

Postgres on Alibaba Cloud

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Postgres on Alibaba Cloud

[Why Postgres necessary]

Product? or Solution?

Postgres & HybridDB

Growing with community

About 23% of Oracle in the world

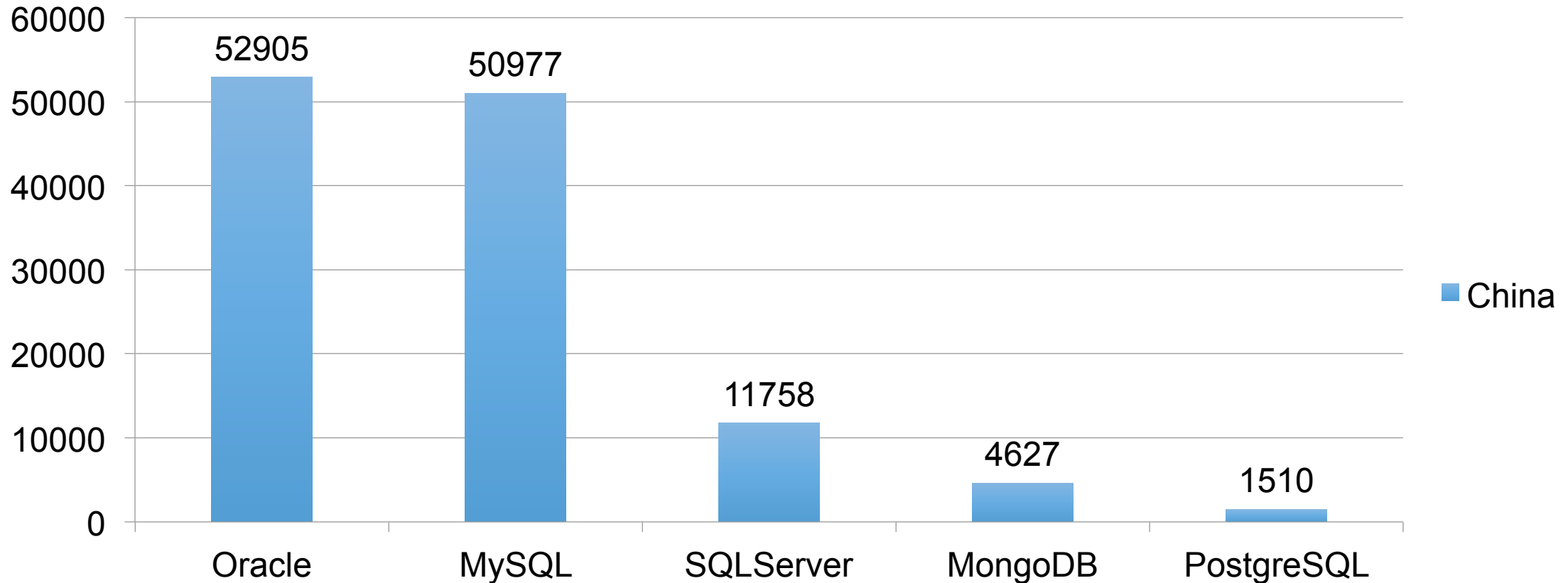
310 systems in ranking, November 2016

Rank			DBMS	Database Model	Score		
Nov 2016	Oct 2016	Nov 2015			Nov 2016	Oct 2016	Nov 2015
1.	1.	1.	Oracle	Relational DBMS	1413.01	-4.09	-67.94
2.	2.	2.	MySQL	Relational DBMS	1373.56	+10.91	+86.71
3.	3.	3.	Microsoft SQL Server	Relational DBMS	1213.80	-0.38	+91.48
4.	5.	5.	PostgreSQL	Relational DBMS	325.82	+7.12	+40.13
5.	4.	4.	MongoDB	Document store	325.48	+6.67	+20.87
6.	6.	6.	DB2	Relational DBMS	181.46	+0.90	-21.07
7.	7.	8.	Cassandra	Wide column store	133.97	-1.09	+1.05
8.	8.	7.	Microsoft Access	Relational DBMS	125.97	+1.30	-14.99
9.	9.	10.	Redis	Key-value store	115.54	+6.00	+13.13
10.	10.	9.	SQLite	Relational DBMS	112.00	+3.43	+8.55

Data from: db-engines.com

Just about 3% of Oracle in the China

China



Data from: zhaopin.com (the popular recruiting website in China)

Why Postgres necessary

Enterprise
Customer

Complex
Query

IoT = JSON + GIS

FDW connect everything

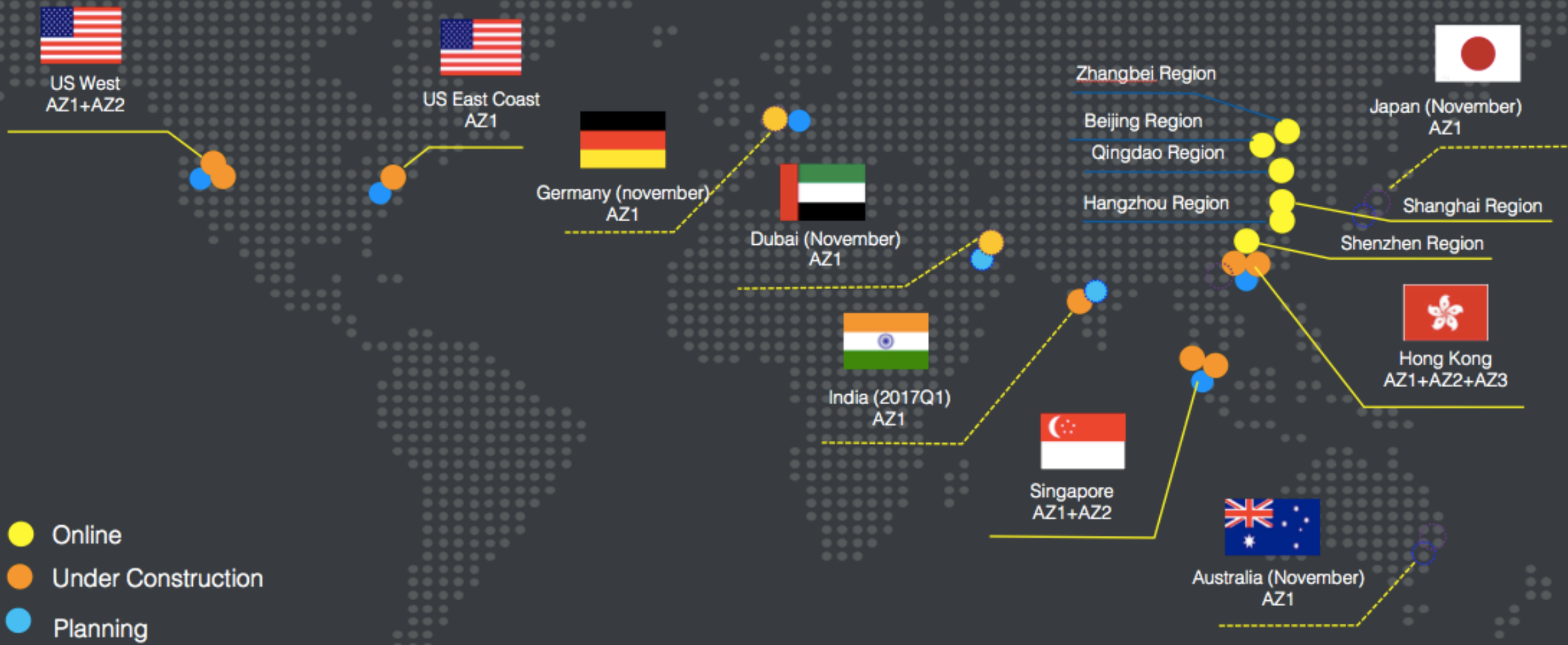
Growth stage is the best opportunity



7 years ago,
Alibaba Cloud
just a baby!

Today we support 11.11
generated **\$17.8Billion**
in 24hours.





Postgres on Alibaba Cloud

Why Postgres necessary

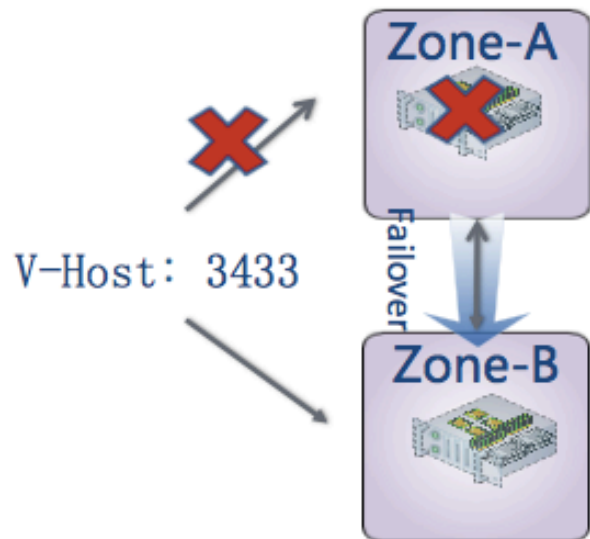
[Product? or Solution?]

Postgres & HybridDB

Growing with community

Not just a Postgres engine

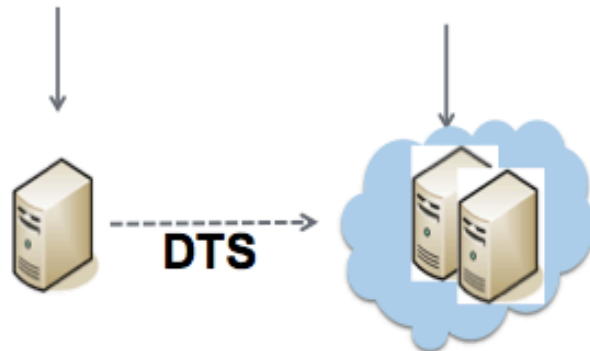
HA & Failover Replication between Zone



DTS: near zero down time

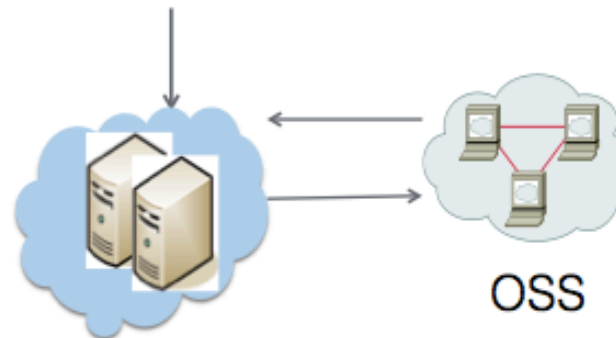
IDC:5432

HostB:3433



Backup and Recovery

HostA:3433



DBA focus on SQL

[10% DBA / Developer 90%]

Deploy
Life Cycle
Performance



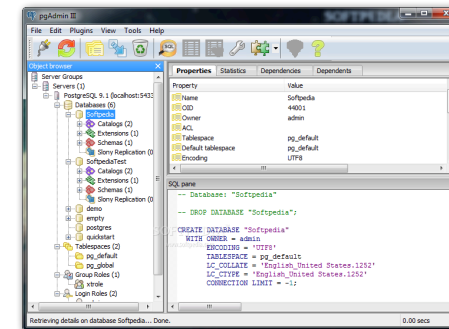
Backup
Security
Monitoring

```
root@slave-server:~# su - postgres
postgres@slave-server:~$ psql
psql (9.4.5)
Type "help" for help.

postgres=# \list

      Name | Owner | Encoding | Collate | Ctype | Access privileges
-----+-----+-----+-----+-----+-----
 howtoforge | postgres | UTF8 | en_US.UTF-8 | en_US.UTF-8 |
 postgres | postgres | UTF8 | en_US.UTF-8 | en_US.UTF-8 |
 template0 | postgres | UTF8 | en_US.UTF-8 | en_US.UTF-8 | =c/postgres
                                     postgres=CTC/postgres
 template1 | postgres | UTF8 | en_US.UTF-8 | en_US.UTF-8 | =c/postgres
                                     postgres=CTC/postgres
(4 rows)

postgres=#
```



更贴心 - 潜在问题没发现，一个不漏告诉你
白名单范围设置过大，疑似SQL注入，被部署到别处...
主动推送重要和紧急隐患的问题，不再担心漏管数据库

温馨提示：

- 实例 rosetab 没有创建数据库
- 实例 rosetab 没有创建账号
- 实例 rosetab 角色名与库名为%，有安全风险
- 实例 test 角色名与库名为%，有安全风险
- 实例 test2 没有创建账号

更聚焦 - 量身定制仪表盘，健康状况一眼底
定制最关注的实例及监控项（CPU利用率，IOPS利用率等）
业务高峰时段，聚焦实例监控项概览

更专业 - SQL语句性能差，DBA意见帮你忙
没有专业DBA，写的SQL语句性能差，导致CPU利用率高，怎么办？
定期执行性能分析，找出引起性能问题的SQL语句，及处理意见

问题：

- 当前实例CPU利用率100%（由SQL慢查询引起）
- 当前实例IOPS利用率达85%（有重要数据备份）
- 当前实例磁盘空间利用率达95%（日志文件过大导致）
- 当前实例连接数利用率达90%（有大量SQL慢查询导致）
- 当前实例在SQL注入攻击包15条

返回入口 | 自助处理

更方便 - 快捷操作自定义，列表项自由组合
功能项可自定义选择排序，鼠标拖拽即可实现
实例列表展示数据自由组合（数据类型、物理节点及可用区等）

自定义列表项

- 实例名称 数据库实例
- 连接方式 IOPS
- 磁盘空间 操作

Command Line

GUI Tools



SQL DML
SQL DDL



Web GUI



MySQL

SQL Server

PostgreSQL

PPAS

Web GUI: Performance monitoring

实例状态 距下次自动刷新还有: 2分39秒 © 实例数据采集时间点: ████████████████████ 刷新 查看诊断报告

指标	当前值	最大值	状态
IOPS	0	300	运行良好
CPU	0%	100%	运行良好
连接数	4	150	运行良好
存储空间	2092	10240	运行良好

实例基本信息

实例名: ████████████████████
数据库类型: MySQL 5.6
状态: 使用中
内存: 600(MB)
创建时间: 2015-08-06 13:36:03

常用操作

- [SQL窗口](#): SQL语句、数据编辑、执行计划、模板
- [命令窗口](#): DBA命令式交互, 支持多SQL提交
- [实例性能](#): 展现每4s采集一次的最新访问情况
- [建表](#): 便捷的可视化MySQL建表操作

Web GUI: session list / slow SQL / lock tables

首页

实时性能 ×

实时诊断 ×

会话列表

进程ID	库名	用户名	客户端IP	会话开始时间	是否等待	当前状态	SQL
15399	postgres	myadmin	10.151.239.83	16-11-29 00:19:38	false	idle	SELECT sum(numbackends) numbackends, sum(XACT_COMMIT) XACT_COMMIT

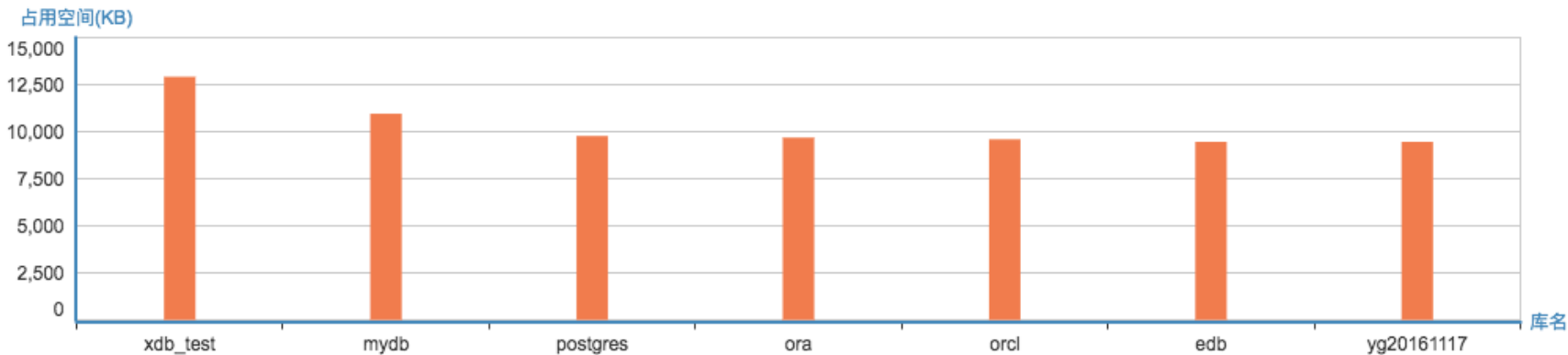
慢SQL列表(无)

进程ID	库	用户	客户端IP	SQL开始时间	SQL
------	---	----	-------	---------	-----

锁列表(无)

冲突类型	持锁用户	持锁对象	持锁模式	持锁进程	持锁事务开始时间	持锁时长	等待锁进程	等待锁SQL开始时间	等待锁SQL
------	------	------	------	------	----------	------	-------	------------	--------

空间分配信息



Manager your instance via API / SDK

```
https://rds.aliyuncs.com/?Action=CreateDBInstance  
&RegionId=cn-hangzhou  
&Engine=PostgreSQL  
&EngineVersion=9.4  
&DBInstanceClass=rds.pg.s2.large  
&DBInstanceStorage=50  
&DBInstanceNetType=Internet  
&SecurityIPList=11.11.11.11  
&PayType=Postpaid  
&...
```

```
https://rds.aliyuncs.com/?Action=ModifyDBInstanceSpec  
&DBInstanceId=rds-my-pg-instance  
&PayType=Postpaid  
&DBInstanceClass=rds.pg.st.d13  
&DBInstanceStorage=1000
```

Alibaba Cloud Postgres open source tools

https://github.com/aliyun/rds_dbsync

Sync data from:
MySQL/PostgreSQL
to
PostgreSQL/HybridDB/
Greenplum Database

aliyun / rds_dbsync

Watch 6 Star 4 Fork 5

Code Issues 6 Pull requests 0 Projects 0 Pulse Graphs

Branch: master rds_dbsync / dbsync / Create new file Find file History

wjzeng committed on GitHub Merge pull request #9 from guangzhouzhang/master Latest commit 6f6ea08 25 days ago

..		
test	baseline	3 months ago
Makefile	support build on macos	28 days ago
dbsync-mysql2pgsql.c	baseline	3 months ago
dbsync-pgsql2pgsql.c	baseline	3 months ago
demo.cpp	baseline	3 months ago
ini.c	baseline	3 months ago
ini.h	baseline	3 months ago
misc.c	baseline	3 months ago
misc.h	baseline	3 months ago
my.cfg	baseline	3 months ago
mysql2pgsql.c	Merge pull request #9 from guangzhouzhang/master	25 days ago
pg_logicaldecode.c	baseline	3 months ago
pg_logicaldecode.h	baseline	3 months ago

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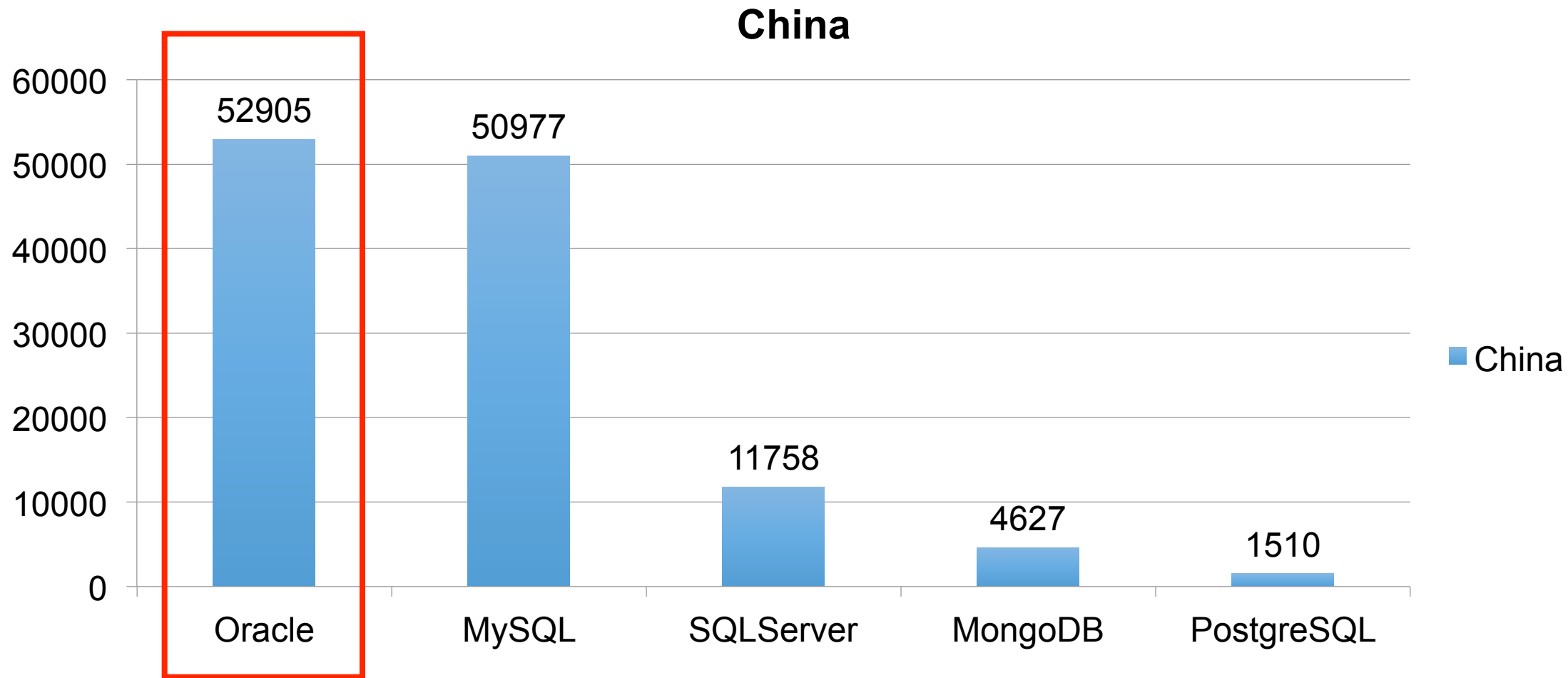
Why Postgres necessary

Product? or Solution?

[Postgres & HybridDB]

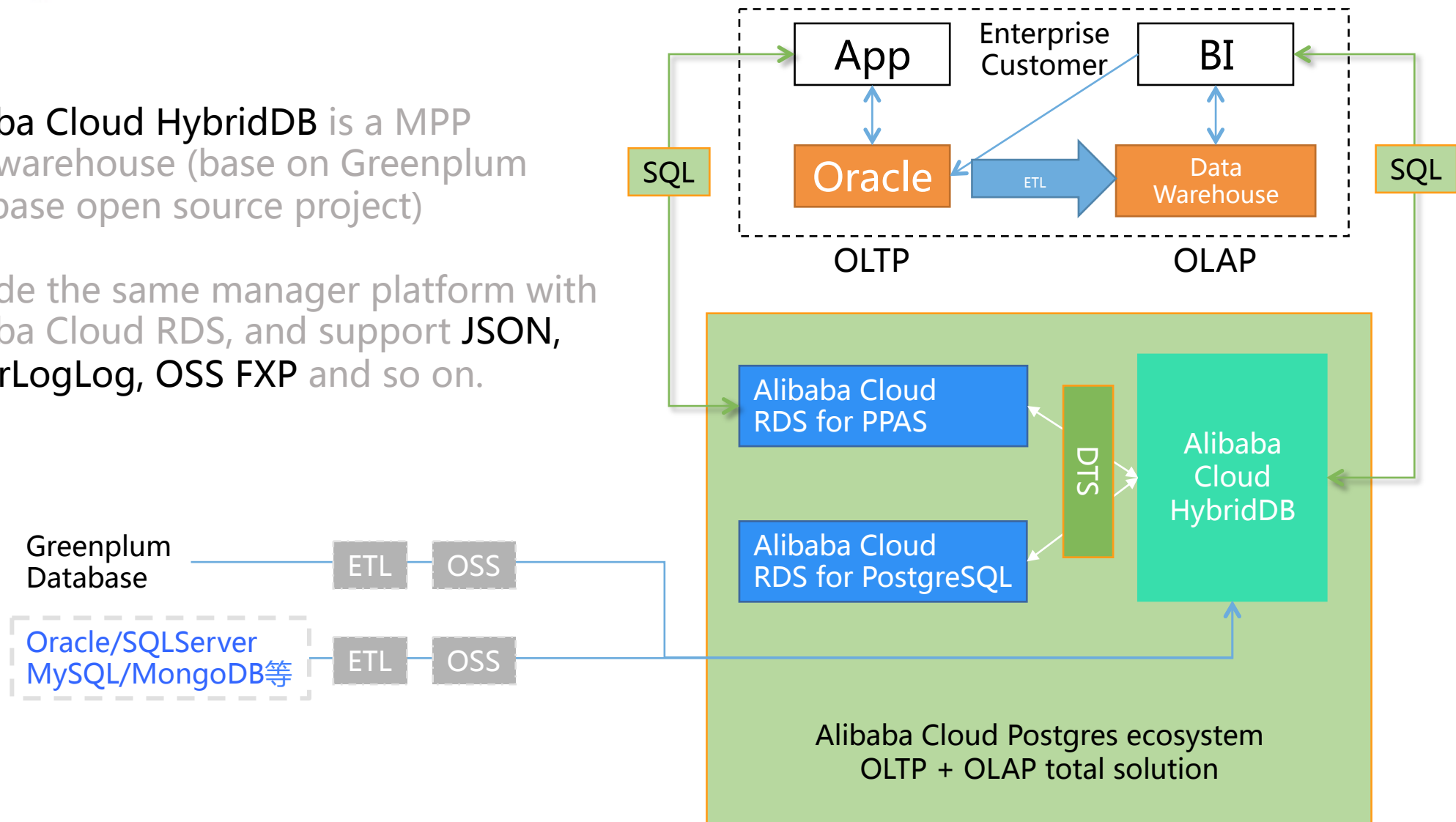
Growing with community

What enterprise customer need?

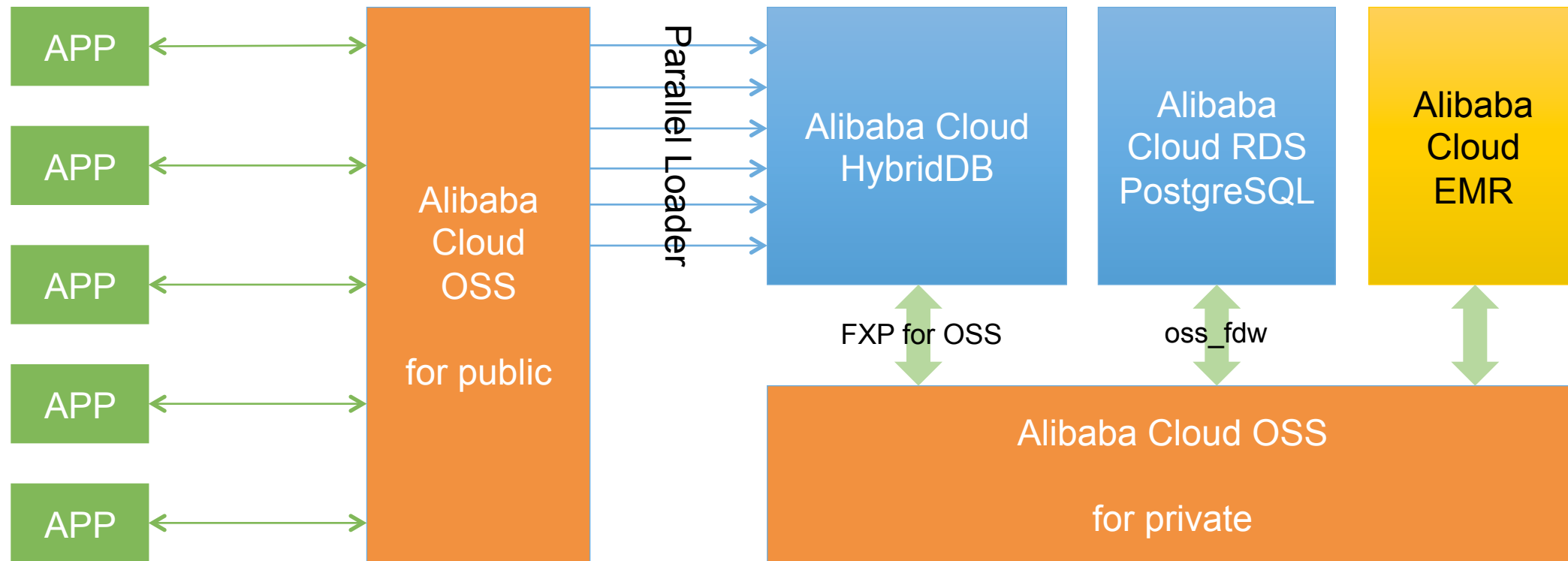


Help enterprise user migrate all IT system to cloud

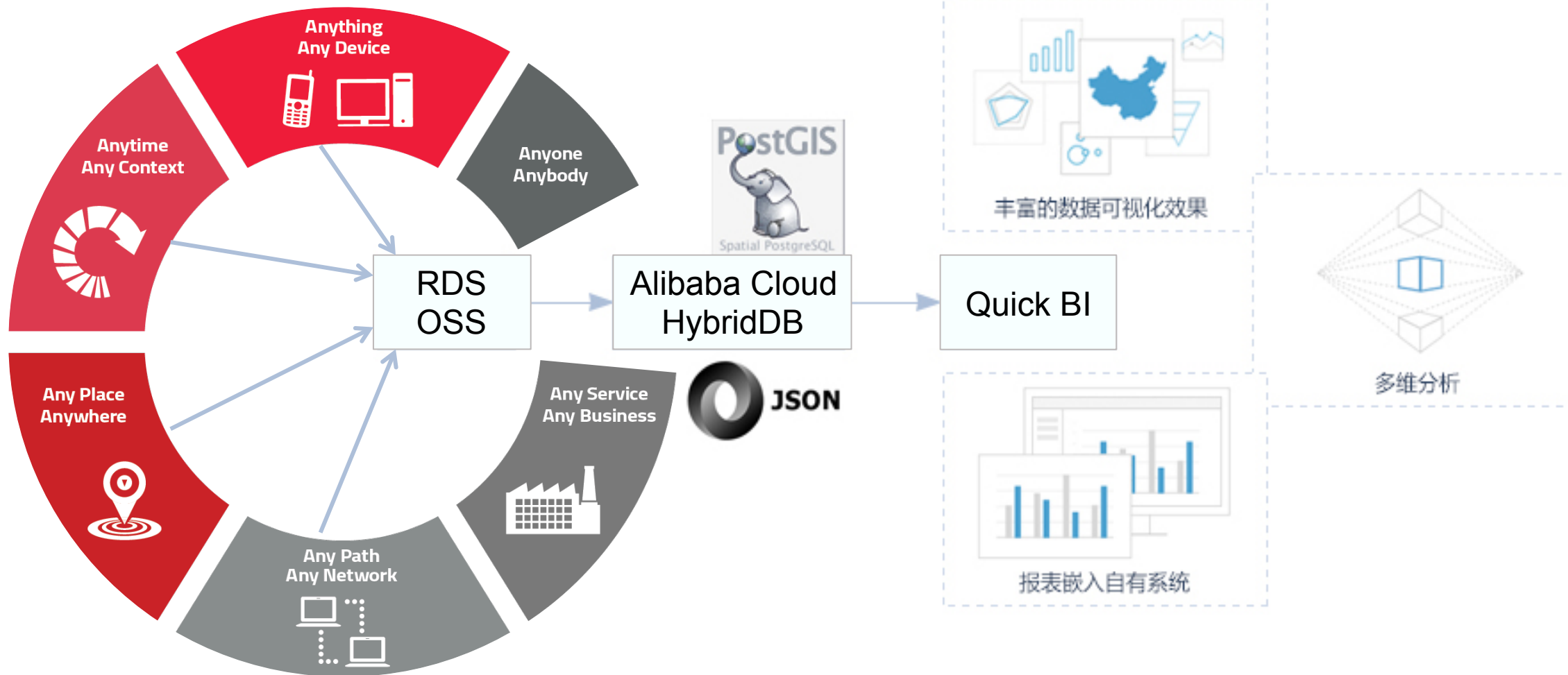
- Alibaba Cloud HybridDB is a MPP data warehouse (base on Greenplum Database open source project)
- Provide the same manager platform with Alibaba Cloud RDS, and support JSON, HyperLogLog, OSS FXP and so on.



OSS: “Parallel Loader” and “warm storage”



GIS + JSON make IoT easy



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[Growing with community]

Learning from the world and sharing in China

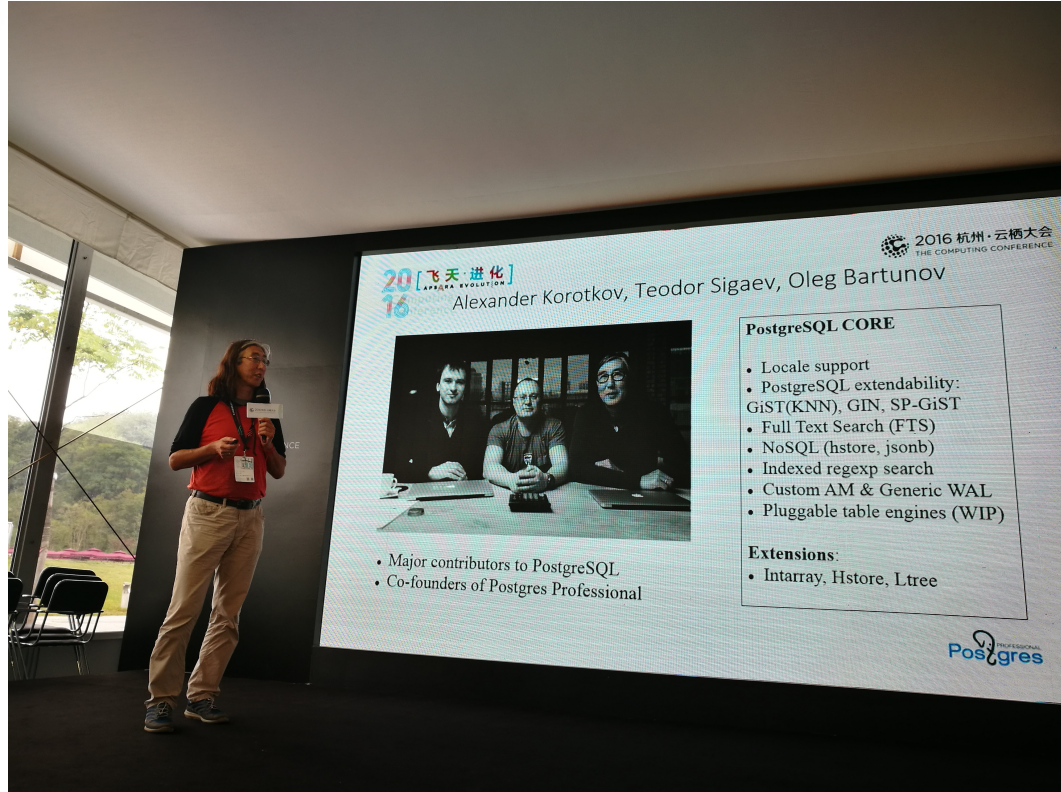
The screenshot shows the Alibaba Cloud community website (yq.aliyun.com) with a search for 'postgresql'. The search results page displays two articles:

- PostgreSQL clang & gcc** (4天前)
作者: 德哥
PostgreSQL clang vs gcc 编译 作者 digoal 日期 2016-11-04 标签 PostgreSQL, clang 背景 CLANG是一个不错的编译器, 本文将介绍一下使用CLANG编译以及它的优化开关, 如何编译PostgreSQL, 同时对比一下GCC 4.4.6版本的性能。安装clang 安装clang, 需要更高版本的gcc来进行编译。安装gcc 找一个比较快的镜... [查看全文](#)
Tags: llvm, python, PostgreSQL, postgres, http, path, 测试, clang, gcc, test, Create, html
Digoal, wget, CMake
33人浏览 0人赞 0人评论
- PostgreSQL AWR报告** (4天前)
作者: 德哥
PostgreSQL AWR报告 作者 digoal 日期 2016-11-23 标签 PostgreSQL, AWR, Oracle, 数据库诊断, 性能报告, snapshot, 快照 背景 熟悉Oracle的童鞋一定对AWR不陌生, 通常要分析一个数据库在某个时间段的性能, 可以从数据库的动态视图等统计信息记录中生成一份该时段的统计分析报告。里面包含了常见的等待事件分析, TOP S... [查看全文](#)
Tags: PostgreSQL, postgres, SQL, 日志, 数据库, database, csv, awk, 日志分析

We support:

- 1000+ blogs for Chinese
- 20+ Conference in China (3 times oversea)
- 12 hours free course
- 6 free training
- 1 open source project

The Computing Conference China 2016



Postgres Conference China 2016 volunteers



Alibaba Cloud send:
5 volunteers and 6 speakers to support PG Conf CN 2016

More Than Just Cloud |  阿里云

