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Experimental Computing Laboratory (ExCL) Monthly Meeting

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U.S. DEPARTMENT
of **ENERGY**

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ExCL Access Shutdown July 11-16 2025

- Initial impetus was a report of difficulties accessing ExCL from the visitor network to the solution center.
- The solution center agent had never heard of us and referred it upwards.
- Cyber determined that login.excl.ornl.gov had plaintext password access from the internet.
- They also determined that our user application database contained PII
- Based on these two findings, our login access from the internet was removed.
- Other than notifying us via teams, there was no opportunity to intervene before isolation was enforced.
 - It did not help that there was limited ExCL staff availability during this time

ExCL Access Shutdown July 11-16 2025 Issue Resolution

- The assigned cyber contact was unable to show where multifactor authentication is required for logins to open research systems from the internet.
 - Access was requested to be restored Tuesday night, and took place around 9 AM this morning.
- The account request spreadsheet (in Google Docs with very limited access) was backed up within ORNL resources, and the request spread sheet and forms were removed.
 - These resources will be restored within the Microsoft environment (moderate so meets our needs wrt PII).
 - Project requests are not moved yet, this is a next step
 - The account request process is currently by hand; there is still a few steps that need completion.

ExCL Access Shutdown July 11-16 2025 Issue Resolution (2)

- ITSD staff were unable to locate a security plan for ExCL (filed _many_ years ago). Were they able to do so, this may not have arisen.
 - ExCL staff will create a new security plan. No changes to ExCL operations are expected, expect for authentication mechanisms.
- Multi Factor Authentication will likely be imposed (it is likely that this incident will result in ORNL operating procedures being revised). Since we are an XCAMS resource, this may be done via
 - Google Authenticator – this is a pretty easy integration and most people have it on their phones.
 - SSH Keying where appropriate (gitlab-runner logins, onsite logins, both as we have the capability to do now.
 - Password access is likely to be disabled for user accounts, once user has a chance to set up SSH keying.

ExCL Access Shutdown July 11-16 2025 Issue Resolution (3)

Key Takeaways:

- There was no unexpected vulnerability
- There was no user account data exfiltration
- The underlying issues (some of which we were aware of and were already in the process of addressing) are being addressed.

ExCL System Status

- Equinox is likely down for the count. If you require multiple GPUs for a project please say so (now would be good).
 - Cause: Nvlink has failed. This results in the GPUs pulling themselves off of the pcie bus, for no discernable reason.

EOFY System acquisition opportunity coming up

Lots of possibilities:

- Tenstorrent Blackhole PCIe board for high performance AI processing
- AMD Versal VHK150 Evaluation Kit
- Infrastructure needs (switch for 3700 lab, hypervisor servers)
- Nvidia DGX Spark Integrated CPU GPU card (Grace Blackwell)
- Mac Studio M4 for gitlab-runners and any performance analyses needed
- CXL server?
- Intel GPU w/ hardware FP implementation

Questions Projects Comments Discussion Brickbats

- GPS feed from roof? (no takers)