RHEL: Rename a network interface on RHEL 7

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# Tested on CentOS 7 (Virtual server)

# RHEL 6 introduced the Consistent Network Device Naming, feature
that sets the name of
# network interfaces in order to make locating and differentiating
the interfaces easier.

# This feature assigns automatically, during boot-up process, names
to network interfaces
# whether they are embedded or in PCI slots, so they are persistent
across reboots and
# hardware changes. Given names are based on:
#
# – firmware/bios-provided index numbers for on-board devices
# – firmware-provided pci-express hotplug slot index number
# – physical/geographical location of the hardware
# – the interface’s MAC address
#
# Consistent Network Device Naming convention:
#
# Two character prefixes based on the type of interface:
#   en -- ethernet
#   sl -- serial line IP
#   wl -- wlan
#   ww -- wwan
#
# Type of names:
#   b<number>                             -- BCMA bus core number
```

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#   ccw<name>                                   -- CCW bus group name
#   o<index>                                    -- on-board device index
number
#   s<slot>[f<function>][d<dev_port>]     -- hotplug slot index
number
#   x<MAC>                                      -- MAC address
#   [P<domain>]p<bus>s<slot>[f<function>][d<dev_port>]
#                                               -- PCI geographical
location
#   [P<domain>]p<bus>s<slot>[f<function>][u<port>][..]1[i<interface>]
#                                               -- USB port number chain

ip addr
   1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state
UNKNOWN
       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: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc
pfifo_fast state UP qlen 1000
       link/ether 08:00:27:48:a7:ef brd ff:ff:ff:ff:ff:ff
       inet 192.168.54.113/24 brd 192.168.54.255 scope global enp0s3
          valid_lft forever preferred_lft forever
       inet6 fe80::a00:27ff:fe48:a7ef/64 scope link
          valid_lft forever preferred_lft forever

# We can see that name has been assigned during boot-up:

dmesg | egrep "enp0s3|eth"
   [   12.329024] e1000 0000:00:03.0 eth0: (PCI:33MHz:32-bit)
08:00:27:48:a7:ef
   [   12.329854] e1000 0000:00:03.0 eth0: Intel(R) PRO/1000 Network
Connection
   [   97.455465] e1000: enp0s3 NIC Link is Up 1000 Mbps Full Duplex,
Flow Control: RX
```

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# Starting with RHEL 7, this feature is enabled by default. If, for
some reason, you want to
# choose your own names for network interfaces, follow this
procedure:


# First of all, disable the naming rule. To do that, edit
/etc/default/grub file and add
# "net.ifnames=0" parameter to GRUB_CMDLINE_LINUX variable:

vi /etc/default/grub
   [...]
   GRUB_CMDLINE_LINUX="crashkernel=auto rd.lvm.lv=rootvg/lv_root
rd.lvm.lv=rootvg/lv_swap rd.lvm.lv=rootvg/lv_usr net.ifnames=0 rhgb
quiet"
   [...]

# Then, regenerate grub configuration by running this command:

grub2-mkconfig -o /boot/grub2/grub.cfg
   Generating grub configuration file ...
   Found linux image: /boot/vmlinuz-3.10.0-327.el7.i686
   Found initrd image: /boot/initramfs-3.10.0-327.el7.i686.img
   Found linux image: /boot/vmlinuz-0-rescue-
ccddb0f617bc493baa4e9f7d7b8e4612
   Found initrd image: /boot/initramfs-0-rescue-
ccddb0f617bc493baa4e9f7d7b8e4612.img
   done


# Once finished you have to create a udev rule,
/etc/udev/rules.d/70-persistent-net.rules,
# to effectively rename the network interface at boot time:

vi /etc/udev/rules.d/70-persistent-net.rules
   SUBSYSTEM=="net", ACTION=="add", DRIVERS=="?*",
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ATTR{address}=="08:00:27:48:a7:ef", ATTR{type}=="1", KERNEL=="eth*",
NAME="my_eth0"

# *** Do not forget to update /etc/sysconfig/network-scripts/ifcfg-*
file conveniently !


# To make this change effective, reboot the server:

systemctl reboot

# And verify:

dmesg | egrep "enp0s3|eth"
   [   19.046271] e1000 0000:00:03.0 eth0: (PCI:33MHz:32-bit)
08:00:27:48:a7:ef
   [   19.048890] e1000 0000:00:03.0 eth0: Intel(R) PRO/1000 Network
Connection
   [   99.567957] e1000: my_eth0 NIC Link is Up 1000 Mbps Full
Duplex, Flow Control: RX

ip addr
   1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state
UNKNOWN
       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: my_eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc
pfifo_fast state UP qlen 1000
       link/ether 08:00:27:48:a7:ef brd ff:ff:ff:ff:ff:ff
       inet 192.168.54.113/24 brd 192.168.54.255 scope global my_eth0
          valid_lft forever preferred_lft forever
       inet6 fe80::a00:27ff:fe48:a7ef/64 scope link
          valid_lft forever preferred_lft forever
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