

netstat command (Network statistics)



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Description

The "*netstat*" command allows to monitor network connections, network packets statistic for each protocol, to display routing tables and statistics for network interfaces.

Syntax:

```
net -r print routing table
net -i [clear] print interface table
net -s print IP statistics
net -s{rut} print protocol statistics (raw,udp,tcp)
```

Parameters

Parameters	Description
-r	<p>Displays the content of the system routing tables.</p> <p>Flags for specific routes have the following meaning:</p> <ul style="list-style-type: none">• "<i>U</i>" – this routing table element is currently active.• "<i>H</i>" – this route leads to a host. If this flag is not set, the route goes to a network.• "<i>D</i>" – this route has been created using the "<i>icmp redirect</i>" protocol.• "<i>M</i>" – this route has been modified using the "<i>icmp redirect</i>" protocol.• "<i>G</i>" – this route is connected to a host. If this flag is not set, it is considered that the route destination is directly connected.• "<i>S</i>" – it's a static route, set by the operator using a "<i>route add</i>" command.• "<i>I</i>" – a pseudostatic route, set as a result of a "<i>rip static</i>" command.• "<i>L</i>" – a route points to a directly connected host (for such a route an APR request may be performed).• "<i>C</i>" – when using this route, more specific routes may be created (e.g. using the "<i>L</i>" flag).
-i [clear]	<p>Displays an information about each network interface in the system.</p> <ul style="list-style-type: none">• "<i>clear</i>" – resets a statistic of inbound / outbound packets and errors.
-s{rut}	<p>Displays statistics for IP and ICMP packets.</p> <ul style="list-style-type: none">• "<i>r</i>" – if added, statistic of RAW protocol packets is displayed.• "<i>u</i>" – statistic of UDP protocol packets is displayed.• "<i>t</i>" – statistic of TCP protocol packets is displayed.

Examples

Display the content of the system routing tables using the "-r" parameter.

```
Routing tables
Destination      Gateway           Flags    Refs      Use  Interface
default          192.168.103.1    UGS      1         47   svil
10.10.10.0/24    link#2           UC       0          0   eth0
127.0.0.1        127.0.0.1       UH       2         26   lo0
192.168.103.0/24 link#6           UC       0          0   svil
192.168.103.1    6c:3b:e5:51:e3:8d UHL      1          0   svil
192.168.103.20   bc:ee:7b:8d:32:65 UHL      0        1743   svil
192.168.103.243  08:00:27:54:47:bf UHL      1       17257   svil
224.0.0.0/8      127.0.0.1       UGS      0          0   lo0
```

Reset the statistic of packets and display the information about network interfaces using the "*netstat -i [clear]*" command.

Name	Network	Address	Ipkts	Ierrs	Opkts	Oerrs
lo0	Link:		0	0	0	0
lo0	127.0.0.1/32	127.0.0.1				
eth0	Link:	00043503f7dd	0	0	0	0
eth0	10.10.10.0/24	10.10.10.14				
eth1	Link:	00043513f7dd	0	0	0	0
eth1	none	none				
rf5.0	Link:	00043523f7dd	0	0	0	0
rf5.0	none	none				
null0*	Link:		0	0	0	0
svil	Link:	02043503f7dd	0	0	0	0
svil	192.168.103.0/24	192.168.103.37				

Use the "-s" parameter to display packet statistic.

```
IP statistic:
ips_total          8584161 (total packets received)
ips_badsum          0 (checksum bad)
ips_tooshort        0 (packet too short)
ips_toosmall        0 (not enough data)
ips_badhlen         0 (ip header length < data size)
ips_badlen          0 (ip length < ip header length)
ips_fragments       0 (fragments received)
ips_fragdropped     0 (frags dropped (dups,ipstat. out of space))
ips_fragtimeout     0 (fragments timed out)
ips_forward         0 (packets forwarded)
ips_cantforward     2496172 (packets rcvd for unreachable dest)
ips_redirectsent    0 (packets forwarded on same net)
ips_noproto         0 (unknown or unsupported protocol)
ips_delivered       6087989 (datagrams delivered to upper level)
ips_localout        335787 (total ip packets generated here)
ips_odropped        0 (lost packets due to nobufs,ipstat. etc.)
ips_reassembled     0 (total packets reassembled ok)
ips_fragmented      0 (datagrams sucessfully fragmented)
ips_ofragments      0 (output fragments created)
ips_cantfrag        0 (don't fragment flag was set,ipstat. etc.)
ips_badoptions      0 (error in option processing)
ips_noroute         0 (packets discarded due to no route)
ips_badvers         0 (ip version != 4)
ips_rawout          17401 (total raw ip packets generated)
ips_badfrags        0 (malformed fragments (bad length))
ips_rcvmemdrop      0 (frags dropped for lack of memory)
ips_toolong         0 (ip length > max ip packet size)

ICMP Staticstic:
icps_error          0 ( # of calls to icmp_error )
icps_oldshort       0 ( no error 'cuz old ip too short )
icps_oldicmp        0 ( no error 'cuz old was icmp )
icps_badcode        0 ( icmp_code out of range )
icps_tooshort       0 ( packet < ICMP_MINLEN )
icps_checksum       0 ( bad checksum )
icps_badlen         0 ( calculated bound mismatch )
icps_reflect        0 ( number of responses )
icps_bmcastecho     0 ( rejected broadcast icmps )
```

Display statistic of UDP protocol packets using the "netstat -su" command.

```
UDP statistic:
udps_ipackets       5878277
udps_opackets       11019
udps_hdrops         0
udps_badsum         0
udps_badlen         0
udps_noport         0
udps_fullsock       0
udps_pcbhashmiss    17511
0.0.0.0:0 snmp
0.0.0.0:161 snmp
0.0.0.0:22534 trap
```