

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



U Chicago Facility

~1000 cores, part of much larger shared pool at the MWT2
User quota: 100GB home plus 10TB for data

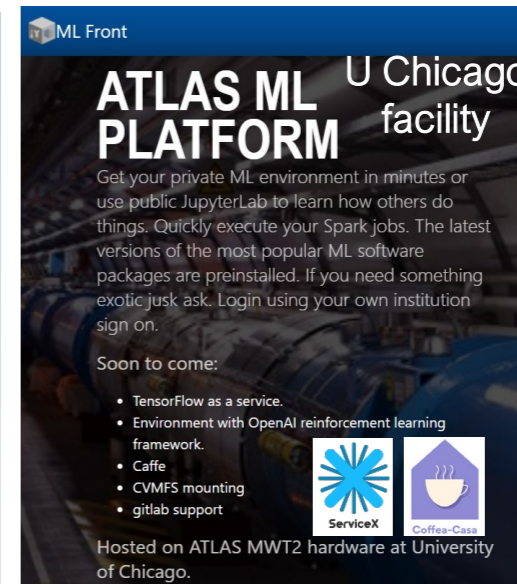
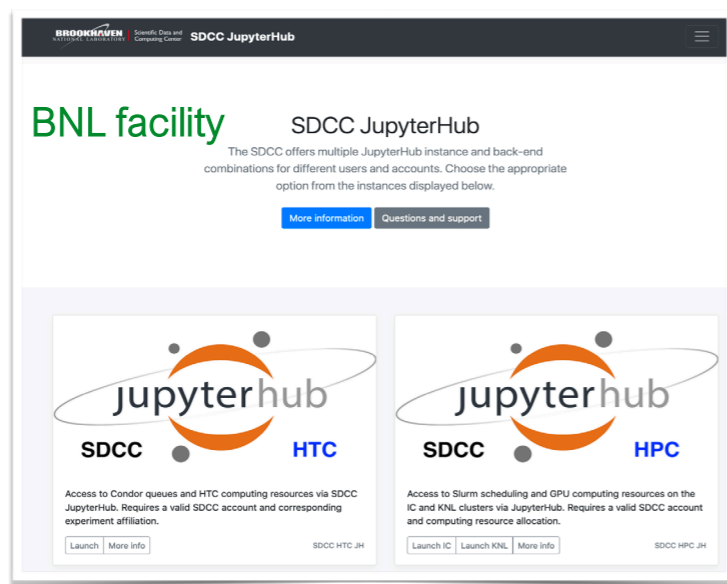
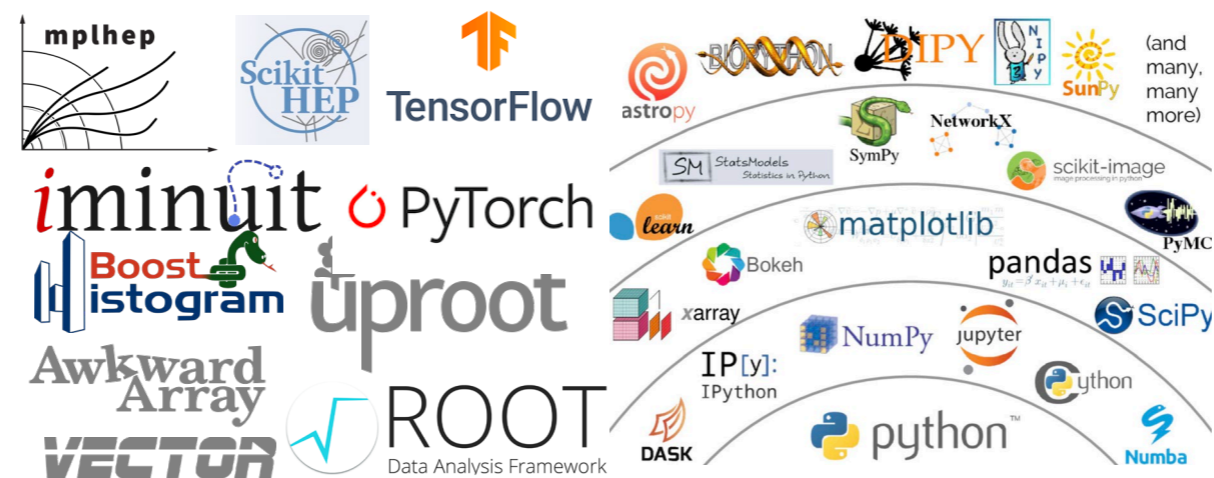
NEW

Launched
Oct 2021

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>

ATLAS Rucio UI Monitoring Data Transfers (R2D2) Reports pattern OR name OR rule id Search

You are here: Rucio Rule Definition Droid - Request Rule

If you are new to this interface you might want to take the [tour](#).

If you find any errors or have suggestions for improvements for this interface please report it to [Jira](#).

Your input will be saved until you submit it. If you want to clear the form please click [here](#).

1. Select Data Identifiers (DIDs)

DID Pattern Search List of DIDs

Please start by entering a DID or DID wildcard and search for either containers or datasets. Then select the requested DIDs. Please do not use a trailing '/' for containers.

Data pattern Search Container Dataset

<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/>

The screenshot shows the 'Introduction - US ATLAS Analysis' page on Read the Docs. The page title is 'Public Documentation for US ATLAS Analysis Facilities'. It provides an overview of the facilities and their support. A sidebar on the left contains navigation links for 'GETTING STARTED', 'INTRODUCTION', 'USER ONBOARDING', 'QUICKSTART GUIDES', 'DATA STORE, ACCESSING AND SHARING', and 'JUPYTER AT ANALYSIS FACILITIES'. The main content area includes sections for 'Getting Started', 'Introduction', and 'Public Documentation for US ATLAS Analysis Facilities'. A blue arrow points from the 'AF Discourse' link in the bottom right of the page to the Discourse forum screenshot.

The screenshot shows the ATLAS-Talk Discourse forum. The page title is 'Atlas-Talk'. The forum is organized into categories, with a table listing the categories and their topic counts. The categories listed are: WELCOME!!! (1 topic), BNL Tier-3 Analysis Facility (0 topics), SLAC Tier-3 Analysis Facility (2 topics), UChicago Tier-3 Analysis Facility (18 topics), New to Discourse? (1 topic), Site Feedback (2 topics), and Uncategorized (1 topic). The 'UChicago Tier-3 Analysis Facility' category is expanded, showing a list of recent topics with their titles, authors, and dates.

Category	Topics	Latest
WELCOME!!!	1	
This Discourse forum is dedicated to support US-ATLAS Tier 3 computing needs and build a community resource where everyone can learn from one another.		
BNL Tier-3 Analysis Facility	0	
SLAC Tier-3 Analysis Facility	2	
UChicago Tier-3 Analysis Facility	18	
This category is dedicated to support users at the UChicago Tier-3 Analysis Facility		
New to Discourse?	1	
Post your question here in case you don't know which category choose or refer to. Or if you need to know how to make a post, make a question, ask for help, use Discourse, etc		
Site Feedback	2	
Discussion about this site, its organization, how it works, and how we can improve it.		
Uncategorized	1	
Topics that don't need a category, or don't fit into any other existing category.		

Topic	Author	Count	Time
Rucio download freezing up	UChicago Tier-3 Analysis Facility	2	3d
Grabbing a A100 for a big training	UChicago Tier-3 Analysis Facility	3	7d
Is 'af.uchicago.edu' offline?	UChicago Tier-3 Analysis Facility	2	9d
Create new kernel for jupyter notebook	SLAC Tier-3 Analysis Facility	2	13d
JupyterLab - keeping your work from getting deleted	UChicago Tier-3 Analysis Facility	3	14d
Single file namespace (feature request)	UChicago Tier-3 Analysis Facility	5	14d
SLAC AF maintenance	SLAC Tier-3 Analysis Facility	0	14d
How much GPU memory?	UChicago Tier-3 Analysis Facility	2	21d

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!

The screenshot shows the Indico event page for 'US-ATLAS Analysis Facility User Onboarding: UChicago'. The event is scheduled for Thursday, April 7, 2022, from 13:00 to 15:00 in the America/Chicago time zone. The description welcomes participants to the first onboarding event at the newly opened Tier3 facility at the University of Chicago. It mentions that the event is designed to be low-stress and highlights how to get started using the facilities, introduces the US ATLAS Physics Support team, and provides information about the tools available through the UChicago facility. Documentation for all three Analysis Facilities can be found at the 'Analysis Facility Documentation' link. Participants are encouraged to ask questions on the 'US-ATLAS Analysis Facility Discourse Page'. The event details include a videoconference link, a registration page, and a list of sessions: Introduction (13:00-13:05), Overview of US ATLAS Analysis Facilities (13:05-13:20) by Robert William Gardner Jr., Presentations and Tutorials: University of Chicago (13:20-14:20) including Documentation Walkthrough (13:20-13:25) by Amber Roepe, User Account Setup (13:35-13:50) by Amber Roepe, and Quickstart Tutorial (13:50-14:00) by Cecilia Duran Osuna, and Open Q&A (14:20-15:00).

The screenshot shows an exit survey form with the following questions and input fields:

- What position do you hold? (grad student, postdoc, etc.) *
- How many years of experience have you had on ATLAS? *
- Did you find the event helpful to get started using the UChicago AF? * (Yes/No)
- What did you like about the event?
- What would you improve upon for future events?
- Are there any AF-related topics you would like to see covered in a future event?

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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We hope you enjoy the
event today!