

# CheatSheet: IP Virtual Service - IPVS

## TOOLS

- PDF Link: [cheatsheet-ipvs-A4.pdf](#), Category: Tools
- Blog URL: <https://cheatsheet.dennyzhang.com/cheatsheet-ipvs-A4>
- Related posts: CheatSheet: shell, #denny-cheatsheets

File me Issues or star this repo.

## 1.1 ipvsadm

Name	Command
List IPVS services	<code>sudo ipvsadm -l -n</code>
Set up a new IPVS service	<code>sudo ipvsadm -A -t 1.2.3.4:80 -s rr</code>
Change scheduling mode to Round Robin	<code>sudo ipvsadm -E -t 1.2.3.4:80 -s rr</code>
Change scheduling mode to Weighted Round Robin	<code>sudo ipvsadm -E -t 1.2.3.4:80 -s wrr</code>
Delete virtual service	<code>sudo ipvsadm -d -t 1.2.3.4:80 -r 172.17.0.3</code>
Delete real server	<code>sudo ipvsadm -D -t 1.2.3.4:80</code>
Show stats	<code>sudo ipvsadm -L -n --stats --rate</code>
Clear the whole table	<code>sudo ipvsadm -C</code>
Reference	Link: A minimal IPVS Load Balancer demo

## 1.2 ipvsadm Online Help

```
user@dennyzhang:~$ sudo ipvsadm --help
```

```
ipvsadm v1.28 2015/02/09 (compiled with popt and IPVS v1.2.1)
```

Usage:

```
ipvsadm -A|E virtual-service [-s scheduler] [-p [timeout]] [-M netmask] [--pe persistence_engine] [-b sched
ipvsadm -D virtual-service
ipvsadm -C
ipvsadm -R
ipvsadm -S [-n]
ipvsadm -a|e virtual-service -r server-address [options]
ipvsadm -d virtual-service -r server-address
ipvsadm -L|l [virtual-service] [options]
ipvsadm -Z [virtual-service]
ipvsadm --set tcp tcpfin udp
ipvsadm --start-daemon state [--mcast-interface interface] [--syncid sid]
ipvsadm --stop-daemon state
ipvsadm -h
```

Commands:

Either long or short options are allowed.

```
--add-service      -A      add virtual service with options
--edit-service     -E      edit virtual service with options
--delete-service   -D      delete virtual service
--clear            -C      clear the whole table
--restore          -R      restore rules from stdin
--save             -S      save rules to stdout
--add-server       -a      add real server with options
--edit-server      -e      edit real server with options
--delete-server    -d      delete real server
--list             -L|-l   list the table
--zero            -Z      zero counters in a service or all services
--set tcp tcpfin  udp      set connection timeout values
--start-daemon     start   start connection sync daemon
--stop-daemon      stop    stop connection sync daemon
--help            -h      display this help message
```

**virtual-service:**

```
--tcp-service|-t service-address service-address is host[:port]
--udp-service|-u service-address service-address is host[:port]
--sctp-service service-address service-address is host[:port]
--fwmark-service|-f fwmark fwmark is an integer greater than zero
```

**Options:**

```
--ipv6 -6 fwmark entry uses IPv6
--scheduler -s scheduler one of rr|wrr|lc|wlc|lblc|lblcr|dh|sh|sed|nq,
the default scheduler is wlc.
--pe engine alternate persistence engine may be sip,
not set by default.
--persistent -p [timeout] persistent service
--netmask -M netmask persistent granularity mask
--real-server -r server-address server-address is host (and port)
--gatewaying -g gatewaying (direct routing) (default)
--ipip -i ipip encapsulation (tunneling)
--masquerading -m masquerading (NAT)
--weight -w weight capacity of real server
--u-threshold -x uthreshold upper threshold of connections
--l-threshold -y lthreshold lower threshold of connections
--mcast-interface interface multicast interface for connection sync
--syncid sid syncid for connection sync (default=255)
--connection -c output of current IPVS connections
--timeout output of timeout (tcp tcpfin udp)
--daemon output of daemon information
--stats output of statistics information
--rate output of rate information
--exact expand numbers (display exact values)
--thresholds output of thresholds information
--persistent-conn output of persistent connection info
--nosort disable sorting output of service/server entries
--sort does nothing, for backwards compatibility
--ops -o one-packet scheduling
--numeric -n numeric output of addresses and ports
--sched-flags -b flags scheduler flags (comma-separated)
```

### 1.3 More Resources

License: Code is licenipvs under MIT License.

[https://medium.com/@benmeier\\_/a-quick-minimal-ipvs-load-balancer-demo-d5cc42d0deb4](https://medium.com/@benmeier_/a-quick-minimal-ipvs-load-balancer-demo-d5cc42d0deb4)

<https://docs.huihoo.com/hpc-cluster/linux-virtual-server/HOWTO/LVS-HOWTO.ipvsadm.html>