

# Kings Transport: Accelerating logistics services with data-driven decisions on Google Cloud

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About Kings Transport

## KINGS

### About Kings Transport

Kings Transport offers supply-chain solutions to help customers across Australia and New Zealand deliver goods on time, from documents to steel rods and everything in between. The company is committed to people first, safety always, strong capabilities and sustainability; electric vehicles into its transport solutions, as well as taking part in community activities that help to offset the environmental impact of its fleet.

Kings Transport moved its infrastructure on Google Cloud to scale VMs efficiently via auto-scaling Compute Engine and achieve data insights with BigQuery and Google Studio.

## Google Cloud results

- Automated VM upgrades reduce need for IT staff to sacrifice nights and weekends for hardware maintenance and updates
- Modernizes mission-critical workloads such as Kings Transport's resource management system, delivering scalability and flexibility in the cloud
- Delivers low-latency, highly available

## Transport management system analysis hour

Industries: Other

Location: Australia

<https://cloud.google.com/source-repositories/>

## About Oreta

Google Cloud Premier Partner, Oreta aims to provide cost-effective, value-add cloud services that enable its clients to transform their business through technology and innovation. It specializes in infrastructure design and implementation, cloud migration, security and identity, networking, and data services.

Google Cloud Platform (<https://cloud.google.com/>)

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App Engine (<https://cloud.google.com/appengine/>)

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BigQuery (<https://cloud.google.com/bigquery/>)

Cloud IAM (<https://cloud.google.com/iam/>)

Cloud Source Repositories  
(<https://cloud.google.com/source-repositories/>)

Cloud Storage (<https://cloud.google.com/storage/>)

Google Cloud Premier Partner Oreta aims

Google Data Studio  
(<https://marketingplatform.google.com/about/data-studio/>)

their business through technology and innovation. It specializes in infrastructure

connections  
for reliable  
data  
migration  
from on-  
premises to  
Virtual  
Private Cloud

Compute Engine  
(<https://cloud.google.com/compute/>)

and data services  
Operations  
(<https://cloud.google.com/products/operations>)

Migrate for Compute Engine  
(<https://cloud.google.com/migrate/compute-engine/>)

According to the Australian Department of Infrastructure, Transport, Regional Development, and Communications, the freight and logistics industry accounts for approximately 8.6% of GDP (<https://www.infrastructure.gov.au/transport/freight/>). With growing consumer demand for ecommerce, logistic providers are under pressure to attract and retain customers with faster service at lower costs.

To stay competitive, Kings Transport (<https://www.kingstransport.com.au/>), which specializes in on-demand courier, taxi truck, and business fleet services, is on a transformation journey to improve its resource management systems, so that it can provide a more streamlined service, more cost-effectively. The company wants to use real-time data to identify new revenue opportunities and optimize transport resources. Kings Transport generates large amounts of data each day from job bookings, route planning, delivery notifications, invoicing, and much more. However, the aging on-premises data center lacked the

compute resources and analytics capabilities to derive insights from data.

“Our on-premises data center was at the end of its life cycle. It became challenging to add new workloads, such as data analytics, without worrying about reduced performance and downtime,” says Travis Timms, General Manager of Technology at Kings Transport. “In comparison, Google Cloud provides scalable computing on demand to extract data insights for our business users and customers.”

“Another reason why we chose Google Cloud is its vast networks throughout the world,” Travis adds. “The robust global network of Google Cloud provides high availability connectivity to keep our services running without disruption, even if a machine or a data center fails.”

Kings Transport runs its cloud resources in the Sydney Google Cloud region to comply with the Australia Privacy Act and minimize latency for customers in the region. It uses Cloud Hybrid Connectivity (<https://cloud.google.com/hybrid-connectivity>) to connect to a Melbourne data center provider for data backup and disaster recovery.

“Cloud Interconnect (/hybrid-connectivity) gives us high bandwidth access to Google Cloud to keep data secure, without going over the public internet,” says Travis. “Virtual Private Cloud (/vpc) (VPC) gives us a redundant connection in a failover scenario.”

“Protecting our customer data is a top priority,” Travis adds. “We adopt rigorous Cloud Identity and Access Management (/iam) to control access to data. Google Cloud provides an additional layer of cloud security by encrypting data at rest and in transit.”



## Modernizing legacy infrastructure with a cloud-first strategy

Google Cloud Partner Oreta (<https://oreta.com.au>) provided in-depth cloud expertise to Kings Transport during the twelve-month migration process. The team took a mindful approach to cloud migration by reviewing what legacy applications to migrate or modernize. Kings Transport replicated mission-critical workloads such as its transport management system to a “bubble” test environment to make sure everything works well together on Google Cloud (<https://cloud.google.com/>).

“Oreta’s project management is fantastic and kept everyone accountable to meet deadlines,” says Travis. “Its technical resources gave us direction and allowed us to exchange ideas to ease the migration process.”

The team cleaned up years of legacy infrastructure and ran performance and load testings, before turning off the legacy servers. The cleanup process involved recoding legacy applications with hard-coded IP addresses and retiring now-defunct applications such as its email server.

Kings Transport used Migrate for Compute Engine (<https://cloud.google.com/migrate/compute-engine>) (formerly Velostrata) to move the legacy applications from the physical servers to Compute Engine with no impact on the customers. After the migration, the team uses Google Cloud operations tools (</products/operations>) (formerly Stackdriver) to monitor and correct problems in the full technology stack in Google Cloud.

“By moving to Google Cloud, we reduced administrative tasks by 10%.”

Google Cloud automatically takes care of software patches and firmware updates, so that's one less thing we have to worry about from a system admin point of view."

—Travis Timms, General  
Manager - Technology, Kings  
Transport

## Streamlining IT operations with automation on Google Cloud

From an IT point of view, managed services on Google Cloud such as automatic upgrades improve team morale since everyone can leave their work on time. Upgrading virtual machines in the legacy environment was a pain point for IT staff. A team member had to start the update after hours to minimize downtime and work all night to install the update. With managed services on Google Cloud, IT staff don't have to

sacrifice their nights and weekends to perform maintenance tasks and upgrades.

“By moving to Google Cloud, we reduced administrative tasks by 10%,” says Travis, “Google Cloud automatically takes care of software patches and firmware updates, so that’s one less thing we have to worry about from a system admin point of view.”

Kings Transport uses Cloud Source Repositories (<https://cloud.google.com/source-repositories>) to manage infrastructure and app deployment scripts and other codebases.

## **Scaling power to run queries on Compute Engine and App Engine**

Compute Engine (/compute) provides Kings Transport with a range of virtual machines optimized for different workloads, including its transport management system that requires 20 TB of storage. The majority of employees interact with this platform daily for job bookings, job despatching and monitoring, job viewing on a customer-based website portal, GPS, invoice management, and more.

Logistic providers like Kings Transport typically experience peak demand for delivery before Christmas and returns just after Christmas. On the legacy infrastructure, scaling was a laborious process that required setting up servers and configuring hardware. To handle such traffic spikes, Compute Engine



seamlessly scales up to handle more user requests and scales back down when resources are no longer required.

Over the years, Kings Transport expanded its business and service offerings through organic growth and acquisitions. As a result, the company offers more than 500 service codes on the transport management system. The job booking process is complicated since customers have to select from the vast catalog and quote the relevant one to schedule a pick-up.

“Compared to our on-premises server environment, pay-as-you-go billing on Compute Engine lets us scale up or down VMs without having to worry about hardware provisioning or

## additional licensing.”

—*Travis Timms, General  
Manager - Technology, Kings  
Transport*

To improve customer experience, the project transformation team plans to reduce the number of services by reviewing sales volume and profitability. This project involves an analysis of data from the transport management system.

“In the legacy environment, we needed at least a day to access and analyze data from our transport management system,” says Travis. “We can run the same workload on Google Cloud under an hour.”

The IT team clones the transport management system in a bubble environment so other users on the platform won't be affected. Once the project transformation team can access and analyze the data, IT shuts down the instance, so it's not running round the clock.

“Compared to our on-premises server environment, pay-as-you-go billing on Compute Engine lets us scale up or down VMs without having to worry about hardware provisioning or additional licensing,” says Travis.

Kings Transport also uses [App Engine](#) (/appengine) to host internal applications such as its various internally developed applications in a fully managed, serverless environment. App Engine automatically provisions servers and scales cloud instances up and down as traffic load increases or decreases. The IT team can focus on business demands instead of maintaining the infrastructure.

## Break down data silos using Cloud Storage

Kings Transport keeps data in sync across teams and departments with [Cloud Storage](#) (/storage) as a central point for all data. Cloud Storage interacts seamlessly with other Google Cloud products such as BigQuery using a consistent API.

“Just like Compute Engine, we pay for what we use on Cloud Storage, so we don’t need to provision capacity in advance,” says Travis. “We store infrequently used data to Cloud Storage Nearline and Cloud Storage Coldline using a life cycle policy to reduce storage costs further.”

“By eliminating memory overheads required in hardware servers, Cloud Storage reduces our storage usage for our Tier 1 and 2 applications by half, from 40 to 20 terabytes,” Travis adds.

Kings Transport uses a gsutil command-line interface to access Cloud Storage and automate tasks such as

adding or removing data from buckets.

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## Robust reporting and analytics with BigQuery and Google Data Studio

The technology team at Kings Transport used to spend up to 80 hours a month running reports for colleagues in business development, account management, and operations. IT had to export data from the transport management system into spreadsheets and then manipulate the data to meet reporting requirements.

For example, the Sales and Operations team looks at KPIs, such as delivery in full on time, account balances, and demurrage costs to track performance and identify issues.

IT created an interactive dashboard by analyzing enterprise data with BigQuery and connecting the results to Google Data Studio. Visualizing data with Google Data Studio makes it easier for Kings Transport to view and analyze patterns and trends pertinent to the business. The dashboard refreshes BigQuery data regularly so the business users can see up to date results.

“Google Data Studio fills a massive gap that we had in the business, a reporting tool that makes data accessible for anyone in the organization,” says Travis. “Powered by BigQuery, Google Data Studio increases data visibility to improve business planning.”

Business users can easily create and share custom reports with Google Data Studio by adding KPI

relevant to their reporting needs. For example, team leaders can analyze historical and current data to forecast trends and determine whether to scale up trucks and staffing. Kings Transport also utilizes Google Data Studio for lead and lag safety performance indicators which can be analyzed at Group level down to client operational sites; ensuring safety remains the utmost priority.

“Google Data Studio makes it easy for clients to access account performance at any time,” says Travis. “We build better relationships with our clients by being transparent about our service level. Internally and externally, we’re measuring and reporting the same metrics.”

“Our focus this year is to create an Enterprise Data Warehouse to accelerate transformation with data-driven insights,” he adds. “Using BigQuery on Google Cloud, we get high-speed analysis of data at scale without worrying about hardware constraints.”