# Network Tools Cheatsheet

| Task | Current Tool | Legacy Tool |
|---|---|---|
| **IP/Netmask/MAC** | | |
| Set IP address | ip addr add 192.168.1.100/24 dev eth0 | ifconfig eth0 192.168.1.100 |
| Set netmask | ip addr add 192.168.1.100/24 dev eth0 | ifconfig eth0 netmask 255.255.255.0 |
| Set MAC | ip link set dev interface address 00:07:e9:0c:ec:5e | ifconfig eth0 hw ether 00:07:e9:0c:ec:5e |
| Request DHCP address | dhclient eth0 | |
| Set default gateway | ip route add default via 192.168.1.1 | route add default gw 192.168.1.1 |
| Show default gateway | ip route | route |
| Show network device settings | ip link | ethtool eth0 |
| Show IP address | ip addr show | ifconfig |
| Show Netmask | ip addr show | ifconfig |
| Check routing | traceroute 4.2.2.2 | |
| Restart Network Service | systemctl restart network | service network restart |
| **ARP, Connectivity and Ports** | | |
| Check connectivity | ping 192.168.1.100 | |
| Check connectivity (broadcast) | ping -b 192.168.1.255 | |
| Show ARP table | arp | |
| Set static ARP entry | arp -s 192.168.1.100 00:07:e9:0c:ec:5e | |
| Deleting an ARP entry | arp -d  192.168.1.100 | |
| Show network connections | ss -ltn | netstat -platune |
| Scan network ports | nmap -sT -sU -P0 -O 192.168.1.100 | |
| **DNS** | | |
| Resolve DNS name (a record) | nslookup google.com | dig google.com A |
| Resolve DNS using server | nslookup google.com 4.2.2.2 | dig @4.2.2.2 google.com |