US ATLAS Analysis Facilities – Shared T3s

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Analysis Facilities Onboarding Event

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For the US ATLAS Physics Support Team

US ATLAS Shared Tier 3 Analysis Facilities

- **Three US ATLAS shared Tier 3 analysis facilities with software & computing resources for analysis to use between grid jobs and local computers**
  - Large login nodes for development & batch pools for larger-scale processing
  - Storage for local datasets & Xcache for remote datasets
  - Access to ATLAS & analysis software and tools
- **Broad range of activities carried out & supported at the facilities, including:**
  - Event generation, detector simulation with ATLAS or standalone software
  - Data movement (via R2D2) and access (using Xcache)
  - Data processing for analysis & statistics using ATLAS software in CVMFS
  - Graphical applications for example via X-windows
  - Software development, testing code before submitting to batch system or Panda

BNL Facility

~2000 cores, but part of a much larger shared pool, potentially may access up to 38k cores

User quota: 500GB GPFS plus 5TB dCache

SLAC Facility

~1200 cores, part of much larger shared pool, potentially may access up to 15k cores

User quota: 100GB home plus 2-10TB for data

NEW

Launched Oct 2021

U Chicago Facility

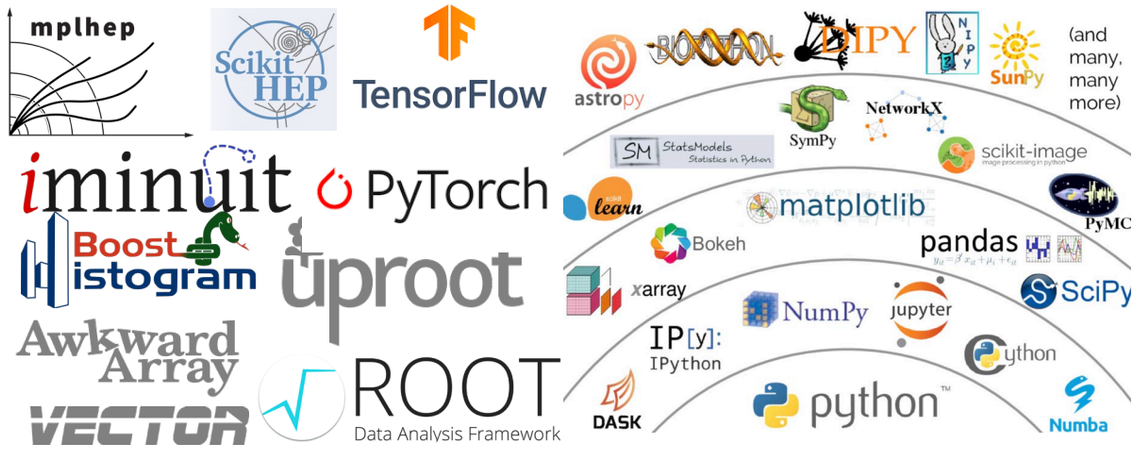
~1000 cores, part of much larger shared pool at the MWT2

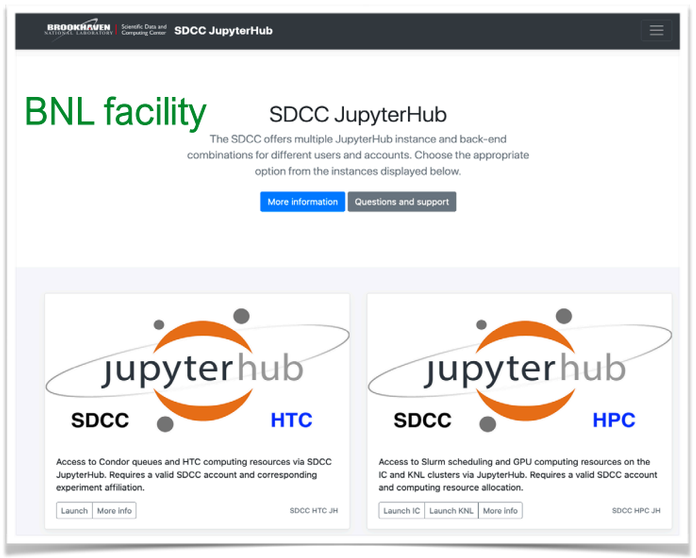
User quota: 100GB home plus 10TB for data

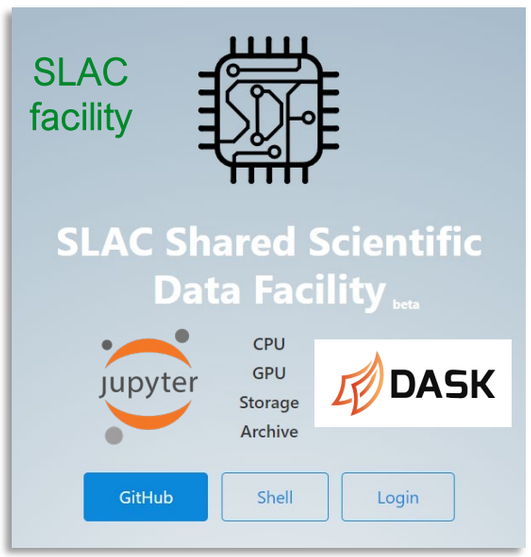
Several resources available for US ATLAS members & collaborators!

Jupyter Notebooks, Machine Learning Resources, etc

- *Several US ATLAS resources for analysis available and supported*
  - Examples: Jupyter notebooks, DASK, GPUs & Machine Learning tools
  - Also provide access to different types of computing resources including GPUs
  - Supported for Run 3 but also allow for R&D for the future







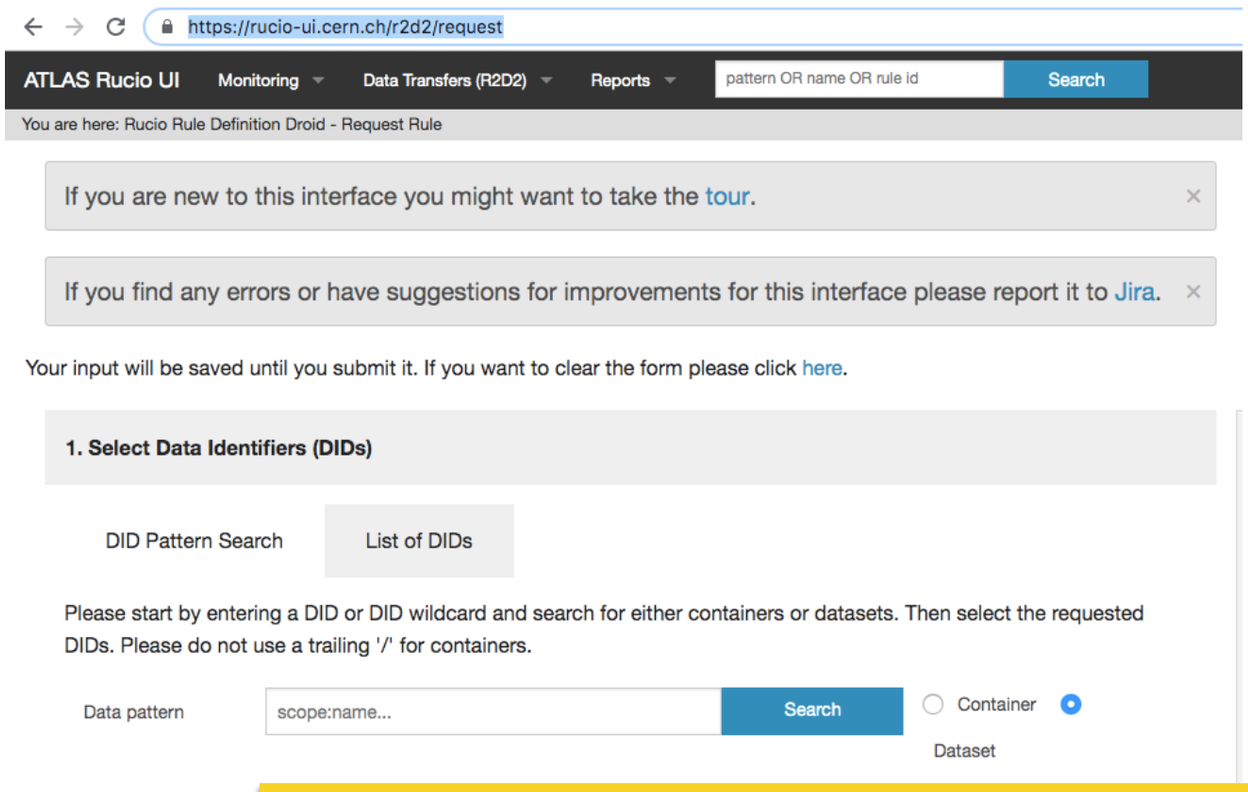
Several kinds of shared analysis resources are available – please use them, provide feedback and contribute if you can!

US Disk Resources for Analysis

- *Dedicated US ATLAS disk space at the US T1 and T2s — LOCALGROUPDISK*
  - 15 TB available per site, can request additional space if need beyond 30 TB
  - Request: https://atlas-lgdm.cern.ch/LocalDisk_Usage/USER/RequestFormUsage/

- How to transfer datasets to LOCALGROUPDISK
  - Transfer using r2d2
  - Add "-destSE" to your PANDA job
  - Via rucio command line

- How to access datasets
  - In grid-based analyses
  - Through XRootD from shared T3's
  - Can download locally



https://rucio-ui.cern.ch/r2d2/request

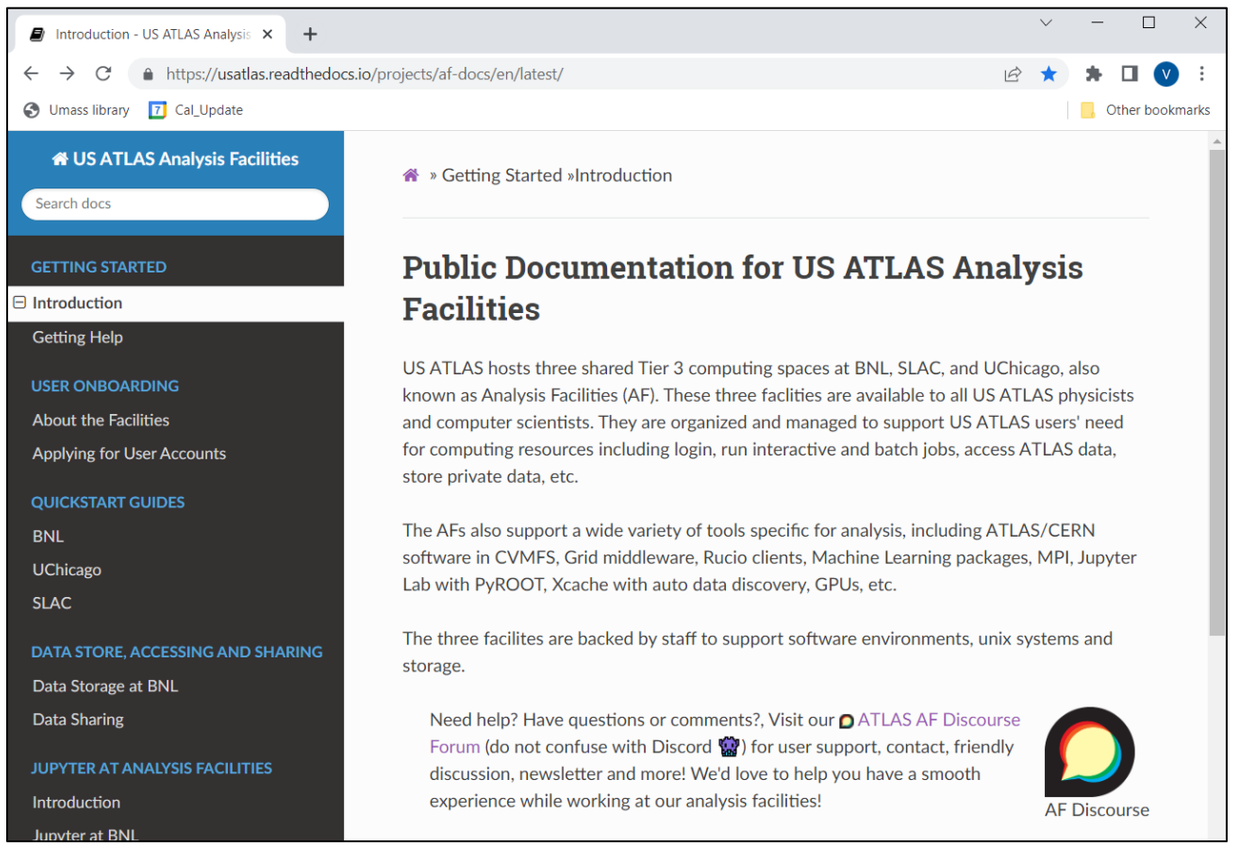
MWT2_UC_LOCALGROUPDISK (Midwest Tier 2, Chicago area)
BNL-OSG2_LOCALGROUPDISK (Brookhaven)
NET2_LOCALGROUPDISK (Northeast Tier 2, Boston University)
AGLT2_LOCALGROUPDISK (Great Lakes Tier 2, University of Michigan)
SLACXRD_LOCALGROUPDISK (SLAC)
OU_OCHEP_SWT2 (Oklahoma)
LUCILLE_LOCALGROUPDISK (Oklahoma)
SWT2_CPB_LOCALGROUPDISK (UTA)

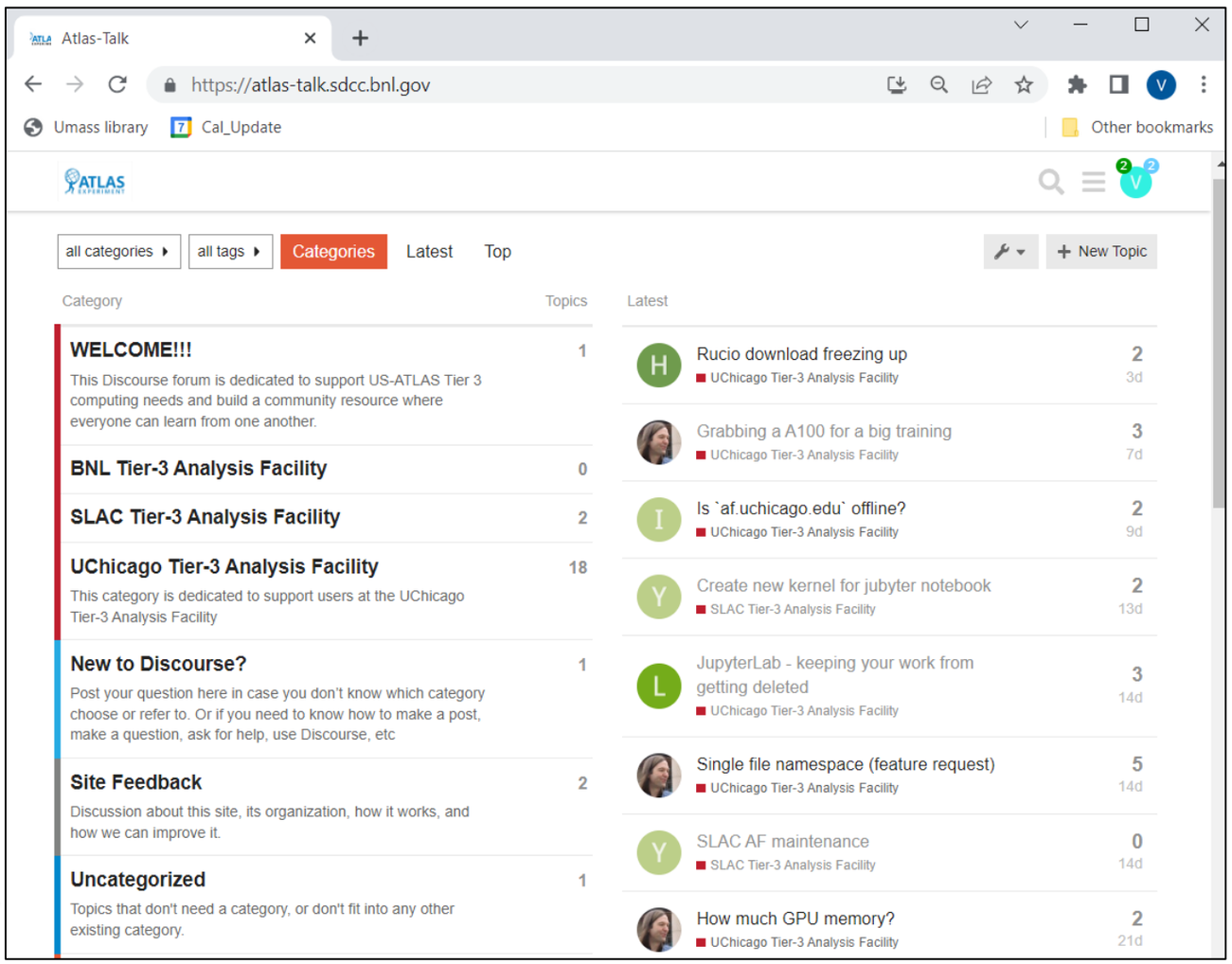
Please request US ATLAS VO for your grid certificate

Disk resources are available for analysis — please make use of them!

US ATLAS Analysis Facilities Documentation & Support

- *Consolidated documentation page for all facilities and are using the discourse platform for support*
  - Documentation page: https://usatlas.readthedocs.io/projects/af-docs/en/latest/
  - Discourse link (use CERN credentials): https://atlas-talk.sdcc.bnl.gov/

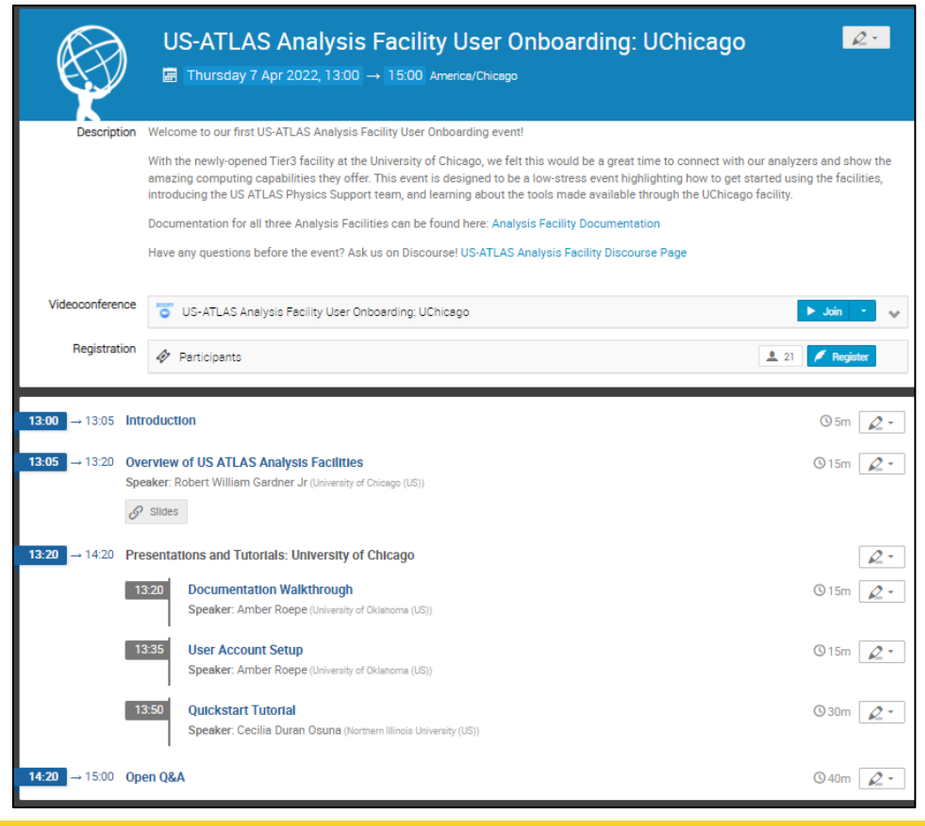


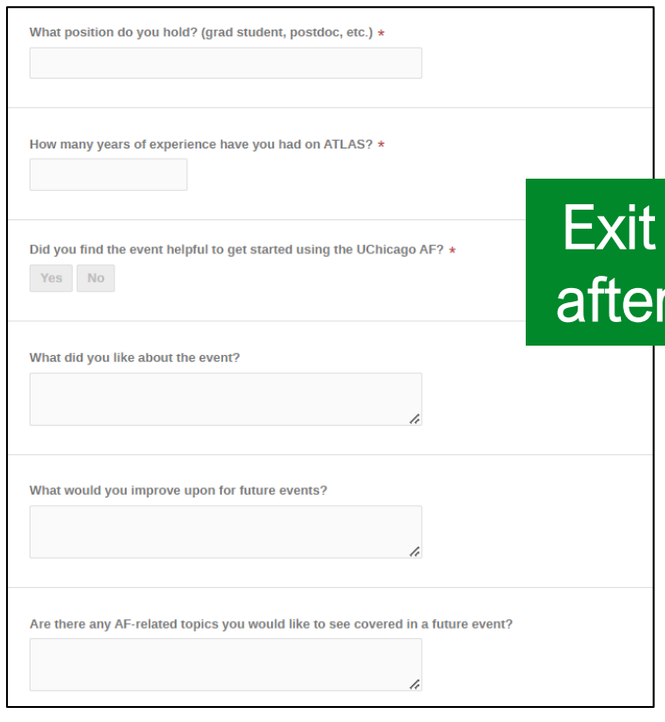


Trying to make as much material available as possible and welcome feedback on anything that might be missing or needs updating – please let us know!

US ATLAS Analysis Facilities Onboarding Events

- *US ATLAS analysis facilities onboarding events are intended to be informal, connect users with the support team and provide a space for discussion*
  - Planning to hold these regularly
  - First one today is focusing on the new U Chicago facility, but the goal is to include others in the future
  - Please let help us make these events useful, we have a feedback form on the event indico page and you may always get in touch with us directly as well!





Exit survey available after the event today

We would like to make these events as useful as possible – please provide us with your feedback so that we can improve!

Summary & Feedback Request

US ATLAS provides numerous resources, we hope you can take advantage of them
We are also happy to receive input and suggestions for how we can help you!

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ATLAS EXPERIMENT
"YOU ARE WELCOME HERE!"

We hope you enjoy the event today!