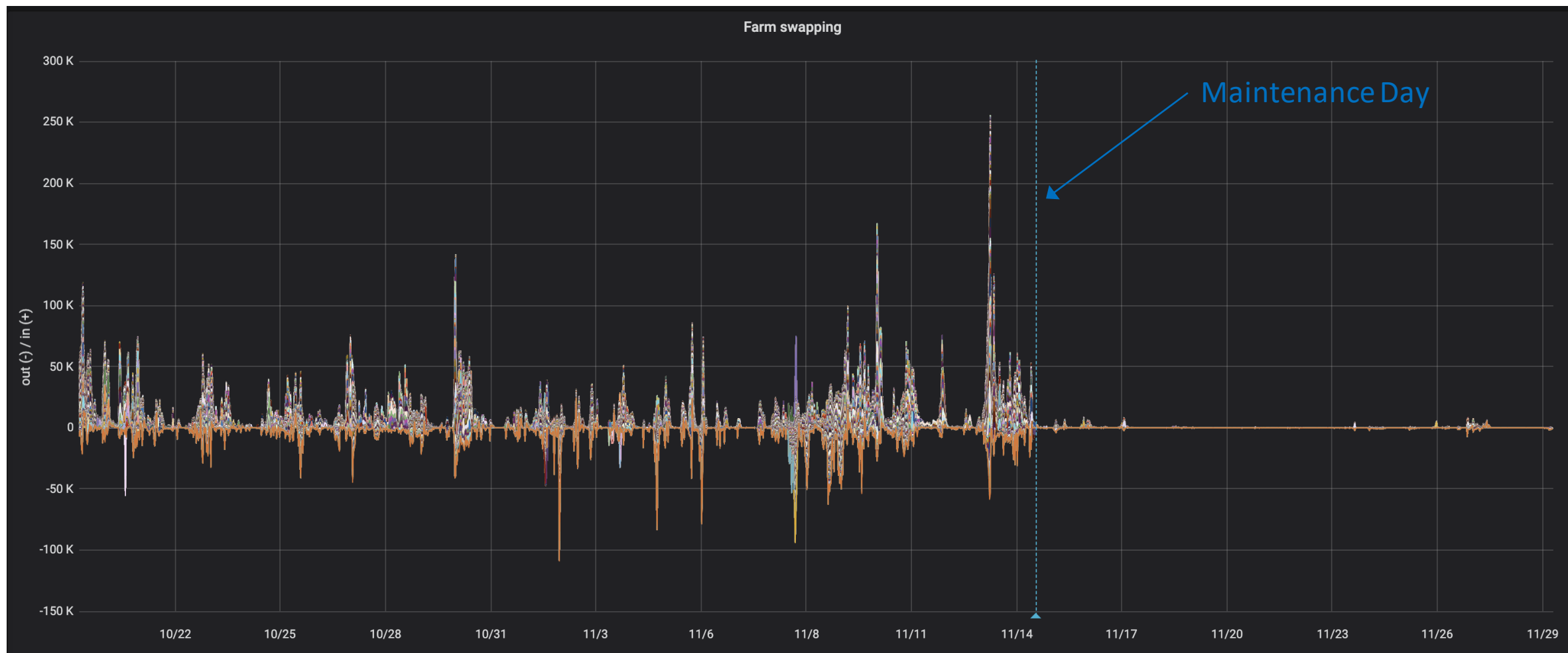# SciOps+ENP December 2022 Meeting

Bryan Hess

Friday, December 2, 2022

# Swapping stopped with CGgroup OOM killer in Slurm

Farm23 node procurement progress – Capacity Projection

- Farm23 Nodes have arrived

- Will be racked soon

- Awaiting some networking equipment

- Will initially run CentOS 7.9, become part of production

- This will bring the farm to 240MCH/year in Skylake core hour (farm18) equivalents

- Farm13 has been retired

Total million Skylake core hours vs year

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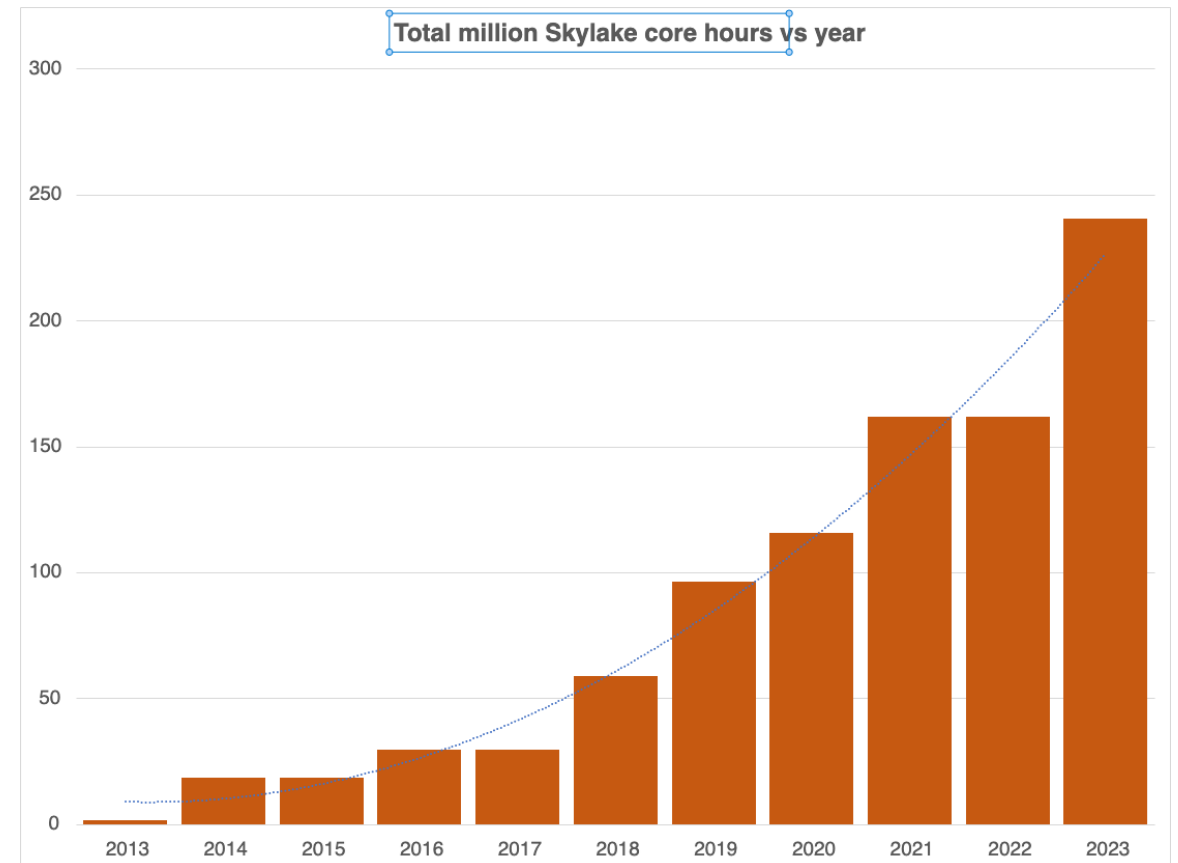
Open Science Grid

- Steady use of the OSG continues
- No operational issues this month
- XRootD direct writes to select /work
  - MCWrapper testing
  - EIC writing is next up (config in progress)
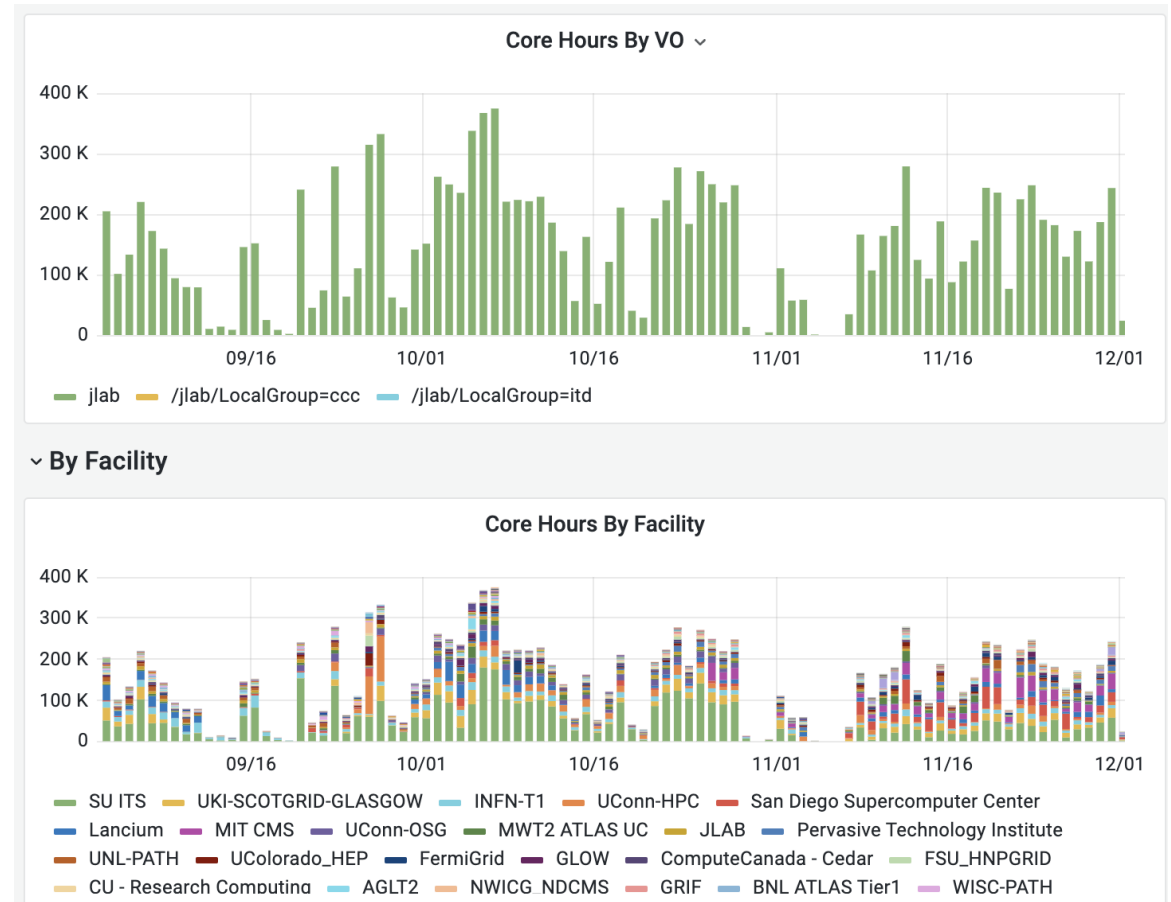
SWIF – Changes and Updates

- Added -refresh-input flag for retry-jobs to purge cached inputs

- Fixed bug where server shutdown could cause an output file partially extracted from tar archive to be treated as fully extracted, leading to truncated results.

- Improved concurrency, replacing daemon serial loops with thread pool worker queues

- Capture globus exception details (e.g. "consent required") to present to user

- Fixed bug where a non-tape file would not transfer off-site.

- Implemented new shell manager to cache per-user shells and better manage timeouts.

- Harvest swif diagnostic info from job to store in database

- Avoid race condition with ln -fs

- Fix read-only access for -user flag in swif list

- Upgraded from JDK 11 -> JDK 17

- Upgraded Jersey/Grizzly to latest version.

- Integrate with cache manager to coordinate file lifetime management

- Other miscellaneous bug fixes and tweaks.

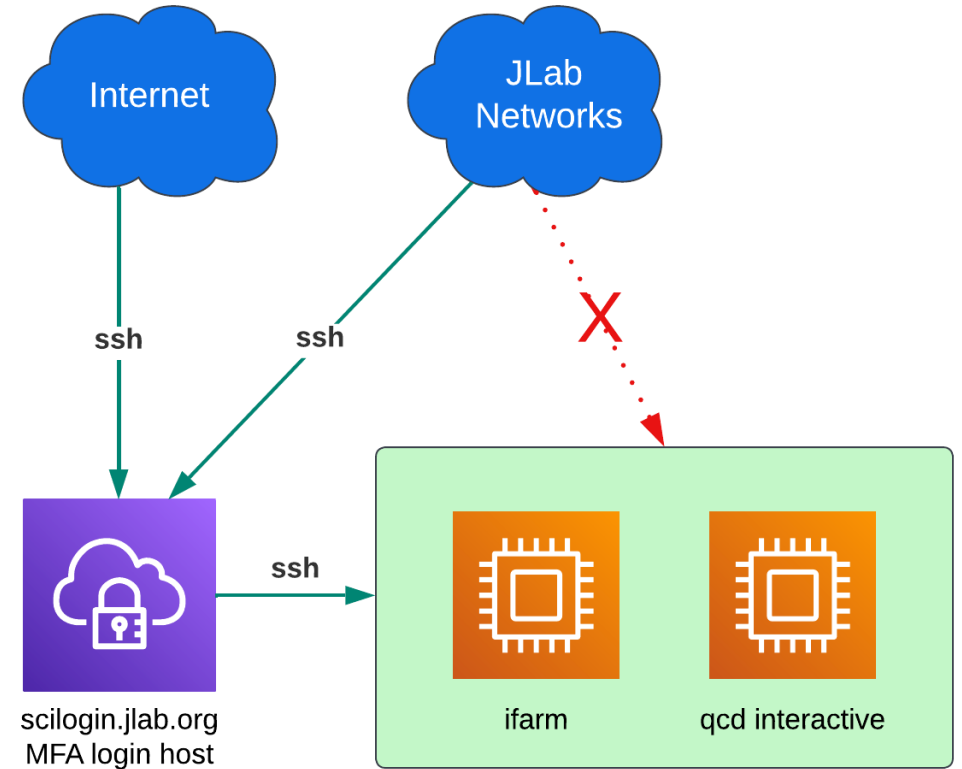SWIF Job dispatch and data (1 week sample)
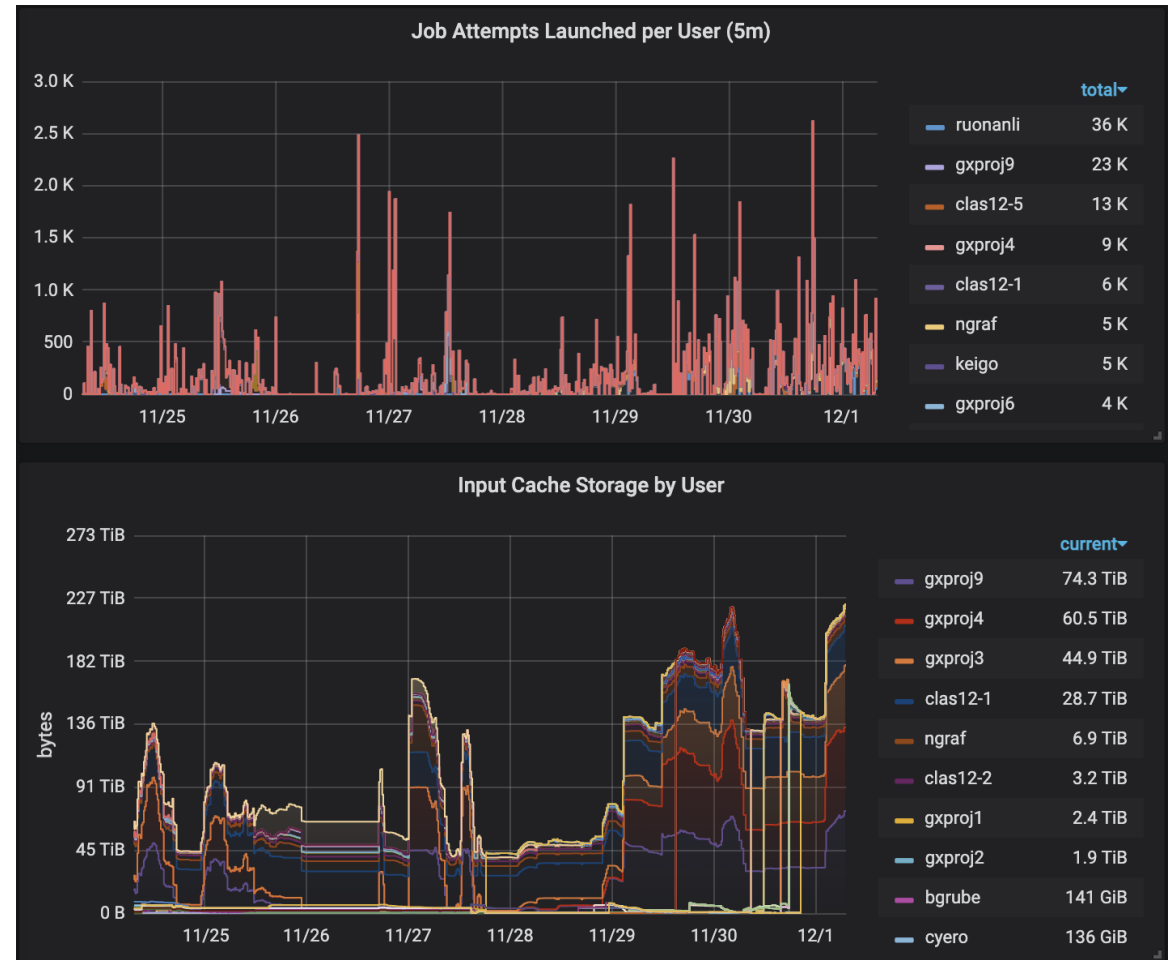
Jasmine look-aside disk cache

- Distinct from the user-visible cache

- Policy driven, meant to improve performance in problematic cases

- Staging features and use cases into production gradually
    - small files
    - auto-cache for DAQ
    - disk store until duplicates are written

- Initial results are encouraging

- If you see volume 000000 on Jasmine web pages, that's a cache hit from the disk based "meta mover"

- disk storage is XRootD based.

- example: 200TB of cache hits this week.
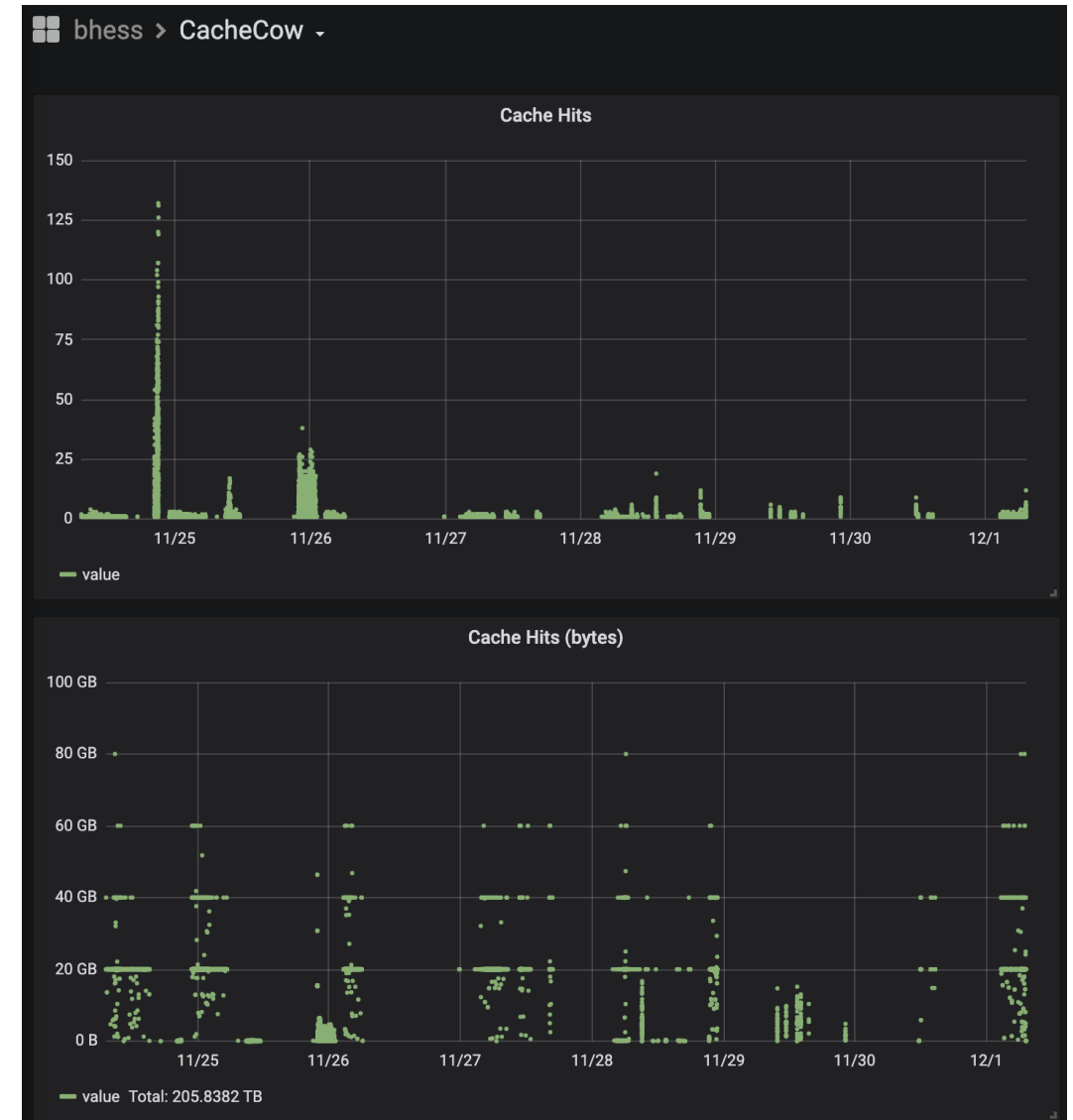
MFA For Scientific Computing

- March 21, 2023 – ssh using MFA gateway will be required

- Same model as hallgw for hall access

- scilogin.jlab.org VM pair being built

- Announcement email to users soon

- MFA credentials will be issued to all users with ifarm or qcdi access

- Supported MFA
  - Microsoft Authentication
  - Google Authenticator
  - MobilePass App
  - Yubikey hardware token

- Discussion: what are ssh key based uses on ifarm? What functionality is needed?

Internet

JLab Networks

ssh   ssh

X

scilogin.jlab.org
MFA login host

ssh

ifarm   qcd interactive

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Maintenance Activities for December 20, 2022

- No large changes planned before the Lab Shutdown

- Primary MAriaDB database server for Jasmine, SWIF
  - version update

- Routine security updates and reboots for all internet-facing services

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