IMPETUS

Lab Manual for LeapLogic Trial

Contents

1 Objective

The objective of this document is to provide guidance to the first-time users to access and use the LeapLogic solution to execute the following two types of work items-

- Automated assessment of EDW-ETL workloads
    - How a user can configure an assessment pipeline in LeapLogic.
    - What is available in a LeapLogic assessment report.
- Automated code transformation of EDW-ETL workloads
    - How a user can see configure the code translation pipeline in LeapLogic.
    - How can you download the converted code and execute in your Databricks workspace.

2 LeapLogic Value Proposition

2.1 LeapLogic Assessment

Assessment provides several meaningful and useful insights that helps to plan the migration. It plays a vital role in identifying the starting point for your migration and in chunking the workloads appropriately for a smooth, phased migration ensuring zero business disruption. In a nutshell, it offers the following fundamental benefits.

- Helps to create a robust plan to ensure business continuity through automated assessment.
- Chalks out a prioritized roadmap of use cases based on risk, SLA, and enterprise business goals.
- Automated inventory and profiling of your data warehouse, ETL, and analytics workloads.
- Creates a phase-wise, prioritized blueprint of your migration plan.
- Strategizes your offload program based on data-driven analysis and insights.
- Helps to craft a full-scale transformation strategy as per the business use case.
- Actionable recommendations for data warehouse assessment.

2.2 LeapLogic Transformation

The workload transformation pipeline provides code transformation capabilities in batch mode. In a nutshell, it offers the following fundamental benefits.

- Helps to create a drag-drop-based code transformation pipeline.
- Automated code transformation of a variety of code types and sources.
- Code packaging and orchestration directly executable using Databricks-native wrappers.
- Preserve core business logic through automated transformation to native-Databricks Lakehouse equivalent format.
- Code optimization recommendations for better performance on Databricks.
- Repeatable, extensible, and verifiable transformation methodology.

3 LeapLogic Supported Source EDW-ETL Platforms.

The following matrix describes the supported platforms and versions.

3.1 Supported EDW and ETL Platforms

The following enterprise data warehouse platforms are supported by LeapLogic.

#	EDW	Input Type
1	Teradata	SQL/BTQ/Procedure
		KSH
2	Netezza	SQL/Procedure
3	Oracle	SQL/Procedure
4	SQL Server	SQL/Procedure
5	Vertica	SQL/Procedure
		KSH/BASH/SH
6	Greenplum	SQL/Procedure

#	ETL	Input Type
1	Ab Initio	KSH
2	Informatica	XML
3	DataStage	XML/DSX
4	SSIS	DTSX

#	Analytical Platform	Input Type
1	SAS	SAS Script
		EGP
		<TODO>

4 Demo Video

There is a demo video available to guide you through the step-by-step process to create the Automated Assessment and Automated Code Transformation pipelines within the LeapLogic solution.

4.1 LeapLogic Assessment

The video is available here. This includes the details on LeapLogic usage for creating an EDW-ETL assessment pipeline and reviewing the Assessment Report

4.2 LeapLogic Transformation

The video is available here. This includes the details on LeapLogic usage for creating a code transformation pipeline and executing the code in the Databricks workspace.

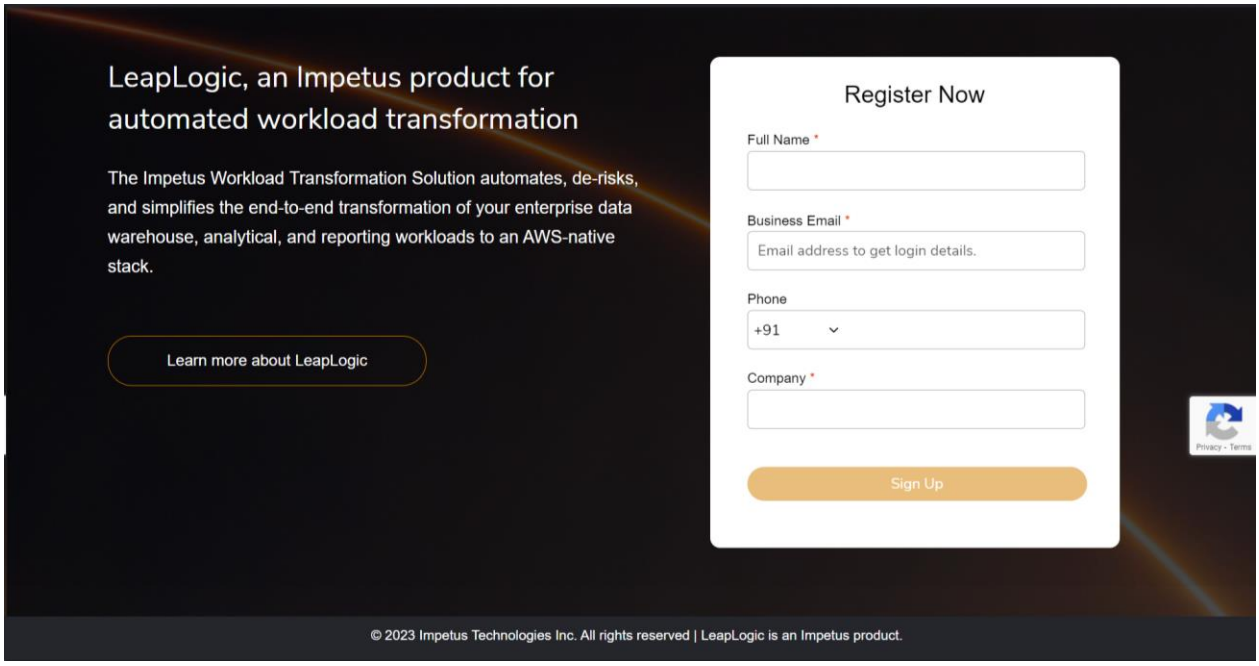
5 Registration and Login

You will be provided with a self-hosted LeapLogic environment.

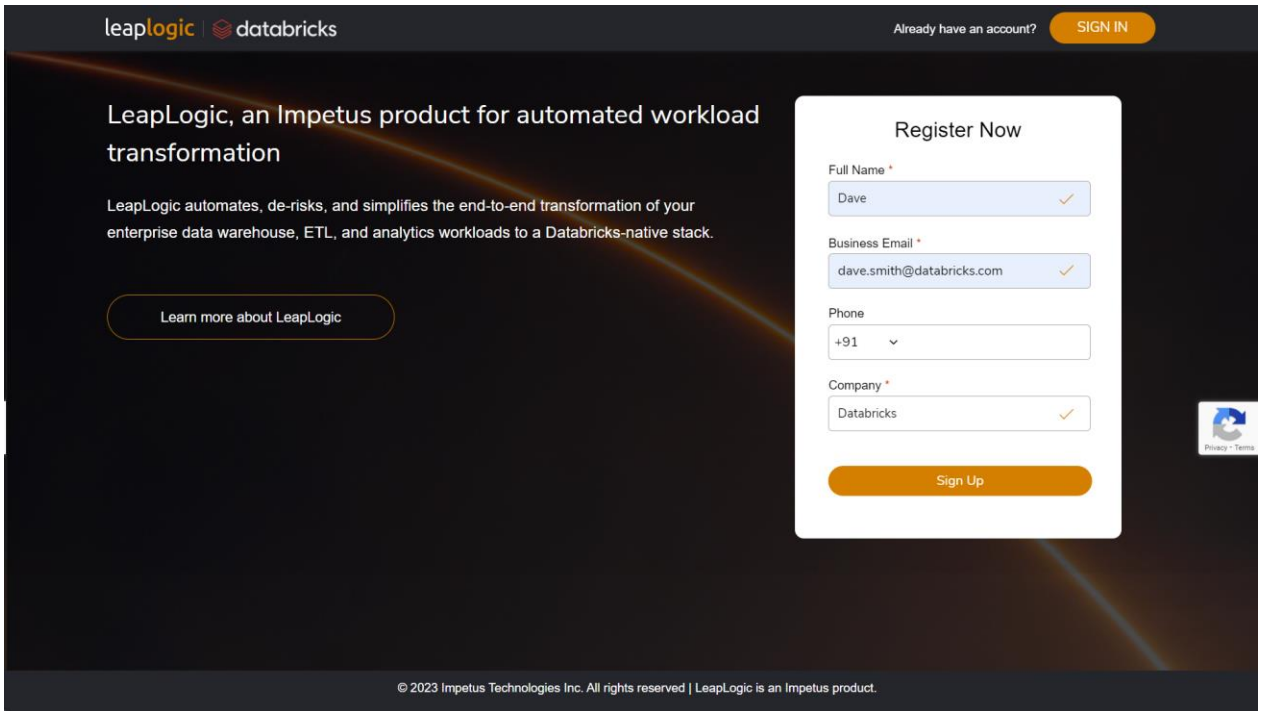
Follow these steps to start experiencing LeapLogic assessment and how it produces meaningful and powerful insights that are actionable, descriptive, and diagnostic in nature.

1. Go to LeapLogic. (https://trial.leaplogic.io). You will land on the Sign-Up page.

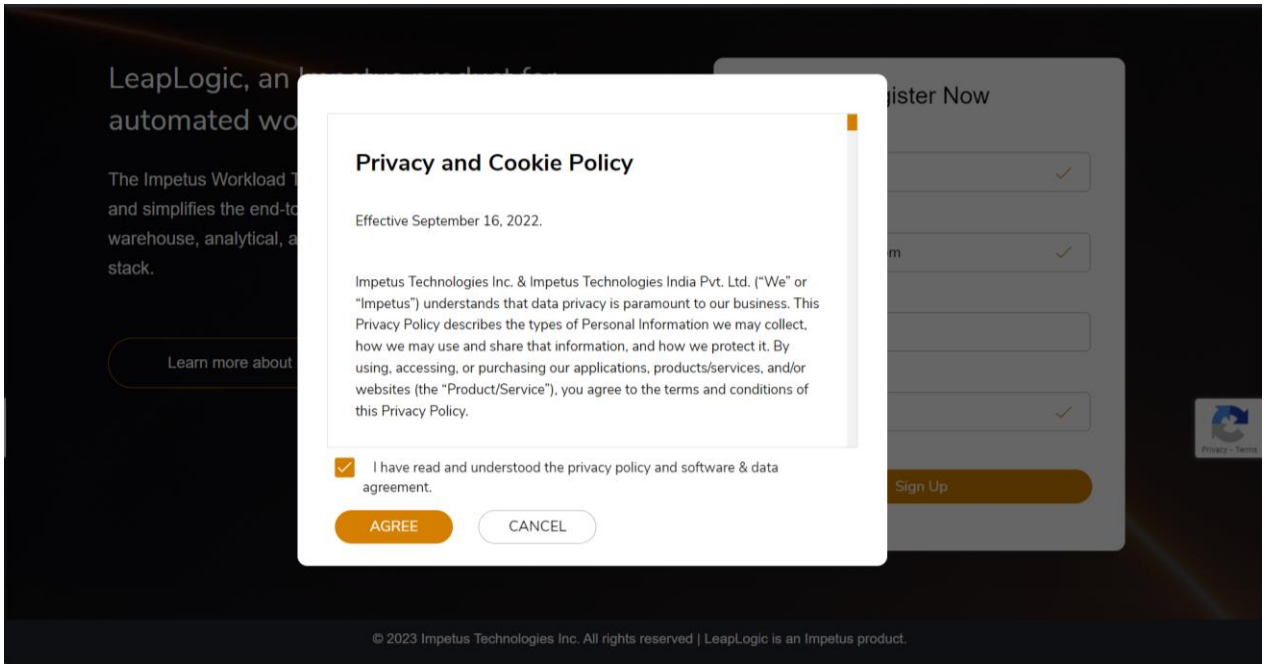
> **Note**: If you already have login credentials, click **SIGN IN** and go to step no. 8 directly. If you do not have the credentials, follow the below steps.



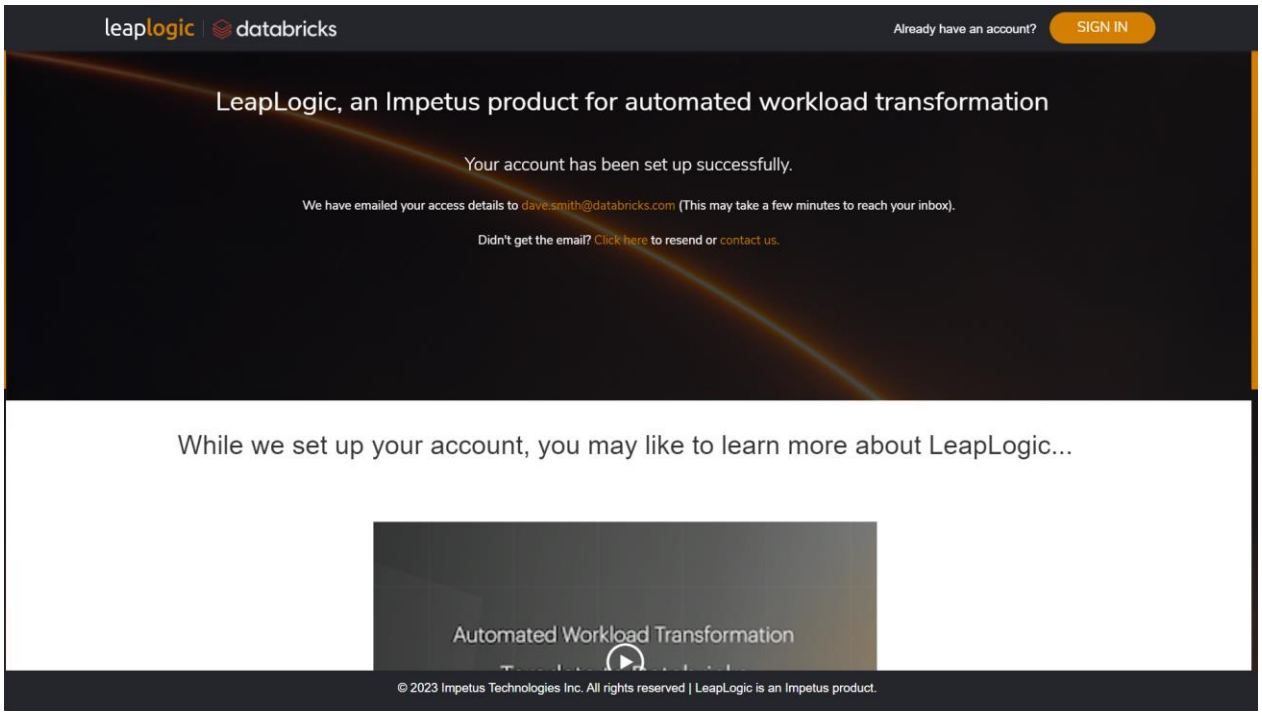
2. Fill in the registration form.



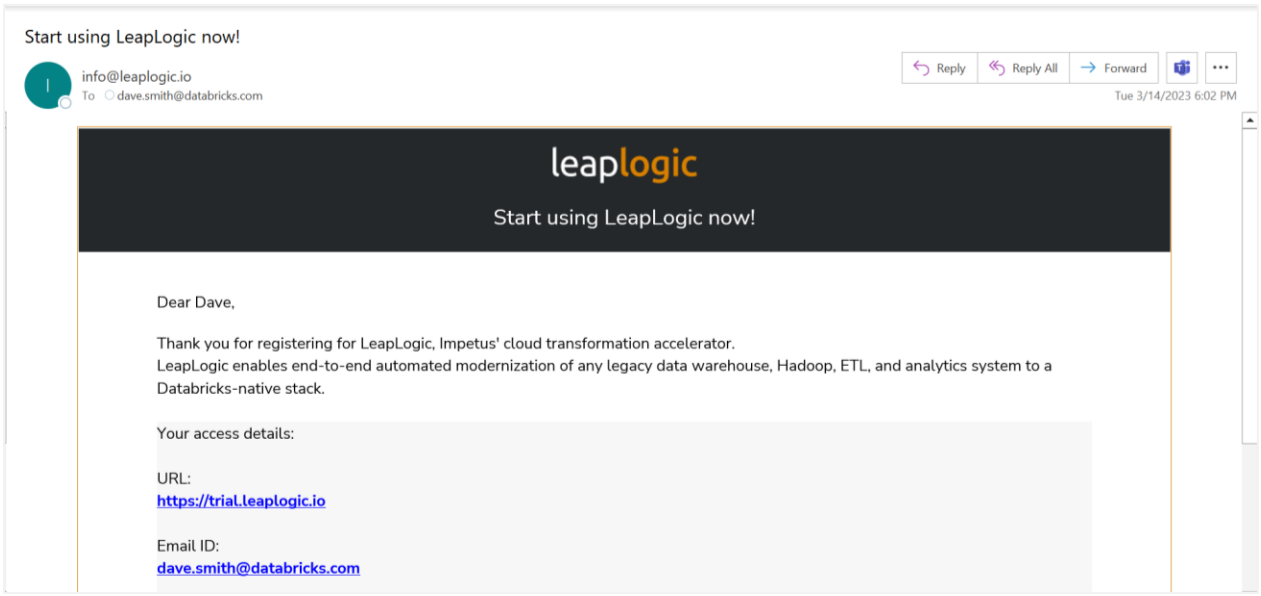
3. Click on Sign Up.
4. Select “I have read and understood the privacy policy and software & data agreement.” and click on AGREE.



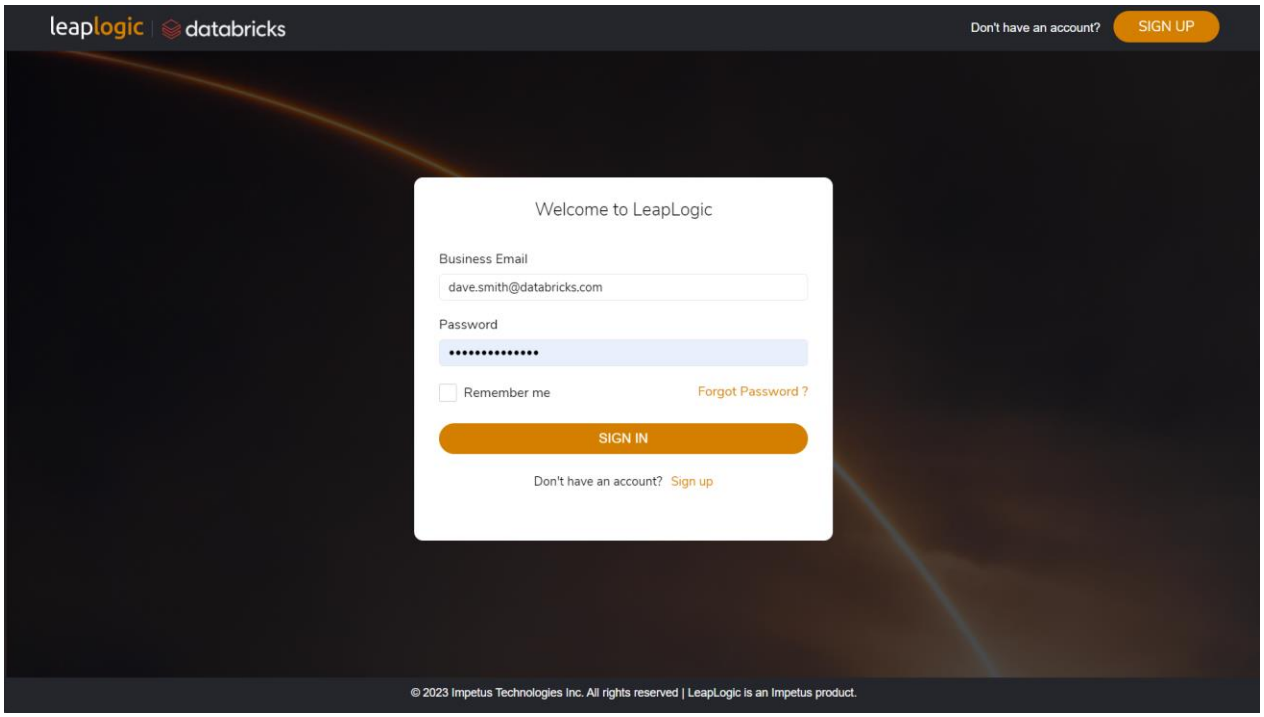
5. You will be landed on a Sign-Up success page.



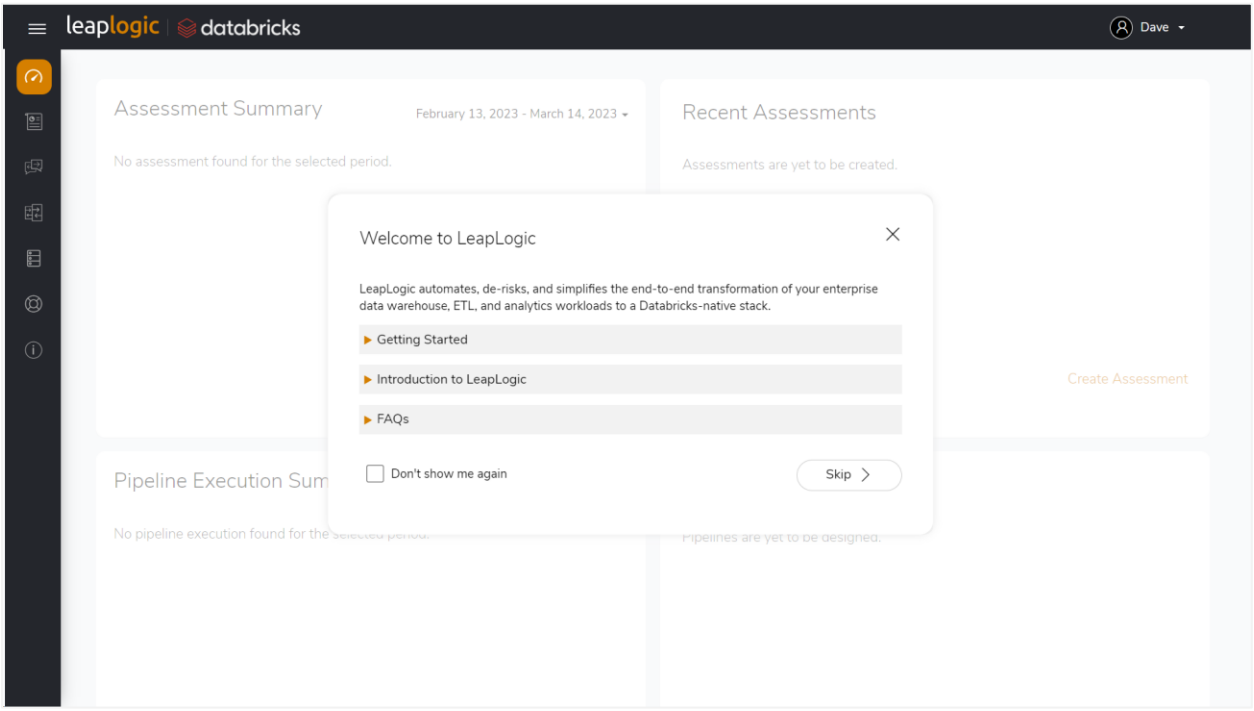
6. Check your Inbox. You would have received an email from info@leaplogic.io with the subject 'Start using LeapLogic now!'. Copy the login credentials.



7. Go back to the application and click on **SIGN IN**.
8. Paste the user id and password in the respective fields and click on **SIGN IN**.



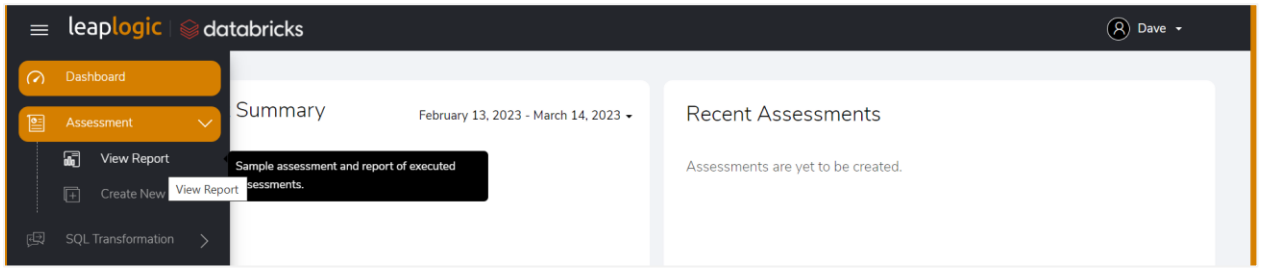
9. You will land on to the Welcome screen.



10. Click Skip.

11. Once you skip that dialog, you will see Dashboard showing recent assessments and pipelines.

12. Go to Assessment > View Report from the left navigation menu.



13. You will land on to the Assessment reports page.

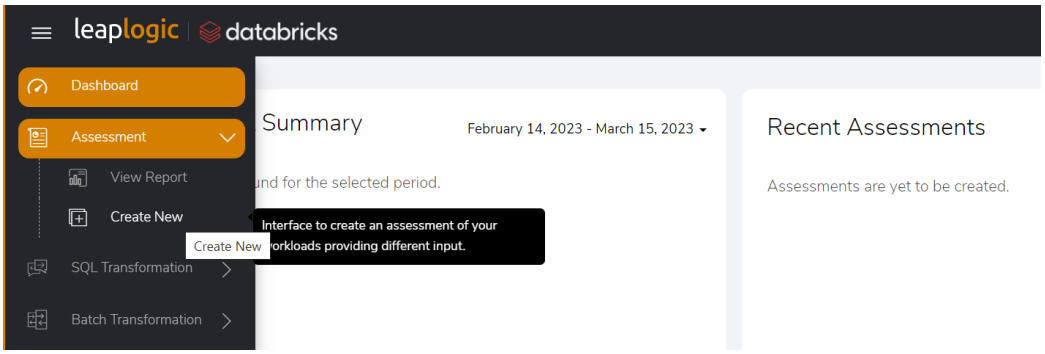
6 Prerequisites

To start extracting useful insights out of LeapLogic Assessment, the following prerequisites needs to be catered.

- You have the required access of the database and steps to extract the ETL scripts.
- You have the ETL scripts that you need to transform.

7 Assessment

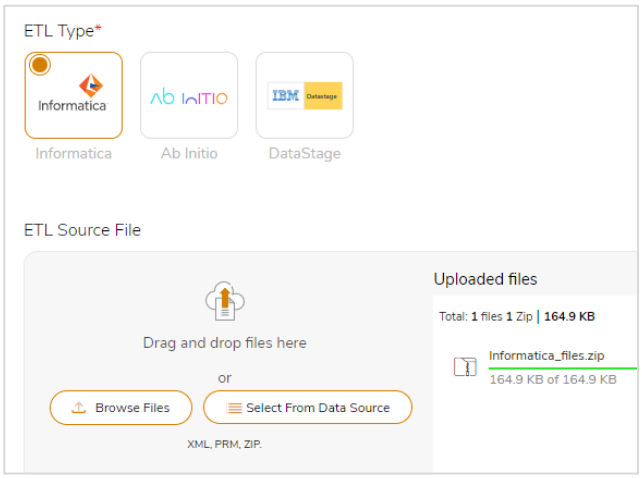
Use the left navigation menu and go to Assessment and click Create.



7.1 Create And Assessment Pipeline

Assessment creation is the first and foremost step to get the required insights.

- Give your assessment a name.
- Select **ETL Script** in the **Source Code Type**.
- Select ETL type as Informatica, DataStage etc.



- Select **Databricks** in target.
- Once done with the configuration, click **Execute**. It takes you to the listing page which shows your assessment.
- Click your assessment to see detailed analysis and download reports.

7.2 Insights & Recommendations

Once you click on your assessment, the system takes you to the insights section.

7.2.1 Source Inventory

Assessment identifies and reports complete source inventory on the application UI and in downloadable excel reports. An example for the Informatica inventory is as follows: Workflows, mappings, sessions, expressions, source queries, procedure blocks etc. DataStage: File-wise jobs, activities, stages, transformations, and job info.

7.2.2 Code Complexity

Assessment identifies and reports the complexity of ETL scripts, queries, files, and analytics scripts. Based on the complexity identified, it helps to estimate the conversion effort.

7.2.3 Dependency Analysis

Assessment identifies and reports the end-to-end dependency structure which is shown as an interactive graph on the application UI and through downloadable excel reports. It provides various options to filter and search by specific target tables, entities, jobs, etc.

Insights	**Benefits**
Dependency structure: end-to-end lineage • Triggering orchestration scripts • Participating scripts • Input and output tables • Orchestration sequence	• Identify the phase-wise scope for migration by dividing migration into separate logical units. • Sprint planning

7.2.4 Recommendations

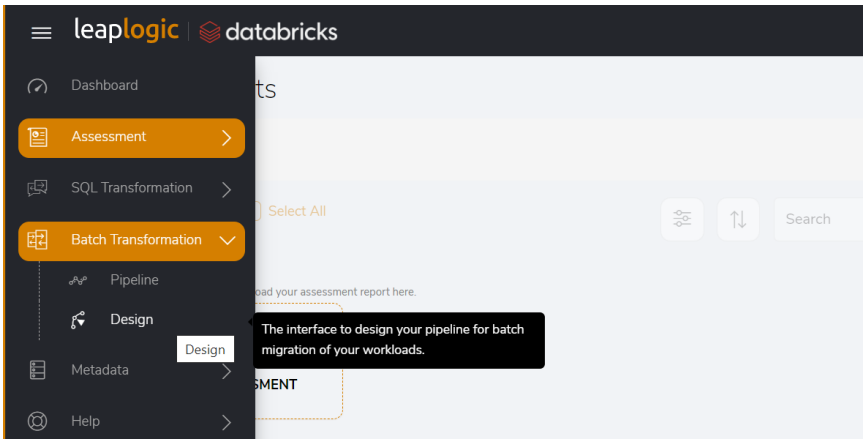
LeapLogic Assessment recommends files, queries, entities, applications, and users for migration. It also provides optimization recommendations for schema, code, and orchestration. Furthermore, it recommends a future-state architecture blueprint for your target data warehouse.

7.2.5 Downloadable Reports

LeapLogic Assessment provides detailed downloadable reports for offline business use. Access them from the top right corner of the screen and download the required ones.

8 Pipeline

Use the left navigation menu and go to Batch Transformation and click Design.



8.1 Pipeline Creation

Create your transformation pipeline to transform your code.

8.1.1 ETL Conversion

When your source is an ETL, use the ETL Conversion stage.

- Drag-drop the **ETL Conversion** stage from the transformation library.
- Double-click to configure it.
- Select ETL source as Informatica or DataStage as required.
- Select target type as Databricks Notebook (Python Notebook compatible code) or Databricks Lakehouse (SQL compatible code)
- Once done with the configuration, click **Save**.
- Click **Execute** icon from the right top corner of the screen to execute the pipeline. It takes you to the listing page which shows your pipeline.
- Click your pipeline to see detailed reports and download the generated artifacts.

8.2 Reports

Once you click on your pipeline, the system takes you to the reports section.

8.2.1 ETL Conversion Report

The ETL conversion report shows a summary followed by the transformed ETL scripts. You can drill-down individual scripts to see the converted transformations or components.

8.2.2 Downloadable Artifacts

The Transformation report provides the converted artifacts in a downloadable format for execution over the Databricks platform. Click the **Download** icon to download the converted artifacts.

9 Getting Help

Contact LeapLogic technical support at info@leaplogic.io for any help.