

OSPF NEIGHBOUR / ADJACENCY REQUIREMENTS

1. AREA NUMBER MUST MATCH
2. INTERFACES must be in the SAME SUBNET
3. OSPF PROCESS must not be SHUTDOWN

```
R2(config)#router ospf 1
R2(config-router)#shutdown
R2(config-router)#
*Aug 23 03:43:31.719: %OSPF-5-ADJCHG: Process 1, Nbr 192.168.1.1 on GigabitEthernet0/0 from FULL to DOWN, Neighbor Down: Int
R2(config-router)#do show ip ospf neighbor
R2(config-router)#[
```

4. OSPF ROUTER ID must be unique

```
R2(config-router)#router-id 192.168.1.1
% OSPF: Reload or use "clear ip ospf process" command, for this to take effect
R2(config-router)#end
R2#clear ip
*Aug 23 03:57:58.835: %SYS-5-CONFIG_I: Configured from console by console
R2#clear ip ospf process
Reset ALL OSPF processes? [no]: yes
R2#
*Aug 23 03:58:04.055: %OSPF-5-ADJCHG: Process 1, Nbr 192.168.1.1 on GigabitEthernet0/0 from FULL to DOWN, Neighbor Down: Interface down or d
R2#
*Aug 23 03:58:06.495: %OSPF-4-DUP_RTRID_NBR: OSPF detected duplicate router-id 192.168.1.1 from 192.168.1.1 on interface GigabitEthernet0/0
R2#show ip ospf neighbor
R2#[
```

5. HELLO and DEAD Timers must MATCH

6. AUTHENTICATION settings must MATCH

```
R2(config-if)#ip ospf authentication-key jeremy
R2(config-if)#ip ospf authentication
R2(config-if)#
*Aug 23 04:56:28.435: %OSPF-5-ADJCHG: Process 1, Nbr 192.168.1.1 on GigabitEthernet0/0 from FULL to DOWN, Neighbor Down: D
R2(config-if)#do show ip ospf neighbor
R2(config-if)#[
```

*** SPECIAL REQUIREMENTS ***

7. IP MTU settings must MATCH
 - IP MTU : Maximum size of an IP Packet that can be sent from an INTERFACE
 - If the settings DO NOT match, can still become OSPF Neighbors but OSPF WILL NOT operate properly
8. OSPF NETWORK TYPE must match
 - will appear to be working but NEIGHBOR won't appear in ROUTING information