NAME

tipc-link − show links or modify link properties

SYNOPSIS

tipc link set
[**{** priority *PRIORITY* | **tolerance** *TOLERANCE* | **window** *WINDOW* } **link** *LINK* **]** |
[{ **broadcast** [*BROADCAST* | *REPLICAST* | *AUTOSELECT* [**ratio** *SIZE*] **]** } **]**

tipc link get
[**{** priority | tolerance | window **}** link *LINK*] |
[**{** broadcast **}**]

tipc link statistics { **show** [**link** *LINK*] | **reset link** *LINK* }

tipc link list

tipc link monitor set { **threshold** }

tipc link monitor get { **threshold** }

tipc link monitor summary

tipc link monitor list
[**media** { **eth** | **ib** } **device** *DEVICE*] |
[**media udp name** *NAME*]

OPTIONS

Options (flags) that can be passed anywhere in the command chain.

−h, **--help**
Show help about last valid command. For example **tipc link --help** will show link help and **tipc --help** will show general help. The position of the option in the string is irrelevant.

−j, **−json**
Output results in JavaScript Object Notation (JSON).

−p, **−pretty**
The default JSON format is compact and more efficient to parse but hard for most users to read. This flag adds indentation for readability.

DESCRIPTION

Link statistics

ACTIVE link state
An **ACTIVE** link is serving traffic. Two links to the same node can become **ACTIVE** if they have the same link **priority**. If there is more than two links with the same priority the additional links will be put in **STANDBY** state.

STANDBY link state
A **STANDBY** link has lower link priority than an **ACTIVE** link. A **STANDBY** link has control traffic flowing and is ready to take over should the **ACTIVE** link(s) go down.

MTU
The Maximum Transmission Unit. The two endpoints advertise their default or configured **MTU** at initial link setup and will agree to use the lower of the two values should they differ.

Packets
The total amount of transmitted or received TIPC packets on a link. Including **fragmented** and **bundled** packets.

Fragments
Represented in the form **fragments/fragmented**. Where **fragmented** is the amount of data messages which have been broken into **fragments**. Subsequently the **fragments** are the total amount of packets that the **fragmented** messages has been broken into.

Bundles
Represented in the form **bundles/bundled**. If a link becomes congested the link will attempt to bundle data from small **bundled** packets into **bundles** of full MTU size packets before they are transmitted.

Profile
Shows the **average** packet size in octets/bytes for a **sample** of packets. It also shows the packet size distribution of the **sampled** packets in the intervals

0-64 bytes
64-256 bytes
256-1024 bytes
1024-4096 bytes
4096-16384 bytes
16384-32768 bytes
32768-66000 bytes

Message counters

states - Number of link state messages

probes - Link state messages with probe flag set. Typically sent when a link is idle

nacks - Number of negative acknowledgement (NACK) packets sent and received by the link

defs - Number of packets received out of order

dups - Number of duplicate packets received

Congestion link
The number of times an application has tried to send data when the TIPC link was congested

Send queue
Max is the maximum amount of messages that has resided in the out queue during the statistics collection period of a link.

Avg is the average outqueue size during the lifetime of a link.

Link properties

priority

The priority between logical TIPC links to a particular node. Link priority can range from 0 (lowest) to 31 (highest).

tolerance

Link tolerance specifies the maximum time in milliseconds that TIPC will allow a communication problem to exist before taking the link down. The default value is 1500 milliseconds.

window

The link window controls how many unacknowledged messages a link endpoint can have in its transmit queue before TIPC's congestion control mechanism is activated.

Monitor properties

threshold

The threshold specifies the cluster size exceeding which the link monitoring algorithm will switch from "full-mesh" to "overlapping-ring". If set of 0 the overlapping-ring monitoring is always on and if set to a value larger than anticipated cluster size the overlapping-ring is disabled. The default value is 32.

Monitor information

table_generation

Represents the event count in a node's local monitoring list. It steps every time something changes in the local monitor list, including changes in the local domain.

cluster_size

Represents the current count of cluster members.

algorithm

The current supervision algorithm used for neighbour monitoring for the bearer. Possible values are full-mesh or overlapping-ring.

status

The node status derived by the local node. Possible status are up or down.

monitored

Represent the type of monitoring chosen by the local node. Possible values are direct or indirect.

generation

Represents the domain generation which is the event count in a node's local domain. Every time something changes (peer add/remove/up/down) the domain generation is stepped and a new version of node record is sent to inform the neighbors about this change. The domain generation helps the receiver of a domain record to know if it should ignore or process the record.

applied_node_status

The node status reported by the peer node for the succeeding peers in the node list. The Node list is a circular list of ascending addresses starting with the local node. Possible status are: U or D. The status U implies up and D down.

[non_applied_node:status]
Represents the nodes and their status as reported by the peer node. These nodes were not applied to the monitoring list for this peer node. They are usually transient and occur during the cluster startup phase or network reconfiguration. Possible status are: U or D. The status U implies up and D down.

Broadcast properties

BROADCAST
Forces all multicast traffic to be transmitted via broadcast only, irrespective of cluster size and number of destinations.

REPLICAST
Forces all multicast traffic to be transmitted via replicast only, irrespective of cluster size and number of destinations.

AUTOSELECT
Auto switching to broadcast or replicast depending on cluster size and destination node number.

ratio SIZE
Set the AUTOSELECT criteria, percentage of destination nodes vs cluster size.

EXAMPLES

tipc link monitor list
Shows the link monitoring information for cluster members on device data0.

tipc link monitor summary
The monitor summary command prints the basic attributes.

EXIT STATUS

Exit status is 0 if command was successful or a positive integer upon failure.

SEE ALSO

tipc(8), **tipc-media**(8), **tipc-bearer**(8), **tipc-nametable**(8), **tipc-node**(8), **tipc-peer**(8), **tipc-socket**(8)

REPORTING BUGS

Report any bugs to the Network Developers mailing list **<netdev@vger.kernel.org>** where the development and maintenance is primarily done. You do not have to be subscribed to the list to send a message there.

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