VISA@ESRF

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Setting the scene

- Work done under the umbrella of PaNOSC (WP4 and WP6)

- Initial setup ready in Jan 2022:
  - Openstack (latest production release, HA – 2 DataCenters, KOLLA-ANSIBLE)
  - Currently 2 VISA (OS) compute nodes (2TB, 64 Cores, 2 pGPUs NIVIDIA A40)/Node
  - Access to 6 HPC nodes with 4 additional A40
  - Keycloak as SSO
  - NFSv4 on dedicated storage network (25Gb/s)
  - Ubuntu 20.04 (migration to 22.04 this fall)
  - VISA app in containers as delivered by ILL

- Since then, adaptation to BL/Instruments/users needs
        for preparing the general rollout.

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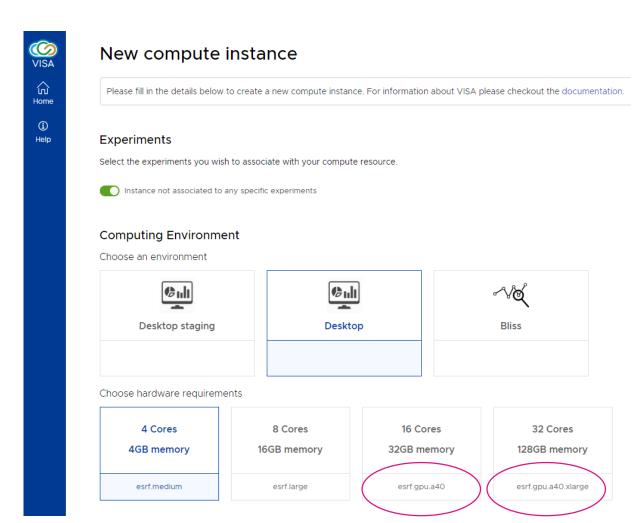open science cloud

GPUs

- Clear user needs

- Currently exploratory work
  - Is this the right model?
  - SLURM nodes vs VMs?

- 1 GPU = 1 VM (no partitioning)

- Manage through CYBORG (OS component)


```
$ openstack flavor set --property 'accel:device_profile=gpu_a40' esrf.gpu.a40.xlarge
```

HPC - SLURM

- Required by some processing workflows and Software

- Setup of a SLURM cluster dedicated to VISA (Separation from the BL processing)

- VISA VM in configless mode (i.e. configuration sent by the SLURM controller)

- 6 Compute nodes at the moment

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NEXT

- Open to all BLs'users at the end of Sept

- Foster the use of Singularity amongst the developer community

- 100+ Software to move to Singularity

- Provide clear documentation on https://visa.readthedocs.io/en/latest/index.html

- Windows Software solution?

- Refine the way we distribute BL scripts.

- Open to non ESRF BL users, i.e. Open VISA to people interested by the Open Datasets ?

- Listen to our user community needs.

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