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Case Study

Building a POC on AWS for an International Business Process Outsourcing Company

This case study explores how Datavail helped an international business process outsourcing company conduct an analysis and proof of concept to test the functionality of AWS for a database migration project.

The Challenge

The client needed to confirm that the database workload would run in AWS RDS for an AMS Line of Business environment. Should RDS not be sufficient to keep up with workload demands, the proof of concept would be tested on AWS EC2. In addition, the proof of concept will determine whether AWS features or Oracle Data Guard should be used for the database high availability solution.

The Solution

Datavail started with a project kick-off with the client. We worked alongside its team to develop a project plan that included setting up the governance structure, configuring team access to the client environment, and testing.

We focused on determining where the in-scope workload best runs in AWS and the migration approach necessary to move to that environment. The existing Oracle 12c database was analyzed as well as the application.

Our client received the following information from the proof of concept:

- Findings
- Recommendations for the migration approach and the tools needed for that process
- Recommendations for a high availability approach
- Recommendations for the necessary testing and measurement tools
- The impact of the proof of concept findings on the original project assumptions and approach
- The projected costs to run this project in AWS

Our findings allowed the client to have critical information for making data-driven decisions on the direction of this project.

We also put together a migration plan for moving the databases to the proof of concept target environment. The migration approach that we chose included the following steps:

- Configuring the Oracle database in AWS RDS for the proof of concept target
- Migrating this database to the target environment
- Migrating the application servers to the target
- Thoroughly testing the latency and performance of the proof of concept
- Overseeing the client's testing and noting the system performance and output
- Testing the failover of the high availability configuration

The Results

We migrated the critical applications to AWS with Oracle and SQL Server as the database backend. The database was moved from Solaris OS to EC2 on Red Hat Linux 7. By refactoring the Oracle database to PostgreSQL, we lowered the licensing cost for our client. PostgreSQL is an open-source database without a license cost, and it includes many of the enterprise-grade features that Oracle is known for.

An archival mechanism was also designed and implemented to archive the business process outsourcer's multiple terabytes of data. High availability and disaster recovery strategies were put in place to improve reliability and reduce downtime.