



OPENWORKS

BE UNSTOPPABLE



OPENWORKS

MOVING GALERA FROM COMMUNITY SERVER TO ENTERPRISE SERVER TO SKYSQL

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WHAT WE'RE FOCUSING ON

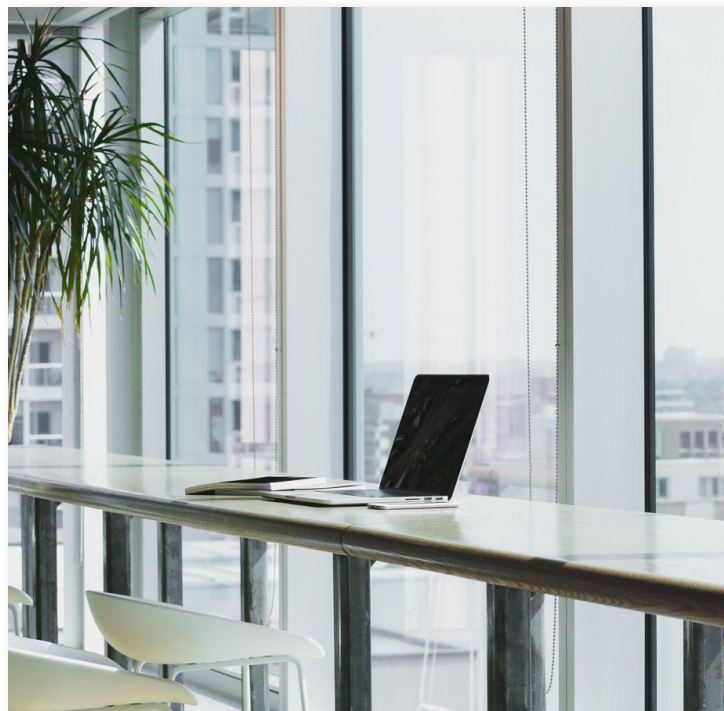
Why
Enterprise
Server

Rolling
Upgrade
Options

Moving to
SkySQL

MARIADB SERVER

- 75% of Fortune 500 companies use MariaDB
- High demand:
 - Top 5 databases on Docker Hub
 - 1B+ Docker Hub downloads
 - 60M+ reach via Linux distros
 - 300K+ Twitter followers





UNSTOPPABLE PERFORMANCE

MARIADB ENTERPRISE SUBSCRIPTION



Enterprise Server



Enterprise Availability



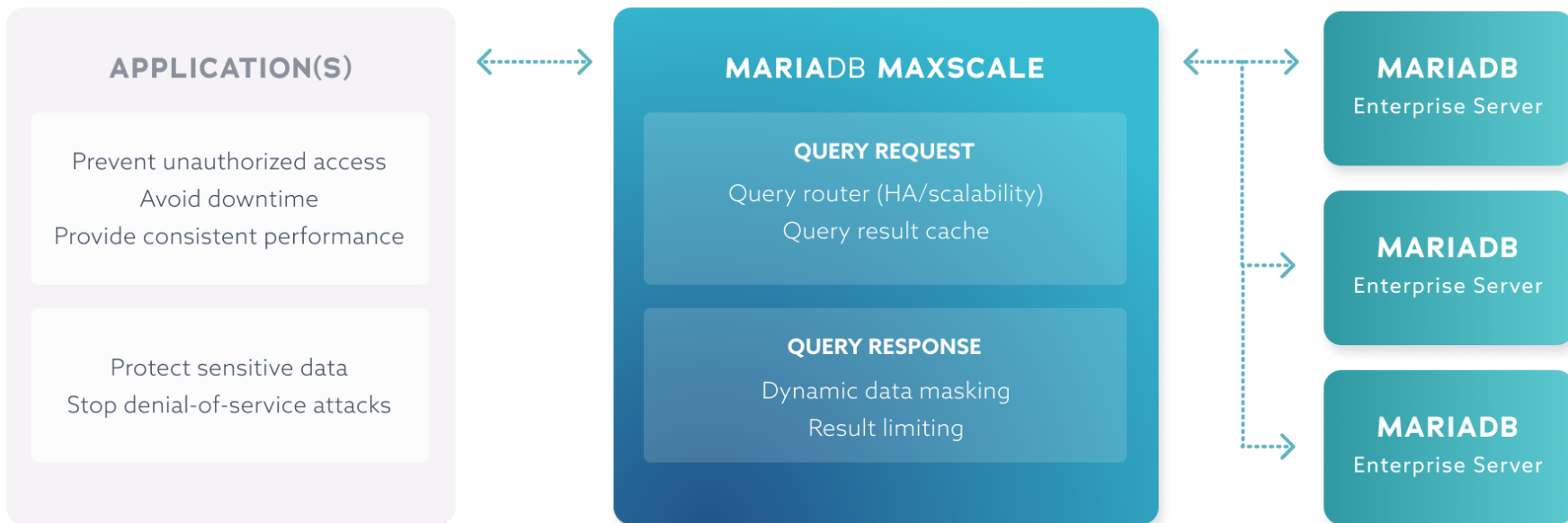
Support & Services

MARIADB ENTERPRISE SERVER

- Open source
- At least 5 yrs maintenance
- Managed release cycles
- Includes only supported, stable features
- Built for demanding production environments
- Feature backports to older ES versions
- Available in SkySQL
- Enterprise only features and services including:
 - non-blocking backup
 - improved auditing
 - encrypted buffers
- MaxScale
 - Specific Galera Monitor
 - Single connection for your Application
 - MaxScale forwards traffic to all nodes of cluster



MARIADB MAXSCALE



MariaDB MaxScale simplifies application development by abstracting away the underlying database topology.

ENTERPRISE FEATURES



End to End
Encryption



Non-blocking
Backup



Improved
Auditing

SUPPORT



30-minute S1 SLA



24x7 Technical Support



Remote DBAs

Recap: Why Enterprise Server

- Built for demanding production environments
- Hardened for production deployments
- Secured with default security parameters set to best practices
- MaxScale is included
- Galera buffers are able to be encrypted
- Enterprise backup tool for online backups with little to no impact

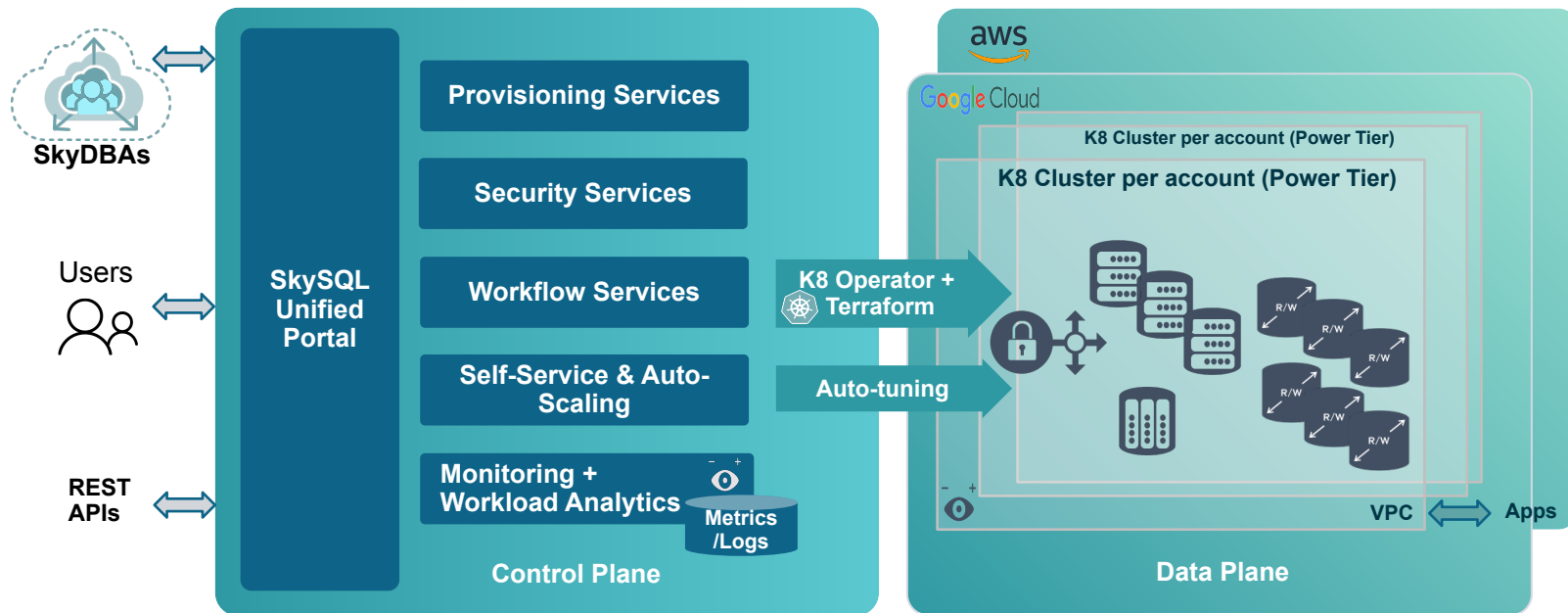
WHAT IS A ROLLING UPGRADE

- Each node is upgraded individually
- The cluster is always operational
- There can be no downtime from the application's perspective
- MaxScale will route traffic to the online nodes
 - Putting node in maintenance mode will prevent MaxScale from sending any traffic to the node



ROLLING UPGRADE OPTIONS





- Online
 - No downtime is necessary
 - Application allowed to stay online
 - Verify gcache settings first
- Offline
 - Downtime window needs to be scheduled
 - Your application will be unavailable until process is complete
- Applies to both
 - Upgrade one node at a time
 - Be sure to run the mariadb-upgrade after upgrade

SKYSQL CLOUD DATABASE SERVICE ARCHITECTURE

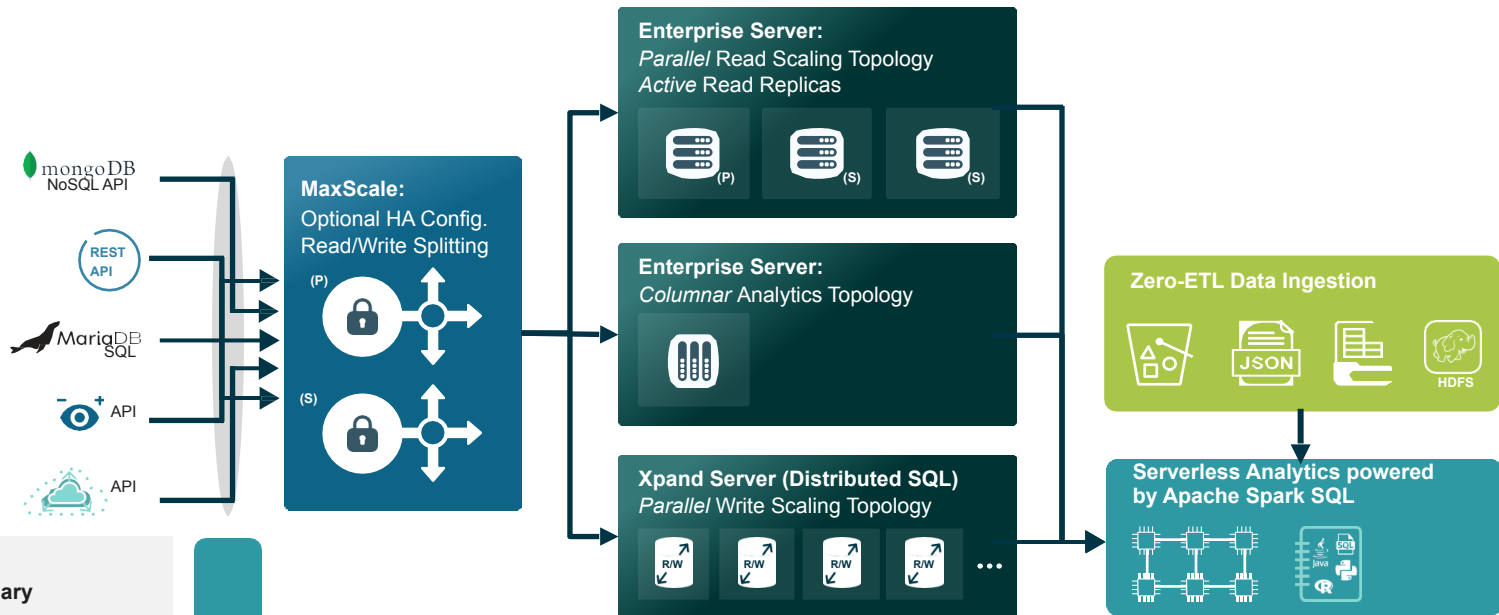


Legend

-  - Kubernetes Cluster (AWS – EKS, GCP – GKE)
-  - MaxScale Intelligent Data Proxy

-  - Enterprise Server
-  - ColumnStore Engine
-  - Xpand (Distributed SQL)
-  - Observability services

SINGLE SQL DIALECT FOR ANY WORKLOAD AT SCALE



Legend

(P) = Primary

(S) = Secondary

= Intelligent Data Proxy (Multi-Node)

= Database Instance Topology Options

= Serverless Topology

Observability (Logs, Events, Alerts)

Auto-Scaling (Vertical, Horizontal)

Workload Analytics

Kubernetes Clusters (Data Plane)

Ultrascale, Supporting Improved Availability and Performance as You Scale

- All nodes are active, so you're always getting the ROI you paid for
- Zero code or developer intervention is required to scale, failover, or leverage replicas with the SQL dialect

Enterprise Server

Single Node Instance

Vertically Scale Instance
vCPUs, RAM, storage, IOPS

Improves performance across all operations

Enterprise Server

Multi-Node Instances
Horizontally Scale Nodes
Primary with Read-Replicas

Parallel Reads improves
read-intensive operations

Multiple AZ and Regions

Xpand Distributed SQL

Multi-Node Instances
Ultrascale Nodes

All nodes read/write scaling

High concurrency/availability

Write intensive global apps

Multiple AZ and Regions

Global Replication

SkySQL Cloud DBaaS Unified Portal, Monitoring, and Management Services OR On-premises, Private Cloud, Do-it-yourself, for example, Bring your own license to AWS on EC2

Augmented/Enhanced Transactional Workloads

- Avoid taxing either the operational transactions or overburdened EDWs
- Eliminate/reduce ETL and data pipeline complexity
- Accelerate BI/reporting

Enterprise Server
ColumnStore

Reporting & Analytics

Vertically Scale Instance
vCPUs, RAM, storage, IOPS

Collocated Data Warehousing

Direct S3 Large Scale Ingestion

Xpand Columnar Indexing

Multi-Node Instances

Horizontally Scale Nodes

Inline Operational Analytics

Serverless Analytics

Ad Hoc & Advanced Analytics

Apache Spark SQL Powered

SkySQL Cloud DBaaS Unified Portal, Monitoring, and Management Services (same additional options for Enterprise Server and Xpand, Serverless Analytics is on SkySQL only)



MOVING TO SKYSQL

- Read Heavy
 - Use cases:
 - Product catalogs
 - Reporting
 - Shopping carts
 - Replicated transactions
 - High availability
 - Self-healing
 - Automated split-second failover
 - Read scale replication



MOVING TO SKYSQL

- Write Heavy
 - Use cases:
 - Payments
 - Customer Profiles
 - Messaging
 - Logging
 - IOT
 - Xpand - Distributed SQL
 - Elastic to millions of transactions per second
 - Automated split-second failover
 - Scale horizontally by adding nodes
 - Read and Write scalable



WHAT WE COVERED

Why to switch
to Enterprise
Server for your
Galera Cluster

What a Rolling
Upgrade is
and their
options

How to
migrate to
SkySQL

NEXT STEPS

Check out these sources to learn more about MariaDB

- For more information on MariaDB Enterprise Server, [check out this datasheet](#)
- To learn more about High Availability options for MariaDB Enterprise check out this [Guide to high availability with MariaDB](#)
- For migrating to SkySQL check out this whitepaper [MariaDB SkySQL: Lift-and-Shift Migration](#)
- To learn more about Xpand please check out the OpenWorks session: ***MariaDB Xpand Under the Hood: From Architecture to Reality*** available on-demand later today



THANK YOU



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