

Open Infrastructure - Task #7520

Checkout whether OSPF can be helpful for DCL

12/21/2019 01:49 PM - Nico Schottelius

Status:	Closed	Start date:	12/21/2019
Priority:	Normal	Due date:	
Assignee:	Nico Schottelius	% Done:	0%
Category:		Estimated time:	0.00 hour
Target version:			
PM Check date:			
Description			
<ul style="list-style-type: none">• testing with new routers• Todo: find out how to limit route imports in arista via ospf			

History

#1 - 12/21/2019 02:16 PM - Nico Schottelius

Seems like these code blocks are already enough for internal route exchange:

```
protocol ospf v3 ospf_v6 {
```

```
    ipv6 {
```

```
        import all;
```

```
        export all;
```

```
    };
```

```
    area 0 {
```

```
        interface "bond0.8" {
```

```
            cost 5;
```

```
            hello 5;
```

```
            retransmit 2;
```

```
            wait 10;
```

```
            dead 20;
```

```
        };
```

```
    };
```

```
}
```

```
protocol ospf v3 ospf_v4 {
```

```
    ipv4 {
```

```
        import all;
```

```
        export all;
```

```
    };
```

```
    area 0 {
```

```
        interface "bond0.8" {
```

```
            cost 5;
```

```

        hello 5;
        retransmit 2;
        wait 10;
        dead 20;
    };
};
}

```

#2 - 12/21/2019 02:35 PM - Nico Schottelius

Testing on arista:

```

switch1-place6>enable
switch1-place6#configure
switch1-place6(config)#ipv6 router ospf ?
 <1-65535> Process ID

switch1-place6(config)#ipv6 router ospf 1
switch1-place6(config-router-ospf3)#show active
ipv6 router ospf 1
switch1-place6(config-router-ospf3)#
switch1-place6(config-if-Vl8)#ipv6 ospf 1 area 0
switch1-place6(config-if-Vl8)#show active
interface Vlan8
  ipv6 address 2a0a:e5c0:1:8::21/64
  ipv6 ospf 1 area 0.0.0.0
switch1-place6(config-if-Vl8)#
switch1-place6(config-if-Vl8)#show ipv6 ospf
Routing Process "ospfv3 1" with ID 10.3.4.1 and Instance 0 VRF default
  It is not an autonomous system boundary router and is not an area border router
  Minimum LSA arrival interval 1000 msec
  Initial LSA throttle delay 1000 msec
  Minimum hold time for LSA throttle 5000 msec
  Maximum wait time for LSA throttle 5000 msec
  It has 0 fully adjacent neighbors
  Number of areas in this router is 1. 1 normal, 0 stub, 0 nssa
  Initial SPF schedule delay 0 msec
  Minimum hold time between two consecutive SPF's 5000 msec
  Current hold time between two consecutive SPF's 5000 msec
  Maximum wait time between two consecutive SPF's 5000 msec
  SPF algorithm last executed 00:00:31 ago
  No scheduled SPF
  Adjacency exchange-start threshold is 20
  Maximum number of next-hops supported in ECMP is 32
  Graceful-restart is not configured
  Graceful-restart-helper mode is enabled
  Area 0.0.0.0
    Number of interface in this area is 1
    It is a normal area

switch1-place6(config-if-Vl8)#
switch1-place6(config-if-Vl8)#show ipv6 ospf interface
Vlan8 is up
  Interface Address fe80::21c:73ff:fe3e:ed01, VRF default, Area 0.0.0.0
  Network Type Broadcast, Cost 10
  Transmit Delay is 1 sec, State DR, Priority 1
  Designated Router is 10.3.4.1
  Backup Designated Router is 0.0.0.0
  Timer intervals configured, Hello 10, Dead 40, Retransmit 5
  Neighbor Count is 0
  Options are R E V6
switch1-place6(config-if-Vl8)#
switch1-place6(config-if-Vl8)#show ipv6 ospf database
Codes: AEX - AS External, GRC - Grace,
        IAP - Inter Area Prefix, IAR - Inter Area Router,
        LNK - Link, NAP - Intra Area Prefix,
        NSA - Not So Stubby Area, NTW - Network,
        RTR - Router

```

Routing Process "ospf 1", VRF default

AS Scope LSDB

Type	Link ID	ADV Router	Age	Seq#	Checksum
------	---------	------------	-----	------	----------

Area 0.0.0.0 LSDB

Type	Link ID	ADV Router	Age	Seq#	Checksum
RTR	0.0.0.0	10.3.4.1	121	0x80000001	0x009986
NAP	0.0.0.1	10.3.4.1	121	0x80000001	0x000ca7

Interface vlan8 LSDB

Type	Link ID	ADV Router	Age	Seq#	Checksum
------	---------	------------	-----	------	----------

switch1-places6(config-if-Vl8) #

```
switch1-places6(config-if-Vl8)#show ipv6 ospf neighbor
switch1-places6(config-if-Vl8) #
```

-> arista does not see routes directly. Might need some debugging / is not important at the moment.

#3 - 12/21/2019 02:53 PM - Nico Schottelius

parameters mismatch between switch & routers: disable switch for the moment

```
Dec 21 14:44:41 router1 daemon.err bird: ospf_v6: Bad HELLO packet from nbr 10.3.4.1 on bond0.8 - hello interval mismatch (10)
```

.. or update:

```
switch1-places6(config)#interface vlan 8
switch1-places6(config-if-Vl8)#ipv6 ospf hello-interval 5
switch1-places6(config-if-Vl8)#ipv6 ospf dead-interval 20
switch1-places6(config-if-Vl8)#ipv6 ospf retransmit-interval 2
switch1-places6(config-if-Vl8)#ipv6 ospf cost 5
```

```
switch1-places6(config-if-Vl8)#show active
interface Vlan8
  ipv6 address 2a0a:e5c0:1:8::21/64
  ipv6 ospf cost 5
  ipv6 ospf hello-interval 5
  ipv6 ospf dead-interval 20
  ipv6 ospf retransmit-interval 2
  ipv6 ospf 1 area 0.0.0.0
```

```
switch1-places6(config-if-Vl8)#show ipv6 ospf interface vlan 8
Vlan8 is up
```

```
  Interface Address fe80::21c:73ff:fe3e:ed01, VRF default, Area 0.0.0.0
  Network Type Broadcast, Cost 5
  Transmit Delay is 1 sec, State DR Other, Priority 1
  Designated Router is 147.78.195.251
  Backup Designated Router is 147.78.195.250
  Timer intervals configured, Hello 5, Dead 20, Retransmit 2
  Neighbor Count is 2
  Options are R E V6
```

```
switch1-places6(config-if-Vl8) #
```

```
switch1-places6(config-if-Vl8)#mtu 9000
```

```
Dec 21 14:49:38 router1 daemon.err bird: ospf_v6: MTU mismatch with nbr 10.3.4.1 on bond0.8 (remote 1500, local 9000)
```

```
switch1-places6(config-if-Vl8)#show ipv6 ospf neighbor
Routing Process "ospf 1":
Neighbor 147.78.195.250 VRF default priority is 1, state is Full
  In area 0.0.0.0 interface Vlan8
  DR is 147.78.195.251 BDR is 147.78.195.250
  Options is 0
  Dead timer is due in 17 seconds
  Graceful-restart-helper mode is Inactive
  Graceful-restart attempts: 0
Neighbor 147.78.195.251 VRF default priority is 1, state is Full
  In area 0.0.0.0 interface Vlan8
  DR is 147.78.195.251 BDR is 147.78.195.250
  Options is 0
```

```
Dead timer is due in 15 seconds
Graceful-restart-helper mode is Inactive
Graceful-restart attempts: 0
```

```
switch1-place6(config-if-Vl8)#show ipv6 route ospf
VRF name: default
Displaying 78232 of 78254 IPv6 routing table entries
```

```
=====
WARNING: Some of the routes are not programmed in
hardware, and they are marked with '*'.
=====
```

```
Codes: C - connected, S - static, K - kernel, O3 - OSPFv3, B - BGP, R - RIP, A B - BGP Aggregate, I L1 - ISIS
level 1, I L2 - ISIS level 2, NG - Nexthop Group Static Route
```

```
*O3 2001::/32 [110/10000]
    via fe80::21b:21ff:febc:bfd8, Vlan8
*O3 2001:4:112::/48 [110/10000]
    via fe80::21b:21ff:febc:bfd8, Vlan8
```

```
.....
```

#4 - 12/21/2019 02:53 PM - Nico Schottelius

- Description updated

#5 - 01/02/2020 12:21 PM - Nico Schottelius

- Status changed from In Progress to Closed

It works!

But not for eBGP routes.