

## ip 用法

Last login: Mon Oct 23 09:40:45 2017 from 10.160.8.50

[root@lv067 ~]# ip

Usage: ip [ OPTIONS ] OBJECT { COMMAND | help }

ip [ -force ] -batch filename

where OBJECT := { link | addr | addrlabel | route | rule | neigh | ntable |  
tunnel | tuntap | maddr | mroute | mrule | monitor | xfrm |  
netns | l2tp | tcp\_metrics | token }

OPTIONS := { -V[ersion] | -s[tatistics] | -d[etails] | -r[esolve] |  
-h[uman-readable] | -i[ec] |  
-f[amily] { inet | inet6 | ipx | dnet | bridge | link } |  
-4 | -6 | -I | -D | -B | -O |  
-l[oops] { maximum-addr-flush-attempts } |  
-o[neline] | -t[imestamp] | -b[atch] [filename] |  
-rc[vbuf] [size] | -n[etns] name | -a[ll] }

[root@lv067 ~]# ip addr

1: lo: <LOOPBACK,UP,LOWER\_UP> mtu 65536 qdisc noqueue state UNKNOWN

link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00

inet 127.0.0.1/8 scope host lo

valid\_lft forever preferred\_lft forever

inet6 ::1/128 scope host

valid\_lft forever preferred\_lft forever

2: eth0: <BROADCAST,MULTICAST,UP,LOWER\_UP> mtu 1500 qdisc pfifo\_fast state UP qlen 1000

link/ether 52:54:00:4f:c0:87 brd ff:ff:ff:ff:ff:ff

inet 10.1.22.7/20 brd 10.1.31.255 scope global eth0

valid\_lft forever preferred\_lft forever

inet6 fe80::5054:ff:fe4f:c087/64 scope link

valid\_lft forever preferred\_lft forever

[root@lv067 ~]#

[root@lv067 ~]# ip link

1: lo: <LOOPBACK,UP,LOWER\_UP> mtu 65536 qdisc noqueue state UNKNOWN mode DEFAULT

link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00

2: eth0: <BROADCAST,MULTICAST,UP,LOWER\_UP> mtu 1500 qdisc pfifo\_fast state UP mode DEFAULT qlen 1000

link/ether 52:54:00:4f:c0:87 brd ff:ff:ff:ff:ff:ff

[root@lv067 ~]#

[root@lv067 ~]# ip addrlabel

prefix ::1/128 label 0

prefix ::/96 label 3

prefix ::ffff:0.0.0.0/96 label 4

prefix 2001::/32 label 6

prefix 2001:10::/28 label 7

prefix 3ffe::/16 label 12

prefix 2002::/16 label 2

prefix fec0::/10 label 11

prefix fc00::/7 label 5

prefix ::/0 label 1

[root@lv067 ~]#

[root@lv067 ~]# ip route

default via 10.1.31.254 dev eth0

10.1.16.0/20 dev eth0 proto kernel scope link src 10.1.22.7

169.254.0.0/16 dev eth0 scope link metric 1002

[root@lv067 ~]#

[root@lv067 ~]# ip rule

0: from all lookup local

32766: from all lookup main

32767: from all lookup default

```
[root@lv067 ~]#
[root@lv067 ~]# ip neigh
10.1.19.36 dev eth0 lladdr 52:54:00:f7:a8:7e REACHABLE
10.1.17.1 dev eth0 lladdr 52:54:00:cb:3a:7e STALE
10.1.16.253 dev eth0 lladdr f4:8e:38:1d:8c:26 STALE
10.1.22.17 dev eth0 lladdr 52:54:00:cb:e6:18 STALE
10.1.31.254 dev eth0 lladdr 00:08:e3:ff:fd:90 REACHABLE
10.1.17.15 dev eth0 lladdr 52:54:00:db:27:9e STALE
10.1.16.252 dev eth0 lladdr f4:8e:38:1d:b7:26 STALE
10.1.17.6 dev eth0 lladdr 52:54:00:0f:ae:17 REACHABLE
[root@lv067 ~]#
[root@lv067 ~]# ip ntable
inet6 ndisc_cache
    thresh1 128 thresh2 512 thresh3 1024 gc_int 30000
    refcnt 1 reachable 39699 base_reachable 30000 retrans 1000
    gc_stale 60000 delay_probe 5000 queue 31
    app_probes 0 ucast_probes 3 mcast_probes 3
    anycast_delay 1000 proxy_delay 800 proxy_queue 64 locktime 0

inet6 ndisc_cache
    dev eth0
    refcnt 4 reachable 27663 base_reachable 30000 retrans 1000
    gc_stale 60000 delay_probe 5000 queue 31
    app_probes 0 ucast_probes 3 mcast_probes 3
    anycast_delay 1000 proxy_delay 800 proxy_queue 64 locktime 0

inet6 ndisc_cache
    dev lo
    refcnt 1 reachable 31395 base_reachable 30000 retrans 1000
    gc_stale 60000 delay_probe 5000 queue 31
    app_probes 0 ucast_probes 3 mcast_probes 3
    anycast_delay 1000 proxy_delay 800 proxy_queue 64 locktime 0

inet arp_cache
    thresh1 128 thresh2 512 thresh3 1024 gc_int 30000
    refcnt 1 reachable 30508 base_reachable 30000 retrans 1000
    gc_stale 60000 delay_probe 5000 queue 31
    app_probes 0 ucast_probes 3 mcast_probes 3
    anycast_delay 1000 proxy_delay 800 proxy_queue 64 locktime 1000

inet arp_cache
    dev eth0
    refcnt 9 reachable 43847 base_reachable 30000 retrans 1000
    gc_stale 60000 delay_probe 5000 queue 31
    app_probes 0 ucast_probes 3 mcast_probes 3
    anycast_delay 1000 proxy_delay 800 proxy_queue 64 locktime 1000

inet arp_cache
    dev lo
    refcnt 1 reachable 17934 base_reachable 30000 retrans 1000
    gc_stale 60000 delay_probe 5000 queue 31
    app_probes 0 ucast_probes 3 mcast_probes 3
    anycast_delay 1000 proxy_delay 800 proxy_queue 64 locktime 1000

[root@lv067 ~]#
[root@lv067 ~]# ip tunnel
[root@lv067 ~]#
[root@lv067 ~]# ip tuntap
```

```
[root@lv067 ~]# ip maddr
1:      lo
        inet 224.0.0.1
        inet6 ff02::1
        inet6 ff01::1
2:      eth0
        link 33:33:00:00:00:01
        link 01:00:5e:00:00:01
        link 33:33:ff:4f:c0:87
        inet 224.0.0.1
        inet6 ff02::1:ff4f:c087
        inet6 ff02::1
        inet6 ff01::1
[root@lv067 ~]# ip mroute
[root@lv067 ~]# ip mrule
32767:  from all lookup default
[root@lv067 ~]# ip monitor
```

```
^C
[root@lv067 ~]#
[root@lv067 ~]# ip xfrm
Usage: ip xfrm XFRM-OBJECT { COMMAND | help }
where XFRM-OBJECT := state | policy | monitor
[root@lv067 ~]#
[root@lv067 ~]# ip netns
[root@lv067 ~]# ip 2tp
Object "2tp" is unknown, try "ip help".
[root@lv067 ~]# ip l2tp
Usage: ip l2tp add tunnel
        remote ADDR local ADDR
        tunnel_id ID peer_tunnel_id ID
        [ encap { ip | udp } ]
        [ udp_sport PORT ] [ udp_dport PORT ]
Usage: ip l2tp add session [ name NAME ]
        tunnel_id ID
        session_id ID peer_session_id ID
        [ cookie HEXSTR ] [ peer_cookie HEXSTR ]
        [ offset OFFSET ] [ peer_offset OFFSET ]
        [ l2spec_type L2SPEC ]
ip l2tp del tunnel tunnel_id ID
ip l2tp del session tunnel_id ID session_id ID
ip l2tp show tunnel [ tunnel_id ID ]
ip l2tp show session [ tunnel_id ID ] [ session_id ID ]
```

```
Where: NAME      := STRING
       ADDR      := { IP_ADDRESS | any }
       PORT      := { 0..65535 }
       ID        := { 1..4294967295 }
       HEXSTR    := { 8 or 16 hex digits (4 / 8 bytes) }
       L2SPEC    := { none | default }
```

```
[root@lv067 ~]# ip tcp_metrics
192.26.91.193 age 416708.560sec rtt 78500us rttvar 78500us cwnd 10 metric_5 628022 metric_6 314011
203.160.56.44 age 416708.458sec rtt 364875us rttvar 261500us cwnd 10 metric_5 2919748 metric_6 1046495
10.160.8.130 age 68326.631sec
```

123.255.202.74 age 416708.802sec rtt 459125us rttvar 459000us cwnd 10 metric\_5 3673407 metric\_6 1836703  
216.176.179.218 age 416807.190sec  
10.160.8.169 age 870.488sec  
5.160.200.196 age 416709.030sec rtt 451750us rttvar 382500us cwnd 10 metric\_5 3614090 metric\_6 1530270  
124.202.159.69 age 416697.405sec rtt 31875us rttvar 31750us cwnd 10 metric\_5 255772 metric\_6 127886  
96.6.11.178 age 416697.170sec rtt 209250us rttvar 161750us cwnd 10 metric\_5 1674966 metric\_6 647297  
10.160.9.202 age 415432.539sec rtt 9375us rttvar 9500us cwnd 10 metric\_5 75815 metric\_6 38574  
10.160.10.204 age 906801.285sec  
10.160.10.206 age 902543.771sec rtt 27125us rttvar 20250us cwnd 10 metric\_5 217004 metric\_6 81421  
123.58.190.228 age 416697.440sec rtt 5625us rttvar 5500us cwnd 10 metric\_5 45770 metric\_6 22885  
10.160.10.211 age 664969.352sec rtt 33375us rttvar 33250us cwnd 10 metric\_5 267644 metric\_6 133822  
10.160.10.213 age 685349.128sec  
10.160.10.220 age 560946.384sec rtt 50125us rttvar 50000us cwnd 10 metric\_5 401562 metric\_6 200781  
10.1.5.6 age 18645.525sec rtt 2125us rttvar 3250us cwnd 10 metric\_5 17421 metric\_6 13869  
10.160.10.221 age 354195.805sec rtt 112125us rttvar 91250us ssthresh 7 cwnd 4 metric\_5 897390 metric\_6 365311  
10.1.17.6 age 0.527sec rtt 625us rttvar 500us cwnd 10 metric\_5 5078 metric\_6 2974  
10.160.10.223 age 475720.824sec rtt 24000us rttvar 14250us cwnd 10 metric\_5 192650 metric\_6 57289  
133.24.248.18 age 416825.893sec  
10.160.10.229 age 257076.752sec rtt 93000us rttvar 67500us ssthresh 2 cwnd 6 metric\_5 744289 metric\_6 270628  
10.1.17.15 age 2612.512sec  
163.17.38.18 age 416709.172sec rtt 277000us rttvar 277000us cwnd 10 metric\_5 2216129 metric\_6 1108064  
10.1.22.17 age 96.357sec rtt 3875us rttvar 7500us cwnd 10 metric\_5 31852 metric\_6 30730  
118.174.8.44 age 416708.704sec rtt 515375us rttvar 515250us cwnd 10 metric\_5 4123496 metric\_6 2061748  
10.160.10.241 age 40979.143sec rtt 43125us rttvar 56250us cwnd 10 metric\_5 345115 metric\_6 225282  
10.1.19.36 age 6986.980sec rtt 7125us rttvar 11500us cwnd 10 metric\_5 57579 metric\_6 46927  
10.1.5.42 age 845329.086sec  
202.141.160.110 age 416882.319sec  
202.141.176.110 age 416709.695sec rtt 20500us rttvar 20500us cwnd 10 metric\_5 164855 metric\_6 82427  
209.132.181.16 age 416884.422sec  
74.121.199.234 age 415163.187sec rtt 908125us rttvar 914250us cwnd 10 metric\_5 7265860 metric\_6 3657396  
85.236.43.108 age 416907.763sec  
10.160.8.32 age 65135.970sec rtt 20500us rttvar 18750us cwnd 10 metric\_5 164153 metric\_6 75826  
10.160.8.37 age 661700.509sec rtt 7125us rttvar 4750us ssthresh 19 cwnd 11 metric\_5 57927 metric\_6 19244  
10.160.8.40 age 316342.920sec rtt 46875us rttvar 58500us cwnd 9 metric\_5 375297 metric\_6 234231  
10.160.8.44 age 323700.568sec rtt 6625us rttvar 6500us cwnd 13 metric\_5 53715 metric\_6 26857  
10.160.8.46 age 2585.724sec  
120.119.118.1 age 416709.179sec rtt 259875us rttvar 200500us cwnd 10 metric\_5 2079482 metric\_6 802642  
10.160.8.47 age 868.274sec rtt 6750us rttvar 6750us ssthresh 2 cwnd 1 metric\_5 54078 metric\_6 27039  
10.100.4.22 age 691192.843sec rtt 9625us rttvar 8000us cwnd 10 metric\_5 77682 metric\_6 32555  
10.160.8.50 age 192.355sec  
10.160.8.52 age 316749.878sec rtt 53125us rttvar 61500us ssthresh 19 cwnd 14 metric\_5 425986 metric\_6 246271  
10.160.9.54 age 55670.579sec rtt 13125us rttvar 13000us cwnd 10 metric\_5 105149 metric\_6 52574  
10.160.8.59 age 313204.087sec rtt 29500us rttvar 29000us cwnd 10 metric\_5 236671 metric\_6 116197  
10.160.8.60 age 399593.421sec rtt 7625us rttvar 7500us cwnd 10 metric\_5 61469 metric\_6 30734  
10.160.9.60 age 53129.330sec rtt 14500us rttvar 17500us cwnd 10 metric\_5 116949 metric\_6 70788  
10.160.8.61 age 321575.875sec  
10.160.8.69 age 326639.168sec rtt 15375us rttvar 13500us cwnd 10 metric\_5 123575 metric\_6 54219  
10.1.5.115 age 4600.400sec rtt 5750us rttvar 8750us cwnd 10 metric\_5 46203 metric\_6 35860  
10.1.5.116 age 3775.376sec rtt 4375us rttvar 8500us cwnd 10 metric\_5 35473 metric\_6 34657  
10.160.8.76 age 314401.167sec rtt 5750us rttvar 5750us cwnd 10 metric\_5 46640 metric\_6 23320  
10.160.8.79 age 1461.047sec rtt 22000us rttvar 21000us cwnd 10 metric\_5 176238 metric\_6 84636  
10.160.8.80 age 2705.551sec rtt 6000us rttvar 6000us cwnd 10 metric\_5 48230 metric\_6 24115  
10.160.8.85 age 55132.623sec rtt 6000us rttvar 4500us cwnd 14 metric\_5 48593 metric\_6 18979  
202.38.97.230 age 416697.388sec rtt 64125us rttvar 40750us cwnd 10 metric\_5 513997 metric\_6 163491  
10.160.8.90 age 2630.635sec rtt 12000us rttvar 12000us cwnd 3 metric\_5 96812 metric\_6 48406  
10.160.8.91 age 2306.177sec rtt 12375us rttvar 12250us cwnd 10 metric\_5 99650 metric\_6 49825  
115.28.122.210 age 416697.410sec rtt 23375us rttvar 18000us cwnd 10 metric\_5 187696 metric\_6 72240  
202.6.247.208 age 416709.603sec rtt 143250us rttvar 138250us cwnd 10 metric\_5 1146259 metric\_6 553236

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[root@lv067 ~]#
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```
[root@lv067 ~]# ip token
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```
token :: dev eth0
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```
[root@lv067 ~]#
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