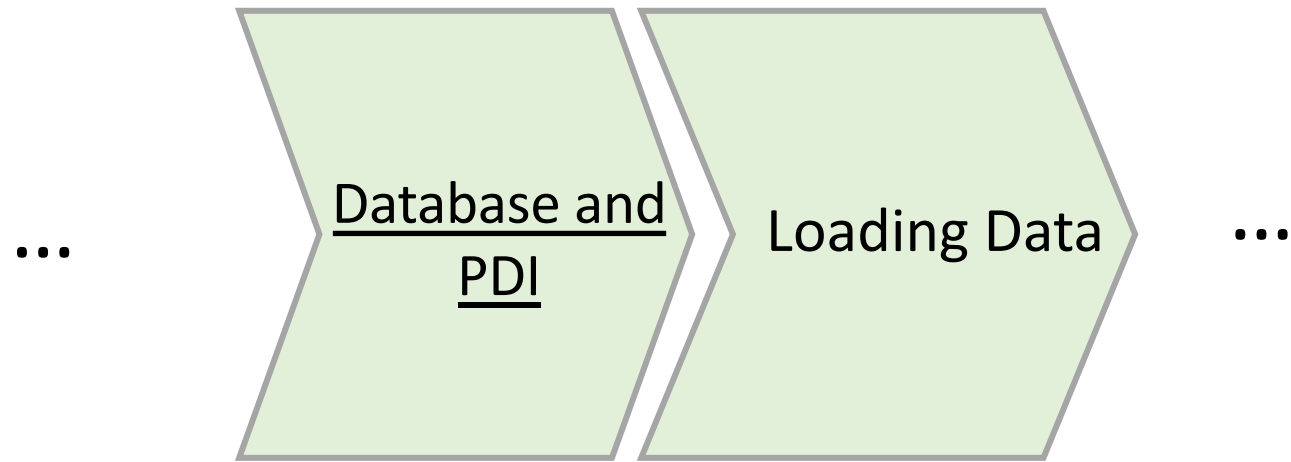


DATA ANALYTICS (Data Warehouse) Pentaho Data Integration

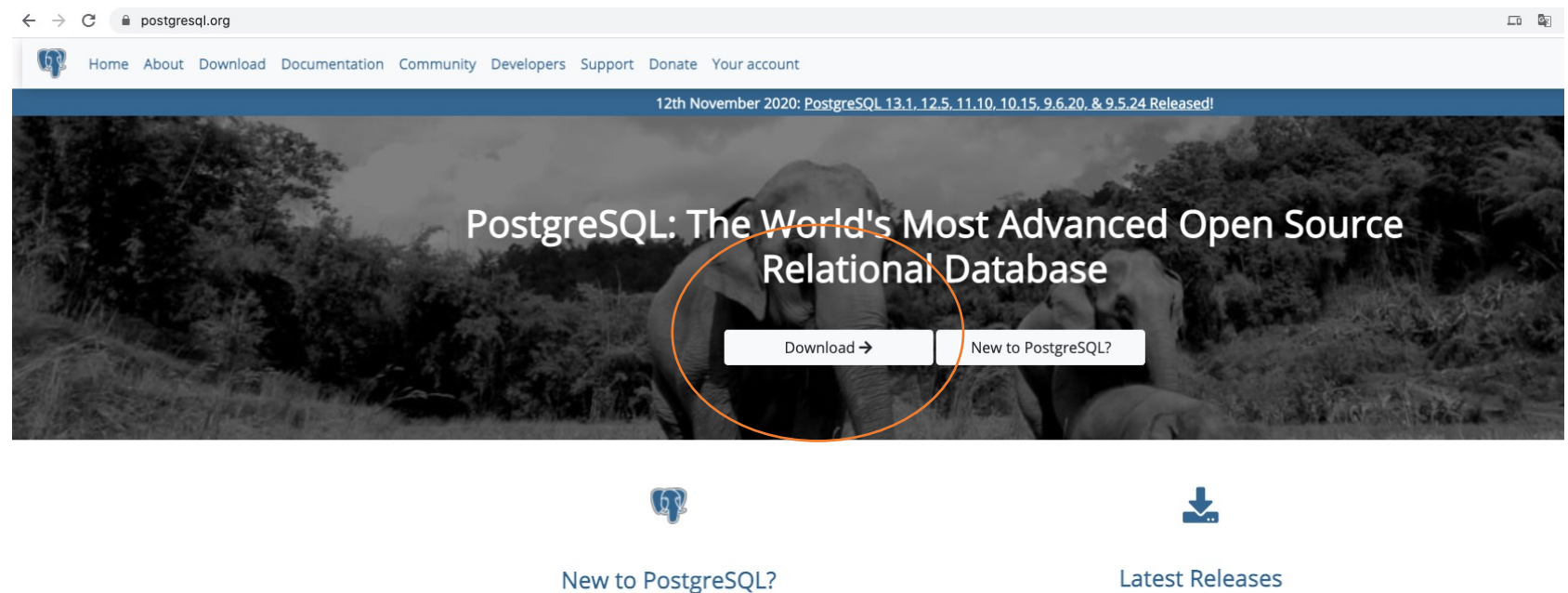
Luca Cinelli, PhD
luca.cinelli@unical.it

Outline



Setup PostgreSQL

- <https://www.postgresql.org/>



- Database engine
- Graphical Interface: PGAdmin

Setup PostgreSQL

- <https://www.postgresapp.com>



Postgres.app

The easiest way to get started with PostgreSQL on the Mac

Introduction

Downloads

Documentation

GitHub

← 6091 Stars!

Postgres.app is a full-featured PostgreSQL installation packaged as a standard Mac app. It includes everything you need to get started, and we've even included the popular extension [PostGIS](#) for geo data.

Postgres.app has a beautiful user interface and a convenient menu bar item. You never need to touch the command line to use it – but of course we do include all the necessary [command line tools](#) and header files for advanced users.

Postgres.app can install minor updates automatically, so you get bugfixes as soon as possible.

Installing Postgres.app

1

Download → Move to Applications folder → Double Click

If you don't move Postgres.app to the Applications folder, you will see a warning about an unidentified developer and won't be able to open it.

2

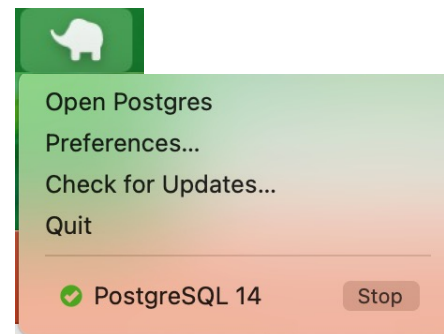
Click "Initialize" to create a new server

3

Configure your \$PATH to use the included command line tools (optional):

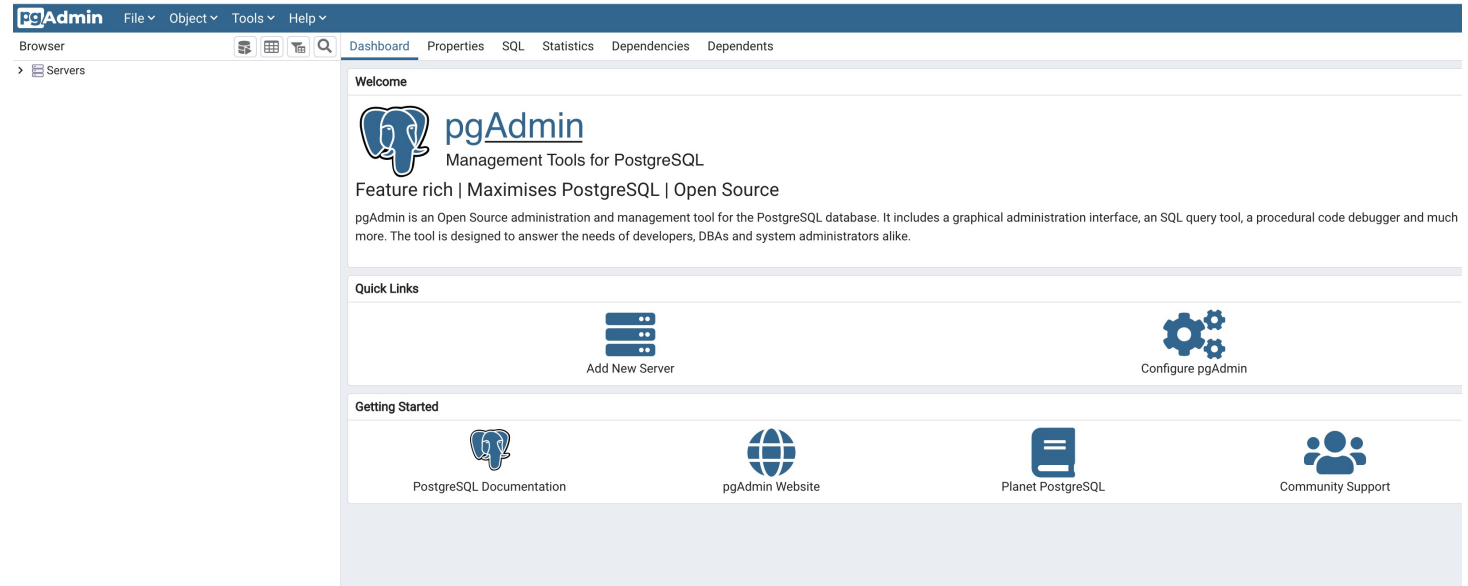
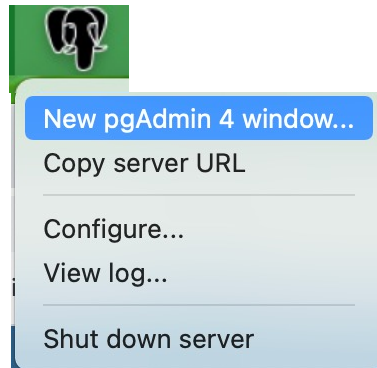
```
sudo mkdir -p /etc/paths.d &&  
echo /Applications/Postgres.app/Contents/Versions/latest/bin | sudo tee /etc/paths.d/postgresapp
```

- Database engine
- Graphical Interface: PGAdmin



Setup PostgreSQL

- <https://www.postgresapp.com>
- Database engine
- Graphical Interface: PGAdmin (<http://127.0.0.1:51765/browser/>)



Creating tables in PostgreSQL

<http://127.0.0.1:60624/browser/>

The diagram illustrates the steps to create a table in PostgreSQL using pgAdmin:

- pgAdmin Interface:** The 'pgAdmin' application is shown with the 'Browser' pane on the left. The tree structure includes 'Servers (2)' > 'PostgreSQL 10' > 'Databases (1)' > 'postgres' > 'Schemas (1)' > 'public'. The 'Tables' option is selected in the left-hand tree.
- Context Menu:** A right-click context menu is shown over the 'Tables' node. The menu options include 'Create', 'Refresh...', 'CREATE Script', 'Maintenance...', 'Backup...', 'Restore...', 'Grant Wizard...', 'Search Objects...', 'Query Tool...', and 'Properties...'. The 'Query Tool...' option is highlighted.
- Query Editor:** The 'Query Editor' window is shown, displaying the 'postgres/postgres@PostgreSQL 10' connection. The 'Query Editor' tab is active, showing a blank query area. The 'Data Output' tab is also visible. A message at the bottom states: 'No data output. Execute a query to get output.'

Creating tables in PostgreSQL – Sales Table schema example

```
Create table Sales (  
  Order_Line int primary key,  
  Order_ID varchar,  
  Order_Date date,  
  Ship_Date date,  
  Ship_Mode varchar,  
  Customer_ID varchar,  
  Product_ID varchar,  
  Sales numeric,  
  Quantity int,  
  Discount numeric,  
  Profit numeric  
);
```

Unique value

Metadata (name, data type)

Creating tables in PostgreSQL – Sales Table schema example

The screenshot displays the pgAdmin 4 web interface in a browser window. The address bar shows the URL `127.0.0.1:60624/browser/`. The interface includes a top menu bar with 'File', 'Object', 'Tools', and 'Help'. Below this is a toolbar with icons for various database operations. The left sidebar, titled 'Browser', shows a tree view of the database structure. Under 'Tables (1)', the 'sales' table is selected, and its 'Columns (11)' are listed: `order_line`, `order_id`, `order_date`, `ship_date`, `ship_mode`, `customer_id`, `product_id`, `sales`, `quantity`, `discount`, and `profit`. The right pane is divided into two sections: 'Query Editor' and 'Query History'. The 'Query Editor' shows a SQL script to create the 'Sales' table with the following columns and data types: `Order_Line int primary key`, `Order_ID varchar`, `Order_Date date`, `Ship_Date date`, `Ship_Mode varchar`, `Customer_ID varchar`, `Product_ID varchar`, `Sales numeric`, and `Quantity int`. Below the query editor, the 'Messages' tab is active, displaying the output: 'CREATE TABLE' and 'Query returned successfully in 61 msec.'

127.0.0.1:60624/browser/

pgAdmin File Object Tools Help

Browser Dashboard Properties SQL Statistics Dependencies Dependents

Foreign Tables
Functions
Materialized Views
1.3 Sequences
Tables (1)
 sales
 Columns (11)
 order_line
 order_id
 order_date
 ship_date
 ship_mode
 customer_id
 product_id
 sales
 quantity
 discount
 profit
Constraints
Indexes
RLS Policies
Rules
Triggers
Trigger Functions

postgres/postgres@PostgreSQL 10

Query Editor Query History

```
1 Create table Sales (  
2 Order_Line int primary key,  
3 Order_ID varchar,  
4 Order_Date date,  
5 Ship_Date date,  
6 Ship_Mode varchar,  
7 Customer_ID varchar,  
8 Product_ID varchar,  
9 Sales numeric,  
10 Quantity int,
```

Data Output Explain Messages Notifications

CREATE TABLE

Query returned successfully in 61 msec.

Creating tables in PostgreSQL – Sales Table schema example

Input

SalesforSQL

| Order Line | Order ID | Order Date | Ship Date | Ship Mode | Customer ID | Product ID | Sales | Quantity | Discount | Profit |
|------------|----------------|------------|------------|----------------|-------------|-----------------|---------|----------|----------|--------|
| 7973 | CA-2017-166142 | 2020-01-01 | 2020-01-05 | Standard Class | MM-17260 | OFF-BI-10004094 | 26.55 | 3 | 0 | 13.01 |
| 7974 | CA-2017-166142 | 2020-01-01 | 2020-01-05 | Standard Class | MM-17260 | FUR-TA-10004607 | 310.44 | 3 | 0.3 | -48.78 |
| 7975 | CA-2017-164378 | 2020-01-01 | 2020-01-04 | Second Class | MM-18055 | OFF-AR-10001177 | 6.56 | 2 | 0 | 1.9 |
| 7976 | CA-2017-164378 | 2020-01-01 | 2020-01-04 | Second Class | MM-18055 | OFF-LA-10000634 | 7.83 | 3 | 0 | 3.6 |
| 7977 | CA-2017-164378 | 2020-01-01 | 2020-01-04 | Second Class | MM-18055 | TEC-AC-10004708 | 41.9 | 2 | 0 | 8.8 |
| 7978 | CA-2017-164378 | 2020-01-01 | 2020-01-04 | Second Class | MM-18055 | FUR-CH-10002084 | 664.15 | 6 | 0.1 | 88.55 |
| 7979 | CA-2017-164378 | 2020-01-01 | 2020-01-04 | Second Class | MM-18055 | OFF-PA-10004519 | 8.96 | 2 | 0 | 4.39 |
| 7980 | US-2017-128951 | 2020-01-01 | 2020-01-03 | First Class | RS-19420 | OFF-AP-10002191 | 179.94 | 3 | 0 | 50.38 |
| 7981 | US-2017-128951 | 2020-01-01 | 2020-01-03 | First Class | RS-19420 | FUR-TA-10004575 | 872.94 | 3 | 0 | 157.13 |
| 7982 | US-2017-128951 | 2020-01-01 | 2020-01-03 | First Class | RS-19420 | OFF-PA-10003177 | 12.96 | 2 | 0 | 6.22 |
| 7983 | US-2017-156909 | 2020-01-02 | 2020-01-04 | Second Class | SF-20065 | FUR-CH-10002774 | 71.37 | 2 | 0.3 | -1.02 |
| 7984 | CA-2017-109778 | 2020-01-02 | 2020-01-07 | Standard Class | VM-21685 | OFF-AR-10003759 | 2.91 | 2 | 0.2 | 0.91 |
| 7985 | US-2017-152842 | 2020-01-02 | 2020-01-09 | Standard Class | NF-18385 | FUR-CH-10004218 | 242.35 | 3 | 0.2 | 15.15 |
| 7986 | CA-2017-139948 | 2020-01-03 | 2020-01-08 | Standard Class | SW-20455 | FUR-FU-10002597 | 7.9 | 2 | 0.2 | 2.17 |
| 7987 | US-2017-105046 | 2020-01-03 | 2020-01-09 | Standard Class | BE-11335 | TEC-PH-10004536 | 269.98 | 2 | 0 | 67.5 |
| 7988 | US-2017-105046 | 2020-01-03 | 2020-01-09 | Standard Class | BE-11335 | OFF-PA-10004353 | 99.9 | 5 | 0 | 47.95 |
| 7989 | US-2017-105046 | 2020-01-03 | 2020-01-09 | Standard Class | BE-11335 | FUR-FU-10004848 | 39.08 | 4 | 0 | 14.46 |
| 7990 | CA-2017-126662 | 2020-01-03 | 2020-01-07 | Standard Class | AB-10255 | TEC-CO-10004202 | 479.98 | 2 | 0.2 | 90 |
| 7991 | CA-2017-142342 | 2020-01-03 | 2020-01-05 | Second Class | AJ-10795 | OFF-PA-10004609 | 32.4 | 5 | 0 | 15.55 |
| 7992 | CA-2017-142342 | 2020-01-03 | 2020-01-05 | Second Class | AJ-10795 | OFF-EN-10002592 | 57.9 | 5 | 0 | 28.95 |
| 7993 | CA-2017-142342 | 2020-01-03 | 2020-01-05 | Second Class | AJ-10795 | OFF-ST-10002957 | 10.56 | 2 | 0 | 0 |
| 7994 | CA-2017-142342 | 2020-01-03 | 2020-01-05 | Second Class | AJ-10795 | FUR-BO-10002613 | 1194.17 | 5 | 0.15 | 210.74 |
| 7995 | US-2017-142573 | 2020-01-04 | 2020-01-09 | Standard Class | ML-17410 | FUR-TA-10001932 | 801.6 | 5 | 0.5 | -448.9 |
| 7996 | US-2017-142573 | 2020-01-04 | 2020-01-09 | Standard Class | ML-17410 | FUR-CH-10004218 | 161.57 | 2 | 0.2 | 10.1 |
| 7997 | US-2017-142573 | 2020-01-04 | 2020-01-09 | Standard Class | ML-17410 | OFF-PA-10000246 | 16.1 | 2 | 0.2 | 5.23 |
| 7998 | US-2017-142573 | 2020-01-04 | 2020-01-09 | Standard Class | ML-17410 | OFF-BI-10003350 | 7.66 | 4 | 0.7 | -6.12 |



Copy the input in the folder:

[PROGRAMS/PostgreSQL/NN/data/dataset](#)

Where:

- PROGRAMS is where was installed PostgreSQL
- NN is the PostgreSQL version

Create the subfolders data/datasets if don't exist

Creating tables in PostgreSQL – Sales Table data example

- SalesforSQL.csv
- Change the location as per your installation directory
- COPY sales from '/Library/PostgreSQL/14/**data/dataset**/SalesforSQL.csv' delimiter ',' csv header;
 - Example Linux: COPY sales from '/var/lib/postgresql/13/data/dataset/SalesforSQL.csv' delimiter ',' csv header;
 - Example Windows: COPY sales from 'C:\Program Files\PostgreSQL\14\data\dataset\SalesforSQL.csv' delimiter ',' csv header;
 - Select and run only this line
- To Check if the data has been correctly imported, run the select command
 - **SELECT * FROM sales;**

Creating tables in PostgreSQL – Sales Table data example

Query EditorQuery History

```
1 Create table Sales (  
2 Order_Line int primary key,  
3 Order_ID varchar,  
4 Order_Date date,  
5 Ship_Date date,  
6 Ship_Mode varchar,  
7 Customer_ID varchar,  
8 Product_ID varchar,  
9 Sales numeric,  
10 Quantity int,  
11 Discount numeric,  
12 Profit numeric  
13 );  
14  
15  
16 COPY sales from '/Library/PostgreSQL/10/data/dataset/SalesforSQL.csv' delimiter ',' csv header;  
17  
18 SELECT * FROM sales;  
19
```

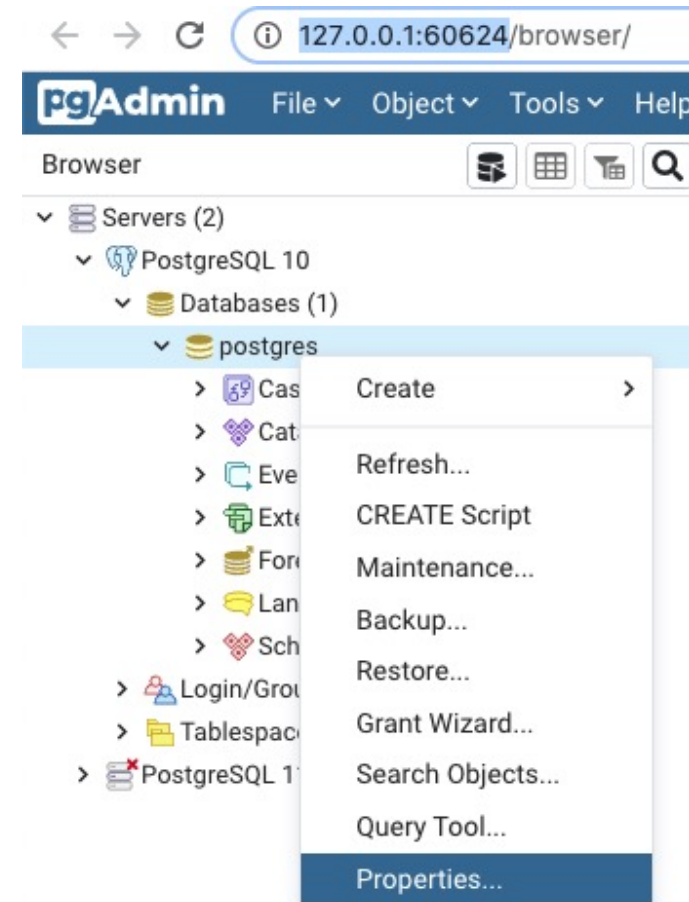
Scratchpad

Data OutputExplainMessagesNotifications

| | order_line [PK] integer | order_id character varying | order_date date | ship_date date | ship_mode character varying | customer_id character varying | product_id character varying | sales numeric | quantity integer | discount numeric | profit numeric |
|----|----------------------------|-------------------------------|--------------------|-------------------|--------------------------------|----------------------------------|---------------------------------|------------------|---------------------|---------------------|-------------------|
| 1 | 7973 | CA-2017-166142 | 2020-01-01 | 2020-01-05 | Standard Class | MM-17260 | OFF-BI-10004094 | 26.55 | 3 | 0 | 13.01 |
| 2 | 7974 | CA-2017-166142 | 2020-01-01 | 2020-01-05 | Standard Class | MM-17260 | FUR-TA-10004607 | 310.44 | 3 | 0.3 | -48.78 |
| 3 | 7975 | CA-2017-164378 | 2020-01-01 | 2020-01-04 | Second Class | MM-18055 | OFF-AR-10001177 | 6.56 | 2 | 0 | 1.9 |
| 4 | 7976 | CA-2017-164378 | 2020-01-01 | 2020-01-04 | Second Class | MM-18055 | OFF-LA-10000634 | 7.83 | 3 | 0 | 3.6 |
| 5 | 7977 | CA-2017-164378 | 2020-01-01 | 2020-01-04 | Second Class | MM-18055 | TEC-AC-10004708 | 41.9 | 2 | 0 | 8.8 |
| 6 | 7978 | CA-2017-164378 | 2020-01-01 | 2020-01-04 | Second Class | MM-18055 | FUR-CH-10002084 | 664.15 | 6 | 0.1 | 88.55 |
| 7 | 7979 | CA-2017-164378 | 2020-01-01 | 2020-01-04 | Second Class | MM-18055 | OFF-PA-10004519 | 8.96 | 2 | 0 | 4.39 |
| 8 | 7980 | US-2017-128951 | 2020-01-01 | 2020-01-03 | First Class | RS-19420 | OFF-AP-10002191 | 179.94 | 3 | 0 | 50.38 |
| 9 | 7981 | US-2017-128951 | 2020-01-01 | 2020-01-03 | First Class | RS-19420 | FUR-TA-10004575 | 872.94 | 3 | 0 | 157.13 |
| 10 | 7982 | US-2017-128951 | 2020-01-01 | 2020-01-03 | First Class | RS-19420 | OFF-PA-10004519 | 8.96 | 2 | 0 | 4.39 |

Connect to database: information

- **Host server address/location:** 127.0.0.1 take a look to your url
http://127.0.0.1:60624/
- **Name database:** postgres
- **Password**
- **User:** postgres



Import data from SQL database in PDI

Table input

Step name **Table input**

Connection SalesDBConnection Edit... New... Wizard...

SQL

`SELECT <values> FROM <table name> WHERE <conditions>`

Line 1 Column 0

☐ Store column info in step meta data

☐ Enable lazy conversion

☐ Replace variables in script?

Insert data from step

☐ Execute for each row?

Limit size 0

Help OK Preview Cancel

Select the database name and type

Select 'next' to proceed

| | |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name of the database connection | SalesDBConnection |
| Type of database to connect to | <div>Borland Interbase Calpont InfiniDB Cloudera Impala dBase III, IV or 5 Exasol 4 ExtenDB Firebird SQL Generic database Google BigQuery Greenplum Gupta SQL Base H2 Hadoop Hive Hadoop Hive 2/3 Hive Warehouse Connector Hypersonic IBM DB2 Impala Infobright Informix Ingres Ingres VectorWise Intersystems Cache KingbaseES LucidDB MariaDB MaxDB (SAP DB) MonetDB MS Access MS SQL Server MS SQL Server (Native) MySQL Native Mondrian Neoview Netezza Oracle Oracle RDB Palo MOLAP Server Pentaho Data Services PostgreSQL Redshift Remedy Action Request System SAP ERP System Snowflake SparkSQL SQLite Sybase SybaseIQ Teradata UniVerse database</div> |
| Type of database access to use | <div>Native (JDBC) ODBC JNDI</div> |

Import data from SQL database in PDI

Set the JDBC Settings

Select 'next' to proceed

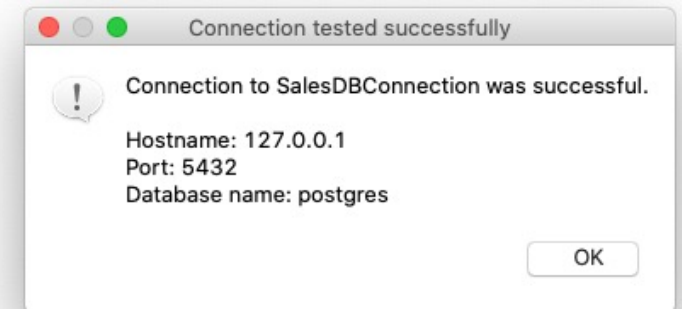
| | |
|----------------------------------|----------------------------------------|
| Host name of the database server | <input type="text" value="127.0.0.1"/> |
| The TCP/IP port | <input type="text" value="5432"/> |
| The name of the database | <input type="text" value="postgres"/> |

username and password

Click 'Finish' to create the database connection

| | |
|--------------|----------------------------------------|
| The username | <input type="text" value="postgres"/> |
| The password | <input type="password" value="*****"/> |

Test database connection



Query data from SQL database in PDI

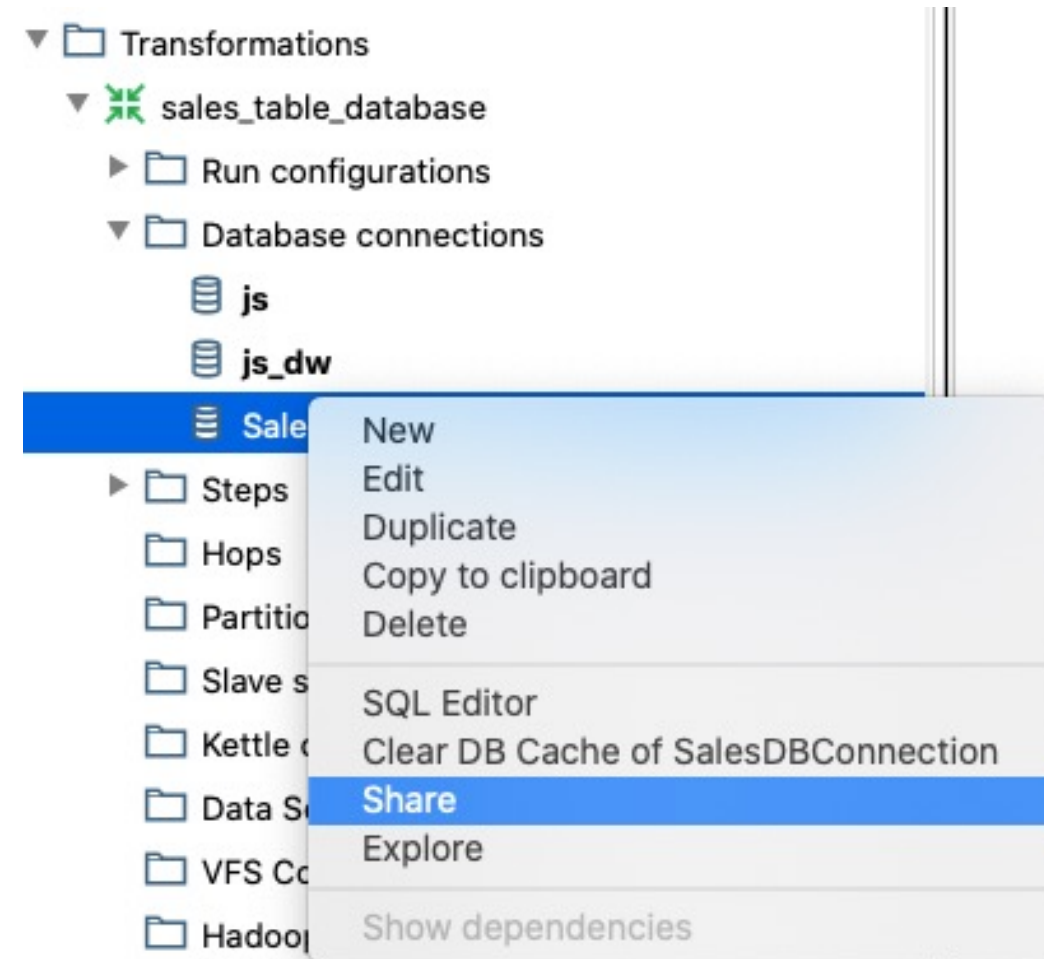
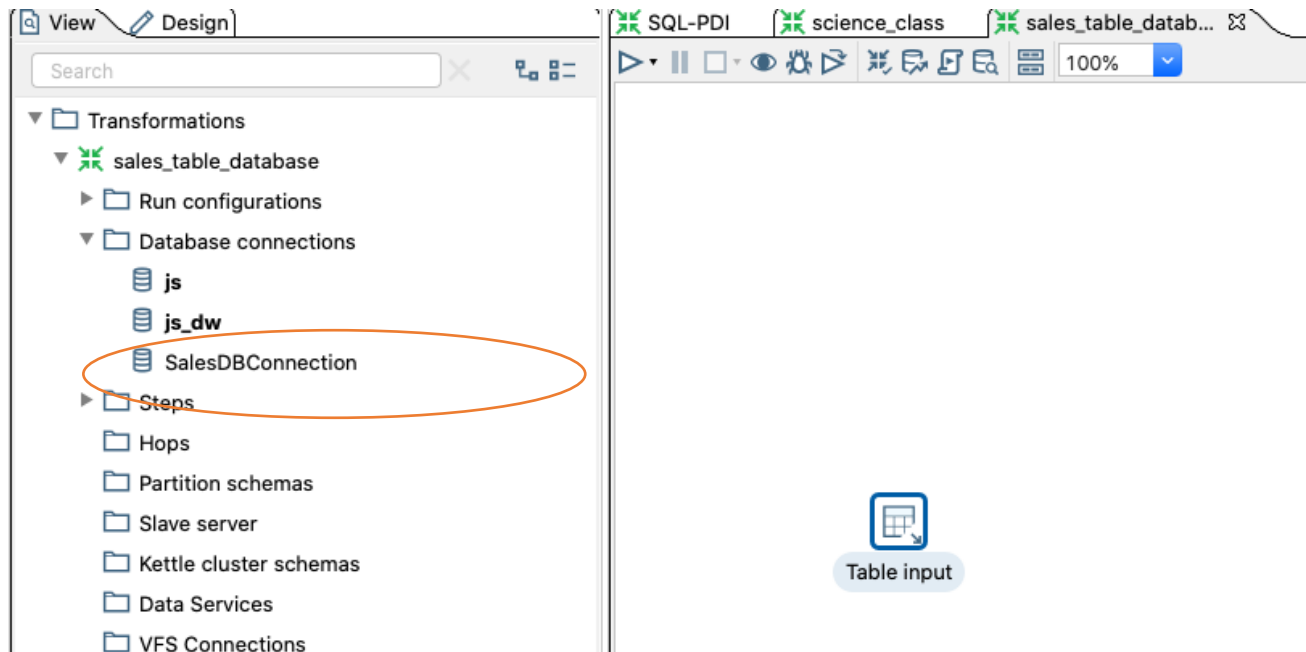
- SELECT <values> FROM <table name> WHERE <conditions>
- SELECT * FROM sales

sales_table_database.ktr

Rows of step: Table input (1000 rows)

| # | order_line | order_id | order_date | ship_date | ship_mode | customer_id | product_id | sales | quantity | discount | profit |
|----|------------|----------------|-----------------------|-----------------------|----------------|-------------|------------------|---------|----------|----------|--------|
| 1 | 7973 | CA-2017-166... | 2020/01/01 00:00:0... | 2020/01/05 00:00:0... | Standard Class | MM-17260 | OFF-BI-10004094 | 26.55 | 3 | 0.0 | 13.01 |
| 2 | 7974 | CA-2017-166... | 2020/01/01 00:00:0... | 2020/01/05 00:00:0... | Standard Class | MM-17260 | FUR-TA-10004607 | 310.44 | 3 | 0.3 | -48.78 |
| 3 | 7975 | CA-2017-164... | 2020/01/01 00:00:0... | 2020/01/04 00:00:0... | Second Class | MM-18055 | OFF-AR-10001... | 6.56 | 2 | 0.0 | 1.9 |
| 4 | 7976 | CA-2017-164... | 2020/01/01 00:00:0... | 2020/01/04 00:00:0... | Second Class | MM-18055 | OFF-LA-10000634 | 7.83 | 3 | 0.0 | 3.6 |
| 5 | 7977 | CA-2017-164... | 2020/01/01 00:00:0... | 2020/01/04 00:00:0... | Second Class | MM-18055 | TEC-AC-10004... | 41.9 | 2 | 0.0 | 8.8 |
| 6 | 7978 | CA-2017-164... | 2020/01/01 00:00:0... | 2020/01/04 00:00:0... | Second Class | MM-18055 | FUR-CH-10002... | 664.15 | 6 | 0.1 | 88.55 |
| 7 | 7979 | CA-2017-164... | 2020/01/01 00:00:0... | 2020/01/04 00:00:0... | Second Class | MM-18055 | OFF-PA-100045... | 8.96 | 2 | 0.0 | 4.39 |
| 8 | 7980 | US-2017-128... | 2020/01/01 00:00:0... | 2020/01/03 00:00:0... | First Class | RS-19420 | OFF-AP-100021... | 179.94 | 3 | 0.0 | 50.38 |
| 9 | 7981 | US-2017-128... | 2020/01/01 00:00:0... | 2020/01/03 00:00:0... | First Class | RS-19420 | FUR-TA-10004575 | 872.94 | 3 | 0.0 | 157.13 |
| 10 | 7982 | US-2017-128... | 2020/01/01 00:00:0... | 2020/01/03 00:00:0... | First Class | RS-19420 | OFF-PA-100031... | 12.96 | 2 | 0.0 | 6.22 |
| 11 | 7983 | US-2017-156... | 2020/01/02 00:00:0... | 2020/01/04 00:00:0... | Second Class | SF-20065 | FUR-CH-10002... | 71.37 | 2 | 0.3 | -1.02 |
| 12 | 7984 | CA-2017-109... | 2020/01/02 00:00:0... | 2020/01/07 00:00:0... | Standard Class | VM-21685 | OFF-AR-10003... | 2.91 | 2 | 0.2 | 0.91 |
| 13 | 7985 | US-2017-152... | 2020/01/02 00:00:0... | 2020/01/09 00:00:0... | Standard Class | NF-18385 | FUR-CH-10004... | 242.35 | 3 | 0.2 | 15.15 |
| 14 | 7986 | CA-2017-139... | 2020/01/03 00:00:0... | 2020/01/08 00:00:0... | Standard Class | SW-20455 | FUR-FU-10002... | 7.9 | 2 | 0.2 | 2.17 |
| 15 | 7987 | US-2017-105... | 2020/01/03 00:00:0... | 2020/01/09 00:00:0... | Standard Class | BE-11335 | TEC-PH-10004... | 269.98 | 2 | 0.0 | 67.5 |
| 16 | 7988 | US-2017-105... | 2020/01/03 00:00:0... | 2020/01/09 00:00:0... | Standard Class | BE-11335 | OFF-PA-100043... | 99.9 | 5 | 0.0 | 47.95 |
| 17 | 7989 | US-2017-105... | 2020/01/03 00:00:0... | 2020/01/09 00:00:0... | Standard Class | BE-11335 | FUR-FU-10004... | 39.08 | 4 | 0.0 | 14.46 |
| 18 | 7990 | CA-2017-126... | 2020/01/03 00:00:0... | 2020/01/07 00:00:0... | Standard Class | AB-10255 | TEC-CO-10004... | 479.98 | 2 | 0.2 | 90.0 |
| 19 | 7991 | CA-2017-142... | 2020/01/03 00:00:0... | 2020/01/05 00:00:0... | Second Class | AJ-10795 | OFF-PA-100046... | 32.4 | 5 | 0.0 | 15.55 |
| 20 | 7992 | CA-2017-142... | 2020/01/03 00:00:0... | 2020/01/05 00:00:0... | Second Class | AJ-10795 | OFF-EN-10002... | 57.9 | 5 | 0.0 | 28.95 |
| 21 | 7993 | CA-2017-142... | 2020/01/03 00:00:0... | 2020/01/05 00:00:0... | Second Class | AJ-10795 | OFF-ST-10002957 | 10.56 | 2 | 0.0 | 0.0 |
| 22 | 7994 | CA-2017-142... | 2020/01/03 00:00:0... | 2020/01/05 00:00:0... | Second Class | AJ-10795 | FUR-BO-10002... | 1194.17 | 5 | 0.15 | 210.74 |
| 23 | 7995 | US-2017-142... | 2020/01/04 00:00:0... | 2020/01/09 00:00:0... | Standard Class | ML-17410 | FUR-TA-10001932 | 801.6 | 5 | 0.5 | -448.9 |
| 24 | 7996 | US-2017-142... | 2020/01/04 00:00:0... | 2020/01/09 00:00:0... | Standard Class | ML-17410 | FUR-CH-10004... | 161.57 | 2 | 0.2 | 10.1 |
| 25 | 7997 | US-2017-142... | 2020/01/04 00:00:0... | 2020/01/09 00:00:0... | Standard Class | ML-17410 | OFF-PA-100002... | 16.1 | 2 | 0.2 | 5.23 |
| 26 | 7998 | US-2017-142... | 2020/01/04 00:00:0... | 2020/01/09 00:00:0... | Standard Class | ML-17410 | OFF-BI-10003350 | 7.66 | 4 | 0.7 | -6.12 |
| 27 | 7999 | US-2017-142... | 2020/01/04 00:00:0... | 2020/01/09 00:00:0... | Standard Class | ML-17410 | FUR-CH-10000... | 311.98 | 3 | 0.2 | -42.9 |

Global database connection



SQL-PDI connection: a simple example

1. Create a new table in postgresql by running this command in PGAdmin

```
create table science_class(  
Enrollment_no INT,  
Name VARCHAR,  
Science_Marks INT  
);
```

2. Insert some sample values

```
insert into science_class values (1,'Popeye',33);  
insert into science_class values (2,'Olive',54);  
insert into science_class values (3,'Brutus',98);
```

3. Query: *select * from science_class*

SQL-PDI connection: task examples

1. Read:

- Retrieve all data from the table 'Science_Class'

2. Read with conditions

- Retrieve the name of students who have scored more than 60 marks

3. Update

- Update the marks of Popeye to 45

4. Insert

- Insert a new row with "Wimpy" who has scored 75 marks

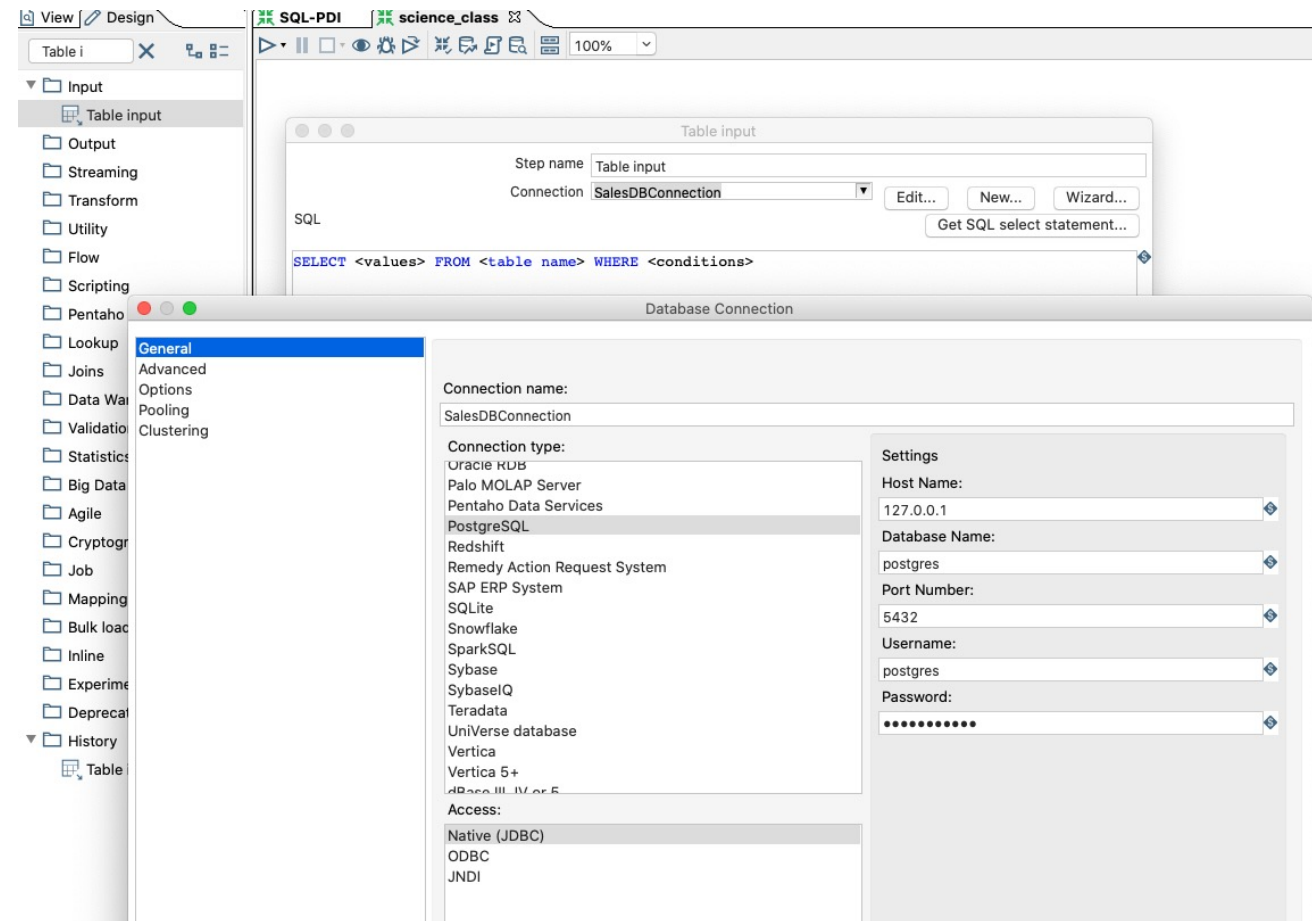
5. Delete

- Delete the record of Wimpy

SQL-PDI connection: Read example

Retrieve all data from the table
'Science_Class'

- Input table -> reuse database connection
- `SELECT * FROM science_class`



SQL-PDI connection: Read with conditions example

- Retrieve the name of students who have scored more than 60 marks
- `SELECT * FROM science_class WHERE science_mark > 60`

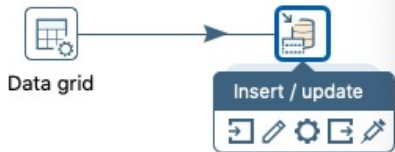
| enrollment_no | name | science_marks |
|---------------|--------|---------------|
| 3 | Brutus | 98 |

science_class_read.ktr

SQL-PDI connection: Update and Insert example

- Update the marks of Popeye to 45
- Insert a new row with “Wimpy” who has scored 75 marks

science_class_update_insert.ktr



Insert / update

Step name: Insert / update

Connection: SalesDBConnection

Target schema: public

Target table: science_class

Commit size: 1

Don't perform any updates: ☐

The key(s) to look up the value(s):

| # | Table field | Comparator | Stream field1 | Stream field2 |
|---|-------------|------------|---------------|---------------|
| 1 | name | LIKE | name | |

Get fields

Update fields:

| # | Table field | Stream field | Update |
|---|---------------|--------------|--------|
| 1 | enrollment_no | enrollment | Y |
| 2 | name | name | Y |
| 3 | science_marks | marks | Y |

Get update fields

Edit mapping

Help OK Cancel SQL

| | enrollment_no | | name | | science_marks |
|---|---------------|---|-------------------|--|---------------|
| | integer | | character varying | | integer |
| 1 | | 1 | Popeye | | 33 |
| 2 | | 2 | Olive | | 54 |
| 3 | | 3 | Brutus | | 98 |



| | enrollment_no | | name | | science_marks |
|---|---------------|---|-------------------|--|---------------|
| | integer | | character varying | | integer |
| 1 | | 2 | Olive | | 54 |
| 2 | | 3 | Brutus | | 98 |
| 3 | | 1 | Popeye | | 45 |
| 4 | | 4 | Wimpy | | 75 |

SQL-PDI connection: Delete example

- Delete the record of Wimpy



| | enrollment_no integer | | name character varying | | science_marks integer |
|---|--------------------------|---|---------------------------|--|--------------------------|
| 1 | | 2 | Olive | | 54 |
| 2 | | 3 | Brutus | | 98 |
| 3 | | 1 | Popeye | | 45 |

Delete

Step name: Delete

Connection: SalesDBConnection [Edit... New... Wizard...]

Target schema: public [Browse...]

Target table: science_class [Browse...]

Commit size: 1

The key(s) to look up the value(s):

| # | Table field | Comparator | Stream field1 | Stream field2 |
|---|-------------|------------|---------------|---------------|
| 1 | name | LIKE | name | |

[Get fields]

[?] Help [OK] [Cancel]

science_class_delete.ktr