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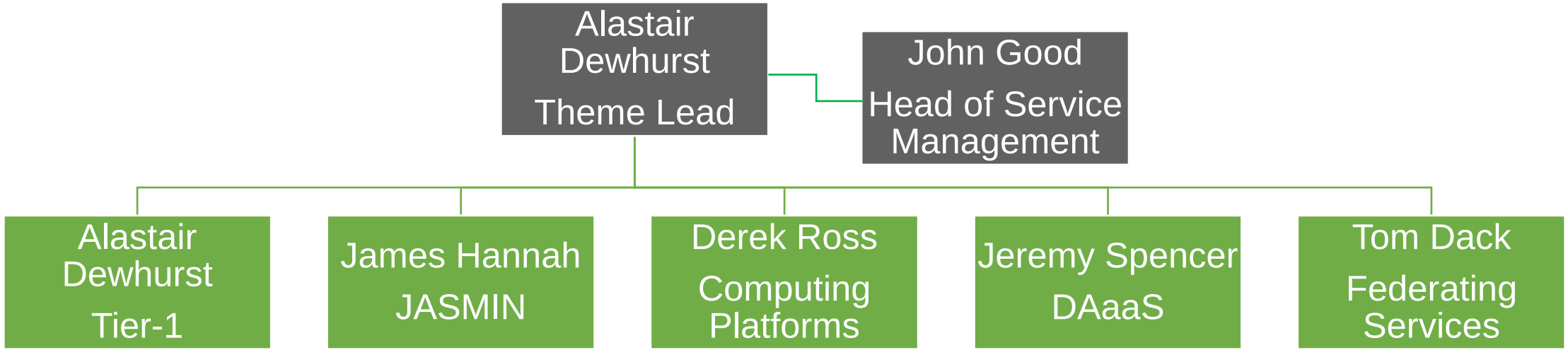
Update from the Federating Services Group at RAL

Greg Corbett

Platforms and Services



- Platforms and Services provides cutting-edge scientific computing platforms to enable world leading research.
- The Theme will provide leadership across SCD on IT Service Management.
- Theme is split into groups that focus on the community they support.

What is the Federating Services Group?

Formerly the Grid Tools team (as presented at GridPP51)

- STFC Scientific Computing group operating and developing services to facilitate federating distributed research infrastructures for our partner communities.
- Currently APEL, GOCDB, FTS and IAM
- Tom Dack is the Product Owner and Group Leader, providing a consistent contact for stakeholder engagement, reporting, and requirement identification

Slide repurposed from "**Grid Infrastructure Projects**" at GridPP51.
https://indico.cern.ch/event/1366954/contributions/5852558/

Agenda

1 Updates on our operations

2 Updates on our services

- APEL
  - HEPscore accounting
  - Token accounting
  - General update
- GOCDB
- File Transfer Service (FTS)
- Identity and Access Management (IRIS IAM and SKA IAM)
- UK Certificate Authority

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Updates on our operations

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Operations - Before

In 2024, operational service support rotated around the four service managers.

A good first step, but in practice resulted in a varied level of support week to week.

Essentially, the service of the service manager on duty probably got the best support that week.

Operations - Now

In Jan 2025, split into a Helpdesk and Service Manager on duty.

Helpdesk

Performs daily health checks of the services and provide first response ticket management, resolutions to standard issues, escalating internal for more complex issues.

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Operations - Now

On Duty Service Manager

Handles support requests that are non-standard, more complex or require elevated privileges.

This is supported by the service managers ring fencing some of their time each week to working collaboratively on service operation, communication and knowledge sharing.

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Updates on our services

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APEL update

"APEL client & Accounting Repository" in GGUS

Slides on behalf of Adrian Coveney

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HEPscore Accounting

- HEPscore support was deployed to the Repository w/c 24th March, meaning the new benchmark **is accepted at the Repository.**
- The Accounting Portal had issues rolling out the associated changes.
- These are now resolved, but currently no HEPscore related changes visible in the Portal.
- Portal should be updated imminently. After that, we will broadcast that the new record format can be accepted and work with WLCG and EGI Ops on a campaign for sites to switch to publishing with HEPscore23

Documentation to start publishing HEPscore23 can be found here:
https://twiki.cern.ch/twiki/bin/view/LCG/AccountingClientHEPscoreDeployment

Post-X.509, non-VOMS, token accounting

- This is our next priority for WLCG accounting
- Issue around getting VO attributes without VOMS
- The central accounting system needs these attributes to properly aggregate data and expects them in the records sent from sites
- As such, the changes needed is in the accounting client (APEL, ARC, custom scripts etc.)
- We are working with the WLCG AuthZ group, as well as Daniela Bauer and Simon Fayer, to understand the issue and find an interim solution that works with the various accounting systems, clients and token profiles currently in use by WLCG and EGI.

General updates

EL7 migration

- All central APEL Repository hosts were migrated before Christmas
- The log and host services monitoring were updated as part of this
- Database and APEL server split to simplify operations and maintenance.
- APEL packages available in CERN repo and UMD-5

Backlog

- There are various improvements and changes that were put on hold during HEPscore accounting development which will now be tackled as part of ongoing development

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GOCDB update

"Configuration and Topology Database (GOCDB)" in GGUS

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GOCDB

Rollout of GOCDB 5.11.{0,1} and, 5.12.{0, 1, 2} bringing privacy enhancements and quality of life improvements.

Working with EGI to investigate a Read Only Failover in the EGI Federated Cloud. Improving resilience at RAL against database issues in the meantime.

Over the next year, improvements around our integration with EGI CheckIn:

- Reworking to use OpenID Connect to match other services run in the group
- Encouraging more users to link EGI CheckIn identifiers with their X.509 based GOCDB account
- Allowing API access via tokens, retrieved via technologies like oidc-agent

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FTS update

Federating Services JIRA Service Desk

On behalf of Rose Cooper

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FTS update

- Main users currently are:
  - SKA, LSST, snowplus
- SKA have been using one of the RAL FTS instances since September 2024
  - Integrated with the SKA IAM and SRCNet Rucio
  - Data test campaigns started on 7 April 2025
  - In process of adding SKA IAM auth to FTS web monitoring & logs

Source	Destination	VO	Finished	Failed	Cancel	Rate (last 1h)
+ davs://webdav.grid.surfsara.	davs://canfar.shao.ac.cn	ska-iam.stfc	–	25	–	0.00 %
+ davs://storm.srcdev.skao.int	davs://storm.srcdev.skao.int	ska-iam.stfc	4	–	–	100.00 %
+ davs://storm.srcdev.skao.int	davs://xrootd01.uksrc.rl.ac.	ska-iam.stfc	4	–	–	100.00 %
+ davs://storm.srcdev.skao.int	davs://dcachetest.grid.surfs	ska-iam.stfc	5	–	–	100.00 %
+ davs://storm.srcdev.skao.int	davs://xrootd.dev.skach.org	ska-iam.stfc	4	–	–	100.00 %
+ davs://storm.srcdev.skao.int	davs://webdav.grid.surfsara.	ska-iam.stfc	6	–	–	100.00 %
+ davs://storm.srcdev.skao.int	davs://xrootd-01.swesrc.chalmers.se	ska-iam.stfc	4	–	–	100.00 %
+ davs://xrootd.dev.skach.org	davs://webdav.grid.surfsara.	ska-iam.stfc	5	–	–	100.00 %

- LSST intending to use RAL FTS as a back-up instance
  - Currently using RAL FTS for testing whilst setting up their primary FTS instance at SLAC

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IAM update

Federating Services JIRA Service Desk

On behalf of Donald Chung

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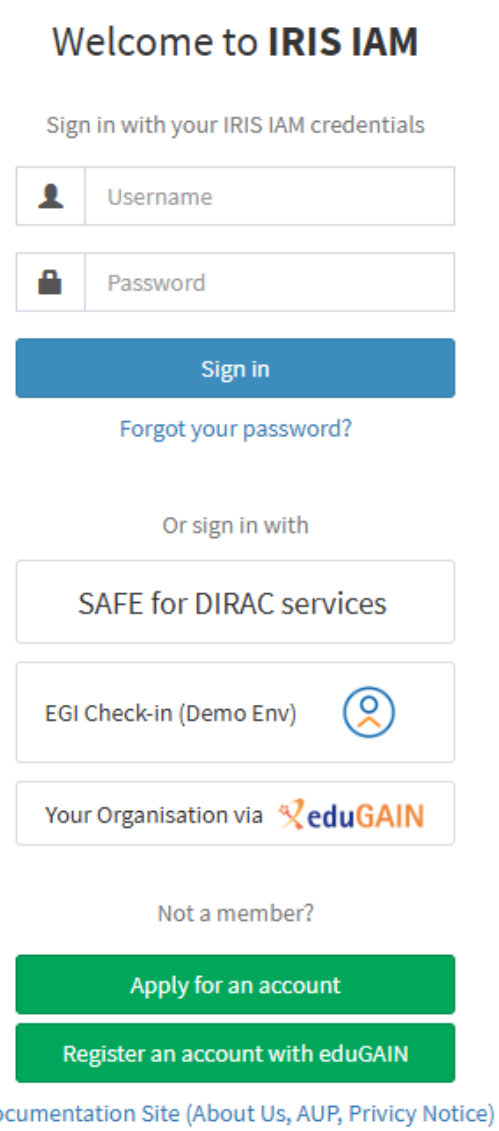
IRIS IAM and SKA IAM Overview

- All-in-One solution for Authentication Access Management that allows sign-in with home institution account.
- Supported community: IRIS and GridPP & SKA (SRCNet): >940 users
- Achieve >99.9% availability per hour for IAM services during the working day. Work to support that includes:
  - Deploying IAM on a Geographically distributed federation of K8s cluster
  - Adapting IAM to use high performance distributed database to overcome performance bottleneck



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UK Certificate Authority update

support@grid-support.ac.uk
Slides c/o Manoj Garai

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Certification Authority (CA)

In the last three months, Manoj Garai has been providing some of his time towards software fixes to the CA toolset. The CA service continues to be looked after by Tom Birkett.

Aim over the next year is to bring the CA fully into the Federating Services Group at RAL and looking at ways to onboard new team members to take ownership of the CA going forward.

Completed development tasks

- Local setup to run and debug the CA web portal, resulting in a fix to JavaScript issues
- Add unit test cases to facilitate future work

Ongoing tasks

- Investigate issues faced by Mac user to use the portal and CertWizard application

In conclusion

Improved operational processes bolster support across a growing portfolio of services.

SL7 “pets” are a distant memory – all our services are now under configuration management.

HEPscore23 is accepted by the Accounting Repository and will be visible once the Portal has updated.

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Questions?

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Thank you

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