



**EDB**

Postgres for the AI Generation

# State of the PostgreSQL RPMs (or simply “oops”)

Tom Lane

PostgreSQL RPM maintainer

Postgres Expert @ EDB

May 2025



# State of the PostgreSQL RPMs (or simply “oops”)

Devrim Gündüz  
PostgreSQL RPM maintainer  
Postgres Expert @ EDB  
May 2025

Before we start:






**EDB**

Postgres for the AI Generation



A person in a dark hoodie stands in a field of tall grass, looking up at a dramatic, cloudy sky. A large, faint watermark logo is visible in the background.

# It's now actually 75 slides!

A bright future ahead for us  
:-)





**EDB**

Postgres for the AI Generation

## Self Introduction

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

...and nowadays:





# DJing!





# DJing!



“oops”



# State of the PostgreSQL PGDG RPMs



# PostgreSQL Version support

- PostgreSQL 18 (**Alpha!!! DO NOT USE IN PRODUCTION**)
- PostgreSQL 17
- PostgreSQL 16 (16.8)
- PostgreSQL 15 (Cool!)
- PostgreSQL 14 (Good old friend)
- PostgreSQL 13 (consider upgrading)
- PostgreSQL 12 (EOLed in Nov 2024)
- PostgreSQL 11 (EOLed in November 2023)
- PostgreSQL 10 (Really?)
- PostgreSQL 9.2 (yum install postgresql on RHEL 7)



# Platform support

- Red Hat Enterprise Linux 10, 9, 8 (and 7, which was kinda EOled in June 2024)
  - x86\_64
  - aarch64
  - ppc64le (for RHEL 9, 8 and 7 )
- Rocky Linux 9, 8
  - x86\_64
  - aarch64
- AlmaLinux 10, 9, 8
  - x86\_64
  - aarch64
  - ppc64le
- SUSE Enterprise Linux 15, 12
  - x86\_64
  - Only the last Service Pack (SP)
- Fedora 41, 30
  - x86\_64
  - aarch64 (maybe...)



# Platform support

“It must not be hard”

```
%if 0%{?fedora} == 39
BuildRequires:    zlib-devel
Requires:         zlib
%endif
%if 0%{?fedora} == 40
BuildRequires:    zlib-ng-compat-devel
Requires:         zlib-ng-compat
%endif
%if 0%{?rhel} >= 8
BuildRequires:    zlib-devel
Requires:         zlib
%endif
%if 0%{?suse_version} >= 1315
BuildRequires:    zlib-devel
Requires:         libz1
%endif
```





# Packages

- common: 139
- non-common: 165
- non-free: 8
- extras: 8

Total: 320



...and users:



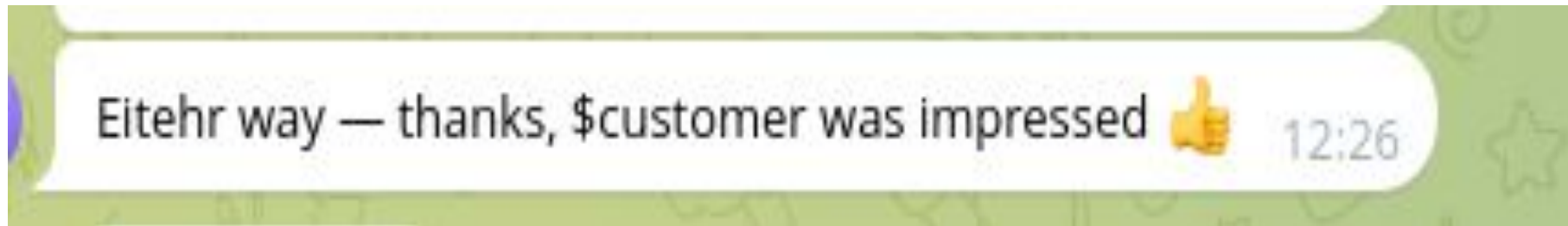
Love good feedback.

```
>  
It worked like a charm for my customer. Thanks again.
```



# Love good feedback.

(A bug report solved in 8 mins including sync)



The biggest feature:



\o/

No -1 from Tom Lane (yet!)





“evil”



# “oops”

Metallica - “Am I evil?”

Huge +1 to that. I have thought many times, and even said to Devrim, a huge number of people trust him to not be evil.



but then...



but then...

We all love surprises:

## **Red Hat strikes a crushing blow against RHEL downstreams**

From now on, only CentOS Stream's source code is available to all



“oops”

- “Build RPMs on RHEL, they’ll work on derivatives”



“oops”

- “Build RPMs on RHEL, they’ll work on derivatives”
- GONE!





# “oops”

- “Build RPMs on RHEL, they’ll work on derivatives”
- GONE!
  - Already had issues with CentOS 8!



“oops”

- Lots of derivatives exist



# “oops”

- Lots of derivatives exist
- Can we support all?



# “oops”

- Lots of derivatives exist
- Can we support all?
- Yes, and it is a challenge!



“oops”

wanted to mention briefly that there's no space between 'Alma' and 'Linux', so it would just be AlmaLinux. Again, very happy to help with any of that that I can!



at that moment:

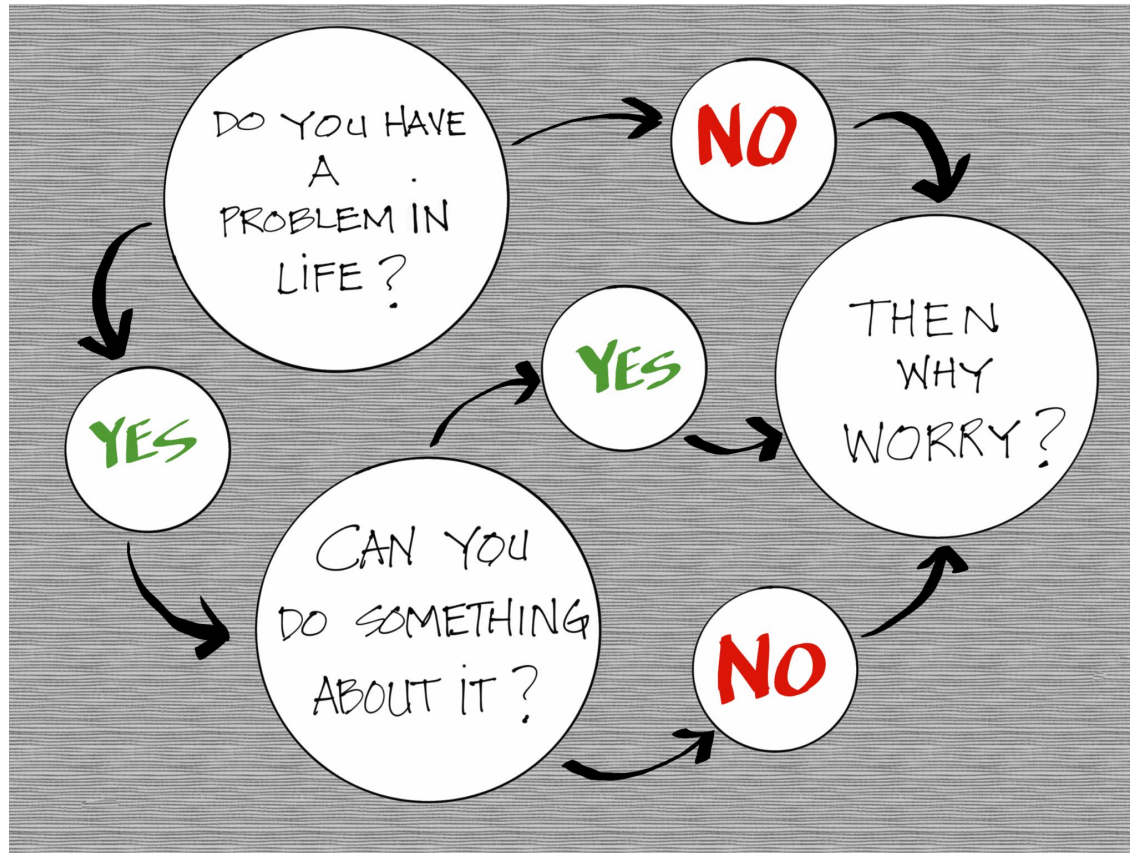




“oops”



“oops”



# Is that all?

No!



Let the breakage begin



# Breakage?

- I'm best at breaking things
  - Used to break website, now break RPMs
  - Good news: Can fix it quickly!



“oops”

I know there have been some issues recently with gdal/geos as you can see -  
<https://www.postgresql.org/list/pgsql-pkg-yum/2023-09/>



# “oops”

I am having similar problems on the RHEL8 repo. Everything is broken. Multiple geos dependencies means the postgis\_raster extension is broken. If I try to use the latest postgis34 packages, then it only brings in geos312. That part works, but the problem becomes gdal36. gdal36-python-tools brings in EPEL's python3-gdal instead of PGDG gdal36-python3 from pgdg-common.



# “oops”

The python module "osgeo\_utils" only comes with the PGDG gdal36-python3 package. That means gdal36\_python-tools / gdal\_calc.py is dead. I can't install gdal36-python3 on top of python3-gdal to get the osgeo\_utils, because the packages conflict.

I have a big infrastructure as code project that relies on the PGDG RHEL8 repo. GDAL, postgis\_raster, gdal-python-tools.... it worked earlier this month, but it's now dead in the water. Do we have a timeline here? Am I stuck retooling this to build geos, gdal, and postgis from source?





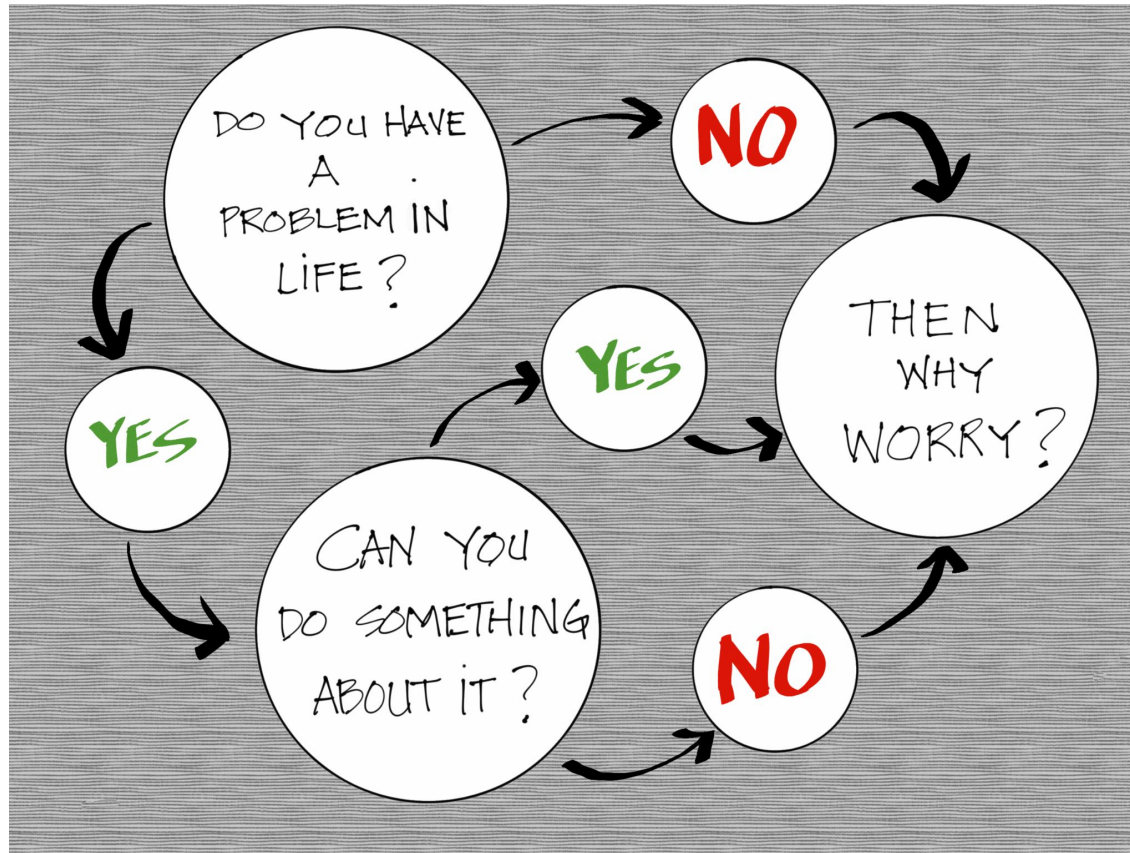
at that moment:



“oops”



“oops”



“oops”

```
ERROR: could not load library "/usr/pgsql-16/lib/llvmjit.so": /usr/pgsql-16/lib/llvmjit.so: undefined symbol: LLVMBuildGEP
```



“oops”

## broken JIT support on Fedora 40

Lists: [pgsql-hackers](#)

---

From: Pavel Stehule <pavel(dot)stehule(at)gmail(dot)com>  
To: PostgreSQL Hackers <pgsql-hackers(at)postgresql(dot)org>  
Subject: broken JIT support on Fedora 40  
Date: 2024-03-06 06:53:53  
Message-ID: [CAFj8pRACpVFr7LMdVYENUkScG5FCYMZDDdSGNU-tch+w98OxYg@mail.gmail.com](#)  
Views: [Raw Message](#) | [Whole Thread](#) | [Download mbox](#) | [Resend email](#)  
Lists: [pgsql-hackers](#)

---

Hi

after today update, the build with `--with-llvm` produces broken code, and  
make check fails with crash



“oops”

- Red Hat releases new minor updates every 6 months, which is \*1 day\* before our minor release.



# “oops”

- Red Hat releases new minor updates every 6 months, which is \*1 day\* before our minor release.
  - They released 9.5 1 day before our latest minor release set!
  - They released 9.4 9 days before our minor release set!



# “oops”

- Red Hat releases new minor updates every 6 months, which is \*1 day\* before our minor release.
  - They released 9.5 1 day before our latest minor release set!
  - They released 9.4 9 days before our minor release set!
- New LLVM/CLANG!





# “oops”

- Red Hat releases new minor updates every 6 months, which is \*1 day\* before our minor release.
  - They released 9.5 1 day before our latest minor release set!
  - They released 9.4 9 days before our minor release set!
- New LLVM/CLANG!
- Download SRPMs, rebuild them on Rocky, release them on our special repo.



# “oops”

- Red Hat releases new minor updates every 6 months, which is \*1 day\* before our minor release.
  - They released 9.5 1 day before our latest minor release set!
  - They released 9.4 9 days before our minor release set!
- New LLVM/CLANG!
- Download SRPMs, rebuild them on Rocky, release them on our special repo.
- Rebuild PostgreSQL RPMs at 4am so that we can release new minor releases on time



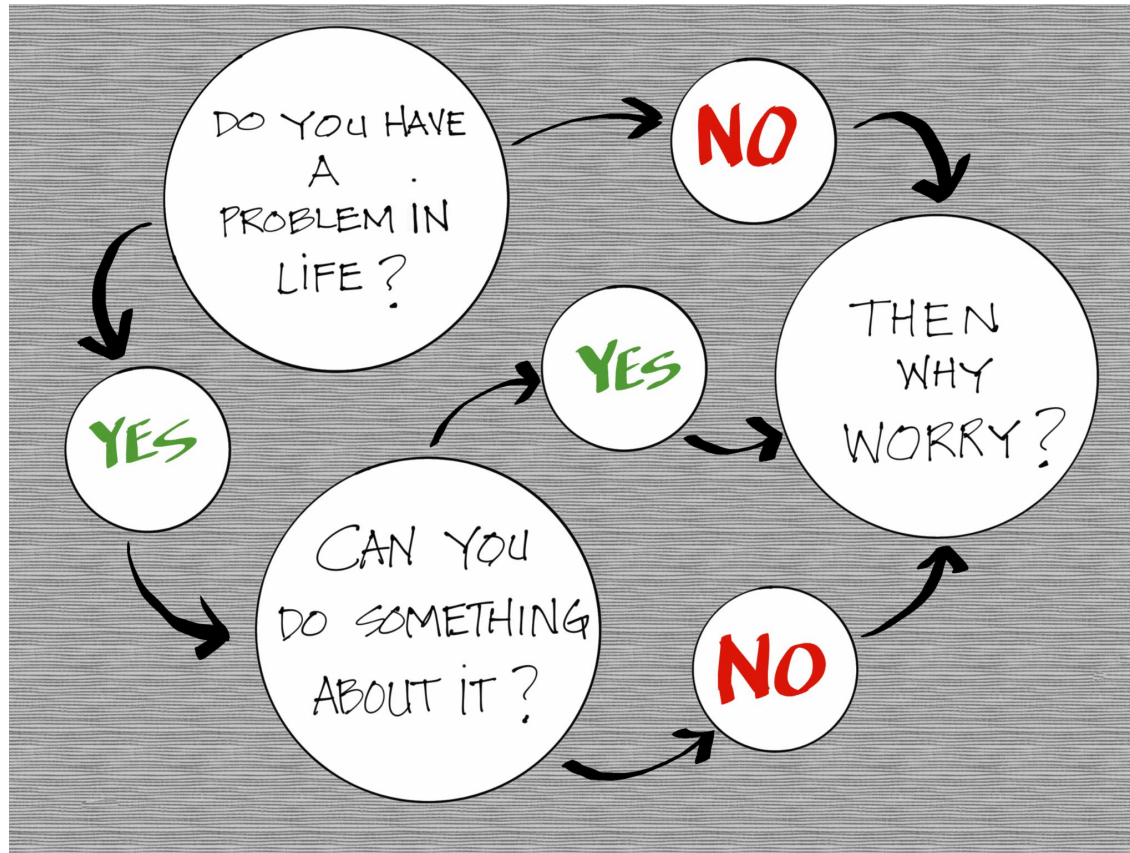
at that moment:



“oops”



“oops”



...and “friends(!)”

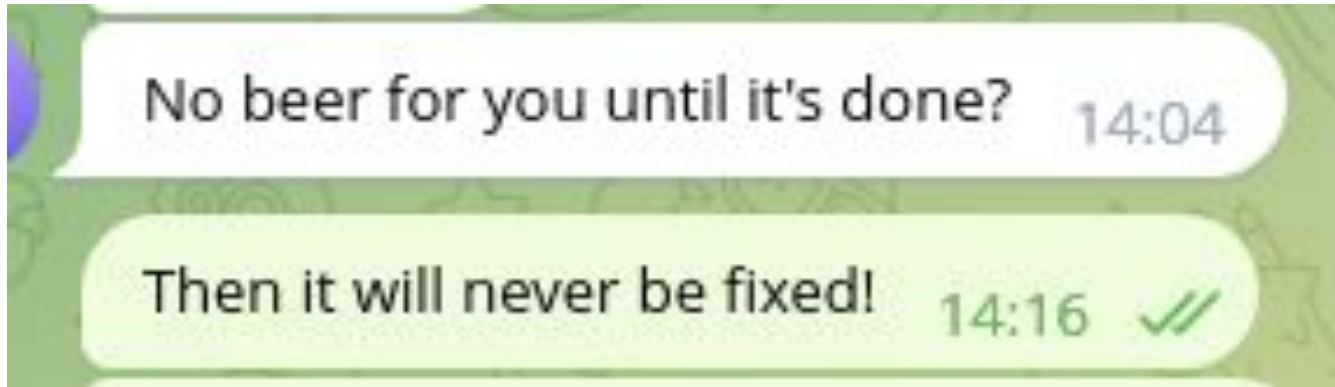


“oops”

Well that sucks. You're The Devrim!! 13:02



“oops”





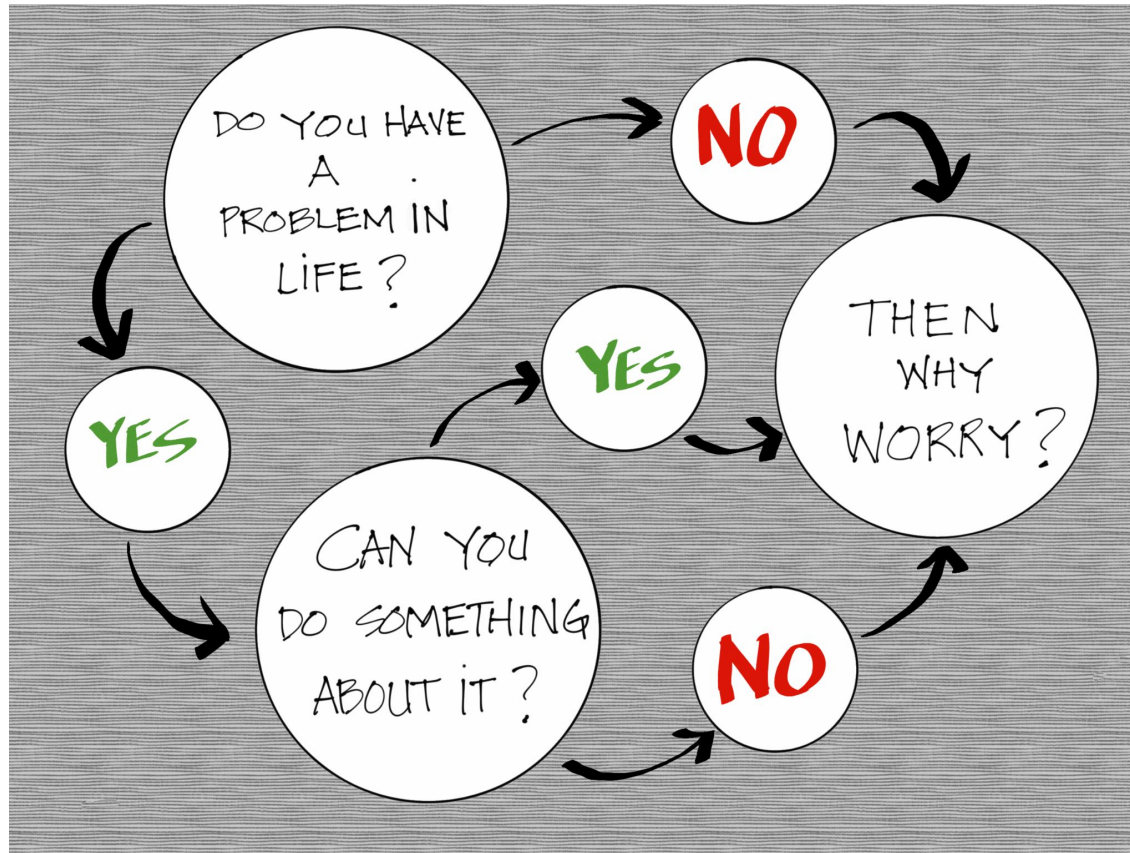
at that moment:



“oops”



“oops”



Wish it was that easy...





# tarball names

```
0.1.4.tar.gz      3.0.0.tar.gz      pgprtdbg-0.3.0.tar.gz      proj-9.2.1.tar.gz      v0.4.1.tar.gz      v2.3.0.Final.tar.gz
0.2.3.tar.gz      3.1.10.tar.gz     pgquarrel_0_7_0.tar.gz     proj-9.3.0.tar.gz      v0.5.0.tar.gz      v2.3.0.tar.gz
0.26.tar.gz       3.3.0.tar.gz      pg_readonly-1.0.3.zip      psqlodbc-16.00.0000.tar.gz      v0.53.6.tar.gz     v2.3.1.tar.gz
0.3.1.tar.gz      3.8.0.tar.gz      PGREPLAY_1_3_0.tar.gz     PyGreSQL-5.2.5.tar.gz   v0.6.tar.gz        v2.3.8.tar.gz
0.31.tar.gz       4.2.0.tar.gz      pgssi-1.7.1.tar.gz        python-consul-1.1.0.tar.gz      v0.8.0.tar.gz      v2.4.0.tar.gz
0.4.0.tar.gz      5.8.0.tar.gz      pgspecial-2.0.1.tar.gz     REL_10_1.tar.gz        v1.0.1.tar.gz      v2.5.1.tar.gz
0.5.0.tar.gz      5.9.tar.gz        pgspecial-2.0.1.tar.gz     REL_11_0.tar.gz        v1.0.2.tar.gz      v2.5.tar.gz
0.6.1.tar.gz      7.7.tar.gz        pgspecial-2.0.1.tar.gz     REL_1_1.tar.gz         v1.0.5.tar.gz      v2.6.0.tar.gz
1.0.6.tar.gz      7.8.0.tar.gz      pgsql-1.6.7.tar.gz        REL_12_0.tar.gz        v1.0.tar.gz        v2.8.0.tar.gz
1.0.8.tar.gz      argh-0.26.2.tar.gz      pgsql_tweaks-0.10.1.zip    REL_1_2_0.tar.gz       v1.10.tar.gz       v3.0.0.tar.gz
1.0.9.tar.gz      bigquery-1.24.0.tar.gz      pgtap-1.3.1.zip           REL_13_1.tar.gz        v1.1.1.tar.gz      v3.0.6.tar.gz
1.10.3.tar.gz     Bucardo-5.6.0.tar.gz      pgxnclient-1.3.2.tar.gz    REL_14_1.tar.gz        v1.14.3.tar.gz     v3.0.tar.gz
1.13.tar.gz       cdiff-1.0.tar.gz      phpPgAdmin-7.13.0.tar.bz2   REL16_1_6_0.tar.gz     v1.1.4.tar.gz      v3.1.2.tar.gz
1.1.tar.gz        count_distinct-3.0.1.zip    pitrery-3.4.tar.gz         REL1_6_1.tar.gz        v1.1.tar.gz        v3.1.4.tar.gz
1.20151224.tar.gz e-maj-4.3.0.zip         postgis-2.5.6.tar.gz       REL_2_0_12.tar.gz      v12.1.0.tar.gz     v3.1.8.tar.gz
1.20220601.tar.gz geoip-0.2.4.zip         postgis-3.0.8.tar.gz       REL2_2_2.tar.gz        v1.2.10.zip        v3.2.2.tar.gz
1.20220917.tar.gz geos-3.10.3.tar.bz2     postgis-3.1.9.tar.gz       REL2_3.tar.gz          v1.2.2.tar.gz      v3.3.4.tar.gz
1.2.0.tar.gz      geos-3.11.2.tar.bz2     postgis-3.2.5.tar.gz       REL2_4_4.tar.gz        v12.2.tar.gz       v3.4.2.tar.gz
1.3.13.tar.gz     geos-3.12.0.tar.bz2     postgis-3.3.4.tar.gz       REL2_7.tar.gz          v1.2.2.zip         v3.5.0.tar.gz
1.3.1.tar.gz      geos-3.8.1.tar.bz2      postgis-3.4.0.tar.gz       REL-2_9_1.tar.gz       v1.2.tar.gz        v3.5.1.tar.gz
1.3.3.tar.gz      geos-3.9.2.tar.bz2      postgresql-10.23.tar.bz2   REL4_0_1.tar.gz        v1.3.0.tar.gz      v3.5.tar.gz
1.4.0.tar.gz      libgeotiff-1.5.1.tar.gz  postgresql-11.21.tar.bz2   REL_4_2_0.tar.gz       v1.4.1.tar.gz      v3.6.9.tar.gz
1.41.1.tar.gz     libgeotiff-1.6.0.tar.gz  postgresql-12.16.tar.bz2   REL4_2_4.tar.gz        v1.4.tar.gz        v3.7.0.tar.gz
1.5.0.tar.gz      libgeotiff-1.7.1.tar.gz  postgresql-13.12.tar.bz2   REL-5_5_1.tar.gz       v1.5.12.tar.gz     v4.3.0.tar.gz
1.5.1.tar.gz      librttopo-1.1.0.tar.gz   postgresql-14.9.tar.bz2    REL8_4_6.tar.gz        v1.5.tar.gz        v4.7.4.tar.gz
15-4.2.1.tar.gz   libspatialite-5.1.0.tar.gz      postgresql-15.4.tar.bz2    REL9_6_0.tar.gz        v1.6.0.tar.gz      v5.4.1.tar.gz
1.7.tar.gz        multicorn-1.4.0.zip      postgresql-16.0.tar.bz2    release-0.7.3.2.tar.gz  V1_6_5.tar.gz      v5.5.tar.gz
1.9.2.tar.gz      ogdi_4_1_0.tar.gz       postgresql-9.6.24.tar.bz2  safeupdate-1.4.2.zip   v1.7.tar.gz        ver_1.1.1.tar.gz
2.0.2.tar.gz      pagila-v3.1.0.tar.gz    postgresql-anonymizer-1.1.0.tar.gz      SFCGAL-v1.4.1.tar.gz   v2.0.19.tar.gz     ver_1.4.8.tar.gz
2.0.tar.gz        pgagent-4.2.2.tar.gz     postgresql-faker-0.5.3.tar.bz2      slony1-2.2.11.tar.bz2  VERSION3_1_20.tar.gz
2.1.0.tar.gz      pgbouncer-1.20.1.tar.gz  postgresql-jdbc-42.6.0.src.tar.gz     sqlsmith-1.4.tar.gz    VERSION4_6_1.tar.gz
2.12.0.tar.gz     pgcryptokey-0.85.tar.gz  postgresql-snapshot.tar.bz2          TAP-Parser-SourceHandler-pgTAP-3.36.tar.gz      wal2json_2_5.tar.gz
2.1.2.tar.gz      pg_fkpart-1.7.0.zip      prioritize-1.0.4.zip        timestamp9-1.4.0.tar.gz      ydiff-1.2.tar.gz
2.2.2a.tar.gz     pg_jobmon-1.4.1.zip      proj-7.1.1.tar.gz          v0.10.0.tar.gz         v2.13.tar.gz
2.26.0.tar.gz     pgldapsync-1.0.0.tar.gz  proj-7.2.1.tar.gz          v0.1.1.tar.gz         v2.18.tar.gz
2.3.0.tar.gz      pgmp-1.0.5.zip          proj-8.0.1.tar.gz          v0.13.tar.gz          v2.2.1.tar.gz
2.4.2.tar.gz      pgpoolAdmin-4.2.0.tar.gz      proj-8.1.1.tar.gz         v0.16.2.tar.gz        v2.2.5.tar.gz
2.48.tar.gz       pgpool-II-4.4.2.tar.gz   proj-9.0.1.tar.gz         v0.32.1.tar.gz        v2.2.tar.gz
[devrim@asus-laptop05 pgsource]$
```




# Slackers!

devrimgunduz commented 3 weeks ago

Author ...


ping



devrimgunduz commented 3 weeks ago

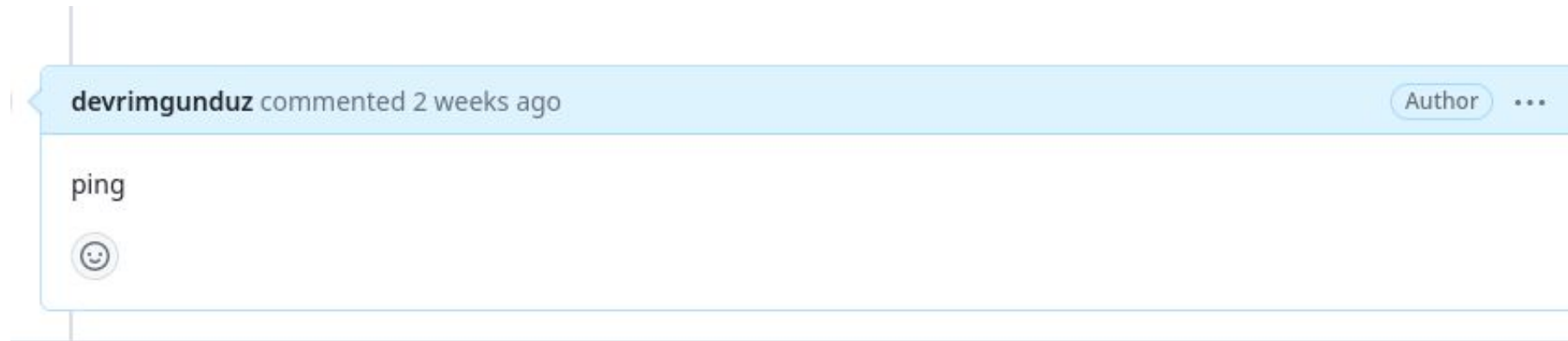
Author ...

cough :)





# Slackers!



# Slackers!

(This was just a start for v17...)

## PostgreSQL 17 Extension Bugs

---


### Known PostgreSQL 17 problems in extension modules

---

== Extensions that fail to build

- citus: <https://github.com/citusdata/citus/issues/7605> 
- credcheck: <https://github.com/MigOpsRepos/credcheck/issues/35> 
- hdfs\_fdw: [https://github.com/EnterpriseDB/hdfs\\_fdw/issues/74](https://github.com/EnterpriseDB/hdfs_fdw/issues/74) 
- logerrors: <https://github.com/munakoiso/logerrors/issues/27> 
- login\_hook: [https://github.com/splendiddata/login\\_hook/issues/20](https://github.com/splendiddata/login_hook/issues/20) 
- mysql\_fdw: [https://github.com/EnterpriseDB/mysql\\_fdw/issues/307](https://github.com/EnterpriseDB/mysql_fdw/issues/307) 
- timescaledb: <https://github.com/timescale/timescaledb/issues/6949> 

== Builds fine, and regression tests fail:

- ddlx (pgddl): <https://github.com/lacanoid/pgddl/issues/29>  (Actually installation also fails)





“oops”

“Devrim I’d like to do a release every day.”  
(True story)



Seriously:



# Not that much “oops”

- Things are mostly stable



# Not that much “oops”

- Things are mostly stable
  - GIS stack is a hard one, but ok



# Not that much “oops”

- Things are mostly stable
  - GIS stack is a hard one, but ok
- Timely updates



# Not that much “oops”

- Things are mostly stable
  - GIS stack is a hard one, but ok
- Timely updates
  - Mostly



# Not that much “oops”

- Things are mostly stable
  - GIS stack is a hard one, but ok
- Timely updates
  - Mostly
- Lots of users use our repo



# Not that much “oops”

- Things are mostly stable
  - GIS stack is a hard one, but ok
- Timely updates
  - Mostly
- Lots of users use our repo
- Thanks EDB for letting me spend most of my time to maintain this repository





# Not that much “oops”

- Things are mostly stable
  - GIS stack is a hard one, but ok
- Timely updates
  - Mostly
- Lots of users use our repo
- Thanks EDB for letting me spend most of my time to maintain this repository
- Thanks for using it!



Thank **you.**





# State of the PostgreSQL RPMs (or simply “oops”)

Devrim Gündüz  
PostgreSQL RPM maintainer  
Postgres Expert @ EDB  
May 2025