

The Next Five Years for PostgreSQL Advocacy

or “How We Can Overtake Every Other Database”

Jonathan S. Katz
PGCon 2014
May 22, 2014

...who?

- CTO, VenueBook
- Co-Organizer, NYC PostgreSQL User Group
 - 925+ members
- Co-Chair, PGConf NYC
 - 2014: 259 attendees
 - *2015: March 25 - 27*
- Director, United States PostgreSQL Association

PostgreSQL Advocacy

...in 2019?



Yes, I know this is bold



Just trying to give
some ideas

~~Name~~

Time Travel

As of Postgres v6.2, *time travel* is no longer supported. There are several reasons for this: performance impact, storage size, and a `pg_time` file which grows toward infinite size in a short period of time.

New features such as triggers allow one to mimic the behavior of time travel when desired, without incurring the overhead when it is not needed (for most users, this is most of the time). See examples in the `contrib` directory for more information.

Time travel is deprecated: The remaining text in this section is retained only until it can be rewritten in the context of new techniques to accomplish the same purpose. Volunteers? -
thomas 1998-01-12

2009

- Barack Obama inaugurated for first term
- “Collateralized Debt Obligations” enters the common lexicon...sort of
- Swine Flu pandemic





Launched at South by Southwest



(and uses PostgreSQL)



redis



Released April 10, 2009





*Was Not Yet Released by PGCon
(May 27, 2009)*

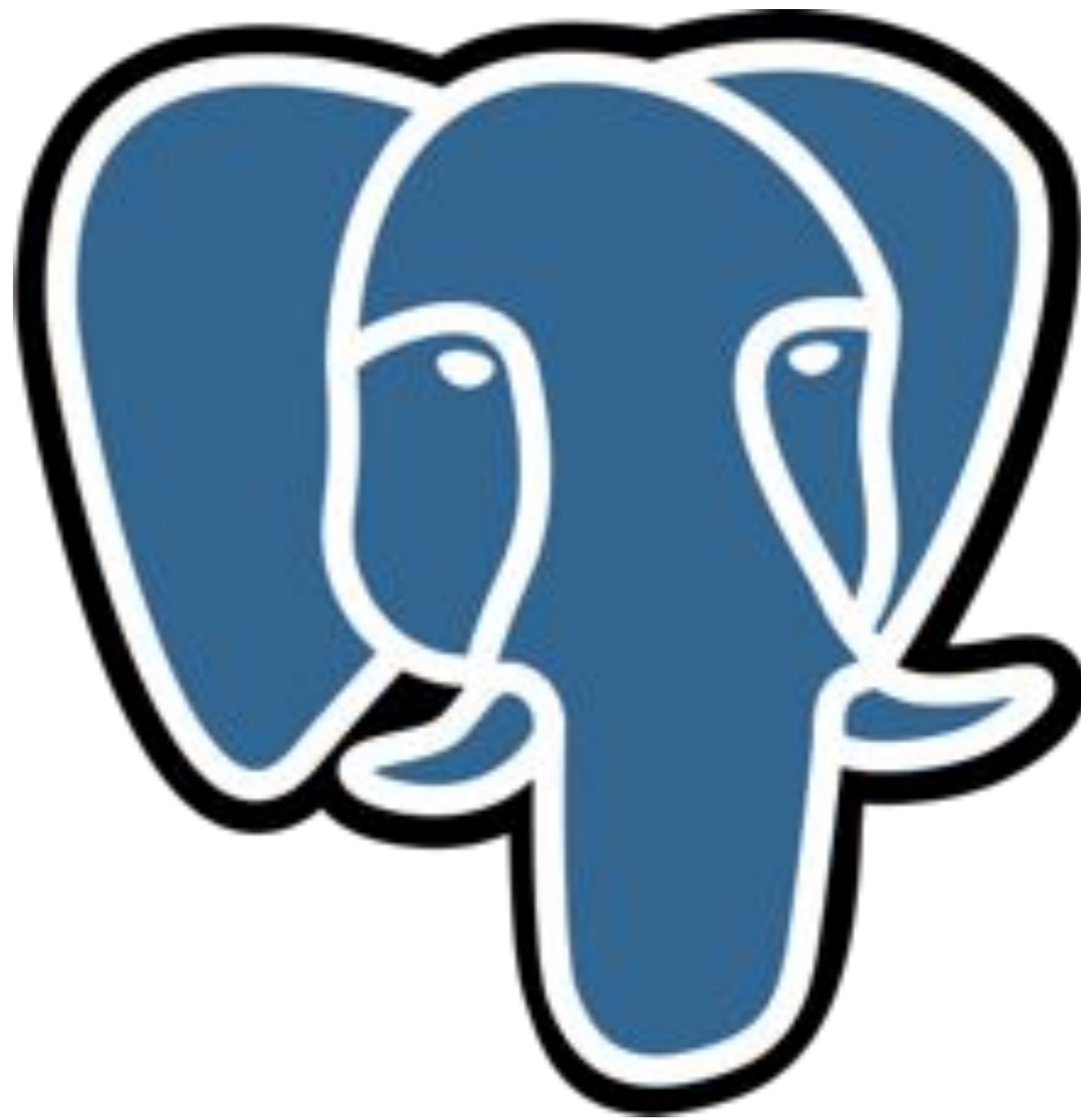
Oracle to Buy Sun

SANTA CLARA, Calif. April 20, 2009 Sun Microsystems (NASDAQ: JAVA) and Oracle Corporation (NASDAQ: ORCL) announced today they have entered into a definitive agreement under which Oracle will acquire Sun common stock for \$9.50 per share in cash. The transaction is valued at approximately \$7.4 billion, or \$5.6 billion net of Sun's cash and debt.

Sun Microsystems Announces Agreement to Acquire MySQL, Developer of the World's Most Popular Open Source Database

Sun Growth Strategy Accelerates With New Position in \$15 Billion Database Market

SANTA CLARA, CA January 16, 2008 Sun Microsystems, Inc. (NASDAQ: JAVA) today announced it has entered into a definitive agreement to acquire MySQL AB, an open source icon and developer of one of the world's fastest growing open source databases for approximately \$1 billion in total



8.3, going on 8.4



8.3 Gave Us...

- Full-text search in core
- XML, UUID, ENUM
- NULLS FIRST, NULLS LAST
- Performance Improvements
 - esp. writing to disk
- GIN support for hstore


What's New in 8.4?


- WINDOW functions
- (Recursive) Common-table expressions
 - aka “WITH” queries
- Warm Standby Improvements
- Column permissions
- SSL as authentication method
- Parallel restore
- Automatic sizing of free space map
 - aka better vacuuming
- Function runtime stats
- pg_stat_statements, btree_gin


But...

- Built-in streaming replication?
- Read-only replicas?
- Easy way to install extensions?
- Writeable CTEs?
- Foreign Data Wrappers?
- Not have VACUUM FULL (or VACUUM) kill the database?
- Exclusion constraints?
- Index-only scans?

And NYCPUG?


April 20, 2010 - 6:30 PM
PostgreSQL Replication Solutions, presented by Bruce Momjian 



20 Database Users | 

This talk is for people who need some kind of replication and want to learn more about the replication options available for PostgreSQL. Replication is not a single... [LEARN MORE](#)

November 30, 2009 - 7:00 PM
New York PostgreSQL November Meetup

2 Database Users | 

Initial organizational meeting. I'm canceling the October meeting because I'm unable to be there. Let's all try to meet in Novemeber. I moved it forward a week so... [LEARN MORE](#)

Not yet...

2014

A LOT has changed in
5 years

Some perceptions change...

Amazon RDS for PostgreSQL - Now Available

The Amazon Relational Database Service (RDS among friends) [launched in 2009](#) with support for MySQL. We added Oracle Database in [2011](#) and Windows SQL Server in [2012](#).

Today we are adding support for [PostgreSQL](#). After personally fielding hundreds requests for this database engine over the last couple of years, I am more than happy to be making this announcement! Some of the people that I have talked to want to move their existing applications over to RDS. Others want to build new applications that take advantage of the [data compression](#), ACID compliance, spatial data (via [PostGIS](#)), or [fulltext indexing](#) that PostgreSQL has to offer.

Over the past few years, PostgreSQL has become the preferred open source relational database for many enterprise developers and start-ups, powering leading geospatial and mobile applications.



PostgreSQL has become the preferred open source relational database for many enterprise developers and start-ups, powering leading geospatial and mobile applications

- Jeff Barr, Chief Evangelist, Amazon Web Services, Nov 14, 2013

...some don't

Disadvantages of PostgreSQL

- **Performance:**

For simple *read-heavy* operations, PostgreSQL can be an over-kill and might appear less performant than the counterparts, such as MySQL.

- **Popularity:**

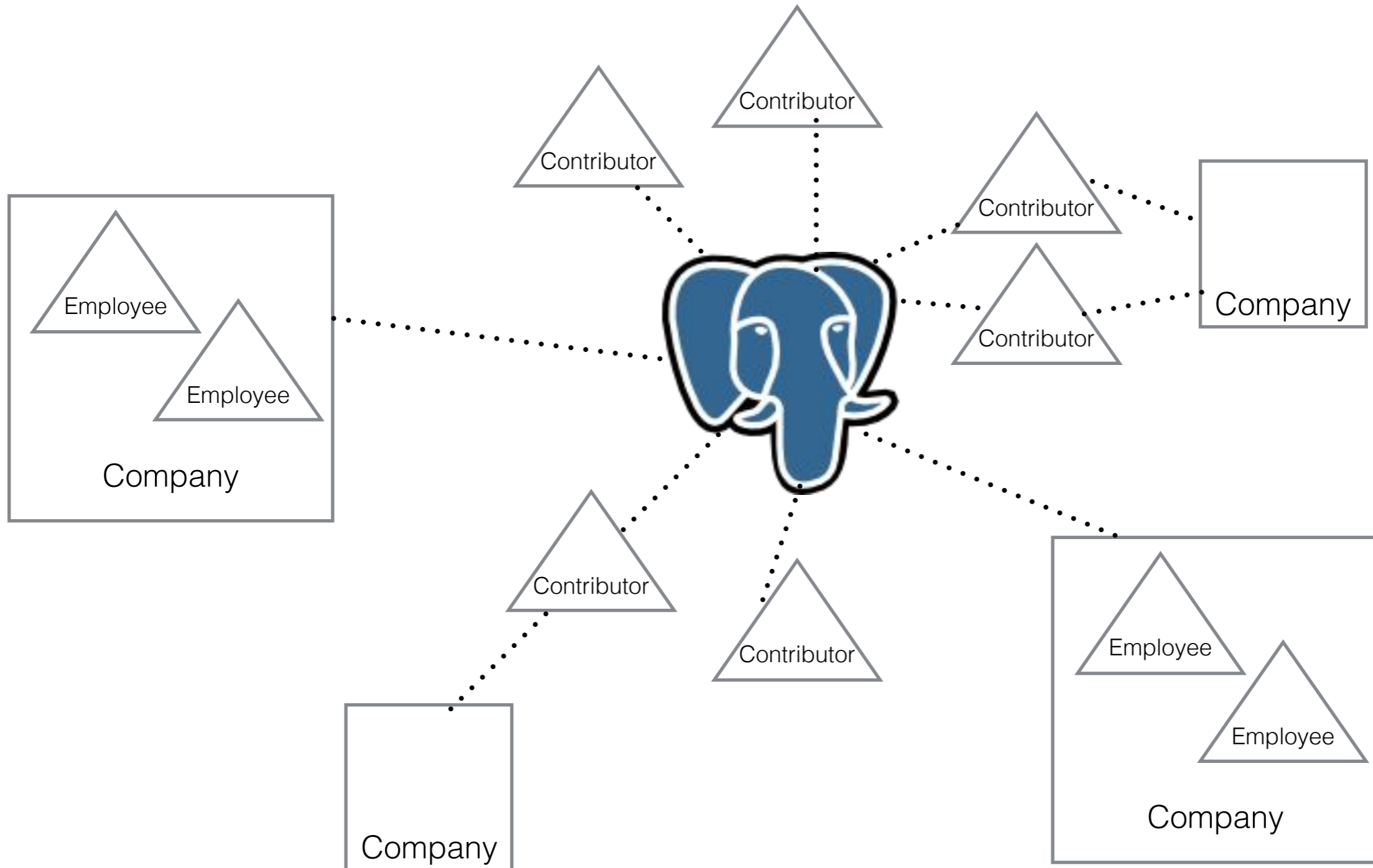
Given the nature of this tool, it lacks behind in terms of popularity, despite the very large amount of deployments - which might affect how easy it might be possible to get support.

- **Hosting:**

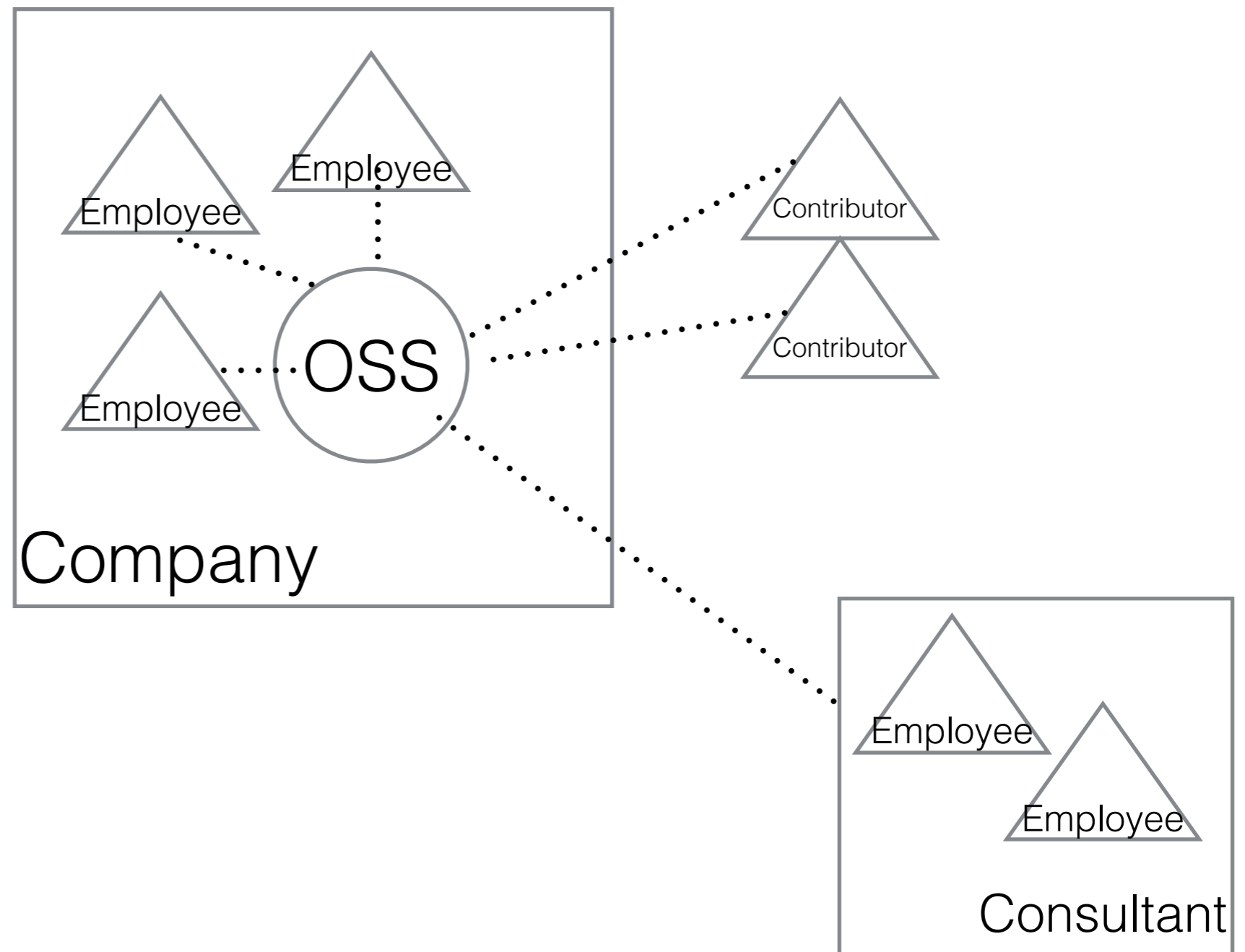
Due to above mentioned factors, it is harder to come by hosts or service providers that offer managed PostgreSQL instances.

So what do can we do?

Our Community



What Our Community Is Not



\$8,400,000,000

\$8,400,000,000

The Sales, General, and Administrative budget for a database company in northern California

\$650,000,000

*(Estimated marketing budget based on 2008 interview with
VP-CMO of database company in Northern California)*

Framing the Problem

- What are the strengths of our advocacy efforts?
- What are the weaknesses?
- What can we do as a community to build and retain PostgreSQL adoption?

Advocacy Strengths

- Support
 - Mailing-lists, IRC
 - Consultants
 - User Groups
- Openness
- Website / Documentation
- Blogging

Areas of Improvement

- Website
- Outreach
 - Speaking at other user groups, conferences
 - Reaching out to help groups
- Leveraging untapped marketing resources
 - Social Media
 - “Memorable Buzz”

(Out of our control?)

- “Need 24/7 support but are there enough resources available?”
- “When there is a problem, I don’t know who to sue!”
- “Want to contribute to the community, but have certain legal / regulatory restrictions we have to work with”



The world's most advanced open source database.

PostgreSQL 2014-03-20 Update Release

20th March 2014

The PostgreSQL Global Development Group announces updates for all active branches of PostgreSQL, specifically versions 9.3.4, 9.2.8, 9.1.13, 9.0.17 and 8.4.21.

- [Release Announcement](#)
- [Download](#)



LATEST RELEASES

- 9.3.4 - March 20, 2014 - [Notes](#)
- 9.2.8 - March 20, 2014 - [Notes](#)
- 9.1.13 - March 20, 2014 - [Notes](#)
- 9.0.17 - March 20, 2014 - [Notes](#)
- 8.4.21 - March 20, 2014 - [Notes](#)

Download | [RSS](#)
[Why should I upgrade?](#)

SHORTCUTS

- [Security](#)
- [Operational Sites](#)
- [Media Logs](#)
- [Wiki](#)
- [Support a Bug](#)
- [FAQs](#)

SUPPORT US

PostgreSQL is free. Please support our work by making a [donation](#).

FEATURED USER

"By default, PostgreSQL is probably the most security-aware database available ..."

Database Hacker's Handbook,

- [Case Studies](#)
- [More Quotes](#)
- [Featured Users](#)

LATEST NEWS

- May 8, 2014 [postgres 5.1 is out](#)
- May 8, 2014 [Team PostgreSQL 1.07 - free PostgreSQL web interface](#)
- May 1, 2014 [PostgresDAC 2.12.0 meets RAD Studio XE6](#)
- April 14, 2014 [Barman 1.3.1 released](#)
- April 14, 2014 [Database .NET 11 released!](#)
- April 10, 2014 [Postgres Days 2014 - Covers the Call for Papers](#)
- March 20, 2014 [PostgreSQL updates 9.3.4, 9.2.8, 9.1.13, 9.0.17 and 8.4.21 released](#)

UPCOMING EVENTS

- 2014-09-20 - 2014-09-24 [PGCon 2014](#) (Ottawa, ON, Canada)
 - 2014-06-05 - 2014-06-06 [PGDay France 2014](#) (Toulon, France)
 - 2014-06-24 [Swiss Postgres Conference 2014](#) (Rapperswil, SG, Switzerland)
 - 2014-07-08 [CHAS 18](#) (Hilton Keynes, United Kingdom)
 - 2014-07-09 [PG Day UK](#) (Hilton Keynes, United Kingdom)
- [More](#) | [Submit Event](#) [RSS](#)
- [1807/1808/1809 TRAINING](#)

PLANET POSTGRES SQL


- 2014-09-18 [Michael Paauer: Make Postgres sing with the use of Windows](#)
- 2014-09-08 [Josh Berkus: Remastering without remastering](#)
- 2014-09-08 [Hans Juergen Schenck: Casting integers to int](#)
- 2014-09-08 [gabriele.nishi: PG13PLUG: May meeting next month](#)
- 2014-09-08 [Marko Tiikkari: PostgreSQL article of the week, week 13](#)
- 2014-09-08 [Shaun M. Thomas: Trimming the PostgreSQL Query Planner](#)

It's a good site if you're
already in the community

Git is a **free and open source** distributed version control system designed to handle everything from small to very large projects with speed and efficiency.

Git is **easy to learn** and has a **tiny footprint with lightning fast performance**. It outclasses SCM tools like Subversion, CVS, Perforce, and ClearCase with features like **cheap local branching**, convenient **staging areas**, and **multiple workflows**.



 **Learn Git in your browser for free with Try Git.**



About

The advantages of Git compared to other source control systems.



Documentation

Command reference pages, Pro Git book content, videos and other material.



Downloads

GUI clients and binary releases for all major platforms.



Community

Get involved! Mailing list, chat, development and more.



Pro Git by Scott Chacon is available to [read online for free](#). Dead tree versions are available on [Amazon.com](#).

 [Mac GUIs](#)

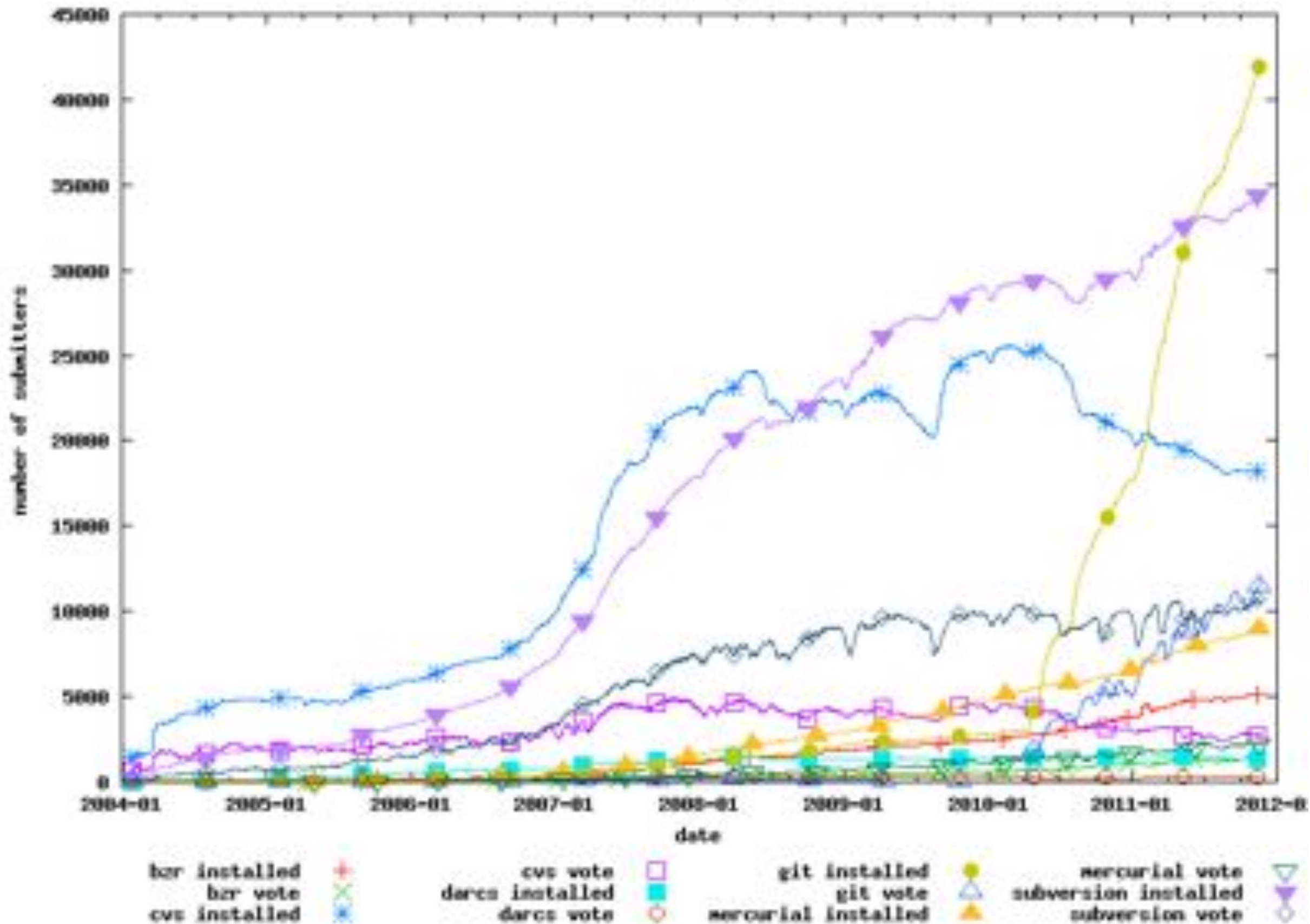
 [Tarballs](#)

 [Windows Build](#)

 [Source Code](#)

git is nontrivial, too

popcom graph



PostgreSQL.org Goals

- Modernize!
 - Look / Feel
 - Mobile Friendly
- Easier navigation
 - Get to front page of documentation
 - Downloads
 - Highlight support resources
- Clearer homepage
- Content

Remember

PostgreSQL.org is often the first impression people have of what PostgreSQL is and the community...

Remember

PostgreSQL.org is often the first impression people have of what PostgreSQL is and the community...

...it may very well be our most powerful advocacy tool

Outreach: Our Conferences

- Overall, very good quality
 - “Community Enforcement”
- But...
 - ...how do we grow attendance?
 - ...how do we encourage more participants?



\$8,400,000,000

Expanding Outreach

- Speak at other conferences
- Speak at other user groups
- Participate in educational programs
- Key: Determine target problem, demonstrate how PostgreSQL addresses it

Expanding Partnerships

- Great, growing community
- Disconnect between PostGIS users + PostgreSQL?
- Need more “synchronization” between our communities
 - http://postgis.net/docs/manual-2.1/performance_tips.html
- Mutually beneficial community growth!



Outreach Summary

- Educated users = stronger community
- Stronger community = better potential for growth

Marketing

(What tech people think about marketing)



© Scott Adams, Inc./Dist. by UFS, Inc.

The Good News

PostgreSQL can compete on price, quality and features

But...

What would make someone change his or her default choice of database?

“The Three Reasons”

There are three reasons why businesses change products, in this order:

1. They feel threatened
2. They determine it is more cost-effective
3. They think it is a better product

Feeling Threatened

- Not intimidation...
- Way of life / business is dramatically altered if **not** using \$product
- “Loss”



Sorry Tony, not here

How Will People Feel Threatened Without Calling Tony Soprano?

- Market Pressures & Measures
 - “Competitor switched to PostgreSQL and has increased sales / productivity by X%”
 - “People who use PostgreSQL save Y% of development time, increase output by Z”
- CASE STUDIES
 - Collect and promote on [PostgreSQL.org](https://www.postgresql.org)

...which leads to



PostgreSQL on Social Media

- Very decentralized
 - Personal / Corporate Twitter accounts
 - Multiple LinkedIn groups
 - Different people active on different media
- “Official Accounts?”
 - @planetpostgres
 - ?

Looks like someone hijacked the tweeter account @psql, and is posting what looks like spam on <http://forum.postgresql.org.pl>, and then spamming those posts with the tweeter account.

I just wanted to let the person in charge know.

Cheers,

--

Martín Marqués <http://www.2ndQuadrant.com/>

PostgreSQL Development, 24x7 Support, Training & Services



The screenshot shows a vertical list of six tweets from the PostgreSQL account (@psql). Each tweet includes the account's profile picture, the name 'PostgreSQL @psql', the date, and the text of the tweet. The tweets contain various links and phrases that appear to be spam or hijacked content. Each tweet also has an 'Expand' button and a set of interaction icons (Reply, Retweet, Favorite, More).

- Tweet 1:** PostgreSQL @psql · May 18
Raghavendra Rao: Few areas of improvements in PostgreSQL 9.4 ift.tt/1jYaDp
Expand
- Tweet 2:** PostgreSQL @psql · May 18
Steve Singer: Keeping Developers in sync with alembic ift.tt/1o4rBvi
[View summary](#)
- Tweet 3:** PostgreSQL @psql · May 17
dieta rapida ift.tt/1pA3Ht
Expand
- Tweet 4:** PostgreSQL @psql · May 17
cum sa slabesti repede ift.tt/1oAW2p
Expand
- Tweet 5:** PostgreSQL @psql · May 17
cum sa slabesti repede ift.tt/1qKCPcL
Expand
- Tweet 6:** PostgreSQL @psql · May 17
dieta rapida ift.tt/1luRh1w
Expand

\$8,400,000,000

PostgreSQL on Social Media

- Quite possibly a full-time team effort to manage
- Possible suggestions:
 - Have a curated Twitter account posting interesting articles / information?
 - Press releases?
 - Conference updates?
- This is a topic that requires research, but there are a lot of answers already out there





“...is a webscale database, and doesn't use SQL or JOINS so it's high performance”

Creating Memorable Buzz

- PostgreSQL has had some buzz in the greater developer community, but nothing major
- Currently have opportunities to create some memorable buzz
 - jsonb - handle relational / web workloads, and faster than “other systems”
 - Foreign Data Wrappers - can push/pull data to ANY database system from PostgreSQL?
- Lure in with the “flashy” features, stay for the awesomeness

Creating Memorable Buzz

- Coming down the road:
 - Logical Replication - replicate PostgreSQL into ANY database?
 - Bi-directional replication
 - Advanced indexing => performance
 - ?

How to Create Buzz

- That's the \$8,400,000,000 question
- Collaborate and identify several campaigns that can go through our marketing channels
- “See what sticks”

Focus on what makes PostgreSQL Unique

(And how PostgreSQL threatens the database market)

Actionable Items for 2014

- “Advocacy Subcommittee”
 - Help to guide and direct advocacy policy
 - Website
- Speak at other meetups / conferences!
- Aggregate & present case studies
- Create some buzz

2019







© Camera News Agency

Thank You

- @jkatz05
- Questions?