



Bulk Content Downloader Commands

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show bcdl

To display Bulk Content Downloader (BCDL) information, use the **show bcdl** command in EXEC mode.

```
show bcdl [group_name]
```

Syntax Description	<i>group_name</i> (Optional) Displays information for a specific BCDL group.
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Command Default	No default behavior or values
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Command Modes	XR EXEC
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Command History	Release	Modification
	Release 7.0.12	This command was introduced.

Usage Guidelines	No specific guidelines impact the use of this command.
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Task ID	Task ID	Operations
	sysmgr	read

The following example shows sample output from the **show bcdl** command:

```
RP/0/RSP0/CPU0:router# show bcdl ipv4_rib

Sun May 31 06:56:12.093 PST
grp ipv4_rib, gid 2040, sg cnt 1, agent jid 124, node 0/RSP0/CPU0, pulse 105,
new mbr 0
sg  lwg  fd  csmr  hdlr-act  dnld-act  susp  wait-lck  seq  pulse-tot  pulse-out
  0 2043 11   4          no         no   no         0 113         103         0
```

Table 1: show bcdl Field Descriptions

Field	Description
group	Type of download and the Group Services Protocol (GSP) group name.
gid	Heavyweight group (HWG) in the GSP. This is the group that a consumer initially joins. It is used by the BCDL agent to send control updates.
sg count	Number of subgroups for this particular download type.
agent jid	Job identifier of the BCDL agent. The JID is numerical identifier for a particular process and remains the same across process restarts.
node	Node, expressed in the <i>rackslotmodule</i> notation, in which the agent is running.

Field	Description
pulse	Pulse code used by the producer to pulse the BCDL agent.
new mbr	Number of new consumers that have not yet been assigned a subgroup.
sg	Subgroups number.
lwg	Lightweight group in GSP. This is a type of child group of the HWG. The BCDL agent tells the consumers to join this group to receive data.
fd	The connection handle between the producer and the BCDL agent.
csmr	Number of consumers.
hdlr-act	Specifies if there is a download in progress.
dnld-act	Indicates whether the convergence flag has been sent or not.
susp	Indicates whether the download is suspended due to the queue filling up.
wait-lck	If nonzero, some thread is waiting for other thread to take control of this subgroup.
seq	Sequence number of the last message sent on this subgroup.
pulse-tot	Total number of pulses sent by the producer to the BCDL agent.
pulse-out	Total number of outstanding pulses that have not yet been processed by the BCDL agent.

show bcdl consumers

To display Bulk Content Downloader (BCDL) consumer information, use the **show bcdl consumers** command in

EXEC

mode

show bcdl consumers [*group_name*]

Syntax Description *group_name* (Optional) Displays information for a specific BCDL group.

Command Default No default behavior or values

Command Modes EXEC

Command History	Release	Modification
	Release 7.0.12	This command was introduced.

Usage Guidelines No specific guidelines impact the use of this command.

Task ID	Task Operations ID
	sysmgr read

The following example shows sample output using the **show bcdl consumers** command:

```
RP/0/RSP0/CPU0:router# show bcdl consumers ipv4_rib

Sun May 31 06:17:38.209 PST
group ipv4_rib, gsp gid 2040, 4 consumers, agent jid 124, node 0/RSP0/CPU0
(expected 4 consumers to reply, received 4 replies)
  pid      node asg csg  lwg sus  messages    bytes  errs name
  323727  0/RSP0/CPU0  0  0 2043  N      113      54196   0 fib_mgr
  110686  0/6/CPU0    0  0 2043  N      111      54140   0 fib_mgr
  110686  0/4/CPU0    0  0 2043  N      112      54168   0 fib_mgr
  110686  0/1/CPU0    0  0 2043  N      111      54140   0 fib_mgr
```

This table describes the significant fields shown in the display that are not described in [Table 1: show bcdl Field Descriptions, on page 2](#).

Table 2: show bcdl consumers Field Descriptions

Field	Description
PID	Process identifier.

Field	Description
node	Consumer node, expressed in the <i>rack/slot</i> notation.
asg	Subgroup to which the BCDL agent thinks this consumer belongs.
csg	Subgroup to which the consumer thinks it belongs.
messages	Number of messages processed by this particular consumer.
bytes	Bytes processed by this particular consumer.
errors	Errors encountered by the consumer. This field indicates the number of times the connection was reset.
name	Name of the consumer process.

show bcdl queues

To display the Bulk Content Downloader (BCDL) queue information, use the **show bcdl queues** command in

EXEC

mode.

show bcdl queues [*group_name*]

Syntax Description	<i>group_name</i> (Optional) Displays information for a specific BCDL group.
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Command Default	No default behavior or values
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Command Modes	EXEC
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Command History	Release	Modification
	Release 7.0.12	This command was introduced.

Usage Guidelines	No specific guidelines impact the use of this command.
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Task ID	Task ID	Operations
	sysmgr	read

The following example shows sample output from the **show bcdl queues** command:

```
RP/0/RSP0/CPU0:router# show bcdl queues ipv4_rib

Sun May 31 07:13:28.665 PST
group ipv4_rib, gsp gid 2040, 4 consumers, agent jid 124, node 0/RSP0/CPU0
(expected 4 consumers to reply, received 4 replies)
  pid          node asg csg  lwg sus msgs_in_q  bytes_in_q  errs name
  323727 0/RSP0/CPU0  0  0 2043  N      0           0      0 fib_mgr
  110686 0/6/CPU0      0  0 2043  N      0           0      0 fib_mgr
  110686 0/1/CPU0      0  0 2043  N      0           0      0 fib_mgr
  110686 0/4/CPU0      0  0 2043  N      0           0      0 fib_mgr
```

[Table 1: show bcdl Field Descriptions, on page 2](#) and [Table 2: show bcdl consumers Field Descriptions, on page 4](#) describe the significant fields shown in the display.

show bcdl tables

To display Bulk Content Downloader (BCDL) table information, use the **show bcdl tables** command in EXEC mode.

show bcdl tables [*group_name*]

Syntax Description	<i>group_name</i> Displays information for a specific BCDL group.
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Command Default	No default behavior or values
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Command Modes	EXEC
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Command History	Release	Modification
	Release 7.0.12	This command was introduced.

Usage Guidelines	No specific guidelines impact the use of this command.
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Task ID	Task ID	Operations
	sysmgr	read

The following example shows sample output using the **show bcdl tables** command:

```
RP/0/RSP0/CPU0:router# show bcdl tables ipv4_rib

Sun May 31 07:19:29.878 PST
grp ipv4_rib, gid 2040, sg cnt 1, agent jid 124, node 0/RSP0/CPU0, pulse 105, ne
w mbr 0
  sg  lwg fd csmr hdlr-act dnld-act susp wait-lck  seq pulse-tot pulse-out
    0 2043 11  4      no      no  no      0  113      103      0
sgs: 1, table_cnt: 1, table_mid_cnt: 4, buf size: 100
Showing table info for 1 subgroups
sg 0: has 1 tables (messages: 0, bytes: 0)
  table 0xe0000000: 4 members, dnld act: 0, messages: 113, bytes: 54196
    cnsmr 0: pid 323727 on node 0/RSP0/CPU0
    cnsmr 1: pid 110686 on node 0/6/CPU0
    cnsmr 2: pid 110686 on node 0/1/CPU0
    cnsmr 3: pid 110686 on node 0/4/CPU0
```

The significant fields shown in the display that are not described in [show bcdl consumers, on page 4](#) or [show bcdl queues, on page 6](#) are described in this table.

Table 3: show bcdl tables Field Descriptions

Field	Description
sgs	Number of subgroups.
table_cnt	Number of tables in this subgroup.
sg	Specific subgroup for which information is provided.
has 1 tables	Number of tables in this subgroup.
messages	Messages sent that are not associated with a particular table ID.
bytes	Bytes sent that are not associated with a particular table ID.
table	Specific table ID for which information is provided.
members	Number of consumers associated with this table.
dnld act	Indicates whether or not the convergence flag has been sent.
messages	Number of messages sent for a particular table.
bytes	Number of bytes sent for a particular table.
cnsmr 0: pid 419725 on node 0/RP0/CPU0	Process ID and node information for each consumer in the specified table.

show bcdl trace

To display Bulk Content Downloader (BCDL) trace information, use the **show bcdl trace** command in EXEC mode.

```
show bcdl trace [group_name] [event] [timing] [grpsnd] [wrapping|unique] [hexdump] [last
n] [reverse] [stats] [tailf] [verbose] [file filename original location node-id | location {node-id
| all}]
```

Syntax Description	
<i>group_name</i>	(Optional) Displays information for a specific BCDL group.
event	(Optional) Displays event trace entries.
timing	(Optional) Displays timing trace entries.
grpsnd	(Optional) Displays group send trace entries.
wrapping	(Optional) Displays wrapping entries.
unique	(Optional) Displays unique entries only, along with the count of the number of times this entry appears.
hexdump	(Optional) Displays traces in hexadecimal format.
last <i>n</i>	(Optional) Displays the last <i>n</i> number of traces only.
reverse	(Optional) Displays the most recent traces first.
stats	(Optional) Displays execution path statistics.
tailf	(Optional) Displays new traces as they are added.
verbose	(Optional) Displays additional internal debugging information.
file <i>filename original location node-id</i>	(Optional) Specifies a filename and original location of the file to display.
location {<i>node-id</i> all}	Specifies the RP node for which to display the execution path monitoring information. The <i>node-id</i> argument is expressed in the <i>rack/slot</i> notation. The all keyword specifies all RP nodes.

Command Default None

Command Modes EXEC

Command History	Release	Modification
	Release 7.0.12	This command was introduced.

Usage Guidelines

No specific guidelines impact the use of this command.

Task ID

Task ID	Operations
sysmgr	read

The following example shows sample output using the **show bcdl trace** command:

```
RP/0/RSP0/CPU0:router# show bcdl trace ipv4_rib location 0/1/cpu0

Sun May 31 08:21:07.933 PST
143 wrapping entries (4096 possible, 0 filtered, 143 total)
May 21 15:14:55.790 bcdl/c/ipv4_rib 0/1/CPU0 t4 LE
  bcdl_join_internal: timer_create ret 0, id is 9
May 21 15:14:56.890 bcdl/c/ipv4_rib 0/1/CPU0 t7 LE
  bcdl_join_internal: group_lookup bcdl_ipv4_rib
  returned gid 2040
May 21 15:14:56.966 bcdl/c/ipv4_rib 0/1/CPU0 t7 LE
  join hwg 2040 returns 0
May 21 15:14:56.978 bcdl/c/ipv4_rib 0/1/CPU0 t7 LE
  bcdl_join_internal: joined group bcdl_ipv4_rib,
  member count 5
May 21 15:14:58.969 bcdl/c/ipv4_rib 0/1/CPU0 t7 LE
  rcv gsp mtype 3: connection init sg 1 cur_seq 0
  lwg_gid 2056 table tag 0x00000000 resend state yes
May 21 15:14:58.969 bcdl/c/ipv4_rib 0/1/CPU0 t7 LE
  pc ring high water 0 -> 1, 0 bytes
May 21 15:14:58.969 bcdl/c/ipv4_rib 0/1/CPU0 t4 LE
  c_h deliver msg_id 7 connection init, table event
  0 table tag 0x00000000
May 21 15:14:58.969 bcdl/c/ipv4_rib 0/1/CPU0 t4 LE
  conn init, seq 64206 -> 0, sg 65534 -> 1, gid 2040,
  lwg gid -1 -> 2056
...
```