

# Zero Downtime Migration

Migrate data from 30 TB Oracle Database from Oracle 10g RAC running on Solaris OS to Oracle 12c RAC running on AIX OS.

## BUSINESS CHALLENGES

- Client is one of the topmost financial service provider and worlds largest retail bank, wanted to migrate one of their 30 TB Oracle Database from Oracle 10g RAC running on Solaris OS to Oracle 12c RAC running on AIX OS
- To minimize time lag as project was delayed by 18 months since the top big box consulting companies failed to provide with zero-downtime reliable solution
- Migrate very high volume of data with zero-downtime and with no loss of data
- The possibility of having any downtime beyond the Service Level Agreements was ruled out as client's database caters to many internal, external and critical decision supporting systems
- High traffic running on all the client websites
- Data came in from various systems
- Difficult to test every use case as there was no similar environment supporting various workload, complex client applications, and hence a fall back plan was needed



## BUSINESS SOLUTION

Based on the challenges regarding the zero-downtime and lag for data migration, we adopted this 3-step migration approach:

### Assessment

- Princeton IT Engineers collaborated with client's key stakeholders to understand critical functionality requirement along with any third-party integrations
- Understood the nature of the existing transactions
- Provided assessment report to the client

### Design and Planning

- Created proper Test Cases covering the entire test coverage and Plan and shared this with the client
- Explained client, the way forward approach and provided the client with their execution plan
- Created high volume of data and transactions that was replica of the Production transactions
- Generated custom verification and validation procedure to ensure there is no loss of data
- Had fall back plan in place to switch back to Oracle 10g Database incase Oracle 12c was not accessible with no data loss

### Migration

- Dry run to ensure there is no loss of data
- Migrated the new sites with zero-downtime, no loss of data and with minimum time lag

## RESULTS / BENEFITS

- Successful Migration with zero-downtime
- Minimized the lag at minimalistic level
- With our proven approach of custom verification and validation procedure, we showed there is absolutely no loss of data
- Achieve confidence in accuracy of their data migration
- Princeton Database Engineers have already migrated over 600+ databases using zero-downtime approach and has excellent expertise handing migrations of very large Database Systems.