

Task:

Create a service that collects statistic about network traffic.

Requirements:

1. A daemon should be implemented that sniffs packets from particular interface. It saves ip addresses of incoming packets and number of packets from each ip.
2. Time complexity for ip search should be log(N).
3. Statistic should be persistent through reboots.
4. Command line interface (cli) should be implemented - another process that interacts with the daemon.
5. The cli should support command:
   1. **start** (packets are being sniffed from now on)
   2. **stop** (packets are not sniffed)
   3. **show [ip] count** (printf number of packets received from ip address)
   4. **select iface [iface]** (select interface for sniffing)
   5. **--help** (show usage information)
6. Daemon could be started independently as well as through the cli.
7. Build automation tool should be used (make for e.g.)
8. It’s up to you to make choice unless otherwise specified.