	-	···
-	vEdge Cloud	-	-	☒	↓	- / -	- / -	Jan 01, 1970 07:00 AM	-	-	···



-	vEdge Cloud	-	-	☒	↓	- / -	- / -	Jan 01, 1970 07:00 AM	-	-	···
-	vEdge Cloud	-	-	☒	↓	- / -	- / -	Jan 01, 1970 07:00 AM	-	-	···
-	vEdge Cloud	-	-	☒	↓	- / -	- / -	Jan 01, 1970 07:00 AM	-	-	···
-	vEdge Cloud	-	-	☒	↓	- / -	- / -	Jan 01, 1970 07:00 AM	-	-	···
vmanage	vManage	1000	1.1.1.1	✓	↑	1 / 1	0 / -	Jul 12, 2023 01:44 PM	2.74%	6	···
vbond	vBond (vEdge Cloud)	1000	1.1.1.2	✓	↑	0 / 0	0 / -	Jul 12, 2023 01:44 PM	1.44%	6	···
vSmart	vSmart	1000	1.1.1.3	✓	↑	0 / 0	0 / -	Jul 12, 2023 01:44 PM	0.36%	3	···
vEdge-Site1	vEdge Cloud	1	2.1.1.1	✓	↑	2 / 2	4 / 4	Jul 12, 2023 01:44 PM	2%	6	···
vEdge1-Site2	vEdge Cloud	2	3.1.1.1	✓	↑	2 / 2	2 / 2	Jul 12, 2023 01:44 PM	2.02%	6	···
vEdge2-Site2	vEdge Cloud	2	4.1.1.1	✓	↑	2 / 2	2 / 2	Jul 12, 2023 01:44 PM	1.96%	6	···



vEdge-Site1 | 2.1.1.1 Site ID: 1 Device Model: vEdge Cloud

Device Options: App Routes Statistics

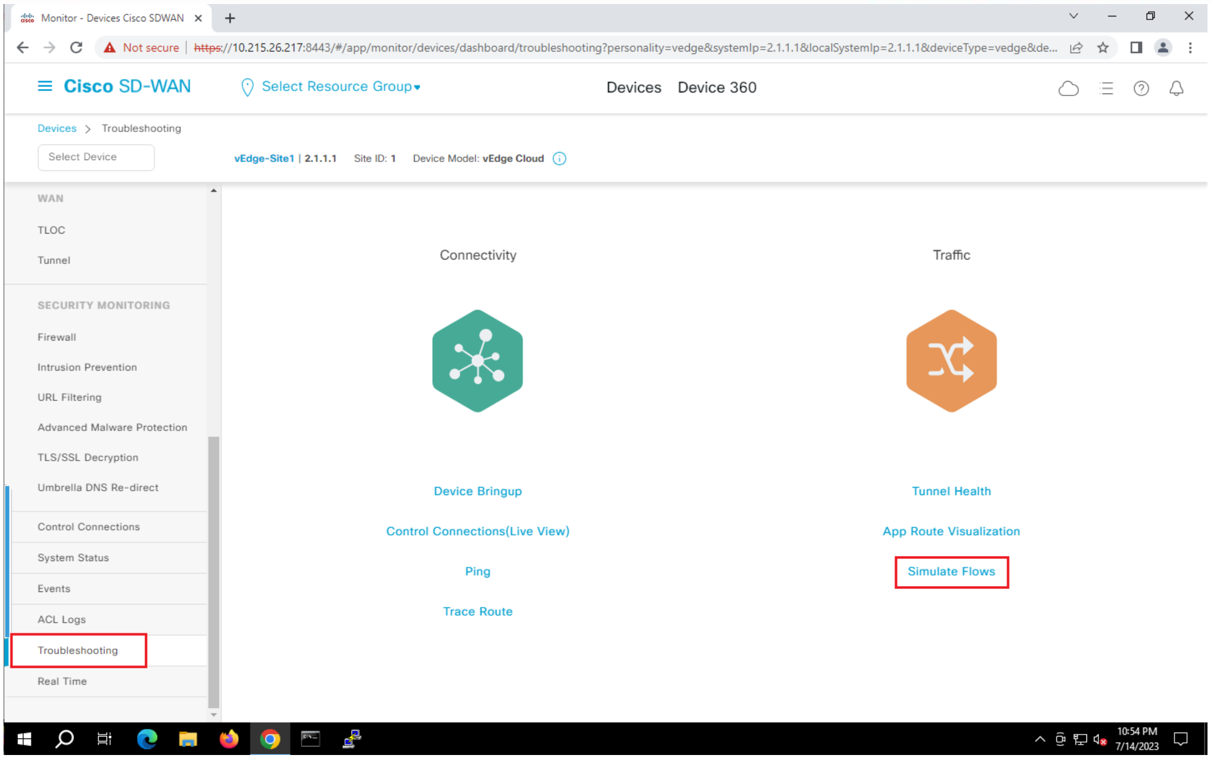
Remote System IP: 3.1.1.1

Total Rows: 12

Hostname	Device IP	Source IP	Destination IP	Protocol	Source Port	Destination Port	Remote System Ip	Local C
vEdge-Site1	2.1.1.1	172.16.1.1	172.16.1.2	ipsec	12386	12386	3.1.1.1	mpls
vEdge-Site1	2.1.1.1	172.16.1.1	172.16.1.2	ipsec	12386	12386	3.1.1.1	mpls
vEdge-Site1	2.1.1.1	172.16.1.1	172.16.1.2	ipsec	12386	12386	3.1.1.1	mpls
vEdge-Site1	2.1.1.1	172.16.1.1	172.16.1.2	ipsec	12386	12386	3.1.1.1	mpls
vEdge-Site1	2.1.1.1	172.16.1.1	172.16.1.2	ipsec	12386	12386	3.1.1.1	mpls
vEdge-Site1	2.1.1.1	172.16.1.1	172.16.1.2	ipsec	12386	12386	3.1.1.1	mpls
vEdge-Site1	2.1.1.1	200.200.1.2	200.200.2.2	ipsec	12366	12366	3.1.1.1	biz-ir
vEdge-Site1	2.1.1.1	200.200.1.2	200.200.2.2	ipsec	12366	12366	3.1.1.1	biz-ir
vEdge-Site1	2.1.1.1	200.200.1.2	200.200.2.2	ipsec	12366	12366	3.1.1.1	biz-int

Note: Các giá trị **Mean Loss**, **Latency** và **Jitter**. Trong chính sách, bạn sẽ dùng để cấu hình cho các bước tiếp theo.

Vào **Monitor > Network** và chọn **vEdge-Site1**. Vào **Troubleshooting** và chọn công cụ **the Simulated Flows**. Thiết lập các thông số như hình:

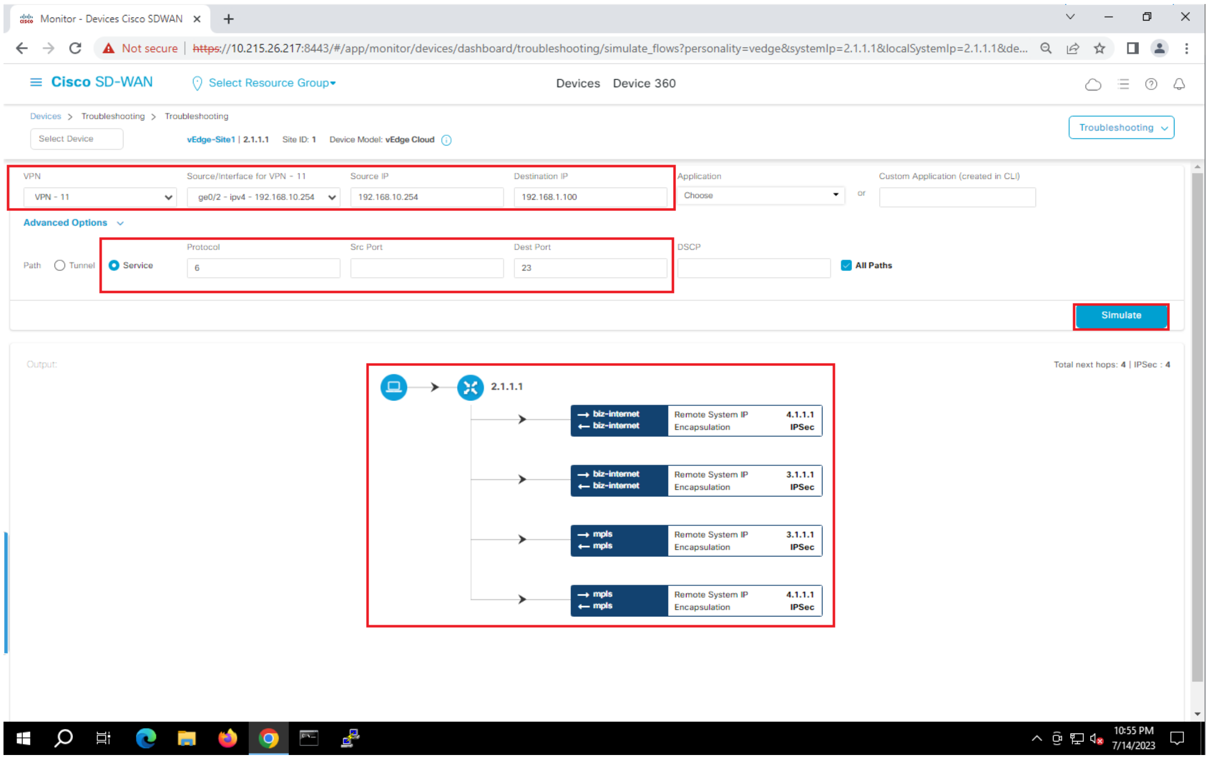


Monitor - Devices Cisco SDWAN

Not secure | https://10.215.26.217:8443/#/app/monitor/devices/dashboard/troubleshooting?personality=vedge&systemIp=2.1.1.1&localSystemIp=2.1.1.1&deviceType=vedge&de...

Devices > Troubleshooting

vEdge-Site1 | 2.1.1.1 Site ID: 1 Device Model: vEdge Cloud



Monitor - Devices Cisco SDWAN

Not secure | https://10.215.26.217:8443/#/app/monitor/devices/dashboard/troubleshooting/simulate_flows?personality=vedge&systemIp=2.1.1.1&localSystemIp=2.1.1.1&de...

Devices > Troubleshooting > Troubleshooting

vEdge-Site1 | 2.1.1.1 Site ID: 1 Device Model: vEdge Cloud

VPN: VPN - 11
Source/Interface for VPN - 11: ge0/2 - ipv4 - 192.168.10.254
Source IP: 192.168.10.254
Destination IP: 192.168.1.100
Application: Choose
or
Custom Application (created in CLI):

Advanced Options

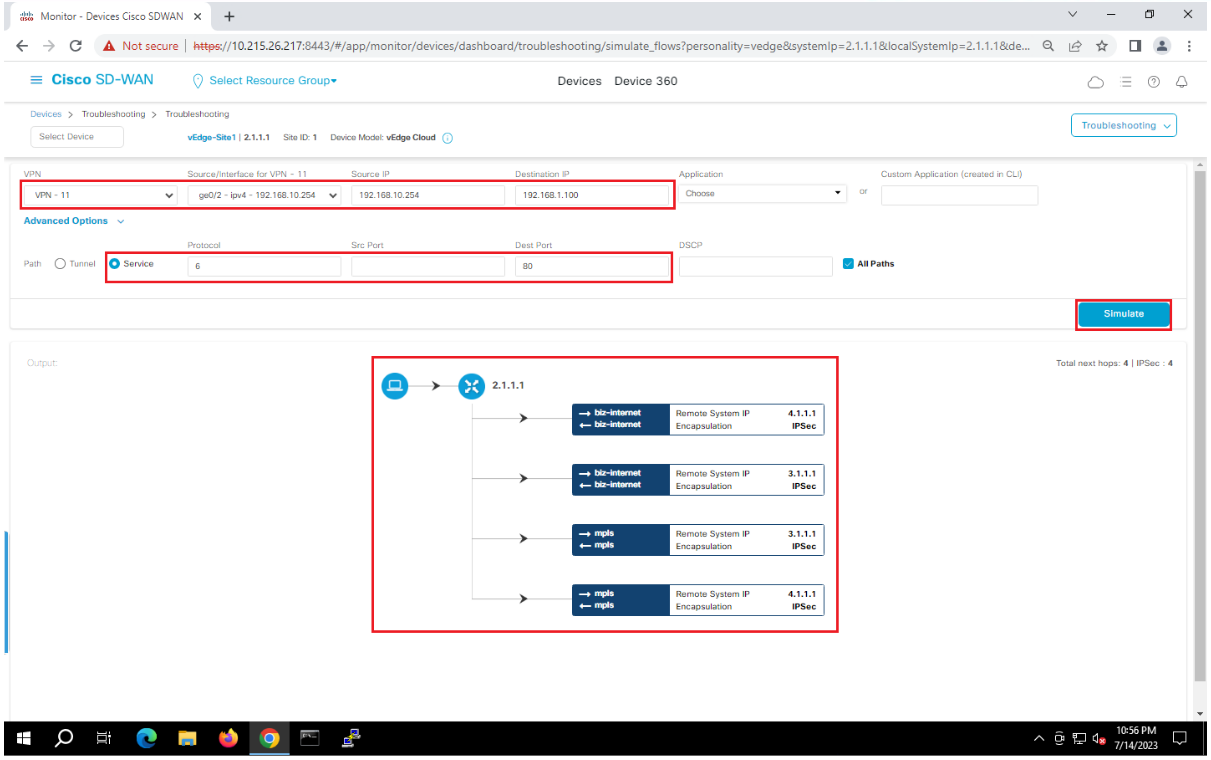
Path ○ Tunnel ● Service
Protocol: 6
Src Port:
Dest Port: 23
DSCP:
☑ All Paths

Output:

Total next hops: 4 | IPSec : 4

2.1.1.1

→ biz-internet ← biz-internet	Remote System IP Encapsulation	4.1.1.1 IPSec
→ biz-internet ← biz-internet	Remote System IP Encapsulation	3.1.1.1 IPSec
→ mpls ← mpls	Remote System IP Encapsulation	3.1.1.1 IPSec
→ mpls ← mpls	Remote System IP Encapsulation	4.1.1.1 IPSec



Monitor - Devices Cisco SDWAN

https://10.215.26.217:8443/#/app/monitor/devices/dashboard/troubleshooting/simulate_flows?personality=vedge&systemIp=2.1.1.1&localSystemIp=2.1.1.1&de...

Devices > Troubleshooting > Troubleshooting

vEdge-Site1 | 2.1.1.1 Site ID: 1 Device Model: vEdge Cloud

VPN: VPN - 11
Source/Interface for VPN - 11: ge0/2 - ipv4 - 192.168.10.254
Source IP: 192.168.10.254
Destination IP: 192.168.1.100
Application: Choose
Custom Application (created in CLI):

Advanced Options

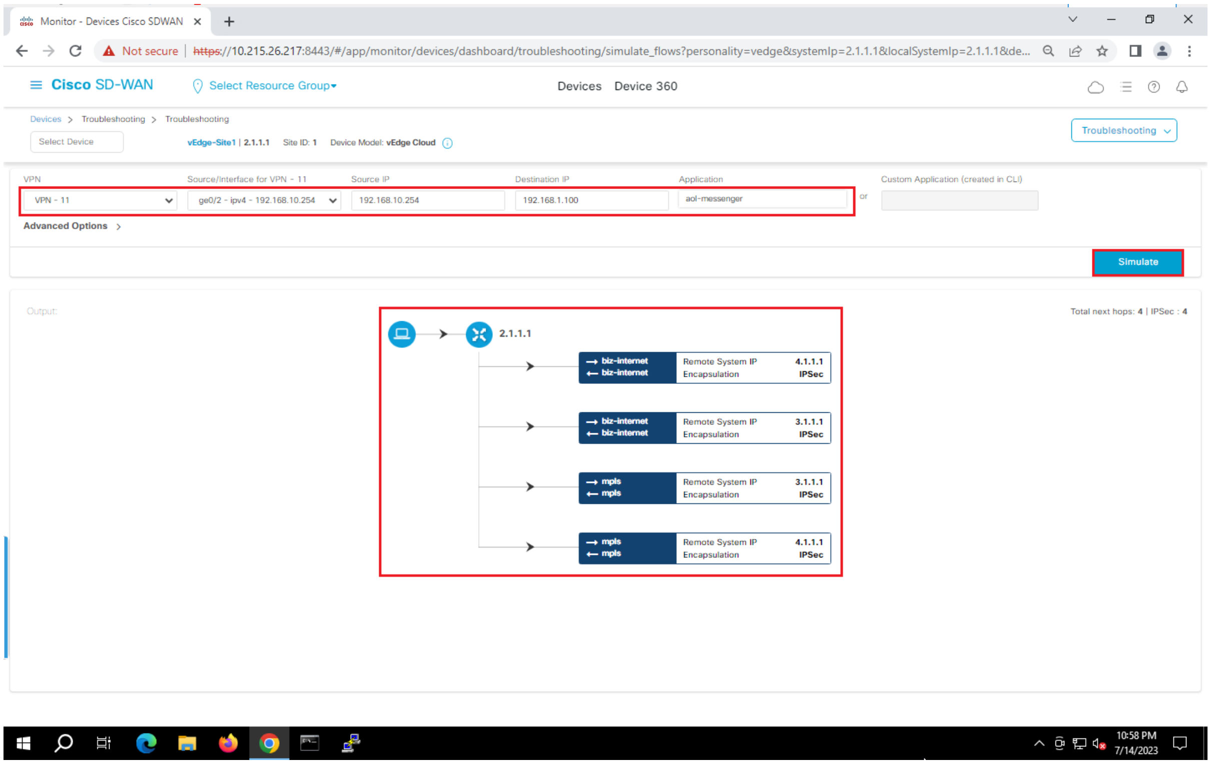
Path: ○ Tunnel ● Service
Protocol: 6
Src Port:
Dest Port: 80
DSCP:
☑ All Paths

Simulate

Output:

Total next hops: 4 | IPSec : 4

biz-internet / biz-internet	Remote System IP Encapsulation	4.1.1.1 IPSec
biz-internet / biz-internet	Remote System IP Encapsulation	3.1.1.1 IPSec
mpls / mpls	Remote System IP Encapsulation	3.1.1.1 IPSec
mpls / mpls	Remote System IP Encapsulation	4.1.1.1 IPSec



Monitor - Devices Cisco SDWAN

https://10.215.26.217:8443/#/app/monitor/devices/dashboard/troubleshooting/simulate_flows?personality=vedge&systemIp=2.1.1.1&localSystemIp=2.1.1.1&de...

Devices > Troubleshooting > Troubleshooting

vEdge-Site1 | 2.1.1.1 Site ID: 1 Device Model: vEdge Cloud

VPN: VPN - 11
Source/Interface for VPN - 11: ge0/2 - ipv4 - 192.168.10.254
Source IP: 192.168.10.254
Destination IP: 192.168.1.100
Application: aol-messenger
Custom Application (created in CLI):

Advanced Options

Simulate

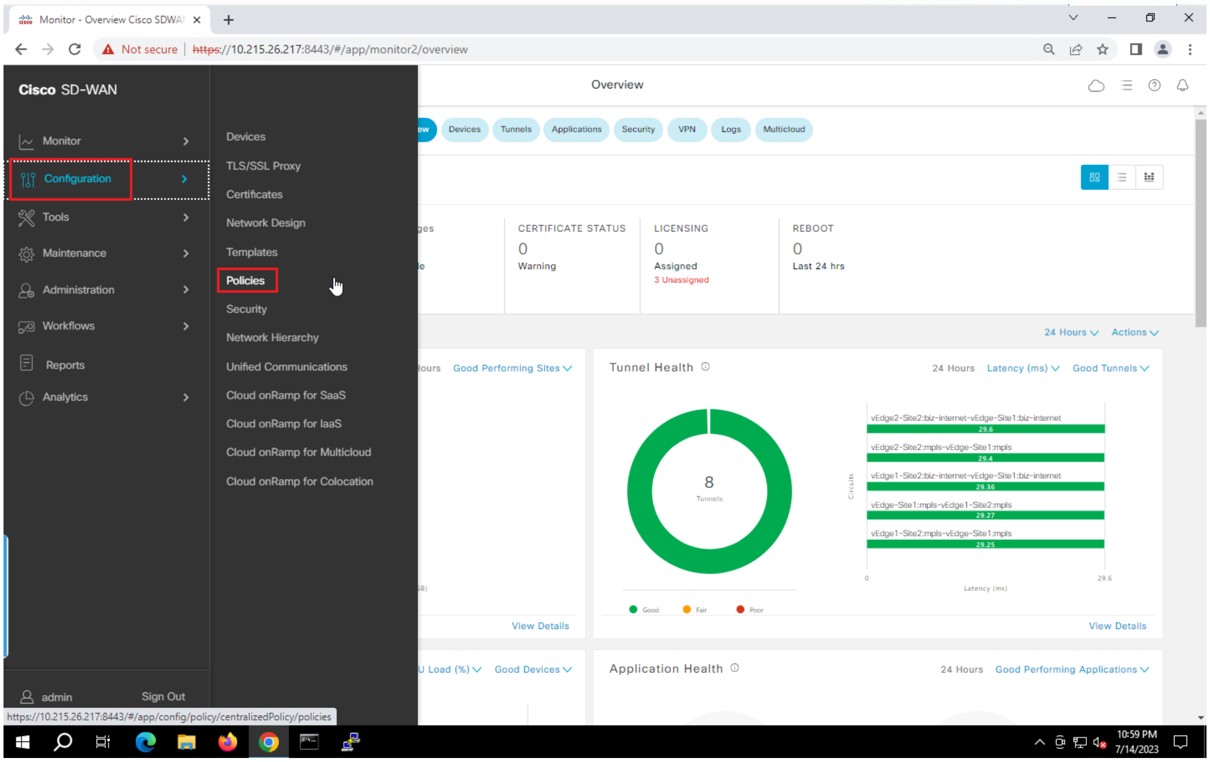
Output:

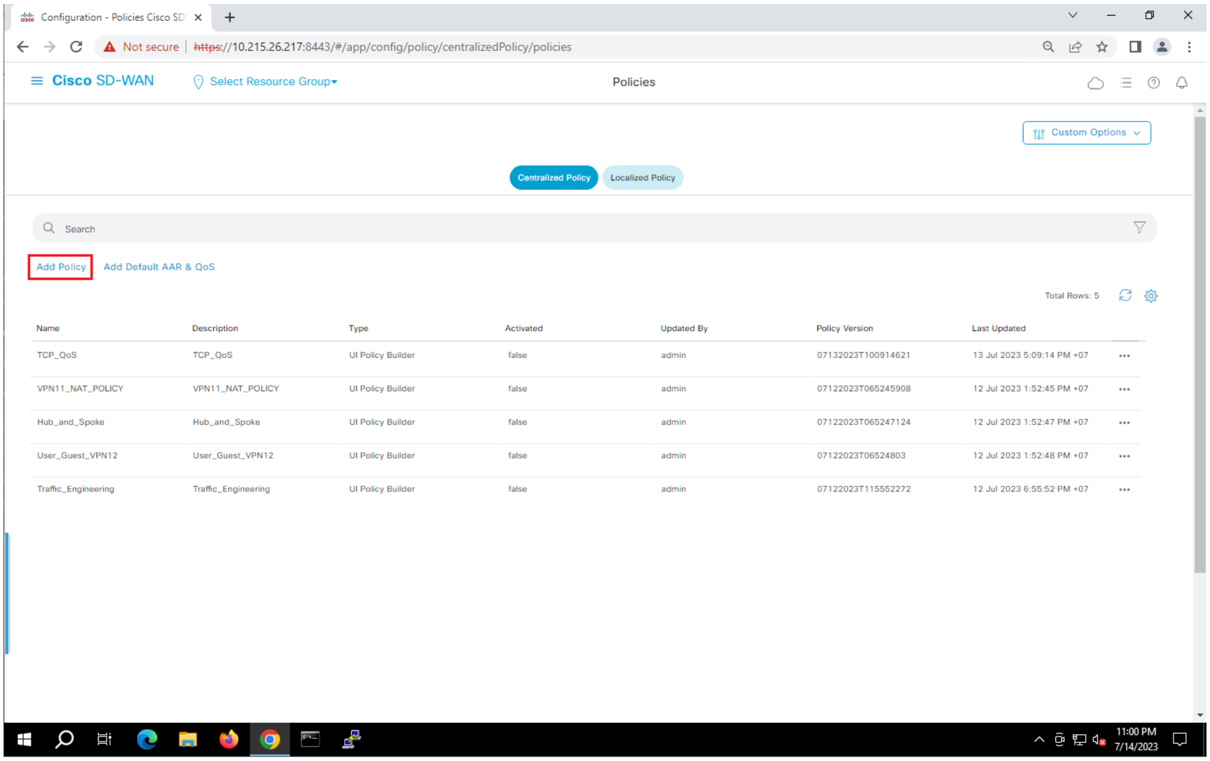
Total next hops: 4 | IPSec : 4

biz-internet / biz-internet	Remote System IP Encapsulation	4.1.1.1 IPSec
biz-internet / biz-internet	Remote System IP Encapsulation	3.1.1.1 IPSec
mpls / mpls	Remote System IP Encapsulation	3.1.1.1 IPSec
mpls / mpls	Remote System IP Encapsulation	4.1.1.1 IPSec

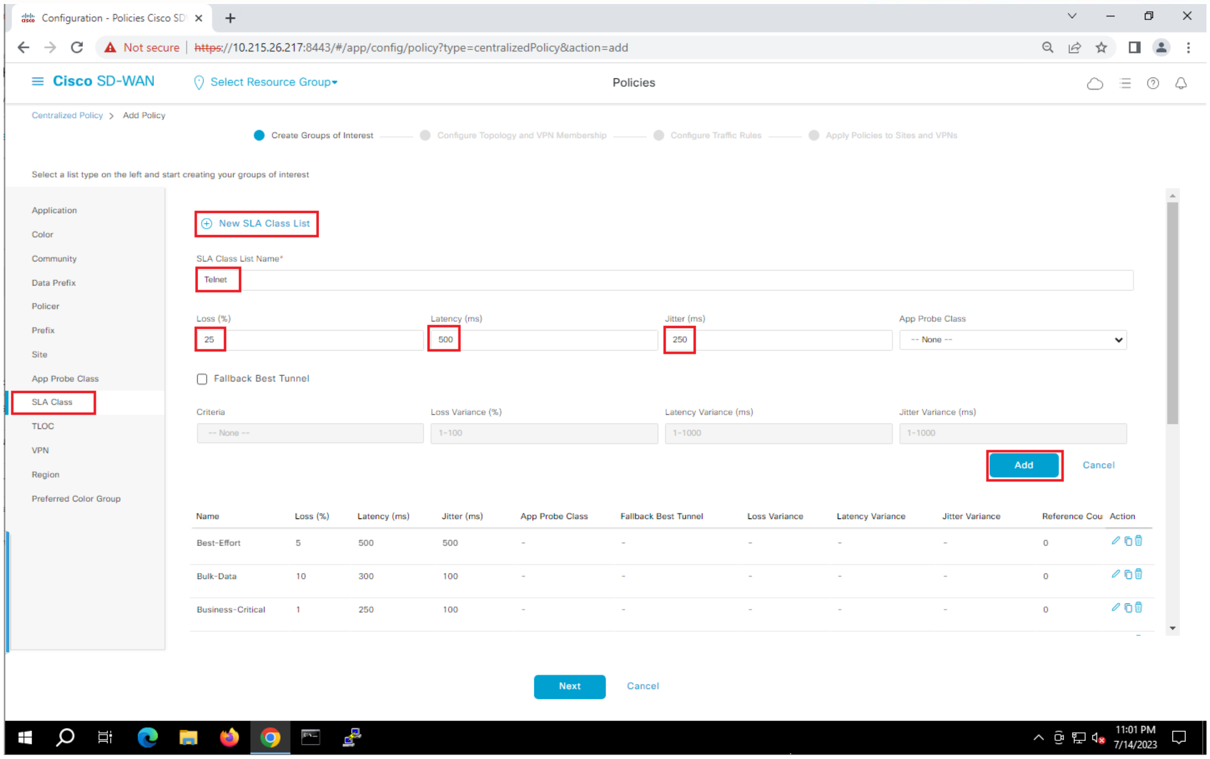
Vào **Configuration > Policies**. Chọn **Custom Options** và chọn **Lists under Centralized Policies**. Vào **the SLA Class** và tạo một danh sách mới. Tạo với **the name: Telnet** và set các giá trị **Loss: 25%**, **Latency: 500ms**, và **Jitter: 250ms.**

Chọn **Add**.





Name	Description	Type	Activated	Updated By	Policy Version	Last Updated
TCP_QoS	TCP_QoS	UI Policy Builder	false	admin	07132023T100914621	13 Jul 2023 5:09:14 PM +07
VPN11_NAT_POLICY	VPN11_NAT_POLICY	UI Policy Builder	false	admin	07122023T065245908	12 Jul 2023 1:52:45 PM +07
Hub_and_Spoke	Hub_and_Spoke	UI Policy Builder	false	admin	07122023T065247124	12 Jul 2023 1:52:47 PM +07
User_Guest_VPN12	User_Guest_VPN12	UI Policy Builder	false	admin	07122023T06524803	12 Jul 2023 1:52:48 PM +07
Traffic_Engineering	Traffic_Engineering	UI Policy Builder	false	admin	07122023T115552272	12 Jul 2023 6:55:52 PM +07


Configuration - Policies Cisco SD
Not secure | https://10.215.26.217:8443/#/app/config/policy?type=centralizedPolicy&action=add
Cisco SD-WAN
Select Resource Group
Policies
Centralized Policy > Add Policy
Create Groups of Interest
Configure Topology and VPN Membership
Configure Traffic Rules
Apply Policies to Sites and VPNs
Application
Color
Community
Data Prefix
Policer
Prefix
Site
App Probe Class
SLA Class
TLOC
VPN
Region
Preferred Color Group
New SLA Class List
Add
Cancel
Next
Cancel
11:01 PM
7/14/2023

Select a list type on the left and start creating your groups of interest

SLA Class List Name*: Telnet

Loss (%): 25

Latency (ms): 500

Jitter (ms): 250

App Probe Class: -- None --

□ Fallback Best Tunnel

Criteria: -- None --

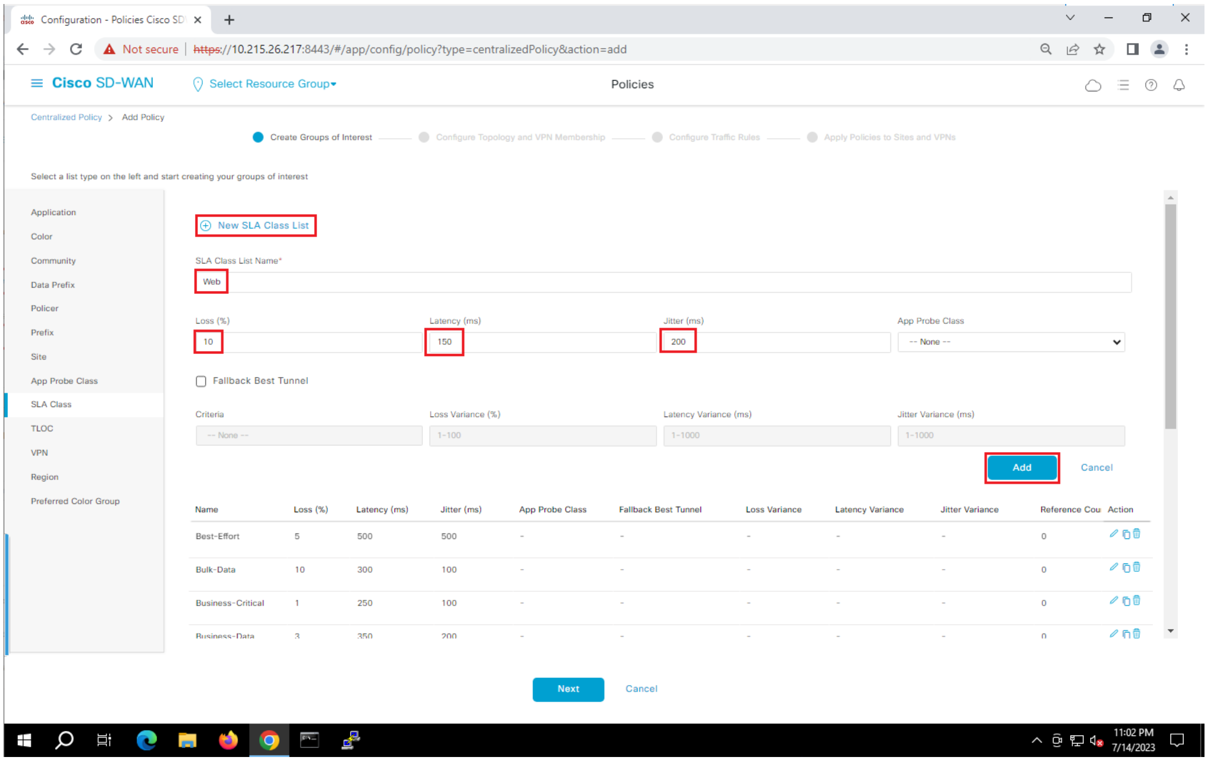
Loss Variance (%): 1-100

Latency Variance (ms): 1-1000

Jitter Variance (ms): 1-1000

Name	Loss (%)	Latency (ms)	Jitter (ms)	App Probe Class	Fallback Best Tunnel	Loss Variance	Latency Variance	Jitter Variance	Reference Cou	Action
Best-Effort	5	500	500	-	-	-	-	-	0	
Bulk-Data	10	300	100	-	-	-	-	-	0	
Business-Critical	1	250	100	-	-	-	-	-	0	

Tạo với **the name: Web** và set các giá trị **Loss: 10%, Latency: 150ms**, và **Jitter: 200ms.** Chọn **Add**.


Configuration - Policies Cisco SD
Not secure | https://10.215.26.217:8443/#/app/config/policy?type=centralizedPolicy&action=add
Cisco SD-WAN
Select Resource Group
Policies
Centralized Policy > Add Policy
Create Groups of Interest
Configure Topology and VPN Membership
Configure Traffic Rules
Apply Policies to Sites and VPNs
Application
Color
Community
Data Prefix
Policer
Prefix
Site
App Probe Class
SLA Class
TLOC
VPN
Region
Preferred Color Group
New SLA Class List
Add
Cancel
Next
Cancel
11:02 PM
7/14/2023

Select a list type on the left and start creating your groups of interest

SLA Class List Name*: Web

Loss (%): 10

Latency (ms): 150

Jitter (ms): 200

App Probe Class: -- None --

□ Fallback Best Tunnel

Criteria: -- None --

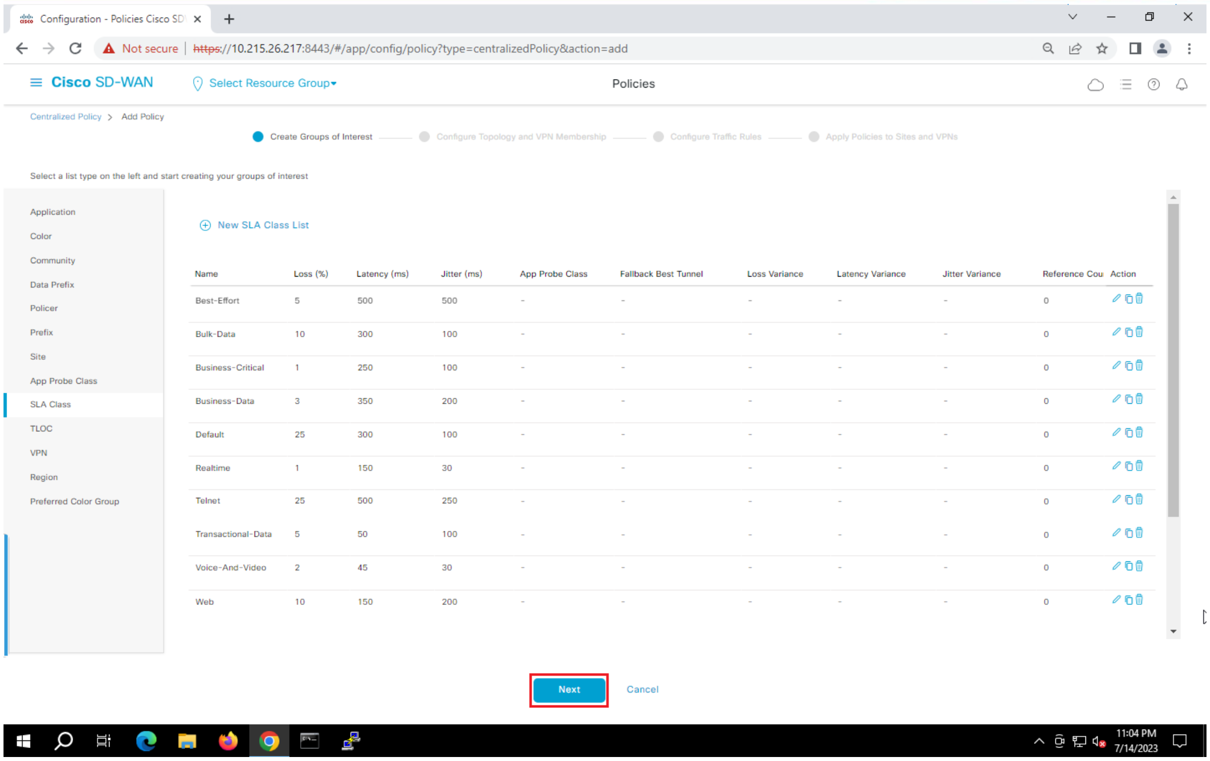
Loss Variance (%): 1-100

Latency Variance (ms): 1-1000

Jitter Variance (ms): 1-1000

Name	Loss (%)	Latency (ms)	Jitter (ms)	App Probe Class	Fallback Best Tunnel	Loss Variance	Latency Variance	Jitter Variance	Reference Cou	Action
Best-Effort	5	500	500	-	-	-	-	-	0	
Bulk-Data	10	300	100	-	-	-	-	-	0	
Business-Critical	1	250	100	-	-	-	-	-	0	
Business-Data	3	350	200	-	-	-	-	-	0	

Chọn Next



Configuration - Policies Cisco SD
https://10.215.26.217:8443/#/app/config/policy?type=centralizedPolicy&action=add

Cisco SD-WAN | Select Resource Group | Policies

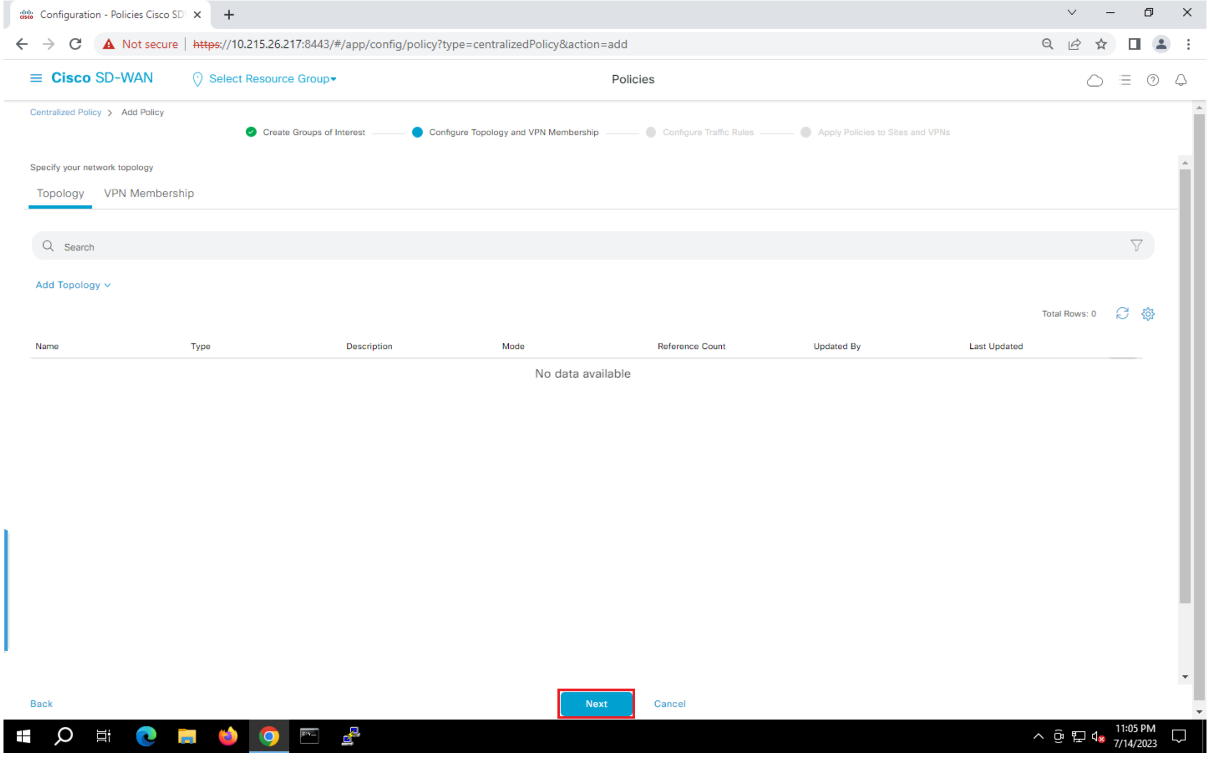
Centralized Policy > Add Policy

● Create Groups of Interest — ○ Configure Topology and VPN Membership — ○ Configure Traffic Rules — ○ Apply Policies to Sites and VPNs

Select a list type on the left and start creating your groups of interest

Name	Loss (%)	Latency (ms)	Jitter (ms)	App Probe Class	Fallback Best Tunnel	Loss Variance	Latency Variance	Jitter Variance	Reference Cou	Action
Best-Effort	5	500	500	-	-	-	-	-	0	
Bulk-Data	10	300	100	-	-	-	-	-	0	
Business-Critical	1	250	100	-	-	-	-	-	0	
Business-Data	3	350	200	-	-	-	-	-	0	
Default	25	300	100	-	-	-	-	-	0	
Realtime	1	150	30	-	-	-	-	-	0	
Telnet	25	500	250	-	-	-	-	-	0	
Transactional-Data	5	50	100	-	-	-	-	-	0	
Voice-And-Video	2	45	30	-	-	-	-	-	0	
Web	10	150	200	-	-	-	-	-	0	

Chọn Next



Configuration - Policies Cisco SD
https://10.215.26.217:8443/#/app/config/policy?type=centralizedPolicy&action=add

Cisco SD-WAN | Select Resource Group | Policies

Centralized Policy > Add Policy

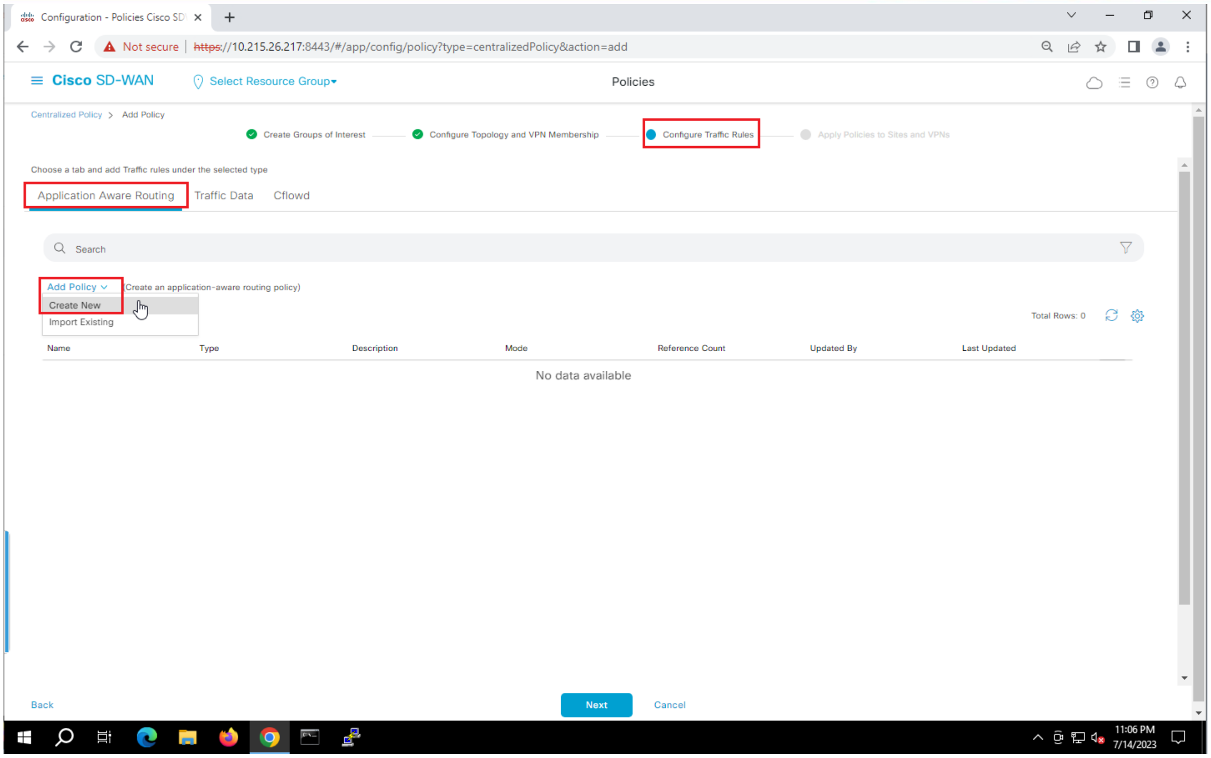
✓ Create Groups of Interest — ● Configure Topology and VPN Membership — ○ Configure Traffic Rules — ○ Apply Policies to Sites and VPNs

Specify your network topology

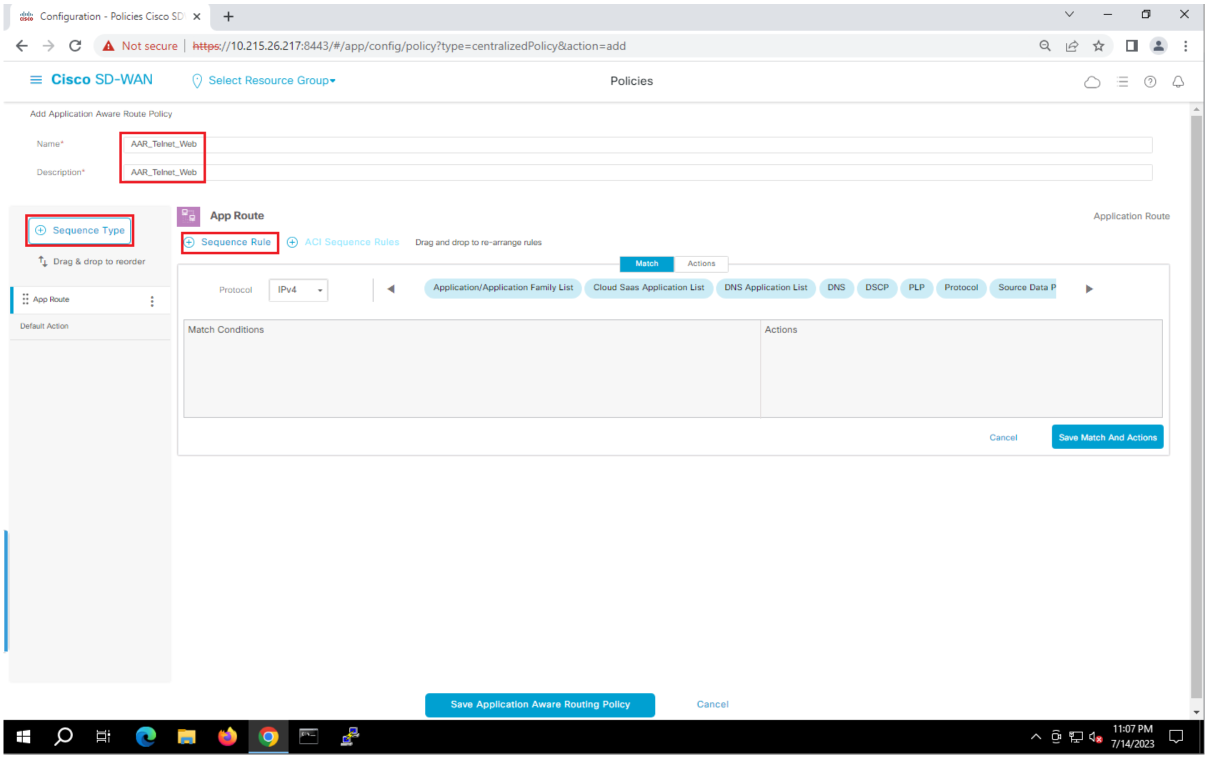
Name	Type	Description	Mode	Reference Count	Updated By	Last Updated

No data available

Ở **Configure Traffic Rules** và chọn **Application Aware Routing** và **Add Policy > Create New.**


Configuration - Policies Cisco SD
Not secure | https://10.215.26.217:8443/#/app/config/policy?type=centralizedPolicy&action=add
Cisco SD-WAN
Select Resource Group
Policies
Centralized Policy > Add Policy
Create Groups of Interest
Configure Topology and VPN Membership
Configure Traffic Rules
Apply Policies to Sites and VPNs
Choose a tab and add Traffic rules under the selected type
Application Aware Routing
Traffic Data
Cflowd
Search
Add Policy
(Create an application-aware routing policy)
Create New
Import Existing
Total Rows: 0
Name
Type
Description
Mode
Reference Count
Updated By
Last Updated
No data available
Back
Next
Cancel
11:06 PM
7/14/2023

Tạo một name và description (ví dụ: AAR-Relnet-Web). Tạo một **Sequence Type** và thêm một **Sequence Rule**.



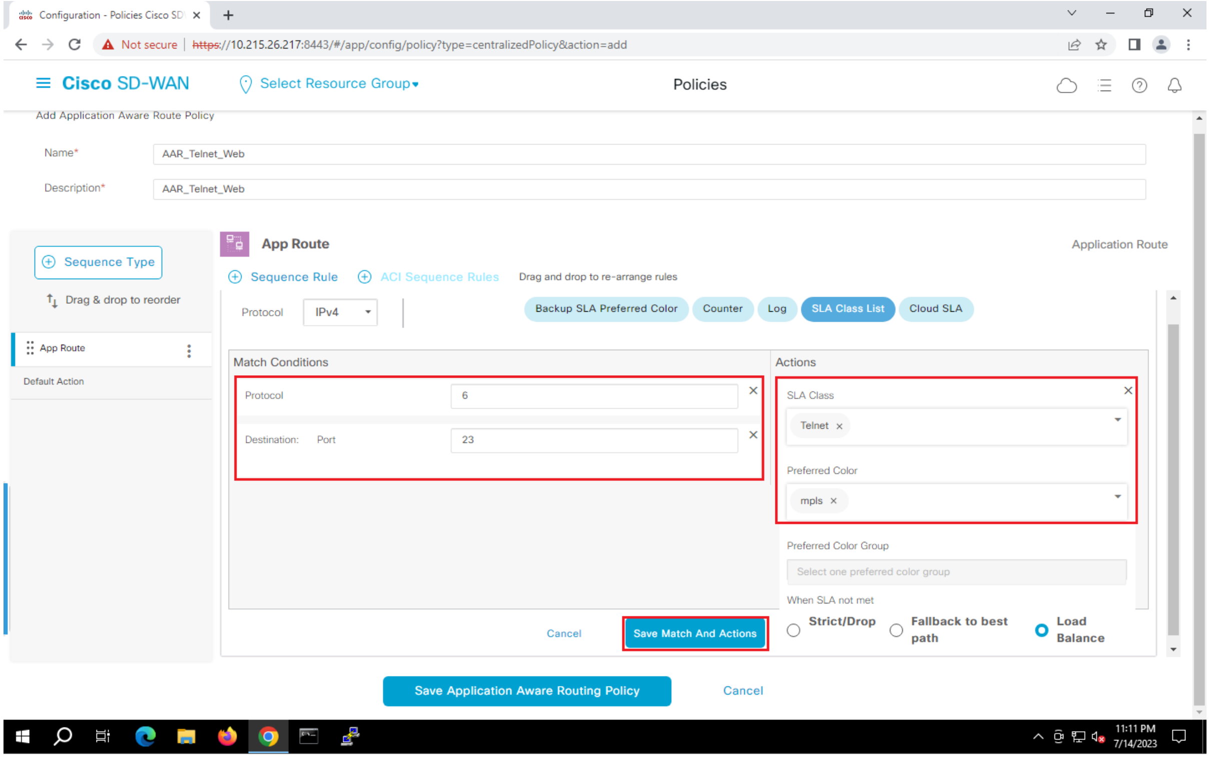
Name*: AAR_Telnet_Web
Description*: AAR_Telnet_Web
Protocol: IPv4

Bạn có thể tạo lưu lượng **Telnet,Web** với giá trị **Protocol: 6** và **Destination Port lần lượt là 23, 80**

Vào mục **Actions** > **SLA Class List.** Chọn **Telnet** và lần lượt set các giá trị:

SLA Class: Telnet

Preferred Color: mpls



Configuration - Policies Cisco SD-WAN

Not secure | https://10.215.26.217:8443/#/app/config/policy?type=centralizedPolicy&action=add

Cisco SD-WAN — Select Resource Group — Policies

Add Application Aware Route Policy

Name*: AAR_Telnet_Web

Description*: AAR_Telnet_Web

App Route

Protocol: IPv4

Match Conditions
- Protocol: 6
- Destination: Port: 23

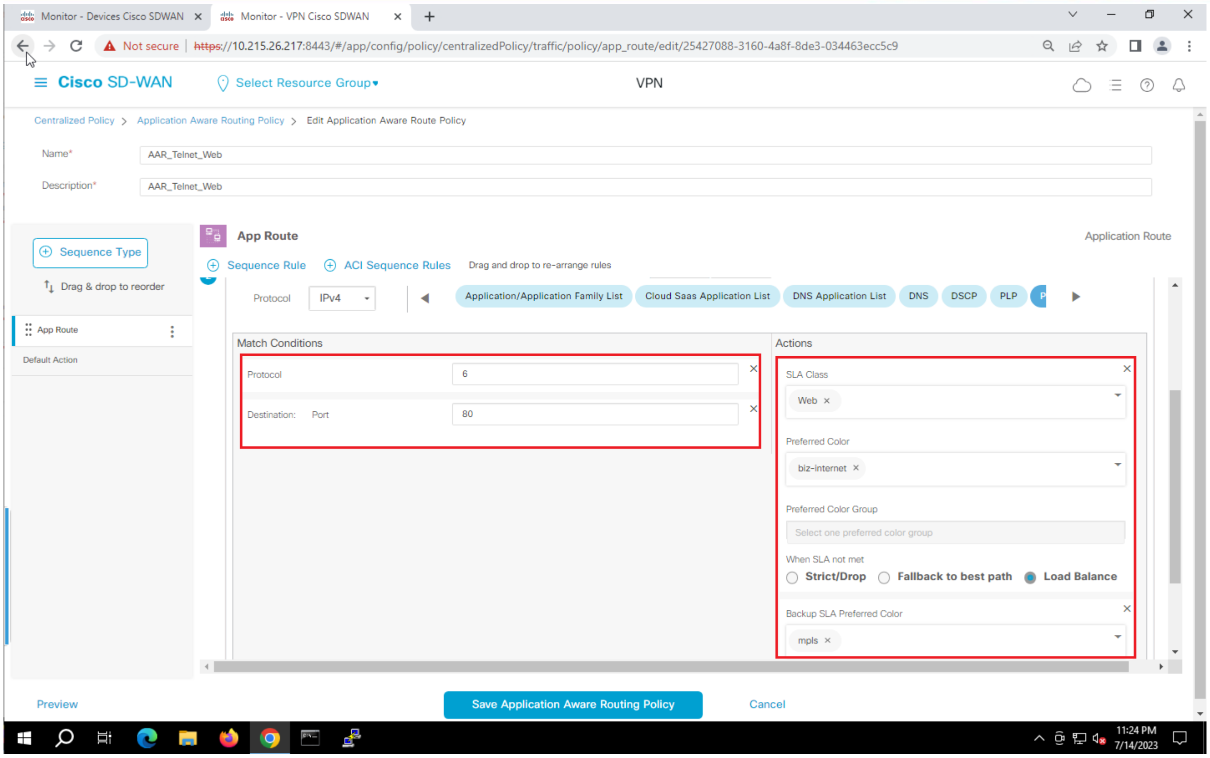
Actions
- SLA Class: Telnet
- Preferred Color: mpls
- Preferred Color Group: Select one preferred color group
- When SLA not met: ○ Strict/Drop ○ Fallback to best path ● Load Balance

Đối với **Web** thì chọn lần lượt các thông số sau:

SLA Class: Web

Preferred Color: biz-internet

Backup SLA Preferred Color: mpls



https://10.215.26.217:8443/#/app/config/policy/centralizedPolicy/traffic/policy/app_route/edit/25427088-3160-4a8f-8de3-034463ecc5c9

Centralized Policy > Application Aware Routing Policy > Edit Application Aware Route Policy

Name* AAR_Telnet_Web

Description* AAR_Telnet_Web

App Route — Application Route

Protocol IPv4

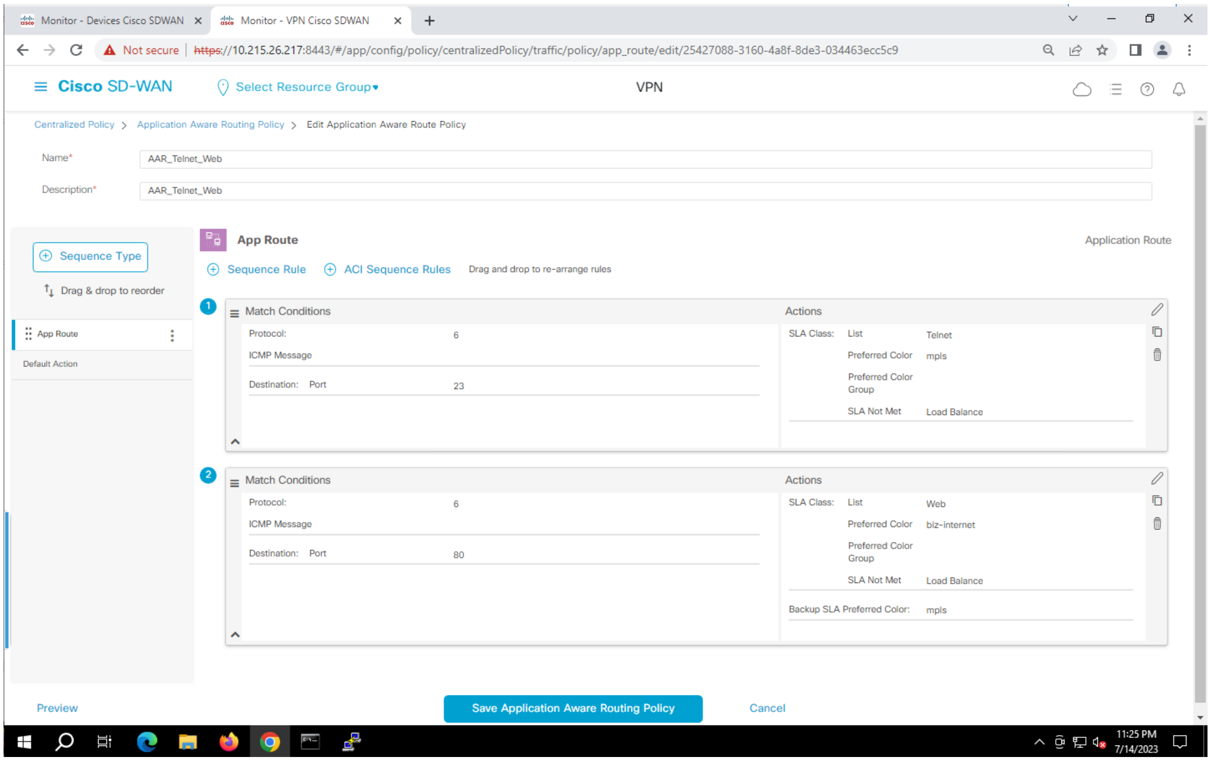
Match Conditions

- Protocol: 6
- Destination: Port 80

Actions

- SLA Class: Web
- Preferred Color: biz-internet
- Preferred Color Group: Select one preferred color group
- When SLA not met: ○ Strict/Drop ○ Fallback to best path ● Load Balance
- Backup SLA Preferred Color: mpls

Nhấn **Save Match And Actions**. **Default Action** thì để mặc định . Nhấn **Save Application Aware Routing Policy.**



https://10.215.26.217:8443/#/app/config/policy/centralizedPolicy/traffic/policy/app_route/edit/25427088-3160-4a8f-8de3-034463ecc5c9

Centralized Policy > Application Aware Routing Policy > Edit Application Aware Route Policy

Name* AAR_Telnet_Web

Description* AAR_Telnet_Web

App Route — Application Route

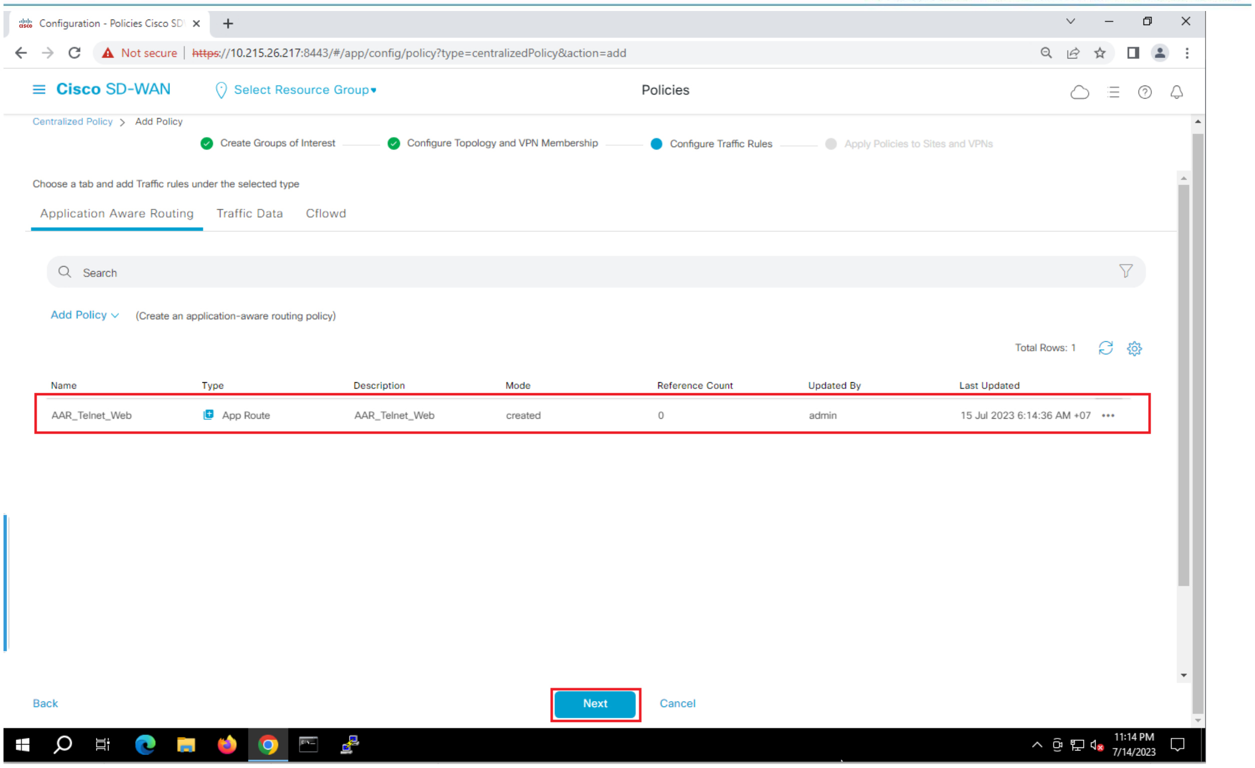
1

Match Conditions		Actions		
Protocol:	6	SLA Class:	List	Telnet
ICMP Message			Preferred Color	mpls
Destination: Port	23		Preferred Color Group	
			SLA Not Met	Load Balance

2

Match Conditions		Actions		
Protocol:	6	SLA Class:	List	Web
ICMP Message			Preferred Color	biz-internet
Destination: Port	80		Preferred Color Group	
			SLA Not Met	Load Balance
		Backup SLA Preferred Color:		mpls

Chọn Next

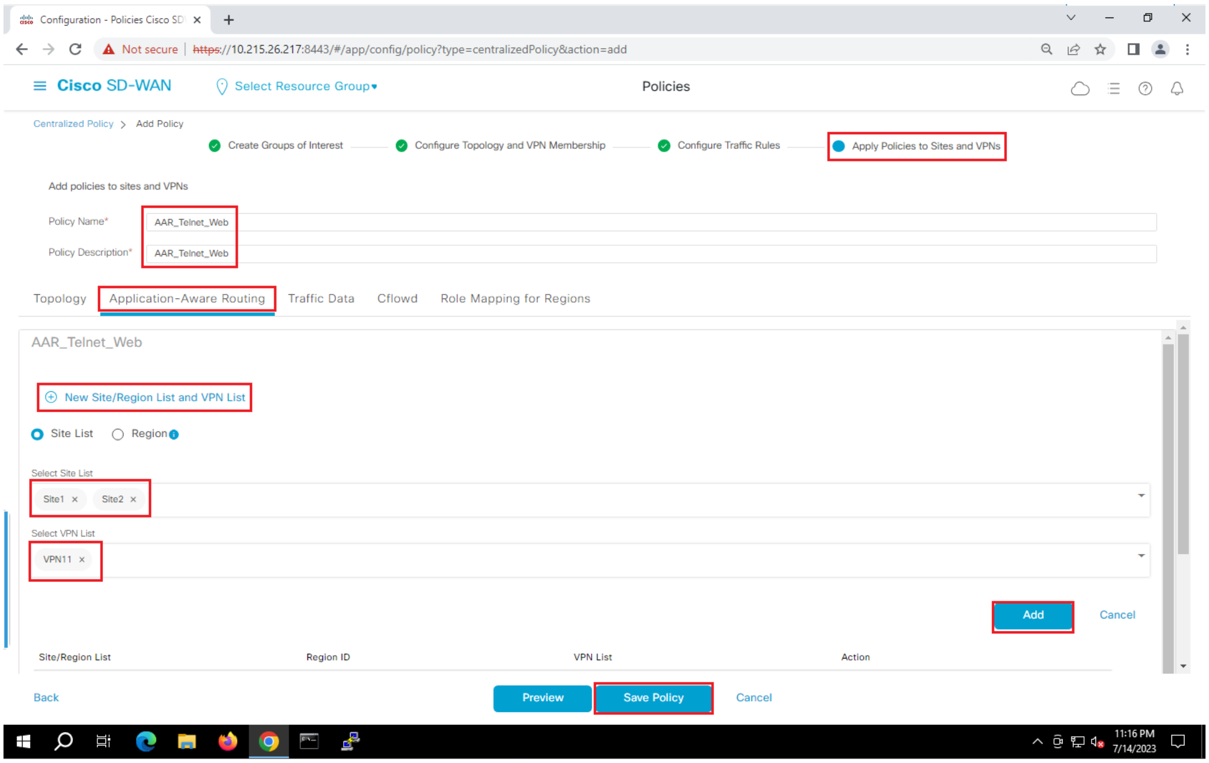

Configuration - Policies Cisco SD
Not secure | https://10.215.26.217:8443/#/app/config/policy?type=centralizedPolicy&action=add
Cisco SD-WAN
Select Resource Group
Policies
Centralized Policy > Add Policy
Create Groups of Interest
Configure Topology and VPN Membership
Configure Traffic Rules
Apply Policies to Sites and VPNs
Application Aware Routing
Traffic Data
Cflowd
Search
Add Policy
Total Rows: 1
Back
Next
Cancel
11:14 PM
7/14/2023

Choose a tab and add Traffic rules under the selected type

(Create an application-aware routing policy)

Name	Type	Description	Mode	Reference Count	Updated By	Last Updated
AAR_Telnet_Web	App Route	AAR_Telnet_Web	created	0	admin	15 Jul 2023 6:14:36 AM +07

Vào **the Policy Application** và chọn **Application Aware Routing**. Nhấn the **New Site List** và **VPN List button** và lần lượt chọn **Site1, Site2** và **VPN 11**. Nhấn **Add > Save Policy**


Configuration - Policies Cisco SD
Not secure | https://10.215.26.217:8443/#/app/config/policy?type=centralizedPolicy&action=add
Cisco SD-WAN
Select Resource Group
Policies
Centralized Policy > Add Policy
Create Groups of Interest
Configure Topology and VPN Membership
Configure Traffic Rules
Apply Policies to Sites and VPNs
Topology
Application-Aware Routing
Traffic Data
Cflowd
Role Mapping for Regions
New Site/Region List and VPN List
Add
Cancel
Back
Preview
Save Policy
Cancel
11:16 PM
7/14/2023

Add policies to sites and VPNs

Policy Name*: AAR_Telnet_Web

Policy Description*: AAR_Telnet_Web

AAR_Telnet_Web

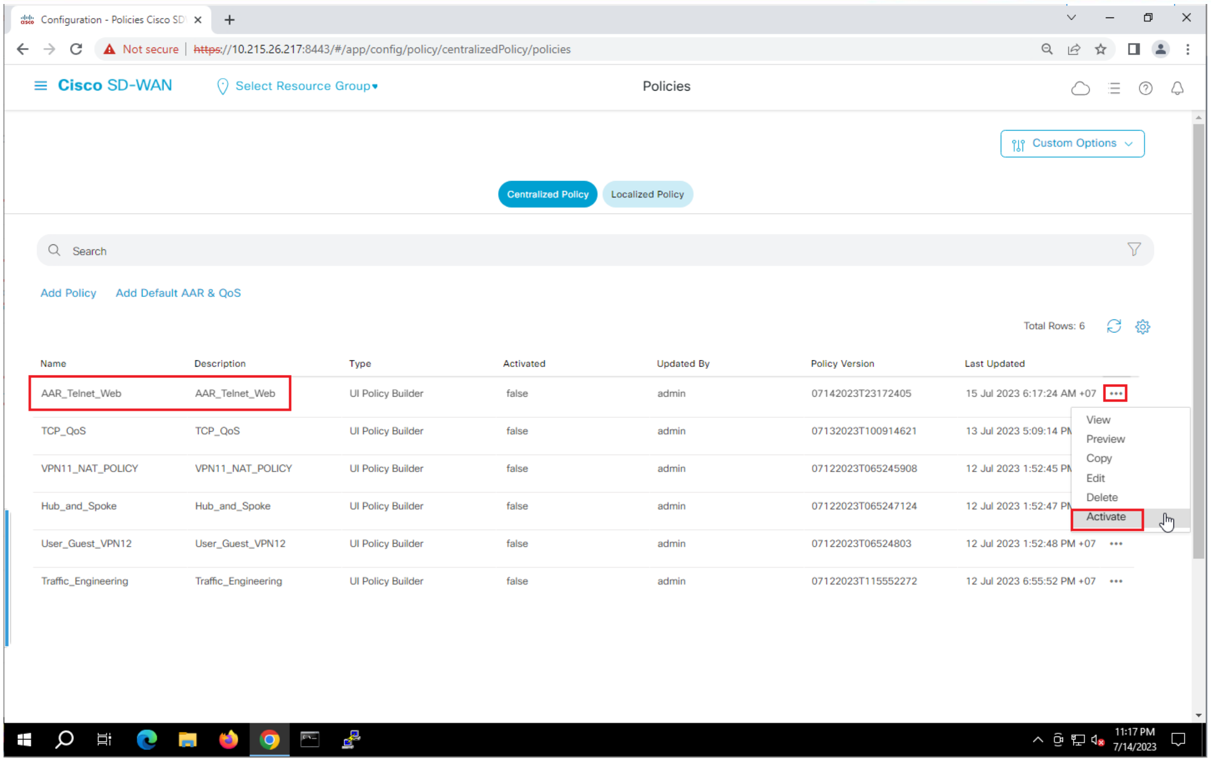
● Site List ○ Region

Select Site List: Site1 × Site2 ×

Select VPN List: VPN11 ×

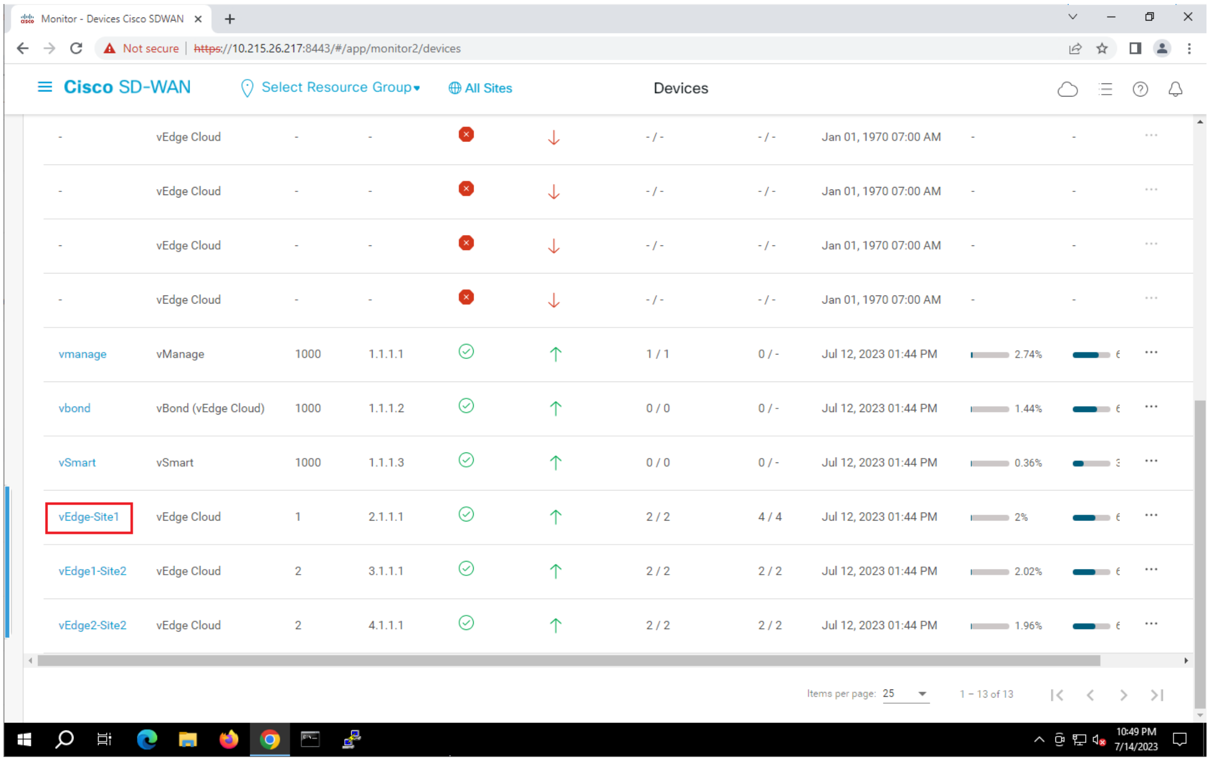
Site/Region List	Region ID	VPN List	Action

Quay lại **Policies>Centralized policy.** Và tiến hành **Activate.**

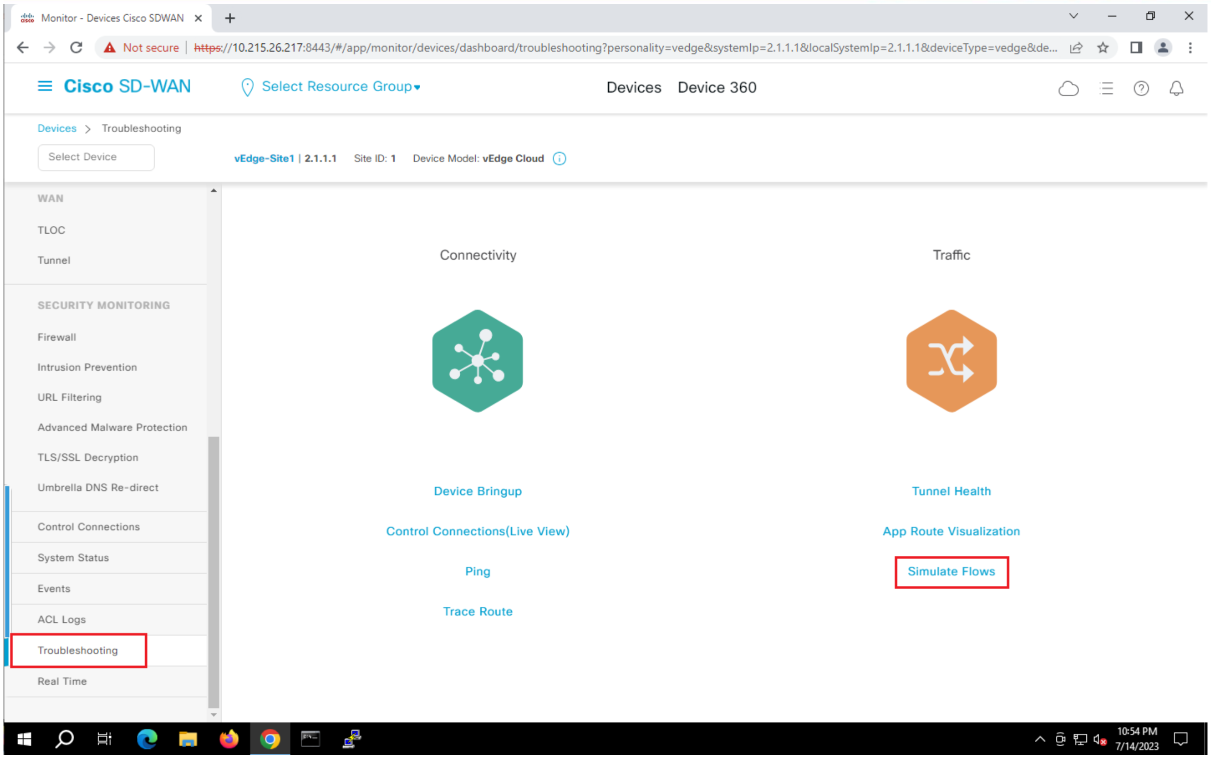


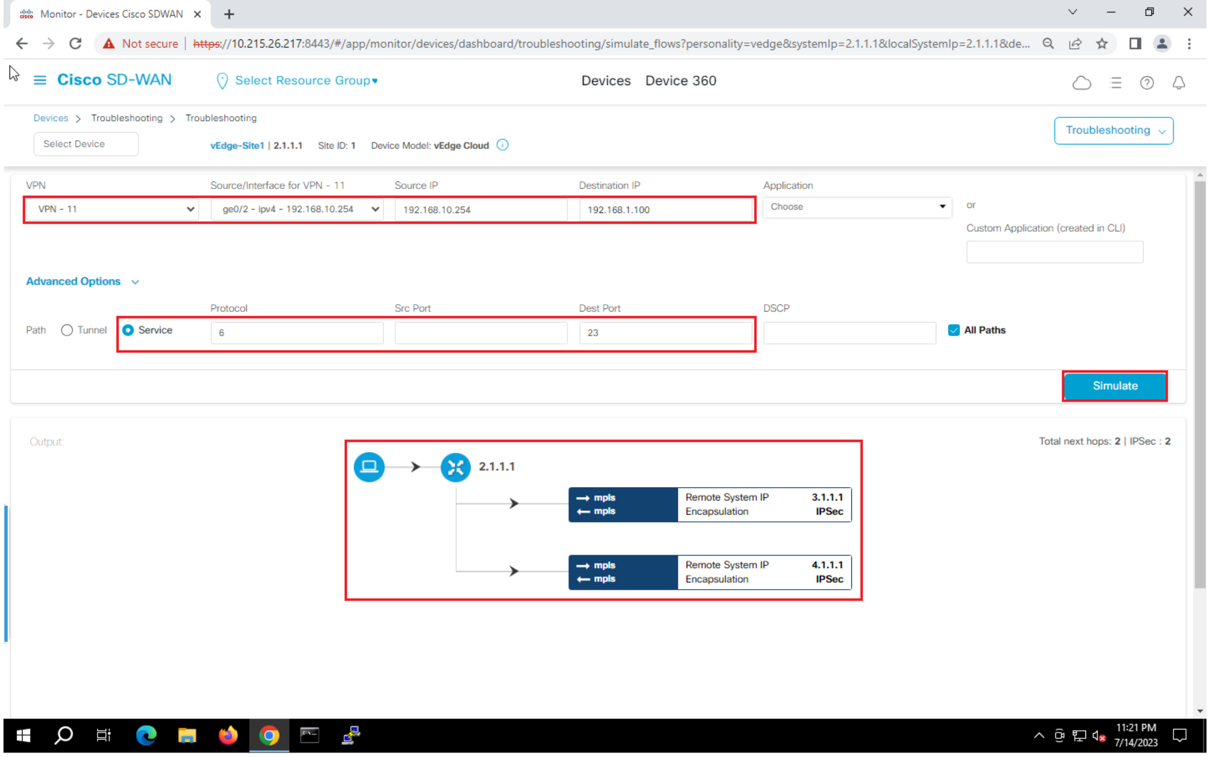
Name	Description	Type	Activated	Updated By	Policy Version	Last Updated
AAR_Telnet_Web	AAR_Telnet_Web	UI Policy Builder	false	admin	07142023T23172405	15 Jul 2023 6:17:24 AM +07
TCP_QoS	TCP_QoS	UI Policy Builder	false	admin	07132023T100914621	13 Jul 2023 5:09:14 PM
VPN11_NAT_POLICY	VPN11_NAT_POLICY	UI Policy Builder	false	admin	07122023T065245908	12 Jul 2023 1:52:45 PM
Hub_and_Spoke	Hub_and_Spoke	UI Policy Builder	false	admin	07122023T065247124	12 Jul 2023 1:52:47 PM
User_Guest_VPN12	User_Guest_VPN12	UI Policy Builder	false	admin	07122023T06524803	12 Jul 2023 1:52:48 PM +07
Traffic_Engineering	Traffic_Engineering	UI Policy Builder	false	admin	07122023T115552272	12 Jul 2023 6:55:52 PM +07

Vào **Monitor > Network** và chọn **vEdge-Site1**. Vào **Troubleshooting** và chọn công cụ **the Simulated Flows**. Thiết lập các thông số như hình:



-	vEdge Cloud	-	-	✖	↓	- / -	- / -	Jan 01, 1970 07:00 AM	-	-
-	vEdge Cloud	-	-	✖	↓	- / -	- / -	Jan 01, 1970 07:00 AM	-	-
-	vEdge Cloud	-	-	✖	↓	- / -	- / -	Jan 01, 1970 07:00 AM	-	-
-	vEdge Cloud	-	-	✖	↓	- / -	- / -	Jan 01, 1970 07:00 AM	-	-
vmanage	vManage	1000	1.1.1.1	✓	↑	1 / 1	0 / -	Jul 12, 2023 01:44 PM	2.74%	
vbond	vBond (vEdge Cloud)	1000	1.1.1.2	✓	↑	0 / 0	0 / -	Jul 12, 2023 01:44 PM	1.44%	
vSmart	vSmart	1000	1.1.1.3	✓	↑	0 / 0	0 / -	Jul 12, 2023 01:44 PM	0.36%	
vEdge-Site1	vEdge Cloud	1	2.1.1.1	✓	↑	2 / 2	4 / 4	Jul 12, 2023 01:44 PM	2%	
vEdge1-Site2	vEdge Cloud	2	3.1.1.1	✓	↑	2 / 2	2 / 2	Jul 12, 2023 01:44 PM	2.02%	
vEdge2-Site2	vEdge Cloud	2	4.1.1.1	✓	↑	2 / 2	2 / 2	Jul 12, 2023 01:44 PM	1.96%	




Monitor - Devices Cisco SDWAN
Not secure | https://10.215.26.217:8443/#/app/monitor/devices/dashboard/troubleshooting/simulate_flows?personality=vedge&systemIp=2.1.1.1&localSystemIp=2.1.1.1&de...
Cisco SD-WAN
Select Resource Group
Devices
Device 360
Devices > Troubleshooting > Troubleshooting
Troubleshooting
Select Device
vEdge-Site1 | 2.1.1.1
Site ID: 1
Device Model: vEdge Cloud
Advanced Options
Simulate
Output:
2.1.1.1
11:21 PM
7/14/2023

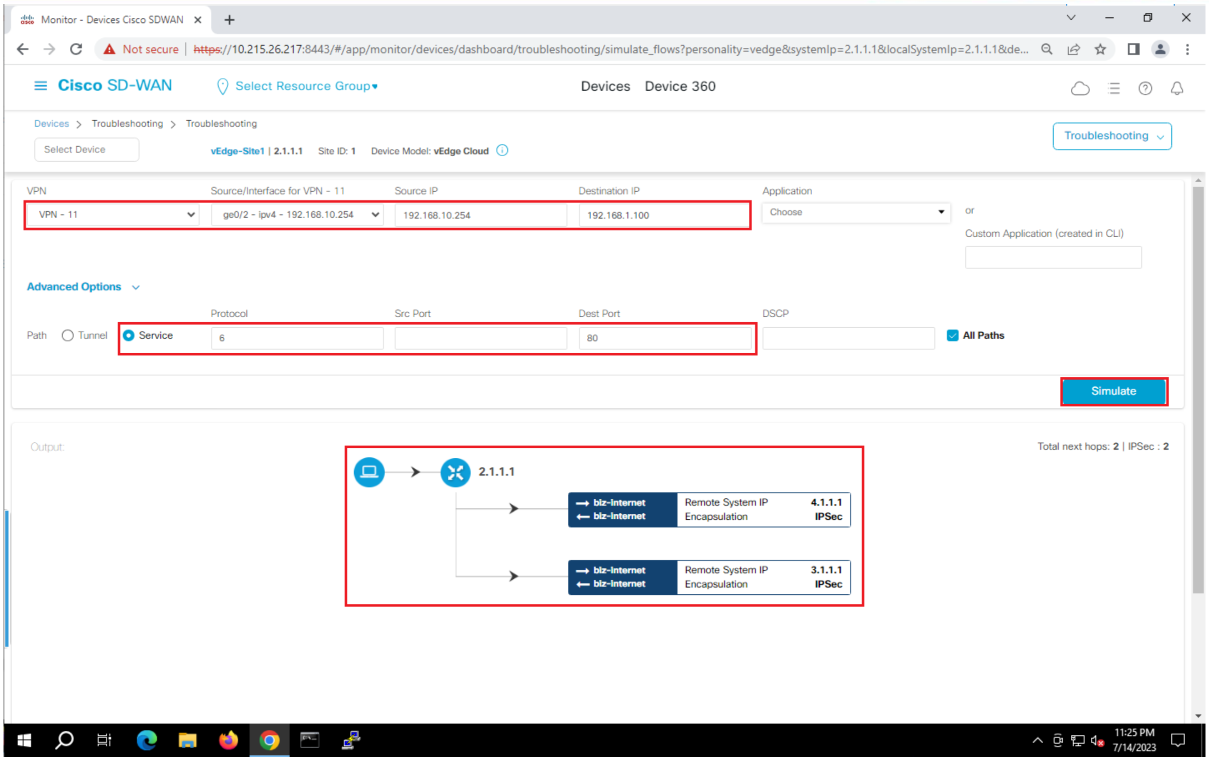
VPN: VPN - 11
Source/Interface for VPN - 11: ge0/2 - ipv4 - 192.168.10.254
Source IP: 192.168.10.254
Destination IP: 192.168.1.100
Application: Choose
or
Custom Application (created in CLI)

Path ○ Tunnel ● Service
Protocol: 6
Src Port:
Dest Port: 23
DSCP:
☑ All Paths

Total next hops: 2 | IPSec : 2

→ mpls ← mpls | Remote System IP 3.1.1.1 | Encapsulation IPSec

→ mpls ← mpls | Remote System IP 4.1.1.1 | Encapsulation IPSec


Monitor - Devices Cisco SDWAN

Not secure | https://10.215.26.217:8443/#/app/monitor/devices/dashboard/troubleshooting/simulate_flows?personality=vedge&systemIp=2.1.1.1&localSystemIp=2.1.1.1&de...

Cisco SD-WAN   Select Resource Group▾   Devices   Device 360

Devices > Troubleshooting > Troubleshooting   Troubleshooting

Select Device   vEdge-Site1 | 2.1.1.1   Site ID: 1   Device Model: vEdge Cloud

VPN: VPN - 11
Source/Interface for VPN - 11: ge0/2 - ipv4 - 192.168.10.254
Source IP: 192.168.10.254
Destination IP: 192.168.1.100
Application: Choose   or   Custom Application (created in CLI)

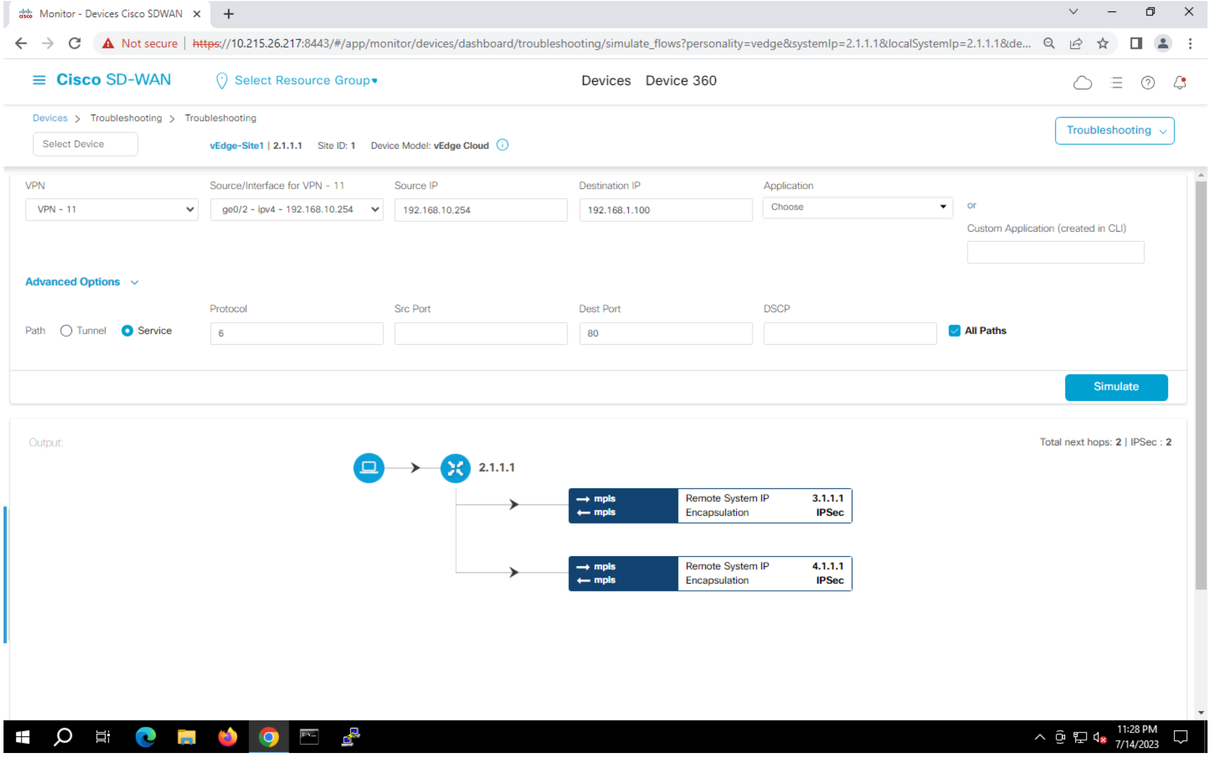
Advanced Options

Path: ○ Tunnel ● Service
Protocol: 6
Src Port:
Dest Port: 80
DSCP:
☑ All Paths

Simulate

Output: Total next hops: 2 | IPSec : 2

Tiến hành tắt Uplink Internet và tiến hành kiểm tra lại. Các bạn sẽ thấy **Web** được đi qua **MPLS.**


Monitor - Devices Cisco SDWAN

Not secure | https://10.215.26.217:8443/#/app/monitor/devices/dashboard/troubleshooting/simulate_flows?personality=vedge&systemIp=2.1.1.1&localSystemIp=2.1.1.1&de...

Cisco SD-WAN   Select Resource Group▾   Devices   Device 360

Devices > Troubleshooting > Troubleshooting   Troubleshooting

Select Device   vEdge-Site1 | 2.1.1.1   Site ID: 1   Device Model: vEdge Cloud

VPN: VPN - 11
Source/Interface for VPN - 11: ge0/2 - ipv4 - 192.168.10.254
Source IP: 192.168.10.254
Destination IP: 192.168.1.100
Application: Choose   or   Custom Application (created in CLI)

Advanced Options

Path: ○ Tunnel ● Service
Protocol: 6
Src Port:
Dest Port: 80
DSCP:
☑ All Paths

Simulate

Output: Total next hops: 2 | IPSec : 2