Getting Started with PostgreSQL

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PostgreSQL on the Desktop - single user (“PostgreSQL Home Page” 2018)

Windows or Mac

- Go to EnterpriseDB download site https://www.enterprisedb.com/downloads/postgres-postgresql-downloads.
- Select the latest version (10.3)
- Select your operating system (Windows or Mac)
- Installation: install everything but don't run StackBuilder yet

Linux: use the PGDG repositories

- RHEL / CentOS / Fedora: https://www.postgresql.org/download/linux/redhat/
- Ubuntu: https://www.postgresql.org/download/linux/ubuntu/ (probably works for Linux Mint)
- Debian: https://www.postgresql.org/download/linux/debian/
- Installation: install PostgreSQL 10.3 and pgAdmin 4 for desktop

Connecting with pgAdmin

- Online manual: (*PgAdmin Manual (Online)* 2018)
- Reference: R. Obe and Hsu (2017b), chapter 4

Exploring the tree

Creating a database

Creating tables - DDL

Reading a CSV file into a table - COPY

Backing up a database

Restoring a database

Creating a query

PostgreSQL on a (Linux) Server

Two dialects of Linux

- Ubuntu 16.04.x LTS (most popular)
- RHEL 7 / CentOS 7

Docker container

- Debian stable - similar to Ubuntu
- Alpine - avoid this unless you want to do a lot of research

The PGDG repositories

Configuring

- Initializing the cluster
- Enabling and starting the service

Listening address and port

Authentication

Fine-grained permissions and roles

Tablespaces

PostGIS

Reading in GIS data (Obe and Hsu 2015, chap. 4)

- Shapefiles
- “GDB” databases
- OpenStreetMap data

Tagging points with a geometry column

Geocoding (Obe and Hsu 2015, chap. 8)

Spatial joins

pgRouting - what it can do

Turn-by-turn directions

- Reference: (R. Obe and Hsu 2017a)

References