# **Database Script Execution Guide**

## **1. Introduction**

This document outlines the process for applying database schema and data changes using scripts located in /src/main/resources/db-scripts. It is essential to follow the specified execution order to maintain database integrity.

## **2. Script Organization and Naming Convention**

The database update scripts adhere to the following naming convention:

* v<previous\_version>\_to\_v<new\_version>\_db\_changes.sql
* Example: v3.1.1\_to\_v3.1.2\_db\_changes.sql

Scripts are categorized as follows:

* ./db-scripts/psql\_db\_scripts/ contains PostgreSQL base scripts.
* ./db-scripts/msql\_db\_scripts/ contains Microsoft SQL Server base scripts.
* ./db-scripts/<version\_to\_version>/ contains incremental updates.

## **3. Execution Order**

Scripts must be executed sequentially to ensure proper migration:

1. v3.1.1\_to\_v3.1.2\_db\_changes.sql
2. v3.1.2\_to\_v3.1.3\_db\_changes.sql
3. v3.1.3\_to\_v3.1.4\_db\_changes.sql
4. v3.1.4\_to\_v3.1.5\_db\_changes.sql
5. v3.1.5\_to\_v3.1.7\_db\_changes.sql
6. v3.1.6\_to\_v3.1.7\_db\_changes.sql (if applicable)
7. v3.1.7\_to\_v3.1.8\_db\_changes.sql
8. v3.1.8\_to\_v3.1.9\_db\_changes.sql

Ensure each script executes successfully before proceeding to the next.

## **4. Executing Scripts in PostgreSQL Using pgAdmin**

### **Steps:**

1. Open **pgAdmin** and connect to the PostgreSQL database.
2. Select the target database.
3. Navigate to **Tools** → **Query Tool**.
4. Click **Open File** and load the required SQL script.
5. Click **Execute (▶️)** to run the script.
6. Monitor execution logs for any errors.
7. Repeat for each script in the specified order.

### **Best Practices:**

* Review script content before execution.
* Validate logs and rollback in case of errors.
* Take database backups before applying scripts.

## **5. Executing Scripts in SQL Server Using SSMS**

### **Steps:**

1. Launch **SQL Server Management Studio (SSMS)**.
2. Connect to the target SQL Server instance.
3. Select the appropriate database.
4. Open a **New Query** window.
5. Load and execute the SQL script in the editor.
6. Click **Execute (▶️)**.
7. Verify execution results in the **Messages** tab.
8. Proceed with the next script sequentially.

**Recommendation:**

* Utilize transactions to ensure safe rollback if needed.
* Validate execution success before continuing.
* Perform thorough testing in a controlled environment before production deployment.