

## Configure BGP-Specific Options

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**Purpose** When unexpected events or problems occur, or if you want to diagnose BGP establishment issues, you can view more detailed information by configuring options specific to BGP. You can also configure tracing for a specific BGP peer or peer group. For more information, see the *JUNOS System Basics Configuration Guide*.

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### Display Detailed BGP Protocol Information

**Action** To display BGP protocol information in detail, follow these steps:

1. In configuration mode, go to the following hierarchy level:

```
[edit]
user@host# edit protocol bgp traceoptions
```

2. Configure the flag to display detailed BGP protocol messages:

```
[edit protocols bgp traceoptions]
user@host# set flag update detail
```

3. Verify the configuration:

```
user@host# show
```

For example:

```
[edit protocols bgp traceoptions]
user@host# show
flag update detail;
```

4. Commit the configuration:

```
user@host# commit
```

5. View the contents of the file containing the detailed messages:

```
user@host# run show log filename
```

For example:

```
[edit protocols bgp traceoptions]
user@pro5-a# run show log bgp
Sep 17 14:47:16 trace_on: Tracing to "/var/log/bgp" started
Sep 17 14:47:17 bgp_read_v4_update: receiving packet(s) from 10.255.245.53
  (Internal AS 10458)
Sep 17 14:47:17 BGP RECV 10.255.245.53+179 -> 10.255.245.50+1141
Sep 17 14:47:17 BGP RECV message type 2 (Update) length 128
Sep 17 14:47:17 BGP RECV flags 0x40 code Origin(1): IGP
Sep 17 14:47:17 BGP RECV flags 0x40 code ASPath(2): 2
Sep 17 14:47:17 BGP RECV flags 0x80 code MultiExitDisc(4): 0
```

```

Sep 17 14:47:17 BGP RECV flags 0x40 code LocalPref(5): 100
Sep 17 14:47:17 BGP RECV flags 0xc0 code Extended Communities(16):
2:10458:1
[...Output truncated...]

```

**Meaning** Table 1 lists tracing flags specific to BGP and presents example output for some of the flags. You can also configure tracing for a specific BGP peer or peer group. For more information, see the *JUNOS System Basics Configuration Guide*.

**Table 1: BGP Protocol Tracing Flags**

Tracing Flags	Description	Example Output
aspath	AS path regular expression operations	Not available.
dampening	Dampening operations	Nov 28 17:01:12 bgp_damp_change: Change event Nov 28 17:01:12 bgp_dampen: Dampening 10.10.1.0 Nov 28 17:01:12 bgp_damp_change: Change event Nov 28 17:01:12 bgp_dampen: Dampening 10.10.2.0 Nov 28 17:01:12 bgp_damp_change: Change event Nov 28 17:01:12 bgp_dampen: Dampening 10.10.3.0
keepalive	BGP keepalive messages	Nov 28 17:09:27 bgp_send: sending 19 bytes to 10.217.5.101 (External AS 65471) Nov 28 17:09:27 Nov 28 17:09:27 BGP SEND 10.217.5.1+179 -> 10.217.5.101+52162 Nov 28 17:09:27 BGP SEND message type 4 (KeepAlive) length 19 Nov 28 17:09:28 Nov 28 17:09:28 BGP RECV 10.217.5.101+52162 -> 10.217.5.1+179 Nov 28 17:09:28 BGP RECV message type 4 (KeepAlive) length 19
open	BGP open packets	Nov 28 18:37:42 bgp_send: sending 37 bytes to 10.217.5.101 (External AS 65471) Nov 28 18:37:42 Nov 28 18:37:42 BGP SEND 10.217.5.1+179 -> 10.217.5.101+38135 Nov 28 18:37:42 BGP SEND message type 1 (Open) length 37
packets	All BGP protocol packets	Sep 27 17:45:31 BGP RECV 10.0.100.108+179 -> 10.0.100.105+1033 Sep 27 17:45:31 BGP RECV message type 4 (KeepAlive) length 19 Sep 27 17:45:31 bgp_send: sending 19 bytes to 10.0.100.108 (Internal AS 100) Sep 27 17:45:31 BGP SEND 10.0.100.105+1033 -> 10.0.100.108+179 Sep 27 17:45:31 BGP SEND message type 4 (KeepAlive) length 19 Sep 27 17:45:31 bgp_read_v4_update: receiving packet(s) from 10.0.100.108 (Internal AS 100)
update	Update packets	Nov 28 19:05:24 BGP SEND 10.217.5.1+179 -> 10.217.5.101+55813 Nov 28 19:05:24 BGP SEND message type 2 (Update) length 53 Nov 28 19:05:24 bgp_send: sending 65 bytes to 10.217.5.101 (External AS 65471) Nov 28 19:05:24 Nov 28 19:05:24 BGP SEND 10.217.5.1+179 -> 10.217.5.101+55813 Nov 28 19:05:24 BGP SEND message type 2 (Update) length 65 Nov 28 19:05:24 bgp_send: sending 55 bytes to 10.217.5.101 (External AS 65471)

## Diagnose BGP Session Establishment Problems

**Purpose** To trace BGP session establishment problems.

**Action** To trace BGP session establishment problems, follow these steps:

1. In configuration mode, go to the following hierarchy level:

```
[edit]
user@host# edit protocol bgp
```

2. Configure BGP open messages:

```
[edit protocols bgp]
user@host# set traceoptions flag open detail
```

3. Verify the configuration:

```
user@host# show
```

For example:

```
[edit protocols bgp]
user@host# show
traceoptions {
  file bgplog size 10k files 10;
  flag open detail;
}
```

4. Commit the configuration:

```
user@host# commit
```

5. View the contents of the file containing the detailed messages:

```
user@host#run show log filename
```

For example:

```
[edit protocols bgp]
user@host# run show log bgplog
```

```
Sep 17 17:13:14 trace_on: Tracing to "/var/log/bgplog" started
Sep 17 17:13:14 bgp_read_v4_update: done with 201.0.0.2 (Internal AS 10458)
received 19 octets 0 updates 0 routes
Sep 17 17:13:15 bgp_read_v4_update: receiving packet(s) from 201.0.0.3
(Internal AS 10458)
Sep 17 17:13:15 bgp_read_v4_update: done with 201.0.0.3 (Internal AS 10458)
received 19 octets 0 updates 0 routes
Sep 17 17:13:44 bgp_read_v4_update: receiving packet(s) from 201.0.0.2
(Internal AS 10458)
```

[...Output truncated...]

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