DGS-3630 Series Switches

Dynamic Routing – OSPF Setup

OSPF Setup Example (CLI)

Core switch

Net 1
10.1.1.0/24

Switch A

Net 11
192.168.11.0/24

Net 1

Switch B

Net 71
192.168.71.0/24

Net 1

Switch C

Net 61
192.168.61.0/24

Net 1
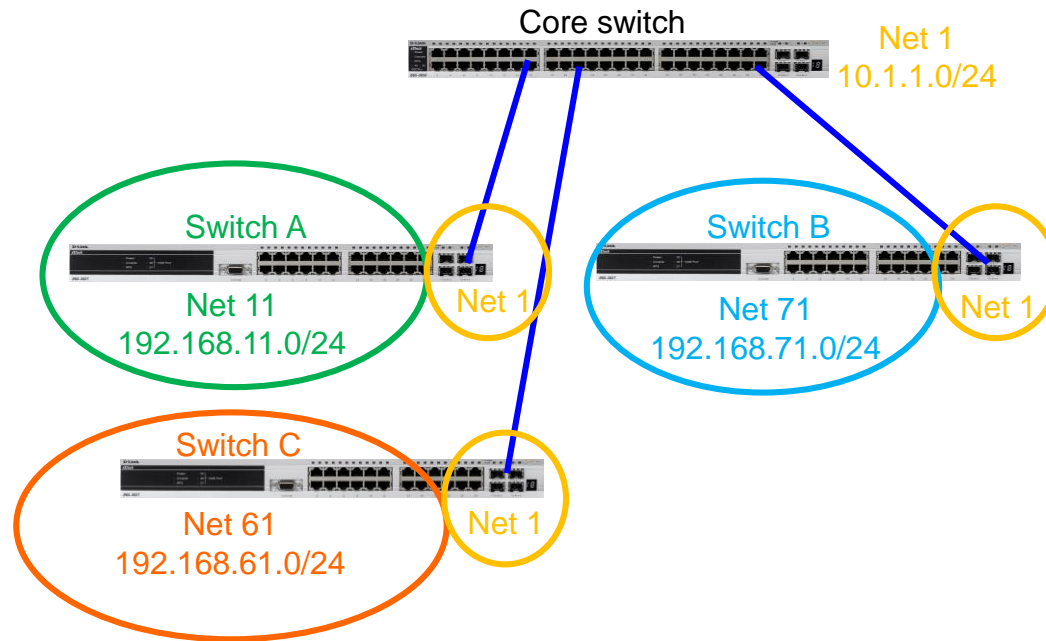
Switch A Configuration Example

Set router ID and add your networks to the OSPF area 0.

```
Switch(config)#router ospf
Switch(config-router)#router-id 10.1.1.11
Switch(config-router)#network 10.1.1.0 0.0.0.255 area 0.0.0.0
Switch(config-router)#network 192.168.11.0 0.0.0.255 area 0.0.0.0
```

OSPF Setup Example (CLI)

- Check the routing table and OSPF neighbors.

```
Switch# show ip route

C     10.1.1.0/24 is directly connected, vlan1
C     192.168.11.0/24 is directly connected, vlan11
O     192.168.61.0/24 [80/2] via 10.1.1.6, vlan1
O     192.168.71.0/24 [80/2] via 10.1.1.7, vlan1
O     192.168.81.0/24 [80/2] via 10.1.1.8, vlan1
O     192.168.91.0/24 [80/2] via 10.1.1.254, vlan1
```
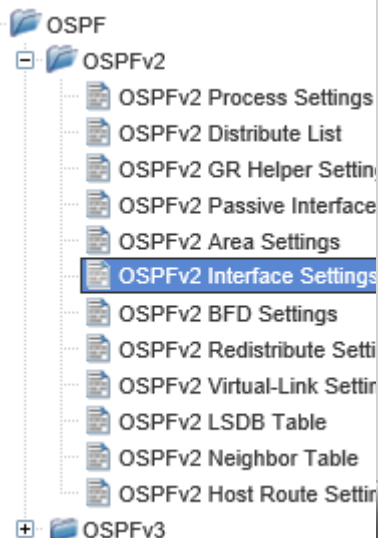
Routes learnt dynamically via OSPF

```
Switch# show ip ospf neighbour

Neighbor ID      Pri   State           Address          Interface
---------------  ----- --------------  ---------------  ------------
10.1.1.8         1     Full/DR         10.1.1.8         vlan1
10.1.1.254       1     Full/Backup     10.1.1.254       vlan1
```

OSPF Setup Example (GUI)

- L3 Features > OSPF > OSPFv2 > OSPF Interface Settings
- Add OSPF interfaces for each of the local interfaces

OSPF tree navigation:
- OSPF
  - OSPFv2
    - OSPFv2 Process Settings
    - OSPFv2 Distribute List
    - OSPFv2 GR Helper Setting
    - OSPFv2 Passive Interface
    - OSPFv2 Area Settings
    - OSPFv2 Interface Settings
    - OSPFv2 BFD Settings
    - OSPFv2 Redistribute Setti
    - OSPFv2 Virtual-Link Settin
    - OSPFv2 LSDB Table
    - OSPFv2 Neighbor Table
    - OSPFv2 Host Route Settin
  - OSPFv3

OSPFv2 Interface Settings

OSPF Interface Settings

VRF Name	12 chars	Select VRF
Area ID	0 . 0 . 0 . 0	
Network IP Address	10 . 1 . 1 . 11	
Network Mask	255 . 255 . 255 . 0	Apply

OSPFv2 Interface Settings

OSPF Interface Settings

VRF Name	12 chars	Select VRF
Area ID	0 . 0 . 0 . 0	
Network IP Address	192 . 168 . 11 . 1	
Network Mask	255 . 255 . 255 . 0	Apply

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OSPF Setup Example (GUI)

- L3 Features > OSPF > OSPFv2 > OSPF Process Settings
- Edit the Table entry and set it to Enabled.

OSPFv2 Process Settings

OSPF Process Settings

VRF Name	12 chars	Select VRF		Find	Show All

OSPF Process Table

Total Entries: 1

VRF Name	OSPF State	Router ID	Default Metric	Distance Settings		Default Originate Info			ECMP	
				Type	Distance	State	Orignate	Metric		
	Enabled	10.1.1.11	20	Intra-area	80	Disabled	None	1	1	Edit / Show Detail

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OSPF Process Table

Total Entries: 1

VRF Name	OSPF State	Router ID	Default Metric	Distance Settings		Default Originate Info			ECMP	
				Type	Distance	State	Orignate	Metric		
	Enabled ⌄	10 . 1 . 1 . 11	20	Intra-Area ⌄	80	Disabled ⌄	None ⌄	1	1	Apply / Show Detail

OSPF Setup Example (GUI)

- Check the routing table under L3 Features > IPv4 Route Table.
- The switch will display other networks learned via OSPF.

IPv4 Route Table

Fuzzy Search		
DGS-3630-28TC		
System		
Management		
L2 Features		
L3 Features		
ARP		
Gratuitous ARP		
IPv6 Neighbor		
Interface		
UDP Helper		
IPv4 Static/Default Route		
IPv4 Static Route BFD		
IPv4 Route Table		
IPv6 Static/Default Route		
IPv6 Static Route BFD		

IPv4 Route Table

VRF Name: 12 chars
◉ IP Address: . . .
○ Network Address: . . .   . . .
○ RIP ○ OSPF ○ BGP ○ Connected ○ Hardware ○ Summary   [Find]

Total Entries: 4

IP Address	Mask	Gateway	Interface	Distance/Metric	Protocol	VRF	Candidate Default
10.1.1.0	255.255.255.0	Directly Connected	vlan1		Connected		-
192.168.71.0	255.255.255.0	Directly Connected	vlan71		Connected		-
192.168.81.0	255.255.255.0	10.1.1.8	vlan1	80/2	OSPF		No
192.168.91.0	255.255.255.0	10.1.1.254	vlan1	80/2	OSPF		No

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