

# **US ATLAS Computing Facilities Face-to-Face at SLAC**

## **Report of Contributions**

Contribution ID: 1

Type: **not specified**

## Container Image Development

*Thursday, 1 December 2022 13:00 (1 hour)*

Discuss efforts to provide a coherent plan for container image management (composition, curation, lifecycle management), in particular for the Analysis Facility use cases.

This breakout will use the alternate room and the following Zoom coordinates:

<https://umich.zoom.us/j/94766135812?pwd=eXVjcTlXTmpCUVBmNnF5MUhmRkF5Zz09>

**Presenters:** UNDRUS, Alexander (Brookhaven National Laboratory (US)); BENJAMIN, Doug (Brookhaven National Laboratory (US)); VUKOTIC, Ilija (University of Chicago (US)); YE, Shuwei (Brookhaven National Laboratory (US))

**Session Classification:** Breakouts

Contribution ID: 2

Type: **not specified**

## **K8s (Kubernetes) Distributions, Deployments and Monitoring**

*Thursday, 1 December 2022 14:00 (1 hour)*

Focused discussion K8s cluster administration and best practices for service deployment and operation.

This breakout will use the same room and Zoom coordinates as the main meeting.

**Presenters:** HOLLOWELL, Christopher Henry (Brookhaven National Laboratory (US)); HU, Feng-ping (University of Chicago (US))

**Session Classification:** Breakouts

Contribution ID: 3

Type: **not specified**

## CIOPS / Federated Operations

*Thursday, 1 December 2022 14:00 (1 hour)*

We need to discuss how we are doing federations operations, what tools we are (or should be) using and what issues and concerns are present. A goal should be to determine if changes are required, and, if so, what effort and prototyping might be required.

This breakout will use the alternate room and the following Zoom coordinates:

<https://umich.zoom.us/j/94766135812?pwd=eXVJcTlXTmpCUVBmNnF5MUhmRkF5Zz09>

Outline for Discussion

<https://docs.google.com/document/d/1c9bF7qIsVylHDQCu0aGyNLT9GmZvw4k81NjVjAtAUfg/edit?usp=sharing>

**Primary author:** RIND, Ofer (Brookhaven National Laboratory)

**Co-author:** VUKOTIC, Ilija (University of Chicago (US))

**Presenters:** VUKOTIC, Ilija (University of Chicago (US)); RIND, Ofer (Brookhaven National Laboratory)

**Session Classification:** Breakouts

Contribution ID: 4

Type: **not specified**

## NET2.1 Status and Planning

*Thursday, 1 December 2022 13:00 (1 hour)*

The new operations and leadership team for NET2 could use advice and discussion about best practices, technology and tool options, and other items important to running and managing a Tier-2.

This breakout will use the same room and Zoom coordinates as the rest of the meeting.

**Presenters:** BACH, Eduardo (University of Massachusetts (US)); LUEHRING, Fred (Indiana University (US)); LOPEZ, Rafael Antonio; MARTINEZ OUTSCHOORN, Verena Ingrid (University of Massachusetts (US)); LEIGHT, William Axel (University of Massachusetts Amherst)

**Session Classification:** Breakouts

Contribution ID: 5

Type: **not specified**

## Introduction and Goals of the Workshop

*Wednesday, 30 November 2022 13:00 (20 minutes)*

**Primary author:** GARDNER JR, Robert William (University of Chicago (US))

**Co-author:** MCKEE, Shawn

**Presenters:** GARDNER JR, Robert William (University of Chicago (US)); MCKEE, Shawn

**Session Classification:** Introduction Plenary

Contribution ID: 6

Type: **not specified**

## Site Report: Tier1

*Wednesday, 30 November 2022 13:20 (40 minutes)*

**Presenters:** BENJAMIN, Doug (Brookhaven National Laboratory (US)); LANCON, Eric Christian (Brookhaven National Laboratory (US)); GARONNE, Vincent (Brookhaven National Laboratory (US))

**Session Classification:** Introduction Plenary

Contribution ID: 7

Type: **not specified**

## Site Report: AGLT2

*Wednesday, 30 November 2022 14:00 (20 minutes)*

Wenjing will cover AGLT2, providing a quick overview of the site and then describing the unique work, tools and plans associated with the site.

**Presenter:** Ms DRONEN, Wenjing

**Session Classification:** Introduction Plenary



Contribution ID: 8

Type: **not specified**

## Site Report: MWT2

*Wednesday, 30 November 2022 14:20 (20 minutes)*

**Presenter:** STEPHEN, Judith Lorraine (University of Chicago (US))

**Session Classification:** Introduction Plenary

Contribution ID: 9

Type: **not specified**

## Site Report: NET2

*Wednesday, 30 November 2022 14:40 (20 minutes)*

**Presenters:** COELHO LOPES DE SA, Rafael (University of Massachusetts (US)); LEIGHT, William Axel (University of Massachusetts Amherst)

**Session Classification:** Introduction Plenary

Contribution ID: **10**

Type: **not specified**

## Site Report: SWT2

*Wednesday, 30 November 2022 15:30 (20 minutes)*

**Presenters:** SOSEBEE, Mark (University of Texas at Arlington (US)); MCGUIGAN, Patrick (UTA); MCGUIGAN, Patrick (University of Texas at Arlington (US))

**Session Classification:** Introduction Plenary

Contribution ID: **11**

Type: **not specified**

## **HPC Operations**

*Wednesday, 30 November 2022 15:50 (15 minutes)*

**Primary author:** WANG, Rui (Argonne National Laboratory (US))

**Co-author:** BRYANT, Lincoln (University of Chicago)

**Presenters:** BRYANT, Lincoln (University of Chicago); WANG, Rui (Argonne National Laboratory (US))

**Session Classification:** Introduction Plenary

Contribution ID: 12

Type: **not specified**

## Combined AF Session

*Wednesday, 30 November 2022 16:05 (1 hour)*

**Presenters:** HU, Fengping (University of Chicago (US)); RIND, Ofer (Brookhaven National Laboratory); YANG, Wei (SLAC National Accelerator Laboratory (US))

**Session Classification:** Introduction Plenary

Contribution ID: 13

Type: **not specified**

## Site Report: AF at UChicago

**Presenter:** HU, Fengping (University of Chicago (US))

**Session Classification:** Introduction Plenary

Contribution ID: 14

Type: **not specified**

## Site Report: AF at SLAC

**Presenter:** YANG, Wei (SLAC National Accelerator Laboratory (US))

**Session Classification:** Introduction Plenary

Contribution ID: 15

Type: **not specified**

## Improving Operations in the US Cloud

*Wednesday, 30 November 2022 17:05 (20 minutes)*

**Presenters:** VARTAPETIAN, Armen (University of Texas at Arlington (US)); RIND, Ofer (Brookhaven National Laboratory)

**Session Classification:** Introduction Plenary



Contribution ID: 16

Type: **not specified**

## Virtual Placement: A Cost/Benefit Analysis

*Thursday, 1 December 2022 08:45 (15 minutes)*

**Presenter:** VUKOTIC, Ilija (University of Chicago (US))

**Session Classification:** Lightning Talks

Contribution ID: 17

Type: **not specified**

## Run3 Analysis User Support in US ATLAS

*Thursday, 1 December 2022 09:15 (15 minutes)*

Presentation about ongoing and planned user support for Run3

**Primary author:** ROEPE-GIER, Amber (University of California,Santa Cruz (US))

**Presenters:** ROEPE-GIER, Amber (University of California,Santa Cruz (US)); HANCE, Mike (UC Santa Cruz); KRUMNACK, Nils Erik (Iowa State University (US))

**Session Classification:** Lightning Talks

Contribution ID: **18**

Type: **not specified**

## **Grand Challenge Discussion I: Networking and Data**

**Session Classification:** Introduction Plenary

Contribution ID: **19**

Type: **not specified**

## **Grand Challenge Discussion II: Analysis Facility Evolution**

**Session Classification:** Introduction Plenary

Contribution ID: 20

Type: **not specified**

## **Breakout Session NET2.1 Summary and Discussion**

*Thursday, 1 December 2022 15:30 (20 minutes)*

We will have the breakout conveners present a quick summary and introduction topics for discussion.

**Presenters:** LUEHRING, Fred (Indiana University (US)); LOPEZ, Rafael Antonio; MARTINEZ OUTSCHOORN, Verena Ingrid (University of Massachusetts (US))

**Session Classification:** Breakout Plenary

Contribution ID: 21

Type: **not specified**

## **Breakout Session on Containerization Summary and Discussion**

*Thursday, 1 December 2022 15:50 (15 minutes)*

We will have the breakout conveners present a quick summary and introduction topics for discussion.

**Presenters:** UNDRUS, Alexander (Brookhaven National Laboratory (US)); BENJAMIN, Doug (Brookhaven National Laboratory (US)); VUKOTIC, Ilija (University of Chicago (US)); YE, Shuwei (Brookhaven National Laboratory (US))

**Session Classification:** Breakout Plenary

Contribution ID: 22

Type: **not specified**

## **Breakout Session on K8s Summary and Discussion**

*Thursday, 1 December 2022 16:05 (15 minutes)*

We will have the breakout conveners present a quick summary and introduction topics for discussion.

**Presenters:** HOLLOWELL, Christopher Henry (Brookhaven National Laboratory (US)); HU, Feng-ping (University of Chicago (US))

**Session Classification:** Breakout Plenary

Contribution ID: 23

Type: **not specified**

## **Breakout Session on CIOPs/Federation Summary and Discussion**

*Thursday, 1 December 2022 16:20 (25 minutes)*

We will have the breakout conveners present a quick summary and introduction topics for discussion.

**Presenters:** VUKOTIC, Ilija (University of Chicago (US)); RIND, Ofer (Brookhaven National Laboratory)

**Session Classification:** Breakout Plenary



Contribution ID: 24

Type: **not specified**

## Tier-2 Procurement Process / Milestones

*Friday, 2 December 2022 08:30 (30 minutes)*

Fred will discuss the proposed milestones and procurement process for our Tier-2, leaving time to discuss the main points amongst the facility.

**Presenter:** LUEHRING, Fred (Indiana University (US))

**Session Classification:** Workshop Summary and Discussions

Contribution ID: 25

Type: **not specified**

## Facility Data Challenge Planning

*Friday, 2 December 2022 09:00 (30 minutes)*

Shawn will summarize what is known about the upcoming WLCG Network Data Challenge and describe possible areas the USATLAS facilities could participate, leaving time for discussion.

**Presenter:** MC KEE, Shawn (University of Michigan (US))

**Session Classification:** Workshop Summary and Discussions

Contribution ID: 26

Type: **not specified**

## Data Challenge Testing

*Thursday, 1 December 2022 09:00 (15 minutes)*

Hiro will describe the tools and plans to test USATLAS sites in preparation for DC24.

**Presenter:** ITO, Hironori (Brookhaven National Laboratory (US))

**Session Classification:** Lightning Talks

Contribution ID: 27

Type: **not specified**

## **ATLAS Canada: Infrastructure and Analytics Summary**

*Thursday, 1 December 2022 10:45 (15 minutes)*

Lightning talk on ATLAS Canada's infrastructure and use of analytics.

**Presenter:** FERNANDEZ GALINDO, Fernando (TRIUMF (CA))

**Session Classification:** Lightning Talks

Contribution ID: 28

Type: **not specified**

## **ATLAS Canada: Overview of Cloud Native Infrastructure at U Victoria**

*Thursday, 1 December 2022 11:00 (15 minutes)*

A lightning talk on the Univ of Victoria's Cloud Native Infrastructure.

**Presenter:** TAYLOR, Ryan (University of Victoria (CA))

**Session Classification:** Lightning Talks

Contribution ID: 29

Type: **not specified**

## **Cost Models Update (TBC)**

A lightning talk on cost modeling for the facilities

**Presenter:** MISAWA, Shigeki (Brookhaven National Laboratory (US))

**Session Classification:** Lightning Talks

Contribution ID: **30**

Type: **not specified**

## **User Analysis Containers in 10 minutes (TBC)**

A very quick overview of user analysis containers

**Presenters:** BENJAMIN, Doug (Brookhaven National Laboratory (US)); YE, Shuwei (Brookhaven National Laboratory (US))

**Session Classification:** Lightning Talks

Contribution ID: **31**

Type: **not specified**

## Analysis Facility Metrics

*Thursday, 1 December 2022 09:30 (15 minutes)*

A lightning talk summarizing analysis facility metrics (existing and proposed).

**Primary author:** HANCE, Mike (UC Santa Cruz)

**Presenters:** VUKOTIC, Ilija (University of Chicago (US)); HANCE, Mike (UC Santa Cruz); KRUM-NACK, Nils Erik (Iowa State University (US))

**Session Classification:** Lightning Talks



Contribution ID: 32

Type: **not specified**

## **OKD Experience at BNL (TBC)**

Lightning talk about OKD experience at BNL

**Presenter:** HOLLOWELL, Christopher Henry (Brookhaven National Laboratory (US))

**Session Classification:** Lightning Talks

Contribution ID: 33

Type: **not specified**

## Deployment Experiences with EL9 at MWT2

*Thursday, 1 December 2022 11:45 (15 minutes)*

**Presenter:** GOLNARAGHI, Farnaz (University of Chicago (US))

**Session Classification:** Lightning Talks

Contribution ID: 34

Type: **not specified**

## Extended Discussion Session

*Friday, 2 December 2022 09:30 (30 minutes)*

Use this slot to continue discussions about Tier-2 procurement and/or Data Challenge activities from the Facility.

We could also discuss the timeline and steps for allowing our sites to find the next operating system after RHEL7/CentOS7 becomes deprecated in 2024. Need about 10-15 minutes describing what is known and what critical areas need to be explored. Leave 15-20 minutes for discussion.

NOTE: We are gathering action items in this Google doc: <https://docs.google.com/document/d/1H0hKN3M37RzVJ3DLZK43>

**Session Classification:** Workshop Summary and Discussions

Contribution ID: 35

Type: **not specified**

## Tokens, HTCondor, Storage and our Facilities

*Friday, 2 December 2022 10:30 (30 minutes)*

We need to lay out the issues with the evolution of our infrastructure to tokens, replacing x.509. HTCondor 10.x will remove support for x.509 and our sites should already be capable of transitioning to this. However, storage still requires x.509 and the issues around replacing x.509 with tokens should be discussed.

Brian and Ofer should summarize the issues and lead a discussion on these topics.

**Presenters:** LIN, Brian Hua (University of Wisconsin - Madison); RIND, Ofer (Brookhaven National Laboratory)

**Session Classification:** Workshop Summary and Discussions

Contribution ID: 36

Type: **not specified**

## Workshop Review and Final Discussions

*Friday, 2 December 2022 11:00 (30 minutes)*

We need to summarize the workshop and allow follow-up discussions on any remaining topics we weren't able to spend sufficient time on.

NOTE: Let's use this Google doc to capture facility action items: <https://docs.google.com/document/d/1H0hKN3M37RzVJ3D>

**Session Classification:** Workshop Summary and Discussions

Contribution ID: 37

Type: **not specified**

## Homework and action items

*Friday, 2 December 2022 11:30 (20 minutes)*

As a group, define the actions items identified in the meeting, assigning names and timelines when appropriate

**Session Classification:** Workshop Closeout

Contribution ID: **38**

Type: **not specified**

## Closeout

*Friday, 2 December 2022 11:50 (10 minutes)*

**Presenters:** GARDNER JR, Robert William (University of Chicago (US)); MC KEE, Shawn (University of Michigan (US))

**Session Classification:** Workshop Closeout

Contribution ID: **39**

Type: **not specified**

## **On-Demand Breakout #1**

Side meetings as needed

**Session Classification:** Breakouts



Contribution ID: 40

Type: **not specified**

## On-Demand Breakout #2

Possible side meeting

**Session Classification:** Breakouts

Contribution ID: 41

Type: **not specified**

## **On-Demand Breakout #3**

Available for side discussions

**Session Classification:** Breakouts

Contribution ID: 42

Type: **not specified**

## **On-Demand Breakout #4**

Used for side meetings

**Session Classification:** Breakouts

Contribution ID: 43

Type: **not specified**

## Data Placement Activity in ADC

*Thursday, 1 December 2022 08:30 (15 minutes)*

Hiro will cover Data Placement Activity in ADC in terms of site storage usage efficiency and implications for our facilities.

**Presenter:** ITO, Hironori (Brookhaven National Laboratory (US))

**Session Classification:** Lightning Talks

Contribution ID: 44

Type: **not specified**

## **ATLAS Software and Computing Keynote - TBC**

**Session Classification:** Introduction Plenary

Contribution ID: 45

Type: **not specified**

## ADC Analytics Platform

*Thursday, 1 December 2022 10:30 (15 minutes)*

**Presenter:** JORDAN, David (University of Chicago (US))

**Session Classification:** Lightning Talks

Contribution ID: 46

Type: **not specified**

## **JBOD management tools**

*Thursday, 1 December 2022 11:30 (15 minutes)*

**Presenter:** HANCOCK, Robert

**Session Classification:** Lightning Talks

Contribution ID: 47

Type: **not specified**

## How does ServiceX work?

*Thursday, 1 December 2022 09:45 (15 minutes)*

**Presenter:** VUKOTIC, Ilija (University of Chicago (US))

**Session Classification:** Lightning Talks



Contribution ID: 48

Type: **not specified**

## Update on the Kubernetes Project at SWT2

*Thursday, 1 December 2022 11:15 (15 minutes)*

A lightning talk on the SWT2 investigation of running a Tier-2 computing center on the Kubernetes platform.

**Presenter:** VARTAPETIAN, Armen (University of Texas at Arlington (US))

**Session Classification:** Lightning Talks

Contribution ID: 49

Type: **not specified**

## Storage Cost and Workflows

*Thursday, 1 December 2022 16:45 (15 minutes)*

Lightning talk about storage planning based on the BNL presentation at the IRIS-HEP Coordinated Ecosystems meeting

**Presenter:** LANCON, Eric Christian (Brookhaven National Laboratory (US))

**Session Classification:** Lightning Talks

Contribution ID: 50

Type: **not specified**

## Optimizing Storage Utilization in the HL-LHC Era

*Thursday, 1 December 2022 17:00 (15 minutes)*

Update on the BNL LDRD project to design an AI/ML-based, optimized data management system.

**Presenter:** HUANG, Qiulan (Brookhaven National Laboratory (US))

**Session Classification:** Lightning Talks

Contribution ID: 51

Type: **not specified**

## **Broad Themes and Challenges for ATLAS S&C**

*Thursday, 1 December 2022 08:00 (30 minutes)*

**Presenters:** DI GIROLAMO, Alessandro (CERN); MARSHALL, Zach (Lawrence Berkeley National Lab. (US))