

Chapter 33

Summary of MSDP Configuration Statements

The following sections explain each of the Multicast Source Discovery Protocol (MSDP) configuration statements. The statements are organized alphabetically.

active-source-limit

Syntax	<pre>active-source-limit { maximum <i>number</i>; threshold <i>number</i>; }</pre>
Hierarchy Level	<pre>[edit logical-routers <i>logical-router-name</i> protocols msdp], [edit logical-routers <i>logical-router-name</i> protocols msdp group <i>group-name</i> peer <i>address</i>], [edit logical-routers <i>logical-router-name</i> protocols msdp peer <i>address</i>], [edit logical-routers <i>logical-router-name</i> protocols msdp source <i>prefix/mask</i>], [edit protocols msdp], [edit protocols msdp group <i>group-name</i> peer <i>address</i>], [edit protocols msdp peer <i>address</i>], [edit protocols msdp source <i>prefix/mask</i>], [edit routing-instances <i>instance-name</i> logical-routers <i>logical-router-name</i> protocols msdp], [edit routing-instances <i>instance-name</i> logical-routers <i>logical-router-name</i> protocols msdp group <i>group-name</i> peer <i>address</i>], [edit routing-instances <i>instance-name</i> logical-routers <i>logical-router-name</i> protocols msdp peer <i>address</i>], [edit routing-instances <i>instance-name</i> logical-routers <i>logical-router-name</i> protocols msdp source <i>prefix/mask</i>], [edit routing-instances <i>instance-name</i> protocols msdp], [edit routing-instances <i>instance-name</i> protocols msdp group <i>group-name</i> peer <i>address</i>], [edit routing-instances <i>instance-name</i> protocols msdp peer <i>address</i>], [edit routing-instances <i>instance-name</i> protocols msdp source <i>prefix/mask</i>]</pre>
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Limit the number of active source messages the router accepts.
Default	If you do not include this statement, the router accepts any number of MSDP active source messages.
Options	The options are explained separately.

Usage Guidelines See “Configuring the MSDP Active Source Limit” on page 323.

Required Privilege Level routing—To view this statement in the configuration.
routing-control—To add this statement to the configuration.

authentication-key

Syntax authentication-key *peer-key*;

Hierarchy Level [edit logical-routers *logical-router-name* protocols msdp group *group-name* peer *address*],
[edit logical-routers *logical-router-name* protocols msdp peer *address*],
[edit protocols msdp group *group-name* peer *address*],
[edit protocols msdp peer *address*],
[edit routing-instances *instance-name* logical-routers *logical-router-name* protocols msdp group *group-name* peer *address*],
[edit routing-instances *instance-name* logical-routers *logical-router-name* protocols msdp peer *address*],
[edit routing-instances *instance-name* protocols msdp group *group-name* peer *address*],
[edit routing-instances *instance-name* protocols msdp peer *address*]

Release Information Statement introduced before JUNOS Release 7.4.

Description Associate a Message Digest 5 (MD5) signature option authentication key with an MSDP peering session.

Default If you do not include this statement, the router accepts any valid MSDP messages from the peer address.

Options *peer-key*—MD5 authentication key. The peer key can be a text string up to 16 letters and digits long. Strings can include any ASCII characters with the exception of (,), &, and [. If you include spaces in an MSDP authentication key, enclose all characters in quotation marks (" ").

Usage Guidelines See “Configuring the MSDP Authentication Key” on page 318.

Required Privilege Level routing—To view this statement in the configuration.
routing-control—To add this statement to the configuration.

data-encapsulation

Syntax data-encapsulation (disable | enable);

Hierarchy Level [edit logical-routers *logical-router-name* protocols msdp],
[edit protocols msdp],
[edit routing-instances *instance-name* logical-routers *logical-router-name* protocols msdp],
[edit routing-instances *instance-name* protocols msdp]

Release Information Statement introduced before JUNOS Release 7.4.

Description Configure a rendezvous point (RP) using MSDP to encapsulate multicast data received in MSDP register messages inside forwarded MSDP source-active messages.

Default If you do not include this statement, the RP encapsulates multicast data.

Options disable—(Optional) Do not use MSDP data encapsulation.

enable—Use MSDP data encapsulation.

Default: enable

Usage Guidelines See “Configuring MSDP Data Encapsulation” on page 322.

Required Privilege Level routing—To view this statement in the configuration.
routing-control—To add this statement to the configuration.

default-peer

Syntax default-peer;

Hierarchy Level [edit logical-routers *logical-router-name* protocols msdp],
[edit logical-routers *logical-router-name* protocols msdp group *group-name*],
[edit logical-routers *logical-router-name* protocols msdp group *group-name*
peer *address*],
[edit logical-routers *logical-router-name* protocols msdp peer *address*],
[edit protocols msdp],
[edit protocols msdp group *group-name*],
[edit protocols msdp group *group-name* peer *address*],
[edit protocols msdp peer *address*],
[edit routing-instances *instance-name* logical-routers *logical-router-name* protocols
msdp],
[edit routing-instances *instance-name* logical-routers *logical-router-name* protocols
msdp group *group-name*],
[edit routing-instances *instance-name* logical-routers *logical-router-name* protocols
msdp group *group-name* peer *address*],
[edit routing-instances *instance-name* logical-routers *logical-router-name* protocols
msdp peer *address*],
[edit routing-instances *instance-name* protocols msdp],
[edit routing-instances *instance-name* protocols msdp group *group-name*],
[edit routing-instances *instance-name* protocols msdp group *group-name* peer *address*],
[edit routing-instances *instance-name* protocols msdp peer *address*]

Release Information Statement introduced before JUNOS Release 7.4.

Description Establishes this peer as the default MSDP peer and accepts source-active messages from the peer without the usual peer-reverse-path-forwarding (peer-RPF) check.

Usage Guidelines See “Configuring a Default MSDP Peer” on page 325.

Required Privilege Level routing—To view this statement in the configuration.
routing-control—To add this statement to the configuration.

disable

Syntax	disable;
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols msdp], [edit logical-routers <i>logical-router-name</i> protocols msdp group <i>group-name</i>], [edit logical-routers <i>logical-router-name</i> protocols msdp group <i>group-name</i> peer <i>address</i>], [edit logical-routers <i>logical-router-name</i> protocols msdp peer <i>address</i>], [edit protocols msdp], [edit protocols msdp group <i>group-name</i>], [edit protocols msdp group <i>group-name</i> peer <i>address</i>], [edit protocols msdp peer <i>address</i>], [edit routing-instances <i>instance-name</i> logical-routers <i>logical-router-name</i> protocols msdp], [edit routing-instances <i>instance-name</i> logical-routers <i>logical-router-name</i> protocols msdp group <i>group-name</i>], [edit routing-instances <i>instance-name</i> logical-routers <i>logical-router-name</i> protocols msdp group <i>group-name</i> peer <i>address</i>], [edit routing-instances <i>instance-name</i> logical-routers <i>logical-router-name</i> protocols msdp peer <i>address</i>], [edit routing-instances <i>instance-name</i> protocols msdp], [edit routing-instances <i>instance-name</i> protocols msdp group <i>group-name</i>], [edit routing-instances <i>instance-name</i> protocols msdp group <i>group-name</i> peer <i>address</i>], [edit routing-instances <i>instance-name</i> protocols msdp peer <i>address</i>]
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Explicitly disable MSDP.
Usage Guidelines	See “Disabling MSDP” on page 326.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

export

Syntax	export [<i>policy-names</i>];
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols msdp], [edit logical-routers <i>logical-router-name</i> protocols msdp group <i>group-name</i>], [edit logical-routers <i>logical-router-name</i> protocols msdp group <i>group-name</i> peer <i>address</i>], [edit logical-routers <i>logical-router-name</i> protocols msdp peer <i>address</i>], [edit protocols msdp], [edit protocols msdp group <i>group-name</i>], [edit protocols msdp group <i>group-name</i> peer <i>address</i>], [edit protocols msdp peer <i>address</i>], [edit routing-instances <i>instance-name</i> logical-routers <i>logical-router-name</i> protocols msdp], [edit routing-instances <i>instance-name</i> logical-routers <i>logical-router-name</i> protocols msdp group <i>group-name</i>], [edit routing-instances <i>instance-name</i> logical-routers <i>logical-router-name</i> protocols msdp group <i>group-name</i> peer <i>address</i>], [edit routing-instances <i>instance-name</i> logical-routers <i>logical-router-name</i> protocols msdp peer <i>address</i>]

```

msdp peer address],
[edit routing-instances instance-name protocols msdp],
[edit routing-instances instance-name protocols msdp group group-name],
[edit routing-instances instance-name protocols msdp group group-name peer address],
[edit routing-instances instance-name protocols msdp peer address]

```

Release Information Statement introduced before JUNOS Release 7.4.

Description Apply one or more policies to routes being exported from the routing table into MSDP.

Options *policy-names*—Name of one or more policies.

Usage Guidelines See “Configuring MSDP Routing Policy” on page 319.

Required Privilege Level routing—To view this statement in the configuration.
routing-control—To add this statement to the configuration.

See Also import on page 336

group

```

Syntax 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; {
    active-source-limit {
      maximum number;
      threshold number;
    }
    authentication-key peer-key;
    default-peer;
    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>;
    }
  }
}

```

Hierarchy Level	[edit protocols msdp], [edit logical-routers <i>logical-router-name</i> protocols msdp], [edit routing-instances <i>instance-name</i> logical-routers <i>logical-router-name</i> protocols msdp], [edit routing-instances <i>instance-name</i> protocols msdp]
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Define an MSDP peer group. MSDP peers within groups share common traceoptions, if present and not overridden for an individual peer with the peer statement. To configure multiple MSDP groups, include multiple group statements. By default, the group's options are identical to the global MSDP options. To override the global options, include group-specific options within the group statement. The group must contain at least one peer.
Options	group-name —Name of the MSDP group. The remaining statements are explained separately.
Usage Guidelines	See “Configuring MSDP Groups” on page 315.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

import

Syntax	import [<i>policy-names</i>];
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols msdp], [edit logical-routers <i>logical-router-name</i> protocols msdp group <i>group-name</i>], [edit logical-routers <i>logical-router-name</i> protocols msdp group <i>group-name</i> peer <i>address</i>], [edit logical-routers <i>logical-router-name</i> protocols msdp peer <i>address</i>], [edit protocols msdp], [edit protocols msdp group <i>group-name</i>], [edit protocols msdp group <i>group-name</i> peer <i>address</i>], [edit protocols msdp peer <i>address</i>], [edit routing-instances <i>instance-name</i> logical-routers <i>logical-router-name</i> protocols msdp], [edit routing-instances <i>instance-name</i> logical-routers <i>logical-router-name</i> protocols msdp group <i>group-name</i>], [edit routing-instances <i>instance-name</i> logical-routers <i>logical-router-name</i> protocols msdp group <i>group-name</i> peer <i>address</i>], [edit routing-instances <i>instance-name</i> logical-routers <i>logical-router-name</i> protocols msdp peer <i>address</i>], [edit routing-instances <i>instance-name</i> protocols msdp], [edit routing-instances <i>instance-name</i> protocols msdp group <i>group-name</i>], [edit routing-instances <i>instance-name</i> protocols msdp group <i>group-name</i> peer <i>address</i>], [edit routing-instances <i>instance-name</i> protocols msdp peer <i>address</i>]
Release Information	Statement introduced before JUNOS Release 7.4.

Description	Apply one or more policies to routes being imported into the routing table from MSDP.
Options	<i>policy-names</i> —Name of one or more policies.
Usage Guidelines	See “Configuring MSDP Routing Policy” on page 319.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.
See Also	export on page 334

local-address

Syntax	local-address <i>address</i> ;
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols msdp], [edit logical-routers <i>logical-router-name</i> protocols msdp group <i>group-name</i>], [edit logical-routers <i>logical-router-name</i> protocols msdp group <i>group-name</i> peer <i>address</i>], [edit logical-routers <i>logical-router-name</i> protocols msdp peer <i>address</i>], [edit protocols msdp], [edit protocols msdp group <i>group-name</i>], [edit protocols msdp group <i>group-name</i> peer <i>address</i>], [edit protocols msdp peer <i>address</i>], [edit routing-instances <i>instance-name</i> logical-routers <i>logical-router-name</i> protocols msdp], [edit routing-instances <i>instance-name</i> logical-routers <i>logical-router-name</i> protocols msdp group <i>group-name</i>], [edit routing-instances <i>instance-name</i> logical-routers <i>logical-router-name</i> protocols msdp group <i>group-name</i> peer <i>address</i>], [edit routing-instances <i>instance-name</i> logical-routers <i>logical-router-name</i> protocols msdp peer <i>address</i>], [edit routing-instances <i>instance-name</i> protocols msdp], [edit routing-instances <i>instance-name</i> protocols msdp group <i>group-name</i>], [edit routing-instances <i>instance-name</i> protocols msdp group <i>group-name</i> peer <i>address</i>], [edit routing-instances <i>instance-name</i> protocols msdp peer <i>address</i>]
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Configure the local end of an MSDP session. You must configure at least one peer for MSDP to function. When configuring a peer, you must include this statement. This address is used to accept incoming connections to the peer and to establish connections to the remote peer.
Options	<i>address</i> —IP address of the local end of the connection.
Usage Guidelines	See “Minimum MSDP Configuration” on page 313.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

maximum

Syntax	maximum <i>number</i> ;
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols msdp active-source-limit], [edit protocols msdp active-source-limit], [edit routing-instances <i>instance-name</i> logical-routers <i>logical-router-name</i> protocols msdp active-source-limit], [edit routing-instances <i>instance-name</i> protocols msdp active-source-limit]
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Configure the maximum number of MSDP active source messages the router accepts.
Options	<i>number</i> —Maximum number of active source messages. Range: 1 through 1,000,000 Default: 25,000
Usage Guidelines	See “Configuring the MSDP Active Source Limit” on page 323.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.
See Also	threshold on page 342

mode

Syntax	mode (mesh-group standard);
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols msdp group <i>group-name</i>], [edit protocols msdp group <i>group-name</i>], [edit routing-instances <i>instance-name</i> logical-routers <i>logical-router-name</i> protocols msdp group <i>group-name</i>], [edit routing-instances <i>instance-name</i> protocols msdp group <i>group-name</i>]
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Configure groups of peers in a full mesh topology to limit excessive flooding of source-active messages to neighboring peers. The default flooding mode is standard.
Default	If you do not include this statement, default flooding is applied.
Options	mesh-group—(Optional) Group of peers that are mesh group members. standard—Use standard MSDP source-active flooding rules. Default: standard
Usage Guidelines	See “Configuring MSDP Mesh Groups” on page 316.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

msdp

```

Syntax      msdp {
                active-source-limit {
                    maximum number;
                    threshold number;
                }
                data-encapsulation (enable | disable);
                disable;
                rib-group group-name;
                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>;
                }
                peer address {
                    active-source-limit {
                        maximum number;
                        threshold number;
                    }
                    authentication-key peer-key;
                    default-peer;
                    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 {
                    active-source-limit {
                        maximum number;
                        threshold number;
                    }
                }
                authentication-key peer-key;
            }

```

```

    default-peer;
    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>;
    }
}
source prefix/mask {
    active-source-limit {
        maximum number;
        threshold number;
    }
}
}
}
}

```

Hierarchy Level	[edit protocols], [edit logical-routers <i>logical-router-name</i> protocols], [edit routing-instances <i>instance-name</i> logical-routers <i>logical-router-name</i> protocols], [edit routing-instances <i>instance-name</i> protocols]
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Enable MSDP on the router. You must also configure at least one peer for MSDP to function.
Default	MSDP is disabled on the router.
Options	The statements are explained separately.
Usage Guidelines	See “Enabling MSDP” on page 314.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

peer

Syntax

```

peer address {
    active-source-limit {
        maximum number;
        threshold number;
    }
    authentication-key peer-key;
    default-peer;
    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>;
    }
}

```

Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols msdp], [edit logical-routers <i>logical-router-name</i> protocols msdp group <i>group-name</i>], [edit protocols msdp], [edit protocols msdp group <i>group-name</i>], [edit routing-instances <i>instance-name</i> logical-routers <i>logical-router-name</i> protocols msdp], [edit routing-instances <i>instance-name</i> logical-routers <i>logical-router-name</i> protocols msdp group <i>group-name</i>], [edit routing-instances <i>instance-name</i> protocols msdp], [edit routing-instances <i>instance-name</i> protocols msdp group <i>group-name</i>]
Release Information	Statement introduced before JUNOS Release 7.4.
Description	<p>Define an MSDP peering relationship. An MSDP router must know which routers are its peers. You define the peer relationships explicitly by configuring the neighboring routers that are the MSDP peers of the local router. After peer relationships are established, the MSDP peers exchange messages to advertise active multicast sources. To configure multiple MSDP peers, include multiple peer statements.</p> <p>By default, the peer's options are identical to the global or group-level MSDP options. To override the global or group-level options, include peer-specific options within the peer statement.</p> <p>At least one peer must be configured for MSDP to function. You must configure <i>address</i> and <i>local-address</i>.</p>
Options	<p><i>address</i>—Name of the MSDP peer.</p> <p>The remaining statements are explained separately.</p>
Usage Guidelines	See “Configuring MSDP Peers” on page 314.
Required Privilege Level	<p>routing—To view this statement in the configuration.</p> <p>routing-control—To add this statement to the configuration.</p>

rib-group

Syntax	<i>rib-group group-name</i> ;
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols msdp], [edit protocols msdp], [edit routing-instances <i>instance-name</i> logical-routers <i>logical-router-name</i> protocols msdp], [edit routing-instances <i>instance-name</i> protocols msdp]
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Associate a routing table group with MSDP.

Options *group-name*—Name of the routing table group. The name must be one that you defined with the `rib-groups` statement at the [edit routing-options] hierarchy level.

Usage Guidelines See “Enabling MSDP” on page 314.

Required Privilege Level routing—To view this statement in the configuration.
routing-control—To add this statement to the configuration.

source

Syntax

```
source prefix/mask {
    active-source-limit {
        maximum number;
        threshold number;
    }
}
```

Hierarchy Level [edit logical-routers *logical-router-name* protocols msdp],
[edit protocols msdp],
[edit routing-instances *instance-name* logical-routers *logical-router-name* protocols msdp],
[edit routing-instances *instance-name* protocols msdp]

Release Information Statement introduced before JUNOS Release 7.4.

Description Limit the number of active source messages the router accepts from sources in this address range.

Default If you do not include this statement, the router accepts any number of MSDP active source messages.

Options The other statements are explained separately.

Usage Guidelines See “Configuring Per-Source Active Source Limit” on page 324.

Required Privilege Level routing—To view this statement in the configuration.
routing-control—To add this statement to the configuration.

threshold

Syntax `threshold number;`

Hierarchy Level [edit logical-routers *logical-router-name* protocols msdp active-source-limit],
[edit protocols msdp active-source-limit],
[edit routing-instances *instance-name* logical-routers *logical-router-name* protocols msdp active-source-limit],
[edit routing-instances *instance-name* protocols msdp active-source-limit]

Release Information Statement introduced before JUNOS Release 7.4.

Description Configure the random early discard (RED) threshold for MSDP active source messages. This number should be less than the configured or default maximum.

Options *number*—RED threshold for active source messages.
Range: 1 through 1,000,000
Default: 24,000

Usage Guidelines See “Configuring the MSDP Active Source Limit” on page 323.

Required Privilege Level routing—To view this statement in the configuration.
routing-control—To add this statement to the configuration.

See Also maximum on page 338

traceoptions

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

Hierarchy Level [edit logical-routers *logical-router-name* protocols msdp],
[edit logical-routers *logical-router-name* protocols msdp group *group-name*],
[edit logical-routers *logical-router-name* protocols msdp group *group-name*
peer *address*],
[edit logical-routers *logical-router-name* protocols msdp peer *address*],
[edit protocols msdp],
[edit protocols msdp group *group-name*],
[edit protocols msdp group *group-name* peer *address*],
[edit protocols msdp peer *address*],
[edit routing-instances *instance-name* logical-routers *logical-router-name* protocols
msdp],
[edit routing-instances *instance-name* logical-routers *logical-router-name* protocols
msdp group *group-name*],
[edit routing-instances *instance-name* logical-routers *logical-router-name* protocols
msdp group *group-name* peer *address*],
[edit routing-instances *instance-name* logical-routers *logical-router-name* protocols
msdp peer *address*],
[edit routing-instances *instance-name* protocols msdp],
[edit routing-instances *instance-name* protocols msdp group *group-name*],
[edit routing-instances *instance-name* protocols msdp group *group-name* peer *address*],
[edit routing-instances *instance-name* protocols msdp peer *address*]

Release Information Statement introduced before JUNOS Release 7.4.

Description Configure MSDP tracing options.

To specify more than one tracing operation, include multiple **flag** statements.

Default The default MSDP trace options are those inherited from the routing protocol’s traceoptions statement included at the [edit routing-options] hierarchy level.

Options disable—(Optional) Disable the tracing operation. You can use this option to disable a single operation when you have defined a broad group of tracing operations, such as all.

file *name*—Name of the file to receive the output of the tracing operation. Enclose the name within quotation marks. All files are placed in the directory `/var/log`. We recommend that you place tracing output in the `msdp-log` file.

files *number*—(Optional) Maximum number of trace files. When a trace file named *trace-file* reaches its maximum size, it is renamed *trace-file.0*, then *trace-file.1*, and so on, until the maximum number of trace files is reached. Then the oldest trace file is overwritten.

If you specify a maximum number of files, you also must specify a maximum file size with the `size` option.

Range: 2 through 1000 files

Default: 2 files

flag *flag*—Tracing operation to perform. To specify more than one tracing operation, include multiple `flag` statements.

MSDP Tracing Flags

- `keepalive`—Keepalive messages
- `packets`—All MSDP packets
- `route`—MSDP changes to the routing table
- `source-active`—Source-active packets
- `source-active-request`—Source-active request packets
- `source-active-response`—Source-active response packets

Global Tracing Flags

- `all`—All tracing operations
- `general`—A combination of the `normal` and `route` trace operations
- `normal`—All normal operations
Default: If you do not specify this option, only unusual or abnormal operations are traced.
- `policy`—Policy operations and actions
- `route`—Routing table changes
- `state`—State transitions
- `task`—Interface transactions and processing
- `timer`—Timer usage

flag-modifier—(Optional) Modifier for the tracing flag. You can specify one or more of these modifiers:

- `detail`—Detailed trace information

- receive—Packets being received
- send—Packets being transmitted

no-stamp—(Optional) Do not place timestamp information at the beginning of each line in the trace file.

Default: If you omit this option, timestamp information is placed at the beginning of each line of the tracing output.

no-world-readable—(Optional) Disallow any user to read the log file.

replace—(Optional) Replace an existing trace file if there is one.

Default: If you do not include this option, tracing output is appended to an existing trace file.

size size—(Optional) Maximum size of each trace file, in kilobytes (KB), megabytes (MB), or gigabytes (GB). When a trace file named *trace-file* reaches this size, it is renamed *trace-file.0*. When *trace-file* again reaches its maximum size, *trace-file.0* is renamed *trace-file.1* and *trace-file* is renamed *trace-file.0*. This renaming scheme continues until the maximum number of trace files is reached. Then the oldest trace file is overwritten.

If you specify a maximum file size, you must also specify a maximum number of trace files with the **files** option.

Syntax: *xk* to specify KB, *xm* to specify MB, or *xg* to specify GB

Range: 10 KB through the maximum file size supported on your system

Default: 1 MB

world-readable—(Optional) Allow any user to read the log file.

Usage Guidelines See “Tracing MSDP Protocol Traffic” on page 327.

Required Privilege Level routing and trace—To view this statement in the configuration.
routing-control and trace-control—To add this statement to the configuration.

