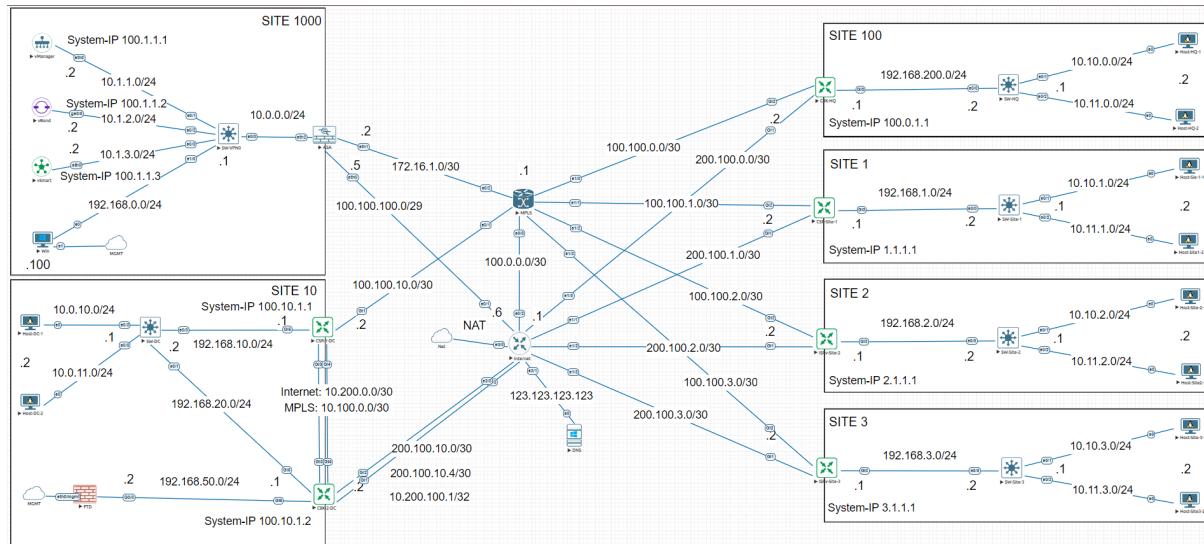


## LAB: Service OSPF



Tên Thiết Bị	Username	Password	Version
vManage	admin	Admin	20.06.1
vBond	admin	Admin	20.06.1
vSmart	admin	Admin	20.06.1
cEdge(CSR1000v)	admin	Admin	17.03.04a
cEdge(C8000v)	admin	Admin	17.06.01a
cEdge(ISRv)	admin	Admin	17.02.02
FTD	Admin	Admin	7.4.1
ASA	Admin	Admin	915-16-k8
PC		Test123	Windows10

## II. Yêu cầu.

Viết các Template Service OSPF.

## III. Thực hiện viết Template Service OSPF

### 3.1 Thực hiện viết cho site 10

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

The screenshot shows the Cisco vManage web interface. The left sidebar is titled "Cisco vManage" and includes links for Dashboard, Monitor, Configuration (which is highlighted with a red box), Tools, Maintenance, Administration, vAnalytics, and Workflows. The user is signed in as "admin". The main content area is titled "Configuration - Templates" and shows a table of templates. The "Feature" tab is selected. The table has columns for Mode..., Device Role ..., Resource Group, Feature Templates, Draft Mode, and Devices Attached. There are 18 total rows. A red box highlights the "Templates" link in the left sidebar.

Chọn vào add Template

The screenshot shows the Cisco vManage web interface. The left sidebar is titled "Cisco vManage" and includes links for Configuration (selected), Templates (highlighted with a red box), Policies, Security, Unified Communications, Cloud onRamp for SaaS, Cloud onRamp for IaaS, Cloud onRamp for Multicloud, and Cloud onRamp for Colocation. The user is signed in as "admin". The main content area is titled "Configuration - Templates" and shows a table of templates. The "Feature" tab is selected. A red box highlights the "Add Template" button in the top right corner of the table header. The table has columns for Name, Description, Type ..., Device Model, Device Templates, Resource Group, Devices Attached, Updated By, and Last. There are 45 total rows.

Kéo xuống và chọn vào CSR1000v và chọn vào Cisco OSPF

The screenshot shows the Cisco vManage web interface. In the top navigation bar, it says "Cisco vManage" and "Select Resource Group". Below that, it says "Configuration - Templates" and has tabs for "Device" and "Feature". The main area is titled "Feature Template > Add Template". On the left, there's a sidebar titled "Select Devices" with a search bar and a list of device names. The "CSR1000v" option is selected and highlighted with a red box. To the right, there are several feature tiles: Cisco BGP, Cisco DHCP Server, Cisco IGMP, Cisco Logging, Cisco Multicast, Cisco OSPF (which is also highlighted with a red box), Cisco PIM, and Cisco SIG Credentials. The Cisco OSPF tile has "WAN" and "LAN" labels below it. At the bottom of the window, there's a toolbar with icons and a status bar showing "2:06 PM 10/30/2024".

Đường Template Name: CSR1000v\_OSPF\_DC và Description:  
CSR1000v\_OSPF\_DC

The screenshot shows the Cisco vManage interface for the "CSR1000v\_OSPF\_DC" template. The top navigation bar includes "Cisco vManage", "Select Resource Group", and "Configuration - Templates". The main area shows the "Feature Template > Add Template > Cisco OSPF" configuration. It has fields for "Device Type" (CSR1000v), "Template Name" (CSR1000V\_OSPF), and "Description" (CSR1000V\_OSPF). Below these, there are tabs for "Basic Configuration", "Redistribute", "Maximum Metric (Router LSA)", "Area", and "Advanced". The "Basic Configuration" tab is active and expanded, showing sections for "BASIC CONFIGURATION" and "ADVANCED OSPF". Under "BASIC CONFIGURATION", there are fields for "Router ID", "Distance for External Routes" (set to 110), and "Distance for Inter-Area Routes" (set to 110). At the bottom of the configuration screen, there are "Cancel" and "Save" buttons, and a status bar at the bottom right showing "2:08 PM 10/30/2024".

## Ở phần Basic Configuration: Router ID chọn vào Global và điền ID 100.10.1.1

The screenshot shows the Cisco vManage web interface for configuring an OSPF feature template. The 'Basic Configuration' tab is selected. Under the 'BASIC CONFIGURATION' section, the 'Router ID' field contains '100.10.1.1' and the 'Type' dropdown is set to 'Global'. Other fields like 'Distance for External Routes', 'Distance for Inter-Area Routes', and 'Distance for Intra-Area Routes' are also visible.

## Ở Phần REDISTRIBUTE: chọn vào New Redistribute

The screenshot shows the Cisco vManage interface with the 'Redistribute' tab selected. Under the 'REDISTRIBUTE' section, there is a single button labeled 'New Redistribute' which is highlighted with a red box. Below this, there are tabs for 'Optional', 'Protocol', 'Enable NAT DIA', 'Route Policy', and 'Action', but no data is listed under 'No data available'.

## Ở Phần REDISTRIBUTE: Protocol chọn vào OMP và chọn vào Add

The screenshot shows the Cisco vManage web interface for configuring OSPF feature templates. The URL is [https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-CSR-1000v&templateType=cisco\\_ospf](https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-CSR-1000v&templateType=cisco_ospf). The 'Redistribute' tab is selected under 'Basic Configuration'. A dropdown menu for 'Protocol' is open, showing options like static, connected, bgp, and omp. The 'omp' option is highlighted with a red box. An 'Add' button is also highlighted with a red box. At the bottom, there are 'Cancel' and 'Save' buttons.

## Ở phần AREA: chọn vào New Area

The screenshot shows the Cisco vManage web interface for configuring OSPF feature templates. The URL is [https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-CSR-1000v&templateType=cisco\\_ospf](https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-CSR-1000v&templateType=cisco_ospf). The 'Area' tab is selected under 'Basic Configuration'. A 'New Area' button is highlighted with a red box. At the bottom, there are 'Cancel' and 'Save' buttons.

Ở phần AREA: Area Number điền là 0 và chọn vào Add Interface

The screenshot shows the Cisco vManage web interface. The URL is [https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-CSR-1000v&templateType=cisco\\_ospf](https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-CSR-1000v&templateType=cisco_ospf). The page title is "Configuration - Templates". Under "Feature Template > Add Template > Cisco OSPF", the "Area" tab is selected. A sub-section titled "AREA" is expanded. The "Area Number" input field contains "0" and is highlighted with a red box. Below it is a dropdown for "Set the area type". Further down are "Interface" and "Range" sections, each with an "Add Interface" button. At the bottom right are "Add" and "Cancel" buttons.

Chọn vào Add Interface

The screenshot shows a modal window titled "Interface". Inside, there's a decorative illustration of a cactus against a background of clouds. Below the illustration, a message says "No OSPF Interfaces added, add your first OSPF Interface". At the bottom are two buttons: "Add Interface" (highlighted with a red box) and "Configure With No Interfaces".

Ở phần Interface: interface Name chọn vào GigabitEthernet5 và chọn tiếp vào Add

The screenshot shows a configuration dialog titled "Interface". On the left, there's a sidebar with a "Add Interface" button and a list containing "GigabitEthernet5". The main area has several input fields: "Interface Name" (set to "GigabitEthernet5"), "Hello Interval (seconds)" (set to 10), "Dead Interval (seconds)" (set to 40), "LSA Retransmission Interval (seconds)" (set to 5), and "Interface Cost" (set to 0). At the bottom, there are "Advanced Options" and two buttons: "Add" (highlighted with a red box) and "Cancel".

Chọn tiếp vào Add

The screenshot shows the Cisco vManage web interface. The URL is https://10.1.1.1/app/config/template/feature?display=add&deviceType=vedge-CS1000v&templateType=cisco\_ospf. The page title is "Cisco vManage". The main navigation bar includes "Cisco vManage", "Select Resource Group", and "Configuration - Templates". Below this, it says "Feature Template > Add Template > Cisco OSPF". The "Area" tab is selected. Under the "Area" section, there's a "New Area" button. The "Area Number" is set to 0. There are fields for "Set the area type" (radio buttons), "Interface" (1 Interface), and "Range" (+ Add Range). At the bottom, there are "Save" and "Cancel" buttons, and the "Add" button is highlighted with a red box.

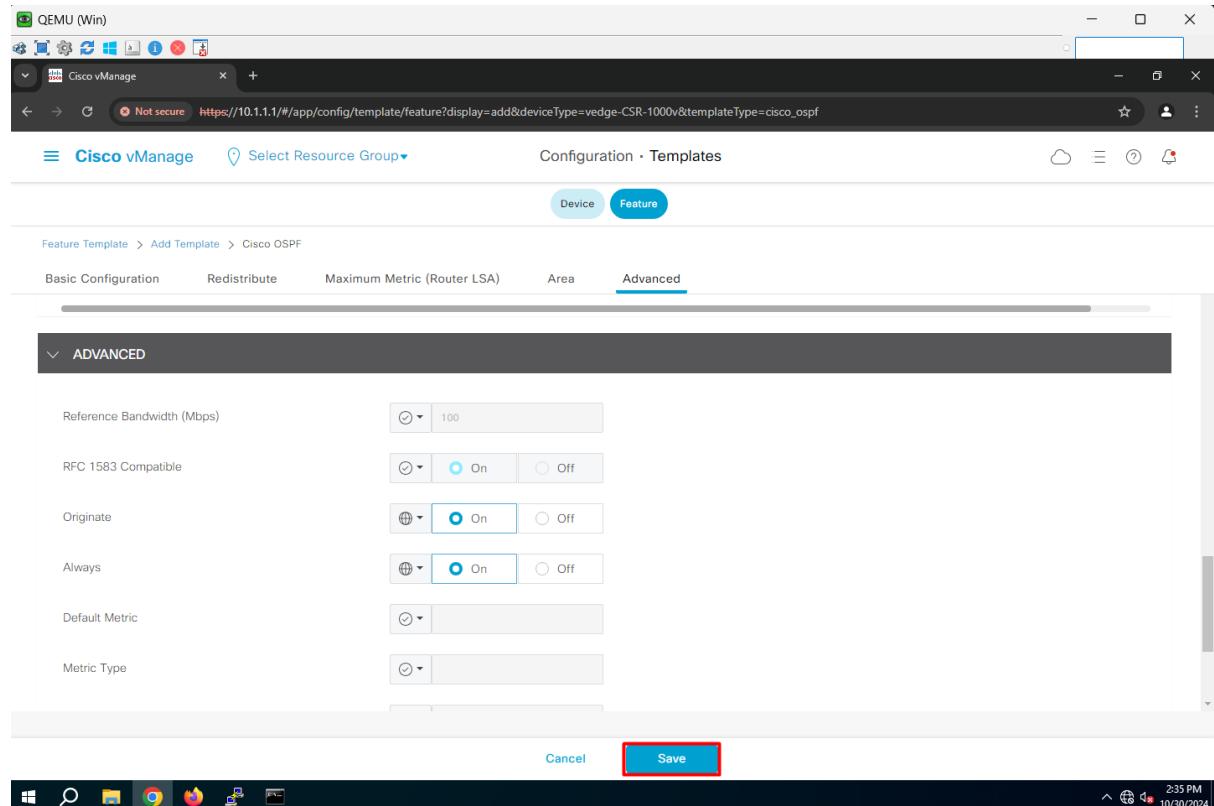
## Ở phần ADVANCED: Originate chọn vào Global chọn vào On

The screenshot shows the Cisco vManage web interface for configuring an OSPF feature template. The URL is https://10.1.1.1#/app/config/template/feature?display=add&deviceType=vedge-CS1000v&templateType=cisco\_ospf. The 'Feature' tab is selected. In the 'Advanced' section, the 'Originate' setting is set to 'On' (radio button selected). A dropdown menu for 'Always' is open, showing 'Global' (radio button selected) and 'Default'. The 'Save' button is visible at the bottom right.

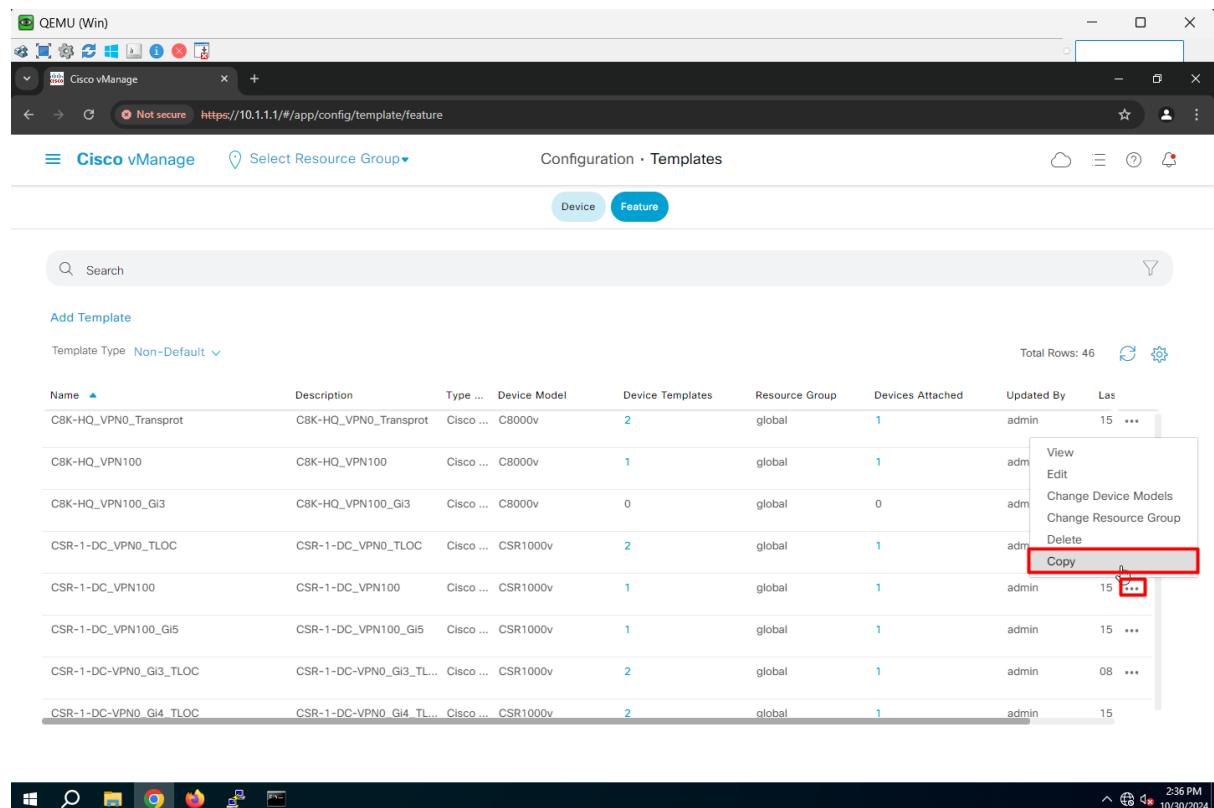
## Ở phần ADVANCED: Always chọn vào Global chọn vào On

This screenshot shows the same configuration interface as above, but the 'Always' dropdown menu has been closed. The 'Global' option is now highlighted with a red box. The 'Save' button is visible at the bottom right.

## Chọn vào Save để lưu Template



Thực hiện copy template CSR1-DC\_VPN100: chọn vào dấu ba chấm và chọn vào Copy



Sửa Template Name : CSR-1-DC\_VPN100 OSPF và Description: CSR-1-DC\_VPN100 OSPF và chọn và Copy

## Template Copy

X

Template Name

CSR-1-DC\_VPN100 OSPF

Description

CSR-1-DC\_VPN100 OSPF

Copy

Cancel

Chọn tiếp vào dấu ba chấm và chọn Edit

The screenshot shows the Cisco vManage web interface. In the center, there is a table titled 'Templates' under the 'Configuration' tab. The table lists various network templates, including 'CBK-HQ\_VPN0\_Transprot', 'CBK-HQ\_VPN100', 'CBK-HQ\_VPN100\_Gi3', 'CSR-1-DC\_VPN0\_TLOC', 'CSR-1-DC\_VPN100', 'CSR-1-DC\_VPN100\_Gi5', 'CSR-1-DC\_VPN100\_OSPF', and 'CSR-1-DC\_VPN0\_Gi3\_TLOC'. A context menu is open over the entry 'CSR-1-DC\_VPN0\_TLOC', with the 'Edit' option highlighted. The status bar at the bottom right indicates the date and time as 10/30/2024 2:42 PM.

Thực hiện sóa rourte Static và chọn vào New advertise OMP

The screenshot shows the 'Advertise OMP' configuration page within the Cisco vManage interface. The top navigation bar includes 'Cisco vManage', 'Select Resource Group', and 'Configuration - Templates'. Below this, a sub-navigation bar shows 'Feature Template > Cisco VPN > CSR-1-DC\_VPN100\_OSPF'. The main content area has tabs for 'Basic Configuration', 'DNS', 'Advertise OMP' (which is selected), 'IPv4 Route', 'IPv6 Route', 'Service', 'Service Route', 'GRE Route', 'IPSEC Route', and 'NAT'. Under the 'Advertise OMP' tab, there is a section titled 'New Advertise OMP' with a red box around it. Below this, there are two rows for 'Protocol': 'Connected' (with a red box around the checkbox) and 'Static' (with a red box around the checkbox). At the bottom, there are 'Cancel' and 'Update' buttons, and the status bar at the bottom right shows 10/30/2024 2:43 PM.

Ở phần Advertise OMP: ở phần Protocol chọn vào OSPF và chọn vào Add

The screenshot shows the Cisco vManage web interface. The URL is [https://10.1.1.1/#/app/config/template/feature?display=edit&tTemplateId=b7a3342e-0362-41b0-bebb-77f96a881d90&templateType=cisco\\_vpn](https://10.1.1.1/#/app/config/template/feature?display=edit&tTemplateId=b7a3342e-0362-41b0-bebb-77f96a881d90&templateType=cisco_vpn). The page title is "Configuration · Templates". The navigation bar includes "Cisco vManage", "Select Resource Group", and tabs for "Device" and "Feature". The main content area shows a "Feature Template > Cisco VPN > CSR-1-DC\_VPN100\_OSPF". Below this are tabs for "Basic Configuration", "DNS", "Advertise OMP", "IPv4 Route", "IPv6 Route", "Service", "Service Route", "GRE Route", "IPSEC Route", and "NAT". The "Advertise OMP" tab is selected. Under "Protocol", a dropdown menu is open, showing options like "Choose", "BGP", and "OSPF". The "OSPF" option is highlighted with a red box. To the right of the dropdown is an "Add" button, also highlighted with a red box. At the bottom of the screen, there are standard Windows taskbar icons and a system tray indicating the date and time as 10/30/2024 at 2:45 PM.

Ở Phần IPv4 ROUTE: thực hiện xóa 2 route

The screenshot shows the Cisco vManage web interface. The URL is [https://10.1.1.1/#/app/config/template/feature?display=edit&tTemplateId=b7a3342e-0362-41b0-bebb-77f96a881d90&templateType=cisco\\_vpn](https://10.1.1.1/#/app/config/template/feature?display=edit&tTemplateId=b7a3342e-0362-41b0-bebb-77f96a881d90&templateType=cisco_vpn). The page title is "Configuration · Templates". The navigation bar includes "Cisco vManage", "Select Resource Group", and tabs for "Device" and "Feature". The main content area shows a "Feature Template > Cisco VPN > CSR-1-DC\_VPN100\_OSPF". Below this are tabs for "Basic Configuration", "DNS", "Advertise OMP", "IPv4 Route", "IPv6 Route", "Service", "Service Route", "GRE Route", "IPSEC Route", and "NAT". The "IPv4 Route" tab is selected. A section titled "IPv4 ROUTE" is expanded, showing a table with two rows of route configurations. The first row has a prefix of "10.0.10.0/24" and a gateway of "Next Hop". The second row has a prefix of "10.0.11.0/24" and a gateway of "Next Hop". Both rows have edit and delete icons in the "Action" column, which are both highlighted with red boxes. At the bottom of the screen, there are standard Windows taskbar icons and a system tray indicating the date and time as 10/30/2024 at 2:46 PM.

## Chọn vào Update để cập nhập Template

The screenshot shows the Cisco vManage web interface. The URL in the address bar is [https://10.1.1.1/#/app/config/template/feature?display=edit&templateId=b7a3342e-0362-41b0-bebb-77f96a881d90&templateType=cisco\\_vpn](https://10.1.1.1/#/app/config/template/feature?display=edit&templateId=b7a3342e-0362-41b0-bebb-77f96a881d90&templateType=cisco_vpn). The page title is "Configuration - Templates". The navigation bar includes "Cisco vManage", "Select Resource Group", and tabs for "Device" and "Feature". Below the tabs, there are sub-tabs: Basic Configuration, DNS, Advertise OMP, IPv4 Route (selected), IPv6 Route, Service, Service Route, GRE Route, IPSEC Route, and NAT. The main content area shows a "Feature Template > Cisco VPN > CSR-1-DC\_VPN100\_OSPF" path. Under "IPv4 Route", there is a "New IPv4 Route" button. A "Selected Gateway Configuration" section shows "No data available". At the bottom right of the content area is a red-bordered "Update" button. The status bar at the bottom right shows "2:50 PM 10/30/2024".

## Chọn vào Device để viết device template cho CSR-1-DC

The screenshot shows the Cisco vManage web interface. The URL in the address bar is <https://10.1.1.1/#/app/config/template/feature>. The page title is "Configuration - Templates". The navigation bar includes "Cisco vManage", "Select Resource Group", and tabs for "Device" (highlighted with a red border) and "Feature". Below the tabs, there is a search bar and an "Add Template" button. The main content area shows a table of device templates. The table has columns: Name, Description, Type, Device Model, Device Templates, Resource Group, Devices Attached, Updated By, and Last Updated. The table shows 47 total rows. The first few rows include: C8000v\_AAA, CSR1000v\_AAA, CSR-1-DC\_VPN..., ISRv\_VPN0\_Gi1..., C8000v\_VPN0\_..., C8000v\_VPN0\_..., and C8000v\_VPN0\_.... The status bar at the bottom right shows "2:51 PM 10/30/2024".

Name	Description	Type	Device Model	Device Templates	Resource Group	Devices Attached	Updated By	Last Updated
C8000v_AAA	C8000v_AAA	Cisco AAA	C8000v	6	global	2	admin	28 Sep 2024 4:5
CSR1000v_AAA	CSR1000v_AAA	Cisco AAA	CSR1000v	6	global	2	admin	28 Sep 2024 4:5
CSR-1-DC_VPN...	CSR-1-DC_VPN0_TLOC	Cisco VPN	CSR1000v	2	global	1	admin	08 Oct 2024 7:3
ISRv_VPN0_Gi1...	ISRv_VPN0_Gi1_Site-3	Cisco VPN Interf...	ISRv	3	global	1	admin	28 Sep 2024 5:3
C8000v_VPN0_...	C8000v_VPN0_DC	Cisco VPN	C8000v	1	global	0	admin	28 Sep 2024 4:5
C8000v_VPN0_...	C8000v_VPN0_Gi1_HQ	Cisco VPN Interf...	C8000v	3	global	1	admin	28 Sep 2024 5:0
C8000v_VPN0_...	C8000v_VPN0_Gi1_DC	Cisco VPN Interf...	C8000v	1	global	0	admin	28 Sep 2024 4:5

Thực hiện Copy template CSR1000v\_DC\_Service: chọn vào dấu 3 chấm và chọn vào Copy

The screenshot shows the Cisco vManage web interface with the URL <https://10.1.1.1/#/app/config/template/device>. The page title is "Configuration - Templates". A context menu is open over the row for "CSR1000V\_DC\_Service", specifically over the "..." button. The "Copy" option is highlighted with a red box.

Name	Description	Type ...	Device Mode...	Device Role ...	Resource Group	Feature Templates	Draft
ISRv_Site-2_BOOTSTRAP	ISRv_Site-2_B...	Feature	ISRv	SDWAN Edge	global	10	Disabled
ISRv_Site-3_BOOTSTRAP	ISRv_Site-3_B...	Feature	ISRv	SDWAN Edge	global	10	Disabled
CSR1000V_DC_TLOC	CSR1000V_DC_T...	Feature	CSR1000v	SDWAN Edge	global	12	Disabled
C8000V_DC_TLOC	C8000V_DC_T...	Feature	C8000v	SDWAN Edge	global	15	Disabled
CSR1000V_DC_Service	CSR1000V_DC...	Feature	CSR1000v	SDWAN Edge	global	14	Disabled 1 ...
C8000V_DC_Service	C8000V_DC_S...	Feature	C8000v	SDWAN Edge	global	18	Disabled 1 ...
C8K-HQ_Transport	C8K-HQ_Trans...	Feature	C8000v	SDWAN Edge	global	12	Disabled 0 ...
C8K-HQ_Service	C8K-HQ_Service	Feature	C8000v	SDWAN Edge	global	13	Disabled 1 ...

Sửa Template Name: CSR1000v\_DC\_Service OSPF và Description: CSR1000v\_DC\_Service OSPF và chọn vào Copy

The dialog box is titled "Template Copy". It contains two input fields: "Template Name" with the value "CSR1000V\_DC\_Service OSPF" and "Description" with the value "CSR1000V\_DC\_Service OSPF". At the bottom are two buttons: "Copy" (highlighted with a red box) and "Cancel".

Chọn tiếp vào dấu ba chấm và chọn vào Edit

The screenshot shows the Cisco vManage web interface with the URL <https://10.1.1.1/#/app/config/template/device>. The page title is "Configuration - Templates". The "Device" tab is selected. A context menu is open over the row for "CSR1000V\_Site-1\_Service", with the "Edit" option highlighted by a red box.

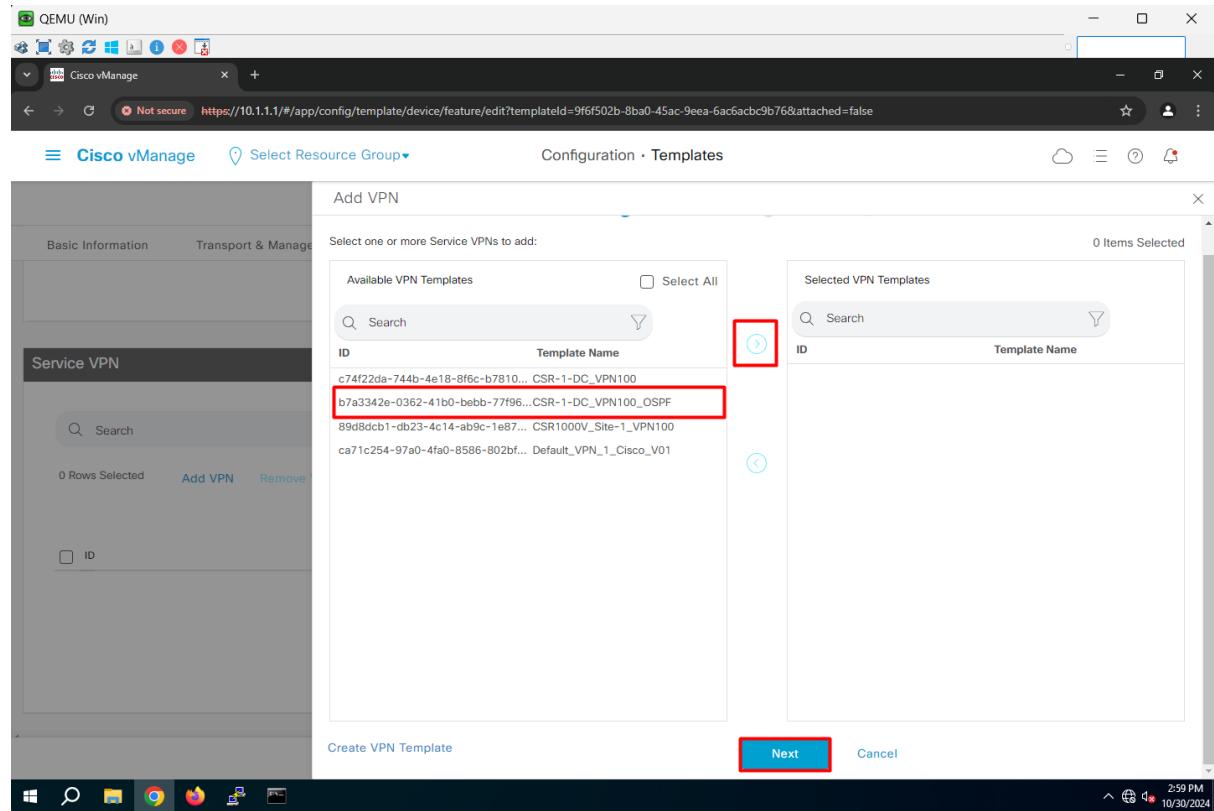
Name	Description	Type ...	Device Mode...	Device Role ...	Resource Group	Feature Templates	Draft Mode	Dev
C8K-HQ_Service	C8K-HQ_Service	Feature	C8000v	SDWAN Edge	global	13	Disabled	1 ...
CSR1000V_Site-1_Transport	CSR1000V_Sit...	Feature	CSR1000v	SDWAN Edge	global	11	Disabled	0 ...
CSR1000V_Site-1_Service	CSR1000V_Sit...	Feature	CSR1000v	SDWAN Edge	global	13	Disabled	1 ...
ISRV_Site-2_Transport	ISRV_Site-2_Tr...	Feature	ISRV	SDWAN Edge	global	11	Disabled	Edit (highlighted)
ISRV_Site-2_Service	ISRV_Site-2_S...	Feature	ISRV	SDWAN Edge	global	13	Disabled	View
ISRV_Site-3_Transport	ISRV_Site-3_Tr...	Feature	ISRV	SDWAN Edge	global	11	Disabled	Delete
ISRV_Site-3_Service	ISRV_Site-3_S...	Feature	ISRV	SDWAN Edge	global	13	Disabled	Copy
CSR1000V_DC_Service OSPF	CSR1000V_DC...	Feature	CSR1000v	SDWAN Edge	global	14	Disabled	Enable Draft Mode

Ở phần SERVICE: tích vào service chọn vào Remove VPN và tiếp tục chọn vào Add VPN

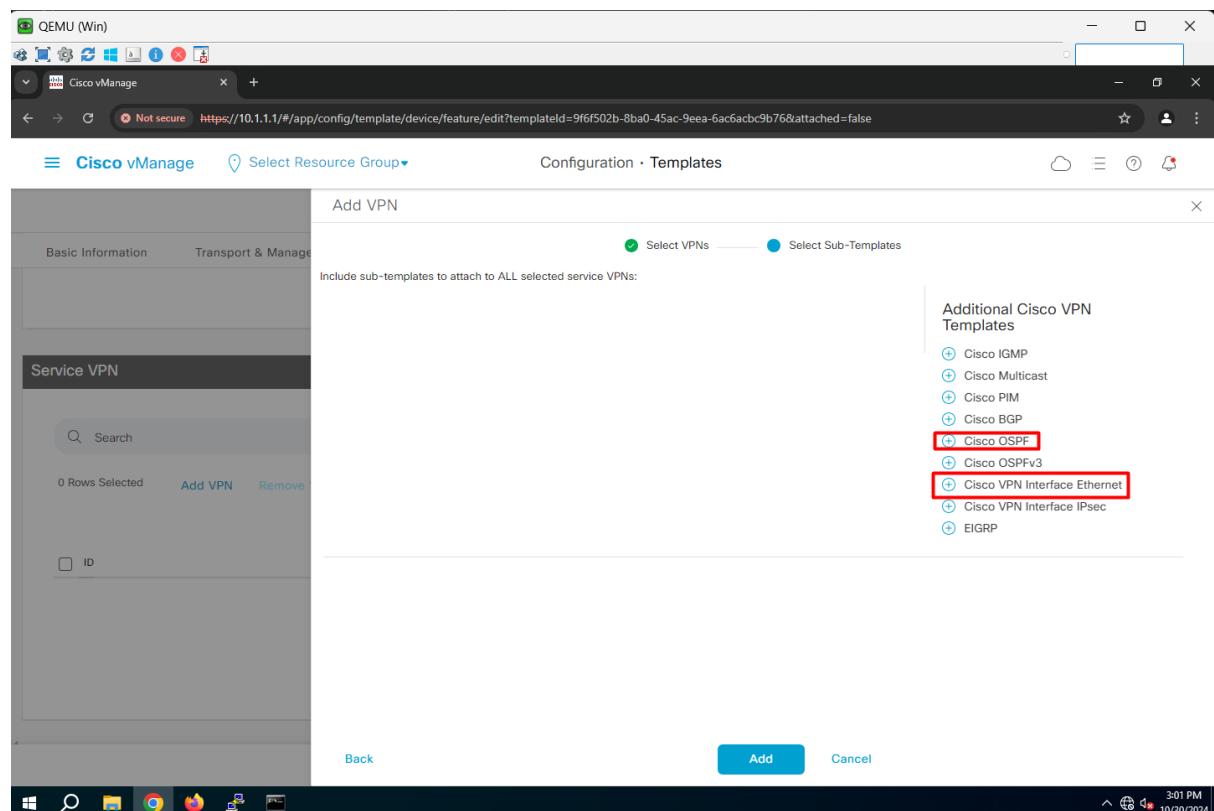
The screenshot shows the Cisco vManage web interface with the URL <https://10.1.1.1/#/app/config/template/device/feature/edit?templateId=9f6f502b-8ba0-45ac-9eea-6ac6acbc9b76&attached=false>. The page title is "Configuration - Templates". The "Service VPN" tab is selected. The "Add VPN" and "Remove VPN" buttons are highlighted by red boxes. A checkbox in the table header is also highlighted by a red box.

ID	Template Name	Sub-Templates	...
574f22da-744b-4e18-8f6c-b7810c9f6ef7	CSR-1-DC_VPN100	Cisco VPN Interface Ethernet	...

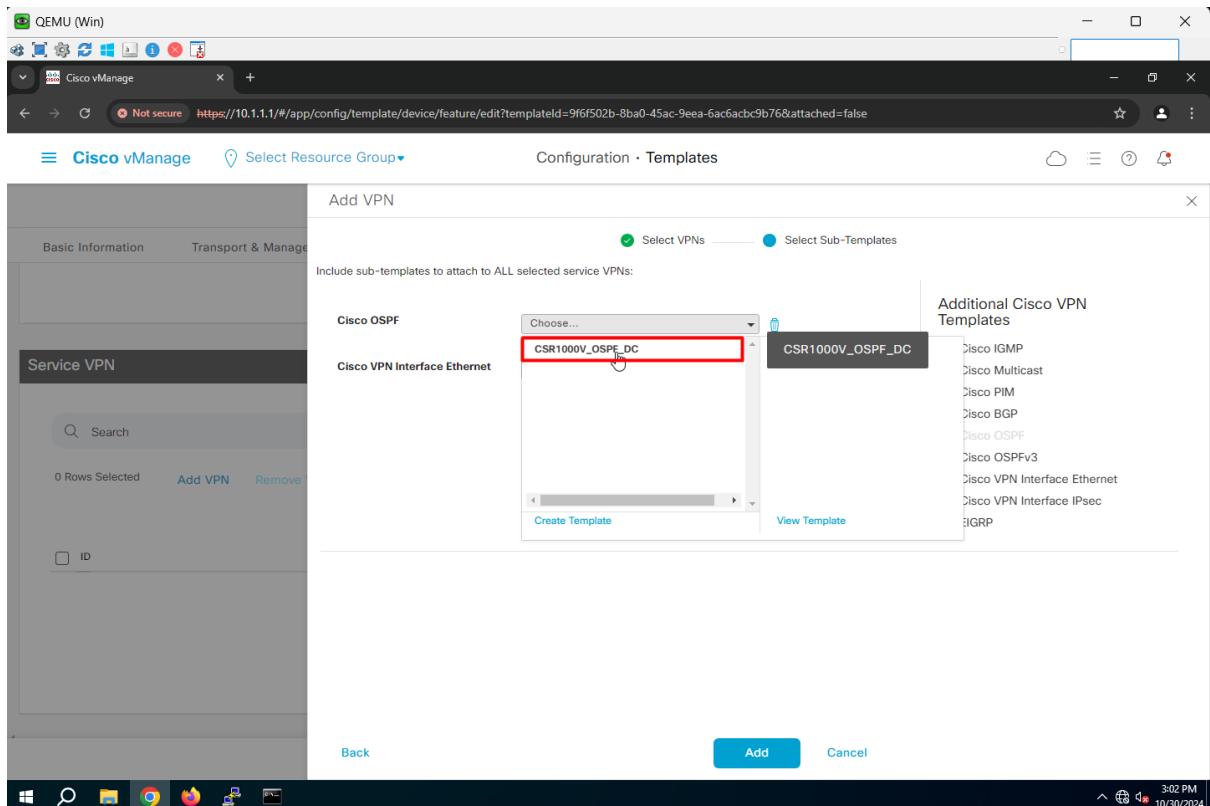
Chọn vào CSR-1-DC\_VPN100\_OSPF và chọn vào dấu mũi tên sau đó nhấn Next



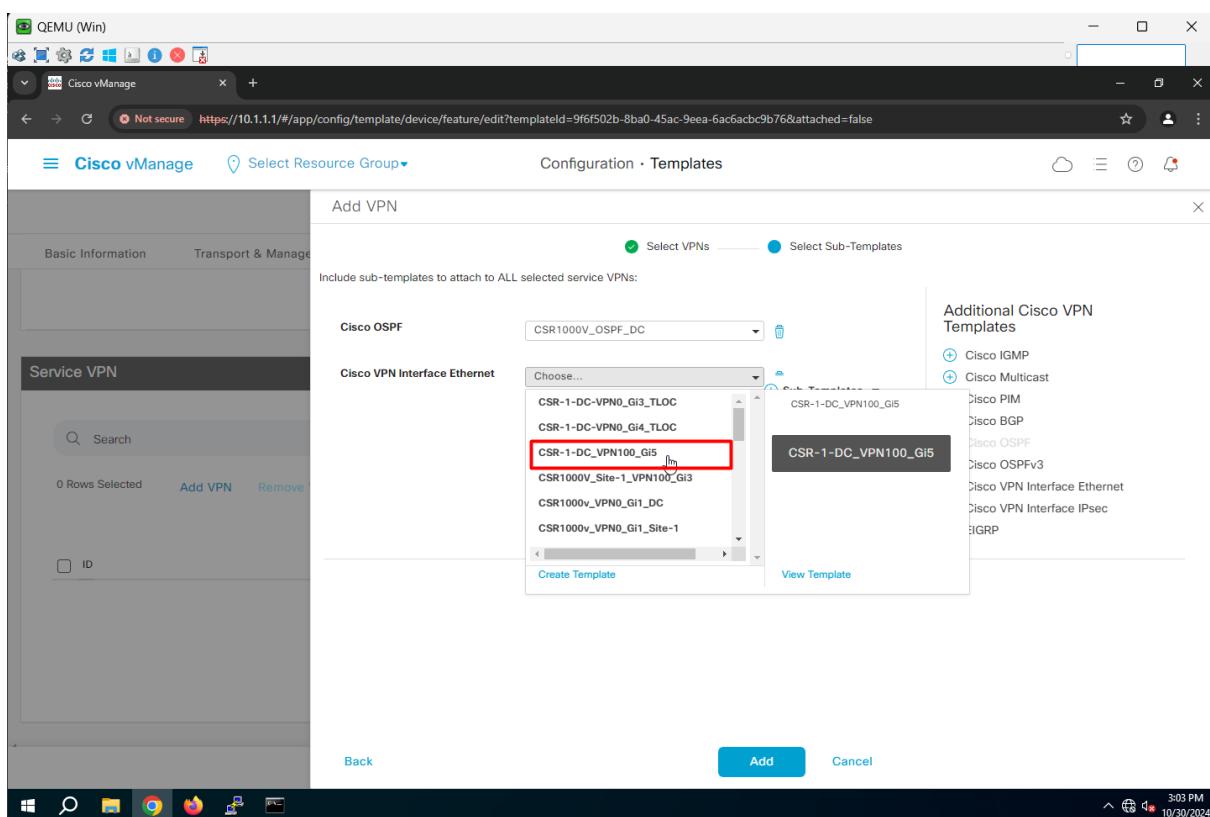
Chọn vào Cisco OSPF và Cisco VPN Interface Ethernet



## Ở phần Cisco OSPF chọn vào CSR1000V\_OSPF\_DC



Ở phần Cisco VPN Interface Ethernet chọn vào CSR-1-DC\_VPN100\_Gi5 và chọn vào Add



Và chọn vào Update để cập nhật lại device Template

The screenshot shows the Cisco vManage web interface. The URL in the address bar is <https://10.1.1.1/#/app/config/template/device/feature/edit?templateId=9f6f502b-8ba0-45ac-9eea-6ac6acbc9b76&attached=false>. The page title is "Configuration - Templates". The "Device" tab is selected. In the main content area, there is a table with one row under the "Service VPN" section. The row contains the following data:

ID	Template Name	Sub-Templates
b7a3342e-0362-41b0-bebb-77f96a881d90	CSR-1-DC_VPN100_OSPF	Cisco OSPF, Cisco VPN Interface Ethernet

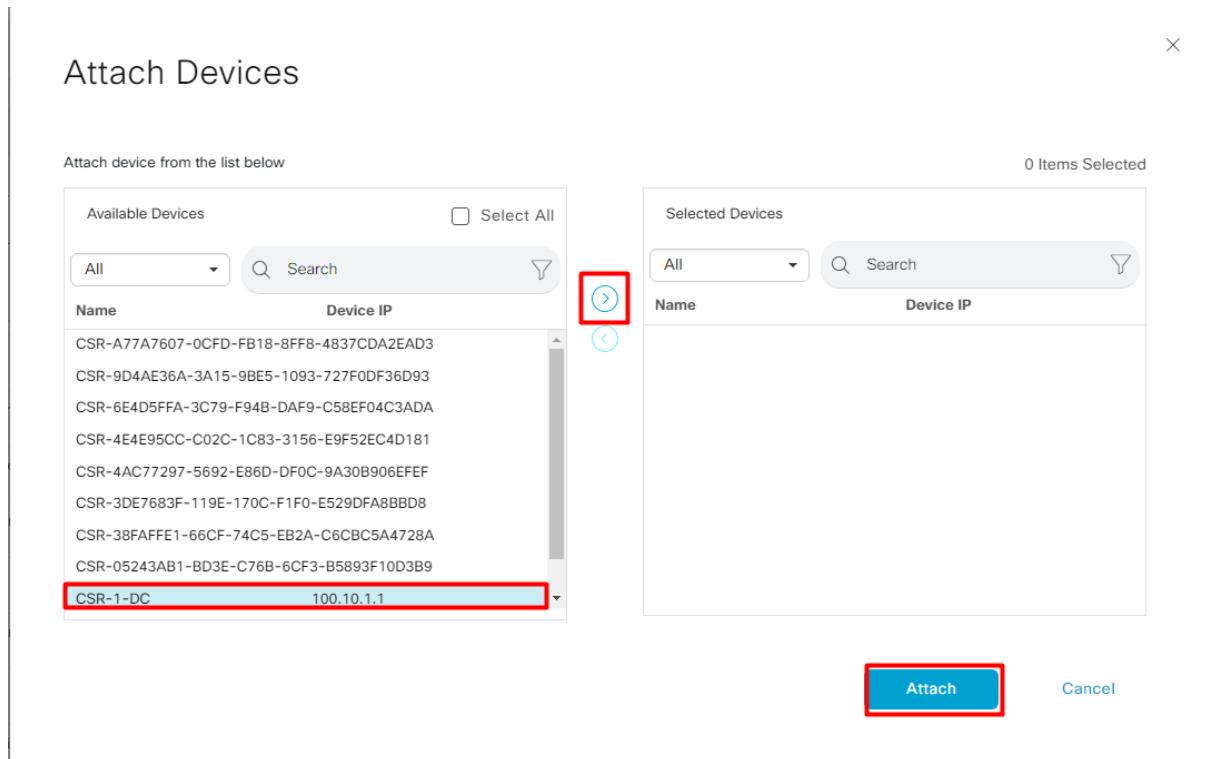
At the bottom of the table, there are "Update" and "Cancel" buttons. The "Update" button is highlighted with a red rectangle.

Chọn vào dấu 3 chấm và chọn vào Attach Devices

The screenshot shows the Cisco vManage interface with a list of templates. The URL in the address bar is <https://10.1.1.1/#/app/config/template/device>. The page title is "Configuration - Templates". The "Device" tab is selected. The table lists various templates, and the last row, "CSR1000V\_DC\_Service\_OSPF", has its context menu open. The "Attach Devices" option in the menu is highlighted with a red rectangle.

Name	Description	Type ...	Device Mode...	Device Role ...	Resource Group	Feature Templates	Draft Mode	Dev
C8K-HQ_Service	C8K-HQ_Service	Feature	C8000v	SDWAN Edge	global	13	Disabled	1 ...
CSR1000V_Site-1_Transport	CSR1000V_Sit...	Feature	CSR1000v	SDWAN Edge	global	11	Disabled	0 ...
CSR1000V_Site-1_Service	CSR1000V_Sit...	Feature	CSR1000v	SDWAN Edge	global	13	Disabled	1 ...
ISRv_Site-2_Transport	ISRv_Site-2_Tr...	Feature	ISRv	SDWAN Edge	global	11	Disabled	Edit View
ISRv_Site-2_Service	ISRv_Site-2_S...	Feature	ISRv	SDWAN Edge	global	13	Disabled	Delete Copy
ISRv_Site-3_Transport	ISRv_Site-3_Tr...	Feature	ISRv	SDWAN Edge	global	11	Disabled	Enable Draft Mode
ISRv_Site-3_Service	ISRv_Site-3_S...	Feature	ISRv	SDWAN Edge	global	13	Disabled	Change Resource Group Export CSV
CSR1000V_DC_Service_OSPF	CSR1000V_DC...	Feature	CSR1000v	SDWAN Edge	global	15	Disabled	... Attach Devices

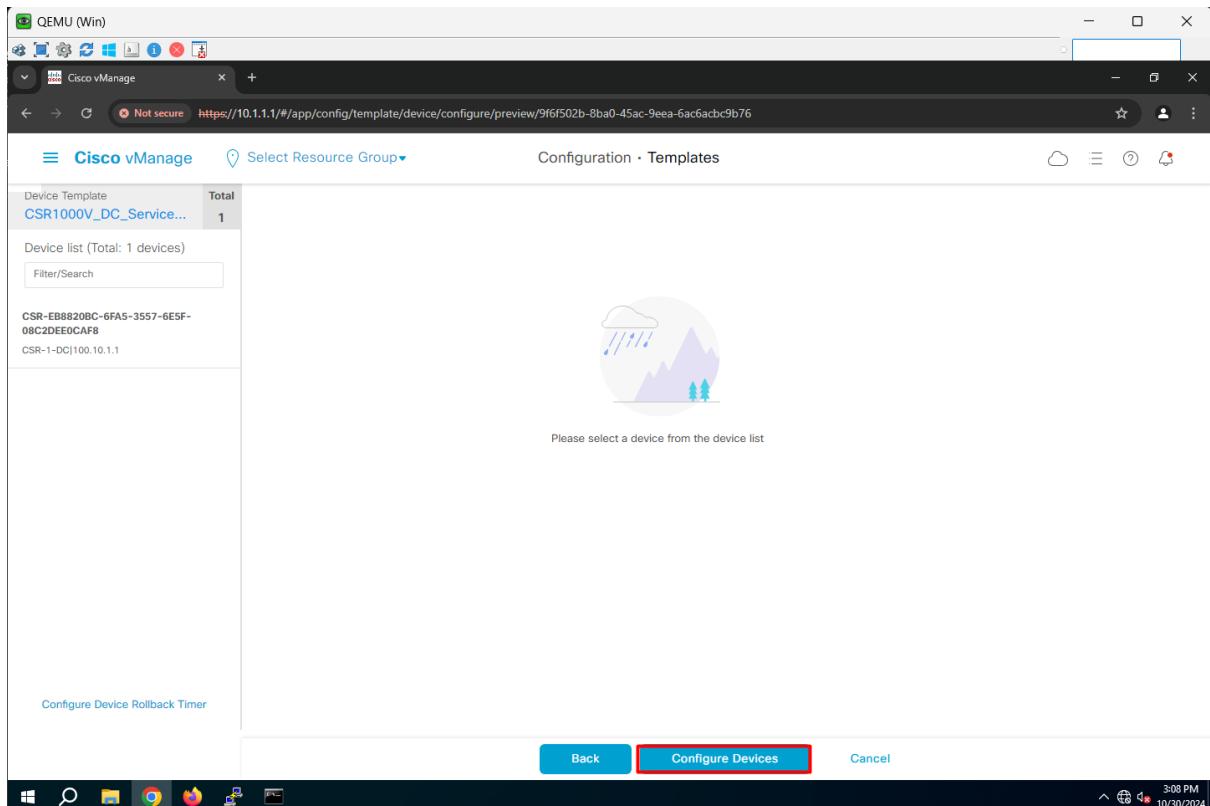
Chọn vào CSR-1-DC và chọn vào dấu mũi tên sau đó chọn Attach



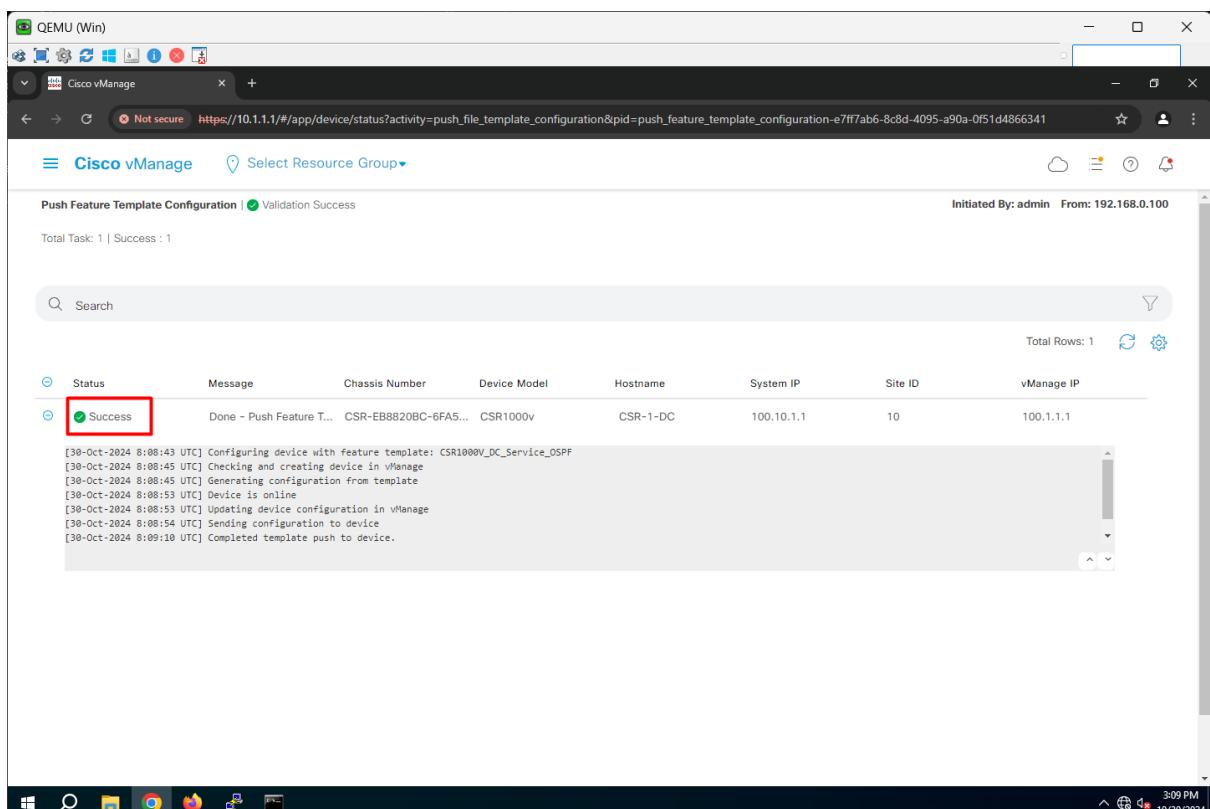
Chọn vào Next

The screenshot shows the 'Configuration - Templates' section in Cisco vManage. A table displays device templates, with one row selected and highlighted with a red box. The columns include Chassis Number, System IP, Hostname, Address(CSR-1-DC\_VPN0\_Transport), Address(CSR-1-DC\_VPN0\_Transport1), and Hostname. At the bottom of the table is a 'Next' button, which is also highlighted with a red box. The browser address bar shows the URL: https://10.1.1.1/#/app/config/template/device/configure/9f6f502b-8ba0-45ac-9eea-6ac6acbc9b76.

## Chọn vào Configure Devices



Đợi một vài phút sau đó hiện trạng thái Success là đã thành công.



Thực hiện viết cho C8000v còn lại của site DC

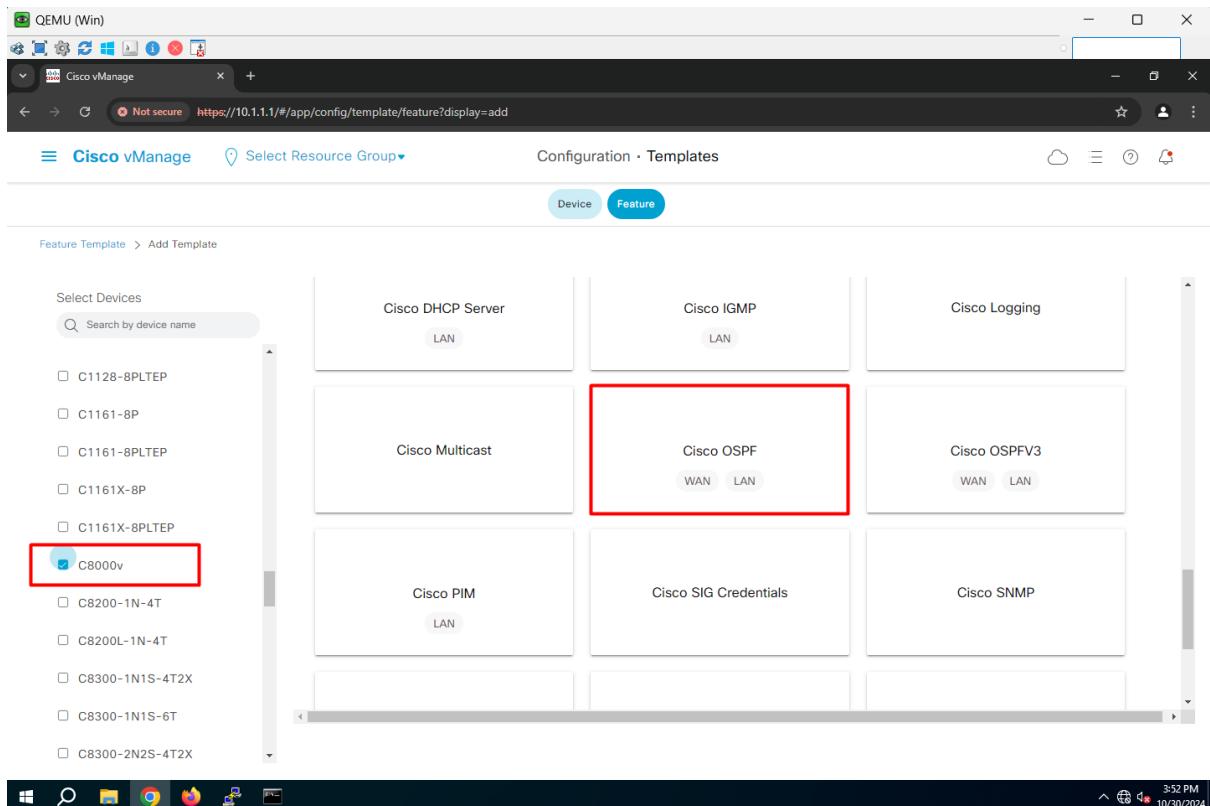
Ở Giao diện vManage, vào menu Configuration => Templates, chọn vào tab Feature => Chọn Add.

The screenshot shows the Cisco vManage web interface. In the left sidebar, under the 'Configuration' section, the 'Templates' item is highlighted with a red box. At the top right, the 'Feature' tab is selected, also highlighted with a red box. The main content area displays a table of feature templates, with a total of 18 rows. The columns include Mode, Device Role, Resource Group, Feature Templates, Draft Mode, and Devices Attached. The table lists various SDWAN Edge global templates, each with 10 to 15 feature templates attached.

Chọn vào add Template

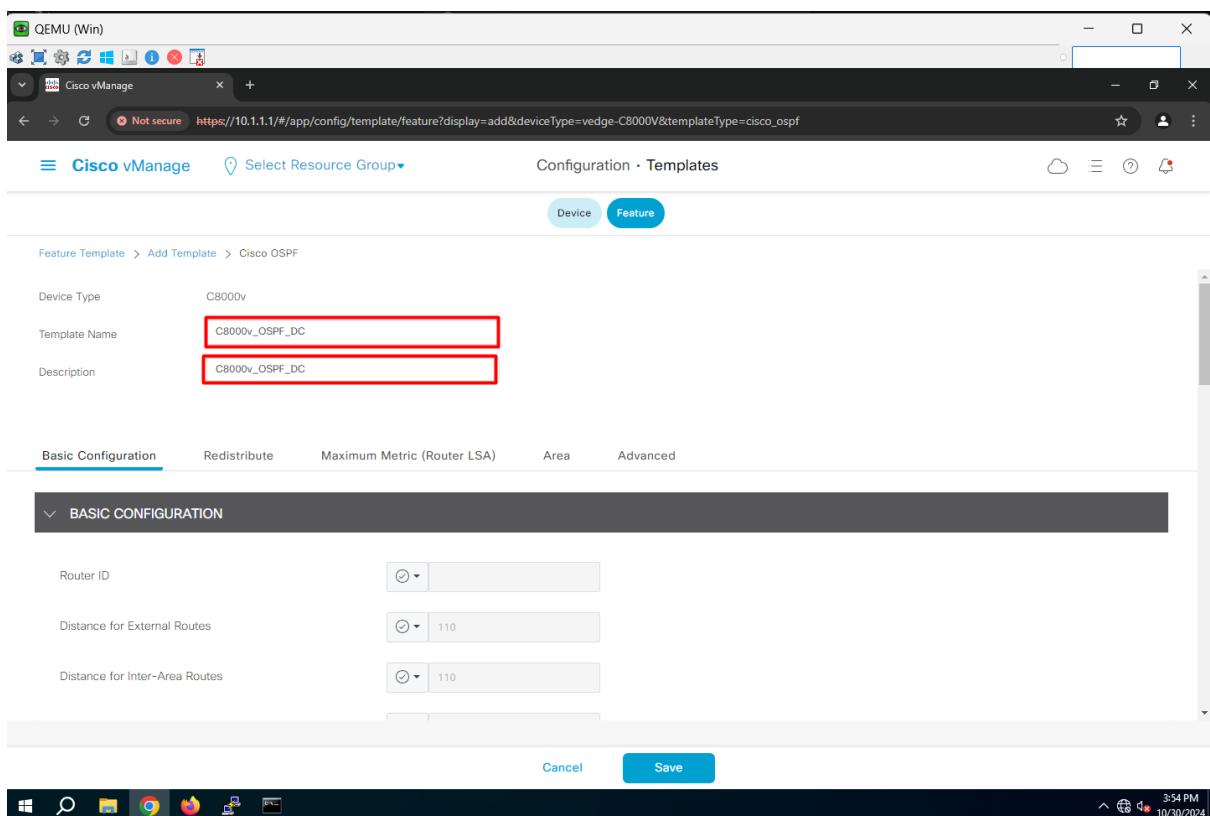
The screenshot shows the Cisco vManage interface again, but this time the 'Add Template' button in the top left of the main content area is highlighted with a red box. The rest of the interface is similar to the previous screenshot, showing the 'Feature' tab selected and a list of feature templates.

## Kéo xuống và chọn vào C8000v và chọn vào Cisco OSPF



The screenshot shows the Cisco vManage web interface. In the top navigation bar, it says "Cisco vManage" and "Select Resource Group". Below that, it says "Configuration - Templates" and has tabs for "Device" and "Feature", with "Feature" selected. The main area is titled "Feature Template > Add Template". On the left, there's a sidebar with a search bar and a list of devices, where "C8000v" is checked and highlighted with a red box. To the right, there's a grid of feature templates, with "Cisco OSPF" highlighted with a red box. The status bar at the bottom right shows the date and time: 10/30/2024 3:52 PM.

Đường Template Name: C8000v OSPF DC và Description: C8000v OSPF DC



The screenshot shows the configuration page for the "C8000v OSPF" template. At the top, it says "Feature Template > Add Template > Cisco OSPF". It shows fields for "Device Type" (C8000v), "Template Name" (C8000v OSPF DC), and "Description" (C8000v OSPF DC), all of which are highlighted with red boxes. Below these, there are tabs for "Basic Configuration", "Redistribute", "Maximum Metric (Router LSA)", "Area", and "Advanced". The "Basic Configuration" tab is selected, showing fields for "Router ID", "Distance for External Routes" (set to 110), and "Distance for Inter-Area Routes" (set to 110). At the bottom, there are "Cancel" and "Save" buttons, and the status bar at the bottom right shows the date and time: 10/30/2024 3:54 PM.

## Ở phần Basic Configuration: Router ID chọn vào Global và điền ID 100.10.1.2

QEMU (Win) Cisco vManage Configuration · Templates Feature Template > Add Template > Cisco OSPF Device Feature

Device Type: C8000v  
Template Name: C8000v OSPF\_DC  
Description: C8000v OSPF\_DC

Basic Configuration Redistribution Maximum Metric (Router LSA) Area Advanced

Router ID: 100.10.1.2 (highlighted with a red box)

Distance for External Routes: Global (highlighted with a red box, selected from a dropdown menu with options: Global, Device Specific, Default)

Distance for Inter-Area Routes

Cancel Save

## Ở Phần REDISTRIBUTE: chọn vào New Redistribute

QEMU (Win) Cisco vManage Configuration · Templates Feature Template > Add Template > Cisco OSPF Device Feature

Basic Configuration Redistribution Maximum Metric (Router LSA) Area Advanced

REDISTRIBUTE (highlighted with a red box)

New Redistribute (highlighted with a red box)

Optional Protocol Enable NAT DIA Route Policy Action

No data available

MAXIMUM METRIC (ROUTER LSA)

New Router LSA

Cancel Save

## Ở Phần REDISTRIBUTE: Protocol chọn vào OMP và chọn vào Add

The screenshot shows the Cisco vManage web interface. The URL is [https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-CS1000v&templateType=cisco\\_ospf](https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-CS1000v&templateType=cisco_ospf). The page title is "Configuration · Templates". The "Feature" tab is selected. Under "Cisco OSPF", the "Redistribute" tab is active. A dropdown menu under "Protocol" has "omp" selected and highlighted with a red box. The "Add" button is also highlighted with a red box. Other options in the dropdown include static, connected, bgp, nat, and eigrp.

## Ở phần AREA: chọn vào New Area

The screenshot shows the Cisco vManage web interface. The URL is [https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-CS1000v&templateType=cisco\\_ospf](https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-CS1000v&templateType=cisco_ospf). The page title is "Configuration · Templates". The "Feature" tab is selected. Under "Cisco OSPF", the "Area" tab is active. A button labeled "New Area" is highlighted with a red box. The "Save" button is also highlighted with a red box.

Ở phần AREA: Area Number điền là 0 và chọn vào Add Interface

The screenshot shows the Cisco vManage web interface. The URL is [https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-CSR-1000v&templateType=cisco\\_ospf](https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-CSR-1000v&templateType=cisco_ospf). The page title is "Configuration - Templates". Under "Feature Template > Add Template > Cisco OSPF", the "Area" tab is selected. A sub-section titled "AREA" is expanded. The "Area Number" input field contains "0" and is highlighted with a red box. Below it is a dropdown for "Set the area type". Further down are "Interface" and "Range" sections, each with an "Add Interface" or "Add Range" button. At the bottom right are "Add" and "Cancel" buttons.

Chọn vào Add Interface

The screenshot shows a modal window titled "Interface". Inside, there's a decorative illustration of a cactus against a background of clouds. Below the illustration, a message says "No OSPF Interfaces added, add your first OSPF Interface". At the bottom are two buttons: "Add Interface" (highlighted with a red box) and "Configure With No Interfaces".

Ở phần Interface: interface Name chọn vào GigabitEthernet5 và chọn tiếp vào Add

The screenshot shows a configuration dialog titled "Interface". On the left, there's a sidebar with a "Add Interface" button and a list containing "GigabitEthernet5". The main area has several input fields: "Interface Name" (set to "GigabitEthernet5"), "Hello Interval (seconds)" (set to 10), "Dead Interval (seconds)" (set to 40), "LSA Retransmission Interval (seconds)" (set to 5), and "Interface Cost" (set to 0). At the bottom, there are "Advanced Options" and two buttons: "Add" (highlighted with a red box) and "Cancel".

Chọn tiếp vào Add

The screenshot shows the Cisco vManage web interface. The URL is https://10.1.1.1/app/config/template/feature?display=add&deviceType=vedge-CS1000v&templateType=cisco\_ospf. The page title is "Configuration - Templates". Under "Feature Template > Add Template > Cisco OSPF", the "Area" tab is selected. A new area named "AREA" is being configured with "Area Number" 0. Other tabs like "Basic Configuration", "Redistribute", and "Maximum Metric (Router LSA)" are visible. At the bottom, there are "Save" and "Cancel" buttons, and the "Add" button is highlighted with a red box.

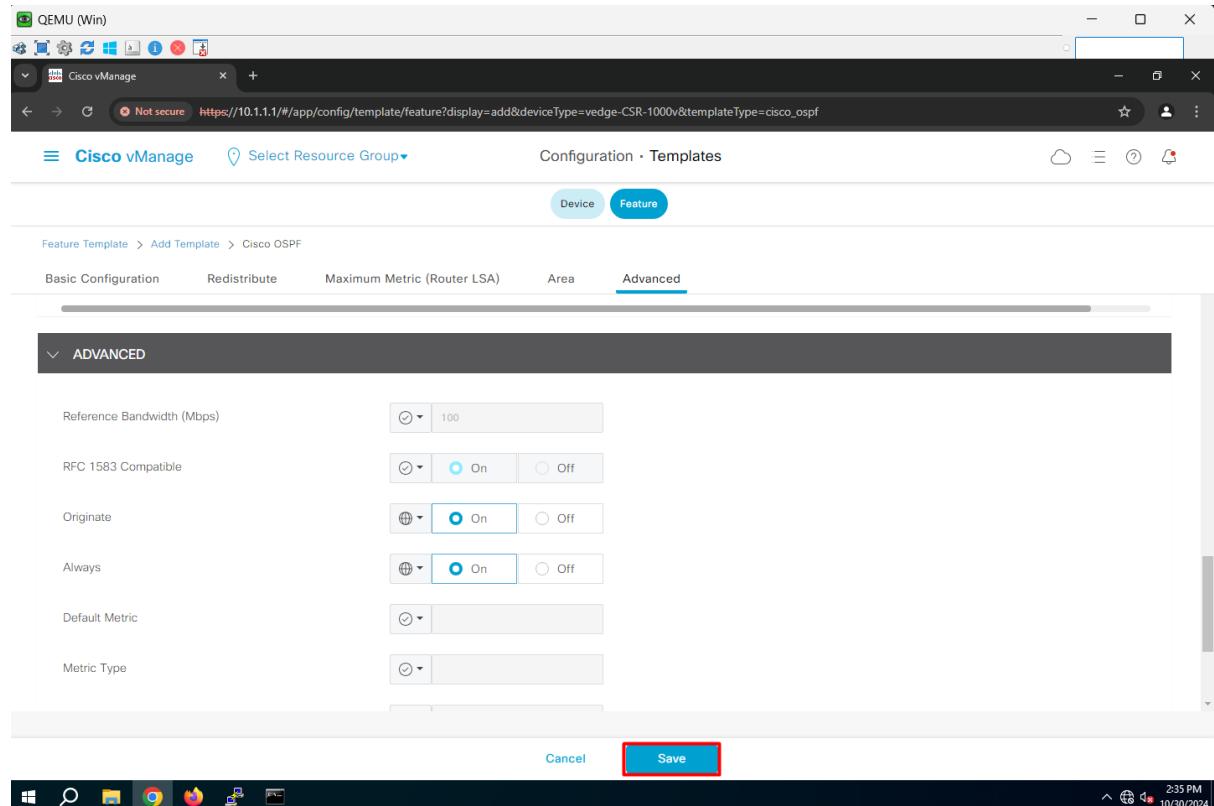
## Ở phần ADVANCED: Originate chọn vào Global chọn vào On

The screenshot shows the Cisco vManage web interface for configuring an OSPF feature template. The URL is https://10.1.1.1#/app/config/template/feature?display=add&deviceType=vedge-CS1000v&templateType=cisco\_ospf. The 'Feature' tab is selected. In the 'Advanced' section, the 'Originate' setting is set to 'On' (radio button selected). A dropdown menu for 'Always' is open, showing 'Global' (radio button selected) and 'Default'. The 'Save' button is visible at the bottom right.

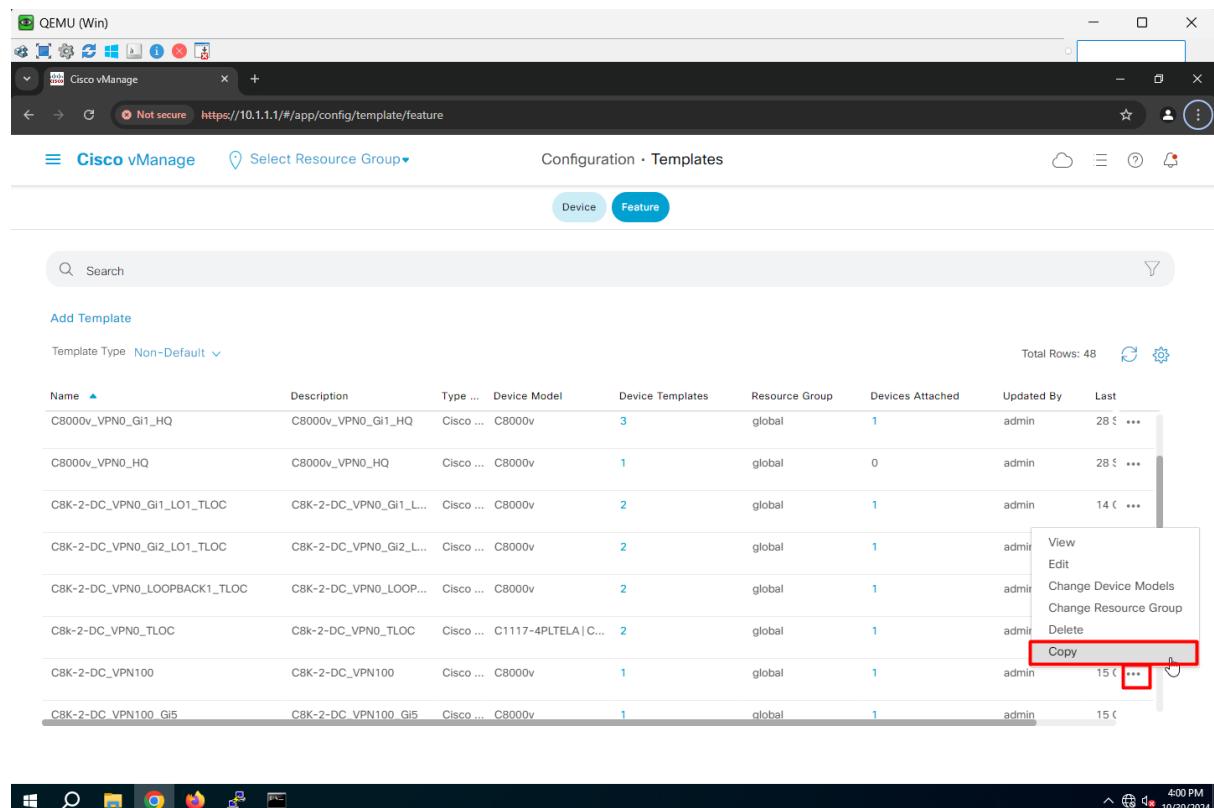
## Ở phần ADVANCED: Always chọn vào Global chọn vào On

This screenshot shows the same configuration interface as the previous one, but the 'Always' dropdown menu has been closed. The 'Global' option is now highlighted with a red box. The 'Save' button is visible at the bottom right.

## Chọn vào Save để lưu Template



Thực hiện copy template C8K-2-DC\_VPN100: chọn vào dấu ba chấm và chọn vào Copy



Sửa Template Name : C8K-2-DC\_VPN100 OSPF và Description: C8K-2-DC\_VPN100 OSPF và chọn và Copy

## Template Copy

X

Template Name

C8K-2-DC\_VPN100 OSPF

Description

C8K-2-DC\_VPN100 OSPF

Copy

Cancel

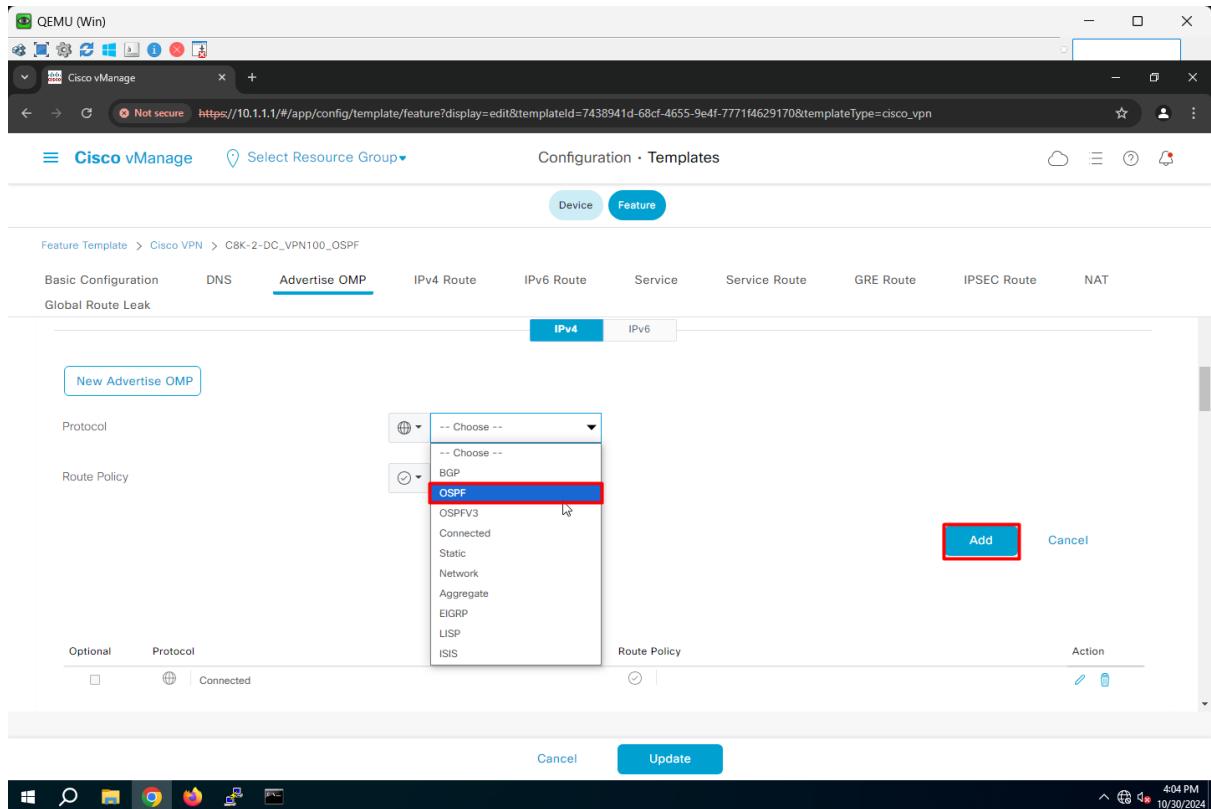
Chọn tiếp vào dấu ba chấm và chọn Edit

The screenshot shows the Cisco vManage web interface. In the center, there is a table titled 'Templates' with columns: Name, Description, Type ..., Device Model, Device Templates, Resource Group, Devices Attached, Updated, View, Edit, Change Device Models, Change Resource Group, Delete, and Copy. A context menu is open over the row for 'C8K-2-DC\_VPN100\_Gi5', with the 'Copy' option highlighted. The status bar at the bottom right shows '4:02 PM 10/30/2024'.

Thực hiện sóa rourte Static và chọn vào New advertise OMP

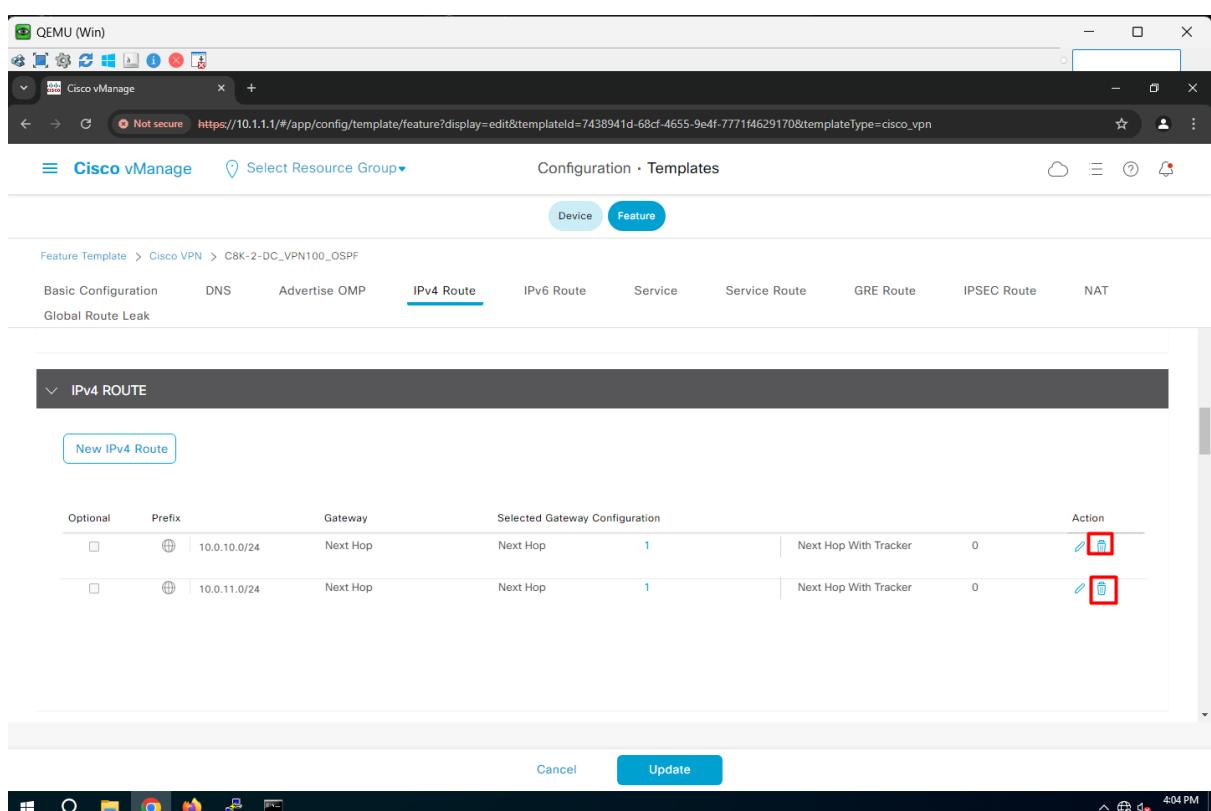
The screenshot shows the 'Advertise OMP' configuration page in Cisco vManage. At the top, there are tabs for Basic Configuration, DNS, Advertise OMP (which is selected), IPv4 Route, IPv6 Route, Service, Service Route, GRE Route, IPSEC Route, and NAT. Below the tabs, there is a section for 'IPv4' with a 'New Advertise OMP' button highlighted with a red box. Further down, there is a table with columns: Optional, Protocol, Route Policy, and Action. Two entries are listed: 'Connected' (Protocol: Connected) and 'Static' (Protocol: Static). The 'Static' entry has its 'Edit' icon highlighted with a red box. The status bar at the bottom right shows '4:04 PM 10/30/2024'.

## Ở phần Advertise OMP: ở phần Protocol chọn vào OSPF và chọn vào Add



The screenshot shows the Cisco vManage web interface. The URL is https://10.1.1.1#/app/config/template/feature?display=edit&templateId=7438941d-68cf-4655-9e4f-7771f4629170&templateType=cisco\_vpn. The page title is Configuration - Templates. Under the Feature tab, the Advertise OMP section is selected. In the IPv4 tab, there is a 'New Advertise OMP' button. Below it, there are two dropdown menus: 'Protocol' and 'Route Policy'. The 'Protocol' dropdown is open, showing options like OSPF, OSPFv3, Connected, Static, Network, Aggregate, EIGRP, LISP, and ISIS. The 'OSPF' option is selected and highlighted with a red box. To the right of the dropdown, there are 'Add' and 'Cancel' buttons, with 'Add' also highlighted with a red box. At the bottom of the form, there are 'Cancel' and 'Update' buttons.

## Ở Phần IPv4 ROUTE: thực hiện xóa 2 route



The screenshot shows the Cisco vManage web interface. The URL is https://10.1.1.1#/app/config/template/feature?display=edit&templateId=7438941d-68cf-4655-9e4f-7771f4629170&templateType=cisco\_vpn. The page title is Configuration - Templates. Under the Feature tab, the IPv4 Route section is selected. A 'New IPv4 Route' button is visible. Below it is a table for managing IPv4 routes. The table has columns: Optional, Prefix, Gateway, Selected Gateway Configuration, and Action. There are two rows in the table. Each row has a delete icon (trash can) in the Action column, which is highlighted with a red box. At the bottom of the form, there are 'Cancel' and 'Update' buttons.

## Chọn vào Update để cập nhập Template

The screenshot shows the Cisco vManage web interface. The URL is https://10.1.1.1/#/app/config/template/feature?display=edit&templateId=b7a3342e-0362-41b0-bebb-77f96a881d90&templateType=cisco\_vpn. The page title is 'Configuration - Templates'. Under 'Feature Template > Cisco VPN > CSR-1-DC\_VPN100\_OSPF', the 'IPv4 Route' tab is selected. A sub-section 'IPv6 ROUTE' is expanded, showing a table with one row: 'No data available'. At the bottom right of this table is a red-bordered 'Update' button. The status bar at the bottom right shows '2:50 PM 10/30/2024'.

## Chọn vào Device để viết device template cho CSR-1-DC

The screenshot shows the Cisco vManage web interface. The URL is https://10.1.1.1/#/app/config/template/feature. The page title is 'Configuration - Templates'. The 'Device' tab is highlighted with a red border. Below it is a search bar and a table titled 'Add Template'. The table has columns: Name, Description, Type, Device Model, Device Templates, Resource Group, Devices Attached, Updated By, and Last Updated. It lists several device templates, such as 'C8000v\_AAA', 'CSR1000v\_AAA', 'CSR-1-DC\_VPN...', 'ISRv\_VPN0\_Gi1...', 'C8000v\_VPN0\_...', 'C8000v\_VPN0\_...', and 'C8000v\_VPN0\_...'. The status bar at the bottom right shows '2:51 PM 10/30/2024'.

Thực hiện Copy template C8000v\_DC\_Service: chọn vào dấu 3 chấm và chọn vào Copy

The screenshot shows the Cisco vManage web interface with the URL <https://10.1.1.1/#/app/config/template/device>. The page title is "Configuration - Templates". The "Device" tab is selected. A search bar is at the top left. Below it is a table with columns: Name, Description, Type ..., Device Mode..., Device Role ..., Resource Group, Feature Templates, Draft Mode, and Dev. There are 19 total rows. The table lists various templates like "C8000v\_HQ\_BOOTSTRAP", "CSR1000v\_Site-1\_BOOTSTRAP", etc. In the "Dev" column for the "ISRV\_Site-3\_BOOTSTRAP" row, a context menu is open with options: Edit, View, Delete, Copy, Enable Draft Mode, Attach Devices, Change Resource Group, Detach Devices, Export CSV, and Change Device Values. The "Copy" option is highlighted with a red box. The status bar at the bottom right shows "4:06 PM 10/30/2024".

Sửa Template Name: C8000v\_DC\_Service OSPF và Description: C8000v\_DC\_Service OSPF và chọn vào Copy

The dialog box has a title "Template Copy" and an "X" button in the top right corner. It contains two input fields: "Template Name" with the value "C8000V\_DC\_Service OSPF" and "Description" with the value "C8000V\_DC\_Service OSPF". Both input fields are highlighted with red boxes. At the bottom are two buttons: "Copy" (highlighted with a red box) and "Cancel".

Chọn tiếp vào dấu ba chấm và chọn vào Edit

The screenshot shows the Cisco vManage web interface with the URL <https://10.1.1.1/#/app/config/template/device>. The page title is "Configuration · Templates". There are two tabs: "Device" (selected) and "Feature". A search bar and a filter icon are at the top. Below is a table with columns: Name, Description, Type ..., Device Mode..., Device Role ..., Resource Group, Feature Templates, Draft Mode, and Dev. The table contains several rows of network templates. A context menu is open over the last row (C8000V\_DC\_Service\_OSPF), with the "Edit" option highlighted.

Ở phần SERVICE: tích vào service chọn vào Remove VPN và tiếp tục chọn vào Add VPN

The screenshot shows the Cisco vManage web interface with the URL <https://10.1.1.1/#/app/config/template/device/feature/edit?templateId=0e2937f6-a33a-4c3f-a524-564d16d61b3d&attached=false>. The page title is "Configuration · Templates". The "Service VPN" tab is selected. Below is a table with columns: ID, Template Name, and Sub-Templates. One row is selected, and its checkbox is highlighted. At the bottom of the table, there are "Add VPN" and "Remove VPN" buttons, both of which are highlighted with red boxes.

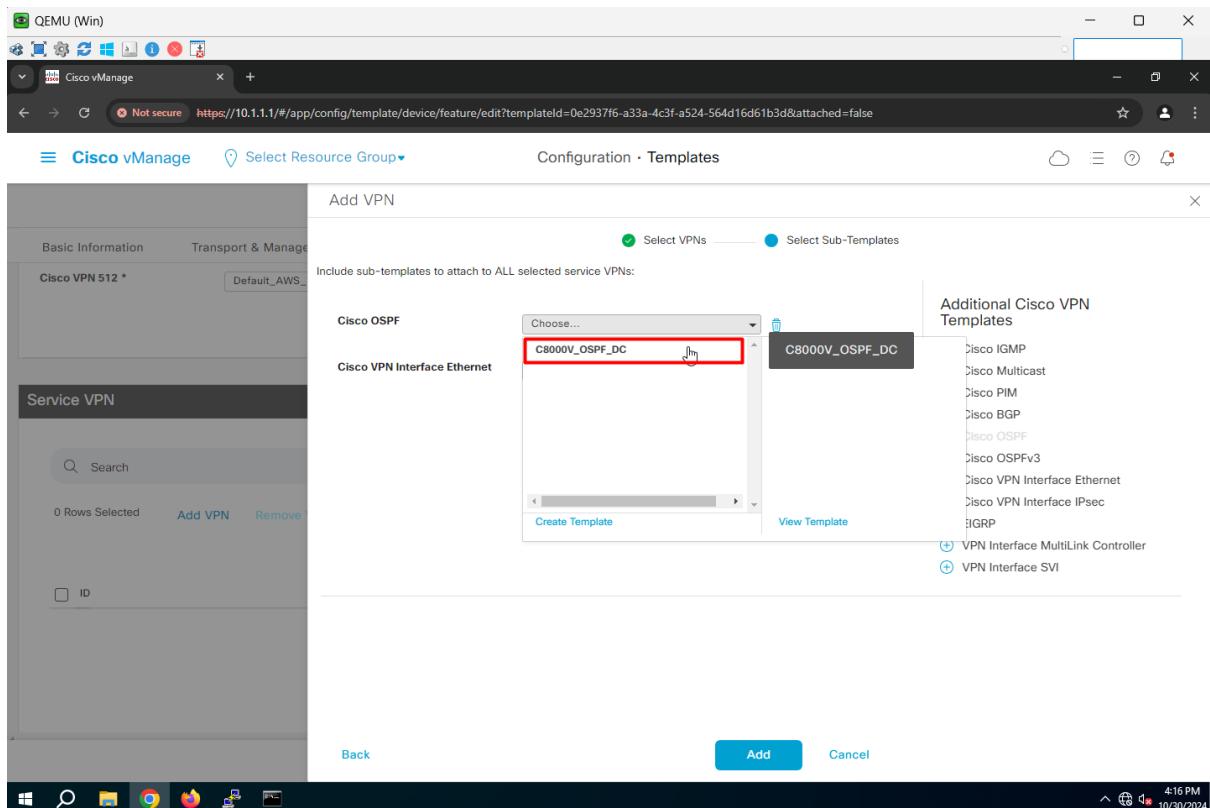
Chọn vào C8K-2-DC\_VPN100 OSPF và chọn vào dấu mũi tên sau đó nhấn Next

The screenshot shows the 'Add VPN' configuration screen in Cisco vManage. On the left, there's a sidebar with 'Service VPN' and 'Cellular' sections. The main area has tabs for 'Basic Information' and 'Transport & Management'. Under 'Transport & Management', there's a 'Service VPN' section with a table showing rows. A red box highlights the 'Selected VPN Templates' section on the right, which contains a table with one row selected: '743b941d-68cf-4655-9e4f-7771fa... C8K-2-DC\_VPN100 OSPF'. Below this table is a 'Create VPN Template' section with 'Next' and 'Cancel' buttons, both highlighted with red boxes.

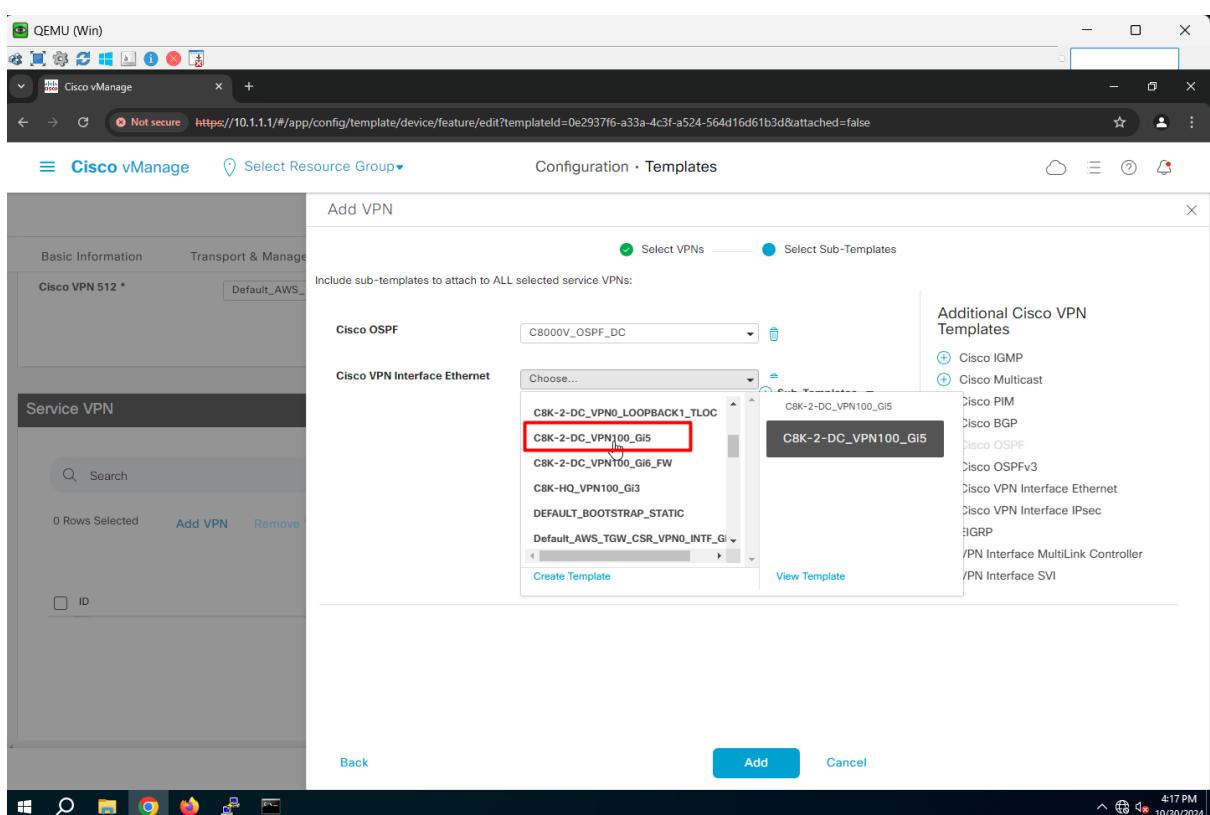
Chọn vào Cisco OSPF và Cisco VPN Interface Ethernet

The screenshot shows the 'Add VPN' configuration screen in Cisco vManage. On the left, there's a sidebar with 'Service VPN' and 'Cellular' sections. The main area has tabs for 'Basic Information' and 'Transport & Management'. Under 'Transport & Management', there's a 'Service VPN' section with a table showing rows. A red box highlights the 'Additional Cisco VPN Templates' section on the right, which lists several options with checkboxes: Cisco IGMP, Cisco Multicast, Cisco PIM, Cisco BGP, Cisco OSPF (selected), Cisco OSPFv3, Cisco VPN Interface Ethernet (selected), Cisco VPN Interface IPsec, EIGRP, VPN Interface MultiLink Controller, and VPN Interface SVI. Below this section is an 'Include sub-templates to attach to ALL selected service VPNs:' checkbox. At the bottom right is an 'Add' button, highlighted with a red box.

## Ở phần Cisco OSPF chọn vào C8000V\_OSPF\_DC



Ở phần Cisco VPN Interface Ethernet chọn vào C8K-2-DC\_VPN100\_Gi5 và chọn vào Add



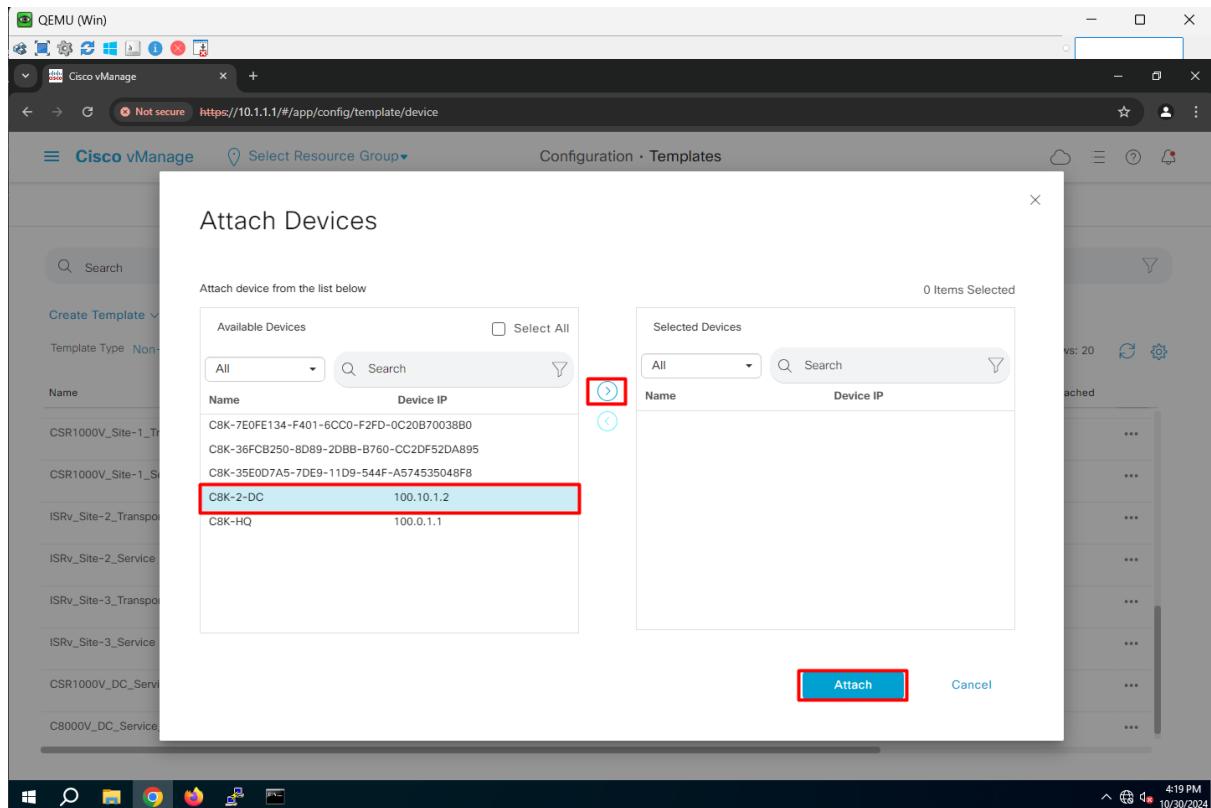
Và chọn vào Update để cập nhật lại device Template

The screenshot shows the Cisco vManage web interface. The URL is https://10.1.1.1/#/app/config/template/device/feature/edit?templateId=0e2937f6-a33a-4c3f-a524-564d16d61b3d&attached=false. The page title is Configuration · Templates. The tab 'Service VPN' is selected. A sub-tab 'Default\_AWS\_TGW\_CSR\_VPN512\_V01' is open. On the right, there's a sidebar titled 'Additional Cisco VPN 512 Templates' with options for 'Cisco VPN Interface Ethernet' and 'VPN Interface SVI'. Below this is a table titled 'Service VPN' with one row: '7438941d-68cf-4655-9e4f-7771f4629170' (Template Name: C8K-2-DC\_VPN100\_OSPF, Sub-Templates: Cisco OSPF, Cisco VPN Interface Ethernet). At the bottom are 'Update' and 'Cancel' buttons, with 'Update' highlighted by a red box.

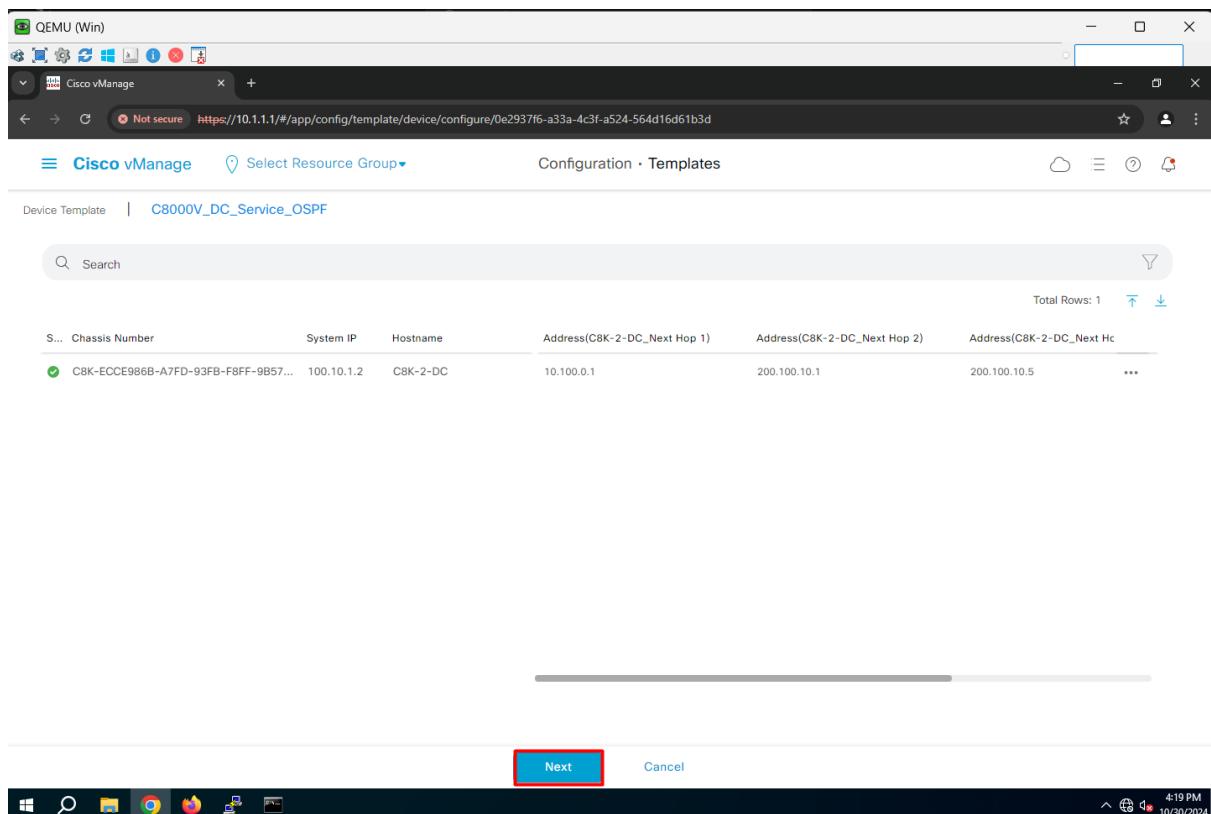
Chọn vào dấu 3 chấm và chọn vào Attach Devices

The screenshot shows the Cisco vManage interface with a list of templates. The URL is https://10.1.1.1/#/app/config/template/device. The page title is Configuration · Templates. The 'Device' tab is selected. A table lists various templates: CSR1000V\_Site-1\_Transport, CSR1000V\_Site-1\_Service, ISRv\_Site-2\_Transport, ISRv\_Site-2\_Service, ISRv\_Site-3\_Transport, ISRv\_Site-3\_Service, CSR1000V\_DC\_Service OSPF, and C8000V\_DC\_Service OSPF. The last two rows have a context menu open, with 'Attach Devices' highlighted by a red box. The status bar at the bottom shows the time as 4:18 PM and the date as 10/30/2024.

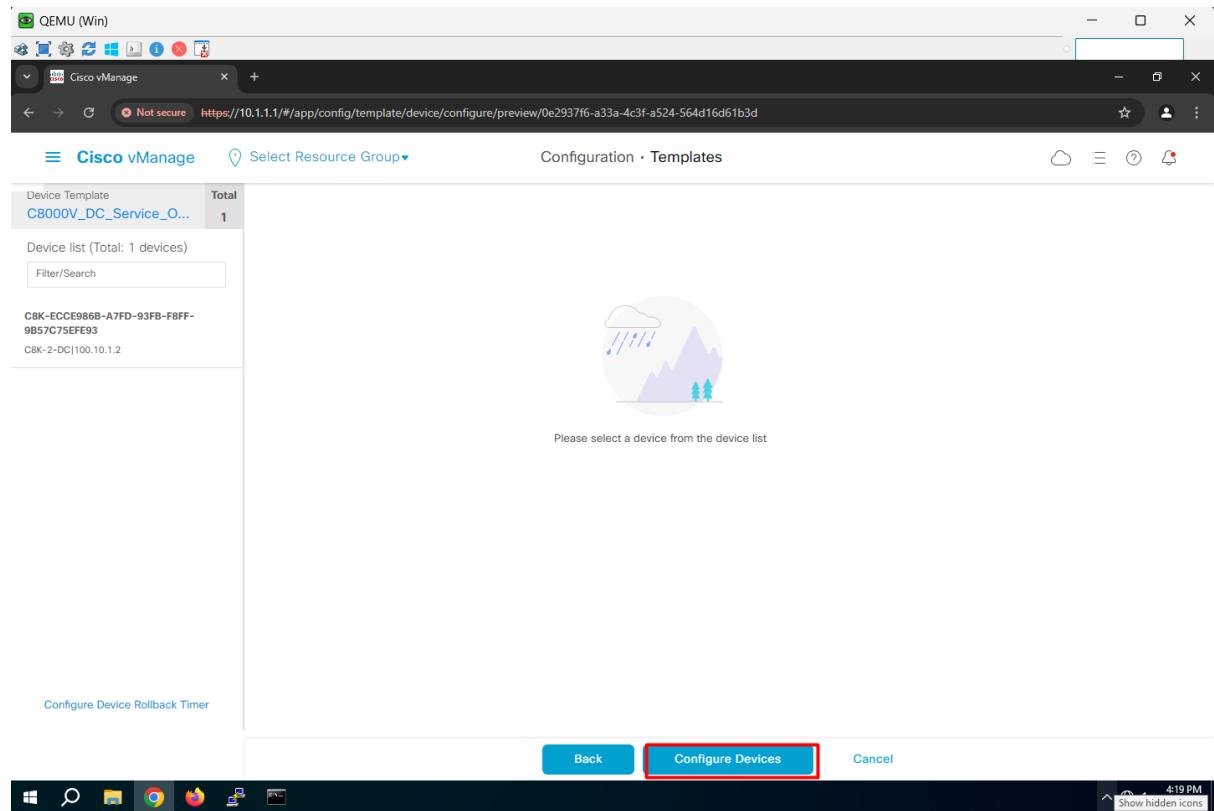
Chọn vào C8K-2-DC và chọn vào dấu mũi tên sau đó chọn Attach



Chọn vào Next



## Chọn vào Configure Devices



Đợi một vài phút sau đó hiện trạng thái Success là đã thành công.

The screenshot shows the Cisco vManage interface again. The URL in the address bar is 'https://10.1.1.1/#/app/device/status?activity=push\_file\_template\_configuration&pid=push\_feature\_template\_configuration-dffd6a3d-a040-4baa-aa01-d0e2b6d7e7ed'. The main area displays a table of task results. The first row, which corresponds to the device CBK-2-DC, has a status icon with a green circle and the word 'Success' (also highlighted with a red box). The message column shows the log of the configuration process. The table includes columns for Status, Message, Chassis Number, Device Model, Hostname, System IP, Site ID, and vManage IP. The status bar at the bottom right shows the time as 4:19 PM and the date as 10/30/2024.

Thực hiện viết cho C8000v site 100

Thực hiện viết cho C8000v còn lại của site DC2 Giao diện vManage, vào menu Configuration => Templates, chọn vào tab Feature => Chọn Add.

The screenshot shows the Cisco vManage web interface. In the left sidebar, under the 'Configuration' section, the 'Templates' item is highlighted with a red box. On the main page, the 'Feature' tab is selected in the top navigation bar, also highlighted with a red box. The main content area displays a table of feature templates, with a total of 18 rows. The columns include Mode, Device Role, Resource Group, Feature Templates, Draft Mode, and Devices Attached. The table lists various templates such as 'C8000v SDWAN Edge global 10 Disabled 0 ...', 'C8000v SDWAN Edge global 11 Disabled 0 ...', and so on.

Chọn vào add Template

This screenshot shows the same Cisco vManage interface as the previous one, but with a different focus. The 'Add Template' button in the top-left corner of the main content area is highlighted with a red box. The rest of the interface, including the sidebar and the table of templates, appears identical to the previous screenshot.



Kéo xuống và chọn vào C8000v và chọn vào Cisco OSPF

The screenshot shows the Cisco vManage web interface. In the top navigation bar, the URL is https://10.1.1.1/#/app/config/template/feature?display=add. The main area is titled "Configuration · Templates". A sidebar on the left lists various device models, with "C8000v" selected and highlighted with a red box. To the right, a grid of feature templates is displayed, with "Cisco OSPF" also highlighted with a red box. The grid includes other features like Cisco DHCP Server, Cisco IGMP, Cisco Logging, Cisco Multicast, Cisco PIM, Cisco SIG Credentials, Cisco OSPFV3, and Cisco SNMP.

Đường Template Name: C8000v OSPF HQ và Description: C8000v OSPF HQ

The screenshot shows the Cisco vManage interface for creating a new template. The URL is https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-C8000V&templateType=cisco\_ospf. The "Feature Template > Add Template > Cisco OSPF" screen is shown. The "Template Name" field contains "C8000V OSPF HQ" and the "Description" field contains "C8000V OSPF HQ", both of which are highlighted with red boxes. Below these fields, there are tabs for "Basic Configuration", "Redistribute", "Maximum Metric (Router LSA)", "Area", and "Advanced". The "Basic Configuration" tab is active, showing sections for "BASIC CONFIGURATION", "Router ID", "Distance for External Routes", and "Distance for Inter-Area Routes". At the bottom of the screen are "Cancel" and "Save" buttons, with "Save" being highlighted with a blue box.

## Ở phần Basic Configuration: Router ID chọn vào Global và điền ID 100.10.1.2

The screenshot shows the Cisco vManage web interface for configuring an OSPF feature template. The URL is https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-C8000V&templateType=cisco\_ospf. The 'Basic Configuration' tab is selected. In the 'BASIC CONFIGURATION' section, the 'Router ID' field contains '100.10.1.2' and the 'Distance for External Routes' dropdown is set to 'Global'. A tooltip for 'Global' indicates it can be changed to 'Device Specific' or 'Default'. Below these fields are 'Distance for Inter-Area Routes' and 'Distance for Intra-Area Routes' fields.

## Ở Phần REDISTRIBUTE: chọn vào New Redistribute

The screenshot shows the Cisco vManage interface for configuring an OSPF feature template. The URL is https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-CSR-1000v&templateType=cisco\_ospf. The 'Redistribute' tab is selected. In the 'REDISTRIBUTE' section, the 'New Redistribute' button is highlighted with a red box. Below it is a table with columns: Optional, Protocol, Enable NAT DIA, Route Policy, and Action. A message 'No data available' is displayed. At the bottom, there is a 'MAXIMUM METRIC (ROUTER LSA)' section with a 'New Router LSA' button.

## Ở Phần REDISTRIBUTE: Protocol chọn vào OMP và chọn vào Add

The screenshot shows the Cisco vManage web interface for configuring a Feature Template. The URL is [https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-CS1000v&templateType=cisco\\_ospf](https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-CS1000v&templateType=cisco_ospf). The page title is "Configuration · Templates". The "Feature" tab is selected. Under "Basic Configuration", the "Redistribute" tab is selected. A sub-section titled "REDISTRIBUTE" is open, showing a "New Redistribute" button. A dropdown menu under "Protocol" has "omp" selected and highlighted with a red box. An "Add" button is also highlighted with a red box. At the bottom are "Cancel" and "Save" buttons.

## Ở phần AREA: chọn vào New Area

The screenshot shows the Cisco vManage web interface for configuring a Feature Template. The URL is [https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-CS1000v&templateType=cisco\\_ospf](https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-CS1000v&templateType=cisco_ospf). The page title is "Configuration · Templates". The "Feature" tab is selected. Under "Basic Configuration", the "Area" tab is selected. A sub-section titled "AREA" is open, showing a "New Area" button highlighted with a red box. At the bottom are "Cancel" and "Save" buttons.

Ở phần AREA: Area Number điền là 0 và chọn vào Add Interface

The screenshot shows the Cisco vManage web interface for configuring OSPF feature templates. The URL is [https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-CSR-1000v&templateType=cisco\\_ospf](https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-CSR-1000v&templateType=cisco_ospf). The 'Area' tab is selected. The 'Area Number' field contains '0' and is highlighted with a red box. The 'Add Interface' button is also highlighted with a red box. Other fields like 'Set the area type' and 'Interface' are visible.

Chọn vào Add Interface

The screenshot shows a modal window titled 'Interface'. It features a cactus icon and a message: 'No OSPF Interfaces added, add your first OSPF Interface'. At the bottom, there are two buttons: 'Add Interface' (highlighted with a red box) and 'Configure With No Interfaces'.

Ở phần Interface: interface Name chọn vào GigabitEthernet5 và chọn tiếp vào Add

### Interface

Add Interface

GigabitEthernet3	<input type="button" value="Delete"/>
Interface Name	<input type="text" value="GigabitEthernet3"/> <span style="border: 2px solid red; padding: 2px;">GigabitEthernet3</span>
Hello Interval (seconds)	<input type="text" value="10"/> <span style="border: 1px solid #ccc; padding: 2px;">10</span>
Dead Interval (seconds)	<input type="text" value="40"/> <span style="border: 1px solid #ccc; padding: 2px;">40</span>
LSA Retransmission Interval (seconds)	<input type="text" value="5"/> <span style="border: 1px solid #ccc; padding: 2px;">5</span>
Interface Cost	<input type="text"/> <span style="border: 1px solid #ccc; padding: 2px;"></span>
Advanced Options >	
<input type="button" value="Add"/> <input type="button" value="Cancel"/>	

Chọn tiếp vào Add

QEMU (Win)

Cisco vManage

Not secure https://10.1.1.1/app/config/template/feature?display=add&deviceType=vedge-CS1000v&templateType=cisco\_ospf

Cisco vManage Select Resource Group Configuration · Templates

Feature Template > Add Template > Cisco OSPF

Basic Configuration Redistribution Maximum Metric (Router LSA) Area Advanced

AREA

New Area

Area Number 0

Set the area type

Interface 1 Interface

Range

Mark as Optional Row

Cancel Save

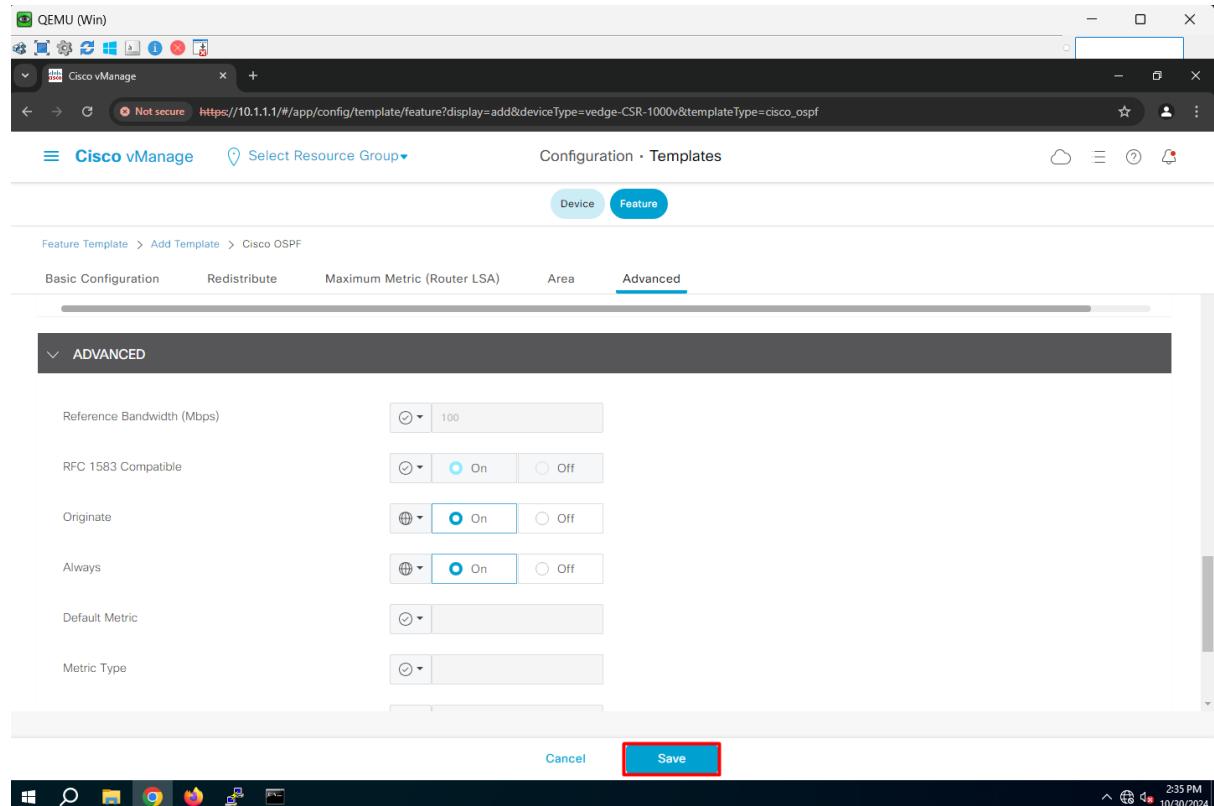
## Ở phần ADVANCED: Originate chọn vào Global chọn vào On

The screenshot shows the Cisco vManage web interface for configuring an OSPF feature template. The URL is https://10.1.1.1#/app/config/template/feature?display=add&deviceType=vedge-CS1000v&templateType=cisco\_ospf. The 'Feature' tab is selected. In the 'Advanced' section, the 'Originate' setting is set to 'On' (radio button selected). A dropdown menu for 'Always' is open, showing 'Global' (radio button selected) and 'Default'. The 'Save' button is visible at the bottom right.

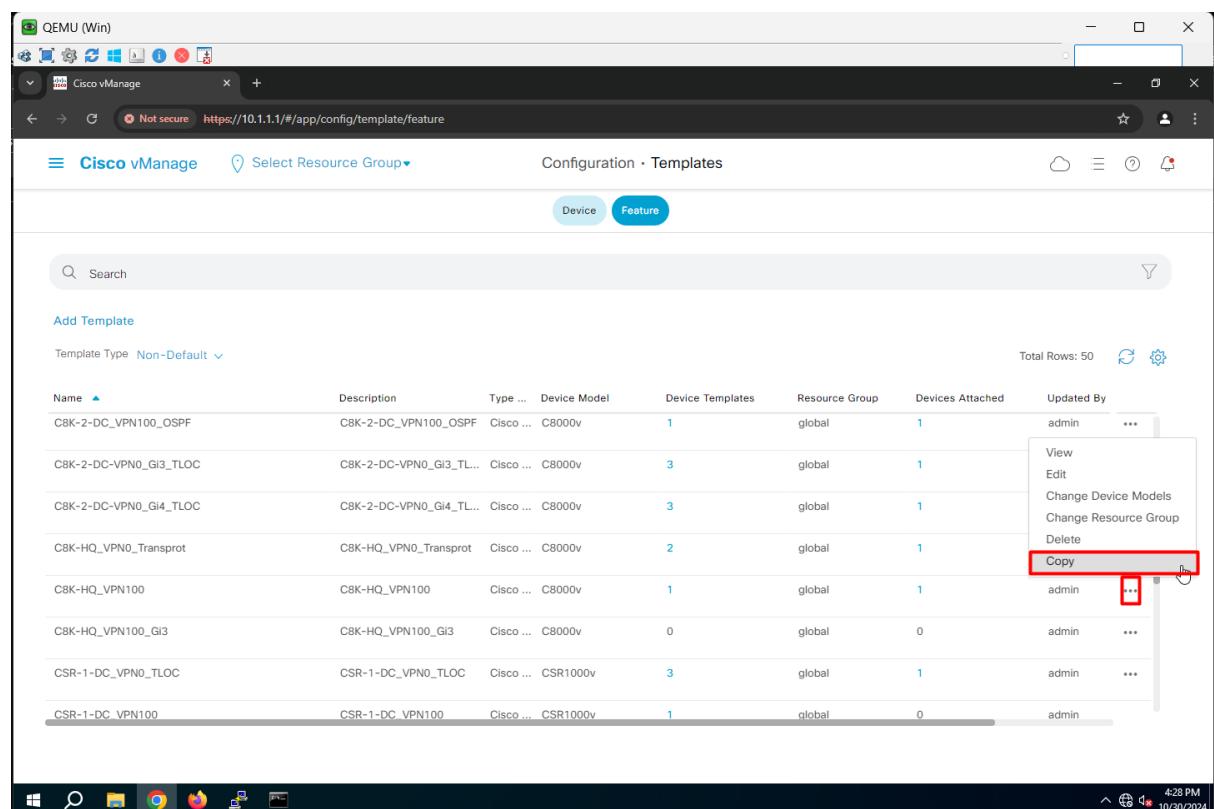
## Ở phần ADVANCED: Always chọn vào Global chọn vào On

This screenshot shows the same configuration interface as above, but the 'Always' dropdown menu has been closed. The 'Global' option is now highlighted with a red box. The 'Save' button is visible at the bottom right.

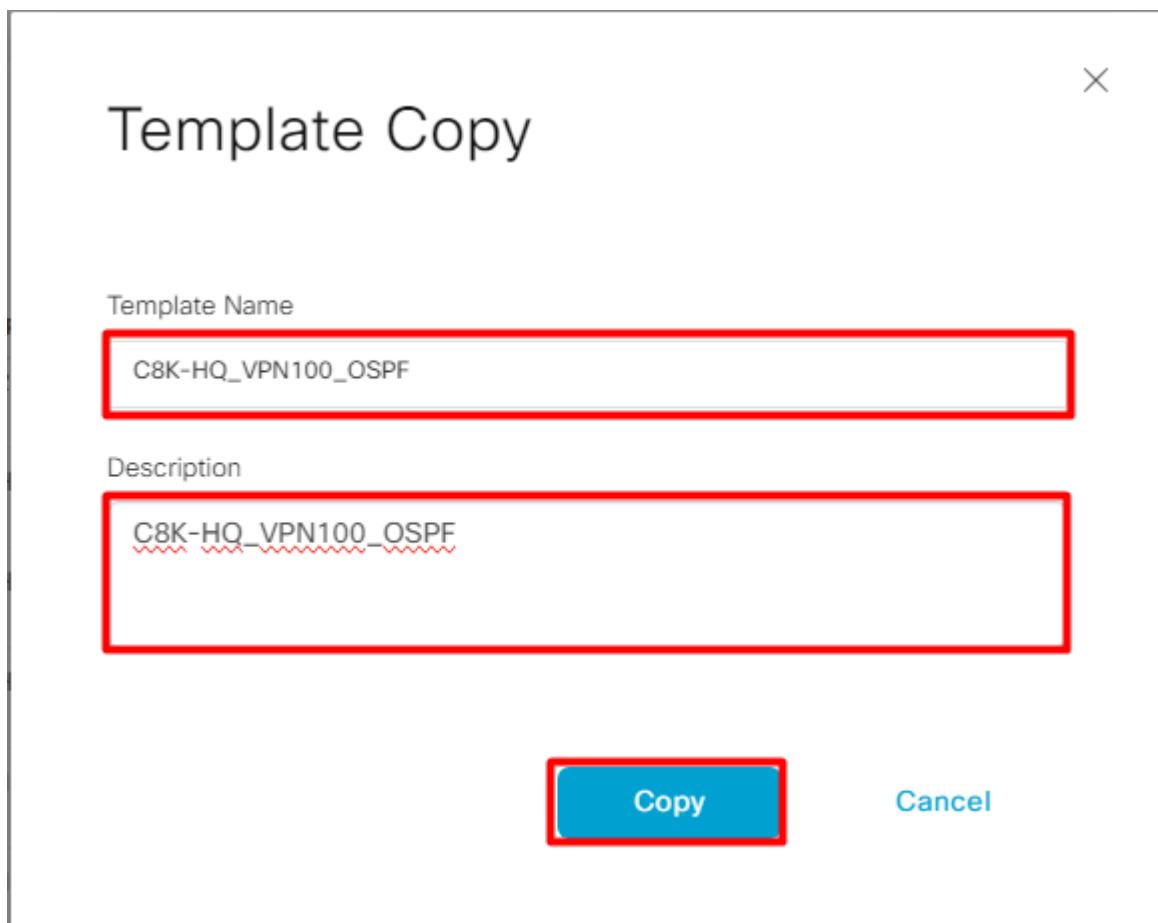
## Chọn vào Save để lưu Template



Thực hiện copy template C8K-HQ\_VPN100: chọn vào dấu ba chấm và chọn vào Copy



Sửa Template Name : C8K-HQ\_VPN100 OSPF và Description: C8K-HQ\_VPN100 OSPF và chọn và Copy



Chọn tiếp vào dấu ba chấm và chọn Edit

The screenshot shows the Cisco vManage web interface with the URL <https://10.1.1.1/#/app/config/template/feature>. The page title is "Configuration - Templates". The "Feature" tab is selected. A table lists various templates, including "C8K-HQ\_VPN100\_OSPF", "C8000v\_AAA", "CSR1000v\_AAA", "CSR-1-DC\_VPN0\_TLOC", "ISRv\_VPN0\_Gi1\_Site-3", "C8000v\_VPN0\_DC", and "C8000v\_VPN0\_Gi1\_HQ". A context menu is open over the row for "C8000v\_AAA", with the "Edit" option highlighted.

Thực hiện sóa rourte Static và chọn vào New advertise OMP

The screenshot shows the Cisco vManage web interface with the URL [https://10.1.1.1/#/app/config/template/feature?display=edit&templateId=008c1343-907d-4955-a0dd-2ba05a7f48b1&templateType=cisco\\_vpn](https://10.1.1.1/#/app/config/template/feature?display=edit&templateId=008c1343-907d-4955-a0dd-2ba05a7f48b1&templateType=cisco_vpn). The page title is "Configuration - Templates". The "Advertise OMP" tab is selected. A message box says "Enhance ECMP Keying can only be turned on in VPN0". Below it, a breadcrumb navigation shows "Feature Template > Cisco VPN > C8K-HQ\_VPN100\_OSPF". The "IPv4" tab is selected. Under "Advertise OMP", there is a section titled "New Advertise OMP" which is highlighted with a red box. At the bottom, there is a table with two rows: "Optional" and "Protocol" (Connected) and "Optional" and "Protocol" (Static). The "Static" row has a delete icon highlighted with a red box.

## Ở phần Advertise OMP: ở phần Protocol chọn vào OSPF và chọn vào Add

The screenshot shows the Cisco vManage web interface for managing network templates. The URL is [https://10.1.1.1/#/app/config/feature?display=edit&templateId=008c1343-907d-4955-a0dd-2ba05a7f48b1&templateType=cisco\\_vpn](https://10.1.1.1/#/app/config/feature?display=edit&templateId=008c1343-907d-4955-a0dd-2ba05a7f48b1&templateType=cisco_vpn). The page title is "Configuration · Templates". The navigation bar includes "Cisco vManage", "Select Resource Group", and "Configuration · Templates". The main content area shows a "Feature Template > Cisco VPN > C8K-HQ\_VPN100\_OSPF". The "Protocol" tab is selected, showing a dropdown menu with "OSPF" highlighted. A modal dialog box is open, titled "New Advertise OMP", with the "Protocol" field set to "OSPF". The "Add" button is highlighted with a red box. The bottom right of the dialog has "Cancel" and "Update" buttons.

## Ở Phần IPv4 ROUTE: thực hiện xóa 2 route

The screenshot shows the Cisco vManage interface for managing network templates. The URL is [https://10.1.1.1/#/app/config/feature?display=edit&templateId=008c1343-907d-4955-a0dd-2ba05a7f48b1&templateType=cisco\\_vpn](https://10.1.1.1/#/app/config/feature?display=edit&templateId=008c1343-907d-4955-a0dd-2ba05a7f48b1&templateType=cisco_vpn). The page title is "Configuration · Templates". The navigation bar includes "Cisco vManage", "Select Resource Group", and "Configuration · Templates". The main content area shows a "Feature Template > Cisco VPN > C8K-HQ\_VPN100\_OSPF". The "IPv4 Route" tab is selected. A section titled "IPv4 ROUTE" is expanded, showing a table of routes. The first two rows in the table have their delete icons highlighted with red boxes. The table columns include "Optional", "Prefix", "Gateway", "Selected Gateway Configuration", and "Action". The bottom right of the table area has "Cancel" and "Update" buttons.

## Chọn vào Update để cập nhập Template

The screenshot shows the Cisco vManage web interface. The URL is https://10.1.1.1/#/app/config/template/feature?display=edit&templateId=b7a3342e-0362-41b0-bebb-77f96a881d90&templateType=cisco\_vpn. The page title is 'Configuration - Templates'. Under 'Feature Template > Cisco VPN > CSR-1-DC\_VPN100\_OSPF', the 'IPv4 Route' tab is selected. A sub-section 'IPv6 ROUTE' is expanded, showing a table with one row: 'No data available'. At the bottom right of the table, there are 'Cancel' and 'Update' buttons, with 'Update' being highlighted with a red box.

## Chọn vào Device để viết device template cho C8K-HQ

The screenshot shows the Cisco vManage web interface. The URL is https://10.1.1.1/#/app/config/template/feature. The page title is 'Configuration - Templates'. The navigation bar has tabs 'Device' (highlighted with a red box) and 'Feature'. Below the navigation bar is a search bar and a 'Add Template' button. The main content area displays a table of device templates. The table includes columns: Name, Description, Type, Device Model, Device Templates, Resource Group, Devices Attached, Updated By, and Last Updated. Total Rows: 47. The table lists several entries, including 'C8000v\_AAA', 'CSR1000v\_AAA', 'CSR-1-DC\_VPN...', 'ISRv\_VPN0\_Gi1...', 'C8000v\_VPN0\_...', 'C8000v\_VPN0\_...', and 'C8000v\_VPN0\_...'. The last entry is 'C8000v\_VPN0\_... C8000v\_VPN0\_Gi1\_DC'. The 'Device' tab is highlighted with a red box.

Thực hiện Copy template C8000v\_HQ\_Service: chọn vào dấu 3 chấm và chọn vào Copy

The screenshot shows the Cisco vManage web interface with the URL <https://10.1.1.1/#/app/config/template/device>. The page title is "Configuration · Templates". A search bar and a "Create Template" dropdown are visible. The main table lists various templates with columns for Name, Description, Type, Device Mode, Device Role, Resource Group, Feature Templates, Draft Mode, and Devices Attached. The "C8K-HQ\_Service" row is selected. A context menu is open over this row, with the "Copy" option highlighted. Other options in the menu include Edit, View, Delete, Enable Draft Mode, Attach Devices, Change Resource Group, Detach Devices, Export CSV, and Change Device Values.

Sửa Template Name: C8000v-HQ\_Service OSPF và Description: C8000v-HQ\_Service OSPF và chọn vào Copy

The dialog box is titled "Template Copy". It contains two input fields: "Template Name" with the value "C8K-HQ\_Service OSPF" and "Description" with the value "C8K-HQ\_Service OSPF". At the bottom are two buttons: "Copy" (highlighted with a red border) and "Cancel".

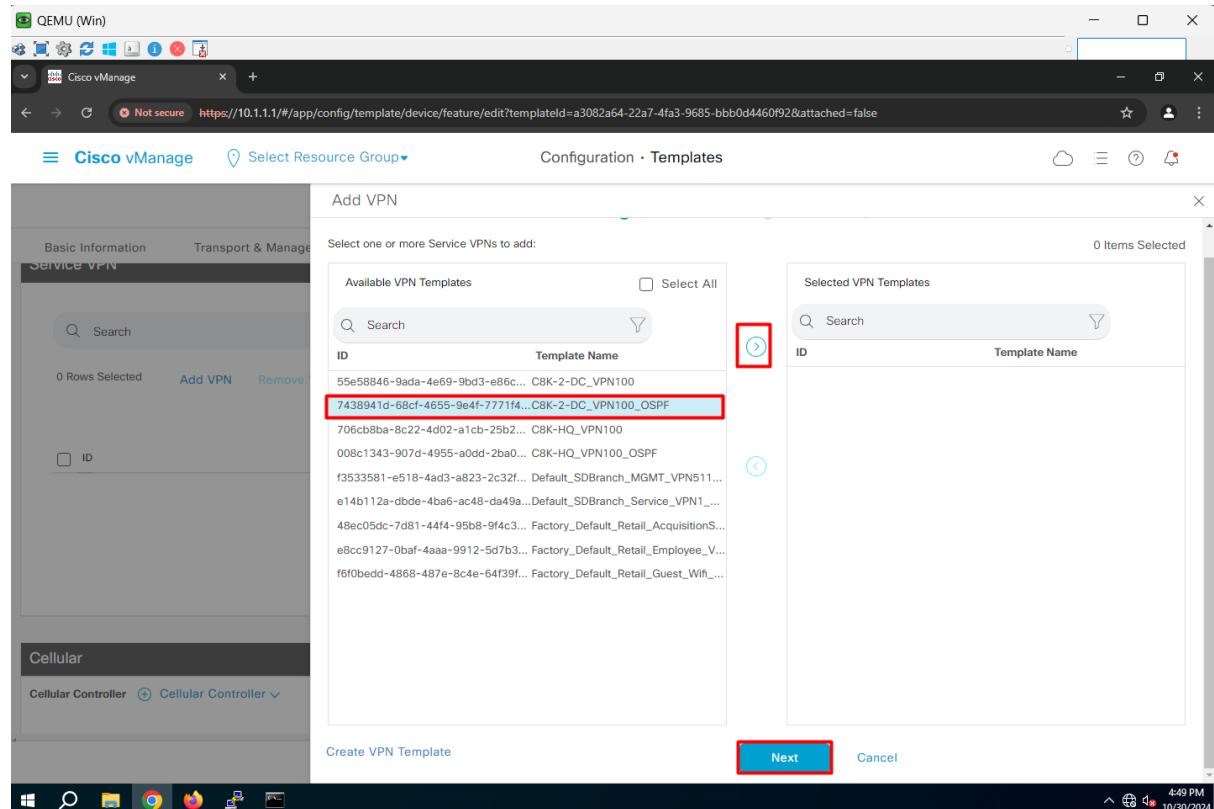
Chọn tiếp vào dấu ba chấm và chọn vào Edit

The screenshot shows the Cisco vManage interface with the URL <https://10.1.1.1/#/app/config/template/device>. The page title is "Configuration - Templates". The "Device" tab is selected. A table lists various templates, including CSR1000V\_Site\_1\_Service, ISRv\_Site-2\_Transport, ISRv\_Site-2\_Service, ISRv\_Site-3\_Transport, ISRv\_Site-3\_Service, CSR1000V\_DC\_Service OSPF, C8000V\_DC\_Service OSPF, and C8K-HQ\_Service OSPF. A context menu is open over the last row (C8K-HQ\_Service OSPF), with the "Edit" option highlighted.

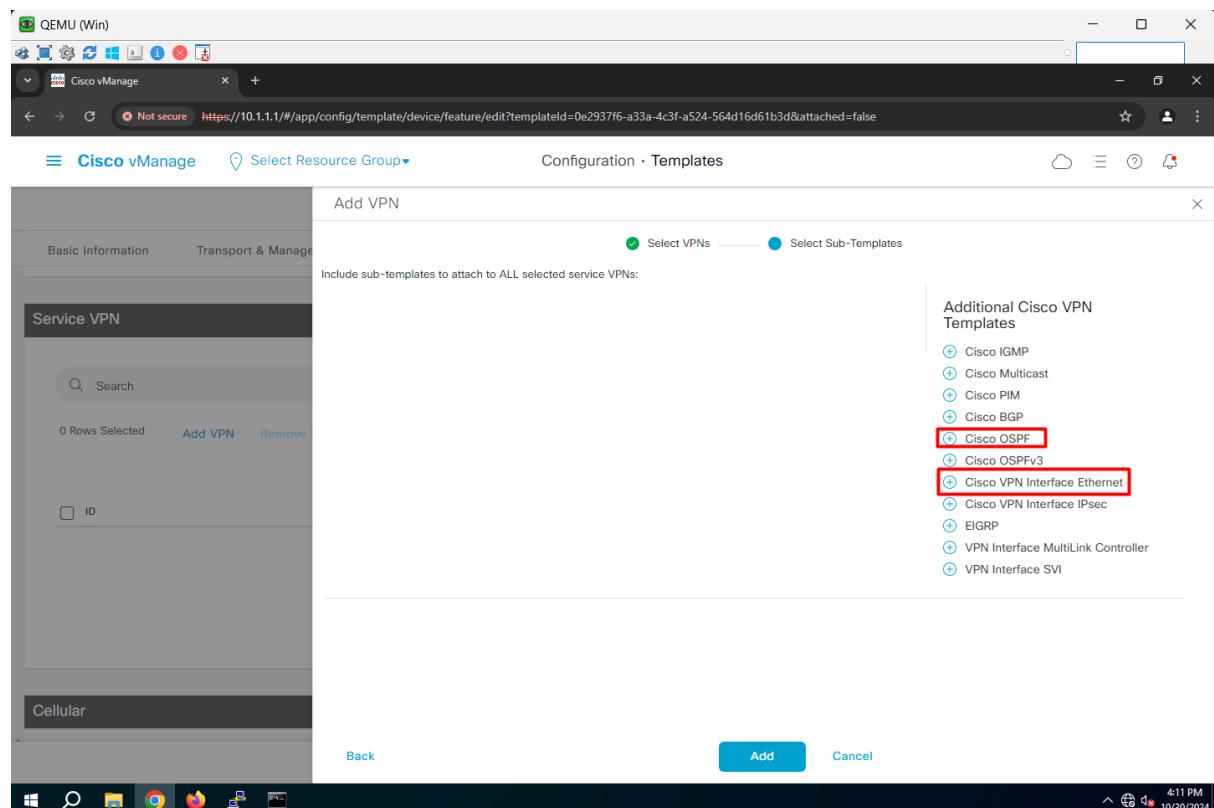
Ở phần SERVICE: tích vào service chọn vào Remove VPN và tiếp tục chọn vào Add VPN

The screenshot shows the Cisco vManage interface with the URL <https://10.1.1.1/#/app/config/template/device/feature/edit?templateId=a3082a64-22a7-4fa3-9685-bbb0d4460f92&attached=false>. The page title is "Configuration - Templates". The "Service VPN" tab is selected. A table shows one row selected, with the "ID" column checked. Below the table, there are "Add VPN" and "Remove VPN" buttons, both of which are highlighted with red boxes.

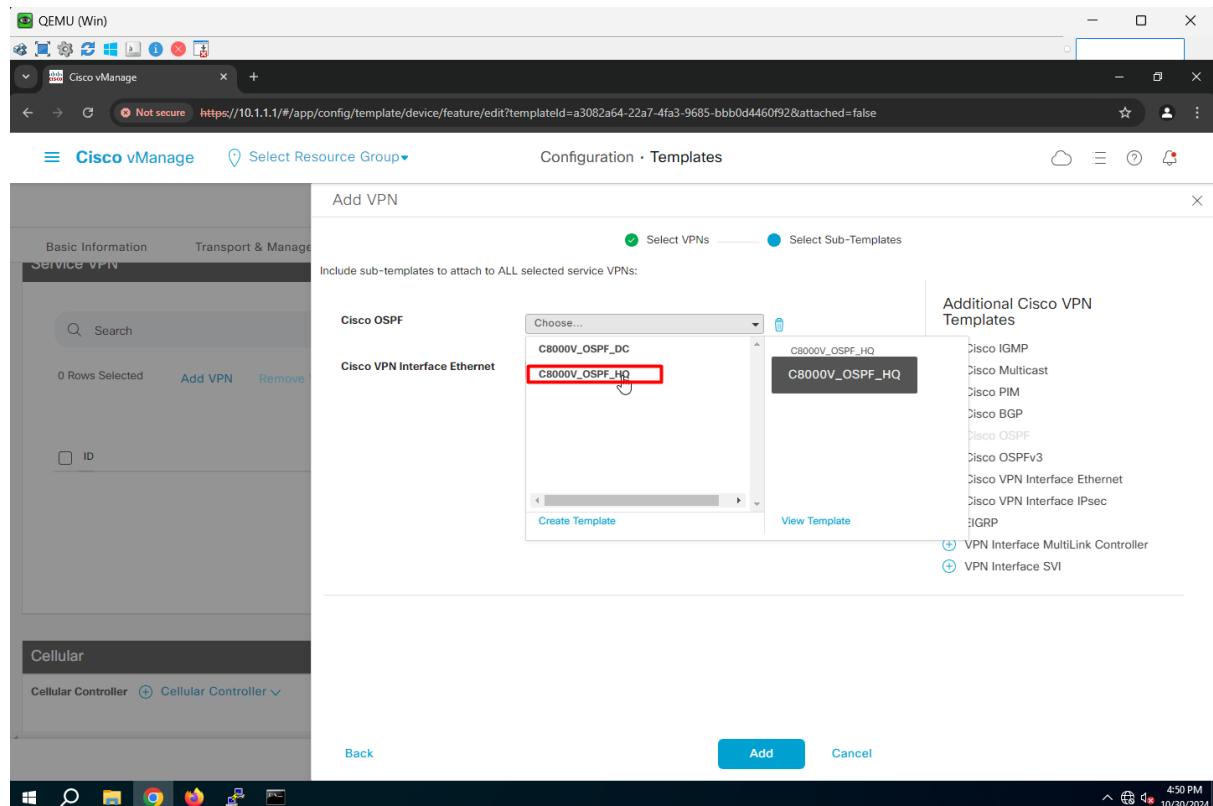
Chọn vào C8K-2-DC\_VPN100 OSPF và chọn vào dấu mũi tên sau đó nhấn Next



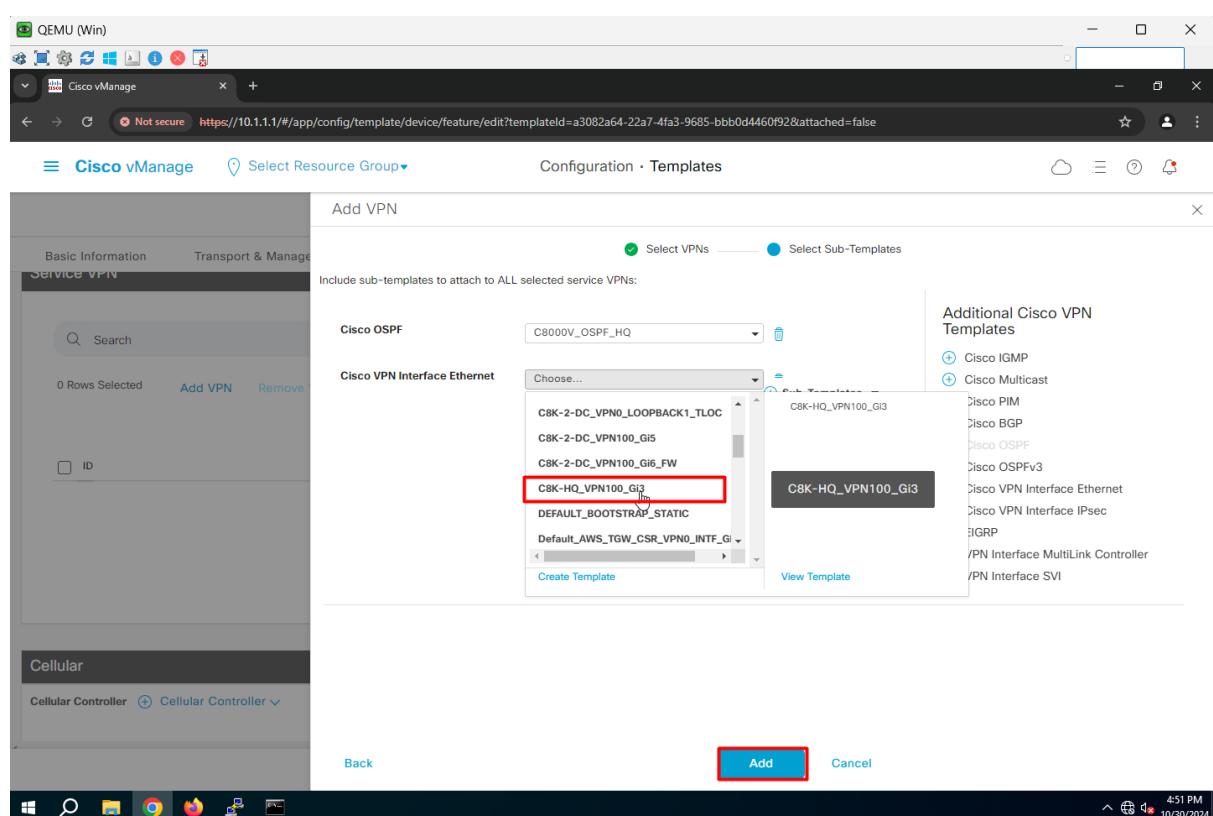
Chọn vào Cisco OSPF và Cisco VPN Interface Ethernet



## Ở phần Cisco OSPF chọn vào C8000V OSPF HQ



Ở phần Cisco VPN Interface Ethernet chọn vào C8K-HQ\_VPN100\_Gi3 và chọn vào Add



Và chọn vào Update để cập nhật lại device Template

The screenshot shows the Cisco vManage web interface. The URL is https://10.1.1.1/#/app/config/template/device/feature/edit?templateId=0e2937f6-a33a-4c3f-a524-564d16d61b3d&attached=false. The page title is Configuration · Templates. The tab 'Device' is selected. A table lists a single template: 'Cisco VPN 512 \*' with 'Default\_AWS\_TGW\_CSR\_VPN512\_V01' selected. To the right, there's a sidebar titled 'Additional Cisco VPN 512 Templates' with options for 'Cisco VPN Interface Ethernet' and 'VPN Interface SVI'. Below the table is a section titled 'Service VPN' with a search bar and buttons for 'Add VPN' and 'Remove VPN'. The table has columns for ID, Template Name, and Sub-Templates. One row is shown: '7438941d-68cf-4655-9e4f-7771f4629170' with 'C8K-2-DC\_VPN100 OSPF' and 'Cisco OSPF, Cisco VPN Interface Ethernet'. At the bottom are 'Update' and 'Cancel' buttons, with 'Update' highlighted with a red box.

Chọn vào dấu 3 chấm và chọn vào Attach Devices

The screenshot shows the Cisco vManage interface with a list of device templates. The URL is https://10.1.1.1/#/app/config/template/device. The page title is Configuration · Templates. The 'Device' tab is selected. A table lists several templates, including 'CSR1000V\_Site-1\_Service', 'ISRV\_Site-2\_Transport', 'ISRV\_Site-2\_Service', 'ISRV\_Site-3\_Transport', 'ISRV\_Site-3\_Service', 'CSR1000V\_DC\_Service OSPF', 'C8000V\_DC\_Service OSPF', and 'C8K-HQ\_Service OSPF'. The last row, 'C8K-HQ\_Service OSPF', has a context menu open with options: Edit, View, Delete, Copy, Enable Draft Mode, Attach Devices (highlighted with a red box), Change Resource, and Export CSV. The 'Attach Devices' option is also highlighted with a red box. The status bar at the bottom shows 4:52 PM and 10/30/2024.

Chọn vào C8K-HQ và chọn vào dấu mũi tên sau đó chọn Attach

## Attach Devices

Attach device from the list below

0 Items Selected

Available Devices

All

Name	Device IP
C8K-7E0FE134-F401-6CC0-F2FD-0C20B70038B0	
C8K-36FCB250-8D89-2DBB-B760-CC2DF52DA895	
C8K-35E0D7A5-7DE9-11D9-544F-A574535048F8	
C8K-2-DC	100.10.1.2
<b>C8K-HQ</b>	<b>100.0.1.1</b>

Selected Devices

All

Name	Device IP

Chọn vào Next

QEMU (Win)

Cisco vManage

Not secure https://10.1.1.1/#app/config/template/device/configure/a3082a64-22a7-4fa3-9685-bbb0d4460f92

Cisco vManage Select Resource Group Configuration · Templates

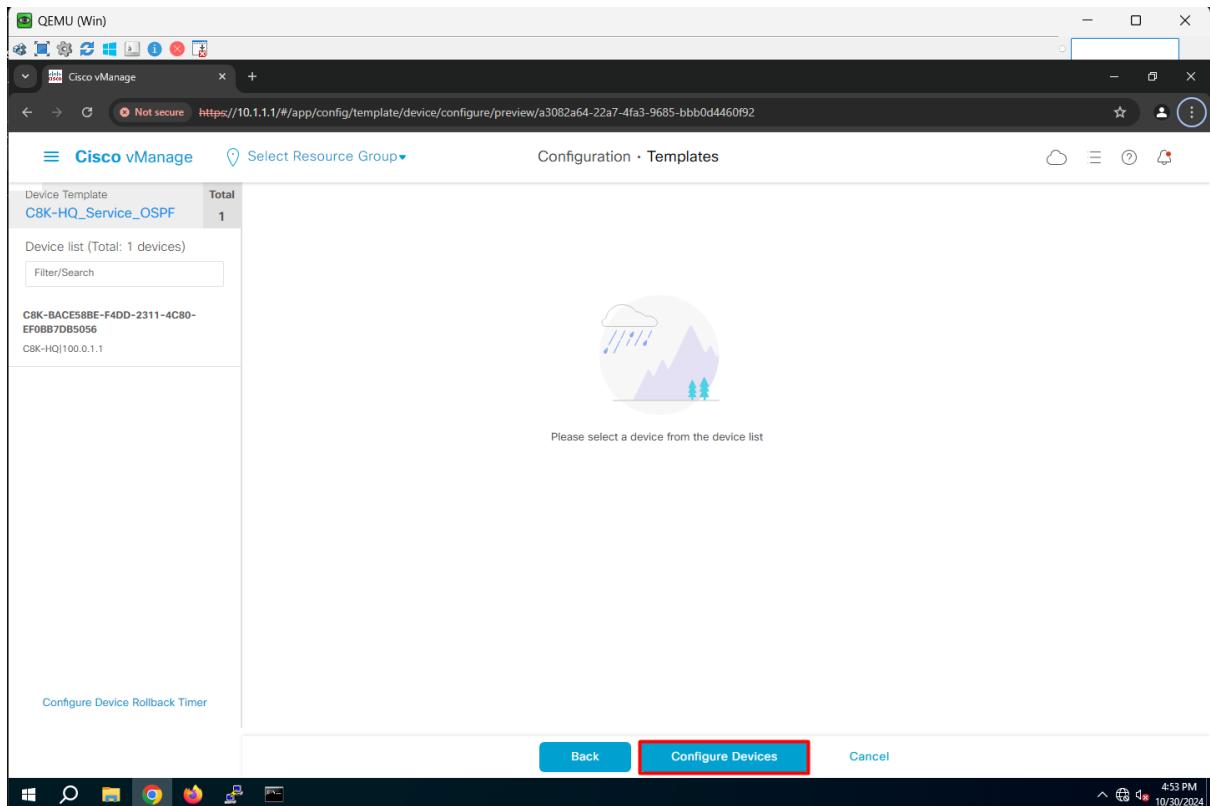
Device Template | C8K-HQ\_Service\_OSPF

Search Total Rows: 1

S...	Chassis Number	System IP	Hostname	Address(C8K-HQ_Nest Hop 1)	Address(C8K-HQ_Nest Hop 2)	Hostname	System IP	⋮
●	C8K-BACE58BE-F4DD-2311-4C80-EF0B...	100.0.1.1	C8K-HQ	100.100.0.1	200.100.0.1	C8K-HQ	100.0.1.1	...

Next Cancel

## Chọn vào Configure Devices



Đợi một vài phút sau đó hiện trạng thái Success là đã thành công.

The screenshot shows the Cisco vManage interface after the configuration task has completed successfully. The title bar says 'Cisco vManage'. The URL in the address bar is 'https://10.1.1.1/#/app/device/status?activity=push\_file\_template\_configuration&pid=push\_feature\_template\_configuration-8c13c580-a2b9-4023-ad52-1227fbab8244'. The main content area shows a table for 'Push Feature Template Configuration | Validation Success'. The table has columns: Status, Message, Chassis Number, Device Model, Hostname, System IP, Site ID, and vManage IP. There is one row with a status of 'Success' (highlighted with a red box). The 'Message' column contains the log entries: '[30-Oct-2024 10:11:24 UTC] Configuring device with feature template: C8K-HQ\_Service OSPF', '[30-Oct-2024 10:11:25 UTC] Checking and creating device in vManage', '[30-Oct-2024 10:11:25 UTC] Generating configuration from template', '[30-Oct-2024 10:11:32 UTC] Device is online', '[30-Oct-2024 10:11:32 UTC] Updating device configuration in vManage', '[30-Oct-2024 10:11:33 UTC] Sending configuration to device', and '[30-Oct-2024 10:11:39 UTC] Successfully notified device to pull configuration'. The status bar at the bottom right shows the time as 5:11 PM and the date as 10/30/2024.

Tiếp tục viết tiếp Template cho site 1

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

The screenshot shows the Cisco vManage web interface. In the left sidebar, under the 'Configuration' section, the 'Templates' item is highlighted with a red box. On the right, the 'Templates' page is displayed with the 'Feature' tab selected (also highlighted with a red box). The table lists various templates, including 'SDWAN Edge' and 'global' resource groups, with columns for Mode, Device Role, Resource Group, Feature Templates, Draft Mode, and Devices Attached. A red box also highlights the 'Add' button in the bottom right corner of the table header.

Chọn vào add Template

The screenshot shows the Cisco vManage interface again, this time with the 'Feature' tab selected in the 'Templates' page. A red box highlights the 'Add Template' button in the top left of the table area. The table displays a list of templates, including 'C8000v\_AAA', 'CSR1000v\_AAA', and 'CSR-1-DC\_VPN0\_TLOC', with columns for Name, Description, Type, Device Model, Device Templates, Resource Group, Devices Attached, Updated By, and Last. A red box also highlights the 'Non-Default' dropdown in the top left of the table area.



Kéo xuống và chọn vào CSR1000v và chọn vào Cisco OSPF

The screenshot shows the Cisco vManage web interface. In the top navigation bar, the URL is https://10.1.1.1/#/app/config/template/feature?display=add. The main content area is titled "Configuration - Templates" and "Feature". On the left, under "Select Devices", the "CSR1000v" checkbox is selected and highlighted with a red box. On the right, a grid of feature templates is shown, with the "Cisco OSPF" template highlighted with a red box. The "Cisco OSPF" template card includes "WAN" and "LAN" labels.

Đường Template Name: CSR1000v\_Site-1 OSPF và Description: CSR1000v\_Site-1 OSPF

The screenshot shows the configuration of the "CSR1000v\_Site-1 OSPF" template. The "Template Name" field contains "CSR1000V\_Site-1 OSPF" and the "Description" field also contains "CSR1000V\_Site-1 OSPF", both of which are highlighted with red boxes. Below this, the "Basic Configuration" tab is selected, showing fields for "Router ID", "Distance for External Routes" (set to 110), and "Distance for Inter-Area Routes" (set to 110). At the bottom right, there are "Cancel" and "Save" buttons, with "Save" highlighted in blue.

## Ở phần Basic Configuration: Router ID chọn vào Global và điền ID 1.1.1.1

The screenshot shows the Cisco vManage web interface for creating a new OSPF feature template. The 'Basic Configuration' tab is selected. Under 'Router ID', the value '1.1.1.1' is entered into the input field, which is highlighted with a red box. Below it, a dropdown menu is open, showing 'Global' selected, also highlighted with a red box. Other options in the dropdown include 'Device Specific' and 'Default'. At the bottom right of the configuration panel are 'Cancel' and 'Save' buttons.

## Ở Phần REDISTRIBUTE: chọn vào New Redistribute

The screenshot shows the Cisco vManage interface for creating a new OSPF feature template. The 'Redistribute' tab is selected. A button labeled 'New Redistribute' is highlighted with a red box. Below it, there are tabs for 'Optional', 'Protocol', 'Enable NAT DIA', 'Route Policy', and 'Action'. A message 'No data available' is displayed. At the bottom right of the configuration panel are 'Cancel' and 'Save' buttons.

## Ở Phần REDISTRIBUTE: Protocol chọn vào OMP và chọn vào Add

The screenshot shows the Cisco vManage web interface for configuring OSPF feature templates. The URL is [https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-CSR-1000v&templateType=cisco\\_ospf](https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-CSR-1000v&templateType=cisco_ospf). The 'Redistribute' tab is selected under 'Basic Configuration'. A dropdown menu for 'Protocol' is open, showing options like static, connected, bgp, and omp. The 'omp' option is highlighted with a red box. An 'Add' button is also highlighted with a red box. At the bottom, there are 'Cancel' and 'Save' buttons.

## Ở phần AREA: chọn vào New Area

The screenshot shows the Cisco vManage web interface for configuring OSPF feature templates. The URL is [https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-CSR-1000v&templateType=cisco\\_ospf](https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-CSR-1000v&templateType=cisco_ospf). The 'Area' tab is selected under 'Basic Configuration'. A 'New Area' button is highlighted with a red box. At the bottom, there are 'Cancel' and 'Save' buttons.

Ở phần AREA: Area Number điền là 0 và chọn vào Add Interface

The screenshot shows the Cisco vManage web interface. The URL is [https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-CSR-1000v&templateType=cisco\\_ospf](https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-CSR-1000v&templateType=cisco_ospf). The page title is "Configuration - Templates". Under "Feature Template > Add Template > Cisco OSPF", the "Area" tab is selected. A sub-section titled "AREA" is expanded. The "Area Number" input field contains "0" and is highlighted with a red box. Below it is a dropdown for "Set the area type". Further down are "Interface" and "Range" sections, each with an "Add Interface" or "Add Range" button. At the bottom right are "Add" and "Cancel" buttons.

Chọn vào Add Interface

The screenshot shows a modal window titled "Interface". Inside, there's a decorative illustration of a cactus against a background of clouds. Below the illustration, a message says "No OSPF Interfaces added, add your first OSPF Interface". At the bottom are two buttons: "Add Interface" (highlighted with a red box) and "Configure With No Interfaces".

Ở phần Interface: interface Name chọn vào GigabitEthernet3 và chọn tiếp vào Add

### Interface

Add Interface

GigabitEthernet3	<input type="button" value="Delete"/>
Interface Name	<input type="text" value="GigabitEthernet3"/>
Hello Interval (seconds)	<input type="text" value="10"/>
Dead Interval (seconds)	<input type="text" value="40"/>
LSA Retransmission Interval (seconds)	<input type="text" value="5"/>
Interface Cost	<input type="text"/>

Advanced Options >

Chọn tiếp vào Add

QEMU (Win)

Cisco vManage

Not secure https://10.1.1.1/app/config/template/feature?display=add&deviceType=vedge-CS1000v&templateType=cisco\_ospf

Cisco vManage Select Resource Group Configuration · Templates

Feature Template > Add Template > Cisco OSPF

Basic Configuration Redistribution Maximum Metric (Router LSA) Area Advanced

AREA

New Area

Mark as Optional Row

Area Number

Set the area type

Interface 1 Interface

Range

Cancel Save

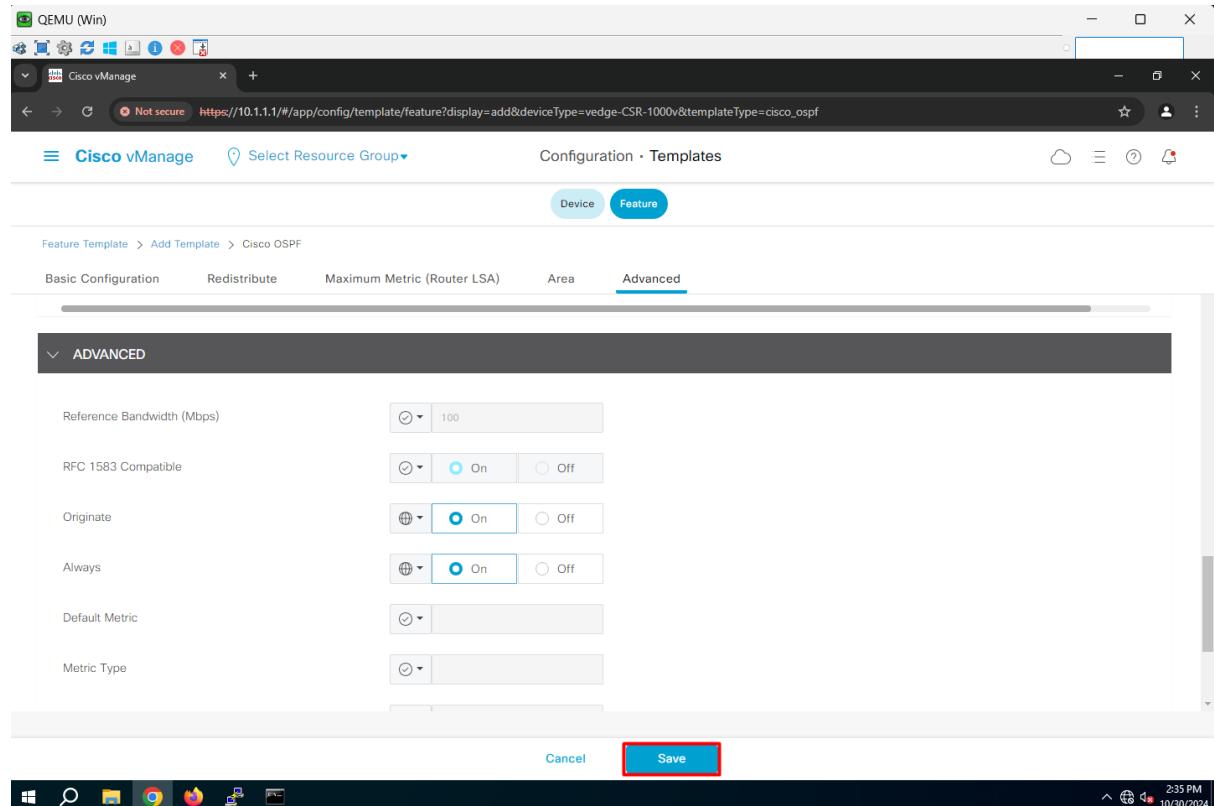
## Ở phần ADVANCED: Originate chọn vào Global chọn vào On

The screenshot shows the Cisco vManage web interface for configuring an OSPF feature template. The URL is https://10.1.1.1#/app/config/template/feature?display=add&deviceType=vedge-CS1000v&templateType=cisco\_ospf. The 'Feature' tab is selected. In the 'Advanced' section, the 'Originate' setting is set to 'On' (radio button selected). A dropdown menu for 'Always' is open, showing 'Global' (radio button selected) and 'Default'. The 'Save' button is visible at the bottom right.

## Ở phần ADVANCED: Always chọn vào Global chọn vào On

This screenshot shows the same configuration interface as the previous one, but with a different selection in the 'Always' dropdown. The 'Global' option is now selected (radio button selected), while 'Default' is unselected. The 'Save' button is visible at the bottom right.

Chọn vào Save để lưu Template



Thực hiện copy template CSR1000v\_Site-1\_VPN100: chọn vào dấu ba chấm và chọn vào Copy

The screenshot shows the Cisco vManage interface displaying a list of templates. The URL is https://10.1.1.1#/app/config/template/feature. The page title is 'Configuration - Templates'. The search bar shows 'Search'. The table has columns: Name, Description, Type, Device Model, Device Templates, Resource Group, Devices Attached, View, Edit, Change Device Models, Change Resource Group, Delete, and a three-dot menu. The 'CSR1000V\_Site-1\_VPN100' row is selected, and a context menu is open with 'Copy' highlighted by a red box. Other options in the menu include 'Edit', 'Change Device Models', 'Change Resource Group', and 'Delete'. The status bar at the bottom right shows '5:21 PM 10/30/2024'.

Name	Description	Type	Device Model	Device Templates	Resource Group	Devices Attached	View	Edit	Change Device Models	Change Resource Group	Delete	Copy
CSR1000V_OSPF_DC	CSR1000V_OSPF_DC	Cisco ...	CSR1000v	1	global	1						
CSR1000V_Site-1_OSPF	CSR1000V_Site-1_OSPF	Cisco ...	CSR1000v	0	global	0						
CSR1000V_Site-1_VPN100	CSR1000V_Site-1_VPN100	Cisco ...	CSR1000v	1	global	1	admin	...				
CSR1000V_Site-1_VPN100_Gi3	CSR1000V_Site-1_VPN100_Gi3	Cisco ...	CSR1000v	1	global	1	admin	...				
CSR1000V_VPN0_DC	CSR1000V_VPN0_DC	Cisco ...	CSR1000v	1	global	0	admin	...				
CSR1000V_VPN0_Gi1_DC	CSR1000V_VPN0_Gi1_DC	Cisco ...	CSR1000v	4	global	1	admin	...				
CSR1000V_VPN0_Gi1_Site-1	CSR1000V_VPN0_Gi1_Site-1	Cisco ...	CSR1000v	3	global	1	admin	...				

Sửa Template Name : CSR1000v\_Site-1\_VPN100 OSPF và Description:  
CSR1000v\_Site-1\_VPN100 OSPF và chọn và Copy

## Template Copy

X

Template Name

CSR1000V\_Site-1\_VPN100\_OSPF

Description

CSR1000V\_Site-1\_VPN100\_OSPF

Copy

Cancel

Chọn tiếp vào dấu ba chấm và chọn Edit

The screenshot shows the Cisco vManage web interface with the URL <https://10.1.1.1/#/app/config/template/feature>. The page title is "Configuration - Templates". The "Feature" tab is selected. A table lists various templates, including "CSR1000V\_Site-1\_VPN100\_OSPF". A context menu is open over this row, with the "Edit" option highlighted.

Thực hiện sóa rourte Static và chọn vào New advertise OMP

The screenshot shows the Cisco vManage web interface with the URL [https://10.1.1.1/#/app/config/template/feature?display=edit&templateId=0acc0f40-314a-46bf-89d0-60b96c61022e&templateType=cisco\\_vpn](https://10.1.1.1/#/app/config/template/feature?display=edit&templateId=0acc0f40-314a-46bf-89d0-60b96c61022e&templateType=cisco_vpn). The page title is "Configuration - Templates". The "Feature" tab is selected. The breadcrumb navigation shows "Feature Template > Cisco VPN > CSR1000V\_Site-1\_VPN100\_OSPF". The "Advertise OMP" tab is selected. A button labeled "New Advertise OMP" is highlighted with a red box.

## Ở phần Advertise OMP: ở phần Protocol chọn vào OSPF và chọn vào Add

The screenshot shows the Cisco vManage web interface. The URL is [https://10.1.1.1/#/app/config/template/feature?display=edit&templateId=0acc0f40-314a-46bf-89d0-60b96c61022e&templateType=cisco\\_vpn](https://10.1.1.1/#/app/config/template/feature?display=edit&templateId=0acc0f40-314a-46bf-89d0-60b96c61022e&templateType=cisco_vpn). The page title is "Cisco vManage Configuration · Templates". The navigation bar includes "Cisco vManage", "Select Resource Group", "Configuration · Templates", and tabs for "Device" and "Feature". Below the tabs, there are links for "Basic Configuration", "DNS", "Advertise OMP", "IPv4 Route", "IPv6 Route", "Service", "Service Route", "GRE Route", "IPSEC Route", and "NAT". The "Advertise OMP" tab is selected. Under "Advertise OMP", there are sub-tabs "IPv4" and "IPv6", with "IPv4" selected. A "New Advertise OMP" button is visible. On the left, there are sections for "Protocol" and "Route Policy". In the "Protocol" section, a dropdown menu is open, showing options like "Choose", "BGP", and "OSPF". The "OSPF" option is highlighted with a red box. To the right of the dropdown, there are "Add" and "Cancel" buttons, with "Add" also highlighted with a red box. At the bottom, there are "Cancel" and "Update" buttons.

## Ở Phần IPv4 ROUTE: thực hiện xóa 2 route

The screenshot shows the Cisco vManage web interface. The URL is [https://10.1.1.1/#/app/config/template/feature?display=edit&templateId=b7a3342e-0362-41b0-bebb-77f96a881d90&templateType=cisco\\_vpn](https://10.1.1.1/#/app/config/template/feature?display=edit&templateId=b7a3342e-0362-41b0-bebb-77f96a881d90&templateType=cisco_vpn). The page title is "Cisco vManage Configuration · Templates". The navigation bar includes "Cisco vManage", "Select Resource Group", "Configuration · Templates", and tabs for "Device" and "Feature". Below the tabs, there are links for "Basic Configuration", "DNS", "Advertise OMP", "IPv4 Route", "IPv6 Route", "Service", "Service Route", "GRE Route", "IPSEC Route", and "NAT". The "IPv4 Route" tab is selected. Under "IPv4 Route", there is a "New IPv4 Route" button. Below it, there is a table with columns: "Optional", "Prefix", "Gateway", "Selected Gateway Configuration", and "Action". Two rows are present in the table:

Optional	Prefix	Gateway	Selected Gateway Configuration	Action
<input type="checkbox"/>	10.0.10.0/24	Next Hop	Next Hop 1	
<input type="checkbox"/>	10.0.11.0/24	Next Hop	Next Hop 1	

At the bottom of the table, there are "Cancel" and "Update" buttons. The status bar at the bottom right shows the time as 5:24 PM and the date as 10/30/2024.

## Chọn vào Update để cập nhập Template

The screenshot shows the Cisco vManage web interface. The URL in the address bar is [https://10.1.1.1/#/app/config/template/feature?display=edit&templateId=b7a3342e-0362-41b0-bebb-77f96a881d90&templateType=cisco\\_vpn](https://10.1.1.1/#/app/config/template/feature?display=edit&templateId=b7a3342e-0362-41b0-bebb-77f96a881d90&templateType=cisco_vpn). The page title is "Configuration - Templates". The navigation bar includes "Cisco vManage", "Select Resource Group", and "Configuration". Below the navigation is a sub-navigation bar with tabs: Basic Configuration, DNS, Advertise OMP, IPv4 Route (selected), IPv6 Route, Service, Service Route, GRE Route, IPSEC Route, and NAT. The main content area shows a "Feature Template > Cisco VPN > CSR-1-DC\_VPN100\_OSPF" path. Under "IPv4 Route", there is a "New IPv4 Route" button. A "Selected Gateway Configuration" section shows "No data available". At the bottom right of the content area is a red box around the "Update" button. The status bar at the bottom right shows "2:50 PM 10/30/2024".

## Chọn vào Device để viết device template cho CSR-1-DC

The screenshot shows the Cisco vManage web interface. The URL in the address bar is <https://10.1.1.1/#/app/config/template/feature>. The page title is "Configuration - Templates". The navigation bar includes "Cisco vManage", "Select Resource Group", and "Configuration". Below the navigation is a sub-navigation bar with tabs: Device (highlighted with a red box) and Feature. The main content area shows a search bar with "Search" and a "Total Rows: 47" indicator. A table lists device templates with columns: Name, Description, Type, Device Model, Device Templates, Resource Group, Devices Attached, Updated By, and Last Updated. The table includes rows for C8000v\_AAA, CSR1000v\_AAA, CSR-1-DC\_VPN..., ISRv\_VPN0\_Gi1..., C8000v\_VPN0\_..., C8000v\_VPN0\_..., and C8000v\_VPN0\_.... The status bar at the bottom right shows "2:51 PM 10/30/2024".

Thực hiện Copy template CSR1000v\_DC\_Service: chọn vào dấu 3 chấm và chọn vào Copy

The screenshot shows the Cisco vManage web interface with the URL <https://10.1.1.1/#/app/config/template/device>. The page title is "Configuration - Templates". A context menu is open over the row for "CSR1000V\_DC\_Service", specifically over the "..." button in the "Actions" column. The "Copy" option is highlighted with a red box.

Name	Description	Type ...	Device Mode...	Device Role ...	Resource Group	Feature Templates	Draft
ISRv_Site-2_BOOTSTRAP	ISRv_Site-2_B...	Feature	ISRv	SDWAN Edge	global	10	Disabled
ISRv_Site-3_BOOTSTRAP	ISRv_Site-3_B...	Feature	ISRv	SDWAN Edge	global	10	Disabled
CSR1000V_DC_TLOC	CSR1000V_DC_T...	Feature	CSR1000v	SDWAN Edge	global	12	Disabled
C8000V_DC_TLOC	C8000V_DC_T...	Feature	C8000v	SDWAN Edge	global	15	Disabled
CSR1000V_DC_Service	CSR1000V_DC...	Feature	CSR1000v	SDWAN Edge	global	14	Disabled 1 ...
C8000V_DC_Service	C8000V_DC_S...	Feature	C8000v	SDWAN Edge	global	18	Disabled 1 ...
C8K-HQ_Transport	C8K-HQ_Trans...	Feature	C8000v	SDWAN Edge	global	12	Disabled 0 ...
C8K-HQ_Service	C8K-HQ_Service	Feature	C8000v	SDWAN Edge	global	13	Disabled 1 ...

Sửa Template Name: CSR1000v\_DC\_Service OSPF và Description: CSR1000v\_DC\_Service OSPF và chọn vào Copy

The screenshot shows the "Template Copy" dialog box. It has two input fields: "Template Name" containing "CSR1000V\_DC\_Service OSPF" and "Description" containing "CSR1000V\_DC\_Service OSPF". At the bottom are two buttons: "Copy" (highlighted with a red box) and "Cancel".

Chọn tiếp vào dấu ba chấm và chọn vào Edit

The screenshot shows the Cisco vManage web interface with the URL <https://10.1.1.1/#/app/config/template/device>. The page title is "Configuration - Templates". The "Device" tab is selected. A context menu is open over the row for "CSR1000V\_Site-1\_Service", with the "Edit" option highlighted by a red box.

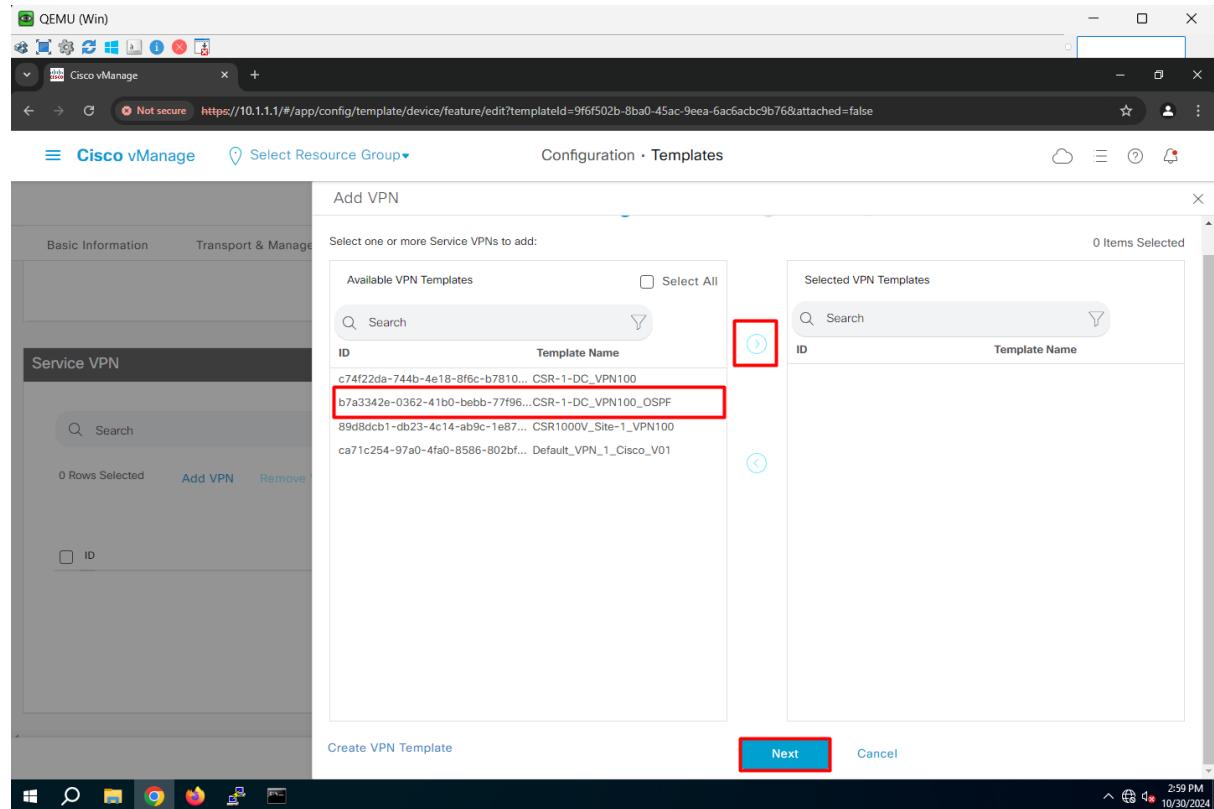
Name	Description	Type ...	Device Mode...	Device Role ...	Resource Group	Feature Templates	Draft Mode	Dev
C8K-HQ_Service	C8K-HQ_Service	Feature	C8000v	SDWAN Edge	global	13	Disabled	1 ...
CSR1000V_Site-1_Transport	CSR1000V_Sit...	Feature	CSR1000v	SDWAN Edge	global	11	Disabled	0 ...
CSR1000V_Site-1_Service	CSR1000V_Sit...	Feature	CSR1000v	SDWAN Edge	global	13	Disabled	1 ...
ISRV_Site-2_Transport	ISRV_Site-2_Tr...	Feature	ISRV	SDWAN Edge	global	11	Disabled	Edit (highlighted)
ISRV_Site-2_Service	ISRV_Site-2_S...	Feature	ISRV	SDWAN Edge	global	13	Disabled	View
ISRV_Site-3_Transport	ISRV_Site-3_Tr...	Feature	ISRV	SDWAN Edge	global	11	Disabled	Delete
ISRV_Site-3_Service	ISRV_Site-3_S...	Feature	ISRV	SDWAN Edge	global	13	Disabled	Copy
CSR1000V_DC_Service OSPF	CSR1000V_DC...	Feature	CSR1000v	SDWAN Edge	global	14	Disabled	Enable Draft Mode

Ở phần SERVICE: tích vào service chọn vào Remove VPN và tiếp tục chọn vào Add VPN

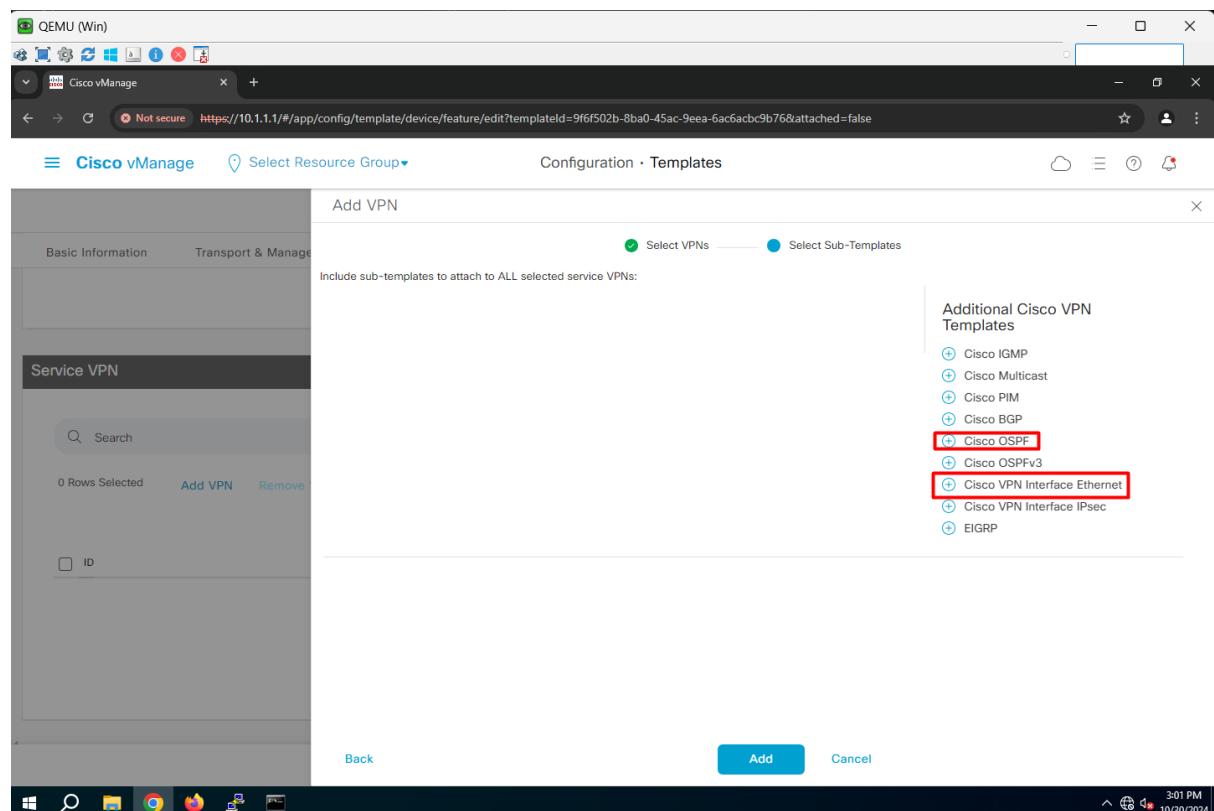
The screenshot shows the Cisco vManage web interface with the URL <https://10.1.1.1/#/app/config/template/device/feature/edit?templateId=9f6f502b-8ba0-45ac-9eea-6ac6acbc9b76&attached=false>. The page title is "Configuration - Templates". The "Service VPN" tab is selected. The "Add VPN" and "Remove VPN" buttons are highlighted by red boxes. A checkbox in the table header is also highlighted by a red box.

ID	Template Name	Sub-Templates	...
574f22da-744b-4e18-8f6c-b7810c9f6ef7	CSR-1-DC_VPN100	Cisco VPN Interface Ethernet	...

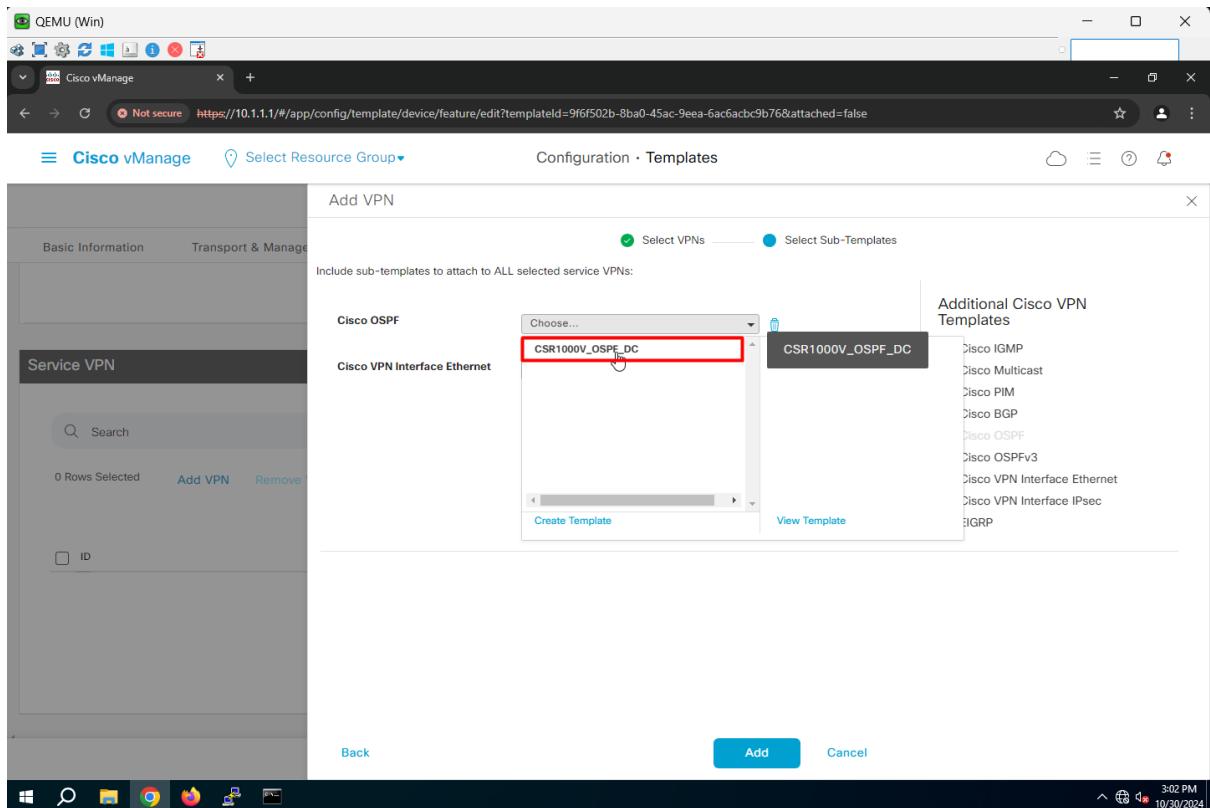
Chọn vào CSR-1-DC\_VPN100\_OSPF và chọn vào dấu mũi tên sau đó nhấn Next



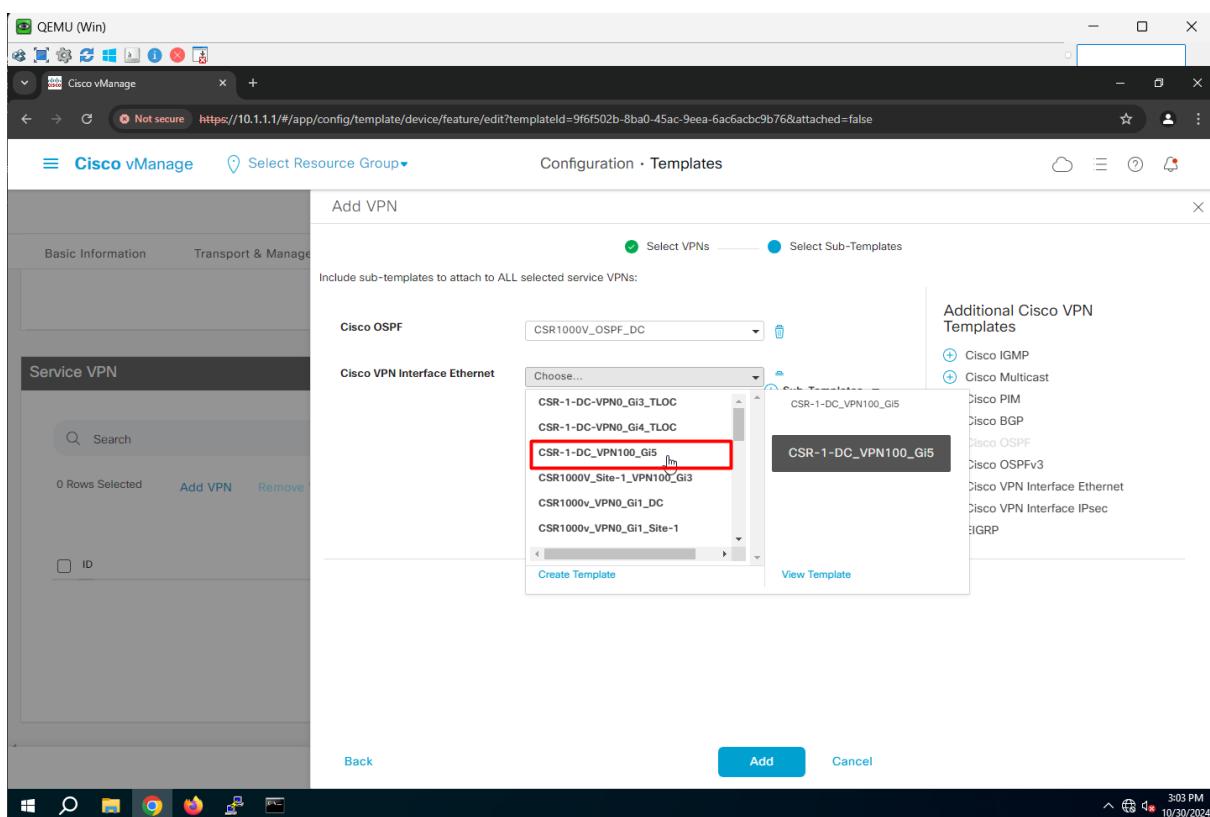
Chọn vào Cisco OSPF và Cisco VPN Interface Ethernet



## Ở phần Cisco OSPF chọn vào CSR1000V\_OSPF\_DC



Ở phần Cisco VPN Interface Ethernet chọn vào CSR-1-DC\_VPN100\_Gi5 và chọn vào Add



Và chọn vào Update để cập nhật lại device Template

The screenshot shows the Cisco vManage web interface. The URL in the address bar is <https://10.1.1.1/#/app/config/template/device/feature/edit?templateId=9f6f502b-8ba0-45ac-9eea-6ac6acbc9b76&attached=false>. The page title is "Configuration - Templates". The "Device" tab is selected. In the main content area, there is a table with one row under the "Service VPN" section. The row contains the following data:

ID	Template Name	Sub-Templates
b7a3342e-0362-41b0-bebb-77f96a881d90	CSR-1-DC_VPN100_OSPF	Cisco OSPF, Cisco VPN Interface Ethernet

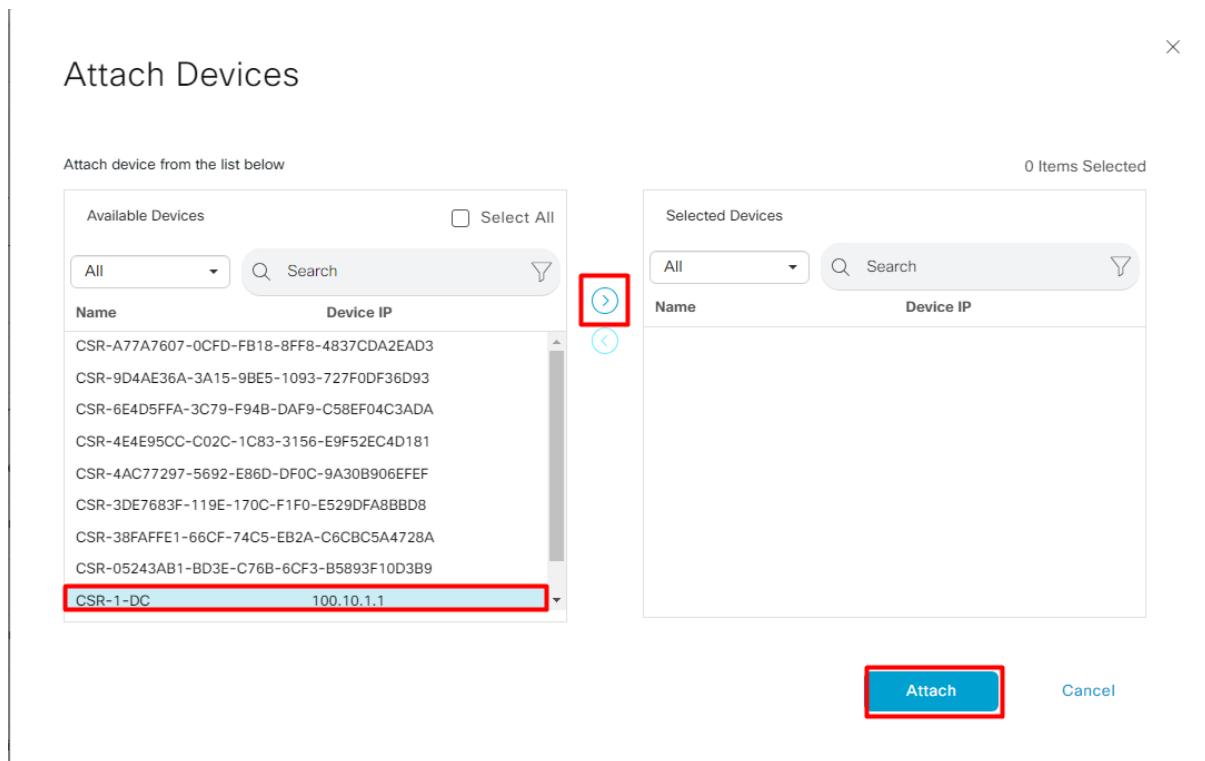
At the bottom of the table, there are "Update" and "Cancel" buttons. The "Update" button is highlighted with a red rectangle.

Chọn vào dấu 3 chấm và chọn vào Attach Devices

The screenshot shows the Cisco vManage interface with a list of templates. The URL in the address bar is <https://10.1.1.1/#/app/config/template/device>. The page title is "Configuration - Templates". The "Device" tab is selected. The table lists various templates, and the last row, "CSR1000V\_DC\_Service\_OSPF", has its context menu open. The "Attach Devices" option in the menu is highlighted with a red rectangle.

Name	Description	Type ...	Device Mode...	Device Role ...	Resource Group	Feature Templates	Draft Mode	Dev
C8K-HQ_Service	C8K-HQ_Service	Feature	C8000v	SDWAN Edge	global	13	Disabled	1 ...
CSR1000V_Site-1_Transport	CSR1000V_Sit...	Feature	CSR1000v	SDWAN Edge	global	11	Disabled	0 ...
CSR1000V_Site-1_Service	CSR1000V_Sit...	Feature	CSR1000v	SDWAN Edge	global	13	Disabled	1 ...
ISRv_Site-2_Transport	ISRv_Site-2_Tr...	Feature	ISRv	SDWAN Edge	global	11	Disabled	Edit View
ISRv_Site-2_Service	ISRv_Site-2_S...	Feature	ISRv	SDWAN Edge	global	13	Disabled	Delete Copy
ISRv_Site-3_Transport	ISRv_Site-3_Tr...	Feature	ISRv	SDWAN Edge	global	11	Disabled	Enable Draft Mode
ISRv_Site-3_Service	ISRv_Site-3_S...	Feature	ISRv	SDWAN Edge	global	13	Disabled	Change Resource Group Export CSV
CSR1000V_DC_Service_OSPF	CSR1000V_DC...	Feature	CSR1000v	SDWAN Edge	global	15	Disabled	... Attach Devices

Chọn vào CSR-1-DC và chọn vào dấu mũi tên sau đó chọn Attach



Chọn vào Next

S...	Chassis Number	System IP	Hostname	Address(CSR-1-DC_VPN0_Transport)	Address(CSR-1-DC_VPN0_Transport1)	Hostname
CSR-EB8820BC-6FA5-3557-6E5F-08C2...	100.10.1.1	CSR-1-DC	100.100.10.1	10.200.0.1	CSR-1-DC	***

Chọn vào Update để cập nhập Template

The screenshot shows the Cisco vManage web interface. The URL is https://10.1.1.1/#/app/config/template/feature?display=edit&templateId=b7a3342e-0362-41b0-bebb-77f96a881d90&templateType=cisco\_vpn. The page title is "Configuration · Templates". The "Device" tab is selected. The main navigation bar includes "Basic Configuration", "DNS", "Advertise OMP", "IPv4 Route" (selected), "IPv6 Route", "Service", "Service Route", "GRE Route", "IPSEC Route", and "NAT". Below the navigation, there is a "Global Route Leak" section. A sub-section titled "IPv6 ROUTE" is expanded, showing a "New IPv6 Route" button. The "Selected Gateway Configuration" table has one row: "No data available". At the bottom right, there is a "Cancel" button and a large blue "Update" button, which is highlighted with a red box.

Chọn vào Device để viết device template cho CSR-1-DC

The screenshot shows the Cisco vManage web interface. The URL is https://10.1.1.1/#/app/config/template/feature?display=edit&templateId=b7a3342e-0362-41b0-bebb-77f96a881d90&templateType=cisco\_vpn. The page title is "Configuration · Templates". The "Feature" tab is selected. The main navigation bar includes "Basic Configuration", "DNS", "Advertise OMP", "IPv4 Route", "IPv6 Route", "Service", "Service Route", "GRE Route", "IPSEC Route", and "NAT". Below the navigation, there is a "Global Route Leak" section. A search bar is present. The "Add Template" section shows "Template Type: Non-Default". A table lists device templates with the following columns: Name, Description, Type, Device Model, Device Templates, Resource Group, Devices Attached, Updated By, and Last Updated. The table shows 47 total rows. The first entry, "C8000v\_AAA", is highlighted with a red box. The last entry, "C8000v\_VPN0\_Gi1\_DC", is also highlighted with a red box. The "Device" tab is highlighted with a red box. At the bottom right, there is a "Cancel" button and a large blue "Update" button.

Thực hiện Copy template CSR1000v\_Site-1\_Service: chọn vào dấu 3 chấm và chọn vào Copy

The screenshot shows the Cisco vManage web interface with the URL <https://10.1.1.1/#/app/config/template/device>. The page title is "Configuration - Templates". The "Device" tab is selected. A search bar and a "Create Template" dropdown are at the top. Below is a table with columns: Name, Description, Type, Device Mode, Device Role, Resource Group, Feature Templates, Draft Mode, Devices Attached, and Update. The table lists several templates, including "CSR1000V\_Site-1\_Service". A context menu is open over this row, with the "Copy" option highlighted. Other options in the menu include Edit, View, Delete, Enable Draft Mode, Attach Devices, Change Resource Group, Detach Devices, Export CSV, and Change Device Values.

Sửa Template Name: CSR1000v\_Site-1\_Service OSPF và Description: CSR1000v\_Site-1\_Service OSPF và chọn vào Copy

## Template Copy

Template Name

CSR1000V\_Site-1\_Service OSPF

Description

CSR1000V\_Site-1\_Service OSPF

Copy

Cancel

Chọn tiếp vào dấu ba chấm và chọn vào Edit

The screenshot shows the Cisco vManage web interface. The URL is https://10.1.1.1/#/app/config/template/device. The page title is 'Configuration - Templates'. There are two tabs at the top: 'Device' (selected) and 'Feature'. A search bar is present. Below is a table with columns: Name, Description, Type ..., Device Mode..., Device Role ..., Resource Group, Feature Templates, Draft Mode, Devices Attached, and Update. The table contains 22 rows. A context menu is open over the row for 'CSR1000V\_Site-1\_Service'. The menu options are: Edit (highlighted with a red box), View, Delete, Copy, Enable Draft Mode, Attach Devices, Change Resource Group, and Export CSV.

Ở phần SERVICE: tích vào service chọn vào Remove VPN và tiếp tục chọn vào Add VPN

The screenshot shows the Cisco vManage interface with the URL https://10.1.1.1/#/app/config/template/device/feature/edit?templateId=1fbe6955-0a75-45ac-b284-7dd8ce5a1ad8&attached=false. The page title is 'Configuration - Templates'. The 'Service VPN' tab is selected. At the top, there are buttons for 'Add VPN' and 'Remove VPN' (highlighted with a red box). Below is a table with columns: ID, Template Name, Sub-Templates, and Actions. One row is listed: ID 89d8dcbb1-db23-4c14-ab9c-1e87e9ffca1f, Template Name CSR1000V\_Site-1\_VPN100, Sub-Templates Cisco VPN Interface Ethernet. At the bottom, there is an 'Additional Templates' section with a dropdown menu labeled 'AppQoE' and buttons for 'Update' and 'Cancel'. The status bar at the bottom right shows the time as 5:29 PM and the date as 10/30/2024.

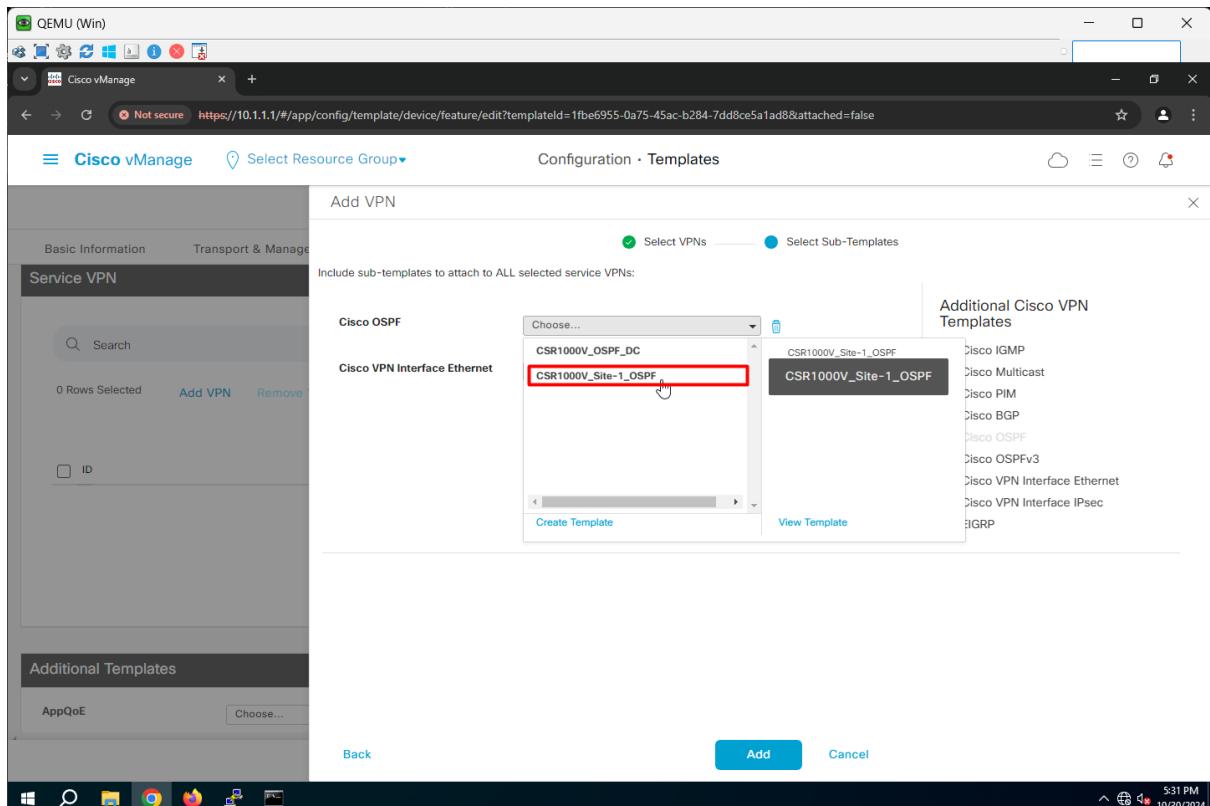
Chọn vào CSR1000v\_Site-1\_Service OSPF và chọn vào dấu mũi tên sau đó nhấn Next

The screenshot shows the Cisco vManage interface with the URL <https://10.1.1.1/#/app/config/template/device/feature/edit?templateId=1fbe6955-0a75-45ac-b284-7dd8ce5a1ad8&attached=false>. The main window displays the 'Add VPN' configuration screen. On the left, there's a sidebar with 'Service VPN' and 'Additional Templates' sections. The central area shows 'Available VPN Templates' and 'Selected VPN Templates' lists. A specific template, '0acc0f40-314a-46bf-89d0-60b96... CSR1000V\_Site-1\_VPN100\_OSPF', is selected and highlighted with a red box. A red circle highlights the right-pointing arrow icon next to it. At the bottom right, the 'Next' button is also highlighted with a red box.

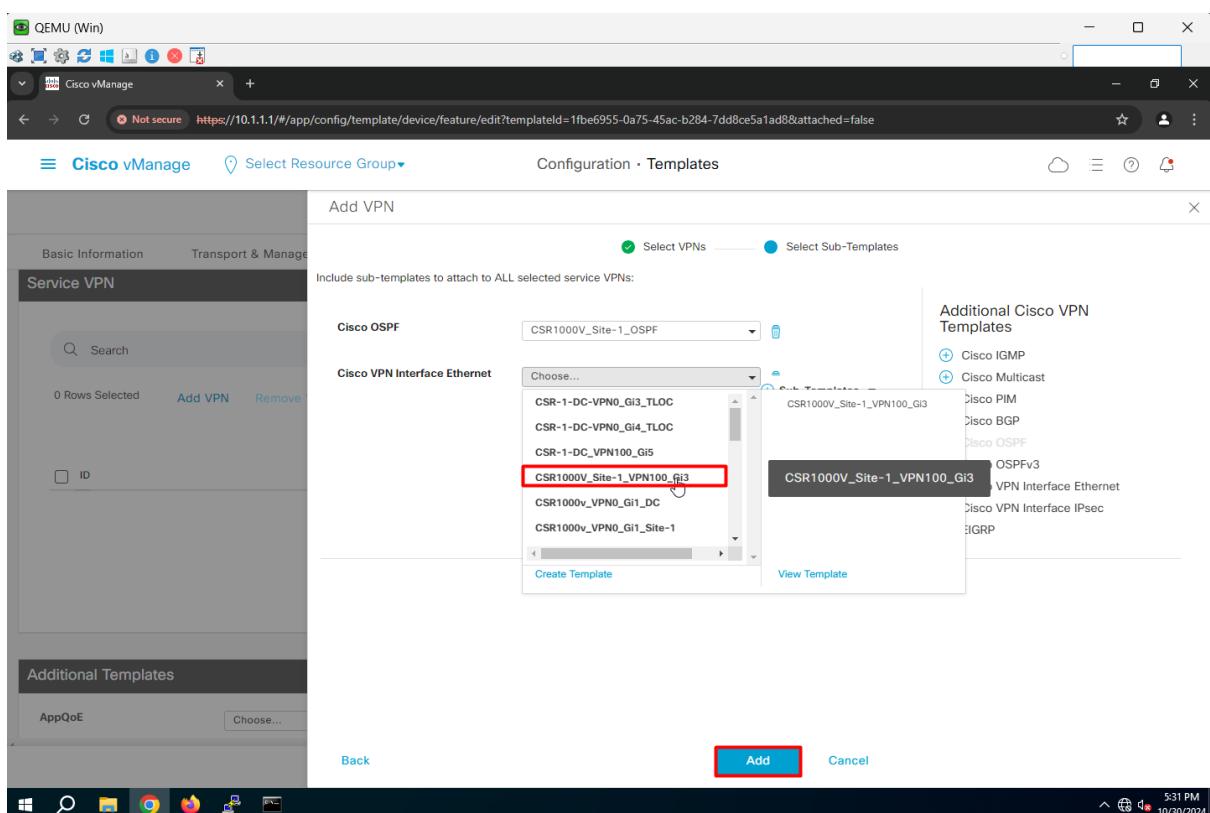
Chọn vào Cisco OSPF và Cisco VPN Interface Ethernet

The screenshot shows the Cisco vManage interface with the same URL as the previous screenshot. The 'Add VPN' configuration screen is displayed. In the 'Select Sub-Templates' section, several options are listed under 'Additional Cisco VPN Templates'. Two specific options are highlighted with red boxes: 'Cisco OSPF' and 'Cisco VPN Interface Ethernet'. Both of these are also selected, indicated by a green checkmark icon. The 'Add' button at the bottom is highlighted with a red box.

## Ở phần Cisco OSPF chọn vào CSR1000v\_Site-1 OSPF



Ở phần Cisco VPN Interface Ethernet chọn vào CSR1000v\_Site-1\_VPN100\_Gi3 và chọn vào Add



Và chọn vào Update để cập nhật lại device Template

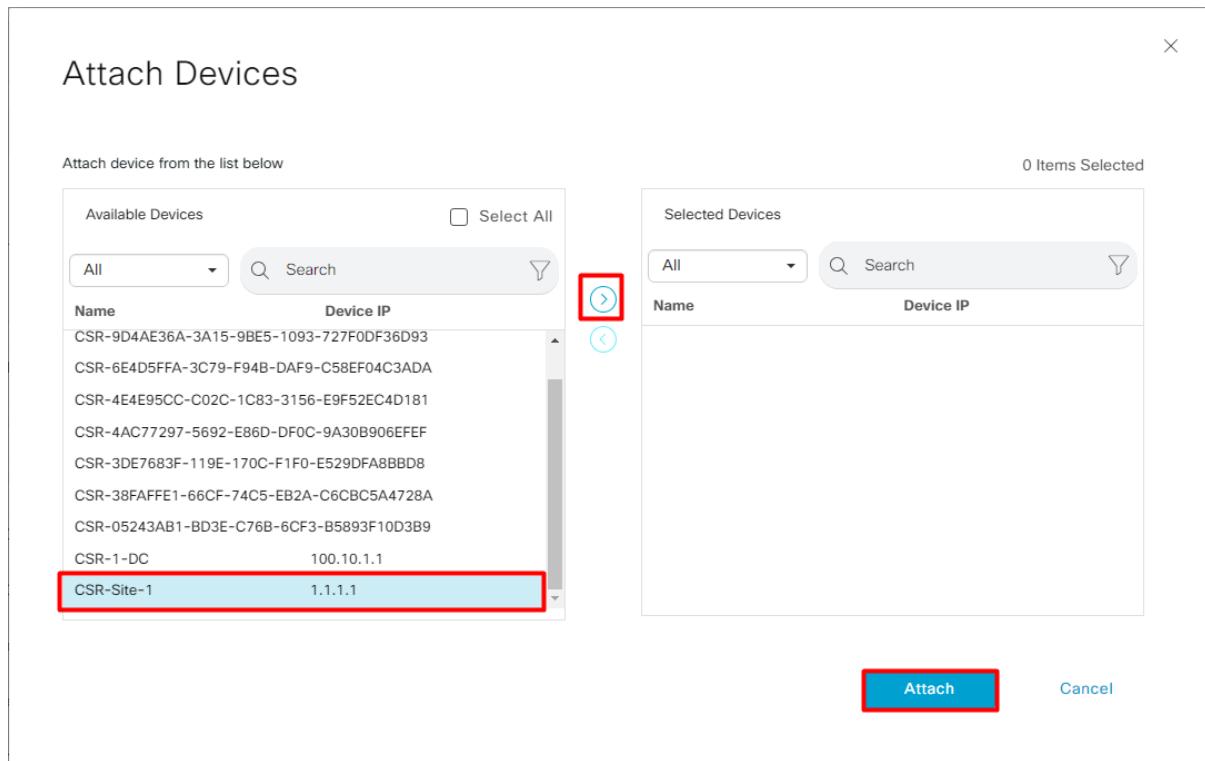
The screenshot shows the Cisco vManage web interface. The URL is https://10.1.1.1/#/app/config/template/device/feature/edit?templateId=1fbe6955-0a75-45ac-b284-7dd8ce5a1ad8&attached=false. The page title is Configuration · Templates. Under the Service VPN tab, there is a table with one row: ID 0acc0f40-314a-46bf-89d0-60b96c61022e, Template Name CSR1000V\_Site-1\_VPN100\_OSPF, and Sub-Templates Cisco OSPF, Cisco VPN Interface Ethernet. Below the table is an 'Additional Templates' section with an 'Update' button highlighted with a red box.

Chọn vào dấu 3 chấm và chọn vào Attach Devices

The screenshot shows the Cisco vManage interface with a list of device templates. A context menu is open over the row for CSR1000V\_Site-1\_Service\_OSPF, with the 'Attach Devices' option highlighted with a red box. Other options in the menu include Edit, View, Delete, Copy, Enable Draft Mode, Change Resource Group, and Export CSV.

Name	Description	Type ...	Device Mode...	Device Role ...	Resource Group	Feature Templates	Draft Mode	Devices Attached	Update
CSR1000v_DC_BOOTSTRAP	CSR1000v_DC...	Feature	CSR1000v	SDWAN Edge	global	10	Disabled	0	admin ...
CSR1000V_DC_Service	CSR1000V_DC...	Feature	CSR1000v	SDWAN Edge	global	14	Disabled	0	admin ...
CSR1000V_DC_Service_OSPF	CSR1000V_DC...	Feature	CSR1000v	SDWAN Edge	global	15	Disabled	1	admin ...
CSR1000V_DC_TLOC	CSR1000V_DC...	Feature	CSR1000v	SDWAN Edge	global	12	Disabled	0	admin ...
CSR1000v_Site-1_BOOTSTRAP	CSR1000v_Sit...	Feature	CSR1000v	SDWAN Edge	global	10	Disabled	0	admin ...
CSR1000V_Site-1_Service	CSR1000V_Sit...	Feature	CSR1000v	SDWAN Edge	global	13	Disabled	1	admin ...
CSR1000V_Site-1_Service_OSPF	CSR1000V_Sit...	Feature	CSR1000v	SDWAN Edge	global	14	Disabled	0	admin ...
CSR1000V_Site-1_Transport	CSR1000V_Sit...	Feature	CSR1000v	SDWAN Edge	global	11	Disabled	0	admin ...

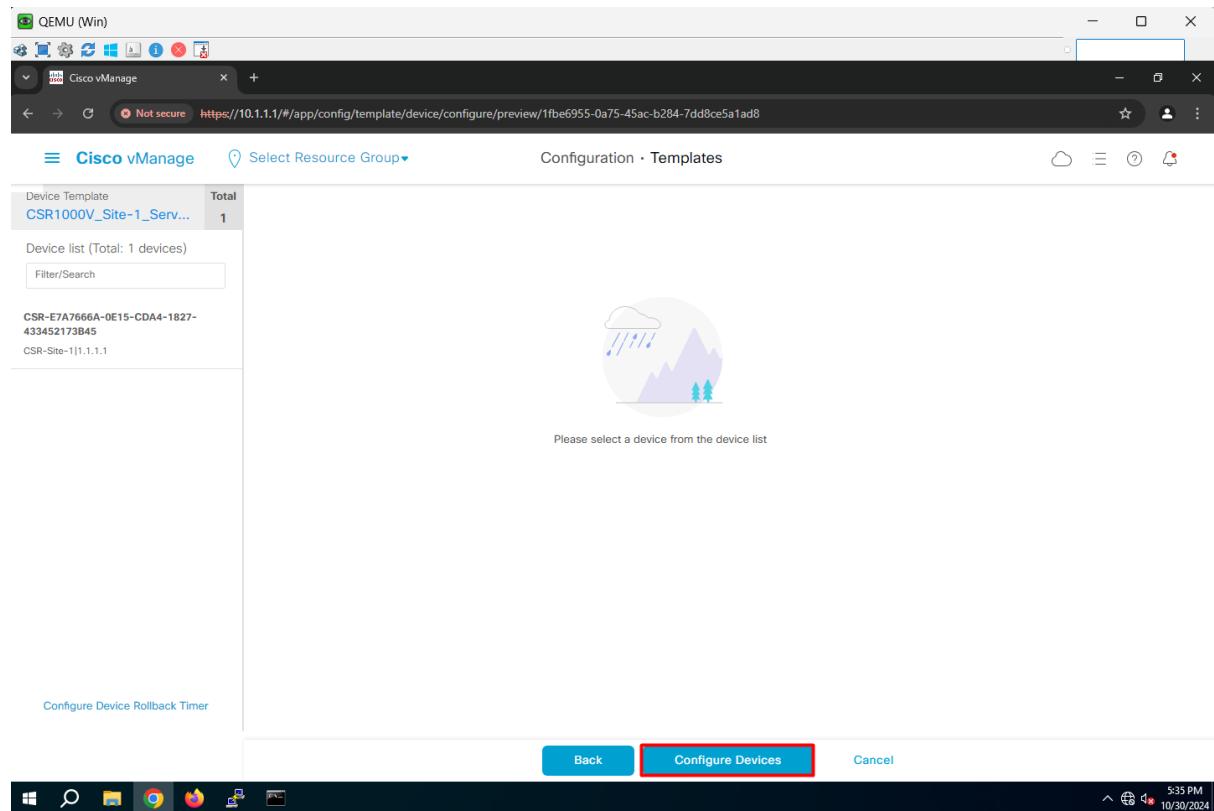
Chọn vào CSR-Site-1 và chọn vào dấu mũi tên sau đó chọn Attach



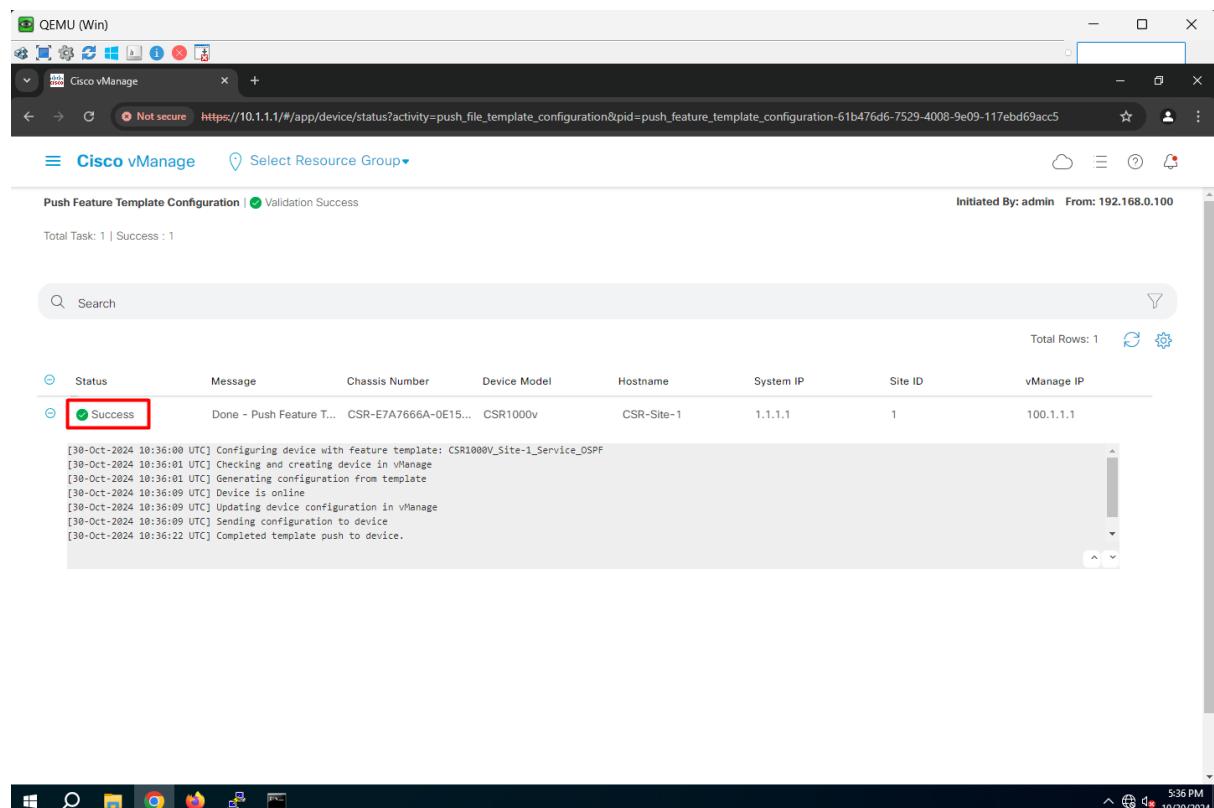
Chọn vào Next

The screenshot shows the Cisco vManage interface. At the top, there is a navigation bar with icons for QEMU (Win), Cisco vManage, and a search bar. The main area is titled 'Configuration - Templates'. Below this, there is a table with one row. The table has columns for Chassis Number, System IP, Hostname, Address(CSR1000V\_S1\_Next Hop 1), Address(CSR1000V\_S1\_Next Hop 2), Hostname, and Syst. The first row contains: CSR-E7A7666A-0E15-CDA4-1827-4334..., 1.1.1.1, CSR-Site-1, 100.100.1.1, 200.100.1.1, CSR-Site-1, 1.1. \*\*\*. At the bottom of the table is a 'Next' button (highlighted with a red box) and a 'Cancel' button.

## Chọn vào Configure Devices



Đợi một vài phút sau đó hiện trạng thái Success là đã thành công.



Tiếp tục viết cho site 2

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

The screenshot shows the Cisco vManage web interface. In the left sidebar, under the 'Configuration' section, the 'Templates' item is highlighted with a red box. On the right, the 'Templates' page is displayed with the 'Feature' tab selected (also highlighted with a red box). The table lists various templates, including SDWAN Edge and Cloud onRamp templates, with columns for Mode, Device Role, Resource Group, Feature Templates, Draft Mode, and Devices Attached. A red box also highlights the 'Add' button in the top right corner of the table header.

Chọn vào add Template

This screenshot shows the same Cisco vManage interface as the previous one, but the 'Device' tab is now selected in the top navigation bar. The 'Add Template' button in the top left of the table area is highlighted with a red box. The table displays 45 rows of template data, with columns for Name, Description, Type, Device Model, Device Templates, Resource Group, Devices Attached, Updated By, and Last. A red box also highlights the 'Add Template' button at the bottom left of the table.

Kéo xuống và chọn vào ISRv và chọn vào Cisco OSPF

The screenshot shows the Cisco vManage web interface. The title bar says "QEMU (Win)" and "Cisco vManage". The URL is "Not secure https://10.1.1.1/#/app/config/template/feature?display=add". The main area is titled "Configuration - Templates" with tabs "Device" and "Feature" (which is selected). Under "Feature Template > Add Template", there is a sidebar "Select Devices" with a search bar and a list of device models. The "ISRv" model is selected and highlighted with a red box. To the right is a grid of feature templates, with "Cisco OSPF" highlighted with a red box. The grid includes other features like Cisco DHCP Server, Cisco IGMP, Cisco Logging, Cisco Multicast, Cisco PIM, Cisco SIG Credentials, Cisco SNMP, and Cisco OSPFv3.

Đường Template Name: ISPv\_Site-2\_OSPF và Description: ISRv\_Site-2\_OSPF

The screenshot shows the configuration of the "Cisco OSPF" template. The "Template Name" field is set to "ISRv-Site-2\_OSPF" and the "Description" field is set to "ISRv-Site-2\_OSPF", both highlighted with red boxes. The "Basic Configuration" tab is selected, showing fields for Router ID, Distance for External Routes (set to 110), and Distance for Inter-Area Routes (set to 110). At the bottom, there are "Cancel" and "Save" buttons, with "Save" highlighted in blue.

## Ở phần Basic Configuration: Router ID chọn vào Global và điền ID 2.1.1.1

The screenshot shows the Cisco vManage web interface for creating a new OSPF feature template. The 'Basic Configuration' tab is selected under the 'Cisco OSPF' template. In the 'Router ID' field, the value '2.1.1.1' is entered and highlighted with a red box. A dropdown menu is open next to the Router ID input, showing options: 'Global' (selected and highlighted with a red box), 'Device Specific', and 'Default'. The 'Save' button is visible at the bottom right of the configuration panel.

## Ở Phần REDISTRIBUTE: chọn vào New Redistribute

The screenshot shows the Cisco vManage interface for creating a new OSPF feature template. The 'Redistribute' tab is selected under the 'Cisco OSPF' template. The 'New Redistribute' button is highlighted with a red box. Below it, there are tabs for 'Optional', 'Protocol', 'Enable NAT DIA', 'Route Policy', and 'Action'. A message 'No data available' is displayed. The 'MAXIMUM METRIC (ROUTER LSA)' section is expanded, showing a 'New Router LSA' button. The 'Save' button is visible at the bottom right of the configuration panel.

## Ở Phần REDISTRIBUTE: Protocol chọn vào OMP và chọn vào Add

The screenshot shows the Cisco vManage web interface for configuring a Feature Template. The URL is [https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-ISRv&templateType=cisco\\_ospf](https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-ISRv&templateType=cisco_ospf). The 'Redistribute' tab is selected under 'Cisco OSPF'. A dropdown menu for 'Protocol' is open, showing options like static, connected, bgp, and ospf. The 'ospf' option is highlighted with a red box. An 'Add' button is also highlighted with a red box. The status bar at the bottom right shows the date and time as 10/30/2024 5:43 PM.

## Ở phần AREA: chọn vào New Area

The screenshot shows the Cisco vManage web interface for configuring a Feature Template. The URL is [https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-CSR-1000v&templateType=cisco\\_ospf](https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-CSR-1000v&templateType=cisco_ospf). The 'Area' tab is selected under 'Cisco OSPF'. A dropdown menu for 'Area Type' is open, showing options like No Summary, Interface, Range, and Action. The 'New Area' option is highlighted with a red box. The status bar at the bottom right shows the date and time as 10/30/2024 2:22 PM.

Ở phần AREA: Area Number điền là 0 và chọn vào Add Interface

The screenshot shows the Cisco vManage web interface. The URL is https://10.1.1.1/#/app/config/template/feature?display=add&deviceType=vedge-CSR-1000v&templateType=cisco\_ospf. The page title is 'Configuration - Templates'. Under 'Feature Template > Add Template > Cisco OSPF', the 'Area' tab is selected. A sub-section titled 'AREA' is expanded. The 'Area Number' input field contains '0' and is highlighted with a red box. Below it is a dropdown for 'Set the area type'. Further down are 'Interface' and 'Range' sections, each with an 'Add' button. At the bottom right are 'Add' and 'Cancel' buttons.

Chọn vào Add Interface

This is a modal dialog box titled 'Interface'. It contains a central image of a cactus against a background of clouds. Below the image is the text 'No OSPF Interfaces added, add your first OSPF Interface'. At the bottom are two buttons: 'Add Interface' (which is highlighted with a red box) and 'Configure With No Interfaces'.

Ở phần Interface: interface Name chọn vào GigabitEthernet3 và chọn tiếp vào Add

The screenshot shows the 'Interface' configuration page. On the left, there's a sidebar with 'Add Interface' and a list containing 'GigabitEthernet3'. The main area has several input fields: 'Interface Name' (set to 'GigabitEthernet3'), 'Hello Interval (seconds)' (set to 10), 'Dead Interval (seconds)' (set to 40), 'LSA Retransmission Interval (seconds)' (set to 5), and 'Interface Cost' (unchecked). Below these is a link to 'Advanced Options'. At the bottom right are 'Add' and 'Cancel' buttons, with 'Add' being highlighted by a red box.

Chọn tiếp vào Add

The screenshot shows the 'Configuration > Templates' page under 'Cisco OSPF'. It's navigating through 'Feature Template > Add Template > Cisco OSPF'. The 'Area' tab is active. A 'New Area' button is visible. The configuration section includes 'Area Number' (set to 0), 'Set the area type' (radio button), 'Interface' (set to 1 Interface), and 'Range' (with an 'Add Range' button). At the bottom right are 'Add' and 'Cancel' buttons, with 'Add' being highlighted by a red box.

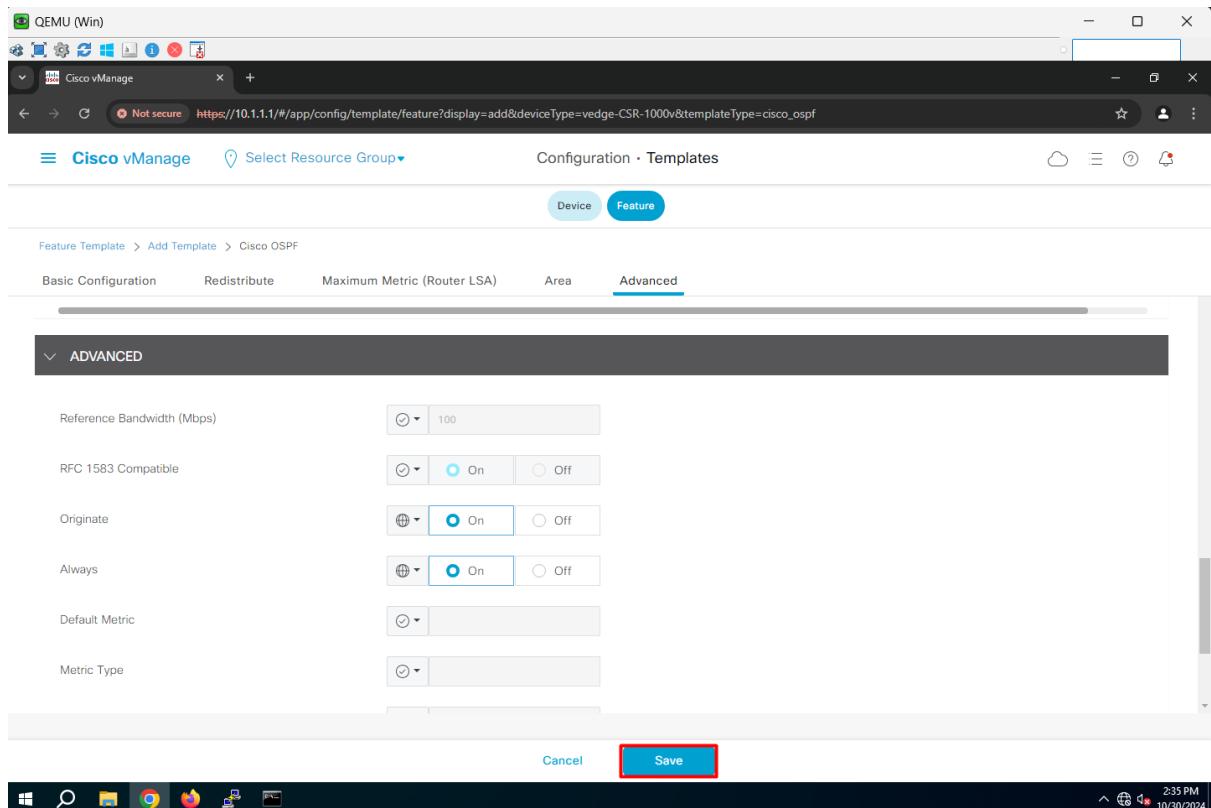
## Ở phần ADVANCED: Originate chọn vào Global chọn vào On

The screenshot shows the Cisco vManage web interface for configuring an OSPF feature template. The URL is https://10.1.1.1#/app/config/template/feature?display=add&deviceType=vedge-CS1000v&templateType=cisco\_ospf. The 'Feature' tab is selected. In the 'Advanced' section, the 'Originate' setting is set to 'On' (radio button selected). A dropdown menu for 'Always' is open, showing 'Global' (radio button selected) and 'Default'. The 'Save' button is visible at the bottom right.

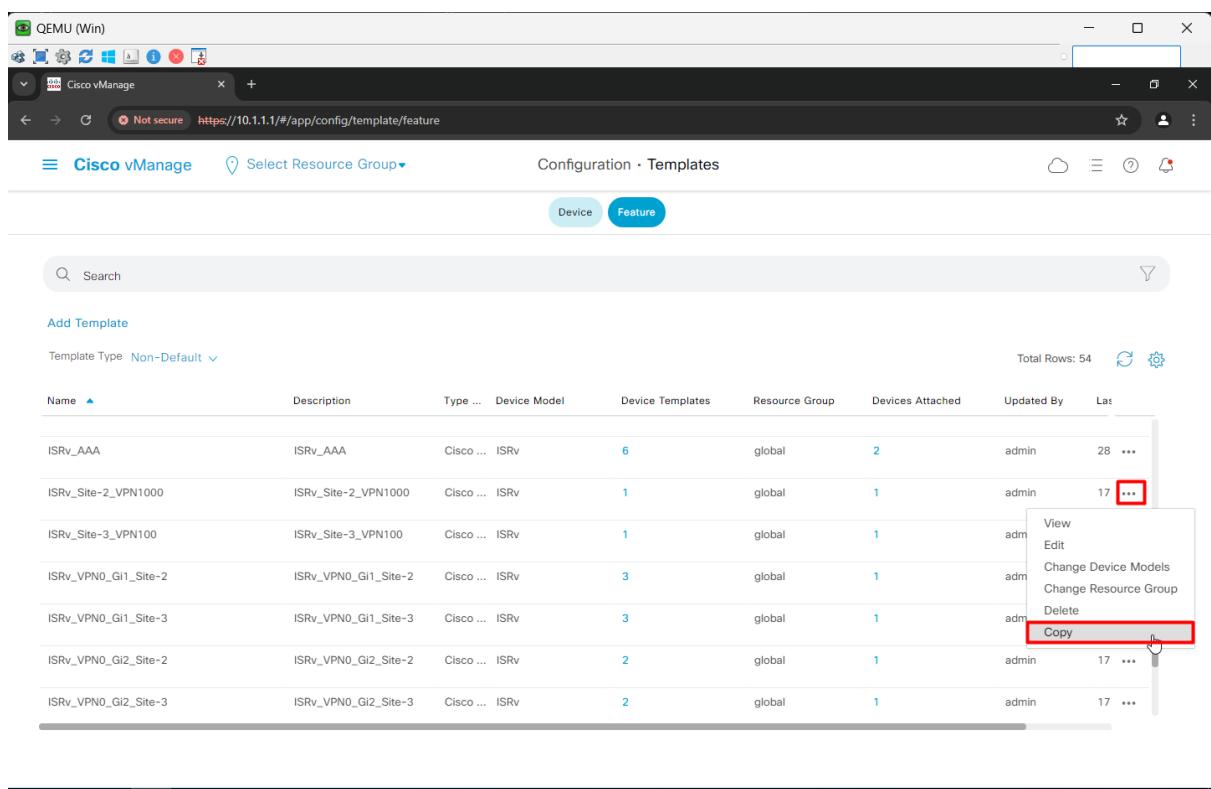
## Ở phần ADVANCED: Always chọn vào Global chọn vào On

This screenshot shows the same configuration interface as above, but the 'Always' dropdown menu has been closed. The 'Global' option is now highlighted with a red box. The 'Save' button is visible at the bottom right.

Chọn vào Save để lưu Template



Thực hiện copy template ISRv\_Site-2\_VPN100: chọn vào dấu ba chấm và chọn vào Copy



Sửa Template Name : ISRv\_Site-2\_VPN100 OSPF và Description: ISRv\_Site-2\_VPN100 OSPF và chọn và Copy

## Template Copy

X

Template Name

ISRv\_Site-2\_VPN1000 OSPF

Description

ISRv\_Site-2\_VPN1000 OSPF

Copy

Cancel

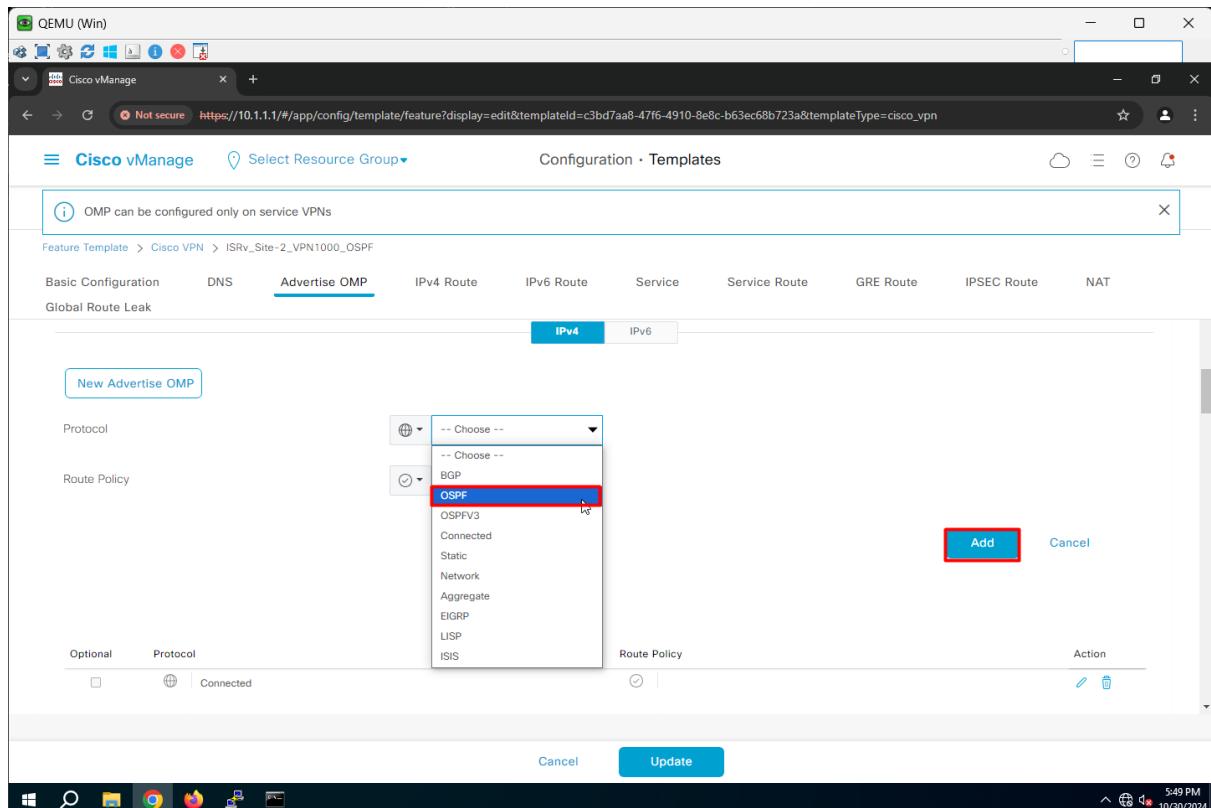
Chọn tiếp vào dấu ba chấm và chọn Edit

The screenshot shows the Cisco vManage web interface. In the center, there is a table titled "Templates" with columns: Name, Description, Type ..., Device Model, Device Templates, Resource Group, Devices Attached, Updated By, and Last. A context menu is open over the row for "ISR\_VPN0\_S2". The menu options are: View, Edit (highlighted with a red box), Change Device Labels, Change Resource Group, Delete, and Copy. The status bar at the bottom right shows "5:48 PM 10/30/2024".

Thực hiện sóa rourte Static và chọn vào New advertise OMP

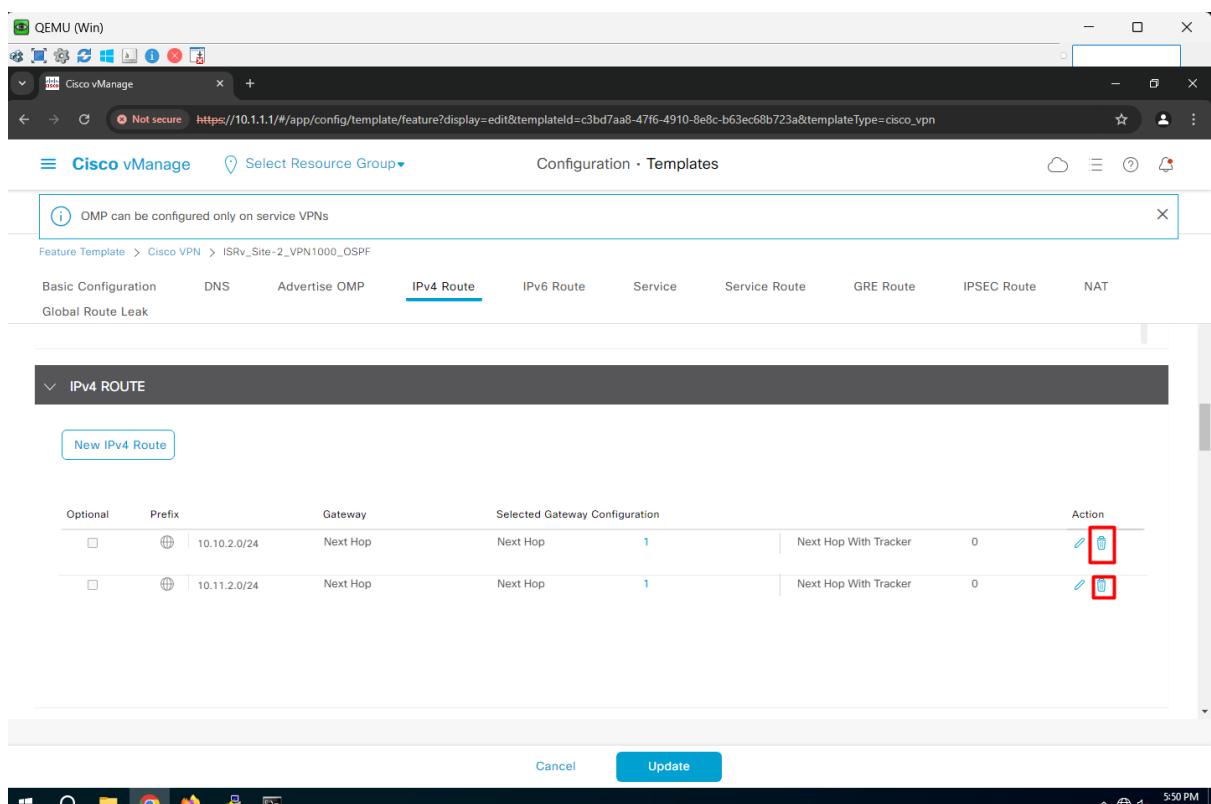
The screenshot shows the Cisco vManage interface under the "Feature Template" section. A message box says "OMP can be configured only on service VPNs". Below it, the path is Feature Template > Cisco VPN > ISRv\_Site-2\_VPN1000\_OSPF. A sub-section titled "Advertise OMP" is expanded, showing tabs for IPv4 and IPv6. The "IPv4" tab is selected. A button labeled "New Advertise OMP" is highlighted with a red box. At the bottom of the page, there is a "Cancel" button and an "Update" button. The status bar at the bottom right shows "5:49 PM 10/30/2024".

Ở phần Advertise OMP: ở phần Protocol chọn vào OSPF và chọn vào Add



The screenshot shows the Cisco vManage web interface. The URL is [https://10.1.1.1/#/app/config/template/feature?display=edit&templateId=c3bd7aa8-47f6-4910-8e8c-b63ec68b723a&templateType=cisco\\_vpn](https://10.1.1.1/#/app/config/template/feature?display=edit&templateId=c3bd7aa8-47f6-4910-8e8c-b63ec68b723a&templateType=cisco_vpn). The page title is "Configuration · Templates". The "Advertise OMP" tab is selected. Under the "IPv4" tab, there is a "Protocol" dropdown menu. The "OSPF" option is selected and highlighted with a red box. To the right of the dropdown is an "Add" button, which is also highlighted with a red box.

Ở Phần IPv4 ROUTE: thực hiện xóa 2 route



The screenshot shows the Cisco vManage web interface. The URL is [https://10.1.1.1/#/app/config/template/feature?display=edit&templateId=c3bd7aa8-47f6-4910-8e8c-b63ec68b723a&templateType=cisco\\_vpn](https://10.1.1.1/#/app/config/template/feature?display=edit&templateId=c3bd7aa8-47f6-4910-8e8c-b63ec68b723a&templateType=cisco_vpn). The page title is "Configuration · Templates". The "IPv4 Route" tab is selected. Below the tabs, a section titled "IPv4 ROUTE" is expanded. A table lists two routes: "10.10.2.0/24" and "10.11.2.0/24". Each row has an "Action" column containing a delete icon, which is highlighted with a red box.

Chọn vào Update để cập nhật Template

The screenshot shows the Cisco vManage web interface. The URL is https://10.1.1.1/#/app/config/template/feature?display=edit&templateId=b7a3342e-0362-41b0-bebb-77f96a881d90&templateType=cisco\_vpn. The page title is "Configuration · Templates". The "Device" tab is selected. The main navigation bar includes "Basic Configuration", "DNS", "Advertise OMP", "IPv4 Route" (selected), "IPv6 Route", "Service", "Service Route", "GRE Route", "IPSEC Route", and "NAT". Below the navigation, there is a "Global Route Leak" section. A sub-section titled "IPv6 ROUTE" is expanded, showing a "New IPv6 Route" button. The "Selected Gateway Configuration" table has one row: "No data available". At the bottom right, there is a "Cancel" button and a large blue "Update" button, which is highlighted with a red box.

Chọn vào Device để viết device template cho CSR-1-DC

The screenshot shows the Cisco vManage web interface. The URL is https://10.1.1.1/#/app/config/template/feature?display=edit&templateId=b7a3342e-0362-41b0-bebb-77f96a881d90&templateType=cisco\_vpn. The page title is "Configuration · Templates". The "Feature" tab is selected. The main navigation bar includes "Basic Configuration", "DNS", "Advertise OMP", "IPv4 Route", "IPv6 Route", "Service", "Service Route", "GRE Route", "IPSEC Route", and "NAT". Below the navigation, there is a "Global Route Leak" section. A search bar is present. The "Add Template" section shows "Template Type: Non-Default". A table lists device templates with the following columns: Name, Description, Type, Device Model, Device Templates, Resource Group, Devices Attached, Updated By, and Last Updated. The table shows 47 total rows. The first entry, "C8000v\_AAA", is highlighted with a red box. The last entry, "C8000v\_VPN0\_Gi1\_DC", is also highlighted with a red box. The "Device" tab is highlighted with a red box. At the bottom right, there is a "Cancel" button and a large blue "Update" button.

Thực hiện Copy template ISRv\_Site-2\_Service: chọn vào dấu 3 chấm và chọn vào Copy

The screenshot shows the Cisco vManage web interface with the URL <https://10.1.1.1/#/app/config/template/device>. The page title is "Configuration > Templates". A context menu is open over the row for "ISRv\_Site-2\_Service". The "Copy" option is highlighted with a red box.

Name	Description	Type	Device Mode	Device Role	Resource Group	Feature Templates	Draft Mode	Devices Attached	User	Action
CSR1000V_Site-1_Service OSPF	CSR1000V_Sit...	Feature	CSR1000v	SDWAN Edge	global	14	Disabled	1	admin	<span>...</span>
CSR1000V_Site-1_Transport	CSR1000V_Sit...	Feature	CSR1000v	SDWAN Edge	global	11	Disabled	0	admin	<span>...</span>
ISRv_Site-2_BOOTSTRAP	ISRv_Site-2_B...	Feature	ISRv	SDWAN Edge	global	10	Disabled	0	admin	<span>...</span>
ISRv_Site-2_Service	ISRv_Site-2_S...	Feature	ISRv	SDWAN Edge	global	13	Disabled	1	admin	<span>...</span>
ISRv_Site-2_Transport	ISRv_Site-2_Tr...	Feature	ISRv	SDWAN Edge	global	11	Disabled	0	admin	<span>...</span>
ISRv_Site-3_BOOTSTRAP	ISRv_Site-3_B...	Feature	ISRv	SDWAN Edge	global	10	Disabled	0	admin	<span>...</span>
ISRv_Site-3_Service	ISRv_Site-3_S...	Feature	ISRv	SDWAN Edge	global	13	Disabled	1	admin	<span>...</span>
ISRv_Site-3_Transport	ISRv_Site-3_Tr...	Feature	ISRv	SDWAN Edge	global	11	Disabled	0	admin	<span>...</span>

Sửa Template Name: ISRv\_Site-2\_Service \_OSPF và Description: ISRv\_Site-2\_Service \_OSPF và chọn vào Copy

The screenshot shows the "Template Copy" dialog box. It has fields for "Template Name" containing "ISRv\_Site-2\_Service\_OSPF" and "Description" containing "ISRv\_Site-2\_Service\_OSPF". At the bottom are "Copy" and "Cancel" buttons, with "Copy" highlighted with a red box.

Chọn tiếp vào dấu ba chấm và chọn vào Edit

The screenshot shows the Cisco vManage interface with the URL <https://10.1.1.1/#/app/config/template/device>. The page displays a list of device templates. A context menu is open over the first row of the table, with the 'Edit' option highlighted.

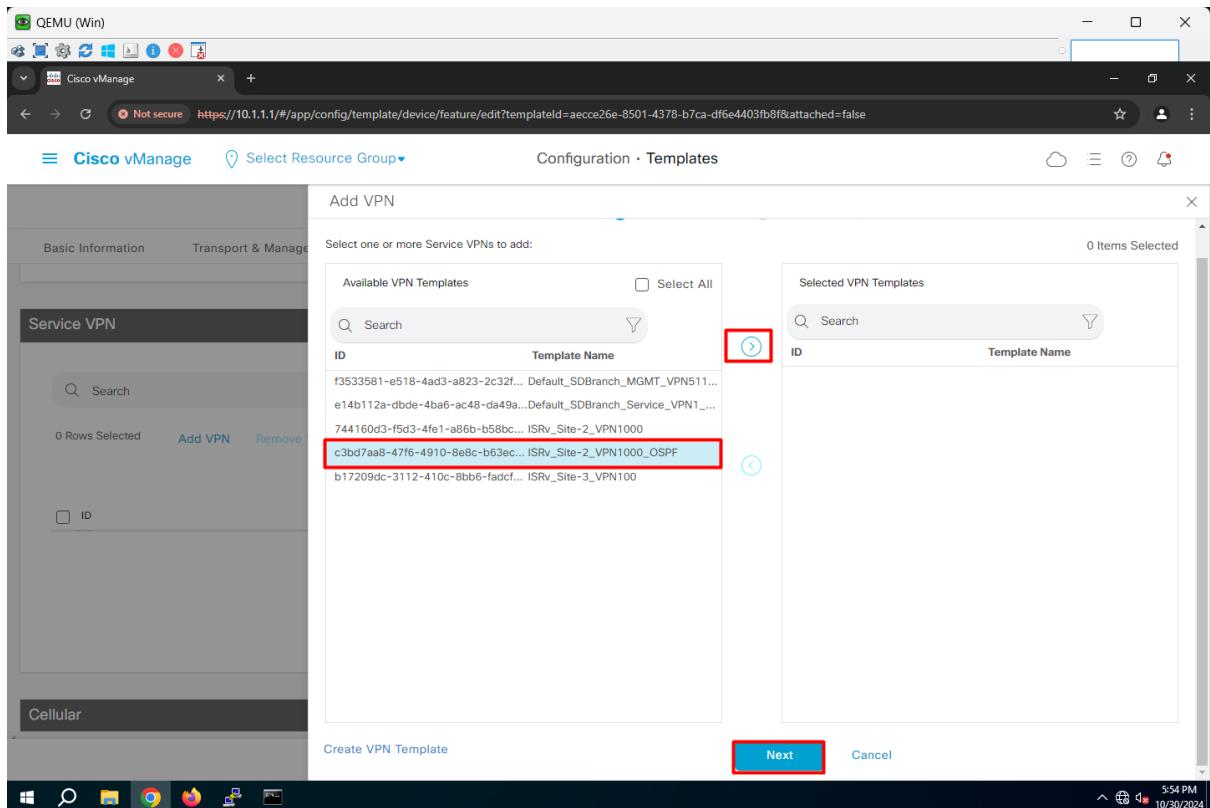
Name	Description	Type ...	Device Mode...	Device Role ...	Resource Group	Feature Templates	Draft Mode	Devices Attached	Action Column
CSR1000V_Site-1_Transport	CSR1000V_Sit...	Feature	CSR1000v	SDWAN Edge	global	11	Disabled	0	<a href="#">Edit</a>
ISRv_Site-2_BOOTSTRAP	ISRv_Site-2_B...	Feature	ISRv	SDWAN Edge	global	10	Disabled	0	<a href="#">View</a>
ISRv_Site-2_Service	ISRv_Site-2_S...	Feature	ISRv	SDWAN Edge	global	13	Disabled	1	<a href="#">Delete</a>
ISRv_Site-2_Service OSPF	ISRv_Site-2_S...	Feature	ISRv	SDWAN Edge	global	13	Disabled	0	<a href="#">Copy</a>
ISRv_Site-2_Transport	ISRv_Site-2_Tr...	Feature	ISRv	SDWAN Edge	global	11	Disabled	0	<a href="#">Enable Draft Mode</a>
ISRv_Site-3_BOOTSTRAP	ISRv_Site-3_B...	Feature	ISRv	SDWAN Edge	global	10	Disabled	0	<a href="#">Attach Devices</a>
ISRv_Site-3_Service	ISRv_Site-3_S...	Feature	ISRv	SDWAN Edge	global	13	Disabled	1	<a href="#">Change Resource Group</a>
ISRv_Site-3_Transport	ISRv_Site-3_Tr...	Feature	ISRv	SDWAN Edge	global	11	Disabled	0	<a href="#">Export CSV</a>

Ở phần SERVICE: tích vào service chọn vào Remove VPN và tiếp tục chọn vào Add VPN

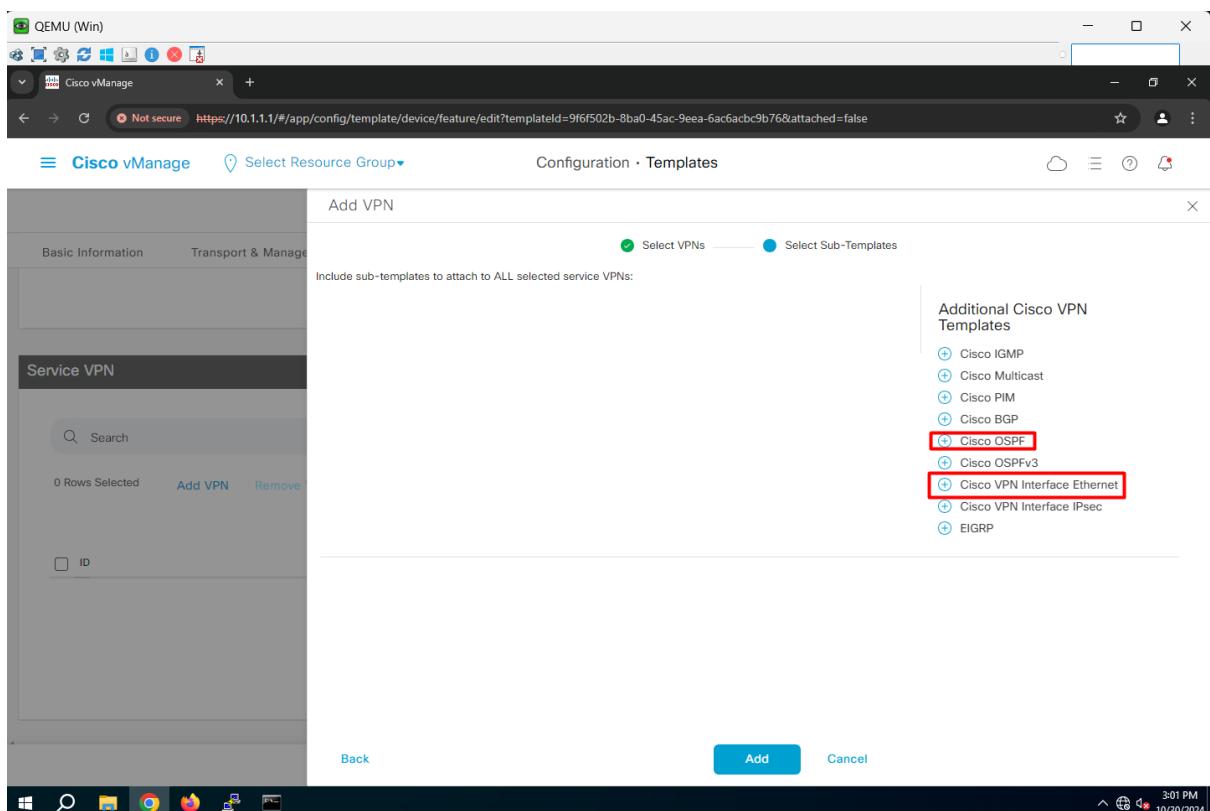
The screenshot shows the Cisco vManage interface with the URL <https://10.1.1.1/#/app/config/template/device/feature/edit?templateId=aecce26e-8501-4378-b7ca-df6e4403fb8f&attached=false>. The page displays a list of service VPN templates. The 'Service VPN' tab is selected. The 'Remove VPN' and 'Add VPN' buttons are highlighted with red boxes.

ID	Template Name	Sub-Templates
744160d3-f5d3-4fe1-a86b-b58bc678a41c	ISRv_Site-2_VPN1000	Cisco VPN Interface Ethernet

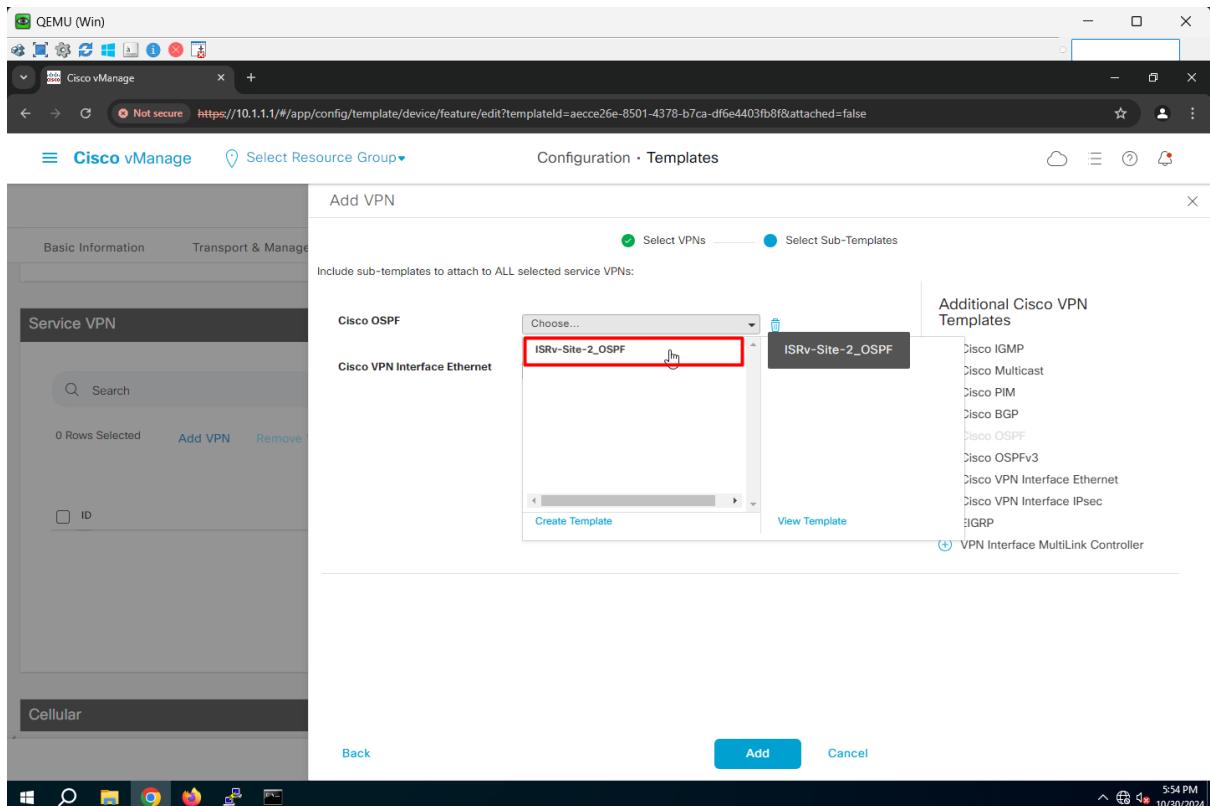
Chọn vào CSR-1-DC\_VPN100 OSPF và chọn vào dấu mũi tên sau đó nhấn Next



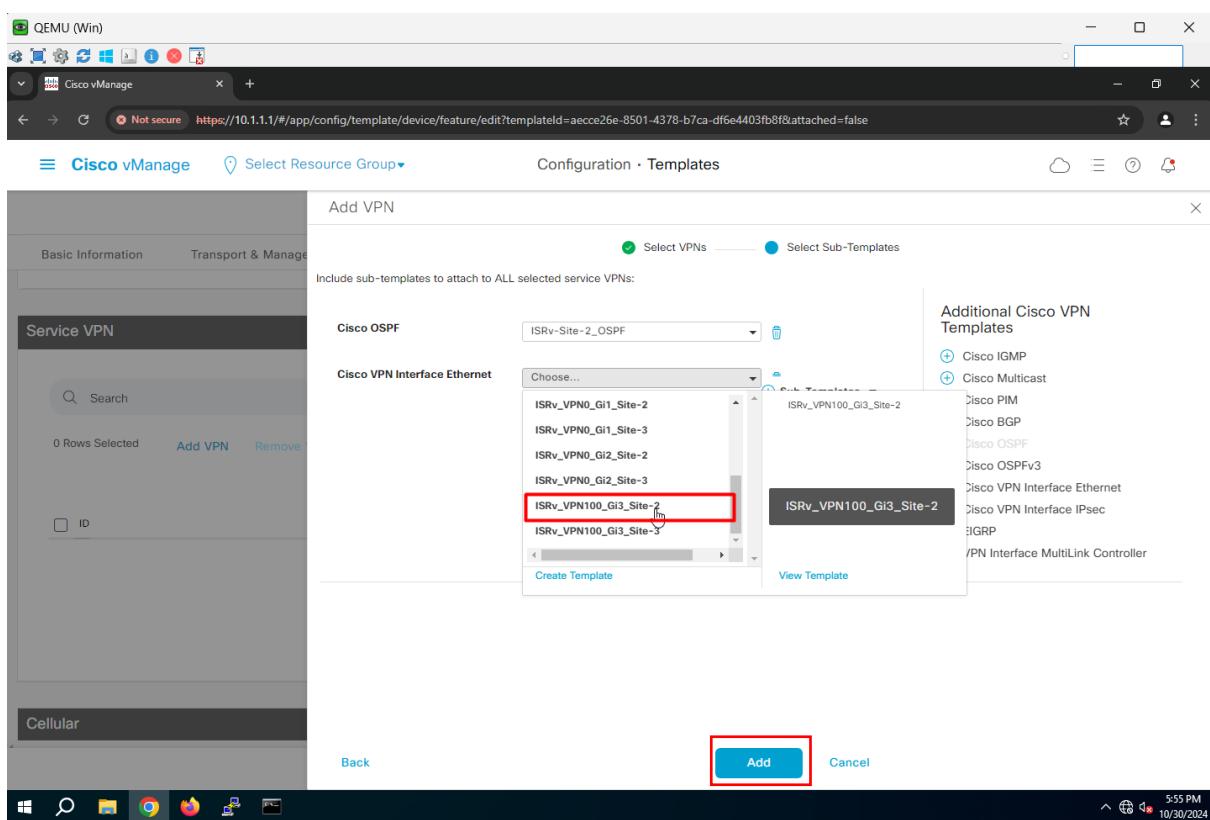
Chọn vào Cisco OSPF và Cisco VPN Interface Ethernet



## Ở phần Cisco OSPF chọn vào ISRv\_Site-2\_OSPF



Ở phần Cisco VPN Interface Ethernet chọn vào ISRv\_VPN100\_Gi3\_Site-2 và chọn vào Add



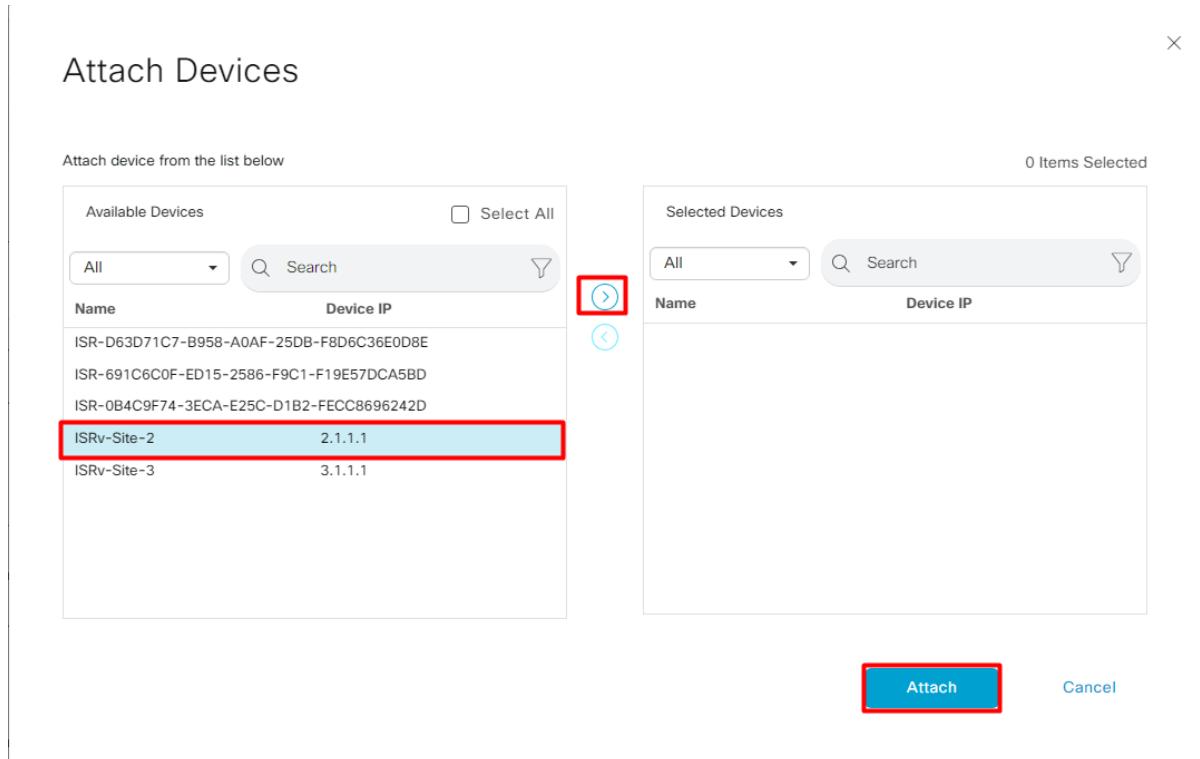
Và chọn vào Update để cập nhật lại device Template

The screenshot shows the Cisco vManage interface for managing device templates. The URL in the browser is <https://10.1.1.1/#/app/config/template/device/feature/edit?templateId=aecce26e-8501-4378-b7ca-df6e4403fb8f&attached=false>. The page title is "Configuration - Templates". The "Service VPN" tab is selected. The "Device" tab is active. The table displays one row for "ISRv\_Site-2\_VPN1000\_OSPF", which has "Cisco OSPF, Cisco VPN Interface Ethernet" as its sub-template. At the bottom right of the table, there is an "Update" button highlighted with a red box.

Chọn vào dấu 3 chấm và chọn vào Attach Devices

The screenshot shows the Cisco vManage interface for creating a new device template. The URL in the browser is <https://10.1.1.1/#/app/config/template/device>. The page title is "Configuration - Templates". The "Device" tab is active. A context menu is open over a row in the table, with the "Attach Devices" option highlighted with a red box. The table lists various device templates, including "CSR1000V\_Site-1\_Transport", "ISRv\_Site-2\_BOOTSTRAP", "ISRv\_Site-2\_Service", "ISRv\_Site-2\_Service\_OSPF", "ISRv\_Site-2\_Transport", "ISRv\_Site-3\_BOOTSTRAP", "ISRv\_Site-3\_Service", and "ISRv\_Site-3\_Transport". The "Devices Attached" column shows the number of devices each template is associated with, such as 0, 0, 1, 0, 0, 0, 1, and 0 respectively. The "Name" column is sorted in ascending order.

Chọn vào CSR-1-DC và chọn vào dấu mũi tên sau đó chọn Attach



Chọn vào Next

QEMU (Win)

Cisco vManage

Not secure https://10.1.1.1#/app/config/template/device/configure/aecce26e-8501-4378-b7ca-df6e4403fb8f

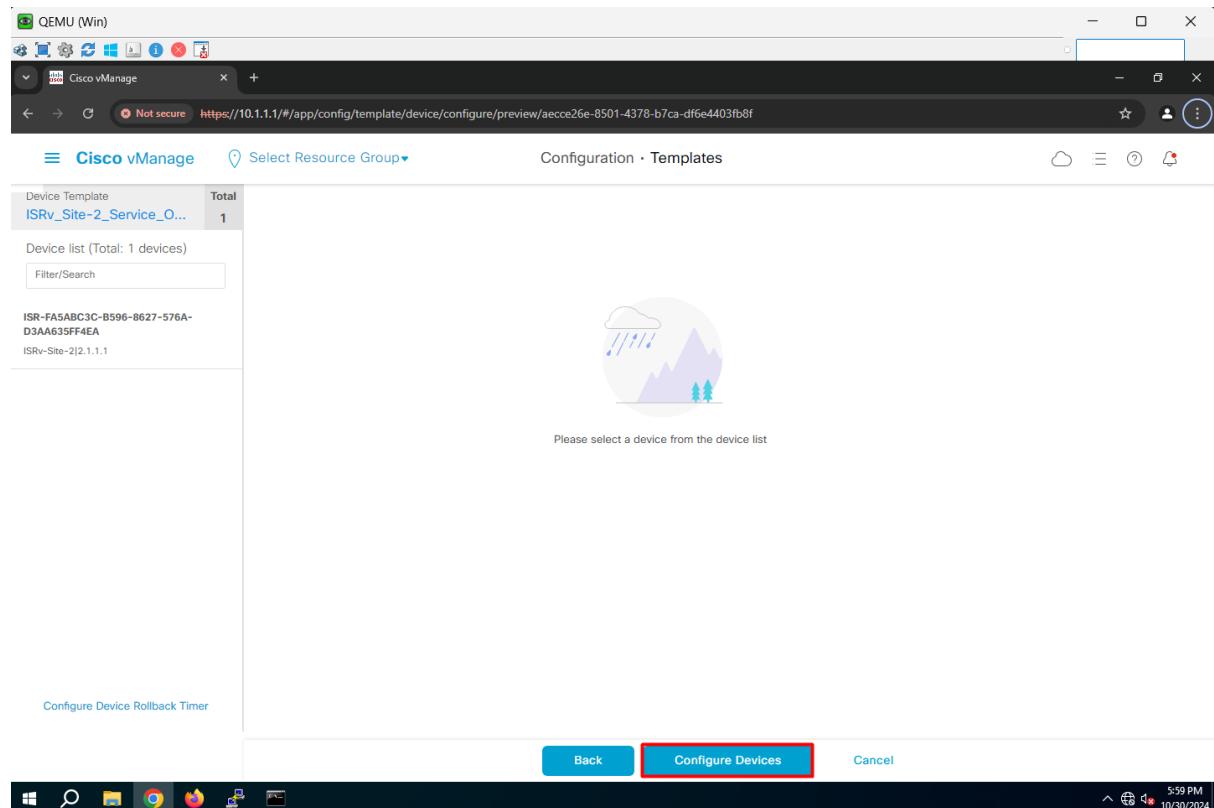
Cisco vManage Select Resource Group Configuration • Templates

Device Template | ISRv\_Site-2\_Service OSPF

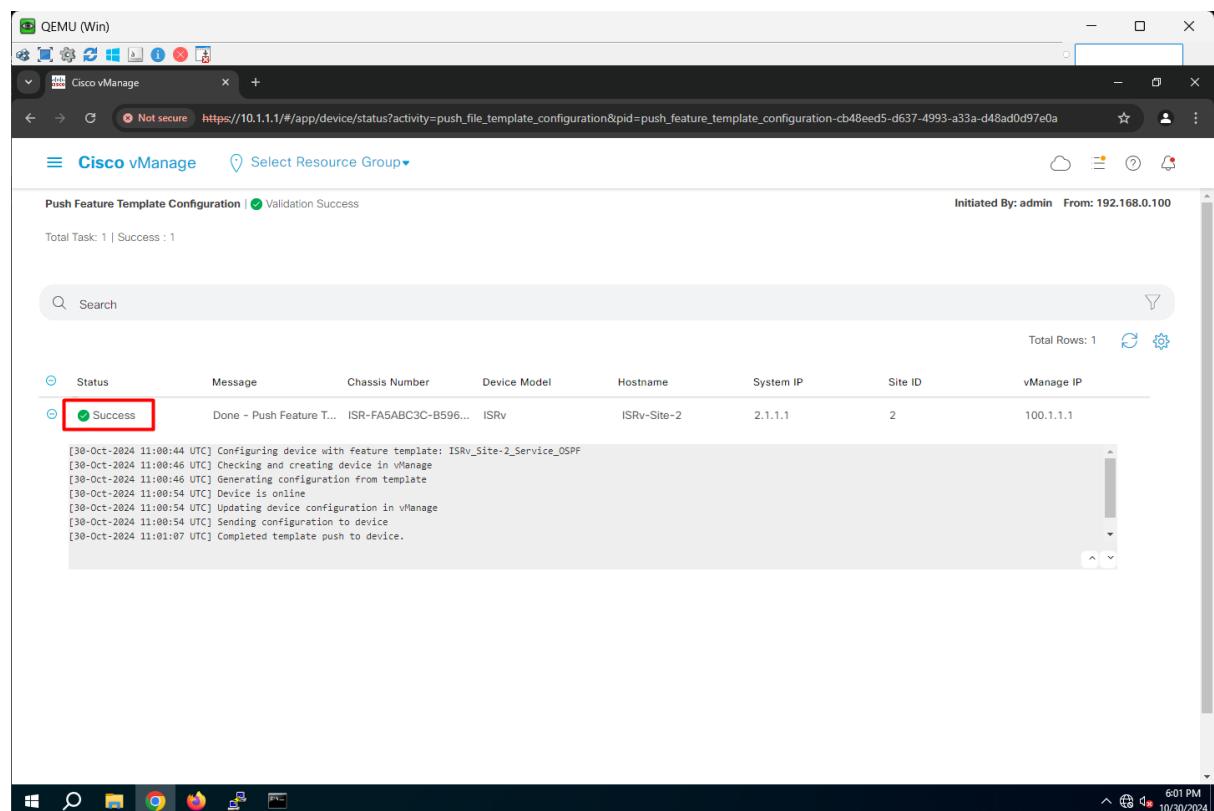
S...	Chassis Number	System IP	Hostname	Address(ISRv_VPN0_Next Hop 1)	Address(ISRv_VPN0_Next Hop 2)	Hostname	System IP
ISR-FA5ABC3C-B596-8627-576A-D3AA...	2.1.1.1	ISRv-Site-2	100.100.2.1	200.100.2.1	ISRv-Site-2	2.1.1.1	***

Next Cancel

## Chọn vào Configure Devices



Đợi một vài phút sau đó hiện trạng thái Success là đã thành công.



Tiếp tục viết cho site 3

