TDM V7 RELEASE NOTES

These Release Notes describe the new features in TDM version 7:

Certification of this TDM release is based on:

- TDM GUI 7.1.
- Fabric 6.4.1.
- Cassandra version 3.11.6 (updated package for Cassandra as a service).
- SQLite version 3.27.2.
- PostgreSQL 9.6.

Main Features and Improvements

1 Fabric Broadway Replaces ADI in TDM V7

In previous versions, TDM was based on a combination of two K2View platforms - Fabric extracted data from data sources and used as the Test Data Warehouse and ADI responsibility was to load the data to target.

Replacing ADI as of TDM V7, Broadway and its powerful Actor, Stages and Flow methodologies, is used to design data movement, its transformation and the orchestration of business flows. Broadway features a powerful user interface for creating and debugging business and data flows and provides a high-performance execution engine that can be activated by Fabric.

Using Broadway to the load the data provides major advantages:

1.1 One Platform for TDM Development

Following a one-platform approach for TDM reduces the implementation effort provide E2E implementation, debugging and execution in one place.

1.2 Supports Various Data Source Types

Broadway supports a wide range of data source types including databases, files in different formats, Web Services and can publish or subscribe messages to a message queue.

1.3 One Generic JDBC DB Interface Standard

Fabric supports a generic DB mechanism based on the JDBC driver:

- Fabric enables defining database types by the project implementation that support the connection of different DB types without changing a product.
- ODBC and ADO.NET drivers are no longer required.

1.4 Auto Discovery

Fabric Auto Discovery supports various interfaces and implements out-of-the-box queries to uncover metadata like the FK and PK of DBs to discover the links between tables. TDM V7 allows better customization for auto-discovery tasks.

1.5 Cassandra DB Load – Performance Improvements

Featuring Datastax Loader support, TDM v7 provides an enhanced performance when loading data to Cassandra as a target DB compared to previously via ADI.

1.6 Adding New Templates to Automate TDM Development

Templates are ready-made Fabric objects that can be used throughout a project. Working with a defined built-in structure rather than creating an object from scratch, saves time and increases efficiency. Templates can also reduce implementation errors since they use and embed the correct methodologies and Fabric's best practices.

TDM v7 provides templates for creating TDM flows that load and delete entities or load Reference tables to target environments. Moreover, TDM V7 automatically generates load flows based on a predefined template and on the LU structure.

1.7 Flexible Error Handling Mechanism

Broadway has Error Handling Actors that enable different types of behavior based on an exception type like an SQL or HTTP error or based on a given SQL Error code and DB vendor:

- Suppress or fail the execution.
- Report the error to the log file.
- Invoke an inner flow that gets the error information and writes it to the TDM tables to provide full data of the errors in the TDM execution report.

The Error Handling mechanism enables a maximum flexibility when running the TDM on different types of data sources.

1.8 Flexible Statistics Mechanism

The Broadway Statistics Actors provide statistics on executed tasks. This includes the Execution Time of the Get Instance from Fabric and the Load Execution Time of each entity. The Statistics Actors also enable writing execution statistics into various target types using an inner Broadway flow. The TDM writes statistics for the Task Execution Report into the TDM DB.

1.9 Robust Data Masking and Sequences Libraries

Masking

To be compliant with Data Privacy laws, Fabric provides a masking category of Broadway Actors that can mask sensitive fields like SSN, credit card numbers and email addresses before they are loaded into a target DB or even before they are loaded into the Test Data Warehouse.

The Masking utility hashes the original value of the masked field using the SHA-256 algorithm and a secret key generated by Fabric.

Sensitive data can be masked either by the LU Table Population Broadway Flow which masks the data before it is saved into Fabric, or by loading Broadway to mask the data before it is loaded to the target.

Sequences

Broadway enables generating and setting new sequences before loading data into a target database. Various sequence patterns can be implemented via the MaskingSequence Actor and other Broadway features. The sequence Actor has major advantages:

- Using Sequence Actors in a flow simplifies the debug and maintenance of TDM processes.
- The sequence Actor works in a lazy mode whereby initial settings are implemented only when a flow runs and only after it verifies that the initial value of the setting's process has not yet been activated.
- An Environment Sequences support has been added to enable execution of parallel environments, whereby each environment has its own sequences that are applied to its populations.

2 Security Improvements

Adding SSL Connection to LDAP

Support has been added for SSL connections to the LDAP system (LDAPS).

HTTP Interface Authentication

The HTTP Interface now supports various standard authentication and authorization types and protocols when accessing external protected resources.

Fabric implements all required authentication interactions with remote vendor servers based on the selected type and security credential properties. The following authentication types are supported:

- Basic HTTP authentication.
- Bearer authentication.
- OAuth 2.0 password credentials.
- OAuth 2.0 client credentials.

3 Improvement for Deleting Entities

Generic TDM implementation utilities have been enhanced to support deleting all children entities from a target environment using a Delete task. This includes data that has been added by testers after first copying a deleted entity.

For example, load Customer #1 with Orders #10 and #11 to the target. The tester creates the additional Order #15 for the customer. The Delete task must also include Order #15 even if it was not copied by the original Load task.

4 Stop and Resume Load Tasks Support

Support has been added for resuming stopped tasks during extract and load task types.