

IMPETUS

SOLUTION BRIEF

# Automated Teradata Workload Transformation

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## Overview

Teradata is a widely used and popular data management platform by large enterprises. At the height of its popularity, there were few good alternatives for analytical data processing. Today that is no longer true and many of these enterprises are now wanting to modernize their data infrastructure to take advantage of the wide range of new options that are available. These “modern data architecture” technologies offer more flexibility, limitless scalability, greater ability to handle big, fast and complex data, while taking advantage of the elasticity and reduced support costs offered by cloud computing solutions.

In addition, many Teradata users today want to move their increasingly important enterprise analytics processing to a new platform - choosing to shift away from dependence on a single vendor architecture in order to take advantage of the flexibility that the open source revolution is delivering.

## Automated Teradata Workload Transformation

To make the move to a new platform, enterprises must confront the complexity of transforming Teradata warehouse workloads to big data. Manual identification and transformation of EDW, ETL, analytical and reporting workloads is-

- Complicated
- Tedious
- Time-consuming
- Error-prone

The way forward is adopting an automated approach for the workload transformation.

# Impetus Automated Workload Transformation Solution

The Impetus Teradata Workload Transformation Solution leverages automation to transform your Teradata warehouse workloads to big data on the cloud, on-premise or hybrid. It simplifies and accelerates the transformation process with speed, reliability, and no required coding by:

- Automatically moving the Teradata schema to an optimized big data model
- Automatically identifying the right transformation candidates
- Providing an automated logic transformation to your choice of supported query engines
- Identifying and transforming the underlying Teradata scripts and BTEQ queries into Spark SQL/HQL
- Certifying/auditing transformed entities automatically
- Replacing the Teradata command line calls to Hive/Spark Beeline calls

Here are the benefits our solution offers over manual transformation-

100% Cloud-ready	Faster Time-to-market	Reduced Development, Validation, and Testing Cycles
Reduced TCO	100% Enterprise-ready	Scalable and Flexible Target Platform

## Fast. Reliable. Automated.

The Impetus Workload Transformation Solution replaces manual transformation with powerful automation to accelerate the process, reduce effort, and save time.

It provides:

- **Automated inventory and profiling of current workloads**
- **Right positioning of workloads:** Enables a data-driven assessment to prioritize workloads for transformation and optimization
- **Optimized transformation:** Transforms data (historical and incremental) and schema with great ease. It also tunes the schema on the fly. Improves CPU/memory usage, cache hit ratio and disk I/O by partitioning, clustering, bucketing, etc.
- **Leave behind transformed source code:** Executes the transformed scripts with standard code that is executable on any standard big data environment
- **Automated validation framework:** Certifies a successful migration. Inbuilt validations for transformation of data, metadata, queries (both syntactically and semantically) and other workloads
- **Automated legacy code transformation:** Automatically transforms the legacy code and logic with the industry's first, intelligent transformation engine built on years of successful transformation expertise. Also, Notebook Editor provides great flexibility to simultaneously edit the transformed queries. Further, predicts performance of transformed queries on target that highlights the ideal candidates for optimization

# The Impetus Teradata Transformation Process

The Teradata transformation process has the following steps-



## ASSESSMENT

Right position the workloads



## VALIDATION

Validate data, metadata, queries



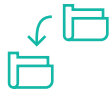
## TRANSFORMATION

Transform complete logic



## EXECUTION

Execute transformed scripts



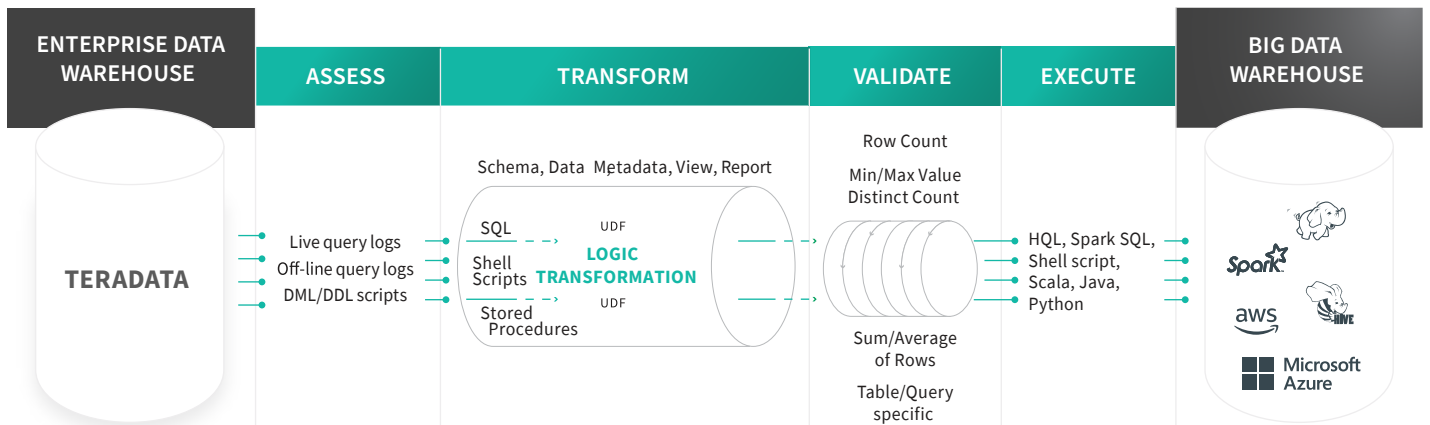
## MIGRATION

Migrate schema, data, view

# Key Features

- Data-driven assessment
- Automated transformation of workloads and data
- Automated script transformation
- Output artifacts: SQL, Java, Scala, Shell, Python
- Data structure optimizations
- Choice of query engine: Hive and Spark SQL
- Notebook-based online transformation
- Query performance prediction on target
- Comprehensive reports
- Automated metadata harvesting and publishing
- Monitoring, audit logs
- Supports end-to-end EDW transformation
- Extensible, repeatable, verifiable framework
- Drag and drop-based workflow

## Impetus Teradata Workload Transformation Solution Architecture



## IMPETUS

Impetus is focused on creating big business impact through Big Data Solutions for Fortune 1000 enterprises across multiple verticals. The company brings together a unique mix of software products, consulting services, Data Science capabilities, and technology expertise. It offers full life-cycle services for Big Data implementations and real-time streaming analytics, including technology strategy, solution architecture, proof of concept, production implementation and on-going support to its clients. To learn more, visit [www.impetus.com](http://www.impetus.com) or write to us at [inquiry@impetus.com](mailto:inquiry@impetus.com).