

# POSTGIS - SPATIAL DATA WAREHOUSE

## LEVEL 1 - INITIATION

### PEDAGOGICAL OBJECTIVES

PostgreSQL is an object-relational database (RDBMS) and PostGIS is a spatial extension that adds geographic types to PostgreSQL.

At the end of the course, participants will be able to:

- Install and use PostGIS
- Import and export GIS data
- Create queries and views
- Create a micro-project
- Connect to GIS software



#### TARGET AUDIENCE

General public



#### PREREQUISITES

Knowledge of SQL language and basic GIS skills

Bring your own laptop and have the Administrator profile for your machine



#### TEACHING RESOURCES

Provision of a software license: yes

Digital training material (with concrete examples and practical exercises)

Evaluation questionnaire and end-of-training certificate



**DURATION** > 2 days (14h training)



**RATES** > By quotation



#### TERMS AND CONDITIONS

No pre-requisite selection  
Dates to be agreed



#### REGISTRATIONS

Email > formation@arx.it.com

Tel. > + 33 (0)5 46 34 07 71

For disabled access, please consult us

### CONTENTS

#### PRESENTATION, INSTALLATION AND CONFIGURATION OF POSTGIS

Introduction to PostgreSQL/PostGIS

Installation and configuration

- From stackbuilder
- Introducing the PostGIS template
- Creating a database with the spatial cartridge

Spatial data representation

- Vector (point, line, polygon) / Raster
- WKT, WKB
- Spatial SQL language

Spatial indexes and useful constraints

- Creation, use, performance
- Table projection management

#### POSTGIS ADMINISTRATION

Spatial queries in PostgreSQL

- Integrating or creating a spatial dataset
- Simple / complex queries
- Complex tools and operators, geometry manipulation

Administration with PgAdmin 4

- Installation and configuration
- Operation (basic administration, queries, import/export)

#### GIS DATA IMPORT/EXPORT

Cartographic data import (WKT, KML, SHP...)

Shp2pgsql (command prompt) with all relevant parameters

PostGIS Shapefile and DBF Loader

Data loading from desktop GIS software such as QGIS

#### DATA MANIPULATION IN A GIS CLIENT

Connecting to a PostGIS database

Opening GIS layers from a PostGIS database

Using DB Manager

Managing write and read entries, modifying, adding and deleting PostGIS data

