MySQL Redis Plug-in

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Agenda

- Who am I
- MySQL Redis Plug-in
- Open Source DBMS Collaboration
  - MySQL
  - MariaDB
  - PostgreSQL
  - CUBRID

Who am I ?

About me

INERVIT
MobileLite

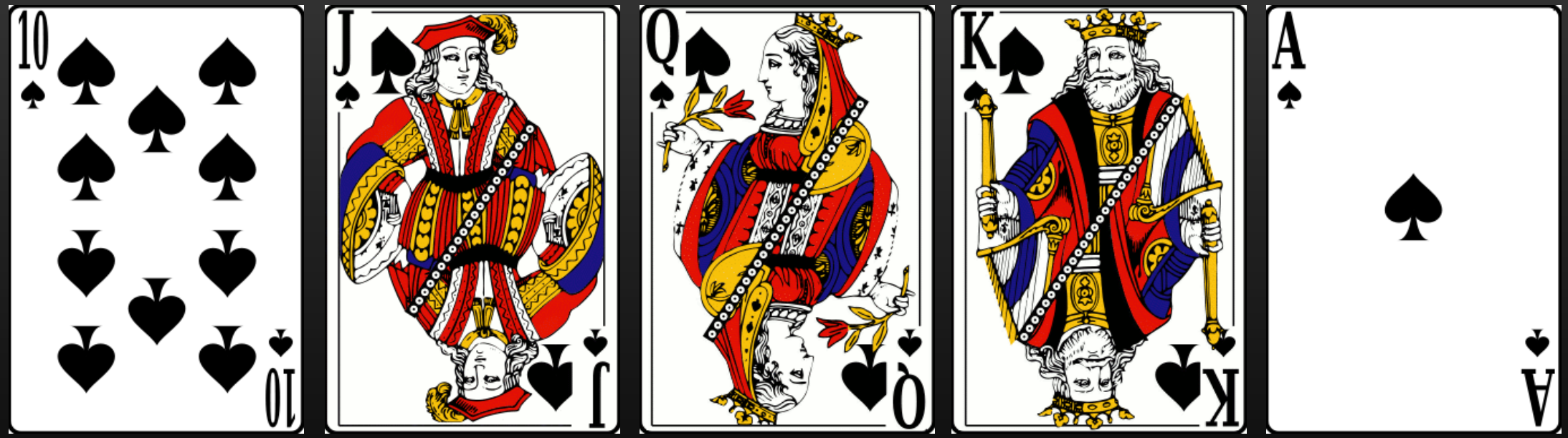
nhn
CUBRID

TELCOWARE
Telcobase

ALTIBASE
Altibase

TIBERO
Tibero

About me



Global Open Frontier Full-time

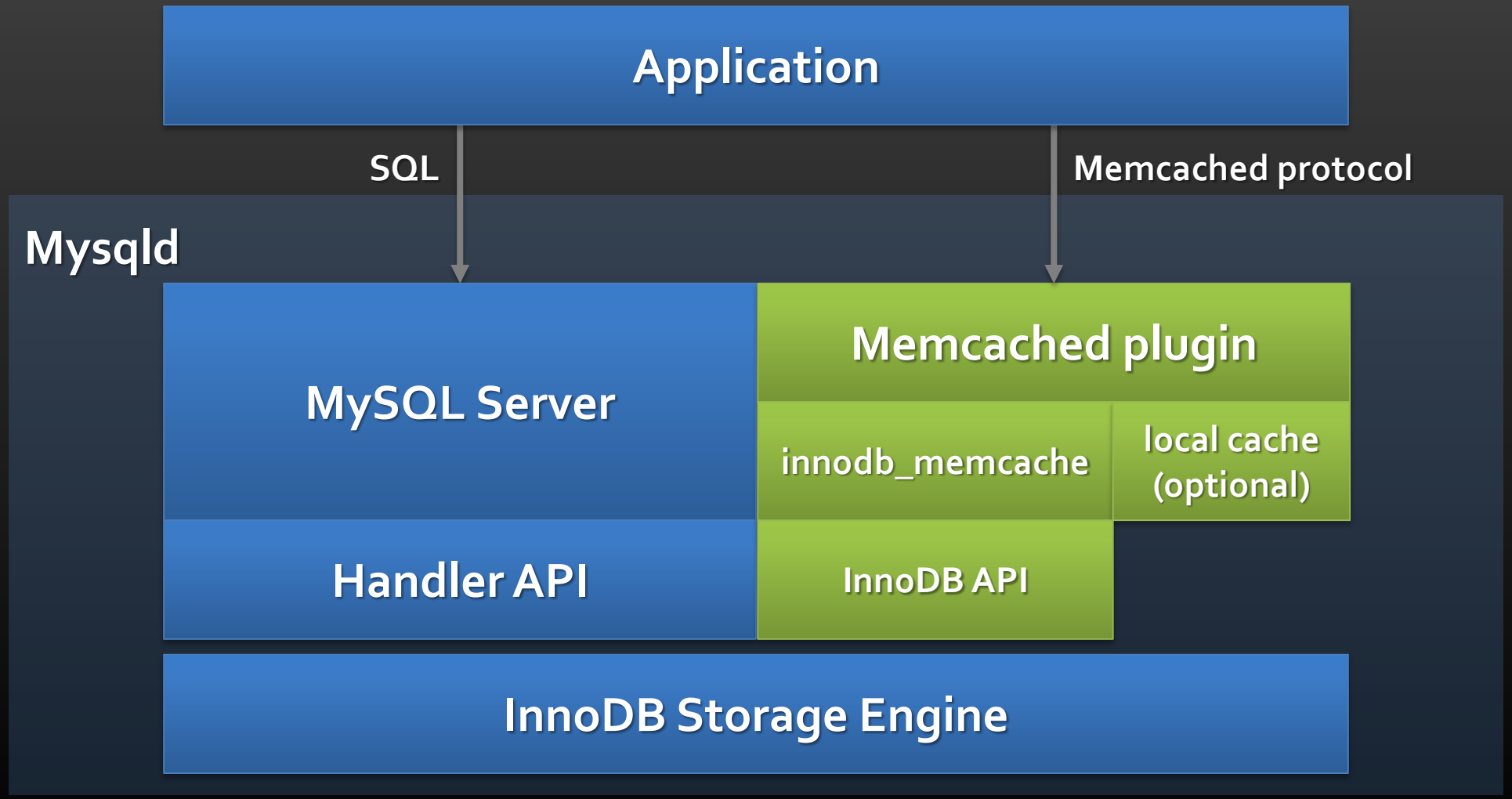
- Project : MySQL Redis Plug-in (+MariaDB, +MaxScale)
  - https://github.com/sql2/MySQL_Redis_Plugin_Dev

MySQL Redis Plug-in

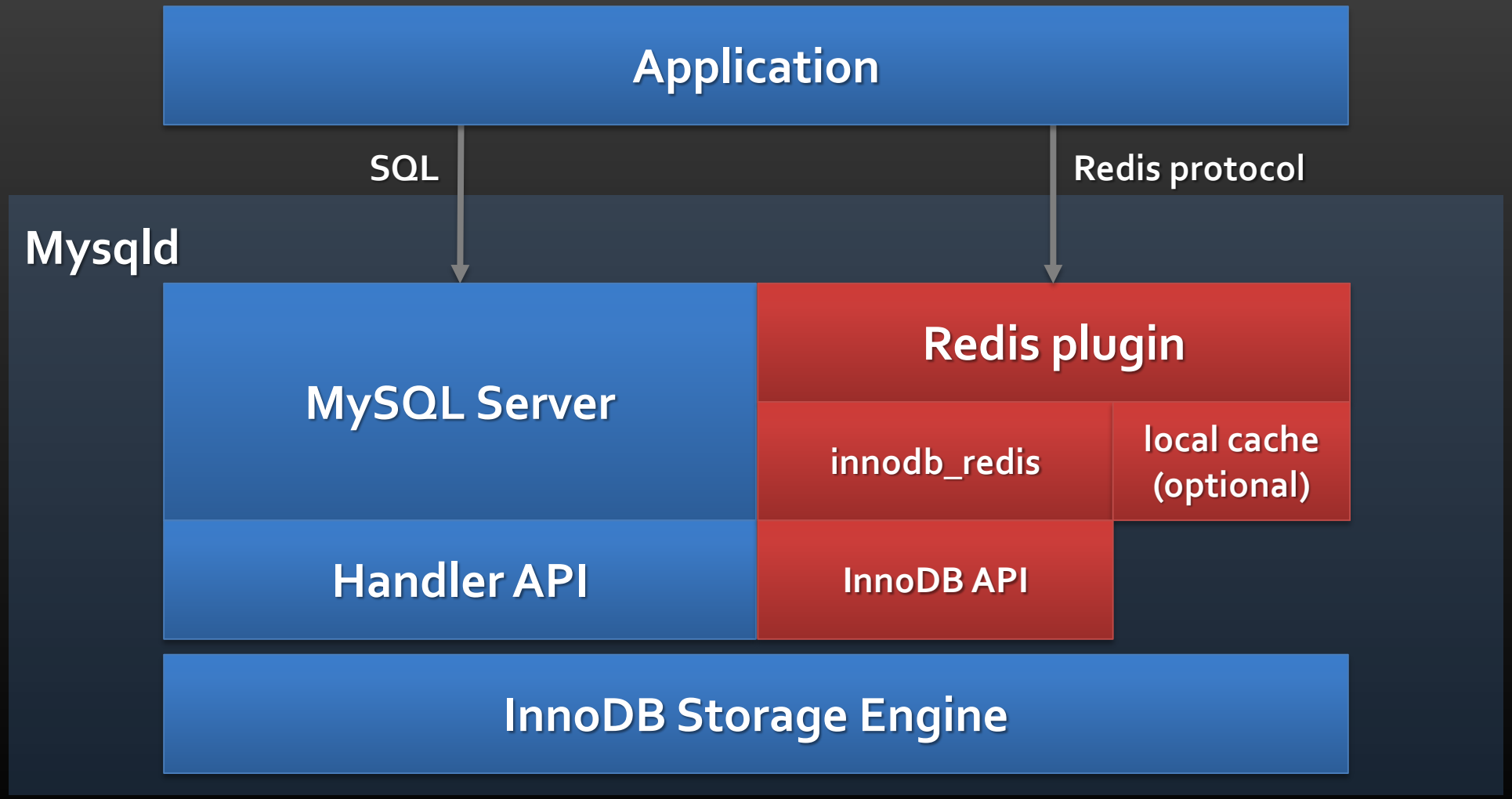
Why ?! Redis ?!

>=

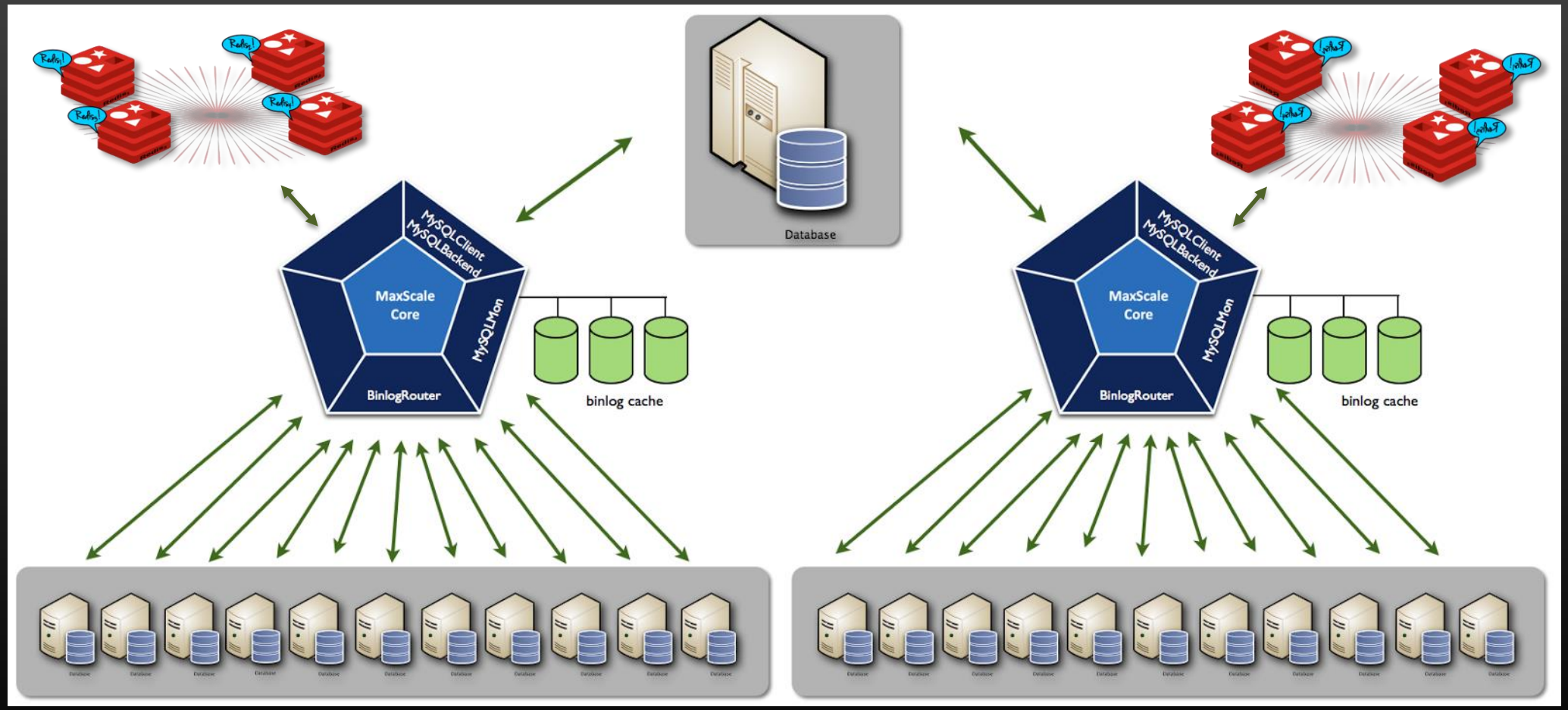
MySQL Memcached Plug-in



MySQL Redis Plug-in



Roadmap:MaxScale Redis Cluster Plug-in



URL : https://mariadb.com/blog/maxscale-proxy-mysql-replication-relay

Open Source DBMS Collaboration

썰戰
잠시 후
그린라이트 권하는 사회
TV는 썸을 타고~!
본방송
jtbc
엄격하고
사적인 잣대로 심판하는

dbdbdib blah~ blah~

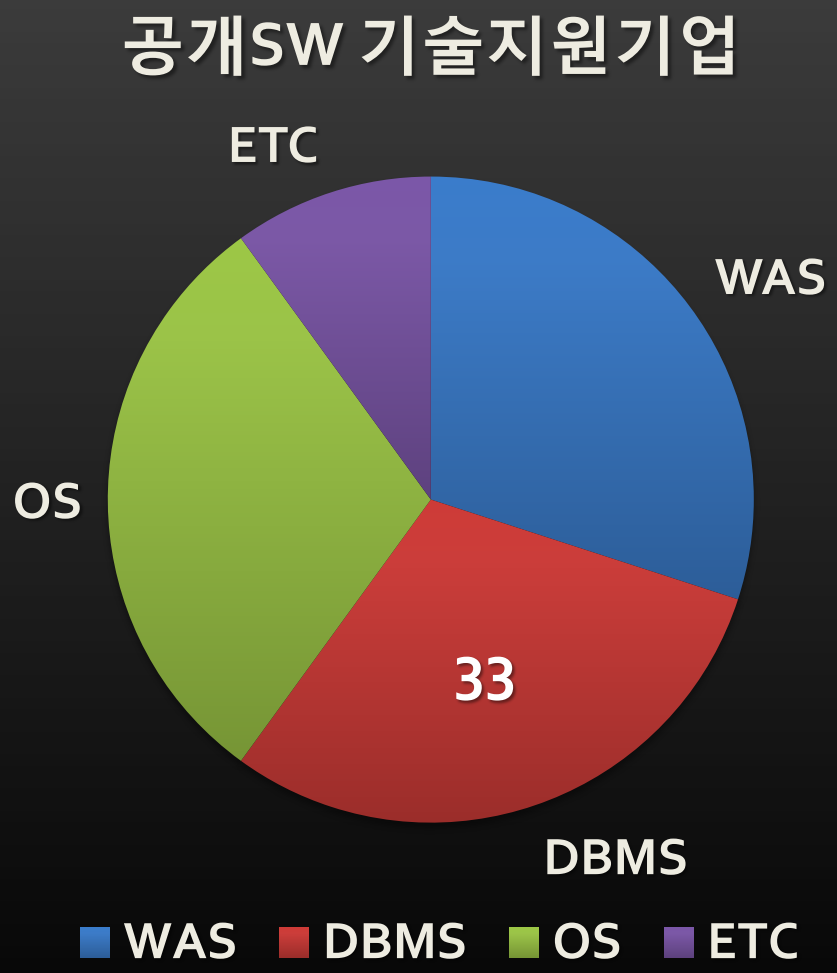
DB-Engines Ranking

2014.10.27

Rank	Last Month	DBMS	Database Model	Score	Changes
1	1	Oracle	Relational DBMS	1471.9	4.99
2	2	**MySQL**	**Relational DBMS**	**1262.97**	**-34.17**
3	3	Microsoft SQL Server	Relational DBMS	1219.6	10.73
4	4	**PostgreSQL**	**Relational DBMS**	**257.72**	**1.92**
5	5	MongoDB	Document store	240.41	-0.58
6	6	DB2	Relational DBMS	207.67	10.64
7	7	Microsoft Access	Relational DBMS	141.64	1.16
8	8	SQLite	Relational DBMS	94.95	2.34
9	9	Sybase ASE	Relational DBMS	86.79	1.37
10	10	Cassandra	Wide column store	85.7	-2.16

http://db-engines.com/en/ranking

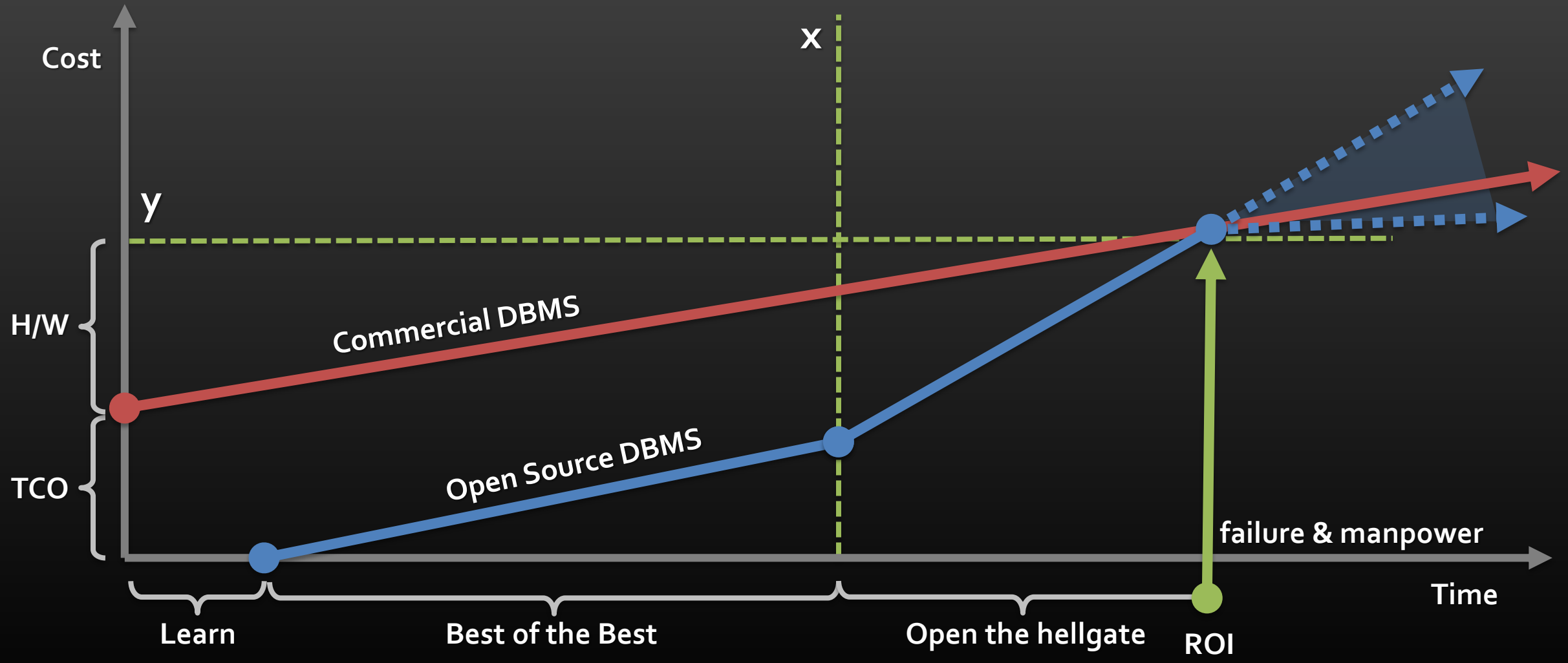
Open Source DBMS Collaboration



OSS	Vendor
OS (RH,CentOS,Debian,…)	25
Virtualization (RHEV, Asia Enterprise Virt)	9
WEB (Apache HTTP Server)	19
WAS (Jboss, Tomcat)	35
DBMS (MySQL, MariaDB, …)	33

http://www.oss.kr/oss_techsupportlist

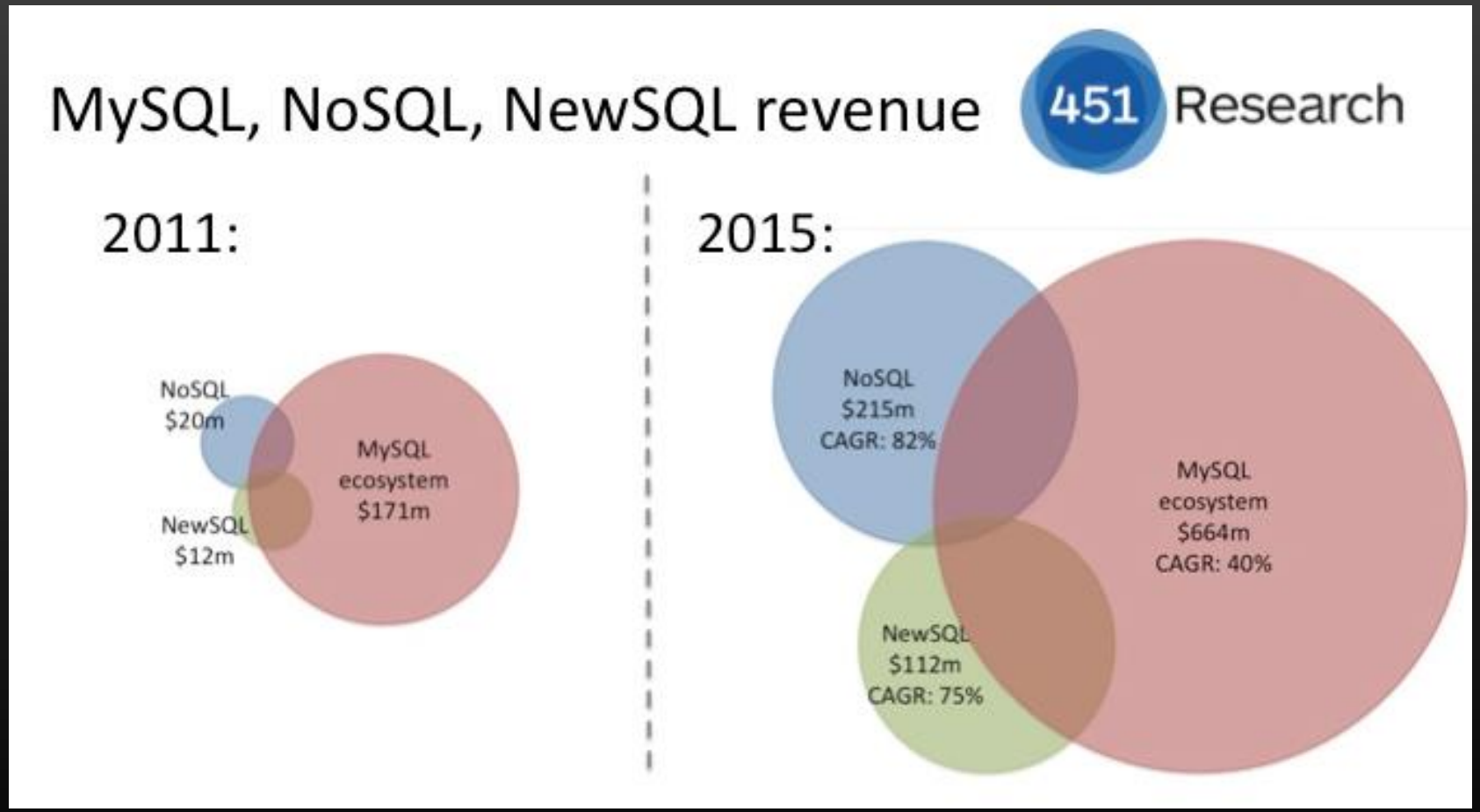
Open Source DBMS Collaboration



Show me the Money $$

MySQL

451 Group analyst Matthew Aslett



URL : http://www.slideshare.net/mattaslett/mysql-vs-nosql-and-newsql-survey-results-13073043

ORACLE bone（甲骨文/갑골문）MySQL

- 중국 은(상)나라의 복점용(卜占用) 구갑(龜甲)이나 짐승 뼈에 새겨진 문자로, 계문(契文) 또는 복사(卜辭)라고도 한다. 1899년에 왕의영(王懿榮), 유악(劉鶚) 등에 의해서 발견됐다.

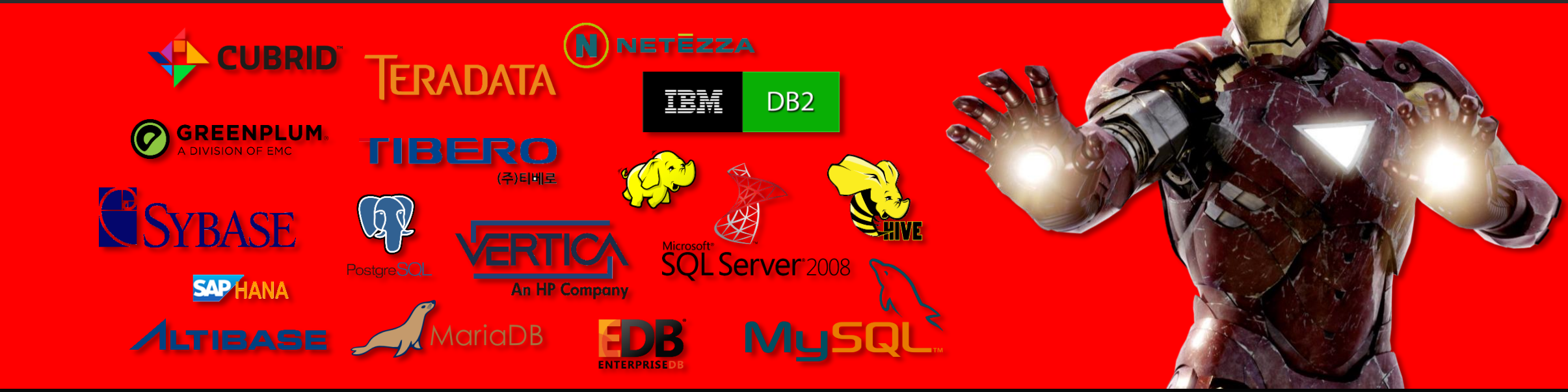
  - [네이버 지식백과] 갑골문 [甲骨文, jiaguwen] (미술대사전(용어편), 1998, 한국사전연구사)

I'm your DB!
May the oracle be with you
ORACLE®

Oracle Family ?!

- Schema & Object Migration
- Embedded SQL (Pro*C)
- PL/SQL & DBMS_* Packages
- Database Security
- Data Types
- Data Storage Concepts
- Blah~ Blah~

ora2my, ora2pgsql, ora2mssql, ...



R.I.P.
Sun
microsystems
1982-2010
The Network IS
ORACLE®

Magic Quadrant for Operational Database Management Systems

[1] Oracle's Letter to the EU Concerning MySQL

After an antitrust investigation, the European Commission approved Oracle's acquisition of Sun Microsystems, including MySQL, on 21 January 2010.

Wikileaks subsequently published cables indicating that the Obama administration applied pressure to the EU to approve the deal.

Concerns about the MySQL acquisition had been addressed in Oracle's 14 December 2009 pledges to customers, which were to extend for five years — thus expiring in early 2015.

Oracle's pledges included commitments to maintain certain APIs, extensions of licenses to then-current licensees, continued use of GPL licensing, and others. The expiration of these commitments may change the nature of Oracle's relationships with a number of hardware and software vendors, as well as its posture regarding product investment, support for purchasing requirements, and other aspects of MySQL's business model.

URL : http://www.gartner.com/technology/reprints.do?id=1-23A415Q&ct=141020&st=sb

Help Save MySQL!

- 별다른 일이 없는 한 **유럽위원회(EU)**는 오는 2010년 1월 27일 이번 합병을 승인하는 결정을 내릴 예정이다. 지난 달 **오라클**이 향후 **최소 5년 간 MySQL**을 오라클의 핵심 데이터베이스 제품에 대해 독립적인 오픈소스 데이터베이스 경쟁제품으로 **보호**하겠다는 약속을 하면서 유럽위원회의가 양사의 합병을 인정하는 쪽으로 방향을 잡게 됐다. 하지만 오라클의 이런 약속은 유럽위원회가 강제하는 것이 아니라 민사소송을 제기해야 한다.

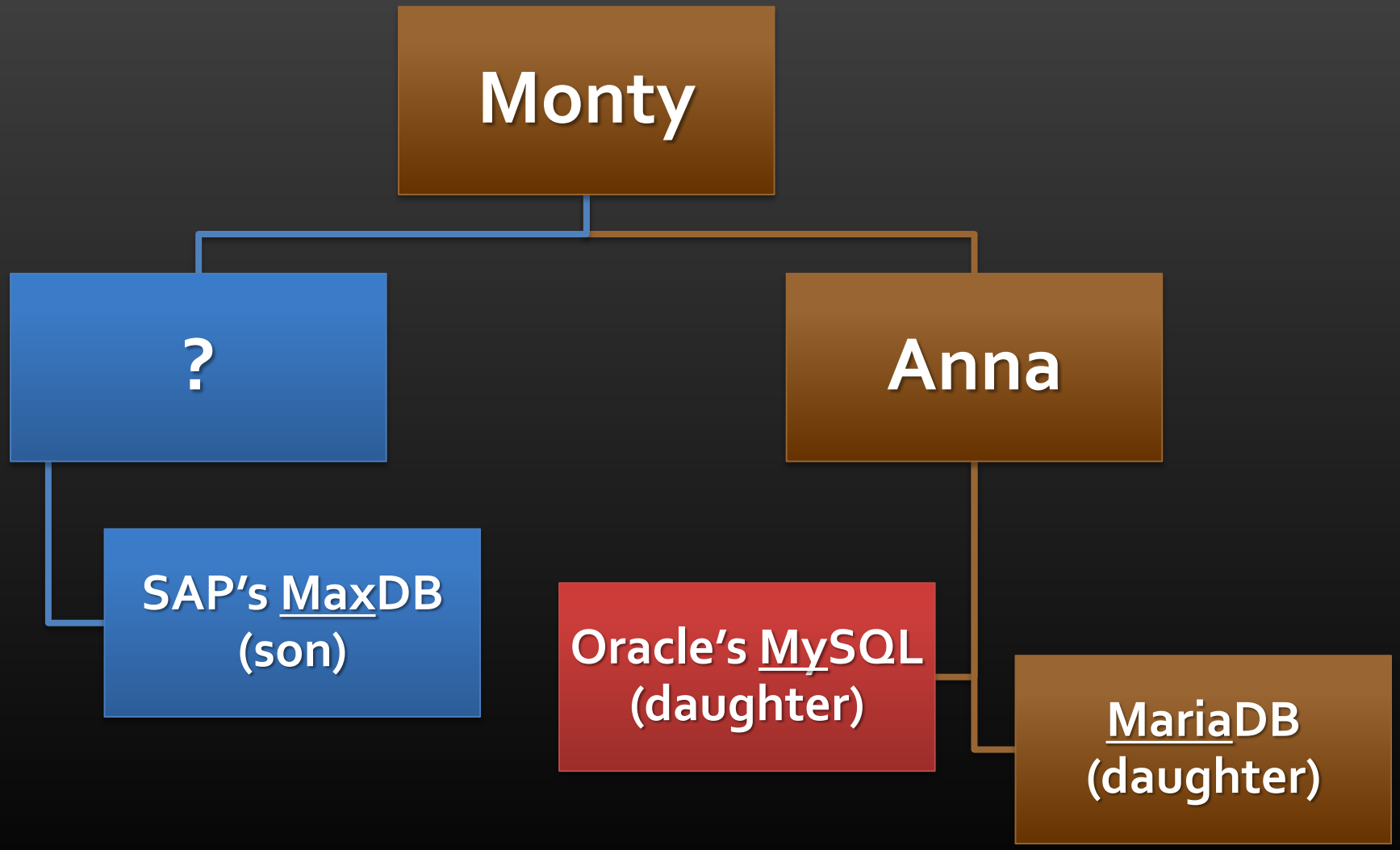
- **와이드니어스**는 유럽위원회(EU)가 **책임을 면하기 위해** MySQL의 보호자 역할을 포기했다고 주장했다. 와이드니어스는 "오라클이 아무런 조건없이 MySQL을 손에 넣는다면, 유럽인으로써 우리의 규제 시스템이 부끄럽다고 할 수밖에 없다"고 비난했다.

URL : http://www.itworld.co.kr/print/60718

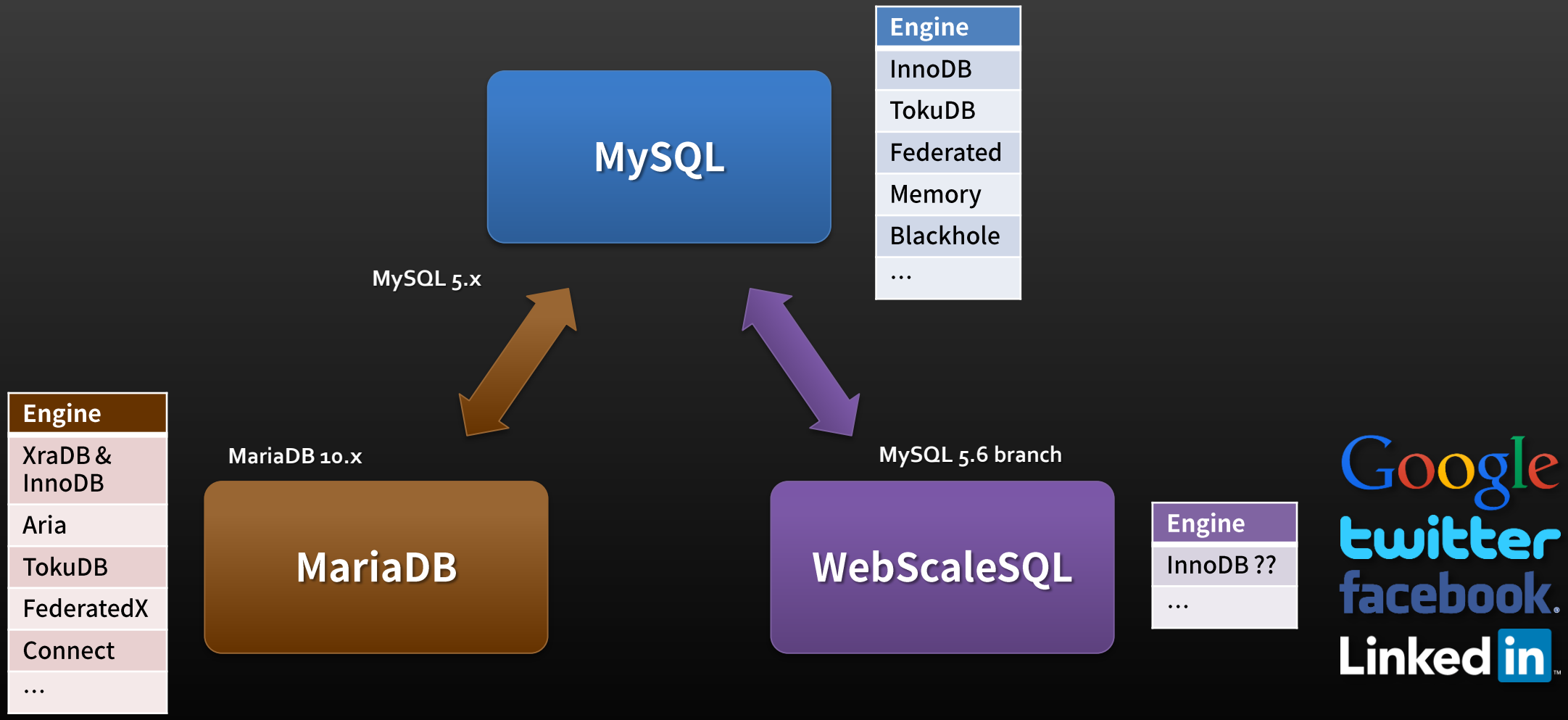
URL : http://monty-says.blogspot.kr/2009/12/help-saving-mysql.html

MariaDB

Monty's Family



MySQL Sister & Brother ?!



MariaDB vs MySQL

Feature	My 5.5	Maria 5.5	My 5.6	Maria 10.0
Multi-source Replication	X	X	X	O
NoSQL Cassandra Storage Engine	X	X	X	O
NoSQL Handlersocket interface	X	O	X	O
NoSQL memcache interface	X	X	O	X
Dynamic Columns	X	O	X	O
Virtual Columns	X	O	X	O
Join Optimizations	X	O	X	O
Engine Independent Statistics	X	X	X	O
SHOW EXPLAIN of a running thread	X	X	X	O
Explain Improvements	X	X	O	X[1]
Global Transaction ID	X	X	O	X[2]

Feature	My 5.5	Maria 5.5	My 5.6	Maria 10.0
Online Alter Table	X	X	O	X[2]
Parallel Slave Threads	X	X	O	X
Partitioning Improvements	X	X	O	X
InnoDB Improvements	X	X	O	O[3]
Performance Schema Improvements	X	X	O	O
Optimizer Enhancements	X	O	O	O
Binlog Group Commit	X	O	O	O
Disk Access Optimizations	X	O	O	O
Subquery Optimizations	X	O	O	O
Microseconds Precision	X	O	O	O

URL : https://mariadb.com/blog/mysql-56-vs-mariadb-100

- MariaDB 10.0.0 is still alpha with some of the features still under development.
- OpenSUSE and Fedora plan to replace MySQL with MariaDB in their corresponding distributions, but that's not because of the technical capabilities of MySQL.

Magic Quadrant for Operational Database Management Systems

Strengths

- **Rich functionality** : MariaDB offers multiple storage engines, tunable persistence, ACID support with the InnoDB/XtraDB engine, graph storage with Open Query Graph (OQGraph), and support for Apache Cassandra and JSON.
- **Value** : In our survey of reference customers, MariaDB received one of the three highest scores for value for money, as it did for suitability of pricing method. It also received one of the highest scores for "no problems encountered."
- **Strong community and partner network** : MariaDB is at the heart of a vibrant MySQL user community and ecosystem. It partners with Linux distribution vendors, IBM, Fusion-io, and organizations offering products for special-purpose storage engines, management, backup and HA, as well as service providers.

Cautions

- **Increased competition** : MariaDB is increasingly visible and will face more competition, especially as Oracle's consent decree with the **EU regarding MySQL expires in 2015[1] and Oracle** becomes more aggressive.
- **Scale** : MariaDB's reference customers mostly quantified the size of their largest databases as being a few hundred gigabytes at most. To compete at the high end against increasing competition, MariaDB will require more terabyte-size reference customers.
- **Fragmented offerings** : Several customers remarked on the number of separate pieces in MariaDB's software stack; one noted there are "too many independent tools for managing databases."

URL : http://www.gartner.com/technology/reprints.do?id=1-23A415Q&ct=141020&st=sb

Magic Quadrant for Operational Database Management Systems

주의

- 경쟁 증가 (PgSQL, MemSQL, …)
- 스케일 이슈 (??? GB 급)
- 각개격파

강점

- 풍부한 기능 (InnoDB, TokuDB, …)
- 가격 경쟁력
- 커뮤니티 및 파트너

URL : http://www.gartner.com/technology/reprints.do?id=1-23A415Q&ct=141020&st=sb

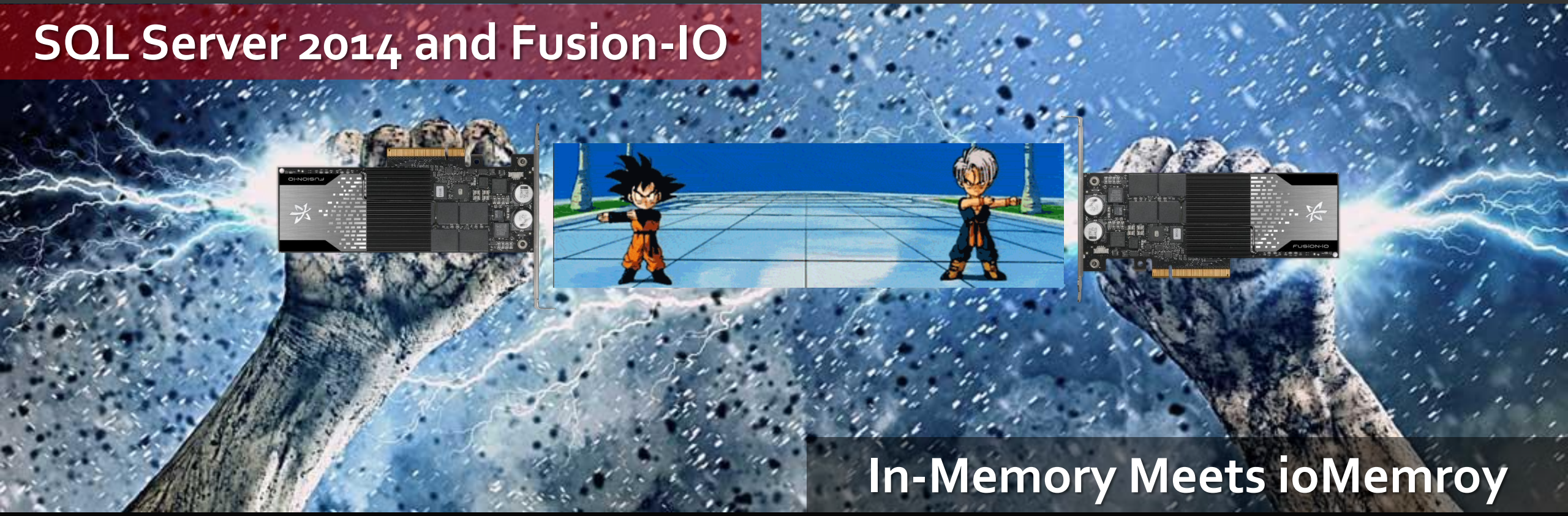
MariaDB & Trademarks, and advice for your project

- MariaDB & Trademarks, and advice for your project
  - https://www.flamingspork.com/blog/2014/10/06/mariadb-trademarks-and-advice-for-your-project

- Who works on MariaDB and MySQL?
  - Looking at the committers/authors of patches in the bzr tree for MariaDB 5.5.31.
    - Non Oracle Contributors : 11
    - Oracle (as they pull Oracle changes) : 40
  - https://www.flamingspork.com/blog/2013/08/09/who-works-on-mariadb-and-mysql

Fusion-io

- Leading MySQL Databases Now Feature Atomic Writes; Fusion-io Provides Key-value Store APIs and Demand Paging Extension to Developer Community in First Open Compute Software Contributions
  URL : http://www.fusionio.com/press-releases/fusion-io-delivers-open-apis-for-flash-aware-application-acceleration



Korea

- After spending the early part of the week in Tokyo the **Monty roadshow moved onto Korea** where we had a great community dinner courtesy of partners Kolon-Benit & OSS Korea with 40+ guests from companies including **KakaoTalk**, **Daum**, **SK Telecom**, **TicketMonster** & **NHN**. (2014-02-24)
  - https://mariadb.com/blog/onwards-upwards-seoul

- For more information, read the full case study: **Kakao Talk Speeds Messaging 5x More Than SSD** Solution (Cutting-edge Korean free talk and text service achieves 30x performance density increase using ioDrive2). Kakao is the leading Simple Messaging System (SMS) provider in South Korea, with a fast-growing user base of 100 million customers worldwide. They run MariaDB 5.5.
  - https://mariadb.com/kb/en/mariadb/case-studies/kakaotalk-uses-mariadb-with-fusion-io/

- **Seong Uck Lee** from DaumKakao
  - https://github.com/SunguckLee
  - http://www.imaso.co.kr/?doc=bbs/gnuboard.php&bo_table=article&wr_id=43389
  - https://blog.mariadb.org/defragmenting-unused-space-on-innodb-tablespace/
  - http://kakaodbe.blogspot.kr/

PostgreSQL

(EntperpriseDB's Postgre Plus Advanced Server)

Two great open source DBMS

: slony

: sea lion

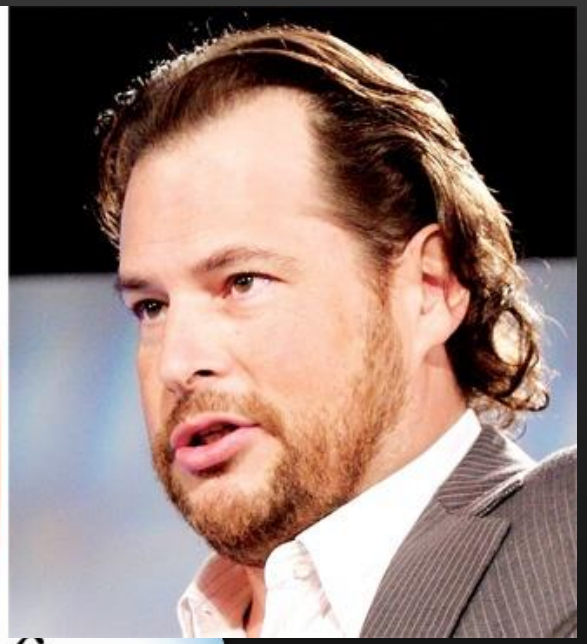
: sakila

Salesforce.com Abandoning Its Postgres Flirtation?

We are hiring 5 Database Engineers this year and 40-50 people next year for a huge PostgreSQL project @ Salesforce.com (2012-10-12)

URL : http://www.postgresql.org/message-id/34A8F8ED87896E4AA4134EED4728E31BD7586BC164@EXSFM-MB02.internal.salesforce.com

Oracle CEO, Larry Ellison



salesforce CEO, Marc Benioff

URL : http://readwrite.com/2013/07/01/salesforcecom-abandoning-its-postgres-flirtation#awesm=~od3Xo3LdsHXoCv

Magic Quadrant for Operational Database Management Systems

Strengths

- Community leadership : EnterpriseDB is the primary contributor to the PostgreSQL community. It is responsible for many of the new features of PostgreSQL by contributing to JSON, materialized views and partitioning.
- Functionality : Gartner clients report that the functionality of EnterpriseDB's Postgres Plus Oracle Compatibility Feature is now more than sufficient to run both mission-critical and non-mission-critical applications. Recently, Infor, a major application platform independent software vendor (ISV), added EnterpriseDB as a DBMS platform choice.
- Stability and compatibility : Reference customers commend the compatibility with Oracle, the stability of the DBMS and the product support.

Cautions

- Open-source dilemma : EnterpriseDB must conform to community-led release cycles for its community editions as they go through the open-source process. This can slow the process of enhancing the base open-source product, but not the enterprise edition.
- Market exposure : EnterpriseDB lacks breadth in its sales and marketing operations, which restricts its ability to communicate its message to potential enterprise customers. According to our survey, those that did not choose EnterpriseDB would have been more likely to choose it if they had been more familiar with it.
- Support and documentation : Reference customers reported a lack of local-language support and weak documentation.

URL : http://www.gartner.com/technology/reprints.do?id=1-23A415Q&ct=141020&st=sb

Magic Quadrant for Operational Database Management Systems

주의

- 오픈소스 딜레마
- 시장 노출 부족
- 지원 및 문서

강점

- 커뮤니티 리더쉽 (JSON, MView, Partitioning)
- 기능 (親 오라클계)
- 안정성 및 호환성

URL : http://www.gartner.com/technology/reprints.do?id=1-23A415Q&ct=141020&st=sb

ORACLE®

Java™
ORACLE®

KT Corp

Korean Telecom Giant KT Corporation Steps up its Cooperation with EnterpriseDB on their Open Source-based Database Solutions

Release Date:

Apr 18, 2012

KT Corp. concludes a one-year evaluation of Postgres Plus Advanced Server, eyeing to replace proprietary databases with a new standard

BEDFORD, Mass. – April 18, 2012 – Enterprise DB, the leading worldwide provider of PostgreSQL and Oracle compatibility products and services, today announced a partnership with KT Corporation (NYSE: KT). The partnership will deepen the two companies' cooperation related to the deployment of Postgres Plus Advanced Server (PPAS) for non-mission critical needs, and will gradually expand the use of PPAS for mission critical deployments within KT.

The largest telecommunications provider in South Korea with a market cap of $8.7 billion, KT is specifically seeking to deploy open source-based database management products to replace its current databases, representing one of the largest migrations from proprietary databases onto such a new standard. KT and EnterpriseDB intend to partner in promoting the use of Postgres Plus Advanced Server throughout KT's network of services.

"Integrated telecommunications providers worldwide are increasingly in the business of selling technology solutions and they're seeking innovative new ways to offer services at a lower cost," Ed Boyajian, President and CEO of EnterpriseDB, said. "PostgresPlus is enterprise-class at a fraction of the cost of traditional databases so we've become the most attractive database solution for mission and non-mission critical deployments."

KT is the largest telephone and broadband services provider in Korea. KT also provides enterprise IT services, including consulting and systems integration. The company's newest enterprise services leverage data stored in a cloud system.

"We made a careful and detailed evaluation of the Postgres Plus Advanced Server by EnterpriseDB and determined the solution makes much better business sense than our continuing with the expense of current software,"

Jae-Ho Jang, Ph.D., Senior Vice President, IT Strategy BU, KT Corporation, said. "We are looking forward to a rewarding partnership with EnterpriseDB as we continue to expand our services and increase the demands on our database."

URL : http://techholic.co.kr/archives/23053

CUBRID

cubrid.com vs cubrid.org

- PreSales & Consulting
- Support

≠

NAVER

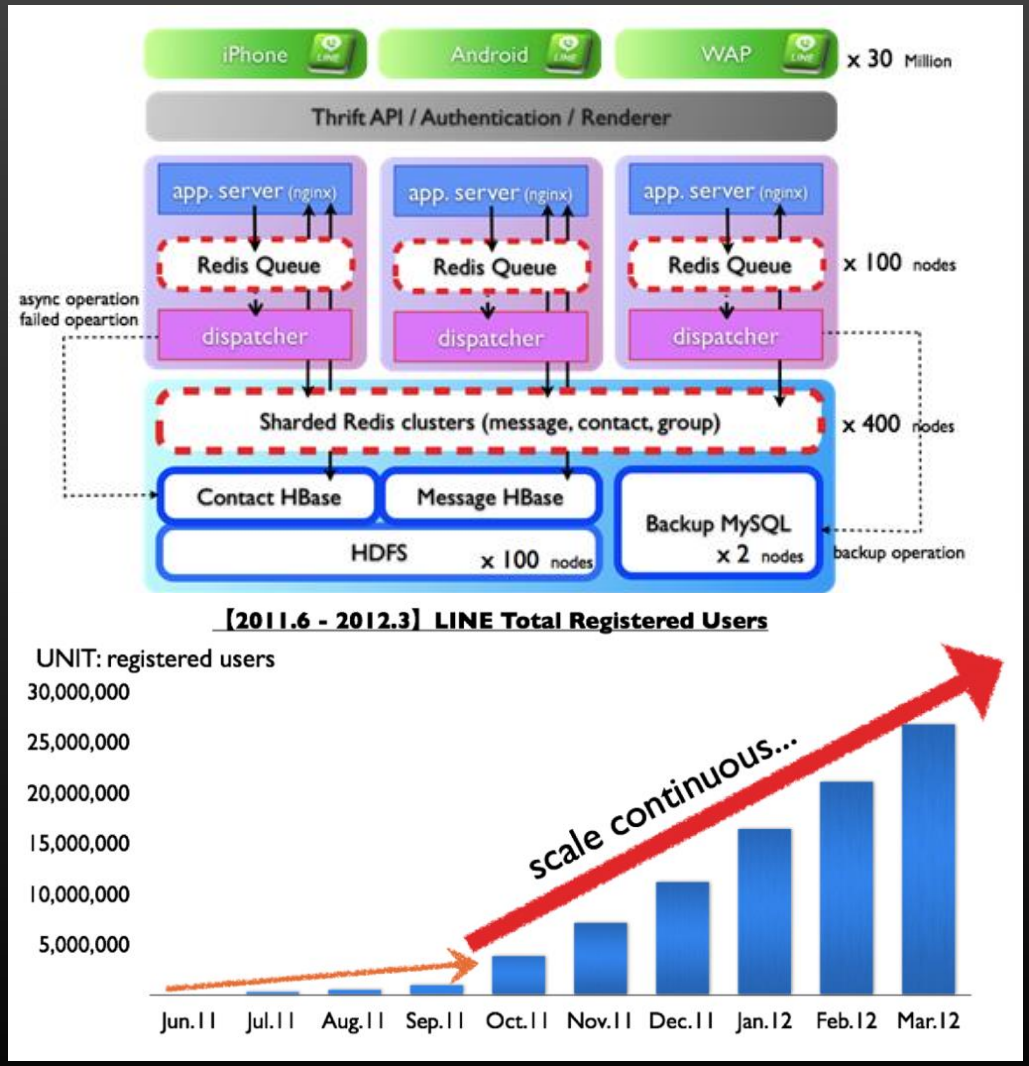
- Development
- Confidential

LINE

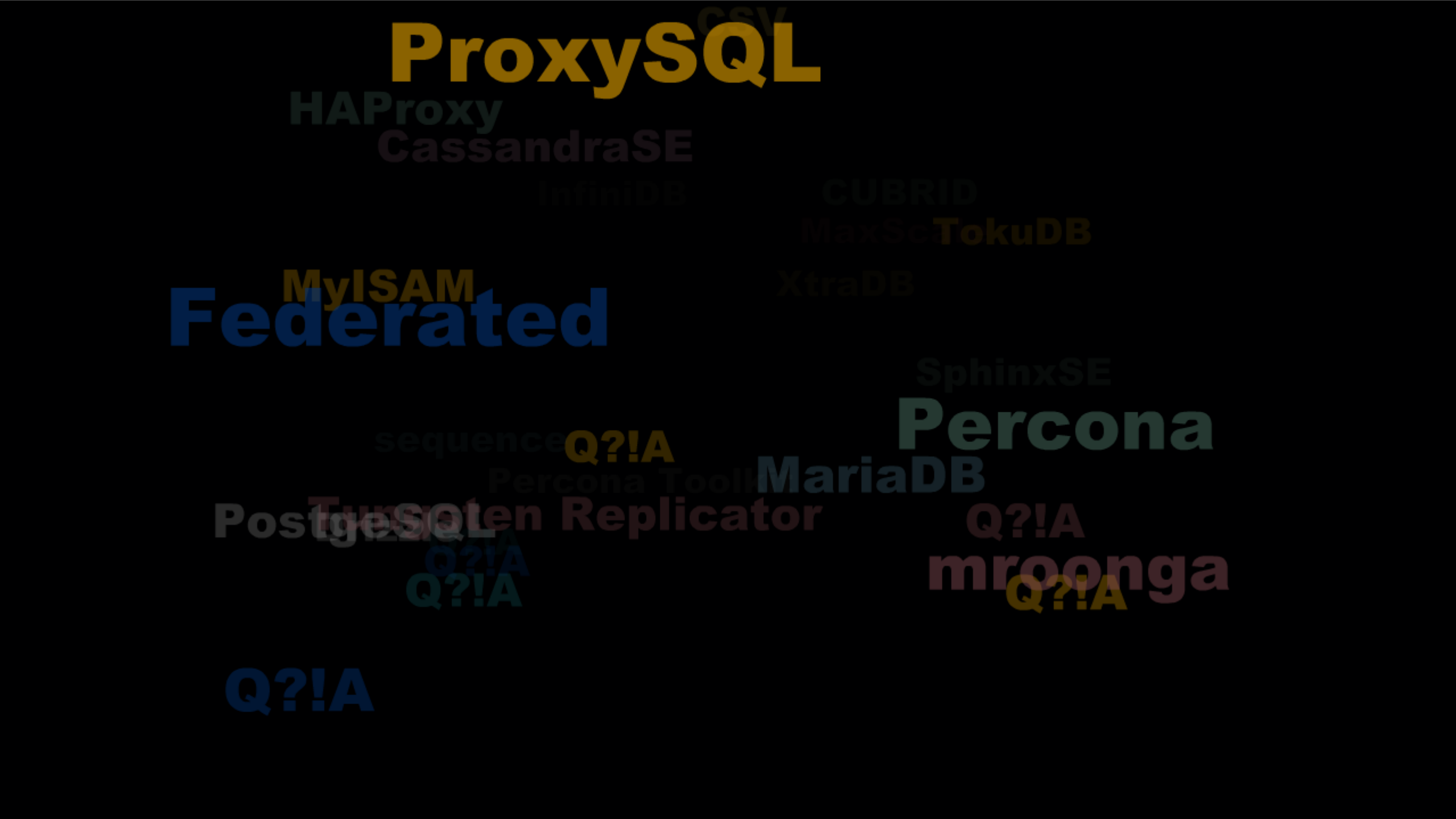
In summary, LINE storage layer is currently constructed as the follows:

- Standalone Redis: asynchronous job and message queuing
  - Redis queue and queue dispatcher are running together on each application server.
- Sharded Redis: front-end cache for data with O(n*t) and primary storage with O(n)
- Backup MySQL: secondary storage (for backup, statistics)
- HBase: primary storage for data with O(n*t)
  - We assume to operate hundreds of terabytes of data on each cluster with 100s to 1000 servers.

LINE main storage is constructed from about 600 nodes and continues to increase month after month.



URL : http://developers.linecorp.com/blog/?p=1420


ProxySQL
HAProxy
CassandraSE
InfiniDB
CUBRID
TokuDB
MyISAM
Federated
XtraDB
SphinxSE
Percona
sequence
Q?!A
Percona Toolkit
MariaDB
Tungsten Replicator
PostgreSQL
Q?!A
mroonga
Q?!A
Q?!A
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