

Grid and Web Services Working Group

IVOA Virtual Interop – on line 2022a

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GWS hot topics for this virtual Interop

FOCUS



- VO in the Cloud
- Science Platforms
- GWS session



VO in the Cloud session

- 3 interesting presentations
- Great participation

Current solution for MAST

- Separate MAST service specifically to serve S3 addresses
- Python client astroquery.mast module custom made for

```

>>> import os
>>> from astroquery.mast import Observations
>>> # Simply call the `enable_cloud_dataset` method from `Observations`
>>> Observations.enable_cloud_dataset(provider='AWS')
INFO: Using the S3 STScI public dataset [astroquery.mast.core]
>>> # Getting the cloud URIs
>>> obs_table = Observations.query_criteria(obs_collection='HST',

<... snip ...>

>>> s3_uris = Observations.get_cloud_uris(filtered)
>>> print(s3_uris)
['s3://stpubdata/hst/public/jbev/jbeveo010/jbeveo010_drz.fits', ...]
>>> Observations.disable_cloud_dataset()

```

Vera C. Rubin Observatory | IVOA | 18 October 2022

IVOA services and protocols



Move the code

Execution Planner

Will my code run on your platform ?

Metadata schema to describe a task and the resources it needs

When can I run my code on your platform ?

Scheduling service to book resources

Zeppelin notebook
PySpark analysis
210 cpu cores
360G memory
1Tbyte disc

2 hours
15:00 – 17:00
Tuesday 18th

Gaia DataMining platform
IVOA Interop meeting
October 2022

Rubin Object Catalog

(the target is a simulated RR Lyrae star in our Data Preview 0.2 system)

...substantial questions to be answered concerning the application of some standards in the Cloud....



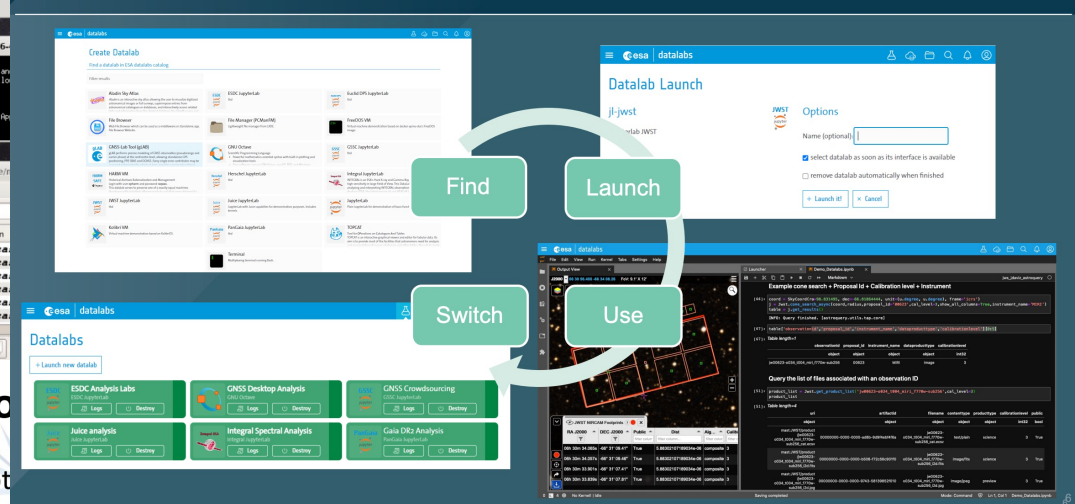
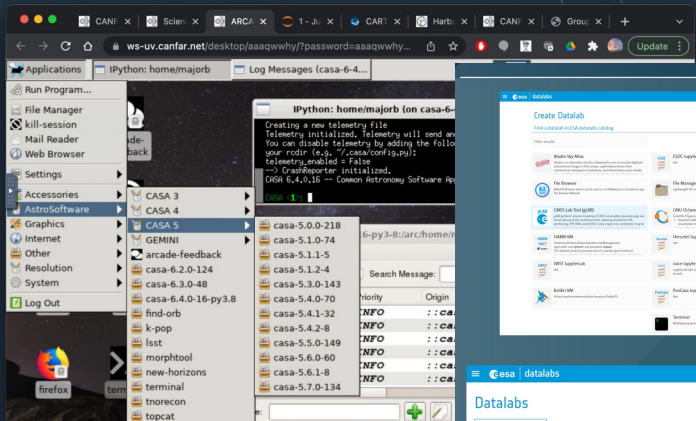
Science Platforms

Desktop Session

Desktop a shell for displaying non-browser container apps.

Apps launched from within but run elsewhere in the cloud.

- all CASA versions
- TOPCAT
- CADC python tools
- Any container a user publishes!



Menu dyn from imag

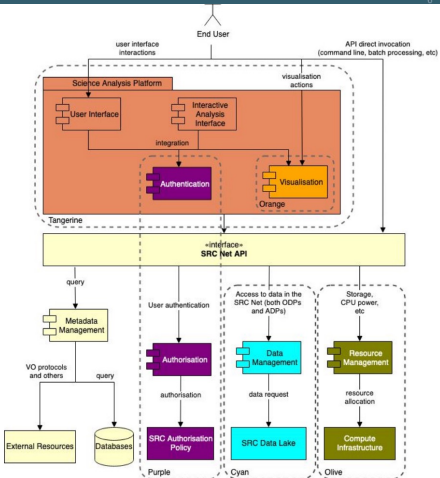


Introducing Ro

- A web-based science platform supporting both analysis environments
- Executes user tasks in software containers on:
 - local CPUs;
 - standalone computing resources
 - HPC clusters and Cloud systems
- Microservice-oriented approach: each task runs in its own co expose its interface directly to the user:
 - Users can choose from different software and interfaces
 - Users can add their own containers

The platform in the SRCNet

The platform brings together all components of the SRC network for the users

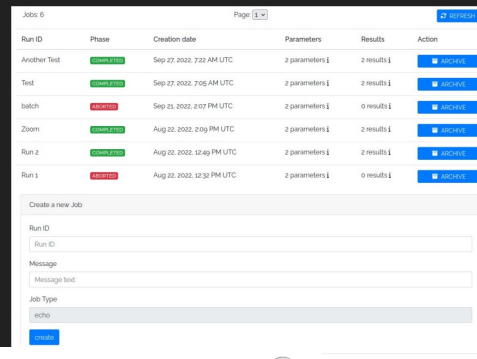


Building a SP requires more than one standard and service...

- Auth/Authz/Acc
- Data access
- Computing access
- Code to data
- Cloud access...

Our implementation in ESCAPE ESAP

- ESAP (ESFRI Science Analysis Platform)
- Query and select datasets
- Browse software
- Run on compatible compute infrastructure
- UWS used for:
 - Batch processing
 - Planned: async queries



Run ID	Phase	Creation date	Parameters	Results	Action
Another Test	Completed	Sep 27, 2022, 7:52 AM UTC	2 parameters	2 results	View
Test	Completed	Sep 27, 2022, 7:05 AM UTC	2 parameters	2 results	View
batch	Failed	Sep 21, 2022, 2:07 PM UTC	2 parameters	0 results	View
Zoom	Completed	Aug 22, 2022, 2:03 PM UTC	2 parameters	2 results	View
Run 2	Completed	Aug 22, 2022, 12:49 PM UTC	2 parameters	2 results	View
Run 1	Failed	Aug 22, 2022, 12:39 PM UTC	2 parameters	0 results	View

Create a new Job

Run ID:

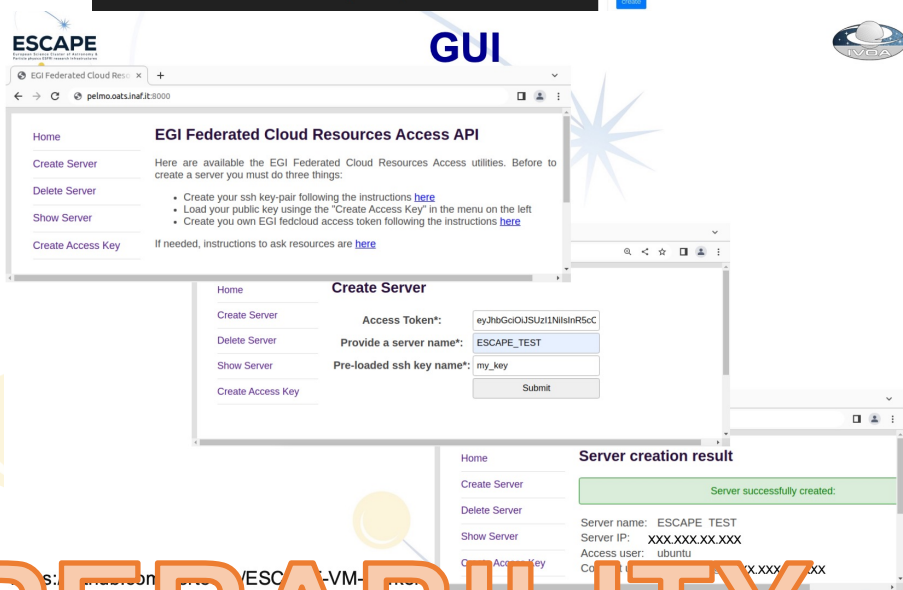
Run ID:

Message:

Message text:

Job Type:

echo:



ESCAPE GUI

Home **EGF Federated Cloud Resources Access API**

Here are available the EGI Federated Cloud Resources Access utilities. Before to create a server you must do three things:

- Create your ssh key-pair following the instructions [here](#)
- Load your public key using the "Create Access Key" in the menu on the left
- Create you own EGI fedcloud access token following the instructions [here](#)

If needed, instructions to ask resources are [here](#)

Home **Create Server**

Access Token*: eyJhbGciOiJIUzI1NiIsInR5cCI6IiJ9

Provide a server name*: ESCAPE_TEST

Pre-loaded ssh key name*: my_key

Home **Server creation result**

Server successfully created:

Server name: ESCAPE TEST
Server IP: XXX.XXX.XX.XXX
Access user: ubuntu
Co... XXXX XXX

INTEROPERABILITY...



Thanks for your attention.

Have had a terrific “virtual” 2022b Iterop!

...Expect follow up during the next semester and at the spring meeting...

Subscribe to grid@ivoa.net
<http://ivoa.net/members>

Slack channel: [#grid-webservices](https://ivoa.slack.com)

