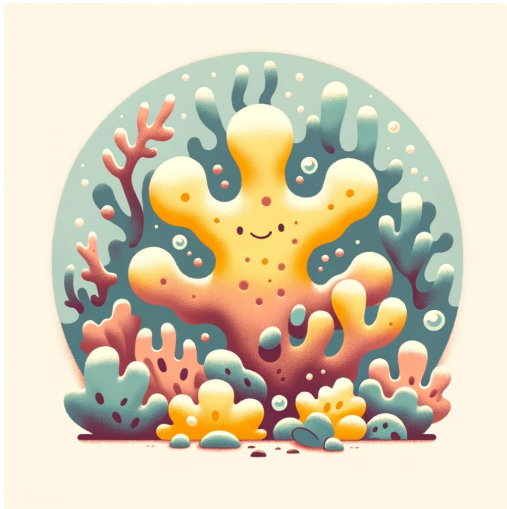


SKACH winter meeting

CHSRC update
Pablo Llopis, Carolina Lindqvist

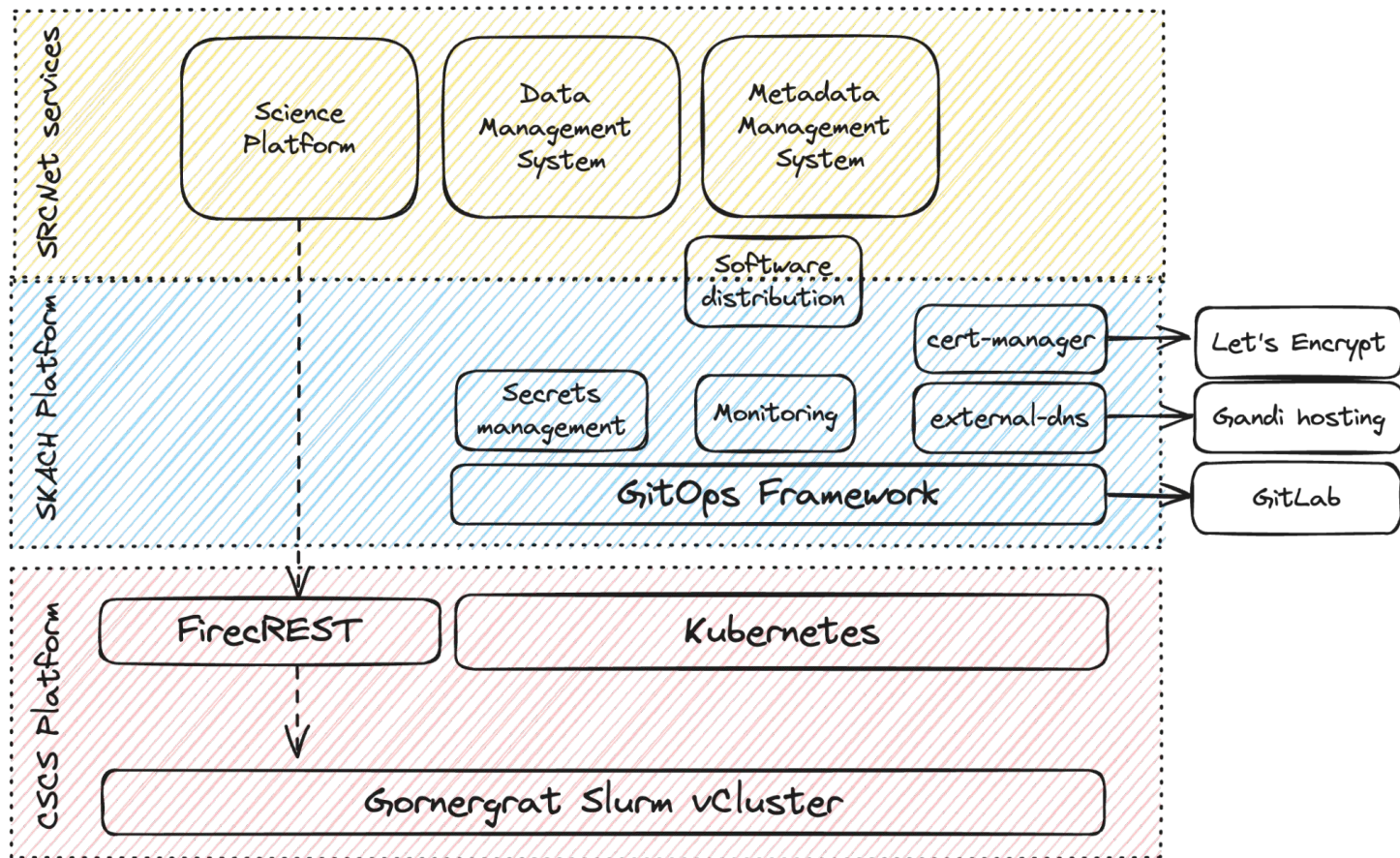
Working methodology in SRCNet

- Following the Scaled Agile Framework
- Teams split by topics and themes
- Named after colors (Cyan, Tangerine, Olive...)
- CHSRC is part of the Coral team



Blue-Lavender	SRCNet
Coral	SRCNet
Gold	CNSRC
Magenta team	Data Management
Olive	HPC, Cloud
Orange	Visualization
Purple	IAM, auth
Red	Science Platform
SRCNet Program Team	Management
Tangerine	Science Platform
Teal	UKSRC

SRCNet Architectural view: CHSRC



Identity and Access Management (IAM)

- Login to services using your institutional account (eduGAIN)
- All scientific services integrated with the IAM
- Groups and roles determining access
- Prototype instance:

<https://ska-iam.stfc.ac.uk/login>



Welcome to **SKA IAM Prototype**

Sign in with your SKA IAM Prototype
credentials

Username

Password

Sign in

[Forgot your password?](#)

Or sign in with

Your Organisation via eduGain 

Not a member?

Apply for an account

[Privacy Policy](#)

Software distribution

- Software packaged as containers
- Containers distributed by [Harbor container registry](#)
- [CVMFS](#) (Cern VM filesystem) mounts being explored as alternative via the [EESSI](#) project.



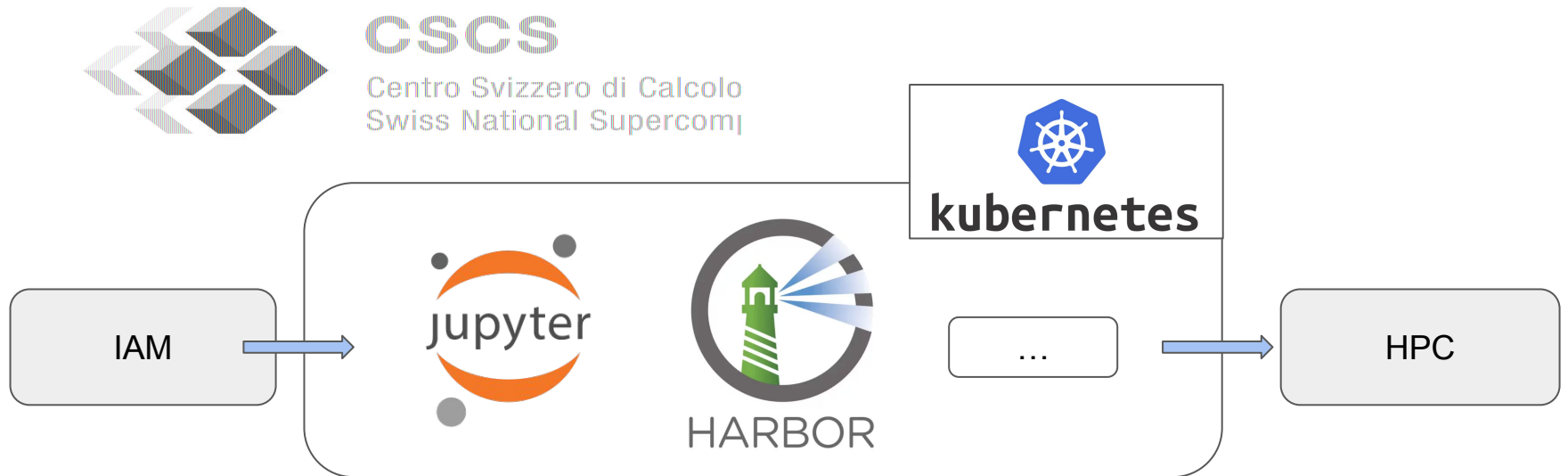
CernVM-FS
CernVM File System



HARBOR

Infrastructure deployment

- CSCS provides a Kubernetes platform
- We deploy the software and integrate the platform with HPC services



Data Management Solutions

Inter-continental data lake: large scale replicated data

Two data management solutions: **Rucio** and **Storage Inventory**.

Rucio (WLCG).

Storage Inventory (OpenCADC).



Data Management Solutions

Metadata APIs allow querying and data discovery.

Comes with IVOA standard implementations: SSAP, ObsCore, TAP.

Metadata APIs was demoed in the Swiss SKA days 2023.

Science Platform: skaha

← → ↻ skaha.src.skach.org/science-portal/






SRC | Net

pllopis

Science Portal

Active Sessions



 carta1 Running skaha/carta:4.0 started: 2023-10-24 15:26 UTC expires: 2023-10-28 15:26 UTC memory: <none> / 1G CPU cores: <none> / 1	 desktop1 Running skaha/desktop:1.1.1 started: 2023-10-24 15:23 UTC expires: 2023-10-28 15:23 UTC memory: 95M / 250M CPU cores: 0.001 / 0.1	 notebook1 Running arks/mcmc-notebook:v1.1 started: 2023-10-24 15:18 UTC expires: 2023-10-28 15:18 UTC memory: 90M / 2G CPU cores: 0.0 / 2
---	---	--

New Session

[Help](#)

type	notebook
container image	arks/mcmc-notebook:v1.1
name	notebook2
memory	16
# cores	2

Launch Reset

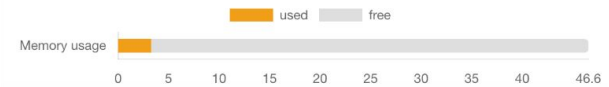
Platform Load



Available CPUs: 20.9 / 24



Available RAM: 43.31G / 46.55G



Running Instances: 3

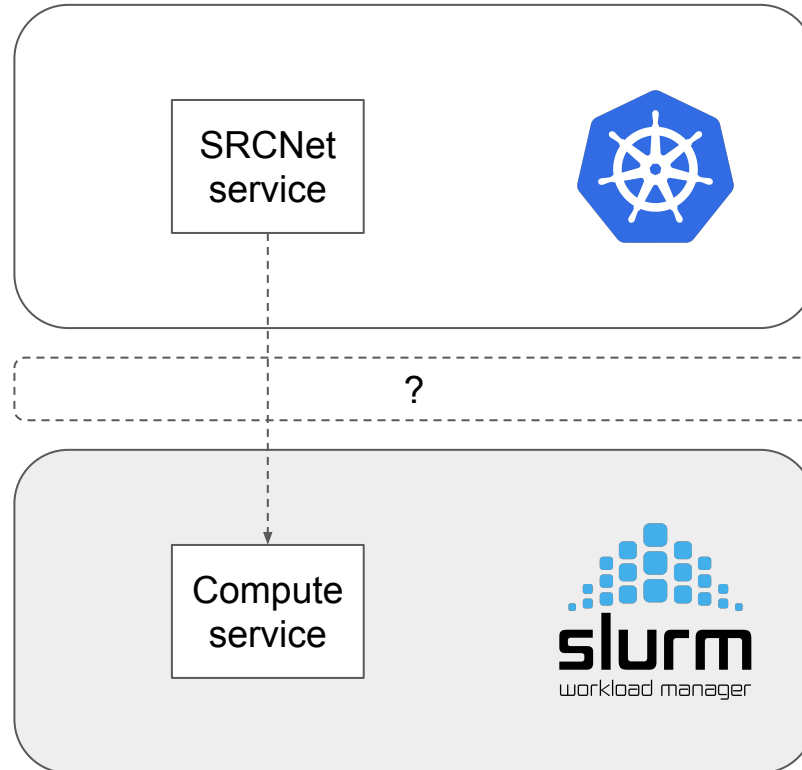
Integration of SRCNet in HPC environments

Challenge: HPC centers are generally conservative about what they allow to run on their infrastructure (and rightly so).

SRCNet integration requires running a number of infrastructure services, and connections to HPC subsystems (compute, storage, network).

We need to make sure we communicate SRCNet requirements adequately, and work with HPC centers to understand their limitations, in order to achieve SRCNet integration.

Integration of SRCNet in HPC environments



SRCNet benchmark suite à la HEPSScore

Teams are contributing **representative workloads** to the [src-workloads](#) repo.

Created a [prototype benchmark](#) that uses these workloads to output a **performance score**.

SRC neTwork representAive peRformance Score (STARScore, or STARS for short)

- Currency for compute (STARS-hours).
- Metric for comparing cost efficiency of systems (STARS/CHF).
- Metric for measuring power efficiency (STARS/Watt).