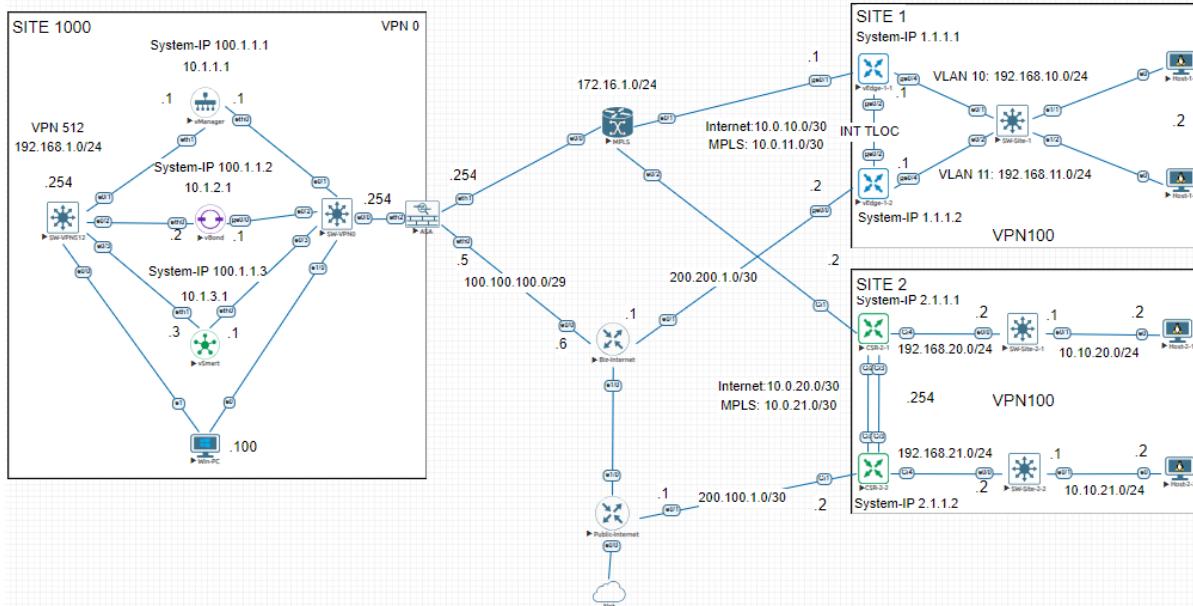


LAB: SUB INTERFACE TLOC-EXTENSION

I: Sơ đồ



Tên Thiết Bị	Username	Password	Version
vManage	admin	Admin	20.06.1
vBond	admin	Admin	20.06.1
vSmart	admin	Admin	20.06.1
vEdge	Admin	Admin	20.06.1
cEdge	Admin	Admin	17.03.04a
PC		Test123	Windows10

II. Yêu cầu:

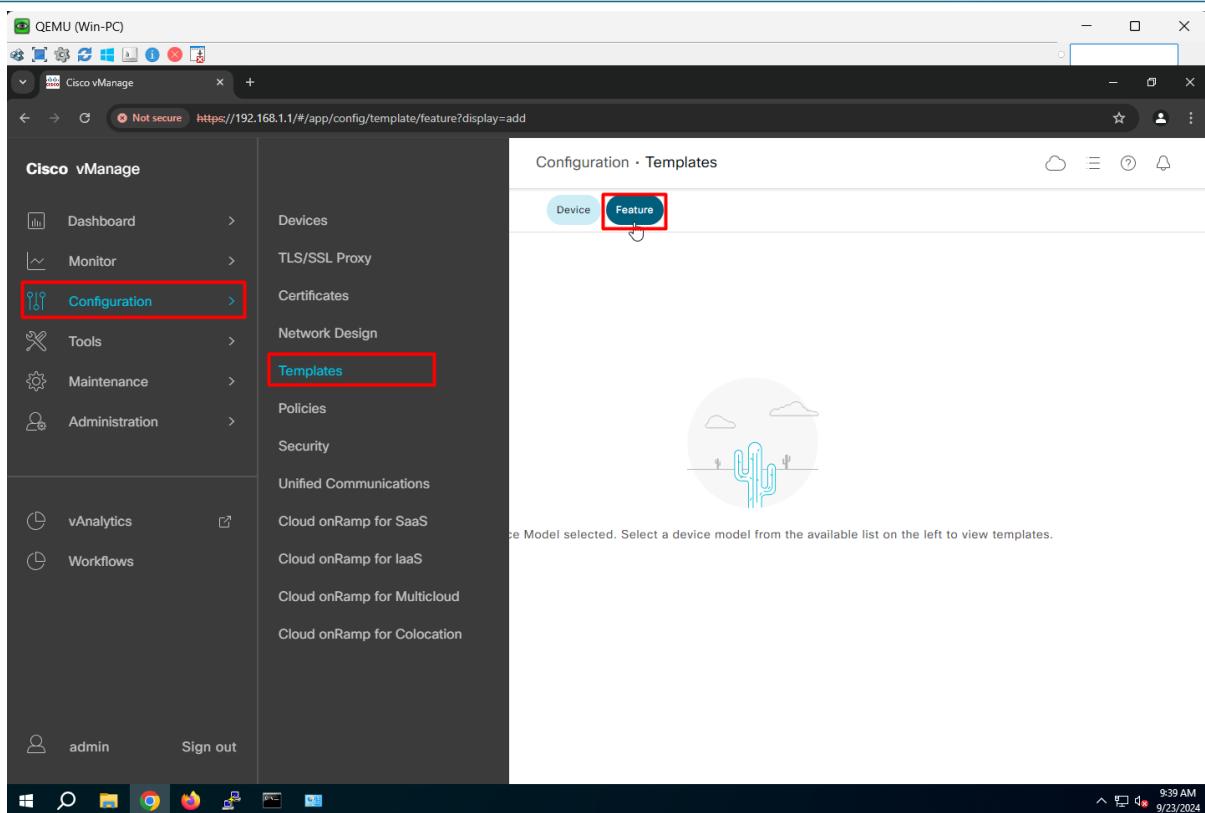
Viết các Feature Template VPN 0, VPN 0 Interface, VPN 512, VPN 512 Interface,

III. Thực hiện viết Template Transport cho vEdge và cEdge:

3.1. Viết Template cho Transport VPN (VPN 0) Site 1

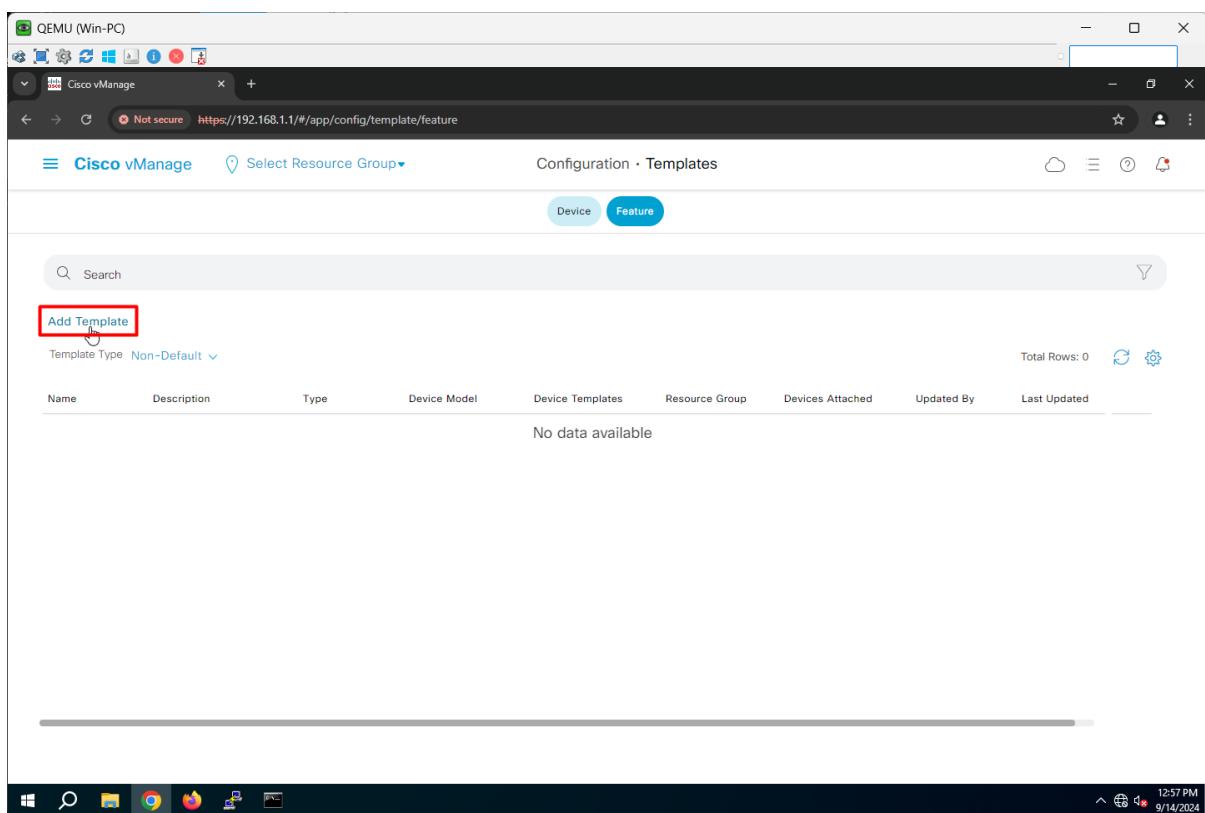
Ở Giao diện vManage, vào menu Configuration => Templates, chọn vào tab Feature => Chọn Add.

Bên trong cột Select Device, chọn vEdge Cloud hoặc có thể chọn bất kỳ loại thiết bị WAN Edge bô xung nào có thể năng trong trung tâm dữ liệu. Sau đó chọn VPN như hình vẽ bên dưới.



The screenshot shows the Cisco vManage web interface. On the left, the navigation bar includes 'Dashboard', 'Monitor', 'Configuration' (highlighted with a red box), 'Tools', 'Maintenance', 'Administration', 'vAnalytics', and 'Workflows'. Below these are user info for 'admin' and 'Sign out'. The main panel title is 'Configuration · Templates'. It has tabs for 'Device' and 'Feature' (highlighted with a red box). A central area displays a cactus icon and the text: 'Please select a device model from the available list on the left to view templates.' The bottom status bar shows the date and time.

Chọn vào Add Template



The screenshot shows the same Cisco vManage interface as above, but with a different view. The 'Feature' tab is still selected. A red box highlights the 'Add Template' button located in the top-left corner of the main content area. The rest of the interface is identical to the first screenshot.

Kéo xuống và chọn vào vEdge và chọn vào AAA

QEMU (Win-PC)

Cisco vManage

Not secure https://192.168.1.1/#/app/config/template/feature?display=add

Configuration · Templates

Feature Template > Add Template

Select Devices

Search by device name

- ISRv
- vEdge 100
- vEdge 100 B
- vEdge 100 M
- vEdge 100 WM
- vEdge 1000
- vEdge 2000
- vEdge 5000
- vEdge Cloud
- vManage
- vSmart

Select Template

BASIC INFORMATION

AAA	Archive	BFD
NTP	OMP	Security

Điền Template Name: vEdge_AAA và Description: vEdge_AAA

QEMU (Win-PC)

Cisco vManage

Not secure https://192.168.1.1/#/app/config/template/feature?display=add&deviceType=vedge-cloud&templateType=aaa

Configuration · Templates

Feature Template > Add Template > AAA

Device Type: vEdge Cloud

Template Name: vEdge_Cloud

Description: vEdge_Cloud

Authentication

AUTHENTICATION

Authentication Order: local > radius > tacacs

Authentication Fallback: On

Admin Authentication Order: On

Cancel Save

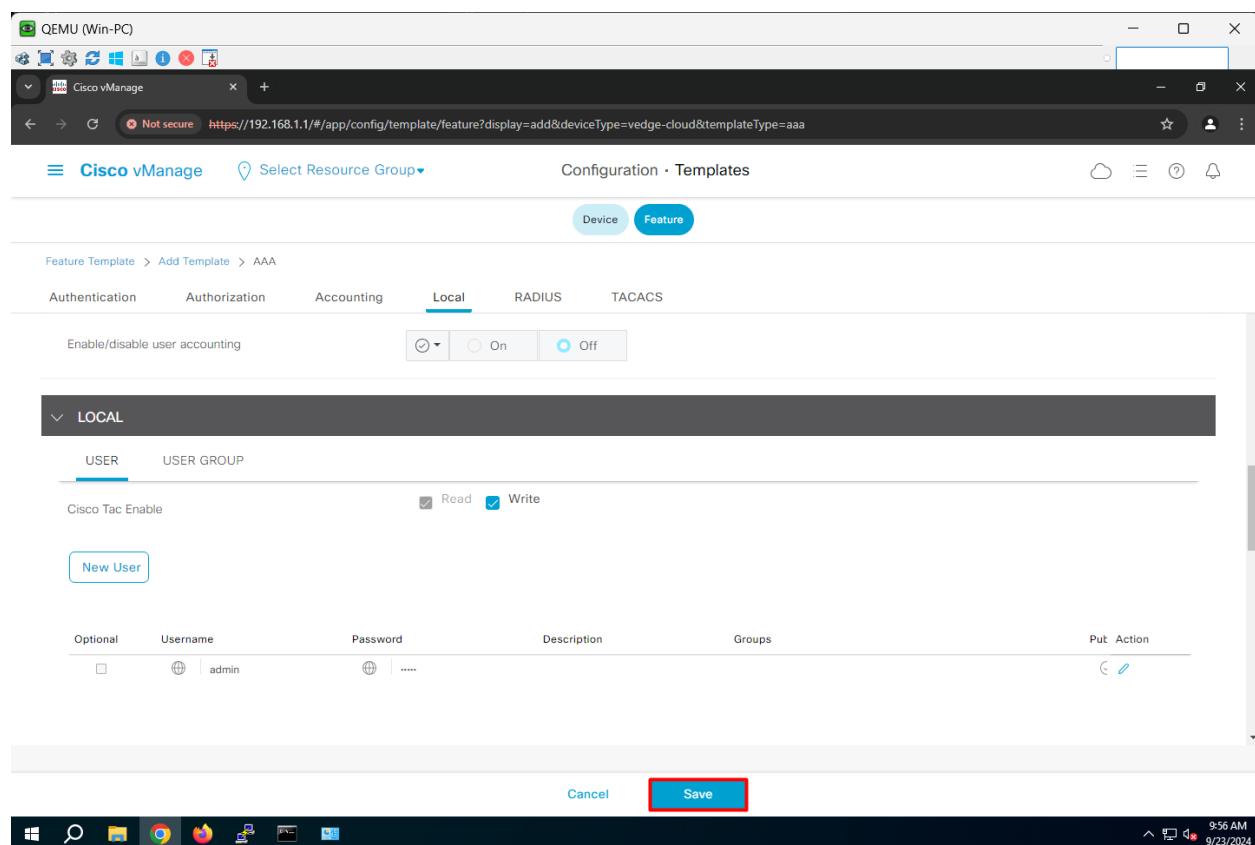
Thực hiện kéo xuống tới phần local chọn vào Action

The screenshot shows the Cisco vManage web interface for managing AAA feature templates. The URL in the browser is <https://192.168.1.1/#/app/config/template/feature?display=add&deviceType=vedge-cloud&templateType=aaa>. The page title is "Cisco vManage". The main navigation bar includes "Select Resource Group", "Configuration · Templates", "Device", and "Feature". Below this, it says "Feature Template > Add Template > AAA". The "Authentication" tab is selected, with sub-tabs for "Local", "RADIUS", and "TACACS". The "Local" tab is highlighted with a red box. Under "LOCAL", there are sections for "USER" and "USER GROUP". Under "USER", there is a "Cisco Tac Enable" checkbox, and "Read" and "Write" checkboxes. A "New User" button is visible. The main table lists a single user entry: "Optional" (checkbox), "Username" (admin), "Password" (*****), "Description" (empty), "Groups" (empty), and "Put" (checkbox). The "Put" checkbox is highlighted with a red box. At the bottom right of the modal, there are "Cancel" and "Save" buttons, with the "Save" button highlighted with a red box.

Chỉnh sửa Password: Admin và chọn vào Save Changes

The screenshot shows the "Update User" dialog box. It has fields for "Name" (with value "admin") and "Password" (with value "*****Admin"). Below these, there is a section for "SSH RSA Key(s) (Maximum: 10)" with a "+ Add" button. At the bottom right of the dialog, there are "Save Changes" and "Cancel" buttons, with the "Save Changes" button highlighted with a red box.

Chọn vào Save để lưu cấu hình Template vEdge_AAA



The screenshot shows the Cisco vManage web interface. The URL in the address bar is <https://192.168.1.1/#/app/config/template/feature?display=add&deviceType=vedge-cloud&templateType=aaa>. The page title is "Configuration · Templates". The "Feature" tab is selected. Below it, the "Local" tab is selected under the "AAA" section. There are tabs for Authentication, Authorization, Accounting, RADIUS, and TACACS. Under the Local tab, there is a dropdown menu for "Enable/disable user accounting" with options "On" and "Off" (selected). The "LOCAL" section is expanded, showing "USER" and "USER GROUP" tabs. Under "USER", there is a "Cisco Tac Enable" checkbox, which is checked. Below this, there are checkboxes for "Read" and "Write". A "New User" button is visible. A table lists a single user entry: "Optional" (checkbox), "Username" (text input with value "admin"), "Password" (text input with value "****"), "Description" (empty), "Groups" (empty), "Put" (button), and "Action" (button). At the bottom of the form, there are "Cancel" and "Save" buttons, with "Save" being highlighted with a red box.

Chọn vào Add Template

Kéo xuống và chọn vào vEdge và chọn vào VPN

The screenshot shows the Cisco vManage web interface. The URL is https://192.168.1.1/#/app/config/template/feature?display=add. The 'Feature' tab is active. On the left, a sidebar titled 'Select Devices' lists various device types, with 'vEdge Cloud' selected and highlighted by a red box. In the main area, under the 'VPN' category, the 'VPN' template is selected and highlighted by a red box. Other templates like 'Secure Internet Gateway (SIG)', 'VPN Interface Cellular', 'VPN Interface Ethernet', etc., are also listed.

Điền Template name: vEdge_VPN0 và Description: vEdge_VPN0

The screenshot shows the configuration of the 'vEdge_VPN0' template. The 'Basic Configuration' tab is selected. The 'Template Name' field contains 'vEdge_VPN0' and the 'Description' field contains 'vEdge_VPN0', both highlighted with red boxes. Below these fields, there are tabs for 'DNS', 'Advertise OMP', 'IPv4 Route', 'IPv6 Route', 'Service', 'Service Route', 'GRE Route', 'IPSEC Route', and 'NAT'. At the bottom, there is a 'BASIC CONFIGURATION' section with fields for 'VPN' (value 0), 'Name' (dropdown), and 'Enhance ECMP Keying' (radio buttons for On or Off). A 'Save' button is at the bottom right.

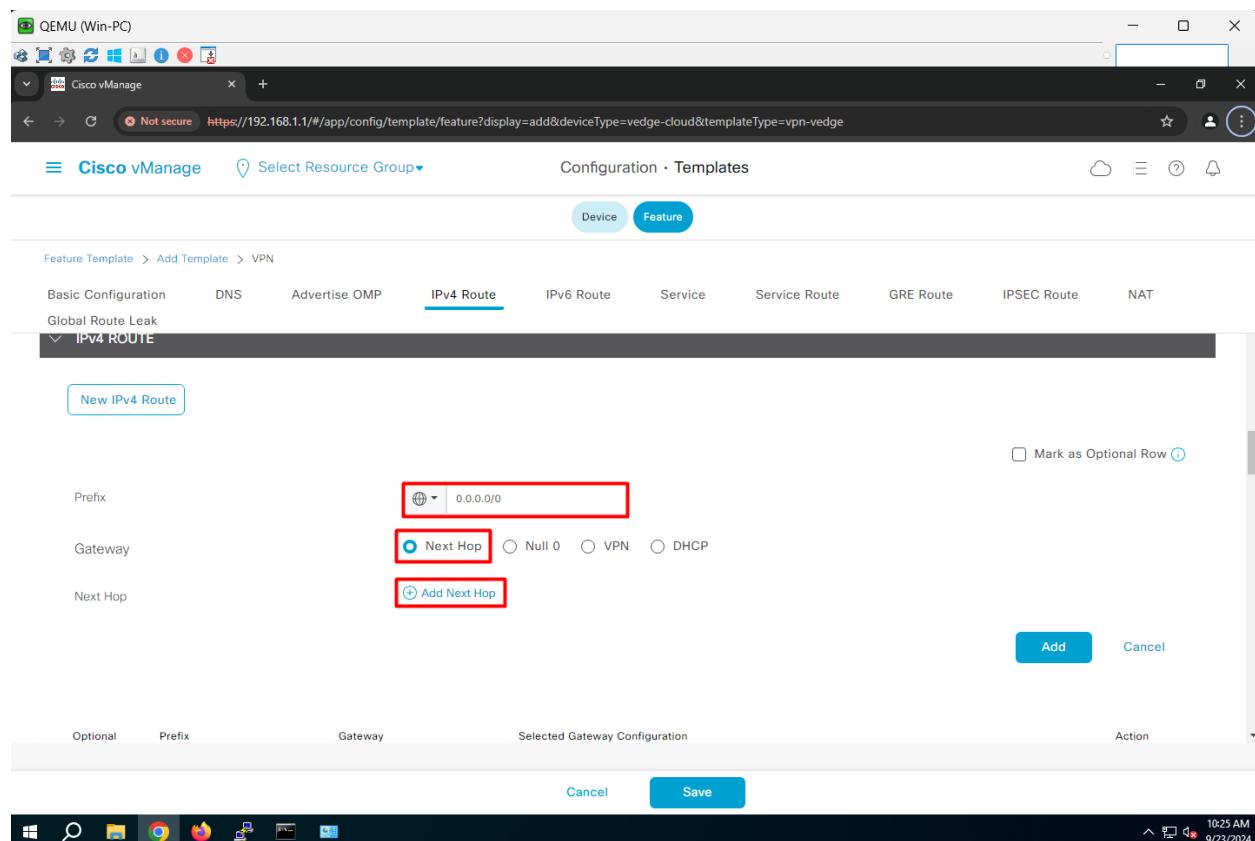
Ở phần Basic Configuration kiểm tra VPN ở mode Global và là VPN0, Nam chọn Global và điền Name: Transport

The screenshot shows the Cisco vManage web interface. In the top navigation bar, the URL is https://192.168.1.1/#/app/config/template/feature?display=add&deviceType=vedge-cloud&templateType=vpn-vedge. The main title is "Configuration · Templates". Below it, there are tabs for "Device" and "Feature", with "Feature" selected. Under "Feature Template > Add Template > VPN", the "Basic Configuration" tab is active. A red box highlights the "Basic Configuration" tab. In the configuration area, the "Name" field is set to "Transport" and the "Global" checkbox is checked. Other options like "Enhance ECMP Keying" and "Enable TCP Optimization" are also visible.

Kéo xuống phần IPv4 ROUTE chọn vào New IPv4 Route

The screenshot shows the Cisco vManage interface again. The URL is the same as the previous screenshot. The main title is "Configuration · Templates". The "Feature" tab is selected. Under "Feature Template > Add Template > VPN", the "IPv4 Route" tab is active. A red box highlights the "IPv4 Route" tab. In the configuration area, the "New IPv4 Route" button is highlighted with a red box. The table below shows no data available under "Optional", "Prefix", "Gateway", and "Selected Gateway Configuration".

Điền vào Prefix: 0.0.0.0/0 và Getway: Next Hop và chọn vào Add Next Hop

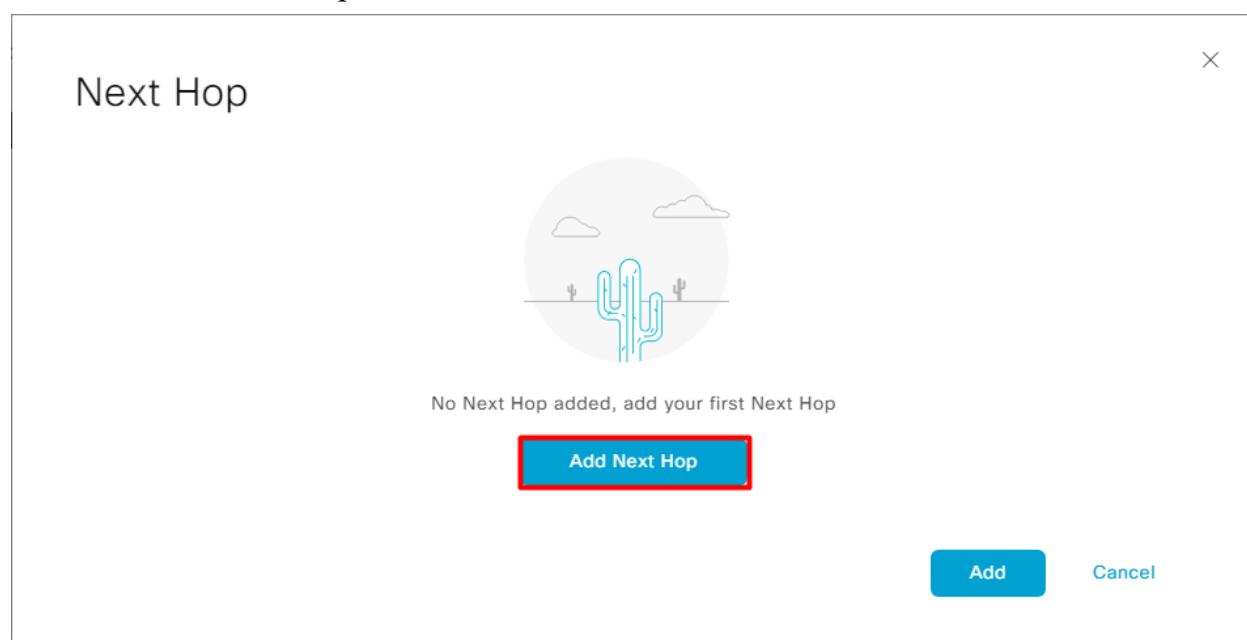


The screenshot shows the Cisco vManage web interface for configuring a Feature Template. The URL is https://192.168.1.1/#/app/config/template/feature?display=add&deviceType=vedge-cloud&templateType=vpn-vedge. The navigation bar includes Cisco vManage, Select Resource Group, Configuration · Templates, Device, and Feature. The Feature Template path is Feature Template > Add Template > VPN. Under the IPv4 Route tab, the 'IPv4 ROUTE' section is selected. A 'New IPv4 Route' button is visible. The configuration form shows:

- Prefix: 0.0.0.0/0
- Gateway: Next Hop (radio button selected)
- Next Hop: (button labeled 'Add Next Hop')

At the bottom right of the configuration form are 'Add' and 'Cancel' buttons. Below the configuration form is a table titled 'Selected Gateway Configuration' with columns: Optional, Prefix, Gateway, Selected Gateway Configuration, and Action. The 'Save' button is located at the bottom center of the configuration area.

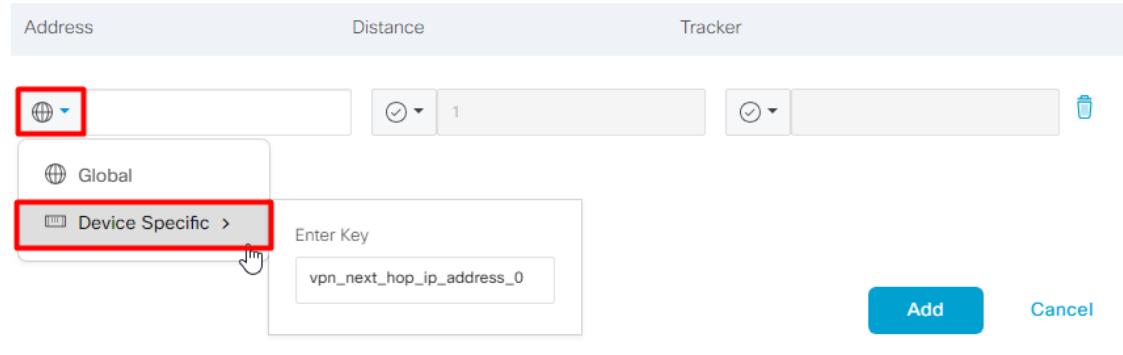
Chọn vào Add Next Hop



The screenshot shows a modal dialog box titled 'Next Hop'. It features a cactus icon with clouds above it. The text 'No Next Hop added, add your first Next Hop' is displayed. A prominent red-bordered 'Add Next Hop' button is centered at the bottom. At the very bottom of the dialog are 'Add' and 'Cancel' buttons.

Ở phần Address chọn vào Device Specific

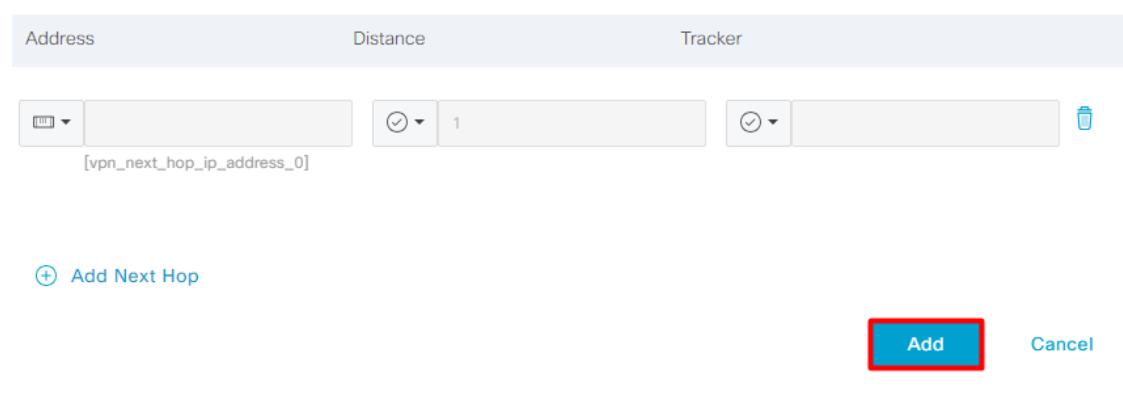
Next Hop



The screenshot shows a configuration dialog for 'Next Hop'. At the top, there are three tabs: 'Address', 'Distance', and 'Tracker'. In the 'Address' tab, there is a dropdown menu with options 'Global' and 'Device Specific'. The 'Device Specific' option is highlighted with a red box. Below the dropdown is a text input field labeled 'Enter Key' containing the value 'vpn_next_hop_ip_address_0'. At the bottom right of the dialog are two buttons: 'Add' (highlighted with a red box) and 'Cancel'.

Chọn vào Add để lưu

Next Hop



The screenshot shows the same 'Next Hop' configuration dialog. The 'Address' tab is selected, displaying the entry '[vpn_next_hop_ip_address_0]'. At the bottom left, there is a button labeled '+ Add Next Hop'. At the bottom right, the 'Add' button is highlighted with a red box, while the 'Cancel' button is in its original state.

Chọn vào Add để lưu IPv4 Route

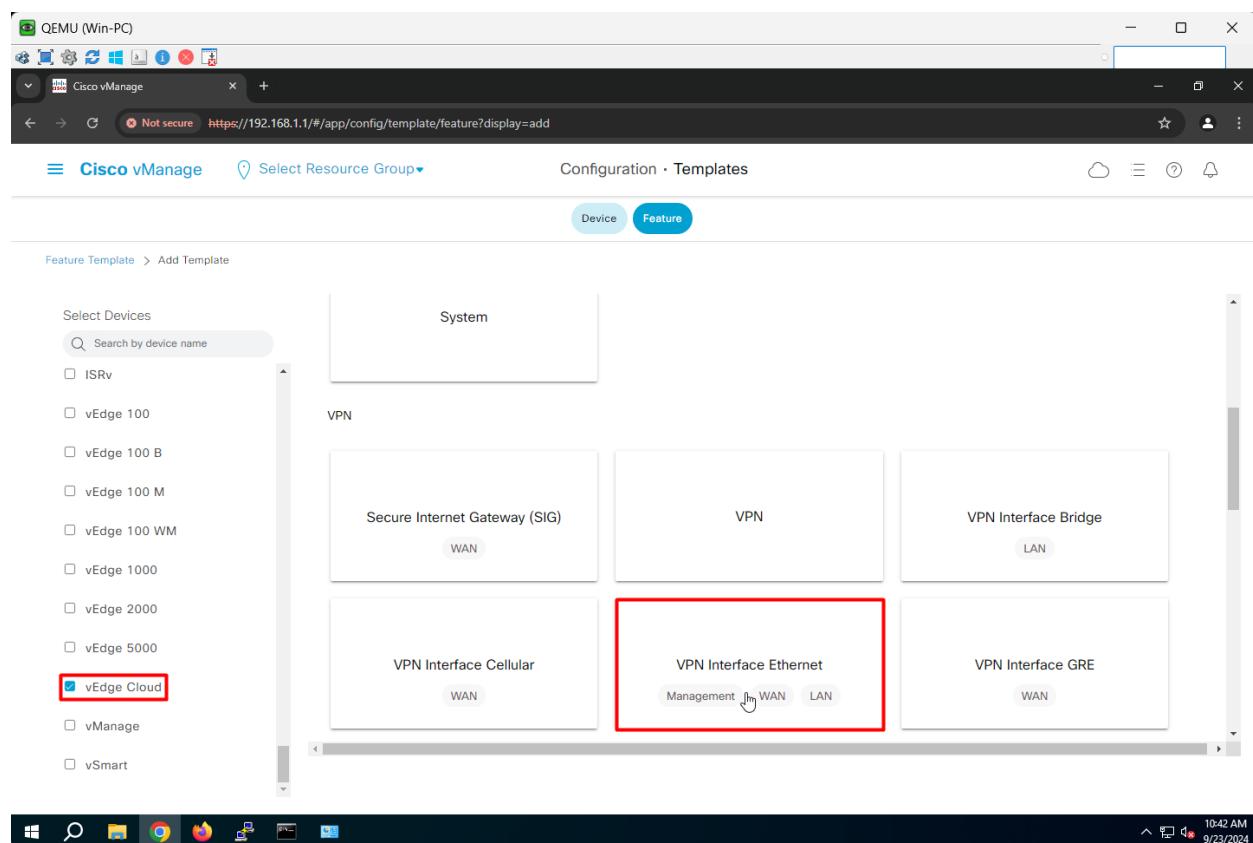
The screenshot shows the Cisco vManage web interface. The user is navigating through 'Configuration > Templates > Feature Template > Add Template > VPN > IPv4 Route'. A new IPv4 route is being configured with a prefix of '0.0.0.0/0' and a gateway type of 'Next Hop'. The 'Add' button at the bottom right of the configuration form is highlighted with a red box.

Chọn vào Save để lưu Template

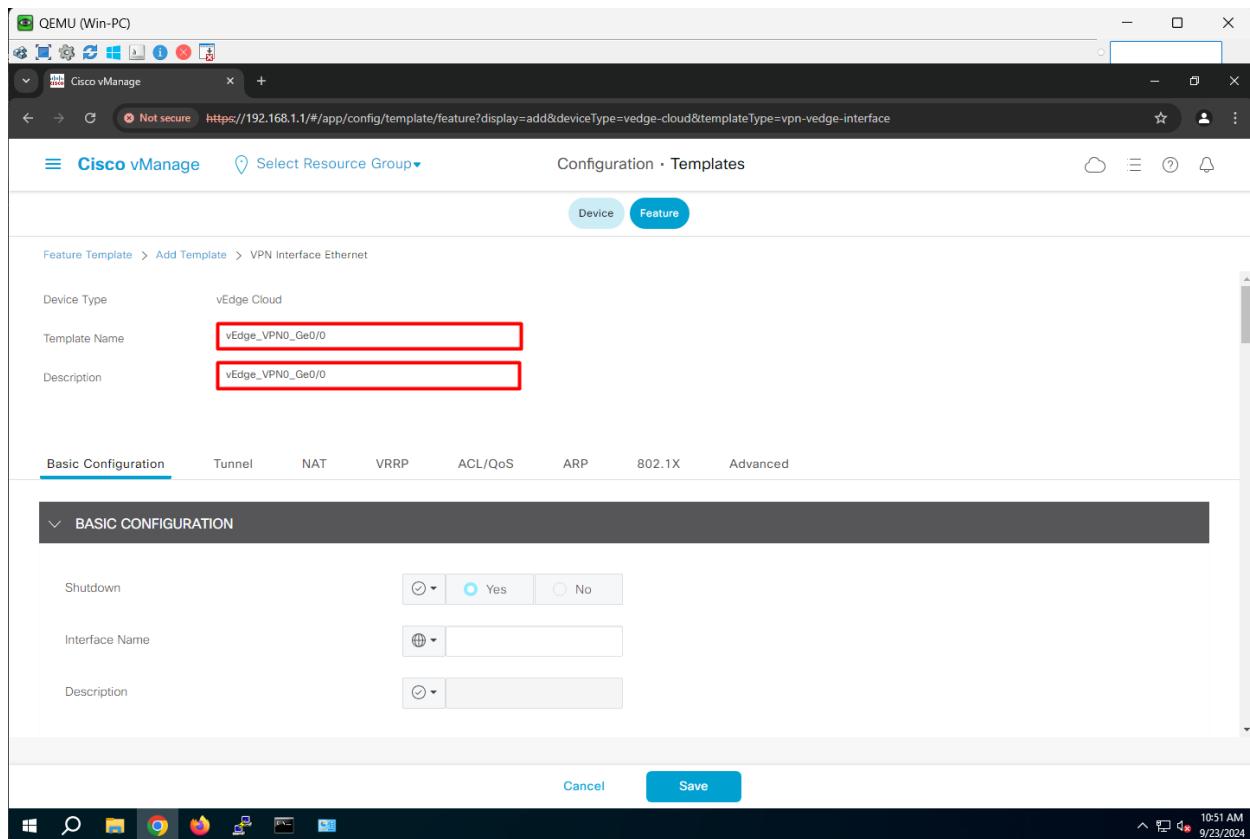
The screenshot shows the Cisco vManage web interface. The user has completed the configuration of the IPv4 route and is now at the confirmation step. The 'Save' button at the bottom right of the dialog box is highlighted with a red box.

Chọn vào Add Template

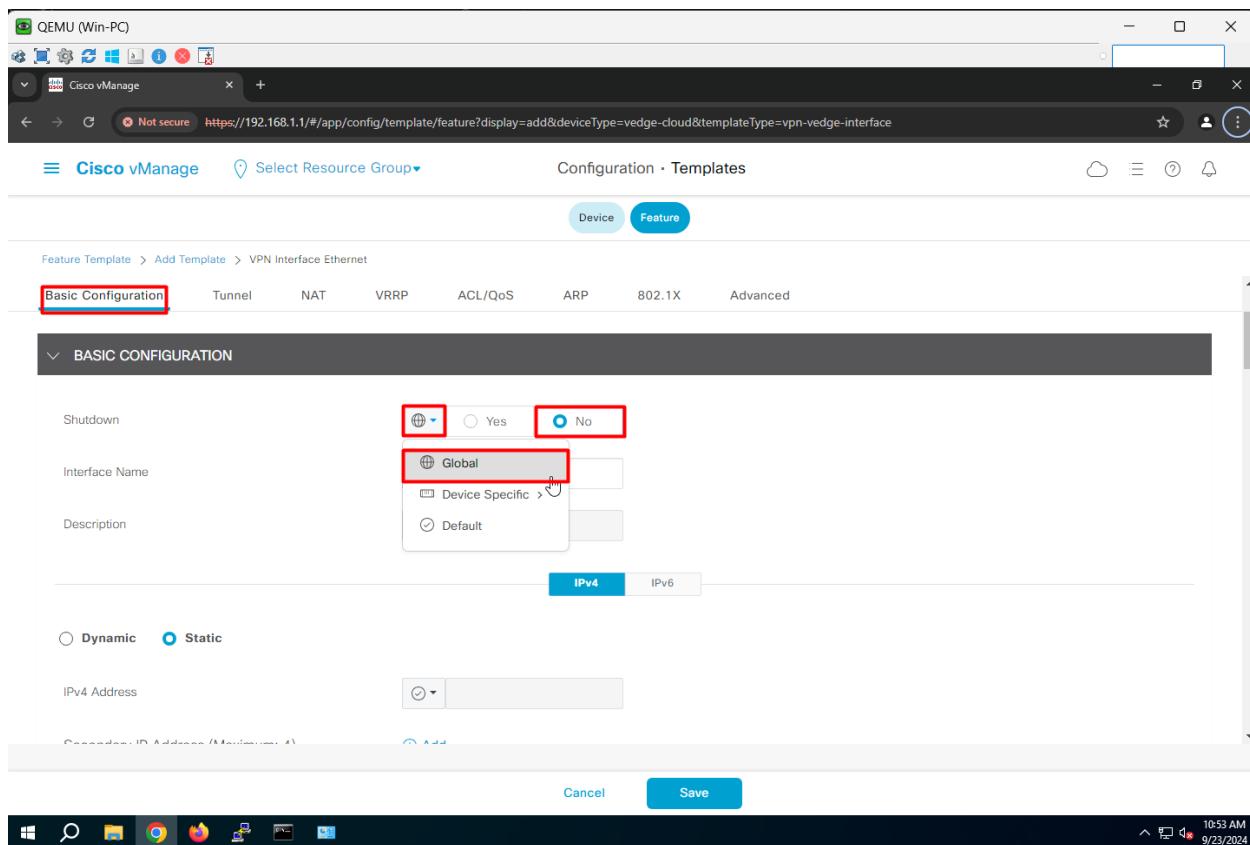
Kéo xuống và chọn vào vEdge và chọn vào VPN Interface Ethernet



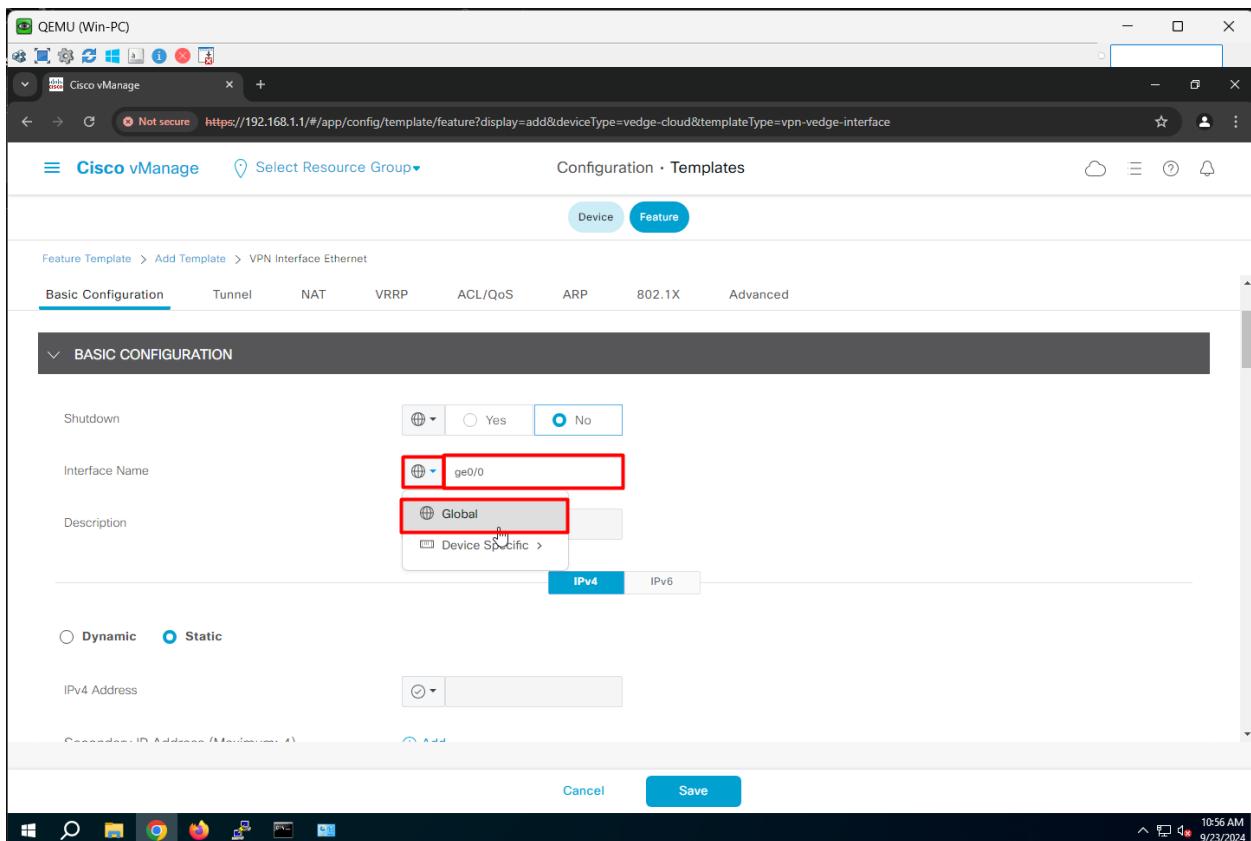
Điền Template Name: vEdge_VPN0_Ge0/0 và Description: vEdge_VPN0_Ge0/0



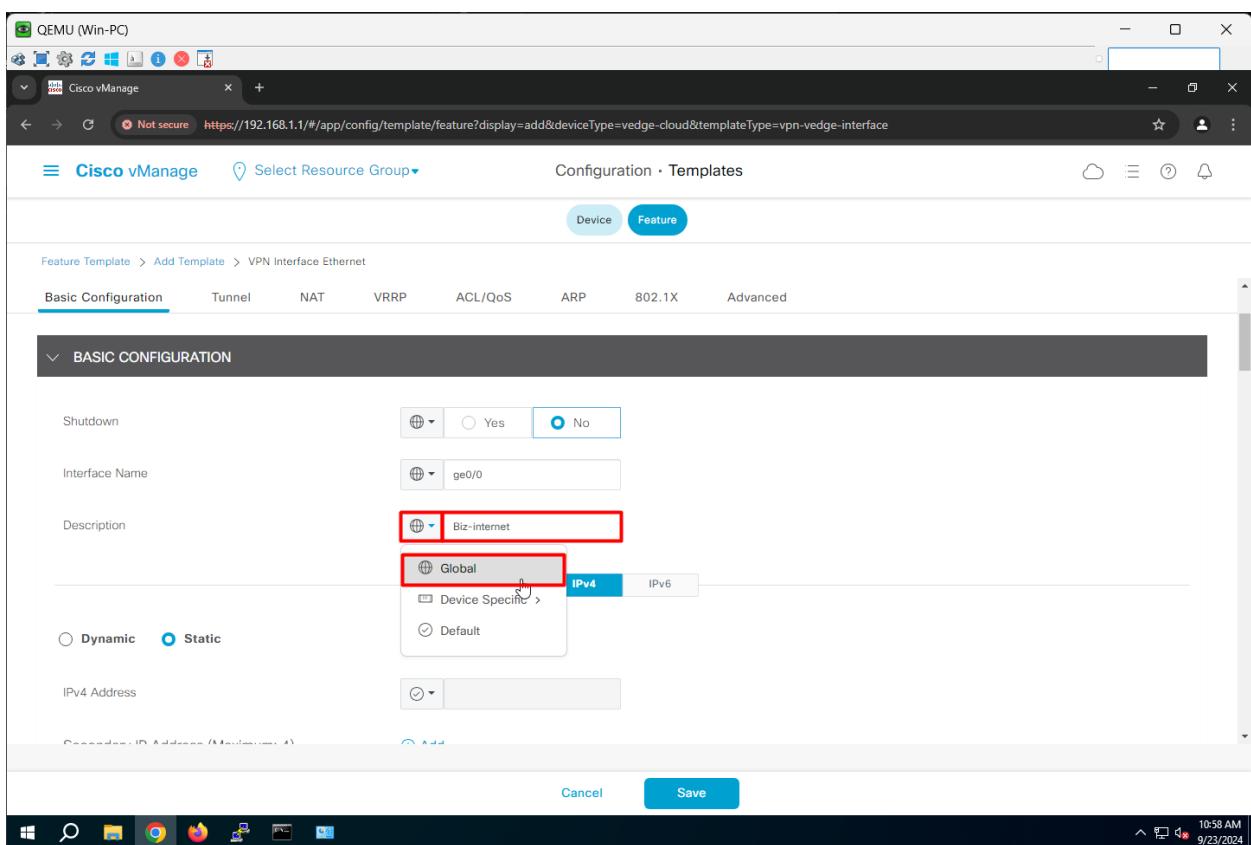
Ở phần Basic Configuration: Phần Shutdown chọn vào Global và chọn vào No



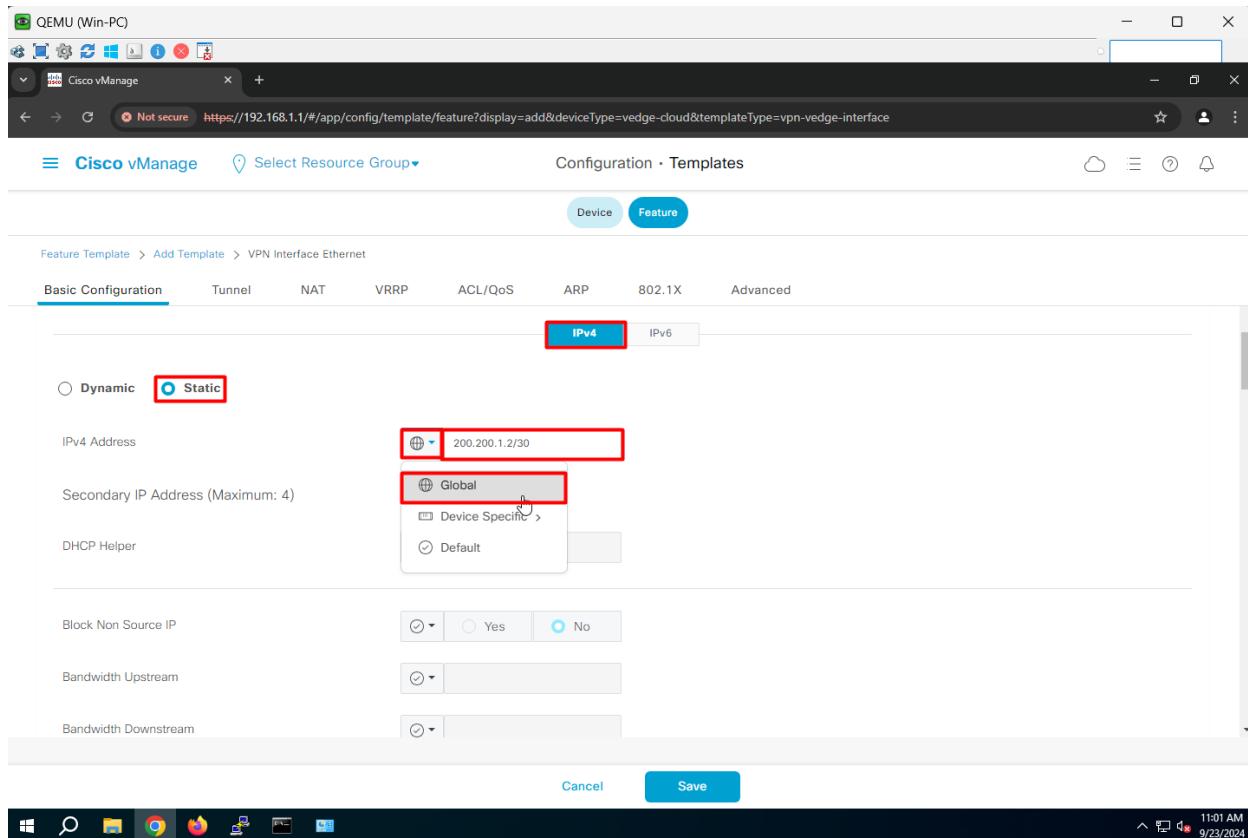
Ở phần interface name chọn vào Global và ge0/0



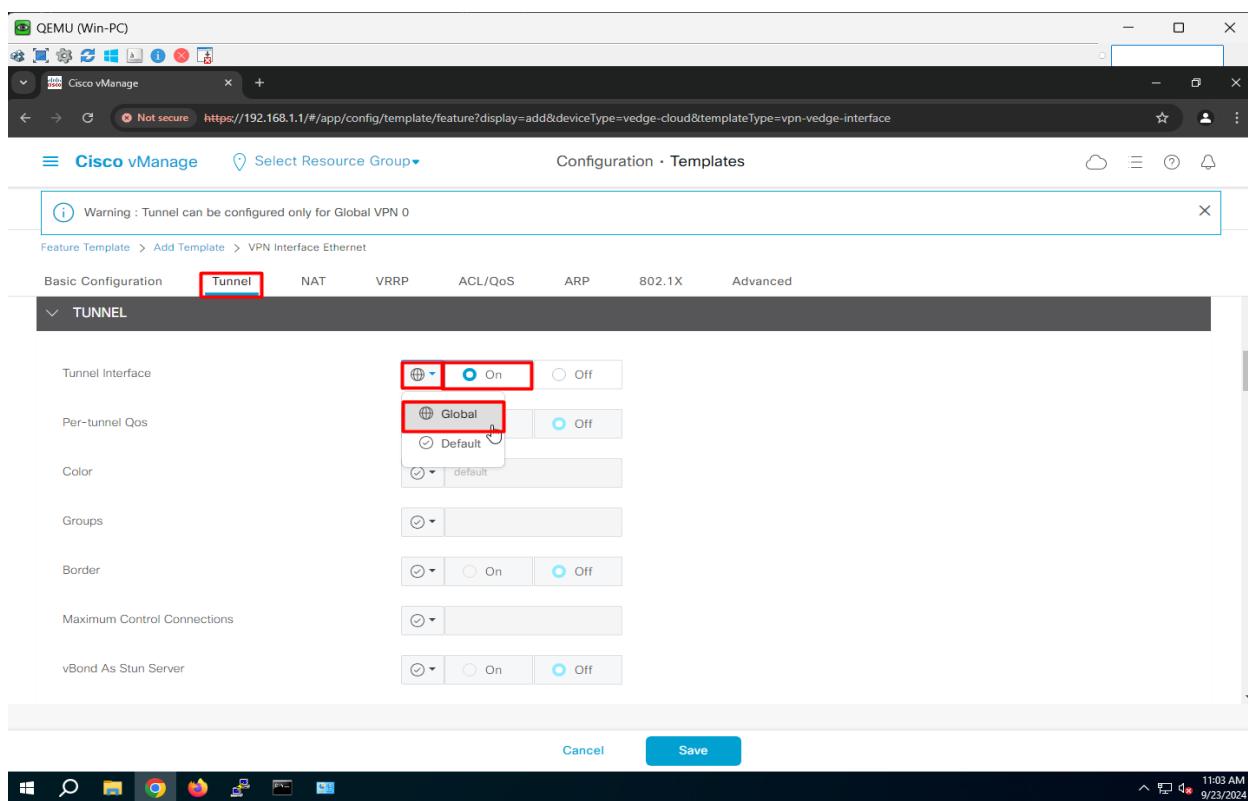
Ở phần Description chọn vào Global và điền description: Biz-Internet



Kéo xuống phần IPv4 chọn vào Static và phần IPv4 Address chọn vào Global và điền IP: 200.200.1.2/30



Tiếp tục kéo xuống tới phần Tunnel: ở tunnel Interface chọn Global chọn vào on



Ở phần Color chọn vào Global và chọn tiếp vào Biz-internet

The screenshot shows the Cisco vManage web interface for configuring a Tunnel template. The 'Tunnel' tab is selected. In the 'Color' section, the dropdown menu is open, showing 'biz-internet' selected. In the 'Restrict' section, the dropdown menu is also open, showing 'Global' selected. Both the 'Color' and 'Restrict' dropdowns are highlighted with red boxes.

Ở phần Allow Service (All) chọn vào Global và chọn tiếp vào On

The screenshot shows the Cisco vManage web interface for configuring a Tunnel template. The 'Tunnel' tab is selected. The 'Allow Service' section is highlighted with a red box. Under the 'All' section, the 'On' radio button is selected and highlighted with a red box. Under the 'BGP' section, the 'Global' radio button is selected and highlighted with a red box. Both the 'All' and 'BGP' sections are highlighted with red boxes.

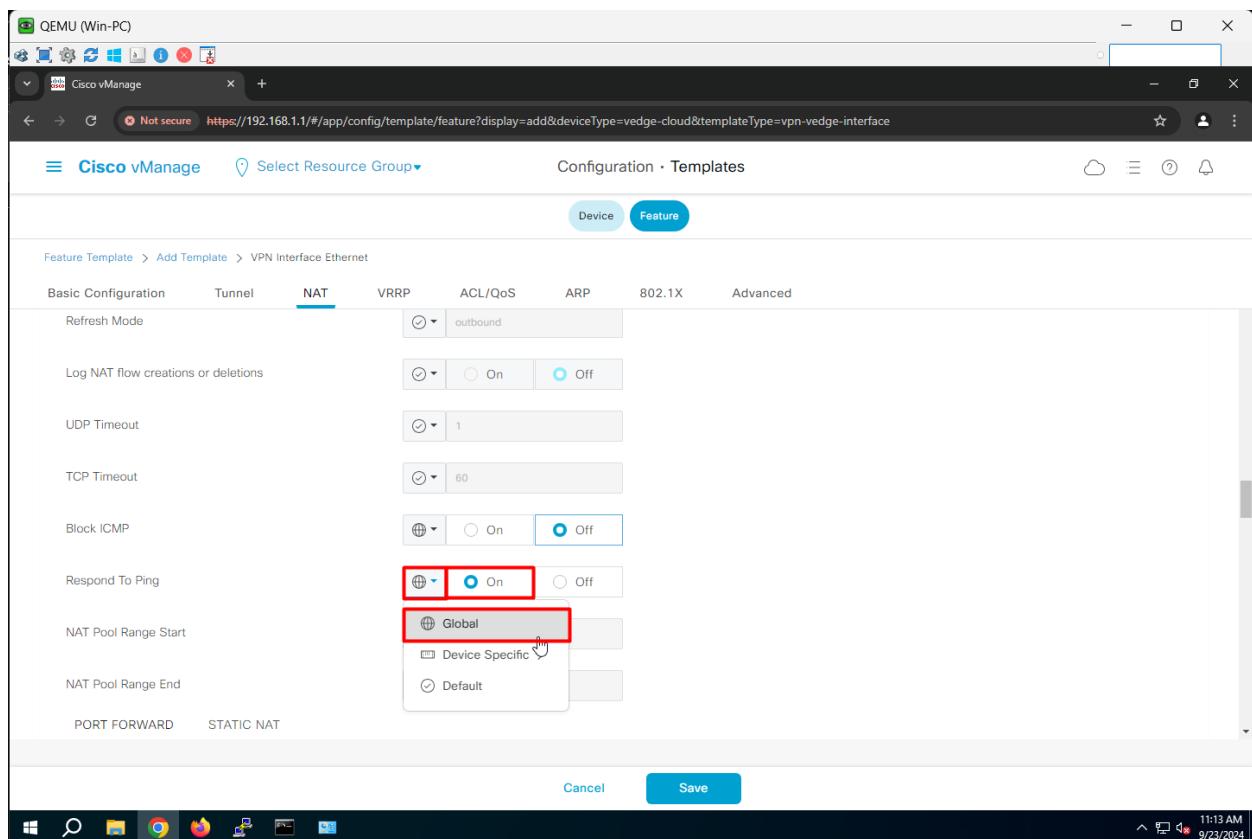
Tiếp tục kéo xuống phần NAT chọn vài Global và chọn vào On

The screenshot shows the Cisco vManage web interface. The URL is https://192.168.1.1/#/app/config/template/feature?display=add&deviceType=vedge-cloud&templateType=vpn-vedge-interface. The 'Cisco vManage' tab is active. In the top navigation bar, there are tabs for 'Device' and 'Feature', with 'Feature' being the active one. Below the navigation, it says 'Configuration · Templates'. The main content area shows a 'Feature Template > Add Template > VPN Interface Ethernet' path. A 'Basic Configuration' tab is selected, followed by 'Tunnel', 'NAT' (which is highlighted with a red box), 'VRRP', 'ACL/QoS', 'ARP', '802.1X', and 'Advanced'. Under the 'NAT' tab, there's a 'NAT' section with a dropdown menu showing 'On' (selected) and 'Off'. Below it is a 'Refresh Mode' dropdown set to 'Global' (highlighted with a red box). Other sections include 'Log NAT flow creations or deletions', 'UDP Timeout', 'TCP Timeout', and 'Block ICMP'. At the bottom right of the configuration window, there are 'Cancel' and 'Save' buttons.

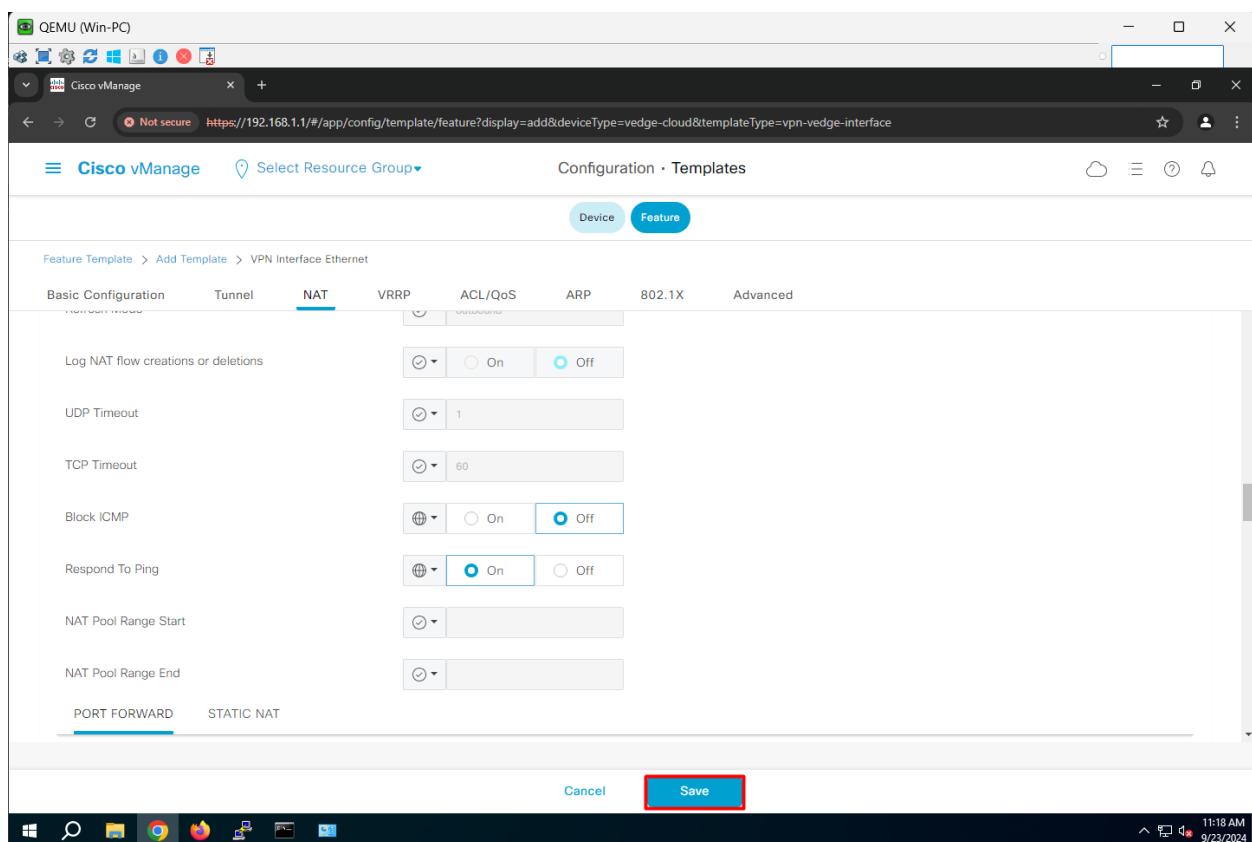
Kéo xuống phần Block ICP tao chọn Global và chọn tiếp vài Off

This screenshot shows the same Cisco vManage interface as the previous one, but with different configuration settings. The 'NAT' tab is still selected. Under the 'IPv4' tab, the 'Block ICMP' section has its dropdown set to 'Off' (highlighted with a red box). The 'Global' dropdown in the same section is also set to 'Off' (highlighted with a red box). Other sections like 'Refresh Mode', 'Log NAT flow creations or deletions', 'UDP Timeout', 'TCP Timeout', and 'Respond To Ping' are visible but not highlighted. The 'Save' button is again at the bottom right.

Ở phần Respond To Ping ta thực hiện chọn vào Global và chọn vào On

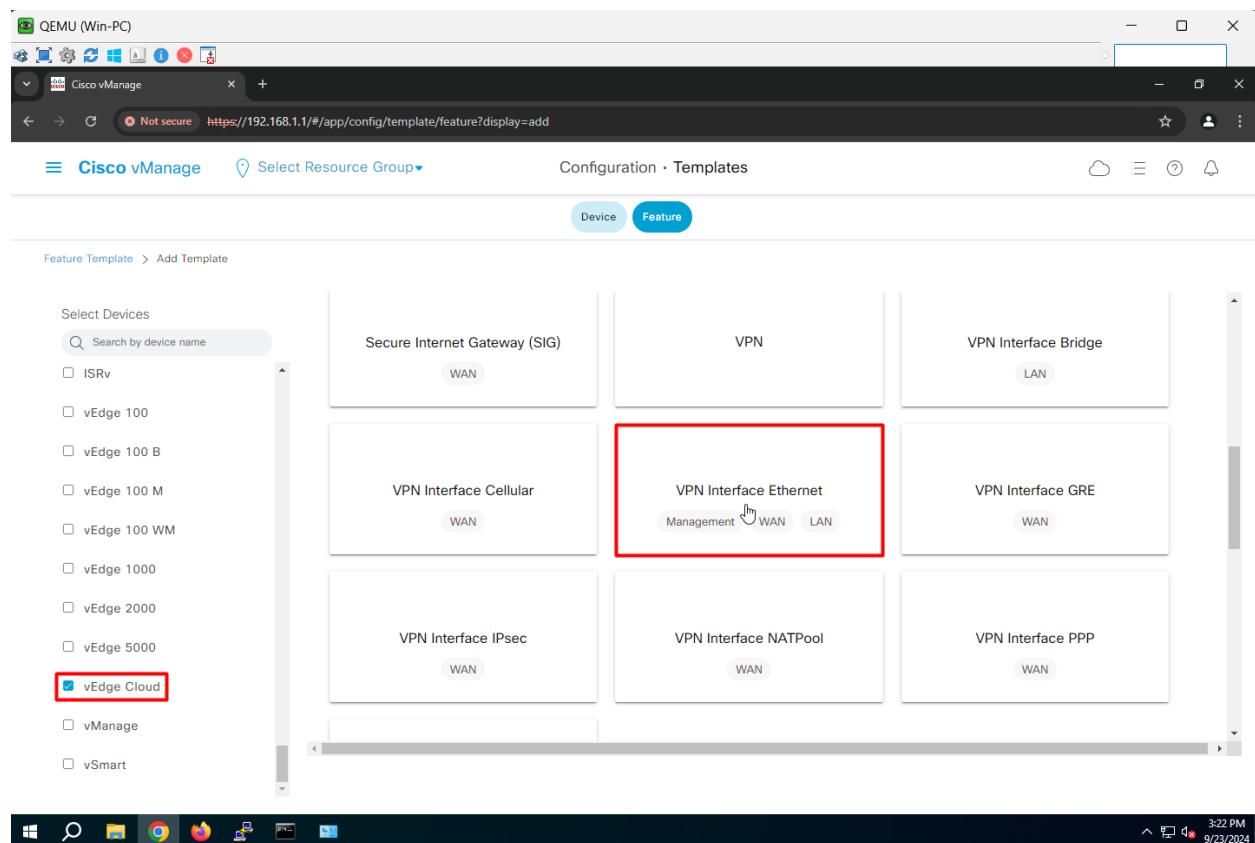


Chọn vào Save để lưu template vEdge_VPN0_Ge0/0



Tiếp tục chọn và Add Template

Kéo xuống chọn vào vEdge cloud và chọn vào VPN Interface Ethernet



The screenshot shows the Cisco vManage web interface. The title bar says "Cisco vManage" and the URL is "https://192.168.1.1/#/app/config/template/feature?display=add". The main area is titled "Configuration - Templates" with tabs for "Device" and "Feature". Under "Feature Template > Add Template", there is a sidebar for "Select Devices" with checkboxes for various Cisco devices, including "vEdge Cloud" which is checked and highlighted with a red box. The main content area displays a grid of template cards. One card, "VPN Interface Ethernet", is also highlighted with a red box. Other cards include "Secure Internet Gateway (SIG)", "VPN", "VPN Interface Bridge", "VPN Interface Cellular", "VPN Interface IPsec", "VPN Interface NATPool", and "VPN Interface PPP". Each card has a "Management" section with "WAN" and "LAN" buttons.

Điền Template Name: vEdge_VPN0_Ge0/1 và Description: vEdge_VPN0_Ge0/1

Device Type: vEdge Cloud

Template Name: vEdge_VPN0_Ge0/1

Description: vEdge_VPN0_Ge0/1

Basic Configuration Tunnel NAT VRRP ACL/QoS ARP 802.1X Advanced

BASIC CONFIGURATION

Shutdown: Yes

Interface Name: Global

Description: Default

Cancel Save

Ở phần Basic Configuration: Shutdown chọn vào Global và chọn vào No

Basic Configuration Tunnel NAT VRRP ACL/QoS ARP 802.1X Advanced

BASIC CONFIGURATION

Shutdown: Global

Interface Name: Global

Description: Default

IPv4 IPv6

Dynamic Static

IPv4 Address: (empty)

Cancel Save

Ở phần IPv4 chọn vào Static và tiếp tục chọn vào Global và điền IP: 172.16.1.1/24

The screenshot shows the Cisco vManage interface for configuring a Feature Template. The 'Basic Configuration' tab is selected. Under the 'IPv4' tab, the 'Static' radio button is selected. In the 'Secondary IP Address' section, the 'Global' radio button is selected. The IP address 172.16.1.1/24 is entered. The 'Save' button is visible at the bottom.

Ở Phần Tunnel: Tunnel Interface chọn vào Global và chọn và

The screenshot shows the Cisco vManage interface for configuring a Feature Template. The 'Tunnel' tab is selected. Under the 'Tunnel Interface' section, the 'On' radio button is selected. Under the 'Per-tunnel QoS' section, the 'Global' radio button is selected. The 'Save' button is visible at the bottom.

Ở Phần Tunnel: Color chọn vào Global và chọn mpls

The screenshot shows the Cisco vManage web interface for configuring a Feature Template. The 'Tunnel' tab is selected under 'Basic Configuration'. In the 'TUNNEL' section, the 'Color' dropdown is set to 'mpls' (highlighted with a red box). Below it, the 'Restrict' dropdown is set to 'Global' (also highlighted with a red box), which has a tooltip 'Device Specific >'. Other settings like 'Tunnel Interface' (On), 'Per-tunnel QoS' (Off), 'Groups' (Default), and 'Border' (Off) are also visible.

Ở Phần Tunnel: Allow Service chọn vào Global và chọn vào On

The screenshot shows the Cisco vManage web interface for configuring a Feature Template. The 'Tunnel' tab is selected under 'Basic Configuration'. In the 'Allow Service' section, the 'All' dropdown is set to 'On' (highlighted with a red box). Below it, the 'BGP' dropdown is set to 'Global' (highlighted with a red box), which has a tooltip 'Device Specific >'. Other service options like 'DNS', 'ICMP', 'NETCONF', and 'NTP' have their 'On' radio buttons selected. The 'DHCP' and 'NETCONF' sections show 'Off' selected.

Ở phần Tunnel: Restrict chọn vào Global và chọn vào On

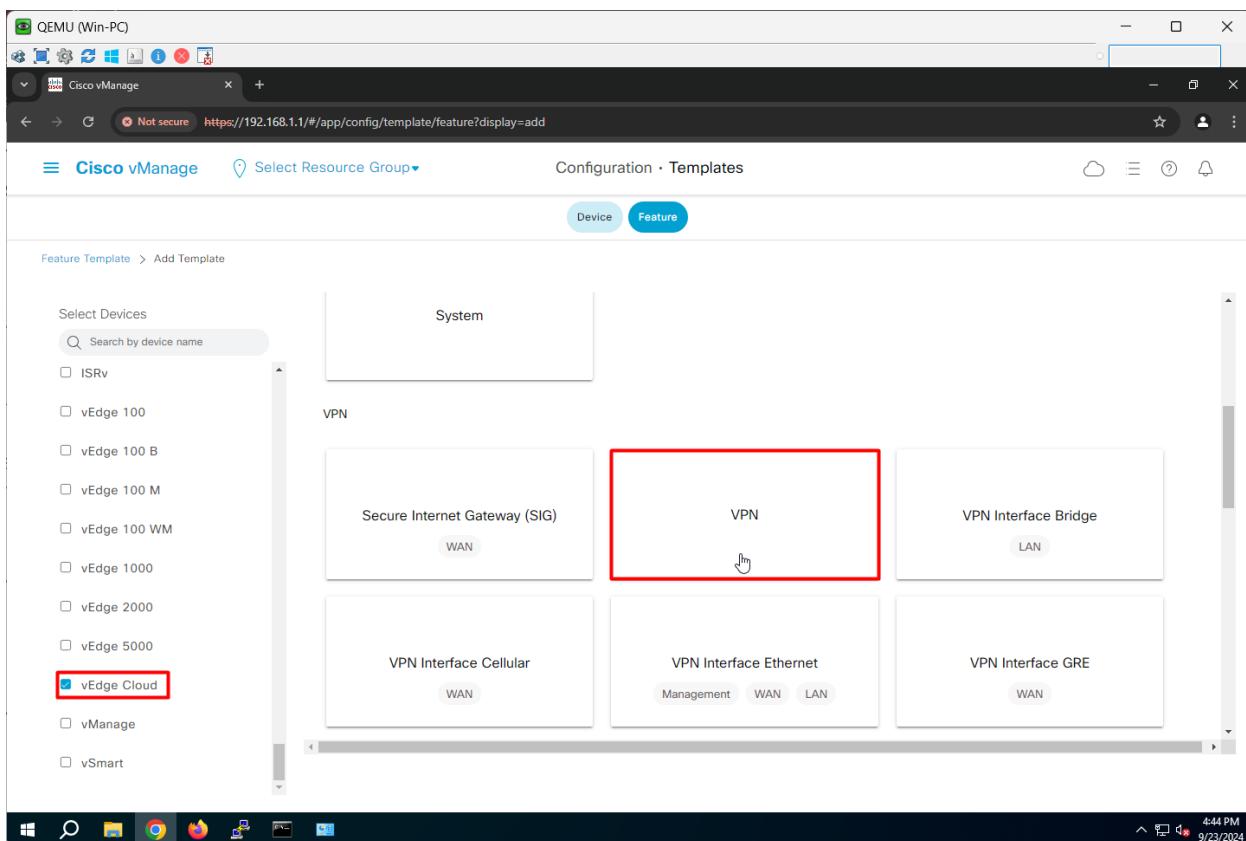
The screenshot shows the Cisco vManage web interface for configuring a Feature Template. The URL is https://192.168.1.1/#/app/config/template/feature?display=add&deviceType=vedge-cloud&templateType=vpn-vedge-interface. The 'Tunnel' tab is active. In the 'Restrict' section, the 'On' radio button is selected. Below it, the 'Global' option is also highlighted with a red box.

Chọn vào Save để lưu Template vEdge_VPN0_Ge0/1

The screenshot shows the Cisco vManage web interface for configuring a Feature Template. The URL is https://192.168.1.1/#/app/config/template/feature?display=add&deviceType=vedge-cloud&templateType=vpn-vedge-interface. The 'Save' button at the bottom right is highlighted with a red box.

Chọn vào Add Template

Kéo xuống và chọn vào vEdge Cloud và chọn vào VPN



Điền Template Name: vEdge_VPN512 và Description: vEdge_VPN512

The screenshot shows the Cisco vManage web interface for creating a Feature Template. The 'Device' tab is selected. In the 'Templates' section, a new template is being created with the following details:

- Device Type:** vEdge Cloud
- Template Name:** vEdge_VPN512 (highlighted with a red box)
- Description:** vEdge_VPN512 (highlighted with a red box)

The 'Basic Configuration' tab is selected. Under the 'BASIC CONFIGURATION' section, the 'VPN' field contains the value '512'. Other fields like 'Name' and 'Enhance ECMP Keying' are present but not highlighted.

Ở Phản Basic Configuration điền vào VPN: 512

The screenshot shows the Cisco vManage web interface for creating a Feature Template. The 'Device' tab is selected. In the 'Templates' section, a new template is being created with the following details:

- Device Type:** vEdge Cloud
- Template Name:** 512 (highlighted with a red box)
- Description:** (empty)

The 'Basic Configuration' tab is selected. Under the 'BASIC CONFIGURATION' section, the 'VPN' field contains the value '512'. Other fields like 'Name', 'Enhance ECMP Keying', 'Enable TCP Optimization', and 'OMP Admin Distance IPv4' are present but not highlighted.

Ở phần Basic Configuration: Name chọn vào Global và điền Name: MGMT

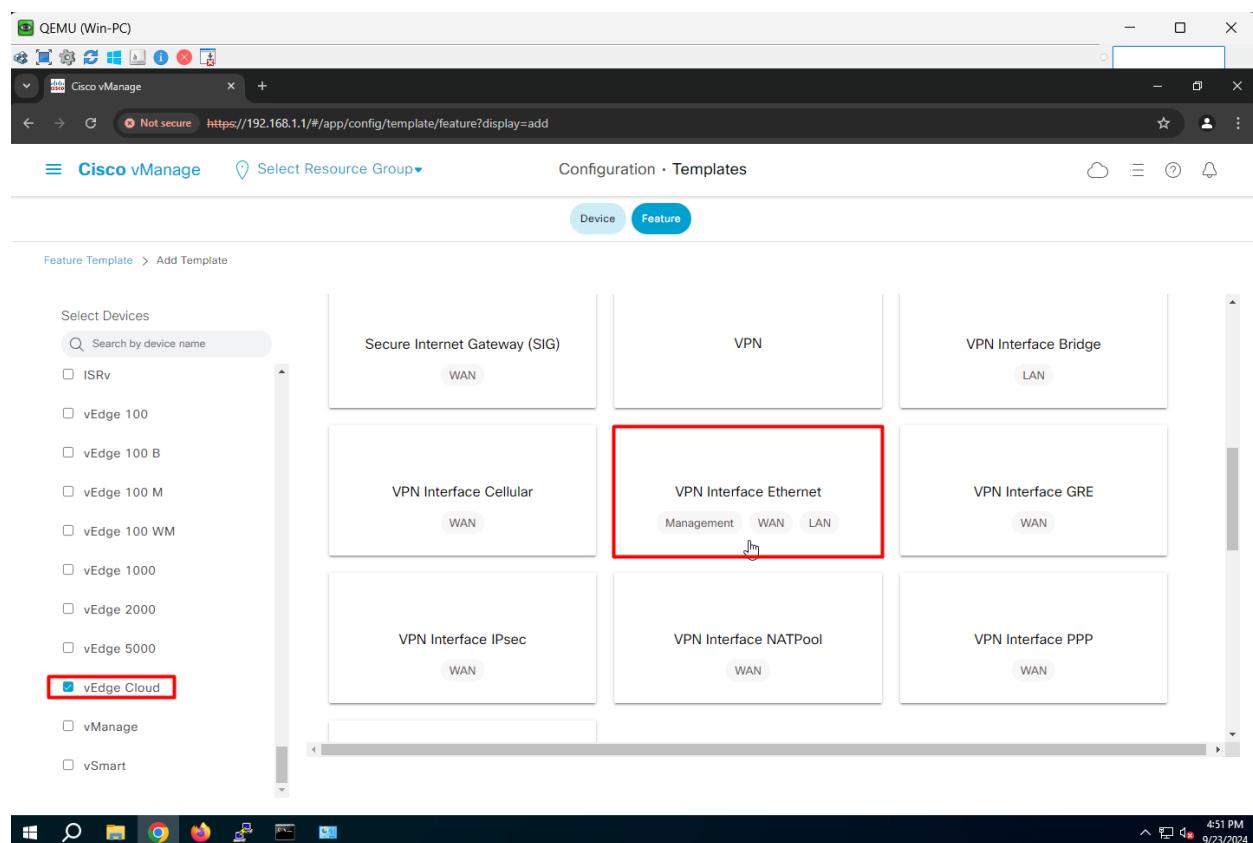
The screenshot shows the Cisco vManage interface for configuring a Feature Template. The 'Basic Configuration' tab is selected under the 'VPN' category. The 'Name' field is set to 'MGMT'. In the 'Enhance ECMP Keying' section, the 'Global' option is selected from a dropdown menu, which is highlighted with a red box. Other options shown are 'Device Specific' and 'Default'. The 'Save' button is located at the bottom right of the configuration dialog.

Chọn vào Save để lưu Template vEdge_VPN512

The screenshot shows the Cisco vManage interface for configuring a Feature Template. The 'Basic Configuration' tab is selected under the 'VPN' category. The 'Name' field is set to 'MGMT'. In the 'Enhance ECMP Keying' section, the 'Off' option is selected from a dropdown menu. The 'Save' button is located at the bottom right of the configuration dialog and is highlighted with a red box.

Chọn vào Add Tempalte

Kéo xuống chọn vào vEdge Cloud và chọn vào VPN Interface Ethernet



Điền Template Name : vEdge_VPN512_eth0 và Description: vEdge_VPN512_eth0

The screenshot shows the Cisco vManage web interface. The URL is https://192.168.1.1/#/app/config/template/feature?display=add&deviceType=vedge-cloud&templateType=vpn-vedge-interface. The page title is "Configuration · Templates". Under "Feature Template > Add Template > VPN Interface Ethernet", the "Device Type" is set to "vEdge Cloud". The "Template Name" and "Description" fields both contain the value "vEdge_VPN512_eth0", which is highlighted with a red box. Below the form, there are tabs for "Basic Configuration", "Tunnel", "NAT", "VRRP", "ACL/QoS", "ARP", "802.1X", and "Advanced". The "Basic Configuration" tab is selected. A "BASIC CONFIGURATION" section is expanded, showing fields for "Shutdown" (radio buttons for "Yes" and "No"), "Interface Name" (dropdown menu), and "Description" (dropdown menu). At the bottom right are "Cancel" and "Save" buttons.

Ở phần Basic Configuration: Shutdown chọn vào Global và chọn No

This screenshot continues from the previous one, showing the "Basic Configuration" section of the template creation. The "Shutdown" field has a dropdown menu open, with "Global" selected and highlighted with a red box. The "No" radio button next to "Global" is also highlighted with a red box. Below the dropdown, there are other fields: "Interface Name" (dropdown menu) and "Description" (dropdown menu). At the bottom, there are tabs for "IPv4" and "IPv6", with "IPv4" selected. Below the tabs, there are radio buttons for "Dynamic" and "Static", with "Static" selected. The "IPv4 Address" field is empty. At the bottom right are "Cancel" and "Save" buttons.

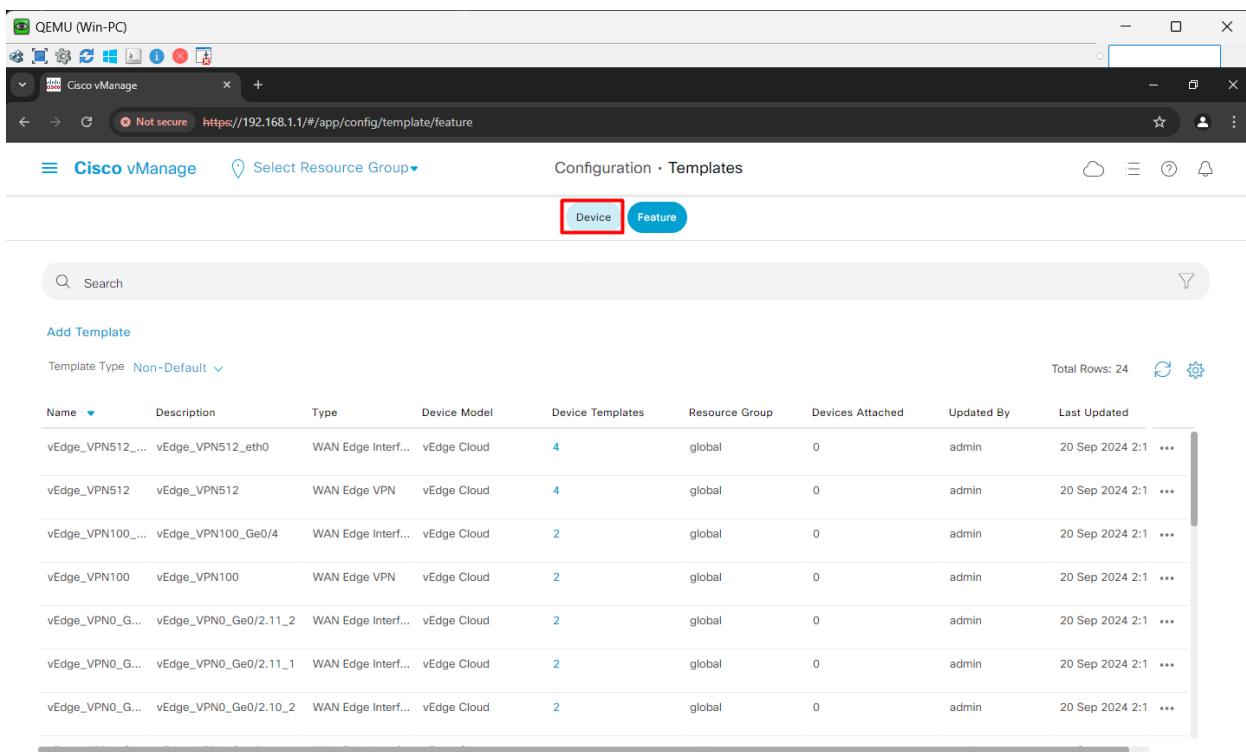
Ở phần Basic Configuration: Interface name: chọn vào Global và chọn eth0

The screenshot shows the Cisco vManage web interface for creating a Feature Template. The 'Basic Configuration' tab is selected. In the 'Interface Name' field, 'eth0' is entered. In the 'Description' dropdown, 'Global' is selected. The 'IPv4' tab is highlighted.

Chọn vào Save để lưu Template vEdge_VPN512_eth0

The screenshot shows the continuation of the Feature Template creation process. The 'Template Name' field contains 'vEdge_VPN512_eth0'. The 'Description' field also contains 'vEdge_VPN512_eth0'. The 'Save' button at the bottom right is highlighted with a red box.

Chọn vào Device

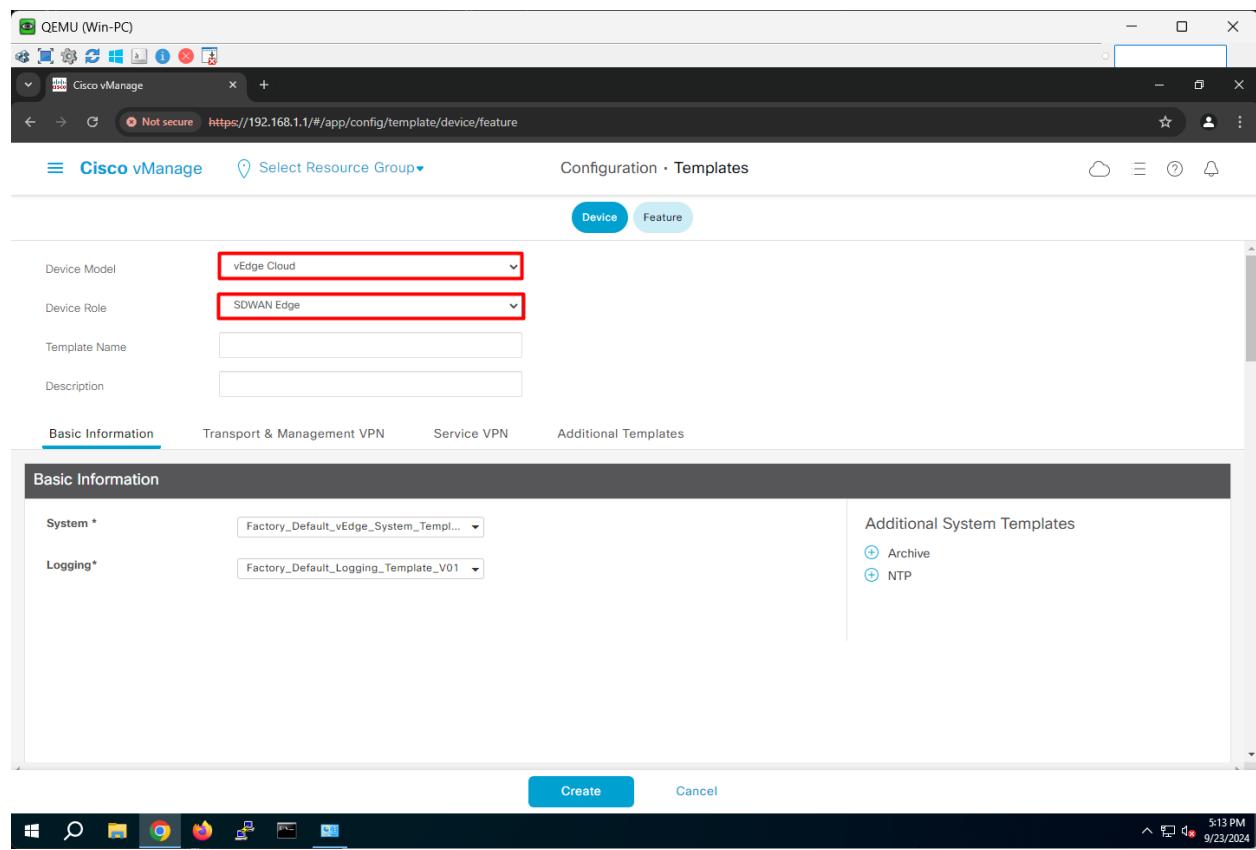


The screenshot shows the Cisco vManage web interface. The title bar reads "Cisco vManage" and the URL is "https://192.168.1.1/#/app/config/template/feature". The navigation bar has two tabs: "Device" (which is highlighted with a red box) and "Feature". Below the navigation bar is a search bar with the placeholder "Search". A table lists various device templates, including their names, descriptions, types, device models, device template counts, resource groups, devices attached, updated by, and last updated dates. The table has columns for Name, Description, Type, Device Model, Device Templates, Resource Group, Devices Attached, Updated By, and Last Updated.

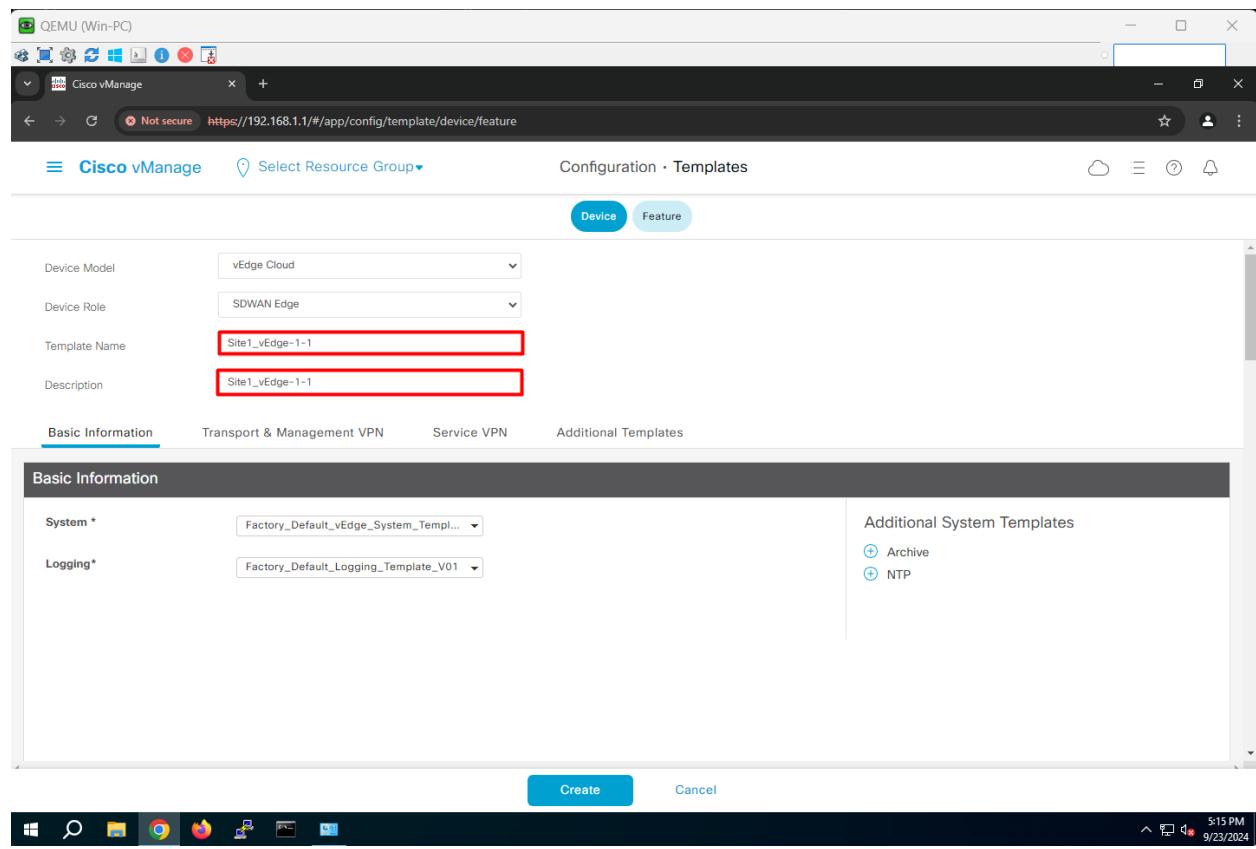
Name	Description	Type	Device Model	Device Templates	Resource Group	Devices Attached	Updated By	Last Updated
vEdge_VPN512....	vEdge_VPN512_eth0	WAN Edge Interf...	vEdge Cloud	4	global	0	admin	20 Sep 2024 2:1
vEdge_VPN512	vEdge_VPN512	WAN Edge VPN	vEdge Cloud	4	global	0	admin	20 Sep 2024 2:1
vEdge_VPN100....	vEdge_VPN100_Ge0/4	WAN Edge Interf...	vEdge Cloud	2	global	0	admin	20 Sep 2024 2:1
vEdge_VPN100	vEdge_VPN100	WAN Edge VPN	vEdge Cloud	2	global	0	admin	20 Sep 2024 2:1
vEdge_VPN0_G...	vEdge_VPN0_Ge0/2.11_2	WAN Edge Interf...	vEdge Cloud	2	global	0	admin	20 Sep 2024 2:1
vEdge_VPN0_G...	vEdge_VPN0_Ge0/2.11_1	WAN Edge Interf...	vEdge Cloud	2	global	0	admin	20 Sep 2024 2:1
vEdge_VPN0_G...	vEdge_VPN0_Ge0/2.10_2	WAN Edge Interf...	vEdge Cloud	2	global	0	admin	20 Sep 2024 2:1

Chọn Vào Create Template và chọn vào From Feature Template

Ở Device Model chọn vào vEdge Cloud và Service Role chọn vào SDWAN vEdge



Điền Template Name: Site1_vEdge-1-1 và Description : Site1_vEdge-1-1



Kéo xuống phần AAA chọn vào vEdge_AAA

The screenshot shows the Cisco vManage web interface. The URL is https://192.168.1.1/#/app/config/template/device/feature. The 'Basic Information' tab is selected. In the 'AAA' section, there is a dropdown menu for 'AAA Template' currently set to 'Factory_Default_AAA_Template'. Below it, a list shows 'None' and 'Factory_Default_AAA_Template', with 'vEdge_AAA' highlighted with a red box. To the right, there is a 'BFD' section with a dropdown set to 'Factory_Default_BFD_Template_V01'. A large 'Create' button is visible at the bottom.

Kéo xuống phần Transport & Management VPN: VPN0 chọn vào vEdge_VPN0

The screenshot shows the Cisco vManage web interface. The URL is https://192.168.1.1/#/app/config/template/device/feature. The 'Transport & Management VPN' tab is selected. In the 'VPN 0' section, there is a dropdown menu for 'VPN 0 Template' currently set to 'Factory_Default_vEdge_VPN_0_Template...'. Below it, a list shows 'Factory_Default_vEdge_VPN_0_Template...' and 'vEdge_VPN0', with 'vEdge_VPN0' highlighted with a red box. To the right, there are two sections: 'Additional VPN 0 Templates' and 'Additional VPN 512 Templates', each listing various network features like BGP, OSPF, and Secure Internet Gateway. A large 'Create' button is visible at the bottom.

Ở phần Transport & Management VPN: VPN 0 chọn vào VPN Interface

The screenshot shows the Cisco vManage web interface. The URL is https://192.168.1.1/#/app/config/template/device/feature. The navigation bar includes 'Cisco vManage', 'Select Resource Group', 'Configuration · Templates', 'Device', and 'Feature'. The main menu has tabs for 'Basic Information', 'Transport & Management VPN', 'Service VPN', and 'Additional Templates'. The 'Transport & Management VPN' tab is active. A sub-menu titled 'Transport & Management VPN' shows 'VPN 0 *' and 'VPN 512 *'. On the right, under 'Additional VPN 0 Templates', the 'VPN Interface' option is highlighted with a red box. Other options include BGP, OSPF, Secure Internet Gateway, and various VPN interface types like Cellular, GRE, IPsec, and PPP.

Ở phần Transport & Management VPN: VPN interface chọn vào vEdge_VPN0_Ge0/1

This screenshot continues from the previous one, showing the configuration of a Transport & Management VPN template for 'VPN 0 *'. The 'Transport & Management VPN' tab is still active. In the 'VPN Interface' dropdown, the option 'vEdge_VPN0_Ge0/1' is selected and highlighted with a red box. A tooltip or context menu is visible over this option, also showing 'vEdge_VPN0_Ge0/1'. The 'Additional VPN 0 Templates' list on the right remains the same as in the previous screenshot.

Ở phần Transport & Management VPN: VPN512 chọn vào vEdge_VPN512

The screenshot shows the Cisco vManage web interface. The URL is https://192.168.1.1/#/app/config/template/device/feature. The 'Transport & Management VPN' tab is selected. In the main area, there is a dropdown menu labeled 'Factory_Default_vEdge_VPN_512_Template...' which has 'vEdge_VPN512' selected. This selection is highlighted with a red rectangle. To the right, there is a list of additional VPN 512 templates, with 'VPN Interface' also highlighted with a red rectangle.

Chọn vào VPN interface

The screenshot shows the same Cisco vManage interface as the previous one, but now the 'Additional VPN 512 Templates' section is visible. The 'VPN Interface' option is highlighted with a red rectangle. The bottom part of the screen shows a table with columns for ID, Template Name, and Sub-Templates. The 'Create' button is visible at the bottom left of the dialog.

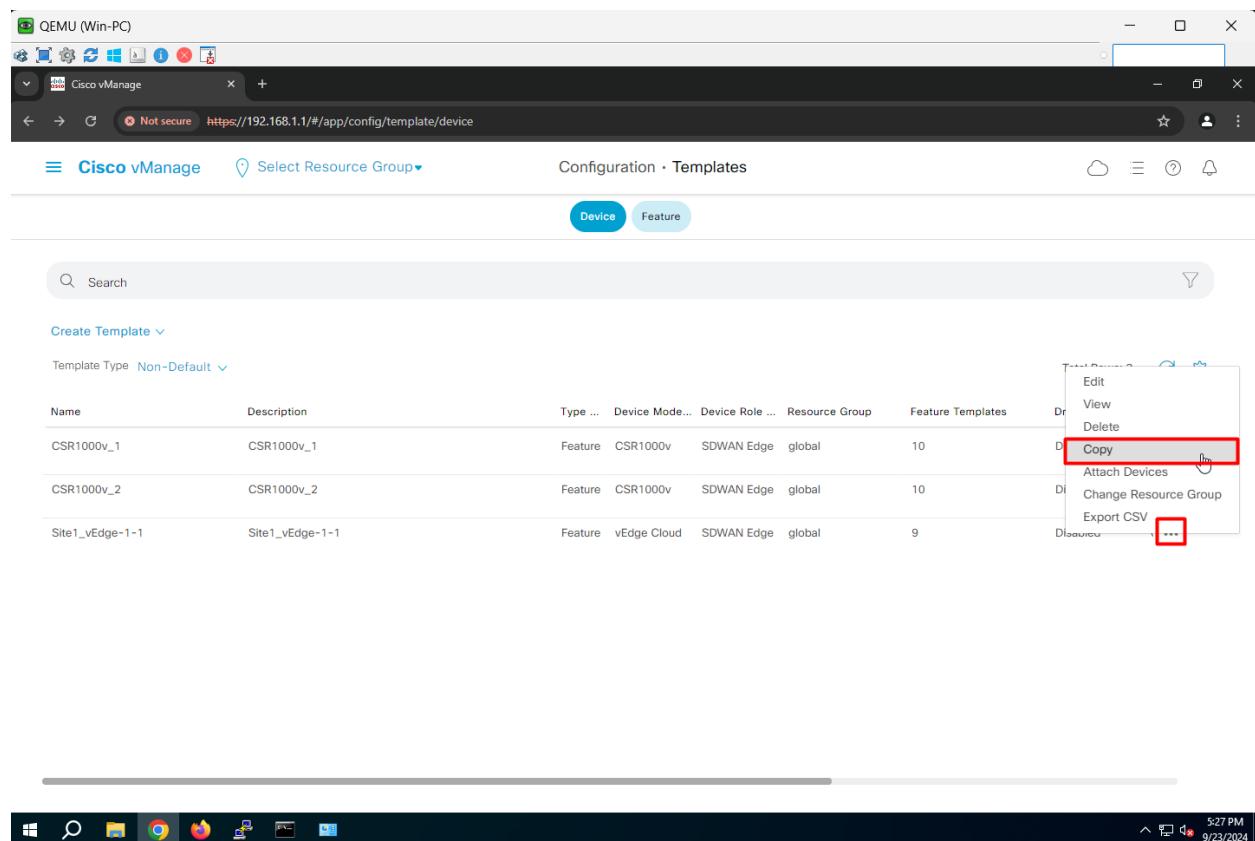
Chọn vào vEdge_VPN512_eth0

The screenshot shows the Cisco vManage web interface. The user is navigating through the 'Configuration > Templates' section under the 'Transport & Management VPN' tab. In the 'Service VPN' section, there is a dropdown menu labeled 'VPN Interface'. A red box highlights the option 'vEdge_VPN512_eth0' in the dropdown list. To the right of the dropdown, a tooltip-like box displays the same option. Below the dropdown, there is a search bar and buttons for 'Create Template' and 'View Template'. At the bottom of the screen, there is a Windows taskbar with icons for various applications and a system tray showing the date and time.

Chọn vào Create

The screenshot shows the Cisco vManage web interface. The user is navigating through the 'Configuration > Templates' section under the 'Transport & Management VPN' tab. In the 'Transport & Management VPN' section, there is a dropdown menu labeled 'VPN 0'. A red box highlights the option 'vEdge_VPN0_Ge0/1' in the dropdown list. To the right of the dropdown, a tooltip-like box displays the same option. Below the dropdown, there is a search bar and buttons for 'Create Template' and 'View Template'. At the bottom of the screen, there is a Windows taskbar with icons for various applications and a system tray showing the date and time.

Chọn vào dấu 3 chấm và chọn vào copy



The screenshot shows the Cisco vManage web interface. In the center, there is a table listing templates. The first row, 'CSR1000v_1', has its details visible: Type: Feature, Device Mode: CSR1000v, Device Role: SDWAN Edge, Resource Group: global, Feature Templates: 10. To the right of this row is a context menu with several options: Edit, View, Delete, Copy, Attach Devices, Change Resource Group, and Export CSV. The 'Copy' option is highlighted with a red box. Below the table, there is a search bar and a 'Create Template' dropdown. At the bottom of the screen, a Windows taskbar is visible with icons for File Explorer, Google Chrome, and others.

Sửa Template Name: Site1_vEdge-1-2 và Description: Site1_vEdge-1-2

Template Copy

Template Name

Site1_vEdge-1-2

Description

Site1_vEdge-1-2

Copy

Cancel

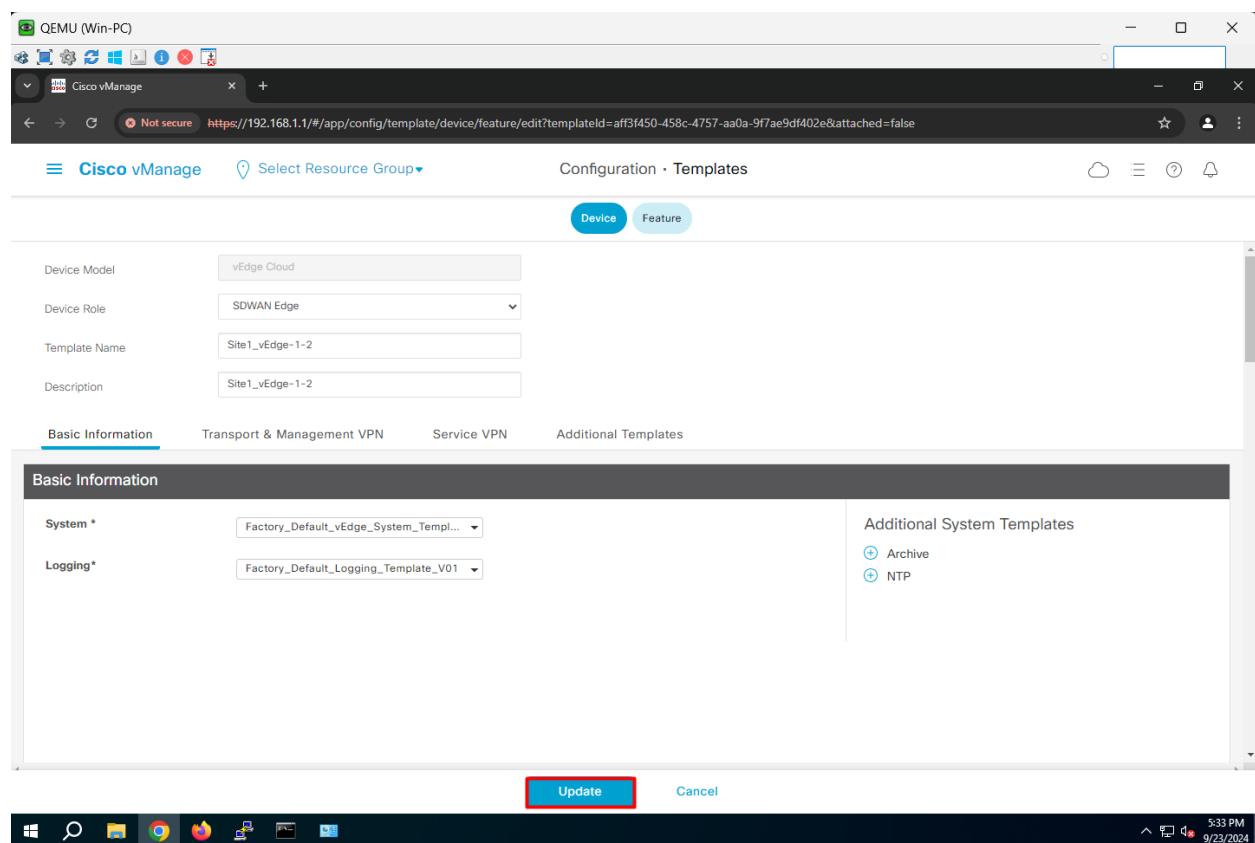
Ở template vừa copy chọn vào dấu ba chấm và chọn Edit

The screenshot shows the Cisco vManage web interface. The URL is https://192.168.1.1/#/app/config/template/device. The page title is "Configuration · Templates". There are two tabs: "Device" (selected) and "Feature". A search bar is at the top. Below is a table with columns: Name, Description, Type ..., Device Mode..., Device Role ..., Resource Group, Feature Templates, and DR. The last column contains actions: Edit (highlighted with a red box), View, Delete, Copy, Attach Devices, Change Resource Group, and Export CSV. A context menu is open over the last row of the table, with "Edit" highlighted and another red box around it.

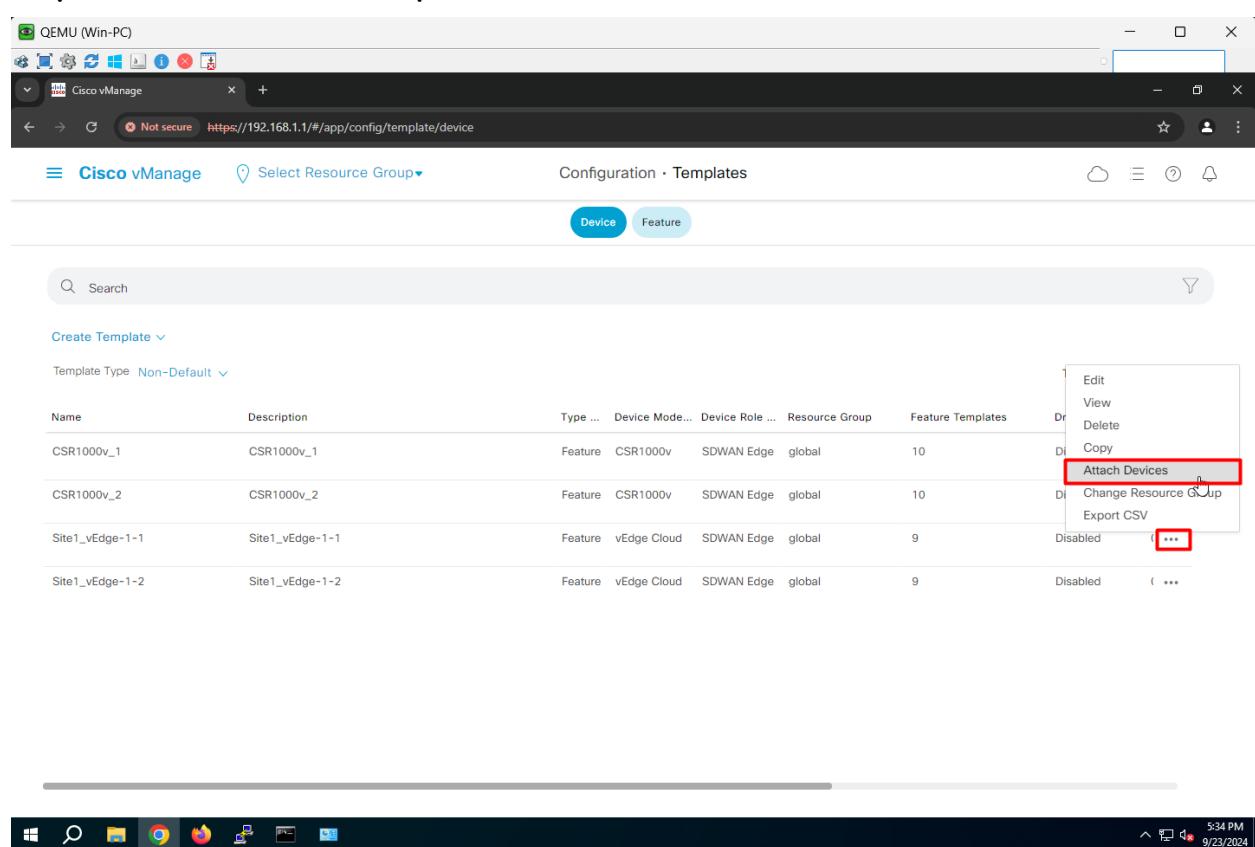
Ở phần Transport & Management VPN: VPN interface chọn vào vEdge_VPN0_Ge0/0

The screenshot shows the Cisco vManage interface with the URL https://192.168.1.1/#/app/config/template/device/feature/edit?templateId=aff3f450-458c-4757-aa0a-9f7ae9df402e&attached=false. The page title is "Configuration · Templates". The "Transport & Management VPN" tab is selected. The left sidebar has tabs: Basic Information, Transport & Management VPN (selected), Service VPN, and Additional Templates. The main area shows the "Transport & Management VPN" configuration. Under "VPN 0", the "VPN Interface" dropdown is open, showing a list of interfaces: Factory_Default_vEdge_DHCP_Tunnel_1, vEdge_VPN0_Ge0/0 (highlighted with a red box), vEdge_VPN0_Ge0/1, vEdge_VPN0_Ge0/2, vEdge_VPN0_Ge0/2.10_1, vEdge_VPN0_Ge0/2.10_2. Below the dropdown are buttons for "Create Template" and "View Template". To the right, there are two sections: "Additional VPN 0 Templates" and "Additional VPN 512 Templates", each listing various VPN interface types. At the bottom are "Update" and "Cancel" buttons.

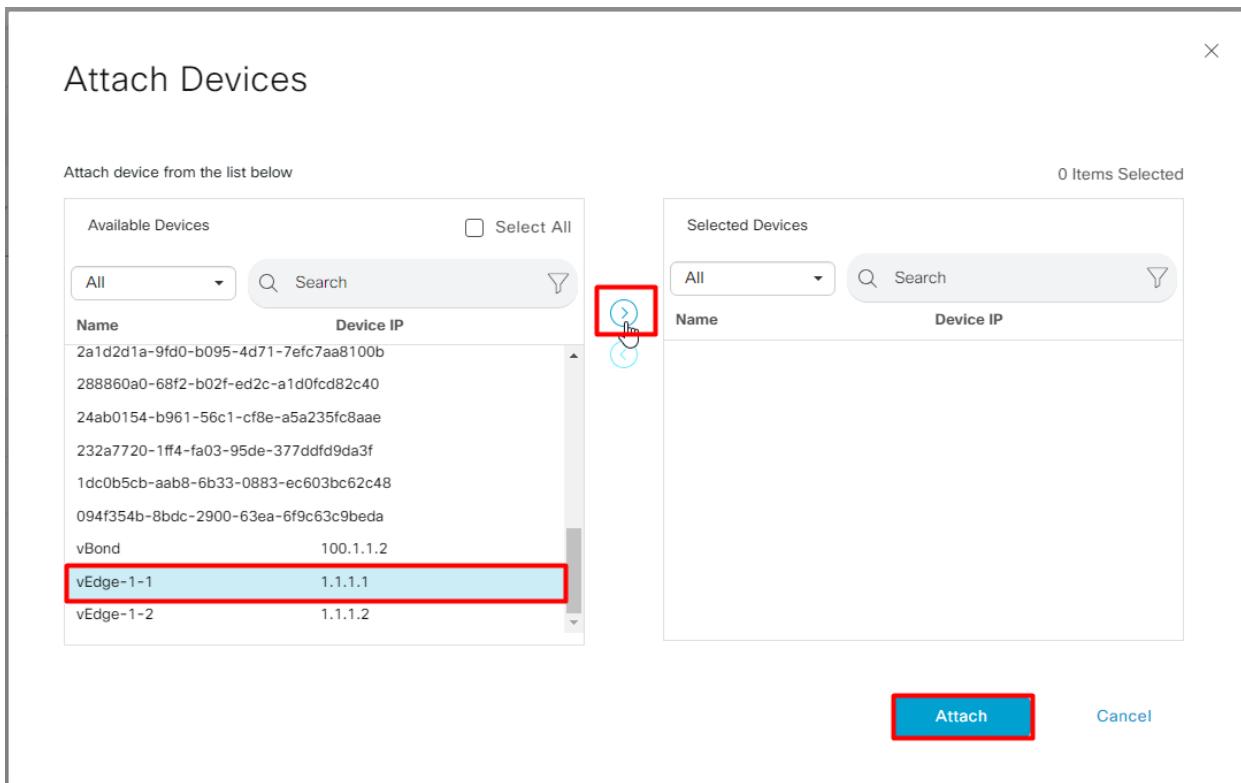
Chọn vào Update



Chọn vào dấu ba chấm và chọn vào Attach Device



Kéo xuống chọn vào vEdge-1-1 và chọn vào dấu mũi tên cuối cùng chọn vào Attach



Chọn vào dấu ba chấm và chọn vào Edite Device Template

S...	Chassis Number	System IP	Hostname	Address(vpn_next_hop_ip_address_0)	Address(vpn_TLOC-EX_next_hop_ip_address_1)	Hc
...	5440ff7e-bea5-3beb-5b46-c51e4a6b6bf6	1.1.1.1	vEdge-1-1			

Điền các thông tin như trên ảnh và chọn vào Update

Update Device Template

×

Variable List (Hover over each field for more information)

Status	in_complete
Chassis Number	5440ff7e-bea5-3beb-5b46-c51e4a6b6bf6
System IP	1.1.1.1
Hostname	vEdge-1-1
Address(vp_nex_hop_ip_address_0)	172.16.1.254
Hostname	Site1_vEdge-1-1
System IP	1.1.1.1
Site ID	1

Generate Password **Update** **Cancel**

Chọn vào Next

QEMU (Win-PC)

Cisco vManage

Not secure https://192.168.1.1/#/app/config/template/device/configure/05fe3393-829b-4248-8a69-cb4421e9dea4

Cisco vManage Select Resource Group Configuration · Templates

Device Template Site1_vEdge-1-1

Status	Chassis Number	System IP	Hostname	Address(vpn_next_hop_ip_address_0)	Hostname	System IP	Site ID
✓	5440ff7e-bea5-3beb-5b46-c51e4a6b6bf6	1.1.1.1	vEdge-1-1	172.16.1.254	Site1_vEdge-1-	1.1.1.1	1 ***

Total Rows: 1

Next Cancel

Chọn vào Configure Device

QEMU (Win-PC)

Cisco vManage

Not secure https://192.168.1.1/#/app/config/template/device/configure/preview/05fe3393-829b-4248-8a69-cb4421e9dea4

Cisco vManage Select Resource Group Configuration · Templates

Device Template Site1_vEdge-1-1 Total 1

Device list (Total: 1 devices)

Filter/Search

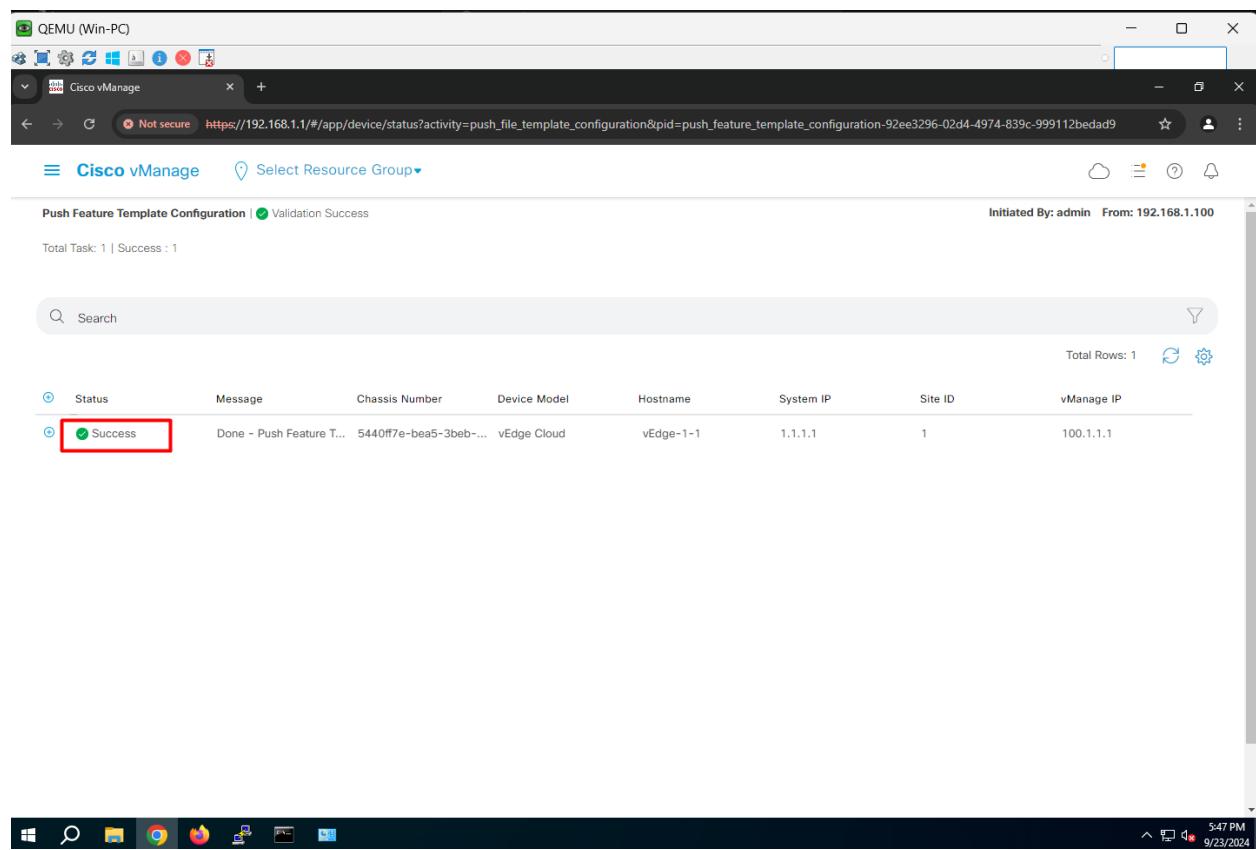
5440ff7e-bea5-3beb-5b46-c51e4a6b6bf6 vEdge-1-1 1.1.1.1

Please select a device from the device list

Configure Device Rollback Timer

Back Configure Devices Cancel

Chờ xuất hiện trạng thái Success là đã Attach thành công



The screenshot shows a browser window titled "Cisco vManage" with the URL "https://192.168.1.1/#/app/device/status?activity=push_file_template_configuration&pid=push_feature_template_configuration-92ee3296-02d4-4974-839c-999112bedad9". The page displays a table of task results. One row is highlighted with a red box around the "Status" column, which contains the word "Success". The table columns include Status, Message, Chassis Number, Device Model, Hostname, System IP, Site ID, and vManage IP. The message column shows "Done - Push Feature T... 5440ff7e-bea5-3beb-... vEdge Cloud". The hostnames column shows "vEdge-1-1". The system IP column shows "1.1.1.1". The site ID column shows "1". The vManage IP column shows "100.1.1.1". The status bar at the bottom indicates "Total Task: 1 | Success : 1". The browser's address bar shows "Not secure https://192.168.1.1/#/app/device/status?activity=push_file_template_configuration&pid=push_feature_template_configuration-92ee3296-02d4-4974-839c-999112bedad9". The task was initiated by "admin" from "192.168.1.100". The task was completed at "5:47 PM" on "9/23/2024".

Làm tương tự cho con còn lại.