Rockwell Collins
NLAT User Guide

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1. Definitions
    1.1 IP Tables
        1.1.1 Chains: used to allow or block traffic
            1.1.1.1 Input: Controls the behavior for incoming connections
            1.1.1.2 Forward: Used for incoming connections that are not delivered locally
            1.1.1.3 Output: Used for outgoing connections
        1.1.2 Bytes
        1.1.3 Packets
    1.2 Ethernet Statistics
        1.2.1 status: determines whether the system is online or offline
        1.2.2 rx_good: total bytes and packets received
        1.2.3 rx_errors: the number of bad packets received
        1.2.4 rx_dropped: the number of times when there is no space in Linux buffers
        1.2.5 rx_overruns: the number of times when there are fifo overruns caused by the rate at which the buffer gets full and the kernel is not able to empty it
        1.2.6 rx_frame: the number of times there is a received frame alignment error
        1.2.7 tx_good: total bytes and packets transmitted
        1.2.8 tx_errors: the number of packet transmit problems
        1.2.9 tx_dropped: the number of times there is no space available in Linux
        1.2.10 tx_overruns: the number of times when there are fifo overruns caused by the rate at which the buffer gets full and the kernel is not able to empty it
        1.2.11 tx_carrier: the number of errors due to the carrier
        1.2.12 tx_collisions: the number of transmissions terminated due to Carrier Sense Multiple Access with Collision Detection
    1.3 Switch Statistics
        1.3.1 status: determines whether the system is online or offline
        1.3.2 duplex: link mode of the interface either full-duplex or half-duplex
        1.3.3 speed: speed of the interface in megabits
        1.3.4 ingress bytes: the number of bytes received
        1.3.5 ingress unicast: the number of unicast packets received

1.3.6 ingress broadcast: the number of broadcast packets received

1.3.7 ingress multicast: the number of multicast packets received

1.3.8 ingress pause: the number of received packets that have the pause operational code; connected device requests for a traffic pause when its receive buffer is almost full

1.3.9 ingress undersize: the number of received packets that are under 64 bytes

1.3.10 ingress fragments: the number of received packets that are less than 64 octets in length

1.3.11 ingress oversize: the number of received packets over 1514 bytes

1.3.12 ingress jabber: the number of received packets exceed 20 ms

1.3.13 ingress rx_error: the number of received packets that an rx error

1.3.14 ingress fcs_error: the number of received packets with frame check sequence errors but no framing errors

1.3.15 egress bytes: the number of bytes transmitted

1.3.16 egress unicast: the number of unicast packets transmitted

1.3.17 egress broadcast: the number of broadcast packets transmitted

1.3.18 egress multicast: the number of multicast packets transmitted

1.3.19 egress pause: the number of transmitted packets that have the pause operational code; connected device requests for a traffic pause when its receive buffer is almost full

1.3.20 egress excessive: the number of transmitted packets that have a collisions 16 times in a row

1.3.21 egress collisions: the number of Ethernet collisions

1.3.22 egress other: the number of transmitted packets with other types of errors

2 Critical Errors

2.1 The following errors occur rarely and should be investigated promptly.

2.2 Ethernet Statistics

2.2.1 rx_frame

2.2.2 tx_collision

2.2.3 tx_collisions

2.3 Switch Statistics

2.3.1 ingress pause

2.3.2 ingress undersize

2.3.3 ingress oversize

2.3.4 ingress jabber

2.3.5 ingress fcs_error

2.3.6 egress pause

2.3.7 egress excessive

2.3.8 egress collisions

2.3.9 egress other

3 Chart Information

3.1 All of the charts are displayed as a function of time with 2 minute intervals.

3.2 IPTables

3.2.1 Input

3.2.1.1 Bytes graph displays the number of input bytes over time.

3.2.1.2 Packets graph displays the number of input packets over time.

3.2.1.3 Bandwidth graph displays the input bandwidth of the intervals in kilobytes per second.

3.2.2 Output

3.2.2.1 Bytes graph displays the number of output bytes over time.

3.2.2.2 Packets graph displays the number of output packets over time.

3.2.2.3 Bandwidth graph displays the output bandwidth of the intervals in kilobytes per second.

3.2.3 Forward

3.2.3.1 Bytes graph displays the number of forward bytes over time.

3.2.3.2 Packets graph displays the number of forward packets over time.

3.2.3.3 Bandwidth graph displays the output bandwidth of the intervals in kilobytes per second.

3.3 Ethernet Statistics

3.3.1 Errors graph displays the total number of errors over time.

3.3.2 Received packets displays the number of packets received over time.

3.3.3 Transmitted packets displays the number of packets transmitted over time.

3.4 Switch Statistics

3.4.1 Ingress

3.4.1.1 Bytes graph displays the number of bytes received over time.

3.4.1.2 Multicast graph displays the number of multicast packets received over time.

3.4.1.3 Broadcast graph displays the number of broadcast packets received over time.

3.4.1.4 Unicast graph displays the number of unicast packets received over time.

3.4.1.5 Bandwidth graph displays the ingress bandwidth of the intervals in kilobytes per second.

3.4.2 Egress

3.4.2.1 Bytes graph displays the number of bytes transmitted over time.

3.4.2.2 Multicast graph displays the number of multicast packets transmitted over time.

3.4.2.3 Broadcast graph displays the number of broadcast packets transmitted over time.

3.4.2.4 Unicast graph displays the number of unicast packets transmitted over time.

3.4.2.5 Bandwidth graph displays the egress bandwidth of the intervals in kilobytes per second.

4 How To

4.1 Upload multiple files

4.1.1 Click on the “Upload Log File” button found on the home screen or the “Upload” button found in the upper right hand corner of the page.

4.1.2 Then click on the “Choose Files” button.

4.1.3 Finally, hold down the “ctrl” key while selecting the files to be opened.

4.2 Zoom in and zoom out

4.2.1 Click and hold the mouse on the starting position of the start of the interval to zoom in.

4.2.2 Drag the mouse over to the end of the interval.

4.2.3 Release mouse and see the graph zoomed in.

4.2.4 Click the “Reset zoom” button to zoom out of the graph back to the first interval range of when the file was first loaded.

4.3 Select a specific series to view

4.3.1 In the legend of the chart, click on the series that should be included in the graph.

4.4 Change the interval

4.4.1 In the text box next to the word “Interval”, either type in a number or use the arrow keys to indicate the desired time interval.

4.4.2 Click the “Update” button.

4.5 Print or download a graph

4.5.1 In the upper right hand corner of each of the graphs, select the button with three lines.

4.5.2 Then choose an option to either print or download the graph.