

Postgres@CERN - PostgreSQL Meetup at CERN - January 17th



Report of Contributions

Contribution ID: 1

Type: **not specified**

Pavlo Golub - Professional PostgreSQL scheduling made easy

Friday, January 17, 2020 3:10 PM (50 minutes)

The talk firstly introduces all appropriate levels of database scheduling and then focuses on PostgreSQL and the means it provides. The talk explains the meaning and importance of key approaches. Postgres community has already developed several tools in that area. Some popular common options will be highlighted together with the problems that different scheduling approaches have. To overcome some of these problems a new Open Source tool from Cybertec, called `pg_timetable`, is introduced and explained in detail. It offers the simplest possibly entry into exhaustive Postgres scheduling combined with system tasks (cron on steroids). Also discussed will be advanced topics like transaction support and cross-platform tasks.

Pavlo Golub is a PostgreSQL expert and developer at Cybertec. Pavlo is working with PG for 17 years.

Presenter: PAVLO GOLUB

Contribution ID: 2

Type: **not specified**

Anastasia Lubennikova - Advanced PostgreSQL Backup and Recovery methods

Friday, January 17, 2020 4:15 PM (50 minutes)

As database size and complexity grow, DBAs may face the fact that the functionality offered by built-in tools such as `pg_dump` and `pg_basebackup` is insufficient, and more flexibility is required to create reliable backups and manage them.

This talk cover various advanced topics in the area of backups:

- incremental backups;
- archive management;
- backup validation;
- retention policies;
- etc.

Based on these features, we'll compare various backup/recovery solutions for PostgreSQL.

This information will help you to choose the most appropriate tool for your system.

Anastasia Lubennikova received her B.S. degree in Applied Mathematics and Information Science from NRNU MEPhI.

She has 5 years of experience as a system software developer and speaker. She also worked as a teacher and project manager in a database systems domain.

As a PostgreSQL contributor, Anastasia focuses on optimizing indexing, storage, and backup solutions. She enjoys working with both open source community and enterprise projects, as they provide different perspectives on the same product. Contributing to open source allows to improve the system used by millions of users and collaborate with the best professionals in the field all around the world. While working on software custom development and tech support provides constant challenges, not only technical ones and connects the art of system development with real business needs.

Presenter: ANASTASIA LUBENNIKOVA

Contribution ID: 4

Type: **not specified**

Gülçin Yıldırım - Evolution of Fault Tolerance in PostgreSQL

Friday, January 17, 2020 2:15 PM (50 minutes)

PostgreSQL is an awesome project and it evolves at an amazing rate. The talk will focus on the evolution of fault tolerance capabilities in PostgreSQL throughout its versions.

The talk will cover the topics listed below:

- Robustness of PostgreSQL
- PostgreSQL Fault Tolerance: WAL
- Transaction? Commit? Checkpoint?
- Replication Methods for PostgreSQL
- Physical Replication
- Standby Modes
- Streaming Replication and WAL
- Failover and Switchover
- Synchronous Commit
- Managing Timeline Issues: `pg_rewind`
- Trigger-based Replication
- Logical Decoding

There are several ways of how to look at fault tolerance. In this sense, PostgreSQL provides different means of achieving fault tolerance and dependability either out of the box solutions or using extensions depending on what are the user's priorities about their system. General fault tolerance in PostgreSQL is improving over time and I expect this trend to continue.

Gülçin studied Applied Mathematics in Yildiz Technical University in Istanbul and completed her Master's at Tallinn Technical University in Estonia. She started working with Postgres at a startup company in 2012 and was amazed how good Postgres really is! After being involved in organizing PostgreSQL conferences, giving talks and being an active community member she has been elected to PostgreSQL Europe Board in 2017 until 2019. Gülçin is interested in PostgreSQL Automation and Cloud Technologies. She resurrected the Prague PostgreSQL Meetup group and has been organizing a meetup with two talks each month as the main organizer. She is also part of Postgres Women and cares about diversity and representation of women in technical communities. She is currently on maternity leave and getting inspired by the evolution of human beings :)

Presenter: GÜLÇİN YILDIRIM

Contribution ID: 5

Type: **not specified**

Vik Fearing - Advent of Code Using PostgreSQL

Friday, January 17, 2020 5:10 PM (20 minutes)

SQL is a rich language and can do more than you think. The short talk will show some techniques I learned by trying to solve general-purpose programming challenges using just a single query.

Presenter: VIK FEARING

Contribution ID: 6

Type: **not specified**

Oleg Bartunov - All You Need Is Postgres !

Friday, January 17, 2020 6:00 PM (20 minutes)

Closing keynote

Presenter: OLEG BARTUNOV

Contribution ID: 7

Type: **not specified**

Romuald Thion - PostgreSQL at the university : some lessons learned

Friday, January 17, 2020 5:35 PM (20 minutes)

The computer science department of Université Claude Bernard Lyon 1 (France) has progressively introduced PostgreSQL in its courses since 2018.

Now, more than 400 students enrolled from second to fifth year use PostgreSQL in databases, web, security or system administration courses.

In this talk, we will briefly showcase our platform and give feedback on some common pitfalls students and teachers fall into.

From our experience, we will propose some directions to promote PostgreSQL to students and teachers.

Presenter: ROMUALD THION

Contribution ID: 8

Type: **not specified**

Welcome and Opening

Friday, January 17, 2020 2:00 PM (15 minutes)

Presenters: AVROT, Laetitia; PACHOT, Franck