ESCAPE

European Science Cluster of Astronomy & Particle physics ESFRI research Infrastructures

OSSR and TSPs

Kay GRAF for the E-OSSR Work Package

ECAP, Friedrich-Alexander University Erlangen-Nürnberg

ESCAPE TSP General Meeting, 20th Oct. 2021

ESCAPE - The European Science Cluster of Astronomy & Particle Physics ESFRI Research Infrastructures has received funding from the European Union's Horizon 2020 research and innovation programme under the Grant Agreement n° 824064.

ESCAPE EOSC cell

ESCAPE
European Science Cluster of Astronomy & Particle physics ESFRI research Infrastructures

ESCAPE OSSR

Catalogue & Repository of resources

Datasets
Software & services
Tutorials
Training
Publications

TSP's

RI-Specific Science Platforms

ESCAPE VO Virtual Observatory

Astronomy Data centres

VO Registry

VO Registry
Analysis Tools
VO Services

ESCAPE SAP Science Platforms

Workflows, notebooks, deployment platforms, packaging

ESCAPE CS Citizen Science

ESCAPE DIOS Data Lake

FAIR data management
Content discovery and delivery

HPC

PRACE

EuroHPC Joint Undertaking

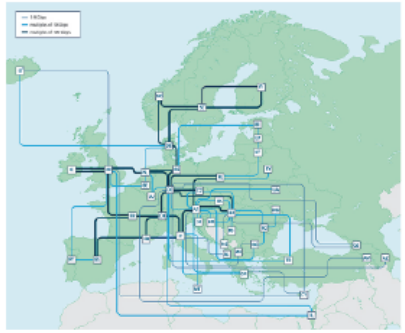
HTC

Grid clusters, etc

Private/public clouds

Commercial clouds

GÉANT



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E-OSSR Aims and Objectives

- **Aim: ⇒ open-science products shared open science software and services based on FAIR principles**
- Objectives:
  - Facilitate and support continuous **development, deployment, exposure and preservation** of partners' software/tools/services
  - Foster **interoperability, software re-use and cross-fertilisation** between ESFRIs (e.g. simulation)
  - Offer an **open innovation environment for open standards** (e.g. workflows, data-formats), **common regulations** and **shared (novel) software** for multi-messenger & multi-probe data
- All objectives follow:
  - Paradigm of **enabling open science** – with **software as "first class citizen"**
  - a **community-based, inclusive** approach
  - the **FAIR principles** for open science resources – software and derivatives
  - **Federation** of available resources

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OSSR entry categorization (draft)

- `Scientific analysis software`
  - fully installable software packages, e.g. gammypy
- `Service environments`
  - Projects for data and service providers, which offer e.g. a platform, GUI, or middleware for the computing environment (e.g. ConCordia)
- `dedicated scientific products` (analysis, data)
  - **repositories of data or workflows**: projects that provide a certain class of data objects and serve as repository for this class of data, e.g. jupyter notebooks, or certain analysis results (if not provided in datalake or VO), e.g. CME database
  - **self-contained analysis environments**: repositories which provide full workflows and data (access), e.g. to reproduce a given analysis (e.g. SKA data challenge, HCG-16 study)

Can be loaded in ESAP?

ESCAPE services to OSSR?

integration into ESAP?

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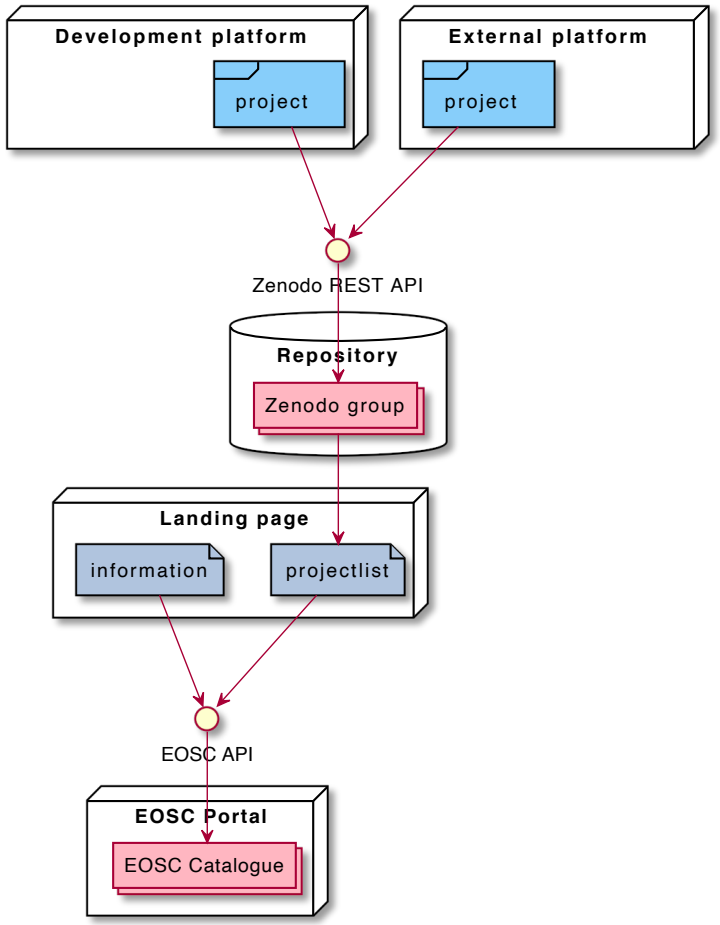
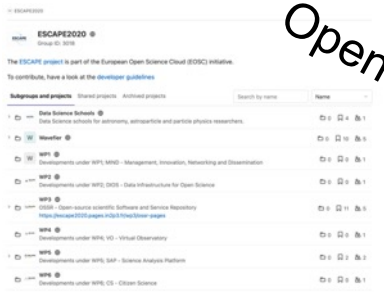
OSSR Prototype - Schematic

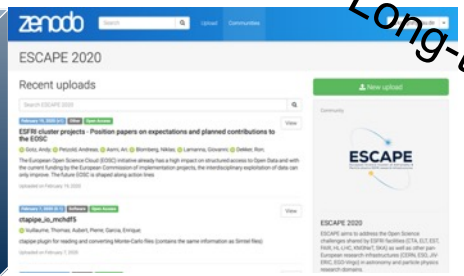


Development Platform
- Software Development
- Integration & Automisation



Open-source

Repository
- Service Aggregation
- Preservation



Long-term

Landing Page
- Entry point, Link Aggregation
- Search

Federation

See also technical presentation on E-EB extended discussion day

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ESCAPE OSSR and Development Platform – how to ease the publication and integration process?

- publishes source code
- Jupyter notebooks (my-binder integration)

jupyter binder

zenodo

- long term archived
- findable
- citable

GitLab

- develop/maintain software
- tag a version(release)
- let the CI do the rest

- builds a container image

- publishes image

- registers image

docker hub

ESCAPE

- integrates into ESCAPE EOSC cell

GitLab Container Registry

- Separation of high-level / low-level workflows → steering needs manual intervention (for now)
- How to integrate ReCAST/reana → similar workflow

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OSSR - Current Landing Page

http://purl.org/escape/ossr

ESCAPE OSSR ▾ | OSSR POLICY ▾ | TUTORIALS ▾ | TOOLS ▾ | ABOUT ▾

ESCAPE OSSR | Open-source Scientific Software and Service Repository

Search software and services in the ESCAPE repository

Welcome to the ESCAPE OSSR!

Browse the OSSR content.

What is it?

The ESCAPE Open-source Scientific Software and Service Repository (OSSR) is a sustainable open-access repository to share scientific software and services to the science community and enable open science. It will house astro-particle-physics-related scientific software and services for data processing and analysis, as well as test data sets, user-support documentation, tutorials, presentations and training activities.

How to contribute to the ESCAPE OSSR?

You can onboard your project right now - see here how.

Learn more about our projects in this website or Contact us!

Research infrastructures and Science Projects in the OSSR

Please note that this page will be constantly updated with the latest WP3 development.

zenodo | Search ESCAPE 2020 | Upload | Communities | Log in | Sign up

ESCAPE 2020

All versions

Found 15 results. Sort by: Most recent

Access Right
- Open (15)

File Type
- Zip (7)
- Pdf (4)
- Gz (3)
- Json (2)
- (1)
- Md (1)
- Simg (1)
- Tar (1)

Keywords
- ESCAPE (3)
- CTA (2)
- Python (2)
- AGN (1)
- EOSC (1)
- European Open Science Cloud, ESFRI, E-Infrastructures (1)

August 10, 2021 (v1) | Report | Open Access — View

EOSC Symposium 2021 Report

Bertacchini, Veronica; Drago, Federico; Flicker, Katharina; Gebreyesus, Netsanet; Grant, Annabel; Jones, Bob; Liinamaa, Iiris; Märkälä, Anu; Marinos-Kouris, Christos; Meerman, Bert; Saurugger, Bernd; Smith, Zachary;

The EOSC Symposium 2021 provided a key engagement opportunity for the EOSC community after the European Open Science Cloud finally entered its highly-anticipated implementation phase in 2021. Delivered online to just under 1,000 EOSC stakeholders from over 63 different countries, this was not only t

Uploaded on August 16, 2021

August 2, 2021 (0.1.1) | Software | Open Access — View

agnpy: Modelling Active Galactic Nuclei radiative processes with python.

Cosimo Nigro; Julian Sitarek; Paweł Gliwny; David Sanchez; Matthew Craig;

agnpy is a python package focusing on the computation of the radiative processes of relativistic particles accelerated in the jets of Active Galactic Nuclei (AGN). It includes classes describing the galaxy components responsibles for line and thermal emission and calculates the absorption due to gam

Uploaded on August 2, 2021

6 more version(s) exist for this record

July 12, 2021 (v1.0) | Lesson | Open Access — View

ESCAPE Data Science Summer School 2021

Thomas Vuillaume; Maximilian Nöthe; Julien Peloton; Axel Donath; Arturo Sanchez Pineda; Eduardo Rodrigues; Enrique Garcia; Karl Kosack; Tamas Gal; Benson Muite; Alberto Iess; Martino Sorbaro; Claudia Beleites; Jutta Schnabel; Rachael Ainsworth;

Release of the ESCAPE Data Science Summer School 2021. The school is held as a continuation of the Asterics/Obelics summer schools that were organised in-person in Annecy, France in 2017, 2018 and 2019. The aim of the school is to provide theoretical and hands-on training on Data Science and Python

To be added: related projects (TSPs!) / collections

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Short Demo

as Video at the ESCAPE Cloud

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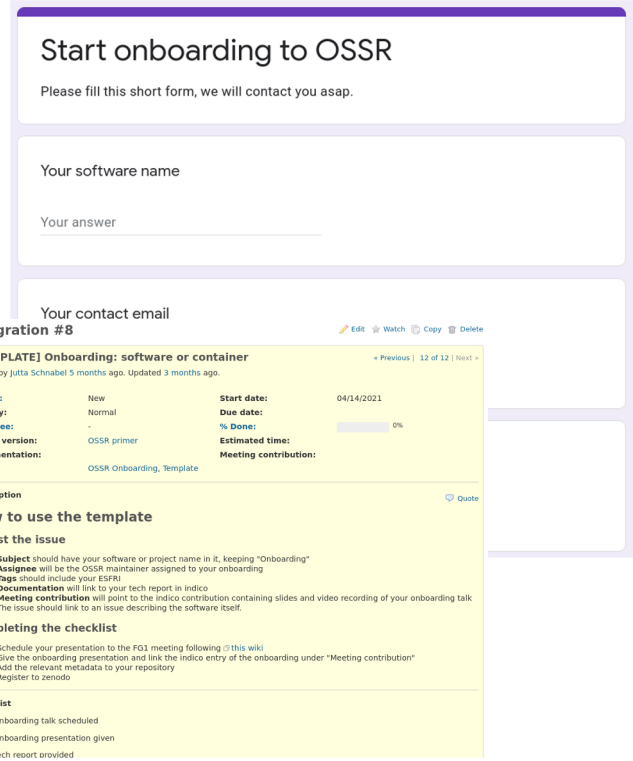
Onboarding Procedure

- Checklist for ESCAPE partners at https://escape2020.pages.in2p3.fr/wp3/ossr-pages/
  - Process tracked via issues on project platform
  - Necessary: Onboarding presentation & technical report → entry on the landing page
  - Add metadata and register to ESCAPE community at Zenodo
- To be extended to external partners (TSOs) and streamlined
  - Add EOSC terms of use



Onboarding Procedure Checklist

- Sign User Agreement
  (We don't have a formal User Agreement yet. We currently assume "conduct implying an intent" / "implied contract".)
- Request an issue in the project platform to start the onboarding process by filling this registration form, or contacting a repository maintainer.
- A short onboarding presentation should be held during an FG1 call using this template, an example can be found in this talk. Please book your date in this poll.
- A technical report should be filed using this template, an example can be found at this tech report.

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Backup Slides

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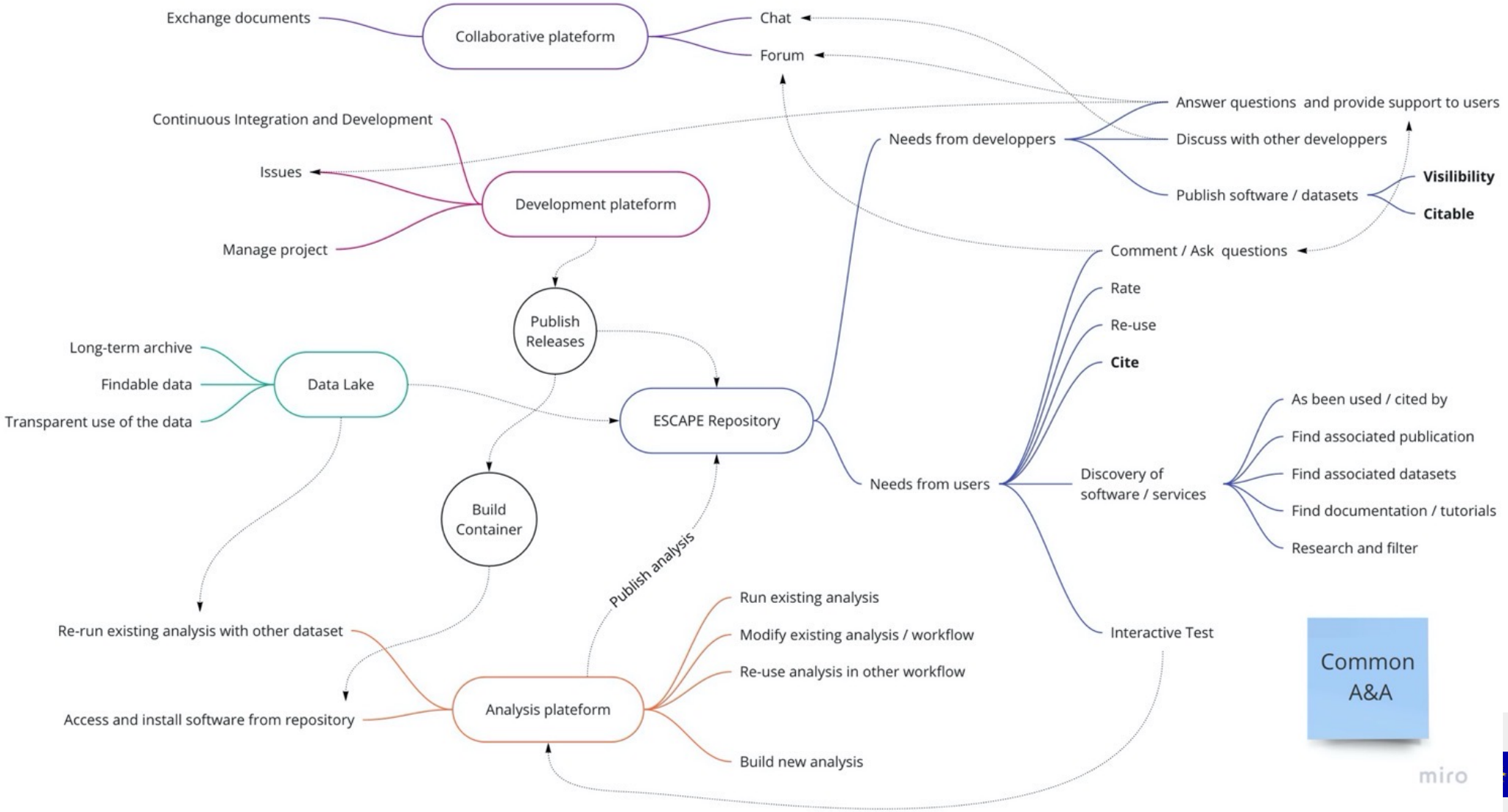
Aim: ESCAPE Virtual Research Environment