

## Replication and HA in PostgreSQL (code: PgSQL-REPL-HA)

### Overview

The training focuses on the management of PostgreSQL *large size databases*, working in conditions requiring *high availability*. We discuss the issues of *correct implementation of HA (High Availability) system* for PostgreSQL and techniques which are intended to *distribute application load* over several servers. We will give some reliable recipes for systems that could survive the failure of the infrastructure's part without disrupting their work.

The training programme includes analysis of the available PostgreSQL replication methods and practical examples of embedded replication usage. We will accurately explain the difference between synchronous and asynchronous replication and we will analyse the advantages and disadvantages of each solution. We will not forget about comprehensive approaching the issue of monitoring, without which HA systems cannot do.

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.

### Duration

2 days

### Agenda

1. PostgreSQL operation log
  - Principle of WAL operation
  - Logs archiving (log shipping)
  - `_pg_basebackup_program`
  - `_pg_receivexlog_program`
  - Point In Time Recovery
2. Replication
  - Hot standby
  - Streaming replication
    - Monitoring replication stage
    - Replication parameters tuning
    - Cascading Replication
  - Synchronous replication
    - Inner workings
    - The balance of benefits and costs
  - External replication systems
3. High Availability
  - Replication setting for HA
  - Master-slave automated promotion
    - STONITH problem (Shoot The Other Node In The Head)
  - Security guarantees for HA systems
  - Estimating the risk of loosing data in case of failure
  - External HA systems for PostgreSQL

### Target audience and prerequisites

#### Ask for details

Phone +44 203 608 6289

info@alx.training

We recommend that the participants have good knowledge of PostgreSQL and ability to administrate Linux system.

## Certificates

Course participants receive completion certificates signed by ALX.

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## 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.