Swedish SKA Regional Center & SRCNet v0.1 Expression of Interest
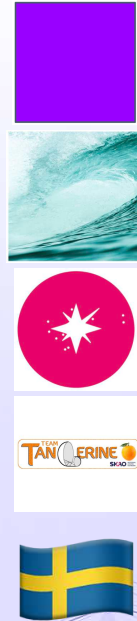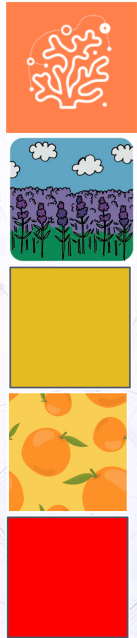
Kelley Hess, Senior Researcher | Onsala Space Observatory | 22 March 2024

swe | SRC

SRCNet ART PI-23 Planning - June 3-6

Chalmers Lindholmen Conference Center, Gothenburg, Sweden

Swedish SKA Regional Center

- Chalmers University of Technology is the administrative body for Sweden's representation in the SKA.

- Onsala Space Observatory is the national radio astronomy infrastructure for Sweden (VLBI; LOFAR; 25 m; 20m; Onsala Twin Telescopes; Geodetic VLBI; Nordic ARC)

- SRCNet & SKA operations funded as part of grant to OSO from Swedish Research Council

- Chalmers e-Commons HPC center partnership provides compute, storage, expertise

- SRCNet ART development/prototyping efforts in Coral Team

Expression of Interest

- v0.1 & v0.2 contribution in line with the Roadmap; Sweden has a 1.5% share.

- 10.5 TFLOPS / 42 TFLOPS v0.2 - plans to purchase additional computing in 2024.

- Online bulk storage: 300 TB / 1.2 PB for v0.2 - plans to purchase additional storage in 2025.

- Scratch/cache/computing storage: 30 TB.

- Focus is on online+scratch storage: not yet purchasing tape.

- IPv6 internet connectivity; fully connected through 100 Gbps and possibility to connect through dedicated links.

Expression of Interest

- 0.1 FTE & <3 working days response (0.2 FTE if part of a collaborative node)

- Currently running CANFAR science platform & user storage authenticated through SKA-(Indigo) IAM prototype
  - CARTA, JupyterHub, Desktop
  - Running Rucio end point
  - Running Open CADC Storage Inventory
  - Kubernetes cluster is up and running; building OpenStack cloud environment
  - Connected to HPC (e-Commons)

- Ability to run validation tests

Strengths, limitations

- Funding/resources secure for v0.1, v0.2

- Partnership with Chalmers e-Commons to run SWE-SRC
  - HPC center; part of national HPC infrastructure (system experts; application experts)
  - Gateway for researchers to local/national/international digital expertise; assistance managing data over its life-cycle

- Close working relationship with Nordic ALMA Regional Center (ARC)
  - Experience building/running a Regional Center, providing user support functions, etc
  - Participated WG2 Operations & WG6 Science User Engagement

- Small team; proportionally higher overhead

- Interested in collaboration; experience with Mini-SRCNet Demonstrator (Susana's talk)

Ideas, feedback, questions

- Now is s good time to start face-to-face workshops

- How one refers to the nodes--with an emphasis on being inclusive
- Roadmap & EoI: 1.5% vs 2% is a sizeable difference for a small node

- What does a collaborative v0.1 node look like?