CentOS7

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SL6 SW on C7 WNs

- Production: ✓
  - Histogram validation ✓
  - Evtgen ✓
  - Derivation ✓
  - Simulation ✓
  - Reco ✓
- Grid validation ✓
  - Simulation ✓
  - Reco ✓
- Analysis: validated ✓
  - Histogram validation ✓
  - HC compile and run on the grid ✓

More detailed validation plots in Jose test space
CentOS7 native

- Work on release 21 started after the summer 2016 but two migrations took precedence
  - Cmt → cmake
  - svn → git next March
- After March
  - Bug fixes
  - Physics validation
- Once C7 releases are available both platform will be used until the end of Run 2
  - C7 releases cannot be validated on SL6 nodes
  - There cannot be mixed resources behind the same PandaQueues
Current testing

• Sites
  • OSCER and ECDF are now running production SL6 jobs
  • TRIUMF is testing and doing a lot of validation
  • Australia-LCG2 has now the resources in place to start testing too.

<table>
<thead>
<tr>
<th>Site</th>
<th>Tier</th>
<th>Cloud</th>
<th>Analysis</th>
<th>Single core</th>
<th>Multi core</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia-ATLAS</td>
<td>T2</td>
<td>CA</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>OSCER</td>
<td>T2</td>
<td>US</td>
<td>online</td>
<td>online (sim only)</td>
<td></td>
</tr>
<tr>
<td>TRIUMF-LCG2</td>
<td>T1</td>
<td>CA</td>
<td>test</td>
<td>test</td>
<td>test</td>
</tr>
<tr>
<td>UKI-SCOTGRID-ECDF</td>
<td>T2</td>
<td>UK</td>
<td>test</td>
<td>online</td>
<td>online</td>
</tr>
</tbody>
</table>

• You need to create a new Panda Site for testing
  • Please add SL7 to the queues to easily identify them
  • SW validation
  • HC tests
  • And SL5 releases will not work on C7 nodes

• In the future it may not be needed
  • SL5 rel will need to be cleaned up though
Middleware status

- OSG distributes CentOS7 middleware
- EGI has now an rpm in the UMD testing repositories MWREADY-135
  - UMD CentOS7 testing repository
  - YUM repo file
  - No need to go through recipes to get the rpms in place
  - It needs to be tested by sites
    - TRIUMF started to look into it
    - Feedback on the ticket above is very welcome if you test the UMD testing repository
- Tarball version of the UMD rpm available in CVMFS
  - /cvmfs/grid.cern.ch/centos7-wn-preview-v01
Containers & Virtualisation

• RAL is moving towards running services inside containers, controlled by Mesos.
  • Some services already migrated (FTS and Squid).
  • Batch Farm will be entirely migrated by April next year.
  • C7 machines will run “SL6 WN” inside containers.

• What works?
  • ATLAS, CMS, LHCb and ALICE jobs.
  • They started to test singularity on the WNs
    • Considered easier also for smaller sites ✓

• For full detail see Andrew Lahiff's presentation
Containers and virtualisation

- TRIUMF is also testing docker containers
- ECDF has resources on Openstack so they started using them for analysis
  - Production running on standard C7 WNs
  - C7 analysis on standard WNs in test
  - SL6 VMs on C7 hypervisors on openstack in test
    - Analysis in test because of a problem with the storage which is under investigation
HOWTO migrate

- It is recommended to keep the SL6 and C7 resources separated even now
  - Big bang upgrade: declare a downtime and come back with C7 worker nodes behind the same PandaSite and PandaQueues.
    - sw releases will have to be wiped and revalidated
    - SL5 releases will not be reinstalled
  - Rolling upgrade: declare an “at risk” DT, create a new PandaSite with new master+slaves queues.
    - sw releases will automatically be validated
- In either case the migration has to be communicated to ATLAS (<atlas-project-adc-operations@cern.ch>)
  - Sites using SL6 containers or VM don't need to announce
    - But it is good if you tell us in case of problems
Recommended?

- Moving the WNs to CentOS7 is NOT yet recommended on EGI resources as the middleware is not in good shape yet.
  - Testing appreciated would speed up its release though
- ATLAS SL6 applications running in compatibility mode have been validated and sites that have to move can move
  - If you have to move please don't setup the nodes without telling us.
Information

- CentOS7 Readiness twiki
- Problems and tickets tracking: ADCINFR-11
- We have now an e-group for sites who want to test to use for communication.
  - atlas-adc-centos7@NOSPAMcern.ch
- Any other question I&F coordinators
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