

# Introduction to PostgreSQL Two-day Course



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# About the course



**Duration:** 2 days

## Prerequisites

- basic understanding of databases and SQL
- acquaintance with Unix

## Skills to be gained

- general idea of PostgreSQL architecture
- basics of installation, configuring, and managing the server
- physical and logical data layout
- basic administration tasks
- authentication and access control
- overview of backups and replication

## Xubuntu OS

minimal requirements: 32-bit, 1 GB memory

## Two PostgreSQL 11 servers

alpha — the main server

beta — standby server for backup and replication

## PostgreSQL 11 documentation

opens as a start page in Firefox

## Presentations

slides with notes (\*.pdf)

notes may contain hints or additional information

## Demonstrations

output of live demo scripts (\*.html)

## Solutions for practical exercises

output of scripts (\*\_lab.html)

first try to solve yourself, then look through the provided solution

# Demo prompts



student\$

shell command, run in terminal on behalf of the *student* OS user

postgres\$

shell command, run in terminal on behalf of the *postgres* OS user

```
student$ sudo su postgres
```

$\alpha$ =>

psql command on the *alpha* server

```
student$ psql
```

$\beta$ =>

psql command on the *beta* server

```
student$ psql -p 5433
```

About 6 hours a day + 1 hour lunch break

Each lesson consists of

presentation and demonstration: ~20–60 min

practical exercises: ~20–30 min, including a break

## Basic Toolkit

- 01. Overview: Installation and Management, psql

## Architecture

- 02. General Overview
- 03. Isolation and Multiversion Concurrency Control
- 04. Buffer Cache and Logging

## Data Organization

- 05. Logical Layout
- 06. Physical Layout

## Administration Tasks

- 07. Monitoring
- 08. Maintenance

## Access Control

- 09. Access Control Overview

## Backup and Replication

- 10. Backup and Restore Overview
- 11. Replication Overview