portStatsShow

Displays port hardware statistics.

SYNOPSIS

portstatsshow [*slot/*]*port*

portstatsshow -i [*index1*[-*index2*][...] [**-f**]]

portstatsshow -slot [*slot1*[-*slot2*][...]

portstatsshow ge [*slot/*]**ge** *port*

portstatsshow ip [*slot/*]**ge** *port* [*ip_address*]

portstatsshow fcip [*slot/*]**ge** *port* [*tunnel_number*]

portstatsshow -h

DESCRIPTION

Use this command to display port hardware statistics counters. Some counters are platform- or port-specific and display only on those platforms and ports. All statistics have a maximum 32-bit value of 4,294,967,295.

You can display statistics for a single port identified by its port number or by its port index. Port ranges are supported with index numbers and by specifying a slot or a slot range. Use **switchShow** for a listing of valid ports, slots, and port index numbers.

Specifying multiple ports with the index (**-i)** or slot (**-s**) option is supported only if **PortSwap** is disabled. They are not supported on GbE ports and configured F_Port trunks. Use the **-i** option without a port index to display the **portSwap** status, or alternately use **portSwapShow**.

The command output may include the following fields (Tx indicates frames transmitted by the port; Rx indicates frames received by the port).

stat_wtx
: The number of 4-byte words transmitted.

stat_wrx
: The number of 4-byte words received.

stat_ftx
: The number of frames transmitted.

stat_frx
: The number of frames received.

stat_c2_frx
: The number of class 2 frames received.

stat_c3_frx
: The number of class 3 frames received.

stat_lc_rx
: The number of link control frames received.

stat_mc_rx
: The number of multicast frames received.

stat_mc_to
: The number of multicast timeouts.

stat_mc_tx
: The number of multicast frames transmitted.

tim_rdy_pri
The number of times that sending R_RDY or VC_RDY primitive signals was a higher priority than sending frames, due to diminishing credit reserves in the transmitter at the other end of the fiber. This parameter is sampled at intervals of 1.8 microseconds, and the counter is incremented by 1 if the condition is true.

tim_txcrd_z
The number of times that the port was unable to transmit frames because the transmit BB credit was zero. The purpose of this statistic is to detect congestion or a device affected by latency. This parameter is sampled at intervals of 2.5 microseconds, and the counter is incremented if the condition is true. Each sample represents 2.5 microseconds of time with zero Tx BB Credit. An increment of this counter means that the frames could not be sent to the attached device for 2.5 microseconds, indicating degraded performance.

tim_txcrd_z_vc
The number of times that the port was unable to transmit frames because the transmit BB credit was zero for each of the port's 16 Virtual Channels (VC 0-15). The purpose of this statistic is to detect congestion or a device affected by latency. This parameter is sampled at intervals of 2.5 microseconds (microseconds), and the counter is incremented if the condition is true. Each sample represents 2.5 microseconds of time with zero Tx BB Credit. An increment of this counter means that the frames could not be send to the attached device for 2.5 microseconds, indicating degraded performance (platform- and port-specific).

er_enc_in
The number of encoding errors inside frames.

er_crc
The number of frames with cyclic redundancy check (CRC) errors.

er_trunc
The number of frames shorter than the minimum frame length.

er_toolong
The number of frames longer than the maximum frame length.

er_bad_eof
The number of frames with bad end-of-frame.

er_enc_out
The number of encoding error outside frames.

er_bad_os
The number of invalid ordered sets (platform- and port-specific).

er_rx_c3_timeout
The number of receive class 3 frames received at this port and discarded at the transmission port due to timeout (platform-and port-specific).

er_tx_c3_timeout
The number of transmit class 3 frames discarded at the transmission port due to timeout (platform- and port-specific).

er_c3_dest_unreach
The number of class 3 frames discarded because the transmit port, although it is determined, cannot send the frame at the moment when the error occurs.

er_other_discard
The number of other discarded due to route lookup failures or other reasons.

er_zone_discard
The number of class 3 frames discarded due to zone mismatch.

er_type1_miss
The number of FCR frames with transmit errors.

er_type2_miss
The number of frames with routing errors.

er_type6_miss
The number of FCR frames with receive errors.

er_zone_miss , **er_lun_zone_miss**
The number of frames discarded due to hard zoning miss or LUN zoning miss. If Rx port hard zoning is enabled, frames will be discarded at the Rx port. If TX port hard zoning is enabled, frames will be discarded at the TX port. If both RX and TX port hard zoning is enabled, frames will be discarded at the RX port. (LUN zoning is currently not supported.)

er_crc_good_eof
The number of CRC errors with good end-of-frame (EOF) (platform- and port-specific).

er_inv_arb
The number of invalid arbitrated loops (ARBs).

open
The number of times the FL_Port entered OPEN state.

transfer
The number of times the FL_Port entered TRANSFER state.

opened
The number of times the FL_Port entered OPENED state.

starve_stop
The number of loop tenancies stopped due to starvation.

fl_tenancy
The number of times the FL_Port had a loop tenancy.

nl_tenancy
The number of times the NL_Port had a loop tenancy.

zero_tenancy
The number of times a zero tenancy occurred.

ge_stat_tx_frms
The number of frames transmitted on the GbE port.

ge_stat_tx_octets
The number of octets transmitted on the GbE port.

ge_stat_tx_ucast_frms
The number of unicast frames transmitted on the GbE port.

ge_stat_tx_mcast_frms
The number of multicast frames transmitted on the GbE port.

ge_stat_tx_bcast_frms
The number of broadcast frames transmitted on the GbE port.

ge_stat_tx_vlan_frms
The number of VLAN frames transmitted on the GbE port.

ge_stat_tx_pause_frms
The number of pause frames transmitted on the GbE port.

ge_stat_rx_frms
The number of frames received on the GbE port.

ge_stat_rx_octets
The number of octets received on the GbE port.

ge_stat_rx_ucast_frms
The number of unicast frames received on the GbE port.

ge_stat_rx_mcast_frms
The number of multicast frames received on the GbE port.

ge_stat_rx_bcast_frms
The number of broadcast frames received on the GbE port.

ge_stat_rx_vlan_frms
The number of VLAN frames received on the GbE port.

ge_stat_rx_pause_frms
The number of pause frames received on the GbE port.

ge_err_carrier
The number of times the GbE port lost carrier sense.

ge_err_length
The number of times an invalid length error was observed on the GbE port.

ge_err_crc
The number of CRC Errors received on the GbE port.

ge_err_abort
The number of frames aborted on the GbE port.

ge_err_overrun
The number of overruns observed on the GbE port.

ge_err_fifo_ovf
The number of times an overflow of the first in first out (FIFO) queue was observed on the GbE port.

ip_err_hdr_cksum
The number of checksum errors observed on the GbE port.

ip_err_tcp_data_chksum
The number of IP TCP data checksum errors observed on the GbE port.

NOTES

The execution of this command is subject to Virtual Fabric or Admin Domain restrictions that may be in place. Refer to Chapter 1, "Using Fabric OS Commands" and Appendix A, "Command Availability" for details.

This command is not supported on FCoE ports.

OPERANDS

This command has the following operands:

slot
For bladed systems only, specifies the slot number of the port to be displayed, followed by a slash (/).

[**ge**]*port*
Displays statistics for a single port identified by the port number, relative to its slot on bladed systems. Specify the optional **ge** option to display the GbE port hardware statistics. Port ranges are not supported with this command. Use **switchShow** for a listing of valid ports.

-i *index1*[-*index2*]
Displays statistics for a single port or for a range of ports identified by port index numbers. You may specify multiple index ranges separated by a space, for example, **-i** 33-47 65-73.

-f

Ignores nonexisting ports. This operand is valid only with the **-i** option.

-slot [*slot1*[*-slot2*]

Displays statistics for all ports on a slot or on a range of slots, for example, **-s** 3-5. You may specify multiple slot ranges separated by a space, for example, **-s** 3-5 8-10.

ge

Displays the GbE port statistics.

ip

Displays all GbE port statistics related to IP addresses that are not zero. This operand is not supported on the Brocade 7800 and FX8-24 platforms.

ip_address

Specifies an IP address to display statistics only for the specified IP address. This operand is optional and valid only with the **ip** option.

fcip

Displays the GbE statistics on all FCIP tunnels. This operand is not supported on the Brocade 7800 and FX8-24 platforms.

tunnel_number

Specifies a tunnel ID to display statistics only for the specified FCIP tunnel. This operand is optional and valid only with the **fcip** option.

-h

Displays the command usage.

EXAMPLES

To display the basic set of statistics for port 1/13 on a DCX backbone:

```
switch:admin> portstatsshow 13
stat_wtx            0     4-byte words transmitted
stat_wrx            0     4-byte words received
stat_ftx            0     Frames transmitted
stat_frx            0     Frames received
stat_c2_frx         0     Class 2 frames received
stat_c3_frx         0     Class 3 frames received
stat_lc_rx          0     Link control frames received
stat_mc_rx          0     Multicast frames received
stat_mc_to          0     Multicast timeouts
stat_mc_tx          0     Multicast frames transmitted
tim_rdy_pri         0     Time R_RDY high priority
tim_txcrd_z         0     Time TX Credit Zero (2.5Us ticks)
tim_txcrd_z_vc  0- 3:  0       0       0       0
tim_txcrd_z_vc  4- 7:  0       0       0       0
tim_txcrd_z_vc  8-11:  0       0       0       0
tim_txcrd_z_vc 12-15:  0       0       0       0
er_enc_in           0     Encoding errors inside of frames
er_crc              0     Frames with CRC errors
er_trunc            0     Frames shorter than minimum
er_toolong          0     Frames longer than maximum
er_bad_eof          0     Frames with bad end-of-frame
er_enc_out          0     Encoding error outside of frames
er_bad_os           0     Invalid ordered set
er_rx_c3_timeout    0     Class 3 receive frames discarded
                          due to timeout
er_tx_c3_timeout    0     Class 3 transmit frames discarded
                          due to timeout
er_c3_dest_unreach 0      Class 3 frames discarded due to
                          destination unreachable
er_other_discard    0     Other discards
```

```
er_type1_miss      0     frames with FTB type 1 miss
er_type2_miss      0     frames with FTB type 2 miss
er_type6_miss      0     frames with FTB type 6 miss
er_zone_miss       0     frames with hard zoning miss
er_lun_zone_miss   0     frames with LUN zoning miss
er_crc_good_eof    0     Crc error with good eof
er_inv_arb         0     Invalid ARB
open               0     loop_open
transfer           0     loop_transfer
opened             0     FL_Port opened
starve_stop        0     tenancies stopped due to starvation
fl_tenancy         0     number of times FL has the tenancy
nl_tenancy         0     number of times NL has the tenancy
zero_tenancy       0     zero tenancy
```

To display the basic set of statistics using port index numbers:

```
switch:admin> portstatsshow -i 13
switch:admin> portstatsshow -i 13-23
switch:admin> portstatsshow -i 4-6 22-30
```

To display the basic set of statistics using slot numbers:

```
switch:admin> portstatsshow -s 3-5
switch:admin> portstatsshow -s 3-5 10-13
```

To display GbE port statistics for GbE1 on the Brocade 7800:

```
switch:admin> portstatsshow ge 8/ge1
ge_stat_tx_frms        1523916   GE transmitted frames
ge_stat_tx_octets      152411630 GE transmitted octets
ge_stat_tx_ucast_frms  1523907   GE transmitted unicast frames
ge_stat_tx_mcast_frms  0   GE transmitted multicast frames
ge_stat_tx_bcast_frms  9   GE transmitted broadcast frames
ge_stat_tx_vlan_frms   0   GE transmitted vlan frames
ge_stat_tx_pause_frms  0   GE transmitted pause frames
ge_stat_rx_frms        1512154   GE received frames
ge_stat_rx_octets      149255230 GE received octets
ge_stat_rx_ucast_frms  1512154   GE received unicast frames
ge_stat_rx_mcast_frms  0   GE received multicast frames
ge_stat_rx_bcast_frms  0   GE received broadcast frames
ge_stat_rx_vlan_frms   0   GE received vlan frames
ge_stat_rx_pause_frms  0   GE received pause frames
ge_err_carrier         0   GE lost carrier sense
ge_err_length          0   GE invalid length
ge_err_crc             0   GE CRC Errors
ge_err_abort           0   GE abort frames
ge_err_overrun         0   GE overruns
ge_err_fifo_ovf        0   GE Fifo overflow
```

To display statistics for FCIP tunnel 2, slot 8, and GbE1 on the Brocade FR4-18i.:

```
switch:admin> portstatsshow fcip 8/ge1 2
tunnel_id               2   Tunnel ID
fcip_ip2fc_bytes        0   uncompressed bytes
fcip_ip2fc_pkts         0   pkt rvd by fcip entity from ip
fcip_ip2fc_wantov_drop  0   pkt dropped due to wantov
fcip_fc2ip_pkts         0   ve to fcip_entity pkts
fcip_fc2ip_bytes        0   ve to fcip_entity bytes
```

To display port statistics for all IP addresses, slot 8, and GbE1 on the Brocade FR4-18i:

```
switch:admin> portstatsshow ip 8/ge1
ip_err_crc              0   IP CRC Errors
ip_err_hdr_cksum        0   IP Checksum Errors
ip_err_tcp_data_chksum  0   IP TCP Data Checksum Errors
```

To display port statistics for IP address 192.168.255.10, slot 8, and GbE1 on the Brocade FR4-18i:

```
switch:admin> portstatsshow ip 8/ge1 192.168.255.10
ipaddr              192.168.255.10   IP address
ip_out_octets       159896 IP transmitted comp bytes
ip_out_octets       159896 IP transmitted uncomp bytes
ip_out_pkts         3476   IP transmitted packets
ip_out_ucast_pkts   3476   IP transmitted unicast packets
ip_out_bcast_pkts   0      IP transmitted broadcast packets
ip_out_mcast_pkts   0      IP transmitted multicast packets
ip_in_octets        0      IP received comp bytes
ip_in_octets        0      IP received uncompbytes
ip_in_pkts          0      IP received packets
ip_in_ucast_pkts    0      IP received unicast packets
ip_in_bcast_pkts    0      IP received broadcast packets
ip_in_mcast_pkts    0      IP received multicast packets
ip_err_crc          0      IP CRC Errors
ip_err_hdr_cksum    0      IP Checksum Errors
ip_err_tcp_data_chksum 0   IP TCP Data Checksum Errors
```

SEE ALSO **portErrShow**, **portShow**, **portSwapDisable**, **portSwapShow**