



# **EXECUTIVE SUMMARY**

**For**

**TESLA**

**10-22-2023**

## Tesla's Data Management: Assessing the Value Proposition of Google Cloud SQL

### Introduction

- **Tesla's Evolution:** Tesla's journey from an electric car manufacturer to a global technology leader in sustainable energy solutions.
- **Database Importance:** In an age of IoT (Internet of Things) and smart vehicles, having a powerful, efficient, and scalable database is paramount for operations, decision-making, and innovation.

### Database Significance for Tesla

- **Data Volume:** Managing vast amounts of data from vehicle telematics, user feedback, and factory operations.
- **Real-time Analytics:** Immediate processing and insights are key for vehicle safety and innovation.
- **Scalability:** With global operations and a growing user base, the data infrastructure must scale seamlessly.

### Why Google Cloud SQL's Enterprise Plus Edition?

- **Performance:** Built for high-demand situations, ensuring smooth data operations.
- **Adaptability:** Flexible structure to evolve with Tesla's needs.
- **Safety & Reliability:** Advanced security features and uninterrupted data access.

Cost Breakdown for Google Cloud SQL - Enterprise Plus Edition			
Resource	Hourly Pricing	Monthly Pricing	Annualized (Based on 12 months)
vCPUs	\$0.0644 per vCPU	\$47.012 per vCPU	\$564.144 per vCPU
Memory	\$0.0109 per GB	\$7.957 per GB	\$95.484 per GB
HA vCPUs	\$0.1289 per vCPU	\$94.097 per vCPU	\$1,129.164 per vCPU
HA Memory	\$0.0218 per GB	\$15.914 per GB	\$190.968 per GB
Data Cache Storage	\$0.0003 per GB	\$0.192 per GB	\$2.304 per GB
HA Data Cache Storage	\$0.0005 per GB	\$0.384 per GB	\$4.608 per GB

### Recommendation

- **Scalability & Flexibility:** Google Cloud SQL grows with Tesla's increasing data needs.
- **Optimized Costs:** Tiered pricing offers a balance between performance and cost.
- **Integration:** Easy alignment with Tesla's existing systems and future tools.
- **Possible Challenges:** Consideration for training staff, migration efforts, and ensuring all tools are integrated seamlessly.

### Conclusion

- **Strategic Fit:** Google Cloud SQL aligns with Tesla's strategic goals, offering a balance of performance, scalability, and cost-effectiveness.
- **Future-Proof:** Built for the future, ensuring Tesla remains at the forefront of technological innovations.

**Reference:** (n.d.). *Cloud SQL pricing*. Google Cloud. <https://cloud.google.com/sql/pricing>