

# The compute cluster *lisa*

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SURFsara, Amsterdam, 25<sup>th</sup> June 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

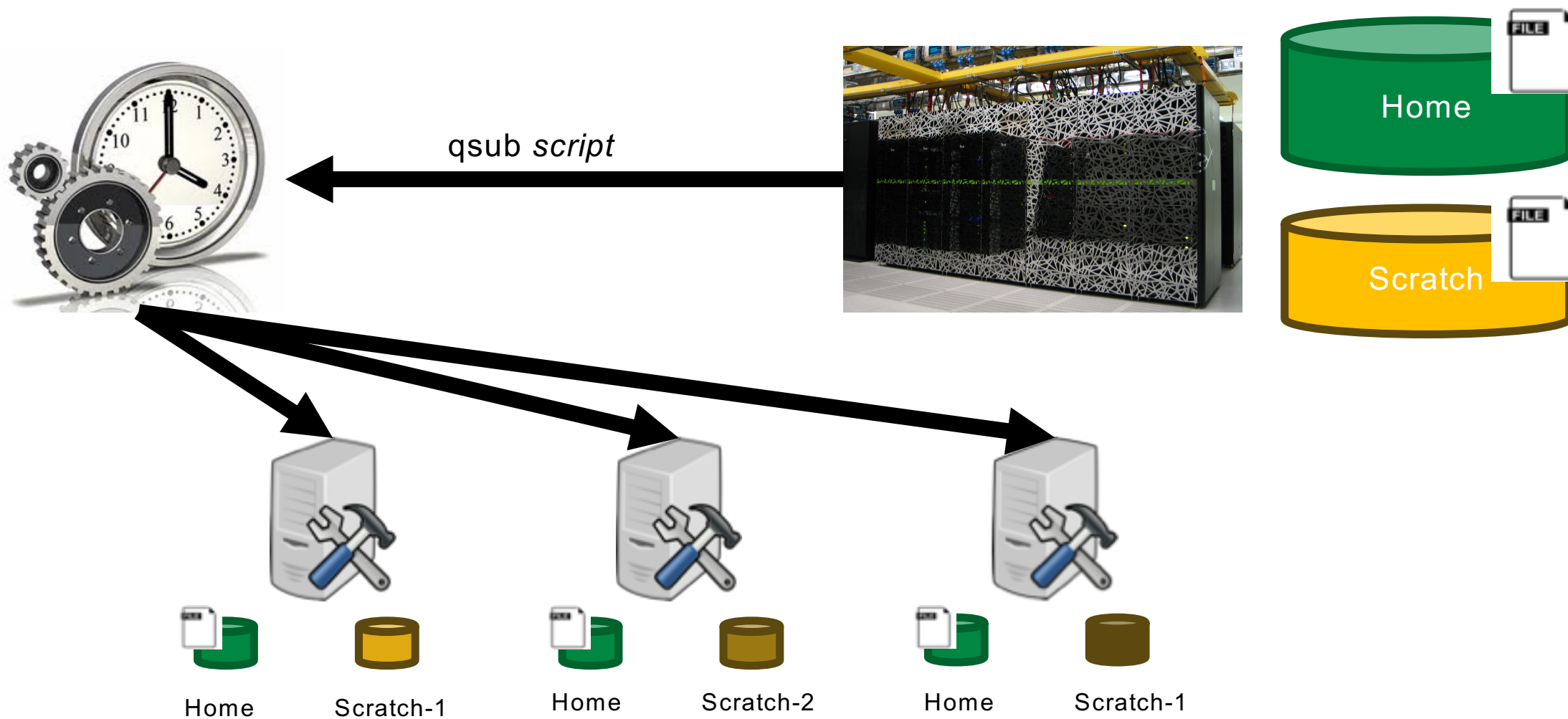
iRODS

# Training setup

- **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

Jobscrip

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

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
```

**Set iRODS parameters**

**Download dataset** from FigShare  
10.6084/m9.figshare.3119248

Start workflow

←

```
python acesWorkflow.py
```

1. Search for data in iRODS
2. Start computation
3. Write result data to iRODS



Home



Scratch-1

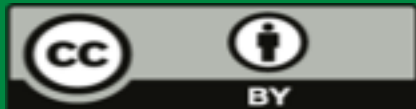
# Thank you! Questions?

**Slides based on PRACE iRODS training:**

Zheng Meyer-Zhao, Arthur Newton, Christine Staiger

Data Management with iRODS, Sept 2017

<https://events.prace-ri.eu/event/638/>



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