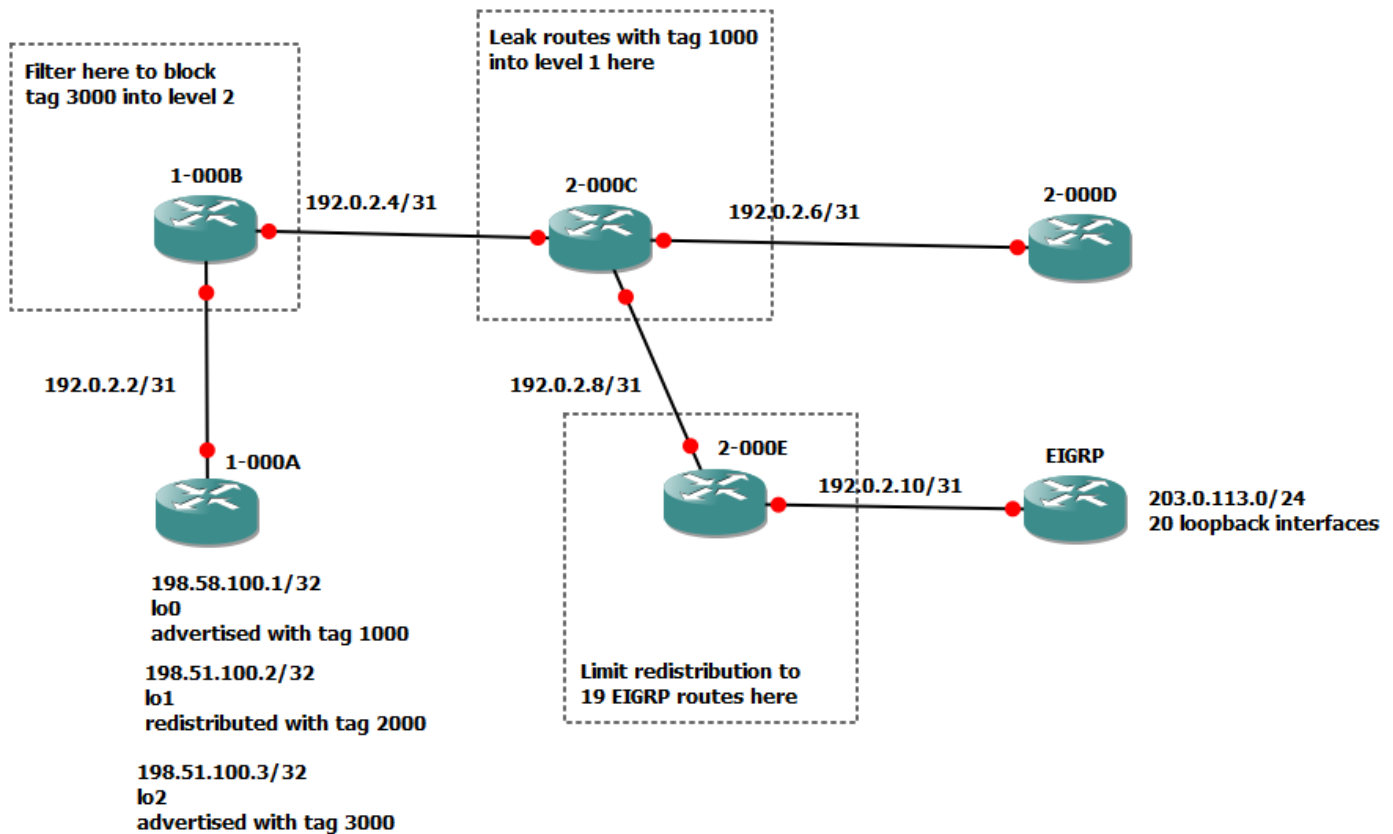


IS-IS Redistribution



Redistribution Limit Show Output

```
2-000E#show ip eigrp topo
```

```
EIGRP-IPv4 Topology Table for AS(100)/ID(192.0.2.11)
```

```
Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,  
r - reply Status, s - sia Status
```

```
P 203.0.113.1/32, 1 successors, FD is 156160  
    via 192.0.2.10 (156160/128256), FastEthernet0/1  
P 192.0.2.10/31, 1 successors, FD is 28160  
    via Connected, FastEthernet0/1  
P 203.0.113.4/32, 1 successors, FD is 156160  
    via 192.0.2.10 (156160/128256), FastEthernet0/1  
P 203.0.113.2/32, 1 successors, FD is 156160  
    via 192.0.2.10 (156160/128256), FastEthernet0/1  
P 203.0.113.5/32, 1 successors, FD is 156160  
    via 192.0.2.10 (156160/128256), FastEthernet0/1  
P 203.0.113.3/32, 1 successors, FD is 156160  
    via 192.0.2.10 (156160/128256), FastEthernet0/1
```

```
2-000E#
```

```
2-000E#
```

```
*Dec 23 16:41:43.931: %IPRT-4-REDIST_THR_PFX: Redistribution prefix threshold has been  
reached "isis L1" - 7 prefixes
```

2-000E#

2-000E#

2-000E#show ip eigrp topo

EIGRP-IPv4 Topology Table for AS(100)/ID(192.0.2.11)

Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,
r - reply Status, s - sia Status

P 203.0.113.1/32, 1 successors, FD is 156160
via 192.0.2.10 (156160/128256), FastEthernet0/1
P 192.0.2.10/31, 1 successors, FD is 28160
via Connected, FastEthernet0/1
P 203.0.113.4/32, 1 successors, FD is 156160
via 192.0.2.10 (156160/128256), FastEthernet0/1
P 203.0.113.2/32, 1 successors, FD is 156160
via 192.0.2.10 (156160/128256), FastEthernet0/1
P 203.0.113.5/32, 1 successors, FD is 156160
via 192.0.2.10 (156160/128256), FastEthernet0/1
P 203.0.113.6/32, 1 successors, FD is 156160
via 192.0.2.10 (156160/128256), FastEthernet0/1
P 203.0.113.3/32, 1 successors, FD is 156160
via 192.0.2.10 (156160/128256), FastEthernet0/1

2-000C#show isis data detail

IS-IS Level-1 Link State Database:

LSPID	LSP Seq Num	LSP Checksum	LSP Holdtime	ATT/P/OL
2-000C.00-00	* 0x00000000A	0x759E	857	1/0/0
Area Address: 49.2222				
NLPID: 0xCC				
Hostname: 2-000C				
IP Address: 192.0.2.9				
Metric: 10 IP 192.0.2.8/31				
Metric: 10 IP 192.0.2.6/31				
Metric: 10 IS-Extended 2-000D.00				
Metric: 10 IS-Extended 2-000E.00				
Metric: 30 IP-Interarea 198.58.100.1/32				
2-000D.00-00	0x000000004	0x9E98	791	0/0/0
Area Address: 49.2222				
NLPID: 0xCC				
Hostname: 2-000D				
IP Address: 192.0.2.7				
Metric: 10 IP 192.0.2.6/31				
Metric: 10 IS-Extended 2-000C.00				
2-000E.00-00	0x000000006	0x7435	920	0/0/0
Area Address: 49.2222				
NLPID: 0xCC				
Hostname: 2-000E				
IP Address: 192.0.2.8				
Metric: 10 IP 192.0.2.8/31				
Metric: 10 IS-Extended 2-000C.00				

```

Metric: 10          IP 192.0.2.10/31
IS-IS Level-2 Link State Database:
LSPID              LSP Seq Num  LSP Checksum  LSP Holddtime    ATT/P/OL
1-000B.00-00       0x00000000C  0x6CD0        1131             0/0/0
Area Address: 49.1111
NLPID:             0xCC
Hostname: 1-000B
IP Address:        192.0.2.4
Metric: 10          IP 192.0.2.4/31
Metric: 10          IS-Extended 2-000C.00
Metric: 10          IP 192.0.2.2/31
Metric: 10          IP 198.51.100.2/32
Metric: 20          IP 198.58.100.1/32
2-000C.00-00       * 0x000000006  0xAF04        949             0/0/0
Area Address: 49.2222
NLPID:             0xCC
Hostname: 2-000C
IP Address:        192.0.2.5
Metric: 10          IP 192.0.2.4/31
Metric: 10          IS-Extended 1-000B.00
Metric: 10          IP 192.0.2.6/31
Metric: 10          IP 192.0.2.8/31
Metric: 20          IP 192.0.2.10/31
2-000C#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
       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, H - NHRP, l - LISP
       + - replicated route, % - next hop override

```

Gateway of last resort is not set

```

192.0.2.0/24 is variably subnetted, 8 subnets, 2 masks
i L2    192.0.2.2/31 [115/20] via 192.0.2.4, 00:28:03, FastEthernet0/1
C        192.0.2.4/31 is directly connected, FastEthernet0/1
L        192.0.2.5/32 is directly connected, FastEthernet0/1
C        192.0.2.6/31 is directly connected, FastEthernet0/0
L        192.0.2.6/32 is directly connected, FastEthernet0/0
C        192.0.2.8/31 is directly connected, Ethernet1/0
L        192.0.2.9/32 is directly connected, Ethernet1/0
i L1    192.0.2.10/31 [115/20] via 192.0.2.8, 00:16:50, Ethernet1/0
        198.51.100.0/32 is subnetted, 1 subnets
i L2    198.51.100.2 [115/20] via 192.0.2.4, 00:28:03, FastEthernet0/1
        198.58.100.0/32 is subnetted, 1 subnets
i L2    198.58.100.1 [115/30] via 192.0.2.4, 00:28:03, FastEthernet0/1
2-000C#

```

```

==
2-000C#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
       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, H - NHRP, l - LISP
       + - replicated route, % - next hop override

```

Gateway of last resort is not set

```

      192.0.2.0/24 is variably subnetted, 8 subnets, 2 masks
i L2      192.0.2.2/31 [115/20] via 192.0.2.4, 00:33:55, FastEthernet0/1
C          192.0.2.4/31 is directly connected, FastEthernet0/1
L          192.0.2.5/32 is directly connected, FastEthernet0/1
C          192.0.2.6/31 is directly connected, FastEthernet0/0
L          192.0.2.6/32 is directly connected, FastEthernet0/0
C          192.0.2.8/31 is directly connected, Ethernet1/0
L          192.0.2.9/32 is directly connected, Ethernet1/0
i L1      192.0.2.10/31 [115/20] via 192.0.2.8, 00:22:42, Ethernet1/0
      198.51.100.0/32 is subnetted, 1 subnets
i L2      198.51.100.2 [115/20] via 192.0.2.4, 00:33:55, FastEthernet0/1
      198.58.100.0/32 is subnetted, 1 subnets
i L2      198.58.100.1 [115/30] via 192.0.2.4, 00:33:55, FastEthernet0/1
      203.0.113.0/32 is subnetted, 6 subnets
i L1      203.0.113.1 [115/20] via 192.0.2.8, 00:02:35, Ethernet1/0
i L1      203.0.113.2 [115/20] via 192.0.2.8, 00:02:04, Ethernet1/0
i L1      203.0.113.3 [115/20] via 192.0.2.8, 00:01:52, Ethernet1/0
i L1      203.0.113.4 [115/20] via 192.0.2.8, 00:01:42, Ethernet1/0
i L1      203.0.113.5 [115/20] via 192.0.2.8, 00:01:30, Ethernet1/0
i L1      203.0.113.6 [115/20] via 192.0.2.8, 00:01:17, Ethernet1/0

```

2-000C#

2-000C#show isis data detail

IS-IS Level-1 Link State Database:

LSPID	LSP Seq Num	LSP Checksum	LSP Holdtime	ATT/P/OL
2-000C.00-00	* 0x00000000A	0x759E	493	1/0/0
Area Address: 49.2222				
NLPID: 0xCC				
Hostname: 2-000C				
IP Address: 192.0.2.9				
Metric: 10	IP 192.0.2.8/31			
Metric: 10	IP 192.0.2.6/31			
Metric: 10	IS-Extended 2-000D.00			
Metric: 10	IS-Extended 2-000E.00			
Metric: 30	IP-Interarea 198.58.100.1/32			
2-000D.00-00	0x000000004	0x9E98	427	0/0/0
Area Address: 49.2222				

```

NLPID:      0xCC
Hostname: 2-000D
IP Address: 192.0.2.7
Metric: 10   IP 192.0.2.6/31
Metric: 10   IS-Extended 2-000C.00
2-000E.00-00      0x00000010   0x30B7      1105      0/0/0
Area Address: 49.2222
NLPID:      0xCC
Hostname: 2-000E
IP Address: 192.0.2.8
Metric: 10   IP 192.0.2.8/31
Metric: 10   IS-Extended 2-000C.00
Metric: 10   IP 192.0.2.10/31
Metric: 10   IP 203.0.113.1/32
Metric: 10   IP 203.0.113.2/32
Metric: 10   IP 203.0.113.3/32
Metric: 10   IP 203.0.113.4/32
Metric: 10   IP 203.0.113.5/32
Metric: 10   IP 203.0.113.6/32
IS-IS Level-2 Link State Database:
LSPID          LSP Seq Num   LSP Checksum   LSP Holdtime   ATT/P/OL
1-000B.00-00      0x0000000C   0x6CD0        766            0/0/0
Area Address: 49.1111
NLPID:      0xCC
Hostname: 1-000B
IP Address: 192.0.2.4
Metric: 10   IP 192.0.2.4/31
Metric: 10   IS-Extended 2-000C.00
Metric: 10   IP 192.0.2.2/31
Metric: 10   IP 198.51.100.2/32
Metric: 20   IP 198.58.100.1/32
2-000C.00-00      * 0x00000010   0xE0D4        1109          0/0/0
Area Address: 49.2222
NLPID:      0xCC
Hostname: 2-000C
IP Address: 192.0.2.5
Metric: 10   IP 192.0.2.4/31
Metric: 10   IS-Extended 1-000B.00
Metric: 10   IP 192.0.2.6/31
Metric: 10   IP 192.0.2.8/31
Metric: 20   IP 192.0.2.10/31
Metric: 20   IP 203.0.113.1/32
Metric: 20   IP 203.0.113.2/32
Metric: 20   IP 203.0.113.3/32
Metric: 20   IP 203.0.113.4/32
Metric: 20   IP 203.0.113.5/32
Metric: 20   IP 203.0.113.6/32

```

Router Filtering with Tags Show Output

1-000A#show isis neighbors

System Id	Type	Interface	IP Address	State	Holdtime	Circuit Id
1-000B	L1	Fa0/0	192.0.2.3	UP	29	01

1-000A#show isis data verbose

IS-IS Level-1 Link State Database:

LSPID	LSP Seq Num	LSP Checksum	LSP Holdtime	ATT/P/OL
1-000A.00-00	* 0x000000010	0x778C	1100	0/0/0

Area Address: 49.1111

NLPID: 0xCC

Hostname: 1-000A

IP Address: 198.51.100.3

Metric: 10 IP 192.0.2.2/31

Metric: 10 IP 198.58.100.1/32

Route Admin Tag: 1000

Metric: 10 IP 198.51.100.3/32

Route Admin Tag: 3000

Metric: 10 IS-Extended 1-000B.00

Metric: 0 IP 198.51.100.2/32

Route Admin Tag: 2000

1-000B.00-00	0x00000000B	0x5603	1166	1/0/0
--------------	-------------	--------	------	-------

Area Address: 49.1111

NLPID: 0xCC

Hostname: 1-000B

IP Address: 192.0.2.3

Metric: 10 IP 192.0.2.2/31

Metric: 10 IS-Extended 1-000A.00

IS-IS Level-2 Link State Database:

LSPID	LSP Seq Num	LSP Checksum	LSP Holdtime	ATT/P/OL
1-000A.00-00	* 0x00000000C	0x71F1	531	0/0/0

Area Address: 49.1111

NLPID: 0xCC

Hostname: 1-000A

Metric: 10 IP 192.0.2.2/31

Metric: 10 IP 198.51.100.3/32

Route Admin Tag: 3000

Metric: 10 IP 198.58.100.1/32

Route Admin Tag: 1000

1-000A#show isis data detail

IS-IS Level-1 Link State Database:

LSPID	LSP Seq Num	LSP Checksum	LSP Holdtime	ATT/P/OL
1-000A.00-00	* 0x000000010	0x778C	1099	0/0/0

Area Address: 49.1111

NLPID: 0xCC

Hostname: 1-000A

IP Address: 198.51.100.3

```

Metric: 10      IP 192.0.2.2/31
Metric: 10      IP 198.58.100.1/32
Metric: 10      IP 198.51.100.3/32
Metric: 10      IS-Extended 1-000B.00
Metric: 0       IP 198.51.100.2/32
1-000B.00-00    0x0000000B    0x5603      1166      1/0/0

```

Area Address: 49.1111

NLPID: 0xCC

Hostname: 1-000B

IP Address: 192.0.2.3

Metric: 10 IP 192.0.2.2/31

Metric: 10 IS-Extended 1-000A.00

IS-IS Level-2 Link State Database:

LSPID	LSP Seq Num	LSP Checksum	LSP Holddtime	ATT/P/OL
1-000A.00-00	* 0x0000000C	0x71F1	531	0/0/0

Area Address: 49.1111

NLPID: 0xCC

Hostname: 1-000A

Metric: 10 IP 192.0.2.2/31

Metric: 10 IP 198.51.100.3/32

Metric: 10 IP 198.58.100.1/32

1-000A#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
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, H - NHRP, l - LISP
+ - replicated route, % - next hop override

Gateway of last resort is 192.0.2.3 to network 0.0.0.0

```

i*L1 0.0.0.0/0 [115/10] via 192.0.2.3, 00:38:54, FastEthernet0/0
      192.0.2.0/24 is variably subnetted, 2 subnets, 2 masks
C      192.0.2.2/31 is directly connected, FastEthernet0/0
L      192.0.2.2/32 is directly connected, FastEthernet0/0
      198.51.100.0/32 is subnetted, 2 subnets
C      198.51.100.2 is directly connected, Loopback1
C      198.51.100.3 is directly connected, Loopback3
      198.58.100.0/32 is subnetted, 1 subnets
C      198.58.100.1 is directly connected, Loopback0
1-000A#

```

1-000B#show isis neighbors

System Id	Type	Interface	IP Address	State	Holddtime	Circuit Id
1-000A	L1	Fa0/1	192.0.2.2	UP	23	01
2-000C	L2	Fa0/0	192.0.2.5	UP	29	00

1-000B#show isis data verbose

IS-IS Level-1 Link State Database:

LSPID	LSP Seq Num	LSP Checksum	LSP Holddtime	ATT/P/OL
1-000A.00-00	0x000000010	0x778C	1071	0/0/0

Area Address: 49.1111

NLPID: 0xCC

Hostname: 1-000A

IP Address: 198.51.100.3

Metric: 10 IP 192.0.2.2/31

Metric: 10 IP 198.58.100.1/32

Route Admin Tag: 1000

Metric: 10 IP 198.51.100.3/32

Route Admin Tag: 3000

Metric: 10 IS-Extended 1-000B.00

Metric: 0 IP 198.51.100.2/32

Route Admin Tag: 2000

1-000B.00-00	* 0x00000000B	0x5603	1141	1/0/0
--------------	---------------	--------	------	-------

Area Address: 49.1111

NLPID: 0xCC

Hostname: 1-000B

IP Address: 192.0.2.3

Metric: 10 IP 192.0.2.2/31

Metric: 10 IS-Extended 1-000A.00

IS-IS Level-2 Link State Database:

LSPID	LSP Seq Num	LSP Checksum	LSP Holddtime	ATT/P/OL
1-000B.00-00	* 0x00000000C	0x6CD0	450	0/0/0

Area Address: 49.1111

NLPID: 0xCC

Hostname: 1-000B

IP Address: 192.0.2.4

Metric: 10 IP 192.0.2.4/31

Metric: 10 IS-Extended 2-000C.00

Metric: 10 IP 192.0.2.2/31

Metric: 10 IP 198.51.100.2/32

Route Admin Tag: 2000

Metric: 20 IP 198.58.100.1/32

Route Admin Tag: 1000

2-000C.00-00	0x000000011	0x990F	944	0/0/0
--------------	-------------	--------	-----	-------

Area Address: 49.2222

NLPID: 0xCC

Hostname: 2-000C

IP Address: 192.0.2.5

Metric: 10 IP 192.0.2.4/31

Metric: 10 IS-Extended 1-000B.00

Metric: 10 IP 192.0.2.6/31

Metric: 10 IP 192.0.2.8/31

Metric: 20 IP 192.0.2.10/31

1-000B#show isis data detail

IS-IS Level-1 Link State Database:

LSPID	LSP Seq Num	LSP Checksum	LSP Holdtime	ATT/P/OL
1-000A.00-00	0x000000010	0x778C	1071	0/0/0

Area Address: 49.1111

NLPID: 0xCC

Hostname: 1-000A

IP Address: 198.51.100.3

Metric: 10 IP 192.0.2.2/31

Metric: 10 IP 198.58.100.1/32

Metric: 10 IP 198.51.100.3/32

Metric: 10 IS-Extended 1-000B.00

Metric: 0 IP 198.51.100.2/32

1-000B.00-00	* 0x00000000B	0x5603	1141	1/0/0
--------------	---------------	--------	------	-------

Area Address: 49.1111

NLPID: 0xCC

Hostname: 1-000B

IP Address: 192.0.2.3

Metric: 10 IP 192.0.2.2/31

Metric: 10 IS-Extended 1-000A.00

IS-IS Level-2 Link State Database:

LSPID	LSP Seq Num	LSP Checksum	LSP Holdtime	ATT/P/OL
1-000B.00-00	* 0x00000000C	0x6CD0	450	0/0/0

Area Address: 49.1111

NLPID: 0xCC

Hostname: 1-000B

IP Address: 192.0.2.4

Metric: 10 IP 192.0.2.4/31

Metric: 10 IS-Extended 2-000C.00

Metric: 10 IP 192.0.2.2/31

Metric: 10 IP 198.51.100.2/32

Metric: 20 IP 198.58.100.1/32

2-000C.00-00	0x000000011	0x990F	944	0/0/0
--------------	-------------	--------	-----	-------

Area Address: 49.2222

NLPID: 0xCC

Hostname: 2-000C

IP Address: 192.0.2.5

Metric: 10 IP 192.0.2.4/31

Metric: 10 IS-Extended 1-000B.00

Metric: 10 IP 192.0.2.6/31

Metric: 10 IP 192.0.2.8/31

Metric: 20 IP 192.0.2.10/31

1-000B#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

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, H - NHRP, l - LISP

+ - replicated route, % - next hop override

Gateway of last resort is not set

```
192.0.2.0/24 is variably subnetted, 7 subnets, 2 masks
C      192.0.2.2/31 is directly connected, FastEthernet0/1
L      192.0.2.3/32 is directly connected, FastEthernet0/1
C      192.0.2.4/31 is directly connected, FastEthernet0/0
L      192.0.2.4/32 is directly connected, FastEthernet0/0
i L2   192.0.2.6/31 [115/20] via 192.0.2.5, 00:28:11, FastEthernet0/0
i L2   192.0.2.8/31 [115/20] via 192.0.2.5, 00:38:19, FastEthernet0/0
i L2   192.0.2.10/31 [115/30] via 192.0.2.5, 00:28:11, FastEthernet0/0
198.51.100.0/32 is subnetted, 2 subnets
i L1   198.51.100.2 [115/10] via 192.0.2.2, 00:41:48, FastEthernet0/1
i L1   198.51.100.3 [115/20] via 192.0.2.2, 00:41:48, FastEthernet0/1
198.58.100.0/32 is subnetted, 1 subnets
i L1   198.58.100.1 [115/20] via 192.0.2.2, 00:41:48, FastEthernet0/1
1-000B#
```

2-000C#show isis neighbors

System Id	Type	Interface	IP Address	State	Holdtime	Circuit Id
1-000B	L2	Fa0/1	192.0.2.4	UP	28	00
2-000D	L1	Fa0/0	192.0.2.7	UP	24	00
2-000E	L1	Et1/0	192.0.2.8	UP	25	00

2-000C#show isis data verbose

IS-IS Level-1 Link State Database:

LSPID	LSP Seq Num	LSP Checksum	LSP Holdtime	ATT/P/OL
2-000C.00-00	* 0x00000000B	0x739F	994	1/0/0
Area Address: 49.2222				
NLPID: 0xCC				
Hostname: 2-000C				
IP Address: 192.0.2.9				
Metric: 10 IP 192.0.2.8/31				
Metric: 10 IP 192.0.2.6/31				
Metric: 10 IS-Extended 2-000D.00				
Metric: 10 IS-Extended 2-000E.00				
Metric: 30 IP-Interarea 198.58.100.1/32				
Route Admin Tag: 1000				
2-000D.00-00	0x000000005	0x9C99	895	0/0/0
Area Address: 49.2222				
NLPID: 0xCC				
Hostname: 2-000D				
IP Address: 192.0.2.7				
Metric: 10 IP 192.0.2.6/31				
Metric: 10 IS-Extended 2-000C.00				
2-000E.00-00	0x000000011	0x5E40	913	0/0/0
Area Address: 49.2222				
NLPID: 0xCC				
Hostname: 2-000E				
IP Address: 192.0.2.8				

Metric: 10 IP 192.0.2.8/31
Metric: 10 IS-Extended 2-000C.00
Metric: 10 IP 192.0.2.10/31

IS-IS Level-2 Link State Database:

LSPID	LSP Seq Num	LSP Checksum	LSP Holddtime	ATT/P/OL
1-000B.00-00	0x0000000C	0x6CD0	419	0/0/0

Area Address: 49.1111

NLPID: 0xCC

Hostname: 1-000B

IP Address: 192.0.2.4

Metric: 10 IP 192.0.2.4/31

Metric: 10 IS-Extended 2-000C.00

Metric: 10 IP 192.0.2.2/31

Metric: 10 IP 198.51.100.2/32

Route Admin Tag: 2000

Metric: 20 IP 198.58.100.1/32

Route Admin Tag: 1000

2-000C.00-00	* 0x00000011	0x990F	917	0/0/0
--------------	--------------	--------	-----	-------

Area Address: 49.2222

NLPID: 0xCC

Hostname: 2-000C

IP Address: 192.0.2.5

Metric: 10 IP 192.0.2.4/31

Metric: 10 IS-Extended 1-000B.00

Metric: 10 IP 192.0.2.6/31

Metric: 10 IP 192.0.2.8/31

Metric: 20 IP 192.0.2.10/31

2-000C#show isis data detail

IS-IS Level-1 Link State Database:

LSPID	LSP Seq Num	LSP Checksum	LSP Holddtime	ATT/P/OL
2-000C.00-00	* 0x0000000B	0x739F	994	1/0/0

Area Address: 49.2222

NLPID: 0xCC

Hostname: 2-000C

IP Address: 192.0.2.9

Metric: 10 IP 192.0.2.8/31

Metric: 10 IP 192.0.2.6/31

Metric: 10 IS-Extended 2-000D.00

Metric: 10 IS-Extended 2-000E.00

Metric: 30 IP-Interarea 198.58.100.1/32

2-000D.00-00	0x00000005	0x9C99	895	0/0/0
--------------	------------	--------	-----	-------

Area Address: 49.2222

NLPID: 0xCC

Hostname: 2-000D

IP Address: 192.0.2.7

Metric: 10 IP 192.0.2.6/31

Metric: 10 IS-Extended 2-000C.00

2-000E.00-00	0x00000011	0x5E40	913	0/0/0
--------------	------------	--------	-----	-------

Area Address: 49.2222

```

NLPID:      0xCC
Hostname: 2-000E
IP Address: 192.0.2.8
Metric: 10   IP 192.0.2.8/31
Metric: 10   IS-Extended 2-000C.00
Metric: 10   IP 192.0.2.10/31
IS-IS Level-2 Link State Database:
LSPID      LSP Seq Num  LSP Checksum  LSP Holddtime  ATT/P/OL
1-000B.00-00  0x00000000C  0x6CD0       419           0/0/0
Area Address: 49.1111
NLPID:      0xCC
Hostname: 1-000B
IP Address: 192.0.2.4
Metric: 10   IP 192.0.2.4/31
Metric: 10   IS-Extended 2-000C.00
Metric: 10   IP 192.0.2.2/31
Metric: 10   IP 198.51.100.2/32
Metric: 20   IP 198.58.100.1/32
2-000C.00-00  * 0x000000011  0x990F       917           0/0/0
Area Address: 49.2222
NLPID:      0xCC
Hostname: 2-000C
IP Address: 192.0.2.5
Metric: 10   IP 192.0.2.4/31
Metric: 10   IS-Extended 1-000B.00
Metric: 10   IP 192.0.2.6/31
Metric: 10   IP 192.0.2.8/31
Metric: 20   IP 192.0.2.10/31
2-000C#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
       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, H - NHRP, l - LISP
       + - replicated route, % - next hop override

Gateway of last resort is not set

192.0.2.0/24 is variably subnetted, 8 subnets, 2 masks
i L2    192.0.2.2/31 [115/20] via 192.0.2.4, 00:39:55, FastEthernet0/1
C       192.0.2.4/31 is directly connected, FastEthernet0/1
L       192.0.2.5/32 is directly connected, FastEthernet0/1
C       192.0.2.6/31 is directly connected, FastEthernet0/0
L       192.0.2.6/32 is directly connected, FastEthernet0/0
C       192.0.2.8/31 is directly connected, Ethernet1/0
L       192.0.2.9/32 is directly connected, Ethernet1/0
i L1    192.0.2.10/31 [115/20] via 192.0.2.8, 00:28:42, Ethernet1/0
198.51.100.0/32 is subnetted, 1 subnets

```

```
i L2      198.51.100.2 [115/20] via 192.0.2.4, 00:39:55, FastEthernet0/1
          198.58.100.0/32 is subnetted, 1 subnets
i L2      198.58.100.1 [115/30] via 192.0.2.4, 00:39:55, FastEthernet0/1
2-000C#
```

```
2-000D#show isis neighbors
```

System Id	Type	Interface	IP Address	State	Holdtime	Circuit Id
2-000C	L1	Fa0/1	192.0.2.6	UP	25	02

```
2-000D#show isis data verbose
```

IS-IS Level-1 Link State Database:

LSPID	LSP Seq Num	LSP Checksum	LSP Holdtime	ATT/P/OL
2-000C.00-00	0x00000000B	0x739F	962	1/0/0

Area Address: 49.2222

NLPID: 0xCC

Hostname: 2-000C

IP Address: 192.0.2.9

Metric: 10 IP 192.0.2.8/31

Metric: 10 IP 192.0.2.6/31

Metric: 10 IS-Extended 2-000D.00

Metric: 10 IS-Extended 2-000E.00

Metric: 30 IP-Interarea 198.58.100.1/32

Route Admin Tag: 1000

2-000D.00-00	* 0x000000005	0x9C99	867	0/0/0
--------------	---------------	--------	-----	-------

Area Address: 49.2222

NLPID: 0xCC

Hostname: 2-000D

IP Address: 192.0.2.7

Metric: 10 IP 192.0.2.6/31

Metric: 10 IS-Extended 2-000C.00

2-000E.00-00	0x000000011	0x5E40	881	0/0/0
--------------	-------------	--------	-----	-------

Area Address: 49.2222

NLPID: 0xCC

Hostname: 2-000E

IP Address: 192.0.2.8

Metric: 10 IP 192.0.2.8/31

Metric: 10 IS-Extended 2-000C.00

Metric: 10 IP 192.0.2.10/31

IS-IS Level-2 Link State Database:

LSPID	LSP Seq Num	LSP Checksum	LSP Holdtime	ATT/P/OL
2-000D.00-00	* 0x000000010	0x9109	887	0/0/0

Area Address: 49.2222

NLPID: 0xCC

Hostname: 2-000D

Metric: 10 IP 192.0.2.6/31

Metric: 20 IP 192.0.2.8/31

Metric: 30 IP 192.0.2.10/31

```
2-000D#show isis data detail
```

IS-IS Level-1 Link State Database:

LSPID	LSP Seq Num	LSP Checksum	LSP Holddtime	ATT/P/OL
2-000C.00-00	0x0000000B	0x739F	962	1/0/0
Area Address: 49.2222				
NLPID: 0xCC				
Hostname: 2-000C				
IP Address: 192.0.2.9				
Metric: 10 IP 192.0.2.8/31				
Metric: 10 IP 192.0.2.6/31				
Metric: 10 IS-Extended 2-000D.00				
Metric: 10 IS-Extended 2-000E.00				
Metric: 30 IP-Interarea 198.58.100.1/32				

2-000D.00-00	* 0x00000005	0x9C99	867	0/0/0
Area Address: 49.2222				
NLPID: 0xCC				
Hostname: 2-000D				
IP Address: 192.0.2.7				
Metric: 10 IP 192.0.2.6/31				
Metric: 10 IS-Extended 2-000C.00				
2-000E.00-00	0x00000011	0x5E40	881	0/0/0
Area Address: 49.2222				
NLPID: 0xCC				
Hostname: 2-000E				
IP Address: 192.0.2.8				
Metric: 10 IP 192.0.2.8/31				
Metric: 10 IS-Extended 2-000C.00				
Metric: 10 IP 192.0.2.10/31				

IS-IS Level-2 Link State Database:

LSPID	LSP Seq Num	LSP Checksum	LSP Holddtime	ATT/P/OL
2-000D.00-00	* 0x00000010	0x9109	887	0/0/0
Area Address: 49.2222				
NLPID: 0xCC				
Hostname: 2-000D				
Metric: 10 IP 192.0.2.6/31				
Metric: 20 IP 192.0.2.8/31				
Metric: 30 IP 192.0.2.10/31				

2-000D#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
 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, H - NHRP, l - LISP
 + - replicated route, % - next hop override

Gateway of last resort is 192.0.2.6 to network 0.0.0.0

```
i*L1 0.0.0.0/0 [115/10] via 192.0.2.6, 00:33:03, FastEthernet0/1
192.0.2.0/24 is variably subnetted, 4 subnets, 2 masks
```

```

C      192.0.2.6/31 is directly connected, FastEthernet0/1
L      192.0.2.7/32 is directly connected, FastEthernet0/1
i L1   192.0.2.8/31 [115/20] via 192.0.2.6, 00:33:03, FastEthernet0/1
i L1   192.0.2.10/31 [115/30] via 192.0.2.6, 00:29:12, FastEthernet0/1
      198.58.100.0/32 is subnetted, 1 subnets
i ia   198.58.100.1 [115/40] via 192.0.2.6, 00:33:03, FastEthernet0/1
2-000D#

```

```

2-000E#show isis neighbors

```

System Id	Type	Interface	IP Address	State	Holdtime	Circuit Id
2-000C	L1	Fa0/0	192.0.2.9	UP	27	01

```

2-000E#show isis data verbose

```

IS-IS Level-1 Link State Database:

LSPID	LSP Seq Num	LSP Checksum	LSP Holdtime	ATT/P/OL
2-000C.00-00	0x00000000B	0x739F	1079	1/0/0

```

Area Address: 49.2222

```

```

NLPID: 0xCC

```

```

Hostname: 2-000C

```

```

IP Address: 192.0.2.9

```

```

Metric: 10 IP 192.0.2.8/31

```

```

Metric: 10 IP 192.0.2.6/31

```

```

Metric: 10 IS-Extended 2-000D.00

```

```

Metric: 10 IS-Extended 2-000E.00

```

```

Metric: 30 IP-Interarea 198.58.100.1/32

```

```

Route Admin Tag: 1000

```

2-000D.00-00	0x000000005	0x9C99	980	0/0/0
--------------	-------------	--------	-----	-------

```

Area Address: 49.2222

```

```

NLPID: 0xCC

```

```

Hostname: 2-000D

```

```

IP Address: 192.0.2.7

```

```

Metric: 10 IP 192.0.2.6/31

```

```

Metric: 10 IS-Extended 2-000C.00

```

2-000E.00-00	* 0x000000011	0x5E40	1002	0/0/0
--------------	---------------	--------	------	-------

```

Area Address: 49.2222

```

```

NLPID: 0xCC

```

```

Hostname: 2-000E

```

```

IP Address: 192.0.2.8

```

```

Metric: 10 IP 192.0.2.8/31

```

```

Metric: 10 IS-Extended 2-000C.00

```

```

Metric: 10 IP 192.0.2.10/31

```

IS-IS Level-2 Link State Database:

LSPID	LSP Seq Num	LSP Checksum	LSP Holdtime	ATT/P/OL
2-000E.00-00	* 0x000000006	0x2095	1000	0/0/0

```

Area Address: 49.2222

```

```

NLPID: 0xCC

```

```

Hostname: 2-000E

```

```

Metric: 20 IP 192.0.2.6/31

```

```

Metric: 10 IP 192.0.2.8/31

```

2-000E#show isis data detail

IS-IS Level-1 Link State Database:

LSPID	LSP Seq Num	LSP Checksum	LSP Holddtime	ATT/P/OL
2-000C.00-00	0x0000000B	0x739F	1079	1/0/0

Area Address: 49.2222

NLPID: 0xCC

Hostname: 2-000C

IP Address: 192.0.2.9

Metric: 10 IP 192.0.2.8/31

Metric: 10 IP 192.0.2.6/31

Metric: 10 IS-Extended 2-000D.00

Metric: 10 IS-Extended 2-000E.00

Metric: 30 IP-Interarea 198.58.100.1/32

2-000D.00-00	0x00000005	0x9C99	980	0/0/0
--------------	------------	--------	-----	-------

Area Address: 49.2222

NLPID: 0xCC

Hostname: 2-000D

IP Address: 192.0.2.7

Metric: 10 IP 192.0.2.6/31

Metric: 10 IS-Extended 2-000C.00

2-000E.00-00	* 0x00000011	0x5E40	1002	0/0/0
--------------	--------------	--------	------	-------

Area Address: 49.2222

NLPID: 0xCC

Hostname: 2-000E

IP Address: 192.0.2.8

Metric: 10 IP 192.0.2.8/31

Metric: 10 IS-Extended 2-000C.00

Metric: 10 IP 192.0.2.10/31

IS-IS Level-2 Link State Database:

LSPID	LSP Seq Num	LSP Checksum	LSP Holddtime	ATT/P/OL
2-000E.00-00	* 0x00000006	0x2095	1000	0/0/0

Area Address: 49.2222

NLPID: 0xCC

Hostname: 2-000E

Metric: 20 IP 192.0.2.6/31

Metric: 10 IP 192.0.2.8/31

2-000E#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

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, H - NHRP, l - LISP

+ - replicated route, % - next hop override

Gateway of last resort is 192.0.2.9 to network 0.0.0.0

i*L1 0.0.0.0/0 [115/10] via 192.0.2.9, 00:29:30, FastEthernet0/0


```

    192.0.2.0/24 is variably subnetted, 5 subnets, 2 masks
i L1    192.0.2.6/31 [115/20] via 192.0.2.9, 00:29:30, FastEthernet0/0
C       192.0.2.8/31 is directly connected, FastEthernet0/0
L       192.0.2.8/32 is directly connected, FastEthernet0/0
C       192.0.2.10/31 is directly connected, FastEthernet0/1
L       192.0.2.11/32 is directly connected, FastEthernet0/1
    198.58.100.0/32 is subnetted, 1 subnets
i ia    198.58.100.1 [115/40] via 192.0.2.9, 00:29:30, FastEthernet0/0
2-000E#

```

Configurations

```

!
hostname 1-000A
!
no ip domain lookup
ipv6 unicast-routing
ipv6 cef
!
interface Loopback0
 ip address 198.58.100.1 255.255.255.255
 ip router isis
 isis circuit-type level-1
 isis tag 1000
!
interface Loopback1
 ip address 198.51.100.2 255.255.255.255
!
interface Loopback3
 ip address 198.51.100.3 255.255.255.255
 ip router isis
 isis circuit-type level-1
 isis tag 3000
!
interface FastEthernet0/0
 ip address 192.0.2.2 255.255.255.254
 ip router isis
 speed auto
 duplex auto
 isis circuit-type level-1
 isis network point-to-point
!
interface FastEthernet0/1
 no ip address
 shutdown
 speed auto
 duplex auto
!
router isis
 net 49.1111.0000.0000.000a.00

```

```
metric-style wide
redistribute connected route-map set-tag level-1
!
route-map set-tag permit 15
  set tag 2000
!
End

!
hostname 1-000B
!
interface FastEthernet0/0
  ip address 192.0.2.4 255.255.255.254
  ip router isis
  speed auto
  duplex auto
  isis circuit-type level-2-only
  isis network point-to-point
!
interface FastEthernet0/1
  ip address 192.0.2.3 255.255.255.254
  ip router isis
  speed auto
  duplex auto
  isis circuit-type level-1
  isis network point-to-point
!
router isis
  net 49.1111.0000.0000.000b.00
  metric-style wide
  redistribute isis ip level-1 into level-2 route-map l1-to-l2
!
route-map l1-to-l2 deny 10
  match tag 3000
!
route-map l1-to-l2 permit 20
!
End

!
hostname 2-000C
!
interface FastEthernet0/0
  ip address 192.0.2.6 255.255.255.254
  ip router isis
  speed auto
  duplex auto
  isis circuit-type level-1
  isis network point-to-point
!
```

```
interface FastEthernet0/1
 ip address 192.0.2.5 255.255.255.254
 ip router isis
 speed auto
 duplex auto
 isis circuit-type level-2-only
 isis network point-to-point
!
interface Ethernet1/0
 ip address 192.0.2.9 255.255.255.254
 ip router isis
 duplex full
 isis circuit-type level-1
 isis network point-to-point
!
interface Ethernet1/1
 no ip address
 shutdown
 duplex full
!
interface Ethernet1/2
 no ip address
 shutdown
 duplex full
!
interface Ethernet1/3
 no ip address
 shutdown
 duplex full
!
router isis
 net 49.2222.0000.0000.000c.00
 metric-style wide
 redistribute isis ip level-2 into level-1 route-map l2-to-l1
!
route-map l2-to-l1 permit 10
 match tag 1000
!
route-map l2-to-l1 deny 20
!
End

!
hostname 2-000D
!
interface FastEthernet0/1
 ip address 192.0.2.7 255.255.255.254
 ip router isis
 speed auto
 duplex auto
```

```

isis circuit-type level-1
isis network point-to-point
!
router isis
 net 49.2222.0000.0000.000d.00
 metric-style wide
!
End

!
hostname 2-000E
!
interface FastEthernet0/0
 ip address 192.0.2.8 255.255.255.254
 ip router isis
 speed auto
 duplex auto
 isis circuit-type level-1
 isis network point-to-point
!
interface FastEthernet0/1
 ip address 192.0.2.11 255.255.255.254
 speed auto
 duplex auto
!
router eigrp 100
 network 192.0.2.10 0.0.0.1
!
router isis
 net 49.2222.0000.0000.000e.00
 metric-style wide
 redistribute maximum-prefix 10 warning-only
 redistribute eigrp 100 metric 10 level-1
!
End

!
hostname EIGRP
!
interface Loopback0
 ip address 203.0.113.1 255.255.255.255
 shutdown
!
interface Loopback1
 ip address 203.0.113.2 255.255.255.255
 shutdown
!
interface Loopback2
 ip address 203.0.113.3 255.255.255.255
 shutdown

```

```
!  
interface Loopback3  
  ip address 203.0.113.4 255.255.255.255  
  shutdown  
!  
interface Loopback4  
  ip address 203.0.113.5 255.255.255.255  
  shutdown  
!  
interface Loopback5  
  ip address 203.0.113.6 255.255.255.255  
  shutdown  
!  
interface Loopback6  
  ip address 203.0.113.7 255.255.255.255  
  shutdown  
!  
interface Loopback7  
  ip address 203.0.113.8 255.255.255.255  
  shutdown  
!  
interface Loopback8  
  ip address 203.0.113.9 255.255.255.255  
  shutdown  
!  
interface Loopback9  
  ip address 203.0.113.10 255.255.255.255  
  shutdown  
!  
interface Loopback10  
  ip address 203.0.113.11 255.255.255.255  
  shutdown  
!  
interface Loopback11  
  ip address 203.0.113.12 255.255.255.255  
  shutdown  
!  
interface Loopback12  
  ip address 203.0.113.13 255.255.255.255  
  shutdown  
!  
interface Loopback13  
  ip address 203.0.113.14 255.255.255.255  
  shutdown  
!  
interface Loopback14  
  ip address 203.0.113.15 255.255.255.255  
  shutdown  
!  
interface Loopback15
```

```
ip address 203.0.113.16 255.255.255.255
shutdown
!
interface Loopback16
ip address 203.0.113.17 255.255.255.255
shutdown
!
interface Loopback17
ip address 203.0.113.18 255.255.255.255
shutdown
!
interface Loopback18
ip address 203.0.113.19 255.255.255.255
shutdown
!
interface Loopback19
ip address 203.0.113.20 255.255.255.255
shutdown
!
interface FastEthernet0/0
ip address 192.0.2.10 255.255.255.254
speed auto
duplex auto
!
router eigrp 100
network 192.0.2.0
network 203.0.113.0
!
end
```