

The compute cluster *lisa*

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PRACE

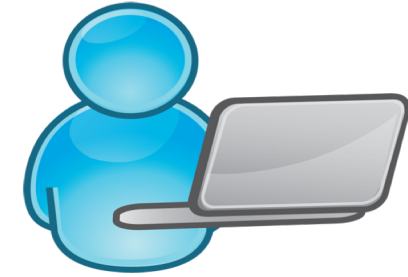
SURFsara, Amsterdam, 6th Sept. 2018

Training setup



Lisa login node

login



Python API

1. Connect to iRODS
2. Up and down load data
3. Annotate data
4. Search for data in iRODS

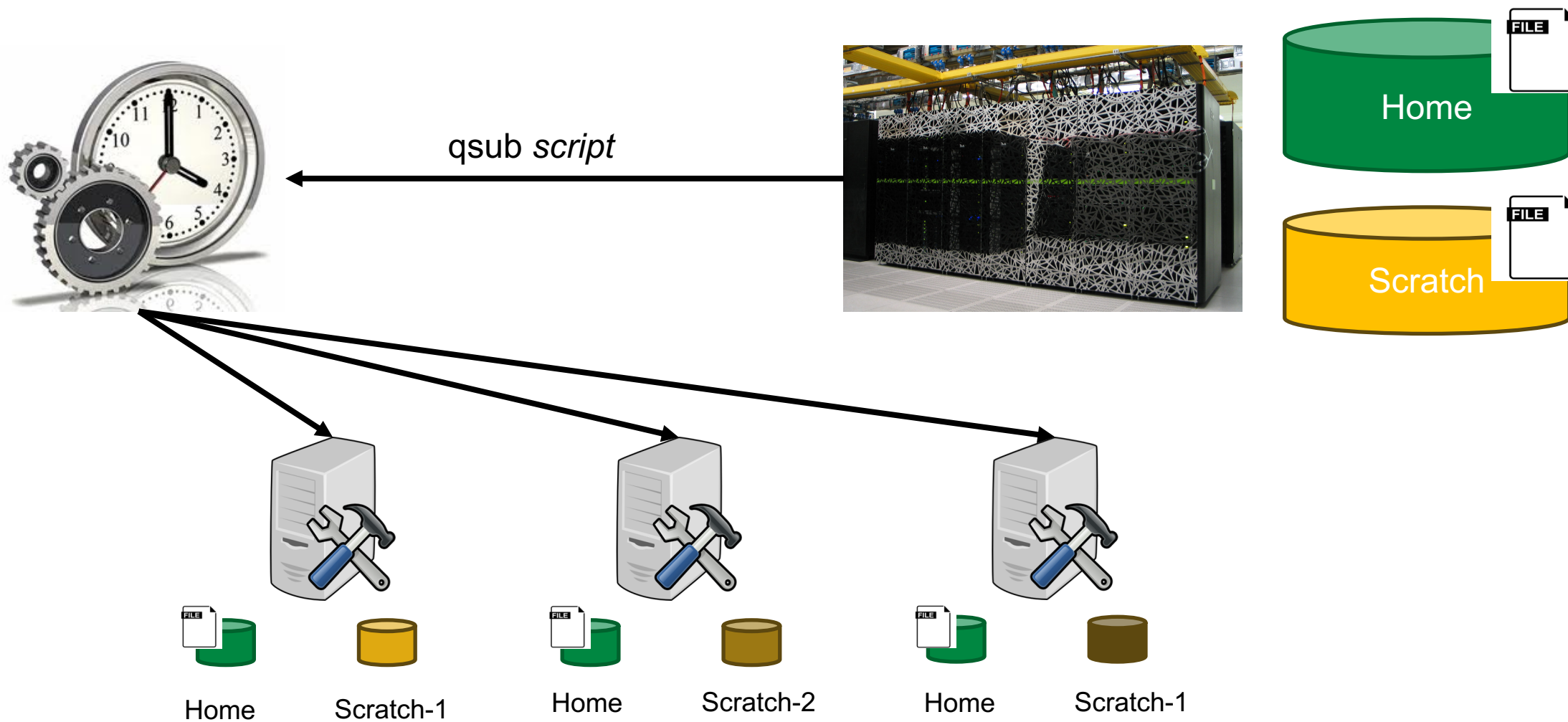
iRODS

Supercomputers

- **What is a Supercomputer?**
 - A fast computer
 - A large computer (memory/storage)
 - An expensive computer (millions of € for hardware, electricity and man power)
- **Why/when do you need a Supercomputer?**
 - If your task would take months/years on a normal PC
 - If your task requires more space (memory/storage) than available in PC
- **What is the difference?**
 - Cartesius – larger “blocks” (capability computing – fewer large scale jobs)
 - Lisa – smaller “blocks” (capacity computing – more small(er) scale jobs)
 - Cartesius – expensive expensive
 - Lisa – cheaper, but still expensive

Lisa

Lisa login node



Workflow 1 - Wordcount

Jobscript

Select cluster nodes

{

```
#PBS -S /bin/bash
#PBS -lwalltime=00:04:00 -lnodes=1
```

Set environment on
compute node

{

```
module load python/2.7.9
cd /home/sdemo110/RDM-Compute-
training/iRODS-Compute-Tutorial-
Words
```

Start workflow

←

```
python wordsWorkflow.py
```

1. Set parameters to connect to iRODS
2. Search for data in iRODS
3. Start computation
4. Write result data to iRODS

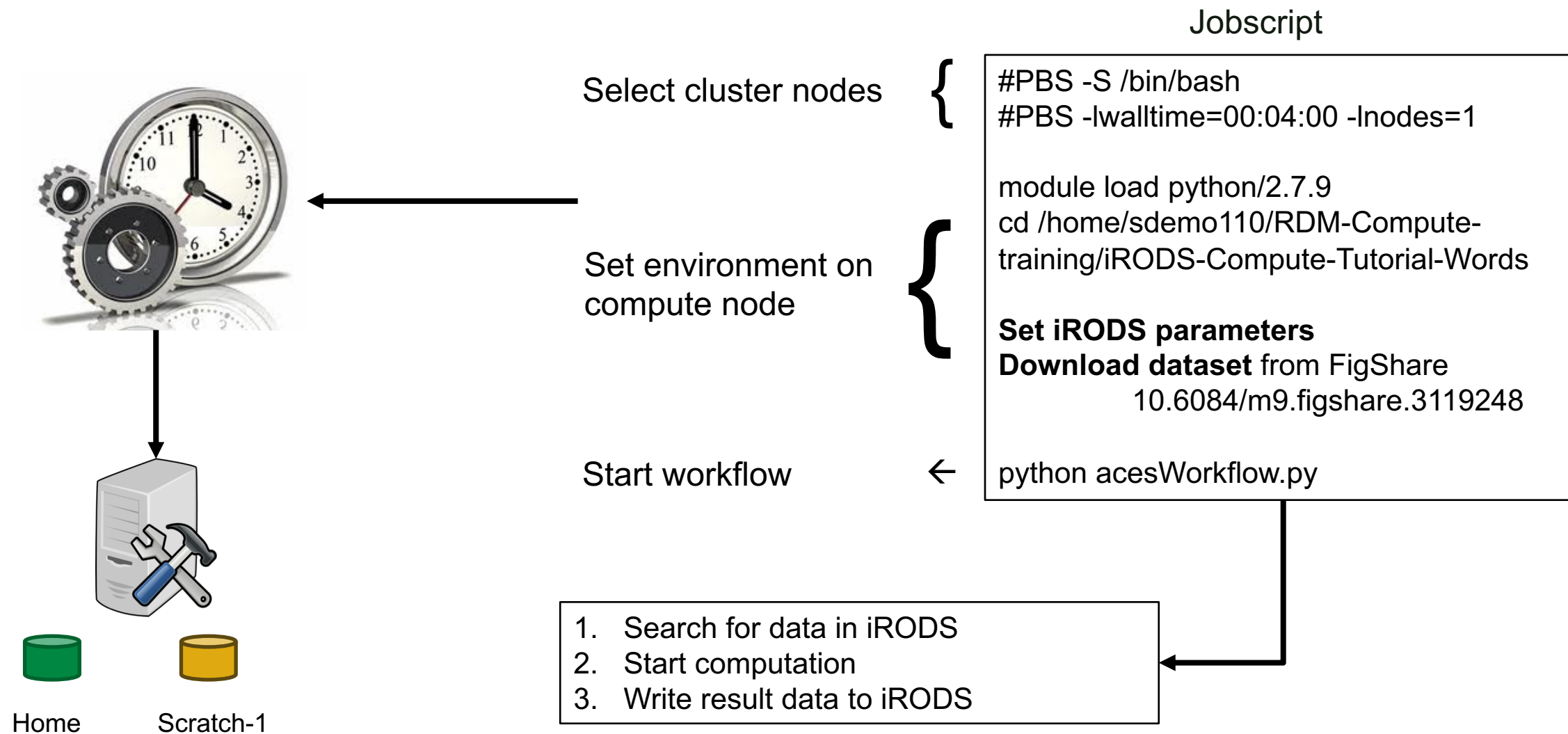


Home



Scratch-1

Workflow 2 - ACES



Material:

git clone <https://github.com/sara-nl/RDM-Compute-training>



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