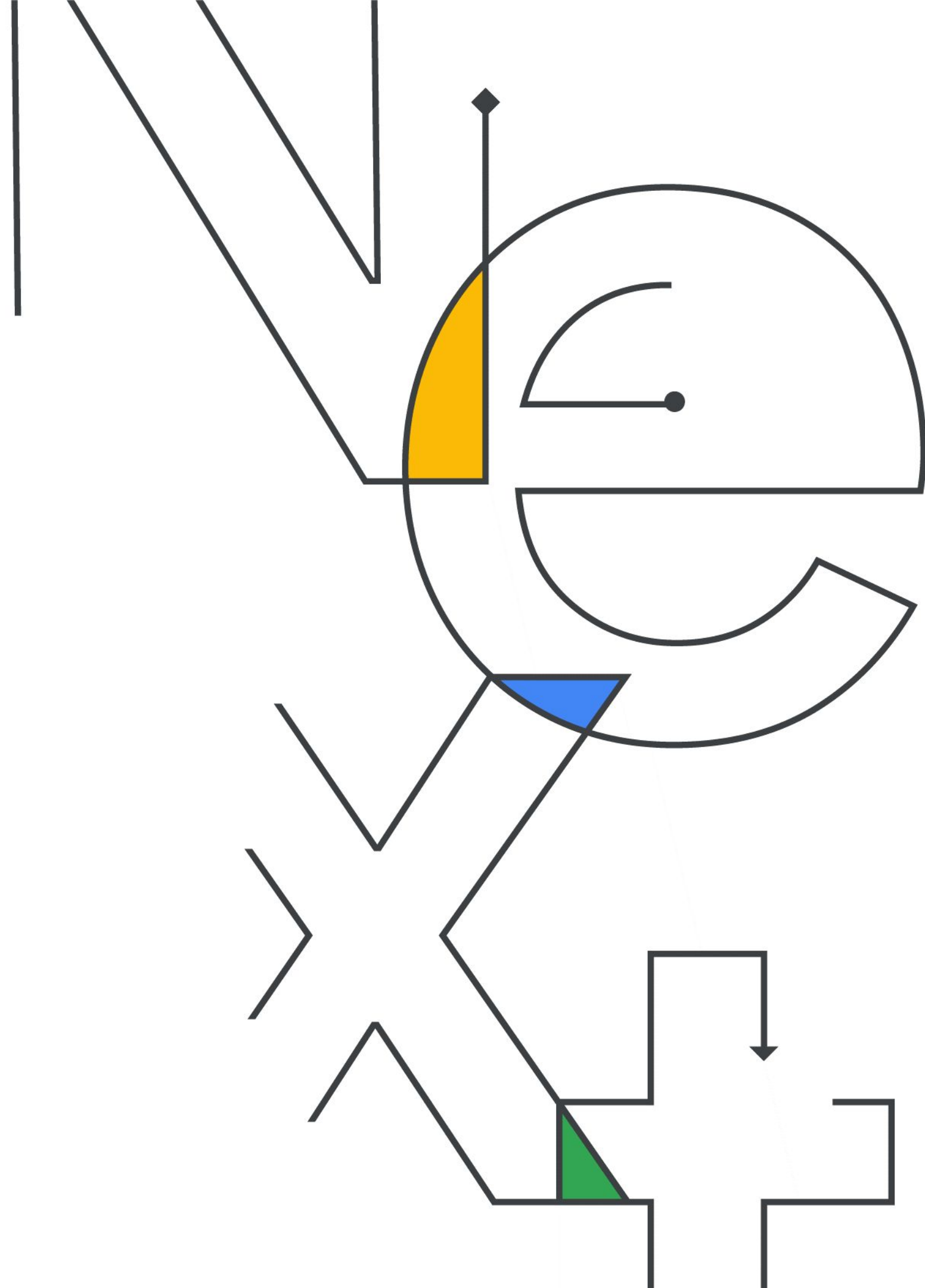Google Cloud

# Next '22

# Why now is the time to migrate your apps to managed databases
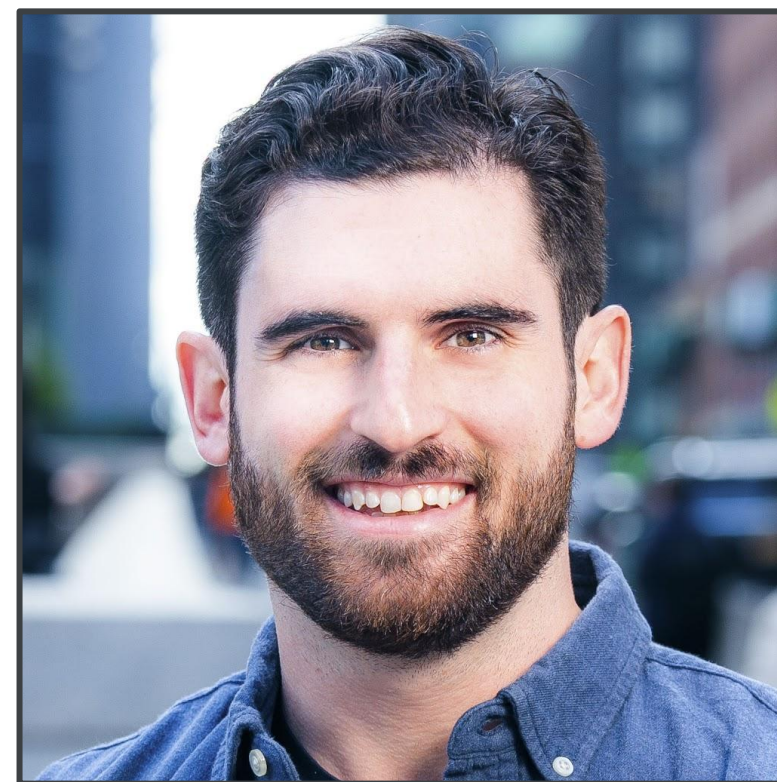
Oct/
11–13

**Sujatha Mandava**

Director, Product Management,
SQL Databases
**Google Cloud**

**Joseph Zirilli**

Senior Software Engineer
**Major League Baseball**

# Contents

Google Cloud

# 1

# The burden of self-managing databases

# More responsibilities & less time for innovation

Provision, configure, scale, maintain & upgrade

Monitor performance and troubleshoot issues

Support application integrations

Optimize cost

Secure the data

Protect data integrity

Ensure data resiliency

Comply with regulations

⬇ **Innovation**

⬆ **Responsibility**

Google Cloud

# What we are hearing from you

We need to get our service off the ground with a small DevOps staff

With increased scale of database instances and frequency of software releases DBA's are overwhelmed

Need a platform that can enable all our data driven activities, integration with BigQuery and Kubernetes

# How Cloud SQL can help

# Cloud SQL solves these challenges and helps you...

## Innovate Faster

Automated, streamlined and non-intrusive database management with greater observability, simpler integrations and optimized for cost

## Reduce Risk

Databases trusted with enterprise workloads for changing regulatory, security, governance needs along with enhanced data protection

Google Cloud

# Cloud SQL : Trusted, integrated and intelligently managed

**Supports PostgreSQL, MySQL and SQL Server**
Full compatibility with source database engines

**Fully Managed & Enterprise Ready**
Easy to set up, operate, and scale

**Trusted**
Enterprise-grade data protection, security and governance

**Developer Friendly**
Application centric observability and API-first administration

More than

# 90%

of Google Cloud's top 100 customers use Cloud SQL

# Proven ROI vs self-managed databases

## 246%
**Three-year ROI**

## 96%
**Faster to create and deploy a new database**

## 11 months
**Payback period**

Google Cloud

"

Now we're able to spend **more time working with users and less time on infrastructure management.**

**Phil Portnoy**
Associate Director of Engineering
Wayfair

"

Plus, migrating to Cloud SQL has made it much **easier for us to change our infrastructure** as needed, **add more power** when necessary or even **reduce our infrastructure size.**

**Cyril Picchiottino**
Quality & Customer Satisfaction IS VP

"

Cloud SQL provides highly scalable, available, and reliable database capabilities within Manhattan Active Platform, which helps us provide **significantly better outcomes for our clients and better experiences for their customers.**

**Sanjeev Siotia**
SVP and CTO,
Manhattan Associates

# 3 Looking ahead

We continue to invest in the areas that matter the most to you - Enterprise Readiness & Innovation!

# SQL Server

**Enterprise Readiness**

- Read Replicas for high read workloads and DR

- Audit to monitor changes on the instance/database New

**Compatibility**

- SQL Server as Publisher to set up replication to an external instance New

- In-place upgrades to maintain version currency New

Google Cloud

# Availability

**Major version upgrade** New

- Upgrade your database to the next major version in-place

- Maintain IP address, users, and settings on upgraded instance

- Industry-leading planned-downtime

- SQL Server, MySQL - General Availability

- PostgreSQL - Public Preview

**Cascading & HA read replicas** New

- Configure read replicas with HA and other read replicas replicating from them

- Reduce RTO by promoting a pre-configured replica

- Reduce cost by optimizing cross region egress

Google Cloud

# Data protection

**Password Policy** New

- Customizable password requirements for local database user accounts

- Better controls for security administrators

- Instance level for Cloud SQL for MySQL & PostgreSQL.

- User level for Cloud SQL for MySQL

**Instance Deletion Protection** New

- Protect your instance from unintended deletions

- Enabled by default in the console

- Instance cannot be deleted without disabling the flag

Google Cloud

# Query insights

- Developer friendly dashboards to troubleshoot query performance.
- Tag queries with business logic for application management.
- Follows the Open Telemetry standard for easy integration.
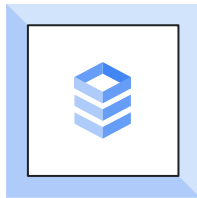
PostgreSQL (GA)
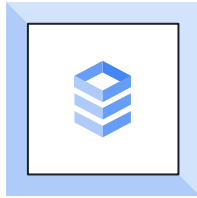
MySQL (GA)

AlloyDB (Preview)

Spanner (GA)



Google Cloud
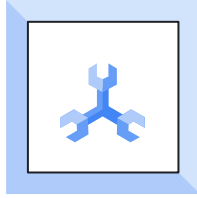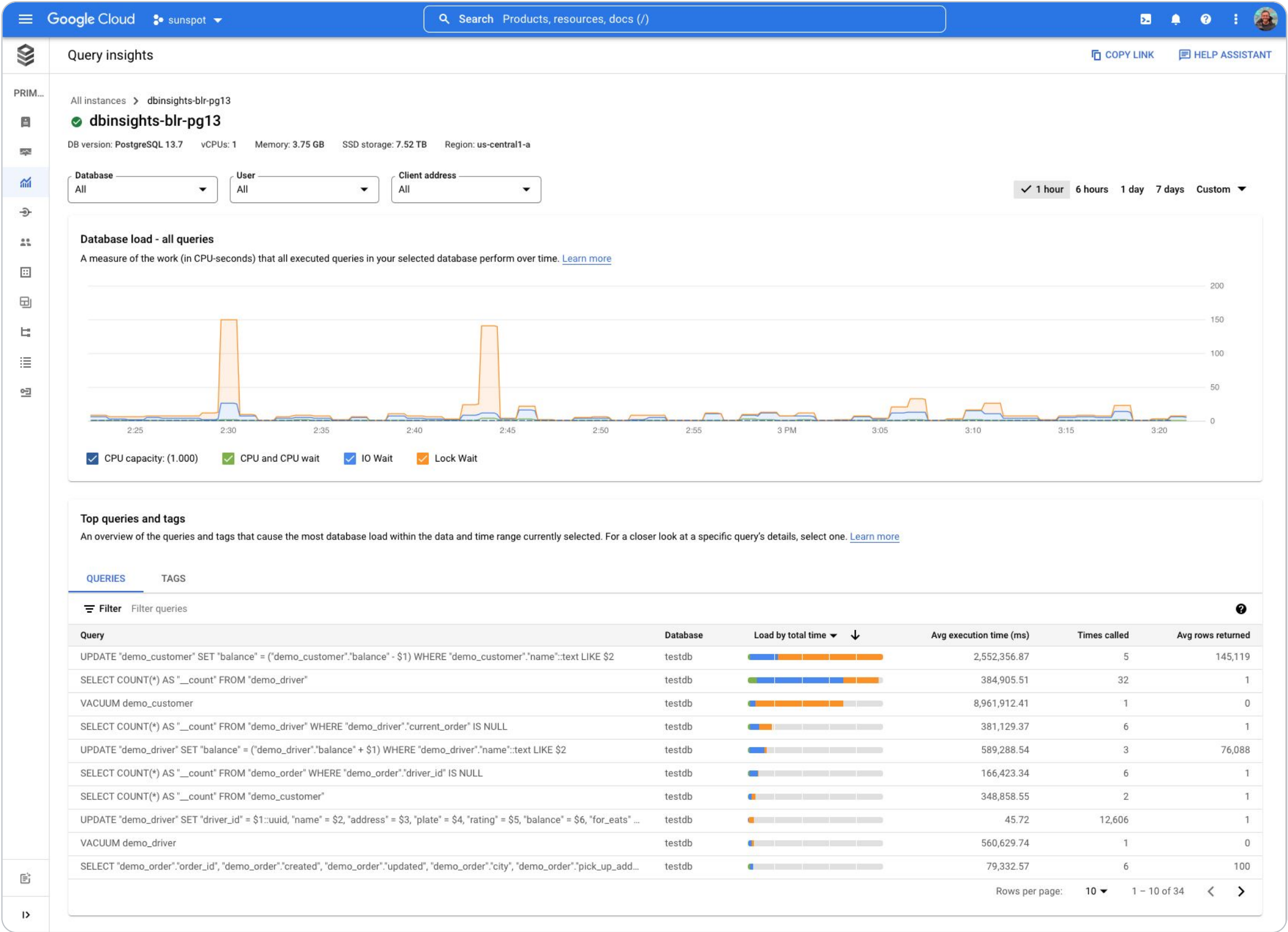
# System insights

- Single dashboard for instance and database metrics & monitoring.
- Visual indicators to highlight health & performance issues.
- Detailed error logs and recommendations for triggered events.
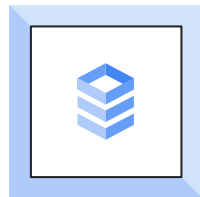
PostgreSQL (Preview)
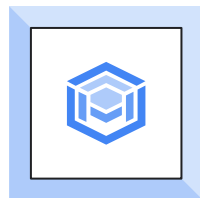
AlloyDB (Preview)
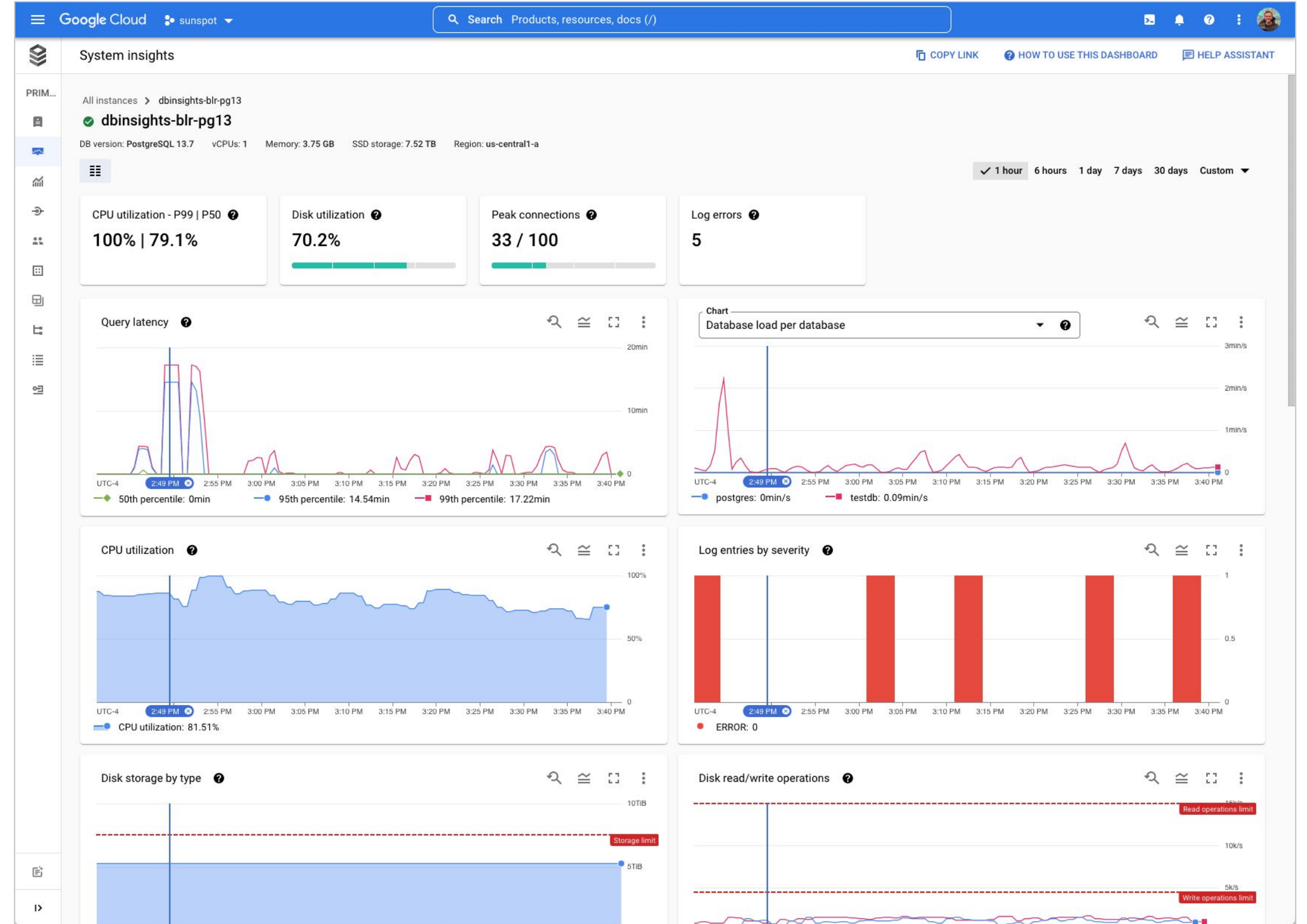
# Cost optimization recommenders

- Detects idle instances
- Recommends right-sizing for over-provisioned instances
- Leverage committed use discounts

PostgreSQL (GA)

MySQL (GA)

SQL Server (GA)

# Security recommenders

- Detects vulnerabilities
- Checks for risky security configurations

Gated public preview:

PostgreSQL

MySQL

SQL Server

# Performance recommenders

- Predict service limits
- Detects misconfigurations
- Recommends right database flags

## Public preview

PostgreSQL

MySQL

# Ecosystem integration

- Integrate your favorite APM tool via Sqlcommenter
- Sqlcommenter now is Open Telemetry standard and library
- Integrate your favorite monitoring and alerting tools with Cloud Ops

sql/*✍*/ — Python, ruby, node.js, Java (GA)

sql/*✍*/ — GO (coming soon)

In-context recommended alerts

# 4
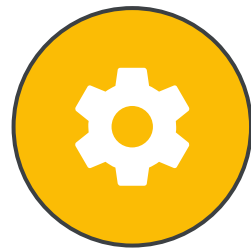
MLB's home run with Cloud SQL

Major League Baseball

**Oldest professional sports league in the world**

**800+** Tables

**170M+** Fans

"Our challenge was to scale league operations backed by a legacy database running on-premises with a limited database team that struggled to meet the growing demands."
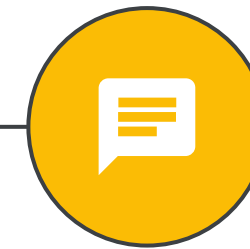
# Why Cloud SQL?

## Openness

A fully compatible managed database service for PostgreSQL, one of the most popular open source databases in the world.
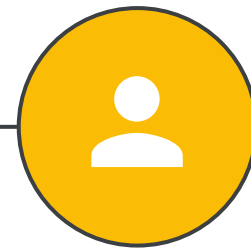
## Availability

High availability with 99.95% uptime SLA without lengthy and complex setup, enabling higher service uptime.

## Automation

Quick and easy to create read replicas for analytical workloads.

Operational agility with the Cloud SQL API; enabling backup, replica and dev/test environment creation simple and automated.

# New possibilities

- Query insights:  First stop to diagnosing and troubleshooting query slowness

- System Insights: Monitor system performance and get alerted on resource bottlenecks

- Cost Recommender: Recommendations already resulted in right-sizing exercises that saved on the costs
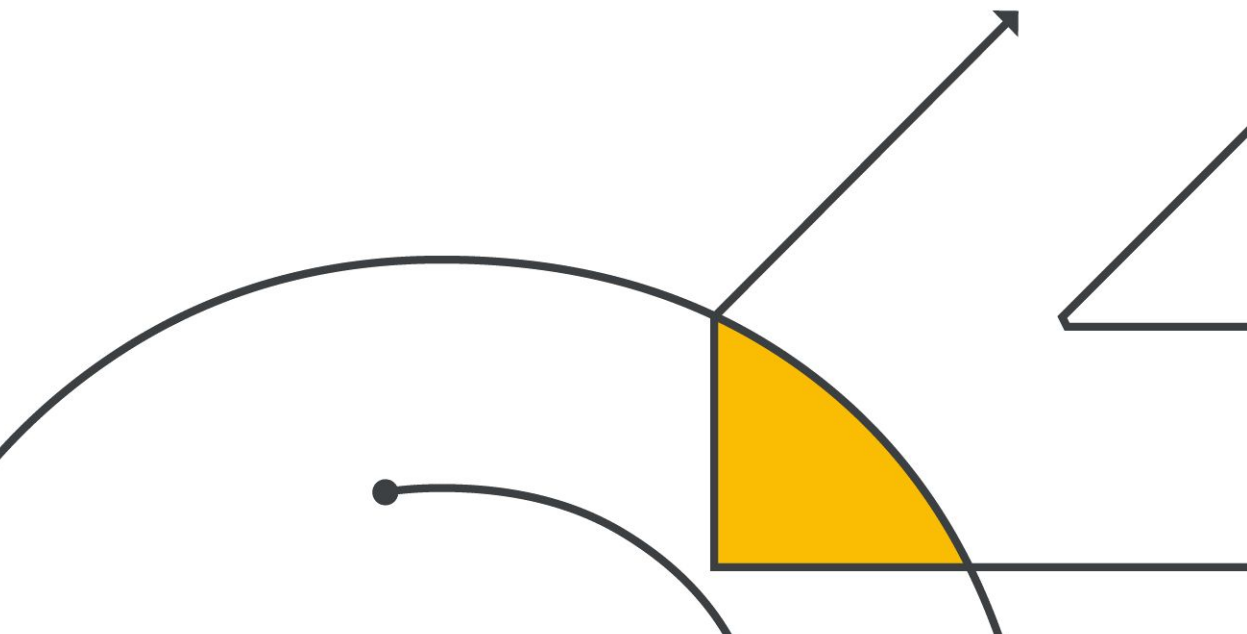
Google Cloud

# Start your Cloud SQL journey today!

## Get started with Cloud SQL

Google Cloud console under "Databases"

## Learn more about Cloud SQL

Documentation

Google Cloud

# Thank you

Google Cloud

Next '22