Case Studies - Migration

Telecommunications Leader proves complex migration ahead of platform deployment

Due to the simultaneous creation of a new Oracle data centre and the requirements of a project which relied upon these environments, the data to support the project would not be ready to support development and testing. Key to the success of the project was for up to date, full volume and accurately transformed data from the previous system to be available in the new system when the applications were deployed into the fresh environments.

This required some innovative solutions since the entire migration process had to be tested, proven and audited in a highly agile culture without access to database environments and limited access to data.

The Project

The Client is New Zealand's largest communications infrastructure company. The projects aim is to establish systems and processes to support fibre fulfilment, assurance and billing for ultra-fast broadband (UFB).

The programme is to enable separation from its sister company, putting in place several core foundational capabilities to support end to end fibre provisioning such as: -

- Migration of core systems to a new IT data centre environment
- Introduction of cost-effective Product Catalogue Management
- Establishment of automated end-to-end Fibre Fulfilment
- Establishment of an advanced Work Order capability
- Provision of a prequalification service for customers
- Alignment of business interactions with the other Local Fibre companies
- Alignment of Channel Agreement.

The Solution

The management team working with a development team had the vision to utilise the **CAD4Data** business process using **Smart** to logically map the migration. **Smart** allows the entire migration to be performed on a laptop directly from the mappings which are produced by a data analyst. The data mappings make up a specification which can be queried for problem diagnosis and are used to produce detailed documentation and process flow diagrams.

The migration code was written automatically by **Smart** meaning that there was no delay waiting for a developer to deliver code, resulting in immediate feedback upon assumptions entered into the specification. As test data became available it was entered into the migration in order to test business rules against test cases. On the laptop environment, **Smart** code was written in Microsoft T-SQL and tested on a local SQL Server instance. **Smart** code is written using parallel processing techniques resulting in extremely efficient and rapid processing. Full logging and quality checks ensure that the maps, code and process flow diagrams remain aligned throughout.

"Working directly with the solution architects and being able to provide immediate feedback upon specification change is essential when dealing with complex agile projects."

Once connectivity had been established to the Oracle data sources, volume data was processed into the laptop environment. Target structures were derived from EA (Enterprise Architect), a modelling, visualization and design platform based on the UML 2.5 standard. This uncovered a number of data related issues which were reported to the management team for decision support. This allowed for re-engineering of the target application to be performed well in advance of the data being applied to it.

When the data centre was ready, the migration code was complete, tested and ready for deployment against the application. A key challenge during this exercise was that the application structure was more advanced than that held in EA. **Smart** was used during this process to identify the differences and provide a report to EA to bring it in line with the application.

Having proven the data load into the application, **Smart** then wrote the code in Oracle PL-SQL so that the migration could be deployed and performed entirely within the secure data centre. The deployment process integrated several other migration processes and requirements into an automated package. **Smart** wrote the package for deployment without being required in the package giving transparency to the auditors.

The client performed a large and complex migration within two hours with no issues. The organization now has the ability to independently deliver ultra-fast-broadband. The client is moving forward to further increase value for its wide customer base.