



PGBootCamp.ru

Первые шаги в разработке ядра Postgres

Андрей Бородин, Postgres Contributor

PG BootCamp Russia 2024 Kazan

Разрабатывал Postgres, GreenplumDB, Redshift

Мэйнтейнер:

- › Odyssey
- › WAL-G

Open Source

СТРЕК
ПЕРЖ



Зачем всё это?

From: Jakub Kicinski <kuba@kernel.org>
To: Serge Semin <Sergey.Semin@baikalelectronics.ru>
Cc: <netdev@vger.kernel.org>, David Miller <davem@davemloft.net>,
Paolo Abeni <paben@redhat.com>,
Eric Dumazet <edumazet@google.com>,
Alexei Starovoitov <ast@kernel.org>
Subject: Re: [PATCH net 00/13] net: stmmac: Fixes bundle #1
Date: Tue, 14 Mar 2023 10:33:16 -0700 [thread overview]
Message-ID: <20230314103316.313e5f61@kernel.org> (raw)
In-Reply-To: <20230313224237.28757-1-Sergey.Semin@baikalelectronics.ru>

On Tue, 14 Mar 2023 01:42:24 +0300 Serge Semin wrote:
> From: Serge Semin <Sergey.Semin@baikalelectronics.ru>

We don't feel comfortable accepting patches from or relating
to hardware produced by your organization.

Please withhold networking contributions until further notice.

▲ sph 11 months ago | root | parent | next [-]

> Should Linux also accept North-Korean patches for their ICBMs in mainline?

While NK is probably not looking to merge their '*char/icbm*' driver to the mainline tree, what about the NK military fixing a nasty bug in the memory allocator? Should the patch be rejected even if it improves a non-military subsystem, just because of who wrote it?

It's just food-for-thought, personally I do not care one way or the other. As you say, it's all a grey area, and there is not a clear answer, which is where politics and posturing, rather than pragmatism, thrives.

▲ arp242 11 months ago | root | parent | next [-]

Ignoring trust issues (NK inserting a backdoor), I'd say clean bugfixes should probably be accepted.

My main point was to nuance the absolutist "code and science should be separate". I don't know enough about this code to make a judgement one way or the other: as I understand the commit message it's a cleanup as a prelude to GMAC and X-GMAC SoC support. Maybe the code is badly in need of some cleanup, or maybe it's essentially just fine and there is no reason to merge any of this beyond supporting those SoCs.

▲ anonymouskimmer 11 months ago | root | parent | next [-]

> Ignoring trust issues (NK inserting a backdoor)

For another option, is it possible that patching a legitimate bug could open up a line of attack in an otherwise unrelated piece of code that the bug was somehow blocking? If it is, even legitimate, verified bug fixes, or even bug reports, from non-trusted sources, should be carefully vetted.

Date: Fri, 29 Mar 2024 08:51:26 -0700
From: Andres Freund <andres@...razel.de>
To: oss-security@...ts.openwall.com
Subject: backdoor in upstream xz/liblzma leading to ssh server compromise

Hi,

After observing a few odd symptoms around liblzma (part of the xz package) on Debian sid installations over the last weeks (logins with ssh taking a lot of CPU, valgrind errors) I figured out the answer:

The upstream xz repository and the xz tarballs have been backdoored.

At first I thought this was a compromise of debian's package, but it turns out to be upstream.



Abuse of Open Source?

Monday, April 4, 2022

With the Russian invasion of Ukraine, there is renewed focus on the use of Postgres by governments, particularly uses that might further military goals.

The unintended use of technology is nothing new. Alfred Nobel's invention of dynamite prompted the creation of the Nobel Peace Prize to promote peace. Manhattan Project engineers unsuccessfully tried to control the use of the atomic bomb they created.

In the software industry, companies have tried to control the use of proprietary software, with mixed success. Cloud and web services are better able to control access because authentication and continuous connectivity are often required. Social media companies also exert control over who can use and what can be said on their platforms.

The licenses used by open source software don't support these traditional use-regulation methods because there is no required interaction between software producers and users. This was done consciously to promote adoption and independent usage (particularly the Postgres license). Attempts to limit the use of open source software by the U.S. Immigration and Customs Enforcement (ICE) agency have largely been unsuccessful. Attempts to limit Russia's use of Postgres, even for projects directly contributing to the war effort, are also likely to be ineffective.

Changing the Postgres license now would not change the license of previous versions, and even if we could go back in time and change the license, the net effect would likely be negative for the project and ineffective at controlling usage. In summary, once you create something, it is hard to control it, and very hard without legal/governmental support.

Update: depesz has blocked access to his website and services from Russia and Belarus. *2022-04-13*

[View or Post Comments](#)

https://momjian.us/main/blogs/pgblog/2022.html#April_4_2022

Листы рассылки

pgsql-admin

- Pär & Holger** 00:59
Use AD-account as login into Postgres.
 5 
Hi! Is it only to config in hba.conf the connection info, to use AD-accounts to login in postgres. This is a windows/postres intallation   Mvh Pär +46706...
- Ed, David, Laurenz, Ron, Holger, Matthew & Scott** 00:49
upgrade questions
 10 
I'm going to be doing an upgrade from version 11 to version 15 sometime in the near future. I'm a bit nervous about it and I'm hoping I can get some questions...
- Magnus, Ron & Stephen** Yesterday
pg_basebackup --wal-method=fetch
 8 
(PG 14, if it matters.) What's the purpose of fetch mode, as opposed to streaming mode? Is it a legacy of bygone days that just hasn't been deprecate...
- Tom, Laurenz, Ron & Gambhir** Yesterday
DDL - TYPES
 5 
Hi, I was trying to generate DDL of functions and procedures and generated it successfully using the below query. `\psql --no-align -t --host=xxxxxx --port=...`
- Holger, Thomas & Gambhir** 08.02.2024
Need help to implement Primary Key.
 3 
Hi, I have a table with a record count of ~500 million (496,098,390). There is no primary key in this table. Now I need to set up a primary key on this table. I can...

pgsql-announce



PostgreSQL Global Development Group

PostgreSQL 16.2, 15.6, 14.11, 13.14, and 12.18 Released!

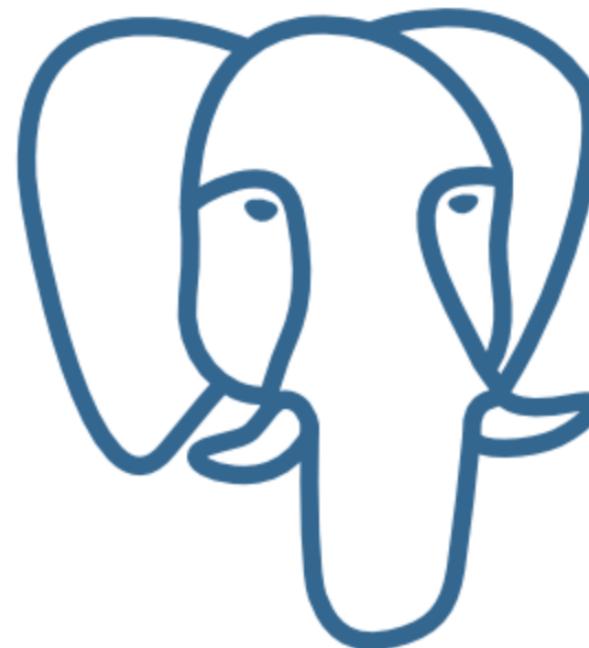
Inbox - Yandex-Team

8 February 2024, 19:10



To: PostgreSQL Announce,

Reply-To: announce@postgresql.org



PostgreSQL 16.2,
15.6, 14.11, 13.14,
and 12.18
Released!

The PostgreSQL Global Development Group has released an update to all supported versions of PostgreSQL, including 16.2, 15.6, 14.11, 13.14, and 12.18. This release fixes one

pgsql-bugs

pgsql-bugs – Yandex-Team
15 260 messages, 13 591 unread



- **Etsuro, Tom, Andres, Thomas, Alexander & PG Bug repo...** Yesterday
BUG #17828: postgres_fdw leaks file descriptors on error and aborts... 15
The following bug has been logged on the website: Bug reference: 17828
Logged by: Alexander Lakhin Email address: exclusion@gmail.com PostgreSQL...
- **jian, Tender & PG Bug reporting form** 08.02.2024
BUG #18314: PARALLEL UNSAFE function does not prevent parallel in... 5
The following bug has been logged on the website: Bug reference: 18314
Logged by: Alexander Lakhin Email address: exclusion@gmail.com PostgreSQL...
- **Masahiko, vignesh & Drew** 08.02.2024
Potential data loss due to race condition during logical replication slot... 7
Hello, We discovered a race condition during logical replication slot creation that can result in the changes for transactions running at the time of the slot creati...
- **Andrei Lepikhov, Alexander Korotkov, David G. Johnst...** 08.02.2024
v17 Possible Union All Bug 13
Hey, The attached pg_dumpall file creates some test roles and some views, two of which show the expected and problem behaviors. There is a lot going on be...

pgsql-committers



Heikki Linnakangas

pgsql-committers

29 January 2024, 16:52

pgsql: Fix locking when fixing an incomplete split of a GIN internal pa
To: pgsql-committers@lists.postgresql.org

Fix locking when fixing an incomplete split of a GIN internal page

ginFinishSplit() expects the caller to hold an exclusive lock on the buffer, but when finishing an earlier "leftover" incomplete split of an internal page, the caller held a shared lock. That caused an assertion failure in MarkBufferDirty(). Without assertions, it could lead to corruption if two backends tried to complete the split at the same time.

On master, add a test case using the new injection point facility.

Report and analysis by Fei Changhong. Backpatch the fix to all supported versions.

Reviewed-by: Fei Changhong, Michael Paquier
Discussion: https://www.postgresql.org/message-id/tencent_A3CE810F59132D8E230475A5F0F7A08C8307@qq.com

Branch

REL_13_STABLE

Details

<https://git.postgresql.org/pg/commitdiff/e74c916657b56e062e244be97ea17c57c178ade0>

Modified Files

src/backend/access/gin/ginbtree.c | 68 ++++++-----
1 file changed, 50 insertions(+), 18 deletions(-)

pgsql-committers



Andrey Borodin

12 February 2021, 10:22

Re: pgsql: Add functions to 'pageinspect' to inspect GiST indexes.

To: Peter Geoghegan, Cc: Heikki Linnakangas, pgsql-committers



[Details](#)

12 февр. 2021 г., в 01:53, Peter Geoghegan <pg@bowt.ie> написал(а):

On Wed, Jan 13, 2021 at 12:36 AM Heikki Linnakangas <cheikki.linnakangas@iki.fi> wrote:

| Add functions to 'pageinspect' to inspect GiST indexes.

Is gist_page_items() robust with deleted pages? I think that it's unsafe to assume that deleted pages will have index tuples, since the page contents will actually be a GISTDeletedPageContents.

Simplest fix would be to assume maxoff is 0 for the page, perhaps. Right now we just use PageGetMaxOffsetNumber(), which implicitly assumes that the page uses slotted tuples with an array of line pointers (actually it can also deal with a zeroed page, but that's not relevant here).

Thanks, Peter! I agree that taking PageGetMaxOffsetNumber() seems incorrect for deleted page, because we set pd_lower for the deleted page. Also, there was an idea to add a column for LP_DEAD. As long as we are dealing with deleted data anyway, maybe let's add this column? PFW both patches.

Thanks!

Best regards, Andrey Borodin.



0001-Prevent- 0002-Add-bool-
pagein...l.patch column...t.patch

pgsql-hackers

pgsql-hackers – Yandex-Team

167 396 messages, 150 653 unread



- **Zhijie Hou (Fujitsu), Amit Kapila, Peter Smith, Masahiko Saw...** 14:19

Synchronizing slots from primary to standby

📎 655 ⓘ

Thanks for the feedback. 1. ===== src/backend/utils/misc/postgresql.conf.sample +#enable_syncslot = on # enables slot synchronization...

- ◀ **Mats Kindahl, Nathan Bossart, Andres Freund, Andrey Boro...** 12:59

glibc qsort() vulnerability

📎 46 ⓘ

Hi all, Split the code into two patches: one that just adds the functions (including the new pg_cmp_size()) to common/int.h and one that starts using t...

- **Peter Eisentraut** 12:41

backend *.c #include cleanup (IWYU)



I played with include-what-you-use (IWYU), "a tool for use with clang to analyze #includes in C and C++ source files".[0] I came across this via clangd (the lang...

-
- **jian he, Andrei Lepikhov, Alena Rybakina, vignesh C, Robert...** 10:01

POC, WIP: OR-clause support for indexes

📎 114 ⓘ

I support such a cunning approach. But this specific case, you demonstrated above, could be optimized independently at an earlier stage. If to convert: (F(A...

Роли

Core Team

For more information on the purpose of the core team, please click [here](#).

Contributor

Peter Eisentraut (peter.eisentraut at enterpriseDB.com)

EDB

Dresden, Germany

Contribution

Works on the build system, porting, documentation, and the internationalization effort, and codes many other improvements.

Andres Freund (andres at anarazel.de)

Microsoft

San Francisco, USA

Pluggable table access methods, JIT, logical decoding, replication, performance, scalability, bug fixing and patch review.

Magnus Hagander (magnus at hagander.net)

Redpill Linpro

Stockholm, Sweden

Has done major work on the Win32 port, authentication system and more, and helps maintain the PostgreSQL websites and project infrastructure.

Jonathan Katz (jonathan.katz at excoventures.com)

Amazon Web Services

New York, NY

General project advocacy, including press releases & @postgresql, contributions to and moderation of PostgreSQL websites. Various committee participation and board membership. Miscellaneous patches & review.

Tom Lane (tgl at sss.pgh.pa.us)

Crunchy Data

Pittsburgh, Pennsylvania, USA

Involved in all aspects of PostgreSQL, including bug evaluation and fixes, performance improvements, and major new features, such as schemas. He is also responsible for the optimizer.

Bruce Momjian (bruce at momjian.us)

EDB

Philadelphia, Pennsylvania, USA

Maintains the TODO list, codes, applies patches, and speaks at conferences.

Dave Page (dpage at pgadmin.org)

EDB

Oxfordshire, United Kingdom

Created and maintains pgAdmin, helps manage the postgresql.org websites and project infrastructure, and maintains the PostgreSQL installers.

Contributors

- Major contributors
- Contributors

Contributors committee

Contributor Profiles

These are the fine people that make PostgreSQL what it is today!

To suggest additions to the list, please email contributors@postgresql.org. Existing contributors can update their information in their [user profile](#).

Sponsor

	Kontur	United States
	Zalando	Germany
	Yandex	Russia
	Oriole	United States
	Adjust	Germany
	Rackspace	United States
	HighGo	Canada
	Aiven	Finland

<https://www.postgresql.org/about/contributing/>

Committers

This is the current list of people with access to push to the git repository with their user names. For technical details on how committing works, see [Committing with Git](#). Note: This is just a list of people who currently have access to and previous contributors, see the [contributor profiles](#) section of the web site. Note: The names are listed here in order of first commit or when added as a committer, oldest first; this isn't intended to imply anything about depth of involvement.

- Bruce Momjian (momjian)
- Tom Lane (tgl)
- Michael Meskes (meskes)
- Tatsuo Ishii (ishii)
- Peter Eisentraut (petere)
- Joe Conway (joe)
- Alvaro Herrera (alvherre)
- Andrew Dunstan (adunstan)
- Magnus Hagander (mha)
- Heikki Linnakangas (heikki)
- Robert Haas (rhaas)
- Jeff Davis (jdavis)
- Stephen Frost (sfrost)
- Fujii Masao (fujii)
- Noah Misch (noah)
- Andres Freund (andres)
- Dean Rasheed (deanr)
- Andrew Gierth (rhodiumtoad)
- Alexander Korotkov (smagen)
- Amit Kapila (amitkapila)
- Tomas Vondra (fuzzycz)
- Michael Paquier (michael-kun)
- Thomas Munro (macdice)
- Peter Geoghegan (pgeoghegan)
- Etsuro Fujita (efujita)
- David Rowley (drowley)
- Daniel Gustafsson (d_gustafsson)
- John Naylor (john.naylor)
- Nathan Bossart (nathan)
- Amit Langote (amitlan)
- Masahiko Sawada (msawada)

AH

Alvaro Herrera

pgsql: Use atomic access for SlruShared->latest_page_number

To: pgsql-committers

Use atomic access for SlruShared->latest_page_number

The new concurrency model proposed for slru.c to improve performance does not include any single lock that would coordinate processes doing concurrent reads/writes on SlruShared->latest_page_number. We can instead use atomic reads and writes for that variable.

Author: Dilip Kumar <dilipbalaut@gmail.com>

Reviewed-by: Andrey M. Borodin <x4mmm@yandex-team.ru>

Discussion: <https://postgr.es/m/CAFiTIN-vzDvNz=ExGXz6gdyjtzGixKSqs0mKHMmaQ8sOSEFZ33A@mail.gmail.com>

Branch

master

Details

<https://git.postgresql.org/pg/commitdiff/d172b717c6f436738cc8383a4e9f611ae227fd93>

Modified Files

src/backend/access/transam/clog.c | 6 +----

src/backend/access/transam/commit_ts.c | 7 +----

src/backend/access/transam/multixact.c | 28 ++++++-----

src/backend/access/transam/slru.c | 39 ++++++-----

src/include/access/slru.h | 5 +---

5 files changed, 53 insertions(+), 32 deletions(-)

AK

Alexander Korotkov

pgsql: Use larger segment file names for pg_notify

To: pgsql-committers

Use larger segment file names for pg_notify

This avoids the wraparound in `async.c` and removes the corresponding code complexity. The maximum amount of allocated SLRU pages for NOTIFY / LISTEN queue is now determined by the `max_notify_queue_pages` GUC. The default value is 1048576. It allows to consume up to 8 GB of disk space which is exactly the limit we had previously.

Author: Maxim Orlov, Aleksander Alekseev, Alexander Korotkov, Teodor Sigaev

Author: Nikita Glukhov, Pavel Borisov, Yura Sokolov

Reviewed-by: Jacob Champion, Heikki Linnakangas, Alexander Korotkov

Reviewed-by: Japin Li, Pavel Borisov, Tom Lane, Peter Eisentraut, Andres Freund

Reviewed-by: Andrey Borodin, Dilip Kumar, Aleksander Alekseev

Discussion: <https://postgr.es/m/CACG%3DezZe1NQSCnfHOr78AtAZxJZeCvxrts0ygrxYwe%3DpyyjVWA%40mail.gmail.com>

Discussion: <https://postgr.es/m/CAJ7c6TPDOYBYrnCAeyndkBktO0WG2xSdYduTF0nxq%2BvfkmTF5Q%40mail.gmail.com>

Branch

master

Details

<https://git.postgresql.org/pg/commitdiff/2cdf131c46e631addfc386f6106e52a1b8cc3a70>

Commitfest

UUID v7

Обновить текущую страницу (⌘R)

Home / Commitfest 2024-01 / UUID v7 / Log in

UUID v7

Edit Comment/Review Change Status ▾

Title	UUID v7
Topic	Server Features
Created	2023-06-22 17:29:56
Last modified	2024-02-01 18:16:38 (1 week, 1 day ago)
Latest email	2024-01-30 18:37:56 (1 week, 3 days ago)
Status	<p>2024-03: Ready for Committer</p> <p>2024-01: Moved to next CF</p> <p>2023-11: Moved to next CF</p> <p>2023-09: Moved to next CF</p> <p>2023-07: Moved to next CF</p>
Target version	17
Authors	Andrey Borodin (x4m), Kirk Wolak (kirkw)
Reviewers	Aleksander Alekseev (a.alekseev), Chris Travers (einhverfr), Nikolay Samokhvalov (nikolay), Przemysław Sztoch (psztoch)
	Become reviewer



CF Manager role

Found in pgsql-hackers Mailbox

 Tom Lane 2 February 2024, 10:28

Re: Commitfest 2024-01 is now closed Details

To: vignesh C, Cc: Pg Hackers

vignesh C <vignesh21@gmail.com> writes:

| Thanks a lot to all the members who participated in the commitfest.

Thanks for all the work you did running it! CFM is typically a thankless exercise in being a nag, but I thought you put in more than the usual amount of effort to keep things moving.

regards, tom lane



PostgreSQL BuildFarm Status

Shown here is the latest status of each farm member for each branch it has reported on in the last 30 days.

Use the farm member link for history of that member on the relevant branch.

Legend	= cassert	= debug	= gssapi	= krb5	= llvm	= meson	= nls	= openssl
	= pam	= perl	= python	= tap-tests	[tcl] = tcl	= thread-safety	= vpath	= xml

Branch: HEAD									
Alias	System				Status	Flags			
boomslang	Debian 11 Bullseye	gcc 10	riscv64		03:05 ago	OK	[e70abd6]	Config	X
mantid	CentOS 7.9.2009	gcc 4.8.5	x86_64	(virtualized)	00:39 ago	OK	[e70abd6]	Config	X
turbot	Ubuntu 22.04.3 LTS	gcc 11.4.0	aarch64		01:08 ago	OK	[e70abd6]	Config	X
fairywren	Windows / Msys	12.2.0	gcc 11.2.0	x86_64	02:43 ago	OK	[e70abd6]	Config	X
chimaera	Debian GNU/Linux 9 (stretch)	gcc 6.3.0	ppc64le	(POWER9)	00:38 ago	OK	[e70abd6]	Config	X
lorikeet	Cygwin64/Windows 3.4.9/10	gcc 11.4.0	x86_64		01:51 ago	OK	[e70abd6]	Config	X
sevengill	macOS 14.3	clang 15.0.0	arm64		01:21 ago	OK	[e70abd6]	Config	X
cisticola	Loongnix-Server 8.4.0	GCC 8.3.0	loongarch64		01:26 ago	OK	[e70abd6]	Config	X
canebrake	Debian Sid	gcc 13	x86-64		03:09 ago	OK	[e70abd6]	Config	X

Цикл разработки

- Feature freeze в апреле
- Release в сентябре

- Feature freeze в апреле
- Release в сентябре
- Разработка в ветке master

- Feature freeze в апреле
- Release в сентябре
- Разработка в ветке master
- Ветки REL_{X}_STABLE для поддерживаемых мажоров
Например REL_16_STABLE

- Feature freeze в апреле
- Release в сентябре
- Разработка в ветке master
- Ветки REL_{X}_STABLE для поддерживаемых мажоров
Например REL_16_STABLE
- Теги для всех выпущенных версий REL_16_2

- Feature freeze в апреле
- Release в сентябре
- Разработка в ветке master
- Ветки REL_{X}_STABLE для поддерживаемых мажоров
Например REL_16_STABLE
- Теги для всех выпущенных версий REL_16_2
- Фикс для CVE и коррупции в каждой выпущенной версии

Разработка

2020-09: Committed

2020-07: Moved to next CF

2020-03: Moved to next CF

2020-01: Moved to next CF

2019-11: Moved to next CF

git kung-foo

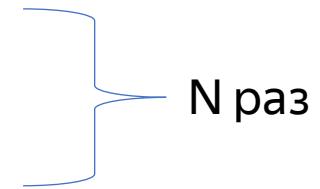
```
git checkout origin/master
```

```
git checkout -b my_feature
```

```
// hack hack hack
```

```
git commit -a
```

```
git patch-format -7 -v 42
```



N раз



x4m / postgres_g

Q Type [

Code Pull requests 6

Actions

Projects

Security

Insights

Settings



postgres_g

Public

forked from [postgres/postgres](#)

Pin

Unwatch 2

tt_22 ▾

286 Branches

395 Tags

Go to file

t

Add file ▾

Code ▾

This branch is 4 commits ahead of, 298 commits behind [postgres/postgres:master](#).

Contribute ▾

Sync fork ▾



zhjwpku and Andrey M. Borodin fix reschedule timeout for each com...



82a2fbe · last month

57,443 Commits



config

Make all Perl warnings fatal

2 months ago



contrib

Revert "pg_stat_statements: Add coverage for entry_deal...

2 months ago



doc

Introduce transaction_timeout

last month



src

fix reschedule timeout for each command

last month



.cirrus.star

Remove duplicate words in docs and code comments.

4 months ago



.cirrus.tasks.yml

Use "template" data directory in tests

6 months ago



.cirrus.yml

ci: Make compute resources for CI configurable

6 months ago

https://github.com/x4m/postgres_g/tree/tt_22

x4m / postgres_g

Pull requests 6 Actions Projects Security Insights Settings

postgres_g Public forked from postgres/postgres

Pin Unwatch 2

tt_22 286 Branches 395 Tags Go to file Add file Code

This branch is 4 commits ahead of, 298 co

zjhwpku and Andrey M. Borodin fix

config contrib doc src .cirrus.star .cirrus.tasks.yml cirrus.yml

All checks have passed

1 neutral and 7 successful checks

- Windows - Server 2019, MinGW64 - Meson Completed in 57s Details
- CompilerWarnings Successful in 4m - Task Summary Details
- FreeBSD - 13 - Meson Successful in 7m - Task Summary Details
- Linux - Debian Bullseye - Autoconf Successful in 5m - Task Summary Details
- Linux - Debian Bullseye - Meson Successful in 6m - Task Summary Details
- SanityCheck Successful in 34s - Task Summary Details
- Windows - Server 2019, VS 2019 - Meson & ninja Successful in 11m - Task Summary Details
- macOS - Ventura - Meson Successful in 4m - Task Summary Details

AB

Andrey M. Borodin

Re: UUID v7

pgsql-hackers 31 August 2023, 00:05



To: Peter Eisentraut, Cc: Tom Lane, Daniel Gustafsson & 9 more

[Details](#)

On 21 Aug 2023, at 13:42, Andrey M. Borodin <x4mmm@yandex-team.ru> wrote:

<[v5-0001-Implement-UUID-v7-as-per-IETF-draft.patch](#)><[v5-0002-Buffer-random-numbers.patch](#)>
<[v5-0003-Use-cached-random-numbers-in-gen_random_uuid-too.patch](#)>

FPA attached next version.

Changes:

- implemented protection from time leap backwards when series is generated on the same backend
- counter overflow is now translated into ms step forward

Best regards, Andrey Borodin.



v6-0001-
Implem...t.patch



v6-0003-Use-
cached....patch



v6-0002-
Buffer-...s.patch

В рассылке

- Помните, что пишете в архив

Re: UUID v7

From: "Andrey M(dot) Borodin" <x4mmm(at)yandex-team(dot)ru>
To: Przemysław Sztoch <przemyslaw(at)sztoch(dot)pl>
Cc: Andrey Borodin <amborodin86(at)gmail(dot)com>, Jelte Fennema <postgres(at)jeltef(dot)nl>, Nick Babadzhian <pgnickb(at)gmail(dot)com>, Mat Arye <mat(at)timescaledb(dot)com>, Peter Eisentraut <peter(at)eisentraut(at)enterprisedb(dot)com>, Tom Lane <tgl(at)sss(dot)pgh(dot)pa(dot)us>, Daniel Gustafsson <daniel(at)yesql(dot)se>, Matthias van de Meent <boekewurm+postgres(at)gmail(dot)com>, Nikolay Samokhvalov <samokhvalov(at)gmail(dot)com>, "Kyzer Davis (kydavis)" <kydavis(at)cisco(dot)com>, Andres Freund <andres(at)anarazel(dot)de>, PostgreSQL Hackers <pgsql-hackers(at)postgresql(dot)org>, "brad(at)peabody(dot)io" <brad(at)peabody(dot)io>, "wolakk(at)gmail(dot)com" <wolakk(at)gmail(dot)com>, sergeyprokhorenko(at)yahoo(dot)com(dot)au
Subject: Re: UUID v7
Date: 2024-01-04 18:20:11
Message-ID: CFE482C1-F001-4C51-89A3-084E7FF36157@yandex-team.ru
Views: Raw Message | Whole Thread | Download mbox | Resend email
Thread: 2024-01-04 18:20:11 from "Andrey M(dot) Borodin" <x4mmm(at)yandex-team(dot)ru> 
Lists: pgsql-hackers

Hello Przemysław,

thanks for your interest in this patch!

> On 3 Jan 2024, at 04:37, Przemysław Sztoch <przemyslaw(at)sztoch(dot)pl> wrote:
>
> 1. Is it possible to add a function that returns the version of the generated uuid?
> It will be very useful.
> I don't know if it's possible, but I think there are bits in the UUID that inform about the version.
What do you think if we have functions `get_uuid_v7_ver(uuid)` and `get_uuid_v7_var(uuid)` to extract bit fields according to [0] ? Or, perhaps, this should be one function with two return parameters? It's not in a patch yet, I'm just considering how this functionality should look like.

> 2. If there is any doubt about adding the function to the main sources (standard development in progress), in my opinion you can definitely add this function to the `uuid-ossp` extension.
From my POV we can just have this function in the core. OSSP support for UUID seems more or less dead [1]: "Newsflash: 04-Jul-2008: Released OSSP uuid 1.6.2". Or do I look into wrong place?

> 3. Wouldn't it be worth including UUID version 6 as well?
The standard in [0] says "Systems that do not involve legacy UUIDv1 SHOULD use UUIDv7 Section 5.7 instead." If there's a point in developing v6 - I'm OK to do so.

> 4. Sometimes you will need to generate a uuid for historical time. There should be an additional function `gen_uuid_v7(timestamp)`.
Done, please see patch attached. But I changed signature to `gen_uuid_v7(int8)`, to avoid messing with bytes from user who knows what they want. Or do you think `gen_uuid_v7(timestamp)` would be more convenient?

Thanks!

Best regards, Andrey Borodin.

[0] <https://datatracker.ietf.org/doc/html/draft-ietf-uuidrev-rfc4122bis-14#uuidv7>
[1] <http://www.ossp.org/>

Attachment	Content-Type	Size
v8-0001-Implement-UUID-v7-as-per-IETF-draft.patch	application/octet-stream	9.0 KB
v8-0002-Add-optional-argument-unix_ts_ms-to-gen_uuid_v7.patch	application/octet-stream	5.7 KB

В рассылке

- Помните, что пишете в архив
- Plain text
- Без top posting \ overquoting

В рассылке

- Помните, что пишете в архив
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Экосистема

powerteam / pg_stat_kcache

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Code

rjuu Release 2.2.3 ✓

44f0c7e · 3 weeks ago 145 Commits

.github/workflows	Add GitHub regression test	7 months ago
debian	Release 2.2.3	3 weeks ago
expected	Avoid regression test failure on a server where OS and pg...	4 years ago
test/sql	Avoid regression test failure on a server where OS and pg...	4 years ago
.gitignore	Start working on 2.1.1	6 years ago
CHANGELOG.md	Release 2.2.3	3 weeks ago
CONTRIBUTORS.md	Release 2.2.3	3 weeks ago
LICENSE	Update copyright year.	last year
META.json	Update copyright and forgotten upstream change	6 years ago
Makefile	Allow PG_CONFIG value to be found on command-line (#...)	6 years ago
README.rst	Recommend installing from PGDG repositories	last year
pg_stat_kcache--2.1.0--2.1.1.sql	Update copyright year.	3 weeks ago
pg_stat_kcache--2.1.0.sql	Update copyright year.	3 weeks ago

About

Gather statistics about physical disk access and CPU consumption done by backends.

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optimization postgresql
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JelteF v1.22.0 e6ce619 · 2 weeks ago 1,526 Commits

doc	Various doc updates (#1012)	2 weeks ago
etc	Improve recommended systemd unit file (#983)	3 months ago
include	Update client varcache with canonical values from server ...	2 months ago
lib @ 46a78d2	Unbreak windows CI (#1009)	3 weeks ago
src	Unbreak windows CI (#1009)	3 weeks ago
test	Unbreak windows CI (#1009)	3 weeks ago
uthash @ eeба196	v1.22.0	2 weeks ago
win32	refactor: Use an enum for shutdown values (#926)	6 months ago
.cirrus.yml	Unbreak windows CI (#1009)	3 weeks ago
.editorconfig	Correct editorconfig rules for C files (#891)	7 months ago
.flake8	Exclude lib and uthash directory for python tooling (#924)	6 months ago
.gitattributes	Fix C code indented with spaces	2 years ago
.gitignore	Add autoformatting for C files (#892)	6 months ago
.gitmodules	Make varcache dynamically configurable. (#867)	8 months ago

About

lightweight connection pooler for PostgreSQL

[www.pgbouncer.org/](#)

postgresql

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PgBouncer 1.22.0 Latest 2 weeks ago + 16 releases

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master 73 Branches 54 Tags Go to file Add file Code

VGoshev Merge pull request #1641 from ElectricR/mongodb-fix-nonsha... 390c294 · 3 days ago 1,664 Commits

.github Add --after option support for PostgreSQL delete retain c... last week

benchmarks Update Copy composer benchmark (#1073) 3 years ago

cmd MongoDB binary restore: If shardIdentity document does ... 3 days ago

docker Add --after option support for PostgreSQL delete retain c... last week

docs STORAGES doc using wrong Azure variable name (#1626) last week

internal Merge pull request #1641 from ElectricR/mongodb-fix-no... 3 days ago

main Initial ETCD + WAL-G implementation (#1605) 2 months ago

pkg/storages Add tests for partitionStrings (#1598) 4 days ago

submodules Update brotli to v1.0.9 from v1.0.7 (#1179) 3 years ago

test Pass Context around Folder upload functions, add PG WA... 5 months ago

tests_func Add MongoDB 7.0 support. Remove MongoDB 4.2 suppor... 4 months ago

testtools Reuse SSH connections opened once when daemon start... 2 months ago

utility rename GetRandomizedString to GetRandomizedHexString 10 months ago

About Archival and Restoration for databases in the Cloud

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v2.0.1 Latest on Aug 25, 2022 + 48 releases



zalando / patroni

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800



6k

master

15 Branches

65 Tags

Go to file

t

Add file

Code



barthisrael

Patroni doesn't filter out some not allowed options from `pg...



7adfc0d · 5 days ago

2,371 Commits



.github

Release v3.2.2 (#3007)

last month



docker

update Dockerfiles (#2937)

3 months ago



docs

Release v3.2.2 (#3007)

last month



extras

Change master->primary/leader/member (#2541)

last year



features

Optimize priority failover behave tests (#3004)

last month



kubernetes

Update PG version in a couple of places (#2986)

2 months ago



patroni

Patroni doesn't filter out some not allowed options from `...

5 days ago



tests

Patroni doesn't filter out some not allowed options from `...

5 days ago



typings

Bump pyright to 1.1.336 (#2952)

3 months ago



.gitignore

fix typo and add gitignore entries (#2959)

3 months ago



.readthedocs.yaml

Generate API docs from code with sphinx autodoc (#2699)

6 months ago



CODEOWNERS

Add Polina to maintainers (#2451)

2 years ago



Dockerfile

Update PG version in a couple of places (#2986)

2 months ago

About

A template for PostgreSQL High Availability with Etcd, Consul, ZooKeeper, or Kubernetes

kubernetes consul raft postgresql
 zookeeper etcd haproxy failover
 high-availability

Readme

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Code of conduct

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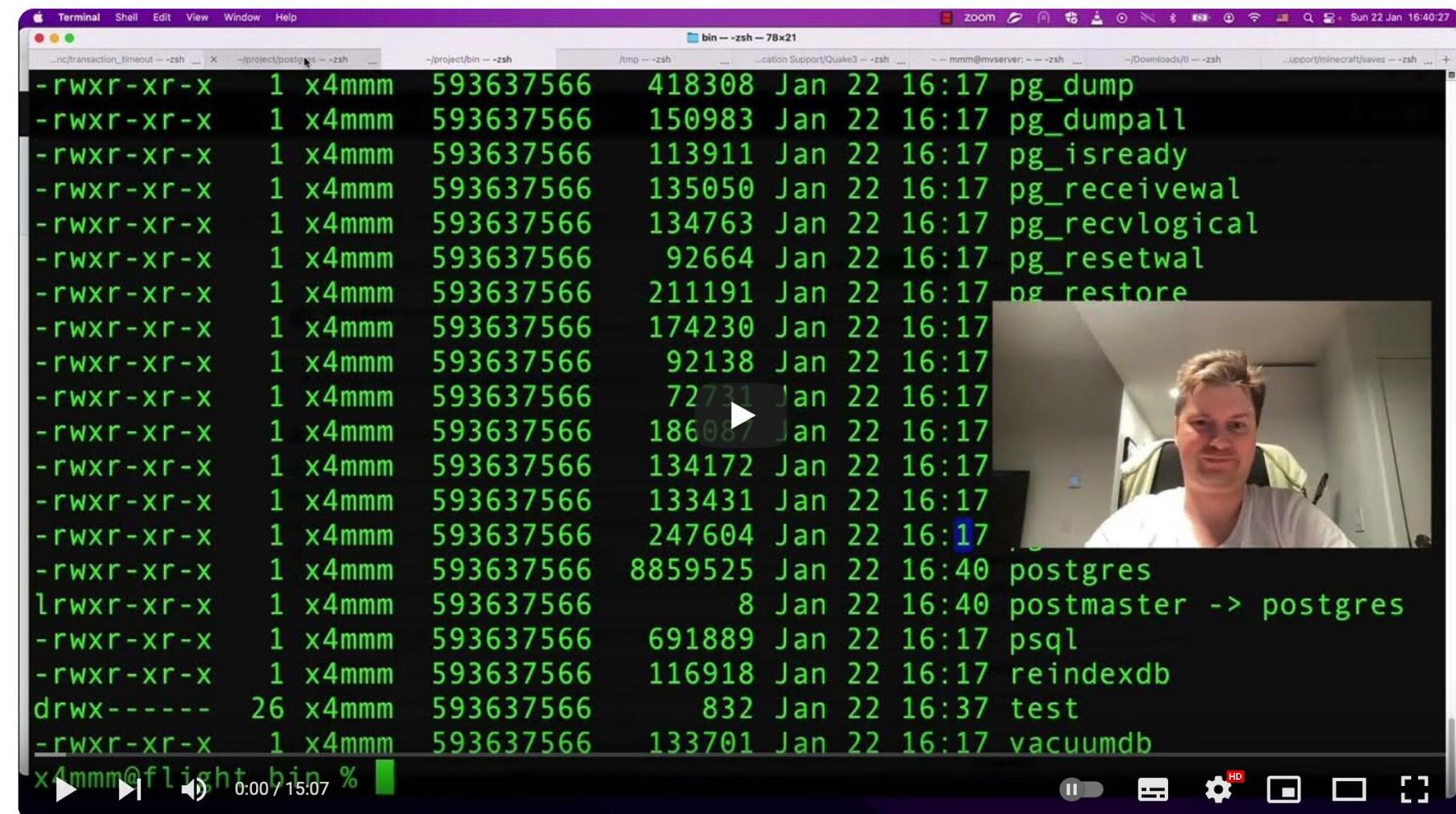
Report repository

Releases 58

v3.2.2 Latest
last month

+ 57 releases

С чего начать (light version)



The terminal window displays a list of files with their permissions, sizes, modification times, and names. The files are owned by user 'x4mmm' and group 'postgres'. The list includes:

- rwxr-xr-x 1 x4mmm 593637566 418308 Jan 22 16:17 pg_dump
- rwxr-xr-x 1 x4mmm 593637566 150983 Jan 22 16:17 pg_dumpall
- rwxr-xr-x 1 x4mmm 593637566 113911 Jan 22 16:17 pg_isready
- rwxr-xr-x 1 x4mmm 593637566 135050 Jan 22 16:17 pg_receivewal
- rwxr-xr-x 1 x4mmm 593637566 134763 Jan 22 16:17 pg_recvlogical
- rwxr-xr-x 1 x4mmm 593637566 92664 Jan 22 16:17 pg_resetwal
- rwxr-xr-x 1 x4mmm 593637566 211191 Jan 22 16:17 pg_restore
- rwxr-xr-x 1 x4mmm 593637566 174230 Jan 22 16:17
- rwxr-xr-x 1 x4mmm 593637566 92138 Jan 22 16:17
- rwxr-xr-x 1 x4mmm 593637566 72731 Jan 22 16:17
- rwxr-xr-x 1 x4mmm 593637566 186087 Jan 22 16:17
- rwxr-xr-x 1 x4mmm 593637566 134172 Jan 22 16:17
- rwxr-xr-x 1 x4mmm 593637566 133431 Jan 22 16:17
- rwxr-xr-x 1 x4mmm 593637566 247604 Jan 22 16:17
- rwxr-xr-x 1 x4mmm 593637566 8859525 Jan 22 16:40 postgres
- lrwxr-xr-x 1 x4mmm 593637566 8 Jan 22 16:40 postmaster -> postgres
- rwxr-xr-x 1 x4mmm 593637566 691889 Jan 22 16:17 psql
- rwxr-xr-x 1 x4mmm 593637566 116918 Jan 22 16:17 reindexdb
- drwx----- 26 x4mmm 593637566 832 Jan 22 16:37 test
- rwxr-xr-x 1 x4mmm 593637566 133701 Jan 22 16:17 vacuumdb

The terminal window has a dark theme and is running on a Mac OS X system. A video player interface is overlaid on the right side of the terminal, showing a man's face in a video frame. The video player controls include play/pause, volume, and a progress bar indicating 0:00 / 15:07.

https://www.youtube.com/watch?v=rihfAnd_leM

Robert Haas

VP, Chief Database Scientist @ EnterpriseDB, PostgreSQL Major Contributor and Committer

Tuesday, July 09, 2024

Mentoring Program Updates

Here are a few updates on the mentoring program that I announced in a [previous blog post](#).

First, I ended up keeping applications open for 12 days. During that time, I got 34 applications. Many of the 9 committer-mentors who initially offered to mentor one person ended up deciding that they would be willing to mentor two people, so I was able to send out 14 acceptances, which I think is a great result, especially considering that this is the first time we've done something like this.

But what about all of the people who were applied and not accepted, or who did not apply but are still interested in learning more about hacking on PostgreSQL? How can we support them and encourage them to get involved and contribute? I'm pleased to be able to announce two additional efforts in that direction.

First, I decided to spin up a Discord server, which anyone is welcome to join. The purpose of this Discord server is for people who are interested in hacking on PostgreSQL to connect with each other and with experienced hackers who can help them learn how to do it better. Initially, I sent out invitations to all of the committers who agreed to mentor, and all of those who applied for a mentor. However, one of my colleagues then tweeted a link to the Discord, and it now has almost 300 people in it!

Maybe you'd like to join, too. If so, this query will give you the invite link:

```
SELECT string_agg(chr(c+46), '') FROM
unnest(array[58,70,70,66,69,12,1,1,54,59,69,53,65,68,54,0,57,57,1,52,74,4,25,11,29,41,
75,68,43]) AS c
```

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Подписки

- pgsql-announce
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Commitfest 2024-03

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Status summary: Needs review: 174. Waiting on Author: 44. Ready for Committer: 27. Committed: 20. Returned with Feedback: 1. Rejected: 1. Total: 267.

Active patches

Patch	↓	Status	Ver	Author	Reviewers	Committer	Num cfs	Latest activity	Latest mail
Bug Fixes									
Add some checks to avoid stack overflow		Needs review	stable	Egor Chindyaskin (egorchn21)	Robert Haas (rhaas)		5	2024-02-01 16:36	2024-01-12 21:00
Allow SIGINT to cancel psql database reconnections		Needs review		Tristan Partin (tristan957)			4	2024-01-12 17:15	2024-01-31 18:34
Postpone reparameterization of paths until when creating plans		Ready for Committer		Richard Guo (richardguo)	Ashutosh Bapat (ashutoshbapat), Andrei Lepikhov (lepihkov), Alena Rybakina (a.rybakina)	tgl	4	2024-02-01 18:10	2024-02-02 02:10
pg_ctl start may return 0 even if the postmaster has been already started on Windows		Waiting on Author		Kyotaro Horiguchi (horiguti)	Hayato Kuroda (ha-kun)		3	2024-02-01 18:23	2024-01-15 18:34
Mark expressions nullable by grouping sets		Waiting on Author		Richard Guo (richardguo)	Alena Rybakina (a.rybakina)		3	2024-01-30 06:01	2024-01-11 15:10
[PATCH] LockAcquireExtended improvement		Needs review	17	Jingxian Li (jingxian)			2	2024-02-01 16:37	2024-02-08 10:28
Fix COPY FROM...CSV importing _ on a line by itself		Needs review		Daniel Vérité (danielverite)			2	2024-02-01 16:37	2024-01-24 16:01
"unexpected duplicate for tablespace" problem in logical replication		Waiting on Author	stable	Shenhao Wang (wangshenhao)	Masahiko Sawada (masahikosawada)		2	2024-02-01 18:24	2024-02-02 15:49
Dump-restore loosing 'attnonnull' bit for DEFERRABLE PRIMARY KEY column(s)		Needs review	17	Amul Sul (sulamul)			2	2024-02-01 16:37	2024-01-23 12:11

Конференции



Сложности разработки

- Непонятно как мотивировать сотрудника

- Непонятно как мотивировать сотрудника
- Сотруднику непонятно как строить карьеру

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- Сотруднику непонятно как строить карьеру
- Сложность кодовой базы продолжает расти, есть проекты проще

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- Инструментарий, не нужный нигде кроме системной разработки TAP, perl, C

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- Инструментарий, не нужный нигде кроме системной разработки ТАР, perl, С
- Всё уже изобретено много раз

Возможности

Total Cost of Ownership

- Железо
- Софт
- Люди

Total Cost of Ownership

- Железо
- Софт
- Люди

ФУНКЦИЯ СУЩЕСТВЕННО СЛОЖНЕЕ СЛОЖЕНИЯ



$$\frac{(SRE_{cost} + Licences_{cost}) \cdot (Incidents_{cost}) \cdot (ComputePower_{cost})}{\alpha \cdot QPS + \beta \cdot Traffic} \approx const$$

, где SREcost включает усилия, потраченные на observability

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- Инциденты – основная стоимость операционной СУБД

SRE <-> Contributors

- Инциденты – основная стоимость операционной СУБД
- Incident-driven development

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- Но метрики не помешают

SRE <-> Contributors

- Инциденты – основная стоимость операционной СУБД
- Incident-driven development
- Речь не о гарантиях и SLA
- Но метрики не помешают
- Нужен owner

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- Предлагает сдуть пыль со старых патчей
- Напоминает о необходимости обновлений патчей
- Защищает необходимость ресурсов на экосистемные работы

Нас не так много, как кажется

- Монокомпании EDB, PgPro, NTT, Tantor
- Крупные команды контрибьюторов в AWS и MS
- Небольшие команды в Google, Timescale, Яндексе, Aiven
- Околопостгресные стартапы Oriole, Neon, Supabase, Greenplum



PGBootCamp.ru

Давайте делать Postgres!

Андрей Бородин, Postgres contributor.

PG BootCamp Russia 2024 Kazan