



QGEP – Entwicklungstreiber und Zusammenarbeit mit anderen QGIS-Projekten

- QGEP in field use: QGEP – qfield
- Postgres Updates Manager: QGEP – qwat

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QGEP mobile



OPENGIS.ch
ANDROID · [Q]GIS · WEB





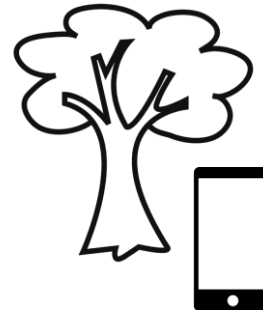
QGEP mobile

Motivations

- Collect missing information and picture on field
- Validate the network



Synchronisation
back at the office



Outdoor data collection
with Qfield





QGEP mobile

Data collection



Chambre N° : 3

Coordonnées	Y	X	Z
	547704.43	211054.26	954.35

Chambre	Matériau	Forme	Dimensions [mm]	Profondeur [m]
	Béton	Rond	600	2.00

Couvercle	Matériau	Forme	Dimensions [mm]
	Fonte	Rond	690

Arrivée N°	Matériau	Dimensions [mm]	Profondeur [m]	Arrivée de (N° de chambre)
3	PVC	500	1.98	
4	PVC	300	1.99	

Sortie N°	Matériau	Dimensions [mm]	Profondeur [m]	Sortie vers (N° de chambre)
1	PVC	300	2.04	
2	PVC	500	2.03	



QGEP mobile

Work in progress

➤ Creation of two views

- Structure mobile
 - Used for data collection with Qfield
 - Automatic synchronisation with the database

- Quarantine
 - For data that can't be automatically synchronised
 - Manual synchronisation

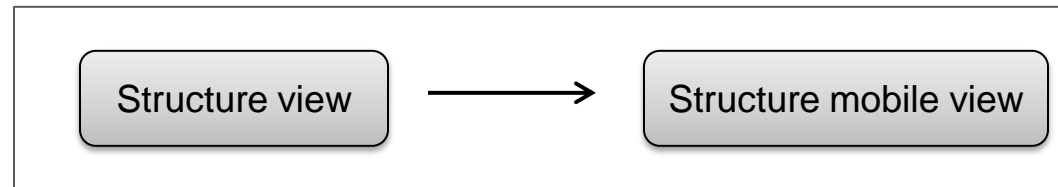


QGEP mobile

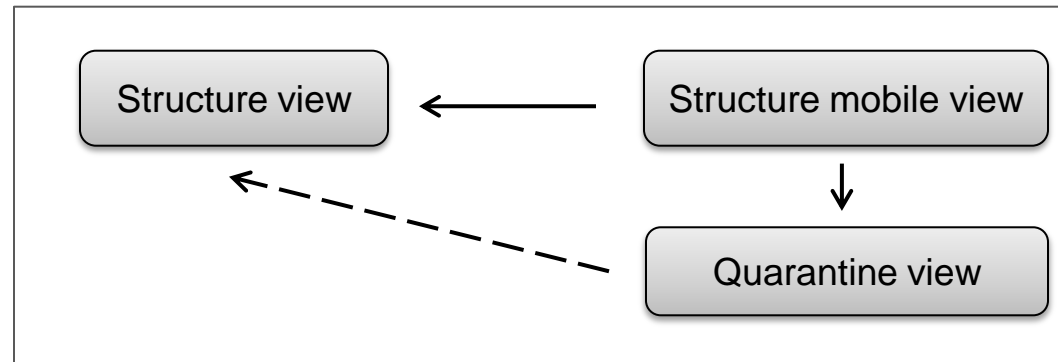
Work in progress



QGEP Database



QGEP Database



Field work





QGEP mobile

Work in progress

- Synchronisation of the data from structures

Step 1

If constraint are met → automatic synchronisation of the data

Step 2

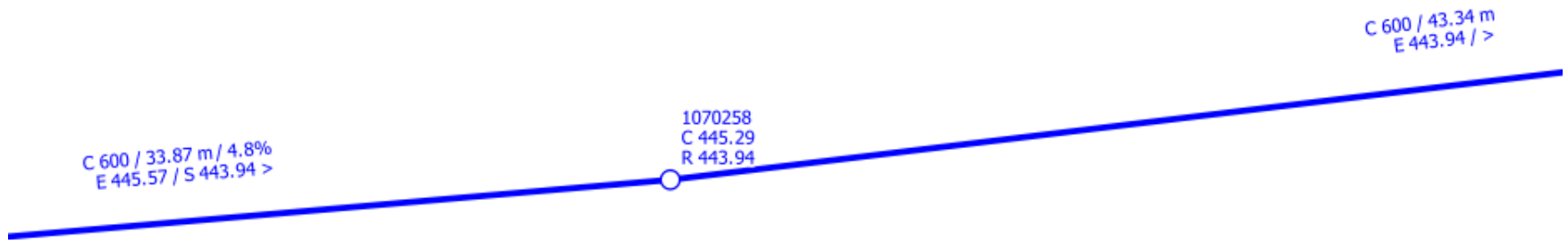
If constraint aren't met → data are sent to the quarantine view for manual synchronisation



QGEP mobile

Future

- Synchronisation of the data from reaches
 - 0 or 1 inlet / outlet

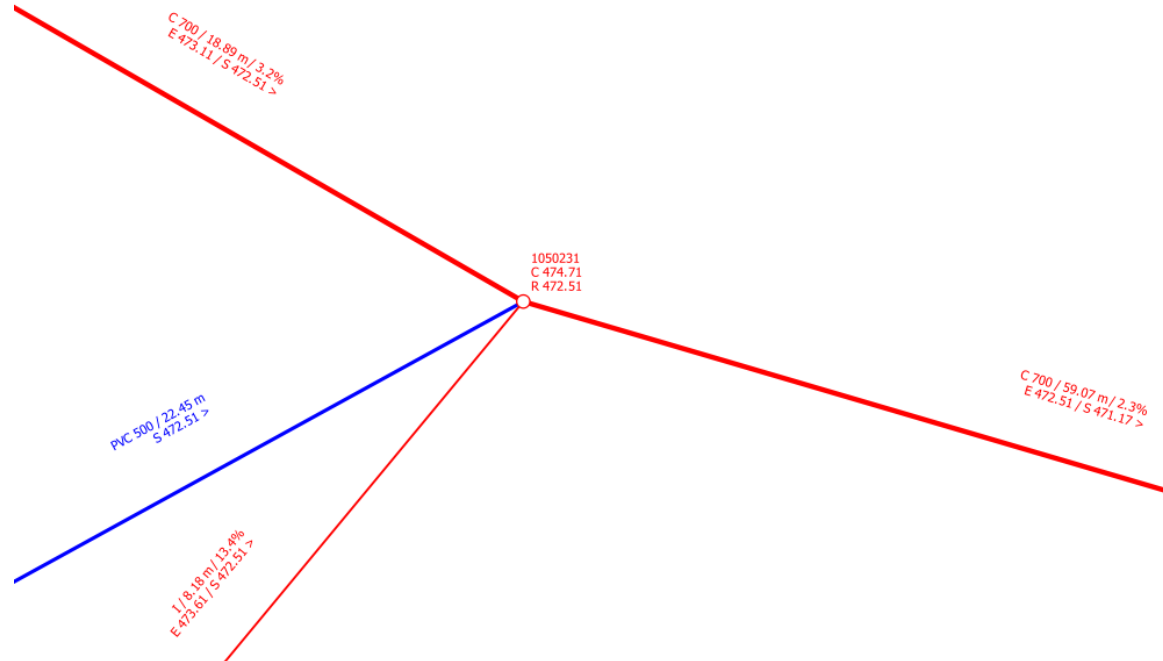




QGEP mobile

Future

- Synchronisation of the data from reaches
 - More than 1 inlet / outlet

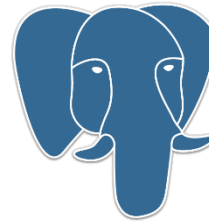


1

0

Controlling your databases

How reality develops

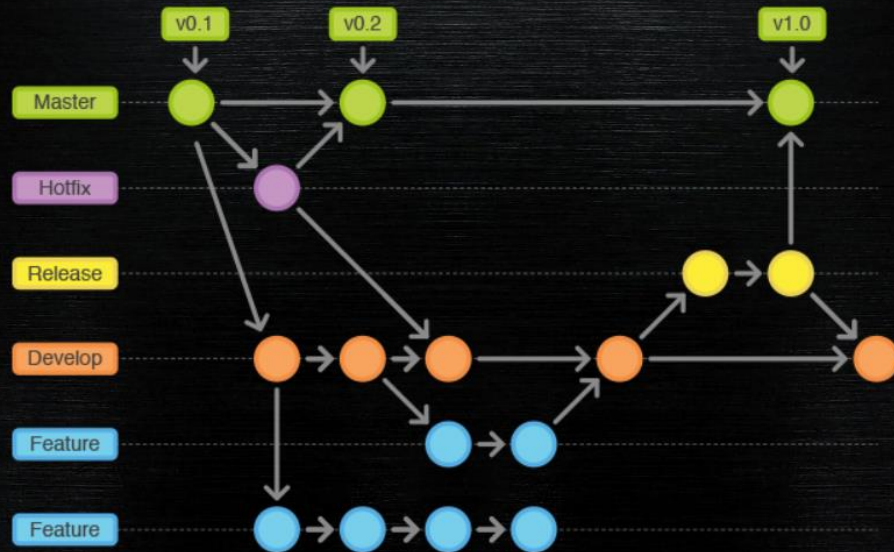




Controlling your databases

How reality develops

Code evolution

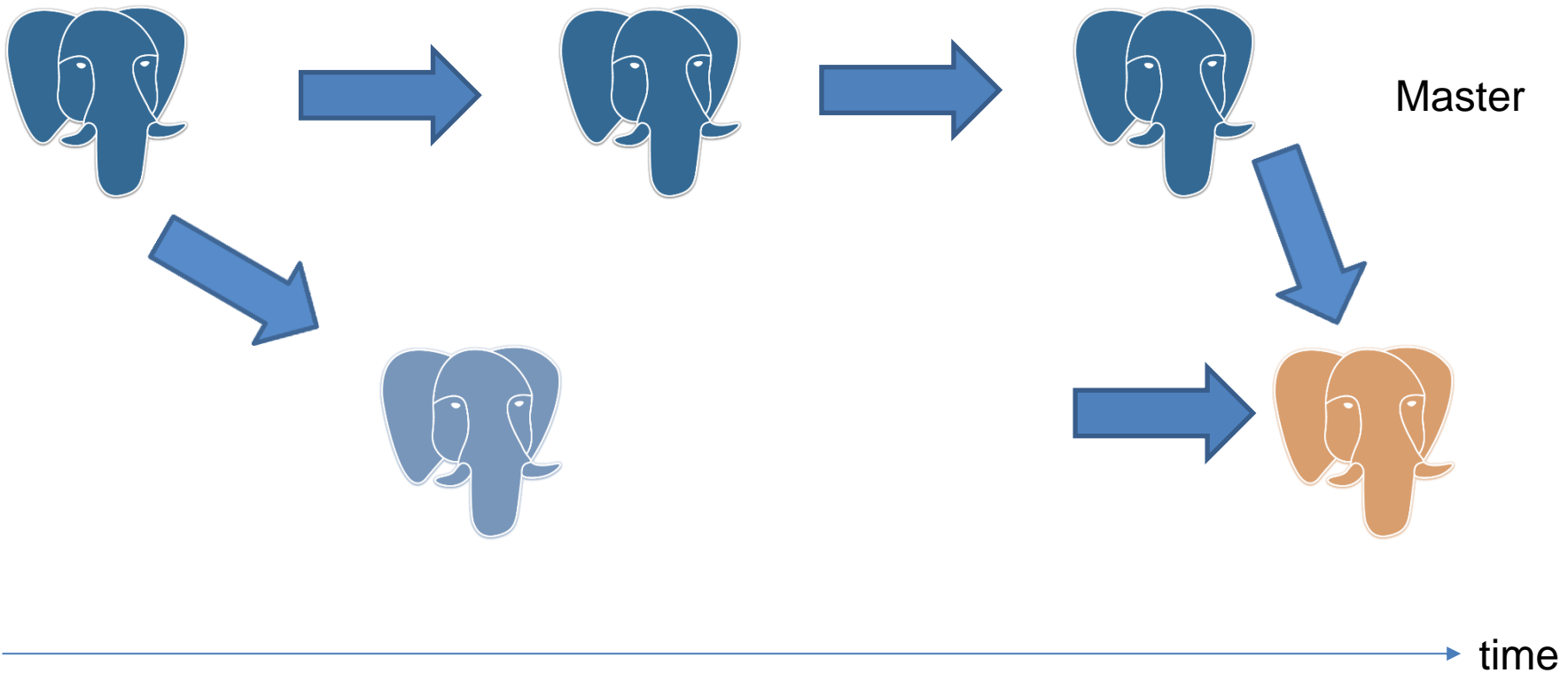


1

2

Controlling your databases

How reality develops





Controlling your databases

Principles of database control

- Three rules for database work



1. Never use a shared database server for development work.





Controlling your databases

Principles of database control

- Three rules for database work

Production Dev1 Dev2



2. Always Have a Single, Authoritative Source For Your Schema





Controlling your databases

Principles of database control

- Three rules for database work



1.0.0

1.0.1

1.0.2

3. Always Version Your Database

- The baseline
- Change scripts



Controlling your databases

The tool

- PUM – Postgres Upgrades Manager
- Database migration management tool
- Python program
- PUM operations:
check difference, backup, restore, upgrade and more
- Originally developed for qwat, applied for QGEP also -> universal tool for other projects



PUM Functions

baseline and info

- The `baseline` command creates the upgrades information table and sets the current version.
- The `info` command prints the status of the already or not applied delta files.

```
pum info [-h] -p PG_SERVICE -t TABLE  
        -d DIR [DIR ...]
```



PUM Functions

check

- The `check` command compares 2 databases and shows the differences of:
 - tables
 - columns
 - constraints
 - views
 - sequences
 - indexes
 - triggers
 - functions
 - rules



PUM Functions

test and upgrade

- The `test-and-upgrade` command does the following steps:
- creates a `dump` of the production db
- makes a `restore` of the db dump into a test db
- applies the delta files found in the delta directories to the test db.
- checks if there are differences between the test db and a comparison db
- if no significant differences are found, after confirmation, applies the delta files \geq current version to the production dbD.



PUM Delta files

- SQL e.g.

```
ALTER TABLE distributors
  ALTER COLUMN address TYPE varchar(80),
  ALTER COLUMN name TYPE varchar(100);
```

- Python: Python module containing DeltaPy subclass
- pre – post: There are different kind of delta files like the pre-all and the post-all that are executed on each migration.



PUM Repository and help

opengisch / pum

Watch 7 Star 8 Fork 3

Code Issues 6 Pull requests 0 Insights

Branch: master pum / README.md Find file Copy path

3nids use psycopg to forward variables rather than using regex (#42) b8f1811 on 24 Apr

5 contributors

457 lines (341 sloc) | 15.8 KB Raw Blame History

Pum

Pum stands for "Postgres Upgrades Manager". It is a Database migration management tool very similar to flyway-db or Liquibase, based on metadata tables.

Features

Pum is python program that can be used via command line or directly from another python program.

Pum permits the followings operations on Postgres databases:

- <https://github.com/opengisch/pum>



QGEP Release 1.0.1

QGEP / datamodel Watch 6 Star 2 Fork 16

Code Pull requests 5 Projects 0 Insights

Releases Tags

Latest release

1.0.1-5
97b6ba9

1.0.1-5
qgеп-ninja released this 11 days ago · 4 commits to master since this release

Assets

qgеп_v1.0.1-5_demo_data.backup	4.49 MB
qgеп_v1.0.1-5_structure.sql	1.52 MB
qgеп_v1.0.1-5_structure_and_demo_data.backup	5.79 MB
qgеп_v1.0.1-5_structure_with_value_lists.sql	1.66 MB
Source code (zip)	
Source code (tar.gz)	

Descriptions of the files

File	Description
qgеп_v1.0.1-5_structure.sql	Contains the structure of tables and system schema content
qgеп_v1.0.1-5_structure_with_value_lists.sql	Contains the structure of tables, system schema data and value lists data
qgеп_v1.0.1-5_demo_data.backup	Data only backup of the qgеп_od schema (i.e. original data from demonstration set of data)
qgеп_v1.0.1-5_structure_and_demo_data.backup	Complete backup with structure and data of the demonstration set of data

• <https://github.com/QGEP/datamodel/releases/>



QGEP Projekt

- Neue Nutzer sind eingeladen, sich in der Anwendergruppe einzubringen und vom Know-how von anderen zu profitieren.
- Für weitere Fragen und Infos wenden Sie sich an den Koordinator des Projektes Stefan Burckhardt qgep@qgis.ch
- <https://www.qgis.ch/de/projekte/qgep-abwasserfachschale>
- Download [Flyer](#)