



PSQL State of Union

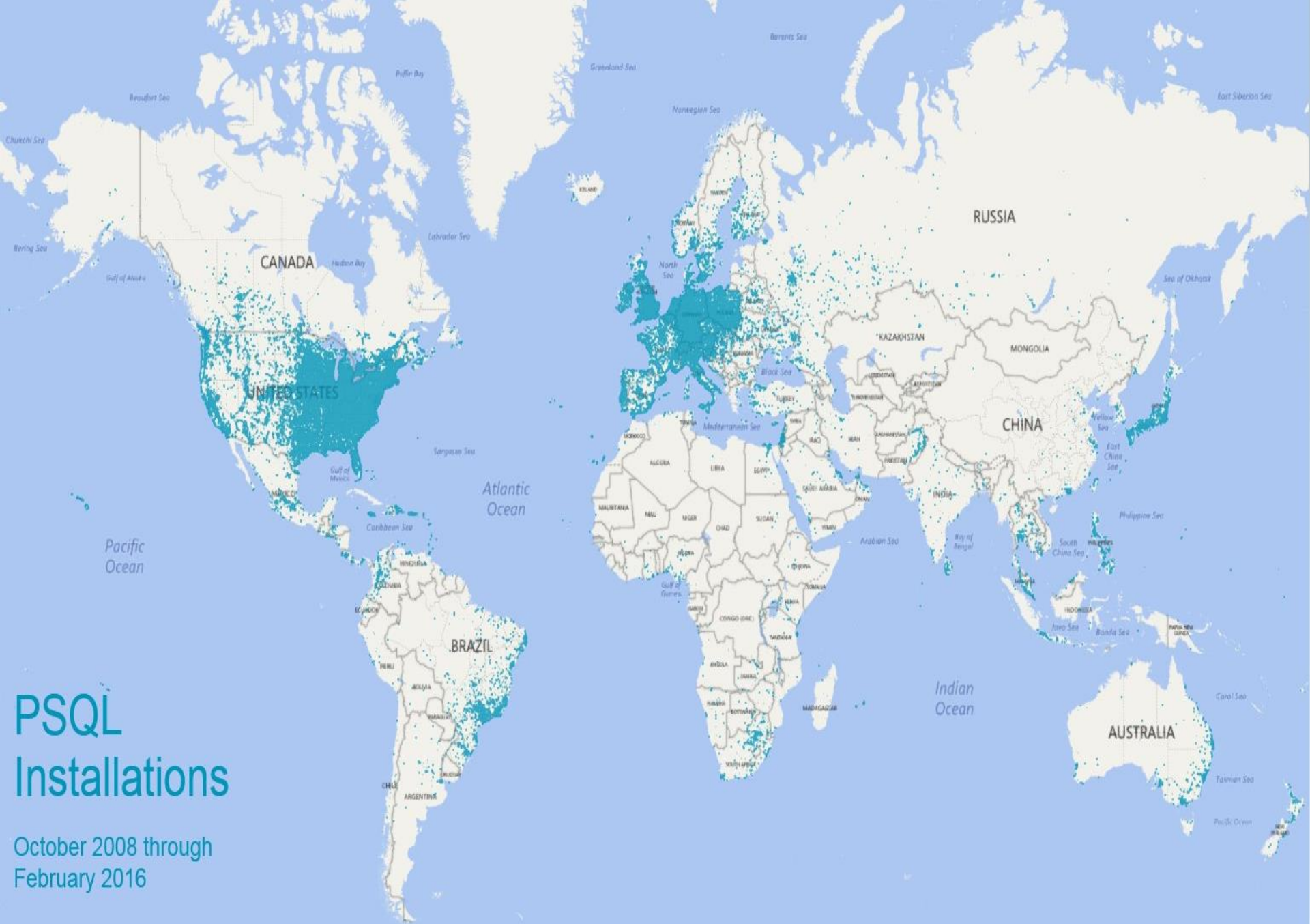
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Engineering

Actian Technical User Group Conference
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Disclaimer

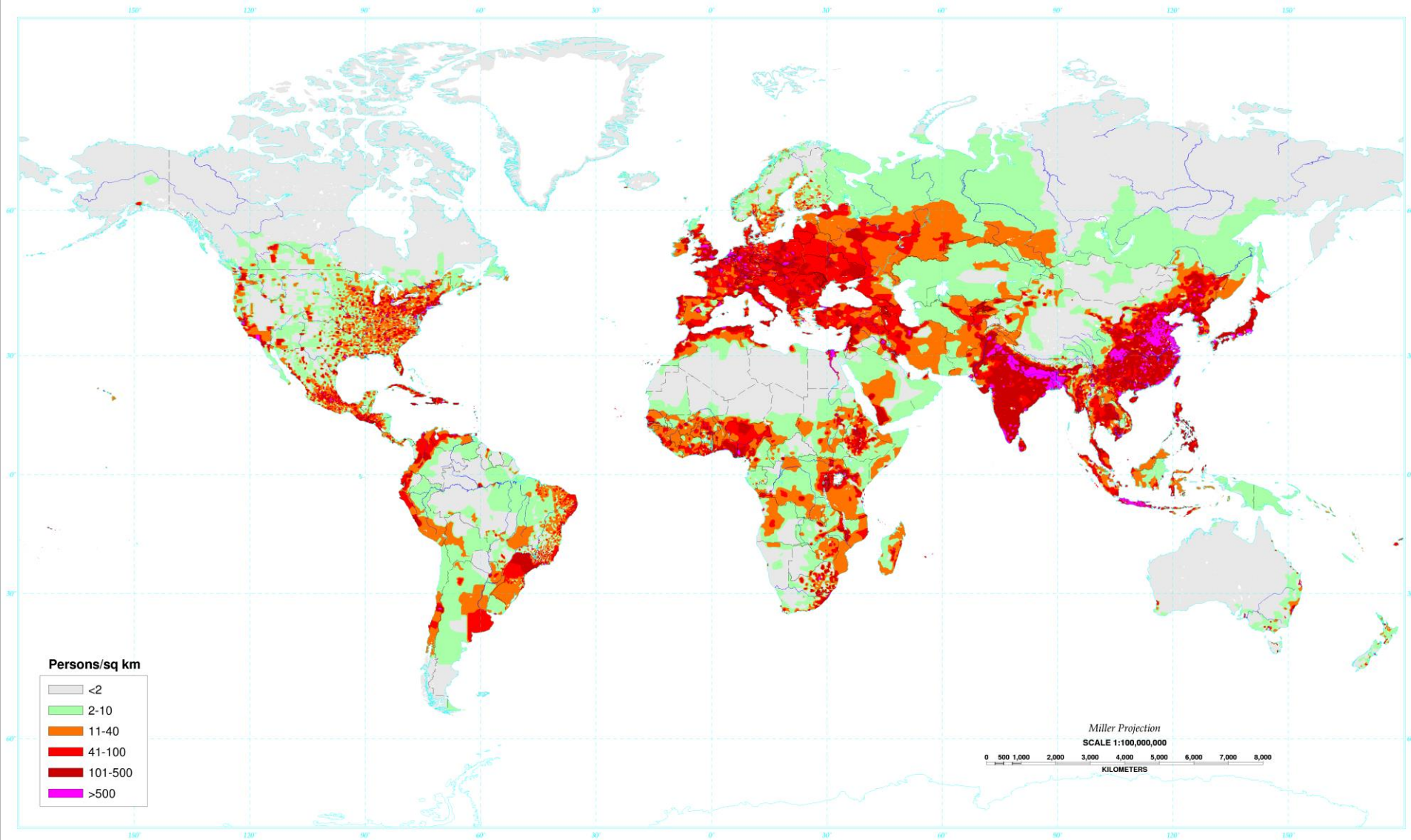
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PSQL Installations

October 2008 through
February 2016



What have we done?

PSQL 12 (released)	Btrieve 12 (released)	PSQL 12.1 (Q2/16)	AM 12 (Q3/16)	DX 12 (Q4/16)
<p>Objectives</p> <ul style="list-style-type: none"> SMB going global Strengthen advantage in low TCO and low/Z DBA situations <p>Features</p> <ul style="list-style-type: none"> Support for multi-lingual database via Unicode NCHAR Continuous operation and database performance sustenance over time Updated licensing for current deployment environments Support for new Microsoft OS versions 	<p>Objectives</p> <ul style="list-style-type: none"> Revised Microkernel Architecture <p>Features</p> <ul style="list-style-type: none"> Use Current MKDE Updated Windows Platform support 	<p>Objectives</p> <ul style="list-style-type: none"> Further reduction of administrative effort Continued I18N <p>Features</p> <ul style="list-style-type: none"> Auto Defragmentation - Functions for most common automatic data file compaction operations I18N - Sorting of Unicode data 	<p>Objectives</p> <ul style="list-style-type: none"> Support newer PSQL releases Continued support of international markets <p>Features</p> <ul style="list-style-type: none"> Certified with PSQL v12 Allow audits of Japanese "MyNumber ID" data stored in PSQL. 	<p>Objectives</p> <ul style="list-style-type: none"> Support newer PSQL releases <p>Features</p> <ul style="list-style-type: none"> Certified with PSQL v12

PSQL v13 Features

→ Support for ARM architecture

- Enable support for ARM based CPU devices/machines
- ARM/RISC based computing market share is increasing over CISC based computing from Raspberry to data center
- Enable support for micro computing OS platform like Windows IoT Core and Raspbian
- Enabler for IoT market

→ Support for Docker platform

- Enable deployment of PSQL on Docker containers (PSQL client focus)
- Docker platform available on Linux and soon on MS Server 2016
- Amazon EC2 Container Service (ECS) allows you to easily run and manage Docker-enabled applications across a cluster of Amazon EC2 instances
- Containers enables easy packaging of application and its configurations and dependencies to be executed in resource-isolated processes that can be deploy quickly, reliably, and consistently regardless of deployment environment.

PSQL v13 Features

→ Reporting SQL Cache Engine (a.k.a Supersized Cache Engine)

- Enhance cache engine to do SQL
- Enables SQL reporting to be offload to secondary machine without affecting production server
- Enables PSQL customers to off load their SQL reporting possibly using Docker
- Improve performance of production server and SQL reporting

→ Modernizing Btrieve API

- Create C++ Btrieve API class that obfuscate Btrieve API programming idiosyncrasy
- Use SWIG to wrap C++ APIs to support scripting languages like Javascript, Perl, PHP, Python, Tcl and Ruby
- With support for scripting languages, PSQL can better support web based environment

PSQL v13 Features

→ PSQL New utility for data management

- DumpDB utility – export/import scheme, convert v1 to v2 metadata

→ Single Sign-On

- User's (AuthN) AD group permissions will control PSQL security – access to databases, tables, views, files (AuthZ)
- Active Directory (Identity Provider) and Kerberos (security package). Using domain credentials, user logs into client box. Client app sends user's AD/Kerberos service ticket to server app, which impersonates the user on the server w/o need of additional credentials.
- Windows: Security Support Provider Interface (SSPI), specifying Kerberos as the SSP
- Linux: Generic Security Service (GSS-API) using Kerberos as the default security mechanism

PSQL v13 Features

- ➔ PSQL New Functionalities requested by customers
 - Extending DROP if EXIST to more database objects beside tables
 - Supporting LIMIT syntax
 - Supporting ISR in SQL
 - Improve L1 cache management
 - Pre-loading
 - Flushing

QUESTION?



Thank You!

A ship in port is safe, but that's not what ships are built for. – Grace Hopper

There are no secrets to success. It is the result of preparation, hard work, and learning from failure. – Colin Powell

