Proprietary + Confidential

Google Cloud

#### Database Performance Management for PostgreSQL and AlloyDB

Karan Thapar Product Manager, Google



### Agenda

#### **Setting The Stage**

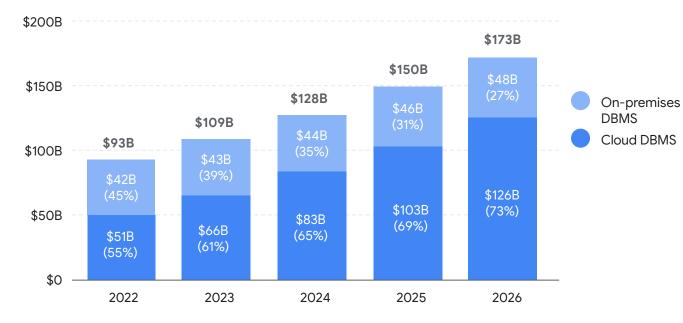
Industry Trends Evolution of the Personas

Managing Database Health and Performance Query Insights System Insights Workload Advisors Ecosystem Integration

The Road Ahead Performance Insights

# **Setting The Stage**

### Overall DBMS market is projected to surpass \$170B by 2026 – 73% in the Cloud



#### Highlights:

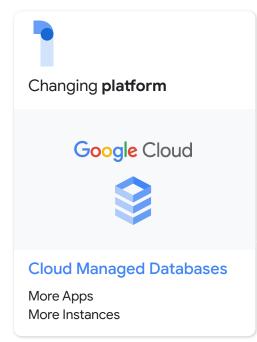
DBMS market projected to reach nearly \$200B by 2026

DBMS market projected to grow 17% CAGR for the next 5 years

Cloud services account for more than 50% of market since 2022

Source: Gartner Software Marketshare

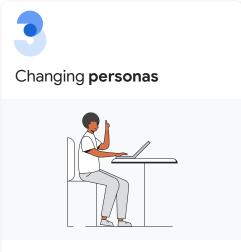
# Industry trends resulting in many new challenges and new opportunities





#### New workload types

More velocity More engine types



#### **Generalists and Specialists**

Nuanced requirements Speed v/s Depth Managing Database Health and Performance

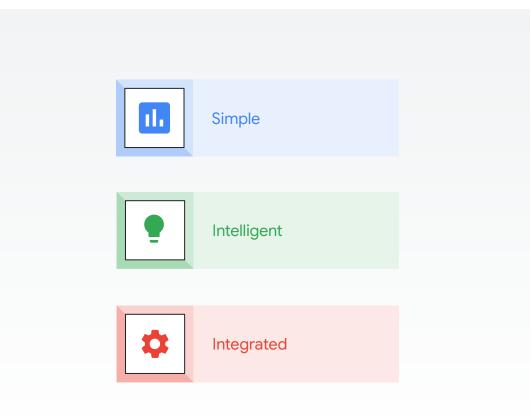
### **Our Mission**

# Empower <mark>users</mark> to quickly

### understand, troubleshoot, and optimize

## their databases with a

### simple, easy to use experience.



Three pillars to our approach

### **Query Insights**

Provides developer-friendly dashboards to troubleshoot query performance.

Tags queries with business logic for tracking and application management.



PostgreSQL (GA)



MySQL (GA)



AlloyDB (GA)



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#### **System Insights**

Provides all database monitoring metrics in a single dashboard.

Clearly highlights health and performance issues with visual indicators.

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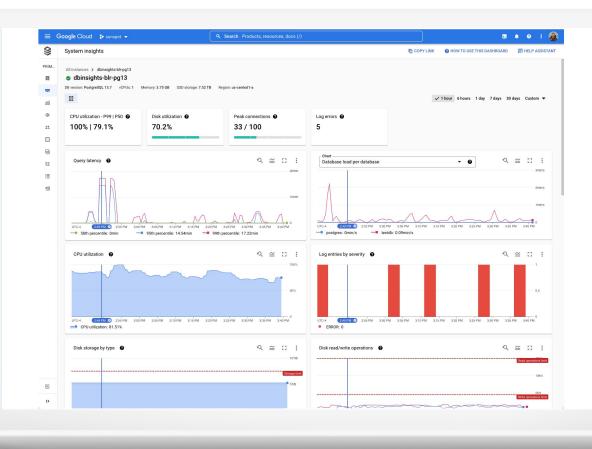
MySQL (Preview)

PostgreSQL (GA)



AlloyDB (GA)





### **Index Advisor**

Recommends indexing opportunities to boost query performance.

Proven performance enhancement with minimal storage and cost overheads.



AlloyDB (Preview)

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### **Ecosystem Integration**

Integrates APM tools via Sqlcommenter, an OpenTelemetry standard and library

Provides monitoring and alerting tools with Cloud Ops



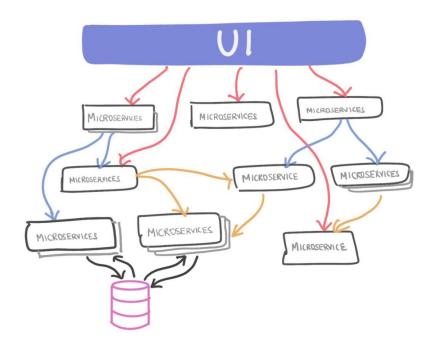
Python, ruby, node.js, Java, GO (GA)



In-context recommended alerts



Grafana integration via OpenTelemetry (GA)



## **The Road Ahead**

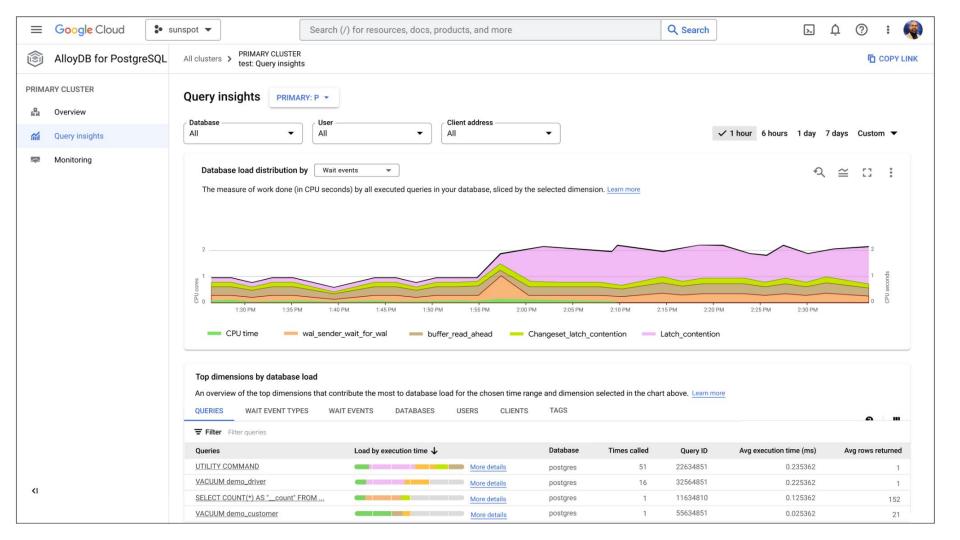
#### **Performance Insights**

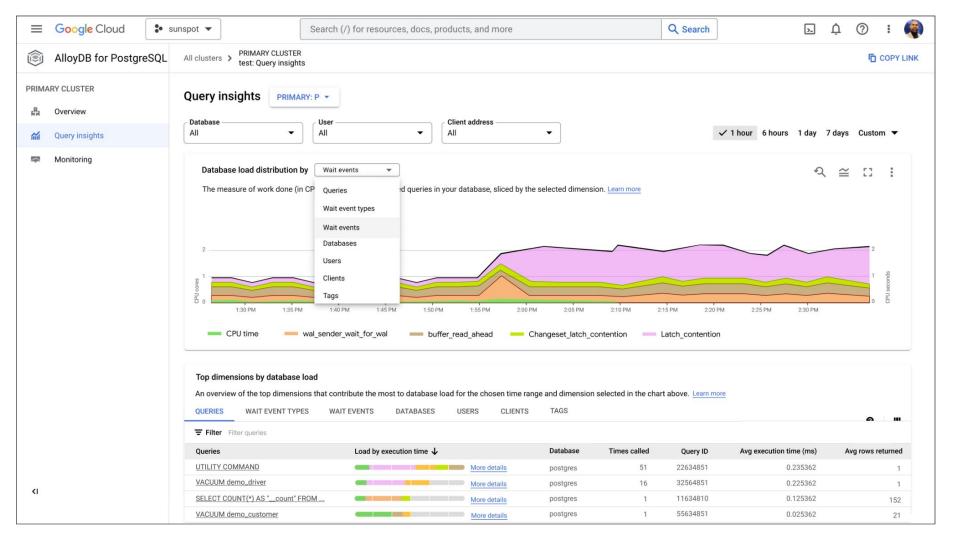
The new and enhanced Performance Insights empowers **DBAs**, application developers, and IT generalists to detect and troubleshoot database performance problems by leveraging intelligent and assistive experiences.

With the new Performance Insights, you can:

- **Perform ad hoc analysis** to root cause hard-to-diagnose problems.
- Get complete visibility into query execution with granular query plan views.
- **Troubleshoot complex performance issues** by analyzing deeper telemetry.
- **Benefit from ready-to-consume recommendations** to improve query performance by creating indexes, tuning plans, etc.

With these enhancements, Performance Insights will enable you and your teams to save time and focus on business priorities.





# Thank You!!!