

Data Migration from Mainframe to AIX and Oracle

JVs and Branches:
India, United Kingdom,
Australia, Bahrain,
Japan, Singapore

Case Study

PPA- Data Cleansing

The Problem

The PPA (Public Pension Agency) has a 20-year-old legacy system on mainframe technology. The data (in Arabic) comprises from various organizations and banks. The data has 3 million records that required thorough data analysis and data cleansing. The purpose of the cleansing activity was to provide a totally cleaned data and this activity should form a basis for future reengineering activities.

The Solution

The data was ported from mainframe environment and converted to flat files (Windows Code Page 1256 format). These flat files were loaded on to SQL Serve 2000 database for Analysis purpose. ETL (Extraction, Transformation & Loading) tools like SQL DTS (Data Transmission Services) and Cognos ETL tools were used for Data Porting and cleansing activities. A detailed analysis was carried out on 100% data. Based on the analysis and error identification, automated cleansing and manual cleansing activities were identified. A detailed report was submitted to the customer highlighting the current quality of data, project plans, tools & technology to be used for data cleansing activities with recommendations.

Mainframe to SQL

One of the major issues in the project was converting the mainframe data to the form suitable for RDBMS based SQL server. The steps involved in the Project was following:

- VSAM files were moved to QSAM files on mainframe
- Assembly programs were written on mainframe to read QSAM files and unpack packed fields. Invalid packed fields were replaced with \$ and delimiters were inserted between the fields
- Generated files were FTPed in binary format from mainframe to PC
- VEDIT product was used to translate files from EBCDIC format to codepage 1256 and insert CRLF at the end of each record
- The records were than fed into SQL 2000 server to analyze the data as per the business rules

Public Pension Agency (PPA), Saudi Arabia

PPA is a government organization that takes care of giving pensions to the government employees who retire from work. If the government employee is no longer alive, the pension amount is given to his or her dependents. The agency covers both the civil as well as military employees of the government.

Currently they use a mainframe based System for maintaining the details of the Pension and the Pensioner. This System is in use for the last 20 years. PPA is in the process of developing a new open standard system for this purpose.

Our assignment was to clean the data stored in the old System, i.e. the legacy data and make it suitable for the new System being developed. The whole process was carried out by doing a detailed business analysis to understand the business rules behind each of the fields in the old System and then using database programming concepts to verify the business rule. Erroneous and error free data were separated based on the result of the program. Both the automated and manual cleaning process was followed to clean the complete data.

Technologies and Tools Used

- PL - SQL programming
- Data warehousing concepts
- SQL Server 2000
- Cognos Decision stream
- Project wise document archival System
- Vedit
- Assembly Programs on Mainframe

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