
PostgreSQL
Conference
Europe
2012
Prague
October 23-26
Corinthia Hotel

Welcome to Prague and PGConf.EU 2012

As President of PostgreSQL Europe, I am pleased to welcome you to this year's edition of the European PostgreSQL conference, this time in Prague. For our repeat visitors, the format will be familiar as we are building on the foundation of previous years. We have listened to the feedback from last year and made some minor changes this time around. For example, we have gone back to only three parallel sessions, to decrease the risk of wanting to go to more than one talk at the same time. Instead, we have added a full day to the conference, making this year's three days of conference and one day of training a new record for us!

For our new users - welcome to a new experience. We hope you will find our large number of sessions interesting, and that every timeslot will have something for you. And whatever your interest is - don't miss out on the "hallway track". pgconf.eu will be packed with major PostgreSQL contributors, developers, DBAs, consultants (and even some sales people, I'm told). It's an excellent opportunity to build new, or build upon existing, networks and connections with your peers.

Outside of the hallway track, don't miss our party track. Check the online conference schedule for the latest news on our evening activities, as the details were not finalized by printing time.. But rest assured that there will be plenty of time to network there as well.

I'd like to thank all our sponsors for making it possible for us to put together a conference like this - EnterpriseDB and 2ndQuadrant in the Platinum slot, followed by gold sponsors Servoy, Cybertec and VMWare, through silver sponsors Dalibo, GoodData, Heroku and pgPower and also all our bronze sponsors.

This year we had over a hundred submissions for presentations - unfortunately, we just don't have room for all the great speakers. For those of you who are here - thank you for submitting, thank you for showing up, you are really the ones who bring the audience. For those who submitted but weren't choosen - thank you as well, we appreciate your efforts, and very much invite you to join us again next year.
And most of all, thanks to our fantastic volunteers who have spent months preparing this event, and to all of you - our attendees - for making it worthwhile!

Once again, welcome to PostgreSQL Conference Europe 2012.

Magnus Hagander
President of PostgreSQL Europe

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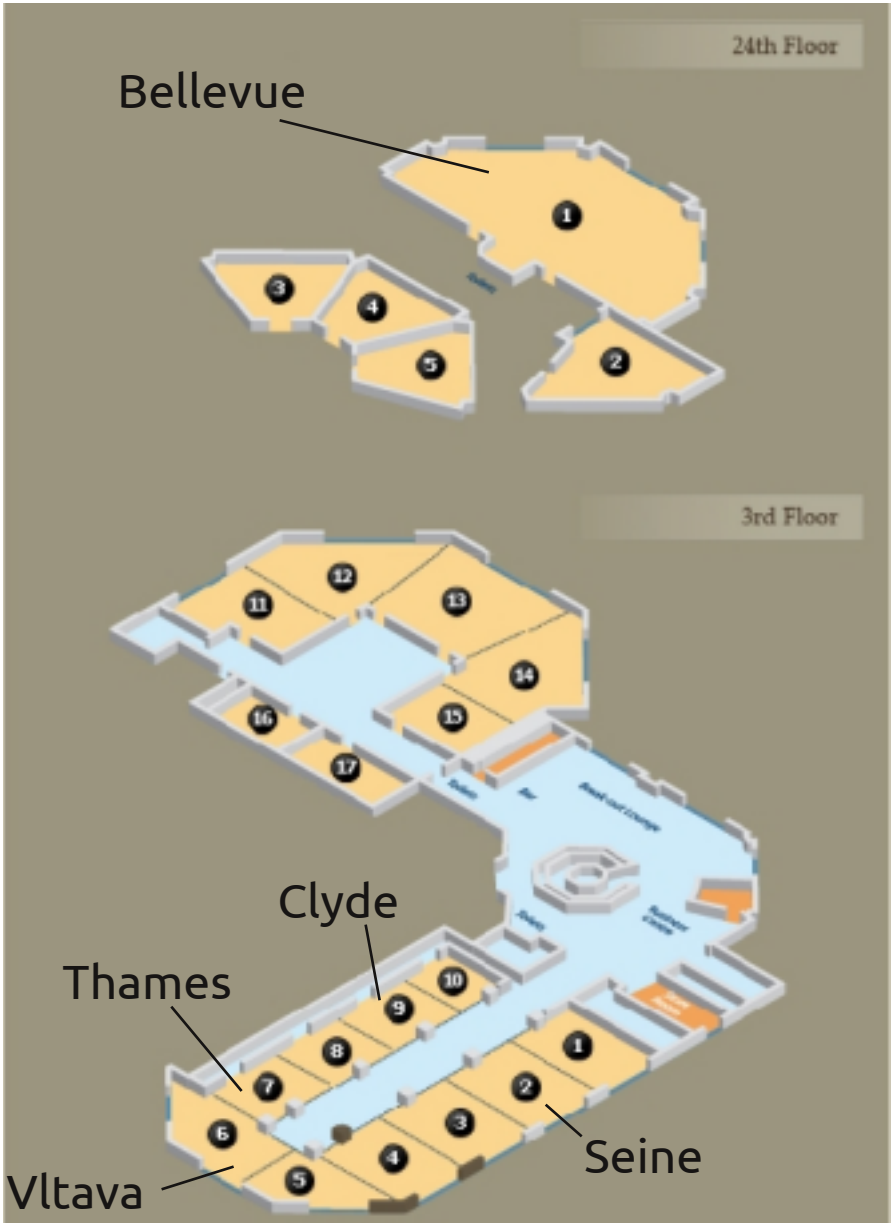
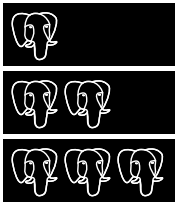
Conference Rooms



Conference Tips

Levels

Elephant heads indicate the technical level of each talk :



Beginner

Intermediate

Advanced

Talks

- **TK** Training (Czech)
- **TR** Training (English)
- **GL** General (English)
- **CZ** General (Czech)
- **DB** DBA (English)
- **DE** Developer (English)
- **HK** Hacker (English)

Update !

Despite our efforts the schedule may change after this booklet is printed.

Please check our website for any last minutes changes :

http://2012.pgconf.eu

Twitter

The official hastag is #pgoncfeu

Follow @pgconfeu

Feedback

http://2011.pgconf.eu/feedback/

Tuesday

	Clyde	Seine	Thames	Vltava
09:00	Mastering PostgreSQL Administration Part 1 Bruce Momjian Devrim Gündüz	PostgreSQL Performance Greg Smith Peter Geoghegan	Implementace uložených Procedur V PostgreSQL Pavel Stehule	A day of SQL With Celko Part 1 Joe Celko
12:30				
Lunch				
13:30	Mastering PostgreSQL Administration Part 2 Bruce Momjian Devrim Gündüz	PostgreSQL Performance Dimitri Fontaine Simon Riggs	Čtení Exekučních plánů Tomas Vondra	A day of SQL With Celko Part 2 Joe Celko
17:00				

Wednesday

	Bellevue	Seine	Thames	Vltava
09:30 09:45 10:45	Welcome & Opening Keynote: Joe Celko			
Coffee				
11:10 12:00		Programming the SQL Way with Common Table Expressions Bruce Momjian	Writing a foreign Data wrapper Bernd Helmle	Provoz PostgreSQL Na AWS Tomas Vondra
12:10 13:00		Postgre SQL On AWS Christophe Pettus	MultiMaster Replication Andres Freund, Simon Riggs	PL/pgSQL - internals Pavel Stehule
Lunch				
14:00 14:50		Understanding EXPLAIN's output Guillaume Lelarge	Using collectd for PostgreSQL Performance Analysis Sebastian Harl	Migrace z MySQL Na PostgreSQL Tomas Vondra
15:20 16:10		Boosting performance and reliablity by using pgpool-II Tatsuo Ishii	Range Types in PostgreSQL 9.2 Jonathan S. Katz	Indexy jsou grunt Pavel Stehule
Tea				
16:20 17:10		CREATE EXTENSION pgchess; Gianni Ciolli	High availability in Postgres-XC, the symmetric PostgreSQL cluster Koichi Suzuki	Load dat Do PostgreSQL Jan Holčapek

Thursday

	Bellevue	Seine	Thames	Vltava
09:30		How fast is PostgreSQL? Cédric Villemain	Graphs and topology with PostgreSQL And PostGIS Vincent Picavet	Marketing PostgreSQL Jonathan S. Katz
10:45				
Coffee				
11:50		Implementing High Availability Dimitri Fontaine	Universal Data Access with SQL/MED David Fetter	Java Wrapper for PostgreSQL Stored Procedures Jan Mussler
12:40				
11:50			PostGIS 2.0 and beyond Vincent Picavet	Elephants And Windmills Josh Berkus
12:40				
Lunch				
13:40		Inside PostgreSQL Shared Memory Bruce Momjian	Practical Tips for Better PostgreSQL Applications Marc Balmer	PostgreSQL in Research and Development: 3 success stories Roland Sonnenschein
14:30				
14:40		Embracing the Web with JSON and PLV8 Will Leinweber	Pacemaker And PostgreSQL Guillaume de Rorthais	Index support for regular expression Search Alexander Korotkov
15:30				
Tea				
16:00	Lightning talks Harald Armin Massa			
16:50				

Friday

	Bellevue	Seine	Thames	Vltava
09:30 – 10:45		Beyond Query Logging Greg Smith Peter Geoghegan	PostBIS - A Bioinformatics Booster for PostgreSQL Michael Schneider	pg_xnode Alternative implementation Of XML Antonin Houska
Coffee				
11:50 – 12:40		PostgreSQL Backup Strategies Magnus Hagander	Migrating Oracle queries to PostgreSQL Alexey Klyukin	PostgreSQL makes dev happy, a pgAgent + pl/pgsql use case Julien Rouhaud
11:50 – 12:40		Maintaining Very Large Databases Devrim Gündüz	Debugging complex SQL queries with writable CTEs Gianni Ciolli	PG-Strom GPU Accelerated Asynchronous Query Execution Module KaiGai Kohei
Lunch				
13:40 – 14:30		Large Scale MySQL Migration to PostgreSQL Dimitri Fontaine	Limiting PostgreSQL resource consumption using the Linux kernel Hans-Jürgen Schönig	Using PostgreSQL for storing time-series data Sebastian Harl
Tea				
15:00 – 15:20	Postgres Adoption at the Tipping Point Ed Boyajian			
15:25 – 15:45	Community PostgreSQL Harald Armin Massa Simon Riggs			
15:50 – 16:30	Closing Dave Page			

Wednesday

09:30-09:45 Bellevue

Welcome and opening

Magnus Hagander

09:45-10:45 Bellevue  GL

Opening Keynote

Joe Celko

When we get a new technology, we mimic the old technology. The first automobiles were called “horseless carriages”, the cinema was “moving pictures” and “artificial anything” has to wait to get its own name. The human mindset needs to anchor itself with the familiar before we can make the leap to something new.
The first films were black and white, low resolution, jerky and short duration because of the physical limitations of the equipment. It would be a while before high speed color film and lens designed for it would be invented.
While all that equipment is fun, the real innovation was a change in the mindset, not the equipment. For a few thousand years of human history, we had stage plays instead of cinema houses or television. You sat in one place and watched the performance. And that is how the first motion pictures were filmed. It was D. W. Griffith (1875 -1948) who realized that the camera could move. He invented the “basic vocabulary” of cinematography we take for granted – distance shots, pan shots, close-ups, fades, dissolves and tracking shots.
Herman Hollerith and his “unit record equipment” (notice the terminology!) go back to the 1880's. The first ANSI/ISO SQL Standard was in 1986, a “mere” century later. Dr. E. F. Codd was our version of D. W. Griffith and we now assume a relational data model.
Or do we? How much of the prior technology mindset do we still carry in our systems? And where do we go next? Let's take a look at the evolution of databases from punch cards and magnetic tapes to Solid State Disk and the Cloud, and the mindset from sequences of static physical records to sets of dynamic virtual abstractions.

11:10-12:00 **Seine**  **DE**

Programming the SQL Way with Common Table Expressions

Bruce Momjian

SQL is a declarative language, meaning the user submits an SQL command and the database determines the optimal execution. Common Table Expressions (CTEs) allow queries to be more imperative, allowing looping and processing hierarchical structures that are normally associated only with imperative languages. This talk will help developers implement CTE queries in their applications and allow operations that normally could only be done in application code to be done via SQL queries.

11:10-12:00 **Thames**  **HK**

Writing a foreign data wrapper

Bernd Helmle

Writing a foreign data wrapper (FDW) for PostgreSQL seems easy. However, there are many pitfalls. This talk will cover experiences from writing a FDW for Informix and will discuss differences between 9.1 and 9.2 APIs, data type mapping and conversion, optimizer support and performance related topics. Interested attendees will get an overview on how to tackle their own FDW and (hopefully) learn something to do it better ;-)

11:10-12:00 **Vltava**  **CZ**

Provoz PostgreSQL na AWS

Tomas Vondra

Každý dnes mluví o cloudových řešeních, a Amazon AWS je v této oblasti pravděpodobně nejznámějším poskytovatelem. Naše firma na AWS provozuje více než 200 instancí, na mnoha z nich běží PostgreSQL. Podívejme se co vám AWS může dát, s jakými problémy se budete muset vypořádat a jaký výkon čekat od jednotlivých typů instancí. Tato přednáška v krátkosti představí základní informace o AWS (typy instancí, uložišť apod.), co vám AWS může (a nemůže) poskytnout, jaké jsou silné a slabé stránky provozu PostgreSQL na AWS, chytáky a základní benchmarky.

12:10-13:00 **Seine**  **DB**

PostgreSQL on AWS

Christophe Pettus

Amazon Web Services (AWS) has become a very popular platform for deploying PostgreSQL-backed applications. But it's not a standard hosting platform. We'll talk about how to get PostgreSQL to run efficiently and safely on AWS. Among the topics covered will be: Selecting an EC2 instance size, and configuring it for PostgreSQL. Dealing with ephemeral instance storage: What is it good for? How much do you need? Elastic Block Store: How much do you need? How do you configure it for best performance? AWS characteristics and quirks. Why replication is not optional on AWS. Backups and disaster recovery.

12:10-13:00 **Thames**  **HK**

MultiMaster Replication: Applications, Comparison, Implementation

Andres Freund & Simon Riggs

MultiMaster Replication is one of the most requested features by PostgreSQL users. Simon Riggs will discuss how and when you might want it and evaluate various replication implementations in CouchDB, MongoDB, SQLServer and Oracle. Andres Freund will discuss the architecture, summary of implementation and benefits of the current Bi-Directional Replication project under development for 9.3 and beyond. All explained to be accessible for intermediate users.

12:10-13:00 **Vltava**  **CZ**

PL/pgSQL - internals

Pavel Stehule

Přednáška vysvětluje základní architekturu procedurálního jazyka PL/pgSQL, ukazuje co je v něm možné napsat a co nejde vůbec nebo jen velmi obtížně. Ať již jste v PL/pgSQL začátečníci nebo zkušení programátoři, měla by vám pomoci psát efektivnější a spolehlivější kód.

14:00-14:50 **Seine**  **DE**

Understanding EXPLAIN's output

Guillaume Lelarge

Many wonder how one should read the output of the EXPLAIN statement. This talk will show how to read, and what kind of information you can gather from this.

14:00-14:50 **Thames**  **DB**

Using collectd for PostgreSQL performance analysis

Sebastian Harl

Performance analysis and tuning cannot be done without identifying and understanding performance bottlenecks. For this purpose, it is very helpful to have information about the behavior of the system and its history available. collectd is a UNIX daemon which periodically collects and stores system performance data in a variety of ways. Through its modular design it is very flexible in the way it may be used. By running as a daemon without calling external scripts, it is very efficient and allows for a default resolution of 10 seconds. Besides being able to collect various information about the system it's running on, collectd supports collecting many information about PostgreSQL servers and databases. This allows for doing detailled analyses of an entire PostgreSQL server setup.

14:00-14:50 **Vltava**  **CZ**

Migrace z MySQL na PostgreSQL

Tomas Vondra

Před více než rokem se GoodData rozhodly zmigrovat svůj produkt - BI platformu - z MySQL na PostgreSQL. V rámci této přednášky se pokusím vysvětlit jaké důvody nás k migraci vedly, a to jak z business tak i z technické stránky. Ačkoliv migrace je success story, nebudu mluvit jenom o přínosech (vlastnosti, výkon, komunita) ale také o věcech které nám v PostgreSQL chybí a neočekávaných nástrahách, přičemž pro některé stále nemáme řešení. Pokud o podobné migraci uvažujete, tato přednáška vám může ušetřit nemálo starostí.

15:20-16:10 **Seine** DB

Boosting performance and reliablity by using pgpool-II

Tatsuo Ishii

Pgpool-II offers several ways to enhance performance of PostgreSQL including connection pooling , load balancing and on memory query cache. In this presentation we focus on the query cache and explain how to configure, use and tune it to achieve better performance. Also we discuss how to avoid SPOF of pgpool-II itself by using built in high availability functionality "watchdog" to manage pgpool-II cluster system.

15:20-16:10 **Thames** DE

Range Types in PostgreSQL 9.2 Your Life Will Never Be The Same

Jonathan S. Katz

The range data type is a revolutionary new feature in PostgreSQL 9.2 that gives you the power to search and sieve over any data type that can be represented as a range (and very quickly too!). After comparing what life was like for such queries before and after the range data type, we will look at some common applications and extensions, and additionally see how VenueBook uses range types in its daily operations.

15:20-16:10 **Vltava** CZ

Indexy jsou grunt

Pavel Stehule

Přednáška je úvodem do indexování a možností které v této oblasti poskytuje PostgreSQL. Vysvětluje základní koncept indexů, varianty a mechanismy fungování, včetně jejich výhod a nevýhod. Ukazuje jak indexy v PostgreSQL udržovat. Stručně si také srovnáme jaké typy indexů poskytuji PostgreSQL, Oracle a MS SQL podporují, a to včetně speciálních typů indexů dostupných v PostgreSQL (GIN/GiST, indexy použitelné pro LIKE apod.)

16:20-17:10 **Seine**  **DE**

CREATE EXTENSION pgchess; a Deep Blue elephant

Gianni Ciolli

Two years ago we presented a program that plays Chess on PostgreSQL, to demonstrate many of its features that are helpful in software development. This talk presents the new version, named "pgchess", packaged as a PostgreSQL 9.1 extension, and the features added since then. It includes both C and PL/pgSQL code, allowing better performance and modularity queries.

16:20-17:10 **Thames**  **HK**

High availability in Postgres-XC the symmetric PostgreSQL cluster

Koichi Suzuki

Postgres-XC is a symmetric PostgreSQL cluster which provides both read and write scalability using a mixture of table sharding and replication. Each Postgres-XC cluster node provides a single database view, where applications can connect to any cluster node and run any transaction. The result of transactions is visible from all the cluster nodes without delay.

16:20-17:10 **Vltava**  **CZ**

Load dat do PostgreSQL

Jan Holčapek

V naší aplikaci do PostgreSQL nalíváme spoustu dat - většinou hromadně z CSV souborů. Tradiční způsob jak toto dělat je COPY příkaz, ale to je občas dost pomalé (zejména pokud jsou na tabulce indexy) protože PostgreSQL používá pouze jedno CPU a nemá některé příkazy které potřebujeme - například MERGE příkaz. Naštěstí, existuje rozšíření pg_bulkload které některé problémy řeší. Během přednášky ukážeme jak pg_bulkload používat, jaké možnosti nabízí a srovnáme jeho výkon s prostým COPY v různých situacích. A protože nic není dokonalé, ukážeme si několik nevýhod kterých byste si u pg_bulkloadu měli být vědomi.

Thursday

09:30-10:20 **Seine**  **DB**

Improving VACUUM Suction

Cédric Villemain

Benchmark results for the 9.2 release, plus details of how to produce your own benchmarks using tools like Tsung to determine how many users your database can survive. Load testing a database cluster requires powerful tools, not only do you need to be able to monitor your servers, but also you need enough clients to go over the limits and predict your

09:30-10:20 **Thames**  **DE**

Graphs and topology with PostgreSQL and PostGIS

Vincent Picavet

Graphs and networks are data structures more and more frequently used for modelization. They are naturally used in transportation, energy, networks and globally in the GIS field. PostgreSQL and PostGIS provide features which enable one to deal with this kind of data natively and efficiently. This presentation describes these components, and their database features, as well as practical use cases on network data.

09:30-10:20 **Vltava**  **GL**

Marketing PostgreSQL

Jonathan S. Katz

You know that PostgreSQL is the best database, but what about your colleagues? Your boss? Your friends in the community? How do you convince people that PostgreSQL should be their first choice to solve most of their data problems? This talk will go over facts and figures that can be applied to negotiating the use of PostgreSQL to different members of an organization, from DBAs to MBAs.

10:50-12:40 **Seine**  **DB**

Implementing High Availability

Dimitri Fontaine

How to implement PostgreSQL in a demanding project, what are the different technical offerings good for? All you wanted to know about replication and never dared to ask. PostgreSQL includes several High Availability solutions, some replication solutions, and some external Open Source projects complement the offering. When to use which project and what for? This talk will present the usual needs you want to address in a medium size project and how to use several replication solutions to implement them.

10:50-11:40 **Thames**  **DE**

Universal Data Access with SQL/MED

David Fetter

Much of the world's data can be accessed as tables. SQL/MED is designed to bring all this data together. See how PostgreSQL does this, and a roadmap for the future. Before the talk is over, you will have tools you can use in your projects right away.

10:50-11:40 **Vltava**  **DE**

Java Wrapper for PostgreSQL Stored Procedures

Jan Mussler

At Zalando we store most of our critical data in PostgreSQL databases. To achieve both high performance and implement a secure API layer all database access is done through stored procedures, using plpgsql and sql functions. After implementing a type mapper to get rid of writing mappers for every procedure and types returned, implementing a lightwight wrapper was the next step to reduce the amount of java code necessary. We will present our stored procedure wrapper that uses annotated Java methods to mirror available stored procedures and thus makes the usage of stored procedures very easy in Java.

11:50-12:40 **Thames**  **DE**

PostGIS 2.0 and beyond

Vincent Picavet

PostGIS 2.0 saw the light in 2012. This new major version of the GIS component of PostgreSQL comes with a lot of core changes and additional features.
Raster in database is one of the long-awaited features present in version 2.0. Topology is also a complete set of features to deal with a new way of storing geometry information. Data management functions, geometry functions... A lot of new functions has been added to what was already available in the 1.5 series.
But PostGIS development is far from being stalled, and a lot of work is ongoing to improve current features, have better performances, and add a whole range of new functionalities to the core set of PostGIS features. Among them, the work on 3D is a huge and complex task, raising new problems, but looks promising. Raster, topology are other areas where a lot of improvement has been made.
This talk presents the 2.0 novelties and what we could expect from next versions of PostGIS.

11:50-12:40 **Vltava**  **GL**

Elephants and Windmills

Josh Berkus

Not only does PostgreSQL power much of the web, it's running wind power generators as well. The USA's leading wind-power management startup is PostgreSQL-powered, including maintenance, supply, inspection, billing and analytics. Learn how PostgreSQL has allowed this company to develop first-in-industry software for managing wind power.

This talk will cover the design of two systems. First, Service Reports uses iPads, PostgreSQL and Django to track inspections, failures and maintenance online. Second, Analytics allows windfarm owners to collect up to 700 facts per second from each turbine and turn that into trending reports covering power production, reliability and the effects of regulation.

13:40-14:30 **Seine**  **HK**

Inside PostgreSQL Shared Memory

Bruce Momjian

This talk is for people who want to understand how PostgreSQL shares information among processes using shared memory. The talk covers the internal data page format, usage of the shared buffers, locking methods, and various other shared memory data structures.

13:40-14:30 **Thames**  **DE**

Practical Tips for Better PostgreSQL Applications

Marc Balmer

This talk is for programmers that wish to integrate PostgreSQL in their applications or who maintain applications that use PostgreSQL as their primary database. Whereas PostgreSQL claims to be "the most advanced open source database in the world", many client applications don't use advanced features, but rather a subset of what PostgreSQL has to offer. Often we see applications that claim to be "database neutral" and that support many databases. These applications can then, of course, only use the least common denominator of the features of all databases. Once an application developer has decided to use only PostgreSQL, he is then ready to unveil the real power of PostgreSQL and to make use of advanced features and PostgreSQL specific functionality.

13:40-14:30 **Vltava**  **GL**

PostgreSQL in Research and Development: 3 success stories

Roland Sonnenschein

In technical applications, databases are rarely used to store measurements and metadata. This talk is about 3 technical projects with PostgreSQL as the core software component: Wind Energy: Testing of large size bearings of wind mills, Automotive Industry: Test center to improve corrosion behaviour and Plant genetics: Automated mass phenotyping by machine vision. Details will be discussed.

14:40-15:30 **Seine** DE

Embracing the Web with JSON and PLV8

Will Leinweber

This talk will present the statistics gathered by the collector. It will decrypt each statistics views, and explain how to use them. Some related tools will be discussed.

14:40-15:30 **Thames** DB

Pacemaker and PostgreSQL: to serve and protect your data

Jehan-Guillaume de Rorthais

In the past few years PostgreSQL developpers have done a lot of work on in-core replication and related features. The next challenge administrators have to face is to deal with high availability, a non-optional component in any clustering solution that can not be an in-core feature.

This talk introduce Pacemaker, the next generation Cluster Resource Manager that is able to deal with any kind of service, including PostgreSQL. We'll discover how to these two great piece of software can works together to make your data safe and available !

14:40-15:30 **Vltava** HK

Index support for regular expression search

Alexander Korotkov

Regular expressions are a powerful tool for text processing. When dealing with large string collections it's important to search fast on those collections (i.e. search using index). Indexing for regex search is quite a hard task.

This talk presents a novel technique (and WIP patch for PostgreSQL implementing it) for regex search using trigram indexes. The proposed technique provides more comprehensive trigram extraction than analogues, i.e. higher performance.

16:00-16:50 **Bellevue** GL

Lightning talks

Harald Armin Massa

Your moment in the spotlight! A session of 5 minute lightning talks on a variety of topics. Always a crowd pleaser!

Lightning Talks - the high intensity part of conference which only uses 5 minutes of attention span at a time.

The rules for Lightning Talks are easy: you can talk about anything, but no longer than 5 minutes. The audience really prefers the talks to be related to PostgreSQL (the worlds most advanced OpenSource Database, the project, the community, the conference, the ecosystem)

To optimally prepare for your awesome Lightning Talk: give your presentation as HTML, OpenOffice, PDF, PPT or Prezi to the Lightning Talk Man Harald Armin Massa hours before the scheduled time. If you cannot do that, please make sure your laptop/tablet/mobile phone is able to communicate with the projector, especially that you have all necessary adapters and Jobs-plugs and you have the correct drivers, settings and licences.

Friday

09:30-10:20 **Seine**  **DB**

Beyond Query Logging

Greg Smith & Peter Geoghegan

Query logging, saving information about the statements that take a long time to execute, is a useful way to look at small amounts of data about your server's workload. Workload analysis is a more formal approach that takes that data and builds a larger picture about your server's health from it. PostgreSQL 9.2 makes it easier than ever to collect slow query information, but you can start formal workload analysis in any version.

09:30-10:20 **Thames**  **DE**

PostBIS - A Bioinformatics Booster for PostgreSQL

Michael Schneider

Biological sequences such as genomic DNA sequences are most commonly stored as ASCII strings in varchar fields or just simple text files outside the database. While this is a valid and functional approach, it deprives us of optimization opportunities, the nature of biological sequence data offers.

09:30-10:20 **Vltava**  **HK**

pg_xnode - Alternative implementation of XML

Antonin Houska

pg_xnode extension implements the XML standard from scratch, using no external library such as libxml2. The current (pre)release includes: Binary storage for XML document tree, its nodes and XPath expressions, functions to modify XML documents in-place, XPath processor that allows for implementation of custom XPath functions and a template to turn relational data into XML easily.

10:50-11:40 **Seine**  **DB**

PostgreSQL Backup Strategies

Magnus Hagander

Rumor has it all these other users and companies do this thing called "backup" on their database. And people keep saying it's a good idea. But what does it actually mean? In this talk we'll go through the different options we have for PostgreSQL backups, how to use them and some good tips and best practices for setting up a backup strategy that actually works when disaster strikes.

10:50-11:40 **Thames**  **DE**

Migrating Oracle queries to PostgreSQL

Alexey Klyukin

Based on my experience migrating a large Oracle 8i database, the talk highlights conversion of SQL queries from Oracle specific constructions to PostgreSQL. A number of products exist that helps to automate data conversion from Oracle to PostgreSQL, among the notable open-source ones are ora2pg and relatively new PostgreSQL Foreign Data Wrapper for Oracle. The talk touches them briefly and advances to the area that is less explored and automated - conversion of SQL queries. Examples are provided for different classes of queries, and subtle (often undocumented) differences are highlighted.

10:50-11:40 **Vltava**  **DE**

PostgreSQL makes dev happy, a pgAgent + pl/pgsql use case

Julien Rouhaud

Success story for a development based on pgAgent on Windows (with PostgreSQL on GNU/Linux) for scheduling tasks, and a mix of Windows binaries and pl/pgsql functions to manage maintenance tasks, operation tasks and night batch processings for a health insurance company.
Come to discover how pgAgent helped to manage about 15.000 invoices every day.

11:50-12:40 **Seine**  **DB**

Maintaining Very Large Databases (VLDs)

Devrim GÜNDÜZ

"Big" sometimes means "important" to people -- so everyone actually has big data. However, some of them are really big, like 100's of TB. Storing data is a somewhat easier problem: You can vertically or horizontally scale your servers to store the data. However, what about backups? TPS? Upgrades? Monitoring? This talk will mention best practices and solutions to handle big multi TB PostgreSQL databases.

11:50-12:40 **Thames**  **DE**

Debugging complex SQL queries with writable CTEs

Gianni Ciolli

Sometimes you have a complex query using subqueries, and even using EXPLAIN output you still can't understand why the output differs from what you expected. In this talk we show how CTE (a.k.a. WITH queries), more precisely the writable ones introduced in PostgreSQL 9.1, can provide a debugging and tracing tool. We will provide concrete examples and try to point out pitfalls and limitations.

11:50-12:40 **Vltava**  **HK**

PG-Strom
GPU Accelerated Asynchronous Query Execution Module

KaiGai Kohei

This session introduces a brief overview, internal architecture and future direction of PG-Strom, in addition to technology background of GPU computing and FDW mechanism. PG-Strom is a FDW module that utilizes GPU devices to scan massive amounts of records with complex qualifiers, performs on well optimized column-oriented data structure underlying foreign tables. GPU devices offer cost and energy effective large parallel processing cores, so enables to offloading of a part of CPU's tasks. PG-Strom makes CPU and GPU focus on the jobs with their respective specialty, and run them asynchronously. This architecture enabled to minimize response time when we tried to analyze towards a bunch of big-data.

13:40-14:30 **Seine**  **DE**

Large Scale MySQL Migration to PostgreSQL

Dimitri Fontaine

Once a Top-10 internet audience site. 32 million users. Billions of photos and comments, more than 6TB of them. Migrating away from MySQL to PostgreSQL! This talk will share hindsights about the why and the how of that migration, what problems couldn't be solved without moving away and how the solution now looks. This talk will detail the tools used for migrating away the data, the methods and the new architecture. And the new home, in the cloud!

13:40-14:30 **Thames**  **DB**

Limiting PostgreSQL resource consumption using the Linux kernel

Hans-Jürgen Schönig

PostgreSQL offers a rich set of parameters to tune and configure resource consumption efficiently. A lot of stuff happening inside PostgreSQL can be optimized this way - however, sometimes it is necessary to integrate the database server with the underlaying operating system more tightly and to make sure that only a certain amount of memory, CPU or disk bandwidth is used. This talk will show how Linux cgroups can be used with PostgreSQL.

13:40-14:30 **Vltava**  **HK**

Using PostgreSQL for storing time-series data

Sebastian Harl

As of today, RRDtool is the de-facto standard for storing and graphing time-series data. However, that tool is fairly limited when it comes to large setups requiring redundancy, high-availability, complex analysis of the data or advanced data queries. An RDBMS like PostgreSQL, on the other hand, is very well suited for that kind of purpose. This talk describes and analyses a setup using PostgreSQL as storage backend for storing (high-frequency) performance data and the performance implications on the PostgreSQL setup.

15:00-15:20 **Bellevue** GL

Postgres Adoption at the Tipping Point: Users Around the World and Their Deployment Profile

Ed Boyajian

With the growth of Postgres around the world, we are approaching the tipping point of its adoption and acceptance as the enterprise-class database alternative. The driving force behind this is the expanding base of large and medium scale deployments of mission-critical workloads by commercial enterprises and governments. We will share case studies of organizations around the world who have made Postgres their primary database platform and explore the drivers that make Postgres the new winner in enterprise IT including: technology fit, budgeting & pricing, ecosystem support, platform deployment options including cloud, ROI, and new feature support.

15:25-15:45 **Bellevue** GL

Community PostgreSQL

Harald Armin Massa & Simon Riggs

Open Source is the necessary requirement for Open Engineering, which can deliver high quality software for enterprise use. Open Engineering also requires Community, since a single group cannot deliver the range of talents, long term economic consistency and the variety of opinions required to find the best solutions.

15:50-16:30 **Bellevue** GL

Closing

Dave Page

The closing session for the conference; prizes, observations, thanks and announcements.

EDB

Speakers

Marc Balmer

@mbalmer

After working for Atari Corp. in Switzerland where he was responsible for Unix and Transputer systems, Marc founded his company micro systems in 1990 which first specialised in real-time operating systems and later Unix. Marc is an active NetBSD developer.

Josh Berkus

@fuzzychef

Josh is on the Core Team of the PostgreSQL project. As CEO of PostgreSQL Experts, Inc, he helps companies in diverse industries solve their database and scalibility problems, using PostgreSQL, Python, Perl, PHP, Redis, Greenplum, Vertica, Hadoop, and/or CouchDB.

Ed Boyajian

@edboyajian

Ed is President and Chief Executive Officer of EnterpriseDB. Before that, Ed spent six years at Red Hat, Inc., most recently serving as vice president and general manager of North America.

Joe Celko

Joe served 10 years on ANSI/ISO SQL Standards Committee and contributed to the SQL-89 and SQL-92 Standards. He is author of books (nine so far!) on SQL for Morgan-Kaufmann. He has written over 1200 articles in over a dozen regular columns in the computer trade and academic press, mostly dealing with data and databases.

Gianni Ciolli

@gianniciolli

Gianni has been working with Free and Open Source Software since 1997. He's been an organiser of the European PGDay in Prato, Italy. He started his career in Mathematics as a university researcher and a teacher, and now works with 2ndQuadrant as a PostgreSQL consultant.

David Fetter

@davidfetter

David is currently doing Very Cool Stuff at VMware. He is also a founder of PostgreSQL Experts, based in the San Francisco Bay Area and has worked in various commercial enterprises, non-profits and educational institutions.

Dimitri Fontaine

@tapoueh

Dimitri is a PostgreSQL Major Contributor (design, review, Extensions, Event Triggers, Bi Directional Replication). He contributes to Skytools (PGQ, Londiste) and develops pgloader, prefix and other software. Dimitri works at 2ndQuadrant.

Andres Freund

Andres is a developer and consultant at 2ndQuadrant. He is using and sometimes developing Postgres and other Open Source projects since 2005. Before his current job he worked as a freelancing consultant in the area of databases and software engineering for several years.

Peter Geoghegan

@sternocera

Peter is a database architect for 2ndQuadrant, based in Dublin, Ireland. A user of PostgreSQL since 2006, and founding member of the Irish users' group, he has made a number of notable contributions to core Postgres since he began contributing early in the 9.2 release cycle.

Devrim Gündüz

@devrimgunduz

Devrim is a long-time PostgreSQL, Red Hat, Fedora contributor, and also working on some more open source projects. His career started as a system administrator, and now he is working as Principle Systems Engineer at EnterpriseDB. He is also a Red Hat Certified Engineer.

Magnus Hagander

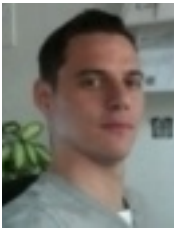
@magnushagander

Magnus is one of the original developers of the Windows port of PostgreSQL. He is also a core member of the postgresql.org infra-structure team. He is a PostgreSQL consultant at Redpill Linpro in Stockholm, Sweden, where he works on consulting, support and training services.

Sebastian Harl

@tokkee

Sebastian is engaged in Linux and Open Source software for many years. Besides actively working on projects like Debian, collectd and RRDtool, he actively supports various Open Source events by staffing booths and giving talks. Since 2011, he works as consultant and trainer at teamix in Nuremberg,



Bernd Helmle

@berndhelmle

Bernd works as a database consultant and developer for credativ in Germany. He has broad experience in PostgreSQL administration, large migration projects to PostgreSQL and high availability. He is also co-author of the german book "PostgreSQL Administration".

Holčapek

blah@test.foo

Antonin Houska

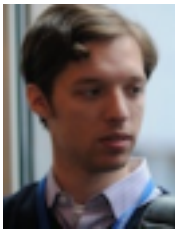
@AntoninHouska

Antonin is a Java developer and a system administrator (DB2, WebSphere, AIX, Linux). He's always been interested in low-level programming (C, C++). He's trying to migrate his career to PostgreSQL soon.

Tatsuo Ishii

@tatsuo_ishii

Tatsuo is the author of pgpool and has been involved in PostgreSQL since 1996. He is a co-founder of Japan PostgreSQL User's Group (JPUG). He works for SRA OSS, Inc. Japan, which provides various PostgreSQL related services.



Jonathan S. Katz

@jkatz05

Jonathan is CTO of VenueBook and one of the organizers of the New York City PostgreSQL User Group. He has used PostgreSQL as his primary database software since 2003, and tries to write extensions in his programming languages, such as Python and Ruby.

Alexey Klyukin

@alexeyklyukin

Alexey has more than 5 years of PostgreSQL experience, from building a custom binary replication product and getting into PostgreSQL internals the hard way, to gradually leveraging his PostgreSQL knowledge in other areas. He is employed by Command Prompt, Inc. He lives in Simferopol, Ukraine.

KaiGai Kohei

@kkaigai

KaiGai is a primary developer of SE-PostgreSQL, and now also working for SAP Global Competence Center of NEC Europe, Ltd. He has 8 years experience in development of OSS/Linux, and contributed to SELinux, PostgreSQL and some other projects.

Alexander Korotkov

aekorotkov@gmail.com

Alexander uses PostgreSQL in many web projects. He wrote a number of patches for PostgreSQL. In 2011he succesfully participated in GSoC program as a PhD student. He now works at Intaro Soft.

Will Leinweber

@leinweber

As a member of Heroku's Department of Data, Will enjoys improving the experience his customers have with their data.

Guillaume Lelarge

@g_lelarge

Guillaume is involved with the PostgreSQL community as a contributor, and as an evangelist. He developed many patches for PostgreSQL, pgAdmin, pgpool, check_postgres, Slony, etc. At work, he's the CTO of Dalibo.

Harald Armin Massa

lightningtalkman.com

Harald studied computers and economics, he's self employed since 1999, doing software development in Python and focussed on databases; He's a presenter and trainer and managing owner of 2ndQuadrant Deutschland since spring 2011.

Bruce Momjian

www.momjian.us

Co-founder of the PostgreSQL Global Development Group, and has worked on PostgreSQL since 1996. He is employed by EnterpriseDB and has spoken at many international open-source conferences.

Mussler

blah@test.foo

Dave Page

@pgsnake

Dave has been actively involved in the PostgreSQL Project since 1998, as the lead developer of pgAdmin, maintainer of the PostgreSQL installers and one of the projects resident Windows hackers. Dave is employed by EnterpriseDB where he works as a software architect and developer.

Christophe Pettus

@Xof

Christophe has been using Postgres since the 7.2 days. He consults as a database architect through PostgreSQL Experts, Inc.

Vincent Picavet

@vpicavet

After a few years working on satellite imagery, Vincent dedicates himself to GIS, designing and implementing spatial data infrastructures with PostGIS and PostgresQL as main components. He is a PostGIS contributor and he founded Oslandia in 2009, providing services in opensource GIS.

Simon Riggs

@simon_riggs

Simon is a major developer & committer of the PostgreSQL project, and CTO of 2ndQuadrant. He works as an Architect and Developer of new features for PostgreSQL, setting technical directions for 2ndQuadrant and as a Database Systems Architect for 2ndQuadrant customers.

Guillaume de Rorthais

blog.ioguix.net

Guillaume started working with Free Software on a daily basis in 2001. While discovering PostgreSQL he contributed some patches to phpPgAdmin in 2006 and became an official developer then co-administrator of the project. He works at Dalibo in Paris.

Julien Rouhaud

github.com/rjuju

Michael Schneider

blah@test.foo

Michael is responsible for PostgreSQL administration and database development at the Max Planck Institute for Marine Microbiology and is currently finishing his Master's thesis about efficient representation of biological sequences in PostgreSQL.

Hans-Jügen Schönig

blah@test.foo

Hans-Jürgen has written 4 books dealing with PostgreSQL and he has been in professional PostgreSQL business at Cybertec since the year 2000.

Greg Smith

@postgresperf

Greg leads the US-based work for international PostgreSQL services firm 2ndQuadrant. He's also the author of "PostgreSQL 9.0 High Performance", available from Packt Publishing.

Roland Sonnenschein

@rsunny

Roland develops solutions to control and document technical processes for more than 25 years. PostgreSQL is the backbone for storing and retrieving huge amounts of measurement data, images (e.g. for computer vision) and metadata.

Pavel Stehule

blah@test.foo

Pavel is a Czech PostgreSQL evangelist - he did lot of PostgreSQL, SQL and PLpgSQL trainings in Czech Republic. He also did some work on the PL/pgSQL interpreter.

Koichi Suzuki

@koichiclarinet

Koichi is the leader of Postgres-XC project, fellow at NTT DATA Intellilink and principle IT specialist at NTT DATA. He's teaching Database at Tokyo City University. He's also a cluster developer at the PostgreSQL global development group.

Cédric Villemain

@c2main

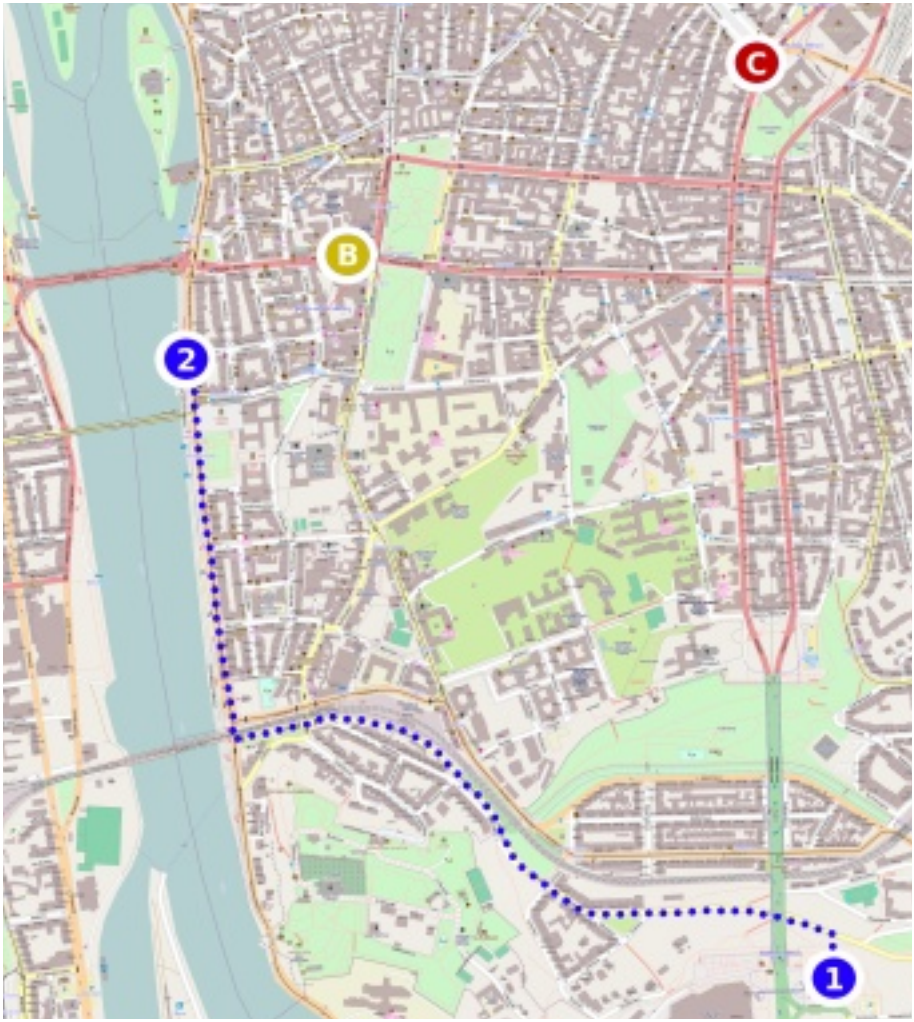
Cédric Villemain is a member of the PostgreSQL community and a professional PostgreSQL consultant in France. Interested in several part of the project, he contributes in the areas of monitoring, administration and products like "Replication Manager" or "Skytools"

Tomas Vondra

blah@test.foo

Tomas first met PostgreSQL in 2003 and quickly became a big fan. He is one of the leaders of the Czech PostgreSQL community and co-organizer of the annual conference P2D2 (Prague PostgreSQL Developers Day). He works for GoodData.

Area Map



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B Museum Metro Station

2 Heroku Boat Party

C "Karlovo namesti" Metro Station

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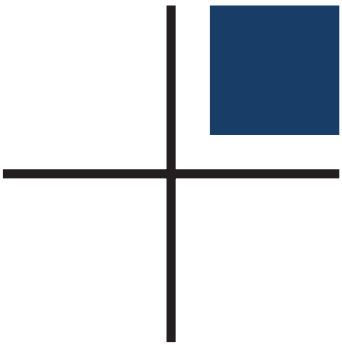

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