

راسملا دي دحت ىلع ريثأتلل EIGRP نيوكت

تايوت حمل

قم دق م لا

ةي ساس أالا تاب ل ط م لا

تاب ل ط م لا

قم دخت س م لا تانوك م لا

ةي ساس أ تامول عم

تاهو ي ران ي س لا

ةكب ش ل ل ي ط ي ط خ ت لا م س ر لا

ةي ل و أ لا ةي ه ت لا تاي ل مع

ري خ أ ت لا ساي قم لي دعت قي رط ن ع راس م لا دي دحت ىلع ريثأت لا: 1 وي ران ي س لا

ةح ا زالا ةم ي ا ق م ا د خ ت س ا ب راس م لا دي دحت ىلع ريثأت لا: 2 وي ران ي س لا

ص ي خ ل ت لا م ا د خ ت س ا ب راس م لا دي دحت ىلع ريثأت لا: 3 وي ران ي س لا

ب ر س ت لا ط ي ا ر خ م ا د خ ت س ا ب راس م لا دي دحت ىلع ريثأت لا: 4 وي ران ي س لا

ةي د ا ب ل ل (AD) ةي ر ا د ا ل ا ةي ر ا د ع ت ل ل ا ل خ ن م راس م لا دي دحت ىلع ريثأت لا: 5 وي ران ي س لا

راس م لا ةي ف ص ت م ا د خ ت س ا ب راس م لا دي دحت ىلع ريثأت لا: 6 وي ران ي س لا

ةل ص ت ا ذ ت ا م و ل ع م

قم دق م لا

لوكوت ورب تازيم ىلع ريثأتلا لال خ نم لضم راسم عاشن ةي لم ع دن تسملا اذه فص ي ةة فل تخم لا (EIGRP) ةن س حمل ةي ل خ ادلا ةراب ع ل ه ي ج و ت

ةي ساس أالا تاب ل ط م لا

تاب ل ط م لا

ةي ل ل ا ت ل ا ع ي ض ا و م ل ا ب ة ف ر ع م ك ي د ل ن و ك ت ن ا ب C i s c o ي ص و ت

- ي ساس أالا IP ه ي ج و ت ة ف ر ع م
- EIGRP لوكوت ورب ة ف ر ع م
- Cisco نم IOS@XE (CLI) ر م ا و أالا ر ط س ة ه ج ا و ة ف ر ع م

ةم دخت س م لا تانوك م لا

دن تست، كلذ عمو، ةني عم ةي دام تانوك م و ج م ا ر ب ت ا ر ا د ص ا ى ل ع دن ت س م لا ا ذ ه ر ص ت ق ي ال ةي ل ل ا ت ل ا ةي د ا م ل ا ت ا ن و ك م ل ا و ج م ا ر ب ل ا ت ا ر ا د ص ا ى ل ا دن ت س م لا ا ذ ه ي ف ة د ر ا و ا ل ا ت ا م و ل ع م لا

- ASR 1000 ه ج و م لا
- Router ISR 4000
- Cisco IOS XE 17.9.x

ةصاخ ةي لم عم ةئيب يف ةدوجوملا ةزهجالا نم دنتسمل اذف ةدراولل تامولعمل عاشنإ م تناك اذا .(يضارتفا) حوسمم نيوكتب دنتسمل اذف يف ةمدختسمل ةزهجالا عيمج تادب رما يأل لم تحملا ريثأتلل كمهف نم دكأتف ،ليغشتلا ديق كتكبش

ةيساسا تامولعمل

لوكتوربلا اهمدختسي ةفلتخم سيياقم ةجلع مب EIGRP راسم ديدحت رثأتي نأ نكمي لعل ءانب ةهجو لرا م لصفأ باسحب EIGRP موقى .ةهجو لا لرا م لصفأ ديدحتل ديدحتل سيياقملا هذف مييقت لعل راسملا ديدحت ةي لم عم لم تشتو ،ةفلتخم سيياقم ةلومحل او ريخأتل او يددرتلا قاطنلا EIGRP لوكتورب سيياقم نمضتت .لثمألا راسملا يلوؤسم دعاسي اهتيمه او سيياقملا هذف مهف نإ .(MTU) يوصللا لاسرالا ةدحوو ةيقو وثوملا ةكبش طورش وأ ةني عم تابلطتم لعل ءانب EIGRP راسم ديدحت ليدعت لعل ةكبشلا ضرع نم ىندألا دحل طقف EIGRP مدختسي ،ةفلتخملا ةيرتملا ميقل نم ،يضارتفا لكشب .هيجوتلا سيياقم باسحل يلامجال رخأتل او ةهجو لا ةكبش لرا م لصفأ لعل يددرتلا قاطنلا ممي يتلا ةتباتلا ميقل نم ريخأتل سيياقمو يددرتلا قاطنلا ديدحت ممي ،كلذل لعل ةوالع ممي ال ،ىرخأ ةرابعبو ،ةهجو لا وحن راسملا لعل ةدوجوملا ةزهجالا نم تاهجاولا لعل اهنيوكت يكي ماني دل لكشب نيقل عمل نيذف سايق

لعل ريثأتلل راسملا ةيفصت مادختسا اضيأ نكمي ،يرتملا بعالتلا نع رظنلا فرصبو وأ اهب حومسملا تامولعمل يف مكحتلا راسملا ةيفصت نمضتت .EIGRP يف راسملا ديدحت تاراسملا ةيفصت مياقلا نكمي .هنم جورخلا وأ هجوملا هيجوت لودج لاخجال ةضوفرملا نمضتت .ةكبشلا رورم ةكرح ةرادا وأ هيجوتلا لوادج نيسحت كلذل يف امب ،ةفلتخم بابسأل مئاق ،عيزوتلا مئاق ،EIGRP يف راسملا ةيفصتب ةقلعتملا ةيساسالا تازيما لصفب مكحتلل ةنرمو ةيوق ةقيرط تايلا اله هذف رفوت .ببسرستلا طئارخو ،راسملا طئارخ ،تائابلا هيجوت لوادج صي صختل ةكبشلا ولوؤسم اهمدختسي نأ نكمي يتلا هيجوتلا تامولعمل يف ةكبشلا ةءافك نيسحتو ةدحم ريياعم ةيبلتل EIGRP .

تاهوي رانيسلا

يف مهسفنأ نولوؤسملا دجي ام ابلاغ ،هيجوتلا تالوكتوربلا يكي ماني دل دهشملا يف نيسحتو ةدحملا ةكبشلا تابلطتم عم اهتاذاحملا هيجوتلا تارارق ميمصت لعل ةجاجلا ةهجاوم ةعونتم تانيوكتو تانقنم ةدافتسالا نمضتتي اذهو .تانايابلا رورم ةكرح قفدت لئادب ةيلالتلا ةلثمألا رفوت .راسملا ديدحت تارارقل تاهجوملا ذاختل ةيفيكي لعل ريثأتلل راسم ديدحت ةجلع ملة هيجوتارتسا تانيوكت مادختسا ني ولوؤسملل نكمي شيح ةفلتخم EIGRP لوكتورب .

1. ريخأتلل سايقم ليدعت قيرط نع InfluencePath ديدحت .

هيجوتلا تارارق لعل ريثأتلل ني ولوؤسملل هجوملا ةهجاو لعل ريخأتلل سايقم طبض حمسي قيق دل بعالتلا اذف يدؤي نأ نكمي .ام طابترلا لعل ةدحملا ةملعمل هذف لعل ريثأتلل لالخنم .ةلدعمل ريخأتلل ميقل لعل ءانب ةلصفملا تاراسملا ذاختل لرا م رورملا ةكرحل .

2. ةلباقم ةمئاق مادختساب راسملا ديدحت لعل ريثأتلل .

امم ،ةني عم تائابلا سيياقملا لئاقتنالا ليدعتلا ةيناملا ةلباقم ةمئاق مادختسا حيتي ةيلالا هذف مدختستو .ةني عم ةهجاو ربع راسملا ديدحت لعل ريثأتلل افدهتسم اجهن رفوي EIGRP لوكتورب ربع اهملعت ممي يتلا تاراسملا لعل ةرداصل او ةدراولل سيياقملا ةدايزل .

ي. ئاق ت ن ل ك ش ب ن ي ع م ر ا س م ي ل ع ت ا ئ د ا ب ل ا ض ع ب ل ي ض ف ت ل و

3. ص ي خ ل ل م ا د خ ت س ا ب ر ا س م ل ا د ي د ح ت ي ل ع ر ي ث ا ت ل ا .

ة. ئ د ا ب ل ل ل و ط ا ل ا ة ق ب ا ط م ل ا ل ي ض ف ت ي ل ع ر ي ث ا ت ل ل ن ي ل و و ؤ س م ل ل ص خ ل م ل ا ت ا ر ا س م ل ا خ د ا ح ي ت ي ن ي س ح ت و ه ي ج و ت ل ل ل و ا د ج ن ي س ح ت و ه ي ج و ت ل ل ت ا ر ا ر ق ة ق د ي ل ع ر a س م ل a ص ي خ ل ل ر ث و ي ن ا ن ك م ي م ا ع ل ك ش ب ة ك ب ش ل ا ة ا ف ك .

4. ب ر س ت ل ل ط ئ ا ر خ م ا د خ ت س ا ب ر a س م ل a د ي د ح ت ي ل ع ر ي ث ا ت ل ل a .

ة ل آ ر ي ف و ت ي ل ع ة ز ج و م ل a ت a ر a S M L a ن ع ن a ل ع ا ل a ا ن ث ا ب ي ر S T L a ط ئ a ر خ N M ة د ا ف ت S a l a ل M ع ت T a M O L E M L a N E N a L E a L a J e N L a ا ذ ه N M ض ي . ي ئ ا ق ت ن a ل ك ش B ا د ي د ح T ر ث K ا T a R a S M N E N a L E a L L R a S M L a R a Y T X a Y L E R Y T a T L a W ه ي ج و T L a ة N O R M ي ل ع ظ a F a L a W ، ي ج ي T a R T S a L K ش B ة ص X L M L a .

5. ة ئ د ا ب ل ل (AD) ة ر a د ا ل a ة ف a S M L a ل ي د ع T ق ي ر ط N E R a S M L a D ي D ح T ي ل ع R ي ث a T L a .

ه ي ج و T L a T a M O L E M R D V M Y F M K H T L L a D I F M a B O L S a ة ئ D a B L L ة ر a D a L a ة F a S M L a R Y Y G T D E Y D a C B T S a A H Y F M Z L Y Y T L a T a H O Y R a N Y S L a Y F V a X L K ش B a D I F M a Z H N O K Y N a N K M Y (RIB) ه ي ج و T L a T a M O L E M ة D E a Q N M ة N E Y E M R D a V M N M T a R a S M L a .

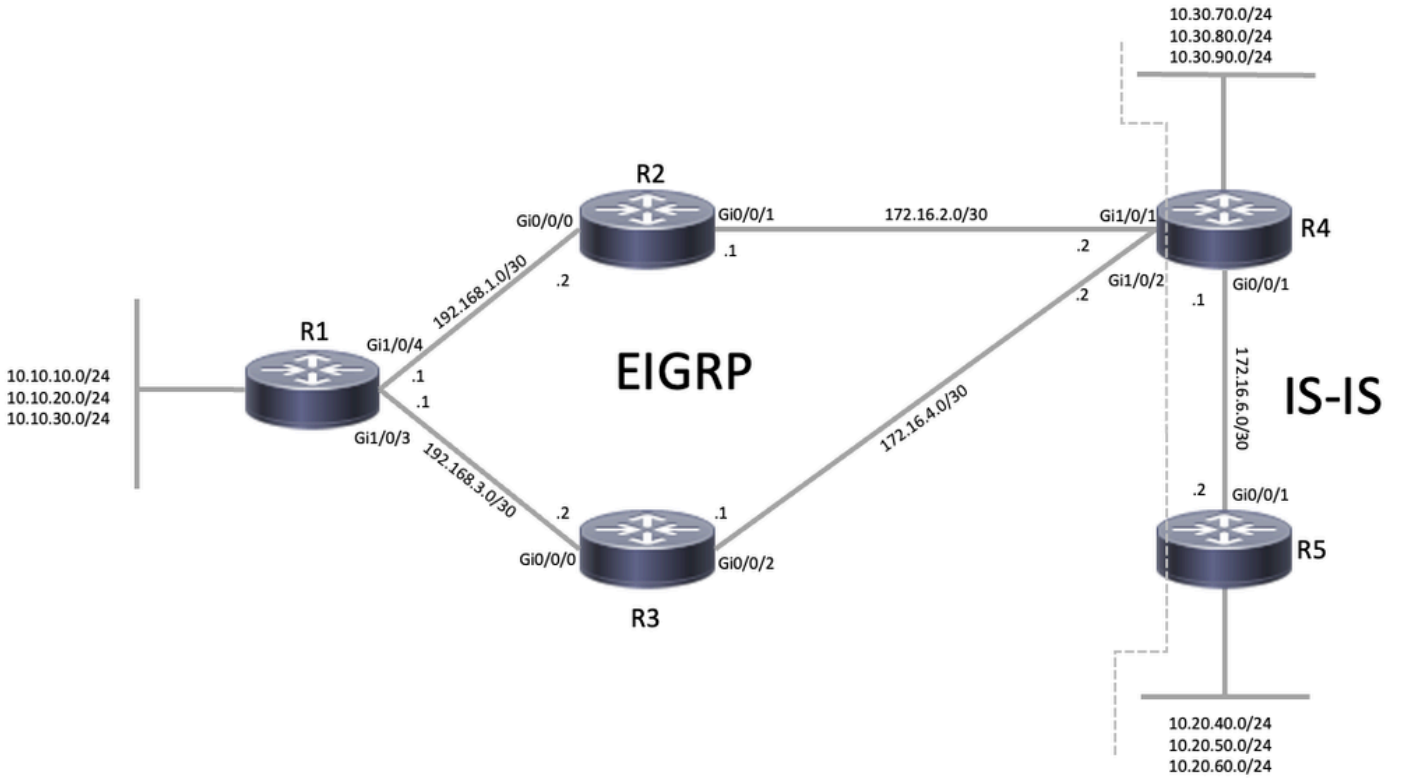
6. R a S M L a ة Y F V T M a D X T S a B R a S M L a R a Y T X a Y L E R Y T a T L a .

a H L O B Q W a ة N E Y E M T a R a S M N a L E a Y F M K H T L L M D X T S T ة L a E F ة Q Y R T Y H R a S M L a ة Y F V T Y L a I D a N T S a ه ي ج و T L a T a M O L E M ة Y F V T L ة D a C M D X T S Y . ه J R a X W a ه ي ج و T L a L O K O T O R B L X a D a H Y L E F R E T L a W a ة N E Y E M T a H J O M N E N a L E a L a E N M Y a M ، ة D D C M R Y Y a C M .

EIGRP Y F T a I D a B L a ة Y F V T L ة M D X T S M L a ة Y S Y T L L a T a O D a L a Y D C a Y H E Y Z O T L a ة M T a Q R a S M L a ة T Y R X W a T a I D a B L a ة M T a Q W a (ACL) L O V O L a ة M T a Q E M N a R T Q a L a B L M E T N a N K M Y W .

ة R O A J M T a H J N M T a I D a B L L ة Q Y Q D L a ة Y F V T L a L Y H E S T Y L a T a I D a B L a ة M T a Q M a D X T S a Y D O Y R a S M L a L Y ض F T L Y D E T L ه ي ج و T L a T a I D H T ة R a D a L Y R O R U Z M K H T L a N M Y O T S M L a a Z H . ة N E Y E M .

ة K B ش L L Y T Y X T L M S R L a



طخم EIGRP

ةيولال ةئيهل تاي لمع

وه يولال نيوكتل) ةزهال ةلحو يولال نيوكتل ةعجارم مهمال نم، نيوكت يا لي دع ت لبق R1، R2، R3، و R4 دع، كيشلل يطي طختال مسرلا ال اذانتسا. (وي رانيس لك يف هسفن ماظنل لاجم نم اعز اضيا R4 نوك عم (نابناج هجوم لكل) EIGRP لوكوتوربل ةرواجم الود IS-IS لوكوتورب نيب لدابت مال عيزوتال ةداعاب مايقل او، (IS-IS) طيسولا ماظنل ال يلا طيسولا ةهجال لالخ نم) هيجوتال لودج يف نيراسم هب R1 نأ ةظحال مهمال نم. EIGRP لوكوتوربو ةي عرفال تاكبشلاو، EIGRP رب ع 10.20.x.x و 10.30.x.x ةي عرفال تاكبشلا ال يلا (gi1/0/3 و gi1/0/4) ةرشابم ةلصت م 10.10.x.x.

R1	
تان نيوكتل	
<pre><#root> R1# show run section router eigrp router eigrp LAB ! address-family ipv4 unicast autonomous-system 100 ! topology base exit-af-topology network 10.10.10.0 0.0.0.255 network 10.10.20.0 0.0.0.255 network 10.10.30.0 0.0.0.255 network 192.168.1.0 0.0.0.3 network 192.168.3.0 0.0.0.3</pre>	<pre><#root> R1# show ip route eigrp Codes: L - local, C - connected, S - static, R - RIP, D - EIGRP, EX - EIGRP external, O - OSPF, IA - N1 - OSPF NSSA external type 1, N2 - OSPF NSSA E1 - OSPF external type 1, E2 - OSPF external n - NAT, Ni - NAT inside, No - NAT outside, No i - IS-IS, su - IS-IS summary, L1 - IS-IS leve ia - IS-IS inter area, * - candidate default, H - NHRP, G - NHRP registered, g - NHRP regist o - ODR, P - periodic downloaded static route, a - application route</pre>

```

exit-address-family
+ - replicated route, % - next hop override, p
& - replicated local route overrides by connec

R1#
show run interface GigabitEthernet1/0/3
Building configuration...
Current configuration : 93 bytes
!
interface GigabitEthernet1/0/3
no switchport
ip address 192.168.3.1 255.255.255.252
end

R1#
show run interface GigabitEthernet1/0/4
Building configuration...
Current configuration : 93 bytes
!
interface GigabitEthernet1/0/4
no switchport
ip address 192.168.1.1 255.255.255.252
end

+ - replicated route, % - next hop override, p
& - replicated local route overrides by connec

Gateway of last resort is not set

10.0.0.0/8 is variably subnetted, 12 subnets, 2
D EX 10.20.40.0/24
[170/66560] via 192.168.3.2, 00:31:39, Gig
[170/66560] via 192.168.1.2, 00:31:39, Gig
D EX 10.20.50.0/24
[170/66560] via 192.168.3.2, 00:31:39, Gig
[170/66560] via 192.168.1.2, 00:31:39, Gig
D EX 10.20.60.0/24
[170/66560] via 192.168.3.2, 00:31:39, Gig
[170/66560] via 192.168.1.2, 00:31:39, Gig
D 10.30.70.0/24
[90/16000] via 192.168.3.2, 00:29:39, Giga
[90/16000] via 192.168.1.2, 00:29:39, Giga
D 10.30.80.0/24
[90/16000] via 192.168.3.2, 00:29:39, Giga
[90/16000] via 192.168.1.2, 00:29:39, Giga
D 10.30.90.0/24
[90/16000] via 192.168.3.2, 00:29:38, Giga
[90/16000] via 192.168.1.2, 00:29:38, Giga
172.16.0.0/30 is subnetted, 2 subnets
D 172.16.2.0 [90/15360] via 192.168.1.2, 6d21h
D 172.16.4.0 [90/15360] via 192.168.3.2, 6d21h

R1#
show ip route connected
Codes: L - local, C - connected, S - static, R - RIP
10.10.10.0/24 is directly connected, Loopback10
L 10.10.10.10/32 is directly connected, Loopback10 C
10.10.20.0/24 is directly connected, Loopback20
L 10.10.20.20/32 is directly connected, Loopback20 C
10.10.30.0/24 is directly connected, Loopback30
L 10.10.30.30/32 is directly connected, Loopback30 1

R1#
show interfaces GigabitEthernet1/0/3
GigabitEthernet1/0/3 is up, line protocol is up (con
MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec, rel
Encapsulation ARPA, loopback not set Keepalive set (

show interfaces GigabitEthernet1/0/4
GigabitEthernet1/0/4 is up, line protocol is up (con
MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec, rel
Encapsulation ARPA, loopback not set Keepalive set (

show ip eigrp neighbors

```

EIGRP لالځ نم 10.30.x.x و 10.20.x.x و 10.10.x.x تائى دابلل ايمج ملعت متي، R2 و R3 ةلاځ يفي

R2	ةلاځ لال
تان يوك تال	ةلاځ لال
<pre> <#root> R2# show run section router eigrp router eigrp LAB ! address-family ipv4 unicast autonomous-system 100 ! topology base exit-af-topology network 172.16.2.0 0.0.0.3 network 192.168.1.0 0.0.0.3 exit-address-family R2# show run interface GigabitEthernet 0/0/0 Building configuration... Current configuration : 96 bytes ! interface GigabitEthernet0/0/0 ip address 192.168.1.2 255.255.255.252 negotiation auto end R2# show run interface GigabitEthernet 0/0/1 Building configuration... Current configuration : 95 bytes ! interface GigabitEthernet0/0/1 ip address 172.16.2.1 255.255.255.252 negotiation auto end </pre>	<pre> <#root> R2# show ip route eigrp Codes: L - local, C - connected, S - static, R - RIP, D - EIGRP, EX - EIGRP external, O - OSPF, IA - N1 - OSPF NSSA external type 1, N2 - OSPF NSSA E1 - OSPF external type 1, E2 - OSPF external i - IS-IS, su - IS-IS summary, L1 - IS-IS leve ia - IS-IS inter area, * - candidate default, o - ODR, P - periodic downloaded static route, a - application route + - replicated route, % - next hop override, p Gateway of last resort is not set 10.0.0.0/24 is subnetted, 9 subnets D 10.10.10.0 [90/10880] via 192.168.1.1, 6d22h D 10.10.20.0 [90/10880] via 192.168.1.1, 6d22h D 10.10.30.0 [90/10880] via 192.168.1.1, 6d22h D EX 10.20.40.0 [170/61440] via 172.16.2.2, 01:32 D EX 10.20.50.0 [170/61440] via 172.16.2.2, 01:32 D EX 10.20.60.0 [170/61440] via 172.16.2.2, 01:32 D 10.30.70.0 [90/10880] via 172.16.2.2, 01:30: D 10.30.80.0 [90/10880] via 172.16.2.2, 01:30: D 10.30.90.0 [90/10880] via 172.16.2.2, 01:30: 172.16.0.0/16 is variably subnetted, 3 subnets, D 172.16.4.0/30 [90/15360] via 172.16.2.2, 6d2 192.168.3.0/30 is subnetted, 1 subnets D 192.168.3.0 [90/15360] via 192.168.1.1, 6d22 R2# show interfaces GigabitEthernet0/0/0 GigabitEthernet0/0/0 is up, line protocol is up Hardware is BUILT-IN-2T+6X1GE, address is 0062.ec8a Internet address is 192.168.1.2/30 MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec, rel Encapsulation ARPA, loopback not set Keepalive not supported Full Duplex, 1000Mbps, link type is auto, media typ output flow-control is on, input flow-control is on ARP type: ARPA, ARP Timeout 04:00:00 Last input 00:00:01, output 00:03:30, output hang n Last clearing of "show interface" counters never Input queue: 0/375/0/0 (size/max/drops/flushes); To Queueing strategy: fifo </pre>

```

Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  208297 packets input, 18918243 bytes, 0 no buffer drops
  Received 718 broadcasts (0 IP multicasts)
  0 runts, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
  0 watchdog, 145070 multicast, 0 pause input
  134239 packets output, 10474478 bytes, 0 underruns
  0 output errors, 0 collisions, 4 interface resets
  11577 unknown protocol drops
  0 babbles, 0 late collision, 0 deferred
  0 lost carrier, 0 no carrier, 0 pause output
  0 output buffer failures, 0 output buffers swapped out

```

R2#

```
show interfaces GigabitEthernet0/0/1
```

```

GigabitEthernet0/0/1 is up, line protocol is up
Hardware is BUILT-IN-2T+6X1GE, address is 0062.ec8a.0000
Internet address is 172.16.2.1/30

```

```
MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec, reliability 255/255
```

```

Encapsulation ARPA, loopback not set
Keepalive not supported
Full Duplex, 1000Mbps, link type is auto, media type is RJ45
output flow-control is on, input flow-control is on
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:05, output 00:03:35, output hang never
Last clearing of "show interface" counters never
Input queue: 0/375/0/0 (size/max/drops/flushes); Total drops 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  145790 packets input, 15086179 bytes, 0 no buffer drops
  Received 2 broadcasts (0 IP multicasts)
  0 runts, 0 giants, 0 throttles
  1 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
  0 watchdog, 145679 multicast, 0 pause input
  134227 packets output, 10473816 bytes, 0 underruns
  0 output errors, 0 collisions, 4 interface resets
  11575 unknown protocol drops
  0 babbles, 0 late collision, 0 deferred
  0 lost carrier, 0 no carrier, 0 pause output
  0 output buffer failures, 0 output buffers swapped out

```

R2#

```
show ip eigrp neighbors
```

```

EIGRP-IPv4 VR(LAB) Address-Family Neighbors for AS(100)
H   Address                Interface                Hold Time (s)
0   172.16.2.2              Gi0/0/1                 15
0   192.168.1.1              Gi0/0/0                 15

```

R3

تاني وكتل

ةل اءل

```
<#root>
R3#
show run | section router eigrp

router eigrp LAB
!
address-family ipv4 unicast autonomous-system 100
!
topology base
exit-af-topology
network 172.16.4.0 0.0.0.3
network 192.168.3.0 0.0.0.3
exit-address-family

R3#
show run interface GigabitEthernet 0/0/0
Building configuration...

Current configuration : 96 bytes
!
interface GigabitEthernet0/0/0
ip address 192.168.3.2 255.255.255.252
negotiation auto
end

R3#
show run interface GigabitEthernet 0/0/2
Building configuration...

Current configuration : 95 bytes
!
interface GigabitEthernet0/0/2
ip address 172.16.4.1 255.255.255.252
negotiation auto
end
```

```
<#root>
R3#
show ip route eigrp

Codes: L - local, C - connected, S - static, R - RIP,
D - EIGRP, EX - EIGRP external, O - OSPF, IA -
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA
E1 - OSPF external type 1, E2 - OSPF external
i - IS-IS, su - IS-IS summary, L1 - IS-IS leve
ia - IS-IS inter area, * - candidate default,
o - ODR, P - periodic downloaded static route,
a - application route
+ - replicated route, % - next hop override, p

Gateway of last resort is not set

10.0.0.0/24 is subnetted, 9 subnets
D 10.10.10.0 [90/10880] via 192.168.3.1, 6d22h
D 10.10.20.0 [90/10880] via 192.168.3.1, 6d22h
D 10.10.30.0 [90/10880] via 192.168.3.1, 6d22h
D EX 10.20.40.0 [170/61440] via 172.16.4.2, 01:46
D EX 10.20.50.0 [170/61440] via 172.16.4.2, 01:46
D EX 10.20.60.0 [170/61440] via 172.16.4.2, 01:46
D 10.30.70.0 [90/10880] via 172.16.4.2, 01:44:
D 10.30.80.0 [90/10880] via 172.16.4.2, 01:44:
D 10.30.90.0 [90/10880] via 172.16.4.2, 01:44:
172.16.0.0/16 is variably subnetted, 3 subnets,
D 172.16.2.0/30 [90/15360] via 172.16.4.2, 6d2
192.168.1.0/30 is subnetted, 1 subnets
D 192.168.1.0 [90/15360] via 192.168.3.1, 6d22h

R3#
show interfaces GigabitEthernet0/0/0
GigabitEthernet0/0/0 is up, line protocol is up
Hardware is BUILT-IN-2T+6X1GE, address is 0062.ec8a
Internet address is 192.168.3.2/30

MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec, rel

Encapsulation ARPA, loopback not set
Keepalive not supported
Full Duplex, 1000Mbps, link type is auto, media typ
output flow-control is on, input flow-control is on
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:01, output 00:00:01, output hang n
Last clearing of "show interface" counters never
Input queue: 0/375/0/0 (size/max/drops/flushes); To
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
208616 packets input, 18949840 bytes, 0 no buffe
Received 726 broadcasts (0 IP multicasts)
0 runts, 0 giants, 0 throttles
2 input errors, 0 CRC, 0 frame, 0 overrun, 0 ign
0 watchdog, 145285 multicast, 0 pause input
134420 packets output, 10488621 bytes, 0 underru
```



```
0 output errors, 0 collisions, 5 interface reset
11597 unknown protocol drops
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier, 0 pause output
0 output buffer failures, 0 output buffers swapp
10 carrier transitions
```

R3#

```
show interfaces GigabitEthernet0/0/2
```

```
GigabitEthernet0/0/2 is up, line protocol is up
Hardware is BUILT-IN-2T+6X1GE, address is 0062.ec8a
Internet address is 172.16.4.1/30
```

```
MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec, re
```

```
Encapsulation ARPA, loopback not set
Keepalive not supported
Full Duplex, 1000Mbps, link type is auto, media typ
output flow-control is on, input flow-control is on
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:01, output 00:00:01, output hang n
Last clearing of "show interface" counters never
Input queue: 0/375/0/0 (size/max/drops/flushes); To
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
145895 packets input, 15083732 bytes, 0 no buffe
Received 1 broadcasts (0 IP multicasts)
0 runts, 0 giants, 0 throttles
1 input errors, 0 CRC, 0 frame, 0 overrun, 0 ign
0 watchdog, 145785 multicast, 0 pause input
134433 packets output, 10489999 bytes, 0 underru
0 output errors, 0 collisions, 5 interface reset
11543 unknown protocol drops
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier, 0 pause output
0 output buffer failures, 0 output buffers swapp
6 carrier transitions
```

R3#

```
show ip eigrp neighbors
```

```
EIGRP-IPv4 VR(LAB) Address-Family Neighbors for AS(10
H   Address                Interface                Ho
(s
1   172.16.4.2              Gi0/0/2
0   192.168.3.1             Gi0/0/0
```

R4

تانې وكتال

حلا

<#root>

<#root>

R4#

R4#

```

show run | section router eigrp

router eigrp LAB
!
address-family ipv4 unicast autonomous-system 100
!
topology base

redistribute isis level-2 metric 1000000 10 255 1 1500

exit-af-topology
network 10.30.70.0 0.0.0.255
network 10.30.80.0 0.0.0.255
network 10.30.90.0 0.0.0.255
network 172.16.2.0 0.0.0.3
network 172.16.4.0 0.0.0.3
exit-address-family

R4#

show run | section ^router isis

router isis
net 49.0001.0000.0000.0004.00
is-type level-2-only
metric-style wide

redistribute eigrp 100

R4#

show run interface GigabitEthernet1/0/1

Building configuration...

Current configuration : 95 bytes
!
interface GigabitEthernet1/0/1
ip address 172.16.2.2 255.255.255.252
negotiation auto
end

R4#

show run interface GigabitEthernet1/0/2

Building configuration...

Current configuration : 95 bytes
!
interface GigabitEthernet1/0/2
ip address 172.16.4.2 255.255.255.252
negotiation auto
end

R4#

show run interface GigabitEthernet0/0/1

Building configuration...

Current configuration : 112 bytes

```

```

show ip route eigrp

Codes: L - local, C - connected, S - static, R -
D - EIGRP, EX - EIGRP external, O - OSPF,
N1 - OSPF NSSA external type 1, N2 - OSPF
E1 - OSPF external type 1, E2 - OSPF exten
i - IS-IS, su - IS-IS summary, L1 - IS-IS
ia - IS-IS inter area, * - candidate defau
o - ODR, P - periodic downloaded static ro
a - application route
+ - replicated route, % - next hop overrid

Gateway of last resort is not set

10.0.0.0/8 is variably subnetted, 12 subnet
D 10.10.10.0/24 [90/16000] via 172.16.4.1,
[90/16000] via 172.16.2.1,
D 10.10.20.0/24 [90/16000] via 172.16.4.1,
[90/16000] via 172.16.2.1,
D 10.10.30.0/24 [90/16000] via 172.16.4.1,
[90/16000] via 172.16.2.1,
192.168.1.0/30 is subnetted, 1 subnets
D 192.168.1.0 [90/15360] via 172.16.2.1, 6
192.168.3.0/30 is subnetted, 1 subnets
D 192.168.3.0 [90/15360] via 172.16.4.1, 6

R4#

show ip route isis

Codes: L - local, C - connected, S - static, R -
D - EIGRP, EX - EIGRP external, O - OSPF,
N1 - OSPF NSSA external type 1, N2 - OSPF
E1 - OSPF external type 1, E2 - OSPF exten
i - IS-IS, su - IS-IS summary, L1 - IS-IS
ia - IS-IS inter area, * - candidate defau
o - ODR, P - periodic downloaded static ro
a - application route
+ - replicated route, % - next hop overrid

Gateway of last resort is not set

10.0.0.0/8 is variably subnetted, 12 subnet
i L2 10.20.40.0/24 [115/20] via 172.16.6.2, 0
i L2 10.20.50.0/24 [115/20] via 172.16.6.2, 0
i L2 10.20.60.0/24 [115/20] via 172.16.6.2, 0

R4#

show ip route connected

Codes: L - local, C - connected, S - static, R -
D - EIGRP, EX - EIGRP external, O - OSPF,
N1 - OSPF NSSA external type 1, N2 - OSPF
E1 - OSPF external type 1, E2 - OSPF exten
i - IS-IS, su - IS-IS summary, L1 - IS-IS
ia - IS-IS inter area, * - candidate defau
o - ODR, P - periodic downloaded static ro
a - application route
+ - replicated route, % - next hop overrid

```

```
!  
interface GigabitEthernet0/0/1  
ip address 172.16.6.1 255.255.255.252  
ip router isis  
negotiation auto  
end
```

```
Gateway of last resort is not set  
  
10.0.0.0/8 is variably subnetted, 12 subnets  
C    10.30.70.0/24 is directly connected, Local  
L    10.30.70.70/32 is directly connected, Local  
C    10.30.80.0/24 is directly connected, Local  
L    10.30.80.80/32 is directly connected, Local  
C    10.30.90.0/24 is directly connected, Local  
L    10.30.90.90/32 is directly connected, Local  
172.16.0.0/16 is variably subnetted, 6 subnets  
C    172.16.2.0/30 is directly connected, GigabitEthernet0/0/1  
L    172.16.2.2/32 is directly connected, GigabitEthernet0/0/1  
C    172.16.4.0/30 is directly connected, GigabitEthernet0/0/2  
L    172.16.4.2/32 is directly connected, GigabitEthernet0/0/2  
C    172.16.6.0/30 is directly connected, GigabitEthernet0/0/1  
L    172.16.6.1/32 is directly connected, GigabitEthernet0/0/1
```

R4#

```
show interfaces GigabitEthernet1/0/1
```

```
GigabitEthernet1/0/1 is up, line protocol is up  
Hardware is SM-X-4X1G-1X10G, address is 0027.9000.0000  
Internet address is 172.16.2.2/30
```

```
MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec, reliability 255/255
```

```
Encapsulation ARPA, loopback not set  
Keepalive not supported  
Full Duplex, 1000Mbps, link type is auto, media type is RJ45  
output flow-control is on, input flow-control is on, link speed is 1000000 Kbit/sec  
ARP type: ARPA, ARP Timeout 04:00:00  
Last input 00:05:38, output 00:00:30, output hang never  
Last clearing of "show interface" counters never  
Input queue: 0/375/0/0 (size/max/drops/flushes); fifo  
Queueing strategy: fifo  
Output queue: 0/40 (size/max)  
5 minute input rate 0 bits/sec, 0 packets/sec  
5 minute output rate 0 bits/sec, 0 packets/sec  
134612 packets input, 9965393 bytes, 0 no buffer drops  
Received 5 broadcasts (0 IP multicasts)  
0 runts, 0 giants, 0 throttles  
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored  
0 watchdog, 134482 multicast, 0 pause input  
146207 packets output, 14544461 bytes, 0 underruns  
0 output errors, 0 collisions, 1 interface reset  
0 unknown protocol drops  
0 babbles, 0 late collision, 0 deferred  
0 lost carrier, 0 no carrier, 0 pause output  
0 output buffer failures, 0 output buffers swapped out
```

R4#

```
show interfaces GigabitEthernet1/0/2
```

```
GigabitEthernet1/0/2 is up, line protocol is up  
Hardware is SM-X-4X1G-1X10G, address is 0027.9000.0000  
Internet address is 172.16.4.2/30
```

```
MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec, reliability 255/255
```

```
Encapsulation ARPA, loopback not set
```

```
Keepalive not supported
Full Duplex, 1000Mbps, link type is auto, media
output flow-control is on, input flow-control i
ARP type: ARPA, ARP Timeout 04:00:00
Last input ha
Last clearing of "show interface" counters neve
Input queue: 0/375/0/0 (size/max/drops/flushes)
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
134654 packets input, 9968624 bytes, 0 no bu
Received 2 broadcasts (0 IP multicasts)
0 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0
0 watchdog, 134535 multicast, 0 pause input
146139 packets output, 14525699 bytes, 0 und
0 output errors, 0 collisions, 1 interface r
0 unknown protocol drops
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier, 0 pause output
0 output buffer failures, 0 output buffers s
```

R4#

```
show interfaces GigabitEthernet0/0/1
```

```
GigabitEthernet0/0/1 is up, line protocol is up
Hardware is ISR4331-3xlGE, address is 0027.9064
Internet address is 172.16.6.1/30
MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 use
reliability 255/255, txload 1/255, rxload 1/
Encapsulation ARPA, loopback not set
Keepalive not supported
Full Duplex, 1000Mbps, link type is auto, media
output flow-control is on, input flow-control i
ARP type: ARPA, ARP Timeout 04:00:00
Last input ha
Last clearing of "show interface" counters neve
Input queue: 0/375/0/0 (size/max/drops/flushes)
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
576123 packets input, 655123623 bytes, 0 no
Received 2 broadcasts (0 IP multicasts)
0 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0
0 watchdog, 576069 multicast, 0 pause input
154335 packets output, 216885838 bytes, 0 un
0 output errors, 0 collisions, 1 interface r
0 unknown protocol drops
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier, 0 pause output
0 output buffer failures, 0 output buffers s
```

R4#

```
show ip eigrp neighbors
```

```
EIGRP-IPv4 VR(LAB) Address-Family Neighbors for A
H Address Interface
```

	1	172.16.4.1		Gi1/0/2
	0	172.16.2.1		Gi1/0/1
	R4#			
	show isis neighbors			
	System Id	Type	Interface	IP Address
	R5	L2	Gi0/0/1	172.16.6.2

ريخات ال سايقم ليدعت قي رط نع راسم ل دي دحت يل ع ري ثات ال : 1 ويران ي سل

ربع راسم ل ليضفت ل EIGRP يل ع ري ثات ال ل ريخات ال ةمي ق مادخت سا متي ، لاثم ل اذه ي ف و Gi1/0/3 تاه اول ني ب لي محت ال ةزاوم وه EIGRP ن ا دي كات كن كم ي ، ري ي غت ي ا عارج ل ب ق R3. ةي ناث ورك يم 10 غ ل بت ي ت ل ريخات ال ةمي ق س فن اهل تاه اول ال ك ن ال Gi1/04.

<#root>

R1#

show ip route eigrp

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

```

10.0.0.0/8 is variably subnetted, 12 subnets, 2 masks
D EX    10.20.40.0/24
        [170/66560] via 192.168.3.2, 5d22h, GigabitEthernet1/0/3
        [170/66560] via 192.168.1.2, 5d22h, GigabitEthernet1/0/4
D EX    10.20.50.0/24
        [170/66560] via 192.168.3.2, 5d22h, GigabitEthernet1/0/3
        [170/66560] via 192.168.1.2, 5d22h, GigabitEthernet1/0/4
D EX    10.20.60.0/24
        [170/66560] via 192.168.3.2, 5d22h, GigabitEthernet1/0/3
        [170/66560] via 192.168.1.2, 5d22h, GigabitEthernet1/0/4
D       10.30.70.0/24 [90/16000] via 192.168.3.2, 5d22h, GigabitEthernet1/0/3
        [90/16000] via 192.168.1.2, 5d22h, GigabitEthernet1/0/4
D       10.30.80.0/24 [90/16000] via 192.168.3.2, 5d22h, GigabitEthernet1/0/3
        [90/16000] via 192.168.1.2, 5d22h, GigabitEthernet1/0/4
D       10.30.90.0/24 [90/16000] via 192.168.3.2, 5d22h, GigabitEthernet1/0/3
        [90/16000] via 192.168.1.2, 5d22h, GigabitEthernet1/0/4
172.16.0.0/30 is subnetted, 2 subnets

```


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

10.0.0.0/8 is variably subnetted, 12 subnets, 2 masks

D EX 10.20.40.0/24
[170/66560] via 192.168.3.2, 00:05:52,

GigabitEthernet1/0/3

D EX 10.20.50.0/24
[170/66560] via 192.168.3.2, 00:05:52,

GigabitEthernet1/0/3

D EX 10.20.60.0/24
[170/66560] via 192.168.3.2, 00:05:52,

GigabitEthernet1/0/3

D 10.30.70.0/24
[90/16000] via 192.168.3.2, 00:05:52,

GigabitEthernet1/0/3

D 10.30.80.0/24
[90/16000] via 192.168.3.2, 00:05:52,

GigabitEthernet1/0/3

D 10.30.90.0/24
[90/16000] via 192.168.3.2, 00:05:52,

GigabitEthernet1/0/3

172.16.0.0/30 is subnetted, 2 subnets

D 172.16.2.0 [90/20480] via 192.168.3.2, 00:05:52, GigabitEthernet1/0/3

D 172.16.4.0 [90/15360] via 192.168.3.2, 00:05:52, GigabitEthernet1/0/3

R1#

show interface GigabitEthernet1/0/4 | i DLY

MTU 1500 bytes, BW 1000000 Kbit/sec,

DLY 1000 usec

,

R1#

show ip eigrp topology

EIGRP-IPv4 VR(LAB) Topology Table for AS(100)/ID(192.168.3.1) Codes: P - Passive, A - Active, U - Update
via 192.168.1.2 (66928640/1392640), GigabitEthernet1/0/4

P 10.20.50.0/24, 1 successors, FD is 8519680 via 192.168.3.2 (8519680/7864320), GigabitEthernet1/0/3
via 192.168.1.2 (73400320/7864320), GigabitEthernet1/0/4

P 10.30.80.0/24, 1 successors, FD is 2048000 via 192.168.3.2 (2048000/1392640), GigabitEthernet1/0/3

```

via 192.168.1.2 (66928640/1392640), GigabitEthernet1/0/4
P 172.16.2.0/30, 1 successors, FD is 2621440 via 192.168.3.2 (2621440/1966080), GigabitEthernet1/0/3 v
via 192.168.1.2 (73400320/7864320), GigabitEthernet1/0/4
P 192.168.1.0/30, 1 successors, FD is 66191360 via Connected, GigabitEthernet1/0/4 via 192.168.3.2 (32
via 192.168.1.2 (73400320/7864320), GigabitEthernet1/0/4
P 10.10.20.0/24, 1 successors, FD is 163840 via Connected, Loopback20 P 10.30.90.0/24, 1 successors, F
via 192.168.1.2 (66928640/1392640), GigabitEthernet1/0/4
P 172.16.4.0/30, 1 successors, FD is 1966080 via 192.168.3.2 (1966080/1310720), GigabitEthernet1/0/3 P
R1#
show ip eigrp topology 10.20.40.0/24
EIGRP-IPv4 VR(LAB) Topology Entry for AS(100)/ID(192.168.3.1) for 10.20.40.0/24 State is Passive, Quer
Total delay is 120000000 picoseconds
Reliability is 255/255 Load is 1/255 Minimum MTU is 1500 Hop count is 2 Originating router is 172.16.6
Total delay is 1110000000 picoseconds
Reliability is 255/255 Load is 1/255 Minimum MTU is 1500 Hop count is 2 Originating router is 172.16.6
traceroute 10.20.40.1 source loopback10
Type escape sequence to abort. Tracing the route to 10.20.40.1 VRF info: (vrf in name/id, vrf out name)
R1#
show ip cef 10.20.40.1
10.20.40.0/24 nexthop 192.168.3.2 GigabitEthernet1/0/3

```

كولس ريغيغو رورملا ةكرح قفدت يف مكحتلل ةديفم ةادأ نوكي نأ نكمي ريخأتلا ليدعت
راسملا نعض عطقم لك رخأت ىلع ءانب ومنت ةيمكارت ةميق وه ريخأتلا. يلامجال ةكبشلا
تاباسح لبق نم يددرتلا قاطنلا مادختسا ةيناكلما ارظن هنا ةظحالما اضيا مهمل نمو
ةقيرط يه ةهجالا ريخأت ةملعم ىلع اهوارجا متي يتلا تاريغيغتلا نإف، رخألا تالوكوتوربلا
يتلا تاهويرانيسللا يف ال ديغت ال ريخأتلا ىلع أرطت يتلا تاريغيغتلا نأ ريغ. ةلضفم
اهمالتسا متي يتلا تاراسملا عيمل ةبس نلاب رخأ راسم ىلع راسم اهيف لصفيف

ريخأتلا ةدايزي ف ب غرت ال تن أف ، ةدي دجل ر يخأتلا ةم يق راي تخا دن ع رذجل خوت : ةظ حال م
ن كم ف ل خ ك تاراس م ل هذ ه ل رظ ن ي EIGRP ا ه ي ف د ع ي ال ة ج ر د ي ل ا

ة ح ا ز ا ل ا ة م ئ ا ق م ا د خ ت س ا ب ر ا س م ل ا د ي د ح ت ي ل ع ر ي ث ا ت ل ا : 2 و ي ر ا ن ي س ل ا

م ز ل ي ي ت ل ا م ا م ت ه ل ل ة ر ي ث م ل ا ة ئ د ا ب ل ا و ا ر و ر م ل ا ة ك ر ح د ي د ح ت م ت ي ، و ي ر ا ن ي س ل ا ا ذ ه ي ف
ي ف م ك ح ت ة م ئ ا ق م ا د خ ت س ا م ت ي . (ACL) ل و ص و ل ا ي ف م ك ح ت ل ا ة م ئ ا ق م ا د خ ت س ا ب ا ه ت ج ل ا ع م
ي ل ا ت ل ا ن ي و ك ت ل ا ة ف ا ض ا م ت ت ، ل ا ث م ل ا ل ي ب س ي ل ع و ، ت ا ئ د ا ب ل ا ه ذ ه ة ق ب ا ط م ل (ACL) ل و ص و ل ا
10.20.60.0/24 و 10.30.90.0/24 ة ي ع ر ف ل ا ت ا ك ب ش ل ا ي ل ا ة ه ج و م ل ا ر و ر م ل ا ة ك ر ح ة ج ل ا ع م ل

```
<#root>
```

```
R1#
```

```
configure terminal
```

```
Enter configuration commands, one per line. End with CNTL/Z.
```

```
R1(config)#
```

```

access-list 20 permit 10.20.60.0 0.0.0.255

R1(config)#

access-list 30 permit 10.30.90.0 0.0.0.255

!
R1#

show access-lists 20

Standard IP access list 20
 10 permit 10.20.60.0, wildcard bits 0.0.0.255
R1#

show access-lists 30

Standard IP access list 30
 10 permit 10.30.90.0, wildcard bits 0.0.0.255

```

EIGRP رورم ةكرح عي مچ ىلع ريثأتلل نود نكلو ةددحمل تائدابلا سايق لي دعت وه فدهلا ةددحمل تائدابلا سايق ىل ةحازا ةفاضلا ةحازالا ةمئاق لاثملا اذه مدختسي. ىرخألا R1 زارطلل دراو لا هاجت إلا يف (10.20.60.0/24 و 10.30.90.0/24).

ةكبشلا ىل لإ لوصولا دنع gi1/0/4 ةهجاو لا ربع R2 ربع راسملا ليضفت يف ةركفلا لثمتت ىل لإ لوصولا دنع gi1/0/3 ةهجاو لا ربع R3 ربع راسملا ليضفت و (R1 نم) 10.20.60.0/24 ةي عرفلا (R1 نم) 10.30.90.0/24 ةي عرفلا ةكبشلا.

وه امك `offset-list {ACL name|ACL number} {in|out} <offset> <interface>` رملأل نيوكتلل مدختسي كلذ دع ب حوضوم:

<#root>

```

R1#

configure terminal

Enter configuration commands, one per line. End with CNTL/Z.
R1(config)#

router eigrp LAB

R1(config-router)#

address-family ipv4 unicast autonomous-system 100

R1(config-router-af)#

topology base

R1(config-router-af-topology)#

offset-list 20 in 200 GigabitEthernet1/0/3

R1(config-router-af-topology)#

end

```

(FIB) هي جدول إيداع إتمام وعمد إقو RIB لودج نم ققحتلاب نيوكتالاجئاتن نم ققحتلال نكمي (gi1/0/3) ههجاوإلى عةقبطمال إازالنا أظالم نكمي، إلالا اأرالم إف. EIGRP ططخم و إةبذالقا راسمالا اذهل عجم امم، إرابع، إدمال إةبالا هذسايق إلع تراث:

```
<#root>
```

```
R1#
```

```
show ip route 10.20.60.0
```

```
Routing entry for 10.20.60.0/24 Known via "eigrp 100", distance 170, metric 66560, precedence routine  
via GigabitEthernet1/0/4
```

```
Route metric is 66560, traffic share count is 1 Total delay is 120 microseconds, minimum bandwidth is
```

```
R1#
```

```
show ip cef 10.20.60.0
```

```
10.20.60.0/24
```

```
nexthop 192.168.1.2 GigabitEthernet1/0/4
```

```
R1#
```

```
show ip eigrp topology 10.20.60.0/24
```

```
EIGRP-IPv4 VR(LAB) Topology Entry for AS(100)/ID(192.168.3.1) for 10.20.60.0/24 State is Passive, Quer  
GigabitEthernet1/0/3
```

```
), from 192.168.3.2, Send flag is 0x0 Composite metric is (8519880/7864520), route is External Vector m  
Total delay is 120003052 picoseconds <---
```

```
Reliability is 255/255 Load is 1/255 Minimum MTU is 1500 Hop count is 2 Originating router is 172.16.6
```

لضفتل نأال إلباقملا إةمئاقلا إاضاإمتت، 10.30.90.0/24 إةبالل إلثامم إةلمع تلمتكا نم، إلثامم إقيرطبو. (gi1/0/4) إلى عةازالاقبب نكلو) gi1/0/3 ههجاوإلى لالخنم R3 راسم وه إدمال إةبالل لضمال راسمالنا أظالم نكمي، EIGRP و FIB و RIB ططخم إعجارم لالخنم R3:

```
<#root>
```

```
R1#
```

```
configure terminal
```

```
Enter configuration commands, one per line. End with CNTL/Z.
```

```
R1(config)#
```

```
router eigrp LAB
```

```
R1(config-router)#
```

```
address-family ipv4 unicast autonomous-system 100
```

```
R1(config-router-af)#
```

```
topology base
```

```
R1(config-router-af-topology)#
```

```
offset-list 30 in 300 gigabitEthernet 1/0/4
```

```
R1(config-router-af-topology)#
```

```
end
```

```
R1#
```

```
show ip route 10.30.90.0
```

```
Routing entry for 10.30.90.0/24
```

```
Known via "eigrp 100", distance 90, metric 16000, precedence routine (0), type internal
```

```
Redistributing via eigrp 100
```

```
Last update from 192.168.3.2 on
```

```
GigabitEthernet1/0/3
```

```
, 00:00:25 ago
```

```
Routing Descriptor Blocks:
```

```
* 192.168.3.2, from 192.168.3.2, 00:00:25 ago, via GigabitEthernet1/0/3
```

```
Route metric is 16000, traffic share count is 1
```

```
Total delay is 21 microseconds, minimum bandwidth is 1000000 Kbit
```

```
Reliability 255/255, minimum MTU 1500 bytes
```

```
Loading 1/255, Hops 2
```

```
R1#
```

```
show ip cef 10.30.90.0
```

```
10.30.90.0/24
```

```
nexthop 192.168.3.2 GigabitEthernet1/0/3
```

```
R1#
```

```
show ip eigrp topology 10.30.90.0/24
```

```
EIGRP-IPv4 VR(LAB) Topology Entry for AS(100)/ID(192.168.3.1) for 10.30.90.0/24 State is Passive, Quer
```

```
Total delay is 21254578 picoseconds <---
```

```
Reliability is 255/255 Load is 1/255 Minimum MTU is 1500 Hop count is 2 Originating router is 172.16.6
```

ةددحمل تائدابلا رثأتو نيوكتلل حاجن ديكأت كنكمي، show ip route eigrp، رمألإ رظنللاب
رورم ةكرحلل أن دكؤي traceroute ضكري اضيأ. ريغت نود رخألل تاراسملا عيمج تلظو طقف
بغرب راسملا ذخأي:

```
<#root>
```

```
R1#
```

```
show ip route eigrp
```

```
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

10.0.0.0/8 is variably subnetted, 12 subnets, 2 masks

```

D EX    10.20.40.0/24
        [170/66560] via 192.168.3.2, 00:22:32, GigabitEthernet1/0/3
        [170/66560] via 192.168.1.2, 00:22:32, GigabitEthernet1/0/4
D EX    10.20.50.0/24
        [170/66560] via 192.168.3.2, 00:22:32, GigabitEthernet1/0/3
        [170/66560] via 192.168.1.2, 00:22:32, GigabitEthernet1/0/4
D EX 10.20.60.0/24 [170/66560] via 192.168.1.2, 00:16:54, GigabitEthernet1/0/4
D      10.30.70.0/24
        [90/16000] via 192.168.3.2, 00:22:32, GigabitEthernet1/0/3
        [90/16000] via 192.168.1.2, 00:22:32, GigabitEthernet1/0/4
D      10.30.80.0/24
        [90/16000] via 192.168.3.2, 00:22:32, GigabitEthernet1/0/3
        [90/16000] via 192.168.1.2, 00:22:32, GigabitEthernet1/0/4
D 10.30.90.0/24 [90/16000] via 192.168.3.2, 00:04:56, GigabitEthernet1/0/3

172.16.0.0/30 is subnetted, 2 subnets
D      172.16.2.0 [90/15360] via 192.168.1.2, 00:22:32, GigabitEthernet1/0/4
D      172.16.4.0 [90/15360] via 192.168.3.2, 00:22:32, GigabitEthernet1/0/3
  
```

R1#

traceroute 10.20.60.1 source loop10

Type escape sequence to abort.
 Tracing the route to 10.20.60.1
 VRF info: (vrf in name/id, vrf out name/id)

```

1 192.168.1.2 1 msec 1 msec 0 msec <--- R2
   2 172.16.2.2 1 msec 1 msec 0 msec
   3 172.16.6.2 1 msec 1 msec *
  
```

R1#

traceroute 10.30.90.1 source loop10

Type escape sequence to abort.
 Tracing the route to 10.30.90.1
 VRF info: (vrf in name/id, vrf out name/id)

```

1 192.168.3.2 0 msec 1 msec 0 msec <--- R3
   2 172.16.4.2 1 msec 1 msec *
  
```

صیخ لئلا مادختساب راسملا ديدحت یلع ریثأتلا: 3 ویرانیسللا

عتم تي . رخآلا یلع دحاو راسم ليضفتل راسم صیخ لت مادختسا متي ، ویرانیسللا اذه ي راسم نيوكت متي لاثملا اذه ي فو ، هجاو لكل صخلم راسم نيوكتل ةمزاللا ةنورملا ب EIGRP R4 نأ يه ةركفللا او 10.20.x.x تائدا بلل یرخأ ةئدابو 10.30.x.x تائدا ب صیخ لتل R4 یلع صخلم زجوملا هجوملا او GigabitEthernet1/0/1 ةهجاو الربع 10.30.0.0/16 زجوملا راسملا ننع نلع ي ليضفتب رثأتت هذه نيوكتللا رورم ةكرح عمو ، GigabitEthernet1/0/2 ةهجاو الربع 10.20.0.0/16 تاكل بشلا یلا هجوملا او R1 نم رورملا ةكرح ردصم ددحي نأ ي ف ببستي اذهو . لو طألا ةقبا طملا ةي عرفلا تاكل بشلا یلا ةهجاو رورملا ةكرحو R3 لال خ نم راسملا 10.30.x.x ةي عرفلا كلكل دعب نيوكتللا ضرع متي . R2 لال خ نم راسملا

```
<#root>
```

```
R4#
```

```
configure terminal
```

```
Enter configuration commands, one per line. End with CNTL/Z.
```

```
R4(config)#
```

```
router eigrp LAB
```

```
R4(config-router)#
```

```
address-family ipv4 unicast autonomous-system 100
```

```
R4(config-router-af)#
```

```
af-interface gigabitEthernet 1/0/1
```

```
R4(config-router-af-interface)#
```

```
summary-address 10.30.0.0/16
```

```
R4(config-router-af-interface)#
```

```
exit
```

```
R4(config-router-af)#
```

```
af-interface gigabitEthernet 1/0/2
```

```
R4(config-router-af-interface)#
```

```
summary-address 10.20.0.0/16
```

```
R4(config-router-af-interface)#
```

```
end
```

```
R4#
```

10.20.0.0/16 ل صخلم راسم دوجو نم ققحتلا نكمي ، R1 نم هي جوتلا لودج نم ققحتلا ب ، نألا 10.30.0.0/16 صخلم راسمو (R3 ب ةلصتلا) GigabitEthernet1/0/3 ةهجاو لال خ نم هملعت متي ةكرح نأ يه نيوكتللا اذه نم ةجيتنلا او . (R2 ب لصلتلا) GigabitEthernet1/0/4 ربع هملعت متي متي 10.30.90.1 ةهجاو عم رورملا ةكرحو R2 ربع اهه جوت متي 10.20.60.1 ةهجو عم رورملا

نم عملعتم لازت ال يتلا قباطملا تائداب لوطاً لضفي R1 نأ وه ببسلا R3 ربع اهيجوت
FIB و traceroute تاجرخم لال خ نم اهديكأت نكميو، يرخألا ةهجاو لا لال خ

<#root>

R1#

show ip route eigrp

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

10.0.0.0/8 is variably subnetted, 14 subnets, 3 masks

D 10.20.0.0/16 [90/66560] via 192.168.3.2, 00:00:16, GigabitEthernet1/0/3

D EX 10.20.40.0/24
[170/66560] via 192.168.1.2, 00:00:16, GigabitEthernet1/0/4

D EX 10.20.50.0/24
[170/66560] via 192.168.1.2, 00:00:16, GigabitEthernet1/0/4

D EX 10.20.60.0/24
[170/66560] via 192.168.1.2, 00:00:16, GigabitEthernet1/0/4

D 10.30.0.0/16 [90/16000] via 192.168.1.2, 00:00:44, GigabitEthernet1/0/4

D 10.30.70.0/24
[90/16000] via 192.168.3.2, 00:00:44, GigabitEthernet1/0/3

D 10.30.80.0/24
[90/16000] via 192.168.3.2, 00:00:44, GigabitEthernet1/0/3

D 10.30.90.0/24
[90/16000] via 192.168.3.2, 00:00:44, GigabitEthernet1/0/3

172.16.0.0/30 is subnetted, 2 subnets

D 172.16.2.0 [90/15360] via 192.168.1.2, 02:42:44, GigabitEthernet1/0/4

D 172.16.4.0 [90/15360] via 192.168.3.2, 02:42:44, GigabitEthernet1/0/3

R1#

show ip route 10.20.0.0

Routing entry for 10.20.0.0/16

Known via "eigrp 100", distance 90, metric 66560, precedence routine (0), type internal
Redistributing via eigrp 100

Last update from 192.168.3.2 on GigabitEthernet1/0/3, 00:12:07 ago

Routing Descriptor Blocks:

* 192.168.3.2, from 192.168.3.2, 00:12:07 ago, via GigabitEthernet1/0/3
Route metric is 66560, traffic share count is 1

```
Total delay is 120 microseconds, minimum bandwidth is 1000000 Kbit
Reliability 255/255, minimum MTU 1500 bytes
Loading 1/255, Hops 2
```

R1#

```
show ip route 10.30.0.0
```

```
Routing entry for 10.30.0.0/16
  Known via "eigrp 100", distance 90, metric 16000, precedence routine (0), type internal
  Redistributing via eigrp 100
```

```
Last update from 192.168.1.2 on GigabitEthernet1/0/4, 00:12:50 ago
```

```
Routing Descriptor Blocks:
```

```
* 192.168.1.2, from 192.168.1.2, 00:12:50 ago, via GigabitEthernet1/0/4
  Route metric is 16000, traffic share count is 1
  Total delay is 21 microseconds, minimum bandwidth is 1000000 Kbit
  Reliability 255/255, minimum MTU 1500 bytes
  Loading 1/255, Hops 2
```

R1#

```
show ip cef exact-route 10.10.10.1 10.20.60.1
```

```
10.10.10.1 -> 10.20.60.1 =>IP adj out of GigabitEthernet1/0/4, addr 192.168.1.2
```

R1#

```
traceroute 10.20.60.1 source loop10
```

```
Type escape sequence to abort. Tracing the route to 10.20.60.1 VRF info: (vrf in name/id, vrf out name)
```

```
1 192.168.1.2 1 msec 1 msec 0 msec <--- R2
```

```
2 172.16.2.2 1 msec 1 msec 0 msec 3 172.16.6.2 1 msec 1 msec * R1#
```

```
show ip cef exact-route 10.10.10.1 10.30.90.1
```

```
10.10.10.1 -> 10.30.90.1 =>IP adj out of GigabitEthernet1/0/3, addr 192.168.3.2 R1#
```

```
traceroute 10.30.90.1 source loop10
```

```
Type escape sequence to abort. Tracing the route to 10.30.90.1 VRF info: (vrf in name/id, vrf out name)
```

```
1 192.168.3.2 1 msec 0 msec 1 msec <--- R3
```

```
2 172.16.4.2 0 msec 1 msec *
```

بـرسـتـالـا طـئـارـخ مـادـخـتـسـاب راسـمـال دـيـدـحـت يـلـع رـيـثـأـتـالـا :4 وـيـرـانـيـسـالـا

نـع نـالـعـالـل ةـنـرم ةـيـلـآ ةـنـجـومـال تـاراسـمـال نـع نـالـعـالـا ءانـثـأ بـيـرسـتـالـا طـئـارـخ مـادـخـتـسـا رـفـوي راسـمـال لـيـضـفـتـل ةـقـبـاطـم لـوطـأ نـم ةـدافـتـسـالـا مـث ،يـئـاقـتـنـا لـكـشـب اـديـدـحـت رـثـكـأ تـاراسـم بـوـغـرـمـالـا .

و (G11/0/1 و G11/0/2) تـاهـجـاولـا الـك يـلـع R4 نـم 10.0.0.0/8 صـخـلـم راسـم نـع نـالـعـالـا مـتـي ،لـاـثـمـال اـذـه يـف نـيـوكـتـالـا يـلـع ةـرظـن يـقـلـن انـعـد .

<#root>


```

R4#
configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
R4(config)#
router eigrp LAB
R4(config-router)#
address-family ipv4 unicast autonomous-system 100
R4(config-router-af)#
af-interface GigabitEthernet1/0/1
R4(config-router-af-interface)#
summary-address 10.0.0.0 255.0.0.0
R4(config-router-af-interface)#
exit
R4(config-router-af)#
af-interface GigabitEthernet1/0/2
R4(config-router-af-interface)#
summary-address 10.0.0.0 255.0.0.0
R4(config-router-af-interface)#
end

```

لازي ال ،كلذ عمو ،كلذ دع ب حضورم وه امك R1 هي جوت لودج يف قب اسلل ني وكتل لس اكعنا متي R1: نم نيراسم لل ربع رورم لل ة كرح لمح ة نزاوم يلع لمعي لودج لل اذه

<#root>

```

R1#
show ip route eigrp

```

```

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

10.0.0.0/8 is variably subnetted, 7 subnets, 3 masks

```
D 10.0.0.0/8 [90/16000] via 192.168.3.2, 00:04:16, GigabitEthernet1/0/3 [90/16000] via 192.168.1.2, 00:04:16, GigabitEthernet1/0/4
172.16.0.0/30 is subnetted, 2 subnets
D 172.16.2.0 [90/15360] via 192.168.1.2, 03:50:08, GigabitEthernet1/0/4
D 172.16.4.0 [90/15360] via 192.168.3.2, 03:50:08, GigabitEthernet1/0/3
```

و 10.20.60.0/24 هي معرفة الة ك ب ش ل ل ا ل ا R1 ن م رور م ل ا ة ك ر ح ل ل ي ض ف ت م ز ل ي ، ك ل ذ ع م و ن ك م ي ، ة ح ي ت ن ل ل ا ه ذ ه ق ي ق ح ت ل (R2 م د ا خ ل ا ب ة ل ص ت م ل ا) GigabitEthernet1/0/4 ل ع 10.30.70.0/24 ل ع ظ ا ف ح ل ا ع م ن ك ل و ا د ي د ح ت ر ث ك ا ل ا ت ا ئ ا د ا ب ل ا ب ي ر س ت ل R4 ل ع ب ر س ت ة ط ي ر خ ن ي و ك ت ه . ع ض و م ي ف ص ي خ ل ت ل ا

```
<#root>
```

```
R4#
```

```
configure terminal
```

```
Enter configuration commands, one per line. End with CNTL/Z.
```

```
R4(config)#
```

```
ip prefix-list LEAKED-PREFIXES permit 10.20.60.0/24
```

```
R4(config)#
```

```
ip prefix-list LEAKED-PREFIXES permit 10.30.70.0/24
```

```
R4(config)#
```

```
route-map LEAKED-PREFIXES
```

```
R4(config-route-map)#
```

```
match ip address prefix-list LEAKED-PREFIXES
```

```
R4(config-route-map)#
```

```
exit
```

```
R4(config)#
```

```
router eigrp LAB
```

```
R4(config-router)#
```

```
address-family ipv4 unicast autonomous-system 100
```

```
R4(config-router-af)#
```

```
af-interface GigabitEthernet1/0/1
```

```
R4(config-router-af-interface)#
```

```
summary-address 10.0.0.0 255.0.0.0 leak-map LEAKED-PREFIXES
```

```
R4(config-router-af-interface)#
```

```
end
```

و 10.20.60.0/24 ل اديحت رثكأ ل اخدا ةيؤري ف R1 أدبي، قبا سلا نيوكتلا قيبطت دع ب
كلك دع ب حضم وه امك، GigabitEthernet1/0/4 ةهجاو لال خ نم نأل هملعت متي يذلا 10.30.70.0/24

<#root>

R1#

show ip route eigrp

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

10.0.0.0/8 is variably subnetted, 9 subnets, 3 masks
D 10.0.0.0/8 [90/16000] via 192.168.3.2, 01:26:41, GigabitEthernet1/0/3
[90/16000] via 192.168.1.2, 01:26:41, GigabitEthernet1/0/4
D EX 10.20.60.0/24 [170/66560] via 192.168.1.2, 00:01:29, GigabitEthernet1/0/4 D 10.30.70.0/24 [90/16000]
172.16.0.0/30 is subnetted, 2 subnets
D 172.16.2.0 [90/15360] via 192.168.1.2, 05:12:33, GigabitEthernet1/0/4
D 172.16.4.0 [90/15360] via 192.168.3.2, 05:12:33, GigabitEthernet1/0/3

R1#

show ip cef exact-route 10.10.10.1 10.20.60.1

10.10.10.1 -> 10.20.60.1 =>IP adj out of GigabitEthernet1/0/4, addr 192.168.1.2

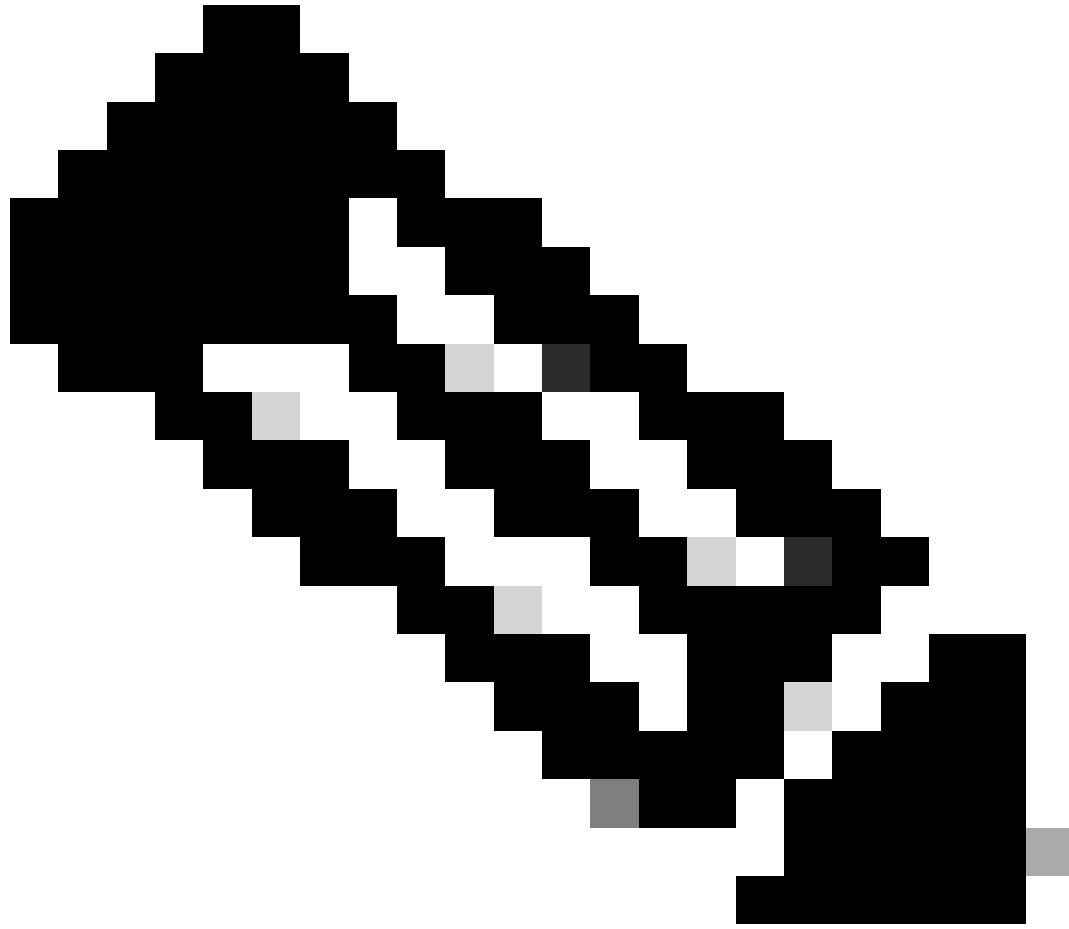
R1#

show ip cef exact-route 10.10.10.1 10.30.70.1

10.10.10.1 -> 10.30.70.1 =>IP adj out of GigabitEthernet1/0/4, addr 192.168.1.2

ةيرادإلا ةفاسملا لي دع ت لال خ نم راسملا دي دع ت ل ع ريثأتلا :5 ويرانيسلا
(AD) ةئدابلل

ةكح هيجوت نكمي، لياتلابو، 10.30.90.0/24 ةئدابلل AD لي دع ت ي ف لاثملا اذ ةرك ف لثمتت
R3. ربع اهيلي ةهجوملا رورملا



تاجت نملل يئي پلا مئي قتللا چمان رب ىلع ري شاتلل رخآ ادروم جهنلا اذه لثمي :ةظحالم
اذا ارذح نك .لباقم ةمئاق مادختسا نم اليضفت لقأ جهنلا اذه نأ ريغ ،ةينورتكلإلا
رثوت نأ نكمي شيح زاهجلا سفن ىلع ةددعتم هيحوت تالوكوتورب مدختست تنك
اضيا ةقيرطالا هذه مهيلع

نيوكتل موقوي الو، طقف ةيخادل EIGRP تاراسم يلع ةقيرطلا هذه رثوت: ةظحال
ةيخاخال EIGRP تاراسم نالعال ليدعتب

R1 نأ ظحال راسملا ملعتي R2 (192.168.1.2) لالخ نم 10.30.90.0/24 راسملا ملعتي R3 (192.168.3.2) لالخ نم 10.30.90.0/24 راسملا ملعتي R1 نأ ظحال
سايقملا سفن مادختساب:

<#root>

R1#

show ip route eigrp

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

```
10.0.0.0/8 is variably subnetted, 12 subnets, 2 masks
D EX 10.20.40.0/24
    [170/66560] via 192.168.3.2, 00:00:26, GigabitEthernet1/0/3
    [170/66560] via 192.168.1.2, 00:00:26, GigabitEthernet1/0/4
D EX 10.20.50.0/24
    [170/66560] via 192.168.3.2, 00:00:26, GigabitEthernet1/0/3
    [170/66560] via 192.168.1.2, 00:00:26, GigabitEthernet1/0/4
D EX 10.20.60.0/24
    [170/66560] via 192.168.3.2, 00:00:26, GigabitEthernet1/0/3
    [170/66560] via 192.168.1.2, 00:00:26, GigabitEthernet1/0/4
D 10.30.70.0/24
    [90/16000] via 192.168.3.2, 00:00:26, GigabitEthernet1/0/3
    [90/16000] via 192.168.1.2, 00:00:26, GigabitEthernet1/0/4
D 10.30.80.0/24
    [90/16000] via 192.168.3.2, 00:00:26, GigabitEthernet1/0/3
    [90/16000] via 192.168.1.2, 00:00:26, GigabitEthernet1/0/4
D 10.30.90.0/24 [90/16000] via 192.168.3.2, 00:00:26, GigabitEthernet1/0/3 [90/16000] via 192.168.1.2, 00:00:26, GigabitEthernet1/0/4
172.16.0.0/30 is subnetted, 2 subnets
D 172.16.2.0 [90/15360] via 192.168.1.2, 00:00:26, GigabitEthernet1/0/4
D 172.16.4.0 [90/15360] via 192.168.3.2, 00:00:26, GigabitEthernet1/0/3
```

قواعد اطمال امداد تسإ متي (ACL) لوصول ا ي ف مكحت ةمئاق نيوكت مزلي، ريغغت لال زاجنال راج دي دحت لال خ نم اضيأ ةئداب لال نالعل ليدعت نكمي لكل ذ دعب، ةبولطم لال ةيغرف لال ةكبش لال
<route ad> <ip source address> <wildcard bits> <acl>.

ةفاضا متت (85) لقا AD ةمي ق م ادخت تسإ متي، R3 نم نالعل لال ليضفت لجال نم، لال ثمل اذه ي ف متت م 0.0.0.0 ةمي ق ب ةحماج ةقاطب م ادخت تسإ اب R3 EIGRP (192.168.3.2) راجب صاخ لال IP ناونع
ةئداب لال ةقباطم ل (ACL) لوصول ا ي ف مكحت لال ةمئاق ةفاضا:

```
<#root>
```

```
R1#
```

```
configure terminal
```

```
Enter configuration commands, one per line. End with CNTL/Z. R1(config)#
```

```
access-list 30 permit 10.30.90.0 0.0.0.255
```

```
R1(config)#
```

```
router eigrp LAB
```

```
R1(config-router)#
```

```
address-family ipv4 unicast autonomous-system 100
```

```
R1(config-router-af)#
```

```
topology base
```

```

R1(config-router-af-topology)#
distance 85 192.168.3.2 0.0.0.0 30

R1(config-router-af-topology)#
end

```

ل هجوتلا لاد ربيغت مت ثيح ، R1 نم FIB و RIB جارخا يف ةجيتننلا ةظحالم نكمي
10.30.90.0/24 لىل AD لىل هب صاخلا 85، او 192.168.3.2) R3 وه EIGRP لىل صاخلا راجلا او 85،

<#root>

```

R1#
show ip route eigrp

```

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

```

10.0.0.0/8 is variably subnetted, 12 subnets, 2 masks
D EX    10.20.40.0/24
        [170/66560] via 192.168.3.2, 00:00:14, GigabitEthernet1/0/3
        [170/66560] via 192.168.1.2, 00:00:14, GigabitEthernet1/0/4
D EX    10.20.50.0/24
        [170/66560] via 192.168.3.2, 00:00:14, GigabitEthernet1/0/3
        [170/66560] via 192.168.1.2, 00:00:14, GigabitEthernet1/0/4
D EX    10.20.60.0/24
        [170/66560] via 192.168.3.2, 00:00:14, GigabitEthernet1/0/3
        [170/66560] via 192.168.1.2, 00:00:14, GigabitEthernet1/0/4
D       10.30.70.0/24
        [90/16000] via 192.168.3.2, 00:00:14, GigabitEthernet1/0/3
        [90/16000] via 192.168.1.2, 00:00:14, GigabitEthernet1/0/4
D       10.30.80.0/24
        [90/16000] via 192.168.3.2, 00:00:14, GigabitEthernet1/0/3
        [90/16000] via 192.168.1.2, 00:00:14, GigabitEthernet1/0/4
D 10.30.90.0/24 [85/16000] via 192.168.3.2, 00:00:14, GigabitEthernet1/0/3

172.16.0.0/30 is subnetted, 2 subnets
D      172.16.2.0 [90/15360] via 192.168.1.2, 00:00:14, GigabitEthernet1/0/4
D      172.16.4.0 [90/15360] via 192.168.3.2, 00:00:14, GigabitEthernet1/0/3

R1#
show ip route 10.30.90.0

```

Routing entry for 10.30.90.0/24

Known via "eigrp 100", distance 85, metric 16000, precedence routine (0), type internal
Redistributing via eigrp 100
Last update from 192.168.3.2 on GigabitEthernet1/0/3, 00:00:31 ago
Routing Descriptor Blocks:

* 192.168.3.2, from 192.168.3.2, 00:00:31 ago, via GigabitEthernet1/0/3

Route metric is 16000, traffic share count is 1
Total delay is 21 microseconds, minimum bandwidth is 1000000 Kbit
Reliability 255/255, minimum MTU 1500 bytes
Loading 1/255, Hops 2

R1#

```
show ip cef 10.30.90.0
```

```
10.30.90.0/24
```

```
nexthop 192.168.3.2 GigabitEthernet1/0/3
```

راسملا ةيفصت مادختساب راسملا ديدحت ىل عريثأتال: 6 ويرانيسل

لالخ نم راسملا ديدحت ىل عريثأتال ل كشب ريثأتال يف ةركفال لثمتت ، لاثملا اذه يف ر1 ىل ةدراول تائدابل وأ تاراسملا ضعب ةيفصت

ةيلال ةيعرفال تاكبشل نم ي ةهجول نوكت ام دنع R2 راسم R1 لصف ي نأ بجي 10.30.70.0/24 و 10.30.80.0/24 و 10.20.40.0/24. ةيعرفال ةكبشل يه ةهجول نوكت ام دنع R3 راسم R1 و 10.20.60.0/24 و 10.20.50.0/24 راسملا لصف ي نأ بجي ، 10.30.90.0/24.

نيوكت متي و ةبولطملا تاراسملا ةقباطملا تائدابل ةمئاق مادختسا متي ، كلذ زاجنإلو وه امك ، دراو هاجتإ يف راسملا ةيفصت لماع قيبطتل EIGRP ةي لمع نم ضعي زوت ةمئاق كلذ دعب حضورم

<#root>

R1#

```
configure terminal
```

Enter configuration commands, one per line. End with CNTL/Z.

```
R1(config)#
```

```
ip prefix-list R2-Preferred permit 10.30.70.0/24
```

```
R1(config)#
```

```
ip prefix-list R2-Preferred permit 10.30.80.0/24
```

```
R1(config)#
```

```
ip prefix-list R2-Preferred permit 10.20.40.0/24
```

```
R1(config)#
```

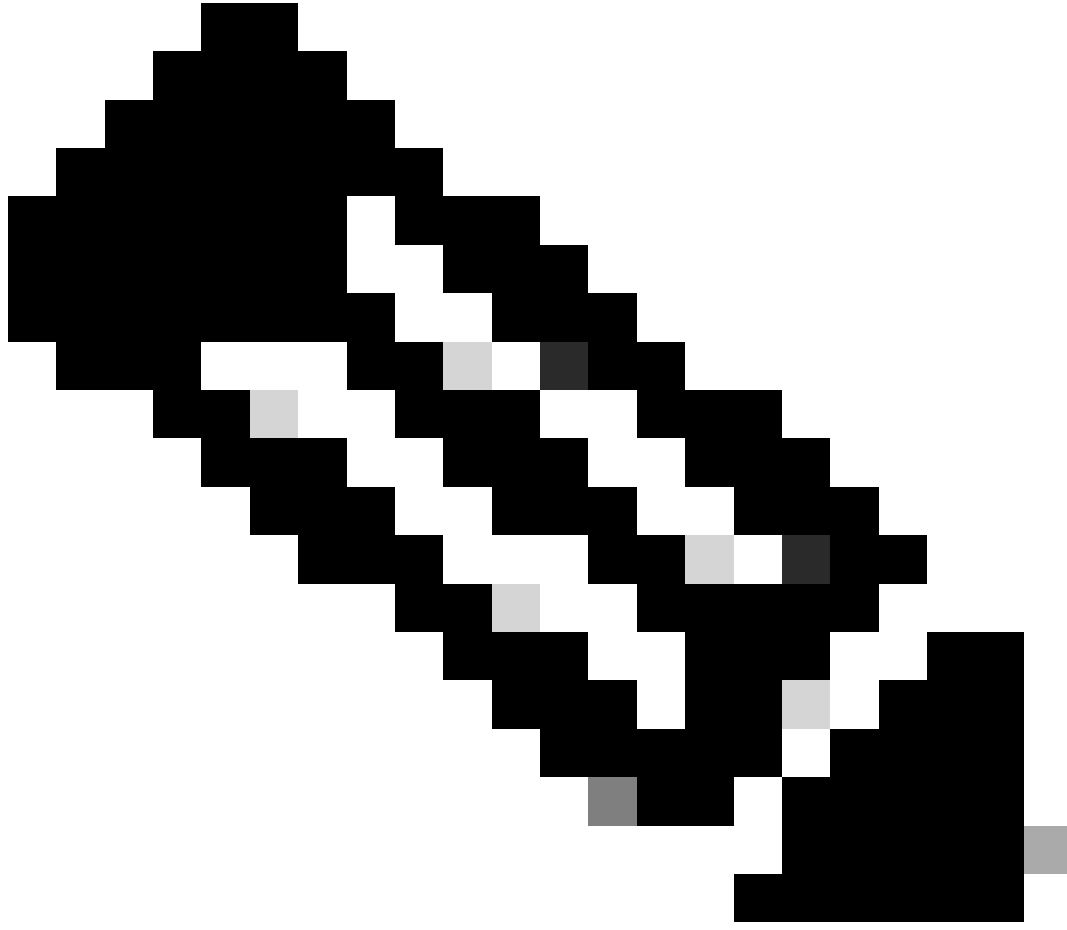
```
R1(config)#
```



```
ip prefix-list R3-Preferred permit 10.30.90.0/24
R1(config)#
ip prefix-list R3-Preferred permit 10.20.50.0/24
R1(config)#
ip prefix-list R3-Preferred permit 10.20.60.0/24

R1(config)#
router eigrp LAB
R1(config-router)#
address-family ipv4 unicast autonomous-system 100
R1(config-router-af)#
topology base
R1(config-router-af-topology)#
distribute-list prefix R2-Preferred in GigabitEthernet1/0/4

R1(config-router-af-topology)#
distribute-list prefix R3-Preferred in GigabitEthernet1/0/3
R1(config-router-af-topology)#
end
```



IP ةئداب ةمئاقك عيزوتلال ةمئاق قيبت دن ع "ةئدابلا" راخ مزلي هنا طحال: ةطحال م
ةبولطملا تاراسملا ةقباطملا اهمادختسا متي

نأ وه، ةلباقم ةمئاق مادختسإ لثم بيلاسأ نيب ةيسيئرلا تافالخال دحأ: ةظحال م EIGRP ططخم لودجو RIB لودج يف اهب حوم سمل ريغ تائدابلا جاردا عنمت distribute-list

ب ولطملا راسملا ديدحت ضرعي R1 هي جوت لودج نأ يه ةجيتنل او:

```
<#root>
```

```
R1#
```

```
show ip route eigrp
```

```
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

10.0.0.0/8 is variably subnetted, 12 subnets, 2 masks

D EX 10.20.40.0/24
[170/66560] via 192.168.1.2, 00:00:12,

GigabitEthernet1/0/4 <--- R2

D EX 10.20.50.0/24
[170/66560] via 192.168.3.2, 00:00:24,

GigabitEthernet1/0/3 <--- R3

D EX 10.20.60.0/24
[170/66560] via 192.168.3.2, 00:00:24,

GigabitEthernet1/0/3

D 10.30.70.0/24
[90/16000] via 192.168.1.2, 00:00:12,

GigabitEthernet1/0/4

D 10.30.80.0/24
[90/16000] via 192.168.1.2, 00:00:12,

GigabitEthernet1/0/4

D 10.30.90.0/24
[90/16000] via 192.168.3.2, 00:00:24,

GigabitEthernet1/0/3

ةلص تاذا تامولعم

- [همادختساو نّسحمل اةيلخادلا ةرأبعلا هيچوت لوكوتورب باعيتسا](#)
- [EIGRP ىلا ةمدقم](#)
- [IP، Cisco IOS XE 17.x هيچوت نيوكت ليلد](#)

ةمچرتل هذه ل و ح

ةلأل تاي نقتل ن مة و مچم مادختساب دن تسمل اذ ه Cisco ت مچرت
ملاعلاء نأ عي مچي ف ني مدختسمل معد ي و تحم مي دقتل ل ي رش بل او
امك ة قيق د ن و ك ت ن ل ة ل آل ة مچرت ل ض ف أن ة ظ حال م ي ج ر ي . ة ص ا خ ل م ه ت غ ل ب
Cisco ي ل خ ت . ف ر ت ح م مچرت م ا ه م د ق ي ي ت ل ا ة ي ف ا ر ت ح ا ل ا ة مچرت ل ا ع م ل ا ح ل ا و ه
ي ل ا م ا د ع و ج ر ل ا ب ي ص و ت و ت ا مچرت ل ا ه ذ ه ة ق د ن ع ا ه ت ي ل و ئ س م Cisco
Systems (رف و ت م ط بار ل ا) ي ل ص أ ل ا ي ز ي ل ج ن ا ل ا دن تسمل ا