HOW TO CHANGE THE MAC ADDRESS OF AN ETHERNET INTERFACE

It is very easy to change the MAC address of an Ethernet interface and make this change permanent. I will briefly explain how to do this using standard commands and one particularly useful tool MAC Changer.

**Change the MAC address of an Ethernet interface temporarily**

Check MAC addresses:

```
$ ifconfig -a | awk '/HWaddr/ {print "Interface: " $1 " MAC: " $NF}]

Interface: eth0   MAC: 08:00:27:2c:a4:69
Interface: eth1   MAC: 08:00:27:9a:21:24
```

Shut down desired Ethernet interface (eth0 in this example):

```
$ sudo ifconfig eth0 down
```

Specify new MAC address:

```
$ sudo ifconfig eth0 hw ether 08:00:00:00:00:01
```

Activate modified Ethernet interface:
# ifconfig eth0 up

Verify changed MAC address:

```
$ ifconfig -a | awk '/HWaddr/ {print "Interface: " $1 " MAC: " $NF}'}
```

<table>
<thead>
<tr>
<th>Interface</th>
<th>MAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>eth0</td>
<td>08:00:00:00:00:01</td>
</tr>
<tr>
<td>eth1</td>
<td>08:00:27:9a:21:24</td>
</tr>
</tbody>
</table>

This change is not permanent as the MAC address on the interface `eth0` will revert to the default on next system reboot.

**Change the MAC address of an Ethernet interface permanently**

To permanently change MAC address of an Ethernet interface you need to edit `/etc/network/interfaces` configuration file and use `hwaddress` directive:

```
# This file describes the network interfaces available on your system

# and how to activate them. For more information, see interfaces(5).

# The loopback network interface
auto lo
iface lo inet loopback

# Network interfaces
allow-hotplug eth0
```
iface eth0 inet dhcp
   hwaddress ether 08:00:00:00:00:01
allow-hotplug eth1
iface eth1 inet dhcp

Reboot or reconfigure network interfaces by hand:

$ sudo service networking restart

MAC Changer

MAC Changer is a utility for viewing/manipulating the MAC address of network interfaces.

Install it using command:

$ sudo apt-get install macchanger

Set random vendor MAC address of the same kind:

$ sudo macchanger -a eth0

Permanent MAC: 84:8f:69:b0:fa:0a (unknown)
Current MAC: 84:8f:69:b0:fa:0a (unknown)
New MAC: 00:0e:37:5b:d7:31 (Harms & Wende Gmbh & Co. kg)

Set random vendor MAC address of any kind:

$ sudo macchanger -A eth0
Permanent MAC: 84:8f:69:b0:fa:0a (unknown)

Current MAC: 00:0e:37:5b:d7:31 (Harms & Wende Gmbh & Co.kg)

New MAC: 00:24:18:22:02:4b (Nextwave Semiconductor)

Set specific MAC address:

$ sudo macchanger -m 02:02:02:00:00:01 eth0

Permanent MAC: 84:8f:69:b0:fa:0a (unknown)

Current MAC: 00:24:18:22:02:4b (Nextwave Semiconductor)

New MAC: 02:02:02:00:00:01 (unknown)

Set fully random MAC:

$ sudo macchanger -r eth0

Permanent MAC: 84:8f:69:b0:fa:0a (unknown)

Current MAC: 02:02:02:00:00:01 (unknown)


Set another MAC address of the same vendor:

$ sudo macchanger -e eth0

Permanent MAC: 84:8f:69:b0:fa:0a (unknown)


New MAC: f6:61:c0:53:a0:5f (unknown)

Revert to the default MAC address:

$ sudo macchanger -p eth0
Permanent MAC: 84:8f:69:b0:fa:0a (unknown)

Current   MAC: f6:61:c0:53:a0:5f (unknown)

New       MAC: 84:8f:69:b0:fa:0a (unknown)

Display a vendor MAC address list to choose from

$ macchanger -l

Misc MACs:

<table>
<thead>
<tr>
<th>Num</th>
<th>MAC</th>
<th>Vendor</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>00:00:00:00 - Xerox Corporation</td>
<td></td>
</tr>
<tr>
<td>0001</td>
<td>00:00:00:01 - Xerox Corporation</td>
<td></td>
</tr>
<tr>
<td>0002</td>
<td>00:00:00:02 - Xerox Corporation</td>
<td></td>
</tr>
<tr>
<td>0003</td>
<td>00:00:00:03 - Xerox Corporation</td>
<td></td>
</tr>
<tr>
<td>0004</td>
<td>00:00:00:04 - Xerox Corporation</td>
<td></td>
</tr>
<tr>
<td>0005</td>
<td>00:00:00:05 - Xerox Corporation</td>
<td></td>
</tr>
<tr>
<td>0006</td>
<td>00:00:00:06 - Xerox Corporation</td>
<td></td>
</tr>
<tr>
<td>0007</td>
<td>00:00:00:07 - Xerox Corporation</td>
<td></td>
</tr>
<tr>
<td>0008</td>
<td>00:00:00:08 - Xerox Corporation</td>
<td></td>
</tr>
<tr>
<td>0009</td>
<td>00:00:00:09 - Xerox Corporation</td>
<td></td>
</tr>
<tr>
<td>0010</td>
<td>00:00:00:0a - Omron Tateisi Electronics Co.</td>
<td></td>
</tr>
<tr>
<td>0011</td>
<td>00:00:00:0b - Matrix Corporation</td>
<td></td>
</tr>
<tr>
<td>0012</td>
<td>00:00:00:0c - Cisco Systems, Inc.</td>
<td></td>
</tr>
</tbody>
</table>
Common problems

$ ifconfig eth0 hw ether 02:00:01:00:00:02

SIOCSIFHWADDR: Operation not permitted

You need root permissions to alter network interface.

$ sudo ifconfig eth0 hw ether 02:00:00:10:10:10

SIOCSIFHWADDR: Device or resource busy - you may need to down the interface

Shut down the network interface first.

$ sudo ifconfig eth0 hw ether 01:00:00:10:10:10

SIOCSIFHWADDR: Cannot assign requested address

This is not an unicast address as the first octet needs to be even. Look at the image below to understand it better. This image is from Wikipedia - MAC address page and licensed under the Creative Commons Attribution-Share Alike 2.5 Generic, 2.0 Generic and 1.0 Generic license.
Source: https://blog.sleeplessbeastie.eu/2013/01/11/how-to-change-the-mac-address-of-an-ethernet-interface/