PostgreSQL and its ecosystems

GRANT ZHOU

MY STORY

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CANADA

HIGH GO

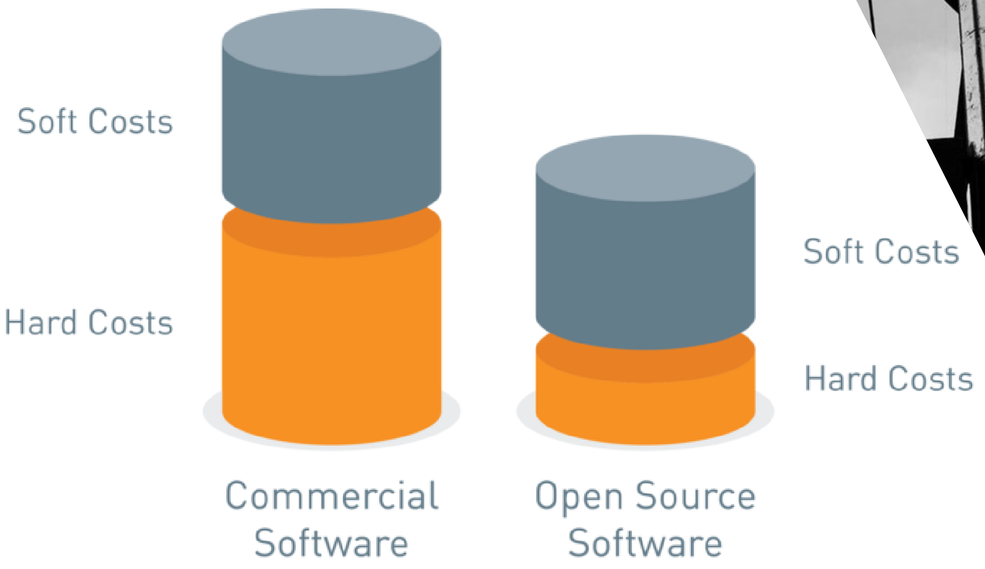
My Agenda

- The death of commercial database
- Why Postgres
- Postgres Ecosystem
- CHINA PostgreSQL Community
- CHINA PostgreSQL Association
- Summary
- Question and Answer

Gartner Says:

> “By 2018 70% of new applications will run on open source databases”

By Max ten Dam



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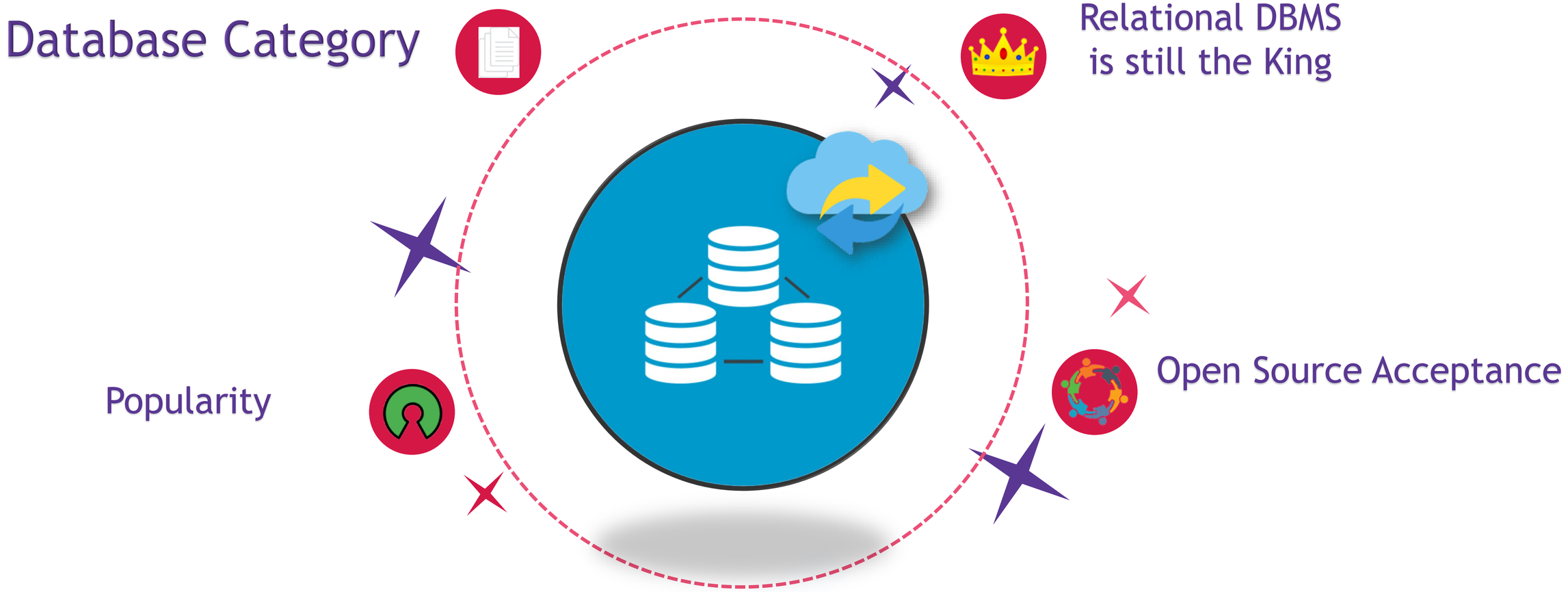
Database Trends in different perspectives

How to make your choice



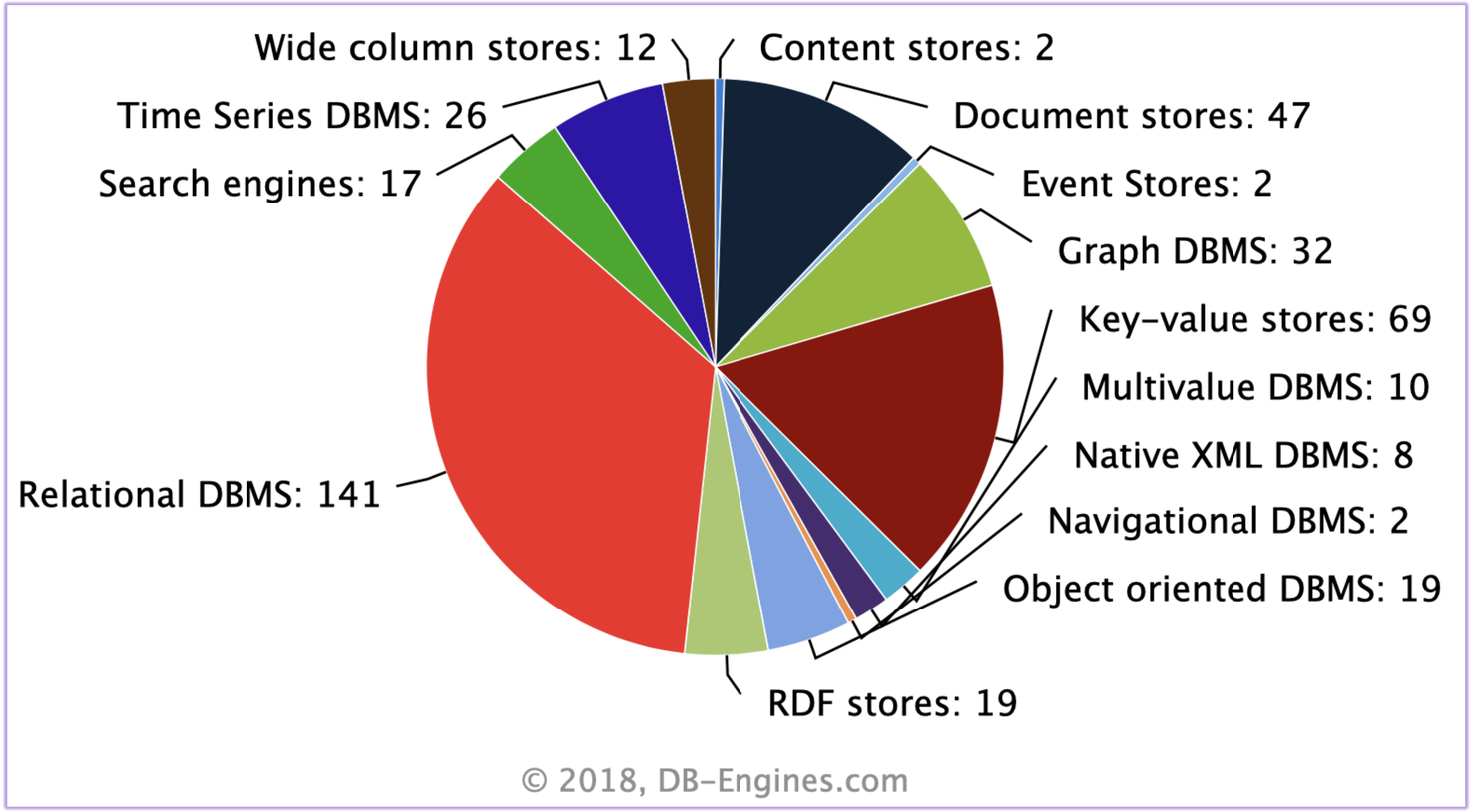
Database Trends in different perspectives

How to make your choice

Trend 1 - Category

It is no longer ONE product that satisfies all application scenarios.

13 categories including:
RDBMS
Document Stores
Key-Value Stores … …



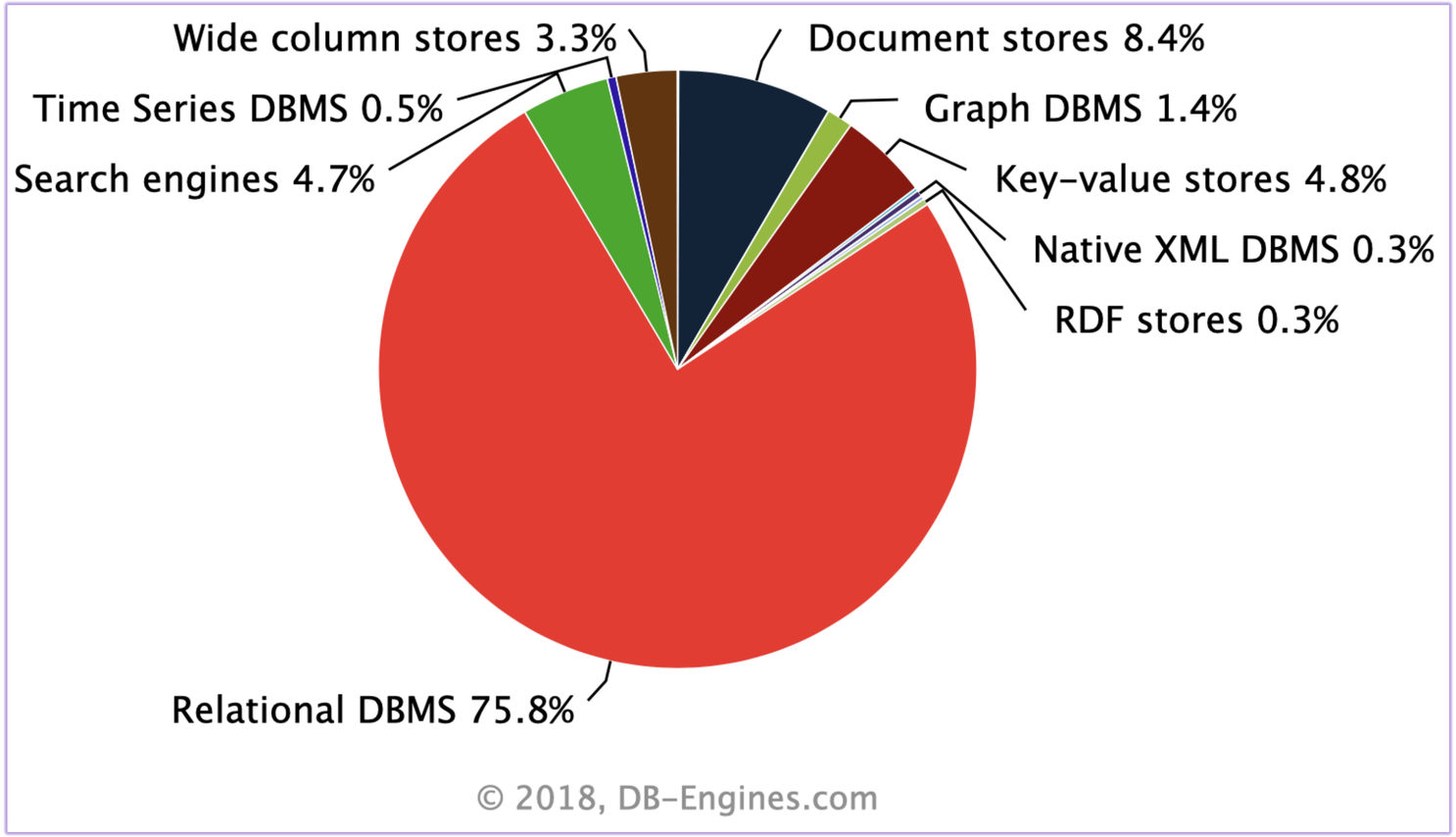
Popularity Scores, Nov 2018

Database Trends in different perspectives

How to make your choice

Trend 2 – RDBMS is still the KING

The relational DBMS will occupy its position for a long time, especially in the critical systems.



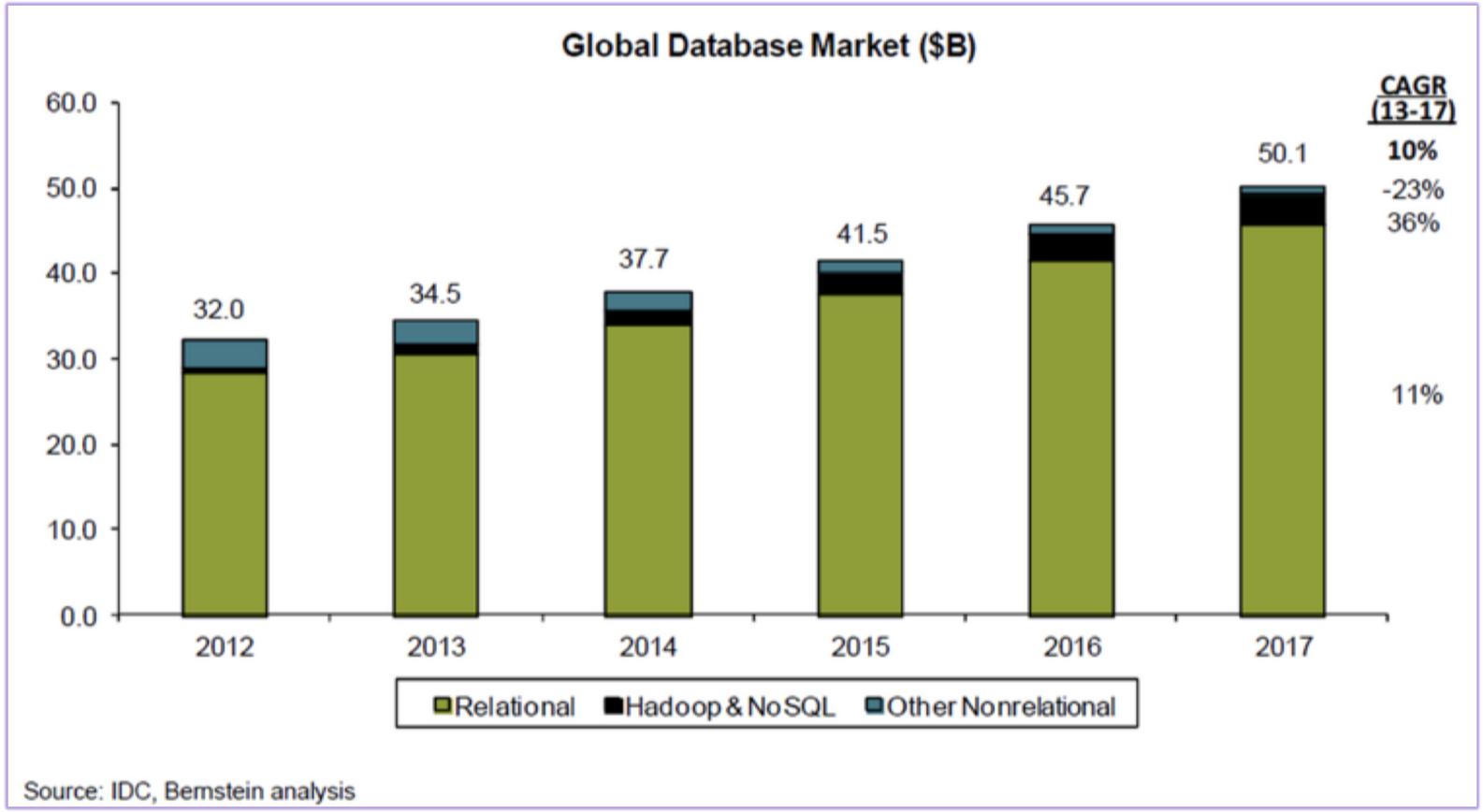
Popularity Scores, Nov 2018

Database Trends in different perspectives

How to make your choice

Trend 2 – RDBMS is still the KING

RDBMS in Global Database Market ($B)

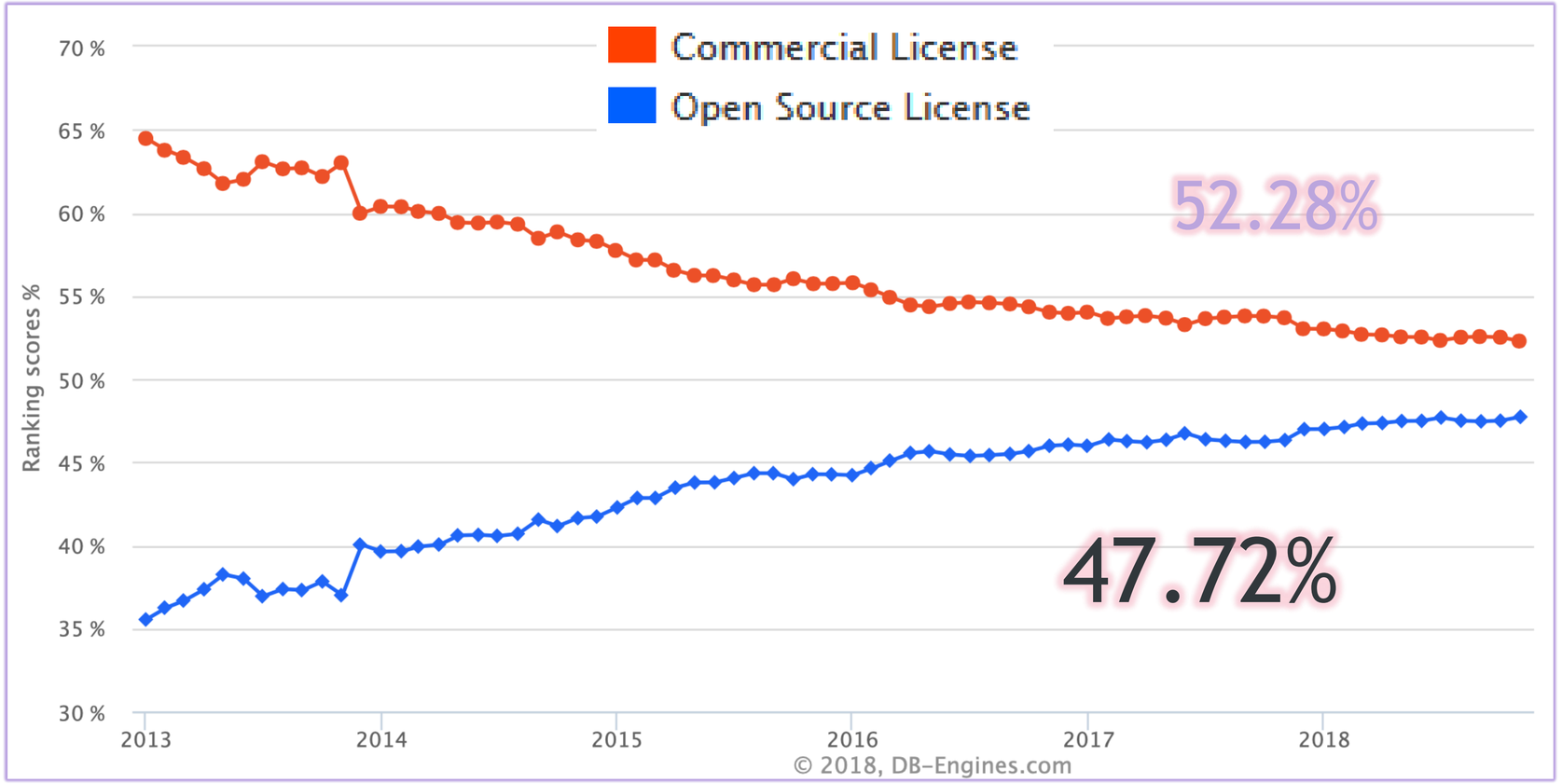


Database Trends in different perspectives

How to make your choice

Trend 3 - Popularity Trend

- Open Source License is reaching its history high
- It will keep growing!



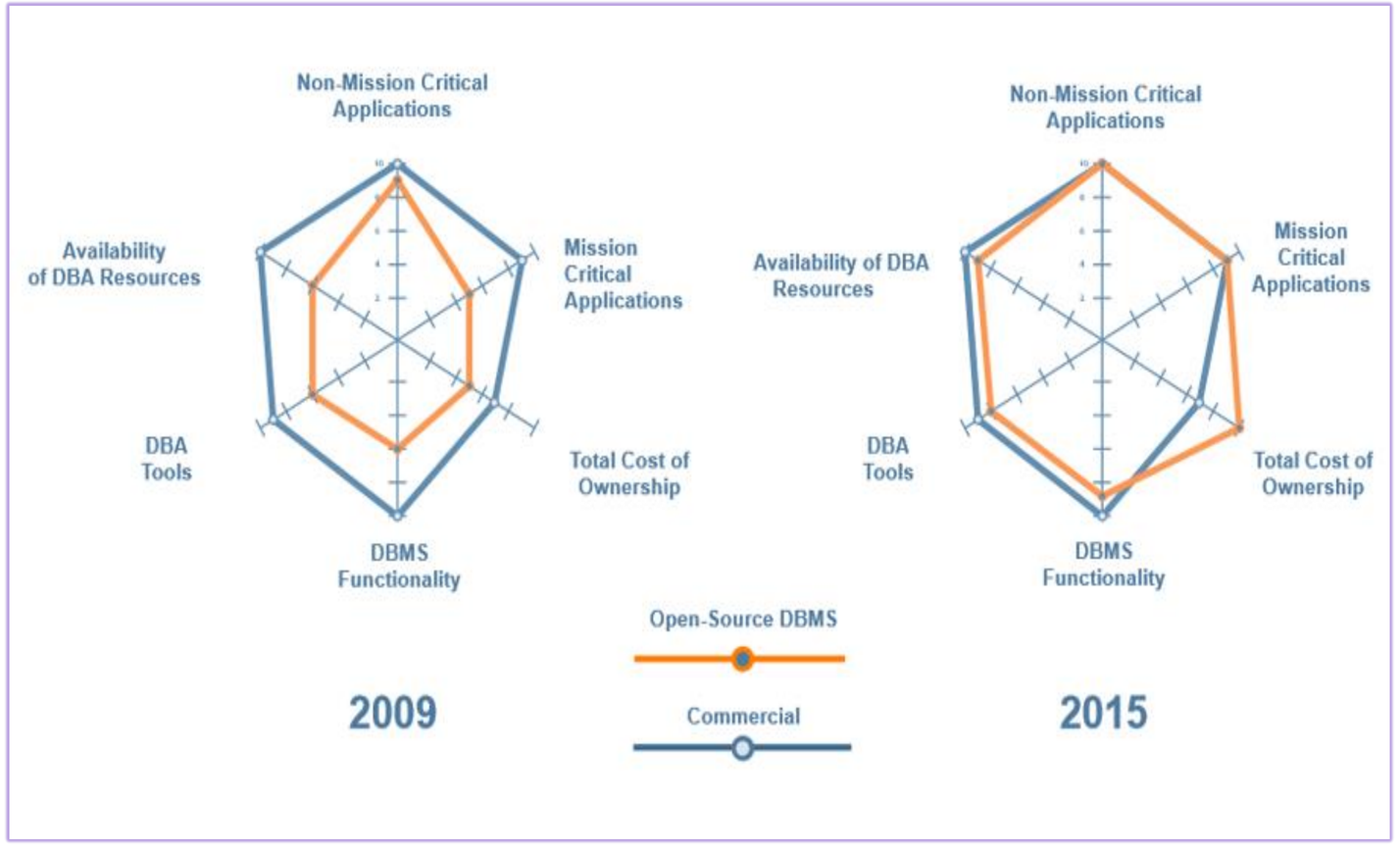
Popularity Scores, Nov 2018

Database Trends in different perspectives

How to make your choice

Trend 4 – More Open-Source Acceptance

The mature Open Source Database is gradually accepted and adopted by government and enterprise customers



The Death of the commercial database

OSDBMS is your choice

- Commercial Database market to decline 20-30% by 2021
- According to Gartner, more than 70 percent of new in-house applications will be developed on an OSDBMS by 2018, and 50 percent of existing commercial RDBMSs will be on the way to leveraging open source technology.

“Open source is the default choice for modern IT solutions”

- Jim Whitehurst (Red Hat CEO and President)

WHY Postgres?

Enterprise proven database

The future is built on open source

The most advanced opensource database in the world with rich features

- Open Source and Cross Platform
- Reliability & Stability
- Extensible
- Designed for high volume environments
- NoSQL support
- support for more complex SQL functions and data types encompassing arrays, joins, windowing, and inherited tables among other DBs
- ……

PostgreSQL License

PostgreSQL is released under the PostgreSQL License, a liberal Open Source license, similar to the BSD or MIT licenses

PostgreSQL

THE WORLD'S MOST ADVANCED OPEN SOURCE DATABASE

Postgres is more than a RDMBS

The most complete ecosystem

Postgres has shifted itself from simply a relational database to more of a **data platform**

- **NoSQL – Document databases and key/value stores JSON/JSONB, hstore**
- **NewSQL – distributed, graph databases (Postgres-XL, PostGIS etc)**

Postgres Ecosystem

The most complete ecosystem

People

Technology

Vendor/Company and Foundations

NYSE New York Stock Exchange

HUAWEI

华夏银行 HUAXIA BANK

ECOSYSTEM

Orchestrating a brighter world

NTT-TX SRA OSS, INC. NEC HITACHI Inspire the Next

Microsoft Alibaba Cloud aws Tencent Cloud HUAWEI Pivotal FUJITSU

EDB POSTGRES citusdata 2ndQuadrant PostgreSQL CYBERTEC The PostgreSQL Database Company CRUNCHY Enterprise PostgreSQL TIMESCALE PROFESSIONAL Postgres Cockroach LABS CMD credativ 瀚高 HIGH GO

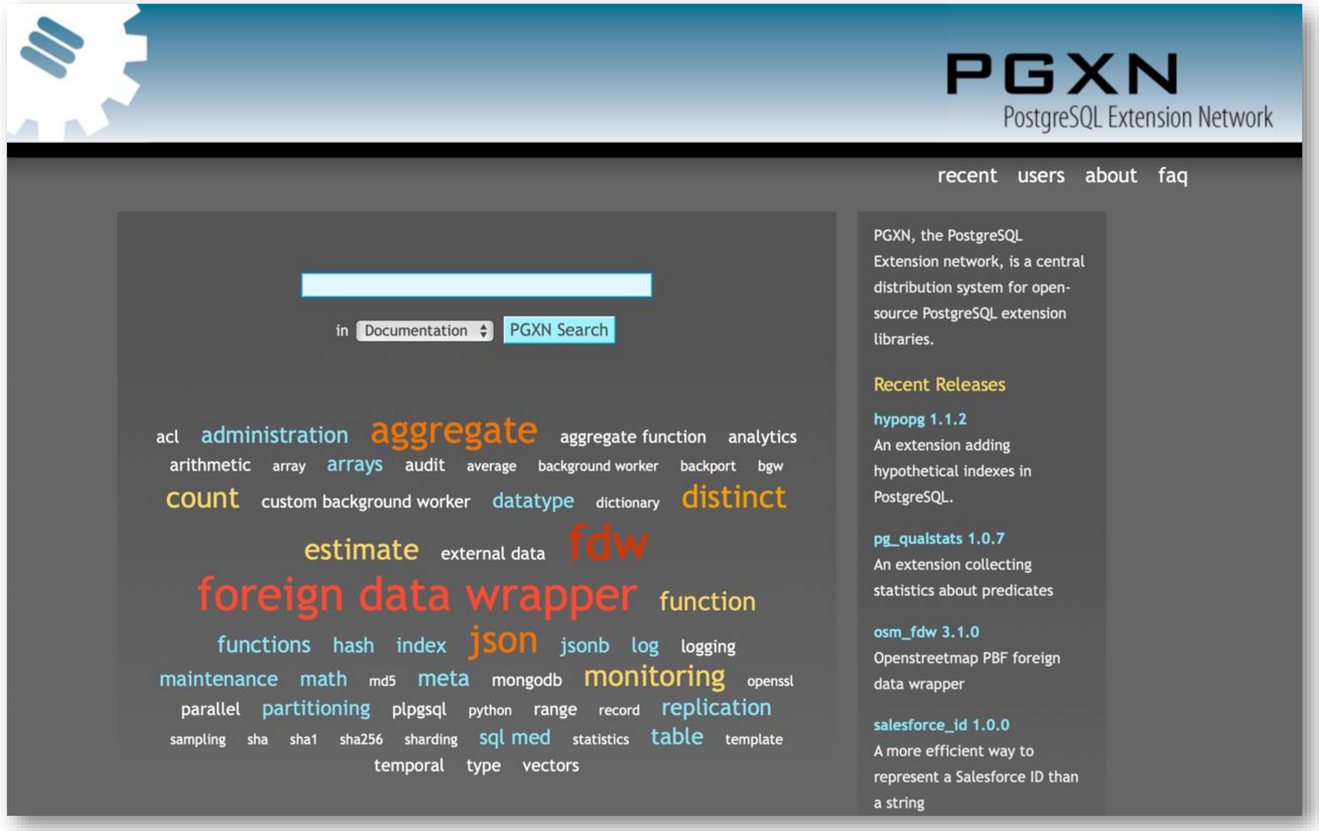
Postgres Ecosystem

The most complete ecosystem

Postgres Extension Ecosystem

The most complete ecosystem

- PGXN (Open Source)
  - PostgreSQL Extension network,
  - Central distribution system for open-source PostgreSQL extension libraries.
- http://pgxn.org/
- Custom data types
- Monitoring
- New use cases/functionality
- Foreign data wrappers



Postgres Extension Ecosystem

The most complete ecosystem

BY Citus Data

- PostgreSQL Extension Network: http://pgxn.org/
- UDFs & operators: https://github.com/eulerto/pg_similarity
- UDAs & data types: https://github.com/aggregateknowledge/postgresql-hll
- Foreign Data Wrappers: http://multicorn.org/, https://github.com/shish/pgosquery
- Indexes: https://github.com/zombodb/zombodb
- Composing Extension Methods: http://doc.madlib.net/
- MPP: https://www.citusdata.com/, https://github.com/greenplum-db/gpdb
- Composing Extensions
- Custom Background Workers: https://github.com/no0p/alps
- Record linking: http://no0p.github.io/2015/10/20/record_linking.html#/

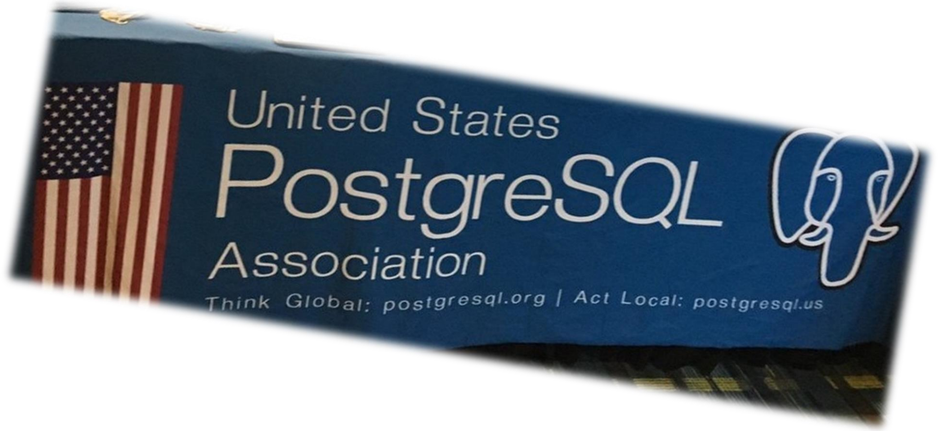
Postgres Ecosystem North America

The most complete ecosystem

THE GLOBAL NON-PROFIT POSTGRES CONFERENCE SERIES

People
Postgres
Data

WWW.POSTGRESCONF.ORG
ORGANIZERS@POSTGRESCONF.ORG



[Oct. 24, 2018 – Citus Data is donating 1 percent equity to PostgreSQL foundations]

Postgres Ecosystem North America

The most complete ecosystem

Conference Series

PGCON - www.pgcon.org - Every May @ Ottawa Canada
PostgresCONF series (PGCONF) - www.postgresconf.org Postgres Conference
Every March @ NY, USA
+ Local PostgresConf : Silicon Valley, Seattle, Philadelphia, Ohio, Austin
+ Nepal, South Africa
+ PGOPEN CHN 2019 CHINA (TBD)
PostgresOPEN - www.PGOpen.org – Every Sept @ CA, USA
PostgresVISION - www.postgresvision.com Every June @ Boston, USA (EnterpriseDB)
2Q PGConf - www.2qpgconf.com - Every Dec @ Chicago, USA (2ndQuadrant)

Postgres Ecosystem CHINA

The most complete ecosystem

www.PostgresqlChina.com
www.pgconf.cn
www.PostgresConf.cn

Postgres Ecosystem CHINA

The most complete ecosystem

Conference Series

PostgreSQL Conference China - www.postgres.cn
PGOPEN CHN – www.postgresqlChina.com – Every June @ Beijing, China

Elephant walking in China local meeting series
- PostgreSQL local activities held in major cities in China since 2011
- Held by PostgreSQL community and Alibaba

Postgres Practises in CHINA

The most complete ecosystem

平安科技
PINGAN TECHNOLOGY

高德地图
amap.com

Alibaba Cloud

Tencent
Cloud

Postgres Practises in CHINA

The most complete ecosystem

- Pingan Technology – Core Business Systems, 1000+ PG Instances
- Qunar.com – Travel System
- Tantan Technology – Social System
- AMAP – PostGIS
- Wechat Small Business Pay – Financial Payment System
- Highgo Database – Core Government affairs systems, 200+ Instances in one application system
- ECOX PostgreSQL HA Cluster – Wenwu Information Technology, PG cluster HA and DR solution, handlreds PG Cluster
- RDS/DBaaS – Alibaba, Wenwu, Tencent, Huawei….

And so on ….

PGOPEN CHN 2018 @ June, BEIJING

- Held By China PostgreSQL Association, HighGo, Pivotal and COPU.
- With China Postgres community support
- Since 2017
- Will be a PostgresConf series of PostgresConf organization

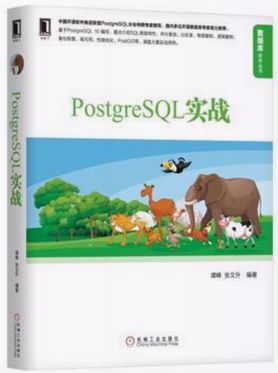
PGCONF CHINA 2018 @ Dec, Hangzhou

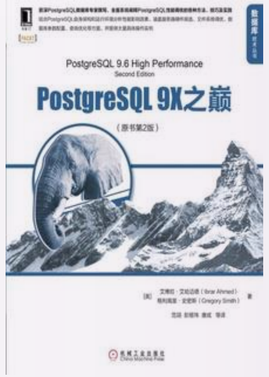
- Held By China PostgreSQL Community
- Since 2010
- Non-Profit PostgreSQL training for 3000+ people
- www.postgres.cn

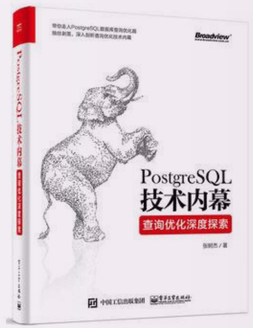
China PostgreSQL Communities

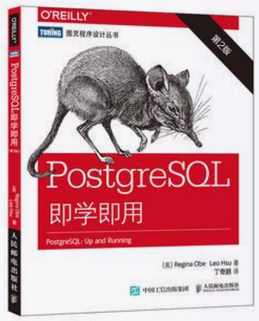
Postgres Conference China 2014 ShenZhen
(160+ person)

China PostgreSQL Communities









北京交通大學

EDUCATION TRAINING UNIVERSITY CERTIFICATIONS

China PostgreSQL Association

- Promote PostgreSQL and its commercialization in China
- Official PostgreSQL organization in China
- China Open Source Software Promotion Union (COPU, http://www.copu.org.cn/)
- Under the governor of Ministry of Industry and Information Technology of China

China PostgreSQL Association

- PostgreSQL Certification and Training Systems

  Official PostgreSQL Certification System

International Consultant Committee

China PostgreSQL Association

President

Joshua D.Drake
from USA
PGCONF US
Founder and
president

MEMBERS

Bruce Momjian From USA
EnterpriseDB

Oleg Bartunov from Russia
Co-Founder and CEO of
Postgres Professional

Ray Feng from China
General Manager of Pivotal
China

Michael Meskes from
German
President and CEO of the
Credativ Group

China PostgreSQL Association

SUMMARY

- OPEN SOURCE
- COMMUNITY
- Commercialize
- Contribution

ONE MORE THING

PGCONF.CN

Beijing China

中华人民共和国工业和信息化部
Ministry of Industry and Information Technology of the People's Republic of China

OPU

China PostgreSQL Association

瀚高 HIGH GO
开源数据库国产化先行者

PGConf US
www.pgconf.us

Pivotal

开源数据库国产化先行者

THANK YOU

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www.highgo.com