

PostgreSQL – High Availability with BCP & DB Migrations help in drastic Cost Reduction

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Agenda

- High Availability
- HA & BCP with Zero cost
- Native inbuilt PostgreSQL Features
- HA Business Continuity - Manual Failover
- HA Business Continuity - Auto Failover
- Best utilization of system resources & value for money
- Database Migrations
- Oracle to PostgreSQL Migration
- Oracle Vs PostgreSQL Cost Comparision
- Implementation Partners - Open source
- Q&A
- Thank you

Why HA ?

- Critical Applications
- SLAs meet :
 - RTO
 - RPO

PostgreSQL comes with inbuilt features to build HA

- Streaming Replication
- Logical Replication
- HA in PostgreSQL with pgpool

Proprietary Databases :

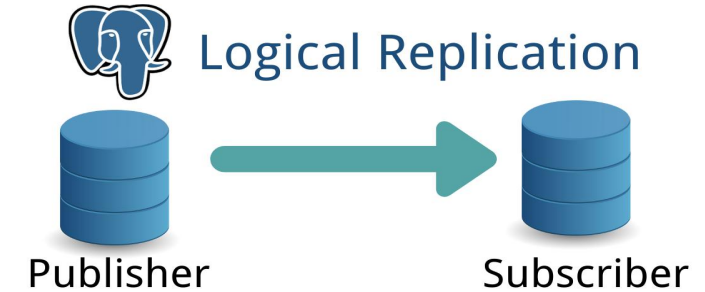
- Special clustered software licensing - @as per vendor costing
- Additional SAN (Shared) required - @as per vendor costing
- Adequate use of Hardware resource utilization for all nodes - @higher costs
- Special experties required - @higher costs

Open Source Database - PostgreSQL

- No special software required - Zero cost
- No special hardware (Shared) required - Zero Cost
- Use of open source tools
- Implemenation with customers budgetary point

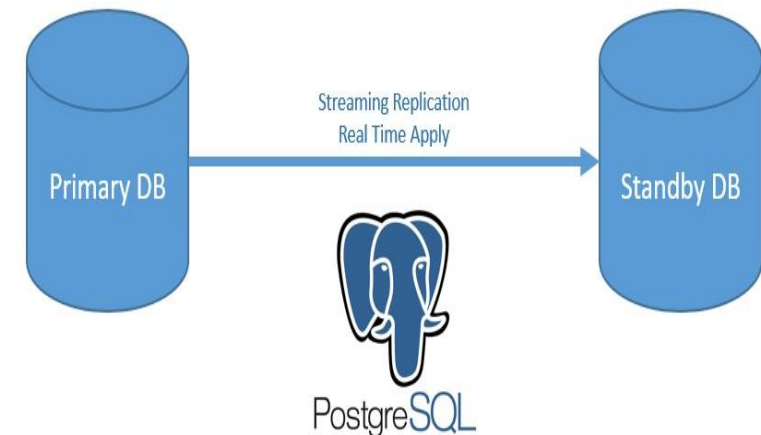
Logical Replication :

- Data objects - Table level
- DDL changes
- DML changes
- Different indexes
- Different schemas



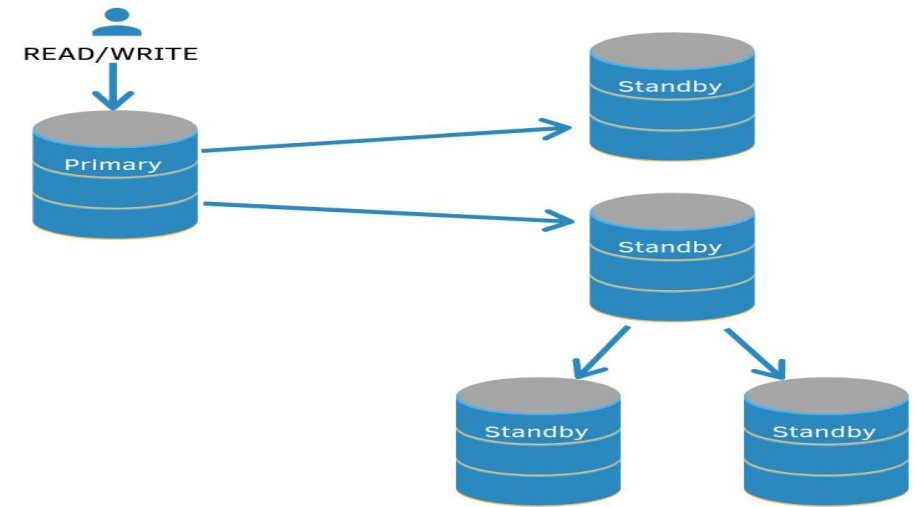
Streaming Replication :

- Recovery time reduce
- Highly available
- Transfer data from primary to standby
- Synchronous vs asynchronous options



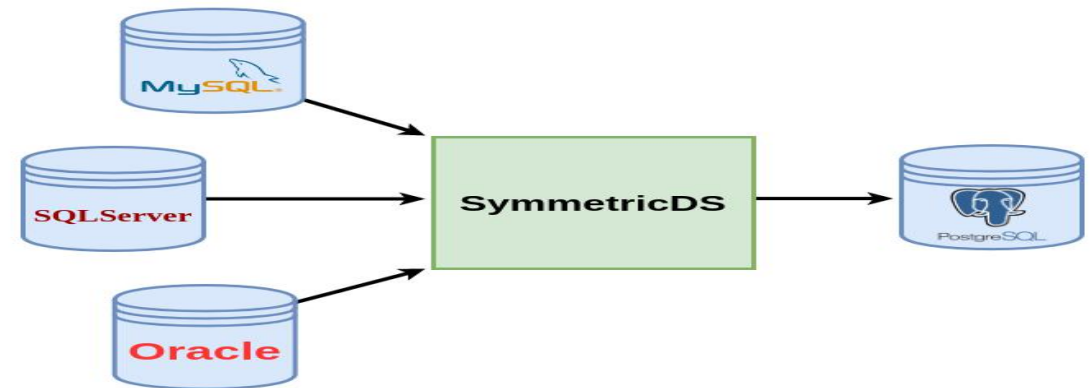
Cascading Replication :

- Creating another copy from standby node
- Transfer data from primary to standby and standby to another standby db
- No limit to add standby node.



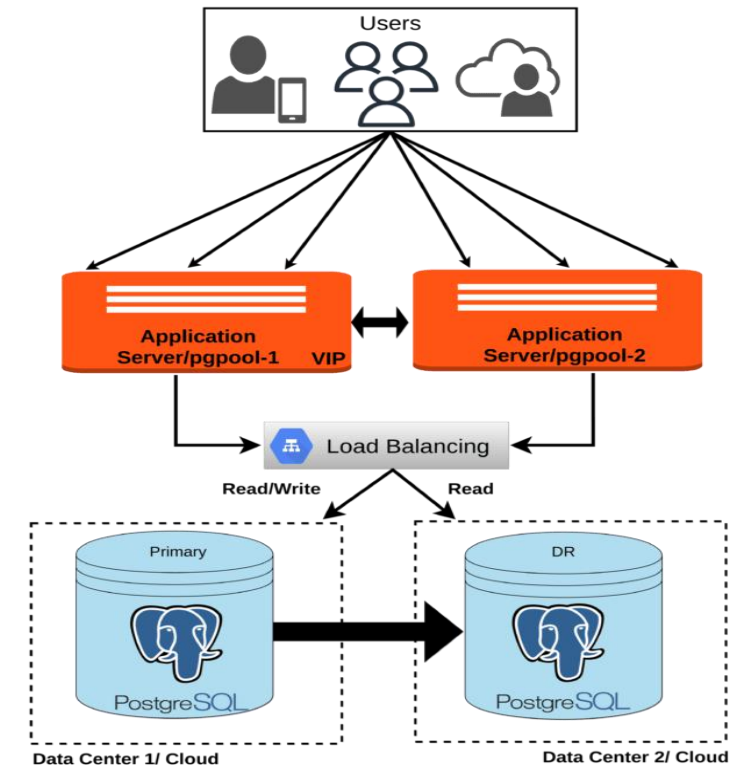
Heterogeneous Replication from Other RDBMS to PostgreSQL :

- SymmetricDS is fully open source software use for cross platform compatibility
- Replicate change data capture between heterogeneous databases



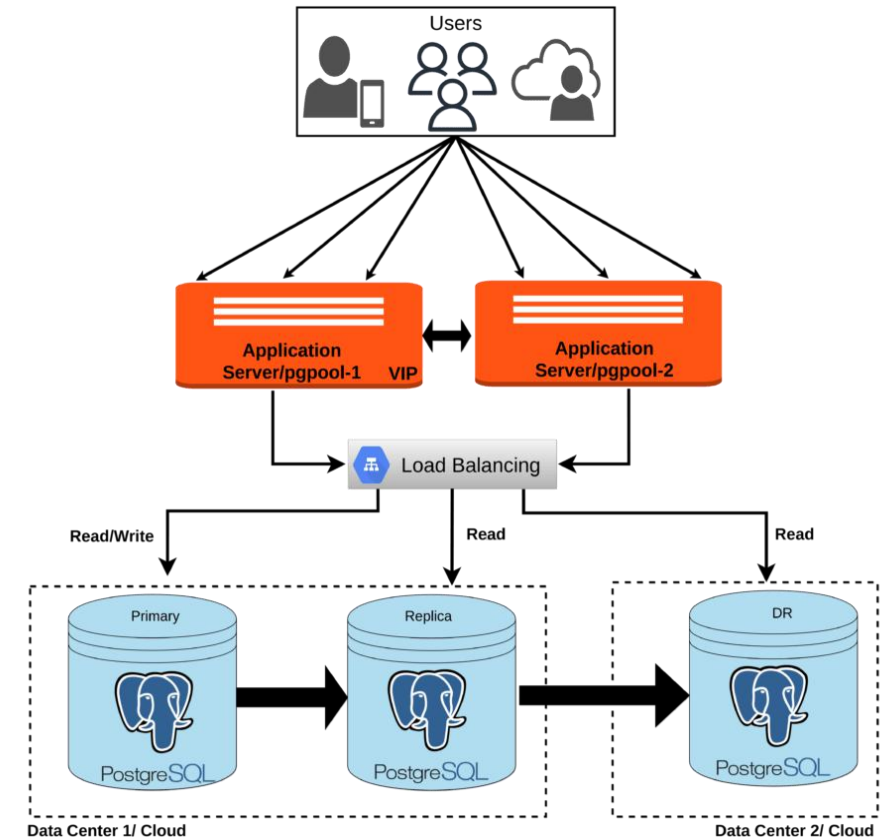
HA Business continuity - Manual Failover

- Full Proof HA Architecture
- Business continuity - DB up & running continuously
- Always available during the disasters
- Minimal Budget
- Downtime acceptance - 5 mins



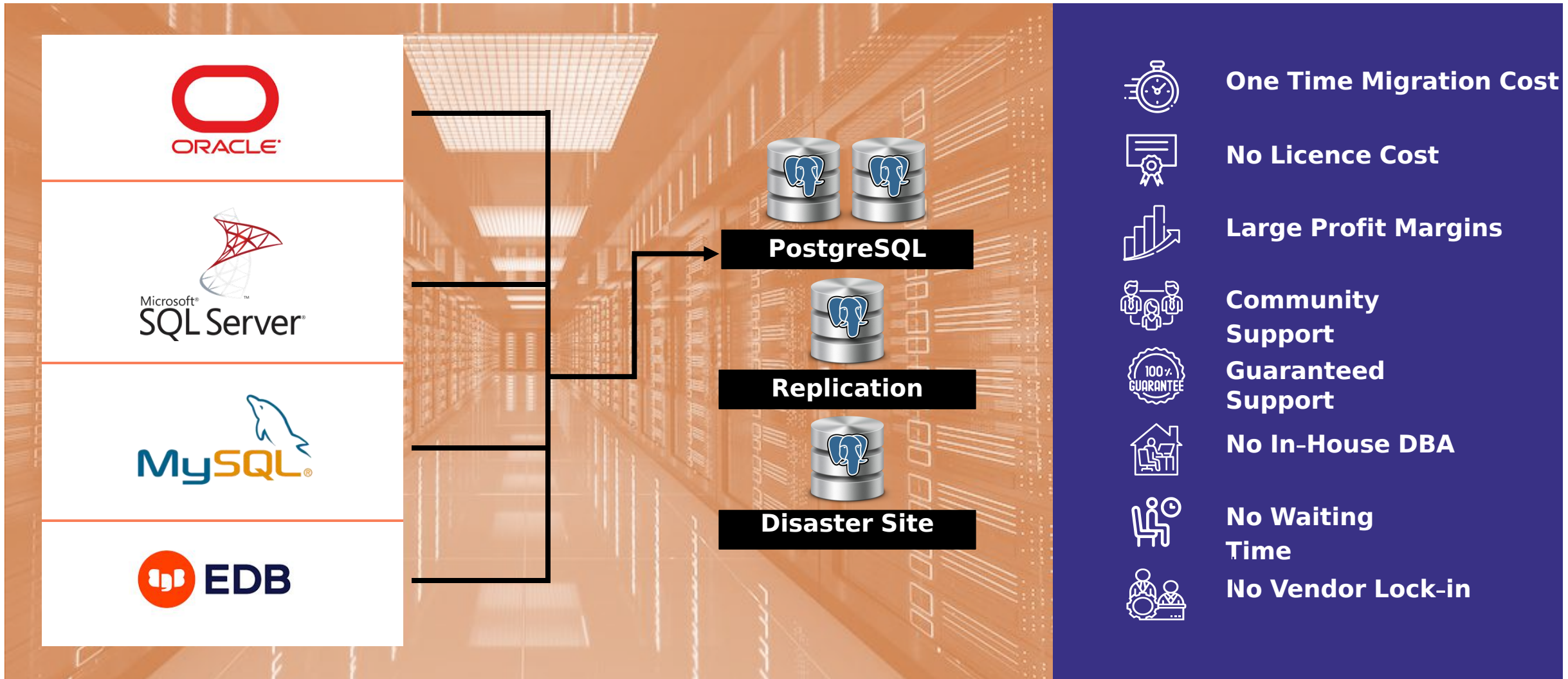
HA Business continuity - Auto Failover

- Full Proof HA Architecture with Open Source tools to remove single point of failures.
- Business continuity - DB up & running continuously
- Always available during the disasters
- No Downtime acceptance
- RTO - 99.99%



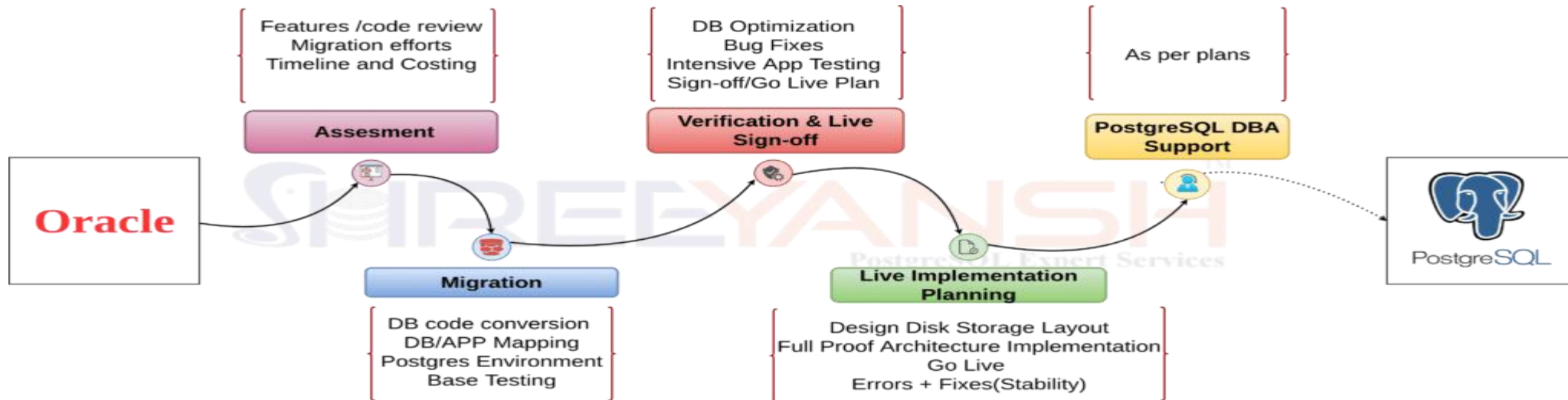
- The Data on local disks, not shared among the HA nodes
- The DB is up & running on all nodes having usable complete resources
- Load balancing
 - Primary Node - RW
 - Secondary node - READ ONLY Queries
- OLAP - SELECT/Reporting queries on secondary node

Database Migrations



Oracle to PostgreSQL Migration

- Oracle is associated with various licensing and support costs which is a big concern for various customers.
- The Oracle deployed applications are best candidates for one time PostgreSQL migration resulting in big saving with ROI in less than 3 years..



License Cost Comparison: Oracle Vs PostgreSQL

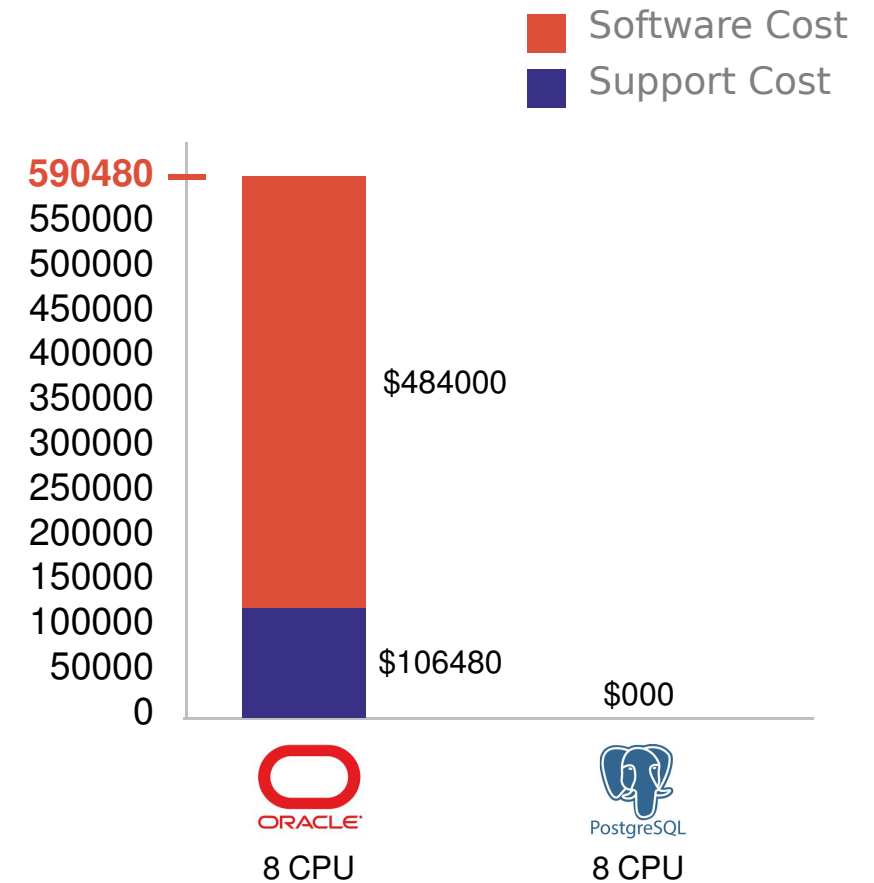
	PostgreSQL Community	Oracle Per Processor
Single Database Enterprise Edition	\$0	\$ 47,500
Clustering / Replication	\$0	\$ 11,500
Active Data Guard	\$0	\$ 15,000
Advanced Security	\$0	\$ 11,500
Partitioning	\$0	\$ 7,500
Diagnostic Pack	\$0	\$ 5,000
Tuning Pack	\$0	\$ 26,620
Software Update License & Support (annual)	\$0	\$ 26,620
Total Cost	\$0	\$ 1,47,620

* ~ price based on Research/Vendor sites

License Cost Comparison: Oracle Vs PostgreSQL



Cost analysis between Oracle vs PostgreSQL



* ~ price based on Research/Vendor sites

Implementation Partners - Open Source



(DB)



(ERP)

Q & A

THANK YOU

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