

# OEL 7 – How to disable IPv6 on Oracle Linux 7

Article Number: 349 | Rating: Unrated | Last Updated: Fri, Aug 3, 2018 11:58 AM

In case you are not interested in IPv6, you can use the following HowTo to disable it on Oracle Linux 7. Unless you have something very very special on your System, these 10 Steps should do it.

1. First of all, check if IPv6 is active at all
2. Add the `disable_ipv6 = 1` entries to the `/etc/sysctl.conf` file
3. Disable IPv6 in all `/etc/sysconfig/network-scripts/ifcfg-*` files, e.g.
4. Disable IPv6 in `/etc/sysconfig/network`
5. Remove the “`::1`” line from the `/etc/hosts` file
6. Remove the “`restrict -6`” line from the `/etc/ntp.conf`
7. Add `ipv6.disable=1` to the `GRUB_CMDLINE_LINUX` entry in the `/etc/default/grub` file
8. Regenerate a GRUB configuration file and overwrite the existing one
9. Reboot the server
10. Confirm if IPV6 is disabled

First of all, check if IPv6 is active at all

```
1 [root@dbidg01 ~]# /sbin/ip -6 addr
2
3 1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536
4
5     inet6 ::1/128 scope host
6
7         valid_lft forever preferred_lft forever
```

```

5      2: enp0s3:
6      <BROADCAST,MULTICAST,UP,LOWER_UP>
7      mtu 1500 qlen 1000
8
9      inet6 fe80::ad02:9b6a:bf40:5a3a/64 scope link
10     valid_lft forever preferred_lft forever
11
12     3: enp0s8:
13     <BROADCAST,MULTICAST,UP,LOWER_UP>
14     mtu 1500 qlen 1000
15
16     inet6 fe80::a00:27ff:feb8:3544/64 scope link
17     valid_lft forever preferred_lft forever

```

Add the `disable_ipv6 = 1` entries to the `/etc/sysctl.conf` file

```

1      #-- Disable IPv6
2
3      net.ipv6.conf.all.disable_ipv6 = 1
4
5      net.ipv6.conf.default.disable_ipv6 = 1

```

Disable IPv6 in all `/etc/sysconfig/network-scripts/ifcfg-*` files, e.g.

```
1
2
cat /etc/sysconfig/network-scripts/ifcfg-enp0s3 |
grep IPV6INIT

IPV6INIT=no
```

Disable IPv6 in /etc/sysconfig/network

```
1
2
cat /etc/sysconfig/network | grep
NETWORKING_IPV6

NETWORKING_IPV6=no
```

Remove the following line from the /etc/hosts file

```
1
::1    localhost localhost.localdomain localhost6
localhost6.localhostain6
```

Remove the following line from the `/etc/ntp.conf`

```
1 cat /etc/ntp.conf | egrep ' -6'
```

```
2 restrict -6 default kod nomodify notrap nopeer
```

```
3 noquery
```

```
restrict -6 ::1
```

Add `ipv6.disable=1` to the `GRUB_CMDLINE_LINUX` entry in the `/etc/default/grub` file

```
1 [root@dbidg01 /]# cat /etc/default/grub | grep
2 GRUB_CMDLINE_LINUX

GRUB_CMDLINE_LINUX="ipv6.disable=1
crashkernel=auto rd.lvm.lv=ol/root
rd.lvm.lv=ol/swap rhgb quiet numa=off
transparent_hugepage=never"
```

Regenerate a GRUB configuration file and overwrite the existing one

```
1 [root@dbidg01 /]# grub2-mkconfig -o
2 /boot/grub2/grub.cfg
```

```
3      Generating grub configuration file ...
4
5      Found linux image:
6      /boot/vmlinuz-4.1.12-61.1.19.el7uek.x86_64
7
8      Found initrd image:
9      /boot/initramfs-4.1.12-61.1.19.el7uek.x86_64.img
10
11     Found linux image:
12     /boot/vmlinuz-4.1.12-61.1.18.el7uek.x86_64
13
14     Found initrd image:
15     /boot/initramfs-4.1.12-61.1.18.el7uek.x86_64.img
16
17     Found linux image:
18     /boot/vmlinuz-3.10.0-514.el7.x86_64
19
20     Found initrd image:
21     /boot/initramfs-3.10.0-514.el7.x86_64.img
22
23     Found linux image: /boot/vmlinuz-0-rescue-547c48
24     bd53614a2ca2d16909b3c14419
25
26     Found initrd image: /boot/initramfs-0-rescue-547c4
27     8bd53614a2ca2d16909b3c14419.img
28
29     done
```

Reboot the server

```
1      init 6
```

Confirm if IPV6 is disabled

```
1 [root@dbidg01 ~]# /sbin/ip -6 addr
2 [root@dbidg01 ~]# lsmod | grep -i v6
```

In case the ip and the lsmod command do not return anything back, then you have successfully disabled IPv6.

And 10 reasons why by disabling IPv6 you are costing your company and customer money!

Enabling IPv6:

1. Identify application problems such as hard-coded IPv4 addresses <- hurts scaling!
2. Identify misconfigured network, applications, virtualized systems, and containers <-exposes downtime risks!
3. Eliminate overlapping IPv4 addresses <-Eliminiat operations and application complexity
4. Eliminate DHCPv4 address exhaustion ( $2^8$  vs.  $2^{64}$  per network) <-Eliminiat operations and application complexity
5. Reduce battery usage on IoT and mobile devices between 12% and 30% <-Eliminiat NAT – Happer customers
6. Offer customers new IOT solution [Machine2Machine, Machine2Cloud, Machine2Cloud+Customer, Customer to Macine+Cloud)
7. Harder for attackers to scan, harder to target, easier to find attackers <-Lowers risk
8. Reduction in customer latency between 10% and 40% <- Happer Customers
9. Reduction in Opex/Capex for data centers – 10-30% <- Happer management and investors

10. Reduction in SPAM (to 7%) and DDOS (2%) <- Happer customers, management and investors

Bonus: Eliminate NAT all devices end-to-end <- reduced code size, inclusion of additional libraries, and complexity

Contact me if you want details.

Joe Klein, CTO Disrupt6; IPv6 Forum – Fellow

Posted - Fri, Aug 3, 2018 11:57 AM. This article has been viewed 20891 times.

Online URL: <http://kb.ictbanking.net/article.php?id=349>