Netstat Manual Page

NETSTAT(1) FreeBSD Reference Manual NETSTAT(1)

NAME
netstat - show network status

SYNOPSIS
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netstat [-Aan] [-f address_family] [system] [core]
netstat [-himnrRs] [-f address_family] [-M core] [-N system]
netstat [-n] [-I [interface]] [-M core] [-N system] [-w wait]
netstat [-p protocol] [-M core] [-N system]
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DESCRIPTION
The netstat command symbolically displays the contents of various network-related data structures. There are a number of output formats, depending on the options for the information presented. The first form of the command displays a list of active sockets for each protocol. The second form presents the contents of one of the other network data structures according to the option selected. Using the third form, with a wait interval specified, netstat will continuously display the information regarding packet traffic on the configured network interfaces. The fourth form displays statistics about the named protocol.

The options have the following meaning:

-A With the default display, show the address of any protocol control blocks associated with sockets; used for debugging.

-a With the default display, show the state of all sockets; normally sockets used by server processes are not shown.

-d With either interface display (option -i or an interval, as described below), show the number of dropped packets.

-g Show multicast routing statistics. When -s is also present, show multicast routing statistics instead.

-h Show the state of the IMP host table.

-i Show the state of interfaces which have been auto-configured (interfaces statically configured into a system, but not located at boot time are not shown).

-I interface
Show information only about this interface; used with an wait interval as described below.

-M Extract values associated with the name list from the specified core instead of the default /dev/kmem.

-m Show statistics recorded by the memory management routines (the network manages a private pool of memory buffers).

-N Extract the name list from the specified system instead of the default /386bsd.

-n Show network addresses as numbers (normally netstat interprets addresses and attempts to display them symbolically). This option may be used with any of the display formats.

-p protocol
Show statistics about protocol, which is either a well-known name

for a protocol or an alias for it. Some protocol names and aliases are listed in the file /etc/protocols. A null response typically means that there are no interesting numbers to report. The program will complain if protocol is unknown or if there is no statistics

routine for it.

-s Show per-protocol statistics.

-r Show the routing tables. When -s is also present, show routing statistics instead.

-f address_family
Limit statistics or address control block reports to those of the specified address family. The following address families are recognized: inet, for AF_INET, ns, for AF_NS, and unix, for AF_UNIX.

The default display, for active sockets, shows the local and remote addresses, send and receive queue sizes (in bytes), protocol, and the internal state of the protocol. Address formats are of the form ``host.port'' or ``network.port'' if a socket's address specifies a network but no specific host address. When known the host and network addresses are displayed symbolically according to the data bases /etc/hosts and /etc/networks, respectively. If a symbolic name for an address is unknown, or if the -n option is specified, the address is printed numerically, according to the address family. For more information regarding the Internet ``dot format,'' refer to inet(3)). Unspecified, or ``wildcard'', addresses and ports appear as ``*''.

The interface display provides a table of cumulative statistics regarding packets transferred, errors, and collisions. The network addresses of the interface and the maximum transmission unit (``mtu'') are also displayed.

The routing table display indicates the available routes and their status. Each route consists of a destination host or network and a gateway to use in forwarding packets. The flags field shows the state of the route (``U'' if ``up''), whether the route is to a gateway (``G''), whether the route was created dynamically by a redirect (``D''), and whether the route has been modified by a redirect (``M''). Direct routes are created for each interface attached to the local host; the gateway field for such entries shows the address of the outgoing interface. The refcnt field gives the current number of active uses of the route. Connection oriented protocols normally hold on to a single route for the duration of a connection while connectionless protocols obtain a route while sending to the same destination. The use field provides a count of the number of packets sent using that route. The interface entry indicates the network interface utilized for the route.

When netstat is invoked with a wait interval argument, it displays a running count of statistics related to network interfaces. This display consists of a column for the primary interface (the first interface found during autoconfiguration) and a column summarizing information for all interfaces. The primary interface may be replaced with another interface with the -I option. The first line of each screen of information contains a summary since the system was last rebooted. Subsequent lines of output show values accumulated over the preceding interval.

SEE ALSO
iostat(1), nfsstat(1), ps(1), vmstat(1), hosts(5), networks(5), protocols(5), services(5), trpt(8), trsp(8)

HISTORY
The netstat command appeared in 4.2BSD.

BUGS

The notion of errors is ill-defined.

Collisions mean something else for the IMP.