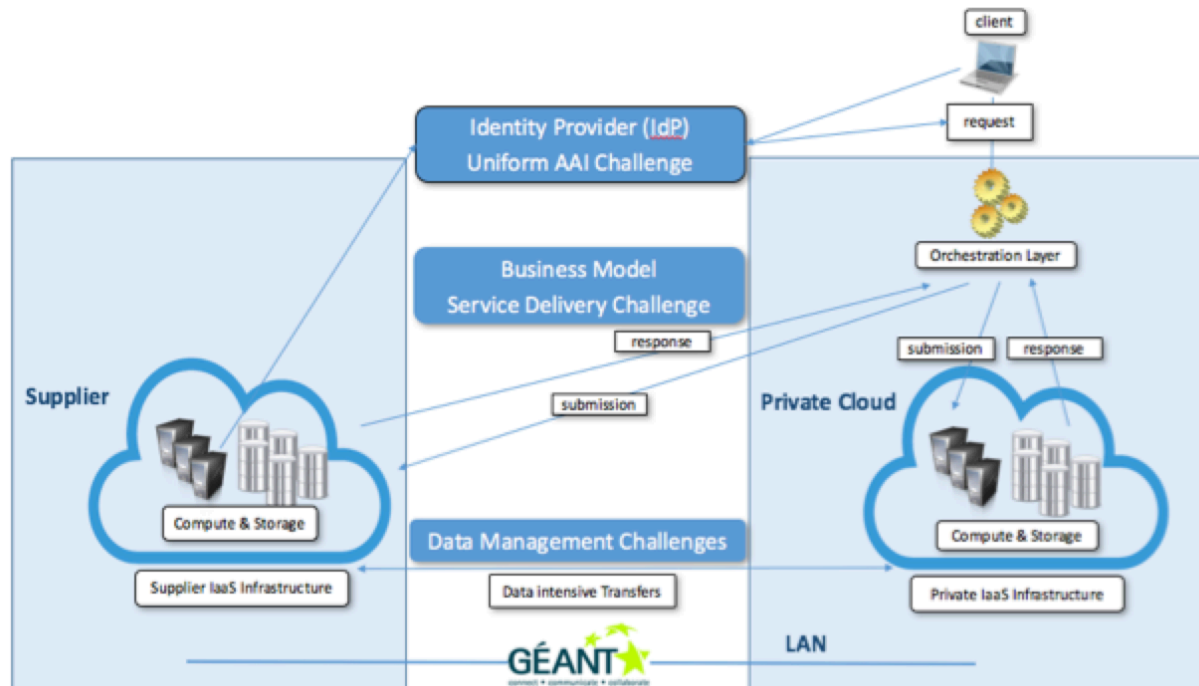


HNSciCloud and VM DIRAC

Luisa Arrabito
Johan Bregeon

HNSciCloud Highlights

- HNSciCloud Objective
 - Create a common hybrid science cloud platform for the European research community



Main Challenges

- **Compute & Storage**
 - CPU process with intensive data access
 - Efficient large-scale data management
 - Transparent data access
- **Network Connectivity and Federated Identity**
 - Tenders needs to be connected to GEANT
 - Single Sign-on and authentication services to end-users supporting eduGAIN
- **Service Payment Models**
 - Determine the most appropriate purchasing option for the scientific application workload

Current activities

- Solution prototyping
 - From Oct 18th to Jan 17th
 - Objective: to assess the designs produced by the selected contractors according to the project needs
- Pilot deployment
 - From Jan 17th to March 20th
 - 3 designs selected
 - Objective: the contractors build their prototypes and make them accessible to the buyers group (CERN, CC-IN2P3, PIC, CNAF...)

Current activities

- Prototype Phase
 - From April to June 2017
 - 3 companies will deploy their proposed solutions for the hybrid Cloud
- Test phase
 - From June to December 2017
- CTA is one of the Use Cases
 - Work with PIC (ranked 1)
 - Selected companies: Tsystems, RHEA, IBM

CTA Use case

- Use VMDIRAC to access hybrid cloud resources
- The output should be useful to other users communities
- Work also to integrate the Data Management part in DIRAC (e.g. OneData)

Testing VMDIRAC

- Tests with 1 cloud provider until now (Tsystems, based on OpenStack)
- VMDIRAC debugging needed to take into account OpenStack evolutions (e.g. new connection parameters)
- Found 2 bugs also in python libcloud
 - Access to the endpoint
 - Retrieve floating ips

Testing VMDIRAC

- Run the contextualization script manually for debugging
- Minor modifications needed to make it running (e.g. mounting ephemeral disk, cvmfs installation)
- Job agent correctly running and matching jobs

Next (near future) steps

- Check that the VM contextualization works well also when launched by the CloudDirector
- Write documentation for VMDIRAC installation, configuration and usage
- All this will be useful also to access FG Cloud resources (I'm already testing LUPM-Cloud in parallel)