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## ***Red Hat Enterprise Linux Release 9.2 Manual Pages on 'Instat.8' command***

### ***\$ man Instat.8***

LNSTAT(8)                    System Manager's Manual                    LNSTAT(8)

#### NAME

Instat - unified linux network statistics

#### SYNOPSIS

Instat [options]

#### DESCRIPTION

This manual page documents briefly the Instat command.

Instat is a generalized and more feature-complete replacement for the old rtstat program. It is commonly used to periodically print a selection of statistical values exported by the kernel. In addition to routing cache statistics, it supports any kind of statistics the linux kernel exports via a file in /proc/net/stat/.

Each file in /proc/net/stat/ contains a header line listing the column names. These names are used by Instat as keys for selecting which statistics to print. For every CPU present in the system, a line follows which lists the actual values for each column of the file. Instat sums these values up (which in fact are counters) before printing them. After each interval, only the difference to the last value is printed. Files and columns may be selected by using the -f and -k parameters. By default, all columns of all files are printed.

#### OPTIONS

Instat supports the following options.

-h, --help

Show summary of options.

-V, --version

Show version of program.

-c, --count <count>

Print <count> number of intervals.

-d, --dump

Dump list of available files/keys.

-f, --file <file>

Statistics file to use, may be specified multiple times. By default

all files in /proc/net/stat are scanned.

-i, --interval <intv>

Set interval to 'intv' seconds.

-j, --json

Display results in JSON format

-k, --keys k,k,k,...

Display only keys specified. Each key k is of the form [file:]key. If <file> is given, the search for the given key is limited to that file. Otherwise the first file containing the searched key is being used.

-s, --subject [0-2]

Specify display of subject/header. '0' means no header at all, '1' prints a header only at start of the program and '2' prints a header every 20 lines.

-w, --width n,n,n,...

Width for each field.

## USAGE EXAMPLES

```
# Instat -d
```

Get a list of supported statistics files.

```
# Instat -k arp_cache:entries,rt_cache:in_hit,arp_cache:destroys
```

Select the specified files and keys.

```
# Instat -i 10
```

Use an interval of 10 seconds.

```
# Instat -f ip_contrack
```

Use only the specified file for statistics.

# Instat -s 0

Do not print a header at all.

# Instat -s 20

Print a header at start and every 20 lines.

# Instat -c -1 -i 1 -f rt\_cache -k entries,in\_hit,in\_slow\_tot

Display statistics for keys entries, in\_hit and in\_slow\_tot of field rt\_cache every second.

## FILES

/proc/net/stat/arp\_cache, /proc/net/stat/ndisc\_cache

Statistics around neighbor cache and ARP. arp\_cache is for IPv4, ndisc\_cache is the same for IPv6.

entries Number of entries in the neighbor table.

allocs How many neighbor entries have been allocated.

destroys How many neighbor entries have been removed.

hash\_grows How often the neighbor (hash) table was increased.

lookups How many lookups were performed.

hits How many lookups were successful.

res\_failed How many neighbor lookups failed.

rcv\_probes\_mcast How many multicast neighbor solicitations were received. (IPv6 only.)

rcv\_probes\_ucast How many unicast neighbor solicitations were received. (IPv6 only.)

periodic\_gc\_runs How many garbage collection runs were executed.

forced\_gc\_runs How many forced garbage collection runs were executed. Happens when adding an entry and the table is too full.

unresolved\_discards How many neighbor table entries were discarded due to lookup failure.

table\_fulls Number of table overflows. Happens if table is full and forced GC run (see forced\_gc\_runs) has failed.

/proc/net/stat/ip\_contrack, /proc/net/stat/nf\_contrack

Contrack related counters. ip\_contrack is for backwards compatibility with older userspace only and shows the same data as

nf\_contrack.

entries Number of entries in contrack table.

searched Number of contrack table lookups performed.

found Number of searched entries which were successful.

new Number of contrack entries added which were not expected before.

invalid Number of packets seen which can not be tracked.

ignore Number of packets seen which are already connected to a contrack entry.

delete Number of contrack entries which were removed.

delete\_list Number of contrack entries which were put to dying list.

insert Number of entries inserted into the list.

insert\_failed Number of entries for which list insertion was attempted but failed (happens if the same entry is already present).

drop Number of packets dropped due to contrack failure. Either new contrack entry allocation failed, or protocol helper dropped the packet.

early\_drop Number of dropped contrack entries to make room for new ones, if maximum table size was reached.

icmp\_error Number of packets which could not be tracked due to error situation. This is a subset of invalid.

expect\_new Number of contrack entries added after an expectation for them was already present.

expect\_create Number of expectations added.

expect\_delete Number of expectations deleted.

search\_restart Number of contrack table lookups which had to be restarted due to hashtable resizes.

#### /proc/net/stat/route

Routing cache statistics.

entries Number of entries in routing cache.

in\_hit Number of route cache hits for incoming packets. Depre?

cated since IP route cache removal, therefore always zero.

in\_slow\_tot Number of routing cache entries added for input traffic.

in\_slow\_mc Number of multicast routing cache entries added for input traffic.

in\_no\_route Number of input packets for which no routing table entry was found.

in\_brd Number of matched input broadcast packets.

in\_martian\_dst Number of incoming martian destination packets.

in\_martian\_src Number of incoming martian source packets.

out\_hit Number of route cache hits for outgoing packets. Deprecated since IP route cache removal, therefore always zero.

out\_slow\_tot Number of routing cache entries added for output traffic.

out\_slow\_mc Number of multicast routing cache entries added for output traffic.

gc\_total Total number of garbage collection runs. Deprecated since IP route cache removal, therefore always zero.

gc\_ignored Number of ignored garbage collection runs due to minimum GC interval not reached and routing cache not full. Deprecated since IP route cache removal, therefore always zero.

gc\_goal\_miss Number of garbage collector goal misses. Deprecated since IP route cache removal, therefore always zero.

gc\_dst\_overflow Number of destination cache overflows. Deprecated since IP route cache removal, therefore always zero.

in\_hlist\_search Number of hash table list traversals for input traffic. Deprecated since IP route cache removal, therefore always zero.

out\_hlist\_search Number of hash table list traversals for output traffic. Deprecated since IP route cache removal, therefore always zero.

SEE ALSO

ip(8)

## AUTHOR

Instat was written by Harald Welte <laforge@gnumonks.org>.

This manual page was written by Michael Prokop <mika@grml.org> for the Debian project (but may be used by others).

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