



Overview of
{yum,zypp}.postgresql.org,
and challenges around RPMifying
extensions

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Postgres Expert @ EDB

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Self introduction

- PostgreSQL Major Contributor
- Responsible for the PostgreSQL RPM repos (Red Hat, Rocky, AlmaLinux, Fedora and SLES)
- Fedora and Rocky Linux contributor
- PostgreSQL community member
- Postgres expert @ EDB
- London, UK.

Nowadays:



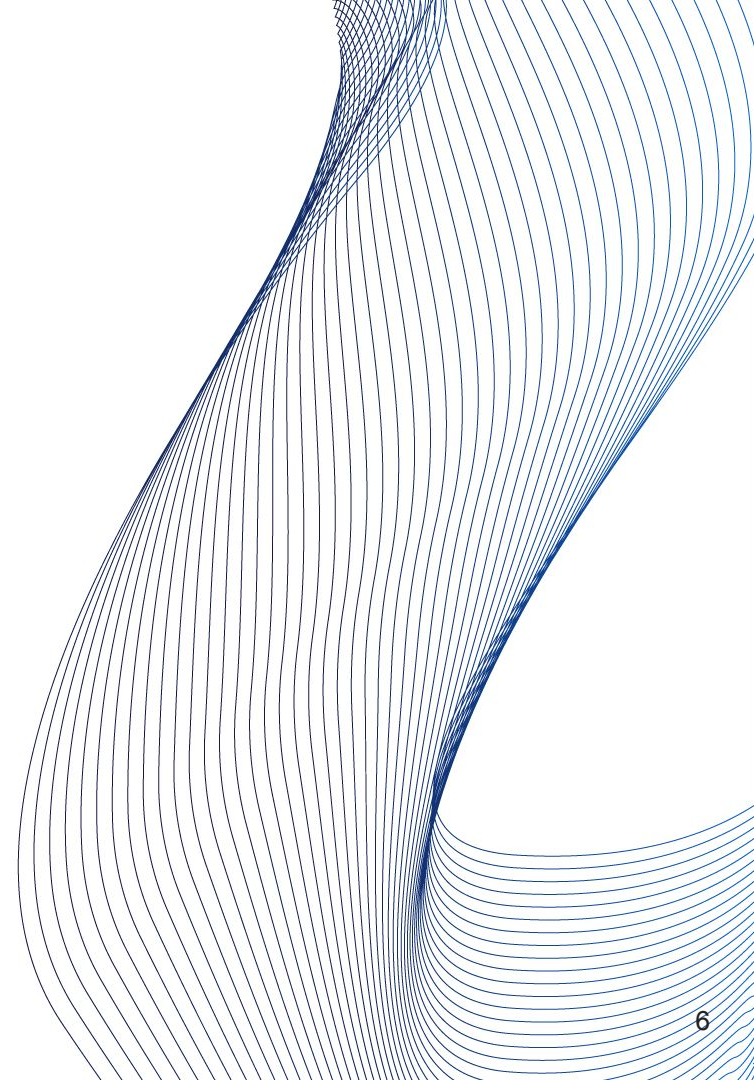
Agenda

- How it started?
- Repository contents
- Supported distros
- Extension packaging
- How to RPMify an extension?
- Updating an extension
- Horror story: PostgreSQL XY Beta is out!
- Where is the maintainer?
- Relying on external repositories

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 - No signature, nothing “official”.

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- 2008 : First RPM Buildfarm
- 2010: “Multiple postmaster support” (9.0)

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- ... and now: 2024!

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 - patroni support (consul, consul-template, ETCD, HAProxy, keepalived, vip-manager)
- **non-free**
 - Packages that depend on closed source software or has license restrictions:
 - ora2pg, oracle_fdw, pg-strom, timescaledb-tsl, informix_fdw , informix_fdw, perl-DBD-Oracle

Supported distros

Supported distros

- **Red Hat Enterprise Linux**
 - Rocky Linux, AlmaLinux
 - x86_64, aarch64, ppc64le
 - RHEL 9, 8 and 7
- **Fedora Linux**
 - x86_64
 - Only 2 major releases supported (matches Fedora lifecycle)
- **SuSE Enterprise Linux**
 - x86_64
 - SLES 15 and SLES 12

Extension packaging

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- **Separate package for each major version**
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- Base for the out-of-core extensions

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 - Less often: ExtensionNameExtensionMajorVersion_PGMajorVersion
 - postgis34_16

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- Fedora is safe.

How to RPMify an extension?

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 - Used to carry more patches in the past, but we now export PATH.

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 - etc.

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 - GCC, CMake, LLVM, etc.
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- **No proper announcement!**

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 - This is another real challenge
 - Fedora has a in-house solution
 - Not impossible to use for us, needs hacking

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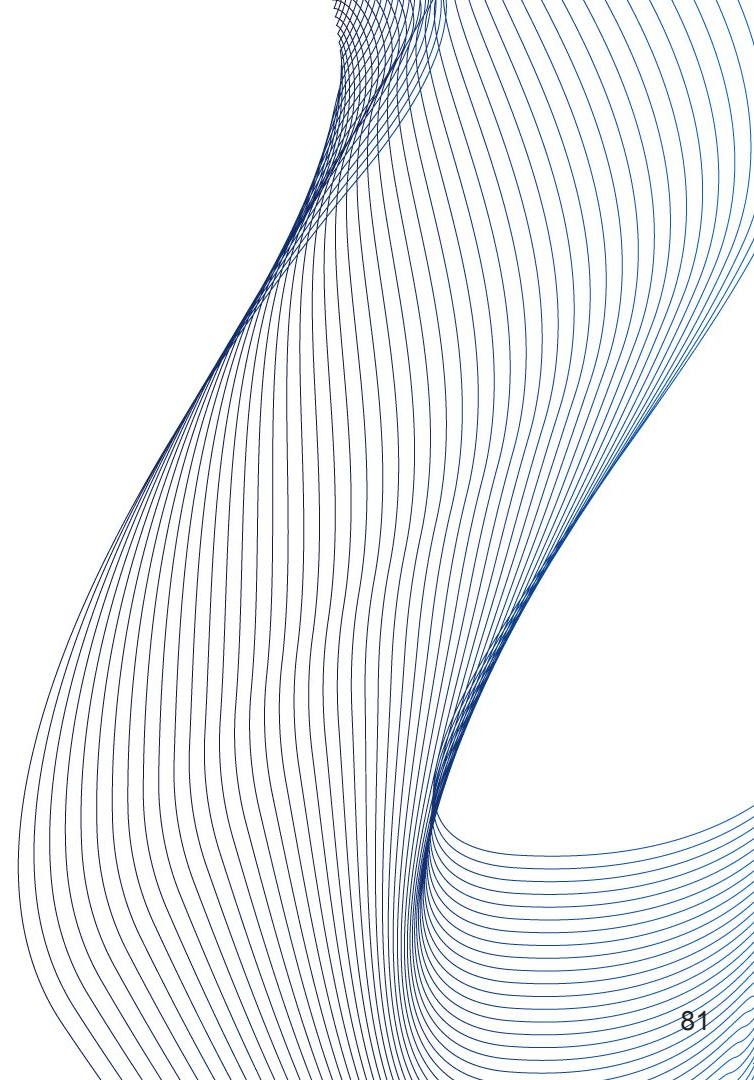
Updating an extension

- Did it break anything?
- Did it break a previous (and supported) PostgreSQL release?
 - Yeah, it happens
- Did the upgrade path work?
- Did I break anything?

Horror Story:
PostgreSQL XY
Beta is out!

Life of a Packager...

- “PostgreSQL XY Beta 1 is out”



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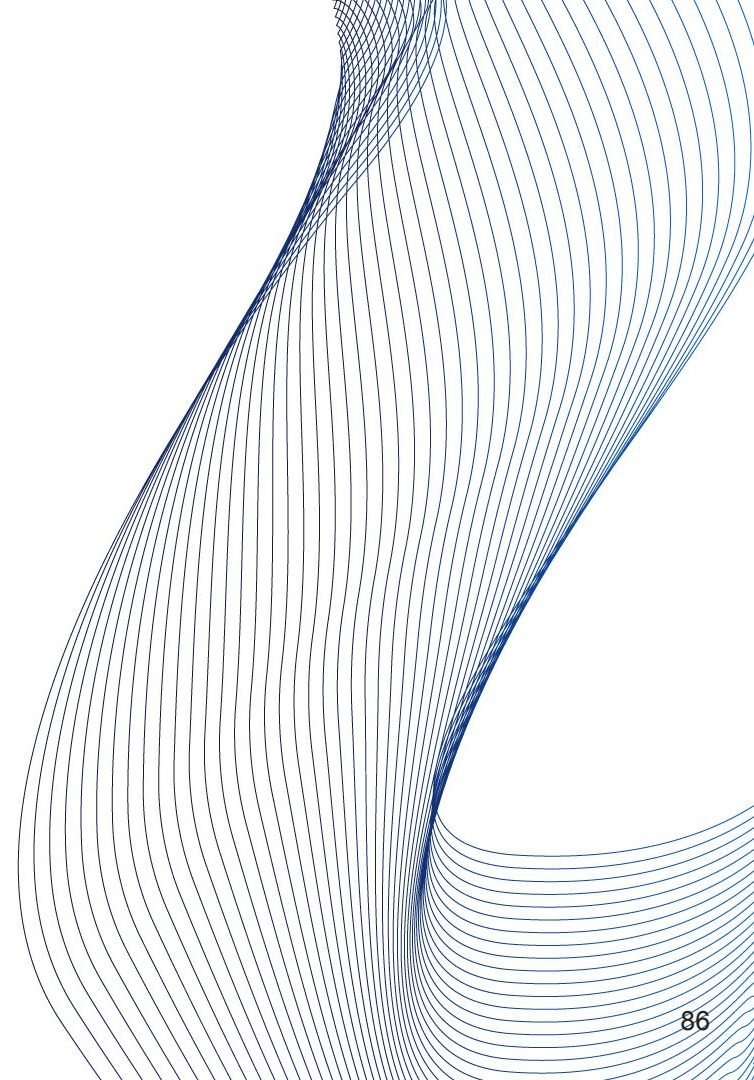
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 - Many of them fail
 - Create ticket against each one
 - “Display” them under [wiki.postgresql.org](https://wiki.postgresql.org/wiki/PostgreSQL_16_Extension_Bugs):
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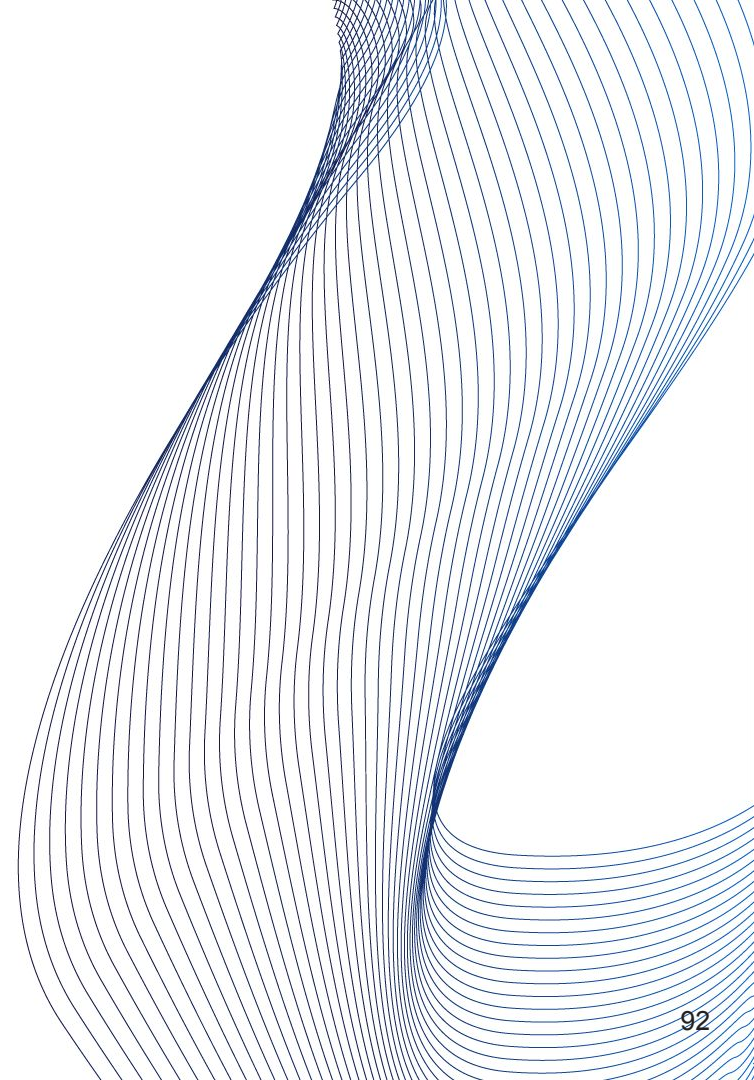
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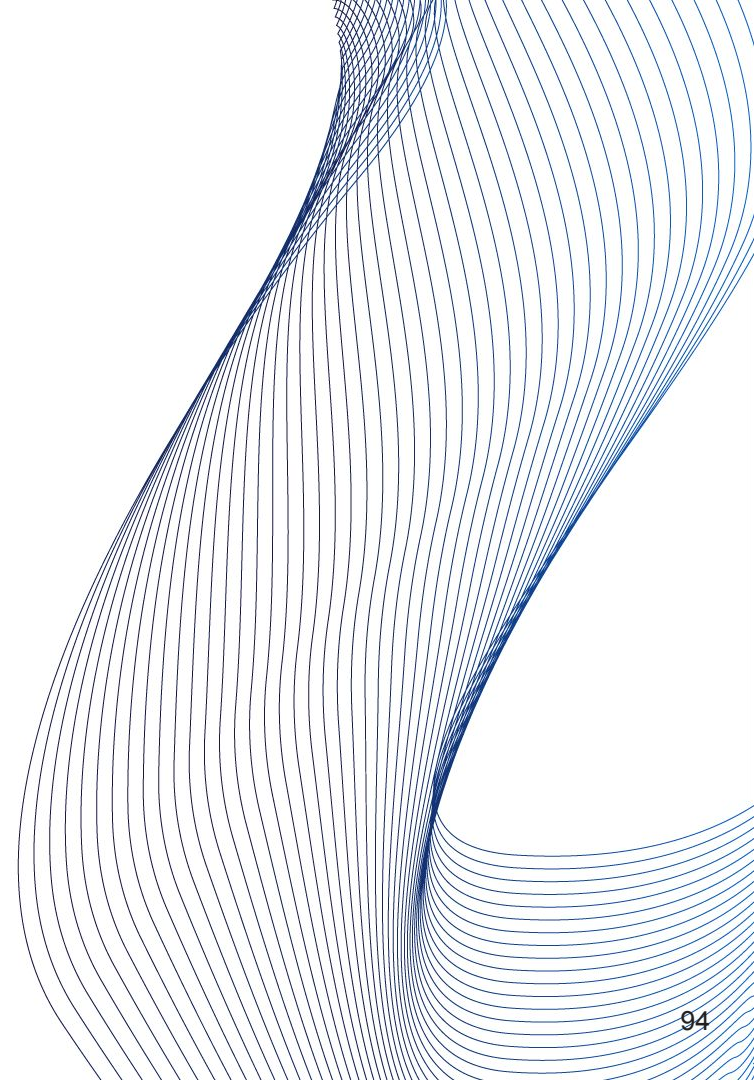
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Where is the
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Non-responsive maintainers

- No response to the tickets/emails



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- Not updating the extensions for the recent PostgreSQL versions
- Not updating the extensions for the new GCC versions

Non-responsive maintainers

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- Going to conferences may help to find maintainers in person :-)

Relying on external repositories

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- **Could be a problem for EPEL, but I can add any package there**
 - OTOH, EPEL is not *that* external.

Cost!

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- Hosting a build server

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 - Have to use some external resources for architectural reasons
 - “sysadmin” tasks
- **Maintaining build instances**
- **Employing the packager**
 - We have bills to pay (or beers to drink)

THANK YOU

Now it is time for questions!



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