



Kanton Zürich
Statistisches Amt



R & Jenkins -

Open Source for Open Government

Philipp Bosch | Statistical Office of the Canton of Zurich

Who am I?



Philipp Bosch

Data Scientist by training - Political Scientist by ❤️

Part of the Team Data at the Statistical Office of the Canton of Zürich

Responsible for [internal package development](#) & [connection of R community](#) across departments

Why should you care?

- Drowning in [CronJobs](#)?
- Searching for a (data)-pipeline tool but [Airflow](#) looks too much like Python?
- Your IT department does not care about data pipelines but they [DO care about CI/CD Tools](#)
- [Automating](#) stuff is fun!

Mandatory DALL-E/ChatGPT slide



Here is the image of a stressed-out data scientist surrounded by multiple computer screens, depicting the chaos of managing too many cronjobs.

Mandatory DALL-E/ChatGPT slide



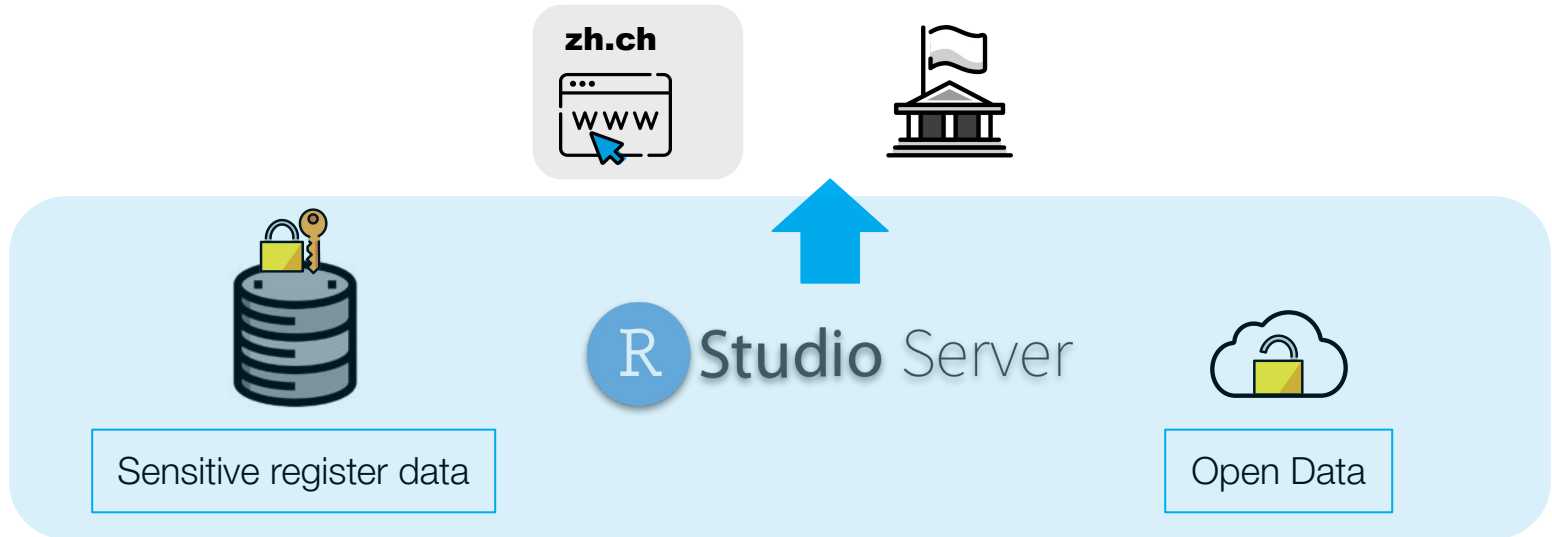
Here is the image of a stressed-out data scientist surrounded by multiple computer screens, depicting the chaos of managing too many cronjobs.



Here's the image of the same data scientist, now looking happy and efficient, with his workflows automated using Jenkins.

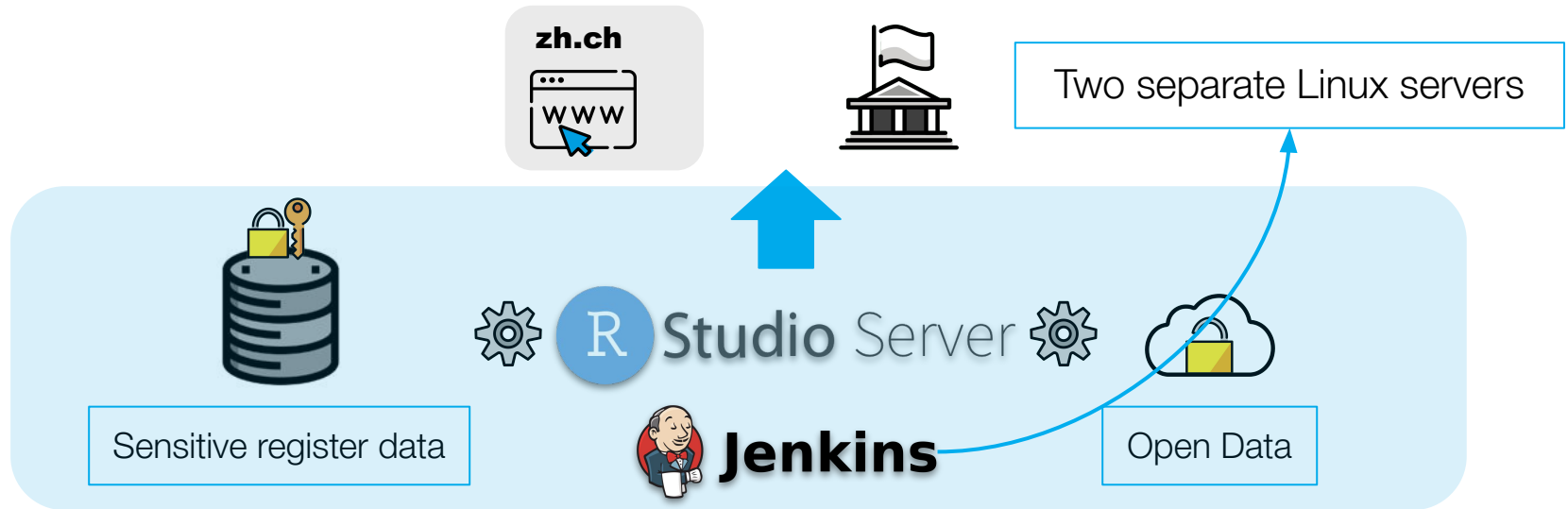
Tasks & Infrastructure

- Statistical Office as the competence center of public statistics & data science
- Since 2017: responsible for the publication of [Open-Government-Data](#) by and from the cantonal administration



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Why Jenkins?

- Graphical overview of jobs and stages
- Slack & E-Mail integration to receive status messages & notifications
- Simple user/groups/password management
- Relatively simple language to describe jobs (Groovy Script)
- Seamless git integration
- Access to R-Server, internal databases, webserver, etc...
- Linux-skills (Shell) available in-house



Jenkins



The setup in action (1)

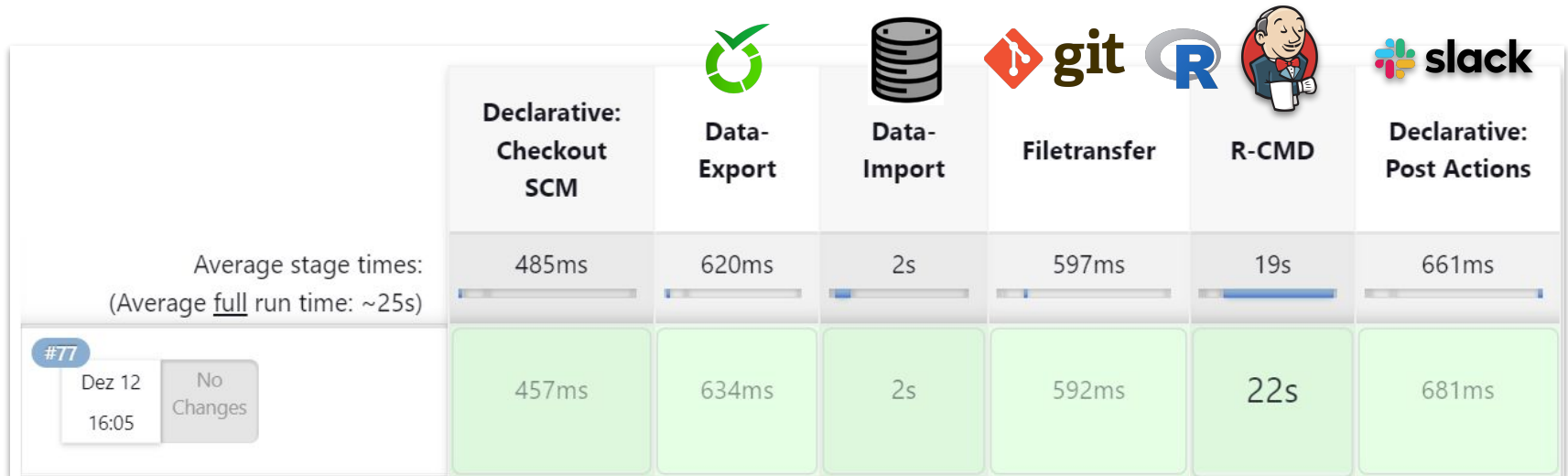
- **Deliverable:** Yearly publication of the tax rates of the municipalities inside the canton of Zürich

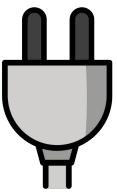




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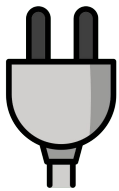
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The setup in action (2)

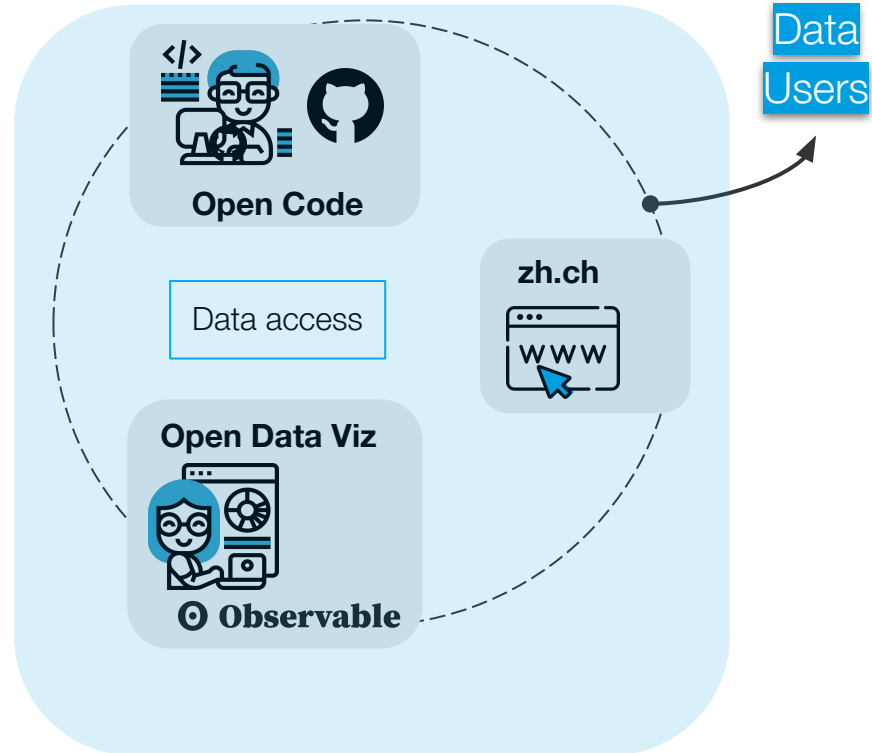
- **Deliverable:** Daily publication of electricity consumption of a city inside the canton

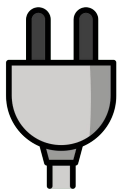


The setup in action (2)

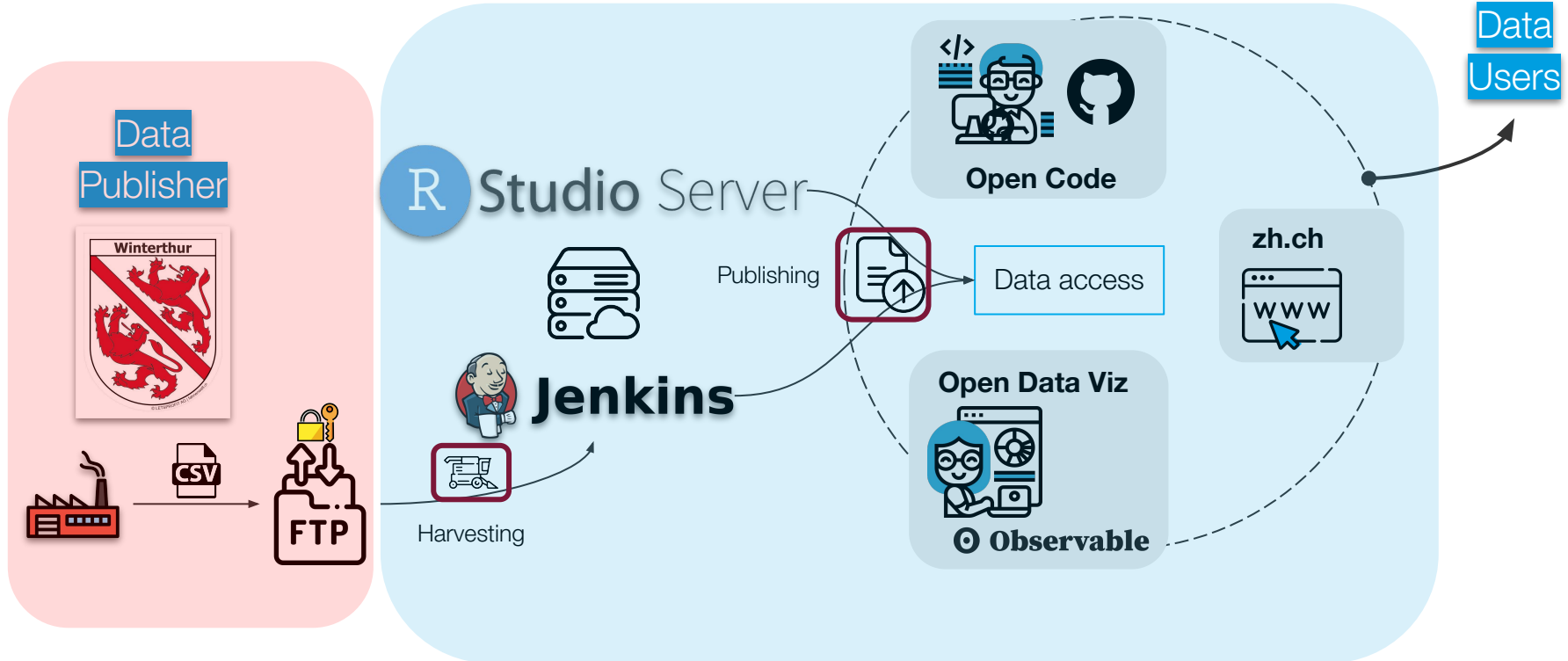


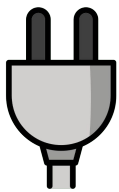
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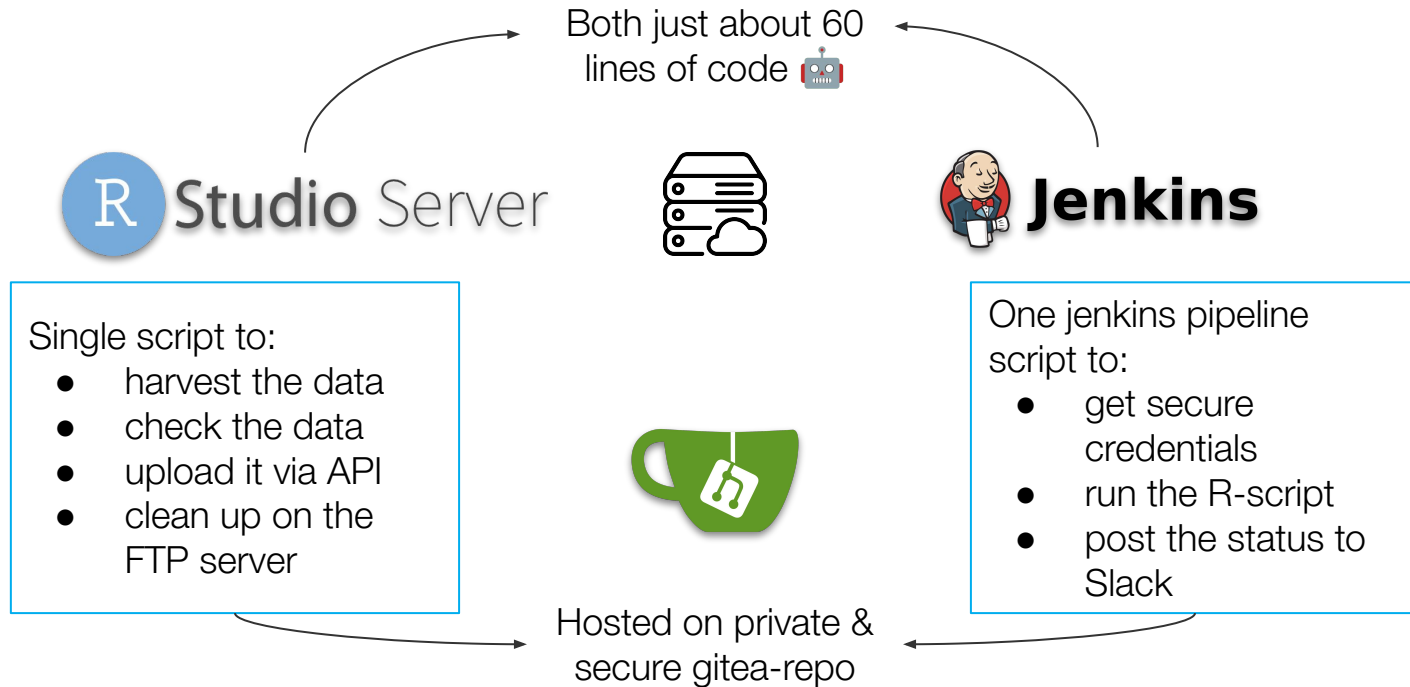


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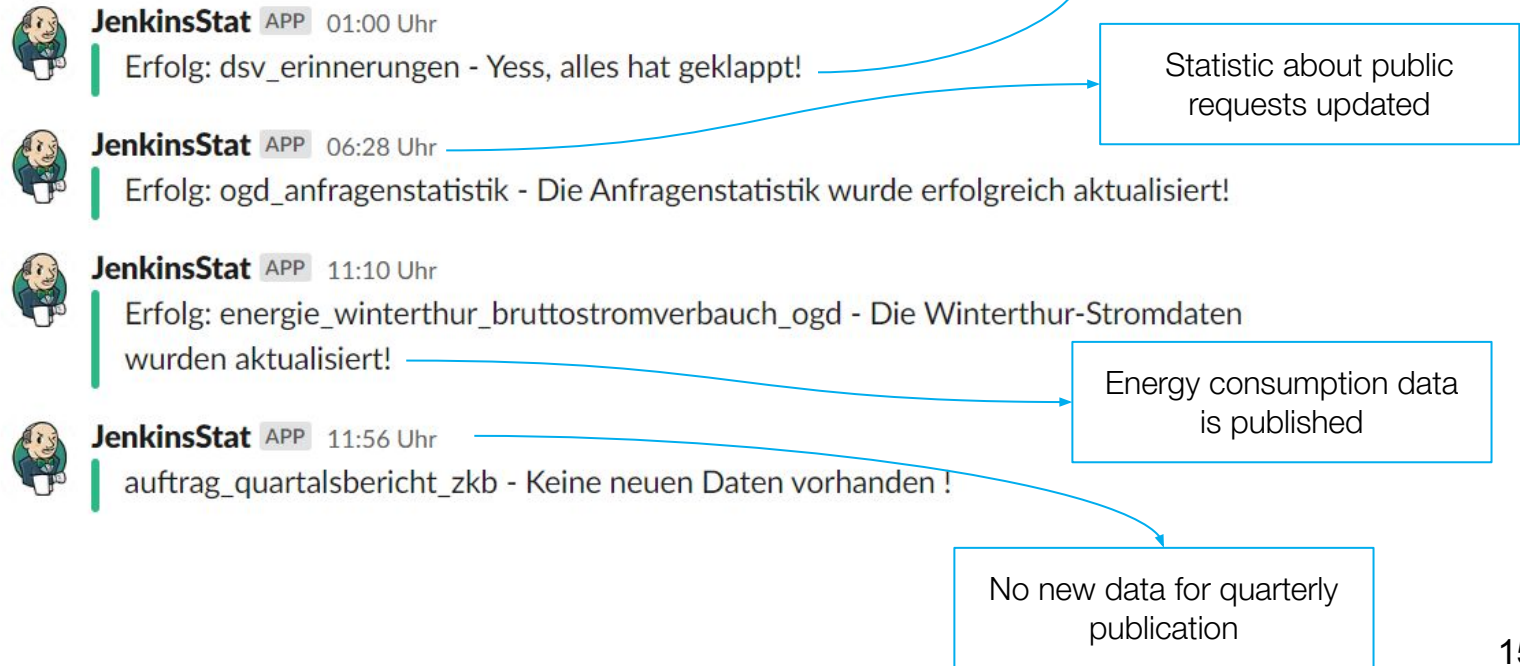








The setup in action (2)



Automate all the things!



Conclusion

- Jenkins fully integrated into the workflows of the Statistical Office 
- Initial effort to set up the system was facilitated by huge online community and documentation 
 - Jenkins is not originally a data pipeline tool but a CI/CD tool → Community outside the “narrow” data world
- Plugins allow integration with other software tools 
- Setup with only one server even simpler (two docker containers on same machine) 



Get the slides

And get in touch for feedback & other ideas!

contact & more info

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