

psql

- \timing option changed
 - to turn timing on use “\timing on”
 - to turn timing off use “\timing off”
 - previously, “\timing” toggled on/off
- \lf function_name
 - prints function with line numbers
 - will help with debugging
- now requires a space between backslash command and first argument
- \dt+ shows how much disk space an object uses
 - does NOT include TOAST table space
- changed \d command to show cases of current table referenced as foreign key constraint

New statement “TABLE table_name”

- substitute for “SELECT * FROM table_name”
- compatible with SQL 2008 standard
- example:
TABLE location LIMIT 10;

Database level collation allowed

- in 8.3 and previous, collation order (order in which things sort) was set for all databases on the server by initdb
- when OHD first switched from Informix to postgres, there were some problems dealing with lists of station identifiers with mixed case characters; problem was caused by the fact that Informix sorted the list differently than postgres due to a difference in the collation order
- makes collation similar to encoding which was always configurable per database

Improved vacuum

- addition of a “visibility map” will allow the vacuum process to skip pages that do not need vacuuming
- automatically changes free space map (FSM) configuration
 - max_fsm_pages and max_fsm_relations config parameters removed
- substantial improvement in performance for large tables with few updates

Administration

- added capability to safely terminate individual sessions via command
pg_terminate_backend
- corrected problems using SIGTERM to terminate backend process
- both methods can now be used

GRANT/REVOKE

- allow column-level privileges

- example: GRANT SELECT (column1), INSERT (column2) ON salesactivity TO salesteam;

ALTER TABLE syntax changes

- new statement “ALTER VIEW OWNER TO ...”
 - previously used an “ALTER TABLE ...” statement for this
- new statement “ALTER TABLE table_name SET WITH OIDS”

Moving a database to a new tablespace

- new statement “ALTER DATABASE SET TABLESPACE ...”

pg_dump

- removed “-d” option because of confusion over its use
- in utilities such as psql, the “-d” option defines the database name

User functions

- added ability to track call counts and runtimes through new view pg_stat_user_functions

Migration tool

- pg_upgrade is a new utility for upgrading a database from 8.3 to 8.4 in-place
 - replaces the dump and restore operation
 - previously called pg_migrator
 - major bug fix in version 8.4.8
 - cannot be used with versions before 8.3 !!!

Installation

- changed default setting for log_min_messages to “warning” (previously was “notice”) to reduce log messages

PL/pgSQL

- CASE statement added

Arrays

- new array_fill() function to create arrays initialized with a value

Problem with MAX/MIN

- use of MAX and MIN in a partitioned table results in a sequential scan
- fixed in Version 9.0