



INT NETLINK's Past Projects

Data warehousing for a Leading Service Provider

Afghanistan



Executive Summary

In order to maintain its competitive edge and leading position in the Afghanistan telecom market with the increasing competition, Customer initially required a fully functional Enterprise wide Data Warehouse (DWH) solution, with data integrated from sources, build from scratch conforming to industry standards. The primary aim was to facilitate end-users to perform detailed analysis on data retrieved from a multitude of data sources.

Solution Requirements

Provisioning of software, hardware, services and training needed for the new solution;

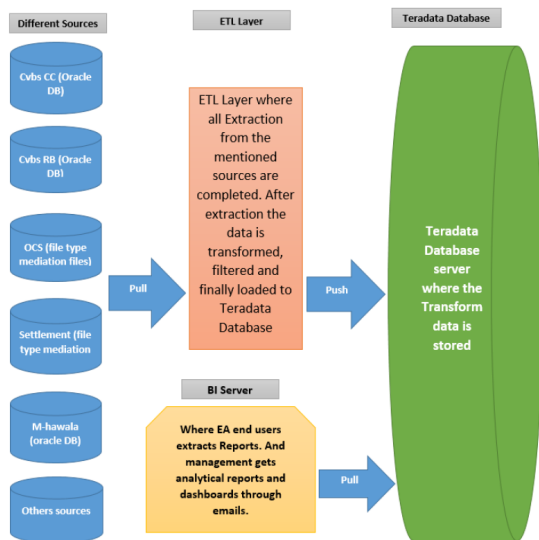
Integration of existing source systems with the new solution;

Integration of the new solution with the current reporting infrastructure of SAP BO 4.0.

The data is currently being extracted from the following source systems:

Applications: Customer care, Online charging system (primary), Online charging system (failover), Settlement, Oracle Data Warehouse, Mobile Money and SIM Inventory.

Databases: Customer care, Interconnect, Roaming Sales portal, mHawala (TLC), CDR pool, CRM, Network access KPIs and ERP.

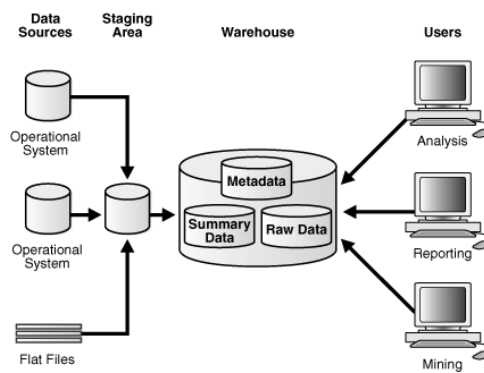


Solution Details

Data warehouses and their architectures vary depending upon the specifics of an organization's situation. The solution logical architecture is as follows

Logical Deployment Model

The approach with connecting the source systems, for data reception, would remain intact. Data from database-based systems would be received through flat files, and data from the source systems will be loaded directly into the staging area. In the figure, the metadata and raw data, extracted from the source systems will be present, along with summary data. Summaries are a mechanism to pre-compute common expensive, long-running operations for sub-second data retrieval. The operational data would be processed and cleaned before putting it into the data warehouse, using the staging area. A staging area simplifies data cleansing and consolidation for operational data coming from multiple source systems, especially for enterprise data warehouses where all relevant information of an enterprise is consolidated.



Physical Deployment Model

Data from database-based systems would be received through flat files, which will be loaded into the DBFS, hosted in Exadata. In addition, data received directly from applications, will be loaded into Exadata's staging area. This approach would save the cost of having a landing server.

All the required preprocessing would be done using Oracle Data Integrator (ODI) – staged inside Exadata – hosting the staging area for transient data. ODI creates temporary tables during the data transformation process. The tables, along with the data, are deleted once the job is completed. ODI would be staged inside Exadata as well, eliminating the cost of an additional landing server and inter-server communication spanning disk, network, etc.

ODI provides a declarative design approach to defining data transformation & integration processes, resulting in faster, simpler development and maintenance.

