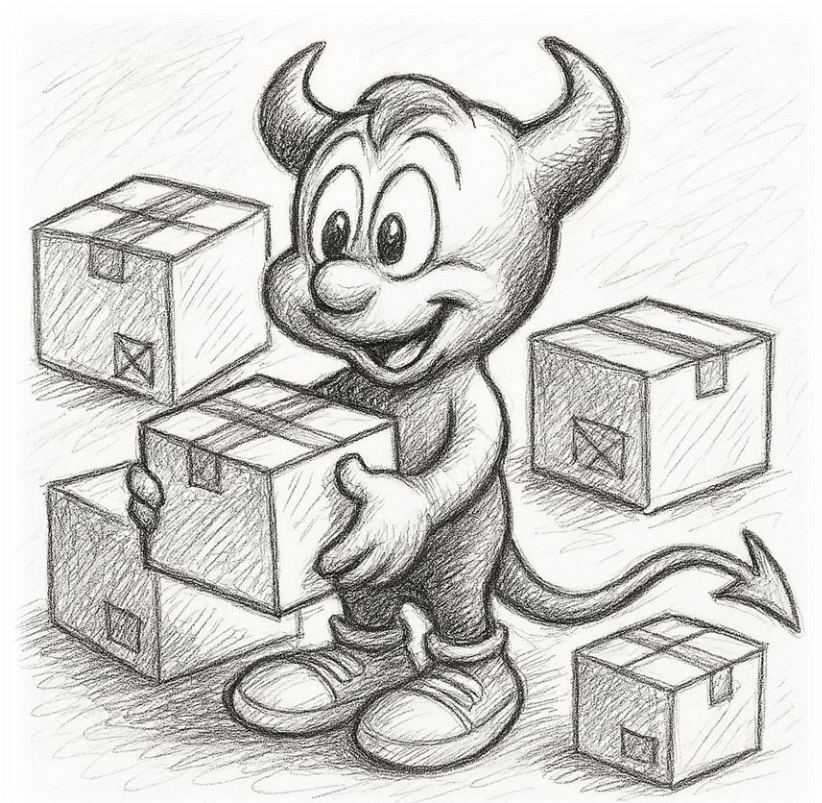


Getting started with pkgbase

Lukas Engelhardt, EuroBSDCon Zagreb, 27.09.2025

Agenda

- What is this pkgbase stuff?
- Why should i use it?
- Converting existing Hosts
- How to perform minor upgrades?
- How to perform major upgrades?
- Building your own packages
- Things to keep in mind



What's that pkgbase stuff?

- `pkg(8)` now can update your base system
- Base system get's packaged in smaller pieces (525 in 14.3)
- New default for updating the system, replaces `freebsd-update(8)`



Why should i use it?

- It's fast... sooo fast!
- Modular design
- It's the new default



Converting existing Hosts...

- Update to 14.x via freebsd-update
- Then use pkgbasify!
 - Creates boot environment
 - Creates repo config files
 - Upgrades existing components to pkgbase
 - Merges config files
 - Updates passwd and capabilities databases
 - Restarts sshd
- You are ready!
- *Upgrading 13.x to 14 works too (not with pkgbasify though)*

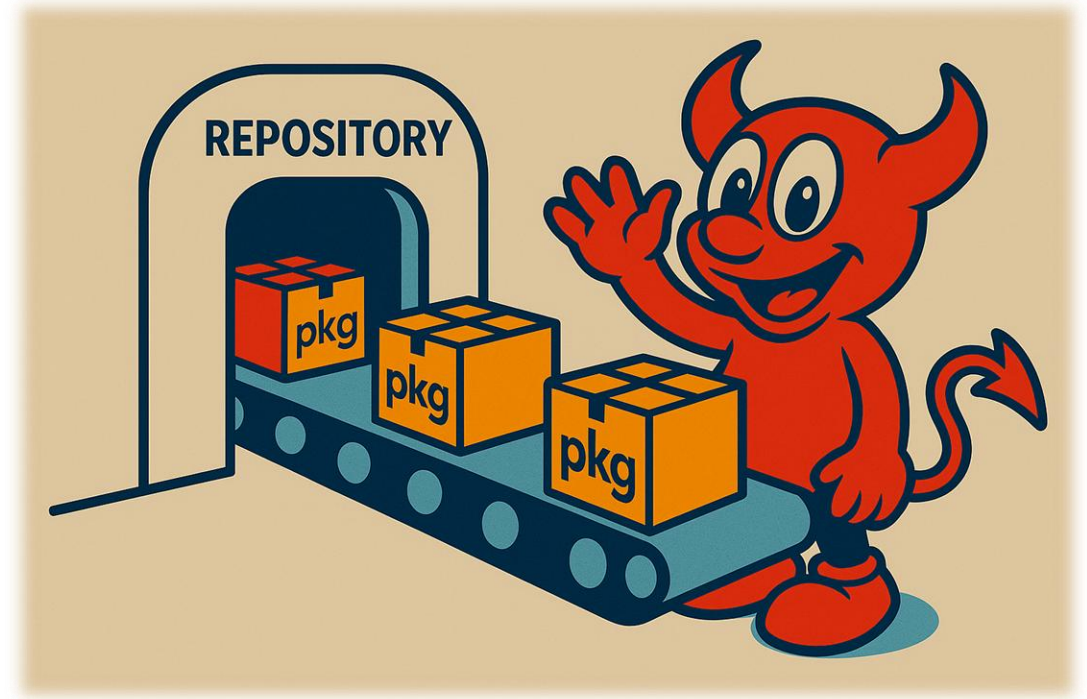


Converting existing Hosts... the hard way

- Create repo config
- **Create boot environment**
- # pkg update
- # pkg install -r FreeBSD-base -g 'FreeBSD-*'
- # cp /etc/ssh/sshd_config.pkgsave /etc/ssh/sshd_config
- # cp /etc/master.passwd.pkgsave /etc/master.passwd
- # cp /etc/group.pkgsave /etc/group
- # pwd_mkdb -p /etc/master.passwd
- # service sshd restart
- # cp /etc/sysctl.conf.pkgsave /etc/sysctl.conf
- Copy back every config file you changed in /etc (like ntp etc)
- reboot

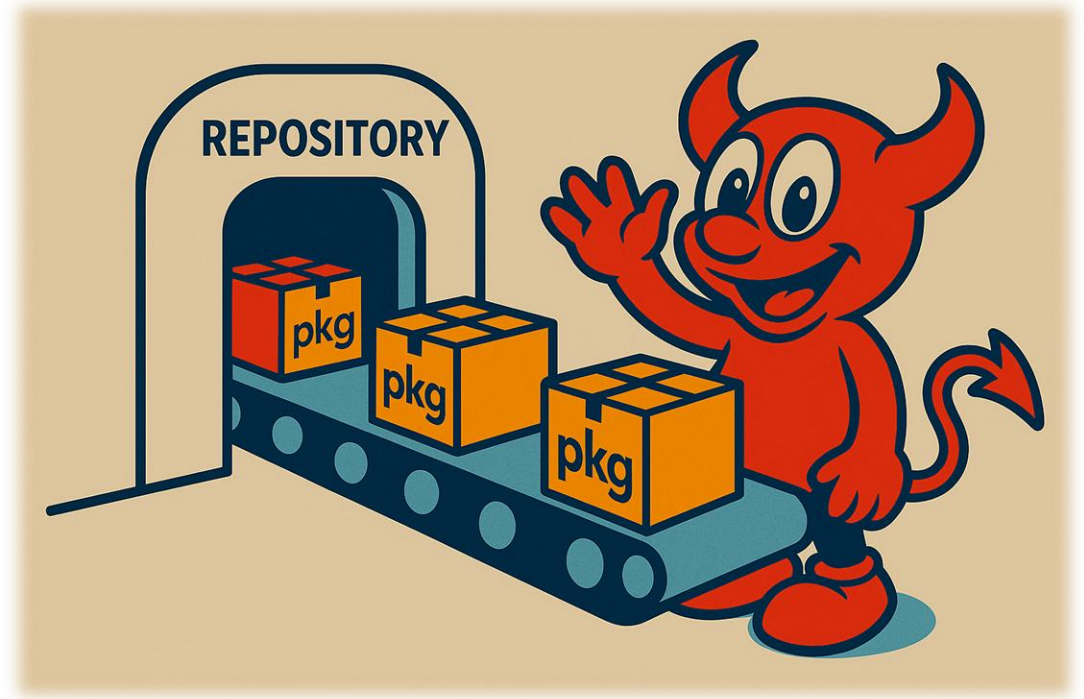
Demo: patch level update 14.2p3 -> 14.2p5

- create boot environment
- pkg update
- pkg upgrade



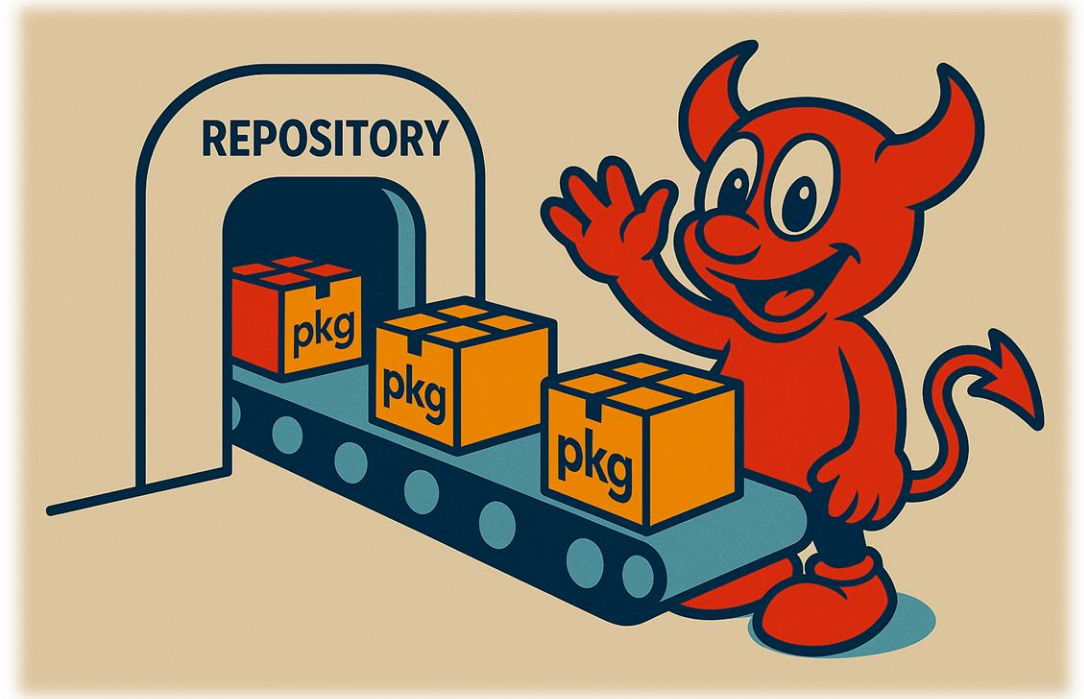
Demo: minor upgrades 14.2 -> 14.3

- create boot environment
- change `/usr/local/etc/pkg/repos/FreeBSD-base.conf` url to `base_release_3`
- `pkg update`
- `pkg upgrade`
- That's it!



Demo: major upgrades

- create boot environment
- pkg update
- `# env ABI=FreeBSD:15:amd64 pkg-static upgrade`
- reboot



Build your own packages

- For local upgrades
- Maybe multiple hosts
- Maybe without direct internet connection
- Multiple hosts with slow internet?

Things to keep in mind

- Some things are still not polished
- Upgrading does not include boot environment creation
- Do not remove all packages! You will destroy your system!
- Backup, Backup, Backup

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