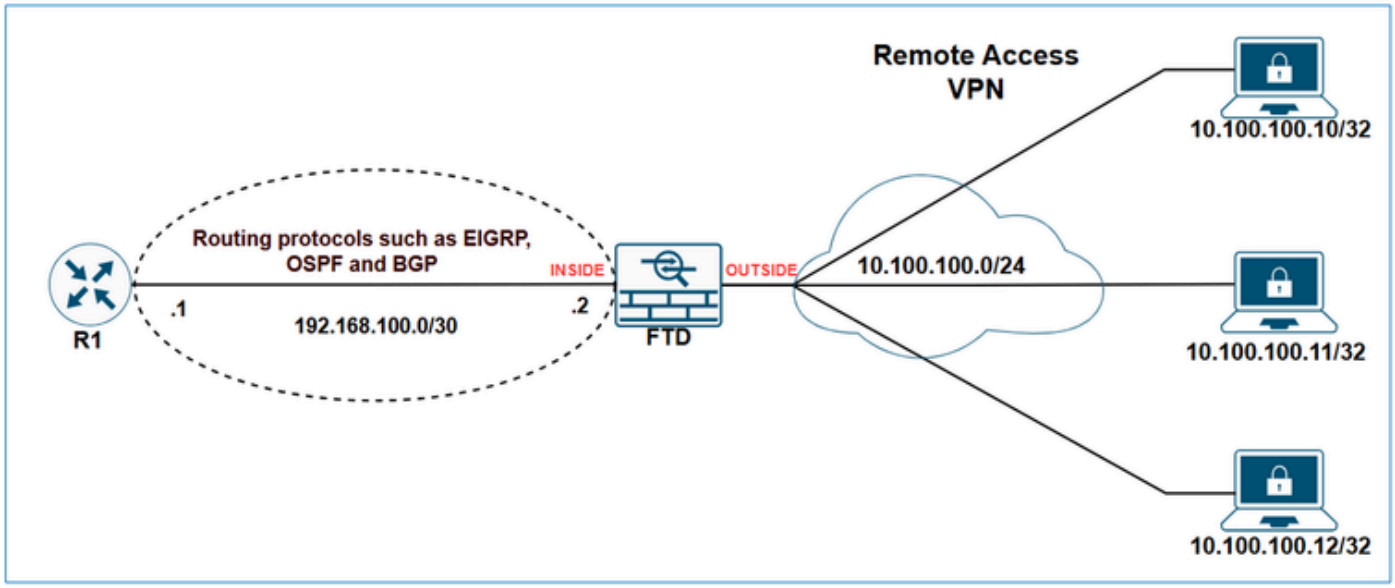
在FTD中通過路由協定通告遠端訪問VPN子網

目錄

簡介

本文檔介紹使用路由協定EIGRP、OSPF和BGP通告VPN相關子網的可用選項。



必要條件

需求

本文件沒有特定需求。

採用元件

本文中的資訊是根據特定實驗室環境內的裝置所建立。文中使用到的所有裝置皆從已清除（預設）的組態來啟動。如果您的網路運作中，請確保您瞭解任何指令可能造成的影響。

本文中的資訊係根據以下軟體和硬體版本：

- 思科安全防火牆管理中心7.6.0
- 思科安全防火牆7.6.0

附註：本文檔概述了使用FMC通過EIGRP、OSPF和BGP重新分配遠端接入VPN子網的配置。有關使用FDM重新分發路由的指導，請參閱FDM配置指南。

背景資訊

首先要瞭解的是FTD如何在其路由表中對VPN子網進行分類。雖然這些子網看起來是通過VPN連線的，但是它們不被視為直接連線的子網；相反，它們被視為靜態路由。

show輸出會顯示此情況。

FTD show route輸出：

```
<#root>

FTD-1#
```

```
show route
```

```
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, V - VPN
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       o - ODR, P - periodic downloaded static route, + - replicated route
       SI - Static InterVRF, BI - BGP InterVRF
Gateway of last resort is not set

C        10.10.20.0 255.255.255.0 is directly connected, outside
L        10.10.20.1 255.255.255.255 is directly connected, outside
C        192.168.100.0 255.255.255.252 is directly connected, inside
L        192.168.100.2 255.255.255.255 is directly connected, inside

V        10.100.100.10 255.255.255.255 connected by VPN (advertised), outside
```

FTD show route connected output:

<#root>

```
FTD-1#
```

```
show route connected
```

```
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, V - VPN
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       o - ODR, P - periodic downloaded static route, + - replicated route
       SI - Static InterVRF, BI - BGP InterVRF

Gateway of last resort is not set

C        10.10.20.0 255.255.255.0 is directly connected, outside
L        10.10.20.1 255.255.255.255 is directly connected, outside
C        192.168.100.0 255.255.255.252 is directly connected, inside
L        192.168.100.2 255.255.255.255 is directly connected, inside
```

FTD show route static output:

<#root>

```
FTD-HQ-1#
```

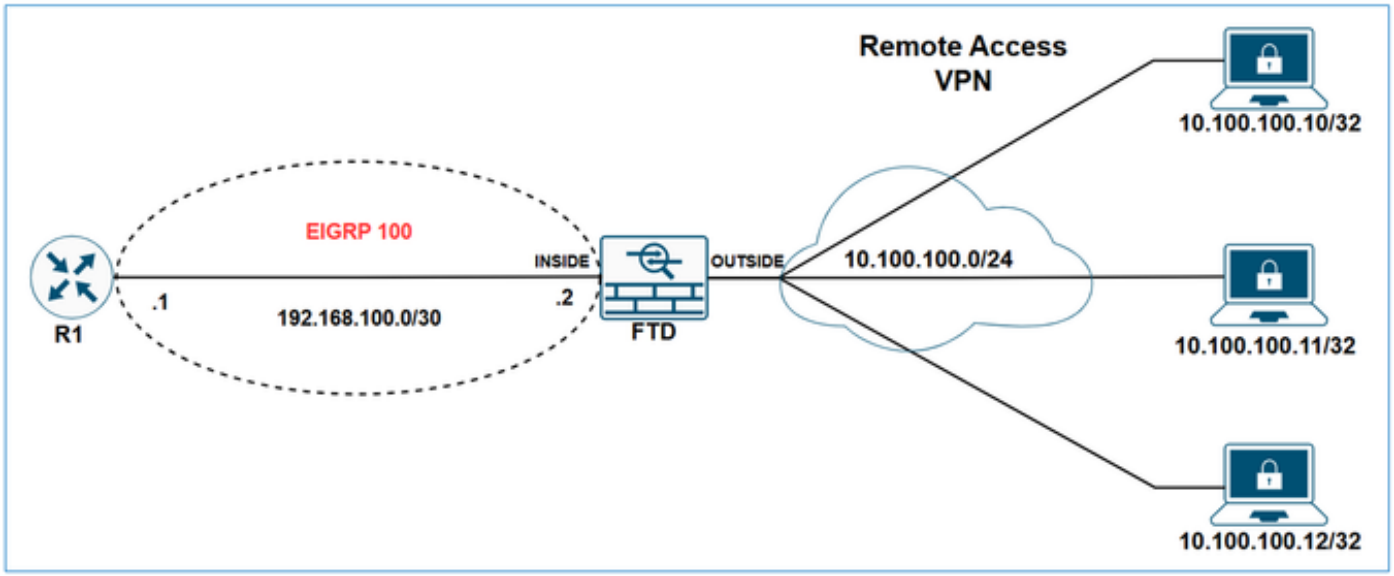
```
show route static
```

```
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, V - VPN
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       o - ODR, P - periodic downloaded static route, + - replicated route
       SI - Static InterVRF, BI - BGP InterVRF

Gateway of last resort is not set

V        10.100.100.10 255.255.255.255 connected by VPN (advertised), outside
```

現在我們已經清楚如何在防火牆的路由表中處理VPN子網，下一步是探索如何使用各種路由協定來通告這些子網。

通過FTD上的EIGRP重新分配遠端訪問VPN子網

網路圖表



屬於network語句範圍的靜態路由會自動重新分發到EIGRP;您無需為其定義重分發規則。但是，重新分發指向EIGRP中VTI介面的靜態路由時，必須指定度量。對於指向其他型別介面的靜態路由，不需要指定度量。

由於EIGRP自動重分佈屬於network語句範圍的靜態路由的行為，因此在FTD上通過EIGRP通告VPN子網有兩個選項：

1. 使用network語句
2. 使用redistribute靜態方法。

在本示例中，目標是讓R1通過EIGRP瞭解VPN子網10.100.100.0/24。

FTD初始設定：

<#root>

```
hostname FTD-1
!
```

ip local pool VPN-POOL1 10.100.100.10-10.100.100.254 mask 255.255.255.0

```
!
webvpn
...
  group-policy LAB_GROUP1 internal
group-policy LAB_GROUP1 attributes
...
  address-pools value VPN-POOL1
!
```

router eigrp 100

```
 no default-information in
 no default-information out
 no eigrp log-neighbor-warnings
 no eigrp log-neighbor-changes
```

network 192.168.100.0 255.255.255.252

FTD初始路由表：

<#root>

```
FTD-1#
```

show route

```
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, V - VPN
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       o - ODR, P - periodic downloaded static route, + - replicated route
       SI - Static InterVRF, BI - BGP InterVRF

Gateway of last resort is not set

C        10.10.20.0 255.255.255.0 is directly connected, outside
L        10.10.20.1 255.255.255.255 is directly connected, outside
C        192.168.100.0 255.255.255.252 is directly connected, inside
L        192.168.100.2 255.255.255.255 is directly connected, inside
```

V   10.100.100.10 255.255.255.255 connected by VPN (advertised), outside

FTD初始EIGRP拓撲表：

<#root>

FTD-1#

show eigrp topology

```
EIGRP-IPv4 Topology Table for AS(100)/ID(192.168.100.2)
Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,
       r - reply Status, s - sia Status

P 192.168.100.0 255.255.255.252, 1 successors, FD is 512 via Connected, inside
```

R1初始路由表：

<#root>

R1#

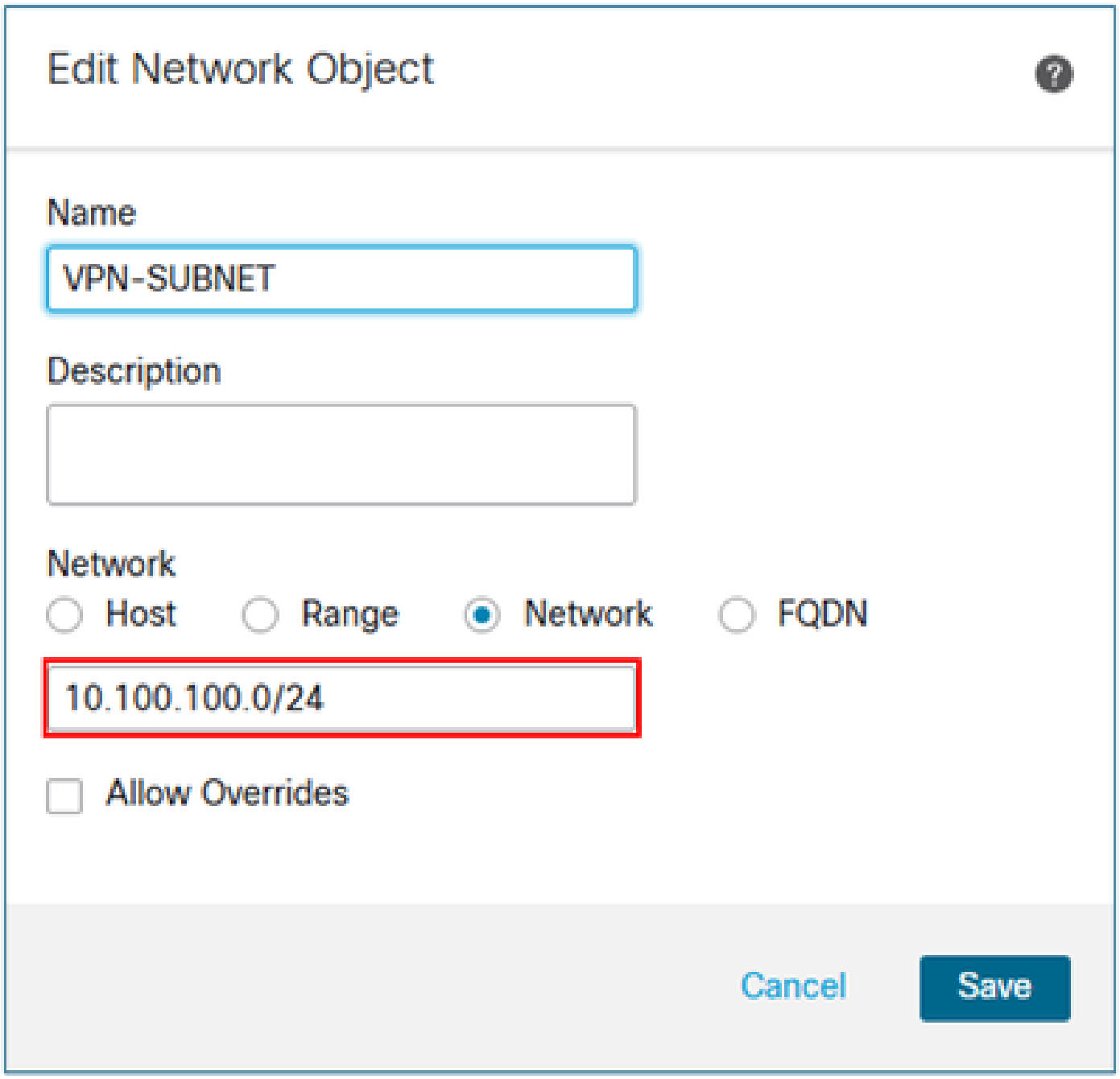
show ip route

```
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, m - OMP
       n - NAT, Ni - NAT inside, No - NAT outside, Nd - NAT DIA
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       H - NHRP, G - NHRP registered, g - NHRP registration summary
       o - ODR, P - periodic downloaded static route, l - LISP
       a - application route
       + - replicated route, % - next hop override, p - overrides from PfR
       & - replicated local route overrides by connected

Gateway of last resort is not set

C        192.168.100.0/30 is directly connected, GigabitEthernet1
L        192.168.100.1/32 is directly connected, GigabitEthernet1
```

使用network語句通過FTD上的EIGRP重新分發遠端訪問VPN子網

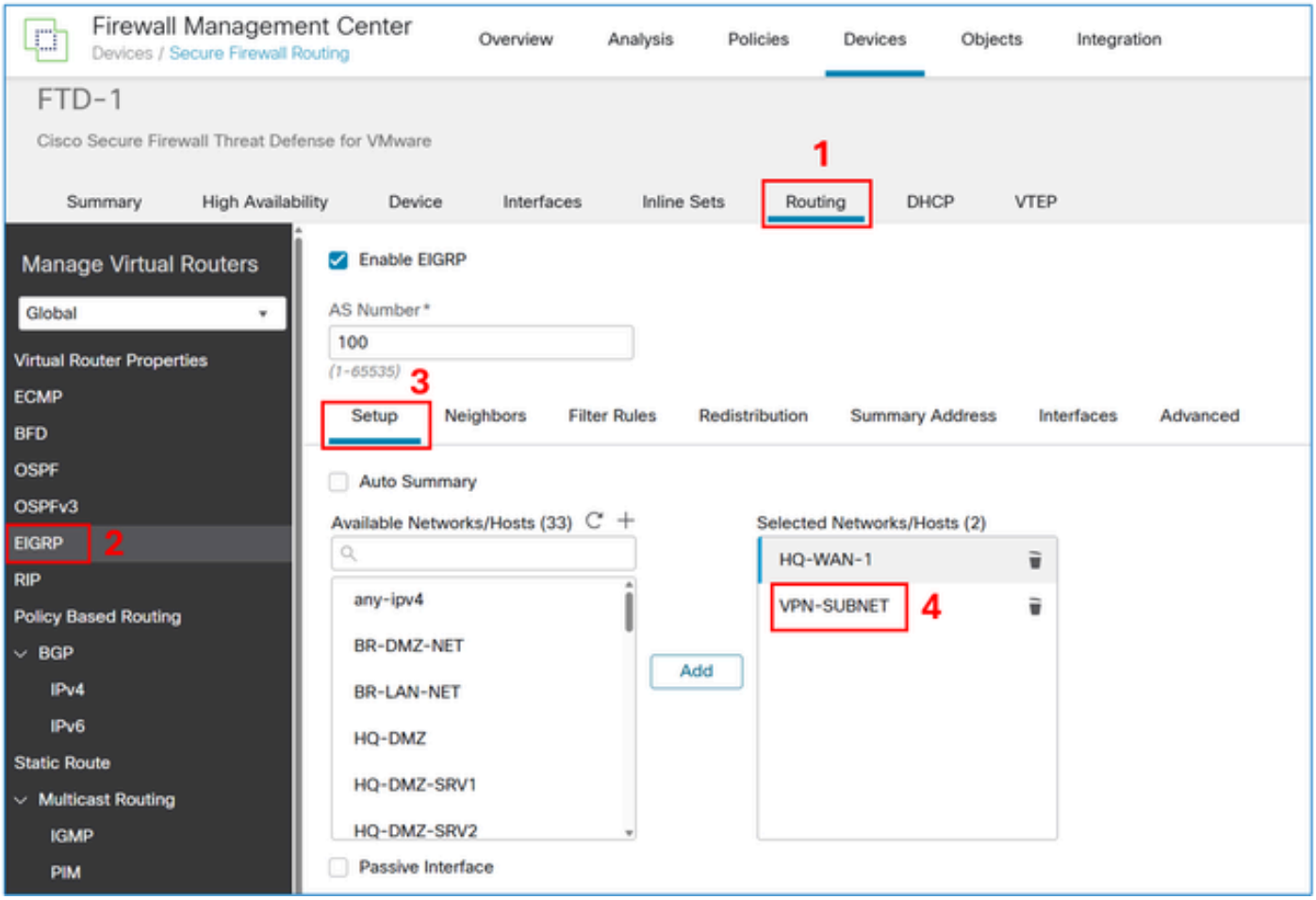
設定

步驟1.為VPN子網建立網路對象。



步驟2.在network語句中包含VPN子網對象。

在FMC裝置管理UI中，導航到Routing > EIGRP > Setup，並將VPN子網包含在選定的網絡/主機中。



儲存並部署FTD上的組態。

驗證

FTD EIGRP配置：

```
<#root>

FTD-1#

show run router


router eigrp 100
 no default-information in
 no default-information out
 no eigrp log-neighbor-warnings
 no eigrp log-neighbor-changes

 network 10.100.100.0 255.255.255.0


 network 192.168.100.0 255.255.255.252
```

FTD EIGRP拓撲表：

<#root>

FTD-1#

show eigrp topology

EIGRP-IPv4 Topology Table for AS(100)/ID(192.168.100.2)
Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,
       r - reply Status, s - sia Status

P 10.100.100.10 255.255.255.255, 1 successors, FD is 512

via Rstatic (512/0)

P 192.168.100.0 255.255.255.252, 1 successors, FD is 512
        via Connected, inside

R1路由表：

<#root>

R1#

show ip route

Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, m - OMP
       n - NAT, Ni - NAT inside, No - NAT outside, Nd - NAT DIA
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       H - NHRP, G - NHRP registered, g - NHRP registration summary
       o - ODR, P - periodic downloaded static route, l - LISP
       a - application route
       + - replicated route, % - next hop override, p - overrides from PfR
       & - replicated local route overrides by connected

Gateway of last resort is not set

C   192.168.100.0/30 is directly connected, GigabitEthernet1
L   192.168.100.1/32 is directly connected, GigabitEthernet1
      10.0.0.0/32 is subnetted, 1 subnets

D   10.100.100.10

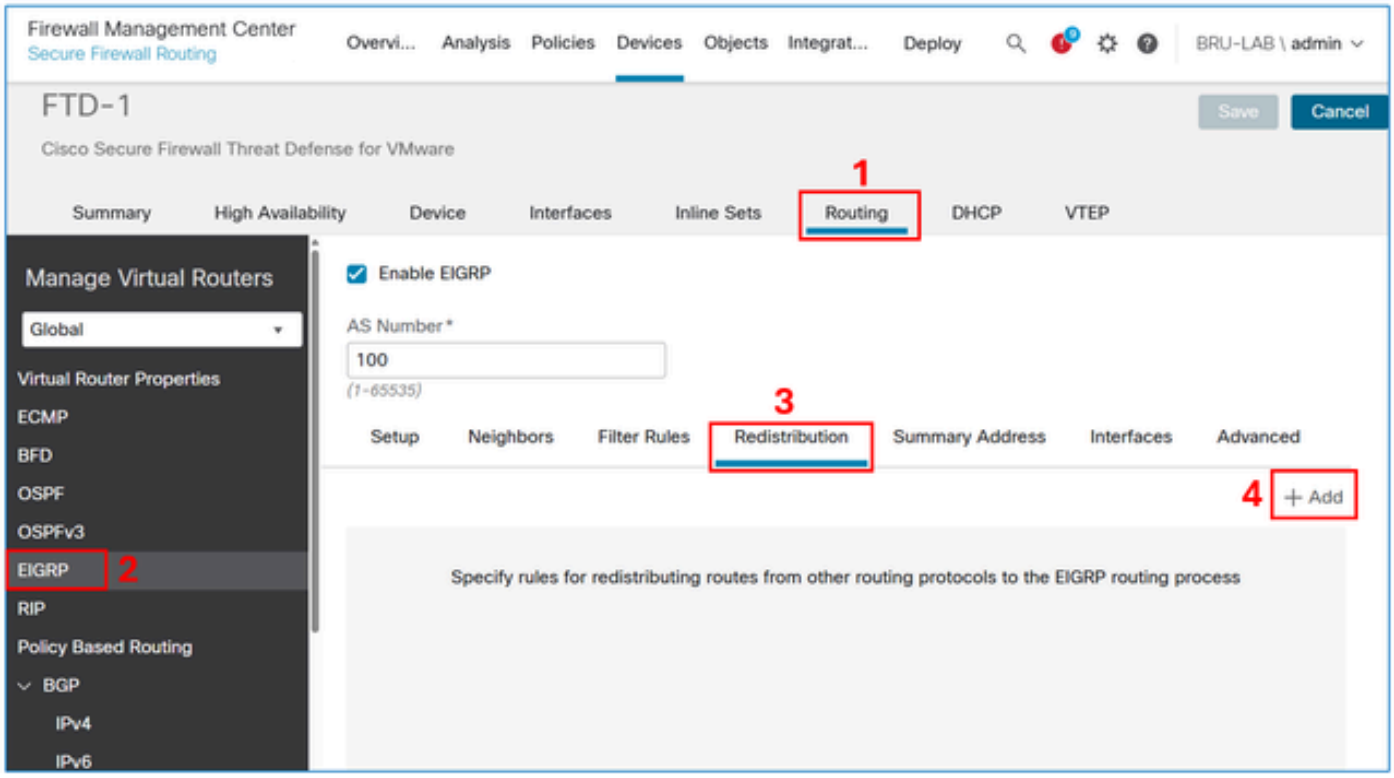
[90/3072] via 192.168.100.2, 00:02:17, GigabitEthernet1

附註：請注意，雖然network語句是10.100.100.0/24，但FTD會通過EIGRP重新分配/32子網。發生這種情況的原因是FTD為每個遠端訪問VPN會話建立字首為/32的靜態路由。要最佳化此功能，您可以使用EIGRP摘要地址功能。

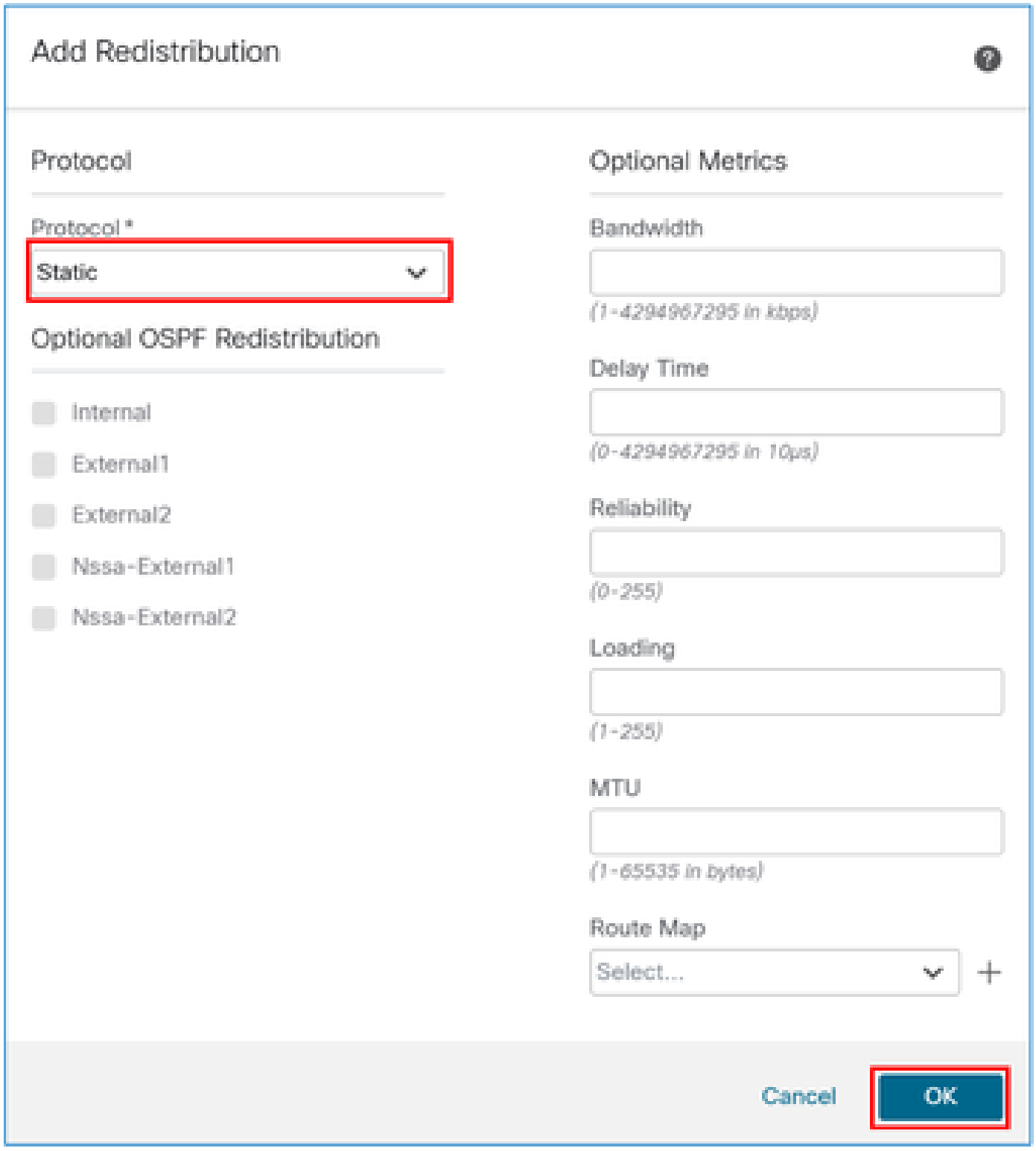
使用redistribute static方法通過FTD上的EIGRP重新分發遠端訪問VPN子網

設定

在FMC裝置管理UI中，導航到Routing > EIGRP > Redistribution，然後選擇Add按鈕。

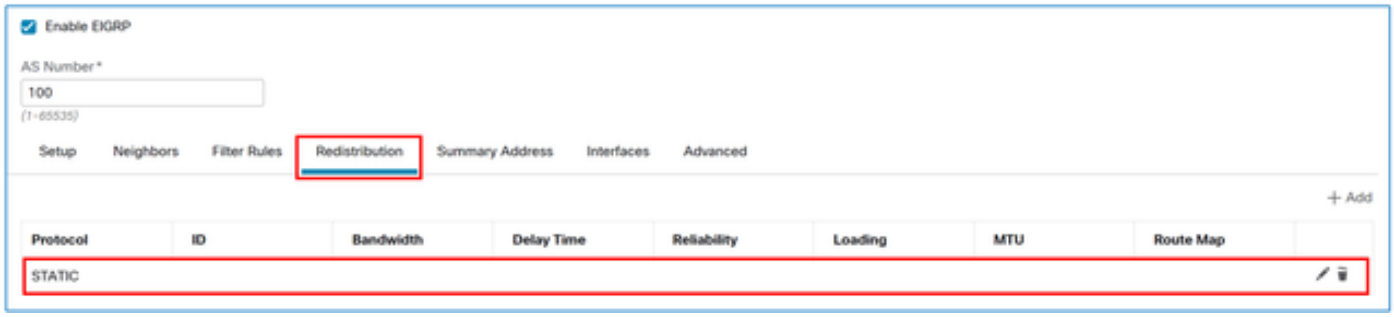


在協定欄位中，選擇Static，然後選擇OK按鈕。



⚠ 注意：這會將所有靜態路由重分發到EIGRP。如果您只需要通告VPN子網，則可以使用network語句方法或應用路由對映來過濾它們。

結果是：



儲存並部署FTD上的組態。

驗證

FTD EIGRP配置：

<#root>

FTD-HQ-1#

show run router

```
router eigrp 100
 no default-information in
 no default-information out
 no eigrp log-neighbor-warnings
 no eigrp log-neighbor-changes
 network 192.168.100.0 255.255.255.252
```

redistribute static

FTD EIGRP拓撲表：

<#root>

FTD-1#

show eigrp topology

```
EIGRP-IPv4 Topology Table for AS(100)/ID(192.168.100.2)
Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,
       r - reply Status, s - sia Status
```

P 10.100.100.10 255.255.255.255, 1 successors, FD is 512

via Rstatic (512/0)

```
P 192.168.100.0 255.255.255.252, 1 successors, FD is 512
        via Connected, inside
```

R1路由表：

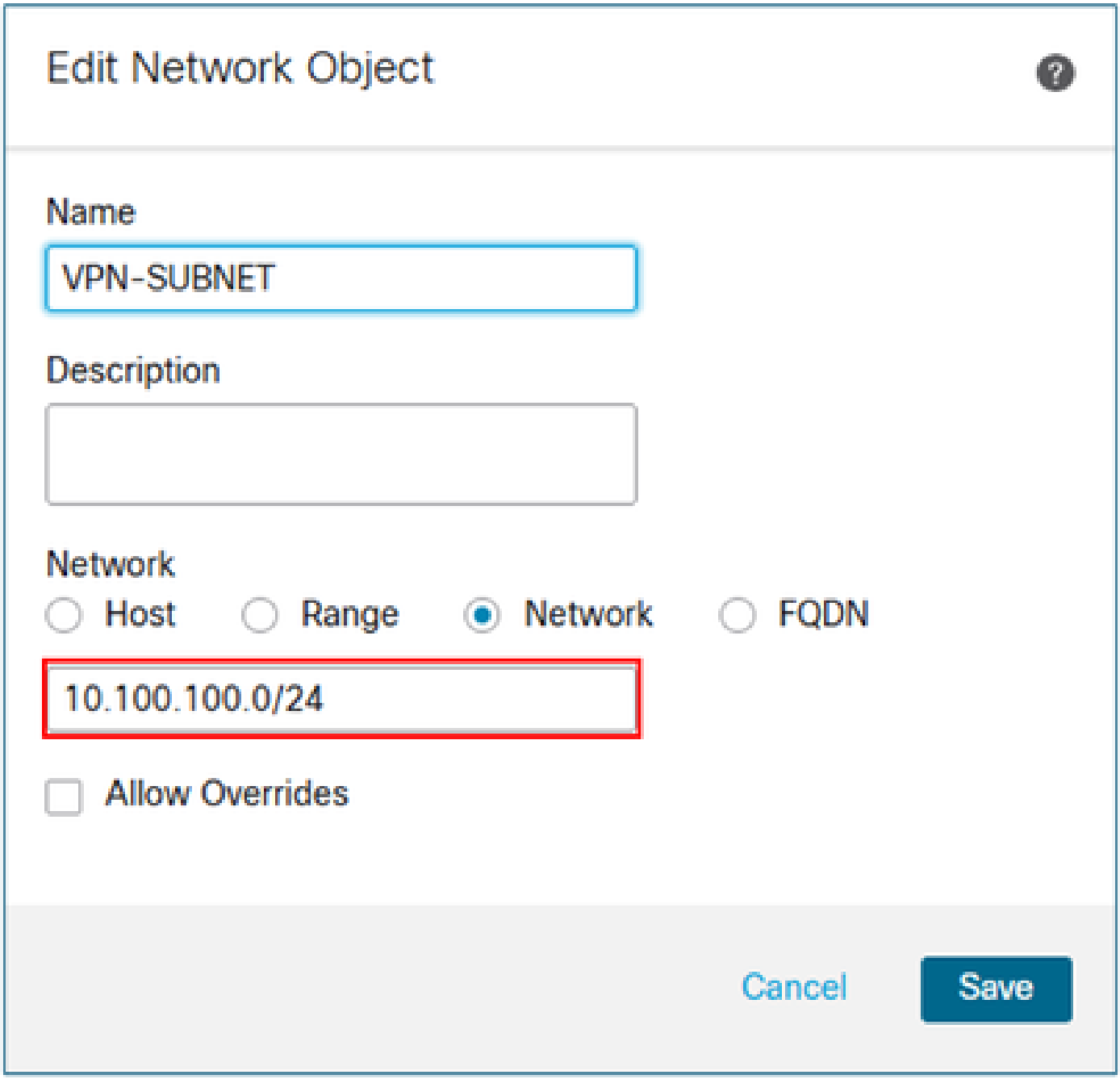
```
<#root>

R1#

show ip route


Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, m - OMP
       n - NAT, Ni - NAT inside, No - NAT outside, Nd - NAT DIA
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       H - NHRP, G - NHRP registered, g - NHRP registration summary
       o - ODR, P - periodic downloaded static route, l - LISP
       a - application route
       + - replicated route, % - next hop override, p - overrides from PfR
       & - replicated local route overrides by connected

Gateway of last resort is not set

C        192.168.100.0/30 is directly connected, GigabitEthernet1
L        192.168.100.1/32 is directly connected, GigabitEthernet1

D EX     10.100.100.10


           [170/3072] via 192.168.100.2, 00:03:52, GigabitEthernet1
```

提示：或者，可以使用FTD上的EIGRP摘要地址功能來最佳化路由表的大小。

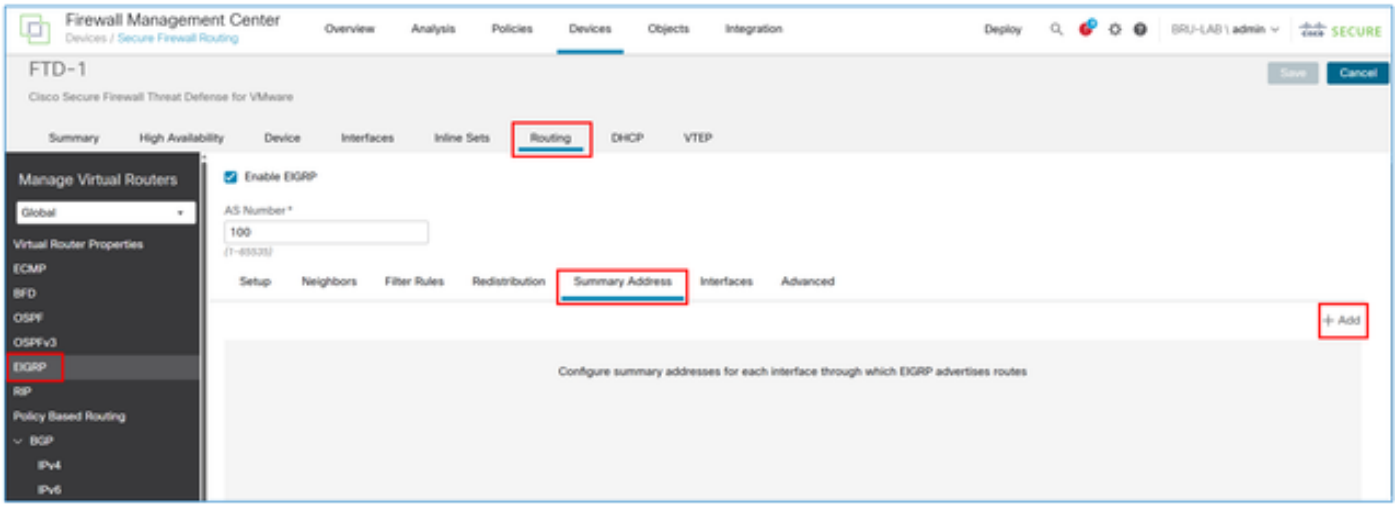
EIGRP摘要地址配置

設定

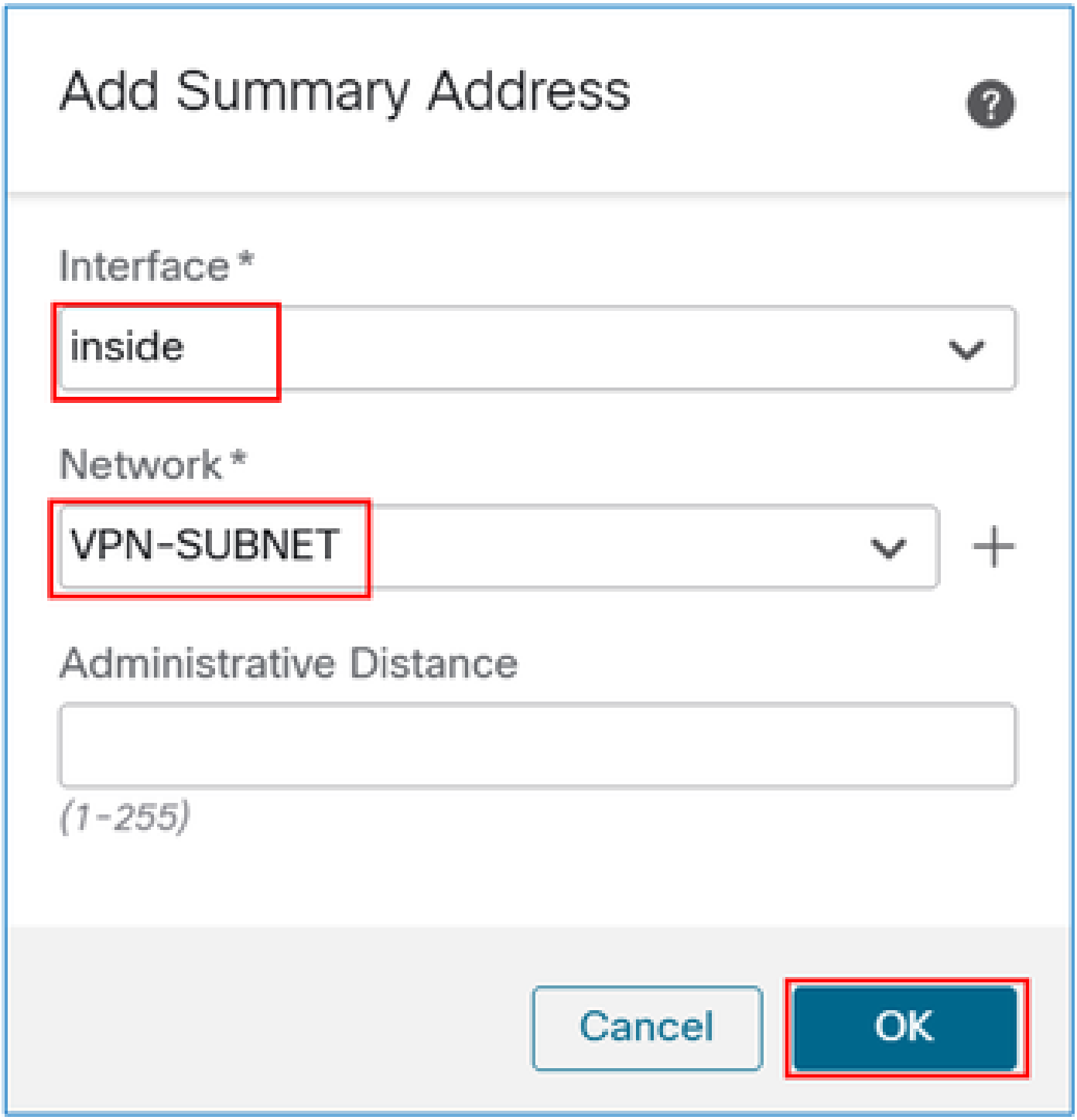
如果尚未建立，請為VPN子網建立網路對象。



在FMC裝置管理UI中，導航到Routing > EIGRP > Summary Address，然後選擇Add按鈕。



在interface欄位中輸入面向EIGRP鄰居的對象，在network欄位中輸入為VPN子網建立的對象。



結果是：

驗證

FTD EIGRP摘要地址配置：

<#root>

FTD-1#

sh run interface

```
interface GigabitEthernet0/0
 nameif inside
 security-level 0
 zone-member inside
 ip address 192.168.100.2 255.255.255.252
```

summary-address eigrp 100 10.100.100.0 255.255.255.0

FTD EIGRP拓撲表：

<#root>

FTD-1#

show eigrp topology

```
EIGRP-IPv4 Topology Table for AS(100)/ID(192.168.100.2)
Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,
       r - reply Status, s - sia Status

P 10.100.100.10 255.255.255.255, 1 successors, FD is 512
        via Rstatic (512/0)
```

P 10.100.100.0 255.255.255.0, 1 successors, FD is 512

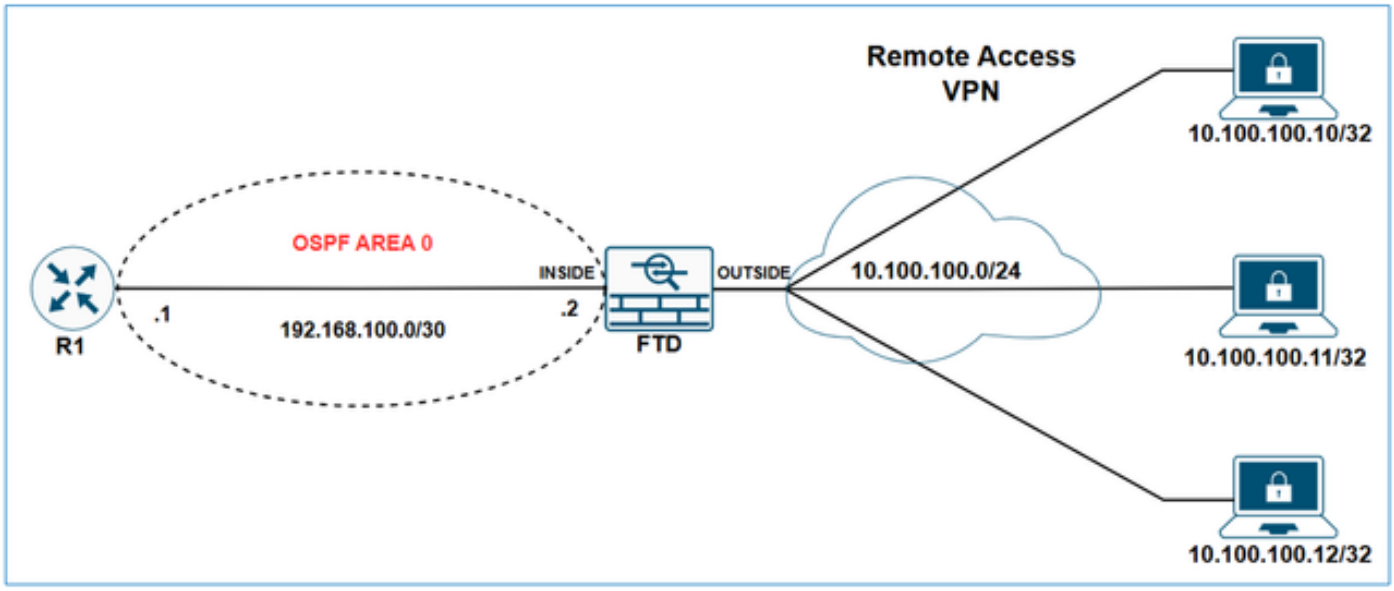
```
        via Summary (512/0), Null0


P 192.168.100.0 255.255.255.0, 1 successors, FD is 512
        via Connected, inside
```

R1路由表：

```
<#root>

R1#

show ip route



Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, m - OMP
       n - NAT, Ni - NAT inside, No - NAT outside, Nd - NAT DIA
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       H - NHRP, G - NHRP registered, g - NHRP registration summary
       o - ODR, P - periodic downloaded static route, l - LISP
       a - application route
       + - replicated route, % - next hop override, p - overrides from PfR
       & - replicated local route overrides by connected

Gateway of last resort is not set

C        192.168.100.0/30 is directly connected, GigabitEthernet1
L        192.168.100.1/32 is directly connected, GigabitEthernet1
      10.0.0.0/24 is subnetted, 1 subnets

D        10.100.100.0 [90/3072] via 192.168.100.2, 00:01:54, GigabitEthernet1
```

通過FTD上的OSPF重新分發遠端訪問VPN子網

網路圖表



初始配置

<#root>

```
ip local pool VPN-POOL1 10.100.100.10-10.100.100.254 mask 255.255.255.0
```

```
!
webvpn
  group-policy LAB_GROUP1 internal
...
group-policy LAB_GROUP1 attributes
...
```

```
address-pools value VPN-POOL1
```

```
!
router ospf 1
```

```
network 192.168.100.0 255.255.255.252 area 0
```

FTD show ospf neighbor output:

<#root>

```
FTD-1#
```

```
show ospf neighbor
```

```
Neighbor ID     Pri   State           Dead Time   Address         Interface
192.168.100.1     1   FULL/DR         0:00:39     192.168.100.1   inside
```

R1 show ip ospf neighbor output:

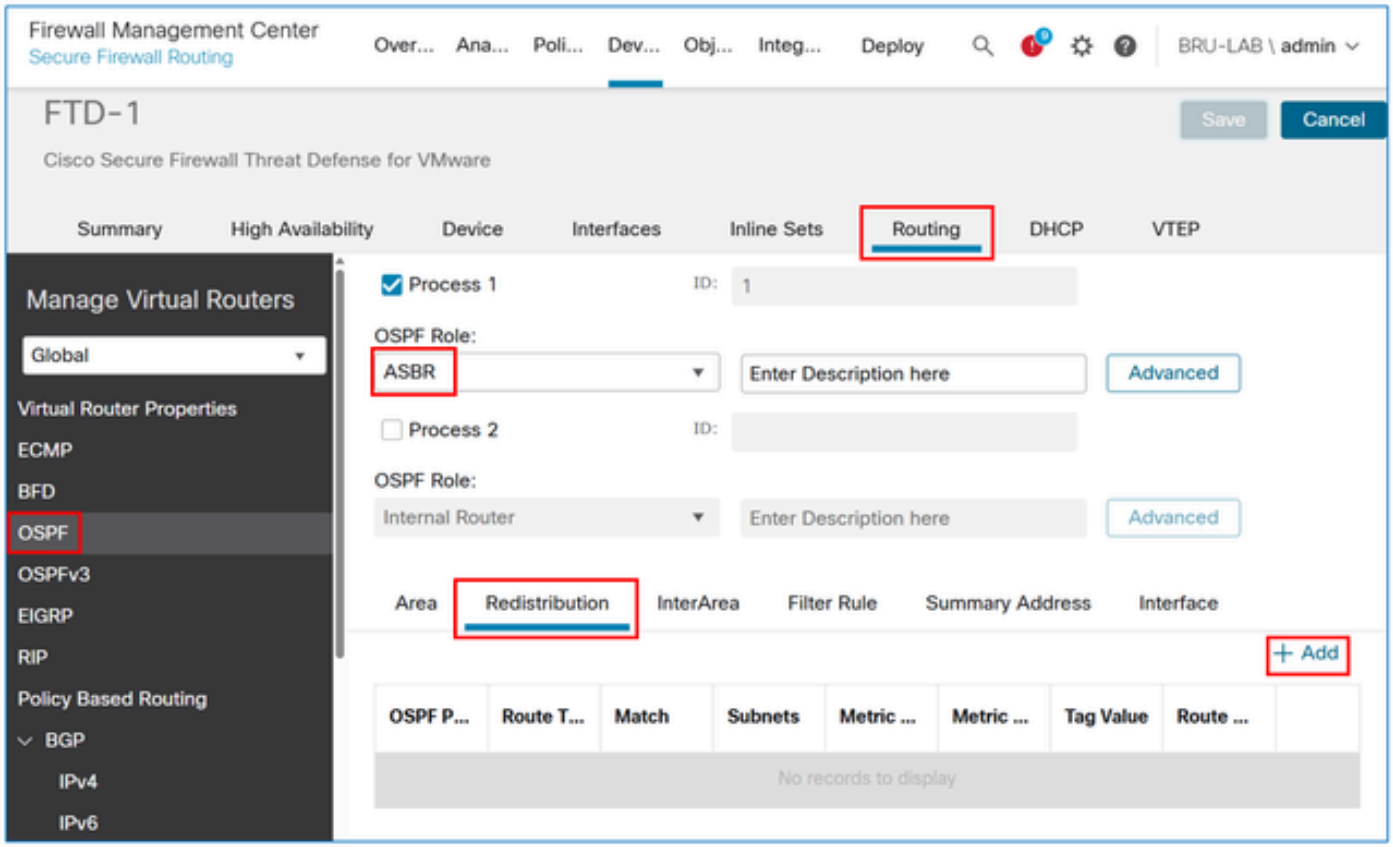
```
<#root>

R1#

show ip ospf neighbor


Neighbor ID     Pri   State           Dead Time   Address         Interface
192.168.100.2     1   FULL/BDR        00:00:37    192.168.100.2   GigabitEthernet1
```

R1路由表：

```
<#root>

R1#

show ip route


Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, m - OMP
       n - NAT, Ni - NAT inside, No - NAT outside, Nd - NAT DIA
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       H - NHRP, G - NHRP registered, g - NHRP registration summary
       o - ODR, P - periodic downloaded static route, l - LISP
       a - application route
       + - replicated route, % - next hop override, p - overrides from PfR
       & - replicated local route overrides by connected

Gateway of last resort is not set

C        192.168.100.0/30 is directly connected, GigabitEthernet1
L        192.168.100.1/32 is directly connected, GigabitEthernet1
```

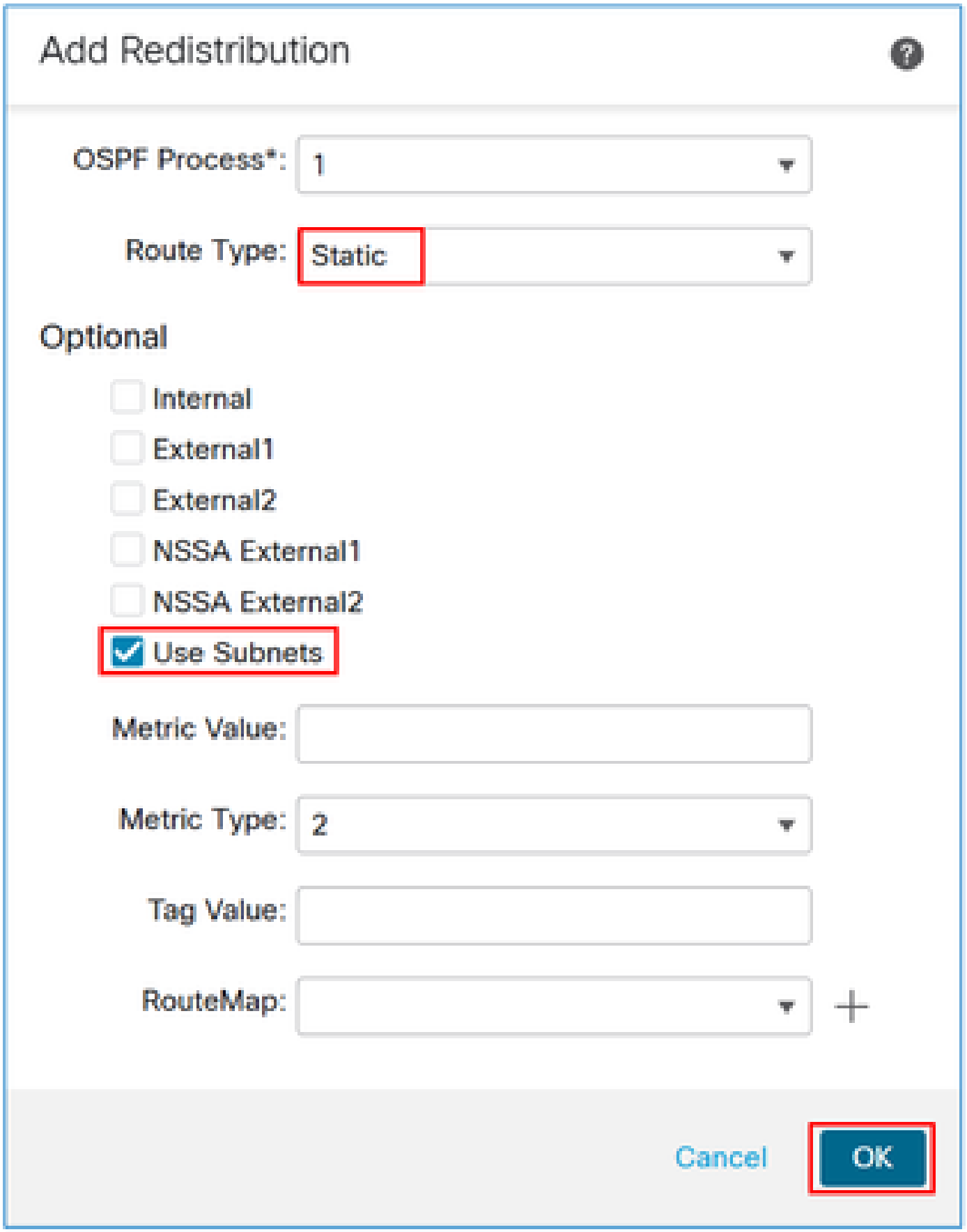
設定

在FMC裝置管理UI中，導航到Routing > OSPF > Redistribution，然後選擇Add按鈕。



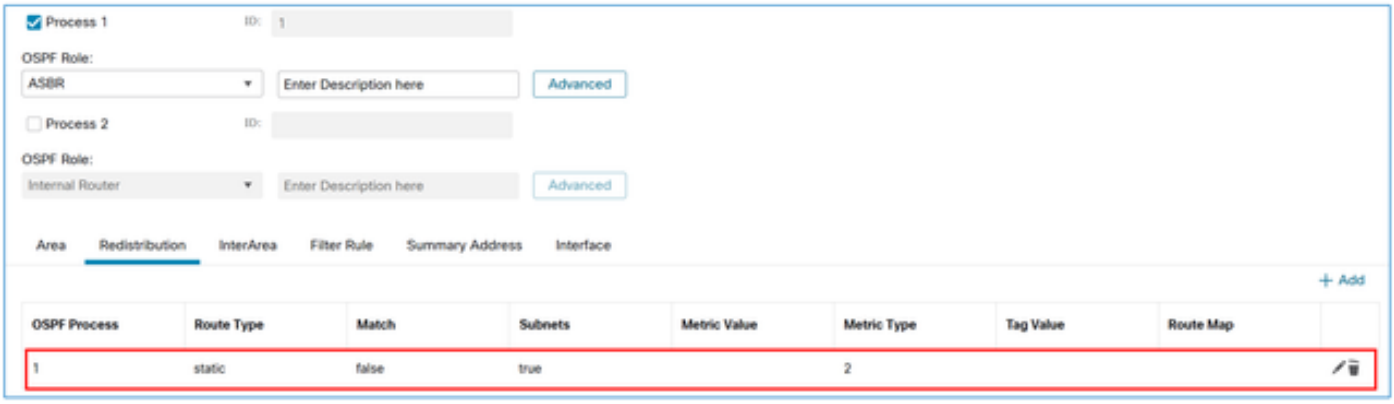
附註：必須將OSPF角色設定為ASBR或ABR和ASBR才能啟用重分發。

在Route Type欄位中，選擇Static，然後選中Use Subnets框。



⚠ 注意：這會將所有靜態路由重分發到OSPF。如果您只需要通告VPN子網，則可以應用路由對映來過濾這些子網。

結果是：



驗證

FTD OSPF重分發配置：

```
<#root>

FTD-1#

sh run router


router ospf 1
 network 192.168.100.0 255.255.255.252 area 0

 redistribute static subnets
```

R1路由表：

```
<#root>

R1#

show ip route


Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, m - OMP
       n - NAT, Ni - NAT inside, No - NAT outside, Nd - NAT DIA
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       H - NHRP, G - NHRP registered, g - NHRP registration summary
       o - ODR, P - periodic downloaded static route, l - LISP
       a - application route
       + - replicated route, % - next hop override, p - overrides from PfR
       & - replicated local route overrides by connected

Gateway of last resort is not set
```

```
C        192.168.100.0/30 is directly connected, GigabitEthernet1
L        192.168.100.1/32 is directly connected, GigabitEthernet1
      10.0.0.0/32 is subnetted, 1 subnets
```

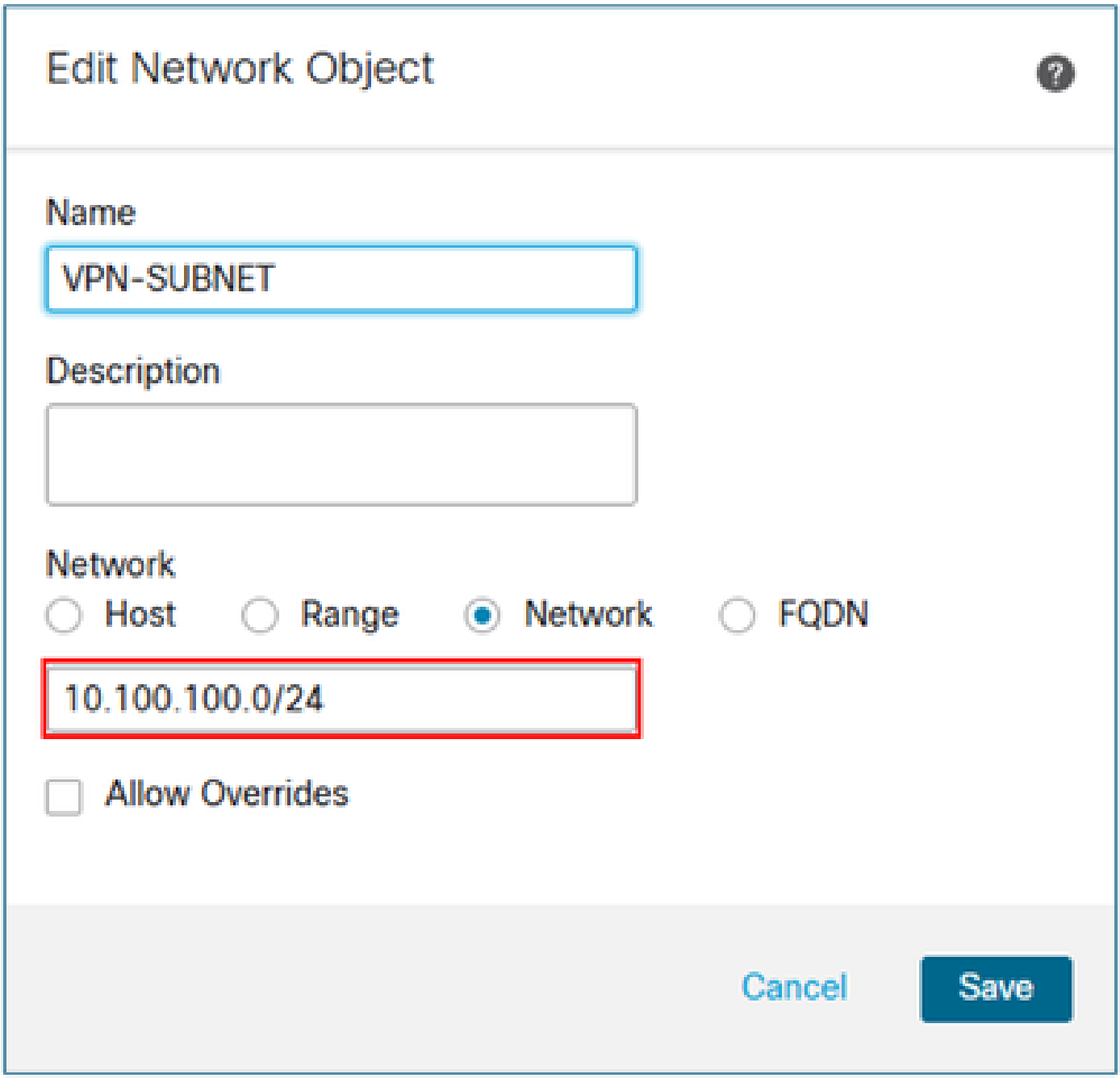
O E2   10.100.100.10 [110/20] via 192.168.100.2, 00:08:01, GigabitEthernet1

提示：請注意，雖然VPN池是10.100.100.0/24，但FTD會通過OSPF重新分配/32子網。發生這種情況的原因是FTD為每個遠端訪問VPN會話建立字首為/32的靜態路由。要最佳化此功能，您可以使用OSPF摘要地址功能。

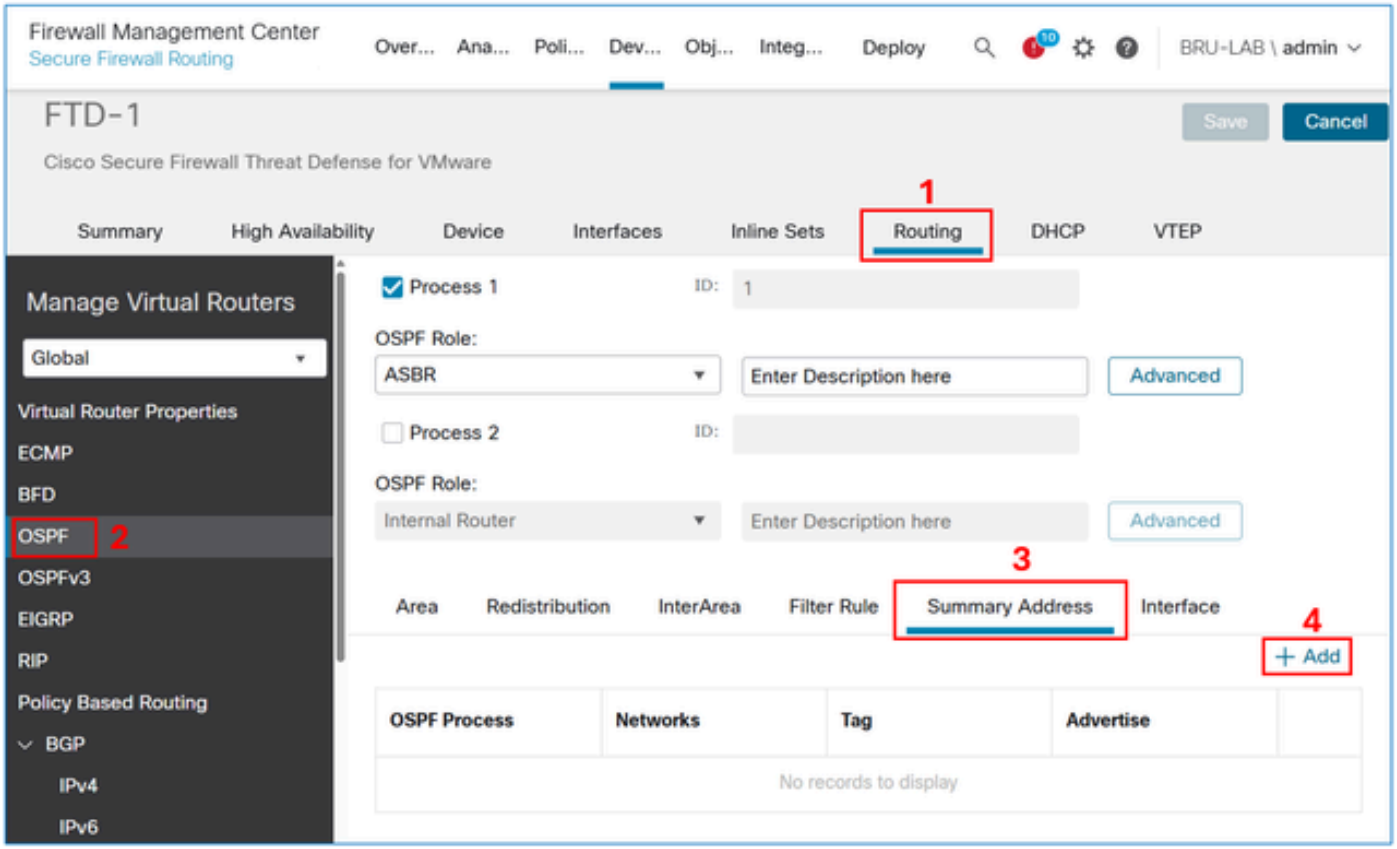
OSPF摘要地址配置

設定

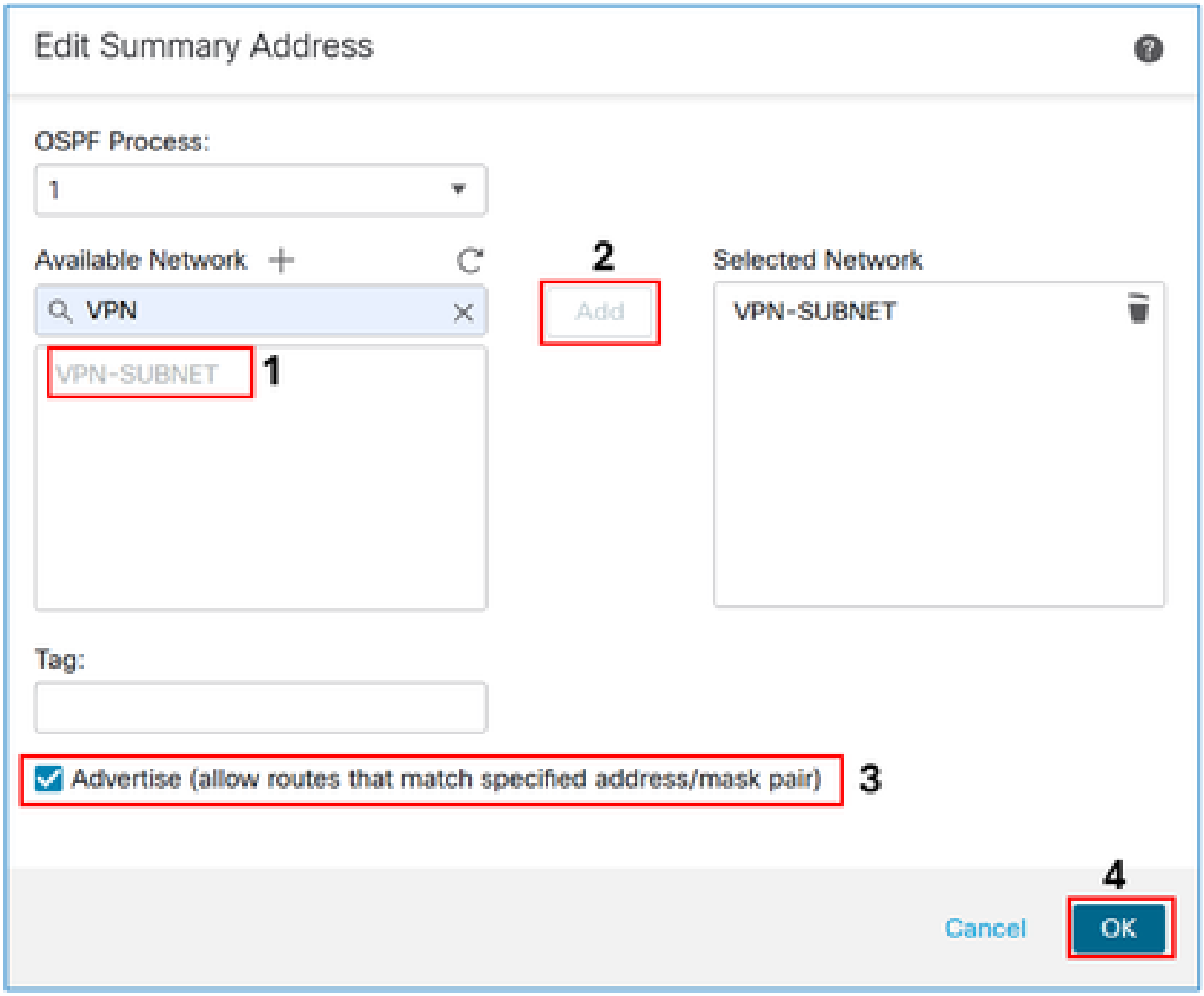
如果尚未建立，請為VPN子網建立網路對象。



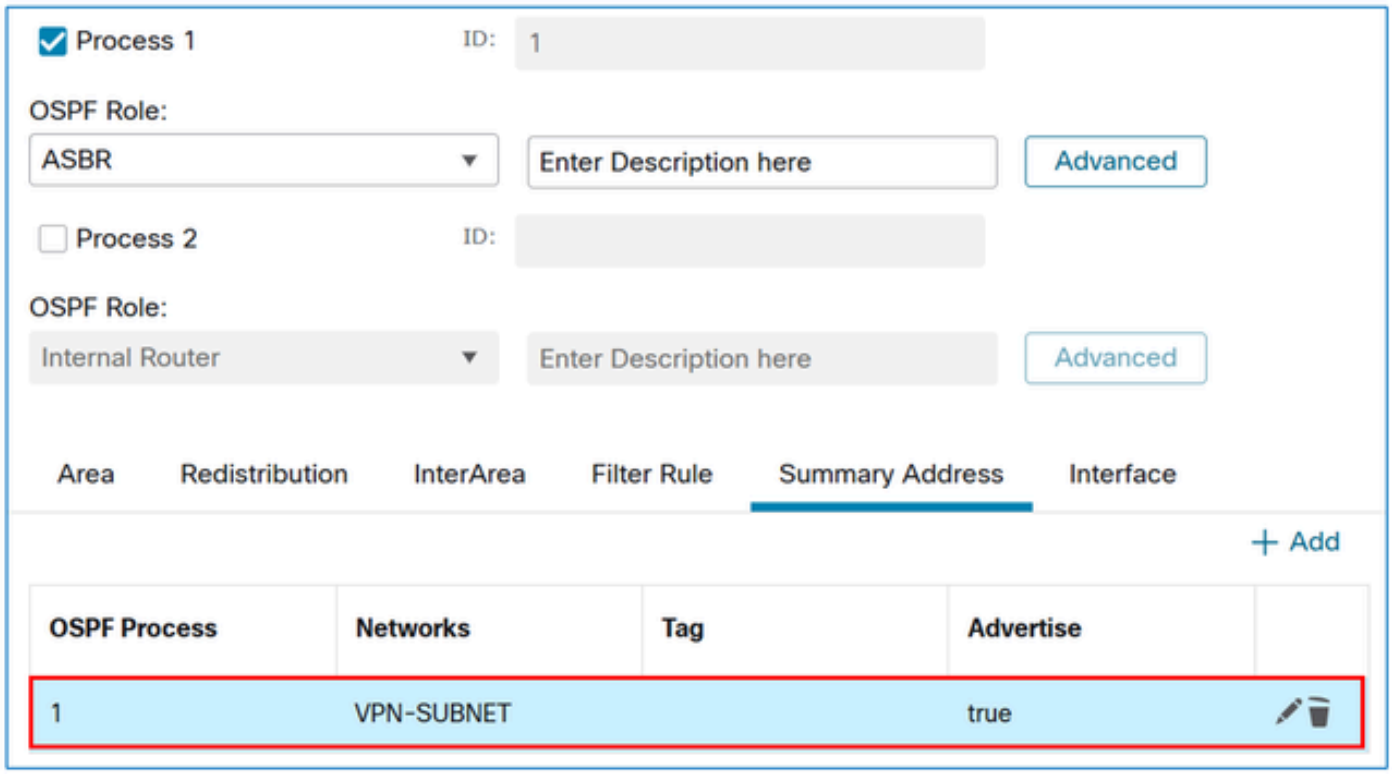
在FMC裝置管理UI中，導航到Routing > OSPF> Summary Address，然後選擇Add按鈕。



新增VPN子網對象並選中Advertise覈取方塊。


Edit Summary Address
OSPF Process:
1
Available Network
VPN
VPN-SUBNET
1
2
Add
Selected Network
VPN-SUBNET
Tag:
Advertise (allow routes that match specified address/mask pair)
3
4
Cancel
OK

結果：



驗證

FTD OSPF配置：

<#root>

FTD-1#

sh run router

```
router ospf 1
 network 192.168.100.0 255.255.255.252 area 0
```

redistribute static subnets

summary-address 10.100.100.0 255.255.255.0

R1路由表：

<#root>

R1#

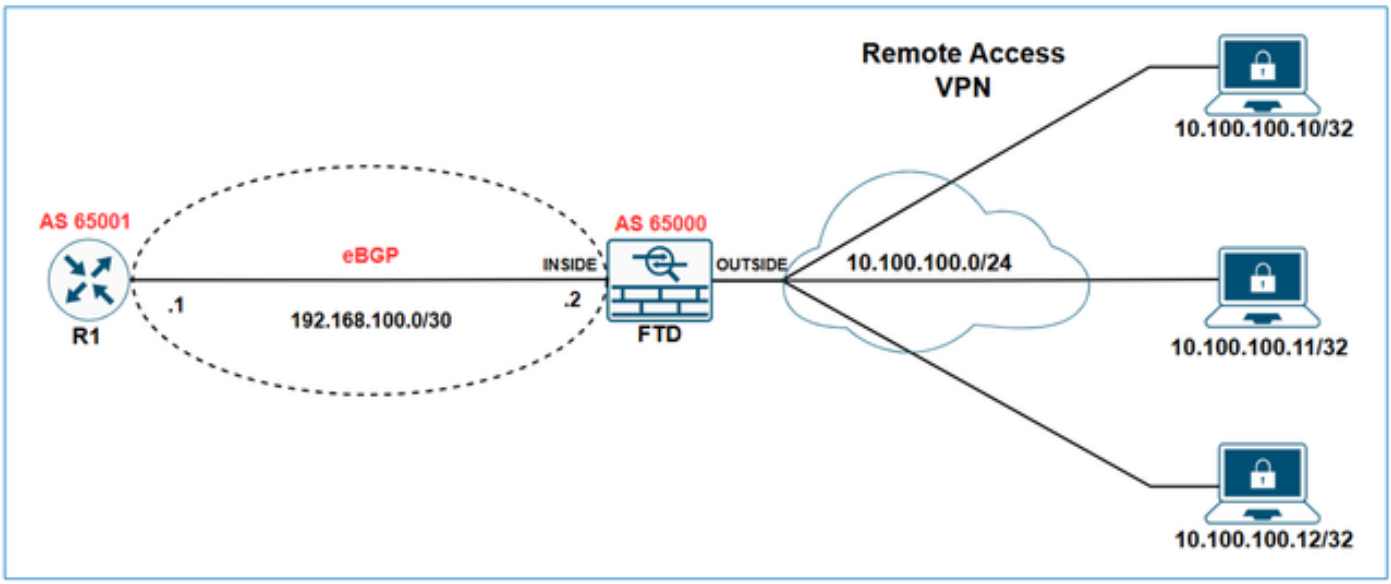
sh ip route

```
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
```

```
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, m - OMP
       n - NAT, Ni - NAT inside, No - NAT outside, Nd - NAT DIA
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       H - NHRP, G - NHRP registered, g - NHRP registration summary
       o - ODR, P - periodic downloaded static route, l - LISP
       a - application route
       + - replicated route, % - next hop override, p - overrides from PfR
       & - replicated local route overrides by connected

Gateway of last resort is not set

C        192.168.100.0/30 is directly connected, GigabitEthernet1
L        192.168.100.1/32 is directly connected, GigabitEthernet1
      10.0.0.0/24 is subnetted, 1 subnets
O E2     10.100.100.0 [110/20] via 192.168.100.2, 00:00:26, GigabitEthernet1
```

透過FTD上的eBGP重新分佈遠端存取VPN子網

網路圖表



在本示例中，目標是讓R1通過eBGP學習VPN子網10.100.100.0/24。

初始配置

FTD初始設定：

<#root>

```
hostname FTD-1
!
ip local pool VPN-POOL1 10.100.100.10-10.100.100.254 mask 255.255.255.0
```

```
!
webvpn
...
  group-policy LAB_GROUP1 internal
group-policy LAB_GROUP1 attributes
...

address-pools value VPN-POOL1

!
router bgp 65000
 bgp log-neighbor-changes
 bgp router-id vrf auto-assign
 address-family ipv4 unicast
  neighbor 192.168.100.1 remote-as 65001
  neighbor 192.168.100.1 transport path-mtu-discovery disable
  neighbor 192.168.100.1 activate
  no auto-summary
  no synchronization
 exit-address-family
```

FTD bgp表輸出：

<#root>

```
FTD-1#

show bgp

BGP table version is 25, local router ID is 192.168.100.2
Status codes: s suppressed, d damped, h history, * valid, > best, i - internal,
              r RIB-failure, S Stale, m multipath
Origin codes: i - IGP, e - EGP, ? - incomplete

Network               Next Hop        Metric LocPrf Weight  Path

r> 192.168.100.0/30  192.168.100.1       1             0  65001 ?
```

FTD show bgp summary輸出：

<#root>

```
FTD-1#

show bgp summary

BGP router identifier 192.168.100.2, local AS number 65000
BGP table version is 25, main routing table version 25
1 network entries using 2000 bytes of memory
17 path entries using 1360 bytes of memory
3/3 BGP path/bestpath attribute entries using 624 bytes of memory
```

```
2 BGP AS-PATH entries using 48 bytes of memory
0 BGP route-map cache entries using 0 bytes of memory
0 BGP filter-list cache entries using 0 bytes of memory
BGP using 4032 total bytes of memory
BGP activity 176/166 prefixes, 257/240 paths, scan interval 60 secs

Neighbor        V           AS MsgRcvd MsgSent   TblVer  InQ OutQ Up/Down  State/PfxRcd

192.168.100.1  4        65001 4589    3769          25    0    0 2d21h  8
```

R1 show ip bgp summary output:

<#root>

```
R1#

sh ip bgp summary


BGP router identifier 192.168.100.1, local AS number 65001
BGP table version is 258, main routing table version 258
1 network entries using 2480 bytes of memory
1 path entries using 2312 bytes of memory
1/1 BGP path/bestpath attribute entries using 864 bytes of memory
1 BGP AS-PATH entries using 64 bytes of memory
0 BGP route-map cache entries using 0 bytes of memory
0 BGP filter-list cache entries using 0 bytes of memory
BGP using 5720 total bytes of memory
BGP activity 85/75 prefixes, 244/227 paths, scan interval 60 secs
12 networks peaked at 11:10:00 Apr 17 2025 UTC (00:06:27.485 ago)

Neighbor        V           AS MsgRcvd MsgSent   TblVer  InQ OutQ Up/Down  State/PfxRcd
192.168.100.2  4        65000    3770    4590      258    0    0 2d21h           9
```

R1 bgp表輸出：

<#root>

```
R1#

show ip bgp


BGP table version is 258, local router ID is 192.168.100.1
Status codes: s suppressed, d damped, h history, * valid, > best, i - internal,
              r RIB-failure, S Stale, m multipath, b backup-path, f RT-Filter,
              x best-external, a additional-path, c RIB-compressed,
              t secondary path, L long-lived-stale,
Origin codes: i - IGP, e - EGP, ? - incomplete
RPKI validation codes: V valid, I invalid, N Not found
       Network          Next Hop            Metric LocPrf Weight Path
 *>   192.168.100.0/30                      0.0.0.0                  1         32768 ?
```

R1路由表：

<#root>

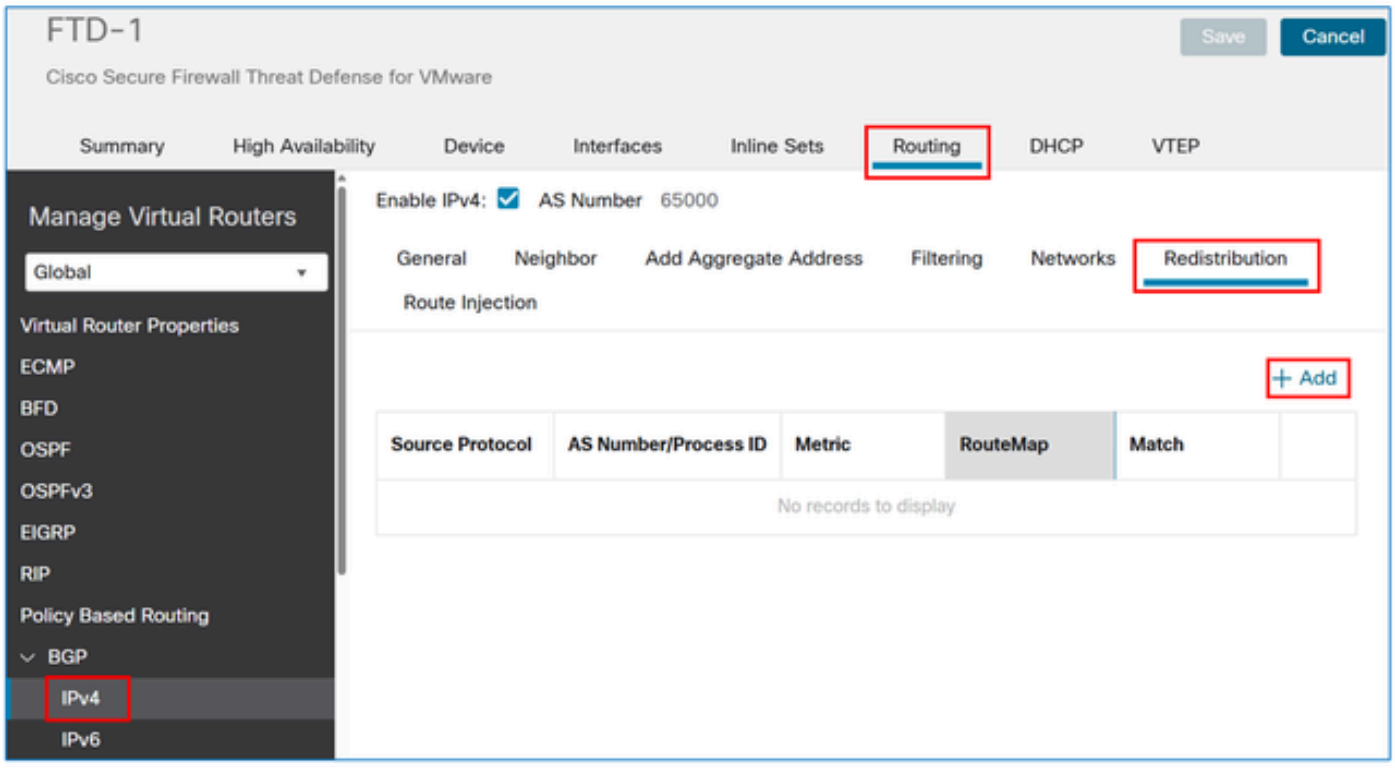
R1#

show ip route

```
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, m - OMP
       n - NAT, Ni - NAT inside, No - NAT outside, Nd - NAT DIA
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       H - NHRP, G - NHRP registered, g - NHRP registration summary
       o - ODR, P - periodic downloaded static route, l - LISP
       a - application route
       + - replicated route, % - next hop override, p - overrides from PfR
       & - replicated local route overrides by connected

Gateway of last resort is not set

C        192.168.100.0/30 is directly connected, GigabitEthernet1
L        192.168.100.1/32 is directly connected, GigabitEthernet1
```

設定

在FMC裝置管理UI中，導航到Routing > BGP > IPv4 > Redistribution，然後選擇Add按鈕。



在「Source Protocol」欄位中，選擇「Static」，然後選擇「OK」按鈕。

Add Redistribution

Source Protocol

Static

Process ID*

Metric

(0-4294967295)

Route Map

Match

- Internal
- External 1
- External 2
- NSSAExternal 1
- NSSAExternal 2

關於此翻譯

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