More Than Just PostgreSQL

The Hidden Ecosystem of PGDG Packaging

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Who are we?

- Core RPM/DEB maintainers at the PostgreSQL Global Development Group (PGDG)
- Packaging, repository infrastructure, release tooling
- Debian / Ubuntu / RHEL / Rocky / AlmaLinux / Fedora / SLES / openSUSE
- Maintaining PostgreSQL packages since… a long time

What do you think PGDG ships?

(Take a guess...)

The Tip of the Iceberg

What everyone knows

- postgresql18-server
- postgresql18-contrib
- pgadmin4
- *… and that's it?*

What's actually there

… you'll find out in the next slides

Supported distros and archs

RPM based OSes

- RHEL 10.1, 10.0
- RHEL 9.7, 9.6
- RHEL 8.10
- Fedora 44, 43
- SLES 16.0
- SLES 15.7, 15.6
- OpenSuSE Leap 16.0

Supported archs

- x86_64 (for all OSes)
- arm64 / aarch64 (for RHEL)
- ppc64le (for RHEL)

Supported distros and archs

DEB based OSes

- Debian bullseye (11), bookworm (12), trixie (13), forky (testing) and sid (unstable)
- Ubuntu jammy (22.04), noble (24.04), questing (25.10, amd64 only), resolute (26.04)

Supported archs

- x86_64 (amd64)
- arm64
- ppc64el

Extensions — First Layer

Popular extensions we package

- PostGIS
- pgvector
- Citus
- pg_partman
- pg_repack
- pg_cron
- TimescaleDB
- … and dozens more

The multiplication problem

- Each extension × each major PG version
- PG 14, 15, 16, 17, 18…
- That’s not 30 packages.
- That’s 30 × N packages.

Every new PostgreSQL major release = rebuild everything

FDWs, data types

FDWs we package

- firebird_fdw
- hdfs_fdw
- mysql_fdw
- multicorn2
- odbc_fdw
- ogr_fdw
- oracle_fdw
- pgbouncer_fdw
- tds_fdw

Data types we package

- ip4r
- pg_extra_time
- pgmp
- pgpdf
- pguint
- pguri
- pg_uuidv7
- postgresql-numeral
- postgresql_unit
- semver
- sequential_uuids
- timestamp9

Monitoring & Analytics

Monitoring

- pg_stat_kcache
- pg_qualstats
- pg_wait_sampling
- pgbadger
- pgaudit
- pgsentinel
- logerrors
- pg_store_plans

Analytics

- hll (HyperLogLog)
- pg_topn
- datasketches
- pg_permissions
- credcheck
- pg_profile

Procedural Languages & Replication

Procedural Languages

- PL/Java
- PL/Lua
- PL/Perl (extra)
- PL/Python (extra)
- PL/R
- PL/sh
- PL/v8 (JavaScript)
- plprofiler

Replication

- pg_logical
- repmgr
- pglogical
- wal2json
- decoder_raw
- mimeo
- pg_comparator

Security & Indexes

Security

- pgaudit
- credcheck
- pg_anon (anonymizer)
- supabase_vault
- pg_tde
- sepgsql
- pg_snakeoil

Indexes & Search

- pg_trgm (contrib)
- rum
- pg_partman
- pg_hint_plan
- pg_qualstats
- hypopg
- pgfaceting

DBA Tools & Oracle Compatibility

DBA Tools

- pg_repack
- pg_squeeze
- pg_activity
- pgbadger
- pg_catcheck
- pg_checksums
- pg_dirtyread
- pg_filedump

Oracle Compatibility

- orafce
- ora2pg (migration)
- pg_dbms_job
- pg_dbms_metadata
- dblink_plus

Poolers, HA & Drivers

Connection Poolers

- PgBouncer
- pgagroal
- pgpool-II

HA & Replication

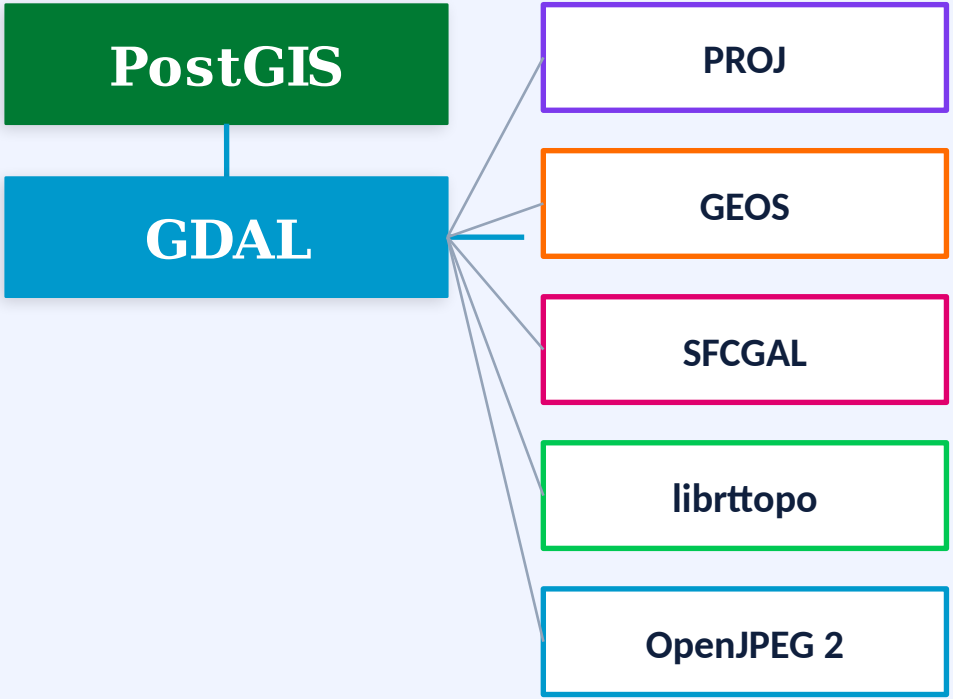
- repmgr
- Patroni and its dependencies

Drivers & Interfaces

- JDBC driver
- ODBC driver

DBAs use these daily — often without realising PGDG ships them

The Dependency Chain Very Few People See



PGDG packages ALL of these

- Distro versions lag 1–2 major releases
- Minor versions are often released late
- ABI conflicts with PG build expectations
- Missing drivers (JP2, raster)
- Different compile-time options
- Custom prefixes avoid conflicts

The Scientific Stack (from EPEL repo)

HDF5

- Hierarchical Data Format — scientific data storage
- Version 1.x and 2.x (breaking CMake option renames)
- Parallel variant built against OpenMPI
- Required for raster data support in GDAL

NetCDF

- Network Common Data Form
- Built against HDF5 — must stay in sync
- Used in climate, GIS, and scientific datasets
- Mostly unknown outside GIS circles

Most PostgreSQL users don't know these exist in our repos

So… How Much Is It?

900+

source packages across RHEL, Fedora, SLES/openSUSE, Debian/Ubuntu

(and that's before counting per-PG-version binary subpackages)

Why Doesn’t Anyone Know?

Undiscoverable

Very few people browse package repos. Users only install what they know to search for.

Docs lag reality

README says “install PostGIS” — not “we also ship its entire dep tree”.

Hidden prefixes

GDAL at /usr/gdal312 is invisible to normal tooling and package managers.

No unified view

The same package exists on 6+ distros with no cross-distro overview.

Silent success

When packaging works, there's silence. Only breakage surfaces publicly.

The Real Cost of Invisibility

Users	Hit missing features (no JP2, no raster) and have no idea why
Contributors	Don’t know where to help — the surface area is invisible
Distros	Re-package pieces inconsistently, creating divergence
Packagers	Solve the same problems independently across RPM, DEB. Missing OSes?

Let’s talk

- What packages do you use that you didn’t know PGDG shipped?
- What’s missing from the ecosystem that you wish someone packaged?
- How can we make the ecosystem more visible — and more collaborative?