

# CheatSheet: Linux Networking

LINUX

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

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## 1.1 Linux Networking

Name	Comment
Scan tcp listening ports for a given server	<code>sudo nmap -O 192.168.1.103</code>
Check dns naming	<code>sudo nslookup www.google.com</code>
Print routing table	<code>netstat -rn</code>
List all the router hops	<code>tracert</code>
DNS lookup utility	<code>host www.google.com</code>
Get detail report for a given NIC	<code>ethtool -S eth0</code>
Check system configuration	<code>sysctl -a</code>
Linux mapping from well-known services to ports	<code>cat /etc/services</code>
	<code>netstat -i</code>
	<code>arp -a</code>

## 1.2 Networking testing

Name	Comment
tc	Adding simulated network latency
Add 97ms latency to eth0	<code>tc qdisc add dev eth0 root netem delay 97ms</code>
Check status	<code>tc -s qdisc</code>
Remove the rule	<code>tc qdisc del dev eth0 root netem</code>
Test your network speed	<a href="http://www.att.com/speedtest/">http://www.att.com/speedtest/</a>

## 1.3 TCP sockets workflow

Name	Comment
create a new anonymous socket	<code>s = socket(&lt;parameters&gt;)</code>
Bind tcp port to a socket	<code>bind(s, &lt;local IP:port&gt;)</code>
Create a socket to remote endpoint	<code>connect(s, &lt;remote IP:port&gt;)</code>
Create local socket and make it eligible to take requests	<code>listen(s, ...)</code>
Accept client requests	<code>s2 = accept(s)</code>
Read n bytes from a socket	<code>n = read(s, buffer, n)</code>
Write n bytes to a socket	<code>n = write(s, buffer, n)</code>
Close a socket	<code>close(s)</code>
Shutdown stdin and stdout/stderr for a socket	<code>shutdown(s, &lt;side&gt;)</code>
Read socket options	<code>getsockopt(s, ..)</code>
Change socket options	<code>setsockopt(s, ..)</code>

## 1.4 TCP

Name	Comment
Tcp manual	<code>man 7 tcp</code>
Reference	Tcpdump CheatSheet

## 1.5 HTTP

Name	Comment
Reference	Curl CheatSheet

## 1.6 References

Name	Comment
RFC793	<a href="http://www.ietf.org/rfc/rfc793.txt">http://www.ietf.org/rfc/rfc793.txt</a>
Reference	Tcpdump CheatSheet, Curl CheatSheet, SSH CheatSheet

## 1.7 More Resources

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