

DIRAC @OSSR and @ESAP

Matthias Fuessling, Gareth Hughes (CTAO)

Based on material and work collected from other people's work

DIRAC Focus Group and Progress Meeting

- Discussions within WP5 about role of DIRAC
- Discussion between WP3 and WP5 interest groups
- Dedicated session as part of the WP5 Progress Meeting
 - A lot of complementary material and ideas
 - <https://indico.in2p3.fr/event/22482/sessions/14082/#20201027>

Tue 27/10	
Print PDF Full screen Detailed view Filter	
10:00	Overview of WP5 DIRAC task <i>Gareth Hughes et al.</i> 🔗 10:00 - 10:15
	Overview of WP3 DIRAC efforts <i>Dr Andrei Tsaregorodtsev et al.</i> 🔗 10:15 - 10:30
	KM3NeT DIRAC use cases <i>Cristiano Bozza et al.</i> 🔗 10:30 - 10:40
	CTA DIRAC use case <i>Dr Johan Bregeon et al.</i> 🔗 10:40 - 10:50
	Discussion <i>Matthias Fuessling</i> 10:50 - 11:00
11:00	

Topics from the meeting 1/2

- Proper follow-up still pending
- Topics (WP5, in overlap with WP3):
 - 1) DIRAC as an application
 - CONCORDIA: Corsika Containers on DIRAC
 - Organized within FG5 in WP3
 - Q: how to integrate the access to the application in the ESAP?
 - Parallel UI, tile in the applications, Jupyter notebook, drop-down menu for containers, ...
 - 2) DIRAC as a service (1/2): storage management
 - Data storage function similar to WP2 data lake based on Rucio
 - To show that ESAP is flexible towards technology, but certainly not to repeat the WP2 work

Topics from the meeting 2/2

- Topics (WP5, in overlap with WP2 and WP3):
 - 3) DIRAC as a service (2/2): workload management system and federated computing resources
 - Workload management system needed
 - Federation of computing resources needed
 - Q: what is the approach?
 - DIRAC is a candidate, but not the only one
 - 4) Use Cases to support the TSPs for complex workflows
 - Develop use cases for the ESAP
 - from simulated data to processed science-ready data available for processing
 - Some ESFRIs are implementing these use cases using DIRAC within their own SW
 - Q: can these be generalized and made available as part of ESAP?
 - Make sure that all software and (sample) data is collected in WP3 that would allow to run the use cases in WP5
 - 5) In each case 1-4, DIRAC may need some infrastructure to function
 - Currently using (public) EGI infrastructure, make sure that the infrastructure (not only HW, but also DIRAC itself and related certificates etc) is sustainable

Use Cases | ESAP & WMS

- Collection location:

- CTA: <https://git.astron.nl/astron-sdc/esap-gui/-/wikis/Use-Case-for-CTA-DIRAC>
- KM3NeT: <https://git.astron.nl/astron-sdc/esap-gui/-/wikis/KM3NeT-use-cases-for-the-ESAP-platform>

- CTA example: IRF generation:

- Provided by G. Maier, G. Hughes
- Initialize MC production
 - Parameters defining the observation period
 - User defined parameters
- Prepare production configuration
 - Check the simulation does not already exist
 - Consistency checks
 - Assign ID to the simulation
- Forward request for a new production to the WMS
 - What resources are required
 - Provided reporting on workflow status
- Output MC production
 - update relevant production data bases and documentation



- KM3NeT example:

- Provided by J. Schnabel, C. Bozza
- Picking an existing container template
- (optional) Modifying it and generating a new container
- Choosing a DIRAC installation to provide data production
- Choosing a (temporary) output storage (DIRAC/RUCIO?)
- Running the simulation - monitoring by GUI
- Retrieving the data from DIRAC storage or RUCIO
- Feeding output to:
 - external storage for analysis or further processing
 - DIRAC/RUCIO storage
 - immediate transfer to input stage of other user application.

