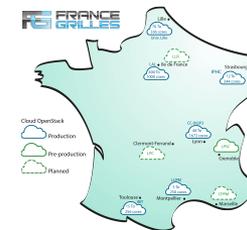


# Update on VMDIRAC 2 testing

Luisa Arrabito  
Johan Bregeon

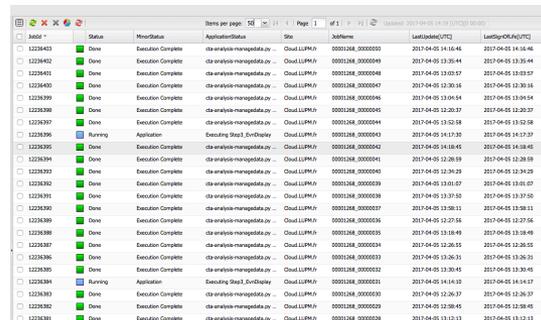
# Integration of cloud resources

- CTA Use Case for HNSciCloud project (LUPM and LAPP)
  - Run MC production and analysis workflow on commercial and private clouds
  - First phase (Dec. 2016 - Jan. 2017) : basic tests to access resources of commercial cloud providers
- Tests using LUPM Openstack cloud
  - Part of France Grilles Federated Clouds



# Testing VMDIRAC 2

- Using real production workflows
  - MC production and analysis (corsika, sim\_telarray, evndisplay, ...)
  - No job customization needed to run on the clouds
    - Using CVMFS to access CTA software (thanks to A. Haupt)
    - Interacting with DIRAC File Catalog and grid SE as for standard grid jobs
- All tested CTA ‘jobs’ run successfully on both commercial and LUPM clouds
- Started preliminary scalability tests on LUPM cloud
  - Included in the last phase of Prod3b La Palma



JobID	Status	Description	Site	JobName	LastUpdateTime	LastUpdateTimeUTC
12228403	Done	Execution Complete	Cloud.LUPM	0001284_0000003	2017-04-05 14:16:46	2017-04-05 14:16:46
12228402	Done	Execution Complete	Cloud.LUPM	0001284_0000049	2017-04-05 13:35:44	2017-04-05 13:35:44
12228401	Done	Execution Complete	Cloud.LUPM	0001284_0000048	2017-04-05 13:03:57	2017-04-05 13:03:57
12228400	Done	Execution Complete	Cloud.LUPM	0001284_0000047	2017-04-05 12:30:16	2017-04-05 12:30:16
12228399	Done	Execution Complete	Cloud.LUPM	0001284_0000046	2017-04-05 12:04:59	2017-04-05 12:04:59
12228398	Done	Execution Complete	Cloud.LUPM	0001284_0000045	2017-04-05 12:30:37	2017-04-05 12:30:37
12228397	Done	Execution Complete	Cloud.LUPM	0001284_0000044	2017-04-05 13:52:58	2017-04-05 13:52:58
12228396	Running	Application Executing Sim3_ExtDisplay	Cloud.LUPM	0001284_0000043	2017-04-05 14:17:30	2017-04-05 14:17:30
12228395	Done	Execution Complete	Cloud.LUPM	0001284_0000042	2017-04-05 14:18:42	2017-04-05 14:18:42
12228394	Done	Execution Complete	Cloud.LUPM	0001284_0000041	2017-04-05 12:28:59	2017-04-05 12:28:59
12228393	Done	Execution Complete	Cloud.LUPM	0001284_0000040	2017-04-05 12:24:29	2017-04-05 12:24:29
12228392	Done	Execution Complete	Cloud.LUPM	0001284_0000039	2017-04-05 13:01:07	2017-04-05 13:01:07
12228391	Done	Execution Complete	Cloud.LUPM	0001284_0000038	2017-04-05 13:37:05	2017-04-05 13:37:05
12228390	Done	Execution Complete	Cloud.LUPM	0001284_0000037	2017-04-05 12:58:53	2017-04-05 12:58:53
12228389	Done	Execution Complete	Cloud.LUPM	0001284_0000036	2017-04-05 12:27:56	2017-04-05 12:27:56
12228388	Done	Execution Complete	Cloud.LUPM	0001284_0000035	2017-04-05 13:18:49	2017-04-05 13:18:49
12228387	Done	Execution Complete	Cloud.LUPM	0001284_0000034	2017-04-05 12:26:55	2017-04-05 12:26:55
12228386	Done	Execution Complete	Cloud.LUPM	0001284_0000033	2017-04-05 12:36:23	2017-04-05 12:36:23
12228385	Done	Execution Complete	Cloud.LUPM	0001284_0000032	2017-04-05 13:30:43	2017-04-05 13:30:43
12228384	Running	Application Executing Sim3_ExtDisplay	Cloud.LUPM	0001284_0000031	2017-04-05 14:14:10	2017-04-05 14:14:10
12228383	Done	Execution Complete	Cloud.LUPM	0001284_0000030	2017-04-05 12:26:37	2017-04-05 12:26:37
12228382	Done	Execution Complete	Cloud.LUPM	0001284_0000029	2017-04-05 12:58:43	2017-04-05 12:58:43
12228381	Done	Execution Complete	Cloud.LUPM	0001284_0000028	2017-04-05 13:12:13	2017-04-05 13:12:13

# Testing VMDIRAC 2

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- Using customized bootstrap scripts
  - Configure CVMFS to access CTA repository
- Using slightly customized images
  - Starting from standard CentOS 6 provided by Cloud provider
  - Install a library needed to interact with srm SE: (ltd libs)
  - Install a few libraries needed for CTA (e.g. gfortran)

# Testing VMDIRAC 2

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- Tests working BUT only after some bug fixes
  - libcloud
    - Maybe due to an old version?
    - Could anyone try to reproduce the tests?
      - See Redmine
    - For the moment hot fixes on CTA DIRAC server
  - VMDIRAC
    - Essentialy connection details to the cloud endpoint
      - PR waiting to be merged (for the moment hot fixes on CTA DIRAC server)
- Documentation on Redmine:
  - [https://forge.in2p3.fr/projects/dirac-in2p3/wiki/Int%C3%A9gration\\_de\\_ressources\\_Cloud](https://forge.in2p3.fr/projects/dirac-in2p3/wiki/Int%C3%A9gration_de_ressources_Cloud)
  - It includes bug fixes

# Testing VMDIRAC 2

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- Some open issues on Redmine
  - Mostly seen only with the commercial cloud (preliminary phase)
  - WebApp VMDIRAC not working
- Questions
  - Can we specify more than one image for each endpoint?
  - How can we tell jobs to use a specific image?

# Next

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- Port the documentation to DIRAC github doc
- Do some scalability tests at LUPM
- Try to use different images for different types of jobs
- Need help to fix WebApp VMDIRAC