

NETSTAT

The network statistics (netstat) command is a networking tool used for troubleshooting and configuration, that can also serve as a monitoring tool for connections over the network. Both incoming and outgoing connections, routing tables, port listening, and usage statistics are common uses for this command.

CHECK ALL PORT AVAILABLE INFORMATION

```
[root@vivek p]# netstat
Active Internet connections (w/o servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
Active UNIX domain sockets (w/o servers)
Proto RefCnt Flags     Type       State      I-Node  Path
unix  2      [ ]      DGRAM      0          30802    /var/run/chrony/chronyd.sock
unix  2      [ ]      DGRAM      0          44386    /run/user/2000/systemd/notify
unix  2      [ ]      DGRAM      0          38253    /run/user/42/systemd/notify
unix  3      [ ]      DGRAM      0          12939    /run/systemd/notify
unix  2      [ ]      DGRAM      0          12941    /run/systemd/cgroups-agent
unix  25     [ ]      DGRAM      0          12952    /run/systemd/journal/dev-log
unix  8      [ ]      DGRAM      0          12964    /run/systemd/journal/socket
unix  3      [ ]      STREAM    CONNECTED  49147    /run/systemd/journal/stdout
unix  3      [ ]      STREAM    CONNECTED  48906    /run/user/2000/bus
unix  3      [ ]      STREAM    CONNECTED  44322
unix  3      [ ]      STREAM    CONNECTED  41000    @/tmp/dbus-d8BX9DLJWr
unix  3      [ ]      STREAM    CONNECTED  36601    /run/user/42/bus
unix  3      [ ]      STREAM    CONNECTED  36921
unix  3      [ ]      STREAM    CONNECTED  51537
unix  3      [ ]      STREAM    CONNECTED  48222
unix  3      [ ]      STREAM    CONNECTED  45005
```

CHECK ALL PORT

```
[root@vivek p]# netstat -a
Active Internet connections (servers and established)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
tcp        0      0 0.0.0.0:sunrpc           0.0.0.0:*               LISTEN
tcp        0      0 vivek.gandhi.com:domain 0.0.0.0:*               LISTEN
tcp        0      0 0.0.0.0:ssh              0.0.0.0:*               LISTEN
tcp        0      0 localhost:ipp            0.0.0.0:*               LISTEN
tcp6       0      0 [::]:sunrpc              [::]:*                 LISTEN
tcp6       0      0 [::]:ftp                  [::]:*                 LISTEN
tcp6       0      0 [::]:ssh                  [::]:*                 LISTEN
tcp6       0      0 localhost:ipp            [::]:*                 LISTEN
udp        0      0 vivek.gandhi.com:domain 0.0.0.0:*               LISTEN
udp        0      0 0.0.0.0:bootps           0.0.0.0:*               LISTEN
udp        0      0 0.0.0.0:sunrpc           0.0.0.0:*               LISTEN
udp        0      0 0.0.0.0:39069            0.0.0.0:*               LISTEN
udp        0      0 0.0.0.0:mdns              0.0.0.0:*               LISTEN
udp        0      0 localhost:323            0.0.0.0:*               LISTEN
udp6       0      0 [::]:39958                [::]:*                 LISTEN
udp6       0      0 [::]:sunrpc               [::]:*                 LISTEN
```

ONLY TCP PORT SHOW

```
[root@vivek p]# netstat -at
Active Internet connections (servers and established)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
tcp        0      0 0.0.0.0:sunrpc           0.0.0.0:*               LISTEN
tcp        0      0 vivek.gandhi.com:domain 0.0.0.0:*               LISTEN
tcp        0      0 0.0.0.0:ssh              0.0.0.0:*               LISTEN
tcp        0      0 localhost:ipp            0.0.0.0:*               LISTEN
tcp6       0      0 [::]:sunrpc              [::]:*                 LISTEN
tcp6       0      0 [::]:ftp                  [::]:*                 LISTEN
tcp6       0      0 [::]:ssh                  [::]:*                 LISTEN
tcp6       0      0 localhost:ipp            [::]:*                 LISTEN
```

ONLY UDP PORT SHOW

```
[root@vivek p]# netstat -au
Active Internet connections (servers and established)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
udp        0      0 vivek.gandhi.com:domain 0.0.0.0:*               LISTEN
udp        0      0 0.0.0.0:bootps           0.0.0.0:*               LISTEN
udp        0      0 0.0.0.0:sunrpc           0.0.0.0:*               LISTEN
udp        0      0 0.0.0.0:39069            0.0.0.0:*               LISTEN
udp        0      0 0.0.0.0:mdns              0.0.0.0:*               LISTEN
udp        0      0 localhost:323            0.0.0.0:*               LISTEN
udp6       0      0 [::]:39958                [::]:*                 LISTEN
udp6       0      0 [::]:sunrpc               [::]:*                 LISTEN
udp6       0      0 [::]:mdns                  [::]:*                 LISTEN
udp6       0      0 localhost:323            [::]:*                 LISTEN
[root@vivek p]#
```

NETSTAT

ONLY UNIX BASED PORT SHOW

```
[root@vivek p]# netstat -ax
Active UNIX domain sockets (servers and established)
Proto RefCnt Flags      Type       State      I-Node     Path
unix  2      [ ACC ]     STREAM    LISTENING   43931      @/tmp/.ICE-unix/2198
unix  2      [ ACC ]     STREAM    LISTENING   15309      @/org/kernel/linux/storage/multipathd
unix  2      [ ACC ]     STREAM    LISTENING   38511      @/tmp/.ICE-unix/1780
unix  2      [ ACC ]     STREAM    LISTENING   43675      /tmp/.esd-2000/socket
unix  2      [ ACC ]     STREAM    LISTENING   45342      @/tmp/.X11-unix/X0
unix  2      [ ACC ]     STREAM    LISTENING   39052      /tmp/.X11-unix/X1024
unix  2      [ ACC ]     STREAM    LISTENING   39196      @/tmp/dbus-rVTSdFCI
unix  2      [ ACC ]     STREAM    LISTENING   30778      /var/run/lsm/ipc/simc
```

ONLY LISTENING BASED PORT SHOW

```
[root@vivek p]# netstat -l
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
tcp      0      0 0.0.0.0:sunrpc          0.0.0.0:*               LISTEN
tcp      0      0 vivek.gandhi.com:domain 0.0.0.0:*               LISTEN
tcp      0      0 0.0.0.0:ssh             0.0.0.0:*               LISTEN
tcp      0      0 localhost:ipp           0.0.0.0:*               LISTEN
tcp6     0      0 [::]:sunrpc             [::]:*                  LISTEN
tcp6     0      0 [::]:ftp                [::]:*                  LISTEN
tcp6     0      0 [::]:ssh                [::]:*                  LISTEN
tcp6     0      0 localhost:ipp           [::]:*                  LISTEN
udp      0      0 vivek.gandhi.com:domain 0.0.0.0:*
```

ONLY TCP LISTENING BASED PORT SHOW

```
[root@vivek p]# netstat -lt
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
tcp      0      0 0.0.0.0:sunrpc          0.0.0.0:*               LISTEN
tcp      0      0 vivek.gandhi.com:domain 0.0.0.0:*               LISTEN
tcp      0      0 0.0.0.0:ssh             0.0.0.0:*               LISTEN
tcp      0      0 localhost:ipp           0.0.0.0:*               LISTEN
tcp6     0      0 [::]:sunrpc             [::]:*                  LISTEN
tcp6     0      0 [::]:ftp                [::]:*                  LISTEN
tcp6     0      0 [::]:ssh                [::]:*                  LISTEN
tcp6     0      0 localhost:ipp           [::]:*                  LISTEN
[root@vivek p]#
```

ONLY UDP LISTENING BASED PORT SHOW

```
[root@vivek p]# netstat -lu
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
udp      0      0 vivek.gandhi.com:domain 0.0.0.0:*
udp      0      0 0.0.0.0:bootps          0.0.0.0:*
udp      0      0 0.0.0.0:sunrpc          0.0.0.0:*
udp      0      0 0.0.0.0:39069           0.0.0.0:*
udp      0      0 0.0.0.0:mdns             0.0.0.0:*
udp      0      0 localhost:323            0.0.0.0:*
udp6     0      0 [::]:39958              [::]:*
udp6     0      0 [::]:sunrpc             [::]:*
udp6     0      0 [::]:mdns               [::]:*
udp6     0      0 localhost:323            [::]:*
```

ONLY UNIX LISTENING BASED PORT SHOW

```
[root@vivek p]# netstat -lx
Active UNIX domain sockets (only servers)
Proto RefCnt Flags      Type       State      I-Node     Path
unix  2      [ ACC ]     STREAM    LISTENING   43931      @/tmp/.ICE-unix/2198
unix  2      [ ACC ]     STREAM    LISTENING   15309      @/org/kernel/linux/storage/multipathd
unix  2      [ ACC ]     STREAM    LISTENING   38511      @/tmp/.ICE-unix/1780
unix  2      [ ACC ]     STREAM    LISTENING   43675      /tmp/.esd-2000/socket
unix  2      [ ACC ]     STREAM    LISTENING   45342      @/tmp/.X11-unix/X0
unix  2      [ ACC ]     STREAM    LISTENING   39052      /tmp/.X11-unix/X1024
unix  2      [ ACC ]     STREAM    LISTENING   39196      @/tmp/dbus-rVTSdFCI
unix  2      [ ACC ]     STREAM    LISTENING   30778      /var/run/lsm/ipc/simc
unix  2      [ ACC ]     STREAM    LISTENING   29359      @irqbalance1023.sock
unix  2      [ ACC ]     STREAM    LISTENING   30780      /var/run/lsm/ipc/sim
unix  2      [ ACC ]     STREAM    LISTENING   38043      @/tmp/dbus-F201pu62
unix  2      [ ACC ]     STREAM    LISTENING   28304      @ISCSID_UIP_ABSTRACT_NAMESPACE
unix  2      [ ACC ]     STREAM    LISTENING   43932      /tmp/.ICE-unix/2198
```

NETSTAT

PROTOCOL STATISTIC CHECK

```
[root@vivek p]# netstat -s
Ip:
  Forwarding: 1
  332 total packets received
  0 forwarded
  0 incoming packets discarded
  108 incoming packets delivered
  256 requests sent out
  4 dropped because of missing route
```

TCP PROTOCOL STATISTIC CHECK

```
[root@vivek p]# netstat -st
IcmpMsg:
  InType3: 108
  OutType3: 108
  OutType8: 14
Tcp:
  0 active connection openings
  0 passive connection openings
  0 failed connection attempts
```

UDP PROTOCOL STATISTIC CHECK

```
[root@vivek p]# netstat -su
IcmpMsg:
  InType3: 108
  OutType3: 108
  OutType8: 14
Udp:
  0 packets received
  0 packets to unknown port received
  0 packet receive errors
```

SERVICE NAME WITH PROCESS ID CHECK

```
[root@vivek p]# netstat -tp
Active Internet connections (w/o servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State       PID/Program name
[root@vivek p]#
```

KERNEL IP ROUTING TABLE

```
[root@vivek p]# netstat -r
Kernel IP routing table
Destination Gateway Genmask Flags MSS Window irtt Iface
default _gateway 0.0.0.0 UG 0 0 0 ens160
_gateway 0.0.0.0 255.255.255.255 UH 0 0 0 ens160
192.168.10.0 0.0.0.0 255.255.255.0 U 0 0 0 ens160
192.168.122.0 0.0.0.0 255.255.255.0 U 0 0 0 virbr0
[root@vivek p]#
```

NETWORK INTERFACE WITH PACKET INFORMATION

```
[root@vivek p]# netstat -i
Kernel Interface table
Iface MTU RX-OK RX-ERR RX-DRP RX-OVR TX-OK TX-ERR TX-DRP TX-OVR Flg
ens160 1500 522 0 0 0 227 0 0 0 BMRU
lo 65536 114 0 0 0 114 0 0 0 LRU
virbr0 1500 0 0 0 0 0 0 0 0 BMU
```

NETSTAT

RECEIVED PACKET ERROR OUTPUT SHOW

```
[root@vivek p]# netstat -ie
Kernel Interface table
ens160: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 192.168.10.2  netmask 255.255.255.0  broadcast 192.168.10.255
        inet6 fe80::4b9:cea9:aab8:d94d  prefixlen 64  scopeid 0x20<link>
        ether 00:0c:29:01:90:46  txqueuelen 1000  (Ethernet)
        RX packets 543  bytes 62809 (61.3 KiB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 237  bytes 13456 (13.1 KiB)
        TX errors 0  dropped 0  overruns 0  carrier 0  collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
        inet 127.0.0.1  netmask 255.0.0.0
```

MULTICASTING GROUP CHECK

```
[root@vivek p]# netstat -g
IPv6/IPv4 Group Memberships
Interface      RefCnt Group
-----
lo              1      224.0.0.1
ens160          1      224.0.0.251
ens160          1      224.0.0.1
virbr0          1      224.0.0.251
virbr0          1      224.0.0.1
lo              1      ff02::1
lo              1      ff01::1
ens160          1      ff02::1:ffb8:d94d
ens160          1      ff02::fb
ens160          1      ff02::1
ens160          1      ff01::1
virbr0          1      ff02::1
virbr0          1      ff01::1
virbr0-nic      1      ff02::1
virbr0-nic      1      ff01::1
```

EXTEND COMMAND CONTINUES CHECK

```
[root@vivek p]# netstat -c
```

END COMMAND CTRL+C

CHECK NON SUPPORTIV ADRESS

```
[root@vivek p]# netstat -v
Active Internet connections (w/o servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
netstat: no support for 'AF_INET (sctp)' on this system.
netstat: no support for 'AF_INET (sctp)' on this system.
Active UNIX domain sockets (w/o servers)
Proto RefCnt Flags   Type       State          I-Node   Path
unix  2      [ ]     DGRAM      30802        /var/run/chrony/chronyd.sock
unix  2      [ ]     DGRAM      44386        /run/user/2000/systemd/notify
unix  2      [ ]     DGRAM      38253        /run/user/42/systemd/notify
unix  3      [ ]     DGRAM      12939        /run/systemd/notify
unix  2      [ ]     DGRAM      12941        /run/systemd/cgroups-agent
unix  24     [ ]     DGRAM      12952        /run/systemd/journal/dev-log
unix  8      [ ]     DGRAM      12964        /run/systemd/journal/socket
```

CHECK PORT PROGRAM RUN

```
[root@vivek p]# netstat -ap |grep ssh
tcp        0      0 0.0.0.0:ssh          0.0.0.0:*               LISTEN      1199/sshd
tcp6       0      0 :::ssh              :::*                   LISTEN      1199/sshd
unix  2      [ ACC ]     STREAM    LISTENING   44885      2184/gnome-keyring- /run/user/2000/keyring/ssh
unix  3      [ ]       STREAM    CONNECTED   33013      1199/sshd
unix  2      [ ]       STREAM    CONNECTED   33337      1199/sshd
[root@vivek p]#
```

NETSTAT

PORT PROCESS RUNNING STATUS

```
[root@vivek p]# netstat -an |grep ssh
unix 2      [ ACC ]     STREAM  LISTENING   44885      /run/user/2000/keyring/ssh
[root@vivek p]#
```

RAW ENTRY STATUS

```
[root@vivek p]# netstat -s --raw
Ip:
  Forwarding: 1
  785 total packets received
  0 forwarded
  0 incoming packets discarded
  148 incoming packets delivered
  338 requests sent out
  4 dropped because of missing route
Icmp:
  148 ICMP messages received
  0 input ICMP message failed
  ICMP input histogram:
    destination unreachable: 148
  162 ICMP messages sent
```

MULTIPLE OPTION CHECK

```
[root@vivek p]# netstat -tupln | grep 22
tcp        0      0 192.168.122.1:53      0.0.0.0:*             LISTEN      1631/dnsmasq
tcp        0      0 0.0.0.0:22            0.0.0.0:*             LISTEN      1199/sshd
tcp6       0      0 :::22                 :::*                   LISTEN      1199/sshd
udp        0      0 192.168.122.1:53      0.0.0.0:*             1631/dnsmasq
[root@vivek p]#
```