

Project setup

Database import

- All scripts need to be executed in the PostgreSQL database
- Create all tables with the create_tables script in /Import
- Execute the federallandsresidents script in /Import
- Execute all copy scripts in /Import
- Execute all update and view scripts in /Import
- Execute all alter table scripts in /Import
- Execute the createRoleElector script for access to the database in /Import
- Execute all scripts in /Blatt 5/Skripte to create all necessary functions

Generate and import elector and voting data

- Execute changed_candidateinelection in PostgreSQL in /Generator to insert generated candidates that are missing in the kerg files
- Setup the java project in /Generator with all libraries in /libs
- Execute ElectorGenerator.java to generate and import all electors for both elections. This could take a while (up to multiple hours)
- Execute VoteGenerator.java to generate csv files containing vote data for both elections. This process should not take more than 5 minutes.
 - First just run the file to generate vote data for 2009
 - Then change the year in the java file to 2013 and run it again
- Execute copy_generated_votes_2009 and copy_generated_votes_2013 in PostgreSQL to import the generated data. This process could take up to 1 hour

Benchmark client

- This benchmark client will generate a valid input file for JMeter
- Configuration with command-line parameters:
 - -t wait time in milliseconds
 - -d total duration of the test in seconds
 - -w workload mix, followed by 6 integer values for the percentage of the requests
 - -n number of terminals
 - -p path of the JMeter installation
 - -f file name for the generated test plan file
 - e.g. -t 1200 -d 100 -n 15 -w 15 15 15 15 20 20
- run *Benchmark.java* with all libraries in /libs added to the build path

Server and website setup

- Install node.js Version 4.2.2 (x86).
 - The node package manger (npm) should be integrated in the installer.
- Navigate to the project directory (/Projekt) via command line.
- Execute *npm install*. This will install all needed modules.
- The modules are specified in the dependencies section in the *package.json* file.
- Execute *node server.js* or *npm start* to start the application server
- The site can be accessed via *http://127.0.0.1:8080/* or *http://localhost:8080/*.
- All registered invocations will be logged to the console output (e.g. for debugging information).

Dependencies in general

Website

- PostgreSQL
- D3
- Node.js
- Express
- Jade
- Stylus
- Nib
- morgan
- pg
- connect-timeout
- body-parser
- connect-flash
- cookie-parser
- express-session

Generator

- Java 7
- Data-Factory
- OpenCSV
- Jdbc for PostgreSQL

Benchmark

- JMeter
- Java 7
- JDom