

Case Study

DPIRD

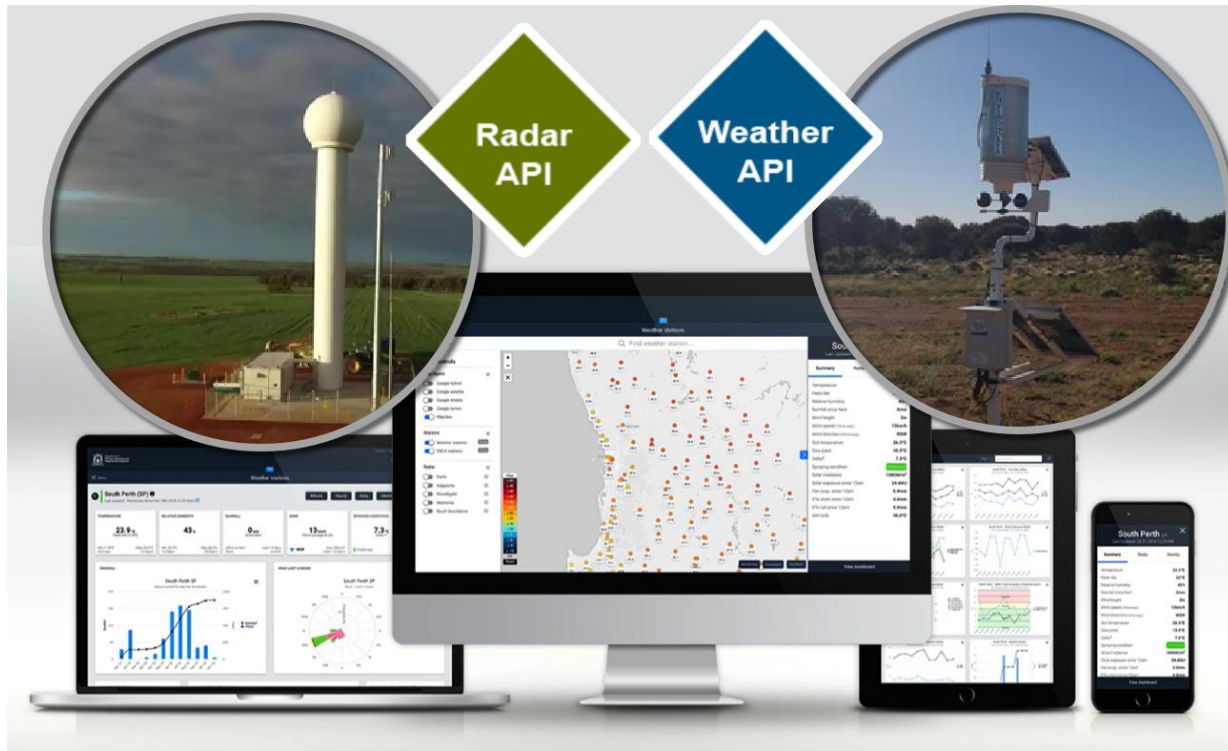
Weather Data Platform Cloud Migration



The Client

The Department of Primary Industries and Regional Development (DPIRD) leads sustainable development of Western Australia's regions and agriculture, aquaculture, food and fisheries sectors.

Funded by the State Government, DPIRD's eConnect project develops online technology and decision support tools to assist WA agribusiness and growers.



Overview

The eConnect program is responsible for delivering the popular, free weather data service <https://weather.agric.wa.gov.au> to WA growers and 3rd party organisations, leveraging DPIRD's extensive network of 192 weather stations and 8 Doppler rain radars. The platform attracts 20,000 unique visitors, processing over 6 million data requests every month.

DPIRD's weather platform is built on an Oracle database and is supported by a number of services processing incoming weather data, which is exposed through a number of RESTful APIs, running on a highly scalable Docker cluster environment.

Interfuzo were engaged to design a scalable cloud-based architecture and migration plan of the eConnect Weather platform, to ensure alignment with DPIRD's overall cloud adoption strategy.

The Challenge

The migration strategy and approach was heavily influenced by several operational factors, minimising any service disruptions to industry, and not impact the all important 3G upgrade of DPIRD's network of Automatic Weather Stations. DPIRD selected Oracle Cloud to host the new solution due to architectural alignment with the existing on-premise system, resource upskilling, risk reduction during migration, and ongoing cost-effectiveness.

The Approach

Interfuzе **organised workshops** to map the current state and get a detailed understanding of the capability and constraints of the Oracle cloud services. A two-staged approach was proposed:

First a migration strategy and **high-level roadmap** was developed to determine the overall migration approach and to establish key principles to guide the solution design. Once the migration strategy was agreed, Interfuzе developed a **detailed solution design** to guide the build of the new weather data platform in the Oracle cloud.

Second, Interfuzе created a **detailed roadmap and cutover plan** to guide the delivery team how to migrate the on-premise development, test and production environments to the Oracle cloud with minimal impact to consumers of the weather service.

The Results

DPIRD was able to successfully re-build and migrate the platform to Oracle Cloud Infrastructure before the imposed deadline. The cutover to the new cloud-based weather data service was achieved with no downtime to consumers of the service.

The Solution

To reduce risk and ensure the tight migration deadline could be met, Interfuzе proposed a strategy minimising the changes of the existing architecture whilst rationalising services where possible to reduce complexity and cloud infrastructure cost. This entailed rebuilding the existing Docker cluster on VMs in the Oracle cloud, so existing configuration, deployment scripts and support documentation could be leveraged. In parallel, the weather application and legacy platform components were containerised so they could be deployed on the Docker cluster to further simplify the architecture and reduce running cost.

All build tasks and migration/cutover tasks and dependencies were documented using the Atlassian Jira instance that was already being used by the client. This enabled DPIRD to visualise the migration plan and efficiently manage dependencies on the critical path.

"Interfuzе provided a clear approach contributing towards a reduction in migration and operational risk, enabling the successful migration of DPIRD's weather platform to the cloud. This resulted in a successful migration which was delivered on-time, under-budget, and with no impacts to business operations. Their level of professionalism and effective communication was an essential part of the success."

Darren Gibbon
Project Manager
DPIRD eConnect

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Think we can help solve your problem?

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