

## ***Singularity tests***

**ATLAS Sites Jamboree  
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# SINGULARITY AND IN2P3-CC

**Site would like to support “light” container technology**

Singularity could cover:

- Local batch farm users from different communities
- **CMS & Atlas**

**IN2P3-CC offers singularity**

- 2.4.X version under recommendation of OSG
- Kernel User-Space mode under technological preview tag for RH OS – bug and security fixes are not high prioritized

**Security Alert last period**

- CVE-2017-7184 & CVE-2017-16939

# Singularity Tests for Atlas

## Grid Engine batch System – test instance

- Singularity version 2.3.1 & 2.4.2-1 recently → Whole Wrapper mode
- Single & Multi core queue
- **EMI environment for Centos 7 is set by the batch**
- **EMI environment for SL6 is set the wrapper**
- Mostly HammerCloud Job

## Cloud Environment

- CernVM image on Scientific Linux 7 & Singularity 2.3.1
- Multicore queue
- **EMI environment for SL6 is set by the wrapper**
- Mostly MC prod Job

## Singularity Configuration

- Suidexec mode & bind control & overlay , mount /home

# Tests

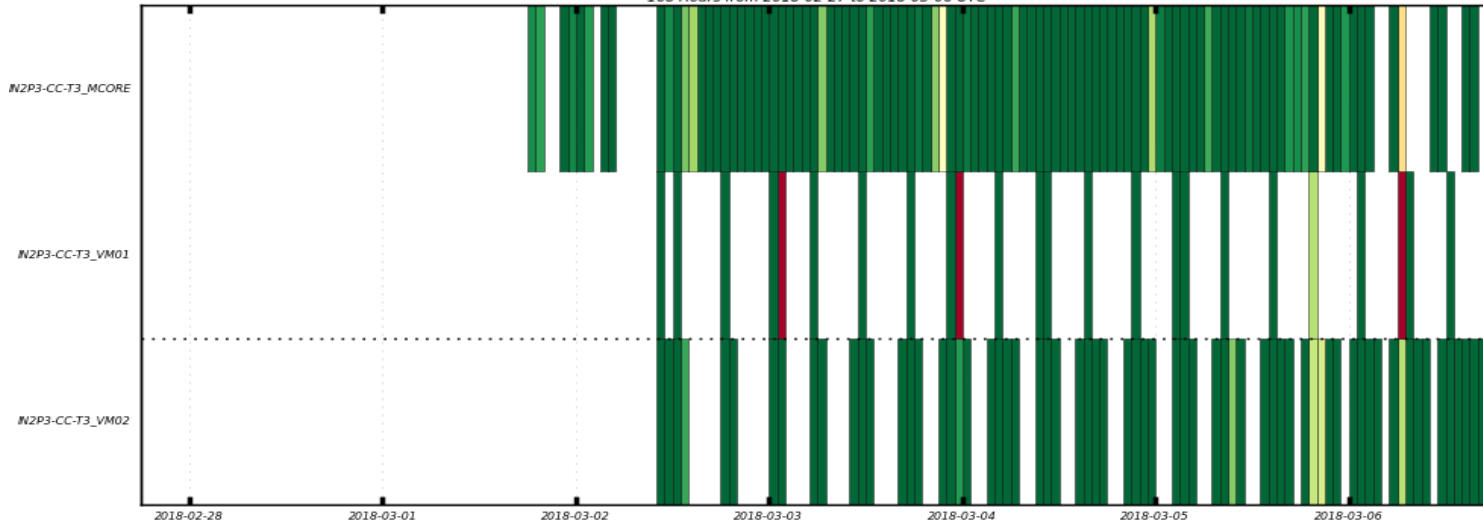
- **Panda resources :**
  - **IN2P3-CC-T3\_VM01 ( multicore on GE )**
    - -B /cvmfs, /**scratch**, /etc/grid-security
    - **xrdcp for stage-in, lcg-cp for stage-out**
  - **IN2P3-CC-T3\_VM02\_SL7 (single core on GE )**
    - -B /cvmfs, /**scratch**, /etc/grid-security
    - **xrdcp for stage-in, lcg-cp for stage-out**
  - **IN2P3-CC-T3\_MCORE (multicore on local openstack )**
    - -B /cvmfs,/etc/grid-security,/var/lib/condor/execute,/local
    - **xrdcp for stage-in, lcg-cp for stage-out**
- **Tests with HC template 929 & MC production jobs**

# Job Efficiency

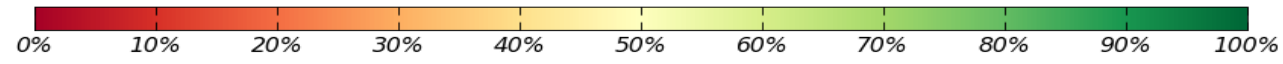


Efficiency based on success/all accomplished jobs

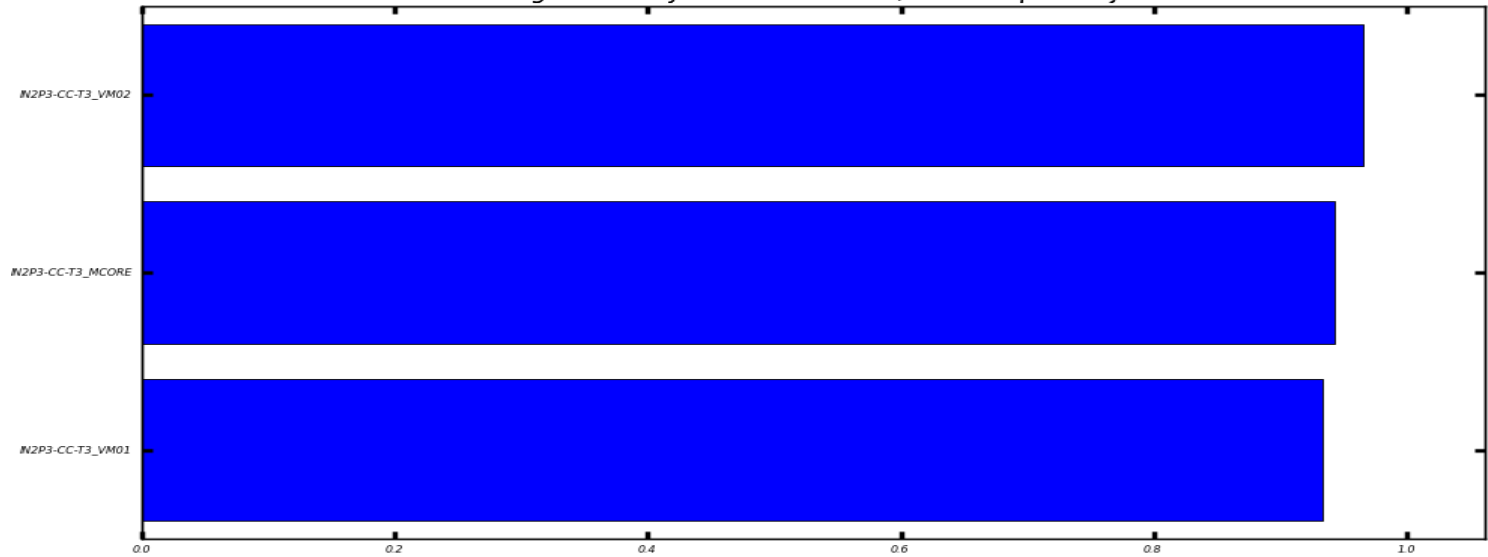
168 Hours from 2018-02-27 to 2018-03-06 UTC



Job Eff > 95%



Average Efficiency based on Success/all accomplished jobs



28 Feb to 5 Mar 2018

# Next Steps

- **Follow the recent developments and test the Pilot ver. 2 and singularity**
- **Setup Environment with consistence way**
- **Make a large scale deployment test on GridEngine CC's production environment ( $\sim 1000$  jobs)**
- **Check the local cvmfs cache stress and squid stress for singularity images ( $\sim 1/2$  GB)**