



MARIADB SKYSQL CLOUD DATABASE SERVICE

Unstoppable performance, flexibility and innovation

OVERVIEW

MariaDB SkySQL is a second generation, fully managed cloud database service (often referred to as a database-as-a-service or DBaaS) that unlocks the full power of MariaDB open source and enterprise-grade features and functionality, plus over a decade of expertise in the cloud. It includes MariaDB Enterprise Server for transactions, MariaDB Xpand distributed SQL for massive scale and write-intensive global applications, MariaDB ColumnStore for data warehouse functionality, and Serverless Analytics powered by Apache Spark SQL for zero-ETL analytics over SkySQL databases, Amazon S3 and other external data sources.

SkySQL runs any workload with superior price/performance compared to those provided by AWS and Google. SkySQL on AWS or Google Cloud is a fully integrated service that securely monitors, manages and executes transactional and analytical processing workloads in the cloud for fully structured (SQL) and semi-structured (JSON, .CSV, etc.) data.

With SkySQL, you can start small and grow to any scale. SkySQL combines what is often found in several different products or services into a unified service through a single portal that can be quickly set up and administered by IT and non-IT users, including CloudOps/DevOps, DBAs, developers, data engineers, architects, scientists and analysts. SkySQL lets you grow fast – even if your internal IT resources are constrained or nonexistent. Moving from MariaDB Community to Enterprise Server or Xpand can be done with the same SQL dialect, meaning little change to your apps as you scale. SkySQL Enterprise Architects help you migrate existing databases to accelerate your time to value. Fractional SkyDBAs augment or act in place of internal or contracted DBAs in initial phases or as ongoing support, if you're constrained by expertise or capacity and need to scale up to larger production or mission-critical deployments. SkyDBAs are assigned to specific customers as teams spanning multiple regions, so you always get 24x7 contextual support.

SkySQL provides best-in-class high availability, resiliency and hyper scalability using an innovative combination of MariaDB products, including MariaDB Xpand distributed SQL and MariaDB MaxScale as an intelligent database proxy and cloud-native technology. Engineered for mission-critical applications with enterprise governance, SkySQL runs equally well on either the AWS version (EKS) or Google version (GKS) of Kubernetes, combines automation of compute and storage, scales up and down for a single node instance, and scales in and out with multiple nodes across multiple availability zones (AZs) and regions. MariaDB Xpand takes this a step further with parallel replication across cloud providers.

BENEFITS

Unparalleled scale: You can start small and grow to extreme scale using self-service or enable auto-scale to elastically handle surges or reductions in demand.

Ease of use: Reduce the burden on internal CloudOps and DevOps teams and resources by empowering developers, engineers, analysts, scientists and power users to self-serve through a unified portal or the SkySQL DBaaS API.

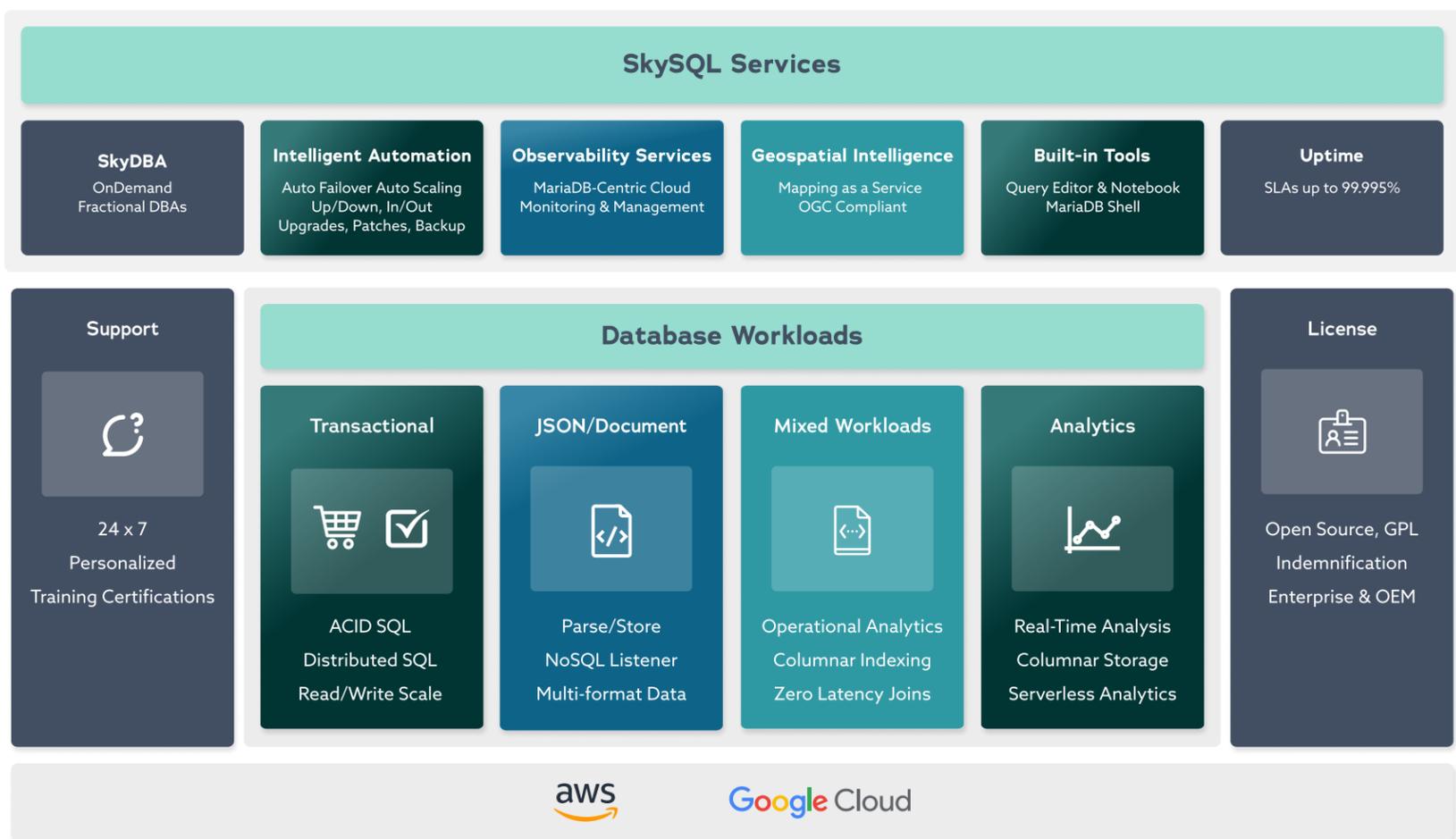
Transparent pricing: Pricing starts at \$100/month for pay-as-you-go. All resource changes are accompanied by estimated changes to subscription costs, ensuring financial transparency and self-governance.

Resiliency without complexity: SkySQL combines MaxScale advanced database proxy and load balancing and Kubernetes for intelligent automation of scale-out and high availability transparent to existing applications and without developer support.

Ultimate flexibility: Deploy across AWS and Google Cloud and observe your MariaDB databases anywhere with SkySQL Observability service. Accelerate CI/CD with infrastructure as code (IaC) configuration and provision of hundreds of SkySQL databases.

FEATURES

- ACID-compliant SQL; NoSQL/MongoDB interface; built-in query editor
- Zero-ETL Serverless Analytics powered by Apache Spark SQL, with a built-in notebook powered by Apache Zeppelin
- Distributed SQL with global bi-directional read and write replication and scaling
- Built-in observability services for SkySQL databases and MariaDB on premises
- Autonomous vertical scaling up and down, for instance, compute and storage, with horizontal scaling in and out of multi-node instances
- Optional, fractional SkyDBAs to support onboarding and ongoing projects, partially or fully



TECHNICAL SPECIFICATIONS

Price/Performance

SkySQL can automatically scale up and down database instance vCPU, RAM, storage and IOPS to ensure the best performance while avoiding under or overcapacity. Further, SkySQL scales in and out database instance nodes for high availability, but unlike most hyperscaler offerings based on open source, all nodes are active and support read-intensive applications, improving performance. SkySQL uses MaxScale advanced database proxy and load balancing to directly read from replicas, avoiding the primary as a bottleneck and further improving performance through built-in read/write splitting functionality. SkySQL further surpasses hyperscaler offerings that rely on a primary write/read replica topology and lack performance when compared with Xpand distributed SQL, offering full read and write parallel operations to all nodes in its clusters within an AZ, across AZs and cloud regions – perfect for today’s globally scaled and rapidly changing intelligent applications in areas like gaming, online retail services, global supply chain management and many others.

Automatic and Instant Failover

SkySQL uses MariaDB MaxScale, the advanced database proxy enterprise customers running on premises rely on to ensure the availability of mission-critical deployments and to provide automatic failover. If the primary database fails, MaxScale will automatically promote an available replica, either in the same zone or a different one (even across regions), and begin routing writes to it – instantaneously, all while continuing to load-balance parallel reads across the remaining replicas. Invoking MariaDB Xpand provides distributed SQL capabilities through a multi-primary approach that adds multi-writer capabilities across clustered nodes, and clusters mirrored across zones, regions and cloud providers.

Self-Healing and Resiliency

SkySQL uses Kubernetes and an advanced operator to perform self-healing when cloud instances fail, automatically recovering standalone databases and returning replicated databases to full capacity. If a cloud instance fails, Kubernetes will create a new node. If the original had a MaxScale pod, a new one is scheduled. If the original had a MariaDB Enterprise Server or Xpand pod, a new one is created and scheduled with the original pod’s persistent disk attached. With replicated databases, a recovered MariaDB Enterprise Server or Xpand node is brought back as a replica (in the case of Enterprise Server or to be reintegrated as a peer node if Xpand) if MaxScale has performed an automatic failover. If a zone fails, the operator will create a new node in a different zone. If the original had a MaxScale pod, a new one is scheduled. If the original had an instance of MariaDB Enterprise Server as a primary, automatic failover is performed (Xpand does not have a primary/secondary structure).

Autonomous Yet Customizable and Controllable Operations

SkySQL includes an intuitive GUI with self-service options for scaling instances up and down (vCPUs, memory, storage, IOPS) and scaling the number of replicas (nodes) up and down. Price estimates are provided for scaling to avoid surprises. Additionally, you can start and stop services based on various operational parameters with notifications of these events. All the above functionality can be automated with the policy engine, which monitors and notifies users if certain predefined limits are passed, and action is taken to scale up. Fail-safe mechanisms help prevent runaway scaling.

All deployed databases are monitored and managed through MariaDB Shell and a single-pane-of-glass observability service that monitors and manages what’s deployed on SkySQL. The SkySQL Observability Service provides a view of all topologies deployed and metrics for all events, which can then be surfaced through customizable dashboards based on predefined or customized alerts.

Cloud Operations and Multi-Cloud Readiness

Today’s multi-cloud requirements aren’t simply about portability from one cloud silo to another. SkySQL Cloud Database service supports cloud operations and applications and data architects and engineers in their quest to build services for zero-touch deployments and

automation using scripting languages to handle critical operational tasks and on-demand requests that span multiple clouds and on premises. With SkySQL, you can integrate various databases with applications operating across a multi-cloud and hybrid environment using the SkySQL Terraform provider to provision multiple instances of various Enterprise Server, ColumnStore and Xpand deployments on AWS and Google Cloud and optionally use Ansible or Chef for more customized and complex configurations. SkySQL Observability services are customized to MariaDB database metrics, exposed in a configurable dashboard within the SkySQL unified portal and through open standard APIs (collectively brought together as the [SkySQL DBaaS API](#)), including Prometheus to multi-cloud, full-stack observability services such as Datadog, New Relic, AppDynamics and others.

Developer, Engineer and Analyst Ready

MariaDB maintains compatibility with MySQL protocol. MariaDB also maintains compatibility with key legacy systems, including Oracle stored procedures and PL/SQL. Recent versions have added JSON capabilities to incorporate semi-structured data. The built-in SkySQL query editor and connectors for popular programming languages provide interactive data exploration and analysis for all provisioned databases.

The ColumnStore storage engine provides data warehousing functionality collocated with MariaDB Enterprise Server's InnoDB storage engine. The latest version of SkySQL adds Serverless Analytics powered by Apache Spark SQL. With this serverless capability, you can perform high-speed, zero-ETL ingestion and integrate structured or semi-structured data from any SkySQL database or other sources, including S3, HDFS or disparate files in various formats, including Avro, Parquet and .CSV.

The combination of these provides a common toolset and operations point for your developers, engineers, scientists and analysts to work as cross-functional teams or independently on projects that can be quickly spun up and down or scaled up for mission-critical production environments.

Open and Extensible Third-Party Integrations

SkySQL supports streaming data with Kafka, memory caching with Redis, and multi-terabyte bulk data imports from S3 without ETL. Out-of-the-box JDBC and ODBC drivers support a range of other databases, lakes and warehouses, as well as the most popular on-premises and SaaS applications. Bulk-data federated queries from popular visualization and reporting tools such as Power BI, Tableau, Looker and Qlik avoid data egress to desktops, on premises, or other cloud-based instances that would otherwise require them to do bulk imports of data. The superior performance of MariaDB database instances provides the opportunity to use these tools on large and disparate data sets for advanced ad hoc analytics.

Observability APIs enable all SkySQL events and log data on MariaDB servers and database services to easily plug into full-stack observability tools and enterprise-wide visualization and analysis tools, including Datadog, Dynatrace, AppDynamics, Grafana and many others. AWS and Google Cloud-specific data services are also supported.

Always Up to Date

SkySQL offers AWS and Google Cloud customers the option of running the latest releases of MariaDB Enterprise Server, MariaDB ColumnStore, MariaDB Xpand and MariaDB Serverless Analytics powered by Apache Spark SQL, so they never have to do without critical bug fixes and security patches or new features such as application-time period tables, instant schema changes, optimizer trace and password expiration/account locking. SkySQL also leverages the latest in AWS and Google Cloud infrastructure advances, including, for example, the ability to run AWS Graviton instances.

EVALUATE SKYSQL FOR YOURSELF

SkySQL Cloud Database service on AWS and Google Cloud is backed by decades of MariaDB engineering, support and administration experience, providing customers in the cloud with the same world-class support on-premises customers enjoy today – technical and consultative support, critical bug fixes and security patches and, optionally, complete database administration by the [SkyDBA team](#).

We invite you to [try the SkySQL Cloud Database service](#) for free today with a \$500 usage credit.

Want a personalized demo to see what SkySQL can do for your organization? Request a demo [here](#).

ABOUT MARIADB PLC

MariaDB is a new generation cloud database company whose products are used by companies big and small, reaching more than a billion users through Linux distributions and have been downloaded over one billion times. Deployed in minutes and maintained with ease, leveraging cloud automation, our database products are engineered to support any workload, any cloud and any scale – all while saving up to 90% of proprietary database costs. Trusted by organizations such as Bandwidth, DigiCert, InfoArmor, Oppenheimer, Samsung, SelectQuote and SpendHQ, MariaDB's software is the backbone of critical services that people rely on every day. Learn more at [mariadb.com](#).

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