The State of Open Source Databases

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CEO, Percona
October 1st, 2019
Thank you
Open Source Software

Amazing times for Open Source Software!
Commercial Success

Fantastic Success of Open Source Based Businesses!
RedHat Acquired by IBM

Image Source: https://techcrunch.com/story/ibm-acquires-red-hat/
Select Open Source Powered Companies

- MongoDB  -  $6.6B
- Elastic  -  $6.3B
- Pivotal  -  Acquired $2.7B
- Cloudera  -  $2.4B
- GitHub  -  Acquired for $7.5B
- MuleSoft  -  Acquired for $6.5B
Open Source Software Traction

- **Y axis:** COSSCI market cap range
- **X axis:** Year
- **Green line:** COSSCI market cap trend
- **Blue bars:** Number of COSSCI companies

Source: [https://twitter.com/asynchio/status/1103408136860327936](https://twitter.com/asynchio/status/1103408136860327936)
Major Public Clouds

Majority of their Revenue is powered by Open Source Software

Even on Microsoft Azure Linux Surpassed Windows
Big Money Creates Big Tension

How are Tens of Billions of Value Created by Open Source Software are going to be divided?
## Open Source and Distributed Software

### Permissive License
- BSD, MIT, Apache 2.0
- Allows Derived Software to be Proprietary

### Copyleft License
- GPLv2, GPLv3
- Intent to force contribution back
Never was Perfect…

Hardware as a way to capture value without giving back

Restricted Access to Binaries, Build System
Age of the Cloud

Software is **not** distributed, provided as a service

Copyleft Licenses such as GPL behave as Permissive License

AGPL suppose to fix this but is not considered strong enough
The Problem

Cloud Companies capture lion share of Open Source derived Revenue

Without legally required to give back
Cloud Open Source Contribution

- All Major Cloud Companies Contribute To Open Source
- Their Contribution is not Always Code
- This Contribution does not go to all the projects they monetize
AWS’s Large Contribution
Businesses always contribute to Open Source for a business reason, Open Source Companies and Cloud Vendors alike.
Great Open Source Debate

Do we need Different Class of Open Source Licenses which prevents competition from Cloud Vendors

Or do we need to define a new class of Proprietary Software, with access to source code and few use restrictions
Open Core Summit

Kendall Miller @blatanterror · Sep 20
Replying to @blatanterror
First and foremost, the whole concept of Open Core is a business model. It’s not about freedom. It’s not about open source ideals. It’s about making money. Full stop.

VanL @VanL · Sep 19
Soapbox time: Open source is fascinating because it is a structured way to "cooperate" in intellectual property. We already have ways to compete. What OSS added was a way to spontaneously and non-rivalrously participate in joint development of valuable things. #OpenCoreSummit 1/n

Rich Bowen @rbowen · Sep 19
I hear there was a talk at #OpenCoreSummit about how if you build a business on top of Apache-licensed code you don’t contribute to, it’s stealing. Here’s a the folk that wrote the license and founded the Foundation, talking about how that’s not true:

VanL @VanL · Sep 19
@salil on OSS: “Using someone else’s Apache-licensed code and building a business around it is stealing.”

Also, @salil on neighborhood playgrounds: “Playing on another person’s playground after they have given you permission to do so is breaking and entering.”

Gose Canseco @moonpolysoft · Sep 19
You know what else had an open core? Chernobyl. And look how well that all turned out. #OpenCoreSummit
How Open Source Software is Built

 Mostly Single Company Development

• Open-Source for Users
• A lot of Capital Required

 Many Developers

• Open-Source for Users and Contributors
• Less Capital Requirements
MongoDB vs PostgreSQL

MongoDB CEO – Dev Itticheria “MongoDB was built by MongoDB. There was no prior art. We didn’t open source it for help; we open sourced it as a freemium strategy””

Source: https://www.cbronline.com/interview/mongodb-ceo-interview
Modern Open Source is Heavily Funded

MongoDB - $311M
RedisLabs - $147M
Elastic - $162M
Confluent - $206M
CockroachDB - $109M
InfluxDB - $120M
Neo4J - $160M

Source: https://www.crunchbase.com/
Unicorns Changing from Open Source Licenses

MongoDB changes Software License to SSPL (Server Side Public License)

Elastic, Confluent, and Redis Labs releasing some components with Source Available License
Are you ready to share the pie?

Do we want to create a bigger pie, or have it all to ourselves?
Contribution and Competition

Best way to invite contribution is by inviting competition
Venture Capital Approach

VCs Prefer to fund creating monopolies
What Project Users Prefer?

The Opposite of Monopoly!

I have not seen a customer who enjoys being a hostage!
Simplicity and Convenience

… But they also want Simplicity and Convenience and ready to compromise on vendor lock-in to achieve it.
Competition

Competition Creates Better Choices

Competition ensures more balanced relationships between vendor and customer

Competition makes for a harder business
Tale of Two Companies
Beyond the Licensing
Open Source is a Strategic Priority

69% of respondents say Open Source is of strategic importance to Enterprise infrastructure

68% of respondents increased Open Source Software usage over the last year

59% of respondents will increase usage further in the coming year

Top Benefits of Open Source Software

- 33% - Lower Cost of Ownership
- 29% - Access to Latest Innovations
- 29% - Better Security

Open Source Databases
Multi-Cloud/Hybrid Strategy?

86%

Reasons for Multi-Cloud/Hybrid Strategy

- Vendor Lock-in
- Shadow IT
- Performance
- Compliance
- Resilience
MULTI-DATABASE IS KING

- **92%** are running more than one database.
- **89%** have more than one OSS database.
- **73%** are running a relational plus purpose built database.
- **54%** are running a purpose-built database, noSQL
- **44%** are running PostgreSQL and MySQL

Numbers based on Percona’s Open Source Data Management Software Survey 2019
# Top Databases

352 systems in ranking, September 2019

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<th>DBMS</th>
<th>Database Model</th>
<th>Score Sep 2019</th>
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Source: [https://db-engines.com/en/ranking](https://db-engines.com/en/ranking)
Developers love Open Source Databases

Most Used databases per Stack Overflow Survey (2019)

- MySQL: 54.0%
- PostgreSQL: 34.3%
- Microsoft SQL Server: 32.8%
- SQLite: 31.6%
- MongoDB: 25.5%

Source: https://insights.stackoverflow.com/survey/2019
Reasons to Adopt Open Source Databases

The top three reasons to adopt Open Source databases:

- Cost Savings (80%)
- Avoiding vendor-lock-in (62%)
- Community (53%)
Fears of Open Source Technologies

The main fears when adopting Open Source database technology:

- Lack of support (54%)
- Bugs (41%)
- Security and compliance (35%)
Self Support

- 64% of respondents rely on self-support when running Open Source database technology
- Only 36% use external support
License Preferences

Permissive Licenses are the most preferred by respondents (2.5x more)

Source Available licenses are considered closer to proprietary licenses than Open Source
Relational Databases are Still Rocking it

- 97% of respondents use Open Source Operational Relational Databases
- 48% of respondents use Search Engines
- 37% of respondents use Document Databases
DBaaS is Winning Hearts and Minds

• Convenience
• Agility
• Operational simplicity
DBaaS is Enemy of no Lock-In

• DBaaS tends to be sufficiently different among cloud providers
Percona’s Vision
Leading Companies Will

Use Multiple Database Technologies

Use Multi-Cloud and Hybrid Environments

Embrace Open Source to avoid Vendor Lock-in
Open Source Solutions Will

• Enhance Their Convenience and Simplicity to reduce the gap with Cloud Vendors DBaaS Offerings
Percona Will

• Invest in Providing Software and Solution to bring this future faster
Cloud Native

Modern Way to Build Applications

Gives new Tools for Automation and Orchestration which were never available before

Kubernetes as leading Cloud Native Platform
PERCONA CLOUD NATIVE
Autonomous Database Initiative
Thank You