

Journey from RHEL 7 to CentOS 7 and Oracle Linux 8 with elevate

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Author: Dominik Wombacher
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From a technical point of view, every Red Hat Enterprise Linux derivative is as good as the original. If you are happy with community support, your use case doesn't require a specific vendor and their support services, you can choose from a lot of really good options.

At work we still have some RHEL 7 VMs in our Management Environment where we actually don't need any sort of support subscriptions. If there is anything broken, we have to fix it on our own, nothing where, in this case, Red Hat could and will help us.

But to have at least the option to pay for vendor support again, something you need in larger companies to calm down your management, we opted to migrate RHEL 7 Systems to [Oracle Linux](#), even though I would personally pick [RockyLinux](#) because of the community behind it.

The migration will be done in two Steps:

1. From RHEL 7 to latest CentOS 7 release
2. From CentOS 7 to Oracle Linux 8

Step 1 feels a little "hacky" and involves some manual steps, for Step 2 we going to use [elevate from AlmaLinux](#).

I will not talk about RHEL 7 > CentOS 7 in detail, just some notes about potential pitfalls, there are tons of guides out to about that topic, for example [this one](#) (Archive: [1], [2]), [this one](#) (Archive: [1], [2]) or [this one](#) (Archive: [1], [2]).

Some things you should keep in mind during RHEL 7 to CentOS 7:

- If you use a HTTP Proxy, configure it correctly on OS Level and ensure the mirrors you going to use are whitelisted
- You have a Red Hat Satellite 6 Server running and the VM registered? Remove also those packages when removing all other redhat / rhn related ones.
- Disable, or even better, remove the subscription manager, you don't need it anymore and it will cause problems otherwise
- Verify that there is enough free space available, you will probably need ~2GB for new downloaded packages

In-Place Upgrade from Enterprise Linux 7 to 8 is technically possible and something Red Hat even officially support for RHEL 7 to RHEL 8. It uses the leapp framework under the hood, which is also the basis of AlmaLinux elevate Project. They describe it as following: `ELevate enables migration between major versions of RHEL® derivatives. Easily go from CentOS 7.x to any 8.x of your choice.`


```
=====
                                REPORT
=====

A report has been generated at /var/log/leapp/leapp-report.json
A report has been generated at /var/log/leapp/leapp-report.txt

=====
                                END OF REPORT
=====
```

Reboot your VM and, if available, watch the rest of the Upgrade through the VMWare / KVM or whatever other Console your Hypervisor provides. It will boot into *ELevate-Upgrade-Initramfs*, perform the whole CentOS 7 to Oracle Linux 8 magic and boot into your new OL8 System afterwards.

Some additional steps I did as soon the System was up and running again:

```
alternatives --set python /usr/bin/python3
# link 'python' to 'python3' for backward compatibility

dnf remove puppet
# we don't need the old puppet agent which was connected to satellite, forgot to remove it earlier...

cat /etc/redhat-release
cat /etc/os-release
rpm -qa | grep centos
rpm -qa | grep el7
# Verify that we running on the expected OS, in case of some el7 leftover, check if that's related to installed applications that might also require a update

dnf clean
dnf upgrade

grubby --set-default /boot/vmlinuz-5.4.17-2136.305.5.3.el8uek.x86_64
# Change from Standard EL8 Kernel to OL UEK

reboot
```

And that's it, except the extra step to configure http proxy, which isn't mention in the AlmaLinux Quickstart Guide yet, it went very smoothly and seem to result in a stable system, so far I'm happy with the results and can recommend to give elevate a try.