



Zachodniopomorski
Uniwersytet Techniczny
w Szczecinie

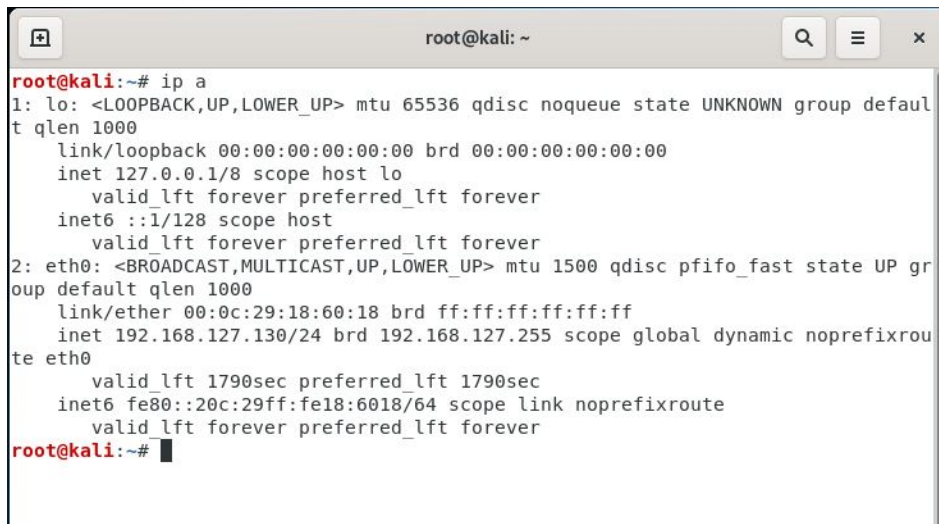
Network Systems Administration
Linux Shell Scripts

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1. Displaying the Network Addresses

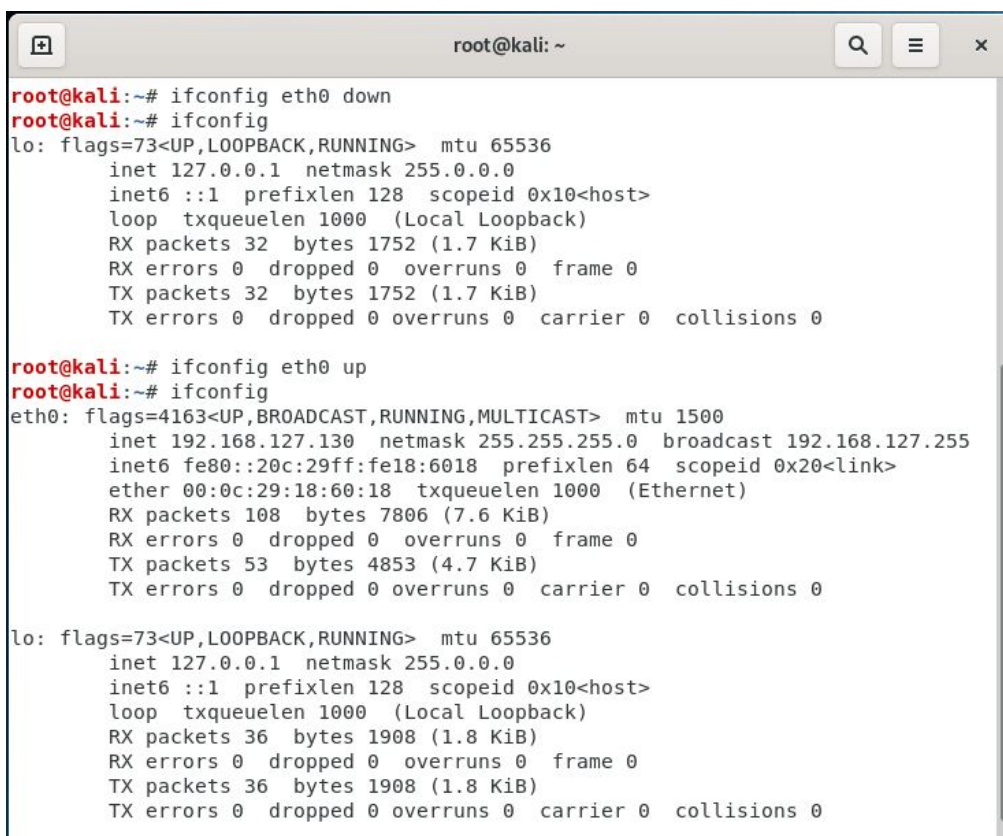
Command is “ifconfig”. To display the network interfaces cards in the system.



```
root@kali: ~  
root@kali:~# ip a  
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000  
    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 group default qlen 1000  
    link/ether 00:0c:29:18:60:18 brd ff:ff:ff:ff:ff:ff  
    inet 192.168.127.130/24 brd 192.168.127.255 scope global dynamic noprefixroute eth0  
        valid_lft 1790sec preferred_lft 1790sec  
    inet6 fe80::20c:29ff:fe18:6018/64 scope link noprefixroute  
        valid_lft forever preferred_lft forever  
root@kali:~#
```

2. Bring a Network Interface Up and Down

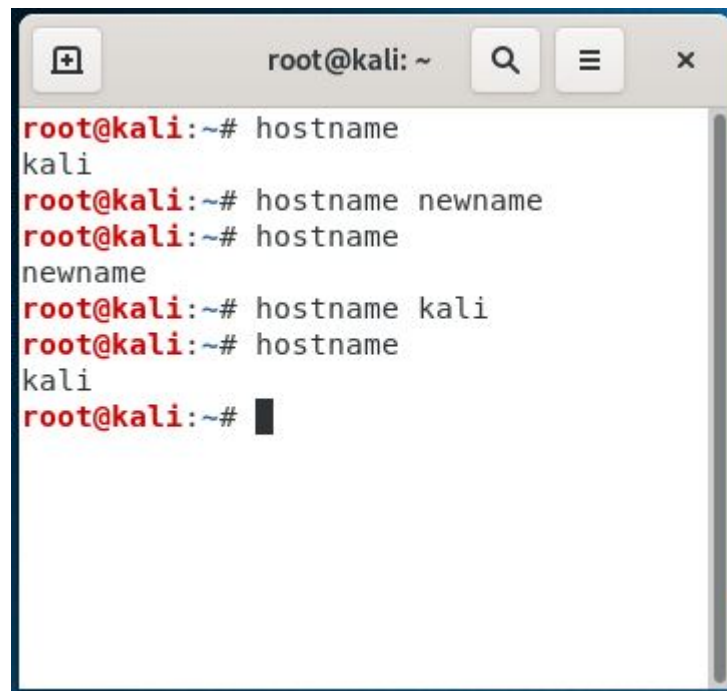
There will be cases wherein you need to bring a network interface down, and enable it again. For this suppose two commands exist: ifconfig “iname” down and ifconfig “iname” up.



```
root@kali: ~  
root@kali:~# ifconfig eth0 down  
root@kali:~# ifconfig  
lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536  
    inet 127.0.0.1 netmask 255.0.0.0  
    inet6 ::1 prefixlen 128 scopeid 0x10<host>  
    loop txqueuelen 1000 (Local Loopback)  
    RX packets 32 bytes 1752 (1.7 KiB)  
    RX errors 0 dropped 0 overruns 0 frame 0  
    TX packets 32 bytes 1752 (1.7 KiB)  
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0  
  
root@kali:~# ifconfig eth0 up  
root@kali:~# ifconfig  
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500  
    inet 192.168.127.130 netmask 255.255.255.0 broadcast 192.168.127.255  
    inet6 fe80::20c:29ff:fe18:6018 prefixlen 64 scopeid 0x20<link>  
    ether 00:0c:29:18:60:18 txqueuelen 1000 (Ethernet)  
    RX packets 108 bytes 7806 (7.6 KiB)  
    RX errors 0 dropped 0 overruns 0 frame 0  
    TX packets 53 bytes 4853 (4.7 KiB)  
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0  
  
lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536  
    inet 127.0.0.1 netmask 255.0.0.0  
    inet6 ::1 prefixlen 128 scopeid 0x10<host>  
    loop txqueuelen 1000 (Local Loopback)  
    RX packets 36 bytes 1908 (1.8 KiB)  
    RX errors 0 dropped 0 overruns 0 frame 0  
    TX packets 36 bytes 1908 (1.8 KiB)  
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

3. Displaying Hostname and Changing the Hostname

The “hostname” command prints the name of the system. “hostname newname” command for changing hostname.

A terminal window titled 'root@kali: ~' with standard window controls (minimize, maximize, close) and search, menu, and close buttons. The terminal shows a sequence of commands and their outputs: 'hostname' returns 'kali', 'hostname newname' returns 'newname', and 'hostname kali' returns 'kali'. The prompt 'root@kali:~#' is shown at the end of each line.

```
root@kali:~# hostname
kali
root@kali:~# hostname newname
newname
root@kali:~# hostname kali
kali
root@kali:~#
```