

## Configurazione router utente per Multicast

### 1. Accesso con RP GARR – RouterCisco

#### **multicast su più link paralleli ad egual costo**

```
ip multicast multipath
```

#### **Configurare PIM-SM (con abilitazione implicita IGMP) e SAP/SDR sulle interfacce:**

```
interface serial1/0  
ip pim sparse-mode  
ip sap listen  
interface eth2/0  
ip pim sparse-mode  
ip sap listen
```

#### **Sull'interfaccia di frontiera verso GARR:**

```
interface serial0/0  
ip pim sparse-mode  
ip multicast boundary 99  
ip pim bsr-border
```

#### **Configurare il RP staticamente:**

```
ip pim rp-address 193.204.216.254
```

### 2. Accesso con RP GARR – Router Juniper

#### **Configurare IGMP, SAP, PIM-SM e indirizzo del RP**

```
protocols {  
  igmp {  
    interface all {  
      version 2;  
    }  
  }  
  sap;
```

```
pim {  
  import multicast-boundary;  
  rp {  
    bootstrap-import reject-bsr-messages-in;  
    bootstrap-export reject-bsr-messages-out;  
    static {  
      address 193.204.216.254 {  
        version 2;  
      }  
    }  
  }  
  interface all {  
    mode sparse;  
    version 2;  
  }  
}
```

**Configurare il multicast boundary:**

```
policy-statement multicast-boundary {  
  term bad-groups {  
    from {  
      route-filter 224.0.1.2/32 exact;  
      route-filter 224.0.1.3/32 exact;  
      route-filter 224.0.1.8/32 exact;  
      route-filter 224.0.1.22/32 exact;  
      route-filter 224.0.1.24/32 exact;  
      route-filter 224.0.1.25/32 exact;  
      route-filter 224.0.1.35/32 exact;  
      route-filter 224.0.1.39/32 exact;  
      route-filter 224.0.1.40/32 exact;  
      route-filter 224.0.1.60/32 exact;  
      route-filter 224.0.2.1/32 exact;  
      route-filter 224.0.2.2/32 exact;  
      route-filter 225.1.2.3/32 exact;  
      route-filter 229.55.150.208/32 exact;  
      route-filter 234.42.42.42/32 exact;  
      route-filter 239.0.0.0/8 orlonger;  
    }  
    then reject;  
  }  
}
```

```
}  
term bad-sources {  
  from {  
    source-address-filter 10.0.0.0/8 orlonger;  
    source-address-filter 127.0.0.0/8 orlonger;  
    source-address-filter 172.16.0.0/12 orlonger;  
    source-address-filter 192.168.0.0/16 orlonger;  
  }  
  then reject;  
}  
term default {  
  then accept;  
}  
}
```

### 3. Configurare il rigetto dei messaggi bsr

**N.B.: fe-3/2/0.0 è l'interfaccia verso GARR**

```
policy-options {  
  policy-statement reject-bsr-messages-in {  
    from interface fe-3/2/0.0;  
    then reject;  
  }  
  policy-statement reject-bsr-messages-out {  
    to interface fe-3/2/0.0;  
  }  
}
```