

Future Plans

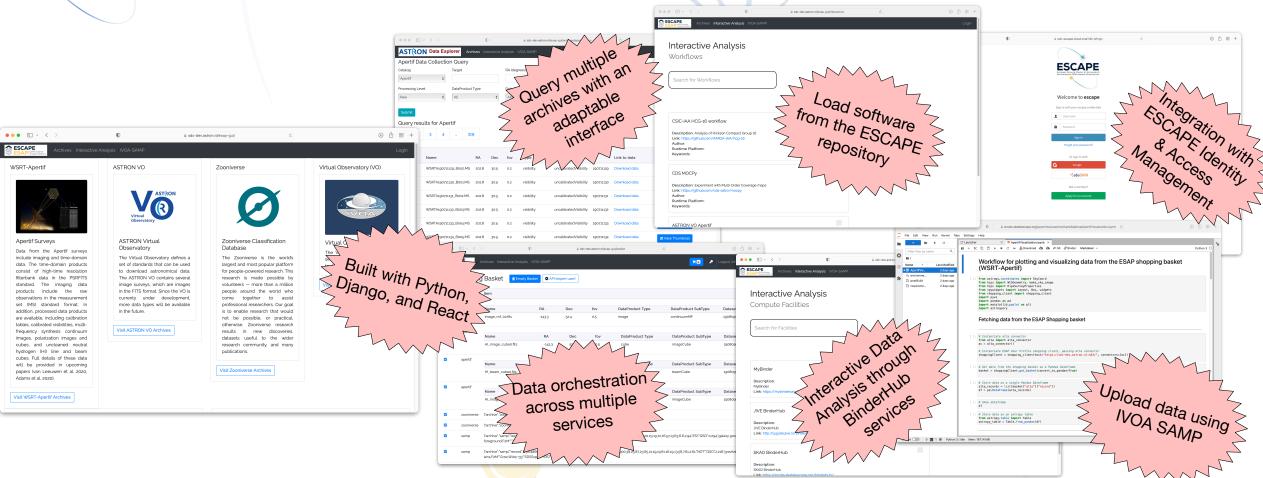






2022-11-21/22

ESCAPE Where are we now?









Conclusions

- Software VM creation in EGI fedcloud is feasible
- Automation is challenging
- Work needed to standardize information to make possible automation
- Work is needed to make homogeneous authentication and authorization
- Future plan: Evaluate and try EGI container compute

Next Steps

- Migration to RUCIO
 - Testing phase (end of 2022)
- Integration: the ESCAPE Datalake
 - Issues: Authentication
- Provide compute infrastructure
 - Issues: Authentication

What is missing

- Authentication
 - x509
- Defining and finding the steering file
 - IVOA Execution Planner
- How to get your output
- More general framework for other WMS

Summary and Next Steps

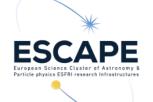
- Rucio integrated with ESAP for data discovery
- Data lake as a Service brings computation to data managed by Rucio

Future

- Improved query mechanism
 - o Metadata over DIDs?
 - Improved IVOA metadata integration in development
- More streamlined authentication mechanism
- Tighter integration with interactive analysis

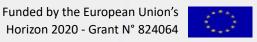
ESCAPE Future Plans

- Desktop Tools as a Service
 - Deploying a Desktop tool in a container on an IDA environment along with the data
 - Rosetta has been the targets of our initial experiments as a Compute Service that
- Automatic mounting data at IDA facility
 - Moving the data automatically on behalf of the user, so that when deployed, everything (data & software) is available for the user without requiring any additional actions
- ESAP to provision VMs for Interactive Analysis automatically
 - Requires having a compute resources available, and a VM provisioning system (i.e. Openstack) connected and available to ESAP
 - User then can request that an IDA environment become available on a given system, and we
 can create VM, setup environment, and redirect them to it.
- Associating Software with Data
 - Recommend Software based on what Data has been selected by the user
 - How to evaluate ESAP?
 - ESAP is not a Research Software
 - ESAP is a service (a toolkit rather a running service)
 - ESAP a service to support scientists in following Open Science practice
 - → How to evaluate this?



Technical Challenges

- ESAP Technical Improvements:
 - Improved provenance tracking & robust PID support and FAIRness?
 - Data sharing & collaborative workflows.
 - Persistent development & analysis environments.
 - Richer understanding of the semantics of and relationships between data products.
 - Federation between ESAP instances.
- Sustaining ESAP:
 - Ongoing open source development and maintenance.
 - Safety and security.
 - Continued effort to integrate new ESFRI services as they become available.
 - The core of a virtual research environment.
- Common standards:
 - Move beyond the current explosion of bespoke science platforms to common standards and platforms that provide federated access to compute, analysis, archive etc services. Relationship to e.g. the Rubin Science Platform? A "VO" like system for science platforms?
 - IVOA Execution Planner as first step?







The ESAP provides an excellent toolbox from which one can build and tailor a Science Platform... CTAO has been able to identify key technologies and ideas which it will further investigate in the future... We look forward to further work together on these topics in future collaborations.

Matthias Füßling, Science User Support System Coordinator at CTAO

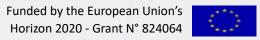
A number of ESCAPE members are now involved in SKA Regional Centre prototyping; will continue to work with the contacts we have made.

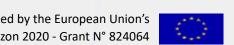
James Collinson, Scientific Programmer at SKAO

SKA Regional Centre science platform prototyping is investigating and may build upon the work done in ESAP.

> Yan Grange, Software Developer at ASTRON and SRC Team Tangerine Product Owner

...your project here?







ESCAPE The ESCAPE Collaboration

ESCAPE CC

Operating the communitybased "Competence Center" for EOSC-alignment, train and support, extended outreach, financial model for services and networking with other SCL-CCs



R&I for an "European Virtual Institute for Research Software" for advanced technologies

Instances

VRE services



Access physical & e-infrastructures Processing & Analysis Security & Operations









ESCAPE







Processing & Analysis Sharing and Discovery Training & Support













Processing & Analysis Sharing and Discovery Training & Support

Training & Support







ESCAPE coso

Challenging "Open Science Objectives" by RI commitments in Open Science Projects (OSP) as well as Cross-Cluster Open Science Projects (COSP)

ESCAPE TECH

Bring the FAIRness within technology, R&D and innovation projects as well as explore new "close-to-sensors" low-latency opendata science

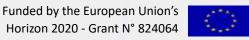
ESCAPE CARS

Career development and rewarding for researcher committing in Open Science. Planning, tracking, and assessing scientific knowledge production

ESCAPE SDSS

Building synergies on "Sector Data Spaces" for Society: Green deal, Health, Manufacturing, Education and Skills

https://www.youtube.com/watch?v=EOwmjNljxCA&t=9555s







References

- ESCAPE:
 - https://www.projectescape.eu
- ESAP Installation & Deployment:
 - https://git.astron.nl/astron-sdc/escape-wp5/esap-deployment
- ESAP documentation:
 - https://git.astron.nl/astron-sdc/esap-api-gateway/-/wikis/home
- WP5 code repositories:
 - https://git.astron.nl/astron-sdc/escape-wp5
- Issues and outstanding work:
 - https://git.astron.nl/groups/astron-sdc/escape-wp5/-/issues





Thank you all for joining us!

...and special thanks to:

- All our speakers over the last couple of days, and to Klaas for chairing today's discussion.
- All the members of ESCAPE WP5 for being such fantastic colleagues over the last few years.



