SOP-Migrating Northwind database from MSSQL to PostgreSQL

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| **SOP Number** |  | | | |
| **SOP Title** | **Migrating Northwind database from MSSQL to PostgreSQL** | | | |
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# Purpose:

The purpose of this Statement of Purpose (SOP) is to outline the systematic process and considerations involved in migrating the Northwind database from Microsoft SQL Server (MSSQL) to PostgreSQL. The migration aims to leverage the benefits of PostgreSQL, such as enhanced performance, scalability, and open-source flexibility. This undertaking is driven by the need to align with modern database management trends, ensuring compatibility and seamless operation while preserving data integrity and security during the transition.

# Introduction:

The Northwind database, a classic and widely-used sample database, has been traditionally associated with Microsoft SQL Server. As organizations evolve and diversify their technology stacks, the migration of databases becomes imperative for staying agile and responsive to emerging requirements. This SOP addresses the essential steps and considerations involved in migrating the Northwind database from MSSQL to PostgreSQL. The decision to migrate is fueled by the desire to harness PostgreSQL's robust features, including advanced indexing, extensibility, and support for complex data types. The following sections detail the systematic approach to ensure a smooth, efficient, and secure transition from MSSQL to PostgreSQL.

# Scope:

The scope of this migration SOP encompasses the simple process of transferring the Northwind database from MSSQL to PostgreSQL using SQL scripts and Chat GPT

# Procedure:

**Step 1:** [GitHub - yogimehla/SQLtoPostgresMigrationScript](https://github.com/yogimehla/SQLtoPostgresMigrationScript)  
Download the TSQL script from the given git hub link  
  
**Step 2:** Execute step 1 .sql on source mssql database which is prerequisite.sql on Source database on MSSQL server which is northwind which creates a function

**Step 3:** execute step 2.sql on source mssql database to create schema and table on source. Which outputs create 2 scripts which can be executed on PostgreSQL one for schema and one for creating tables.

Note: please use double quotes for the table names which have space in it  
for example: dbo.order details should be manually changed to dbo.”order details” **Step 4:** execute step 3.sql on source mssql database to export all the data in the tables to csv. The script automatically exports the data to csv using given path on the top of the sql script please change the path to desired if drive doesn’t have permission to export  
this step need XP\_cmdshell which is extended procedure in mssql by default it will be disabled need to enable using sp\_configure using SA previlages  
  
**Step 5:** execute step 4.sql on source mssql database which will generate import script which can be directly executed in PostgreSQL. Copy the output and paste in PostgreSQL query window and if there are any spaces in table names on the source database make sure to use the double quotes before executing the script

dbo.order details should be manually changed to dbo.”order details”

**Step 6:** run select count statements on both the MSSQL and PostgreSQL databases to verify the data

**Step 7:** execute step 6.sql on source mssql database which outputs a script that can be ran on PostgreSQL to create all primary key and unique constraints . if there are any spaces in table names on the source database make sure to use the double quotes before executing the script

dbo.order details should be manually changed to dbo.”order details”

**Step 8:** execute step 7.sql on source mssql database which outputs a script that can be ran on PostgreSQL to create all Foreign key constraints

**Step 9:** execute step 8.sql on source mssql database which outputs a script which can be executed on PostgreSQL to create all the indexes  
  
**Step 10:** once you have the data matching on both the servers generate scripts for all the views from MSSQL server to .SQL file using wizard this will give a SQL script which is in tsql

**Step 11:** copy the TSQL script generated and use Chat GPT to convert the views from TSQL to PGSQL

**Step 12:** Generate the script for the Stored procedures from the source server using wizard and use ChatGPT to convert it from TSQL to PGSQL

**Step 13:** Check the views and procedures by executing them on the PostgreSQL server

## Internal References

| SOP no. | Effective Date | Significant Changes | Previous SOP no. |
| --- | --- | --- | --- |
| V1 | 14-01-2024 |  | N/A |
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