

# PostgreSQL for Administrators (code: PgSQL-ADMIN)

## Overview

The course is intended for Linux system administrators who will be responsible for the installation, configuration and maintenance of the PostgreSQL database. The training programme covers all elements necessary for the effective cooperation with programmers team on the project based on PostgreSQL.

We focus on practical issues that system administrator has to face to successfully work as a database administrator. Starting from *installation*, through the most important *configuration parameters*, basic *efficiency tuning*, *system security* and *users management*. We will also discuss *the tools* used to diagnose the most common problems and we will tackle the problem of creating backups.

Our instructors have many years of experience with PostgreSQL, both as administrators and as programmers. One of our trainers is a **PostgreSQL contributor** and a regular speaker at the world's largest conference on the topic.

## Ask for details

Phone +44 203 608 6289

info@alx.training

## Duration

2 days

## Agenda

1. Installation
  - Packages or self-compilation?
  - Essential compilation parameters
  - File system
    - Directory layout
    - Configuration files location
    - System logs location
  - Command line client `_psql_`
2. Configuration
  - Critical parameters
  - Kernel shared memory settings
  - Database restart modes
  - Processes started by PostgreSQL
    - `postmaster`
    - `bgwriter`
    - `stats collector`
    - `autovacuum`
    - `clients processes (_backends_)`
  - Data integrity guarantees
    - WAL files
    - `_fsync_ settings`
    - Write-through and write-back caches
3. Performance tuning
  - Hard drive and RAID type selection
  - Key parameters influencing performance
  - Performance and reliability balancing
  - Performance problems diagnosing
4. Security
  - Users and roles
  - Granting permissions

- Host Based Access control ( `_pg_hba.conf_file` )
- Authentication methods
  - `_ident_method`
  - Password method
  - Authentication with SSL certificate
- 5. Management
  - Current queries listing
  - Finding and eliminating the problematic processes
  - Database maintenance
    - `_VACUUM_order` and `_autovacuum_service`
    - statistics and `_ANALYSE_command`
- 6. Backups
  - `_pg_dump_program`
    - Backups formats
    - Restoring data from a copy, including partial recover
  - `_pg_dumpall_program`
    - Backing up users and permissions
  - Other methods of creating backups

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## Target audience and prerequisites

We recommend that the participants are familiar with Linux administration.

## Certificates

Course participants receive completion certificates signed by ALX.

## Locations

- Warsaw (English) – Jasna 14/16A
- Online (English) – your home, office or wherever you want
- any other location (London, UK, EU) on request

## Price

740 EUR

The price includes:

- course materials,
- snacks, coffee, tea and soft drinks,
- course completion certificate,
- one-time consultation with the instructor after course completion.