

```

LFA/FRR
CSR6:
conf t
int g1
Desc conn to CSR1
ip add 10.16.1.6 255.255.255.0
no sh
ip ospf cost 2
int g2
Desc conn to CSR3
ip add 10.36.1.6 255.255.255.0
no sh
ip ospf cost 1
exit

int range g1,g2
bfd interval 50 min_rx 50 multiplier 3
exit

router ospf 1
router-id 6.6.6.6
bfd all-interfaces
net 0.0.0.0 255.255.255.255 area 0
fast-reroute per-prefix enable area 0 prefix-priority low
fast-reroute per-prefix tie-break lowest-metric index 10
fast-reroute per-prefix tie-break node-protecting required index 20
exit
=====

CSR3
conf t
int g1
Desc conn to CSR1
ip add 10.13.1.1 255.255.255.0
no sh
ip ospf cost 1
int g2
Desc conn to CSR6
ip add 10.36.1.3 255.255.255.0
no sh
ip ospf cost 1
int g3
Desc conn to CSR5
ip add 10.35.1.3 255.255.255.0
no sh
ip ospf cost 1
exit

int range g1,g2,g3
bfd interval 50 min_rx 50 multiplier 3
exit

router ospf 1
router-id 3.3.3.3
bfd all-interfaces
net 0.0.0.0 255.255.255.255 area 0
fast-reroute per-prefix enable area 0 prefix-priority low
fast-reroute per-prefix tie-break lowest-metric index 10
fast-reroute per-prefix tie-break node-protecting required index 20

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exit
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```
CSR1
conf t
int g1
Desc conn to CSR2
ip add 10.12.1.1 255.255.255.0
no sh
ip ospf cost 1
int g2
Desc conn to CSR6
ip add 10.16.1.1 255.255.255.0
no sh
ip ospf cost 2
int g3
Desc conn to CSR3
ip add 10.13.1.1 255.255.255.0
no sh
ip ospf cost 1
int g4
Desc conn to CSR4
ip add 10.14.1.1 255.255.255.0
no sh
ip ospf cost 15
exit
int range g1,g2,g3,g4
bfd interval 50 min_rx 50 multiplier 3
exit
```

```
router ospf 1
router-id 1.1.1.1
bfd all-interfaces
net 0.0.0.0 255.255.255.255 area 0
fast-reroute per-prefix enable area 0 prefix-priority low
fast-reroute per-prefix tie-break lowest-metric index 10
fast-reroute per-prefix tie-break node-protecting required index 20
exit
```

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```
CSR2:
conf t
int g1
Desc conn to CSR1
ip add 10.12.1.2 255.255.255.0
no sh
ip ospf cost 1
int g2
Desc conn to CSR5
ip add 10.25.1.2 255.255.255.0
no sh
ip ospf cost 10
exit

int range g1,g2
bfd interval 50 min_rx 50 multiplier 3
exit
```

```
router ospf 1
router-id 2.2.2.2
```

```
bfd all-interfaces
net 0.0.0.0 255.255.255.255 area 0
fast-reroute per-prefix enable area 0 prefix-priority low
fast-reroute per-prefix tie-break lowest-metric index 10
fast-reroute per-prefix tie-break node-protecting required index 20
exit
```

```
=====
CSR4:
```

```
conf t
int g1
Desc conn to CSR1
ip add 10.14.1.4 255.255.255.0
no sh
ip ospf cost 15
int g2
Desc conn to CSR5
ip add 10.45.1.4 255.255.255.0
no sh
ip ospf cost 10
exit
```

```
int range g1,g2
bfd interval 50 min_rx 50 multiplier 3
exit
```

```
router ospf 1
router-id 4.4.4.4
bfd all-interfaces
net 0.0.0.0 255.255.255.255 area 0
fast-reroute per-prefix enable area 0 prefix-priority low
fast-reroute per-prefix tie-break lowest-metric index 10
fast-reroute per-prefix tie-break node-protecting required index 20
exit
```

```
=====
CSR5:
```

```
conf t
int g1
Desc conn to CSR3
ip add 10.35.1.5 255.255.255.0
no sh
ip ospf cost 1
int g2
Desc conn to CSR4
ip add 10.45.1.5 255.255.255.0
no sh
ip ospf cost 10
int g3
Desc conn to CSR2
ip add 10.25.1.5 255.255.255.0
no sh
ip ospf cost 10
exit
```

```
int range g1,g2,g3
bfd interval 50 min_rx 50 multiplier 3
exit
```

```
router ospf 1
router-id 5.5.5.5
bfd all-interfaces
net 0.0.0.0 255.255.255.255 area 0
fast-reroute per-prefix enable area 0 prefix-priority low
fast-reroute per-prefix tie-break lowest-metric index 10
fast-reroute per-prefix tie-break node-protecting required index 20
=====
```

STUB Router:

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```
R1:
conf t
int e0/0
ip add 10.13.1.1 255.255.255.0
no sh
int s2/0
ip add 10.14.1.1 255.255.255.0
no sh
int lo0
ip add 1.1.1.1 255.255.255.0

router ospf 1
router-id 1.1.1.1
net 0.0.0.0 255.255.255.255 area 0
exit
```

```
R2:
conf t
int e0/0
ip add 10.23.1.2 255.255.255.0
no sh
int s2/0
ip add 10.24.1.2 255.255.255.0
no sh
int lo0
ip add 2.2.2.2 255.255.255.0
router ospf 1
router-id 2.2.2.2
net 0.0.0.0 255.255.255.255 area 0
exit
```

```
R3:Stub router
conf t
int e0/0
ip add 10.13.1.3 255.255.255.0
no sh
int e0/1
ip add 10.23.1.3 255.255.255.0
no sh
int lo0
ip add 3.3.3.3 255.255.255.0
router ospf 1
router-id 3.3.3.3
net 0.0.0.0 255.255.255.255 area 0
exit
```

```
R4:
conf t
int s2/0
```

```
ip add 10.14.1.4 255.255.255.0
no sh
int s2/1
ip add 10.24.1.4 255.255.255.0
no sh
int lo0
ip add 4.4.4.4 255.255.255.0

router ospf 1
router-id 4.4.4.4
net 0.0.0.0 255.255.255.255 area 0
exit
```

```
R3:Stub router
Router ospf 1
max-metric router-lsa
exit
```

```
Router ospf 1
max-metric router-lsa on-startup
exit
```

Gracefull Shutdown

```
Router ospf 1
shutdown
exit
```

```
int e0/0
ip ospf shut
exit
=====
```