# Grid and Web Services Working Group

Brian Major and Giuliano Taffoni

IVOA Santiago – October 2017

# GWS Session Review

- Markus: good discussion – splinter session
- Sara: File system backend to VOSpace
- André: Python VOSpace implementation.
- André: RDA – Federated Authentication interest group.  GWS to follow RDA on this and other topics.
- Pierre LS: Eduteam, Geant, VOOT.

# Splinter(s): Capability, Interface, SecurityMethod Multiplicity and Endpoint Problems

- VOResource 1.1 changes:
  - Change relationship between Interface and SecurityMethod from 1:n to 1:1
  - SecurityMethod to allow arbitrary schema within to describe addition info

# Splinter(s): Capability, Interface, SecurityMethod Multiplicity and Endpoint Problems

- UWS changes:
  - Adding 2 new UWS types to a UWS Registry Extension to be used by the interface definition:
    - uws:sync
    - uws:async
  - UWS 1.2 – Formally support synchronous jobs?

# VOSpaces

| VOSpace Authority | Backend Storage | Specification Version |
|---|---|---|
| China-VO | | 2.0 |
| CADC | Archive Store | 2.1 |
| OATS-INAF | File System | 2.1 |
| ESAC | Archive Store | 2.1 |
| CDS | File System | 2.1 |
| NOAO | Swift ? | 2.0 |
| LSST ? | | |
| Others? | | |

# Authentication

- SSO 2.0 is done and is working

- VOResource 1.1 update -- add more information to securityMethod element

- Federated Authentication – IVOA needs to publish a recommendation

- Research Data Alliance (RDA) take the lead?

# Authorization
(decoupled from Authentication!)

- Group Membership Service API
  - VOOT
  - IVOA

- Implementations:
  - Grouper
  - CADC, Others

- Working draft by May

# Remote Execution

The IVOA:     From **Data Provider** …
              to ***Science Platform Provider***

The doors in the GWS collective mind are opening!

KDD/GWS session a huge success!

# Remote Execution

How to register and discover computing services and computing service capabilities?

For example:
- Which datasets are available?
- Python Applications and Libraries
- Containers
- Batch, parallel processing?
- TAP Service with high max row limits
- Fast I/O VOSpace implementations

# Remote Execution

- Different types of code-to-data problems:
  - Simple, common and useful algorithms:
    - Cutouts [SODA]
    - New?: Probabilistic Kernel Density Classification
    - These 'programs' are offered as:
      - Services?
      - Apps withing the data centre?
  - Python interface to computing
  - Container interface to computing

# GWS Telecons

- Monthly telecons will continue!

- From feedback:
    - Will be publishing minutes for each telecon on the grid@ivoa.net mailing list.
    - Will be rotating the time to accommodate all time zones

# Help Wanted!

- ***Interoperable*** code-to-data prototypes

- Federated Authentication — An IVOA recommendation on how to integrate with federated authentication systems

- Note giving examples on how to use the SecurityMethods described in SSO 2.1

# Roadmap, in brief

- VOSpace 2.1 – REC before 2018

- StandardsRegExt records:
  - UWS
  - VOSpace 2.0 & 2.1

- Code-to-data framework and workflow proposals

- Complete KDD/GWS ML experiment

- Group Membership Service WD

- Items on the 'help wanted list'?

grid@ivoa.net