

نع لوصول لة يعرف ال تاكبش ل ن ن ال ع إ ل ا
هيجوت ل ا تالوكوتورب ل لال خ ن م VPN ل ل ا دعب
FTD ف

تایوت حملہ

مقدمه

ةيساس ألاتا لطلطل

تابل طتملا

عمدخت سملاتان وكملا

قىساساً تامولعم

FTD إلى EIGRP لإدخاله في VPN مع لوس، ولدي معرفة التاكبير، إيزوت دواعا

قكب شلبي طي طختلا مسرلا

[مداخلتس اب FTD لىع EIGRP لالځ نم VPN دع ب نىع لىوص وللى قىع رفلالت ك بشل اى عى زوت قداعلا
قك بشل اى نايى](#)

نى وك تارا

قحصلانم ققحتلا

[مادخت س اب FTD لى لع EIGRP لال خ نم VPN دع ب نع لوص ولبل قى عرفلا تاك بش لا عيزوت قداعا
عيزوت لا قداعال تباثل اجه نلا](#)

نى وك تارا

عقود صلح و تم قق ح ت ل ا

EIGRP صیخلت ناو نوع نیوكت

نېوكتلا

عقصر لانا نم ققحت لانا

[FTD يلع OSPF لالڤ نم VPN دعب نعل لوصولل قىعرف لالتك بش لال عىزوت قداغلا](#)

عكس ليل طيخت لاسرلا

نى وك تارا

عقود صلح و تم قق ح ت ل ا

OSPF صخلم ناو نع نيوكت

نېوكتلا

عحصلانم ققحتلا

FTD يلعب eBGP للدخول في VPN دعوى لوصفها في عرفيات الكيانات عذرت دعاء

قكپشللې طيپ ختلا مسرلا

نېوكتلا

ةحصلا نم ققحتلا

BGP عي مجت ناو نع ني وكت

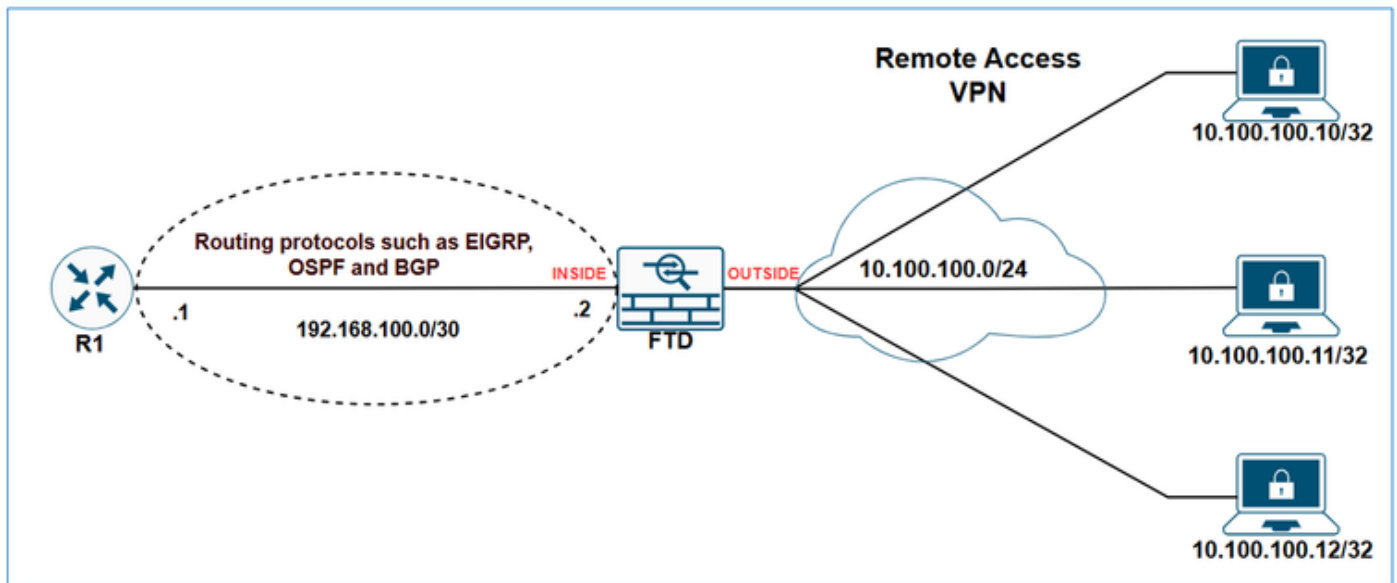
نېوكتلا

عحصلا نم ققحتلا

ةمدقملا

مداخلت سبب VPN بة قول عتملة اى عرفال تاك بشل نال عال ة حاتملا تاراي خل دن تسمل اذه فصى

BGP و OSPF و EIGRP هي جوتال تالوكوتورب



ةيساسأل تابلطتمال

تابلطتمال

دنتسمال اذهل ةصاخ تابلطتم دجوتال

ةمدختسمال تانوكمال

ةصاخ ةيلمعم ةئييب يف ةدوجومال ةزهجال نم دنتسمال اذه يف ةدراول تامولعمل عاشنإ مت تناك اذإ. (يضايرتفا) حوسمم نيوكتب دنتسمال اذه يف ةمدختسُمال ةزهجال ايمج تأدب رما يال لمحتحمل ريثأتلل كمهف نم دكأتف، ليغشتال ديق كتكبش

ةيلاتال ةيدامال تانوكمال اوچماربال تارادصالإ دنتسمال اذه يف ةدراول تامولعمل دنتست

- Cisco Secure Firewall، رادصالإ 7.6.0 ةرادإ زكرم
- Cisco Secure Firewall، رادصالإ 7.6.0

ةصاخال تاكبشلل ةيعرفال تاكبشال عيزوت ةداعإ نيوكت دنتسمال اذه حضوي: ةظحال م
FMC مادختساب BGP و OSPF و EIGRP لالخ نم دعب نع لوصولل (VPN) ةيرهاظلا
ليلدإ لىل عوجرلا ىجري، FDM مادختساب راسمل عيزوت ةداعإ لوح تاداشرا لىل لوصولل
FDM نيوكت.

ةيساسأ تامولعمل

(VPN) ةيرهاظلا ةصاخال ةيعرفال تاكبشلل FTD فينصت ةيفيك وه همهف بجي عيش لوأ
هنا لىل رهظت ةيعرفال تاكبشال هذه نأ نم مغرلا لىل عو. هب صاخال هي جوتال لودج يف
لماعت هنا لب؛ ةرشابم ةلصتم ةيعرفال تاكبش ربتعت ال هناف، VPN ةطساوب ةلصتم
ةتبات تاراسم اهرابتعاب

كلذ ضرعلا تاجرخم رهظت

FTD: ل راسملا ضرع جارخا

<#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: ل لاصتالا راسم ضرع جارخا

<#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: ضرع ل تبات جارخا

<#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

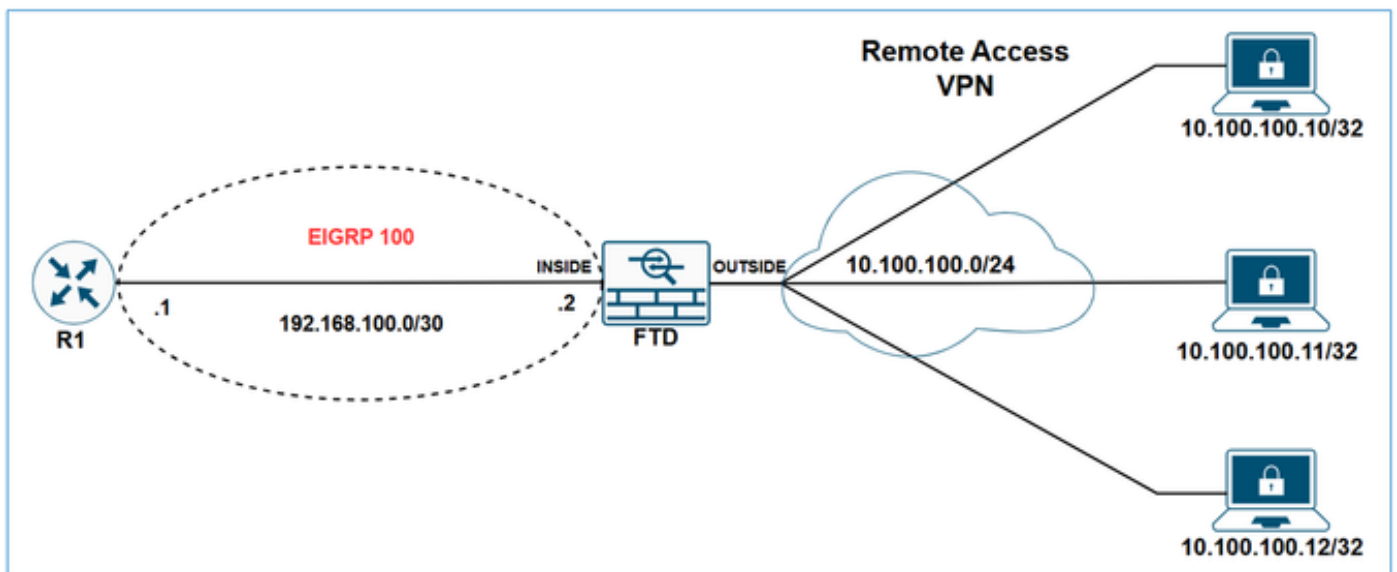
Gateway of last resort is not set

V 10.100.100.10 255.255.255.255 connected by VPN (advertised), outside

هذه الاصل الاكبر للتعرف الاكبر للاعم في اوضاع صا نا دع ب نا
اهن نال اة في فاشك س ا ه اة الا واطل ا ف اة ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا a
ة ا ا ا ا ا ا ا ا ا ا ا a

الاخ نم VPN دع ب ن ل واصل للتعرف الاكبر للاعم في ا ا ا ا ا ا ا a
EIGRP ل ف T D

ة اكبر للاطي ط ا ا ا ا ا



ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا a

تاراسم ال عيزوت ةداع دنع ،كلذ عمو .مهل عيزوت ةداع ةدعاق ديدحت ىلإ جاتحت ال ؛EIGRP تاراسم لل ةبس نلاب .سايقم ال ديدحت بجي ،EIGRP في VTI تاهجاو ىلإ ريشت يتل ةتباثلل سايقم ال ديدحت مزلي ال ،تاهجاو ال نم ىرخأ عاونأ ىلإ ريشت يتل ةتباثلل .

نمض عقت يتل او ايئاق لت ةتباثلل تاراسم ال عيزوت ةداع في لثمتم ال EIGRP كولسل ارظن EIGRP ربع VPN ةكبشل ةيعرفل تكبشل نع نالعالل نارايخ كانه ،ةكبشل تارابع قاطن فTD ىل:

1. ةكبش ةرابع مادختسا .
2. تباثلل عيزوتل ةداع جهن مادختساب .

مقر VPN ةكبشل ةيعرفل ةكبشل ملعتي R1 لعج وه فدهل ،لاثلما اذه في EIGRP لال خ نم .

FTD: ل يلوأل نيوكتل

<#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: ل يلوأل هيجوتل لودج

<#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
```

EIGRP: الأول طخم لودج

<#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: الأول هجوتلا لودج

<#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

مادختساب FTD ىل ع EIGRP لال خ نم VPN دعب نع لوصولل ةيعرفلالتاكبشال عيزوت ةداع
ةكبشال نايب

نيوكتل

(VPN). ةيره اظلال ةصاخلال ةكبشلال ةيعرفلال ةكبشلال ةكبش نئاك ءاشن 1. ةوطخل

Edit Network Object ?

Name

VPN-SUBNET

Description

Network

☐ Host

☐ Range

☒ Network

☐ FQDN

10.100.100.0/24

☐ Allow Overrides

Cancel

Save

ةكبشال نايب في VPN ةكبشلال ةيعرفلال ةكبشلال نئاك ني مضت 2. ةوطخل

ني مضتب مقو، دادعلال > EIGRP > هي جوتل ىل لقتنا، FMC ةزهجأ ةرادا مدختسم ةهجاو في
ةدحمال ةفيضممال ةزهجال/تاكبشال في VPN ةكبشلال ةيعرفلال ةكبشلال

Firewall Management Center
Devices / Secure Firewall Routing

Overview Analysis Policies **Devices** Objects Integration

FTD-1
Cisco Secure Firewall Threat Defense for VMware

Summary High Availability Device Interfaces Inline Sets **Routing** DHCP VTEP

Manage Virtual Routers
Global

Virtual Router Properties
ECMP
BFD
OSPF
OSPFv3
EIGRP
RIP
Policy Based Routing
BGP
IPv4
IPv6
Static Route
Multicast Routing
IGMP
PIM

☒ Enable EIGRP
AS Number *
100
(1-65535)

Setup Neighbors Filter Rules Redistribution Summary Address Interfaces Advanced

☐ Auto Summary

Available Networks/Hosts (33) +

any-ipv4
BR-DMZ-NET
BR-LAN-NET
HQ-DMZ
HQ-DMZ-SRV1
HQ-DMZ-SRV2

Add

Selected Networks/Hosts (2)
HQ-WAN-1
VPN-SUBNET

☐ Passive Interface

FTD. ىل عهرشنو نيوكتال ظفح

ةحصلا نم ققحتلا

FTD EIGRP: نيوكت

<#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: ططخم لودج

<#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: هي جوت لودج

<#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

✎ دي عي FTD نإف، 10.100.100.0/24 ناك ةكبشلا نايب نأ نم مغرلا يلع هنأ طحال :ةطحال م
يكي تاتسا نكاس راسم قلخي FTD نأل اذه ثدحي .EIGRP ربع 32 / ةيعرف ةكبش عيزوت
ناونع ةزي م ادختسا كنكمي ، اذه نيسحتل . ةسلج VPN دعب نع لوصول لكل 32 / ةئداب عم
EIGRP صيخلت

FTD يلع EIGRP لال خ نم VPN دعب نع لوصول ةيعرفلا تاكبشلا عيزوت ةداعإ
عيزوتلا ةداعإل تباثلا جهنلا مادختساب

نيوكتلا

رزل ددح م ث ، عيزوت ةداعإ > EIGRP > هي جوت يلا لقتنا ، FMC ةزهجأ ةرادإ مدختسم ةهجاو يف
ةفاضا .

Firewall Management Center
Secure Firewall Routing

Overview Analysis Policies Devices Objects Integrat... Deploy

FTD-1
Cisco Secure Firewall Threat Defense for VMware

Summary High Availability Device Interfaces Inline Sets **Routing** DHCP VTEP

Manage Virtual Routers
Global
Virtual Router Properties
ECMP
BFD
OSPF
OSPFv3
EIGRP
RIP
Policy Based Routing
BGP
IPv4
IPv6

☒ Enable EIGRP
AS Number *
100
(1-65535)

Setup Neighbors Filter Rules **Redistribution** Summary Address Interfaces Advanced

+ Add

Specify rules for redistributing routes from other routing protocols to the EIGRP routing process

قفاوم رزل ددح م ث ، يكي تاتسا نكاس ددح ، لوكوتوربلا لقح يف

⚠ تنك اذ EIGRP لوكوتورب ىلا ةتباثل تاراسملا عيمج عيزوت ةداعا ىلا اذه يدؤي: ريذحت (VPN) ةيهره اظلا ةصاخلا ةكبشلل ةيعرفلا تاكبشلا نع طوق نالعالا ىلا ةجاحب اهتيفصتل راسم ةطيرخ قيبطت وا ةكبشلا نايب جهن مادختسا اما كنكميف

تجارت:

☒ Enable EIGRP

AS Number *

100
(1-65535)

Setup Neighbors Filter Rules **Redistribution** Summary Address Interfaces Advanced

+ Add

Protocol	ID	Bandwidth	Delay Time	Reliability	Loading	MTU	Route Map
STATIC							

FTD ىل ع هرشنو نىوكتال ظفح

ةحصلا نم ققحتال

FTD EIGRP نىوكت

<#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 ططخم لودج

<#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: هي جوت لودج

<#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

 مچج نيسحتل FTD ىلع EIGRP صيخلت ناوئع ةزيم مادختسا كنكمي، ايرايختخا: حيملت هي جوتل لودج.

EIGRP صيخلت ناوئع نيوكت

نيوكتلا

تاكبشلل ةيعرفلا تاكبشلل ةكبش نئاك عاشناب مقف، دعب هؤاشناب مت دق نكي مل اذا
(VPN) ةيرهاظلا ةصاخلا.

Edit Network Object

Name

VPN-SUBNET

Description

Network

☐ Host

☐ Range

☒ Network

☐ FQDN

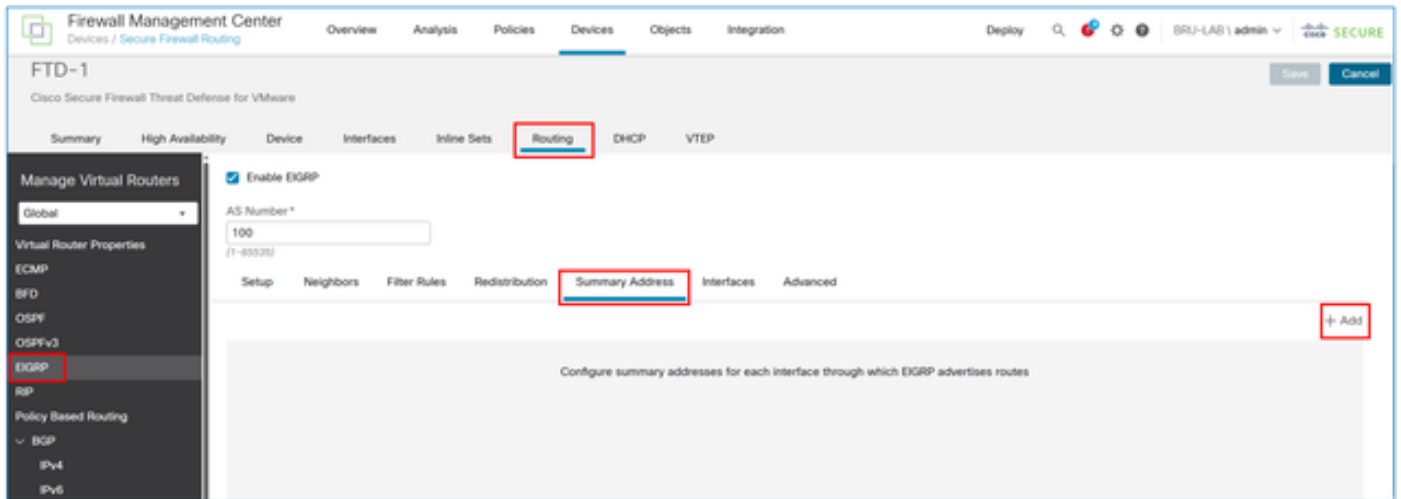
10.100.100.0/24

☐ Allow Overrides

Cancel

Save

رزل ددح مٲ ، صخلم ناونع > EIGRP > هچوت ىل لقتنا ، FMC ةزهجأ ةرادا مدختسم ةهجاو يف ةفاضلا .



ل ل قلخي نئاك ل ل ل اجم ةكبش ل ل ي ف و ، رواجم EIGRP ل ل اجم نراق ل ل ي ف تلخد VPN subnet.

Add Summary Address



Interface *

inside



Network *

VPN-SUBNET



Administrative Distance

(1-255)

Cancel

OK

ملاحظة:

☒ Enable EIGRP

AS Number*

100

(1-65535)

Setup Neighbors Filter Rules Redistribution Summary Address Interfaces Advanced

+ Add

Interface	Network	Administrative Distance
inside	VPN-SUBNET	

ةحصلال نم ققحتال

FTD ل EIGRP صيخلت ناو نع نيوكت

<#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 ططخم لودج

<#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: هي جوت لودج

<#root>

R1#

show ip route

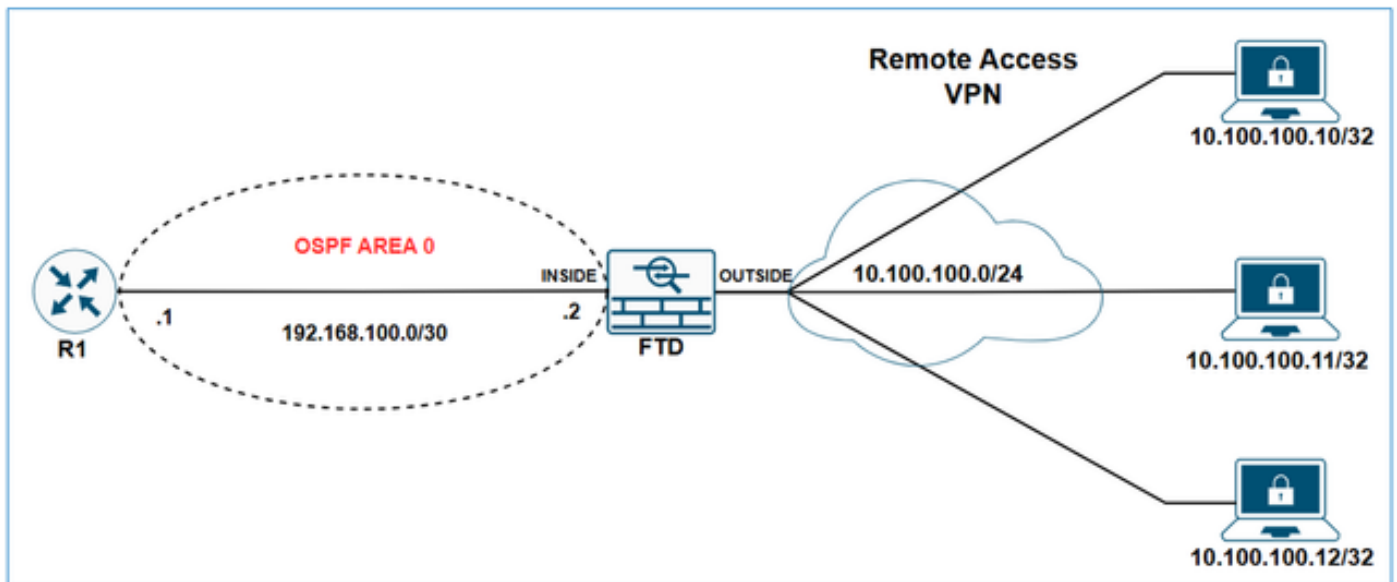
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
E1 - OSPF external type 1, E2 - OSPF external type 2, m - OMP
n - NAT, Ni - NAT inside, No - NAT outside, 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

ل الخ نم VPN دعب نع لوصولل ةيعرفال تالكبشال عيزوت ةداعإ
OSPF ىل ع FTD

ةكبشال ل يطي طختال مسرل



ةيلوأل ةئيهتلا تاي لمع

<#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: صاخلا OSPF راج جارخا

<#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

راج جارخ R1 show ip ospf:

<#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: هي جوت لودج

<#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

ني وكتل

رزل ددج مٲ، عيزوتل اءءاع > OSPF > هي جوت ىل لقتنا، FMC ءزهءاً ءراءاً مءءتسم ءهءاوي ف ءفاضا.

Firewall Management Center
Secure Firewall Routing

Over... Ana... Poli... Dev... Obj... Integ... Deploy 🔍 ⚙️ ? BRU-LAB \ admin

FTD-1

Cisco Secure Firewall Threat Defense for VMware

Save Cancel

Summary High Availability Device Interfaces Inline Sets **Routing** DHCP VTEP

Manage Virtual Routers

Global ▾

Virtual Router Properties

ECMP

BFD

OSPF

OSPFv3

EIGRP

RIP

Policy Based Routing

▼ BGP

IPv4

IPv6

☒ Process 1 ID: 1

OSPF Role: **ASBR** Enter Description here Advanced

☐ Process 2 ID:

OSPF Role: Internal Router Enter Description here Advanced

Area **Redistribution** InterArea Filter Rule Summary Address Interface

+ Add

OSPF P...	Route T...	Match	Subnets	Metric ...	Metric ...	Tag Value	Route ...
No records to display							

✎ عيزوالت اداعا نيكم تل ABR & ASBR ونا لى عف OSPF رود ني عت بجي :ةظالم

ةعرفال اكبشال مادختسا ع برمل ددح م، تباث ددح، راسمل عون لقح يف.

Add Redistribution



OSPF Process*: 1

Route Type: Static

Optional

- ☐ Internal
- ☐ External1
- ☐ External2
- ☐ NSSA External1
- ☐ NSSA External2
- ☒ Use Subnets

Metric Value:

Metric Type: 2

Tag Value:

RouteMap: +

Cancel

OK

⚠ إلى حاجة تنك اذا OSPF. إلى قة باثال تاراسم ال عي زوت قداع إلى اذه يدؤي: ريذحت كنكميف، طقف (VPN) قيره اطلال قصاخال تاكبش لل قيعرفال تاكبشال نع نالعال كنكميف. اهتيفصتل راسم قطيخ قيبطت.

ةةي نل:

Process 1 ID: 1
OSPF Role: ASBR Enter Description here Advanced
Process 2 ID: OSPF Role: Internal Router Enter Description here Advanced

Area Redistribution InterArea Filter Rule Summary Address Interface

OSPF Process	Route Type	Match	Subnets	Metric Value	Metric Type	Tag Value	Route Map
1	static	false	true		2		

ةصل ن م ق قحت

OSPF ل FTD ع يزوت ةداع ني وكت

<#root>

FTD-1#

sh run router

```
router ospf 1
network 192.168.100.0 255.255.255.252 area 0
redistribute static subnets
```

R1: ه جوت ل و د ج

<#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
```



وه (VPN) ةيرهاظلا ةصاخلا ةكبشلا عمجت نأ نم مغلرلا ىلع هنا طحال :حيملت
اذه ثدحي .OSPF ربع 32/ ةيعرف ةكبش عيزوت ديعي FTD جم انرب نأ ال، 10.100.100.0/24
ةسلج VPN دعب نع لوصولك ل 32/ ةئداب عم يكي تاتسإ نكاس راسم قلخي FTD نأل
.OSPF صيخلت ناو نع ةزي م ادختسإ كنكمي ،اذه نيسحتل

OSPF صخلم ناو نع نيوكت

نيوكتلا

تاكبش لل ةيعرفلا تاكبش لل ةكبش نئاك عاشنإب مقف ،دعب هؤاشنإ مت دق نكي مل اذا
(VPN) ةيرهاظلا ةصاخلا

Edit Network Object

Name

VPN-SUBNET

Description

Network

☐ Host

☐ Range

☒ Network

☐ FQDN

10.100.100.0/24

☐ Allow Overrides

Cancel

Save

رزل ددح مٲ، OSPF صخلم ناونع > هچوت ىلا لقتنا ، FMC ةزهجأ ةرادا مدختسم ةهجاو يف ةفاضلا .

Firewall Management Center
Secure Firewall Routing

Over... Ana... Poli... Dev... Obj... Integ... Deploy

FTD-1
Cisco Secure Firewall Threat Defense for VMware

Summary High Availability Device Interfaces Inline Sets **Routing** DHCP VTEP

Manage Virtual Routers
Global

Virtual Router Properties
ECMP
BFD
OSPF
OSPFv3
EIGRP
RIP
Policy Based Routing
BGP
IPv4
IPv6

☒ Process 1 ID: 1
OSPF Role: ASBR Enter Description here Advanced
☐ Process 2 ID:
OSPF Role: Internal Router Enter Description here Advanced

Area Redistribution InterArea Filter Rule **Summary Address** Interface

+ Add

OSPF Process	Networks	Tag	Advertise
No records to display			

راي تخالال ةناخ نالعالإا ددحو نئاك VPN subnet لآ تفضأ

Edit Summary Address

?

OSPF Process:

1

Available Network

+

Q VPN

X

VPN-SUBNET

1

2

Add

Selected Network

VPN-SUBNET

Tag:

3

☒ Advertise (allow routes that match specified address/mask pair)

4

Cancel

OK

ةجيتنل:

☒ Process 1
 ID: 1

OSPF Role:
 ASBR

☐ Process 2
 ID:

OSPF Role:
 Internal Router

Area Redistribution InterArea Filter Rule **Summary Address** Interface

+ Add

OSPF Process	Networks	Tag	Advertise	
1	VPN-SUBNET		true	 

ةحصلال نم ققحتال

نيوكت FTD OSPF:

```
<#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: هيجوت لودج

```
<#root>
```

```
R1#
```

```
sh ip route
```

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

```
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: ب صاخال BGP لودج جارخا

```
<#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: ب صاخال BGP صخلم جارخا

```
<#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 ل (BGP) دودحل ةبابوب لوكوتورب صخلم جارخا

<#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 لودج جارخا

<#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: هي جوت لودج

<#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

نيوكتالا

ددح م ث، عيزوتالاداع | > IPv4 > BGP > هي جوت ىل لقتنا، FMC ةزهجأ ةرادإ مدختسم ةهجاو يف رزلا Add.

The screenshot shows the Cisco FTD-1 configuration interface. The top navigation bar includes tabs for Summary, High Availability, Device, Interfaces, Inline Sets, **Routing**, DHCP, and VTEP. The **Routing** tab is active, and within it, the **Redistribution** sub-tab is selected. On the left sidebar, under 'Manage Virtual Routers', the 'Global' dropdown is set to 'Global'. Below this, a list of routing protocols is shown, with 'IPv4' highlighted under the 'BGP' section. The main configuration area shows 'Enable IPv4' checked and 'AS Number' set to 65000. Below this are tabs for General, Neighbor, Add Aggregate Address, Filtering, Networks, and **Redistribution**. The 'Redistribution' tab contains a table with columns: Source Protocol, AS Number/Process ID, Metric, RouteMap, Match, and an empty column. A '+ Add' button is located to the right of the table. The table currently displays 'No records to display'.

قفاوم رزلا ددح م ث ،يكي تاتاسا نكاس رتخأ ،ردصملا لوكوتورپلا لقح يف.

Add Redistribution



Source Protocol

Static



Process ID*



Metric

(0-4294967295)

Route Map



Match

☐

Internal

☐

External 1

☐

External 2

☐

NSSAExternal 1

☐

NSSAExternal 2

ةمچرتل هذه ل و ح

ةيلآل ا تاي ن ق ت ل ا ن م ة و م ج م ا د خ ت س ا ب د ن ت س م ل ا ا ذ ه Cisco ت م چ ر ت م ل ا ع ل ا ا ح ن ا ع م ج ي ف ن ي م د خ ت س م ل ل م ع د ي و ت ح م م ي د ق ت ل ة ي ر ش ب ل و ا م ك ة ق ي ق د ن و ك ت ن ل ة ي ل آ ة م چ ر ت ل ض ف ا ن ا ة ط ح ا ل م ي ج ر ي . ة ص ا خ ل ا م ه ت غ ل ب Cisco ي ل خ ت . ف ر ت ح م م چ ر ت م ا ه م د ق ي ي ت ل ا ة ي ف ا ر ت ح ا ل ا ة م چ ر ت ل ا ع م ل ا ح ل ا و ه ي ل ا ا م ا د ع و ج ر ل ا ب ي ص و ت و ت ا م چ ر ت ل ا ه ذ ه ة ق د ن ع ا ه ت ي ل و ئ س م Systems (ر ف و ت م ط ب ا ر ل ا) ي ل ص ا ل ا ي ز ي ل ج ن ا ل ا د ن ت س م ل ا