

## Chapter 4

# Complete Multicast Configuration Statements

This chapter shows the complete configuration statement hierarchy for the portions of the configuration discussed in this manual, listing all possible configuration statements and showing their level in the configuration hierarchy. When you are configuring the JUNOS software, your current hierarchy level is shown in the banner on the line preceding the `user@host#` prompt.

For a list of the complete configuration statement hierarchy, see the *JUNOS Internet Software System Basics Configuration Guide*.

This chapter is organized as follows:

[edit protocols] Hierarchy Level on page 32

[edit routing-instances] Hierarchy Level on page 35

[edit routing-options] Hierarchy Level on page 35

[edit logical-routers logical-router-name protocols] Hierarchy Level on page 36

[edit logical-routers logical-router-name routing-instance] Hierarchy Level on page 39

[edit logical-routers logical-router-name routing-options] Hierarchy Level on page 39

## [edit protocols] Hierarchy Level

```

[edit]
protocols {
  DVMRP    dvmrp {
            disable;
            export [ policy-names ];
            import [ policy-names ];
            interface interface-name {
              disable;
              hello-interval seconds;
              hold-time seconds;
              metric metric;
              mode (forwarding | unicast-routing);
            }
            rib-group group-name;
            traceoptions {
              file name <replace> <size size> <files number> <no-stamp>
                <(world-readable | no-world-readable)>;
              flag flag <flag-modifier> <disable>;
            }
          }
  IGMP     igmp {
            interface interface-name {
              disable;
              static {
                group group {
                  source source;
                }
              }
            }
            version version;
            query-interval seconds;
            query-last-member-interval seconds;
            query-response-interval seconds;
            robust-count number;
            traceoptions {
              file name <replace> <size size> <files number> <no-stamp>
                <(world-readable | no-world-readable)>;
              flag flag <flag-modifier> <disable>;
            }
          }
  MLD      mld {
            interface interface-name {
              disable;
              static {
                group group {
                  source source;
                }
              }
            }
            version version;
            query-interval seconds;
  }
}

```

```

query-last-member-interval seconds;
query-response-interval seconds;
robust-count number;
traceoptions {
  file name <replace> <size size> <files number> <no-stamp>
    <(world-readable | no-world-readable)>;
  flag flag <flag-modifier> <disable>;
}
}

MSDP msdp {
  active-source-limits {
    maximum number;
    threshold number;
  }
  data-encapsulation <(disable | enable)>;
  disable;
  export [ policy-names ];
  import [ policy-names ];
  local-address address;
  rib-group group-name;
  traceoptions {
    file name <replace> <size size> <files number> <no-stamp>
      <(world-readable | no-world-readable)>;
    flag flag <flag-modifier> <disable>;
  }
  peer address {
    authentication-key peer-key;
    disable;
    export [ policy-names ];
    import [ policy-names ];
    local-address address;
    traceoptions {
      file name <replace> <size size> <files number> <no-stamp>
        <(world-readable | no-world-readable)>;
      flag flag <flag-modifier> <disable>;
    }
  }
}
group group-name {
  disable;
  export [ policy-names ];
  import [ policy-names ];
  local-address address;
  mode <(mesh-group | standard)>;
  traceoptions {
    file name <replace> <size size> <files number> <no-stamp>
      <(world-readable | no-world-readable)>;
    flag flag <flag-modifier> <disable>;
  }
}
peer address; {
  authentication-key peer-key;
  disable;
  export [ policy-names ];
  import [ policy-names ];
  local-address address;
}

```

```

        traceoptions {
            file name <replace> <size size> <files number> <no-stamp>
              <(world-readable | no-world-readable)>;
            flag flag <flag-modifier> <disable>;
        }
    }
}

PGM    pgm {
    traceoptions {
        file name <replace> <size size> <files number> <no-stamp>
          <(world-readable | no-world-readable)>;
        flag flag <flag-modifier>;
    }
}

PIM    pim {
    disable;
    dense-groups {
        addresses;
    }
    import [ policy-names ];
    interface interface-name {
        disable;
        hello-interval seconds;
        mode (dense | sparse | sparse-dense);
        priority number;
        version version;
    }
    rib-group group-name;
    rp {
        auto-rp (announce | discovery | mapping);
        bootstrap-export [ policy-names ];
        bootstrap-import [ policy-names ];
        bootstrap-priority number;
        local {
            family (inet | inet6) {
                disable;
                address address;
                group-ranges {
                    destination-mask;
                }
                hold-time seconds;
                priority number;
            }
        }
    }
    static {
        address address {
            version version;
            group-ranges {
                destination-mask;
            }
        }
    }
}

```

```

        traceoptions {
            file name <replace> <size size> <files number> <no-stamp>
              <(world-readable | no-world-readable)>;
            flag flag <flag-modifier> <disable>;
        }
    }
}

SDP/SAP    sap {
            disable;
            listen [ address <port port> ];
        }
    }
}

```

### [edit routing-instances] Hierarchy Level

---

```

[edit]
routing-instances {
    instance-name {
        interface interface-name;
        instance-type (virtual-router | vrf);
        protocols {
            pim {
                vpn-group-address class-D-address; /* only needed for the vrf instance type
            */
            }
        }
    }
}

```



**NOTE:** All statements at the [edit protocols pim] hierarchy level can be configured at the [edit routing-instance *instance-name* protocols pim] hierarchy level.

---

### [edit routing-options] Hierarchy Level

---

```

[edit]
routing-options {
    multicast {
        forwarding-cache {
            threshold suppress value <reuse value>;
        }
        scope scope-name {
            interface interface-name;
            prefix destination-prefix;
        }
        scope-policy policy-name;
        ssm-groups {
            address;
        }
    }
}

```

[edit logical-routers *logical-router-name* protocols] Hierarchy Level

```

[edit logical-routers logical-router-name]
protocols {

  DVMRP      dvmrp {
    disable;
    export [ policy-names ];
    import [ policy-names ];
    interface interface-name {
      disable;
      hello-interval seconds;
      hold-time seconds;
      metric metric;
      mode (forwarding | unicast-routing);
    }
    rib-group group-name;
    traceoptions {
      file name <replace> <size size> <files number> <no-stamp>
        <(world-readable | no-world-readable)>;
      flag flag <flag-modifier> <disable>;
    }
  }

  IGMP      igmp {
    interface interface-name {
      disable;
      static {
        group group {
          source source;
        }
      }
      version version;
    }
    query-interval seconds;
    query-last-member-interval seconds;
    query-response-interval seconds;
    robust-count number;
    traceoptions {
      file name <replace> <size size> <files number> <no-stamp>
        <(world-readable | no-world-readable)>;
      flag flag <flag-modifier> <disable>;
    }
  }

  MLD      mld {
    interface interface-name {
      disable;
      static {
        group group {
          source source;
        }
      }
      version version;
    }
  }
}

```

```

query-interval seconds;
query-last-member-interval seconds;
query-response-interval seconds;
robust-count number;
traceoptions {
  file name <replace> <size size> <files number> <no-stamp>
    <(world-readable | no-world-readable)>;
  flag flag <flag-modifier> <disable>;
}
}

MSDP msdp {
  active-source-limits {
    maximum number;
    threshold number;
  }
  data-encapsulation <(disable | enable)>;
  disable;
  export [ policy-names ];
  import [ policy-names ];
  local-address address;
  rib-group group-name;
  traceoptions {
    file name <replace> <size size> <files number> <no-stamp>
      <(world-readable | no-world-readable)>;
    flag flag <flag-modifier> <disable>;
  }
  peer address {
    authentication-key peer-key;
    disable;
    export [ policy-names ];
    import [ policy-names ];
    local-address address;
    traceoptions {
      file name <replace> <size size> <files number> <no-stamp>
        <(world-readable | no-world-readable)>;
      flag flag <flag-modifier> <disable>;
    }
  }
}
group group-name {
  disable;
  export [ policy-names ];
  import [ policy-names ];
  local-address address;
  mode <(mesh-group | standard)>;
  traceoptions {
    file name <replace> <size size> <files number> <no-stamp>
      <(world-readable | no-world-readable)>;
    flag flag <flag-modifier> <disable>;
  }
  peer address; {
    authentication-key peer-key;
    disable;
    export [ policy-names ];
    import [ policy-names ];
    local-address address;
  }
}

```

```

        traceoptions {
            file name <replace> <size size> <files number> <no-stamp>
              <(world-readable | no-world-readable)>;
            flag flag <flag-modifier> <disable>;
        }
    }
}

PGM    pgm {
    traceoptions {
        file name <replace> <size size> <files number> <no-stamp>
          <(world-readable | no-world-readable)>;
        flag flag <flag-modifier>;
    }
}

PIM    pim {
    disable;
    dense-groups {
        addresses;
    }
    import [ policy-names ];
    interface interface-name {
        disable;
        hello-interval seconds;
        mode (dense | sparse | sparse-dense);
        priority number;
        version version;
    }
    rib-group group-name;
    rp {
        auto-rp (discovery | mapping);
        bootstrap-export [ policy-names ];
        bootstrap-import [ policy-names ];
        bootstrap-priority number;
        static {
            address address {
                version version;
                group-ranges {
                    destination-mask;
                }
            }
        }
        traceoptions {
            file name <replace> <size size> <files number> <no-stamp>
              <(world-readable | no-world-readable)>;
            flag flag <flag-modifier> <disable>;
        }
    }
}

SDP/SAP sap {
    disable;
    listen [ address <port port>];
}
}

```

---

### [edit logical-routers *logical-router-name* routing-instance] Hierarchy Level

---

```
[edit logical-routers logical-router-name]
routing-instances {
  instance-name {
    interface interface-name;
    instance-type (virtual-router | vrf);
    protocols {
      pim {
        vpn-group-address class-D-address; /* only needed for the vrf instance type
*/
      }
    }
  }
}
```



**NOTE:** Almost all statements at the [edit protocols pim] hierarchy level can be configured at the [edit logical-routers *logical-router-name* routing-instance *instance-name* protocols pim] hierarchy level. See “PIM Configuration Guidelines” on page 171 for restrictions.

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---

### [edit logical-routers *logical-router-name* routing-options] Hierarchy Level

---

```
[edit logical-routers logical-router-name]
routing-options {
  multicast {
    forwarding-cache {
      threshold suppress value <reuse value>;
    }
    scope scope-name {
      interface interface-name;
      prefix destination-prefix;
    }
    scope-policy policy-name;
    ssm-groups {
      address;
    }
  }
}
```

