

Internal Ethernet Control Network Commands

This module provides command line interface (CLI) commands for configuring internal ethernet control on your router.

To use commands of this module, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using any command, contact your AAA administrator for assistance.

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clear controller backplane ethernet location statistics

To delete the aggregate statistics of traffic sent and received over the control Ethernet, use the **clear controller backplane ethernet location statistics** command in EXEC mode.

clear controller backplane ethernet location *node-id* **statistics**

Syntax Description

node-id	Identifies the node whose controller information you want to delete. The *node-id* argument is entered in the *rack*/*slot*/*module* notation.

Command Modes

EXEC mode

Command History

Release	Modification
Release 3.7.2	This command was introduced.

Usage Guidelines

No specific guidelines impact the use of this command.

Examples

The following example shows how to clear all client statistics on the node at 0/1/1:

```
RP/0/RSP0/CPU0:router# clear controller backplane ethernet location 0/1/1 clients all
statistics
```

show controllers backplane ethernet local brief

To display brief information about the Ethernet interface that connects the node to the router control Ethernet, use the **show controllers backplane ethernet local brief** command in EXEC mode.

show controllers backplane ethernet local brief

Syntax Description

This command has no keywords or arguments.

Command Modes

EXEC mode

Command History

Release	Modification
Release 3.7.2	This command was introduced.
Release 5.3.0	The **local** keyword was deprecated.

Usage Guidelines

No specific guidelines impact the use of this command.

Examples

The following example shows the output from the **show controllers backplane ethernet local brief** command:

```
RP/0/RSP0/CPU0:router# show controllers backplane ethernet local brief

FastEthernet0_RP1_0 (local) is up, MTU 1514 bytes
    561688 packets input, 53760372 bytes
    683424 packets output, 216565877 bytes
RP/0/RSP0/CPU0:router#
```

Table 1: show controllers backplane ethernet local brief Field Descriptions

Field	Description
MTU	Maximum packet size, in bytes, that a particular interface can handle.
packets input	Total number of packets received.
packets output	Total number of packets transmitted.

Related Commands

Command	Description
show controllers backplane ethernet local clients, on page 4	
show controllers backplane ethernet local detail, on page 6	
show controllers backplane ethernet local multicast groups, on page 8	Displays all multicast addresses currently being used by active interfaces on the router.

show controllers backplane ethernet local clients

To display information about local client applications, use the **show controllers backplane ethernet local clients** command in EXEC mode.

show controllers backplane ethernet local clients {*client-id* **statistics** | **all**}

Syntax Description

client-id **statistics**	Displays a list of client statistics for the specified client ID. Range is from 1 to 22.
all	Displays a list of all client applications and their IDs.

Command Modes

EXEC mode

Command History

Release	Modification
Release 3.7.2	This command was introduced.
Release 5.3.0	The **local** keyword was deprecated.

Usage Guidelines

No specific guidelines impact the use of this command.

Examples

The following example shows the output from the **show controllers backplane ethernet local clients** command, which displays a list of client statistics for client ID 1:

```
RP/0/RSP0/CPU0:router# show controllers backplane ethernet local clients 1 statistics

  Client QNET, ES Client Id 1, PID 20498 running on FastEthernet0_33_1
    490915 packets input, 41918238 bytes
    490912 packets delivered,41918120 bytes
    0 packets discarded (0 bytes) in garbage collection
    0 (0 bytes) unicast packets filtered
    0 (0 bytes) multicast packets filtered
    0 (0 bytes) buffer mgmt policy discards
    555660 packets output, 134265364 bytes, 0 could not be transmitted
```

Table 2: show controllers backplane ethernet local clients Field Descriptions

Field	Description
Client	Client application name and ID, followed by backplane client application statistics.
PID	Process ID.

Related Commands

Command	Description
show controllers backplane ethernet local brief, on page 3	Displays brief information about the Ethernet interface that connects the node to the router control Ethernet.

Command	Description
show controllers backplane ethernet local detail, on page 6	
show controllers backplane ethernet local multicast groups, on page 8	Displays all multicast addresses currently being used by active interfaces on the router.

show controllers backplane ethernet local detail

To display detailed information for the Ethernet interface that connects the node to the router control Ethernet, use the **show controllers backplane ethernet local detail** command in EXEC mode.

show controllers backplane ethernet local detail

Syntax Description

This command has no keywords or arguments.

Command Modes

EXEC mode

Command History

Release	Modification
Release 3.7.2	This command was introduced.
Release 5.3.0	The **local** keyword was deprecated.

Usage Guidelines

No specific guidelines impact the use of this command.

Examples

The following example shows the output from the **show controllers backplane ethernet local detail** command:

```
RP/0/RSP0/CPU0:router# show controllers backplane ethernet local detail

FastEthernet0_33_1 is up
  Hardware is 10/100 Ethernet, H/W address is 5246.4800.0211
  Internet address is 10.0.2.17
  MTU 1514 bytes
  Encapsulation HFRIES (HFR Internal Ethernet Server)
  Mode : Full Duplex,  Rate : 100Mb/s
    787486 packets input, 64535218 bytes, 0 total input drops
    0 packets discarded (0 bytes) in garbage collection
    3 packets discarded (582 bytes) in recv processing
    Received 8 broadcast packets, 285994 multicast packets
    Input errors: 0 CRC, 0 overrun, 0 alignment, 0 length, 0 collision
    682244 packets output, 157245225 bytes, 0 total output drops
    Output 42649 broadcast packets, 42649 multicast packets
    Output errors: 0 underruns, 0 aborts, 0 loss of carrier
```

Table 3: show controllers backplane ethernet local detail Field Descriptions

Field	Description
Hardware	Provides the hardware type, followed by the hardware address.
Internet address	IP address of the interface.
MTU	Maximum packet size, in bytes, that a particular interface can handle.
Encapsulation	Encapsulation method assigned to the interface.

Field	Description
Mode	Indicates the operating mode of the interface, followed by transmission data.

Related Commands

Command	Description
show controllers backplane ethernet local brief, on page 3	Displays brief information about the Ethernet interface that connects the node to the router control Ethernet.
show controllers backplane ethernet local clients, on page 4	
show controllers backplane ethernet local multicast groups, on page 8	Displays all multicast addresses currently being used by active interfaces on the router.

show controllers backplane ethernet local multicast groups

To display all multicast addresses currently being used by active interfaces on the router, use the **show controllers backplane ethernet local multicast groups** command in EXEC mode.

show controllers backplane ethernet local multicast groups

Syntax Description

This command has no keywords or arguments.

Command Modes

EXEC mode

Command History

Release	Modification
Release 3.7.2	This command was introduced.
Release 5.3.0	The **local** keyword was deprecated.

Usage Guidelines

No specific guidelines impact the use of this command.

Examples

The following example shows the output from the **show controllers backplane ethernet local multicast groups** command:

```
RP/0/RSP0/CPU0:router# show controllers backplane ethernet local multicast groups

    Intf                    Multicast      Client registered for this address
    Name                     address                Id               Name
-------------------------------------------------------------------------------
FastEthernet0_RP1_CPU0    0100.0000.0064           2                GSP
                          0100.0000.0065           2                GSP
                          0100.0000.0066           2                GSP
                          0100.0000.0068           2                GSP
                          0100.0000.006a           2                GSP
                          0100.0000.006c           2                GSP
                          0100.0000.006e           2                GSP
                          0100.0000.0070           2                GSP
                          0100.0000.0072           2                GSP
                          0100.0000.2774           2                GSP
                          0100.0000.2775           2                GSP
                          0100.0000.2776           2                GSP
                          0100.0000.2778           2                GSP
                          0100.0000.277a           2                GSP
                          0100.0000.277c           2                GSP
                          0100.0000.277e           2                GSP
                          0100.0000.2780           2                GSP
                          0100.0000.2782           2                GSP
                          0100.0000.2784           2                GSP
                          0100.0000.2786           2                GSP
 --More--
```

Table 4: show controllers backplane ethernet local multicast groups Field Descriptions

Field	Description
Intf Name	Identifies the interface whose multicast addresses are displayed. **Note** A multicast address is a single address that refers to multiple network devices.
Multicast address	Multicast addresses associated with the specified interface. **Note** A multicast address is a single address that refers to multiple network devices.
ID	Client identifier.
Name	Client application name.

Related Commands

Command	Description
show controllers backplane ethernet local brief, on page 3	Displays brief information about the Ethernet interface that connects the node to the router control Ethernet.
show controllers backplane ethernet local clients, on page 4	
show controllers backplane ethernet local detail, on page 6	

show controllers backplane ethernet location brief

To display brief information about backplane Ethernet interfaces in a particular location, use the **show controllers backplane ethernet location brief** command in EXEC mode.

show controllers backplane ethernet location *node-id* **brief**

Syntax Description

This command has no keywords or arguments.

Command Modes

EXEC mode

Command History

Release	Modification
Release 3.7.2	This command was introduced.

Usage Guidelines

No specific guidelines impact the use of this command.

Examples

The following example shows the output from the **show controllers backplane ethernet location brief** command:

```
RP/0/RSP0/CPU0:router# show controllers backplane ethernet location 0/1/0 brief

FastEthernet0_0_CPU0 (local) is up, MTU 1514 bytes
    57569 packets input, 5999749 bytes
    36963 packets output, 4105673 bytes
RP/0/RSP0/CPU0:router#
```

Table 5: show controllers backplane ethernet location brief Field Descriptions

Field	Description
MTU	Maximum packet size, in bytes, that a particular interface can handle.
packets input	Total number of packets received.
packets output	Total number of packets transmitted.

Field	Description
Input errors	Displays the number of errors received by the interface. Input errors occur when incoming cells are dropped or corrupted. The possible input errors are as follows: • CRC—Number of times that the checksum calculated from the data received did not match the checksum from the transmitted data. • overrun—Number of times that the receiver hardware was incapable of handing received data to a hardware buffer because the input rate exceeded the receiver's capability to handle the data. • alignment—Number of nonoctets received. • length—Number of times the interface prevented the ASIC from overrunning a maximum transmission unit (MTU) size. • collision—Number of messages retransmitted because of an Ethernet collision.
packets output	Total number of messages transmitted by the system.
bytes	Total number of bytes, including data and MAC encapsulation, in the error-free packets transmitted by the system.
total output drops	Total number of packets dropped from the output queue because the queue was full.
Output	Indicates the total number of broadcast and multicast packets transmitted by the interface.
Output errors	Displays the number of errors transmitted on the interface. Output errors occur when outgoing cells are dropped or corrupted. The possible types output errors are as follows: • underruns—Number of times that the far-end transmitter has been running faster than the near-end receiver can handle. • terminations—Number of illegal sequences of one bits on the interface. • loss of carrier—Number of times the interface was reset because the carrier detect line of that interface was up, but the line protocol was down.

Related Commands

Command	Description
show controllers backplane ethernet location clients, on page 12	Displays information about client applications in a particular location.
show controllers backplane ethernet location detail, on page 14	Displays detailed information about the backplane interfaces in a particular location.

show controllers backplane ethernet location clients

To display information about client applications in a particular location, use the **show controllers backplane ethernet location clients** command in EXEC mode.

show controllers backplane ethernet location *node-id* **clients** *client-id* {**statistics** | **all**}

Syntax Description

node-id	Identifies the node whose local client applications information you want to display. The *node-id* argument is entered in the *rack/slot/module* notation. **Note** Enter the **show platform** command to obtain the *node-id*
client-id **statistics**	Displays a list of client statistics for the specified client ID. Range is from 1 through 22.
client-id **all**	Displays a list of all client applications and their IDs.

Command Modes

EXEC mode

Command History

Release	Modification
Release 3.7.2	This command was introduced.

Usage Guidelines

No specific guidelines impact the use of this command.

Examples

The following example shows the output from the **show controllers backplane ethernet location clients** command, which displays detailed information about the backplane client application statistics:

```
RP/0/RSP1/CPU0:router# show controllers backplane ethernet location 0/0/CPU0 clients all

    Intf           Client ethernet         Client             Description
    Name              server id            Process Id
-------------------------------------------------------------------------------
 FE0_0_CPU0              1                  12307          QNX network manager
                         2                  28726               Group services
                         3                      0          Reserved for Attach
                         4                      0            Plugin controller
                         5                      0                Designated SC
                         6                      0                HFR H/W diags
                         7                      0            IP packet handler
                         8                  16415        Redundancy controller
                         9                      0          HFR Virtual console
                        10                  12312         HFR Virtual terminal
                        11                  12305        Control ethernet echo
                        12                      0       Control eth echo reply
                        13                      0  Card Configuration Protocol
                        14                      0          Reserved for Attach
                        15                      0           Chassis controller
                        16                      0            Forwarding driver
```

```
17                  16414                    MBI hello
18                      0         MBI Boot Server Source
19                      0                  HSR ES client
20                      0              Test application 1
21                      0              Test application 2
22                      0        Test client out-of-band
```

Table 6: show controllers backplane ethernet location clients Field Descriptions

Field	Description
Intf Name	Identifies the Ethernet interface.
Client ethernet server id	Identifies the Ethernet server for the specified interface.
Client process id	Identifies the client process running on the specified interface.
Description	Describes the backplane client application.

Related Commands

Command	Description
show controllers backplane ethernet location brief, on page 10	display brief information about backplane Ethernet interfaces in a particular location
show controllers backplane ethernet location detail, on page 14	Displays detailed information about the backplane interfaces in a particular location.

show controllers backplane ethernet location detail

To display detailed information about the backplane interfaces in a particular location, use the **show controllers backplane ethernet location detail** command in EXEC mode.

show controllers backplane ethernet location *node-id* **detail**

Syntax Description

This command has no keywords or arguments.

Command Modes

EXEC mode

Command History

Release	Modification
Release 3.7.2	This command was introduced.

Usage Guidelines

No specific guidelines impact the use of this command.

Examples

The following example shows the output from the **show controllers backplane ethernet location detail** command:

```
RP/0/RSP0/CPU0:router# show controllers backplane ethernet location 0/1/0 detail

FastEthernet0_1_0 is up
  Hardware is 10/100 Ethernet, H/W address is 5246.4800.0010
  Internet address is 10.0.0.16
  MTU 1514 bytes
  Encapsulation HFRIES (HFR Internal Ethernet Server)
  Mode : Full Duplex,  Rate : 100Mb/s
    426422 packets input, 0 bytes, 1 total input drops
    14170 packets discarded (935122 bytes) in garbage collection
    16 packets discarded (5344 bytes) in recv processing
    Received 0 broadcast packets, 0 multicast packets
    Input errors: 0 CRC, 0 overrun, 0 alignment, 0 length, 0 collision
    440272 packets output, 0 bytes, 0 total output drops
    Output 0 broadcast packets, 0 multicast packets
    Output errors: 0 underruns, 0 aborts, 0 loss of carrier
```

Table 7: show controllers backplane ethernet location detail Field Descriptions

Field	Description
Hardware	Provides the hardware type, followed by the hardware address.
Internet address	IP address of the interface.
MTU	Maximum packet size, in bytes, that a particular interface can handle.
Encapsulation	Encapsulation method assigned to the interface.
Mode	Indicates the operating mode of the interface, followed by transmission data.

Field	Description
packets input	Total number of packets received.
bytes	Total number of bytes, including data and MAC encapsulation, in the error-free packets received by the system.
total input drops	Total number of packets dropped from the input queue because the queue was full.
packets discarded in garbage collection	Number of packets and bytes discarded.
packets discarded in recv processing	Number of packets and bytes discarded.
Received broadcast packets and multicast packets	Indicates the total number of broadcast and multicast packets received by the interface.
Input errors	Displays the number of errors received by the interface. Input errors occur when incoming cells are dropped or corrupted. The possible input errors are as follows: • CRC—Number of times that the checksum calculated from the data received did not match the checksum from the transmitted data. • overrun—Number of times that the receiver hardware was incapable of handing received data to a hardware buffer because the input rate exceeded the receiver's capability to handle the data. • alignment—Number of nonoctets received. • length—Number of times the interface prevented the ASIC from overrunning a maximum transmission unit (MTU) size. • collision—Number of messages retransmitted because of an Ethernet collision.
packets output	Total number of messages transmitted by the system.
bytes	Total number of bytes, including data and MAC encapsulation, in the error-free packets transmitted by the system.
total output drops	Total number of packets dropped from the output queue because the queue was full.
Output	Indicates the total number of broadcast and multicast packets transmitted by the interface.

Field	Description
Output errors	Displays the number of errors transmitted on the interface. Output errors occur when outgoing cells are dropped or corrupted. The possible types output errors are as follows: • underruns—Number of times that the far-end transmitter has been running faster than the near-end receiver can handle. • terminations—Number of illegal sequences of one bits on the interface. • loss of carrier—Number of times the interface was reset because the carrier detect line of that interface was up, but the line protocol was down.

Related Commands

Command	Description
show controllers backplane ethernet location brief, on page 10	display brief information about backplane Ethernet interfaces in a particular location
show controllers backplane ethernet location clients, on page 12	Displays information about client applications in a particular location.

show controllers backplane ethernet location multicast groups

To display information about backplane interfaces that are in multicast groups in a particular location, use the **show controllers backplane ethernet location multicast groups** command in EXEC mode.

show controllers backplane ethernet location multicast groups

Syntax Description

This command has no keywords or arguments.

Command Modes

EXEC mode

Command History

Release	Modification
Release 3.7.2	This command was introduced.

Usage Guidelines

No specific guidelines impact the use of this command.

Examples

The following example shows the output from the **show controllers backplane ethernet location multicast groups** command, which displays detailed information about the backplane interfaces.

```
RP/0/RSP0/CPU0:router# show controllers backplane ethernet location multicast groups

Intf                    Multicast      Client registered for this address
    Name                     address                Id               Name
-------------------------------------------------------------------------------
  FastEthernet0_2_CPU0    0100.0000.0064           2                GSP
                          0100.0000.0065           2                GSP
                          0100.0000.0066           2                GSP
                          0100.0000.0068           2                GSP
                          0100.0000.006a           2                GSP
                          0100.0000.006c           2                GSP
                          0100.0000.006e           2                GSP
                          0100.0000.0071           2                GSP
                          0100.0000.2774           2                GSP
                          0100.0000.2775           2                GSP
                          0100.0000.2776           2                GSP
                          0100.0000.2778           2                GSP
                          0100.0000.277a           2                GSP
                          0100.0000.2782           2                GSP
                          0100.0000.278a           2                GSP
                          0100.0000.2796           2                GSP
                          0100.0000.2798           2                GSP
```

Table 8: show controllers backplane ethernet location multicast groups Field Description

Field	Description
Intf Name	Identifies the interface whose multicast addresses are displayed. **Note** A multicast address is a single address that refers to multiple network devices.

Field	Description
Multicast address	Multicast addresses associated with the specified interface. **Note** A multicast address is a single address that refers to multiple network devices.
ID	Client identifier.
Name	Client application name.

Related Commands

Command	Description
show controllers backplane ethernet location brief, on page 10	display brief information about backplane Ethernet interfaces in a particular location
show controllers backplane ethernet location clients, on page 12	Displays information about client applications in a particular location.
show controllers backplane ethernet location detail, on page 14	Displays detailed information about the backplane interfaces in a particular location.