

NAISS All-Hands 2024-10-02

Swedish Science Cloud (SSC)

## SSC – 4 short things about me

- Erik.Andersson@{umu.se,naiss.se}
  - Coordinator for SSC since mid 2023
  - Works at HPC2N, Umeå university since 2018
  - Worked at central IT (ITS), Umeå university since 1998
  - Loves ice cream, since forever



*Image from JÉSHOOTS*

SSC – How do we describe SSC to our users?

- OpenStack Infrastructure as-a Service
- Community cloud for Swedish academia research
- Located at several data centers within NAISS
- Free of charge through open application procedures
- Complement to classic HPC, offering advanced functionality to users requiring more flexible resources than computational core hours based on jobs

## SSC – What is the typical SSC project workflow

- PI applies with proposal in SUPR, project is approved
- Project is automatically created in all regions
- PI can access any SSC region portal using SUPR account
- Using OpenStack portal/APIs the PI manages resources like servers, network, ips within their project.
- Services created are autonomous
- Higher responsibility for PI for maintaining services

## SSC – Short history page 1

- Started around 2015 as a collaborate Centre-project
- OpenStack as platform
- 3 separate regions (C3SE, HPC2N and UPPMAX) for redundancy and enabling alternating upgrades.
- SUPR as framework for projects, users, auth etc.

## SSC – Short history page 2

- Shared support for all three regions
- Projects can utilize any or all regions
- Only small projects was allowed
- Best effort as SLA, No backup of user services
- Project is responsible for copying important data remotely

SSC – What is a typical project?

- Resources active over time (days, weeks, month)
- Automatization of resources and services
- Often small footprint regarding resources
- Public facing services and resources

## SSC - Regions

- Current regions
  - North (HPC2N)
  - East (UPPMAX)
  - West (C3SE)
- Soon joining the SSC family
  - PDC Cloud



## SSC – Activites 2024 page 1

- Arrhenius (Erik@HPC2N, Benjamin@UPPMAX, Ilari@PDC)
- West – Major re-installation, HW (Dejan & Franz@C3SE)
- East – Upgrades & Replacing old Ceph storage (Benjamin)
- North – Upgrades of OpenStack and Ceph (Erik, late 2024)
- PDC Cloud – Will be welcome as the latest region (Ilari)

- Update policies for expired projects and over-usage
- Review and updating SSC infrastructure scripts
- NAC-WG discussions around Small, Medium [, Large]
- A/E support (Pavlin @UPPMAX)

SSC – Activities 2024 page 3

- Review and update our homepage and documentation
- Improve monitoring of SSC infrastructure

## SSC – Popular requests and wants from users

- Persistence and uptime
- Medium projects to allow for more resources
- We plan to use SSC as seminarplatform for classes
  
- Some popular request (which is sent elsewhere)
  - Can I use SSC instead of YouTube to stream videos?
  - Sensitive data (we have a really good NAISS resource called just that)

## SSC – Workshop: How to improve and what is on the wish list?

- What can be improved around SSC in general?
- How to improve the user experience?
- How to improve the infrastructure?
  - Cores?
  - Storage?
  - Kubernetes?
  - More resources for projects?
- Other ideas?

Questions?

- Questions?
  - Workshop around future SSC improvements after the break