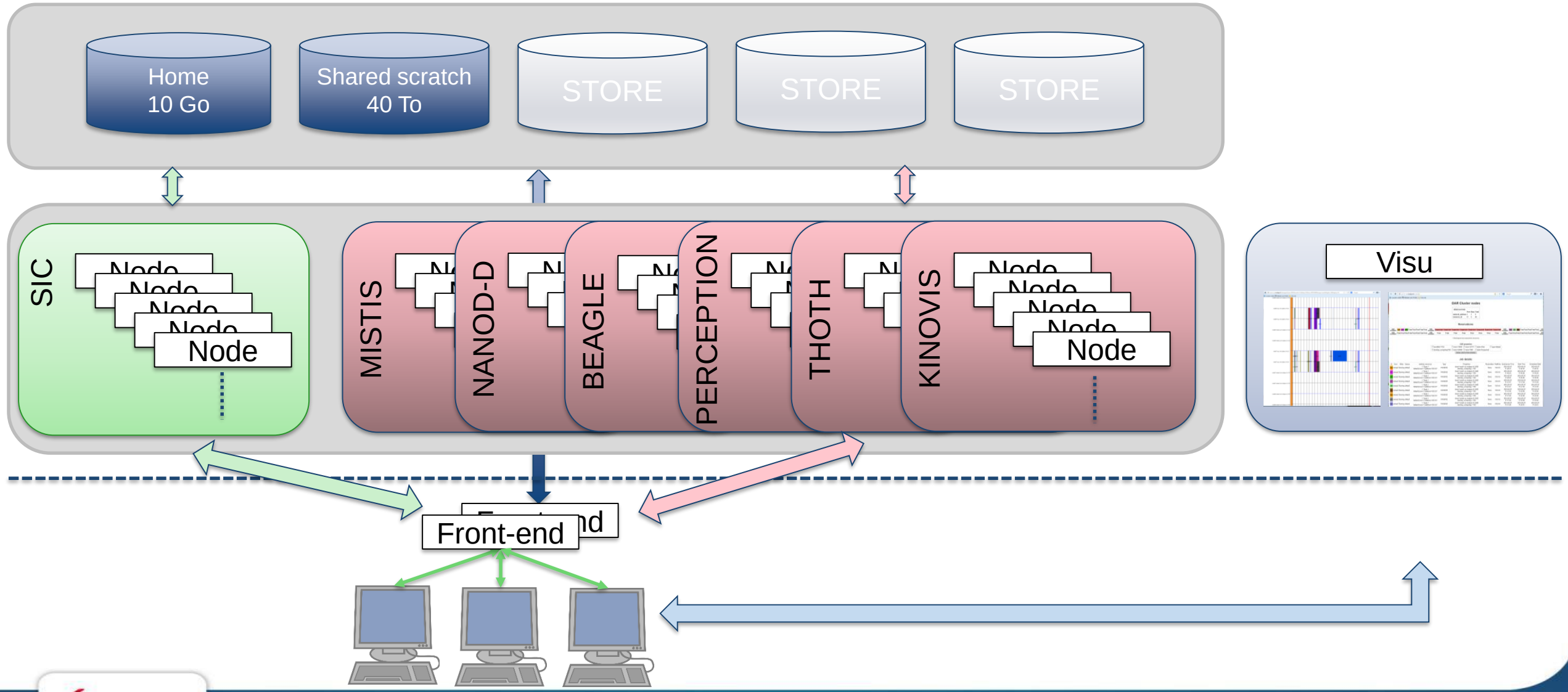
HPC clusters INRIA-Grenoble

Reminders for technical seminar “Introduction to containerization with Singularity”

Available resources



Typical session

- Access to one of the frontends

  ➔ ssh access1-cp (Fedora) or access2-cp (Ubuntu), eventually via bastion

- Have a look of free resources before booking
  - http://visu-cp.inrialpes.fr/monika and/or http://visu-cp.inrialpes.fr/drawgantt
  - oarstat command from access[1|2]-cp
- Request resources with OAR command lines
  - oarsub –I -l nodes=4,walltime=01:15:00 –p "cluster=nanod|mistis|SIC|beagle|…'"
- Carry out your experimentation
  - ./launcher.sh

Collect your results from the scratch

- /services/scratch/<my_EPI>

Booking GPUs

- Nodes with GPU are named gpu-*
  - Only on Kinovis, Perception and Mistis clusters
  - Nvidia Titan X or Titan Xp
  - Coming up Nvidia RTX2080 Ti

- oarsub -I -l "{gpu='YES'}/host=1/gpudevice=1" -p "cluster=‘kinovis|perception|mistis’”
- nvidia-smi or nvidia-smi -L to verify you have the requested GPU

How to access to the scratch from your workstation?

- Easy way: scp from your WS to one of the frontends

```
scp <localfile> <user>@access[1|2]-cp:/services/scratch/<your_EPI>
```

OR

- Other way: install beegfs packages on your WS

evice:GPU:0 with 11376

  - available from Inria's repositories
  - beegfs-helperd and beegfs-client (elfutils-libelf-devel is required)
  - Setup

```
/etc/beegfs/beegfs-client.conf: sysMgmtdHost = bmanage-cp
/etc/beegfs/beegfs-mmounts.conf: <mount_point> /etc/beegfs/beegfs-client.conf /
```

  - Start

```
systemctl restart beegfs-helperd & beegfs-client
```

Documentation

- “First steps” OAR: http://oar.imag.fr/archive/user-quickstart/
- OAR: http://oar.imag.fr/documentation/
- IGRIDA tutorial: http://igrida.gforge.inria.fr/tutorial.html
- Séminaire d'introduction au calcul distribué à Inria Grenoble-Rhone-Alpes https://sed.inrialpes.fr/local/Presentations/150407-Clusters/index-en.html
- SSH: https://wiki.inria.fr/support/GRA:SSH

To conclude…

- Contacts
  - ➔ https://helpdesk.inria.fr
  - Vincent.Blanc@inria.fr
  - Jean-Francois.Scariot@inria.fr
- Next steps
  - migration from Docker to Singularity ➔ Docker engine will be remove before 2019
  - Nvidia driver & Cuda upgrade on GPU hosts
  - Fedora (28) upgrade on SIC, Beagle and Nanod clusters
  - Mistis cluster will move (probably) from Fedora to Ubuntu
  - Setup quota on the max simultaneous submissions
  - Setup default submission gpu=NO