



Getting right on track with an Enterprise Integration Platform

The Australian Rail Track Corporation (ARTC) manage and maintain an 8,500km rail network across five states within Australia. They work with rail operators to ensure access is available for businesses and producers around the country. Established in 1997, ARTC has since become a fundamental part of the transport supply chain within Australia.

Having emerged from a period of significant investment and network growth, ARTC's strategic focus now is to bring more freight onto rail through a business transformation strategy.

Putting customers at the centre, the aim is to continue the transformation into a company that is committed to customer success in order to realise the potential created by the investment phase.

As part of this overarching business transformation strategy, ARTC endorsed a Digital Strategy that included a project known as Strengthening The Core (STC). The end goal of STC is to:

- Improve end user experience.
- Fix fundamental technology issues.
- Create a solid foundation.
- Expand over time.

ARTC chose Fujitsu Data & AI to implement their design for their integration platform identified as a need in Phase 1 of STC.

"I'm thrilled for the team to see the outcomes of this work. Collectively to design & build our future Integration platform, working through over 30 technical choices, really sets us up for future success. This initiative really has set a benchmark for an approach which we can use into the future."

Andrew Simpson, Applications & Business Intelligence Manager, Safety, Engineering & Technology, ARTC



Challenge

ARTC provides weighbridges along their track which read train weights as they pass at speeds of up to 60 kilometres an hour. This information is highly valuable and is required both by ARTC and their customers to provide accurate haulage weight details, analyse technical equipment, and help ensure wagons have been loaded correctly.

Ensuring accurate data

ARTC already had an inhouse solution that would allow them to read these weights and use the data as required. However, this solution was not hosted in the cloud and wasn't designed to allow the accurate capture of weights across all weighbridges. This was impacting their customers, so ARTC chose to move to an Enterprise Integration Platform, which would allow a more streamlined process and importantly, offer consistently accurate data.

ARTC developed an architecture design and blueprint for the new platform and asked Fujitsu to implement this.

Solution

Based on the design and blueprint provided by ARTC, we designed an ingestion process for the incoming data using Data Factory and Databricks. This process takes data from the weighbridges, train schedules and train code look up table and correlates it to determine:

- Which train is where
- The weight of the train
- What time it crossed a particular weight bridge

Once this data has been pulled together, it is stored as a record in CosmosDB.

Delivering secure data

We needed to determine how to get this data to the right people at the right time. As a result, they designed and built a series of RESTful APIs using Azure Function Apps (hosted in Azure API Management).

These APIs give both internal and external consumers a convenient way to access their data. By using the tags provided on individual wagons, this system also ensures that the data is secure and that customers can only access their own data.

Outcomes

By choosing Fujitsu, ARTC have seen Phase 1 of STC completed and have deployed the first step in their Digital Integration Strategy. The migration and modernisation of their train tracking technology has led to several benefits.

More accessible data

By moving from their legacy in-house solution to an Enterprise Integration Platform, ARTC has made their data more accessible across the companies that require it and are now showing them real-time data from the weighbridges. This allows for decisions to be made accurately and efficiently, leading to a more reliable network for all involved.

Having the solution hosted in Azure results in less maintenance and down time and has meant that any infrastructure issues are resolved in line with SLAs provided by Microsoft.

Through this digital transformation, ARTC now have a more reliable service for their customers.

What's next?

ARTC have re-engaged Fujitsu to assist them with the next step of their digital transformation. A solution being built that leverages the work already produced to allow ARTC to better maintain and monitor their network of weighbridges via a mobile phone or other device. This is now underway and will be another great step in the strengthening the core strategy.

Customer:

ARTC

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