**Purpose:**

To create a PostgeSQL/PostGIS database with a database owner and a schema to hold data separate from the ‘public’ schema. As an example, a database ‘gndb4’ with database owner ‘geonetwork’ and schema ‘data’ will be used. Initial access to the database is through ‘sudo –u postgres psql’.

| **Step** | **Major Activity** | **References, Forms and Details** |
| --- | --- | --- |
| **1** | Create production geonetwork database and user.   * sudo -u postgres psql * CREATE USER geonetwork   WITH PASSWORD ‘secret’ LOGIN;   * \du (to view and confirm owner) * CREATE DATABASE gndb4 OWNER geonetwork; | * **Sudo -u postgres psql** is the standard logon * superuser **postgres** owns the functions * owner g**eonetwork** will own the database. It is best to separate the two users for security reasons |
| **2** | Connect to database and create extensions   * \c gndb4 <superuser> * (enter password) * CREATE EXTENSION postgis; * CREATE EXTENSION postgis\_topology;   \dx (to view and confirm extensions) | * Connect to gndb4, or metadata database name of your choosing AS superuser * Create two needed extensions * \dx should display three extensions |
| **3** | In psql,  CREATE SCHEMA data;  ALTER SCHEMA data OWNER TO geonetwork;  GRANT ALL ON SCHEMA data TO geonetwork;  GRANT ALL ON ALL TABLES IN SCHEMA data TO geonetwork;  \dn+ (to view and confirm schemas) | * Can highlight all commands and paste them into psql (faster than individual entries) * Creates non-public schema, so data can be kept separate from other functions * \dn list of schemas, with privileges |
| **4** | In psql,   * \c <another database> * ALTER DATABASE gndb4 SET search\_path= data, public, contrib; * \c gndb4 * show search\_path; (for gndb4 only) * or \drds (paths for all databases) | * IMPORTANT for \d to work * This approach is permanent * Setting search path means the schemas do not need to be explicitly searched, and to last between connections |
| **5** | Other commonly needed psql commands:   * \dt list of tables * \d <tablename> - headings of a table * \password <username> |  |
| **6** | Optional. Restore database dump outside psql:   * sudo su – postgres pg\_restore –Fc –d <database> <database dump name> (compressed file) * sudo –u postgres <database> <file.sql> (uncompressed) | * **unrelated to above steps, but often required** * sudo –u postgres overrides previous database owners (aka roles) |