# PIM SSM with default group 232.0.0.0/8
----------------------------------------------------------------

All routers
Interface config

```
 int xxx
ip ospf 1 area 0
ip pim sparse-mode
exit

ip multicast-routing
ip pim ssm default
```

LHR
The interface that is connected to receiver
```
int xxx
ip igmp ver 3
exit
```

SSM with non default
All routers
-----------------
```
access-list 1 permit host 239.1.1.1
ip pim ssm range 1
```


REC
```
int e0/0
ip igmp ver 3
ip igmp join-group 232.1.1.1 source 10.1.1.1
ip igmp join-group 232.1.1.1 source 1.1.1.1
```

Non Default
```
int e0/0
ip igmp join-group 239.1.1.1 source 10.1.1.1
```

================================================================
# PIM BIDIR

All routers/All interfaces

```
ip multicast-routing

 int xxx
ip ospf 1 area 0
ip pim sparse-mode
exit
```

R3: Rp
```
ip pim bidir-enable
ip pim send-rp-announce  lo0  scope 10 bidir
ip pim send-rp-discovery lo0 scope 10
ip pim autorp listener
```

All others

```
R3: Rp
ip pim bidir-enable
ip pim autorp listener


=================================================
MSDP

R1: Rp for Multicast Domain 1

ip pim bsr-candidate Loopback0 0
ip pim rp-candidate Loopback0

! MSDP config
ip msdp peer 3.3.3.3 connect-source Loopback0

int s2/0
ip pim bsr-router
exit

All routers
ip multicast-routing

int xxx
ip ospf 1 a 0
ip pim sparse-mode
exit


R3: Rp for Multicast Domain 2

ip pim bsr-candidate Loopback0 0
ip pim rp-candidate Loopback0

! MSDP config
ip msdp peer 1.1.1.1 connect-source Loopback0

int s2/0
ip pim bsr-router
exit

All routers
ip multicast-routing

int xxx
ip ospf 1 a 0
ip pim sparse-mode
exit


============================================================
MSDP with anycast

R1/R3  (MSDP peers)

int s2/0
no ip pim bsr-border
```

```
exit

ip pim bsr-candidate Loopback0 0
ip pim rp-candidate Loopback 1

int  lo 1
ip add 88.88.88.88 255.255.255.255
ip ospf 1 area 0
ip pim sparse-mode
exit


MSDP
R1
ip msdp peer 3.3.3.3 connect-source Loopback0
R3
ip msdp peer 1.1.1.1 connect-source Loopback0
```