

Oracle2DBMS Notes and Comments

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Contents

- About me
- Conclusion
- Why ?!
- drop-in replacement for **Oracle** ?!
- Notes and Comments

About me

DBMS Dev, QA, PM, TW, TC, TS, CS, ...

About me

Embedded

INERVIT

MobileLite

OORDBMS

nhn

CUBRID

IMDB

TELCOWARE

Telcobase

IMDB

ALTIBASE

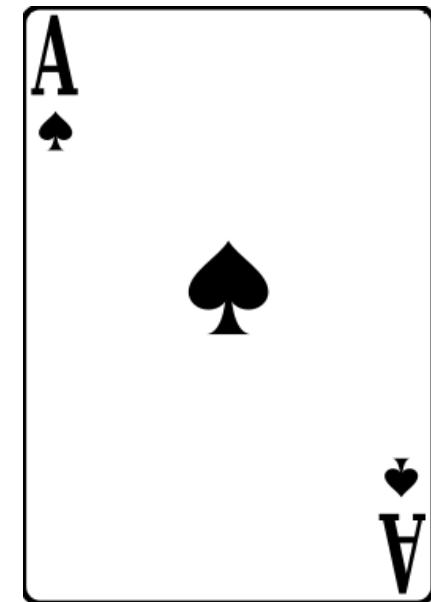
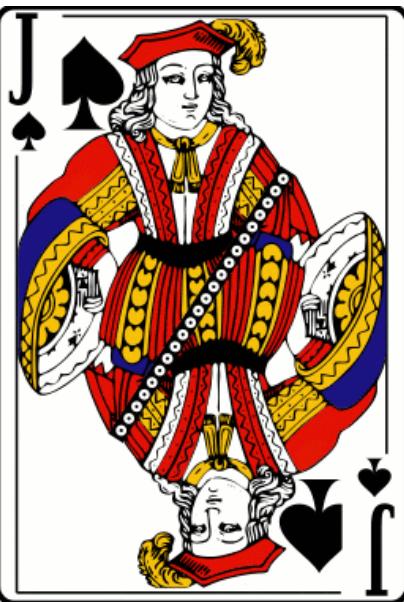
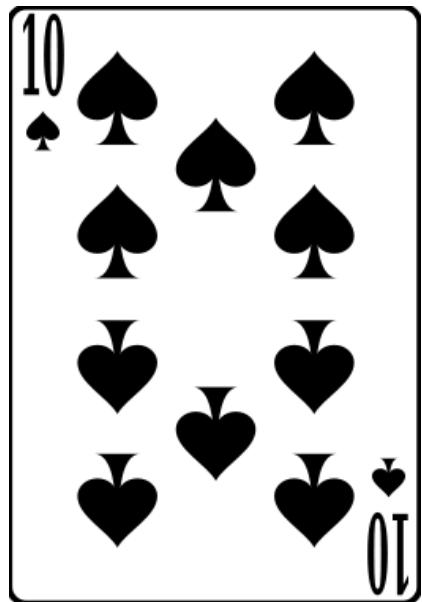
Altibase

T-RDBMS

TIBERO

Tibero

About me



NIPA : Global Open Frontier Full-time

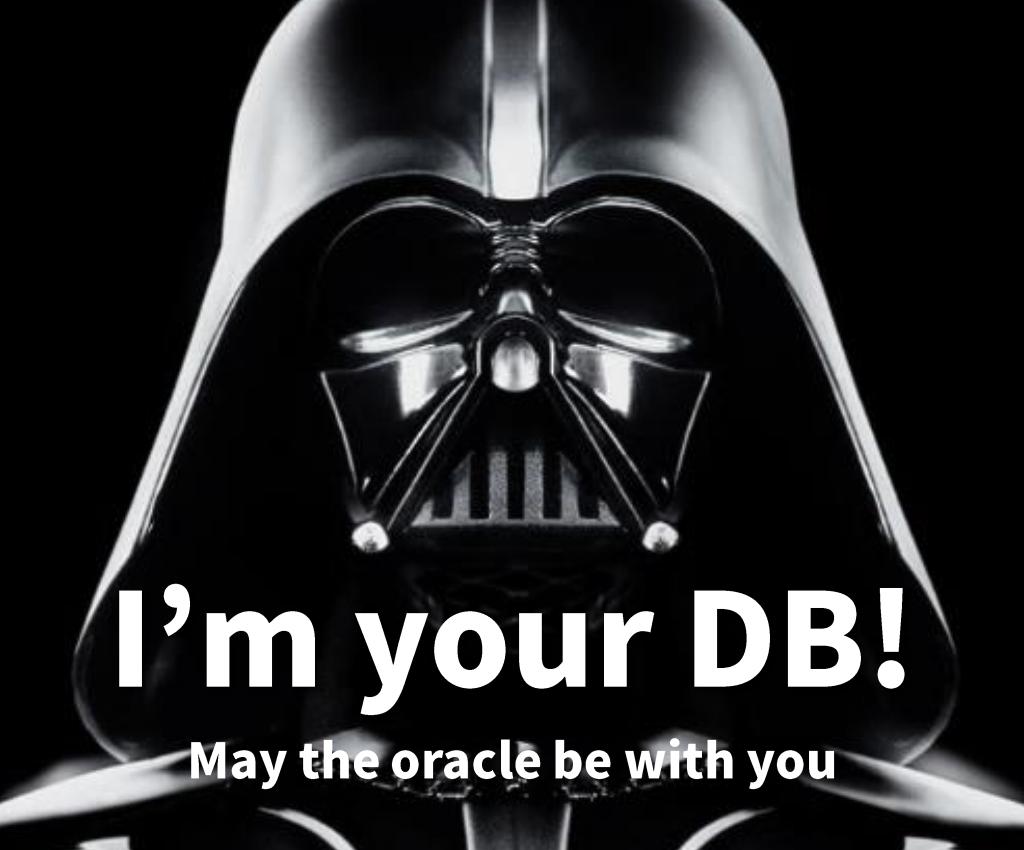
- Project : MySQL & MaxScale Redis Plugin
 - <https://github.com/sql2/MySQL-Redis-Plugin>



Conclusion

Best of the Best

Force



I'm your DB!

May the oracle be with you

ORACLE®

Sexy



ORACLE®

Ace



ORACLE®

Money Crazy

A black Oracle America's Cup sailboat is shown sailing on choppy, dark blue water under a clear sky. The boat's hull features the word "ORACLE" in large white letters, with "AMERICA'S CUP TEAM USA" written vertically above it. An American flag is visible on the side. The background shows distant hills or land across the water.

ORACLE®

Why ?!

TCO ?!

dbdbdib



NAVER



SK telecom

PayPal®



Daum

Google

olleh kt

LG U+

salesforce



TMON

coupang
Color Your Days

WE MAKE WONDERS!
neople

Rule
the Sky

GROUPON
KOREA

WE make PRICE

wemade
ntertainment

4:33
CREATIVE LAB

SAMSUNG

SK C&C

삼성전자

LG CNS

SAMSUNG 삼성SDS
posco 포스코ICT

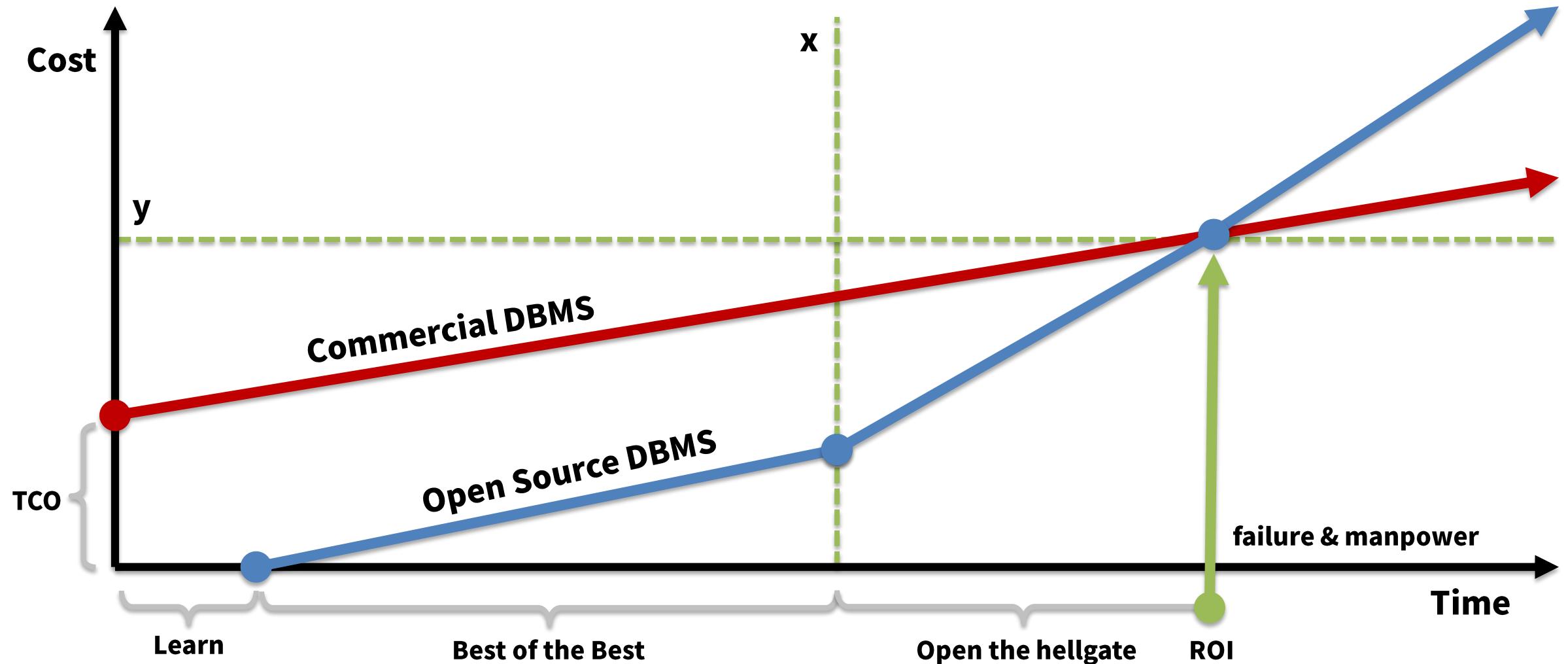
삼성생명

SAMSUNG

내일을 향한 금융
한화생명

KYOBOT 교보생명

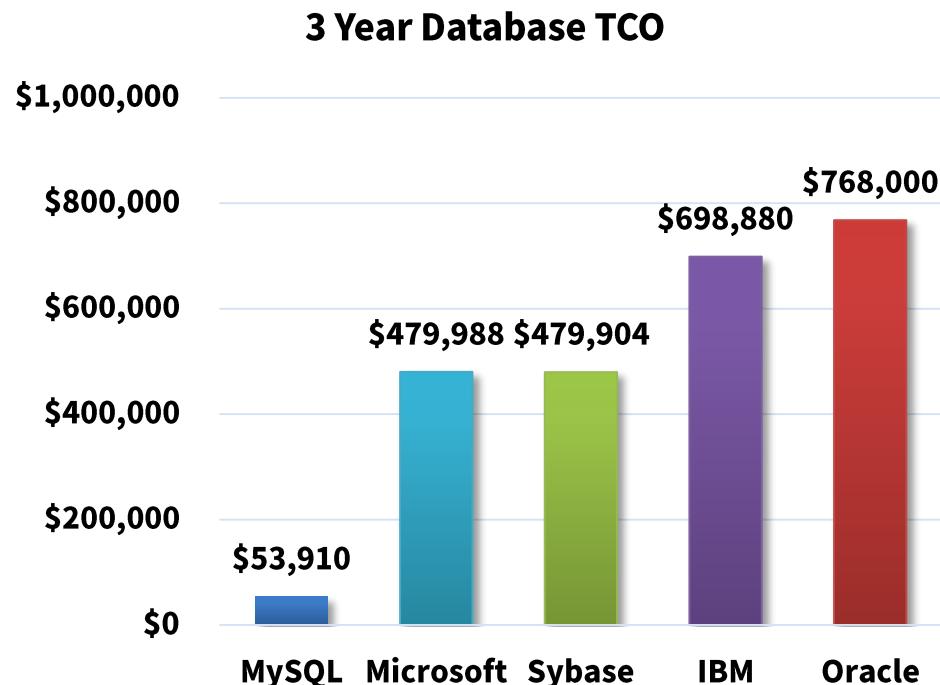
Commercial vs Open Source



TCO !?

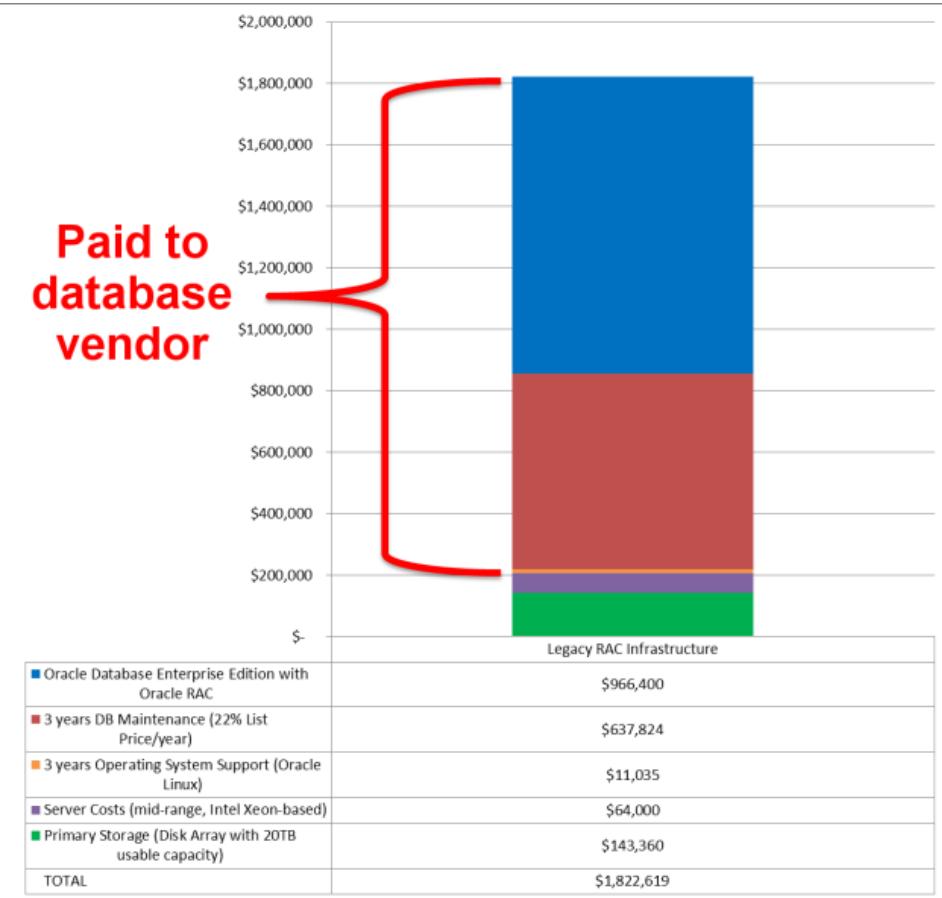
- MySQL TCO Savings Calculator

- <http://www.mysql.com/tcosavings>
- http://www.mysqlkorea.com/sub.html?mcode=tech&scode=06_1

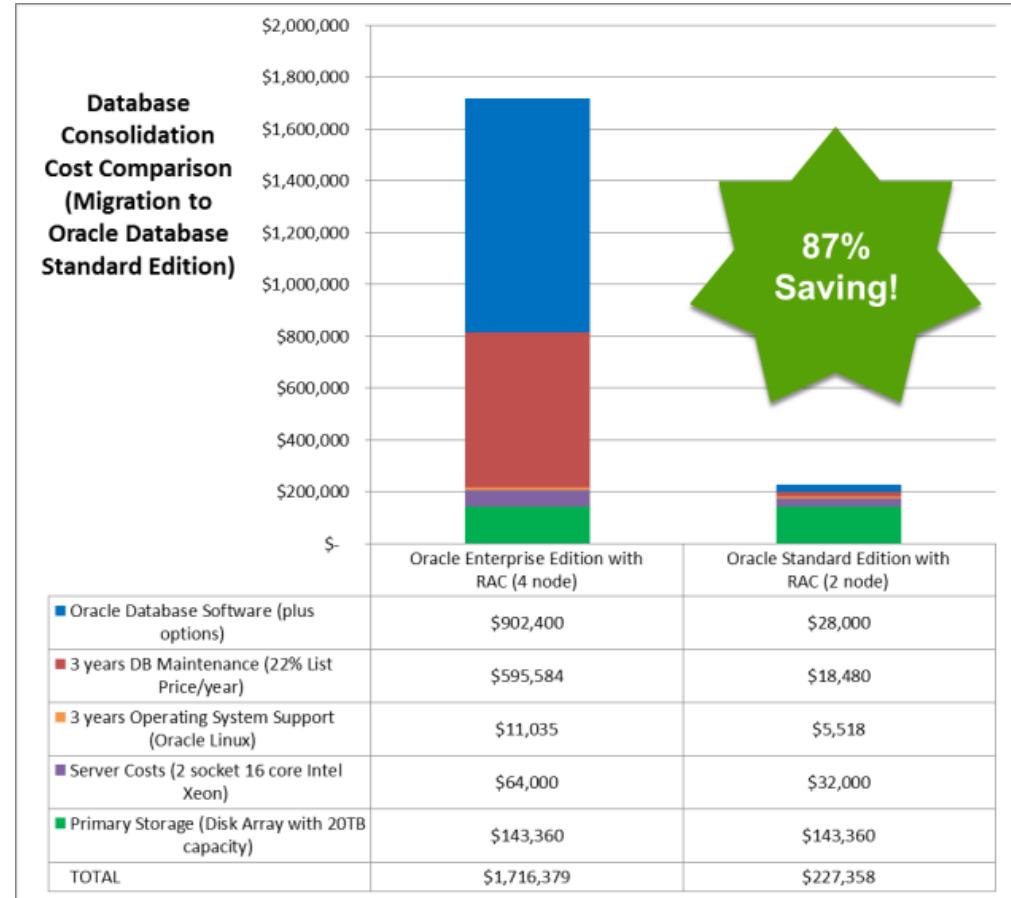


	MySQL	Microsoft	Sybase	IBM	Oracle
제품명	MySQL Enterprise	MS SQL Server 2005	Sybase ASE 15	IBM DB2 v9	Oracle 10g
버전 (에디션)	Gold	Enterprise	Enterprise	Enterprise	Enterprise
DB서버 소스코드	오픈소스	상업 (독점적)	상업 (독점적)	상업 (독점적)	상업 (독점적)
가격책정 단위	Server	CPU	CPU	CPU	CPU
SW 사용권한 (Unit별)	\$0	\$24,999	\$24,995	\$36,400	\$40,000
연간 서브스크립션, 서포트 & M/A (Unit별)	\$2,995	\$5,000	\$4,999	\$7,280	\$8,000
Costs					
선불 SW 사용권한 비용	\$0	\$299,988	\$299,940	\$436,800	\$480,000
서브스크립션, 서포트 & M/A (3년간)	\$53,910	\$180,000	\$179,964	\$262,080	\$288,000
Total Cost of Ownership					
TCO (3년간)	\$53,910	\$479,988	\$479,904	\$698,880	\$768,000
TCO 절약비용					
MySQL 사용시 TCO 절약비용 (USD)	-	\$426,078	\$425,994	\$644,970	\$714,090
MySQL 사용시 TCO 절약비용 (%)	-	88%	88%	92%	92%
MySQL 대비시간 (배)	-	8 x	8 x	12 x	14 x

The Real Cost of Oracle RAC



Paid to database vendor



- <http://feed.askmaclean.com/archives/the-real-cost-of-oracle-rac.html>

Boss !!



Show me the Money!!

Drop-in replacement for Oracle ?!

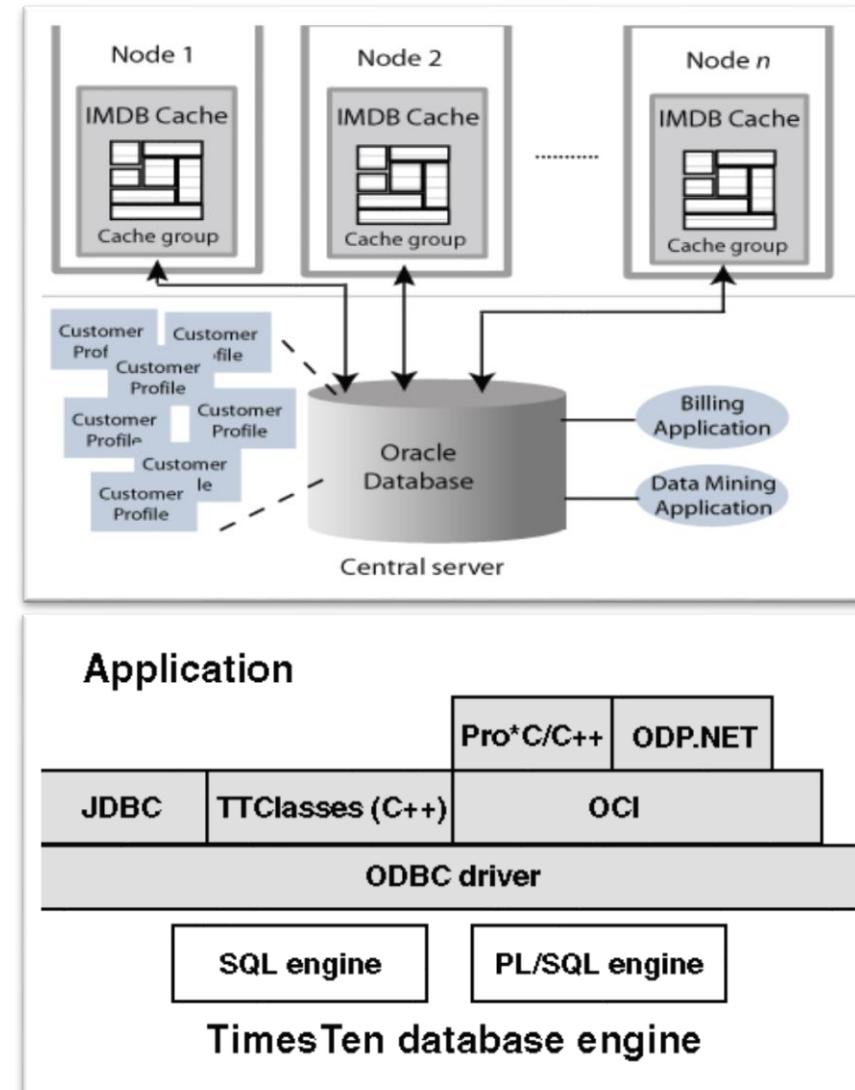
Mission: Impossible

DB-Engines Ranking

Rank	Last Month	DBMS	Database Model	Score	Changes
1	1	Oracle	Relational DBMS	1485.12	-15.80
2	2	MySQL	Relational DBMS	1295.78	-13.77
3	3	Microsoft SQL Server	Relational DBMS	1246.60	+22.81
4	4	PostgreSQL	Relational DBMS	239.46	-0.53
5	5	MongoDB	Document store	238.78	+7.33
6	6	DB2	Relational DBMS	202.01	+3.98
7	7	Microsoft Access	Relational DBMS	144.62	+2.26
8	8	SQLite	Relational DBMS	91.16	+1.97
9	10	Sybase ASE	Relational DBMS	83.72	+3.03
10	9	Cassandra	Wide column store	81.58	-0.26

Oracle Acquires TimesTen

- TimesTen API support
 - SQL and PL/SQL functionality
 - OCI and Pro*C/C++ Precompiler support
- Access Control
- Database connectivity
- Durability
- Performance through query optimization
- Concurrency
- Database character sets and globalization support
- In-memory columnar compression
- Data replication between servers
- Cached data with the TimesTen Cache
- Load data from an Oracle database into a TimesTen table
- Business intelligence and online analytical processing
- Large objects
- Automatic data aging
- System monitoring
- Administration and utilities



Oracle and MySQL Compared

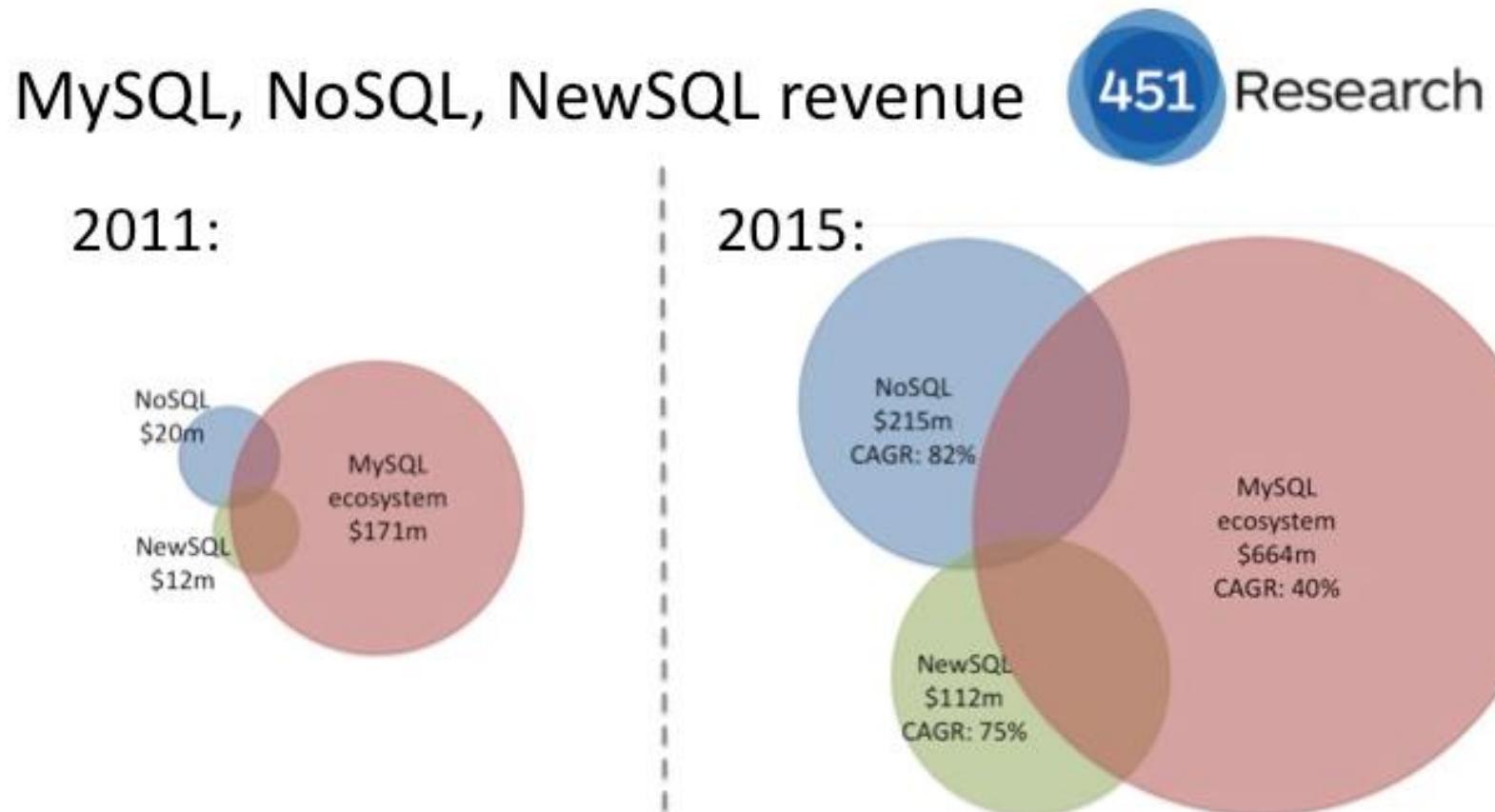
- Database Security
- Schema & Object Migration
- Data Types
- Data Storage Concepts



URL:

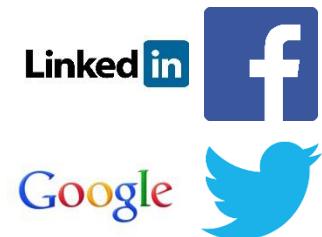
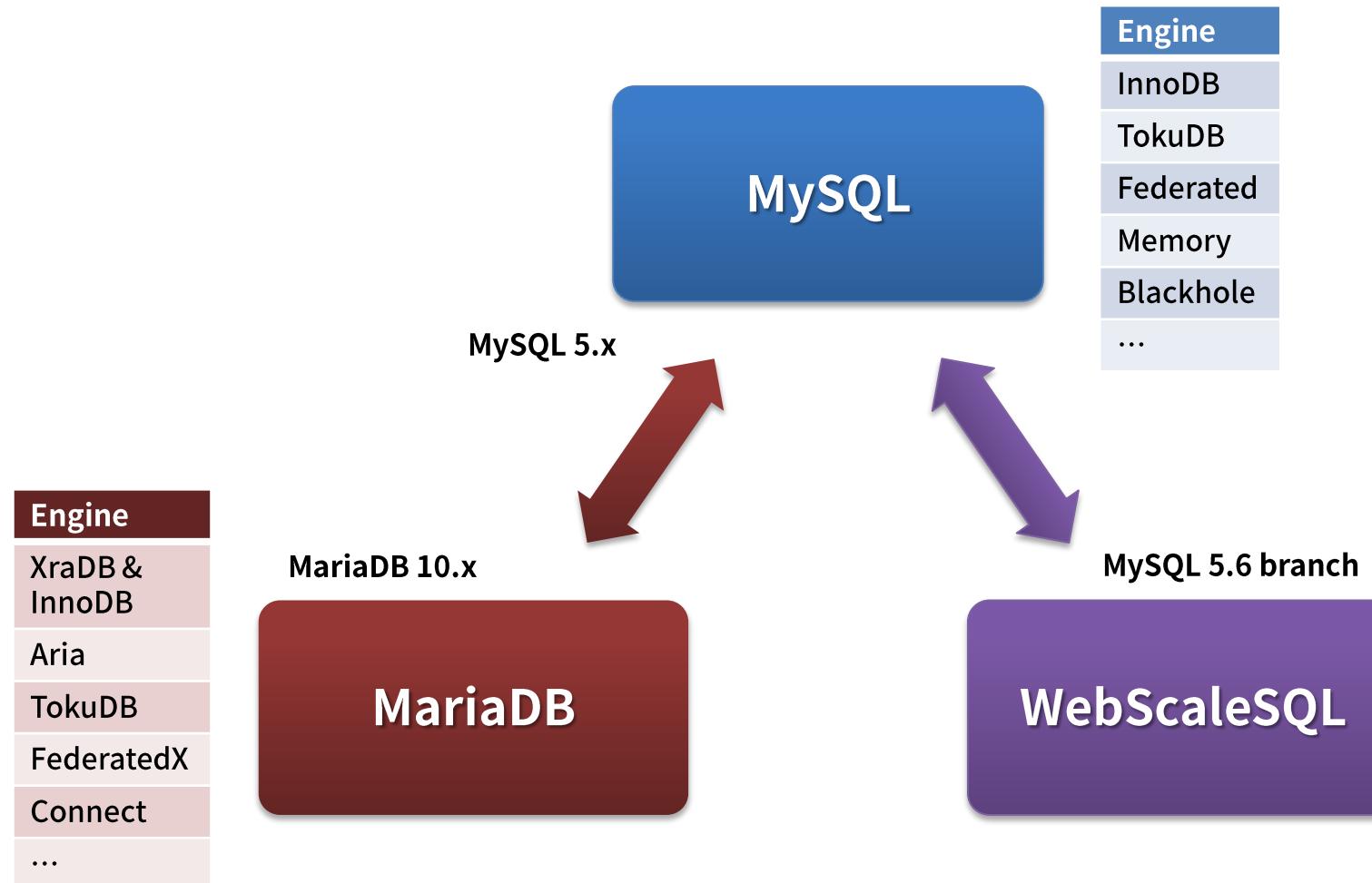
- http://docs.oracle.com/cd/E12151_01/doc.150/e12155/oracle_mysql_compared.htm
- <http://database-management-systems.findthebest.com/compare/30-36/MySQL-vs-Oracle>

451 Group analyst Matthew Aslett



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

MySQL | MariaDB | WebScaleSQL



Case Study : Coupang

Challenges

- 쿠팡은 데이터베이스 변경 및 시스템 변경 사항을 적용하기 위해 한 달에 한번씩 새벽 시간대에 정기점검을 실시했으며, 이로 인해 구매 사이트의 다운 타임이 발생했다.
- 고객 신뢰도와 직결되는 온라인 주문 시스템 등 IT 인프라의 안정성을 확보하고자 했다.
- 자유로운 시스템 변경이 요구됐다.
- 효율적이며 안정적인 데이터 백업이 필요했다.
- SQL 작업 및 레플리케이션(replication) 지연 등 시스템 상태의 실시간 모니터링이 요구됐다.
- 폭발적인 데이터 증가에 대응해 스케일 아웃을 통해 각 업무별 데이터 및 시스템을 분산시키고자 했다.

A word from 쿠팡

“쿠팡은 고객에게 놀라운 감동과 신선힘을 제공하기 위해 ‘WOW’ 프로젝트를 진행했으며, MySQL 엔터프라이즈 에디션의 도입으로 24시간 언제, 어디서든 실시간 구매가 가능해져 매출 및 고객 만족도를 향상시켰다. 쿠팡은 앞으로도 지속적인 투자를 통해 시스템 안정성은 높이면서 TCO를 절감하는 IT 인프라를 구축해 소셜커머스 업계 롤모델이 되고자 한다.” – 전동희 수석, 데이터 Lab 부문, 쿠팡(Dong-Hui Chon, Deputy General Manager, DATA Lab, Coupang)

Why Oracle

데이터 분석 시스템으로 오라클 데이터베이스를 사용하고 있던 쿠팡은 구매 서비스의 다운타임을 줄이고 자유로운 데이터베이스 변경을 위해 여타의 오픈소스 데이터베이스와 비교하여 MySQL 엔터프라이즈 에디션을 선정했다. MySQL 엔터프라이즈 에디션은 데이터베이스, 모니터링 및 백업이 한 시스템에서 구성이 가능하며, 개발자와 실무자의 협업이 원활할 경우, 듀얼 마스터와 룰 구성 등 토플러지 구성이 무궁무진하다는 점이 주효했다. 또한, 도입 및 유지 보수 비용이 저렴해 TCO 절감 측면에서도 월등했으며, 데이터베이스 이슈 발생 시 즉각적인 지원이 가능하다는 점에서도 높이 평가됐다.

Implementation Process

2011년 8월부터 시작된 ‘WOW 프로젝트’는 5단계의 과정을 거쳐 2013년 3월 완료됐다. 1단계는 무분별한 개발자 권한 회수 단계이며, 2단계는 시스템의 읽기/쓰기 권한 분리, 3단계는 VIP(Virtual IP) 도입, 4단계는 백업 및 복구 자동화 구축, 마지막으로 5단계는 MySQL 엔터프라이즈 에디션의 HA 구축 단계로 구성된다.

URL : <http://www.oracle.com/us/corporate/customers/customersearch/coupang-5-mysql-snapshot-2222710-ko.html>

Two greate open source DBMS



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



Oracle CEO, Larry Ellison

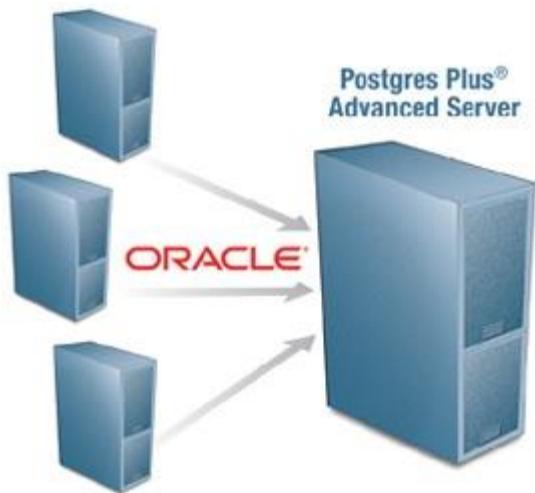
salesforce CEO, Marc Benioff

- URL : <http://readwrite.com/2013/07/01/salesforcecom-abandoning-its-postgres-flirtation>

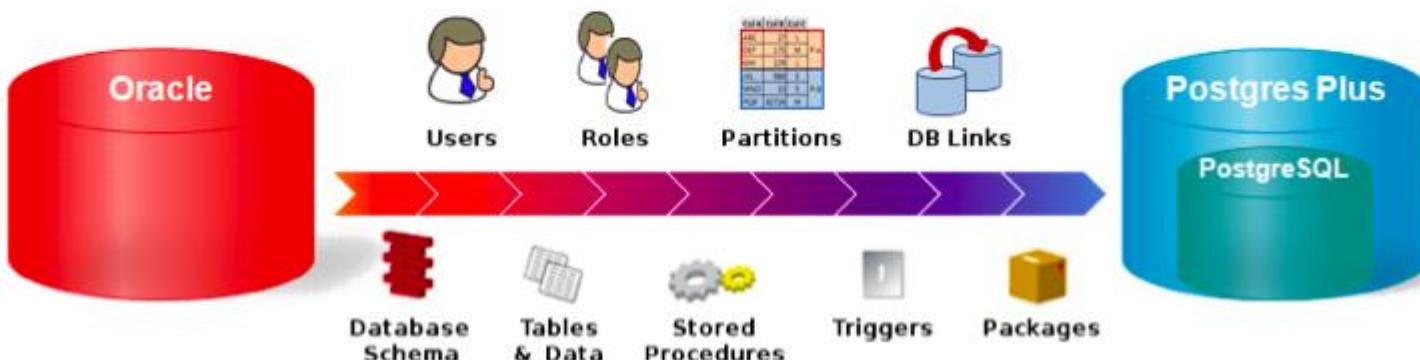
EnterpriseDB

PostgreSQL (Support Only Subscription)	Postgres Plus (Solution Pack Subscription)	Postgres Plus (Advanced Server Subscription)
<ul style="list-style-type: none">▪ PostgreSQL▪ Support/Services	<ul style="list-style-type: none">▪ PostgreSQL▪ Support/Services▪ Postgres Enterprise Mgr.▪ Solution Pack	<ul style="list-style-type: none">▪ PostgreSQL▪ Support/Services▪ Postgres Enterprise Mgr.▪ Solution Pack▪ Performance Features▪ Advanced Security▪ Oracle Compatibility

Oracle Compatibility



Comprehensive Compatibility	
PL/SQL	Data Types
» Triggers	Decode(), ROWNUM, DUAL, ...
» Functions	SQL Syntax and OCI support
» Stored Procedures	49 Data Dictionary Views
» Built-in Packages	EDB*Plus, EDB*Loader, EDB*Wrap
» User Packages	
» Sequences	
» Synonyms	
» Collections	Database Links and Replication



KT (Korea Telecom)

EnterpriseDB

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 – EnterpriseDB](#), 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.

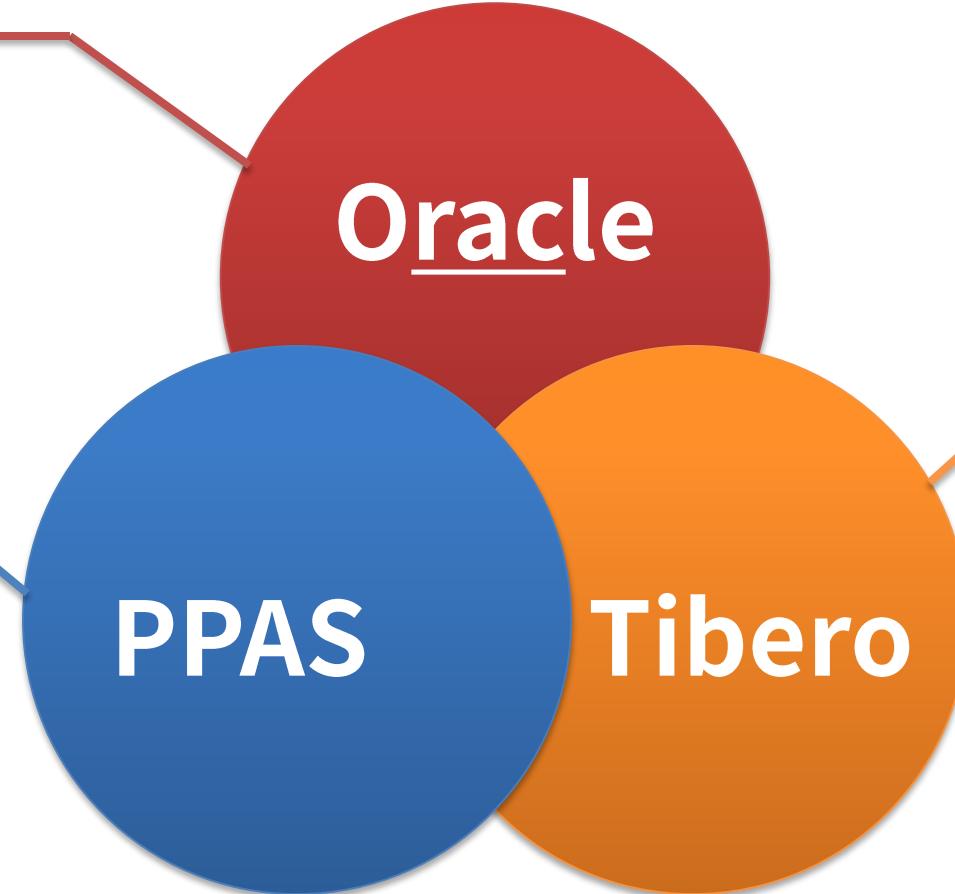
“Integrated telecommunications providers worldwide are increasingly in the business of selling technology solutions and they’re seeking innovative new ways to offer services at a lower cost,” Ed Boyajian, President and CEO of EnterpriseDB, said. “PostgresPlus is enterprise-class at a fraction of the 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,”

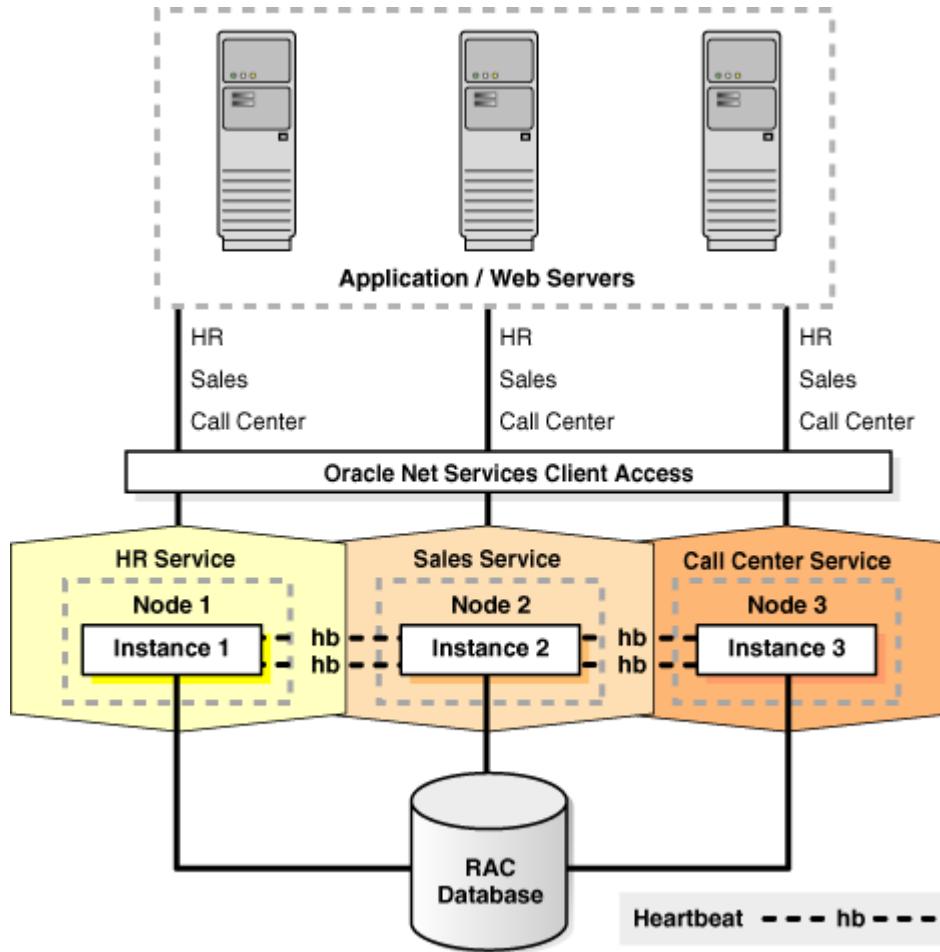
Jae-Ho Jang, Ph.D., Senior Vice President, IT Strategy BU, KT Corporation, said. “We are looking forward to a rewarding partnership with EnterpriseDB as we continue to expand our services and increase the demands on our[database](#).”

Post Oracle : imitation



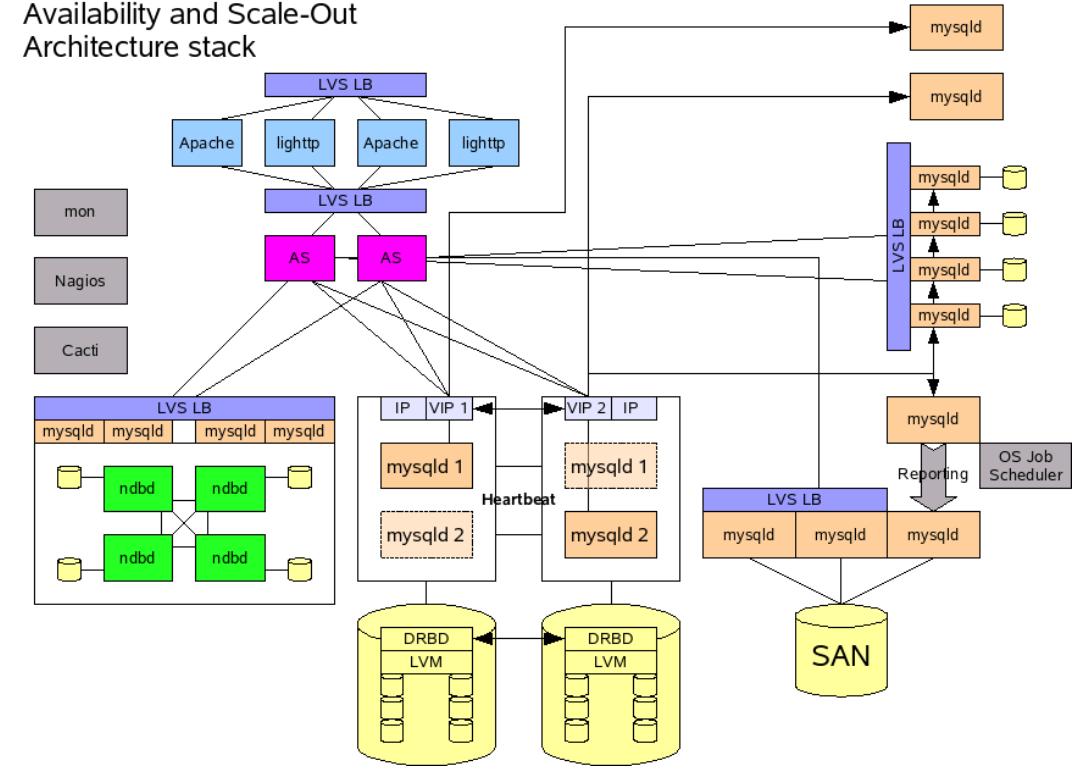
Notes and Comments

Architecture



VS

The complete Open Source High-Availability and Scale-Out Architecture stack



Operation Management

- 0.1K ~ 1K Server
- Monitoring
- Scale-out
 - Provisioning
 - High Availability
 - Shard & Replication
 - Multi Master & Cluster
- DevOps
 - <http://kakaodbe.blogspot.kr>
- Backup & Restore

	Mysqldump	LVM / NFS snapshot	MySQL Replication	Cold Backup	Percona XtraBackup
Incremental backup	✗	✗	✗	✗	✓
Partial backup/restore	✓	✗	✗	✗	✓
Impact on applications	〰	〰	✓	✗	✓
PITR	〰	✓	✗	✓	✓
Corruption detection	✓	✗	✓	✗	✓
Backup/restore speed	✗	〰	✓	〰	✓

Q? !A

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