ExPaNDS
European Open Science Cloud Photon and Neutron Data Services

PaNOSC
photon and neutron open science cloud

Technical Talk

9th of October 2020

The ExPaNDS project has received funding from the *European Union's Horizon 2020 research and innovation programme* under grant agreement No 857641.
The PaNOSC project has received funding from the *European Union's Horizon 2020 research and innovation programme* under grant agreement No 823852.

Overview

- European Spallation Source and Data Systems and Technologies Team at DMSC
- The Portal Architecture test experience
- COVID and the impact on the team’s roadmap

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Facility

European Spallation Source ERIC
Lund, Sweden / Copenhagen, Denmark
No beamlines in production as of yet – expected to have multiple beamlines running by end of 2023

EUROPEAN SPALLATION SOURCE

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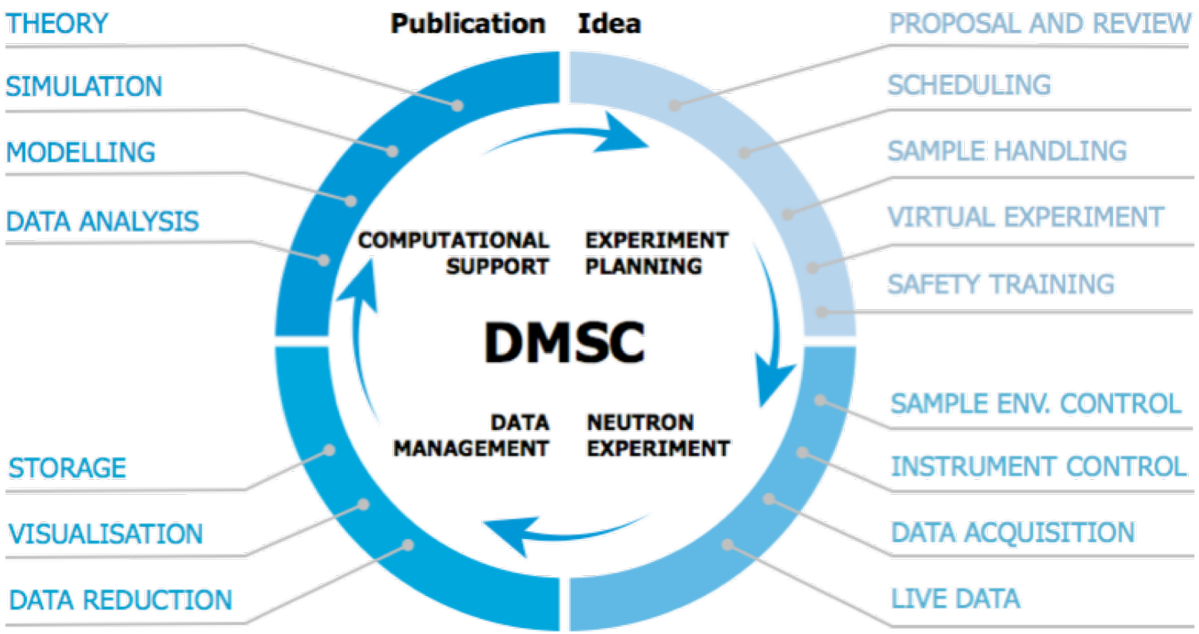
Data Management and Software Centre



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ESS Data flow (DMSC)

Site server room

Beamlines

Detector readout and EPICS Bridge

Data Acquisition

Online Data reduction and analysis

Online storage - raw

Online storage - derived

Service Failover

External Archive

Raw data (read-only)

Derived data (read/write)

Copenhagen server room

Data Portal

Offline environment

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Team – Data Systems and Technologies

Lottie Greenwood
HPC Sys Admin
Working on HPC Cluster, VM Env and Kubernetes
Will contribute to WP4 Data Analysis Services

Kareem Galal
HPC Sys Admin
Working on HPC Cluster, VM Env and Kubernetes
Will contribute to WP6 Identity Management

Alex Stefanov
HPC Sys Admin
Working on HPC Cluster, VM Env and Kubernetes
Will contribute to WP8

Employees from other groups at DMSC also contribute to WP3 and 8

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The Portal Architecture test experience

- What went well?
  - Helm installation on kubernetes cluster
  - Local demo provided a good showcase
- What could go better?
  - Demo example that requires no external systems (ie dummy auth or similar)
  - Documentation on further configuring the system
- What is the gap between what's in your facility and what the Portal needs?
  - No production OIDC identity provider available yet in our facility
  - No openstack installation as of yet
  - Would want to utilize our HPC cluster w/ panosc portal (ie. Slurm integration)

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Facility needs for the Portal

- Name the features you would prioritize/what does the portal needs in order to run in your facility?
  - Slurm module
  - Singularity
  - GUI / remote desktop for eg. Mantid
  - Handling access to large applications

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COVID-19 and the impact on your team

- Since ~July DMSC employees go into the office on a rota
  - DST group on Mon/Fri
  - Other groups on alternate days, possibly hindering collaboration
- Otherwise we already had a culture of remote working
  - Virtual scrum meetings everyday
  - Matrix/Riot chat for our group/wider DMSC
  - Slack available for ESS employees/collaborators
- Some minor impact on server room maintenance, but none on PaNOSC related work thus far

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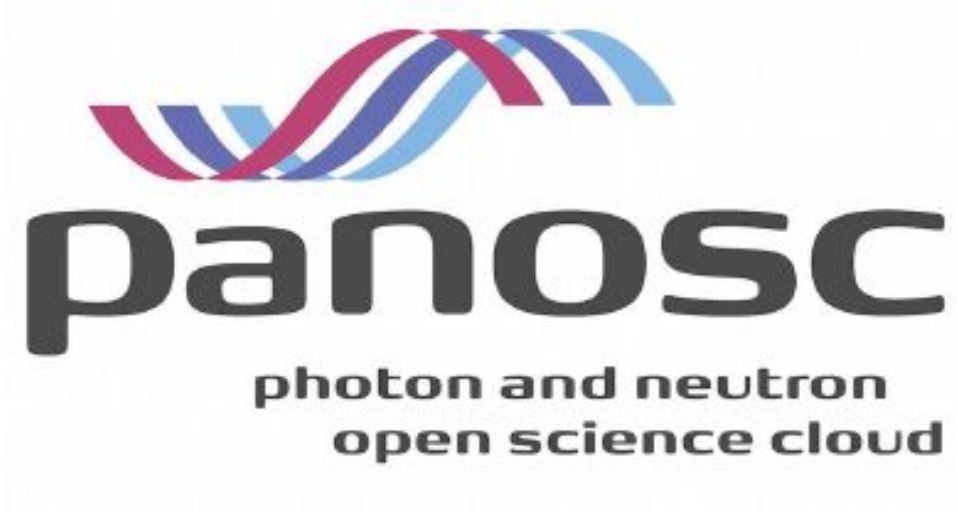

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