

**MIGRATING
FOREMAN FROM EL7
TO EL8 USING
LEAPP/ELEVATE**

\$ whoami

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AGENDA

1. Why upgrading?
2. Different upgrade paths
3. LEAPP details

WHY UPGRADING?

- Newer is better (🙄)
- Foreman is **dropping EL7 support in 3.3**
- EL7 is slowly becoming a maintenance burden

DIFFERENT UPGRADE PATHS

- on Debian: `sed 's/buster/bullseye/' apt update && apt upgrade`
- EL-based distributions don't support this
- classical answer “just redeploy”
(backup/restore)
- you *can* make upgrades work, manually
- or use supported tooling like LEAPP/ELevate

BACKUP/RESTORE?!

- not an *upgrade* per se
- you take a backup of your EL7 Foreman
- and restore it on EL8
- clean, supported, slow


MANUAL UPGRADE

- add EL8 repos
- tinker with yum/dnf until all EL7 packages are replaced with their EL8 pendants
 - extra fun with SCL → Module “translation”
- dirty, unsupported, quick

LEAPP/ELEVATE

- LEAPP is the official Red Hat tool to do RHEL7 to RHEL8 upgrades
- ELevate is a project by AlmaLinux to extend support to AlmaLinux, CentOS, and other EL-derivatives
- contains logic how to map/update packages, services and configurations

LEAPP/ELEVATE

- LEAPP can be extended with custom Actors
- users can write own Actors to extend support beyond the basics
- guess what we did...
- clean, supported, quick ()

LEAPP DETAILS

WORK IN PROGRESS

- Actors for the Satellite EL7 to EL8 upgrade are WIP: [PR#733](#)
- The code should equally work for Foreman/Katello 3.1+/4.3+

UPGRADE STEPS

- Replace all EL7 packages with EL8 versions
 - Replace SCLs with Modules
 - Translate package names
 - Remove unnecessary packages
- Update configuration files

MODULARITY SUPPORT

- Modules are a new concept in EL8, replacing SCLs
- Upgrading SCLs is out of scope for LEAPP
- Thus also no need for Modularity
- Support for enabling modules came recently in [PR#672](#)

RPM AND SYMLINKS

- RPM can't replace a symlink with a directory ([BZ#2018131](#))
- When you try to upgrade PostgreSQL 12 from SCL to module, exactly this happens
- DNF aborts the transaction
- Workaround: have a hook that removes that symlink before the DNF transaction starts

OUR INSTALLER IS NICE AND SLOW

- instead of teaching LEAPP to translate configurations we run `foreman-installer`
- this is rather slow, but saves us from code duplication
- happens in “First Boot” phase

LEAPP UPGRADE

```
# yum install leapp  
# leapp preupgrade  
# leapp upgrade  
# reboot
```


LINKS

- [Foreman 3.3 drops EL7](#)
- [LEAPP project](#)
- [ELevate](#)
- [ELevate quickstart guide](#)
- [Foreman/Katello/Satellite Actor PR for LEAPP](#)

THANKS!

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