

Spark Meeting Galaxy-Server

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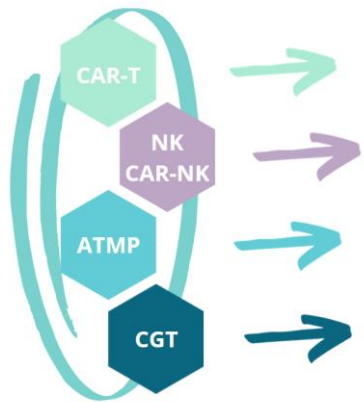
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CRTD / TU Dresden

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ecSeq Bioinformatics, Leipzig



OMICS – Support for data analyses



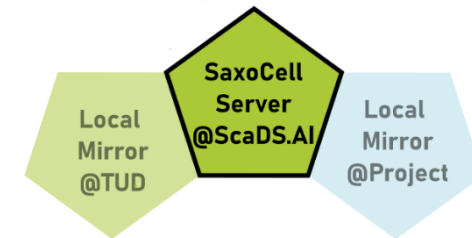
1 User-friendly and GUI-based Omics analysis server



2 High-throughput oriented workflow management tools



3 Customized and cli-based analysis scripts for bioinformatics and machine learning

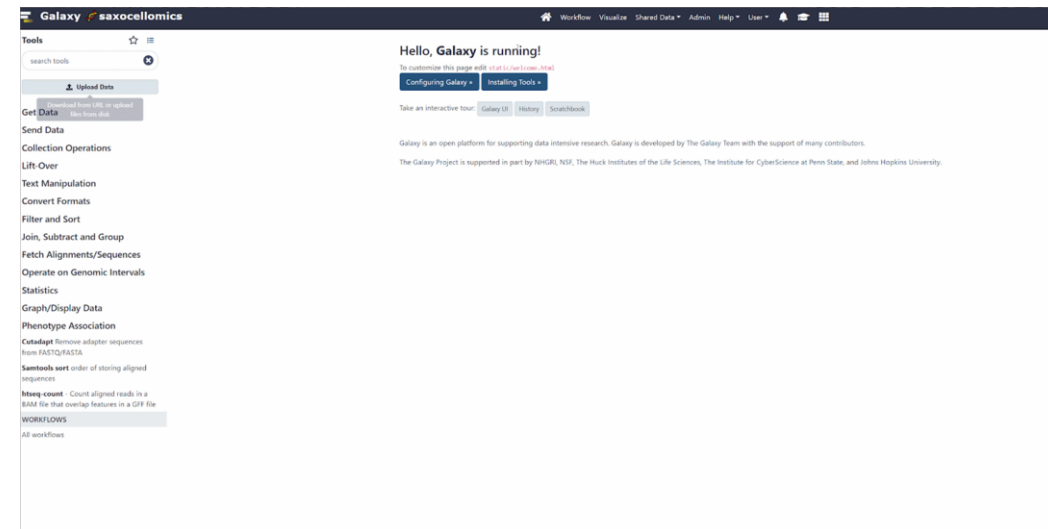
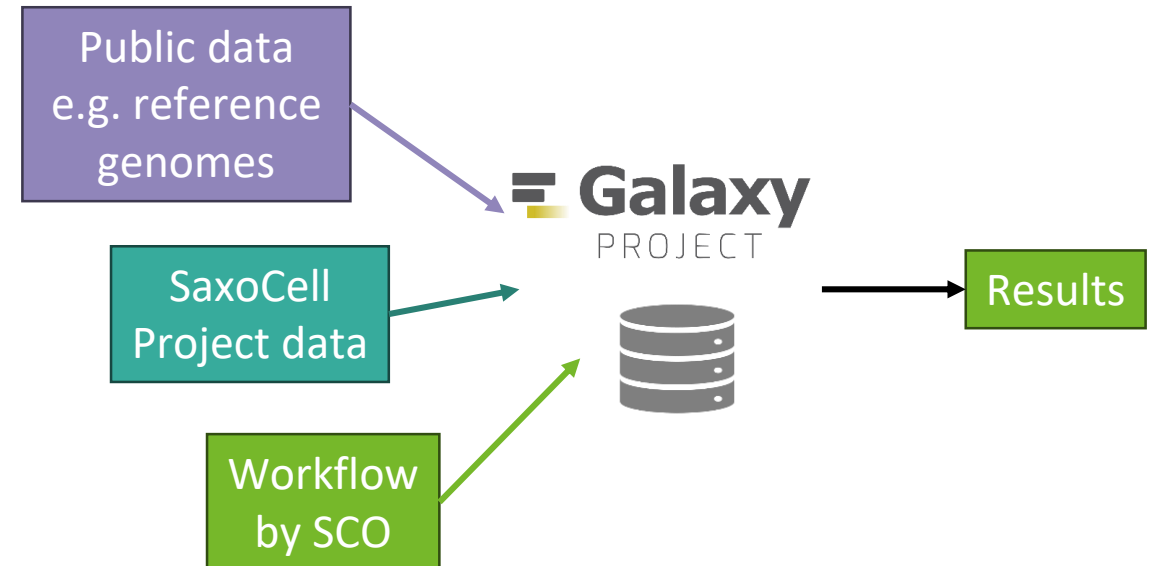


<https://service.scadsai.uni-leipzig.de/saxocellomics/galaxy-dev>

Galaxy project

Galaxy is an **open-source** and **community-driven** platform for **FAIR** data analysis that enables users to:

- Use **tools** from various domains that can be plugged into **workflows**
- ... via a **graphical web interface**.
- **Share** data, workflows and results
- Ensure **reproducibility** by standardized and documented workflows.
- Use either public or **self-hosted** Galaxy analysis server

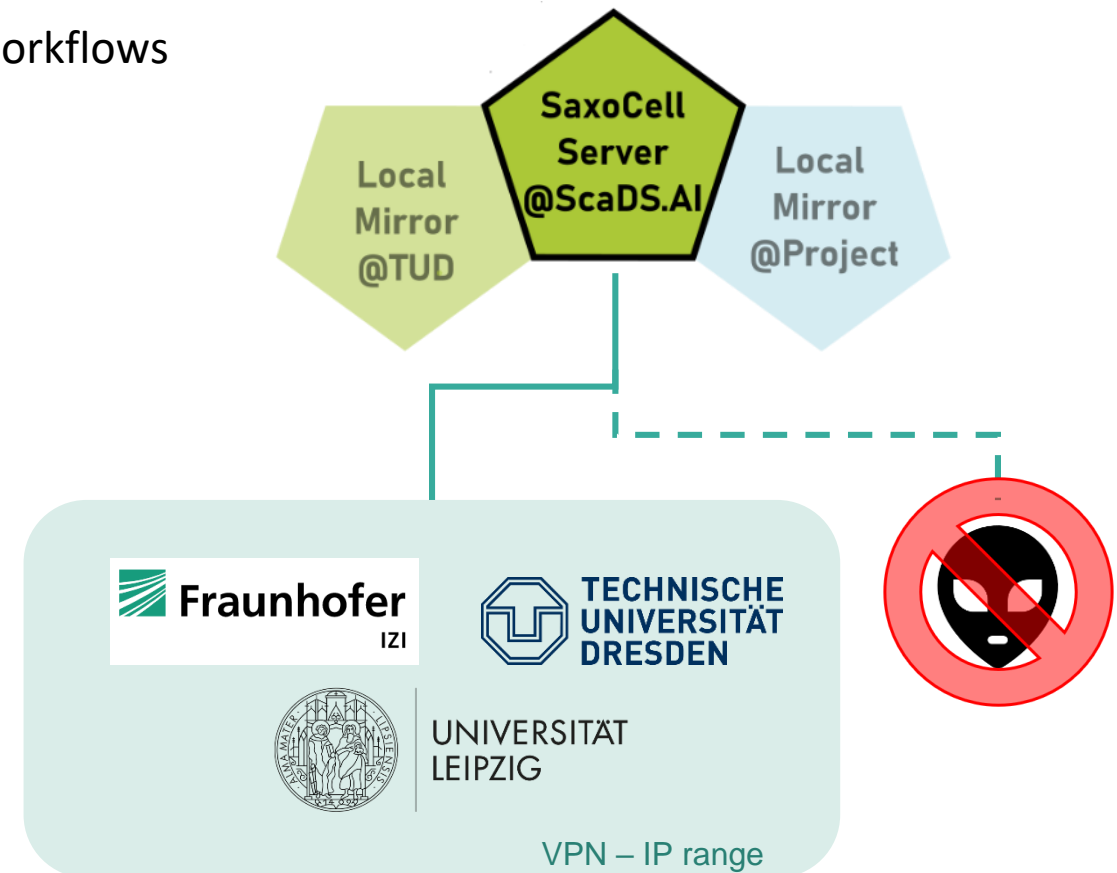


Advantages for SaxoCell

Galaxy server @ScaDS.AI (Leipzig University)

<https://service.scadsai.uni-leipzig.de/saxocellomics/galaxy-dev>

- Full **control** and **security** over your (sensitive) data and workflows
- **Scalability** (currently reduced resources in first phase)
 - Depending on demand: more resources at ScaDS.AI server
 - Easy roll-out on your infrastructure
- SCO will establish **standardized** workflows
- **You can decide:**
 - Perform your own analysis or by SCO team
 - Create and tweak your own workflow or use existing workflows
 - Share or not share data, workflows and results with other users



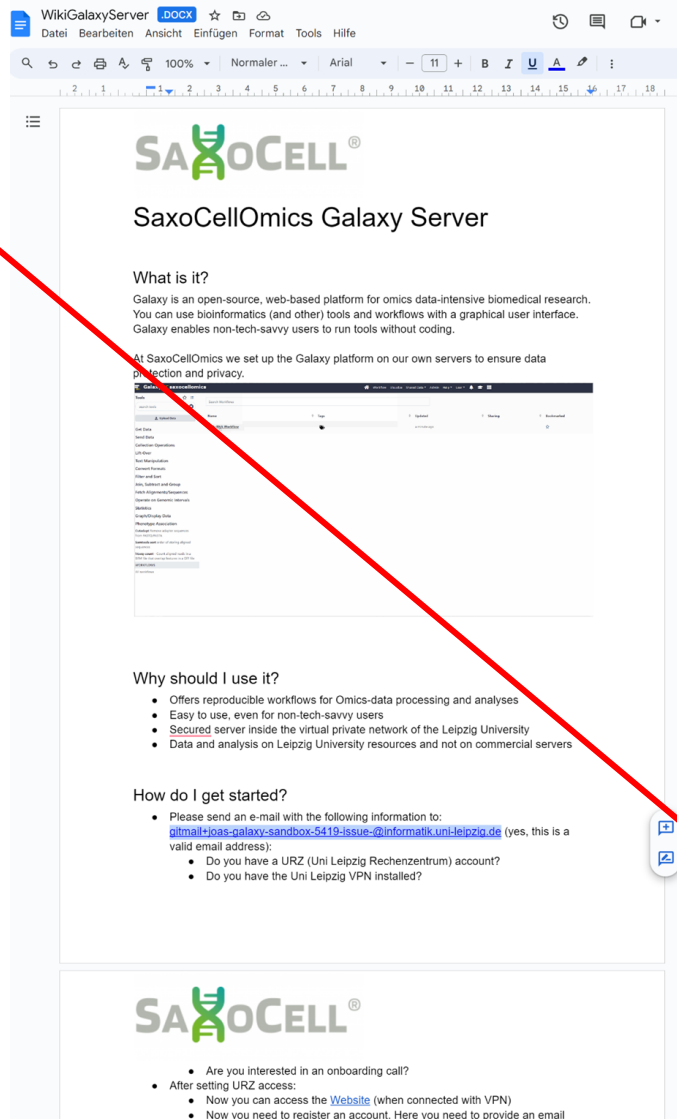
FAQ: Modus Operandi

SAXOCELL
OMICS



SAXOCELL
PROJECTS

FAQ: Introduction



The screenshot shows a document in a browser window titled 'WikiGalaxyServer .DOCX'. The document content includes the SaxoCell logo, the title 'SaxoCellOmics Galaxy Server', and sections for 'What is it?', 'Why should I use it?', and 'How do I get started?'. A red diagonal line is drawn across the entire screenshot.

What is it?
Galaxy is an open-source, web-based platform for omics data-intensive biomedical research. You can use bioinformatics (and other) tools and workflows with a graphical user interface. Galaxy enables non-tech-savvy users to run tools without coding.

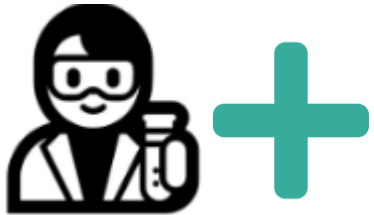
At SaxoCellOmics we set up the Galaxy platform on our own servers to ensure data protection and privacy.

Why should I use it?





- Offers reproducible workflows for Omics-data processing and analyses
- Easy to use, even for non-tech-savvy users
- Secured server inside the virtual private network of the Leipzig University
- Data and analysis on Leipzig University resources and not on commercial servers

How do I get started?

- Please send an e-mail with the following information to: joas-galaxy-sandbox-5419-issue-@informatik.uni-leipzig.de (yes, this is a valid email address):
 - Do you have a URZ (Uni Leipzig Rechenzentrum) account?
 - Do you have the Uni Leipzig VPN installed?



FAQ: Getting Started




- Do you have **access** to:
 - IZI VPN 
 - Leipzig University VPN 
 - TU Dresden VPN 
- Contact us 
 - gitmail+joas-galaxy-sandbox-5419-issue-@informatik.uni-leipzig.de

FAQ: Sign up



- Use your name:
 - Max_Joas
 - World_Best_Scientist777
- No annoying mail verification
- Let's see for yourself:
 - <https://service.scadsai.uni-leipzig.de/saxocellomics/galaxy-dev/>

FAQ: Running Analysis

- What can I do?
 - Almost everything 
 - RNA-seq: raw -> pathways
 - Genome annotation
 - Chip seq analysis
 -
 - Tools: <https://toolshed.g2.bx.psu.edu>
 - Workflows: https://usegalaxy.org/workflows/list_published (#1320)
- What are the limitations? 
 - 80 GB user quote
 - RAM
 - Concurrent use
- Can I use Galaxy as a team? 
 - share data, workflows and history

FAQ: Privacy & Security

- Server hosted by Leipzig University
- Secured by VPN (only accessible within)
- Analysis server:
 - no data backup
 - user is master of data (delete)
 - workflows backed-up
- Downtime possible
 - users notified
- Roll-out on your servers



FAQ: Getting Help



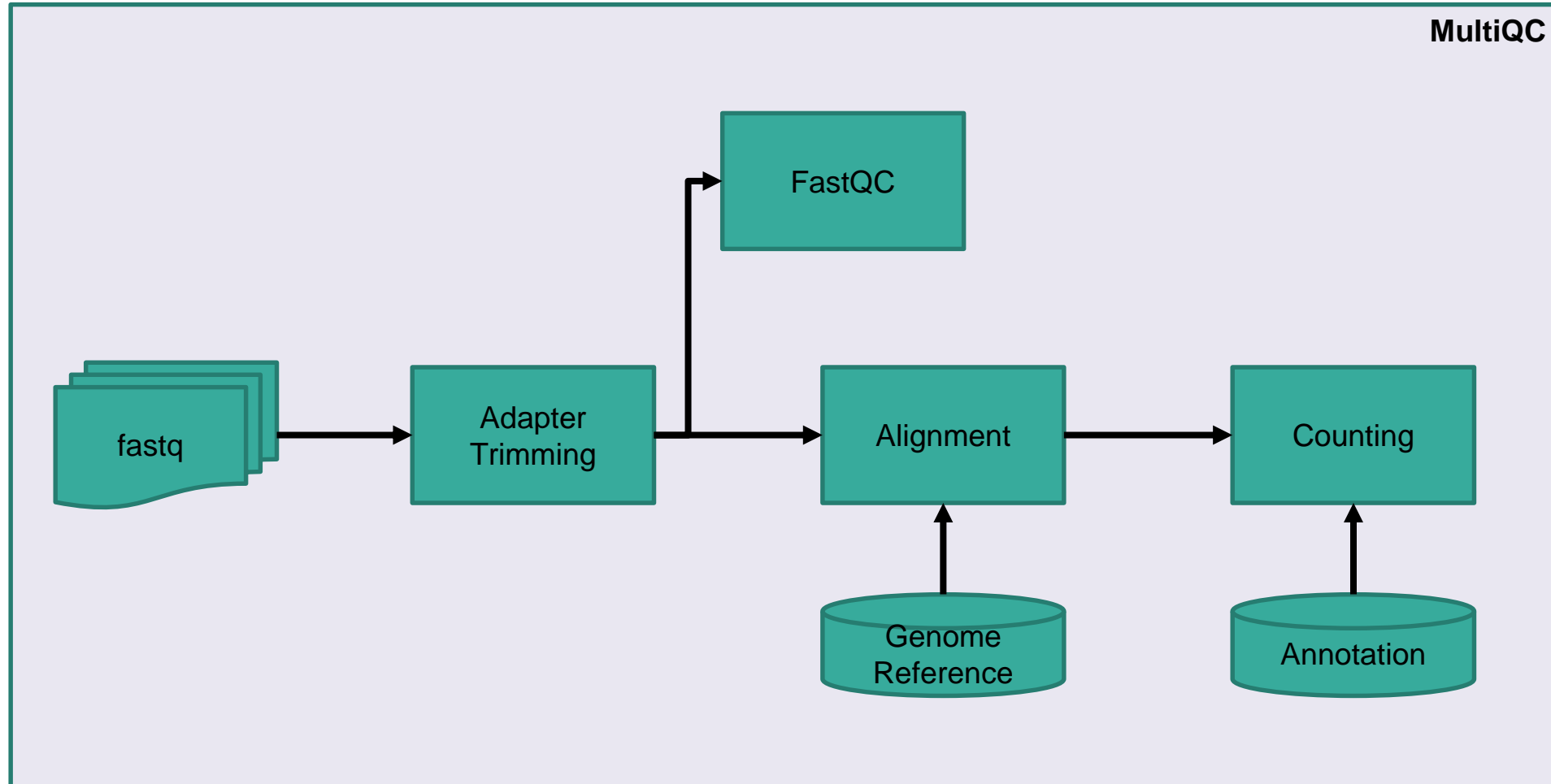
There are multiple channels where you can get help:

- [contact us](#)
- galaxy training <https://training.galaxyproject.org>
- galaxy community help: <https://help.galaxyproject.org>
- ask a question on <https://www.biostars.org>
- ask a question on <https://stackoverflow.com>
- check out our FAQ
https://docs.google.com/document/d/1IsHne_fxngYHVVDYRYxrE_e96ZrJcss8/edit?usp=sharing&oid=115296162071832875425&rtpof=true&sd=true

Hands-on



Hands-on



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