

r2#debug ip ospf events

OSPF events debugging is on

```
*Sep 24 18:56:35.764 KRSK: OSPF: Send hello to 224.0.0.5 area 1 on Serial0/0/0 from 10.16.0.2
*Sep 24 18:56:36.690 KRSK: OSPF: Rcv hello from 10.0.1.3 area 1 from Serial0/1/0 10.16.1.6
*Sep 24 18:56:36.690 KRSK: OSPF: End of hello processing
*Sep 24 18:56:39.370 KRSK: OSPF: Rcv hello from 10.0.0.1 area 1 from Serial0/0/0 10.16.0.1
*Sep 24 18:56:39.370 KRSK: OSPF: End of hello processing
*Sep 24 18:56:42.323 KRSK: OSPF: Interface Serial0/0/0 going Down
*Sep 24 18:56:42.876 KRSK: OSPF: Send hello to 224.0.0.5 area 1 on Serial0/1/0 from 10.16.1.5
*Sep 24 18:56:42.876 KRSK: OSPF: Send hello to 224.0.0.5 area 1 on Serial0/0/1 from 10.16.1.1
*Sep 24 18:56:43.545 KRSK: OSPF: Rcv LS UPD from 10.0.1.3 on Serial0/1/0 length 136 LSA count 1
*Sep 24 18:56:44.070 KRSK: OSPF: Rcv hello from 10.0.1.2 area 1 from Serial0/0/1 10.16.1.2
*Sep 24 18:56:44.070 KRSK: OSPF: End of hello processing
*Sep 24 18:56:46.690 KRSK: OSPF: Rcv hello from 10.0.1.3 area 1 from Serial0/1/0 10.16.1.6
*Sep 24 18:56:46.690 KRSK: OSPF: End of hello processing
*Sep 24 18:56:52.876 KRSK: OSPF: Send hello to 224.0.0.5 area 1 on Serial0/0/1 from 10.16.1.1
*Sep 24 18:56:52.876 KRSK: OSPF: Send hello to 224.0.0.5 area 1 on Serial0/1/0 from 10.16.1.5
*Sep 24 18:56:54.070 KRSK: OSPF: Rcv hello from 10.0.1.2 area 1 from Serial0/0/1 10.16.1.2
*Sep 24 18:56:54.070 KRSK: OSPF: End of hello processing
*Sep 24 18:56:54.924 KRSK: OSPF: Interface Serial0/0/0 going Up
*Sep 24 18:56:54.924 KRSK: OSPF: Send hello to 224.0.0.5 area 1 on Serial0/0/0 from 10.16.0.2
*Sep 24 18:56:54.932 KRSK: OSPF: Rcv hello from 10.0.0.1 area 1 from Serial0/0/0 10.16.0.1
*Sep 24 18:56:54.932 KRSK: OSPF: Send immediate hello to nbr 10.95.0.1, src address 10.16.0.1, on Serial0/0/0
*Sep 24 18:56:54.932 KRSK: OSPF: Send hello to 224.0.0.5 area 1 on Serial0/0/0 from 10.16.0.2
*Sep 24 18:56:54.932 KRSK: OSPF: End of hello processing
*Sep 24 18:56:54.932 KRSK: OSPF: Rcv hello from 10.0.0.1 area 1 from Serial0/0/0 10.16.0.1
*Sep 24 18:56:54.936 KRSK: OSPF: 2 Way Communication to 10.0.0.1 on Serial0/0/0, state 2WAY
*Sep 24 18:56:54.936 KRSK: OSPF: Send DBD to 10.0.0.1 on Serial0/0/0 seq 0x161 opt 0x52 flag 0x7 len 32
*Sep 24 18:56:54.936 KRSK: OSPF: End of hello processing
*Sep 24 18:56:54.936 KRSK: OSPF: Rcv DBD from 10.0.0.1 on Serial0/0/0 seq 0x7D1 opt 0x52 flag 0x7 len 32 mtu 1500 state EXSTART
*Sep 24 18:56:54.940 KRSK: OSPF: First DBD and we are not SLAVE
*Sep 24 18:56:54.940 KRSK: OSPF: Rcv DBD from 10.0.0.1 on Serial0/0/0 seq 0x161 opt 0x52 flag 0x2 len 172 mtu 1500 state EXSTART
*Sep 24 18:56:54.940 KRSK: OSPF: NBR Negotiation Done. We are the MASTER
*Sep 24 18:56:54.944 KRSK: OSPF: Send DBD to 10.0.0.1 on Serial0/0/0 seq 0x162 opt 0x52 flag 0x3 len 172
*Sep 24 18:56:54.948 KRSK: OSPF: Rcv DBD from 10.0.0.1 on Serial0/0/0 seq 0x162 opt 0x52 flag 0x0 len 32 mtu 1500 state EXCHANGE
*Sep 24 18:56:54.948 KRSK: OSPF: Send DBD to 10.0.0.1 on Serial0/0/0 seq 0x163 opt 0x52 flag 0x1 len 32
*Sep 24 18:56:54.948 KRSK: OSPF: Send LS REQ to 10.0.0.1 length 12 LSA count 1
*Sep 24 18:56:54.956 KRSK: OSPF: Rcv LS REQ from 10.0.0.1 on Serial0/0/0 length 48 LSA count 2
*Sep 24 18:56:54.956 KRSK: OSPF: Send UPD to 10.16.0.1 on Serial0/0/0 length 196 LSA count 2
*Sep 24 18:56:54.956 KRSK: OSPF: Rcv DBD from 10.0.0.1 on Serial0/0/0 seq 0x163 opt 0x52 flag 0x0 len 32 mtu 1500 state EXCHANGE
*Sep 24 18:56:54.956 KRSK: OSPF: Exchange Done with 10.0.0.1 on Serial0/0/0
*Sep 24 18:56:54.956 KRSK: OSPF: Rcv LS UPD from 10.0.0.1 on Serial0/0/0 length 88 LSA count 1
*Sep 24 18:56:54.960 KRSK: OSPF: Synchronized with 10.0.0.1 on Serial0/0/0, state FULL
*Sep 24 18:56:54.960 KRSK: %OSPF-5-ADJCHG: Process 1, Nbr 10.0.0.1 on Serial0/0/0 from LOADING to FULL, Loading Done
*Sep 24 18:56:55.428 KRSK: OSPF: Rcv LS UPD from 10.0.0.1 on Serial0/0/0 length 112 LSA count 1
*Sep 24 18:56:56.690 KRSK: OSPF: Rcv hello from 10.0.1.3 area 1 from Serial0/1/0 10.16.1.6
*Sep 24 18:56:56.690 KRSK: OSPF: End of hello processing
```

r2#debug ip ospf adj

OSPF adjacency events debugging is on

***Sep 24 18:59:24.260 KRSK: OSPF: Interface Serial0/0/0 going Down**

*Sep 24 18:59:24.260 KRSK: OSPF: 10.0.0.1 address 10.16.0.1 on Serial0/0/0 is dead, state DOWN

*Sep 24 18:59:24.264 KRSK: OSPF: 10.0.1.1 address 10.16.0.2 on Serial0/0/0 is dead, state DOWN

*Sep 24 18:59:24.765 KRSK: OSPF: Build router LSA for area 1, router ID 10.0.1.1, seq 0x8000081

*Sep 24 18:59:30.607 KRSK: OSPF: Build router LSA for area 1, router ID 10.0.1.1, seq 0x8000082

***Sep 24 18:59:47.346 KRSK: OSPF: Interface Serial0/0/0 going Up**

*Sep 24 18:59:47.350 KRSK: OSPF: 2 Way Communication to 10.0.0.1 on Serial0/0/0, state 2WAY

*Sep 24 18:59:47.354 KRSK: OSPF: Send DBD to 10.0.0.1 on Serial0/0/0 seq 0x474 opt 0x52 flag 0x7 len 32

*Sep 24 18:59:47.354 KRSK: OSPF: Rcv DBD from 10.0.0.1 on Serial0/0/0 seq 0x1C50 opt 0x52 flag 0x7 len 32 mtu 1500 state EXSTART

*Sep 24 18:59:47.354 KRSK: OSPF: First DBD and we are not SLAVE

*Sep 24 18:59:47.358 KRSK: OSPF: Rcv DBD from 10.0.0.1 on Serial0/0/0 seq 0x474 opt 0x52 flag 0x2 len 172 mtu 1500 state EXSTART

*Sep 24 18:59:47.358 KRSK: OSPF: NBR Negotiation Done. We are the MASTER

*Sep 24 18:59:47.358 KRSK: OSPF: Send DBD to 10.0.0.1 on Serial0/0/0 seq 0x475 opt 0x52 flag 0x3 len 172

*Sep 24 18:59:47.362 KRSK: OSPF: Rcv DBD from 10.0.0.1 on Serial0/0/0 seq 0x475 opt 0x52 flag 0x0 len 32 mtu 1500 state EXCHANGE

*Sep 24 18:59:47.366 KRSK: OSPF: Send DBD to 10.0.0.1 on Serial0/0/0 seq 0x476 opt 0x52 flag 0x1 len 32

*Sep 24 18:59:47.366 KRSK: OSPF: Send LS REQ to 10.0.0.1 length 24 LSA count 2

*Sep 24 18:59:47.370 KRSK: OSPF: Rcv LS REQ from 10.0.0.1 on Serial0/0/0 length 36 LSA count 1

*Sep 24 18:59:47.370 KRSK: OSPF: Send UPD to 10.16.0.1 on Serial0/0/0 length 88 LSA count 1

*Sep 24 18:59:47.370 KRSK: OSPF: Rcv DBD from 10.0.0.1 on Serial0/0/0 seq 0x476 opt 0x52 flag 0x0 len 32 mtu 1500 state EXCHANGE

*Sep 24 18:59:47.374 KRSK: OSPF: Exchange Done with 10.0.0.1 on Serial0/0/0

*Sep 24 18:59:47.374 KRSK: OSPF: Rcv LS UPD from 10.0.0.1 on Serial0/0/0 length 196 LSA count 2

*Sep 24 18:59:47.378 KRSK: OSPF: Synchronized with 10.0.0.1 on Serial0/0/0, state FULL

*Sep 24 18:59:47.378 KRSK: %OSPF-5-ADJCHG: Process 1, Nbr 10.0.0.1 on Serial0/0/0 from LOADING to FULL, Loading Done

*Sep 24 18:59:47.843 KRSK: OSPF: Rcv LS UPD from 10.0.0.1 on Serial0/0/0 length 112 LSA count 1

*Sep 24 18:59:47.847 KRSK: OSPF: Build router LSA for area 1, router ID 10.0.1.1, seq 0x8000083

r2#debug ip ospf packet

OSPF packet debugging is on

*Sep 24 19:03:04.077 KRSK: OSPF: rcv. v:2 t:1 l:48 rid:10.0.1.2

aid:0.0.0.1 chk:D4E5 aut:0 auk: from Serial0/0/1

Sep 24 19:03:06.401 KRSK: %LINK-3-UPDOWN: Interface Serial0/0/0, changed state to down**Sep 24 19:03:06.401 KRSK: %OSPF-5-ADJCHG: Process 1, Nbr 10.0.0.1 on Serial0/0/0 from FULL to DOWN, Neighbor Down: Interface down or detached**

*Sep 24 19:03:06.697 MSK: OSPF: rcv. v:2 t:1 l:48 rid:10.0.1.3

aid:0.0.0.1 chk:D4E4 aut:0 auk: from Serial0/1/0

***Sep 24 19:03:07.402 KRSK: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/0, changed state to down**

*Sep 24 19:03:09.405 KRSK: OSPF: rcv. v:2 t:5 l:44 rid:10.0.1.2

aid:0.0.0.1 chk:CE57 aut:0 auk: from Serial0/0/1

*Sep 24 19:03:09.405 KRSK: OSPF: rcv. v:2 t:5 l:44 rid:10.0.1.3

aid:0.0.0.1 chk:CE56 aut:0 auk: from Serial0/1/0

*Sep 24 19:03:14.077 KRSK: OSPF: rcv. v:2 t:1 l:48 rid:10.0.1.2

aid:0.0.0.1 chk:D4E5 aut:0 auk: from Serial0/0/1

*Sep 24 19:03:16.697 KRSK: OSPF: rcv. v:2 t:1 l:48 rid:10.0.1.3

aid:0.0.0.1 chk:D4E4 aut:0 auk: from Serial0/1/0

***Sep 24 19:03:22.916 KRSK: %LINK-3-UPDOWN: Interface Serial0/0/0, changed state to up**

*Sep 24 19:03:22.924 KRSK: OSPF: rcv. v:2 t:1 l:44 rid:10.0.0.1

```
aid:0.0.0.1 chk:E14D aut:0 auk: from Serial0/0/0
*Sep 24 19:03:22.928 KRSK: OSPF: rcv. v:2 t:1 l:48 rid:10.0.0.1
aid:0.0.0.1 chk:D5E8 aut:0 auk: from Serial0/0/0
*Sep 24 19:03:22.928 KRSK: OSPF: rcv. v:2 t:2 l:32 rid:10.0.0.1
aid:0.0.0.1 chk:77D6 aut:0 auk: from Serial0/0/0
*Sep 24 19:03:22.932 KRSK: OSPF: rcv. v:2 t:2 l:172 rid:10.0.0.1
aid:0.0.0.1 chk:9BB0 aut:0 auk: from Serial0/0/0
*Sep 24 19:03:22.936 KRSK: OSPF: rcv. v:2 t:2 l:32 rid:10.0.0.1
aid:0.0.0.1 chk:7BE4 aut:0 auk: from Serial0/0/0
*Sep 24 19:03:22.944 KRSK: OSPF: rcv. v:2 t:3 l:36 rid:10.0.0.1
aid:0.0.0.1 chk:DCB4 aut:0 auk: from Serial0/0/0
*Sep 24 19:03:22.944 KRSK: OSPF: rcv. v:2 t:2 l:32 rid:10.0.0.1
aid:0.0.0.1 chk:7BE3 aut:0 auk: from Serial0/0/0
*Sep 24 19:03:22.948 KRSK: OSPF: rcv. v:2 t:4 l:88 rid:10.0.0.1
aid:0.0.0.1 chk:CD54 aut:0 auk: from Serial0/0/0
*Sep 24 19:03:22.948 KRSK: %OSPF-5-ADJCHG: Process 1, Nbr 10.0.0.1 on Serial0/0/0 from LOADING to FULL, Loading Done
*Sep 24 19:03:23.424 KRSK: OSPF: rcv. v:2 t:4 l:112 rid:10.0.0.1
aid:0.0.0.1 chk:34E7 aut:0 auk: from Serial0/0/0
```

r2#debug ip ospf spf

```
OSPF spf events debugging is on
OSPF spf intra events debugging is on
OSPF spf inter events debugging is on
OSPF spf external events debugging is on
*Feb 10 13:12:19.883 KRSK: %LINK-3-UPDOWN: Interface Serial0/0/0, changed state to down
*Feb 10 13:12:19.883 KRSK: %OSPF-5-ADJCHG: Process 1, Nbr 10.0.0.1 on Serial0/0/0 from FULL to DOWN, Neighbor Down: Interface down or detached
*Feb 10 13:12:20.384 KRSK: OSPF: Schedule SPF in area 1 Change in LS ID 10.0.1.1, LSA type R, , spf-type Full
*Feb 10 13:12:20.384 KRSK: OSPF: forcing SPF in area 1
*Feb 10 13:12:20.885 KRSK: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/0, changed state to down
*Feb 10 13:12:25.384 KRSK: OSPF: running SPF for area 1, SPF-type Full
*Feb 10 13:12:25.384 KRSK: OSPF: Initializing to run spf
*Feb 10 13:12:25.384 KRSK: OSPF - spf_intra() - rebuilding the tree
*Feb 10 13:12:25.384 KRSK: It is a router LSA 10.0.1.1. Link Count 5
*Feb 10 13:12:25.384 KRSK: Processing link 0, id 10.0.1.1, link data 255.255.255.255, type 3, cost 1
*Feb 10 13:12:25.384 KRSK: Add better path to LSA ID 10.0.1.1, gateway 10.0.1.1, dist 1
*Feb 10 13:12:25.384 KRSK: Add path: next-hop 10.0.1.1, interface Loopback0
*Feb 10 13:12:25.388 KRSK: Processing link 1, id 10.0.1.3, link data 10.16.1.5, type 1, cost 50
*Feb 10 13:12:25.388 KRSK: Add better path to LSA ID 10.0.1.3, gateway 10.16.1.6, dist 50
*Feb 10 13:12:25.388 KRSK: OSPF: putting LSA on the clist LSID 10.0.1.3, Type 1, Adv Rtr. 10.0.1.3
*Feb 10 13:12:25.388 KRSK: Add path: next-hop 10.16.1.6, interface Serial0/1/0
*Feb 10 13:12:25.388 KRSK: Processing link 2, id 10.16.1.4, link data 255.255.255.252, type 3, cost 50
*Feb 10 13:12:25.388 KRSK: Add better path to LSA ID 10.16.1.7, gateway 10.16.1.4, dist 50
*Feb 10 13:12:25.392 KRSK: Add path: next-hop 10.16.1.5, interface Serial0/1/0
*Feb 10 13:12:25.392 KRSK: Processing link 3, id 10.0.1.2, link data 10.16.1.1, type 1, cost 50
*Feb 10 13:12:25.392 KRSK: Add better path to LSA ID 10.0.1.2, gateway 10.16.1.2, dist 50
*Feb 10 13:12:25.392 KRSK: OSPF: putting LSA on the clist LSID 10.0.1.2, Type 1, Adv Rtr. 10.0.1.2
*Feb 10 13:12:25.392 KRSK: OSPF: upheap LSA on the clist LSID 10.0.1.2, Type 1, Adv Rtr. 10.0.1.2, from index 2 to index 1
```

```
*Feb 10 13:12:25.392 KRSK:   Add path: next-hop 10.16.1.2, interface Serial0/0/1
*Feb 10 13:12:25.392 KRSK:   Processing link 4, id 10.16.1.0, link data 255.255.255.252, type 3, cost 50
*Feb 10 13:12:25.396 KRSK:   Add better path to LSA ID 10.16.1.3, gateway 10.16.1.0, dist 50
*Feb 10 13:12:25.396 KRSK:   Add path: next-hop 10.16.1.1, interface Serial0/0/1
*Feb 10 13:12:25.396 KRSK: OSPF: downheap LSA on the clist LSID 10.0.1.3, Type 1, Adv Rtr. 10.0.1.3, from index 1 to index 1
*Feb 10 13:12:25.396 KRSK:   It is a router LSA 10.0.1.2. Link Count 6
*Feb 10 13:12:25.396 KRSK:   Processing link 0, id 10.0.1.2, link data 255.255.255.255, type 3, cost 1
*Feb 10 13:12:25.396 KRSK:   Add better path to LSA ID 10.0.1.2, gateway 10.0.1.2, dist 51
*Feb 10 13:12:25.396 KRSK:   Add path: next-hop 10.16.1.2, interface Serial0/0/1
*Feb 10 13:12:25.400 KRSK:   Processing link 1, id 10.32.1.16, link data 255.255.255.240, type 3, cost 1
*Feb 10 13:12:25.400 KRSK:   Add better path to LSA ID 10.32.1.31, gateway 10.32.1.16, dist 51
*Feb 10 13:12:25.400 KRSK:   Add path: next-hop 10.16.1.2, interface Serial0/0/1
*Feb 10 13:12:25.400 KRSK:   Processing link 2, id 10.32.1.0, link data 255.255.255.240, type 3, cost 1
*Feb 10 13:12:25.400 KRSK:   Add better path to LSA ID 10.32.1.15, gateway 10.32.1.0, dist 51
*Feb 10 13:12:25.400 KRSK:   Add path: next-hop 10.16.1.2, interface Serial0/0/1
*Feb 10 13:12:25.404 KRSK:   Processing link 3, id 10.16.1.10, link data 10.16.1.9, type 2, cost 1
*Feb 10 13:12:25.404 KRSK:   Add better path to LSA ID 10.16.1.10, gateway 10.16.1.9, dist 51
*Feb 10 13:12:25.404 KRSK: OSPF: putting LSA on the clist LSID 10.16.1.10, Type 2, Adv Rtr. 10.0.1.3
*Feb 10 13:12:25.404 KRSK: OSPF: upheap LSA on the clist LSID 10.16.1.10, Type 2, Adv Rtr. 10.0.1.3, from index 2 to index 2
*Feb 10 13:12:25.404 KRSK:   Add path: next-hop 10.16.1.2, interface Serial0/0/1
*Feb 10 13:12:25.404 KRSK:   Processing link 4, id 10.0.1.1, link data 10.16.1.2, type 1, cost 50
*Feb 10 13:12:25.404 KRSK:   Ignore newdist 100 olddist 0
*Feb 10 13:12:25.408 KRSK:   Processing link 5, id 10.16.1.0, link data 255.255.255.252, type 3, cost 50
*Feb 10 13:12:25.408 KRSK:   Add better path to LSA ID 10.16.1.3, gateway 10.16.1.0, dist 100
*Feb 10 13:12:25.408 KRSK:   Add path: next-hop 10.16.1.2, interface Serial0/0/1
*Feb 10 13:12:25.408 KRSK: OSPF: downheap LSA on the clist LSID 10.16.1.10, Type 2, Adv Rtr. 10.0.1.3, from index 1 to index 1
*Feb 10 13:12:25.408 KRSK:   It is a router LSA 10.0.1.3. Link Count 6
*Feb 10 13:12:25.408 KRSK:   Processing link 0, id 10.0.1.3, link data 255.255.255.255, type 3, cost 1
*Feb 10 13:12:25.408 KRSK:   Add better path to LSA ID 10.0.1.3, gateway 10.0.1.3, dist 51
*Feb 10 13:12:25.412 KRSK:   Add path: next-hop 10.16.1.6, interface Serial0/1/0
*Feb 10 13:12:25.412 KRSK:   Processing link 1, id 10.32.1.48, link data 255.255.255.240, type 3, cost 1
*Feb 10 13:12:25.412 KRSK:   Add better path to LSA ID 10.32.1.63, gateway 10.32.1.48, dist 51
*Feb 10 13:12:25.412 KRSK:   Add path: next-hop 10.16.1.6, interface Serial0/1/0
*Feb 10 13:12:25.412 KRSK:   Processing link 2, id 10.32.1.32, link data 255.255.255.240, type 3, cost 1
*Feb 10 13:12:25.412 KRSK:   Add better path to LSA ID 10.32.1.47, gateway 10.32.1.32, dist 51
*Feb 10 13:12:25.416 KRSK:   Add path: next-hop 10.16.1.6, interface Serial0/1/0
*Feb 10 13:12:25.416 KRSK:   Processing link 3, id 10.16.1.10, link data 10.16.1.10, type 2, cost 1
*Feb 10 13:12:25.416 KRSK:   Add equal-length path to 10.16.1.10, dist 51
*Feb 10 13:12:25.416 KRSK:   Add path: next-hop 10.16.1.6, interface Serial0/1/0
*Feb 10 13:12:25.416 KRSK:   Processing link 4, id 10.0.1.1, link data 10.16.1.6, type 1, cost 50
*Feb 10 13:12:25.416 KRSK:   Ignore newdist 100 olddist 0
*Feb 10 13:12:25.416 KRSK:   Processing link 5, id 10.16.1.4, link data 255.255.255.252, type 3, cost 50
*Feb 10 13:12:25.420 KRSK:   Add better path to LSA ID 10.16.1.7, gateway 10.16.1.4, dist 100
*Feb 10 13:12:25.420 KRSK:   Add path: next-hop 10.16.1.6, interface Serial0/1/0
*Feb 10 13:12:25.420 KRSK: OSPF: downheap LSA on the clist LSID 10.16.1.10, Type 2, Adv Rtr. 10.0.1.3, from index 1 to index 1
*Feb 10 13:12:25.420 KRSK: OSPF: Add Network Route to 10.16.1.8 Mask /30. Metric: 51, Next Hop: 10.16.1.6
*Feb 10 13:12:25.420 KRSK: OSPF: delete lsa id 10.16.1.10, type 2, adv rtr 10.0.1.3 from delete list
*Feb 10 13:12:25.420 KRSK: OSPF: Add Network Route to 10.16.1.8 Mask /30. Metric: 51, Next Hop: 10.16.1.2
*Feb 10 13:12:25.424 KRSK: OSPF: insert route list LS ID 10.16.1.10, type 2, adv rtr 10.0.1.3
```

```
*Feb 10 13:12:25.424 KRSK: It is a network LSA 10.16.1.10. Router Count 2
*Feb 10 13:12:25.424 KRSK: Processing router id 10.0.1.3
*Feb 10 13:12:25.424 KRSK: New newdist 51 olddist 50
*Feb 10 13:12:25.424 KRSK: Processing router id 10.0.1.2
*Feb 10 13:12:25.424 KRSK: New newdist 51 olddist 50
*Feb 10 13:12:25.424 KRSK: OSPF: Adding Stub nets
*Feb 10 13:12:25.424 KRSK: OSPF: delete lsa id 10.0.1.1, type 0, adv rtr 10.0.1.1 from delete list
*Feb 10 13:12:25.428 KRSK: OSPF: insert route list LS ID 10.0.1.1, type 0, adv rtr 10.0.1.1
*Feb 10 13:12:25.428 KRSK: OSPF: delete lsa id 10.0.1.2, type 0, adv rtr 10.0.1.2 from delete list
*Feb 10 13:12:25.428 KRSK: OSPF: Add Network Route to 10.0.1.2 Mask /32. Metric: 51, Next Hop: 10.16.1.2
*Feb 10 13:12:25.428 KRSK: OSPF: insert route list LS ID 10.0.1.2, type 0, adv rtr 10.0.1.2
*Feb 10 13:12:25.428 KRSK: OSPF: delete lsa id 10.0.1.3, type 0, adv rtr 10.0.1.3 from delete list
*Feb 10 13:12:25.428 KRSK: OSPF: Add Network Route to 10.0.1.3 Mask /32. Metric: 51, Next Hop: 10.16.1.6
*Feb 10 13:12:25.432 KRSK: OSPF: insert route list LS ID 10.0.1.3, type 0, adv rtr 10.0.1.3
*Feb 10 13:12:25.432 KRSK: OSPF: delete lsa id 10.16.1.3, type 0, adv rtr 10.0.1.1 from delete list
*Feb 10 13:12:25.432 KRSK: OSPF: insert route list LS ID 10.16.1.3, type 0, adv rtr 10.0.1.1
*Feb 10 13:12:25.432 KRSK: OSPF: delete lsa id 10.16.1.7, type 0, adv rtr 10.0.1.1 from delete list
*Feb 10 13:12:25.432 KRSK: OSPF: insert route list LS ID 10.16.1.7, type 0, adv rtr 10.0.1.1
*Feb 10 13:12:25.432 KRSK: OSPF: delete lsa id 10.32.1.15, type 0, adv rtr 10.0.1.2 from delete list
*Feb 10 13:12:25.436 KRSK: OSPF: Add Network Route to 10.32.1.0 Mask /28. Metric: 51, Next Hop: 10.16.1.2
*Feb 10 13:12:25.436 KRSK: OSPF: insert route list LS ID 10.32.1.15, type 0, adv rtr 10.0.1.2
*Feb 10 13:12:25.436 KRSK: OSPF: delete lsa id 10.32.1.31, type 0, adv rtr 10.0.1.2 from delete list
*Feb 10 13:12:25.436 KRSK: OSPF: Add Network Route to 10.32.1.16 Mask /28. Metric: 51, Next Hop: 10.16.1.2
*Feb 10 13:12:25.436 KRSK: OSPF: insert route list LS ID 10.32.1.31, type 0, adv rtr 10.0.1.2
*Feb 10 13:12:25.440 KRSK: OSPF: delete lsa id 10.32.1.47, type 0, adv rtr 10.0.1.3 from delete list
*Feb 10 13:12:25.440 KRSK: OSPF: Add Network Route to 10.32.1.32 Mask /28. Metric: 51, Next Hop: 10.16.1.6
*Feb 10 13:12:25.440 KRSK: OSPF: insert route list LS ID 10.32.1.47, type 0, adv rtr 10.0.1.3
*Feb 10 13:12:25.440 KRSK: OSPF: delete lsa id 10.32.1.63, type 0, adv rtr 10.0.1.3 from delete list
*Feb 10 13:12:25.440 KRSK: OSPF: Add Network Route to 10.32.1.48 Mask /28. Metric: 51, Next Hop: 10.16.1.6
*Feb 10 13:12:25.440 KRSK: OSPF: insert route list LS ID 10.32.1.63, type 0, adv rtr 10.0.1.3
*Feb 10 13:12:25.444 KRSK: OSPF: Entered old delete routine area 1
*Feb 10 13:12:25.444 KRSK: OSPF: No ndb for STUB NET old route 10.32.2.48, mask /28, next hop 10.16.0.1
*Feb 10 13:12:25.444 KRSK: OSPF: No ndb for STUB NET old route 10.32.2.32, mask /28, next hop 10.16.0.1
*Feb 10 13:12:25.444 KRSK: OSPF: No ndb for STUB NET old route 10.32.2.16, mask /28, next hop 10.16.0.1
*Feb 10 13:12:25.444 KRSK: OSPF: No ndb for STUB NET old route 10.32.2.0, mask /28, next hop 10.16.0.1
*Feb 10 13:12:25.444 KRSK: OSPF: No ndb for STUB NET old route 10.32.0.0, mask /28, next hop 10.16.0.1
*Feb 10 13:12:25.448 KRSK: OSPF: No ndb for STUB NET old route 10.16.2.4, mask /30, next hop 10.16.0.1
*Feb 10 13:12:25.448 KRSK: OSPF: No ndb for STUB NET old route 10.16.2.0, mask /30, next hop 10.16.0.1
*Feb 10 13:12:25.448 KRSK: OSPF: No ndb for STUB NET old route 10.16.0.4, mask /30, next hop 10.16.0.1
*Feb 10 13:12:25.448 KRSK: OSPF: No ndb for STUB NET old route 10.16.0.0, mask /30, next hop 10.16.0.2
*Feb 10 13:12:25.448 KRSK: OSPF: No ndb for STUB NET old route 10.0.2.3, mask /32, next hop 10.16.0.1
*Feb 10 13:12:25.452 KRSK: OSPF: No ndb for STUB NET old route 10.0.2.2, mask /32, next hop 10.16.0.1
*Feb 10 13:12:25.452 KRSK: OSPF: No ndb for STUB NET old route 10.0.2.1, mask /32, next hop 10.16.0.1
*Feb 10 13:12:25.452 KRSK: OSPF: No ndb for STUB NET old route 10.0.0.1, mask /32, next hop 10.16.0.1
*Feb 10 13:12:25.452 KRSK: OSPF: No ndb for NET old route 10.16.2.8, mask /30, next hop 10.16.0.1
*Feb 10 13:12:25.452 KRSK: OSPF: delete lsa id 10.32.2.63, type 0, adv rtr 10.0.2.3 from delete list
*Feb 10 13:12:25.452 KRSK: OSPF: delete lsa id 10.32.2.47, type 0, adv rtr 10.0.2.3 from delete list
*Feb 10 13:12:25.456 KRSK: OSPF: delete lsa id 10.32.2.31, type 0, adv rtr 10.0.2.2 from delete list
*Feb 10 13:12:25.456 KRSK: OSPF: delete lsa id 10.32.2.15, type 0, adv rtr 10.0.2.2 from delete list
```

*Feb 10 13:12:25.456 KRSK: OSPF: delete lsa id 10.32.0.15, type 0, adv rtr 10.0.0.1 from delete list
*Feb 10 13:12:25.456 KRSK: OSPF: delete lsa id 10.16.2.7, type 0, adv rtr 10.0.2.1 from delete list
*Feb 10 13:12:25.456 KRSK: OSPF: delete lsa id 10.16.2.3, type 0, adv rtr 10.0.2.1 from delete list
*Feb 10 13:12:25.456 KRSK: OSPF: delete lsa id 10.16.0.7, type 0, adv rtr 10.0.0.1 from delete list
*Feb 10 13:12:25.460 KRSK: OSPF: delete lsa id 10.16.0.3, type 0, adv rtr 10.0.1.1 from delete list
*Feb 10 13:12:25.460 KRSK: OSPF: delete lsa id 10.0.2.3, type 0, adv rtr 10.0.2.3 from delete list
*Feb 10 13:12:25.460 KRSK: OSPF: delete lsa id 10.0.2.2, type 0, adv rtr 10.0.2.2 from delete list
*Feb 10 13:12:25.460 KRSK: OSPF: delete lsa id 10.0.2.1, type 0, adv rtr 10.0.2.1 from delete list
*Feb 10 13:12:25.464 KRSK: OSPF: delete lsa id 10.0.0.1, type 0, adv rtr 10.0.0.1 from delete list
*Feb 10 13:12:25.464 KRSK: OSPF: delete lsa id 10.16.2.10, type 2, adv rtr 10.0.2.3 from delete list
*Feb 10 13:12:25.464 KRSK: OSPF: ospf_gen_asbr_sum_all_areas
*Feb 10 13:12:25.464 KRSK: OSPF: running spf for summaries area 1
*Feb 10 13:12:25.464 KRSK: OSPF: sum_delete_old_routes area 1
*Feb 10 13:12:25.464 KRSK: OSPF: Started Building Type 5 External Routes
*Feb 10 13:12:25.464 KRSK: OSPF: ex_delete_old_routes
*Feb 10 13:12:25.464 KRSK: OSPF: Started Building Type 7 External Routes
*Feb 10 13:12:25.468 KRSK: OSPF: ex_delete_old_routes

***Feb 10 13:24:24.275 KRSK: %LINK-3-UPDOWN: Interface Serial0/0/0, changed state to up**

*Feb 10 13:24:24.299 KRSK: OSPF: Detect change in LSA type 1, LSID 10.0.0.1, from 10.0.0.1 area 1

***Feb 10 13:24:24.299 KRSK: %OSPF-5-ADJCHG: Process 1, Nbr 10.0.0.1 on Serial0/0/0 from LOADING to FULL, Loading Done**

*Feb 10 13:24:24.303 KRSK: OSPF: Schedule SPF in area 1 Change in LS ID 10.0.0.1, LSA type R, , spf-type Full

*Feb 10 13:24:24.775 KRSK: OSPF: Detect change in LSA type 1, LSID 10.0.0.1, from 10.0.0.1 area 1

*Feb 10 13:24:24.775 KRSK: OSPF: Schedule SPF in area 1 Change in LS ID 10.0.0.1, LSA type R, , spf-type Full

*Feb 10 13:24:24.779 KRSK: OSPF: Schedule SPF in area 1 Change in LS ID 10.0.1.1, LSA type R, , spf-type Full

***Feb 10 13:24:25.276 KRSK: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0, changed state to up**

*Feb 10 13:24:29.303 KRSK: OSPF: running SPF for area 1, SPF-type Full

*Feb 10 13:24:29.303 KRSK: OSPF: Initializing to run spf

*Feb 10 13:24:29.303 KRSK: OSPF - spf_intra() - rebuilding the tree

*Feb 10 13:24:29.303 KRSK: It is a router LSA 10.0.1.1. Link Count 7

*Feb 10 13:24:29.303 KRSK: Processing link 0, id 10.0.1.1, link data 255.255.255.255, type 3, cost 1

*Feb 10 13:24:29.303 KRSK: Add better path to LSA ID 10.0.1.1, gateway 10.0.1.1, dist 1

*Feb 10 13:24:29.303 KRSK: Add path: next-hop 10.0.1.1, interface Loopback0

*Feb 10 13:24:29.307 KRSK: Processing link 1, id 10.0.0.1, link data 10.16.0.2, type 1, cost 50

*Feb 10 13:24:29.307 KRSK: Add better path to LSA ID 10.0.0.1, gateway 10.16.0.1, dist 50

*Feb 10 13:24:29.307 KRSK: OSPF: putting LSA on the clist LSID 10.0.0.1, Type 1, Adv Rtr. 10.0.0.1

*Feb 10 13:24:29.307 KRSK: Add path: next-hop 10.16.0.1, interface Serial0/0/0

*Feb 10 13:24:29.307 KRSK: Processing link 2, id 10.16.0.0, link data 255.255.255.252, type 3, cost 50

*Feb 10 13:24:29.307 KRSK: Add better path to LSA ID 10.16.0.3, gateway 10.16.0.0, dist 50

*Feb 10 13:24:29.311 KRSK: Add path: next-hop 10.16.0.2, interface Serial0/0/0

*Feb 10 13:24:29.311 KRSK: Processing link 3, id 10.0.1.3, link data 10.16.1.5, type 1, cost 50

*Feb 10 13:24:29.311 KRSK: Add better path to LSA ID 10.0.1.3, gateway 10.16.1.6, dist 50

*Feb 10 13:24:29.311 KRSK: OSPF: putting LSA on the clist LSID 10.0.1.3, Type 1, Adv Rtr. 10.0.1.3

*Feb 10 13:24:29.311 KRSK: OSPF: upheap LSA on the clist LSID 10.0.1.3, Type 1, Adv Rtr. 10.0.1.3, from index 2 to index 1

*Feb 10 13:24:29.311 KRSK: Add path: next-hop 10.16.1.6, interface Serial0/1/0

*Feb 10 13:24:29.311 KRSK: Processing link 4, id 10.16.1.4, link data 255.255.255.252, type 3, cost 50

*Feb 10 13:24:29.315 KRSK: Add better path to LSA ID 10.16.1.7, gateway 10.16.1.4, dist 50

*Feb 10 13:24:29.315 KRSK: Add path: next-hop 10.16.1.5, interface Serial0/1/0

*Feb 10 13:24:29.315 KRSK: Processing link 5, id 10.0.1.2, link data 10.16.1.1, type 1, cost 50
*Feb 10 13:24:29.315 KRSK: Add better path to LSA ID 10.0.1.2, gateway 10.16.1.2, dist 50
*Feb 10 13:24:29.315 KRSK: OSPF: putting LSA on the clist LSID 10.0.1.2, Type 1, Adv Rtr. 10.0.1.2
*Feb 10 13:24:29.315 KRSK: OSPF: upheap LSA on the clist LSID 10.0.1.2, Type 1, Adv Rtr. 10.0.1.2, from index 3 to index 1
*Feb 10 13:24:29.315 KRSK: Add path: next-hop 10.16.1.2, interface Serial0/0/1
*Feb 10 13:24:29.319 KRSK: Processing link 6, id 10.16.1.0, link data 255.255.255.252, type 3, cost 50
*Feb 10 13:24:29.319 KRSK: Add better path to LSA ID 10.16.1.3, gateway 10.16.1.0, dist 50
*Feb 10 13:24:29.319 KRSK: Add path: next-hop 10.16.1.1, interface Serial0/0/1
*Feb 10 13:24:29.319 KRSK: OSPF: downheap LSA on the clist LSID 10.0.1.3, Type 1, Adv Rtr. 10.0.1.3, from index 1 to index 1
*Feb 10 13:24:29.319 KRSK: It is a router LSA 10.0.1.2. Link Count 6
*Feb 10 13:24:29.319 KRSK: Processing link 0, id 10.0.1.2, link data 255.255.255.255, type 3, cost 1
*Feb 10 13:24:29.323 KRSK: Add better path to LSA ID 10.0.1.2, gateway 10.0.1.2, dist 51
*Feb 10 13:24:29.323 KRSK: Add path: next-hop 10.16.1.2, interface Serial0/0/1
*Feb 10 13:24:29.323 KRSK: Processing link 1, id 10.32.1.16, link data 255.255.255.240, type 3, cost 1
*Feb 10 13:24:29.323 KRSK: Add better path to LSA ID 10.32.1.31, gateway 10.32.1.16, dist 51
*Feb 10 13:24:29.323 KRSK: Add path: next-hop 10.16.1.2, interface Serial0/0/1
*Feb 10 13:24:29.323 KRSK: Processing link 2, id 10.32.1.0, link data 255.255.255.240, type 3, cost 1
*Feb 10 13:24:29.323 KRSK: Add better path to LSA ID 10.32.1.15, gateway 10.32.1.0, dist 51
*Feb 10 13:24:29.327 KRSK: Add path: next-hop 10.16.1.2, interface Serial0/0/1
*Feb 10 13:24:29.327 KRSK: Processing link 3, id 10.16.1.10, link data 10.16.1.9, type 2, cost 1
*Feb 10 13:24:29.327 KRSK: Add better path to LSA ID 10.16.1.10, gateway 10.16.1.9, dist 51
*Feb 10 13:24:29.327 KRSK: OSPF: putting LSA on the clist LSID 10.16.1.10, Type 2, Adv Rtr. 10.0.1.3
*Feb 10 13:24:29.327 KRSK: OSPF: upheap LSA on the clist LSID 10.16.1.10, Type 2, Adv Rtr. 10.0.1.3, from index 3 to index 3
*Feb 10 13:24:29.327 KRSK: Add path: next-hop 10.16.1.2, interface Serial0/0/1
*Feb 10 13:24:29.327 KRSK: Processing link 4, id 10.0.1.1, link data 10.16.1.2, type 1, cost 50
*Feb 10 13:24:29.331 KRSK: Ignore newdist 100 olddist 0
*Feb 10 13:24:29.331 KRSK: Processing link 5, id 10.16.1.0, link data 255.255.255.252, type 3, cost 50
*Feb 10 13:24:29.331 KRSK: Add better path to LSA ID 10.16.1.3, gateway 10.16.1.0, dist 100
*Feb 10 13:24:29.331 KRSK: Add path: next-hop 10.16.1.2, interface Serial0/0/1
*Feb 10 13:24:29.331 KRSK: OSPF: downheap LSA on the clist LSID 10.16.1.10, Type 2, Adv Rtr. 10.0.1.3, from index 1 to index 2
*Feb 10 13:24:29.331 KRSK: It is a router LSA 10.0.1.3. Link Count 6
*Feb 10 13:24:29.331 KRSK: Processing link 0, id 10.0.1.3, link data 255.255.255.255, type 3, cost 1
*Feb 10 13:24:29.335 KRSK: Add better path to LSA ID 10.0.1.3, gateway 10.0.1.3, dist 51
*Feb 10 13:24:29.335 KRSK: Add path: next-hop 10.16.1.6, interface Serial0/1/0
*Feb 10 13:24:29.335 KRSK: Processing link 1, id 10.32.1.48, link data 255.255.255.240, type 3, cost 1
*Feb 10 13:24:29.335 KRSK: Add better path to LSA ID 10.32.1.63, gateway 10.32.1.48, dist 51
*Feb 10 13:24:29.335 KRSK: Add path: next-hop 10.16.1.6, interface Serial0/1/0
*Feb 10 13:24:29.335 KRSK: Processing link 2, id 10.32.1.32, link data 255.255.255.240, type 3, cost 1
*Feb 10 13:24:29.339 KRSK: Add better path to LSA ID 10.32.1.47, gateway 10.32.1.32, dist 51
*Feb 10 13:24:29.339 KRSK: Add path: next-hop 10.16.1.6, interface Serial0/1/0
*Feb 10 13:24:29.339 KRSK: Processing link 3, id 10.16.1.10, link data 10.16.1.10, type 2, cost 1
*Feb 10 13:24:29.339 KRSK: Add equal-length path to 10.16.1.10, dist 51
*Feb 10 13:24:29.339 KRSK: Add path: next-hop 10.16.1.6, interface Serial0/1/0
*Feb 10 13:24:29.339 KRSK: Processing link 4, id 10.0.1.1, link data 10.16.1.6, type 1, cost 50
*Feb 10 13:24:29.339 KRSK: Ignore newdist 100 olddist 0
*Feb 10 13:24:29.343 KRSK: Processing link 5, id 10.16.1.4, link data 255.255.255.252, type 3, cost 50
*Feb 10 13:24:29.343 KRSK: Add better path to LSA ID 10.16.1.7, gateway 10.16.1.4, dist 100
*Feb 10 13:24:29.343 KRSK: Add path: next-hop 10.16.1.6, interface Serial0/1/0
*Feb 10 13:24:29.343 KRSK: OSPF: downheap LSA on the clist LSID 10.16.1.10, Type 2, Adv Rtr. 10.0.1.3, from index 1 to index 1

*Feb 10 13:24:29.343 KRSK: It is a router LSA 10.0.0.1. Link Count 6
*Feb 10 13:24:29.343 KRSK: Processing link 0, id 10.0.0.1, link data 255.255.255.255, type 3, cost 1
*Feb 10 13:24:29.343 KRSK: Add better path to LSA ID 10.0.0.1, gateway 10.0.0.1, dist 51
*Feb 10 13:24:29.347 KRSK: Add path: next-hop 10.16.0.1, interface Serial0/0/0
*Feb 10 13:24:29.347 KRSK: Processing link 1, id 10.32.0.0, link data 255.255.255.240, type 3, cost 1
*Feb 10 13:24:29.347 KRSK: Add better path to LSA ID 10.32.0.15, gateway 10.32.0.0, dist 51
*Feb 10 13:24:29.347 KRSK: Add path: next-hop 10.16.0.1, interface Serial0/0/0
*Feb 10 13:24:29.347 KRSK: Processing link 2, id 10.0.2.1, link data 10.16.0.5, type 1, cost 50
*Feb 10 13:24:29.347 KRSK: Add better path to LSA ID 10.0.2.1, gateway 10.16.0.6, dist 100
*Feb 10 13:24:29.351 KRSK: OSPF: putting LSA on the clist LSID 10.0.2.1, Type 1, Adv Rtr. 10.0.2.1
*Feb 10 13:24:29.351 KRSK: OSPF: upheap LSA on the clist LSID 10.0.2.1, Type 1, Adv Rtr. 10.0.2.1, from index 2 to index 2
*Feb 10 13:24:29.351 KRSK: Add path: next-hop 10.16.0.1, interface Serial0/0/0
*Feb 10 13:24:29.351 KRSK: Processing link 3, id 10.16.0.4, link data 255.255.255.252, type 3, cost 50
*Feb 10 13:24:29.351 KRSK: Add better path to LSA ID 10.16.0.7, gateway 10.16.0.4, dist 100
*Feb 10 13:24:29.351 KRSK: Add path: next-hop 10.16.0.1, interface Serial0/0/0
*Feb 10 13:24:29.351 KRSK: Processing link 4, id 10.0.1.1, link data 10.16.0.1, type 1, cost 50
*Feb 10 13:24:29.355 KRSK: Ignore newdist 100 olddist 0
*Feb 10 13:24:29.355 KRSK: Processing link 5, id 10.16.0.0, link data 255.255.255.252, type 3, cost 50
*Feb 10 13:24:29.355 KRSK: Add better path to LSA ID 10.16.0.3, gateway 10.16.0.0, dist 100
*Feb 10 13:24:29.355 KRSK: Add path: next-hop 10.16.0.1, interface Serial0/0/0
*Feb 10 13:24:29.355 KRSK: OSPF: downheap LSA on the clist LSID 10.0.2.1, Type 1, Adv Rtr. 10.0.2.1, from index 1 to index 1
*Feb 10 13:24:29.355 KRSK: OSPF: Add Network Route to 10.16.1.8 Mask /30. Metric: 51, Next Hop: 10.16.1.6
*Feb 10 13:24:29.359 KRSK: OSPF: delete lsa id 10.16.1.10, type 2, adv rtr 10.0.1.3 from delete list
*Feb 10 13:24:29.359 KRSK: OSPF: Add Network Route to 10.16.1.8 Mask /30. Metric: 51, Next Hop: 10.16.1.2
*Feb 10 13:24:29.359 KRSK: OSPF: insert route list LS ID 10.16.1.10, type 2, adv rtr 10.0.1.3
*Feb 10 13:24:29.359 KRSK: It is a network LSA 10.16.1.10. Router Count 2
*Feb 10 13:24:29.359 KRSK: Processing router id 10.0.1.3
*Feb 10 13:24:29.359 KRSK: New newdist 51 olddist 50
*Feb 10 13:24:29.359 KRSK: Processing router id 10.0.1.2
*Feb 10 13:24:29.359 KRSK: New newdist 51 olddist 50
*Feb 10 13:24:29.363 KRSK: OSPF: downheap LSA on the clist LSID 10.0.2.1, Type 1, Adv Rtr. 10.0.2.1, from index 1 to index 1
*Feb 10 13:24:29.363 KRSK: It is a router LSA 10.0.2.1. Link Count 7
*Feb 10 13:24:29.363 KRSK: Processing link 0, id 10.0.2.1, link data 255.255.255.255, type 3, cost 1
*Feb 10 13:24:29.363 KRSK: Add better path to LSA ID 10.0.2.1, gateway 10.0.2.1, dist 101
*Feb 10 13:24:29.363 KRSK: Add path: next-hop 10.16.0.1, interface Serial0/0/0
*Feb 10 13:24:29.363 KRSK: Processing link 1, id 10.0.2.3, link data 10.16.2.5, type 1, cost 50
*Feb 10 13:24:29.363 KRSK: Add better path to LSA ID 10.0.2.3, gateway 10.16.2.6, dist 150
*Feb 10 13:24:29.367 KRSK: OSPF: putting LSA on the clist LSID 10.0.2.3, Type 1, Adv Rtr. 10.0.2.3
*Feb 10 13:24:29.367 KRSK: Add path: next-hop 10.16.0.1, interface Serial0/0/0
*Feb 10 13:24:29.367 KRSK: Processing link 2, id 10.16.2.4, link data 255.255.255.252, type 3, cost 50
*Feb 10 13:24:29.367 KRSK: Add better path to LSA ID 10.16.2.7, gateway 10.16.2.4, dist 150
*Feb 10 13:24:29.367 KRSK: Add path: next-hop 10.16.0.1, interface Serial0/0/0
*Feb 10 13:24:29.367 KRSK: Processing link 3, id 10.0.2.2, link data 10.16.2.1, type 1, cost 50
*Feb 10 13:24:29.371 KRSK: Add better path to LSA ID 10.0.2.2, gateway 10.16.2.2, dist 150
*Feb 10 13:24:29.371 KRSK: OSPF: putting LSA on the clist LSID 10.0.2.2, Type 1, Adv Rtr. 10.0.2.2
*Feb 10 13:24:29.371 KRSK: OSPF: upheap LSA on the clist LSID 10.0.2.2, Type 1, Adv Rtr. 10.0.2.2, from index 2 to index 1
*Feb 10 13:24:29.371 KRSK: Add path: next-hop 10.16.0.1, interface Serial0/0/0
*Feb 10 13:24:29.371 KRSK: Processing link 4, id 10.16.2.0, link data 255.255.255.252, type 3, cost 50
*Feb 10 13:24:29.371 KRSK: Add better path to LSA ID 10.16.2.3, gateway 10.16.2.0, dist 150


```
*Feb 10 13:24:29.371 KRSK:   Add path: next-hop 10.16.0.1, interface Serial0/0/0
*Feb 10 13:24:29.375 KRSK: Processing link 5, id 10.0.0.1, link data 10.16.0.6, type 1, cost 50
*Feb 10 13:24:29.375 KRSK: Ignore newdist 150 olddist 50
*Feb 10 13:24:29.375 KRSK: Processing link 6, id 10.16.0.4, link data 255.255.255.252, type 3, cost 50
*Feb 10 13:24:29.375 KRSK:   Add better path to LSA ID 10.16.0.7, gateway 10.16.0.4, dist 150
*Feb 10 13:24:29.375 KRSK:   Add path: next-hop 10.16.0.1, interface Serial0/0/0
*Feb 10 13:24:29.375 KRSK: OSPF: downheap LSA on the clist LSID 10.0.2.3, Type 1, Adv Rtr. 10.0.2.3, from index 1 to index 1
*Feb 10 13:24:29.375 KRSK: It is a router LSA 10.0.2.2. Link Count 6
*Feb 10 13:24:29.379 KRSK: Processing link 0, id 10.0.2.2, link data 255.255.255.255, type 3, cost 1
*Feb 10 13:24:29.379 KRSK:   Add better path to LSA ID 10.0.2.2, gateway 10.0.2.2, dist 151
*Feb 10 13:24:29.379 KRSK:   Add path: next-hop 10.16.0.1, interface Serial0/0/0
*Feb 10 13:24:29.379 KRSK: Processing link 1, id 10.16.2.10, link data 10.16.2.9, type 2, cost 1
*Feb 10 13:24:29.379 KRSK:   Add better path to LSA ID 10.16.2.10, gateway 10.16.2.9, dist 151
*Feb 10 13:24:29.379 KRSK: OSPF: putting LSA on the clist LSID 10.16.2.10, Type 2, Adv Rtr. 10.0.2.3
*Feb 10 13:24:29.379 KRSK: OSPF: upheap LSA on the clist LSID 10.16.2.10, Type 2, Adv Rtr. 10.0.2.3, from index 2 to index 2
*Feb 10 13:24:29.383 KRSK:   Add path: next-hop 10.16.0.1, interface Serial0/0/0
*Feb 10 13:24:29.383 KRSK: Processing link 2, id 10.32.2.16, link data 255.255.255.240, type 3, cost 1
*Feb 10 13:24:29.383 KRSK:   Add better path to LSA ID 10.32.2.31, gateway 10.32.2.16, dist 151
*Feb 10 13:24:29.383 KRSK:   Add path: next-hop 10.16.0.1, interface Serial0/0/0
*Feb 10 13:24:29.383 KRSK: Processing link 3, id 10.32.2.0, link data 255.255.255.240, type 3, cost 1
*Feb 10 13:24:29.383 KRSK:   Add better path to LSA ID 10.32.2.15, gateway 10.32.2.0, dist 151
*Feb 10 13:24:29.387 KRSK:   Add path: next-hop 10.16.0.1, interface Serial0/0/0
*Feb 10 13:24:29.387 KRSK: Processing link 4, id 10.0.2.1, link data 10.16.2.2, type 1, cost 50
*Feb 10 13:24:29.387 KRSK: Ignore newdist 200 olddist 100
*Feb 10 13:24:29.387 KRSK: Processing link 5, id 10.16.2.0, link data 255.255.255.252, type 3, cost 50
*Feb 10 13:24:29.387 KRSK:   Add better path to LSA ID 10.16.2.3, gateway 10.16.2.0, dist 200
*Feb 10 13:24:29.391 KRSK:   Add path: next-hop 10.16.0.1, interface Serial0/0/0
*Feb 10 13:24:29.391 KRSK: OSPF: downheap LSA on the clist LSID 10.16.2.10, Type 2, Adv Rtr. 10.0.2.3, from index 1 to index 1
*Feb 10 13:24:29.391 KRSK: It is a router LSA 10.0.2.3. Link Count 6
*Feb 10 13:24:29.391 KRSK: Processing link 0, id 10.0.2.3, link data 255.255.255.255, type 3, cost 1
*Feb 10 13:24:29.391 KRSK:   Add better path to LSA ID 10.0.2.3, gateway 10.0.2.3, dist 151
*Feb 10 13:24:29.391 KRSK:   Add path: next-hop 10.16.0.1, interface Serial0/0/0
*Feb 10 13:24:29.391 KRSK: Processing link 1, id 10.32.2.48, link data 255.255.255.240, type 3, cost 1
*Feb 10 13:24:29.395 KRSK:   Add better path to LSA ID 10.32.2.63, gateway 10.32.2.48, dist 151
*Feb 10 13:24:29.395 KRSK:   Add path: next-hop 10.16.0.1, interface Serial0/0/0
*Feb 10 13:24:29.395 KRSK: Processing link 2, id 10.32.2.32, link data 255.255.255.240, type 3, cost 1
*Feb 10 13:24:29.395 KRSK:   Add better path to LSA ID 10.32.2.47, gateway 10.32.2.32, dist 151
*Feb 10 13:24:29.395 KRSK:   Add path: next-hop 10.16.0.1, interface Serial0/0/0
*Feb 10 13:24:29.395 KRSK: Processing link 3, id 10.16.2.10, link data 10.16.2.10, type 2, cost 1
*Feb 10 13:24:29.395 KRSK: Add equal-length path to 10.16.2.10, dist 151
*Feb 10 13:24:29.399 KRSK:   Exist path: next-hop 10.16.0.1, interface Serial0/0/0
*Feb 10 13:24:29.399 KRSK: Processing link 4, id 10.0.2.1, link data 10.16.2.6, type 1, cost 50
*Feb 10 13:24:29.399 KRSK: Ignore newdist 200 olddist 100
*Feb 10 13:24:29.399 KRSK: Processing link 5, id 10.16.2.4, link data 255.255.255.252, type 3, cost 50
*Feb 10 13:24:29.399 KRSK:   Add better path to LSA ID 10.16.2.7, gateway 10.16.2.4, dist 200
*Feb 10 13:24:29.399 KRSK:   Add path: next-hop 10.16.0.1, interface Serial0/0/0
*Feb 10 13:24:29.399 KRSK: OSPF: downheap LSA on the clist LSID 10.16.2.10, Type 2, Adv Rtr. 10.0.2.3, from index 1 to index 1
*Feb 10 13:24:29.403 KRSK: OSPF: Add Network Route to 10.16.2.8 Mask /30. Metric: 151, Next Hop: 10.16.0.1
*Feb 10 13:24:29.403 KRSK: OSPF: insert route list LS ID 10.16.2.10, type 2, adv rtr 10.0.2.3
```

*Feb 10 13:24:29.403 KRSK: It is a network LSA 10.16.2.10. Router Count 2
*Feb 10 13:24:29.403 KRSK: Processing router id 10.0.2.3
*Feb 10 13:24:29.403 KRSK: New newdist 151 olddist 150
*Feb 10 13:24:29.407 KRSK: Processing router id 10.0.2.2
*Feb 10 13:24:29.407 KRSK: New newdist 151 olddist 150
*Feb 10 13:24:29.407 KRSK: OSPF: Adding Stub nets
*Feb 10 13:24:29.407 KRSK: OSPF: Add Network Route to 10.0.0.1 Mask /32. Metric: 51, Next Hop: 10.16.0.1
*Feb 10 13:24:29.407 KRSK: OSPF: insert route list LS ID 10.0.0.1, type 0, adv rtr 10.0.0.1
*Feb 10 13:24:29.407 KRSK: OSPF: delete lsa id 10.0.1.1, type 0, adv rtr 10.0.1.1 from delete list
*Feb 10 13:24:29.407 KRSK: OSPF: insert route list LS ID 10.0.1.1, type 0, adv rtr 10.0.1.1
*Feb 10 13:24:29.411 KRSK: OSPF: delete lsa id 10.0.1.2, type 0, adv rtr 10.0.1.2 from delete list
*Feb 10 13:24:29.411 KRSK: OSPF: Add Network Route to 10.0.1.2 Mask /32. Metric: 51, Next Hop: 10.16.1.2
*Feb 10 13:24:29.411 KRSK: OSPF: insert route list LS ID 10.0.1.2, type 0, adv rtr 10.0.1.2
*Feb 10 13:24:29.411 KRSK: OSPF: delete lsa id 10.0.1.3, type 0, adv rtr 10.0.1.3 from delete list
*Feb 10 13:24:29.411 KRSK: OSPF: Add Network Route to 10.0.1.3 Mask /32. Metric: 51, Next Hop: 10.16.1.6
*Feb 10 13:24:29.415 KRSK: OSPF: insert route list LS ID 10.0.1.3, type 0, adv rtr 10.0.1.3
*Feb 10 13:24:29.415 KRSK: OSPF: Add Network Route to 10.0.2.1 Mask /32. Metric: 101, Next Hop: 10.16.0.1
*Feb 10 13:24:29.415 KRSK: OSPF: insert route list LS ID 10.0.2.1, type 0, adv rtr 10.0.2.1
*Feb 10 13:24:29.415 KRSK: OSPF: Add Network Route to 10.0.2.2 Mask /32. Metric: 151, Next Hop: 10.16.0.1
*Feb 10 13:24:29.419 KRSK: OSPF: insert route list LS ID 10.0.2.2, type 0, adv rtr 10.0.2.2
*Feb 10 13:24:29.419 KRSK: OSPF: Add Network Route to 10.0.2.3 Mask /32. Metric: 151, Next Hop: 10.16.0.1
*Feb 10 13:24:29.419 KRSK: OSPF: insert route list LS ID 10.0.2.3, type 0, adv rtr 10.0.2.3
*Feb 10 13:24:29.419 KRSK: OSPF: insert route list LS ID 10.16.0.3, type 0, adv rtr 10.0.1.1
*Feb 10 13:24:29.419 KRSK: OSPF: Add Network Route to 10.16.0.4 Mask /30. Metric: 100, Next Hop: 10.16.0.1
*Feb 10 13:24:29.423 KRSK: OSPF: insert route list LS ID 10.16.0.7, type 0, adv rtr 10.0.0.1
*Feb 10 13:24:29.423 KRSK: OSPF: delete lsa id 10.16.1.3, type 0, adv rtr 10.0.1.1 from delete list
*Feb 10 13:24:29.423 KRSK: OSPF: insert route list LS ID 10.16.1.3, type 0, adv rtr 10.0.1.1
*Feb 10 13:24:29.423 KRSK: OSPF: delete lsa id 10.16.1.7, type 0, adv rtr 10.0.1.1 from delete list
*Feb 10 13:24:29.423 KRSK: OSPF: insert route list LS ID 10.16.1.7, type 0, adv rtr 10.0.1.1
*Feb 10 13:24:29.427 KRSK: OSPF: Add Network Route to 10.16.2.0 Mask /30. Metric: 150, Next Hop: 10.16.0.1
*Feb 10 13:24:29.427 KRSK: OSPF: insert route list LS ID 10.16.2.3, type 0, adv rtr 10.0.2.1
*Feb 10 13:24:29.427 KRSK: OSPF: Add Network Route to 10.16.2.4 Mask /30. Metric: 150, Next Hop: 10.16.0.1
*Feb 10 13:24:29.427 KRSK: OSPF: insert route list LS ID 10.16.2.7, type 0, adv rtr 10.0.2.1
*Feb 10 13:24:29.427 KRSK: OSPF: Add Network Route to 10.32.0.0 Mask /28. Metric: 51, Next Hop: 10.16.0.1
*Feb 10 13:24:29.431 KRSK: OSPF: insert route list LS ID 10.32.0.15, type 0, adv rtr 10.0.0.1
*Feb 10 13:24:29.431 KRSK: OSPF: delete lsa id 10.32.1.15, type 0, adv rtr 10.0.1.2 from delete list
*Feb 10 13:24:29.431 KRSK: OSPF: Add Network Route to 10.32.1.0 Mask /28. Metric: 51, Next Hop: 10.16.1.2
*Feb 10 13:24:29.431 KRSK: OSPF: insert route list LS ID 10.32.1.15, type 0, adv rtr 10.0.1.2
*Feb 10 13:24:29.431 KRSK: OSPF: delete lsa id 10.32.1.31, type 0, adv rtr 10.0.1.2 from delete list
*Feb 10 13:24:29.435 KRSK: OSPF: Add Network Route to 10.32.1.16 Mask /28. Metric: 51, Next Hop: 10.16.1.2
*Feb 10 13:24:29.435 KRSK: OSPF: insert route list LS ID 10.32.1.31, type 0, adv rtr 10.0.1.2
*Feb 10 13:24:29.435 KRSK: OSPF: delete lsa id 10.32.1.47, type 0, adv rtr 10.0.1.3 from delete list
*Feb 10 13:24:29.435 KRSK: OSPF: Add Network Route to 10.32.1.32 Mask /28. Metric: 51, Next Hop: 10.16.1.6
*Feb 10 13:24:29.435 KRSK: OSPF: insert route list LS ID 10.32.1.47, type 0, adv rtr 10.0.1.3
*Feb 10 13:24:29.439 KRSK: OSPF: delete lsa id 10.32.1.63, type 0, adv rtr 10.0.1.3 from delete list
*Feb 10 13:24:29.439 KRSK: OSPF: Add Network Route to 10.32.1.48 Mask /28. Metric: 51, Next Hop: 10.16.1.6
*Feb 10 13:24:29.439 KRSK: OSPF: insert route list LS ID 10.32.1.63, type 0, adv rtr 10.0.1.3
*Feb 10 13:24:29.439 KRSK: OSPF: Add Network Route to 10.32.2.0 Mask /28. Metric: 151, Next Hop: 10.16.0.1
*Feb 10 13:24:29.439 KRSK: OSPF: insert route list LS ID 10.32.2.15, type 0, adv rtr 10.0.2.2

*Feb 10 13:24:29.443 KRSK: OSPF: Add Network Route to 10.32.2.16 Mask /28. Metric: 151, Next Hop: 10.16.0.1
*Feb 10 13:24:29.443 KRSK: OSPF: insert route list LS ID 10.32.2.31, type 0, adv rtr 10.0.2.2
*Feb 10 13:24:29.443 KRSK: OSPF: Add Network Route to 10.32.2.32 Mask /28. Metric: 151, Next Hop: 10.16.0.1
*Feb 10 13:24:29.443 KRSK: OSPF: insert route list LS ID 10.32.2.47, type 0, adv rtr 10.0.2.3
*Feb 10 13:24:29.443 KRSK: OSPF: Add Network Route to 10.32.2.48 Mask /28. Metric: 151, Next Hop: 10.16.0.1
*Feb 10 13:24:29.447 KRSK: OSPF: insert route list LS ID 10.32.2.63, type 0, adv rtr 10.0.2.3
*Feb 10 13:24:29.447 KRSK: OSPF: Entered old delete routine area 1
*Feb 10 13:24:29.447 KRSK: OSPF: ospf_gen_asbr_sum_all_areas
*Feb 10 13:24:29.447 KRSK: OSPF: running spf for summaries area 1
*Feb 10 13:24:29.447 KRSK: OSPF: sum_delete_old_routes area 1
*Feb 10 13:24:29.447 KRSK: OSPF: Started Building Type 5 External Routes
*Feb 10 13:24:29.451 KRSK: OSPF: ex_delete_old_routes
*Feb 10 13:24:29.451 KRSK: OSPF: Started Building Type 7 External Routes
*Feb 10 13:24:29.451 KRSK: OSPF: ex_delete_old_routes