Preliminary performance results of EMI-2 release

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Outline

- Current test infrastructure
- Selection of test cases
- Description of test and tool used for tests
- The results
- Comparison of the results
Current ARC testing infrastructure

- Revision testing
- Functional testing
- Performance testing
- Recording test results and generating test reports
- Autodeploy installation

http://arc-emi.grid.upjs.sk/tests.php
Why 1000 job test?

- simple realization
- Test emulates all user actions to submit complex job (input files, output files, compilation of the code)
- The test case cover the functionality in regime when all hidden errors are accumulated and well detectable
The test results of 1000 job submission

Server rc1.grid.upjs.sk-clasic

![Performance of job submission graph]

Server pgs03.grid.upjs.sk (part of EMI testbed)
real 120 (min)
user 100 (min)
sys 5 (min)
1000 job test-cont.

Network traffic on the segment during 1000 job submission test
Comparison of the results for ARC CE (WS)

<table>
<thead>
<tr>
<th>Time (minutes)</th>
<th>ARC 1.1.0</th>
<th>ARC 2.0.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>real</td>
<td>11</td>
<td>44</td>
</tr>
<tr>
<td>user</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>system</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
Testing of reliability of job submission

<table>
<thead>
<tr>
<th>ARC CE configuration</th>
<th>ARC 1.1.0</th>
<th>ARC 2.0.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>classic</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>WS</td>
<td>1</td>
<td>0.8-0.85</td>
</tr>
</tbody>
</table>
Demonstration of tool for performace testing

Conclusions

- New performance and reliability issues was detected
- The performance of job submission to the dedicated server for ARC v. 2.0.0 seems to be lower than for ARC 1.1.0
- The reason of performance issue is not known
- We plan to perform more detail performance study for the most common test cases

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