



# Services and Tools Group at SCDF

SCDF Stakeholders and Users Technical Meeting  
July 10, 2025

Ofer Rind (Group Leader)

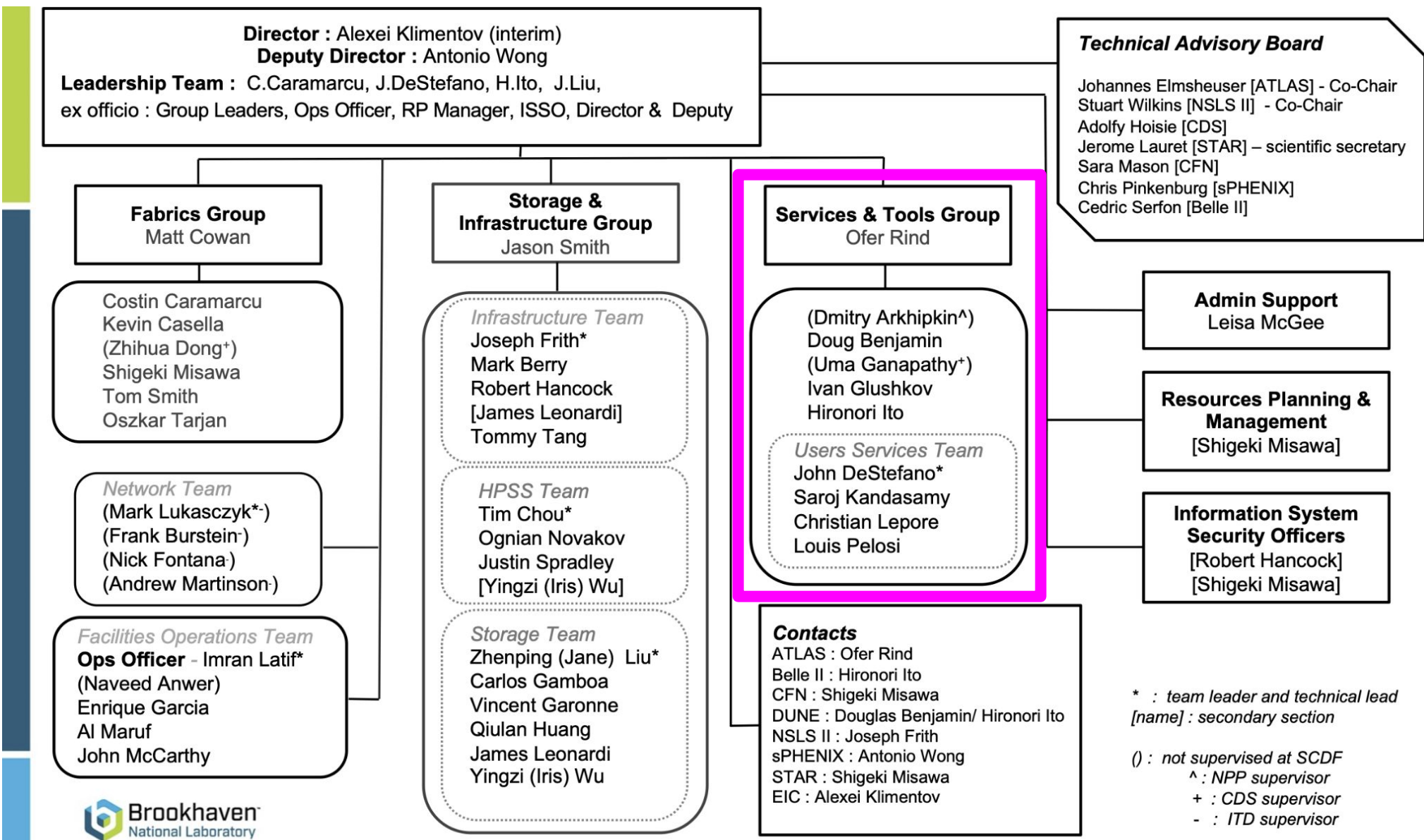


# Why Services and Tools?

- Organizationally, it's an area in which the focus is on user-facing services and the software tools that are essential for collaborative science.
- In practice, it's a “catch-all” group with a grab bag of efforts that rely upon and often overlap with the efforts of the Fabrics and the Storage & Infrastructure groups.
  - Everything from user account support, to collaborative tools, to middleware....
  - Reach extends beyond just users of the SCDF



# Services and Tools Group



# Services and Tools Team

- **Ofer Rind**, **Group Lead** - US ATLAS Cloud ops and Analysis Facilities, ATLAS xcache, BNL Box, ePIC Collaborative Tools
- **Doug Benjamin** - ATLAS Tier-1, ATLAS HPC integration, Analysis Facilities, DUNE computing, HEP-CCE
- **Ivan Glushkov** - US ATLAS Cloud and Tier-1 Operations, ATLAS Fabrics
- **Hironori Ito** - Belle II lead, DUNE PoC, FTS, Network Throughput Data Challenge and IPv6 transition, BNL Box
- **User Services Team**
  - **John De Stefano**, **Technical Lead** - CVMFS, Belle II conditions data + DDM, RT, Jira, ATLAS VOMS/IAM lead, Monitoring development
  - **Saroj Kandasamy** - User accounts, ATLAS VO admin, NX, Insure++
  - **Christian Lepore** - Web services (Drupal), Overleaf, GLPI
  - **Louis Pelosi** - Web Services, Mattermost, Discourse, AAI, Monitoring development
- ***Dmitry Arkhipkin***, *NPP/EIC* - Tools and Databases administration and development for STAR, sPHENIX, ePIC
- ***Uma Ganapathy***, *CDS* - InvenioRDM development

# Experiment Services

- RHIC Services

- STAR:

- Phonebook, Shift Signup, Event Display, Online Metadata Collection system (MIRA), SSH Key Management system (SKM)
    - Conditions / Calibrations / Geometry / FileCatalog / RunControl / Membership databases

- sPHENIX:

- Phonebook, Shift Signup, Event Display
    - Conditions, DAQdb, ProdDB, Data Carousel DB

- ePIC: Phonebook aka CRISP (see slide 8)

- ATLAS Services

- CVMFS, FTS, VO administration

- Belle II Services

- Conditions metadata and payloads, DIRAC, Rucio, FTS, Opensearch, ActiveMQ, Kibana, MySQL, PostgreSQL (in partnership with NPPS)

- DUNE Services

- Working with DUNE and SCDF storage team

# Web Services

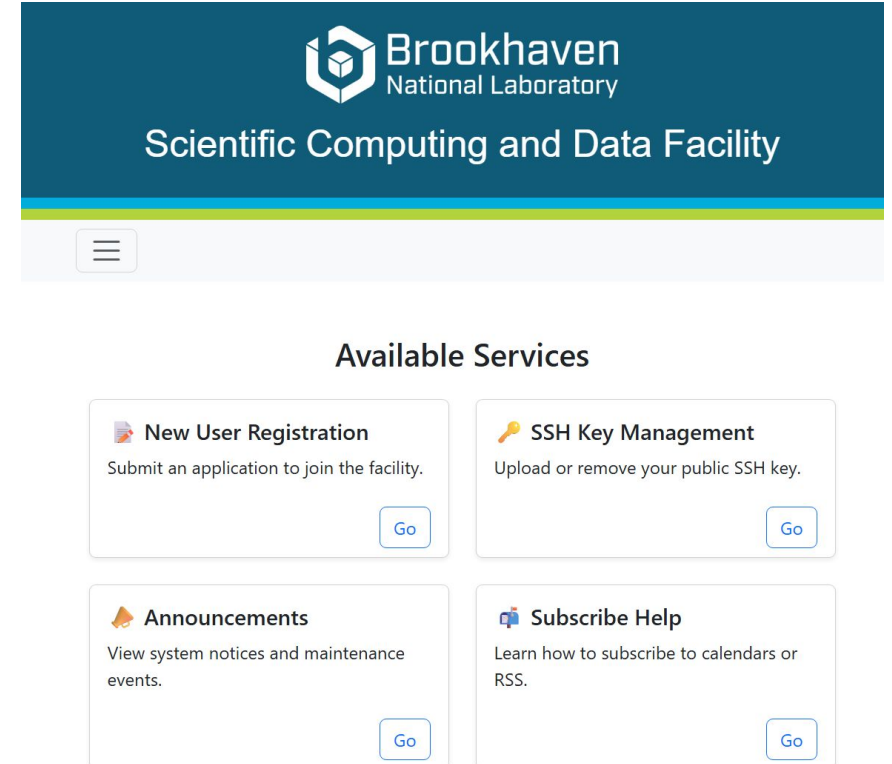
- Drupal Servers

- US-ATLAS, USBELLE-II, sPHENIX (internal only and public facing), Quantum Astrometry, Cosmology, SCDF
  - Production and Dev servers
  - Integration with CILogon for federated auth (US-ATLAS uses CERN SSO)
  - Monthly security updates and major version upgrades semi-annually

- User Portal




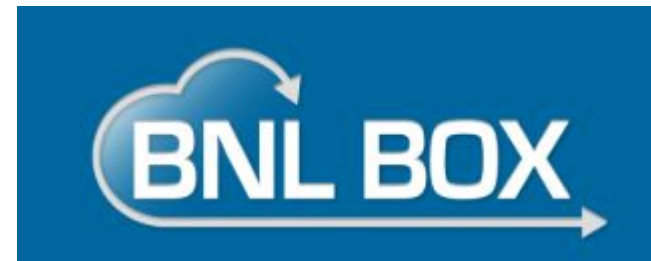
- Implemented:
  - New user submission form for site access
  - SSH Key submission page for users
  - Announcements section displaying service announcements to users
    - Create announcement and editing table for staff only
  - Admin section for cleaning database
  - Profile section displaying user groups, ldap info
- Under development:
  - COmanage group check display for users
  - Revamp of user and staff documentation and migration to mkdocs





# General User Services

- NoMachine NX 
  - Multiple portals for user remote desktop access to SCDF
  - Migrated to RHEL 8 in the past year
  - Currently running version 8.11 - updates to 8.17, 9.x in planning
- Insure ++
  - Version 2024.1.0 was recently installed
- Mattermost, RT, Discourse
  - ~1400 mattermost users, ~2.6M posts, ~11K channels
    - Currently v9.11, upgrade testing in progress to v10.5 and migration to postgres
  - 228 users on atlas-talk Discourse server
- BNL Box
  - File sync and share service
    - 440 accounts, incl. 37 guests
  - Nextcloud Hub 9
  - Recently migrated to the OpenShift platform
  - Moving from Lustre CopyTool to HPSSFS archiving (in progress)



# Program Development

- Computing at BNL for EIC (JD, LP)
  - Major overhaul of SCDF monitoring stack
    - New Prometheus service implementation
      - High res instance for short term data; low res instance for long term trends
      - 3 node Grafana Mimir cluster (currently test only)
    - ELK stack replacement with Opensearch
    - Deployment of Victoria Metrics (*C. Caramarcu*)
    - Recently took delivery of VAST storage plus new server
- Collaborative Tools for ePIC (DA, UG, OR)
  - Phonebook ➡ CRISP (Collaborative Research Information Sharing Platform)
  - Membership DB with a user-centric interface, integrated with COManage, InvenioRDM, Indico, Sympa, ...
- DUNE/FCC Analysis Facility
  - New NVIDIA L40S GPU servers on order
  - Building upon ongoing ATLAS analysis facility development work



# Questions?