PostgreSQL: Past, Present, and Future

BRUCE MOMJIAN



POSTGRESQL has deep roots, a wide user base, and a bright future.

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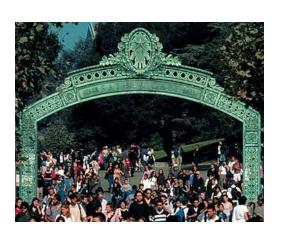
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Last updated: February, 2016

PostgreSQL Past

The University of California at Berkeley





Postgres

Postgres95



Michael Stonebraker



Jolly Chen and Andrew Yu

PostgreSQL Code Base History

- ► Ingres research prototype, spawned Relational Technologies, purchased by Computer Associates
- ► Postgres research prototype, spawned Illustra, purchased by Informix
- Postgres95 added SQL, spawned PostgreSQL

PostgreSQL Through the Years

```
1977-1985 Ingres
1986-1994 Postgres
1994-1995 Postgres95
1996- PostgreSQL
```

Release Dates and Sizes Before 2000

version	reldate	months	relnotes	lines	change	% change
1.0	1995-09-05	18		172470	- 78402	-31
1.01	1996-02-23	6	j	179463	6993	4
1.09	1996-11-04	8		178976	-487	0
4.2	1994-03-17	İ		250872	ĺ	
6.0	1997-01-29	3		189399	10423	5
6.1	1997-06-08	4		200709	11310	5
6.2	1997-10-02	4		225848	25139	12
6.3	1998-03-01	5		260809	34961	15
6.4	1998-10-30	8		297918	37109	14
6.5	1999-06-09	7		331278	33360	11

Release Dates and Sizes After 2000

version	reldate	months	relnotes	lines	change	% change
7.0	2000-05-08	11		383270	51992	15
7.1	2001-04-13	11		410500	27230	7
7.2	2002-02-04	10	250	394274	-16226	-3
7.3	2002-11-27	10	305	453282	59008	14
7.4	2003-11-17	12	263	508523	55241	12
8.0	2005-01-19	14	230	654437	145914	28
8.1	2005-11-08	10	174	630422	-24015	-3
8.2	2006-12-05	13	215	684646	54224	8
8.3	2008-02-04	14	223	762697	78051	11
8.4	2009-07-01	17	314	939098	176401	23
9.0	2010-09-20	15	237	999862	60764	6
9.1	2011-09-12	12	203	1069547	69685	6
9.2	2012-09-10	12	238	1148192	78645	7
9.3	2013-09-09	12	177	1195627	47435	4
9.4	2014-12-18	15	211	1261024	65397	5
9.5	2016-01-07	13	193	1340005	78981	6

PostgreSQL Tenth Anniversary in 2006



PostgreSQL Present

Postgres User Coverage

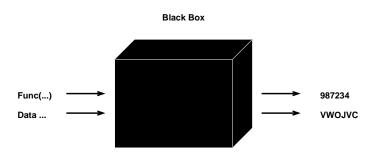
- ► All industry sectors
- All organization sizes
- ► All database sizes

My Postgres Activities

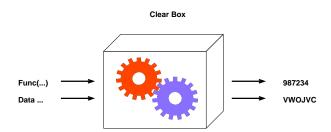


Why Users Choose PostgreSQL

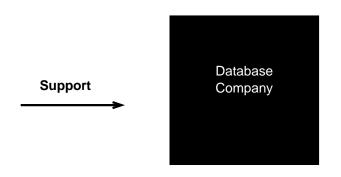
Closed-Source Software



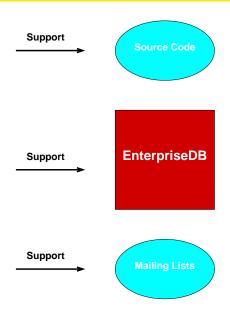
Open-Source Software



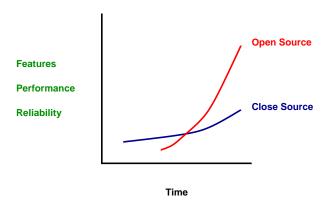
Support of Close-Source Software



Support of Open-Source Software



The Future of Open Source



Postgres Advantages

- ► Cost
- ► Easy administration
- Powerful development environment
- ► Flexibility
- ► Reliability
- ▶ Open license

PostgreSQL Future

PostgreSQL Evolution



Flexibility includes:

- Application-specific data types, e.g. JSON, PostGIS, range types
- ► Advanced index types, e.g. GIN, SP-GiST
- ▶ Single and multi-node scalability

Three Focuses

New WorkloadsPlatforms (Big Data/Cloud) · Liasons with other communities · FDW for common no-SQL DB's · Continue to evolve new datatypes: JSON, XML, HStore **High-end Enterprise** Easy to use / deploy Requirements **PostgreSQL** Vertical Scale (parallel query) Diagnosing Problems · Configuring for success · Horizontal Scale · Still easier installs Performance Diagnostics · Tighter integration with frameworks · Incremental Backup · Integration with other data stores · Integration with other data stores

· Verv simple in the cloud

Keith Alsheimer, EnterpriseDB

· Zero down time upgrades

Conclusion



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