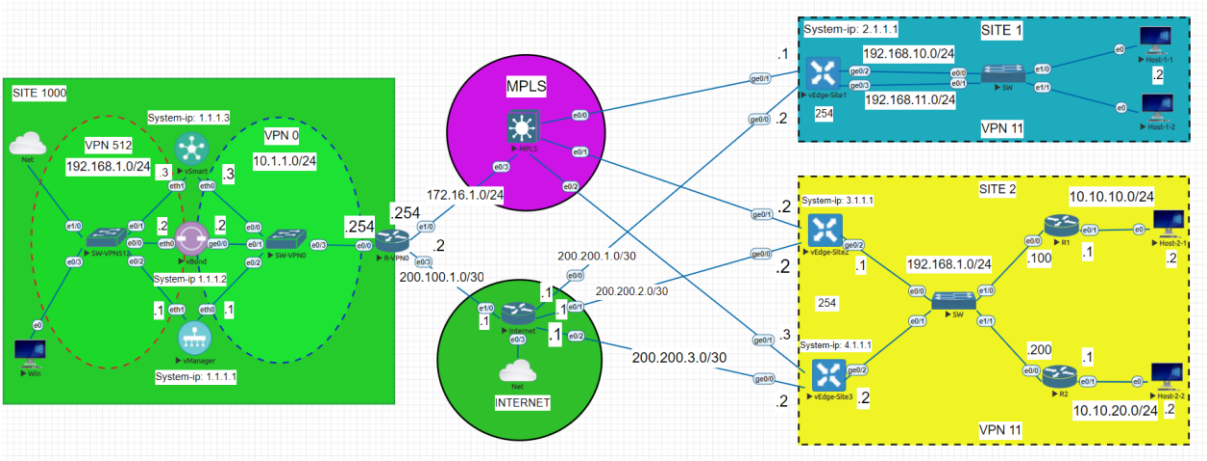
LAB - VIẾT TEMPLATE CẤU HÌNH GIAO THỨC DỰ PHÒNG ĐỊNH TUYẾN VRRP TRÊN SD-WAN

I. Sơ đồ



II. Yêu cầu kỹ thuật

Viết Template cấu hình VRRP trên cổng Ge0/2 thuộc VPN11 của Site 2

Tạo Device Template có chứa các Template VRRP

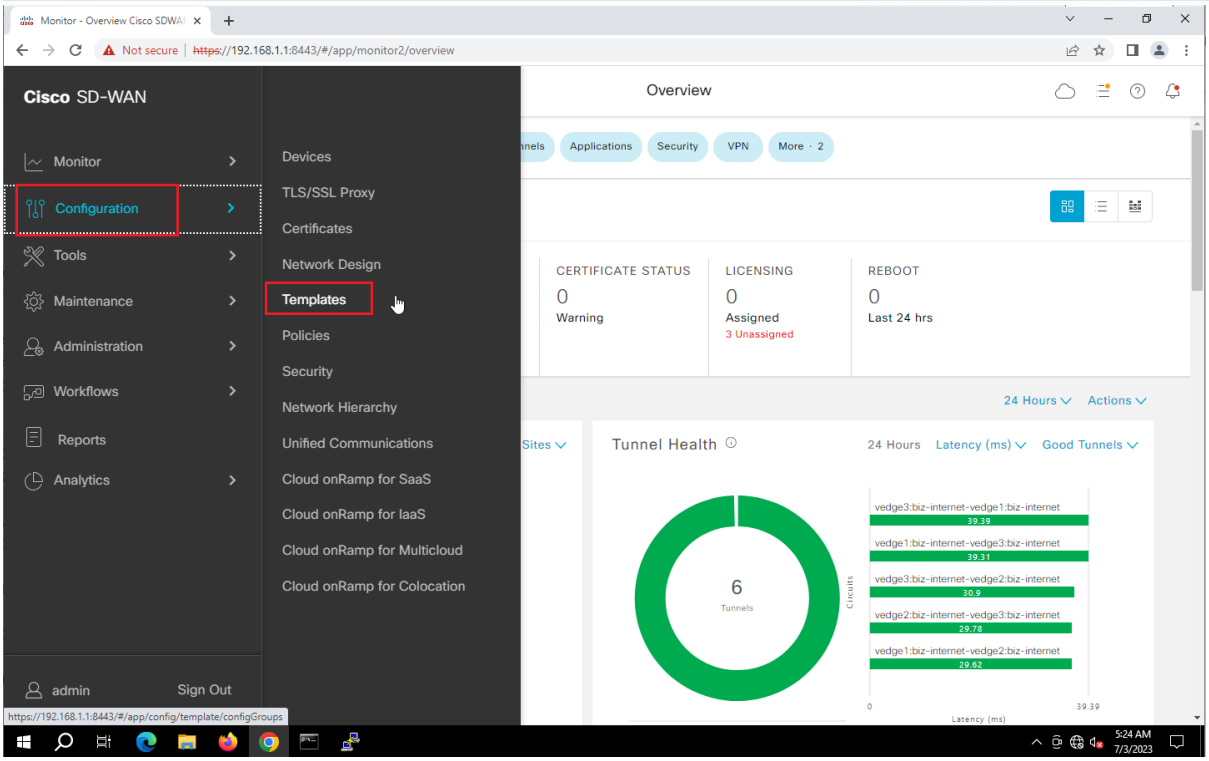
Đẩy cấu hình Device Template vừa viết xong.

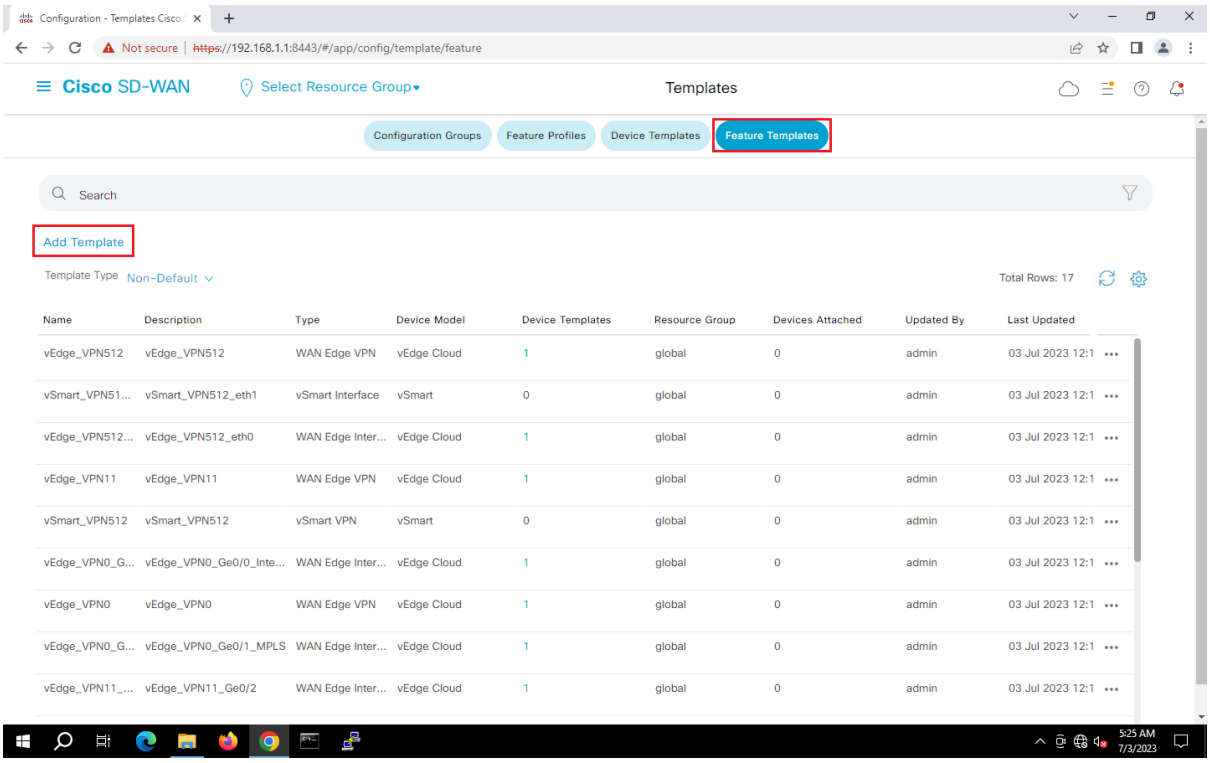
Thực hiện kiểm tra bài Lab đã làm đúng như yêu cầu.

III. Các bước thực hiện

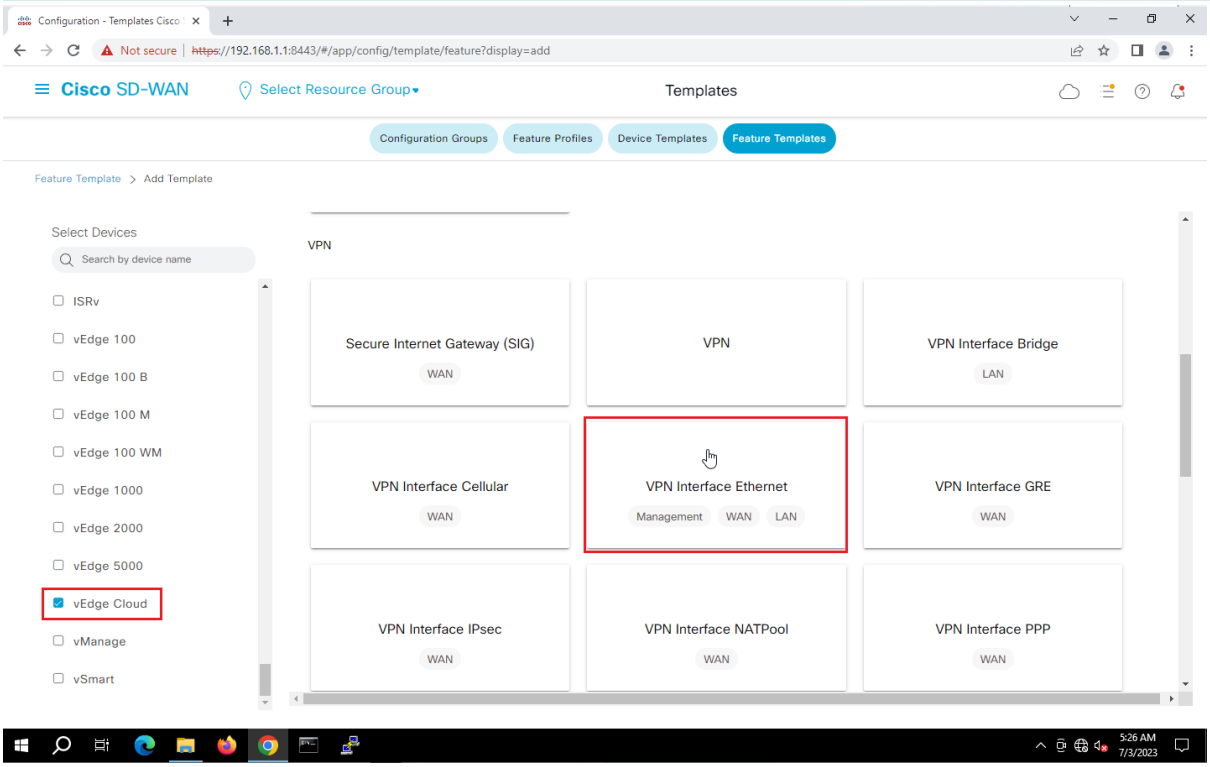
Viết Template cấu hình VRRP trên cổng Ge0/2 thuộc VPN11 của Site 2

Tạo Feature Template: *vEdge_VPN11_Ge0/2_VRRP*. Đầu tiên ta vào giao diện **vManage > Configuration > Template > Feature > Add Template.**





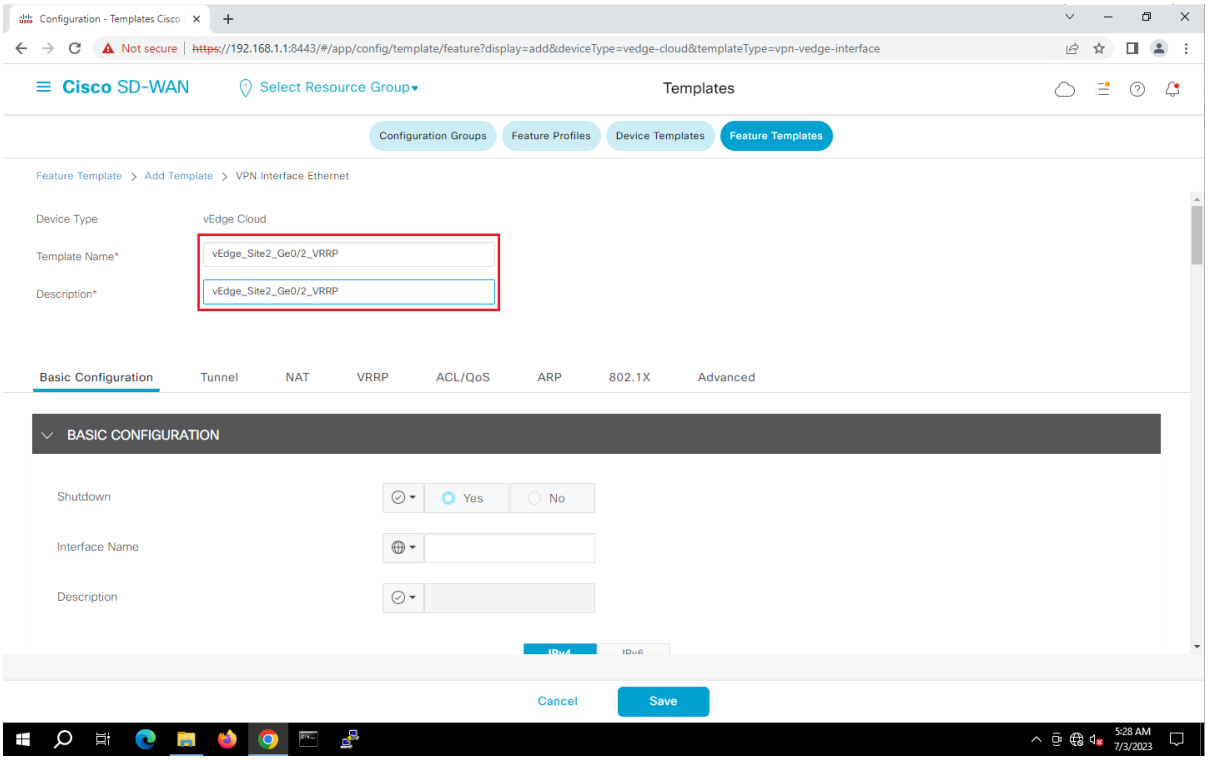
Ở phần **Select Devices** ta chọn thiết bị **vEdge cloud** rồi chon mục **VPN Interface Ethernet**



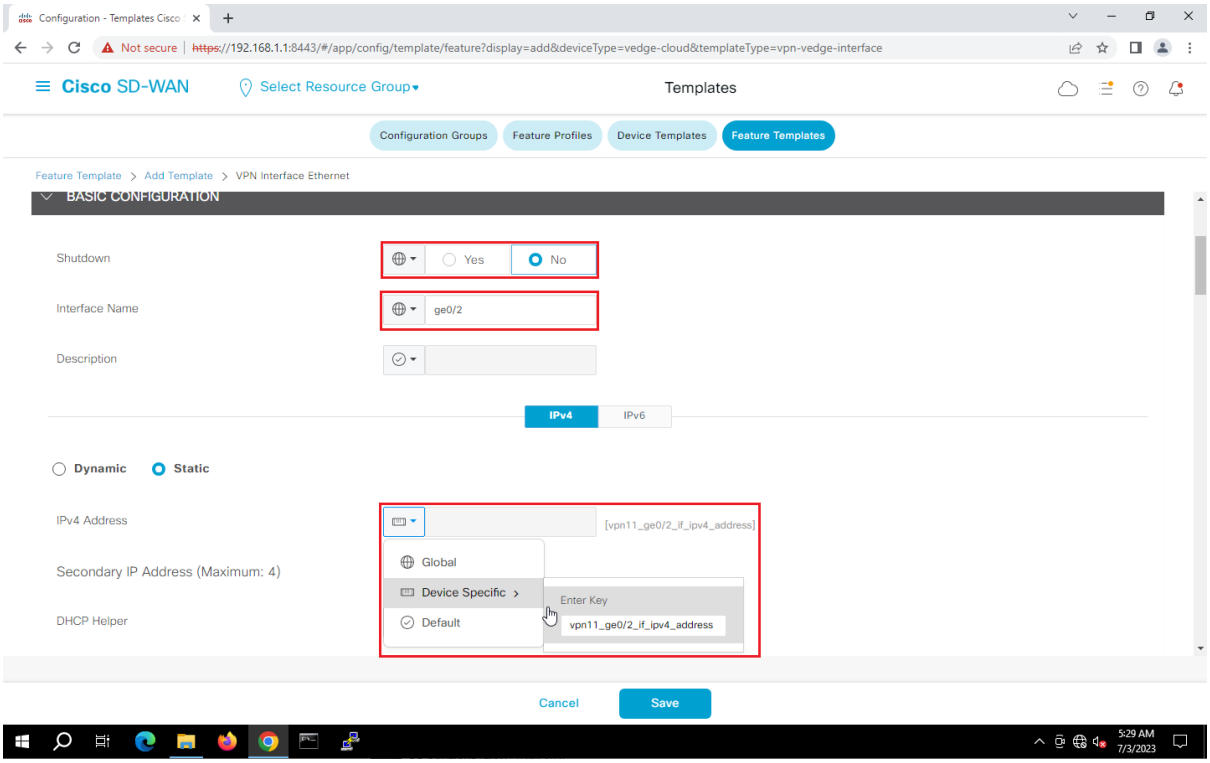
Tiếp theo vào mục **VPN Interface Ethernet** ta cấu hình như sau:

Template Name: *vEdge_Site2_Ge0/2_VRRP*

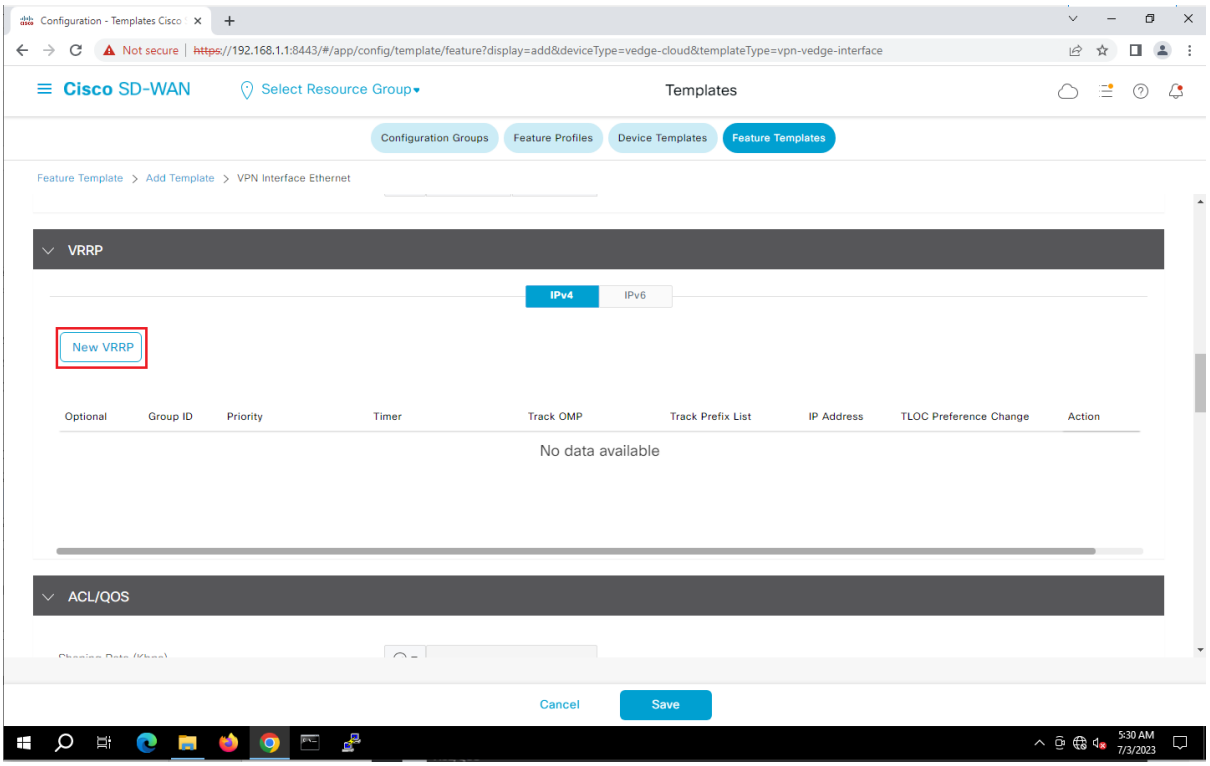
Description: *vEdge_Site2_Ge0/2_VRRP*



Sau đó, ở **BASIC CONFIGURATION** ta cấu hình như sau:



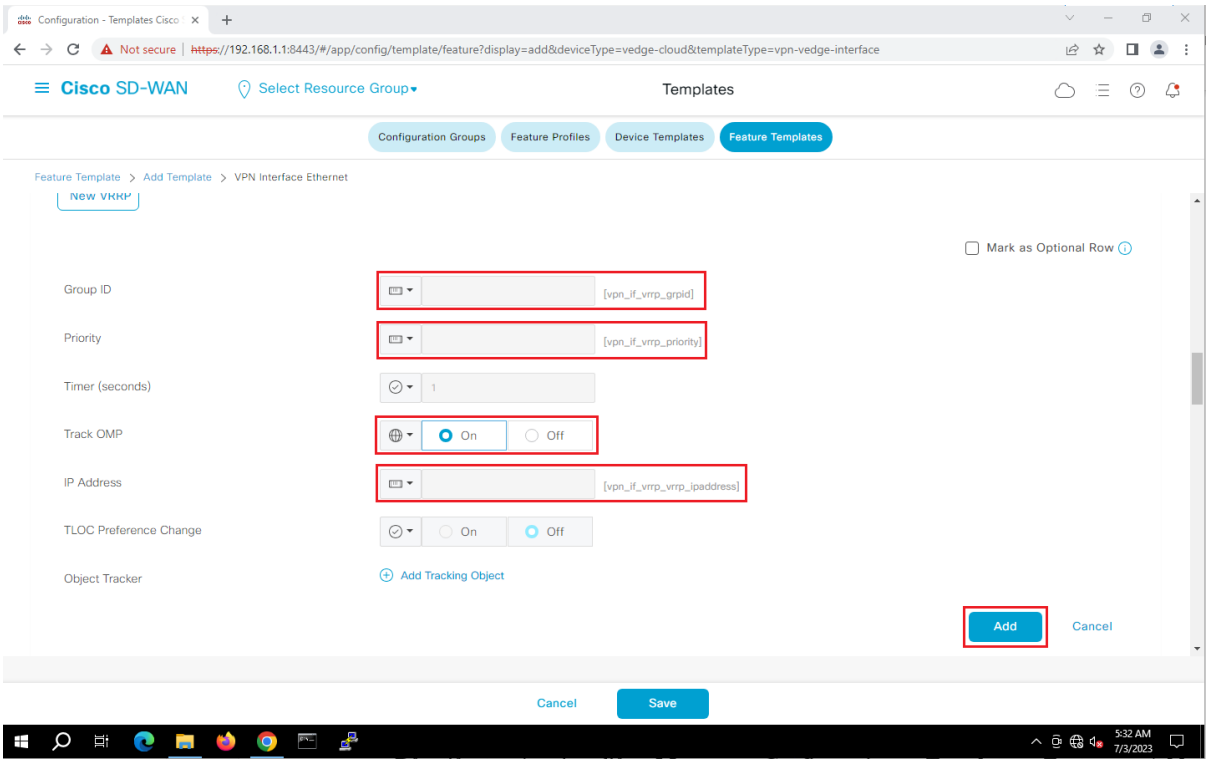
Tiếp theo tới mục **VRRP** ta chọn **NEW VRRP** để tạo thêm VRRP



Sau đó lần lượt cấu hình theo các thông số sau:

Group ID, Priority và IP Address lần lượt chọn **Device Specific**

Track OMP >> ON



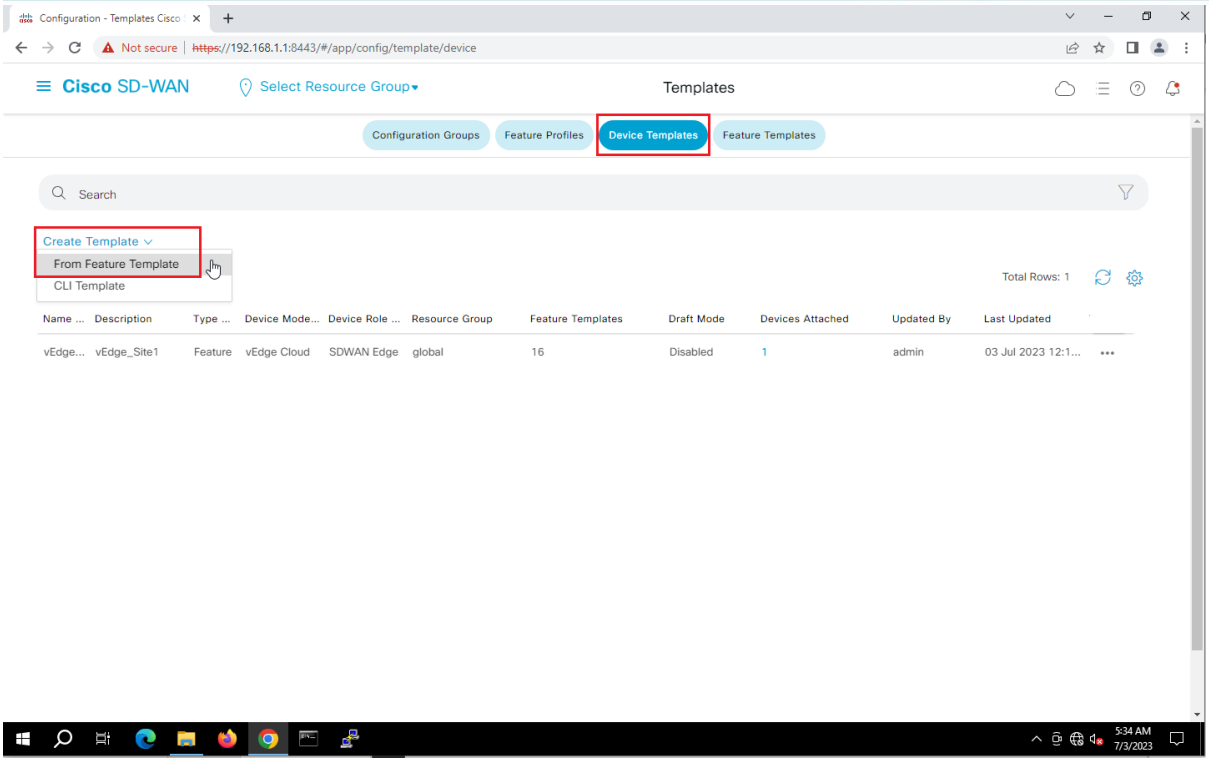
Cuối cùng chọn **Save** để lưu template lại.

Viết Device Template

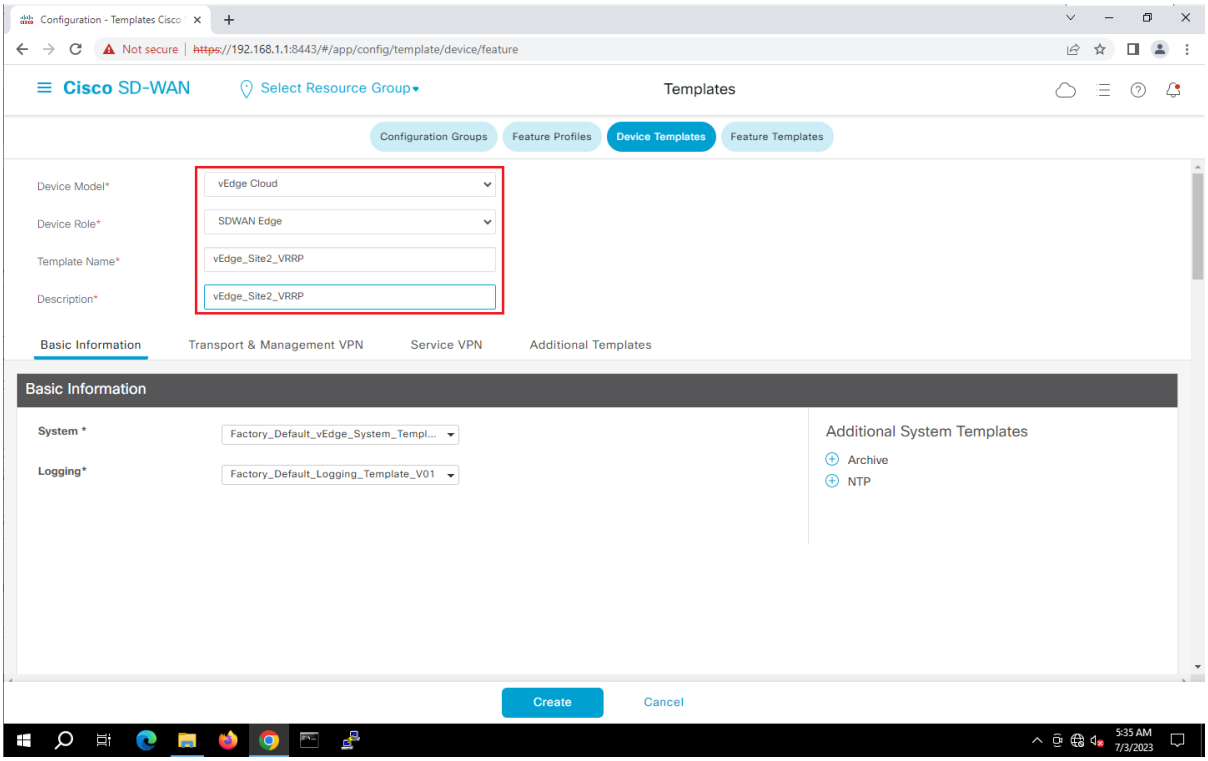
Ở giao diện vManage, **Configuration > Templates** (tab Device).

Chọn **Create Template > From Feature Template.**

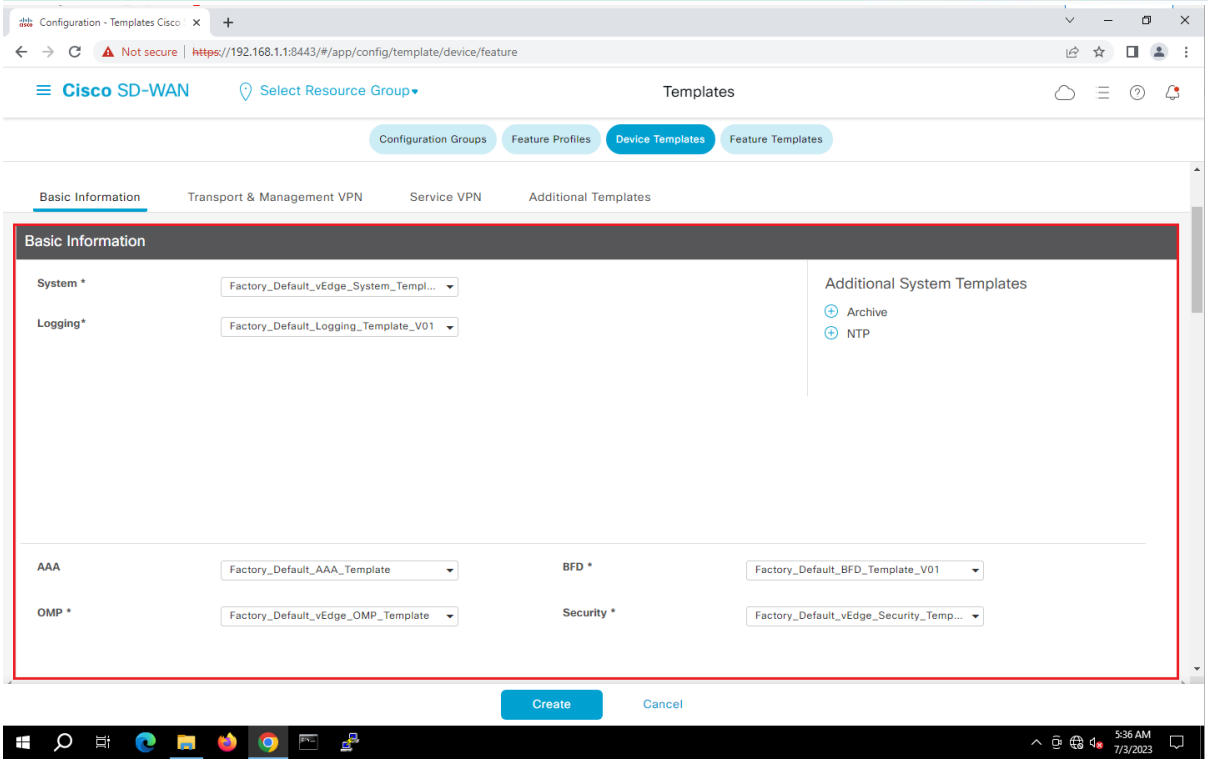
Chọn **Device Model (vEdge Cloud).**



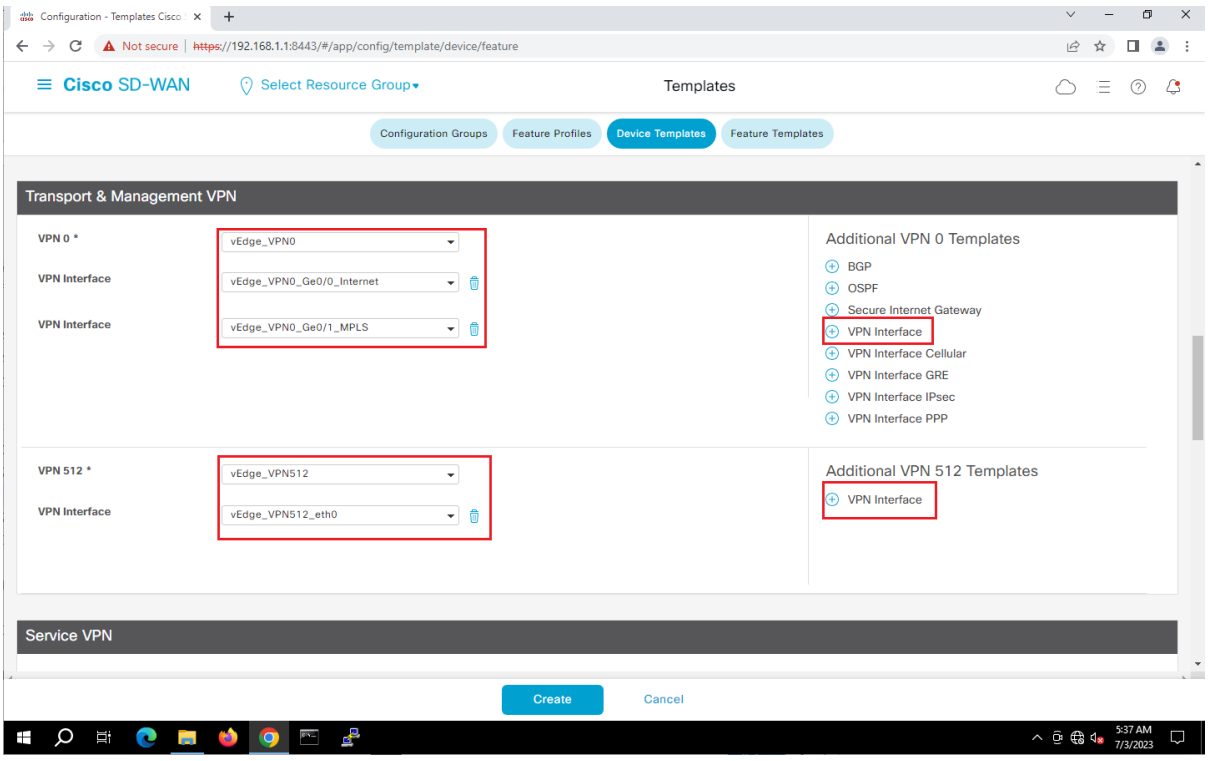
Nhập **Template Name** (vEdge_Site2_VRRP), **Description** (vEdge_Site2_VRRP).



Trong phần Basic Information thì để mặc định nếu có những template tương ứng thì có thể chọn vào.



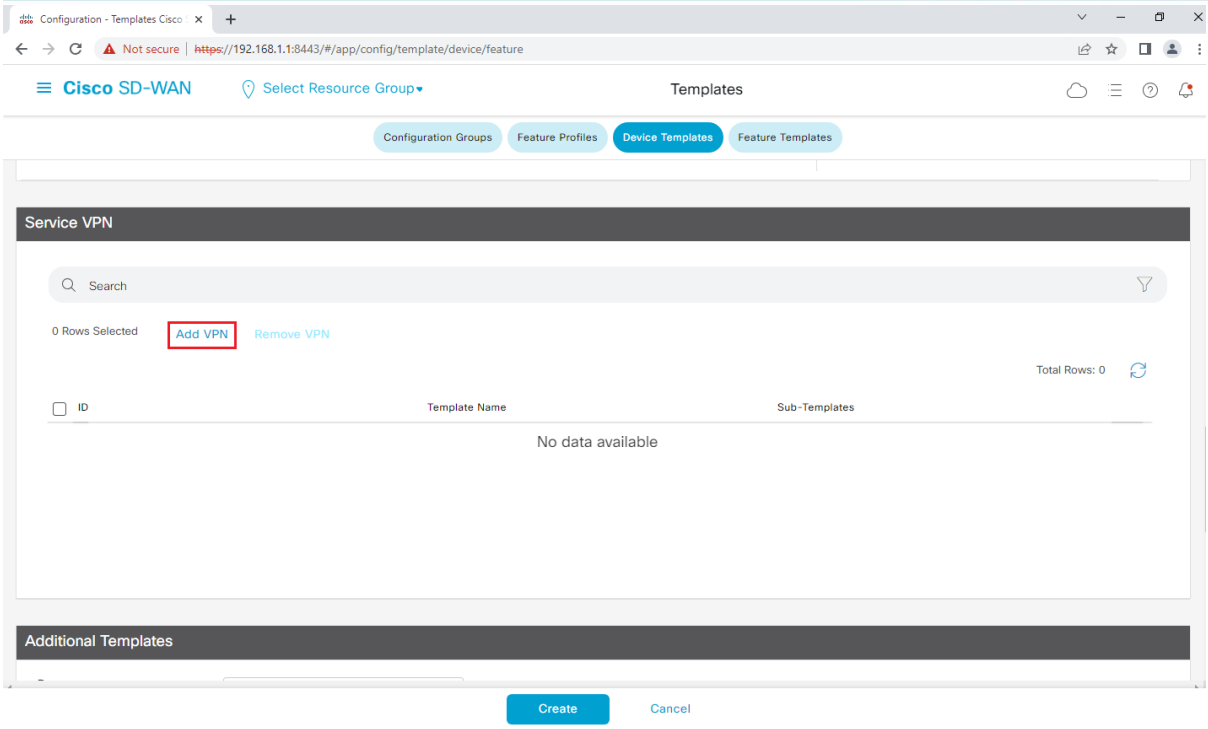
Ở phần **Transport and Management VPN** ta chọn các thông số như sau:



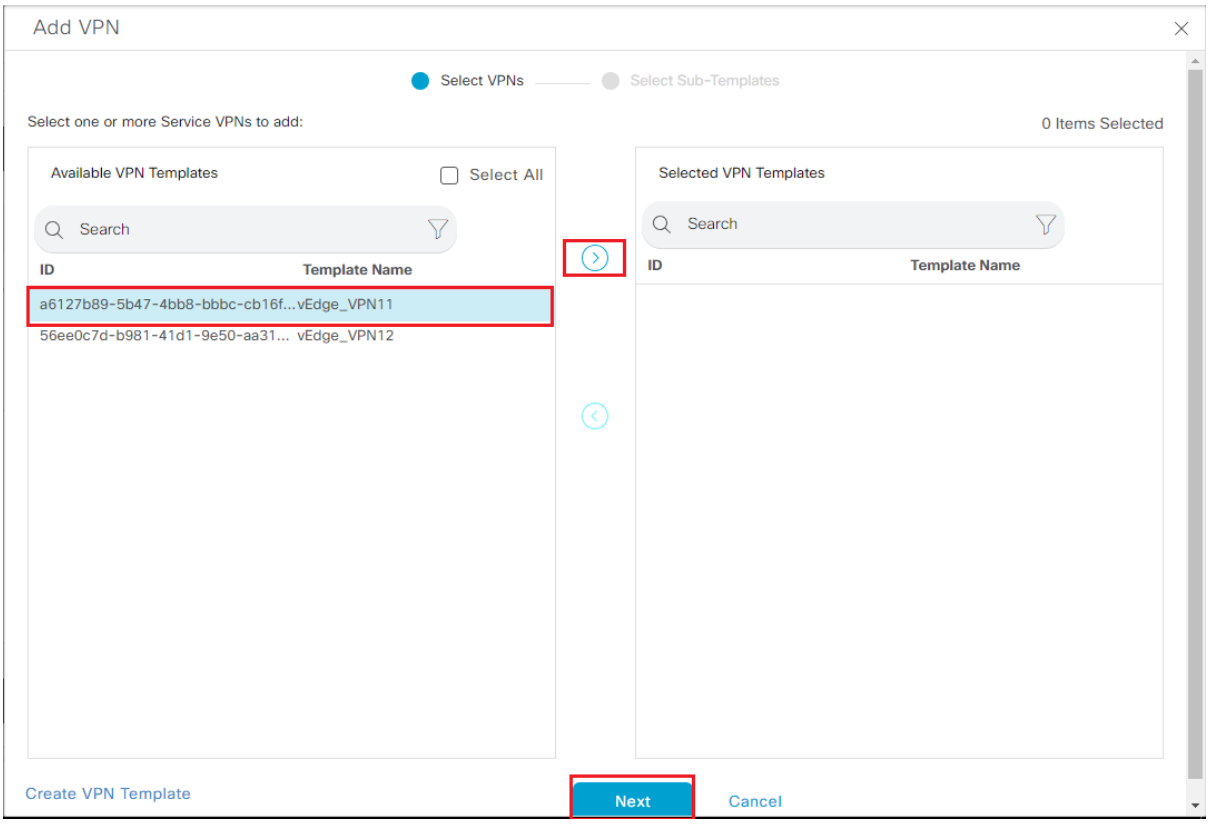
Ở Service VPN, ta lần lượt chọn các template tương ứng với các mục như sau:

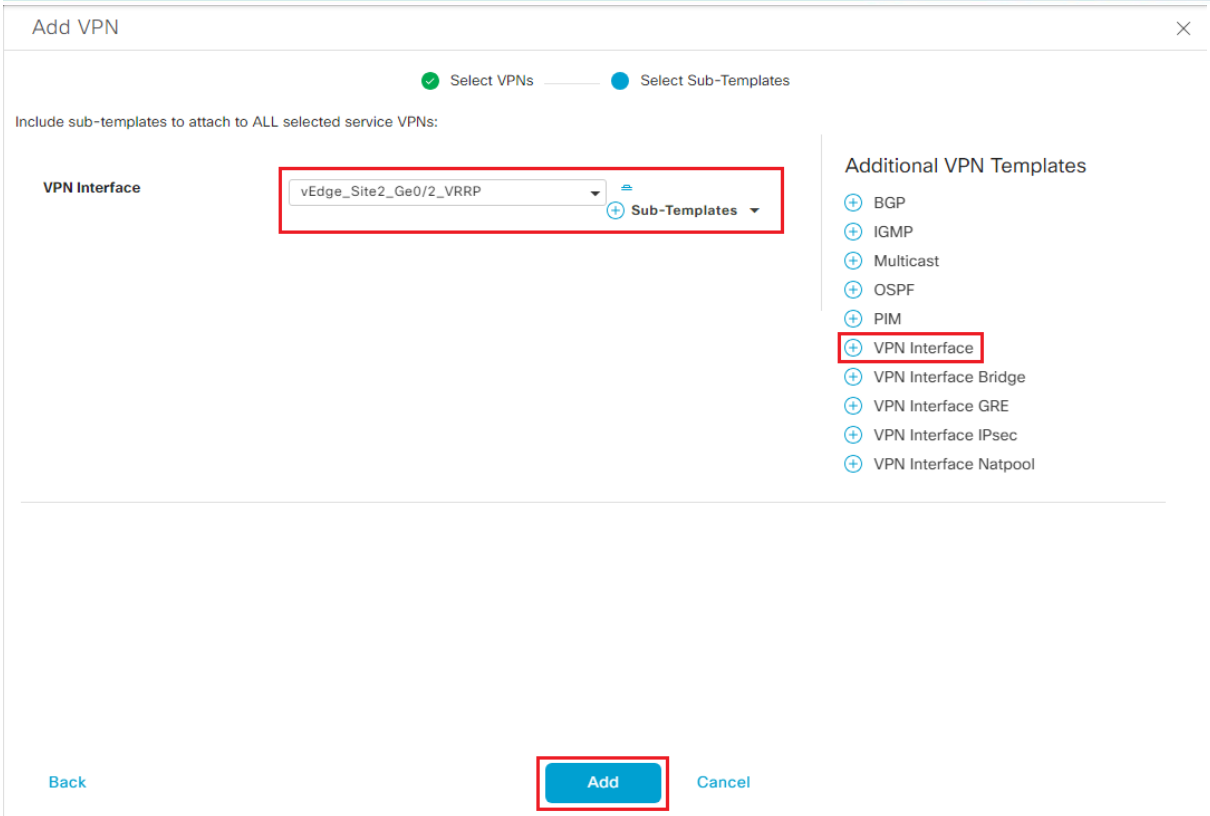
VPN: vEdge_VPN11

VPN Interface: vEdge_Site2_Ge0/2_VRRP


Configuration - Templates Cisco
Not secure | https://192.168.1.1:8443/#/app/config/template/device/feature
Cisco SD-WAN
Select Resource Group
Templates
Configuration Groups
Feature Profiles
Device Templates
Feature Templates
Service VPN
Search
0 Rows Selected
Add VPN
Remove VPN
Total Rows: 0
ID
Template Name
Sub-Templates
No data available
Additional Templates
Create
Cancel

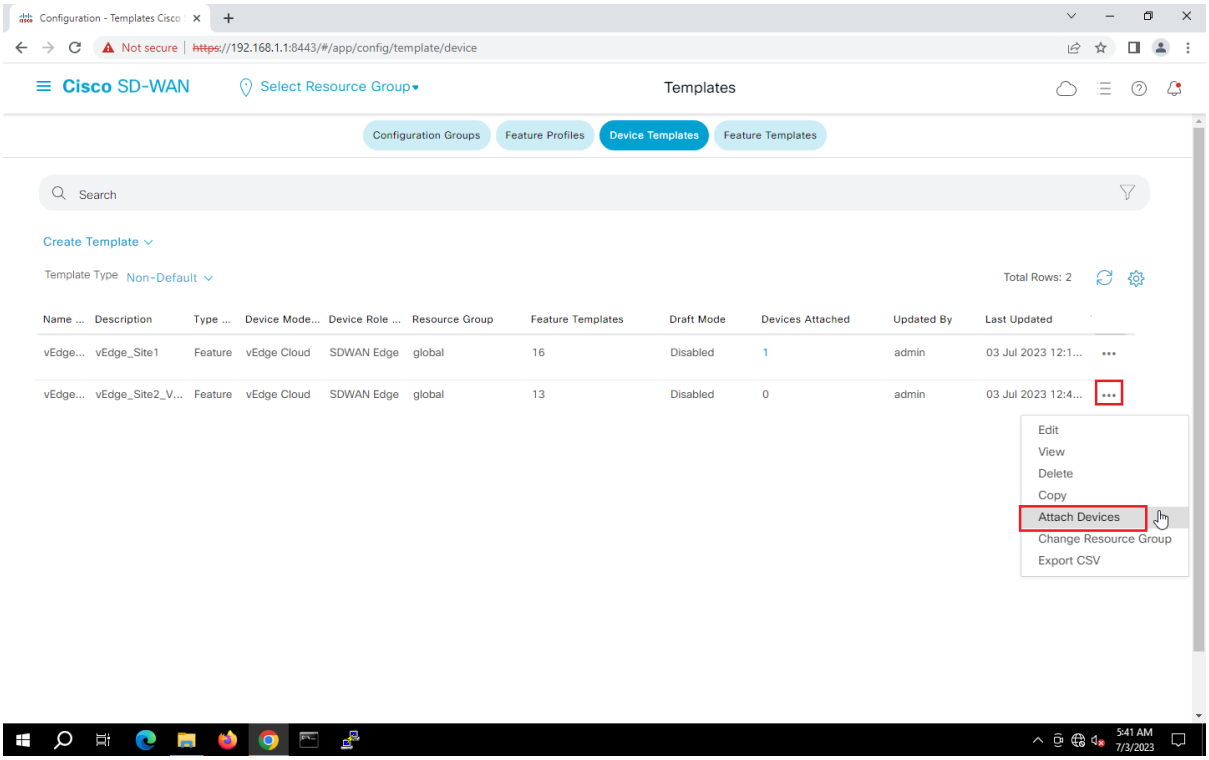
5:38 AM
7/3/2023

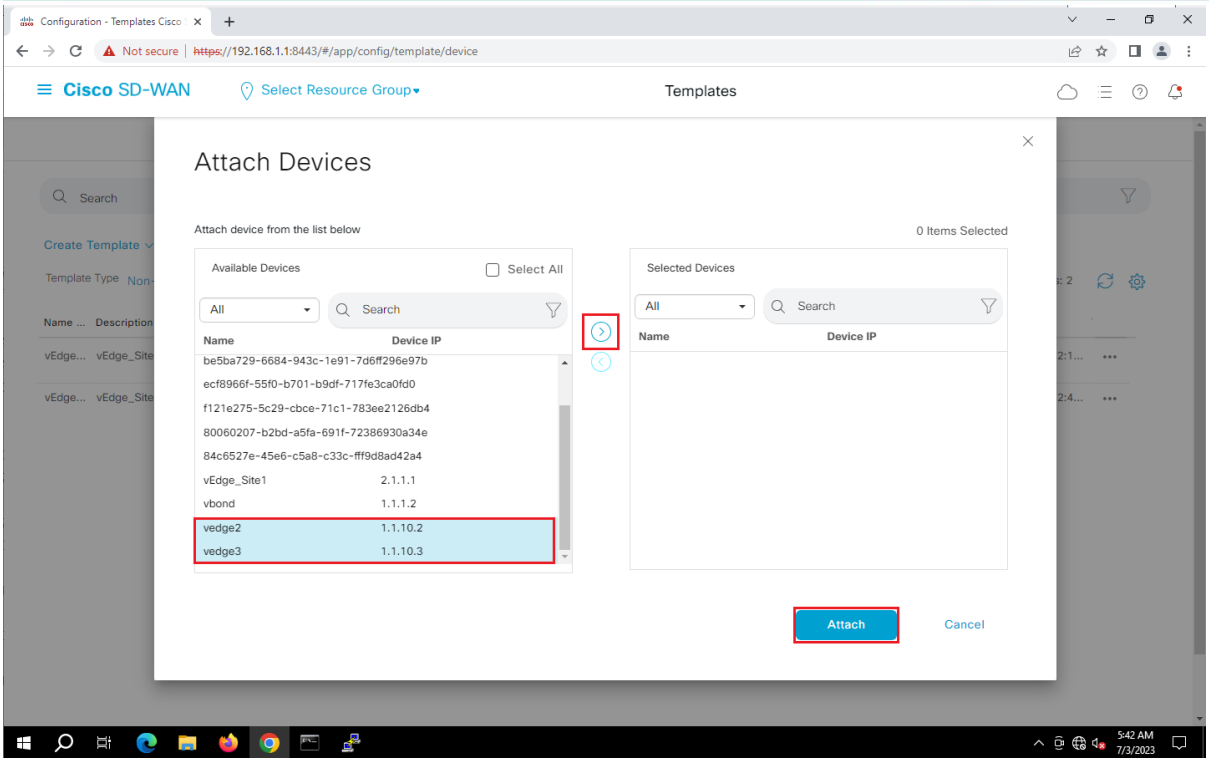

Add VPN
Select VPNs
Select Sub-Templates
Select one or more Service VPNs to add:
0 Items Selected
Available VPN Templates
Select All
Search
ID
Template Name
a6127b89-5b47-4bb8-bbbc-cb16f... vEdge_VPN11
56ee0c7d-b981-41d1-9e50-aa31... vEdge_VPN12
Selected VPN Templates
Search
ID
Template Name
Create VPN Template
Next
Cancel



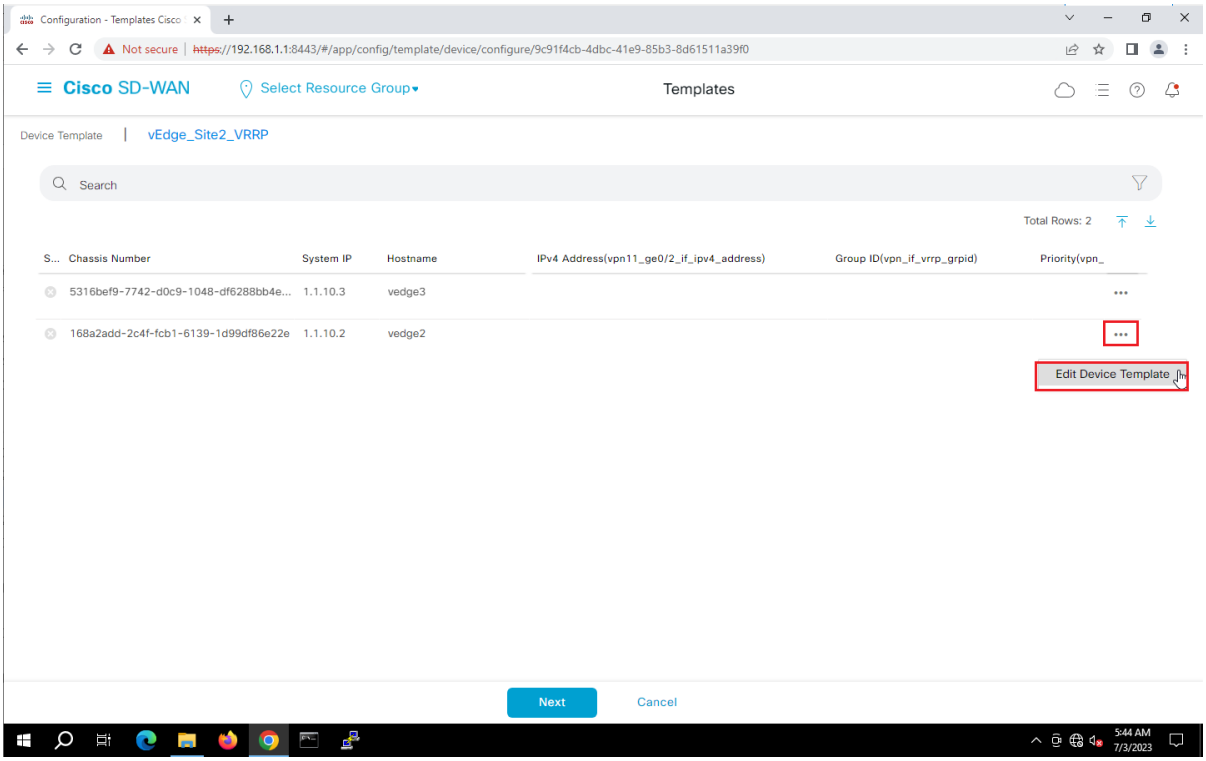
Chọn **Create** để tạo template

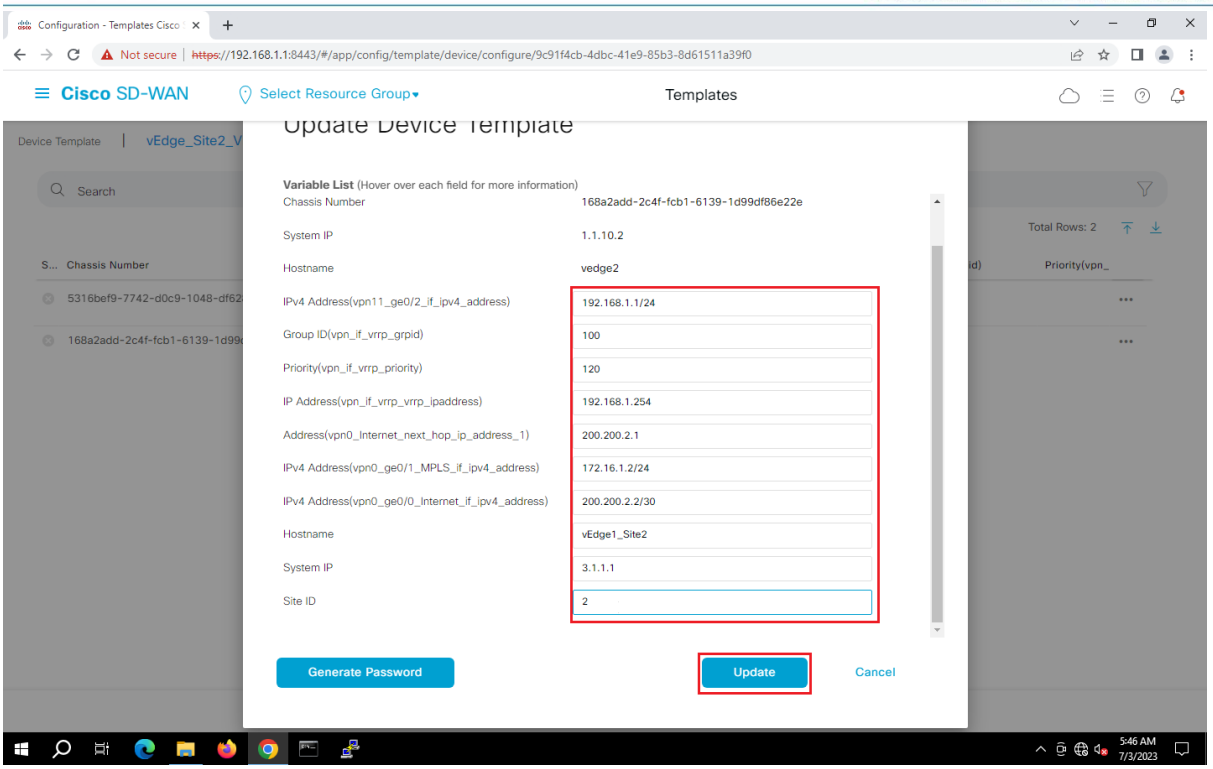
Tiến hành **Attach Devices** và chọn các vEdge tương ứng.

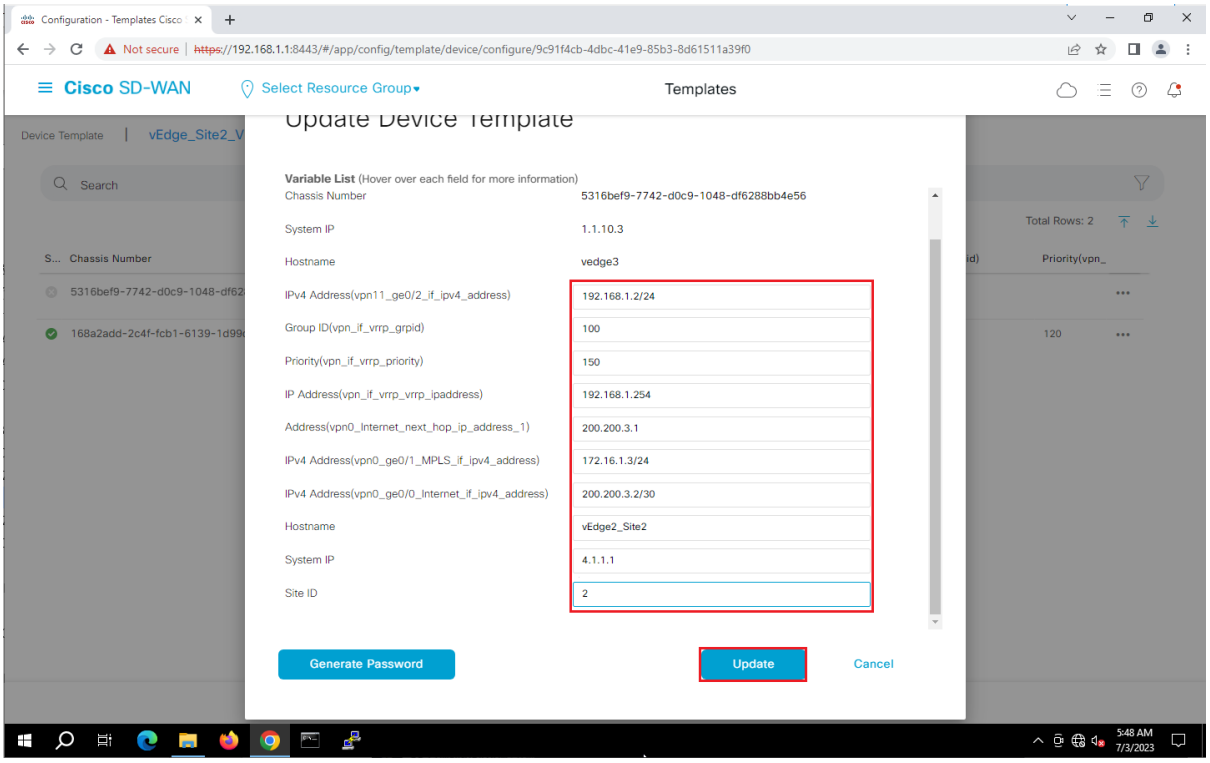




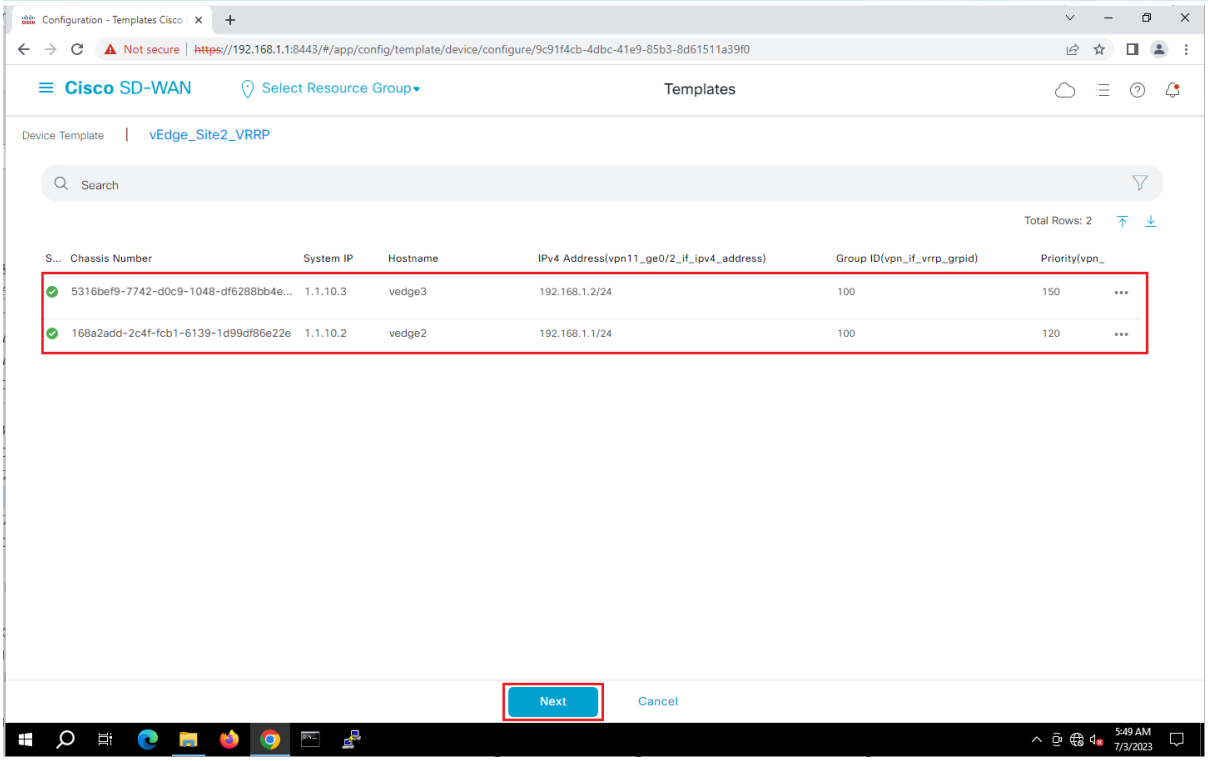
Tiến hành thêm các thông số lần lượt cho **vEdge2** và **vEdge3** như sau:

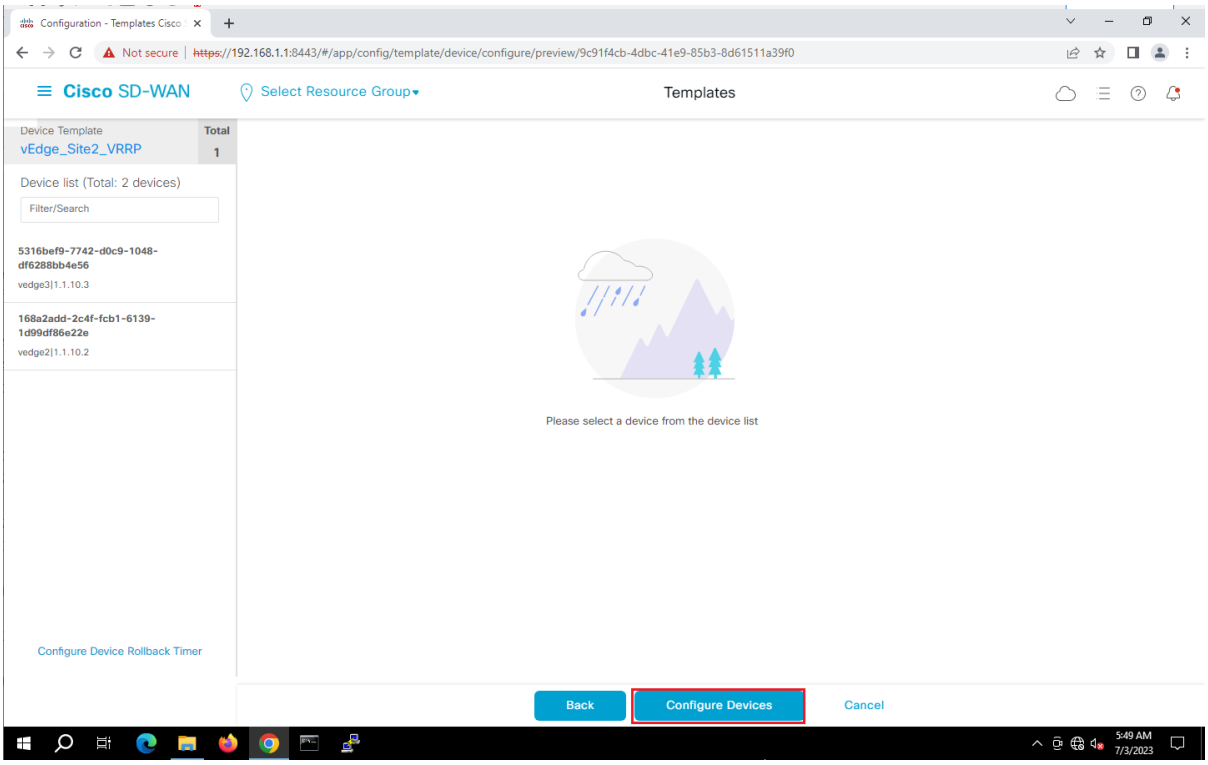


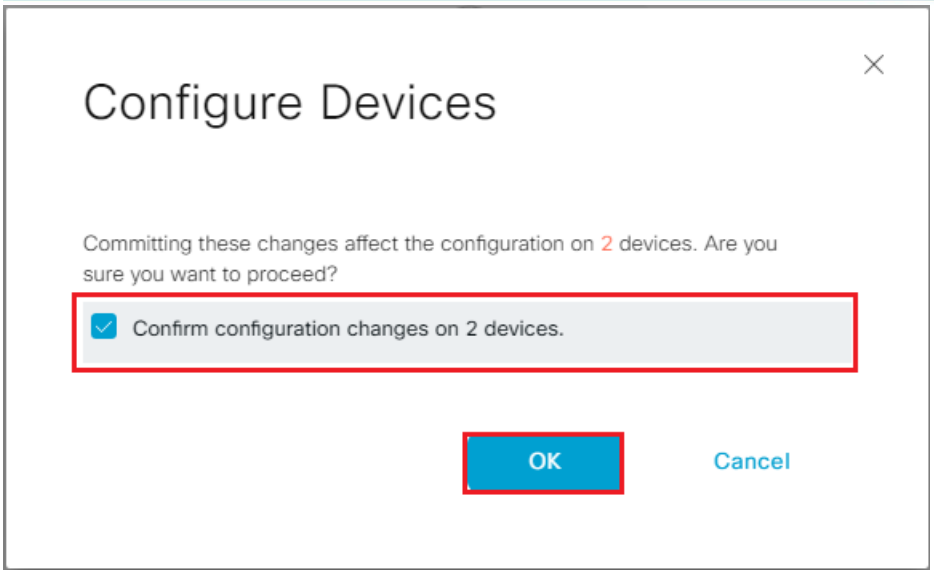




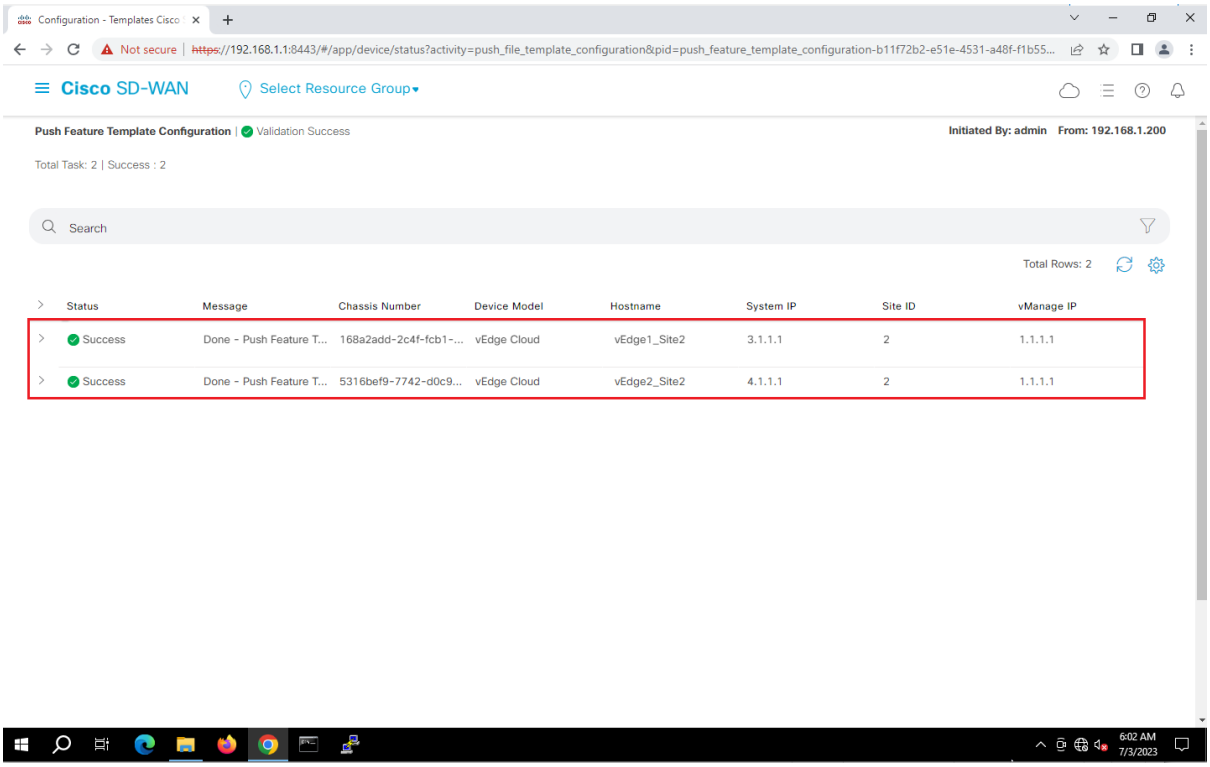
Sau khi xong tiến hành đẩy cấu hình xuống cho thiết bị


Configuration - Templates Cisco
Not secure | https://192.168.1.1:8443/#/app/config/template/device/configure/9c91f4cb-4dbc-41e9-85b3-8d61511a39f0
Cisco SD-WAN
Select Resource Group
Templates
Device Template | vEdge_Site2_VRRP
Search
Total Rows: 2
S... Chassis Number System IP Hostname IPv4 Address(vpn11_ge0/2_if_ipv4_address) Group ID(vpn_if_vrrp_grpid) Priority(vpn_
5316bef9-7742-d0c9-1048-df6288bb4e... 1.1.10.3 vedge3 192.168.1.2/24 100 150
168a2add-2c4f-fcb1-6139-1d99df86e22e 1.1.10.2 vedge2 192.168.1.1/24 100 120
Next
Cancel
5:49 AM
7/3/2023


Configuration - Templates Cisco
Not secure | https://192.168.1.1:8443/#/app/config/template/device/configure/preview/9c91f4cb-4dbc-41e9-85b3-8d61511a39f0
Cisco SD-WAN
Select Resource Group
Templates
Device Template
vEdge_Site2_VRRP
Total
1
Device list (Total: 2 devices)
Filter/Search
5316bef9-7742-d0c9-1048-df6288bb4e56
vedge3|1.1.10.3
168a2add-2c4f-fcb1-6139-1d99df86e22e
vedge2|1.1.10.2
Please select a device from the device list
Configure Device Rollback Timer
Back
Configure Devices
Cancel
5:49 AM
7/3/2023



Quá trình áp cấu hình xuống cho thiết bị đã thành công



Tiến hành cấu hình cho thiết bị R1, R2 ở Site 2

R1:

ena

conf t

hostname R1

!

interface Ethernet0/0

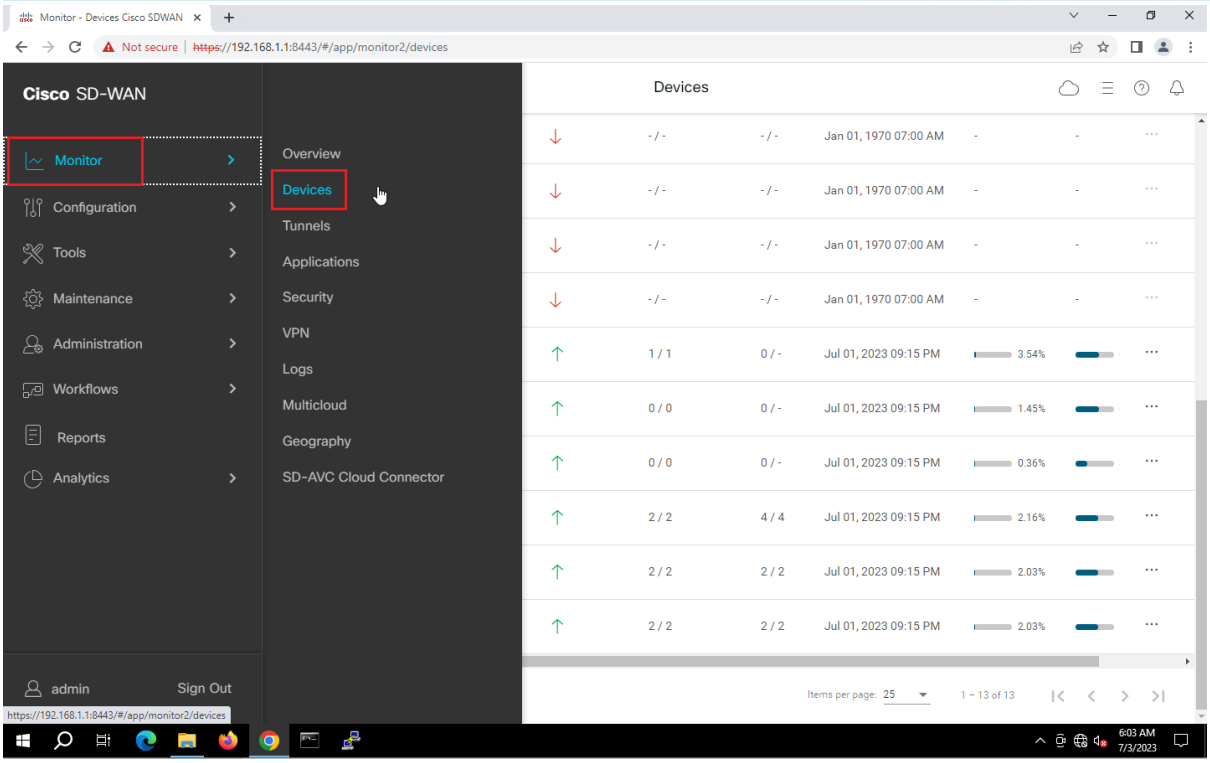
```
 ip address 192.168.1.100 255.255.255.0
 duplex auto
!
interface Ethernet0/1
 ip address 10.10.10.1 255.255.255.0
 duplex auto
!
ip route 0.0.0.0 0.0.0.0 192.168.1.254
do wr
```

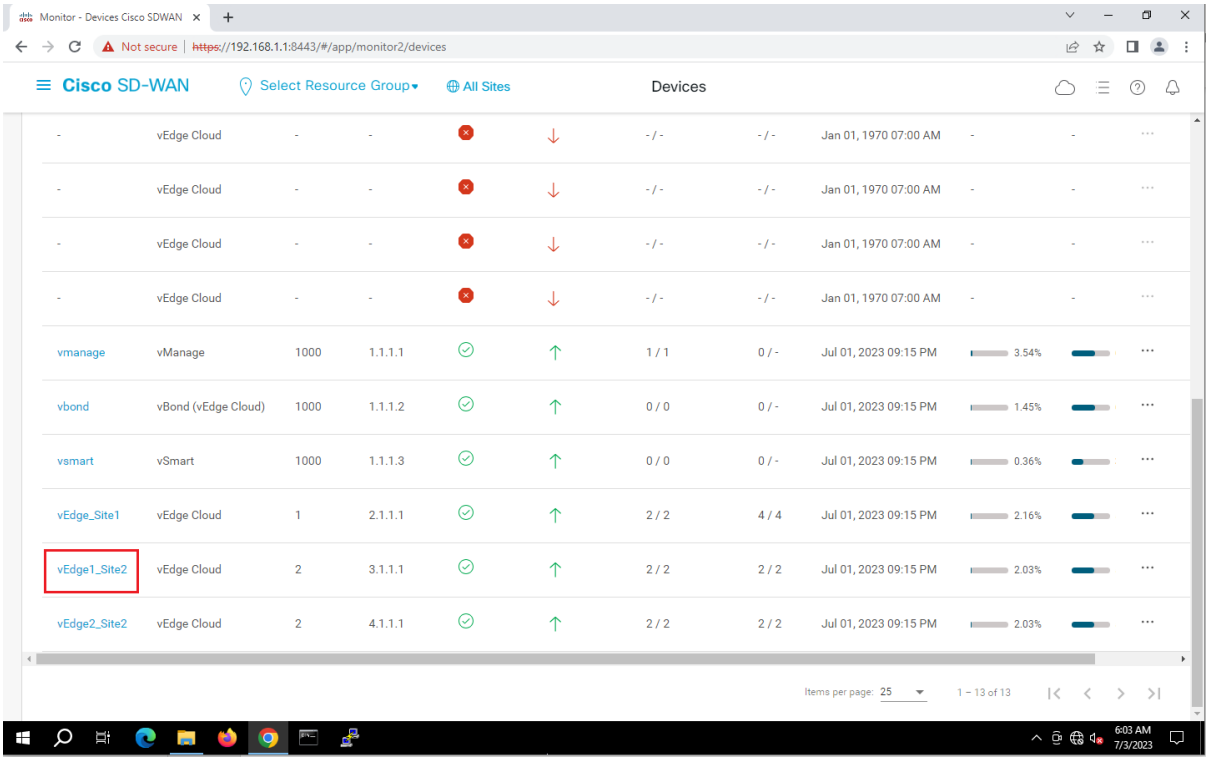
R2:

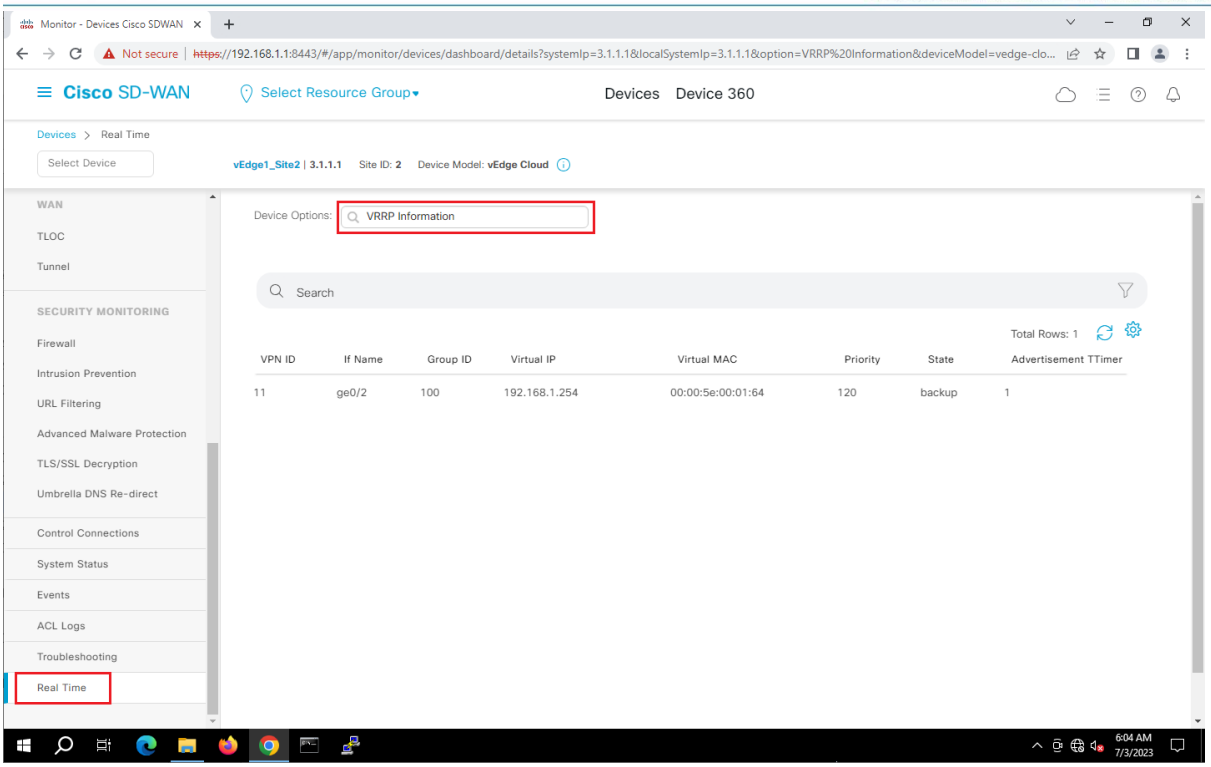
```
ena
conf t
hostname R2
!
interface Ethernet0/0
 ip address 192.168.1.200 255.255.255.0
 duplex auto
!
interface Ethernet0/1
 ip address 10.10.20.1 255.255.255.0
 duplex auto
!
ip route 0.0.0.0 0.0.0.0 192.168.1.254
do wr
```

Kiểm tra

Vào Monitor > Network > vEdge1_Site2 **>** Real Time > VRRP


Monitor - Devices Cisco SDWAN
Not secure | https://192.168.1.1:8443/#/app/monitor2/devices
Cisco SD-WAN
Monitor
Configuration
Tools
Maintenance
Administration
Workflows
Reports
Analytics
Overview
Devices
Tunnels
Applications
Security
VPN
Logs
Multicloud
Geography
SD-AVC Cloud Connector
admin
Sign Out
Devices
Items per page: 25
1 – 13 of 13
6:03 AM
7/3/2023


Monitor - Devices Cisco SDWAN
Not secure | https://192.168.1.1:8443/#/app/monitor2/devices
Cisco SD-WAN
Select Resource Group
All Sites
Devices
vmanage vManage 1000 1.1.1.1 1 / 1 0 / - Jul 01, 2023 09:15 PM 3.54%
vbond vBond (vEdge Cloud) 1000 1.1.1.2 0 / 0 0 / - Jul 01, 2023 09:15 PM 1.45%
vsmart vSmart 1000 1.1.1.3 0 / 0 0 / - Jul 01, 2023 09:15 PM 0.36%
vEdge_Site1 vEdge Cloud 1 2.1.1.1 2 / 2 4 / 4 Jul 01, 2023 09:15 PM 2.16%
vEdge1_Site2 vEdge Cloud 2 3.1.1.1 2 / 2 2 / 2 Jul 01, 2023 09:15 PM 2.03%
vEdge2_Site2 vEdge Cloud 2 4.1.1.1 2 / 2 2 / 2 Jul 01, 2023 09:15 PM 2.03%
Items per page: 25
1 – 13 of 13
6:03 AM
7/3/2023



Trên CLI

Ta dùng lệnh *Show VRRP*

```
vEdge1_Site2# show vrrp
vrrp vpn 11
 interfaces ge0/2
  groups 100
   virtual-ip              192.168.1.254
   virtual-mac             00:00:5e:00:01:64
   priority                120
   real-priority           120
   vrrp-state              backup
   omp-state               up
   advertisement-timer     1
   primary-down-timer      3
   last-state-change-time 2023-07-03T05:50:59+00:00
vEdge1_Site2#
```

```
vEdge2_Site2# show vrrp
vrrp vpn 11
 interfaces ge0/2
  groups 100
   virtual-ip              192.168.1.254
   virtual-mac             00:00:5e:00:01:64
   priority                150
   real-priority           150
   vrrp-state              primary
   omp-state               up
   advertisement-timer     1
   primary-down-timer      3
   last-state-change-time 2023-07-03T05:51:00+00:00
vEdge2_Site2#
```

Từ Router **R1** ping tới IP của router ảo với địa chỉ là **192.168.1.254**

```
R1#ping 192.168.1.254
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.1.254, timeout is 2 seconds:
.!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 21/32/56 ms
R1#
```

Traceroute trên R11 cũng đang đi qua vEdge2_Site2 đang vai trò là Master

```
R1#traceroute 192.168.10.254
Type escape sequence to abort.
Tracing the route to 192.168.10.254
VRF info: (vrf in name/id, vrf out name/id)
  1 192.168.1.2 17 msec 16 msec 20 msec
  2 192.168.10.254 61 msec 66 msec 72 msec
R1#
```