



APRIL 17th, 2025 | OAK RIDGE, TENNESSEE

Experimental Computing Laboratory (ExCL) Monthly Meeting

PRESENTED BY EXCL

Steve Moulton, Aaron Young, Jeff Vetter

Advanced Computing Systems Research Section



U.S. DEPARTMENT OF
ENERGY

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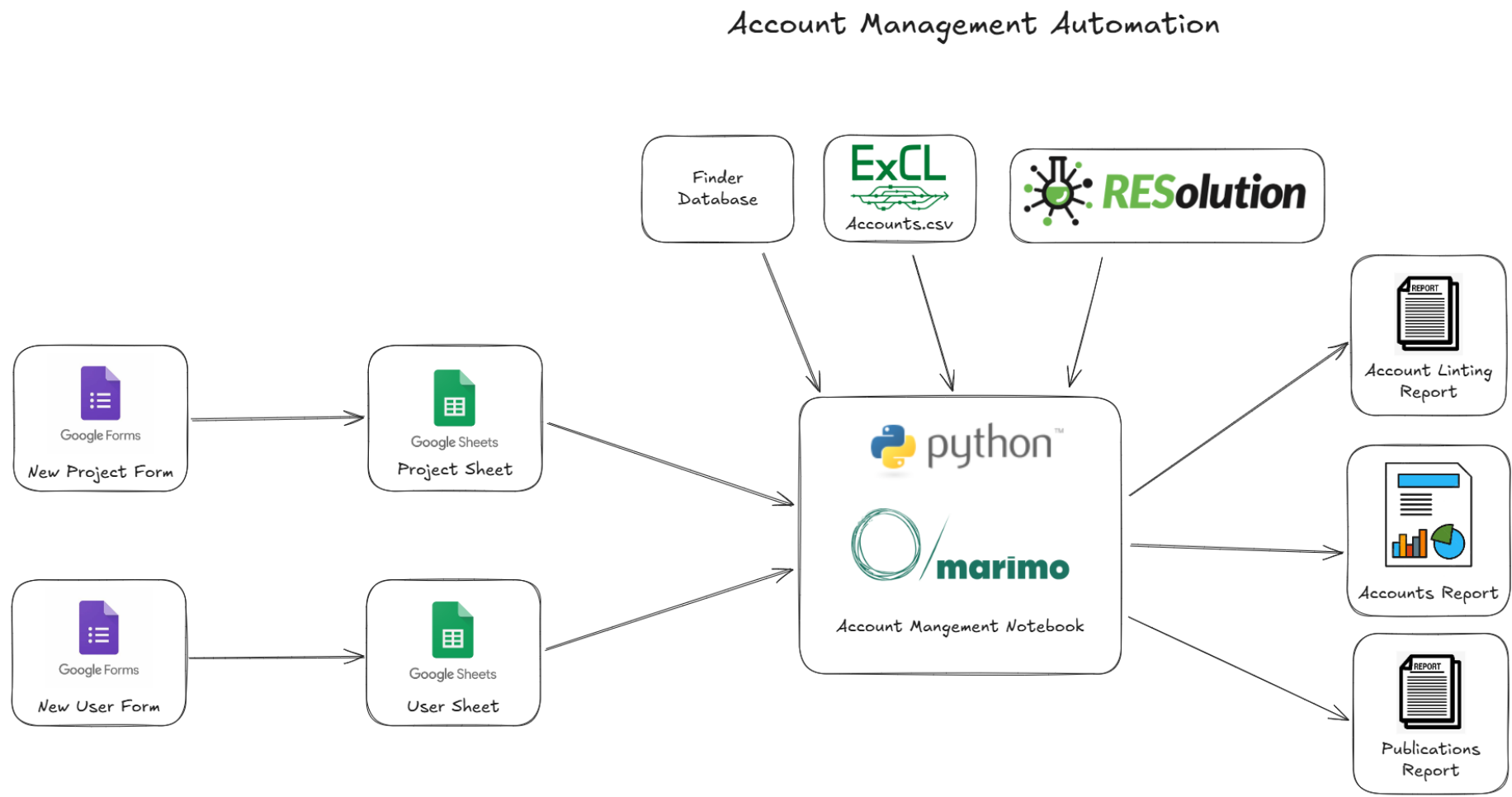
Infrastructure/System Status

- **news** command implemented as a shell command. Up to the minute information will be available there.
- Mi300a. New motherboard deployed. Now networking issues. CTG Federal is working on this.
- Aaron has done considerable work on account reporting and accounting. This will allow us to spend less time on account management as more of the process is automated.
- Continued vulnerability management. Setting gateway machines to auto update (Thursday night 10 PM) and automatically reboot if necessary.

news

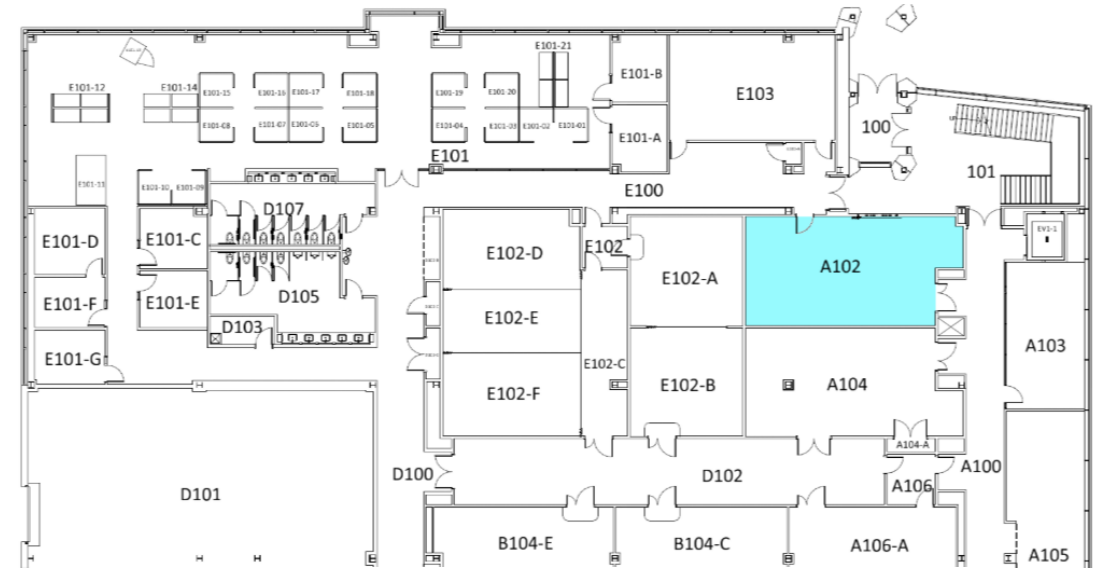
```
$ news
*****
* Wed April 16, 2025 *
* *
* . news alias deployed. That is how you are seeing this. *
* *
* . mi300a deployment still hung on parts. We are working on this. *
* *
* . equinox GPUs are displaying an error on use, and are not available. *
* We hope reseating the nvlink cabling will address this (as it has *
* for others). We will be doing this sometime the week of April 21. *
*****
```

Python/Marimo Automated Account Database Linting and Reporting



Plans for the Next Three Months

- Continued documentation and capability updates.
- Deployment of ARC Pro A60 card.
- Deployment of AMD Xilinx U280.
- Working deployment backlog (for lower priority devices).
- Plan and start move from 5100/227 to 3700/A102 (Translational Research Capability). Infrastructure work to be done:
 - Move rack to D102 if it is still available to us (the current owner has been holding it for three years)
 - Power distribution in D102 for rack (low priority)
 - Propose/purchase networking



BUILDING 3700 - FIRST FLOOR PLAN

Meeting Notifications and Groups.io

- ExCL User Group meetings are announced on our groups.io mailing list (users@excl.groups.io). We will also put a brief note in the CSMD #news slack.
- We will happily add multiple email aliases.
- There is an .ics file appended to the email notification. If you are using outlook, you can preview the attachment and open it from preview to add it to your Outlook calendar. Similar mechanisms are available for other calendar products. Apparently the .ics file is not sent as part of the reminder files.
- **New message in email calendar notification:**

Note: To add this meeting to your calendar, [click here to download the invite.ics file](#). Alternatively, you can click on the "View Event" link above to go to the Groups.io page, then on the right side of the page, you can select the "Add to Calendar" link to download the invite.ics file. Opening this file will add the event to your calendar.

Documentation Updates — Remote Development Roadmap

- [ExCL Remote Development | ExCL User Docs](#)

Roadmap for Setup

If you are new to remote development on ExCL here is a roadmap to follow to set important settings and to get familiar with remote Linux development.

1. Setup SSH: [SSH Keys for Authentication | ExCL User Docs](#)
 - Bonus: [SSH-Agent and SSH Forwarding](#)
2. Setup Git
 - a. [Git SSH Access | ExCL User Docs](#)
 - b. [Setup Git access to code.ornl.gov | ExCL User Docs](#)
3. Setup VS Code Remote Explorer: [Visual Studio Code Remote Explorer | ExCL User Docs](#)
 - Important: Make sure to check the setting Remote.SSH: Lockfiles in Tmp.
4. [Setup FoxyProxy](#). This enables access to [ThinLinc](#) as well as any other web services running on ExCL systems.

Open WebUI

Getting started with Open WebUI.

Link: [Open WebUI \(Running on Zenith\)](#)

Website: [Open WebUI](#)

Documentation: [🏠 Home | Open WebUI](#)

GitHub: [open-webui/open-webui: User-friendly AI Interface \(Supports Ollama, OpenAI API, ...\)](#)

There is an Open WebUI server running on ExCL for developing and testing LLM models created with [Ollama](#). In order to use the website you must first [Setup FoxyProxy](#), then the above link will work. When you first access the page, you will be prompted to create a new account. This account is a unique account for this instance of Open WebUI and is not tied to anything else. After creating an account, send a message to Aaron Young or excl-help@ornl.gov to request your account to be ungraded to an admin account.

Documentation Updates

- Updated:
 - [Jupyter Notebook | ExCL User Docs](#)
 - [Julia | ExCL User Docs](#)
 - [Conda and Spack Installation | ExCL User Docs](#)
- New:
 - [Marimo | ExCL User Docs](#)
 - [Modules | ExCL User Docs](#)
 - [Backup & Storage – Project Storage | ExCL User Docs](#)
 - [ExCL Remote Development | ExCL User Docs](#)
 - [Open WebUI | ExCL User Docs](#)



Questions/Discussions/Comments?

Summer Intern Accounts?

- Use Interns2025,anyAdditionalProjects for the Project ID field.

Project/Shared Storage?

- See next slide.



ExCL Project Storage

- Shared storage available on request for collaborative projects.
- Each project gets a dedicated subvolume in the ZFS filesystem on request.
- Access via automounted NFS share at:
 - /auto/projects/<project_name>
- Restricted access for security:
 - Only execute permissions on /auto/projects/ (must know project name to cd into directory). Only project members have access to a particular project directory.
 - Users cannot list all project directories with ls.
- Access Control Lists (ACLs) manage permissions.
 - Default permissions:
 - Project members have read, write, and execute access.