ERICSSON

Commands: show b

COMMAND DESCRIPTION

17/190 82-CRA 119 1170/1-V1 Uen H

Contents

1 Command Descriptions

Commands starting with “show b” are included.

This document applies to both the Ericsson SmartEdge® and SM family routers. However, the software that applies to the SM family of systems is a subset of the SmartEdge OS; some of the functionality described in this document may not apply to SM family routers.

For information specific to the SM family chassis, including line cards, refer to the SM family chassis documentation.

For specific information about the differences between the SmartEdge and SM family routers, refer to the Technical Product Description *SM Family of Systems* (part number 5/221 02-CRA 119 1170/1) in the **`Product Overview`** folder of this Customer Product Information library.

1.1 show bert

For ports on channelized OC-3 or OC-12 traffic cards, the syntax is:

`show bert` ***`slot/port:ds3-chan-num`***[**`:`**`ds1-chan-num`]

1.1.1 Purpose

Displays Bit Error Rate Tester (BERT) results for a DS-3 or DS-1 port channel.

1.1.2 Command Mode

All modes

1.1.3 Syntax Description

`slot`	Chassis slot number of the traffic card with the port being tested.
`port`	Port number being tested.
`ds3-chan-num`	Optional. DS-3 channel number on the on the channelized OC-12 port being tested. The range of values is *1* to *12*.
`ds1-chan-num`	Optional. DS-1 channel number on the channelized DS-3 channel or port being tested. If omitted, the DS-3 channel must be clear-channel. The range of values is 1 to 28.

1.1.4 Default

Displays results for all channels on the port.

1.1.5 Usage Guidelines

Use the **show bert** command to display BERT results for a port or channel.

Note: The following notes apply to this command:

- The SmartEdge 100 router does not support this command. The system either takes no action and displays another prompt or displays the following error message: **This feature is not currently supported on this router.**
- By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see the **context** command description.
- By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*.

1.1.6 Examples

The following example displays the BERT output for the channelized OC-3 traffic card in slot **2**, port **1**, DS-3 channel **1**, DS-1 channel **1:**

```
[local]Redback>show bert 2/1:1:1


  BERT stats for port 2/1:1:1
    State               : Enabled
    Pattern             : 1s
    Interval            : 1 minute(s)
    Injected err rate   : None
    Time remaining      : 00:00:40
    Total errors        : 0
    Elapsed sync time   : 00:00:00
    Errors this sync    : 0
    Sync count          : 0
```

1.2 show bfd session

show bfd session [*ipv4-addr* | [**ipv6**] *ipv6-addr*] [**detail**] [**all-context**]

1.2.1 Purpose

Displays active Bidirectional Forwarding Detection (BFD) session information for neighbors in the current context.

1.2.2 Command Mode

All modes

1.2.3 Syntax Description

ipv4-addr	Optional. BFD neighbor IPv4 address in the format *A.B.C.D*.
ipv6	Optional. Displays information related to IPv6 links.
ipv6-addr	Optional. BFD neighbor IPv6 address in the format *A:B:C:D:E:F:G:H*.
detail	Optional. Displays detailed information.
all-context	Optional. Displays BFD session information for all contexts. This option is only valid in the local context.

1.2.4 Default

Active BFD session information for all neighbors is displayed.

1.2.5 Usage Guidelines

Use the **show bfd session** command to display active BFD session information for neighbors in the current context.

If the optional neighbor IP address is specified, only the session for that neighbor is displayed.

Note: By default, most **show** commands display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can precede the **show** command with the **context** *ctx-name* construct to view output for the specified context without entering that context. For more information about using the **context** *ctx-name* construct, see ***context***.

Note: To filter the output, at the end of a **show** command, append a space followed by a pipe (|) and the keywords and arguments for filtering. For more information, see *Modifying Output of show Commands* in *Using the CLI*.

1.2.6 Examples

The following example displays summarized BFD session information:

```
[local]Redback>show bfd session

Neighbor      Nexthop-Grid    Minimum     Multiplier  State      Constituents Home/
                            Tx/Rx intvl                                      Backup
1.1.1.2        31700004       1000/1000       3        Down          0           4/1
```

The following example displays detailed BFD session information:

```
[local]Redback>show bfd session detail

BFD Neighbor: 12.1.1.2                BFD interface grid: 0x10000002
  Context id: 0x40080002              Next-hop grid: 0x31700003
  Circuit: 255/11:5:18/1/2/19         Clients: Bgp
  Local discriminator: 0xff0b8111     Remote discriminator: 0xff0b8114
  State: Up                           Previous State: Init
  Local diag: None
  Source IP addr: 12.1.1.1            Source UDP port: 57344
  Configured
   Transmit interval: 1000             Receive interval: 1000
   Multiplier: 3
   Link-group: Single-session
   Homeslot: 1  Backup-Homeslot: 3
  Received
   Transmit interval: 1000             Receive interval: 1000
   Multiplier: 3
```

1.3 show bgp attribute

show bgp attribute{**as-path** | **community**| **nexthop**| **rrinfo** | **summary**}

1.3.1 Purpose

Displays Border Gateway Protocol (BGP) attribute information.

1.3.2 Command Mode

All modes

1.3.3 Syntax Description

as-path	Displays autonomous system (AS) path information.
community	Displays community information.
nexthop	Displays next-hop information.
rrinfo	Displays route reflector information.
summary	Displays attribute summary information.

1.3.4 Default

None

1.3.5 Usage Guidelines

Use the **show bgp attribute** command to display BGP attribute information.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*. For information about troubleshooting BGP, see *L3VPN Troubleshooting*.

Table 1 describes the output fields for the **show bgp attribute nexthop** command.

Table 1 Field Descriptions for the show bgp attribute nexthop Command

Field	Description
Next Hop	IP address of the next-hop neighbor.
Metric	Metric value used.
Ref-count	Number of routes that use the next-hop attribute.
Context-Id	Context ID number.
Interface-id	Interface ID number.

Table 2 describes the output fields for the **show bgp attribute summary** command.

Table 2 Field Descriptions for the show bgp attribute summary Command

Field	Description
Entry Type	Attribute type.
Count	Number of times the attribute has been applied.
Memory	Amount, in bytes, of memory used to process the application of attribute for the specified count.
Policy Cache Type	Type of routing policy.
Count	Number times the policy has been applied.
Memory	Amount, in bytes, of memory used to process the application of the routing policy for the specified count.

1.3.6 Examples

The following example displays output from the **show bgp attribute as-path** command:

```
[local]Redback>show bgp attribute as-path


RefCount  Aspath
       2  14207 3944 2548 3549 20012
       2  64513 2828 5511 4000 3662 4528
       1  14207 3944 2548 6461 7086
       1  14207 3944 2548 3561 5378 6779
       1  64513 2828 209  4766 9754
       2  64513 2828 6453 8657 1930 1930 3251
       1  64513 2828 1239 2516 2521
       1  14207 3944 2548 701  814
```

The following example displays output from the **show bgp attribute community** command:

```
[local]Redback>show bgp attribute community


Community entries: 3, memory used: 116 bytes


RefCount        Community
14181           11:102
2               11:121
2               no-export
```

The **RefCount** field indicates how many attributes use the corresponding community.

The following example displays output from the **show bgp attribute nexthop** command:

```
[local]Redback>show bgp attribute nexthop


Next hop entries: 5


Next Hop               Metric     Ref-count    Context-Id  Interface-id
10.255.255.254         0          1            40080001    0
10.100.1.102           39         2            40080001    0
10.11.64.100           0          93378        40080001    10000006
10.100.1.5             25         2            40080001    0
10.100.2.3             30         9            40080001    0
```

The following example displays output from the **show bgp attribute rrinfo** command:

```
[local]Redback>show bgp attribute rrinfo


RRinfo entries: 6, memory used: 196 bytes


RefCount    Originator    Cluster-list
      45    1.1.1.71      0.0.0.11
      12    1.1.1.72      0.0.0.11
       2    1.1.1.74      0.0.0.11
      14    100.1.1.1     0.0.0.11
      133   10.100.5.1    0.0.0.11
      32    10.100.2.3    0.0.0.11 10.100.12.0
```

The following example displays output from the **show bgp attribute summary** command:

```
[local]Redback>show bgp attribute summary
```

```
Entry Type           Count      Memory
Attribute            31595     1516560
ASpath               12723      506620
Nexthop                 13         364
Community                4         116
Ext Community            0           0
Route Reflection         8         228


Policy Cache Type    Count      Memory
AS-path List         38082     1218624
Community List           4         128
Route Map            43990     1407680
Attributes           16724      535168
```

1.4 show bgp attribute extended-community

`show bgp attribute extended-community`

1.4.1 Purpose

Displays Border Gateway Protocol (BGP) attribute information for extended communities.

1.4.2 Command Mode

All modes

1.4.3 Syntax Description

This command has no keywords or arguments.

1.4.4 Default

None

1.4.5 Usage Guidelines

Use the **`show bgp attribute extended-community`** command to display BGP attribute information for extended communities.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*. For information about troubleshooting BGP, see *L3VPN Troubleshooting*.

1.4.6 Examples

The following example displays output from the **show bgp attribute extended-community** command:

```
[local]Redback>show bgp attribute extended-community

Extended community entries: 3, memory used: 132 bytes

RefCount  Extended community
   21132  RT:4:4
   21132  RT:6:6
   21128  RT:5:5
```

1.5 show bgp malform

show bgp malform {**messages** [**keepalive** | **notification** | **open** | **refresh**] | **update**}

1.5.1 Purpose

Displays malformed Border Gateway Protocol (BGP) messages for troubleshooting purposes.

1.5.2 Command Mode

All modes

1.5.3 Syntax Description

messages	Displays malformed BGP nonupdate messages.
keepalive	Optional. Displays only malformed keepalive messages.
notification	Optional. Displays only malformed notification messages.
open	Optional. Displays only malformed open messages.
refresh	Optional. Displays only malformed refresh messages.
update	Displays malformed BGP update messages.

1.5.4 Default

None

1.5.5 Usage Guidelines

Use the **show bgp malform** command to display malformed BGP messages for troubleshooting purposes.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*. For information about troubleshooting BGP, see *L3VPN Troubleshooting*.

1.5.6 Examples

The following example shows how to enable the display of malformed BGP update messages:

```
[local]Redback>show bgp malform update
```

1.6 show bgp neighbor (all neighbors)

show bgp neighbor

1.6.1 Purpose

Displays BGP neighbor status and statistics for all BGP neighbors.

1.6.2 Command Mode

All modes

1.6.3 Syntax Description

This command has no keywords or arguments

1.6.4 Default

None

1.6.5 Usage Guidelines

Use the **show bgp neighbor** command to display BGP status and statistics for all BGP neighbors. It also indicates whether BFD is enabled and the current state.

Note: By default, most **show** commands display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can precede the **show** command with the **context** *ctx-name* construct to view output for the specified context without entering that context. For more information about using the **context** *ctx-name* construct, see ***context***.

Note: To filter the output, at the end of the **show** command, append a space followed by the pipe (|) character and the keywords and arguments for filtering. For more information, see *Modifying Output of show Commands* in *Using the CLI*. For information about troubleshooting BGP, see *L3VPN Troubleshooting*.

1.6.6 Examples

The following example displays output from the **show bgp neighbor** command:

```
[local]Redback>show bgp neighbor

BGP neighbor: 2.2.2.2, remote AS: 200, external link

  Version: 4, router identifier: 100.100.100.101
  Peer Group member: customer-routes
  State: Idle for 5d17h
  Last read 5d17h, last send 5d17h
  Hold time: configured 180, negotiated 0
  Keepalive time: configured 60, negotiated 0
  Local restart timer 120 sec, stale route retain timer 180 sec
  Received restart timer 0 sec, flag 0x0
  Number of hops external BGP neighbor may be away: 1
  Minimum time between advertisement runs: 30 secs
  Source (local) IP address: 0.0.0.0
  Received messages: 0 (0 bytes), notifications: 0, in queue: 0
  Sent messages: 0 (0 bytes), notifications: 0, out queue: 0
  Last active open: 00:00:14, reason: no active or connected route

  Address family: ipv4 unicast
    Peer Group member: customer-routes
    BGP table version: 1, neighbor version: 0
    Route map in   : foo2
    Route map out  : rm1
    Prefix list in : bar
    Routes: rcvd 0, imported 0, active 0, history 0, dampend 0, sent 0

BGP neighbor: 4:4::4, remote AS: 6400, internal link
  Version: 4, router identifier: 0.0.0.0
  State: Idle for 00:00:16
  Last read 00:00:16, last send 00:00:16
  Hold time: configured 180, negotiated 0
  Keepalive time: configured 60, negotiated 0
  Local restart timer 120 sec, stale route retain timer 180 sec
  Received restart timer 0 sec, flag 0x0
  Minimum time between advertisement runs: 5 secs
  Source (local) IP address: ::
  Received messages: 0 (0 bytes), notifications: 0, in queue: 0
  Sent messages: 0 (0 bytes), notifications: 0, out queue: 0
  Last active open: 00:00:00, reason: no active or connected route

  Address family: ipv6 unicast
    BGP table version: 0, neighbor version: 0
    Route map out  : foo4
    Prefix list in : bar
    Routes: rcvd 0, imported 0, active 0, history 0, dampend 0, sent 0
```

This example shows BFD neighbor status. BFD is enabled and in the UP state.

```
[local]Redback>show bgp neighbor

BGP neighbor: 12.1.1.2, remote AS: 200, external link
  Version: 4, router identifier: 2.2.2.2
  State: Established for 00:06:40
  Last read 00:00:36, last send 00:00:36
  Hold time: configured 180, negotiated 180
  Keepalive time: configured 60, negotiated 60
  Local restart timer 120 sec, stale route retain timer 180 sec
  Received restart timer 120 sec, flag 0x8000
  Number of hops external BGP neighbor may be away: 1
  Minimum time between advertisement runs: 30 secs
  Source (local) IP address: 12.1.1.1
  Received messages: 10 (272 bytes), notifications: 0, in queue: 0
  Sent messages: 10 (272 bytes), notifications: 0, out queue: 0
  BFD: enabled, State: UP

  CapSent: refresh, 4byteAS, unicast, restart
  CapRcvd: refresh, 4byteAS, unicast
           restart (time 120, flags 0x8000, unicast)

  Address family: ipv4 unicast
    BGP table version: 4, neighbor version: 4
    Routes: rcvd 2, imported 0, active 2, history 0, dampend 0, sent 2
```

1.7 show bgp neighbor (IPv4)

show bgp neighbor *ip-addr* [**ipv4** { **unicast** | **multicast** | **mdt** } | **ipv6** {**unicast** | **multicast**} | **malform** {**messages** [**keepalive** | **notification** | **open** | **refresh**] | **update**} | **notification** | **received** [**prefix-filter**] | **reset-log**]

1.7.1 Purpose

Displays status and statistics for a Border Gateway Protocol (BGP) IPv4 neighbor.

1.7.2 Command Mode

All modes

1.7.3 Syntax Description

ip-addr	IPv4 address of the neighbor, in the form ***A.B.C.D***.
ipv4	Optional. Specifies IPv4 as the address family to display.
unicast	Displays unicast address family status and statistics for a neighbor.
multicast	Displays multicast address family status and statistics for a neighbor.
mdt	Displays multicast distribution tree (MDT) route information for a neighbor.

ipv6	Optional. Specifies IPv6 as the address family to display.
malform	Optional. Displays either malformed update or nonupdate messages.
messages	Optional. Displays malformed nonupdate messages. To display all malformed nonupdate messages, do not include any optional keywords with the messages keyword. To exclusively display a particular type of malformed nonupdate message, include the optional **keepalive**, **notification**, **open**, or **refresh** keywords in the command string.
keepalive	Optional. Displays only malformed keepalive messages.
notification	Optional. Displays only malformed notification messages.
open	Optional. Displays only malformed open messages.
refresh	Optional. Displays only malformed refresh messages.
update	Optional. Displays only malformed update messages.
received	Optional. Displays received address information.
prefix-filter	Optional. Displays Outbound Route Filtering (ORF) prefix filters configured on a BGP neighbor.
reset-log	Optional. Displays how many times the BGP neighbor has been reset and for what reason the neighbor has been reset.

1.7.4 Default

When entered with no keywords or arguments, this command displays detailed information about the specified BGP IPv4 neighbor.

1.7.5 Usage Guidelines

Use the **show bgp neighbor** (IPv4) command to display status and statistics for a BGP IPv4 neighbor.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*. For information about troubleshooting BGP, see *L3VPN Troubleshooting*.

1.7.6 Examples

The following example displays information for the BGP neighbor with the IP address, **22.22.22.22**:

```
[local]Redback>show bgp neighbor 22.22.22.22


BGP neighbor: 22.22.22.22, remote AS: 1, internal link
  Version: 4, router identifier: 22.22.22.22
  State: Established for 00:55:29
  Last read 00:00:53, last send 00:00:37
  Hold time: configured 180, negotiated 180
  Keepalive time: configured 60, negotiated 60
  Local restart timer 120 sec, stale route retain timer 180 sec
  Received restart timer 120 sec, flag 0x0
  Minimum time between advertisement runs: 5 secs
  Source (local) IP address: 23.23.23.23
  Received messages: 59 (1272 bytes), notifications: 0, in queue: 0
  Sent messages: 6235 (2513115 bytes), notifications: 0, out queue: 0

  CapSent: refresh, 4byteAS, unicast, v6vpn, restart
  CapRcvd: refresh, 4byteAS, unicast, v6vpn
           restart (time 120, flags 0x0, unicast, v6vpn)

  Address family: ipv4 unicast
    BGP table version: 0, neighbor version: 0
    Routes: rcvd 0, imported 0, active 0, history 0, dampend 0, sent 0

  Address family: ipv6 vpn
    BGP table version: 72484, neighbor version: 72484
    Route refresh requests: sent 1,  received 1
    Routes: rcvd 1, imported 1, active 2, history 0, dampend 0, sent 24146
```

The following example displays information for a BGP neighbor's MDT routes:

```
[local]Redback>show bgp neighbor 20.0.0.1 ipv4 mdt

BGP neighbor: 20.0.0.1, remote AS: 1, internal link
  Version: 4, router identifier: 192.168.254.110
  State: Established for 00:08:17
  Last read 00:00:12, last send 00:00:54
  Hold time: configured 180, negotiated 180
  Keepalive time: configured 60, negotiated 60
  Local restart timer 120 sec, stale route retain timer 180 sec
  Received restart timer 120 sec, flag 0x0
  Minimum time between advertisement runs: 5 secs
  Source (local) IP address: 20.0.0.2
  Received messages: 45 (3290 bytes), notifications: 0, in queue: 0
  Sent messages: 17 (681 bytes), notifications: 0, out queue: 0

  CapSent: refresh, 4byteAS, unicast, vpn, mdt, restart
  CapRcvd: refresh, 4byteAS, unicast, vpn, mdt
           restart (time 120, flags 0x0, unicast, vpn, mdt)

  Address family: ipv4 unicast
    BGP table version: 10, neighbor version: 10
    Routes: rcvd 8, imported 0, active 0, history 0, dampend 0, sent 7

  Address family: ipv4 vpn
    BGP table version: 32, neighbor version: 32
    Routes: rcvd 4, imported 3, active 0, history 0, dampend 0, sent 0

  Address family: ipv4 mdt
    BGP table version: 15, neighbor version: 15
    Routes: rcvd 2, imported 2, active 0, history 0, dampend 0, sent 2
```

1.8 show bgp neighbor (IPv6)

show bgp neighbor ***ipv6-addr*** [**ipv6 unicast**] [**malform** {**messages** [**keepalive** | **notification** | **open** | **refresh**] | **update**} | **notification** | **received** [**prefix-filer**] | **reset-log**]

1.8.1 Purpose

Displays status and statistics for a Border Gateway Protocol (BGP) IPv6 neighbor.

1.8.2 Command Mode

All modes

1.8.3 Syntax Description

ipv6-addr	IPv6 address.
ipv6 unicast	Optional. Displays IPv6 unicast address family status and statistics for a neighbor.
malform	Optional. Displays either malformed update or nonupdate messages.

messages	Optional. Displays malformed nonupdate messages. To display all malformed nonupdate messages, do not include any optional keywords with the messages keyword. To exclusively display a particular type of malformed nonupdate message, include the optional **keepalive**, **notification**, **open**, or **refresh** keywords in the command string.
keepalive	Optional. Displays only malformed keepalive messages.
notification	Optional. Displays only malformed notification messages.
open	Optional. Displays only malformed open messages.
refresh	Optional. Displays only malformed refresh messages.
update	Optional. Displays only malformed update messages.
received	Optional. Displays received address information.
prefix-filter	Optional. Displays Outbound Route Filtering (ORF) prefix filters configured on a BGP neighbor.
reset-log	Optional. Displays how many times the BGP neighbor has been reset and for what reason the neighbor has been reset.

1.8.4 Default

When entered with no keywords or arguments, this command displays detailed information about the specified BGP IPv6 neighbor.

1.8.5 Usage Guidelines

Use the **show bgp neighbor** (IPv6) command to display status and statistics for a BGP IPv6 neighbor.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*. For information about troubleshooting BGP, see *L3VPN Troubleshooting*.

1.8.6 Examples

1.8.6.1 Display Status and Statistic for an IPv6 Peer

The following example displays output from the **show bgp neighbor** (IPv6) command:

```
[local]Redback>show bgp neighbor 100::2

BGP neighbor: 100::2, remote AS: 222, external link
  Version: 4, router identifier: 0.0.0.0
  State: Idle for 06:57:16
  Last read 06:57:16, last send 06:57:16
  Hold time: configured 180, negotiated 0
  Keepalive time: configured 60, negotiated 0
  Local restart timer 120 sec, stale route retain timer 180 sec
  Received restart timer 0 sec, flag 0x0
  Number of hops external BGP neighbor may be away: 1
  Minimum time between advertisement runs: 30 secs
  Source (local) IP address: ::
  Received messages: 0 (0 bytes), notifications: 0, in queue: 0
  Sent messages: 0 (0 bytes), notifications: 0, out queue: 0
  Last active open: 00:00:09, reason: no active or connected route

  Address family: ipv6 unicast
    BGP table version: 1, neighbor version: 0
    Routes: rcvd 0, imported 0, active 0, history 0, dampend 0, sent 0
```

1.8.6.2 Display IPv6 Unicast Address Family Status and Statistics for an IPv6 Peer

The following example displays output from the **show bgp neighbor** (IPv6) command with the **ipv6 unicast** keywords.

```
[local]Redback(config-ctx)#show bgp neighbor 100::2 ipv6 unicast

BGP neighbor: 100::2, remote AS: 222, external link
  Version: 4, router identifier: 0.0.0.0
  State: Idle for 07:01:28
  Last read 07:01:28, last send 07:01:28
  Hold time: configured 180, negotiated 0
  Keepalive time: configured 60, negotiated 0
  Local restart timer 120 sec, stale route retain timer 180 sec
  Received restart timer 0 sec, flag 0x0
  Number of hops external BGP neighbor may be away: 1
  Minimum time between advertisement runs: 30 secs
  Source (local) IP address: ::
  Received messages: 0 (0 bytes), notifications: 0, in queue: 0
  Sent messages: 0 (0 bytes), notifications: 0, out queue: 0
  Last active open: 00:00:12, reason: no active or connected route

  Address family: ipv6 unicast
    BGP table version: 1, neighbor version: 0
    Routes: rcvd 0, imported 0, active 0, history 0, dampend 0, sent 0
```

1.9 show bgp neighbor flap-statistics

show bgp neighbor flap-statistics

1.9.1 Purpose

Displays Border Gateway Protocol (BGP) neighbor flap statistics information.

1.9.2 Command Mode

All modes

1.9.3 Syntax Description

This command has no keywords or arguments.

1.9.4 Default

None

1.9.5 Usage Guidelines

Use the **show bgp neighbor flap-statistics** command to display BGP neighbor flap statistics information.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** *ctx-name* construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** *ctx-name* construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*. For information about troubleshooting BGP, see *L3VPN Troubleshooting*.

Table 3 describes the output fields for the **show bgp neighbor flap-statistics** command.

Table 3 Field Descriptions for the show bgp neighbor flap-statistics Command

Field	Description
Neighbor	Flapping peer. The letter d (before a peer's IP address) indicates that the peer is dampened.
AS	Peer's autonomous system (AS).
Flap	Number of times the peer has been flapping for the time indicated in the Duration column.

Table 3 Field Descriptions for the show bgp neighbor flap-statistics Command

Field	Description
Penalty	The current penalty applied to the session.
Duration	Length of time that the session has been flapping in the current dampening information.
Reuse	Time (in ***hours*:*minutes*:*seconds***) after which the session will be allowed to open again.

1.9.6 Examples

The following example displays output from the **show bgp neighbor flap-statistics** command:

```
[local]Redback>show bgp neighbor flap-statistics

  Neighbor              AS  Flap  Penalty  Duration    Reuse
d 1.1.1.1              100     5     4164  00:13:39    00:08:35
  3.3.3.3              200     2     1977  00:00:13
```

1.10 show bgp neighbor summary

show bgp neighbor summary

1.10.1 Purpose

Displays summarized information for a Border Gateway Protocol (BGP) neighbor.

1.10.2 Command Mode

All modes

1.10.3 Syntax Description

This command has no keywords or arguments

1.10.4 Default

None.

1.10.5 Usage Guidelines

Use the **show bgp neighbor summary** command to summarized information about for BGP neighbor.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*. For information about troubleshooting BGP, see *L3VPN Troubleshooting*.

1.10.6 Examples

The following example displays sample output from the **show bgp neighbor summary** command:

```
[local]Redback>show bgp neighbor summary

BGP router identifier: 3.3.3.3, local AS number: 1
Neighbors Configured: 2, Established: 0

Neighbor                  AS MsgRcvd MsgSent  InQ OutQ Rst  Up/Down State
1.1.1.1                    1       0       0    0    0   0     2w2d Idle
  CapSent  : refresh 4byteAS unicast restart

2.2.2.2                    1       0       0    0    0   6     2w2d Idle
  CapSent  : refresh 4byteAS unicast v6unicast ipv6+label restart
```

1.11 show bgp notification

show bgp notification

1.11.1 Purpose

Displays Border Gateway Protocol (BGP) notification messages for troubleshooting purposes.

1.11.2 Command Mode

All modes

1.11.3 Syntax Description

This command has no keywords or arguments.

1.11.4 Default

None

1.11.5 Usage Guidelines

Use the **show bgp notification** command to display BGP notification messages for troubleshooting purposes.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** *ctx-name* construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** *ctx-name* construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*. For information about troubleshooting BGP, see *L3VPN Troubleshooting*.

1.11.6 Examples

The following example displays BGP notification messages:

```
[local]Redback>show bgp notification


Dump notification messaged logged:
Nov 9 00:36:03 notification msg received (nbr 192.168.3.7, 21 bytes, repeated 0 times, code 4/0
(hold time expired) - ffff ffff ffff ffff ffff ffff ffff ffff 0015 0304 00
Nov 9 00:36:23 notification msg received (nbr 192.168.41.7, 21 bytes, repeated 0 times, code 4/0
(hold time expired) - ffff ffff ffff ffff ffff ffff ffff ffff 0015 0304 00
```

1.12 show bgp peer-group

show bgp peer-group {*group-name* [**member** {**ipv4** {**multicast** | **unicast** | **mdt**} | **session**}] | **summary**}

1.12.1 Purpose

Displays information about configured Border Gateway Protocol (BGP) peer groups.

1.12.2 Command Mode

All modes

1.12.3 Syntax Description

group-name	Peer group name.
member	Optional. Displays address family information for the specified peer group.
ipv4	Specifies standard IP Version 4 (IPv4) address prefixes.
multicast	Displays information for multicast address families associated with the peer group.
unicast	Displays information for unicast address families associated with the peer group.
mdt	Optional. Displays information for multicast distribution tree (MDT) routes.
session	Displays BGP session information for the specified peer group.
summary	Displays a summarized set of information for all configured BGP peer groups.

1.12.4 Default

None

1.12.5 Usage Guidelines

Use the **show bgp peer-group** command to display information about configured BGP peer groups.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*. For information about troubleshooting BGP, see *L3VPN Troubleshooting*.

1.12.6 Examples

The following example displays output from the **show bgp peer-group** command:

```
[local]Redback>show bgp peer-group bgp1
```

```
BGP peer-group: bgp1, external link
  Version: 4, router identifier: 0.0.0.0
  Description: external BGP group 1
  Hold time: configured 180, negotiated 0
  Keepalive time: configured 60, negotiated 0
  Local restart timer 120 sec, stale route retain timer 180 sec
  Received restart timer 0 sec, flag 0x0
  Number of hops external BGP neighbor may be away: 1
  Minimum time between advertisement runs: 30 secs
  Source (local) IP address: 0.0.0.0

  Fast reset timer 1234 msecs
   Interface name: to-2/1      State: DOWN
   Interface name: to-mardi    State: DOWN
   Interface name: to-onze     State: UP


  Address family: ipv4 unicast
    BGP table version: 1394616, neighbor version: 0
    Messages: formatted 0, replicated 0
    Prefixes: advertised 0, accepted 0, active 0


  Address family: ipv4 multicast
    BGP table version: 0, neighbor version: 0
    Messages: formatted 0, replicated 0
    Prefixes: advertised 0, accepted 0, active 0
```

The following example displays BGP peer group summary information:

```
[local]Redback>show bgp peer-group summary
```

```
BGP router identifier: 7.7.7.2, local AS number: 64173
Peer-group Configured: 1 (internal 0, external 1)


Peer-group Name                          Type
full-routes                              external
```

The following example displays BGP peer group member information:

```
[local]Redback>show bgp peer-group full-routes member
```

```
BGP peer-group: full-routes, external link


Neighbor          AS   MsgRcvd  MsgSent  TblVer  InQ  OutQ Rst  Up/Down   PfxRcvd/Sent
10.13.49.172   64172    200645   253642   287452  0    0    12   00:03:46  0      92248
155.53.1.235   14207      5589    66910   287452  0    0     1   02:41:21  92242  92248
```

The following example displays member MDT route information for the BGP peer group **pg-1**:

```
[local]Redback>show bgp peer-group pg-1 member ipv4 mdt

BGP peer-group: pg-1, internal link

Neighbor              AS      MsgRcvd   MsgSent    TblVer   InQ    OutQ Rst            Up/Down   PfxRcvd/Sent
4.4.4.4                1        26        16         15      0       0    0 00:07:40      2  2        No
10.0.0.1               1         0         0          0      0       0    0 00:07:49      Idle        No
```

1.13 show bgp reset-log

show bgp reset-log

1.13.1 Purpose

Displays Border Gateway Protocol (BGP) neighbor reset information for troubleshooting purposes.

1.13.2 Command Mode

All modes

1.13.3 Syntax Description

This command has no keywords or arguments.

1.13.4 Default

None

1.13.5 Usage Guidelines

Use the **show bgp reset-log** command to display information about BGP neighbor resets for troubleshooting purposes.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** *ctx-name* construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** *ctx-name* construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*. For information about troubleshooting BGP, see *L3VPN Troubleshooting*.

1.13.6 Examples

The following example displays output from the **show bgp reset-log** command:

```
[local]Redback>show bgp reset-log


Dump neighbor reset logs:
Neighbor              StartTime          EndTime    Count  Reason
192.168.3.7      Nov 9 00:36:03   Nov 9 00:36:03        1  Remote/TCP close
192.168.41.7     Nov 9 00:36:23   Nov 9 00:36:23        1  Remote/TCP close
192.168.3.7      Nov 9 01:21:35   Nov 9 01:21:35        1  User action
```

1.14 show bgp route

show bgp route [*ip-addr*[*/prefix-length*]] [**longer-prefixes**]

1.14.1 Purpose

Displays Border Gateway Protocol (BGP) route information from the BGP routing table.

1.14.2 Command Mode

All modes

1.14.3 Syntax Description

ip-addr	Optional. IP address, in the form *A.B.C.D*.
prefix-length	Optional. Prefix length. The range of values is 0 to 32.
longer-prefixes	Optional. Available only when the */prefix-length* construct is used. Displays routes sent to and from the specified prefix and also displays more specific routes.

1.14.4 Default

When entered without any keywords or arguments, this command displays information for all BGP routes.

1.14.5 Usage Guidelines

Use the **show bgp route** command to display BGP route information from the BGP routing table.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*. For information about troubleshooting BGP, see *L3VPN Troubleshooting*.

1.14.6 Examples

The following example displays output from the **show bgp route** command:

```
[local]Redback>show bgp route

Address Family: ipv4 unicast
BGP table version is 292821, local router ID is 192.168.41.100
Status codes: d damped, h history, > best, i internal
Origin codes: i - IGP, e - EGP, ? - incomplete

  Network            Next Hop          Metric  LocPrf  Weight Path
  1.0.0.0/8          155.53.0.1             0     100     100 14207 3944 7777 i
  1.2.3.4/32         192.168.41.7           0     100     100 64173 ?
I 2.0.0.0/8          155.53.0.1           200     100     100 14207 3944 7777 i
                     155.53.0.1             0     100     100 14207 3944 7777 i
  2.1.0.0/16         192.168.41.7           0     100     100 64173 100 ?
  2.3.0.0/16         192.168.41.7           0     100     100 64173 100 ?
I 3.0.0.0/8          155.53.0.1           200     100     100 14207 3944 2914 701 80 i
                     155.53.0.1             0     100     100 14207 3944 2914 701 80 i
  3.18.135.0/24      155.53.0.1             0     100     100 14207 64513 2828 2828 2828 2828 7018 ?
I                    155.53.1.236         200     100     100 64513 2828 2828 2828 2828 7018 ?
I 4.0.0.0/8          155.53.0.1           200     100     100 14207 3944 2914 1 i
                     155.53.0.1             0     100     100 14207 3944 2914 1 i
  4.2.1.1/32         192.168.41.7           0     100     100 64173 100 ?
I 4.3.24.3/32        155.53.0.1           200     100     100 14207 3944 7777 i
                     155.53.0.1             0     100     100 14207 3944 7777 i
I 4.21.238.51/32     155.53.0.1           200     100     100 14207 3944 7777 i
                     155.53.0.1             0     100     100 14207 3944 7777 i
I 4.22.124.174/31    155.53.0.1           200     100     100 14207 3944 7777 i
                     155.53.0.1             0     100     100 14207 3944 7777 i
I 4.22.124.176/32    155.53.0.1           200     100     100 14207 3944 7777 i
                     155.53.0.1             0     100     100 14207 3944 7777 i
I 4.22.124.197/32    155.53.0.1           200     100     100 14207 3944 7777 i
                     155.53.0.1             0     100     100 14207 3944 7777 i
```

1.15 show bgp route community

show bgp route community {*community-num* | *as:nn* | **local-as** | **no-advertise** | **no-export**}

1.15.1 Purpose

Displays Border Gateway Protocol (BGP) route community information.

1.15.2 Command Mode

All modes

1.15.3 Syntax Description

community-num	Community number in decimal format. The range of values is 0 to 4,294,967,295.
as:nn	Autonomous system number (ASN) where *aa* is the ASN and *nn* is a 2-byte number.
local-as	Displays routes for the local autonomous system (AS).
no-advertise	Displays routes that are not advertised to internal BGP (iBGP) or external BGP (eBGP) peers.
no-export	Displays routes that are sent only to iBGP peers.

1.15.4 Default

When entered without any keywords or arguments, this command displays all route community information.

1.15.5 Usage Guidelines

Use the **show bgp route community** command to display BGP route community information.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** *ctx-name* construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** *ctx-name* construct, see *context*.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*. For information about troubleshooting BGP, see *L3VPN Troubleshooting*.

1.15.6 Examples

The following example displays routes matching the BGP community, **2914:420:**

```
[local]Redback>show bgp route community 2914:420

Address Family: ipv4 unicast
BGP table version is 292841, local router ID is 192.168.41.100
Status codes: d damped, h history, > best, i internal
Origin codes: i - IGP, e - EGP, ? - incomplete

  Network            Next Hop       Metric  LocPrf  Weight Path
  3.0.0.0/8          155.53.0.1          0     100     100 14207 3944 2914 701 80 i
i 4.0.0.0/8          155.53.0.1        200     100     100 14207 3944 2914 1 i
                     155.53.0.1          0     100     100 14207 3944 2914 1 i
i 6.0.0.0/20         155.53.0.1        200     100     100 14207 3944 2914 3549 i
                     155.53.0.1          0     100     100 14207 3944 2914 3549 i
i 6.1.0.0/16         155.53.0.1        200     100     100 14207 3944 2914 7170 1455 i
                     155.53.0.1          0     100     100 14207 3944 2914 7170 1455 i
i 6.3.0.0/18         155.53.0.1        200     100     100 14207 3944 2914 7170 1455 i
```

The following example displays routes matching the BGP community, **7777:7777:**

```
[local]Redback>show bgp route community 7777:7777
```

```
Address Family: ipv4 unicast
BGP table version is 292862, local router ID is 192.168.41.100
Status codes: d damped, h history, > best, i internal
Origin codes: i - IGP, e - EGP, ? - incomplete

  Network            Next Hop          Metric  LocPrf  Weight Path
  1.0.0.0/8          155.53.0.1             0     100     100 14207 3944 7777 i
i 2.0.0.0/8          155.53.0.1           200     100     100 14207 3944 7777 i
                     155.53.0.1             0     100     100 14207 3944 7777 i
i 5.0.0.0/8          155.53.0.1           200     100     100 14207 3944 7777 i
                     155.53.0.1             0     100     100 14207 3944 7777 i
i 7.0.0.0/8          155.53.0.1           200     100     100 14207 3944 7777 i
                     155.53.0.1             0     100     100 14207 3944 7777 i
i 23.0.0.0/8         155.53.0.1           200     100     100 14207 3944 7777 i
                     155.53.0.1             0     100     100 14207 3944 7777 i
i 27.0.0.0/8         155.53.0.1           200     100     100 14207 3944 7777 i
                     155.53.0.1             0     100     100 14207 3944 7777 i
i 36.0.0.0/8         155.53.0.1           200     100     100 14207 3944 7777 i
                     155.53.0.1             0     100     100 14207 3944 7777 i
```

1.16 show bgp route ext-community route-origin

show bgp route ext-community route-origin ***ext-com***

1.16.1 Purpose

Displays Border Gateway Protocol (BGP) routes for a specific route origin extended community.

1.16.2 Command Mode

All modes

1.16.3 Syntax Description

ext-com	Route origin extended community value that is added to the export origin list. The route origin extended community value can be expressed in either of the following formats: • ***asn*:*nnnn***, where ***asn*** is the autonomous system number, ***nnnn*** is either a 32-bit integer or a 16-bit integer, depending on the size of the ASN. You can specify the ASN as either a two-byte (two-octet) or four-byte (four-octet) integer. A value of 65535 or lower is interpreted as a two-byte integer, unless you add an **L** suffix (for example, **125L**), in which case it is interpreted as a four-byte integer. A value larger than 65535 is always interpreted as a four-byte integer, and the **L** suffix is optional. If the ASN is two-bytes, then ***nnnn*** is a 32-bit integer. If the ASN is four-bytes, then ***nnnn*** is a 16-bit integer. • ***ip-addr*:*nn***, where ***ip-addr*** is the IP address in the form ***A.B.C.D*** and ***nn*** is a 16-bit integer.

1.16.4 Default

None

1.16.5 Usage Guidelines

Use the **show bgp route ext-community route-origin** command to display BGP routes for a specific route origin extended community.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*. For information about troubleshooting BGP, see *L3VPN Troubleshooting*.

1.16.6 Examples

The following example displays the BGP routes for the route origin extended community, **5:987:**

```
[local]Redback>show bgp route ext-community route-origin 5:987


Address Family: ipv4 unicast
BGP table version is 558, local router ID is 192.168.254.110
Status codes: d damped, h history, > best, i internal
Origin codes: i - IGP, e - EGP, ? - incomplete


VPN RD: 100:100
   Network            Next Hop                Metric  LocPrf  Weight Path
>  77.77.2.1/32       12.1.1.1                     0     100     100 2 500 ?
```

1.17 show bgp route ext-community route-target

show bgp route ext-community route-target ***ext-com***

1.17.1 Purpose

Displays Border Gateway Protocol (BGP) routes for a specific route target extended community.

1.17.2 Command Mode

All modes

1.17.3 Syntax Description

ext-com	Route target extended community value that is added to the export target list. The route target extended community value can be expressed in either of the following formats: • ***asn*:*nnnn***, where ***asn*** is the autonomous system number, ***nnnn*** is either a 32-bit integer or a 16-bit integer, depending on the size of the ASN. You can specify the ASN as either a two-byte (two-octet) or four-byte (four-octet) integer. A value of 65535 or lower is interpreted as a two-byte integer, unless you add an **L** suffix (for example, **125L**), in which case it is interpreted as a four-byte integer. A value larger than 65535 is always interpreted as a four-byte integer, and the **L** suffix is optional. If the ASN is two-bytes, then ***nnnn*** is a 32-bit integer. If the ASN is four-bytes, then ***nnnn*** is a 16-bit integer. • ***ip-addr*:*nn***, where ***ip-addr*** is the IP address in the form ***A.B.C.D*** and ***nn*** is a 16-bit integer.

1.17.4 Default

None

1.17.5 Usage Guidelines

Use the **show bgp route ext-community route-target** command to display BGP routes for a specific route target extended community.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*. For information about troubleshooting BGP, see *L3VPN Troubleshooting*.

1.17.6 Examples

The following example displays the BGP routes for the route target extended community, **2:2:**

```
[local]Redback>show bgp route ext-community route-target 2:2

Address Family: ipv4 unicast

BGP table version is 4, local router ID is 2.2.2.2

Status codes: d damped, h history, > best, i internal

Origin codes: i - IGP, e - EGP, ? - incomplete


VPN RD: 2:2

   Network            Next Hop          Metric  LocPrf  Weight Path

>i 55.55.55.55/32     1.1.1.100            101     100     100 ?

>i 77.1.1.0/24        1.1.1.100              0     100     100 ?
```

1.18 show bgp route flap-statistics

show bgp route flap-statistics [**dampened-path** | **external** | **internal**]

1.18.1 Purpose

Displays Border Gateway Protocol (BGP) route-flap statistics accounting information.

1.18.2 Command Mode

All modes

1.18.3 Syntax Description

dampened-path	Optional. Displays only BGP routes suppressed due to dampening.
external	Optional. Displays only route-flap statistics for external BGP (eBGP) routes.
internal	Optional. Displays only route-flap statistics for internal BGP (iBGP) routes.

1.18.4 Default

None

1.18.5 Usage Guidelines

Use the **show bgp route flap-statistics** command to display BGP route-flap statistics accounting information.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*. For information about troubleshooting BGP, see *L3VPN Troubleshooting*.

1.18.6 Examples

The following example displays output from the **show bgp route flap-statistics** command:

```
[local]Redback>show bgp route flap-statistics

Address Family: ipv4 unicast
BGP table version is 418695, local router ID is 192.168.4.100
Status codes: d damped, h history, > best, i internal
Origin codes: i - IGP, e - EGP, ? - incomplete

   Network          From            Flaps Penalty Duration Reuse  Path
i  15.252.0.0/18    10.12.208.81    1     500     00:00:01        14207 3944   6461 7018 71
i  15.252.64.0/20   10.12.208.81    1     500     00:00:01        14207 3944   6461 7018 71
>i 192.6.41.0/24    10.12.208.72    1     500     00:00:00        14207 3944   6461 701 71
i                   10.12.208.81    1     500     00:00:01        14207 3944   6461 701 71
>i 195.82.32.0/19   10.12.208.72    1     1000    00:00:05        14207 3944   6461 9126 8375
i                   10.12.208.81    1     500     00:00:01        14207 3944   6461 9126 8375
hi 198.235.184.0/24 10.12.208.72    1     1000    00:00:00        14207 64513  2828 2828 2828 2828 701 6539
549 hi              10.12.208.81    1     992     00:00:10        64513 2828   2828
                                                                  2828 2828 701 6539 549 ........
h 130.235.0.0/16    192.168.41.7    6     2224    00:16:59        64173 14207  3944 6461 286 2603 1653 2846
2846
h 130.235.56.0/21   192.168.41.7    4     1129    00:20:01        64173 14207  64513 2828 2828 2828 2828 209
286 2603 1653 2846
h 130.235.184.0/21  192.168.41.7    4     1129    00:20:01        64173 14207  64513 2828 2828 2828 2828 209
286 2603 1653 2846
  134.114.0.0/16    192.168.41.7    2     419     00:19:10        64173 14207  3944 6461 701 3908 2900
  144.173.0.0/16    192.168.41.7    2     648     00:09:34        64173 14207  3944 6461 786
h  156.70.0.0/16    192.168.41.7    1     428     00:18:17        64173 14207  3944 6461 1239 5676
  159.226.0.0/16    192.168.41.7    4     988     00:17:48        64173 14207  3944 6461 5727 7497
h  160.8.0.0/16     192.168.41.7    8     1183    01:15:52        64173 14207  3944 6461 1239 5511 2874
d  209.211.0.0/22   192.168.41.7    7     1524    00:55:38        64173 14207  3944 6461 209
```

The following example displays output from the **show bgp route flap-statistics dampened-path** command:

```
[local]Redback>show bgp route flap-statistics dampened-path
```

```
Address Family: ipv4 unicast
BGP table version is 418715, local router ID is 192.168.4.100
Status codes: d damped, h history, > best, i internal
Origin codes: i - IGP, e - EGP, ? - incomplete

Network             From             Flaps Penalty   Duration  Reuse     Path
d  209.211.0.0/22   192.168.41.7     7        1524   00:55:38  00:15:45  64173 14207 3944 6461 209
```

The following example displays output from the **show bgp route flap-statistics external** command:

```
[local]Redback>show bgp route flap-statistics external

Address Family: ipv4 unicast
BGP table version is 418994, local router ID is 192.168.4.100
Status codes: d damped, h history, > best, i internal
Origin codes: i - IGP, e - EGP, ? - incomplete

Network             From           Flaps   Penalty    Duration  Reuse    Path
  63.105.82.0/23    192.168.41.7       1       431    00:03:09           64173 14207 64513 2828
                                                                          2828 2828 2828
                                                                          3356 17074
  63.163.214.0/24   192.168.41.7       1       388    00:05:23           64173 14207 64513 2828
                                                                          2828 2828 2828
                                                                          1239 13776
  63.210.250.0/23   192.168.41.7       2       855    00:03:35           64173 14207 64513
                                                                          2828 2828 2828 2828
                                                                          3356 17074
  63.210.252.0/23   192.168.41.7       2       855    00:03:35           64173 14207 64513
                                                                          2828 2828 2828 2828
                                                                          3356 17074
  64.84.0.0/18      192.168.41.7       2       823    00:06:39           64173 14207 3944
                                                                          6461  1239 10738
h 65.169.76.0/24    192.168.41.7       1       846    00:03:35           64173 14207 64513
                                                                          2828 2828 2828 2828
                                                                          1239 22083
h 65.195.55.0/24    192.168.41.7       1       688    00:07:54           64173 14207 64513
                                                                          2828 2828 2828 2828 701
                                                                          19623
h 130.235.0.0/16    192.168.41.7       6      1277    00:29:09           64173 14207 3944
                                                                          6461  286 2603 1653 2846
                                                                          2846
```

The following example displays output from the **show bgp route flap-statistics internal** command. The **flap-statistics** command (in BGP address family configuration mode) must be enabled to see flap statistics for iBGP peers:

```
[local]Redback>show bgp route flap-statistics internal

Address Family: ipv4 unicast
BGP table version is 419481, local router ID is 192.168.4.100
Status codes: d damped, h history, > best, i internal
Origin codes: i - IGP, e - EGP, ? - incomplete

   Network            From           Flaps Penalty  Duration Reuse    Path
i  15.252.0.0/18      10.12.208.81       1     500  00:00:01          14207 3944 6461 7018 71
i 15.252.64.0/20      10.12.208.81       1     500  00:00:01          14207 3944 6461 7018 71
>i 192.6.41.0/24      10.12.208.72       1     500  00:00:00          14207 3944 6461 701   71
i                     10.12.208.81       1     500  00:00:01          14207 3944 6461 701   71
>i 195.82.32.0/19     10.12.208.72       1    1000  00:00:05          14207 3944 6461 9126 8375
i                     10.12.208.81       1     500  00:00:01          14207 3944 6461 9126 8375
```

1.19 show bgp route inconsistent-as

show bgp route inconsistent-as

1.19.1 Purpose

Displays Border Gateway Protocol (BGP) routes sourced from more than one autonomous system (AS).

1.19.2 Command Mode

All modes

1.19.3 Syntax Description

This command has no keywords or arguments.

1.19.4 Default

None

1.19.5 Usage Guidelines

Use the **show bgp route inconsistent-as** command to display BGP routes sourced from more than one AS.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*. For information about troubleshooting BGP, see *L3VPN Troubleshooting*.

1.19.6 Examples

The following example displays output from the **show bgp route inconsistent-as** command:

```
[local]Redback>show bgp route inconsistent-as

Address Family: ipv4 unicast
BGP table version is 418763, local router ID is 192.168.4.100
Status codes: d damped, h history, > best, i internal
Origin codes: i - IGP, e - EGP, ? - incomplete

Network              Next Hop            Metric  LocPrf   Weight   Path
>i 192.231.3.0/24    155.53.1.235             0     100      100   14207 3944  6461 1 239 5696 10943 i
                     192.168.41.7             0     100      100   64173 14207 3944 6461 1239 5696
                                                                   10943 i
i                    155.53.1.236             0     100      100   64513 2828  2828 2 828 2828 3561 i
>i 198.148.166.0/24  155.53.1.235             0     100      100   14207 3944  6461 7 01 1673 1322 1335
                                                                    8174 18920 i
                     192.168.41.7             0     100      100   64173 14207 3944 6461 701 1673 1322
                                                                   1335 8174 18920 i
i                    155.53.1.236             0     100      100   64513 2828  2828 2 828 2828 701 703
                                                                   4716 9999 i
>i 198.203.153.0/24  155.53.1.235             0     100      100   14207 3944  6461 1 239 5696
                                                                         10943 i
                     192.168.41.7             0     100      100   64173 14207 3944 6461 1239 5696
                                                                   10943 i
i                    155.53.1.236             0     100      100   64513 2828  2828  2
```

1.20 show bgp route ipv4

show bgp route ipv4 {**multicast** | **unicast**}

1.20.1 Purpose

Displays information for Border Gateway Protocol (BGP) multicast or unicast IP Version 4 (IPv4) address prefix-based routes.

1.20.2 Command Mode

All modes

1.20.3 Syntax Description

multicast	Displays information only for multicast routes using IPv4 address prefixes.
unicast	Displays information only for unicast routes using IPv4 address prefixes.

1.20.4 Default

None

1.20.5 Usage Guidelines

Use the **show bgp route ipv4** command to display information for BGP multicast or unicast IPv4 address prefix-based routes.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*. For information about troubleshooting BGP, see *L3VPN Troubleshooting*.

1.20.6 Examples

The following example displays output from the **show bgp route ipv4** command:

```
[local]Redback>show bgp route ipv4

Address Family: ipv4 unicast
BGP table version is 2265175, local router ID is 1.1.1.78
Status codes: d damped, h history, > best, i internal
Origin codes: i - IGP, e - EGP, ? - incomplete

Network          Next Hop        Metric  LocPrf  Weight Path
>i 0.0.0.0/0     10.100.1.1      0       100     100    i
 i 3.0.0.0/8     10.100.1.1      0       100     100    14207 3944 6461 701 80 i
 i                10.100.1.2     0       100     100    14207 3944 6461 701 80 i
 i                10.100.1.5     0       100     100    14207 3944 6461 701 80 i
```

1.21 show bgp route ipv4 mdt

show bgp route ipv4 mdt [**rd** *route-distinguisher*] [*source-address* [*group-address*] | **group** *group-address*] [**detail**]

1.21.1 Purpose

Displays information for Border Gateway Protocol (BGP) IPv4 Multicast Distribution Tree (MDT) routes.

1.21.2 Command Mode

All modes

1.21.3 Syntax Description

rd *route-distinguisher*	Optional. Route distinguisher, expressed in the following format: ***asn*:*nnnn* *src-ip-addr* *group-ip-addr***, where ***asn*** is the autonomous system number, ***nn*** is an integer, ***src-ip-addr*** is the source IP address in the form ***A.B.C.D*** and ***group-ip-addr*** is the MDT group IP address in the form ***A.B.C.D***. Specifying a route distinguisher is optional, but if specified, it must occur before the ***source-address*** argument.
source-address	A source address on which to filter the display. The format is ***A.B.C.D***.
group-address	An MDT group on which to filter the display. The format is ***A.B.C.D***.When used with the ***source-address*** argument, routes are filtered on both source address and MDT group.
group	Displays MDT routes for the specified MDT group. The format is ***A.B.C.D***.
detail	Displays detailed routing information.

1.21.4 Default

When used with no option, this command displays information for all MDT routes.

1.21.5 Usage Guidelines

Use the **show bgp route ipv4 mdt** command to display information for BGP MDT routes.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*. For information about troubleshooting BGP, see *L3VPN Troubleshooting*.

1.21.6 Examples

The following example displays output from the **show bgp route ipv4 mdt** command:

```
[local]Redback>show bgp route ipv4 mdt


Address Family: ipv4 mdt
BGP table version is 15, local router ID is 1.2.3.4
Status codes: d damped, h history, > best, i internal
Origin codes: i - IGP, e - EGP, ? - incomplete

*****************************************************************************************
VPN RD: 1:1
   Source           Group            Next Hop         Metric  LocPrf  Weight Path
>i 1.1.1.2          232.100.100.100  4.4.4.4               0     100     100 ?
 i                                   222.222.222.222       0     100     100 ?
>  222.222.222.222  232.100.100.101  0.0.0.0               0     100   32768 ?
>  222.222.222.222  232.100.100.102  0.0.0.0               0     100   32768 ?

VPN RD: 2:2
   Source           Group            Next Hop         Metric  LocPrf  Weight Path
>i 1.1.1.2          232.100.100.100  4.4.4.4               0     100     100 ?
 i                                   222.222.222.222       0     100     100 ?
>  222.222.222.222  232.100.100.101  0.0.0.0               0     100   32768 ?
>  222.222.222.222  232.100.100.102  0.0.0.0               0     100   32768 ?

VPN RD: 100:101
   Source           Group            Next Hop         Metric  LocPrf  Weight Path
 i 1.1.1.1          232.100.100.100  1.1.1.1               0     115     100 ?
 i                                   1.1.1.1               0     115     100 ?
>i 1.1.1.2          232.100.100.100  4.4.4.4               0     100     100 ?
 i                                   222.222.222.222       0     100     100 ?
```

The following example shows output from the **show bgp route ipv4 mdt** command in a VPN context, **vpn_1**:

```
[local]Redback>show bgp route ipv4 mdt


Address Family: ipv4 mdt
BGP table version is 15, local router ID is 1.2.3.4
Status codes: d damped, h history, > best, i internal
Origin codes: i - IGP, e - EGP, ? - incomplete


VPN RD: 1:1
   Source           Group            Next Hop         Metric  LocPrf  Weight Path
>i 1.1.1.2          232.100.100.100  4.4.4.4               0     100     100 ?
 i                                   222.222.222.222       0     100     100 ?
>  222.222.222.222  232.100.100.101  0.0.0.0               0     100   32768 ?
>  222.222.222.222  232.100.100.102  0.0.0.0               0     100   32768 ?
```

The following example filters output from the **show bgp route ipv4 mdt** command on source address:

```
[local]Redback>show bgp route ipv4 mdt 222.222.222.223
```

```
Address Family: ipv4 mdt
BGP table version is 15, local router ID is 1.2.3.4
Status codes: d damped, h history, > best, i internal
Origin codes: i - IGP, e - EGP, ? - incomplete
```

The following example filters output from the **show bgp route ipv4 mdt** command on MDT group:

```
[local]Redback>show bgp route ipv4 mdt group 232.100.100.103
```

```
Address Family: ipv4 mdt
BGP table version is 15, local router ID is 1.2.3.4
Status codes: d damped, h history, > best, i internal
Origin codes: i - IGP, e - EGP, ? - incomplete
```

The following example filters output from the **show bgp route ipv4 mdt** command on both source address and MDT group:

```
[local]Redback>show bgp route ipv4 mdt rd 222.222.222.222  232.100.100.101
```

```
Address Family: ipv4 mdt
BGP table version is 15, local router ID is 1.2.3.4
Status codes: d damped, h history, > best, i internal
Origin codes: i - IGP, e - EGP, ? - incomplete

VPN RD: 1:1
   Source           Group            Next Hop         Metric  LocPrf  Weight Path
>  222.222.222.222  232.100.100.101  0.0.0.0               0     100   32768 ?

VPN RD: 2:2
   Source           Group            Next Hop         Metric  LocPrf  Weight Path
>  222.222.222.222  232.100.100.101  0.0.0.0               0     100   32768 ?
```

The following example filters output from the **show bgp route ipv4 mdt** command using route distinguisher **1:1**, source address, and MDT group:

```
[local]Redback>show bgp route ipv4 mdt rd 1:1 222.222.222.222  232.100.100.101
```

```
BGP ipv4 mdt routing table entry: 222.222.222.222/32, version 10
Paths: total 1, best path count 1, best peer 0.0.0.0
Advertised to peer-groups in this context: 1
  pg-1
Advertised to non-peer-group peers in this context: 1
  20.0.0.1

Local
  Imported to RD:  2:2
  Nexthop 0.0.0.0 (0), peer 0.0.0.0 (1.2.3.4)
  Origin incomplete, localpref 100, med 0, weight 32768, sourced (redist), best
```

1.22 show bgp route ipv4 vpn

show bgp route ipv4 vpn [**as-path longer** *count*] [**rd** *route-distinguisher*] [**labels**]

1.22.1 Purpose

Displays information for Border Gateway Protocol (BGP) Virtual Private Network IP Version 4 (VPN-IPv4) address prefix-based routes.

1.22.2 Command Mode

All modes

1.22.3 Syntax Description

as-path longer *count*	Optional. Information for AS-paths equal to or longer than the *count* value. The range of *count* values is 1 to 300.
rd *route-distinguisher*	Optional. Route information for only a specific Virtual Private Network (VPN) context with a route distinguisher of the route-distinguisher value, which can be expressed in either of the following formats: • *asn*:*nnnn*, where *asn* is the autonomous system number and *nnnn* is a 32-bit integer. • *ip-addr*:*nn*, where *ip-addr* is the IP address in the form *A.B.C.D* and *nn* is a 16-bit integer.
labels	Optional. Displays Multiprotocol Label Switching (MPLS) label information.

1.22.4 Default

This command displays all VPN-IPv4 routes in all VPN contexts.

1.22.5 Usage Guidelines

Use the **show bgp route ipv4 vpn** command to display information for BGP VPN-IPv4 address prefix-based routes.

Use the rd route-distinguisher construct to display VPN-IPv4 prefixes for just the selected VPN context that matches the route-distinguisher argument.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*. For information about troubleshooting BGP, see *L3VPN Troubleshooting*.

1.22.6 Examples

The following example displays output from the **show bgp route ipv4 vpn** command:

```
[local]Redback>show bgp route ipv4 vpn

Address Family: ipv4 vpn
BGP table version is 0, local router ID is 7.7.7.2
Status codes: d damped, h history, > best, i internal
Origin codes: i - IGP, e - EGP, ? - incomplete

VPN RD: 1.2.3.4:100
   Network            Next Hop          Metric  LocPrf  Weight Path
>  6.3.0.0/18         192.168.41.100         0     100     100 3944 6461 7170 1455 i

VPN RD: 64001:200
   Network            Next Hop          Metric  LocPrf  Weight Path
>  3.0.0.0/8          192.168.3.100          0     100     100 3944 6461 701 80 i
>  10.10.10.10/32     192.168.3.8            0     100     100 100 i
```

The following example displays only VPN-IPv4 routes from the context with route distinguisher of **1.2.3.4:100:**

```
[local]Redback>show bgp route ipv4 vpn rd 1.2.3.4:100
```

```
Address Family: ipv4 vpn
BGP table version is 0, local router ID is 7.7.7.2
Status codes: d damped, h history, > best, i internal
Origin codes: i - IGP, e - EGP, ? – incomplete

VPN RD: 1.2.3.4:100
   Network            Next Hop          Metric  LocPrf  Weight Path
>  6.3.0.0/18         192.168.41.100         0     100     100 3944 6461 7170 1455 i
```

The following example displays MPLS label information for VPN-IPv4 routes:

```
[local]Redback>show bgp route ipv4 vpn labels

VPN RD: 2:2
Network            Next Hop            Rcv Label      Alloc Label
2.1.0.0/16         10.13.49.207        22             589830
2.3.0.0/16         10.13.49.207        21             589829
4.2.1.1/32         10.13.49.207        19             589828

VPN RD: 10.11.12.13:100
Network            Next Hop            Rcv Label      Alloc Label
2.1.0.0/16         10.13.49.207        22             589830
2.3.0.0/16         10.13.49.207        21             589829
4.2.1.1/32         10.13.49.207        19             589828
6.3.0.0/18         192.168.41.100      nolabel        589826

VPN RD: 20.21.22.23:200
Network            Next Hop            Rcv Label      Alloc Label
1.1.1.1/32         0.0.0.0             nolabel        589825
```

The following example displays MPLS label information only for VPN-IPv4 routes from the context with route distinguisher of **2:2:**

```
[local]Redback>show bgp route ipv4 vpn rd 2:2 labels
```

```
VPN RD: 2:2
Network            Next Hop            Rcv Label      Alloc Label
2.1.0.0/16         10.13.49.207        22             589830
2.3.0.0/16         10.13.49.207        21             589829
4.2.1.1/32         10.13.49.207        19             589828
```

1.23 show bgp route ipv4 vpn summary

`show bgp route ipv4 vpn summary`

1.23.1 Purpose

Displays a summary report of Border Gateway Protocol (BGP) Virtual Private Network IP Version 4 (VPN-IPv4) routes in the BGP routing tables for all contexts.

1.23.2 Command Mode

All modes

1.23.3 Syntax Description

This command has no keywords or arguments.

1.23.4 Default

None

1.23.5 Usage Guidelines

Use the **`show bgp route ipv4 vpn summary`** command to display a summary report of BGP VPN-IPv4 routes in the BGP routing tables for all contexts.

Note: By default, most **`show`** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **`context`** ***`ctx-name`*** construct, preceding the **`show`** command, to view output for the specified context without entering that context. For more information about using the **`context`** ***`ctx-name`*** construct, see ***`context`***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*. For information about troubleshooting BGP, see *L3VPN Troubleshooting*.

1.23.6 Examples

The following example displays output from the **show bgp route ipv4 vpn summary** command:

```
[local]Redback>show bgp route ipv4 vpn summary

Address Family: ipv4 vpn
BGP router identifier: 2.2.2.2, local AS number: 64000
BGP route table version: 5065742, RIB table version: 5065742
Neighbors Configured: 1, Established: 1
Sourced paths: redistributed: 0, networked: 0, aggregated: 0
Dampening: Disabled

Entry Type      Count          Memory
Network        132281        16201112
Path           132278         3632896

Neighbor          AS  MsgRcvd  MsgSent    TblVer  InQ OutQ Rst  Up/Down  Pfx Rcvd/Sent
1.1.1.1        64000   336115      258   5065646    0 0 0 04:06:48 132270      8

Context: 0x40080002  VPN RD: 2:2
Neighbor          AS  MsgRcvd  MsgSent    TblVer  InQ OutQ Rst  Up/Down  Pfx Rcvd/Sent
60.1.2.2         200      251    48388   5065742    0 0    0 04:06:50      2      0

Context: 0x40080003  VPN RD: 3:3
Neighbor          AS  MsgRcvd  MsgSent    TblVer  InQ OutQ Rst  Up/Down  Pfx Rcvd/Sent
60.1.3.2         201      250    85962   5065742    0    0    0 04:06:45    3      0
```

1.24 show bgp route ipv6 unicast

show bgp route ipv6 unicast

1.24.1 Purpose

Displays information for Border Gateway Protocol (BGP) unicast IP Version 6 (IPv6) routes.

1.24.2 Command Mode

All modes

1.24.3 Syntax Description

This command has no keywords or arguments.

1.24.4 Default

None

1.24.5 Usage Guidelines

Use the **show bgp route ipv6 unicast** command to display information for BGP unicast IPv6 routes.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*. For information about troubleshooting BGP, see *L3VPN Troubleshooting*.

1.24.6 Examples

The following example displays output from the **show bgp route ipv6 unicast** command:

```
[local]Redback>show bgp route ipv6 unicast

Address Family: ipv6 unicast
BGP table version is 2, local router ID is 10.12.209.174
Status codes: d damped, h history, > best, i internal
Origin codes: i - IGP, e - EGP, ? - incomplete

   Network            Next Hop                Metric  LocPrf  Weight Path
>  9001::/64          7001::ff                     0     100     100 200 i
>  9002::/64          7001::ff                     0     100     100 200 i
```

1.25 show bgp route ipv6 vpn

show bgp route ipv6 vpn [**as-path** | **community** | **ext-community** | **flap-statistics** | **inconsistent-as** | **labels** | **neighbor** | **rd** | **regexp** | **sourced** | **summary**]

1.25.1 Purpose

Displays information for Border Gateway Protocol (BGP) IP Version 6 (IPv6) VPN routes.

1.25.2 Command Mode

All modes

1.25.3 Syntax Description

as-path	Optional. Displays autonomous system (AS) path information for BGP IPv6 VPN routes.
community	Optional. Displays community information for BGP IPv6 VPN routes.
ext-community	Optional. Displays BGP IPv6 routes for IPv6 VPN route target extended communities.
flap-statistics	Optional. Displays BGP route-flap statistics accounting information for IPv6 routes.
inconsistent-as	Optional. Displays BGP IPv6 VPN routes sourced from more than one autonomous system (AS).

labels	Optional. Displays Multiprotocol Label Switching (MPLS) label information for BGP IPv6 VPN routes
neighbor	Optional. Displays information about IPv6 VPN routes to and from BGP neighbors.
rd	Optional. Displays route information for BGP IPv6 VPN routes that have route distinguishers.
regexp	Optional. Displays BGP IPv6 VPN route communities.
sourced	Optional. Displays BGP IPv6 VPN routes sourced from the local autonomous system (AS).
summary	Optional. Displays summarized information about BGP IPv6 VPN routes.

1.25.4 Default

Enter the **show bgp route ipv6 vpn** command without any optional arguments to display information about all BGP IPv6 VPN routes currently configured on the system.

1.25.5 Usage Guidelines

Use the **show bgp route ipv6 unicast** command to display information for BGP IPv6 VPN routes.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*. For information about troubleshooting BGP, see *L3VPN Troubleshooting*.

1.25.6 Examples

The following example displays output from the **show bgp route ipv6 vpn** command:

```
[local]Redback>show bgp route ipv6 vpn
```

```
Address Family: ipv6 vpn
Address Family: ipv6 vpn
BGP table version is 72484, local router ID is 100.100.100.101
Status codes: d damped, h history, > best, i internal
Origin codes: i - IGP, e - EGP, ? - incomplete


VPN RD: 10:2222
   Network            Next Hop                Metric  LocPrf  Weight Path
>i 7::/20             22.22.22.22                  0     100     100 ?

VPN RD: 10:3333
   Network            Next Hop                Metric  LocPrf  Weight Path
>i 7::/20             22.22.22.22                  0     100     100 ?

VPN RD: 100:101
   Network            Next Hop                Metric  LocPrf  Weight Path
>i 1000::/64          1.1.1.1                      0     100     100 ?
>  2000::/64          ::                           0     100   32768 ?

VPN RD: 200:1
   Network            Next Hop                Metric  LocPrf  Weight Path
>  1600::1:1:0/120    ::                           0     100   32768 ?
>  1600::2:1:0/120    ::                           0     100   32768 ?
>  1600::3:1:0/120    ::                           0     100   32768 ?
>  1600::4:1:0/120    ::                           0     100   32768 ?
>  1600::5:1:0/120    ::                           0     100   32768 ?
>  1600::6:1:0/120    ::                           0     100   32768 ?
>  1600::7:1:0/120    ::                           0     100   32768 ?
>  1600::8:1:0/120    ::                           0     100   32768 ?
>  1600::9:1:0/120    ::                           0     100   32768 ?
>  1600::10:1:0/120   ::                           0     100   32768 ?
>  1600::11:1:0/120   ::                           0     100   32768 ?
>  1600::12:1:0/120   ::                           0     100   32768 ?
>  1600::13:1:0/120   ::                           0     100   32768 ?
>  1600::14:1:0/120   ::                           0     100   32768 ?
>  1600::15:1:0/120   ::                           0     100   32768 ?
>  1600::16:1:0/120   ::                           0     100   32768 ?
>  1600::17:1:0/120   ::                           0     100   32768 ?
>  1600::18:1:0/120   ::                           0     100   32768 ?
>  1600::19:1:0/120   ::                           0     100   32768 ?
>  1600::20:1:0/120   ::                           0     100   32768 ?
>  1600::21:1:0/120   ::                           0     100   32768 ?
>  1600::22:1:0/120   ::                           0     100   32768 ?
>  1600::23:1:0/120   ::                           0     100   32768 ?
>  1600::24:1:0/120   ::                           0     100   32768 ?
>  1600::25:1:0/120   ::                           0     100   32768 ?
>  1600::26:1:0/120   ::                           0     100   32768 ?
>  1600::27:1:0/120   ::                           0     100   32768 ?
>  1600::28:1:0/120   ::                           0     100   32768 ?
```

```
>  1600::29:1:0/120    ::                          0      100    32768 ?
>  1600::30:1:0/120    ::                          0      100    32768 ?
>  1600::31:1:0/120    ::                          0      100    32768 ?
>  1600::32:1:0/120    ::                          0      100    32768 ?
>  1600::33:1:0/120    ::                          0      100    32768 ?
>  1600::34:1:0/120    ::                          0      100    32768 ?
>  1600::35:1:0/120    ::                          0      100    32768 ?
>  1600::36:1:0/120    ::                          0      100    32768 ?
>  1600::37:1:0/120    ::                          0      100    32768 ?
>  1600::38:1:0/120    ::                          0      100    32768 ?
>  1600::39:1:0/120    ::                          0      100    32768 ?
>  1600::40:1:0/120    ::                          0      100    32768 ?
>  1600::41:1:0/120    ::                          0      100    32768 ?
>  1600::42:1:0/120    ::                          0      100    32768 ?
>  1600::43:1:0/120    ::                          0      100    32768 ?
>  1600::44:1:0/120    ::                          0      100    32768 ?
>  1600::45:1:0/120    ::                          0      100    32768 ?
>  1600::46:1:0/120    ::                          0      100    32768 ?
>  1600::47:1:0/120    ::                          0      100    32768 ?
>  1600::48:1:0/120    ::                          0      100    32768 ?
>  1600::49:1:0/120    ::                          0      100    32768 ?
>  1600::50:1:0/120    ::                          0      100    32768 ?
>  1600::51:1:0/120    ::                          0      100    32768 ?
>  1600::52:1:0/120    ::                          0      100    32768 ?
>  1600::53:1:0/120    ::                          0      100    32768 ?
>  1600::54:1:0/120    ::                          0      100    32768 ?
>  1600::55:1:0/120    ::                          0      100    32768 ?
>  1600::56:1:0/120    ::                          0      100    32768 ?
>  1600::57:1:0/120    ::                          0      100    32768 ?
>  1600::58:1:0/120    ::                          0      100    32768 ?
>  1600::59:1:0/120    ::                          0      100    32768 ?
>  1600::60:1:0/120    ::                          0      100    32768 ?
>  1600::61:1:0/120    ::                          0      100    32768 ?
>  1600::62:1:0/120    ::                          0      100    32768 ?
>  1600::63:1:0/120    ::                          0      100    32768 ?
>  1600::64:1:0/120    ::                          0      100    32768 ?
>  1600::65:1:0/120    ::                          0      100    32768 ?
>  1600::66:1:0/120    ::                          0      100    32768 ?
---(more)---
```

1.26 show bgp route labels

show bgp route labels

1.26.1 Purpose

Displays Multiprotocol Label Switching (MPLS) labels associated with Border Gateway Protocol (BGP) routes.

1.26.2 Command Mode

All modes

1.26.3 Syntax Description

This command has no keywords or arguments.

1.26.4 Default

None

1.26.5 Usage Guidelines

Use the **show bgp route labels** command to display MPLS labels associated with BGP routes.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*. For information about troubleshooting BGP, see *L3VPN Troubleshooting*.

1.26.6 Examples

The following example displays the MPLS labels associated with BGP routes in the **local** context:

```
[local]Redback>show bgp route labels
```

```
Network             Next Hop            Rcv Label       Alloc Label
3.0.0.0/8           155.53.0.1          nolabel         nolabel
                    155.53.0.1          nolabel         nolabel
4.0.0.0/8           155.53.0.1          nolabel         nolabel
6.0.0.0/20          155.53.0.1          nolabel         nolabel
```

The following example displays the MPLS labels associated with BGP routes in a Virtual Private Network (VPN) context:

```
[local]Redback>show bgp route labels

VPN RD: 10.11.12.13:100
Network             Next Hop            Rcv Label       Alloc Label
2.1.0.0/16          10.13.49.207        22              589830
2.3.0.0/16          10.13.49.207        21              589829
4.2.1.1/32          10.13.49.207        19              589828
6.3.0.0/18          192.168.41.100      nolabel         589826
```

1.27 show bgp route neighbor

show bgp route neighbor *ip-addr*{**active** | **advertised** | **dampened** | **history** | **not-advertised** | **received**}

1.27.1 Purpose

Displays information about routes to and from Border Gateway Protocol (BGP) neighbors.

1.27.2 Command Mode

All modes

1.27.3 Syntax Description

ip-addr	IP address of the neighbor.
active	Displays only active BGP routes from the specified neighbor.
advertised	Displays only BGP routes advertised to the specified neighbor.
dampened	Displays only dampened BGP routes from the specified neighbor.
history	Displays a history of the BGP routes form the specified neighbor.
not-advertised	Displays only BGP routes not advertised to the specified neighbor.
received	Displays only BGP routes received from the specified neighbor.

1.27.4 Default

None

1.27.5 Usage Guidelines

Use the **show bgp route neighbor** command to display information about routes to or from BGP neighbors.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*. For information about troubleshooting BGP, see *L3VPN Troubleshooting*.

1.27.6 Examples

The following example displays output from the **show bgp route neighbor** ***ip-addr*** **active** command:

```
[local]Redback>show bgp route neighbor 192.168.41.7 active

Address Family: ipv4 unicast
BGP table version is 418798, local router ID is 192.168.4.100
Status codes: d damped, h history, > best, i internal
Origin codes: i - IGP, e - EGP, ? - incomplete

   Network            Next Hop          Metric  LocPrf  Weight Path
>  3.3.3.0/24         192.168.41.7           0     100     100 64173 ?
>  4.4.4.0/24         192.168.41.7           0     100     100 64173 ?
>  5.5.5.0/24         192.168.41.7           0     100     100 64173 ?
>  8.8.8.0/24         192.168.41.7           0     100     100 64173 ?
>  10.12.208.81/32    192.168.41.7           0     100     100 64173 ?
>  10.13.208.81/32    192.168.41.7           0     100     100 64173 ?
>  10.100.2.3/32      192.168.41.7           0     100     100 64173 ?
>  155.0.0.0/8        192.168.41.7           0     100     100 64173 ?
>  155.53.1.235/32    192.168.41.7           0     100     100 64173 ?
>  155.53.36.0/24     192.168.41.7           0     100     100 64173 ?
>  165.30.199.0/24    192.168.41.7           0     100     100 64173 14207 64513 2828 2828 2828 2828 701 i
```

1.28 show bgp route regexp

show bgp route regexp ***as-path-string...***

1.28.1 Purpose

Displays Border Gateway Protocol (BGP) communities that match the specified autonomous system (AS) path string.

1.28.2 Command Mode

All modes

1.28.3 Syntax Description

as-path-string...	One or more AS path strings.

1.28.4 Default

None

1.28.5 Usage Guidelines

Use the **show bgp route regex** command to display BGP routes that contain the specified AS path string.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** *ctx-name* construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** *ctx-name* construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*. For information about troubleshooting BGP, see *L3VPN Troubleshooting*.

1.28.6 Examples

The following example displays output from the **show bgp route regex** command. Only routes that contain the AS paths, **64173** and **14207**, are displayed:

```
[local]Redback>show bgp route regex 64137 14207
```

```
Address Family: ipv4 unicast

BGP table version is 418910, local router ID is 192.168.4.100

Status codes: d damped, h history, > best, i internal

Origin codes: i - IGP, e - EGP, ? - incomplete


Network            Next Hop            Metric  LocPrf   Weight  Path

3.0.0.0/8       192.168.41.7             0     100      100  64173 14207 3944  6461 701  80  i

4.0.0.0/8       192.168.41.7             0     100      100  64173 14207 64513 2828 2828 2828 2828 1 i

4.21.132.0/23   192.168.41.7             0     100      100  64173 14207 64513 2828 2828 2828 2828 6461
                                                             16422 i

6.1.0.0/16      192.168.41.7             0     100      100  64173 14207 3944  6461 7170
                                                             1455 i

6.2.0.0/22      192.168.41.7             0     100      100  64173 14207 64513 2828 2828 2828 2828 7170
                                                             1455 i

6.3.0.0/18      192.168.41.7             0     100      100  64173 14207 3944  6461 7170 1455 i

6.4.0.0/16      192.168.41.7             0     100      100  64173 14207 3944  6461 7170 1455 i

6.5.0.0/19      192.168.41.7             0     100      100  64173 14207 3944  6461 7170 1455 i
```

1.29 show bgp route sourced

`show bgp route sourced`

1.29.1 Purpose

Displays Border Gateway Protocol (BGP) routes sourced from the local autonomous system (AS).

1.29.2 Command Mode

All modes

1.29.3 Syntax Description

This command has no keywords or arguments.

1.29.4 Default

None

1.29.5 Usage Guidelines

Use the **show bgp route sourced** command to display BGP routes sourced from the local autonomous system.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*. For information about troubleshooting BGP, see *L3VPN Troubleshooting*.

1.29.6 Examples

The following snapshot from a configuration file enables the output for the **show bgp route sourced** command example:

```
router bgp 64001

 address-family ipv4 unicast

  redistribute static

!

ip route 0.0.0.0/0 10.13.49.254

ip route 10.0.0.0/8 10.13.49.254

ip route 155.0.0.0/8 10.13.49.254

ip route 155.53.36.126/32 10.13.49.254
```

The previous configuration provides the commands that enable the following output:

```
[local]Redback>show bgp route sourced
```

```
Address Family: ipv4 unicast

BGP table version is 418884, local router ID is 192.168.4.100

Status codes: d damped, h history, > best, i internal

Origin codes: i - IGP, e - EGP, ? - incomplete


   Network            Next Hop            Metric  LocPrf  Weight  Path

>  10.0.0.0/8         10.13.49.254        0       100     32768   ?

>  155.0.0.0/8        10.13.49.254        0       100     32768   ?

>  155.53.36.126/32   10.13.49.254        0       100     32768   ?
```

1.30 show bgp route summary

show bgp route summary [detail]

1.30.1 Purpose

Displays a summary report of Border Gateway Protocol (BGP) routes in the BGP routing table.

1.30.2 Command Mode

All modes

1.30.3 Syntax Description

detail Displays detailed information about BGP routes.

1.30.4 Default

None

1.30.5 Usage Guidelines

Use the **show bgp route summary** command to display a summary report of BGP routes in the BGP routing table.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*. For information about troubleshooting BGP, see *L3VPN Troubleshooting*.

1.30.6 Examples

The following example displays output from the **show bgp route summary** command:

```
[local]Redback>show bgp route summary
```

```
Address Family: ipv4 unicast
BGP router identifier: 0.0.0.0, local AS number: 100
BGP route table version: 0, RIB table version: 0
Neighbors Configured: 4, Established: 0
Sourced paths: redistributed: 0, networked: 0, aggregated: 0

Entry Type        Count           Memory
Network           103389        10880700
Path              393376        12588032

Neighbor         AS       MsgRcvd MsgSent TblVer InQ OutQ Rst  Up/Down PfxRcvd/Sent
10.11.64.99      14207    0       0       0      0   0    0    1w0d    Connect
10.11.64.170     64001    0       0       0      0   0    0    1w0d    Idle
10.12.208.76     64001    104681  68515   247945 0   0    1    6d21h   83582 103070
10.12.208.85     64001    0       0       0      0   0    0    1w0d    Connect
10.12.208.89     100      0       1461    0      0   0    0    1w0d    Idle
10.12.209.136    10000    0       1428    0      0   0    0    1w0d    Idle
10.13.49.122     64001    205930  48263   247945 0   0    6    5d17h   103107 103070
10.13.49.173     64173    0       0       0      0   0    0    1w0d    Idle (admin)
10.13.49.174     200      0       1456    0      0   0    0    1w0d    Idle
10.100.2.1       64001    0       0       0      0   0    0    1w0d    Connect
10.100.2.2       64001    0       0       0      0   0    0    1w0d    Connect
10.100.200.1     64001    0       0       0      0   0    0    1w0d    Connect
155.53.1.235     14207    48126   14552   247945 0   0    0    1w0d    103151 19641
155.53.1.236     64513    51801   37437   247945 0   0    0    1w0d    102592 83518
```

The following example displays output from the **`show bgp route summary detail`** command. The **`detail`** keyword adds the following field information to the command output: `Triggered NEXT_HOP scan enabled:`, which shows the configured values and `Time since last triggered NEXT_HOP scan:` 00:00:41, which displays how long ago a triggered scan was run.

```
[local]Redback>show bgp route summary detail
```

```
Address Family: ipv4 unicast
BGP router identifier: 3.1.4.1, local AS number: 1
BGP route table version: 10, RIB table version: 10, deleted vers: 10
Neighbors Configured: 1, Established: 1
Sourced paths: redistributed: 0, networked: 0, aggregated: 0
Router state: send/receive
Number of RR-client configured: 0
Route distance: ebgp: 20, ibgp: 200, local: 200
Triggered NEXT_HOP scan enabled: delay: 10050, holdtime: 40, backoff: 4000
 Time since last triggered NEXT_HOP scan: 00:00:41
Dampening: Disabled
Flap-statistics: Disabled
25 prefix (all inclusive)

Entry Type      Count          Memory
Network             6             832
Path                6             384

Neighbor              AS  MsgRcvd  MsgSent    TblVer  InQ OutQ Rst  Up/Down  PfxRcvd/Sent  RstNeeded
2.7.1.8                1       28       17        10    0    0   0 00:09:42      6       0         No
```

1.31 show bgp summary

show bgp summary

1.31.1 Purpose

Displays a summary of Border Gateway Protocol (BGP) status and statistical information.

1.31.2 Command Mode

All modes

1.31.3 Syntax Description

This command has no keywords or arguments.

1.31.4 Default

None

1.31.5 Usage Guidelines

Use the **show bgp summary** command to display a summary of BGP status and statistical information.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*. For information about troubleshooting BGP, see *L3VPN Troubleshooting*.

1.31.6 Examples

The following example displays output from the **show bgp summary** command:

```
[local]Redback>show bgp summary

Address Family: ipv4 unicast
BGP router identifier: 10.10.10.10, local AS number: 4
BGP route table version: 0, RIB table version: 0
Neighbors Configured: 2, Established: 0
Sourced paths: redistributed: 0, networked: 0
Dampening: Disabled

Entry Type      Count          Memory   Total Alloc
Network             0              24             0
Path                0               0             0

Neighbor           AS MsgRcvd MsgSent   TblVer  InQ OutQ  Up/Down   PfxRcvd/Sent
10.10.2.2           5       0       0        0    0    0  03:35:19  Idle
10.10.10.1          0       0       0        0    0    0  02:08:19  Idle (noAS)
```

1.32 show bindings

To show bindings information for a specific type of circuit, the syntax is as follows:

show bindings [*circuit-type***] [***bind-type***] [up | down] [detail | summary]**

To show bindings information of circuits assigned to a subscriber identified by the RADIUS Agent-Remote-ID or Agent-Circuit-ID attributes, the syntax is:

show bindings [agent-remote-id ***agent-remote-id*** **| agent-circuit-id** ***agent-circuit-id*****] [up | down] [detail | summary]** To show the bindings information of circuits assigned to BVI ports, the syntax is:

show bindings [bvi {*bvi-name* **| id** ***bvi-id*****}] [***circuit-type***] [***bind-type***] [up | down] [detail | summary]**

To show bindings information of l2vpn cross-connect circuits, the syntax is:

show bindings [l2vpn-cross-connect [*cross-connect-prof-id***]] [***circuit-type***] [***bind-type***] [up | down] [detail | summary]**

To show the bindings information of aggregated circuits of a link group, the syntax is:

show bindings [lg {*lg-name* **| id** ***lg-id*****}] [***circuit-type***] [***bind-type***] [up | down] [detail | summary]**

To show the bindings information of a circuit connected to a specific slot and port and optionally the circuit type, the syntax is:

show bindings [*slot/port***[:***chan***[:***sub-chan***]] [{***circuit-id* **|** ***circuit-type***} [***bind-type***]] [up | down] [detail | summary]**

To show the bindings information of circuits assigned to a subscriber identified by a fully qualified subscriber name, the syntax is:

show bindings [username ***subscriber*****] [up | down] [detail | summary]**

1.32.1 Purpose

Displays information on the configured bindings of one or more subscribers, ports, channels, or permanent virtual circuits (PVCs) on the system.

1.32.2 Command Mode

All modes

1.32.3 Syntax Description

circuit-type	Type of circuit for which bindings information is displayed. If omitted, displays bindings information for all types of circuits.The ***circuit-type*** keywords are: **atm**, **chdlc**, **clips**, **dot1q**, **ether**, **fr**, **gre**, **ipip**, **ipsec**, **ipv6-auto**, **ipv6-man**, **l2tp**, **mip-fa**, **mip-ha**, **mp**, **mpls**, **ppp**, **pppoe**, and **vpls**. See Table 4 for the components of this argument.
bind-type	Type of binding for which bindings information is displayed, according to one of the keywords listed in Table 5.
up	Displays only circuits that are up.
down	Displays only circuits that are down.
detail	Displays detailed bindings information.
summary	Displays only summary information.
agent-circuit-id ***agent-circuit-id***	Specifies the RADIUS Agent-Circuit-ID attribute of the subscriber session. ***agent-circuit-id*** is a text string of up to 63 alphanumeric characters.
agent-remote-id ***agent-remote-id***	Specifies a subscriber session. ***agent-remote-id*** is the value of the Agent-Remote-ID attribute in a RADIUS subscriber record. Enter the ***agent-remote-id*** argument as a structured subscriber username in the form subscriber@context. A text string of up to 63 alphanumeric characters.
bvi {***bvi-name*** | **id** ***bvi-id***}	Specifies the name or ID of a Bridged Virtual Interface for which bindings information is displayed.
counters	Displays the circuit counters. The `show bindings counters` command provides the same information as the `show circuit counters` command. See *show circuit counters*.
lg {***lg-name*** | **id** ***lg-id***}	Displays bindings information for all the circuits associated with the specified link or APS group.
slot/port	Chassis slot and port number of a traffic card for which bindings information is displayed. The ***port*** argument is required if you enter the ***slot*** argument.
circuit-id	Circuit identifier, according to one of the constructs listed in Table 6. If omitted, displays bindings information for all circuits on the specified port or channel.
username ***subscriber***	A fully qualified subscriber name for which bindings information is displayed. Enter in the format ***sub-name@ctx-name***.

Note: Keywords and arguments not listed in the Syntax Description table are listed in Table 4, Table 5, and Table 6 of the Usage Guidelines section.

1.32.4 Default

Displays bindings information for all ports, channels, or circuits that are bound within the current context.

1.32.5 Usage Guidelines

Use the **show bindings** command to display information on the configured bindings of one or more subscribers, ports, channels, or permanent virtual circuits (PVCs) on the system.

If you specify the VLAN tag value for an 802.1Q tunnel, the output includes bindings information for all the PVCs within the tunnel.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** *ctx-name* construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** *ctx-name* construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Using the CLI*.

Table 4 lists the options for the ***circuit-type*** argument.

Table 4 Options for the circuit-type Argument

Circuit Type (*circuit-type*)	Description
atm	Specifies ATM circuits.
chdlc	Specifies Cisco HDLC circuits.(1)
clips	Specifies CLIPS circuits.
dot1q	Specifies 802.1Q circuits.
ether	Specifies Ethernet circuits.
fr	Specifies Frame Relay circuits.(2)
gre [*gre-id*]	Specifies GRE tunnel circuits.
ipip [*ipip-id*]	Specifies IPIP tunnel circuits.
ipsec [*ipsec-id*]	Specifies IPSec encrypted tunnel.
ipv6-auto [*ipv6-auto-id*]	Specifies automatic IPv6 tunnel circuits.
ipv6-man [*ipv6-man-id*]	Specifies manual IPv6 tunnel circuits.
l2tp...	Specifies L2TP circuits Syntax: **l2tp** {*l2tp-peer* **tunnel** *l2tp-id* **session** *session-id* | **active-slot** [*active-slot-num*] | **all** | **lns** *lns-circuit-id*} • *l2tp-peer* - Name of the L2TP peer. • **tunnel** *l2tp-id* - L2TP circuit identifier. • **session** *session-id* - Session identifier. • **active-slot** *active-slot-num* - Slot number. • **all** - Specifies all L2TP LNS circuits. • **lns** *lns-circuit-id* - LNS circuit identifier.

Table 4 Options for the circuit-type Argument

Circuit Type (*circuit-type*)	Description
mip-fa [*mip-fa-id*]	Specifies mobile-ip foreign agent (FA) circuits.
mip-ha [*mip-ha-id*]	Specifies mobile-ip home agent (HA) circuits.
mp *mp-id*	Specifies multilink PPP link group circuits
mpls [lsp *lsp-id*]	Specifies MPLS circuits, where ***lsp-id*** is the label-switched path (LSP) identifier. The range of values is 1 to 65535.
ppp	Specifies PPP circuits.
pppoe	Specifies PPPoE circuits
vpls [*vpls-id*]	Specifies VPLS circuits. The range of values is 1 to 65535.

(1) The SmartEdge 100 router does not support the chdlc keyword.

(2) The SmartEdge 100 router does not support the fr keyword.

Table 5 lists the keyword choices for the ***bind-type*** argument.

Table 5 The bind-type Argument

Keyword (*bind-type*)	Description
auth	Display information for circuits that are bound using PAP or CHAP.
bound	Display information for circuits that are bound.
bypass	Display information for cross connected circuits.
interface	Display information for circuits that are bound to an interface.
no-bind	Display information for circuits that have no binding
subscriber	Display information for circuits that are bound to subscribers.
unbound	Display information for unbound circuits.

Table 6 lists the values for the ***circuit-id*** argument.

Table 6 The circuit-id Argument

Circuit ID (*circuit-id*)	Description
dlci *dlci-id*	Specifies the data-link connection identifier (DLCI) of a Frame Relay PVC. The range of values is 16 to 991.
vlan-id...	Specifies an 802.1Q tunnel or PVC, and optionally, whether the circuit is CLIPS, IPv6oE, or PPPoE encapsulated. Syntax: **vlan-id {*pvc-vlan-id* | *tunl-vlan-id* | *tunl-vlan-id:pvc-vlan-id*} [clips [*clips-id*] | ipv6oe | pppoe [*pppoe-id*]]**

Table 6 The circuit-id Argument

Circuit ID (*circuit-id*)		Description
	pvc-vlan-id	Specifies the VLAN tag value of a PVC that is not within an 802.1Q tunnel. Range is 1 to 4095.
	tunl-vlan-id	Specifies the VLAN tag value of a tunnel. Range is 1 to 4095.
	tunl-vlan-id:pvc-vlan-id	Specifies the VLAN tag value of a tunnel followed by the VLAN tag value for the PVC within the tunnel. Range of each is 1 to 4095.
	clips [*clips-id*]	Specifies CLIPS circuits.
	ipv6oe	Specifies IPv6oE circuits.
	pppoe [*pppoe-id*]	Specifies PPPoE circuits.
vpi-vci...		Specifies the ***circuit-id*** argument using the Virtual path identifier (VPI) and virtual circuit identifier (VCI) of an ATM PVC. The ***circuit-id*** argument of an ATM PVC has the following syntax: Syntax: **vpi-vci *vpi-id vci-id* [clips [*clips-id*] | ipv6oe | pppoe [*pppoe-id*]]**
	vpi-vci *vpi-id vci-id*	Specifies the ***circuit-id*** argument using the VPI and VCI IDs of an ATM PVC. The range of values for the arguments are 0 to 255 and 1 to 65535, respectively.

1.32.6 Examples

The following example displays all bindings in the current context (**local**):

```
[local]Redback#show bindings
Circuit                         State Encaps           Bind Type  Bind Name

4/1                             Up    ethernet
4/1 vlan-id 100                 Up    eth dot1q pppoe  chap
4/2                             Down  ethernet
4/4                             Down  ethernet
4/11                            Up    ethernet
4/12                            Up    ethernet
7/1                             Up    ethernet         interface  mgmt@local
10/1                            Down  ethernet
10/1 vlan-id 100                Down  eth dot1q pppoe  chap
lg id 25 lag                    Down  ethernet
lg id 25 vlan-id 100            Down  dot1q
lg id 25 vlan-id 101            Down  dot1q
GRE 1                           Down  gre              interface  link-gre@myISP-Ctx
blue-lg                         Down  ethernet         interface  etherx@local
Link share ethernet             Down  ethernet

Summary:
    total: 15
       up: 5              down: 9
    bound: 3            unbound: 14
     auth: 2          interface: 3       subscriber: 0           bypass: 0
     no-bind: 10           atm: 0            chdlc: 0            dot1q: 2
       ether: 10           fr: 0              gre: 1
        mpls: 0              ppp: 0         pppoe: 2
       clips: 0             vpls: 0          ipip: 0
       ipsec: 0       ipv6v4-man: 0      ipv6v4-auto: 0
```

1.33 show bridge associations

show bridge associations {***bridge-name ctx-name*** [**detail**] | **all** [**detail**] | **circuit** ***slot/port*** [***circuit-id***]}

1.33.1 Purpose

Displays bridge profile permanent virtual circuit (PVC) assignments.

1.33.2 Command Mode

All modes

1.33.3 Syntax Description

bridge-name	Name of the bridge with associations to be displayed.
ctx-name	Name of the context in which the bridge exists with associations to be displayed.
detail	Optional. Displays detailed information.
all	Displays the bridge forwarding table for all bridges in all contexts.
circuit	Displays the bridge forwarding table for the specified bridged port or PVC.
slot	Chassis slot number of the traffic card with the bridged port or PVC.
port	Port number of the bridged port or the port with the bridged PVC.
circuit-id	Optional. Bridged PVC identifier, according to one of the constructs listed in Table 7.

1.33.4 Default

Displays associations for all bridges in the current context.

1.33.5 Usage Guidelines

Use the **show bridge associations** command to display bridge profile PVC assignments.

Caution!

Risk of performance loss. Enabling the generation of debug messages can severely affect system performance. To reduce the risk, exercise caution before enabling the generation of any debug messages on a production system.

Use the **circuit** ***slot/portcircuit-id*** construct to display the association for that bridged PVC.

Note: The SmartEdge 100 router limits the value of the ***slot*** argument to 2.

Note: The value for the ***port*** argument on the SmartEdge 100 router depends on the MIC slot in which the MIC is installed.

Table 7 lists the values for the ***circuit-id*** argument.

Table 7 Values for the circuit-id Argument

Field	Description
vlan ***vlan-id***	A filter that limits the command to a specified virtual LAN (VLAN) 802.1Q tunnel or PVC. The ***vlan-id*** argument is one of the following constructs: • ***pvc-vlan-id***—VLAN tag value of a PVC that is not within an 802.1Q tunnel. • ***tunl-vlan-id***—VLAN tag value of an 802.1Q tunnel. • ***tunl-vlan-id*:*pvc-vlan-id***—VLAN tag value of an 802.1Q tunnel followed by the VLAN tag value for the PVC within the tunnel. The range of values for any VLAN tag value is 1 to 4095.
vpi-vci ***vpi vci***	Virtual path identifier (VPI) and virtual circuit identifier (VCI) for an Asynchronous Transfer Mode (ATM) permanent virtual circuit (PVC). The range of values is 0 to 255 and 1 to 65535, respectively.

Use the **all** keyword to display associations for all bridges in all contexts.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*.

1.33.6 Examples

The following example displays associations for all bridges:

```
[local]Redback#show bridge associations all

Bridge Profile       Circuit

trib                 3/1

trunk                3/2
```

1.34 show bridge bindings

show bridge bindings {***bridge-name ctx-name*** | **all** | {**circuit** ***slot/port*** [***circuit-id***]}} [**detail** | **tracking**]

1.34.1 Purpose

Displays bridge binding information for one or more bridges or for a bridged permanent virtual circuit (PVC).

1.34.2 Command Mode

All modes

1.34.3 Syntax Description

bridge-name	Name of the bridge with binding information to be displayed.
ctx-name	Name of the context in which the bridge exists.
detail	Optional. Displays detailed information.
all	Displays the bridge forwarding table for all bridges in all contexts.
circuit	Displays the bridge forwarding table for the specified bridged port or PVC.

slot	Chassis slot number of the traffic card with the bridged port or PVC.
port	Port number of the bridged port or the port with the bridged PVC.
circuit-id	Optional. Bridged PVC identifier, according to one of the constructs listed in Table 8.
tracking	Optional. Displays RSTP master and client tracking information.

1.34.4 Default

Displays bindings for all bridges in the current context.

1.34.5 Usage Guidelines

Use the **show bridge bindings** command to display bridge binding information for one or more bridges or for a bridged PVC.

Use the **circuit** ***slot/port circuit-id*** construct to display the binding for that bridged PVC.

Note: The SmartEdge 100 router limits the value of the ***slot*** argument to 2.

Note: The value for the ***port*** argument on the SmartEdge 100 router depends on the MIC slot in which the MIC is installed.

Table 8 lists the values for the ***circuit-id*** argument.

Table 8 Values for the circuit-id Argument

Field	Description
vlan ***vlan-id***	A filter that limits the command to a specified virtual LAN (VLAN) 802.1Q tunnel or PVC. The ***vlan-id*** argument is one of the following constructs: • ***pvc-vlan-id***—VLAN tag value of a PVC that is not within an 802.1Q tunnel. • ***tunl-vlan-id***—VLAN tag value of an 802.1Q tunnel. • ***tunl-vlan-id*:*pvc-vlan-id***—VLAN tag value of an 802.1Q tunnel followed by the VLAN tag value for the PVC within the tunnel. The range of values for any VLAN tag value is 1 to 4095.
vpi-vci ***vpi vci***	Virtual path identifier (VPI) and virtual circuit identifier (VCI) for an Asynchronous Transfer Mode (ATM) PVC. The range of values is 0 to 255 and 1 to 65535, respectively.

Use the **all** keyword to display bindings for all bridges in all contexts.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*.

1.34.6 Examples

The following example displays detailed binding information for all bridges:

```
[local]Redback#show bridge bindings all detail
Flags are,(L)earning,(D)ynamic,(t)ributary,(T)runk,
(R)estricted,(d)eleted,(S)tale,(l)og,(U)p, (Ld) Loop Detection
(D)eny bpdu,(O)nly bpdu,(A)llow bpdu (default), (F) stp state forwarding
(B) stp state discarding
Headings : Ld Pri - Loop Detection Priority
           (Bpdu Pri)- bridge protocol data unit Priority
Context   Bridge Group  Circuit MAC  D-MAC Limit  Flag         Ld Pri Bpdu Pri
local     b1            2/1     0    0     4      L-t----U--AF 0        -
```

The `show bridge bindings all tracking` command identifies the tracking masters and clients, their contexts, and circuits. It also shows the RSTP status of circuits bound to the bridges.

```
[local]Redback#show bridge bindings all tracking

Context              Bridge Group         Circuit               Stp State    Role    clients
local                bridge30             3/2                   FORWARD      MASTER  1
local                bridge2              3/2 vlan-id 2         FORWARD      CLIENT  -
local                bridge30             3/3                   FORWARD      MASTER  1
local                bridge2              3/3 vlan-id 2         FORWARD      CLIENT  -
```

1.35 show bridge info

show bridge info {***bridge-name ctx-name*** [**detail**] | **all** [**detail**]}

1.35.1 Purpose

Displays information for configured bridges.

1.35.2 Command Mode

All modes

1.35.3 Syntax Description

bridge-name	Name of the bridge with information to be displayed.
ctx-name	Name of the context in which the bridge exists.
detail	Optional. Displays detailed information.
all	Displays information for bridges in all contexts.

1.35.4 Default

Displays bridge information for all bridges in the current context.

1.35.5 Usage Guidelines

Use the **show bridge info** command to display information for configured bridges.

Use the **all** keyword to display information for all bridges in all contexts.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*.

1.35.6 Examples

The following example displays information for all bridges:

```
[local]Redback#show bridge info all

Type can be: (L)earning,(D)ynamic,(R)outing
Context          Bridge Group     Type Ccts  Aging MAC   D-MAC Description
c1               b1               L--  1     300   6     3     Bridge one
c1               b2               L--  1     300   1     0     Bridge two
c1               b3               L--  1     300   0     0     Bridge three
c1               b4               L--  1     300   0     0     Bridge four
```

The following example illustrates the **show bridge** command with the info keyword. The bridge name is **red** and the context name is **ink**. In this example information is provided on loop-detection using the MAC moves method:

```
[local]Redback(config-bridge)#show bridge info lbdl ink
Type can be: (L)earning,(R)outing,(Md) MacMove Drop
Context          Bridge Group     Type Ccts  Aging MAC   D-MAC PW-Ccts Description
ink              lbdl             L--   0     300   0     0      0
```

1.36 show bridge loop-detection

show bridge loop-detection {all | *bridge-name context-name* [detail | history] | *circuit-id* [history]}

1.36.1 Purpose

Shows the MAC moves loop detection status of all bridges, a specific bridge, or a particular circuit.

1.36.2 Command Mode

Exec

1.36.3 Syntax Description

bridge-name	Name of the bridge.
context-name	Name of the context that contains the bridge.
circuit-id	Specific circuit on the bridge. Shows the loop-detection priority of the specified circuit and its current state; that is, whether the circuit is blocked or unblocked and the priority of the specified circuit as applied by the MAC moves loop-detection profile. See Table 9 for the expanded syntax for the ***circuit-id*** argument.
detail	Optional. Shows detailed information about loop-detection events for the specified bridge or circuit.
history	Optional. Shows the history of loop-detection events for the specified bridge or circuit.

1.36.4 Default

None

1.36.5 Usage Guidelines

Use the **show bridge loop-detection** command to display the MAC moves loop detection status of all bridges, a specific bridge, or a particular circuit.

The ***circuit-id*** argument is composed of the keywords and arguments as described in the following syntax:

slot/port {**vlan** ***vlan-id*** | **ethernet**} | {**vpls** ***vpls-id***}

Table 9 describes the components of the ***circuit-id*** argument:

Table 9 Building Blocks of the circuit-id Argument

Field	Description
slot	Chassis slot number of the line card with the bridged circuit.
port	Port number of the port with the bridged circuit.
vpls ***vpls-id***	A filter that limits the command to a specified Virtual Private LAN Service (VPLS) circuit. The VPLS circuit identifier is a system-generated ID. The range of values is 1 to 65535.
ethernet	A filter that limits the command to Ethernet-encapsulated circuits.
vlan ***vlan-id***	A filter that limits the command to a specified virtual LAN (VLAN) 802.1Q tunnel or PVC. The ***vlan-id*** argument is one of the following constructs: • ***pvc-vlan-id***—VLAN tag value of a PVC that is not within an 802.1Q tunnel. • ***tunl-vlan-id***—VLAN tag value of an 802.1Q tunnel. • ***tunl-vlan-id***:***pvc-vlan-id***—VLAN tag value of an 802.1Q tunnel followed by the VLAN tag value for the PVC within the tunnel. If you specify the VLAN tag value for an 802.1Q tunnel, this command clears subscriber sessions on all the PVCs within the tunnel. The range of values for any VLAN tag value is 1 to 4095.

1.36.6 Examples

The following example illustrates the **show bridge loop-detection** command using the **all** keyword:

```
[local]Redback#show bridge loop-detection all

Context      Bridge Group BlkTime Interval MoveFreq   AggrMoves    cpuMoves
local        a            60          5        0          0            0
    Circuit          State Priority Aggr Moves   CPU Moves    Retry(s) CurRetry
    1/6              Up    1        0            0            0        0
    1/6 vlan-id 1    Up    3        0            0            0        0
```

The following example illustrates the **show bridge loop-detection** command using the **circuit** ***slot/port*** **ethernet** option:

```
[local]Redback#show bridge loop-detection circuit 1/6 ethernet

    Circuit          State Priority From Moves   To Moves     Retry(s) CurRetry
    1/6              Up    1        0            0            0        0
```

The following example illustrates the **show bridge loop-detection** command using the **circuit** ***slot/port*** **vlan-id** option:

```
[local]Redback#show bridge loop-detection circuit 1/6 vlan-id 1

    Circuit          State Priority From Moves   To Moves     Retry(s) CurRetry
    1/6 vlan-id 1    Up    3        0            0            0        0
```

The following example illustrates the **show bridge loop-detection** command using the **circuit** ***slot/port*** **ethernet history** option:

```
[local]Redback#show bridge loop-detection circuit 1/6 ethernet history

    Circuit          State Priority From Moves   To Moves     Retry(s) CurRetry HistIdx
    1/6              Up    1        0            0            0        0        *1
                                    0            0                              2
                                    0            0                              3
                                    0            0                              4
                                    0            0                              5
```

1.37 show bridge profile

show bridge profile [***prof-name***] [**all**]

1.37.1 Purpose

Displays information for configured bridge profiles.

1.37.2 Command Mode

All modes

1.37.3 Syntax Description

prof-name	Optional. Name of the bridge profile with information to be displayed.
all	Optional. Displays information for bridge profiles in all contexts.

1.37.4 Default

Displays bridge profile information for all bridge profiles in the current context.

1.37.5 Usage Guidelines

Use the **show bridge profile** command to display information for configured bridge profiles.

Use the **all** keyword to display information for all bridge profiles in all contexts.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*.

1.37.6 Examples

The following example displays information for all bridge profiles:

```
[local]Redback#show bridge profile all

Flags are: (R)estricted,(t)ributary,(T)runk
Profile              Flag Circuits
pbr                  Rt     0
pbu                  -t     5
pkr                  RT     0
pku                  -T     8
```

1.38 show bridge statistics

show bridge statistics {***bridge-name ctx-name*** | **all**}

1.38.1 Purpose

Displays statistics for one or more configured bridges.

1.38.2 Command Mode

All modes

1.38.3 Syntax Description

bridge-name	Name of the bridge with statistics to be displayed.
ctx-name	Name of the context in which the bridge exists.
all	Displays statistics for all bridges in all contexts.

1.38.4 Default

Displays statistics for all bridges in the current context.

1.38.5 Usage Guidelines

Use the **show bridge statistics** command to display statistics for one or more configured bridges. Table 10 lists the fields that are displayed for each bridge.

Table 10 Field Descriptions for the show bridge statistics Command

Field	Description
Context	Context in which the bridge is configured.
Bridge Group	Name of the bridge.
Static MAC	Number of static medium access control (MAC) addresses configured (using the **bridge mac-entry** command in dot1q PVC, ATM PVC, or port configuration mode) for each bridged 802.1Q PVC, ATM PVC, or Ethernet port in this bridge.
Drop MAC	Number of MAC addresses specified as dropped (using the **mac-entry** command (in bridge configuration mode).
Dynamic MAC	Number of MAC addresses learned by the bridge.
MCAST	Number of multicast or broadcast MAC addresses.
Station Move	Number of station moves that have occurred on the circuits for this bridge.
S Move Reject	Number of station moves rejected for this bridge because of either of the following conditions: • Bridging restrictions (tributary to trunk circuit, static MAC address). • Rapid station moves.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*.

1.38.6 Examples

The following example displays statistics for all bridges:

```
[local]Redback#show bridge statistics all
```

Context	Bridge Group	Static MAC	Drop MAC	Dynamic MAC	MCAST	Station Move	S Move Reject
c1	b1	0	0	51	0	0	0
c1	b2	0	0	51	0	0	0
c2	b3	0	0	55	0	0	0

The following example displays statistics for a specific bridge:

```
[local]Redback#show bridge statistics b1 c1
```

Context	Bridge Group	Static MAC	Drop MAC	Dynamic MAC	MCAST	Station Move	S Move Reject
c1	b1	0	0	51	0	0	0

1.39 show bridge table

show bridge table {***bridge-name ctx-name*** [**detail**] | **all** [**detail**] | **circuit** ***slot/port*** [***circuit-id***]}

1.39.1 Purpose

Displays the bridge forwarding table for one or more bridges or for a bridged permanent virtual circuit (PVC).

1.39.2 Command Mode

All modes

1.39.3 Syntax Description

bridge-name	Name of the bridge with the bridge forwarding table to be displayed.
ctx-name	Name of the context in which the bridge exists.
detail	Optional. Displays detailed information from the bridge forwarding table.
all	Displays the bridge forwarding table for all bridges in all contexts.
circuit	Displays the bridge forwarding table for the specified bridged port or PVC.
slot	Chassis slot number of the traffic card with the bridged port or PVC.
port	Port number of the bridged port or the port with the bridged PVC.
circuit-id	Optional. Bridged PVC identifier, according to one of the constructs listed in Table 11.

1.39.4 Default

None

1.39.5 Usage Guidelines

Use the **show bridge table** command to display the bridge forwarding table for one or more bridges or for a bridged PVC.

Note: The SmartEdge 100 router limits the value of the ***slot*** argument to 2.

Note: The value for the ***port*** argument on the SmartEdge 100 router depends on the MIC slot in which the MIC is installed.

Use the **circuit** ***slot/port circuit-id*** construct to display all bridge forwarding entries for that circuit.

Table 11 lists the values for the ***circuit-id*** argument.

Table 11 Values for the circuit-id Argument

Field	Description
vlan ***vlan-id***	A filter that limits the command to a specified virtual LAN (VLAN) 802.1Q tunnel or PVC. The ***vlan-id*** argument is one of the following constructs: • ***pvc-vlan-id***—VLAN tag value of a PVC that is not within an 802.1Q tunnel. • ***tunl-vlan-id***—VLAN tag value of an 802.1Q tunnel. • ***tunl-vlan-id*:*pvc-vlan-id***—VLAN tag value of an 802.1Q tunnel followed by the VLAN tag value for the PVC within the tunnel. The range of values for any VLAN tag value is 1 to 4095.
vpi-vci ***vpi vci***	Virtual path identifier (VPI) and virtual circuit identifier (VCI) for an Asynchronous Transfer Mode (ATM) PVC. The range of values is 0 to 255 and 1 to 65535, respectively.

Use the **all** keyword to display the bridge forwarding tables for all bridges in all contexts.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*.

Table 12 lists the fields that are displayed for each bridge; some fields are displayed only when the **detail** keyword is specified.

Table 12 Field Descriptions for the show bridge table Command

Field	Description
Context	Context in which the bridge is configured.
Bridge Group	Name of the bridge.
MAC	MAC address of any type, as indicated by the Flag field.
Circuit	Slot, port, circuit identifier (VLAN tag value) on which the MAC address appears.
Slot	Displayed with the **detail** keyword only.

Table 12 Field Descriptions for the show bridge table Command

Field	Description
Flag	Displayed with the **detail** keyword only. Describes the MAC address or circuit, according to one or more of the following conditions: • D—Dropped MAC address • d—Duplicate MAC address • I—Ignored for now, to be validated, and might be purged later • i—Invalid MAC address • S—Static MAC address • T—Trunk circuit • t—Tributary circuit • U—Unbound circuit
Static MAC	Displayed with the **detail** keyword only. Number of static MAC addresses configured (using the **bridge mac-entry** command in dot1q PVC, ATM PVC, or port configuration mode) for each bridged 802.1Q PVC, ATM PVC, or Ethernet port for all bridges that are displayed.
Drop MAC	Displayed with the **detail** keyword only. Number of MAC addresses specified as dropped (using the **mac-entry** command (in bridge configuration mode) for all bridges that are displayed.
Dynamic MAC	Displayed with the **detail** keyword only. Number of MAC addresses learned by the bridges that are displayed.
MCAST	Displayed with the **detail** keyword only. Number of multicast or broadcast MAC addresses for all bridges that are displayed.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*.

1.39.6 Examples

The following example displays the bridge forwarding table for a specific bridge:

```
[local]Redback>show bridge table b1 c1

Context          Bridge Group     MAC               Circuit
c1               b1               00:00:0c:47:00:f8 3/1 vlan-id 5
c1               b1               00:00:0c:5c:df:29 3/1 vlan-id 5
c1               b1               00:01:02:78:01:35 3/1 vlan-id 5
C1               b1               00:01:02:e8:f0:45 3/1 vlan-id 5
c1               b1               00:01:03:67:f3:c0 3/1 vlan-id 5
c1               b1               00:02:3b:01:71:1d 3/1 vlan-id 5
c1               b1               00:02:3b:01:79:14 3/1 vlan-id 5
c1               b1               00:02:3b:01:79:15 3/1 vlan-id 5
C1               b1               00:02:3b:01:81:d6 3/1 vlan-id 5
```

The following example displays the detailed output with the summary data for the same bridge:

```
[local]Redback>show bridge table b1 c1 detail
```

```
Flags:(U)nbound,(D)rop,(S)tatic,(d)uplicate,(T)runk,(t)rib,(I)gnore,(i)nvalid
Context         Bridge Group    MAC               Circuit          Slot Flag
c1              b1              00:00:0c:47:00:f8 3/1 vlan-id 5    c    ---T---
c1              b1              00:00:0c:5c:df:29 3/1 vlan-id 5    c    ---T---
c1              b1              00:01:02:78:01:35 3/1 vlan-id 5    c    ---T---
c1              b1              00:01:02:e8:f0:45 3/1 vlan-id 5    c    ---T---
c1              b1              00:01:03:67:f3:c0 3/1 vlan-id 5    c    ---T---
c1              b1              00:02:3b:01:71:1d 3/1 vlan-id 5    c    ---T---
c1              b1              00:02:3b:01:79:14 3/1 vlan-id 5    c    ---T---
c1              b1              00:30:88:00:01:1b 3/1 vlan-id 5    c    ---T---
c1              b1              00:30:88:00:05:cc 3/1 vlan-id 5    c    ---T---
c1              b1              00:30:88:00:0b:2a 3/1 vlan-id 5    c    ---T---
c1              b1              00:30:88:00:0b:2d 3/1 vlan-id 5    c    ---T---
c1              b1              00:30:88:00:0b:52 3/1 vlan-id 5    c    ---T---
c1              b1              00:40:9d:21:fd:67 3/1 vlan-id 5    c    ---T---
c1              b1              00:40:9d:22:39:01 3/1 vlan-id 5    c    ---T---
c1              b1              00:50:04:07:a8:9a 3/1 vlan-id 5    c    ---T---
c1              b1              00:50:04:70:b9:e6 3/1 vlan-id 5    c    ---T---
c1              b1              00:50:04:73:30:2e 3/1 vlan-id 5    c    ---T---
c1              b1              00:50:04:c6:61:bc 3/1 vlan-id 5    c    ---T---
c1              b1              00:50:04:c9:f4:a2 3/1 vlan-id 5    c    ---T---
c1              b1              00:50:da:b6:62:b3 3/1 vlan-id 5    c    ---T---
c1              b1              00:80:d4:00:11:2d 3/1 vlan-id 5    c    ---T---
c1              b1              00:a0:cc:59:86:ab 3/1 vlan-id 5    c    ---T---
c1              b1              00:c0:b7:a3:40:da 3/1 vlan-id 5    c    ---T---
c1              b1              00:d0:b7:09:e6:f9 3/1 vlan-id 5    c    ---T---
c1              b1              00:d0:b7:09:e9:07 3/1 vlan-id 5    c    ---T---

Static MAC = 0, Dynamic MAC = 25, Drop MAC = 0, Multicast = 0
```

1.40 show bridge table mac-entry

show bridge table mac-entry ***mac-addr*** {**all** | **bridge** ***bridge-name ctx-name***}

1.40.1 Purpose

Displays the bridge forwarding table for one or more bridges that know the specified medium access control (MAC) address.

1.40.2 Command Mode

All modes

1.40.3 Syntax Description

mac-addr	MAC address for which the bridge forwarding table is to be displayed, in the format ***hh:hh:hh:hh:hh:hh***.
all	Displays the bridge forwarding table for all bridges in all contexts that know the specified MAC address.
bridge	Displays the bridge forwarding table for the specified bridge.
bridge-name	Name of the bridge with the bridge forwarding table to be displayed.
ctx-name	Name of the context in which the bridge exists.

1.40.4 Default

None

1.40.5 Usage Guidelines

Use the **show bridge table mac-entry** command to display the bridge forwarding table for one or more bridges that know the specified MAC address.

Use the **show bridge** ***bridge-name ctx-name*** construct to display the bridge forwarding table for that bridge.

Use the **all** keyword to display the bridge forwarding tables for all bridges in all contexts that know the specified MAC address.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*.

1.40.6 Examples

The following example displays the bridge forwarding table for the bridges that know the MAC address, **00:50:04:73:30:2e:**

```
[local]Redback>show bridge table mac-entry 00:50:04:73:30:2e

Context          Bridge Group     MAC               Circuit

c1               b2               00:50:04:73:30:2e 2/6 vpi-vci 1 33

c2               b3               00:50:04:73:30:2e 4/9


Static MAC = 0, Dynamic MAC = 2, Drop MAC = 0, Multicast = 0
```

1.41 show bridge table type

show bridge table type [**bridge** ***bridge-name ctx-name*** [**detail**] | **all** [**detail**] | ***entry-type*** [**detail**]]

1.41.1 Purpose

Displays the bridge forwarding table for one or more bridges.

1.41.2 Command Mode

All modes

1.41.3 Syntax Description

bridge	Optional. Displays the bridge forwarding table for the specified bridge.
bridge-name	Name of the bridge with the bridge forwarding table to be displayed.
ctx-name	Name of the context in which the bridge exists.
detail	Optional. Displays detailed information from the bridge forwarding table.

all	Optional. Displays the bridge forwarding table for all bridges in all contexts.
entry-type	Optional. Type of medium access control (MAC) address entry in the bridge forwarding table to be displayed, according to one or more of the following keywords: • **drop**—Specifies dropped MAC addresses. • **duplicate**—Specifies duplicated MAC addresses. • **dynamic**—Specifies learned MAC addresses. • **static**—Specifies configured MAC addresses. • **trib**—Specifies MAC addresses on tributary circuits. • **trunk**—Specifies MAC addresses on trunk circuits.

1.41.4 Default

Displays all types of MAC addresses for all bridge forwarding tables in the current context.

1.41.5 Usage Guidelines

Use the **show bridge table type** command to display the bridge forwarding table for one or more bridges.

Use the **detail** keyword to display additional information.

Use the **all** keyword to display the bridge forwarding tables for all bridges in all contexts.

You can enter one or more keywords for the ***entry-type*** argument.

Table 13 lists the fields that are displayed for each bridge; some fields are displayed only when the **detail** keyword is specified.

Table 13 Field Descriptions for the show bridge table type Command

Field	Description
Context	Context in which the bridge is configured.
Bridge Group	Name of the bridge.
MAC	MAC address of the type specified.
Circuit	Slot, port, circuit identifier (VLAN tag value) on which the MAC address appears.

Table 13 Field Descriptions for the show bridge table type Command

Field	Description
Slot	Displayed with the **detail** keyword only.
Flag	Displayed with the **detail** keyword only. Describes the MAC address or circuit, according to one or more of the following conditions: • D—Dropped MAC address • d—Duplicate MAC address • I—Ignored for now, to be validated, and might be purged later • i—Invalid MAC address • S—Static MAC address • T—Trunk circuit • t—Tributary circuit • U—Unbound circuit

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*.

1.41.6 Examples

The following example displays the bridge forwarding table entries for tributary, trunk, dropped, and static MAC addresses:

```
[local]Redback#show bridge table type trib trunk drop static detail

Flags:(U)nbound,(D)rop,(S)tatic,(d)uplicate,(T)runk,(t)rib,(I)gnore,(i)nvalid
Context         Bridge Group    MAC               Circuit           Slot Flag
c1              b1              00:00:00:00:00:31 All circuits          DS-----
c1              b1              00:00:00:00:00:32 All circuits          DS-----
c1              b1              00:00:00:00:01:31 3/1                   ---t---
c1              b1              00:00:00:00:01:32 3/1                   ---t---
```

1.42 show bulkstats

show bulkstats policy {*blkst_policy* | **ALL**} [**collection**]

1.42.1 Purpose

Displays the bulk statistics (bulkstats) configuration information and data transfer statistics, or the contents of the current collection file that have not yet been successfully transferred to the receiver, for the specified bulkstats policy or for all policies.

1.42.2 Command Mode

All modes

1.42.3 Syntax Description

policy *blkst_policy*	Name of the bulkstats policy for which bulkstats configuration information and statistics are to be displayed.
policy ALL	Specifies that bulkstats configuration information and statistics are to be displayed for all policies.
collection	Optional. Specifies that the contents of the collection file for the specified policy in its current state is to be displayed, rather than the configuration.

1.42.4 Default

Displays bulkstats configuration information for the specified policy.

1.42.5 Usage Guidelines

Use the **show bulkstats** command to display the current bulkstats configuration information and statistics about the data transfer for the specified policy or for all policies, including:

- IP address and transfer mechanism of primary receiver
- IP address and transfer mechanism of secondary receiver
- Time of last successful transfer

- Size (in bytes) of last transferred bulkstats collection file
- IP address of receiver for last successful transfer
- Time of last attempted transfer
- Time of next transfer attempt

Use the optional **collection** keyword to display the contents of the current bulkstats collection file. This can be useful in debugging schema definitions.

Note: The contents of a collection file for a policy can be viewed only when bulkstats collection for that policy is disabled.

For detailed information on setting up bulkstats, see *Configuring Bulkstats*.

1.42.6 Examples

The following example displays bulk statistics information:

```
[local]Redback>show bulkstats policy bulk

Primary receiver: 198.168.145.99 via ftp
Secondary receiver: 198.168.147.31 via ftp
Last successful transfer to 198.168.145.99 on WED JUN 29 14:55:03 2005
Transferred 1019 bytes into
"//snmp:30A8E9F5A5BD154@198.168.145.99/Bulkstats/whitney_161953"
Last transfer attempt: WED JUN 29 14:58:47 2005
Next transfer attempt: FRI JUL 01 09:06:58 2005
```

The following example displays the current collection file:

```
[local]Redback>show bulkstats policy bulk collection
enet0: (454) 0/0 (null) 4632 2a 36 1
atm50: (454) 5/0 (null) 0 0 0 0
atm51: (454) 5/1 (null) 0 0 0 0
```

1.43 show bypass

show bypass [group *group-name***] [summary] [down | up] [lg** *group-name* **| lg id** *id-num***] [***port-cir***] [detail]**

1.43.1 Purpose

Displays bypass information for one or more cross-connected circuits in the system.

1.43.2 Command Mode

All modes

1.43.3 Syntax Description

group ***group-name***	Optional. Displays information for only the specified cross-connect group.
summary	Optional. Displays summary information for all circuits.
down	Optional. Displays information for only inactive circuits.
up	Optional. Displays information for only active circuits.
port-cir	Optional. Provides the port, slot, and circuit identifier arguments for cross-connected circuits and cross-connected link groups: • For cross-connected circuits:***slot***[***/port*** [***circuit-id*** [***child-circuit-type***]]] • For cross-connected link groups:***circuit-id*** [***child-circuit-type***]
lg ***group-name***	Optional. Specifies the name of an access link group.
lg id ***id-num***	Optional. Specifies the ID of an access link group.
slot	Optional. Chassis slot number of a card with the port for which bypass information is displayed. If omitted, displays bypass information for all cross-connected circuits in the system.
port	Optional. Card port number of the port for which bypass information is displayed. If omitted, displays bypass information for all cross-connected circuits on the ports of the specified card.
circuit-id	Optional. Circuit identifier, according to one of the constructs listed in Table 14. If omitted, displays bypass information for all circuits on the specified port or link group.

child-circuit-type	Optional. Child circuit type, according to one of the following keywords: • **ipv6oe**—Specifies an IP Version 6 over Ethernet (IPv6oE)-encapsulated circuit. • **pppoe**—Specifies a Point-to-Point Protocol (PPP) over Ethernet (PPPoE)-encapsulated circuit. If omitted, displays bypass information for all cross-connected child circuits on the specified circuit.
detail	Optional. Displays detailed information.

1.43.4 Default

Displays bypass information for all cross-connected circuits on all cards.

1.43.5 Usage Guidelines

Use the **show bypass** command to display bypass information for one or more cross-connected circuits in the system.

Note: The SmartEdge 100 router limits the value of the ***slot*** argument to 2.

Note: The value for the ***port*** argument on the SmartEdge 100 router depends on the MIC slot in which the MIC is installed.

Table 14 lists the values for the ***circuit-id*** argument.

Table 14 Values for the circuit-id Argument

Field	Description
vlan ***vlan-id***	A filter that limits the command to a specified virtual LAN (VLAN) 802.1Q tunnel or PVC. The ***vlan-id*** argument is one of the following constructs: • ***pvc-vlan-id***—VLAN tag value of a PVC that is not within an 802.1Q tunnel. • ***tunl-vlan-id***—VLAN tag value of an 802.1Q tunnel. • ***tunl-vlan-id*:*pvc-vlan-id***—VLAN tag value of an 802.1Q tunnel followed by the VLAN tag value for the PVC within the tunnel. The range of values for any VLAN tag value is 1 to 4095.
vpi-vci ***vpi vci***	Virtual path identifier (VPI) and virtual circuit identifier (VCI) for an Asynchronous Transfer Mode (ATM) permanent virtual circuit (PVC). The range of values is 0 to 255 and 1 to 65535, respectively.

If you specify the VLAN tag value for an 802.1Q tunnel, the output includes bypass information for all the PVCs within the tunnel.

Note: By default, most **show** commands (in any mode) display information for the current context only or, depending on the command syntax, for all contexts. If you are an administrator for the local context, you can insert the optional **context** ***ctx-name*** construct, preceding the **show** command, to view output for the specified context without entering that context. For more information about using the **context** ***ctx-name*** construct, see ***context***.

Note: By appending a space followed by the pipe (|) character at the end of a **show** command, you can filter the output using a set of modifier keywords and arguments. For more information, see *Modifying Output of show Commands* in *Using the CLI*.

1.43.6 Examples

The following example displays bypass information for all cross-connected multiprotocol circuits that are active:

```
[local]Redback>show bypass up

Circuit                State  XC Circuit             State

2/1 vpi-vci 0 34 pppoe Up     2/2 vpi-vci 0 34 pppoe Up
```

The following example displays cross-connect group information:

```
[local]Redback>show bypass group one

Circuit         State XC Circuit       State
4/1 vlan-id 32 Up    5/1 vpi-vci 1 32 Up
```

The following example displays bypass summary information:

```
[local]Redback>show bypass summary

Endpoints total: 5, Up: 3, Down: 2
Crossconnects total: 2, Up: 1, Down: 1
```