egee

Experimental service: 3.1 WMS

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Information Society

Enabling Grids for E-sciencE

- **We use two WMSes installed at CNAF (Italy) each one with its own LB server:**
  - WMS devel09.cnaf.infn.it -> LB devel11.cnaf.infn.it
  - WMS devel10.cnaf.infn.it -> LB devel12.cnaf.infn.it

- **The services are updated using two APT repositories at CNAF:**
  - rpm http://goldrake.cnaf.infn.it:8080/ibrido/archives/glite_branch_3_1_0_dagless/repository . i386 noarch
  - rpm http://goldrake.cnaf.infn.it:8080/ibrido/archives/glite_branch_3_1_0_continuous/repository . i386 noarch

Enabling Grids for E-sciencE

- **There is a wiki page with the history of these services:**

    - **https://twiki.cern.ch/twiki/bin/view/LCG/GLiteWMSLog**

- **A service monitoring page (implemented using Yvan Calas tool) can be found here:**

    - **https://yam-server.cnaf.infn.it/monitoring/monitoring.html**

- **A machine monitoring page (implemented using Lemon) can be found here:**

    - **https://yam-server.cnaf.infn.it/lrf/info.php?host=_HOSTNAME_**

Enabling Grids for E-sciencE

- **We need to speed up the cycle**

BUG

TEST   **FIX**

TAG
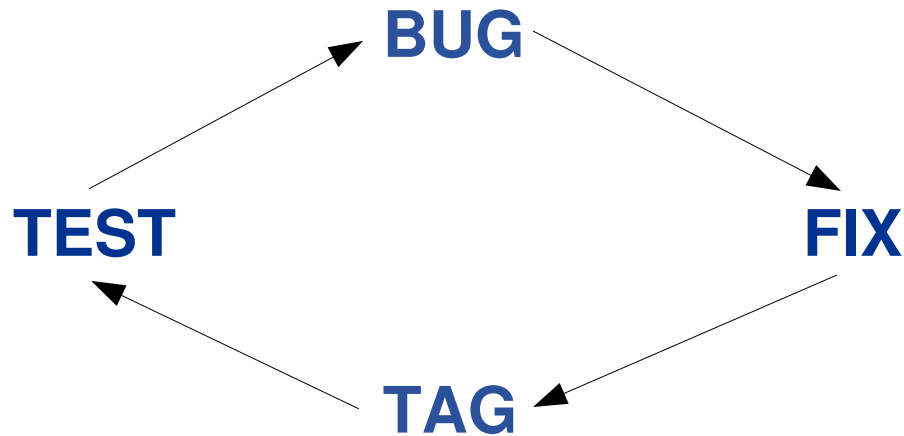
to obtain a stable release to put in certification.

- **We need to give developers the possibility to debug directly and immediately**
- **We need to give users the possibility to ask for new feature or improvements**

Enabling Grids for E-sciencE

- **Some of the new features on 3.1 release are:**

    – Bulk submission is handled without using DAGMan => BulkMM

    – ISM is reorganized

        ▪ VoView uses also the DENY rule

    – Support for submission to ICE-CREAM

    – Support for "prologue" and "epilogue" attribute

    – Support for the load monitoring scripts

    – UI can manage a set of LB/WMproxy EndPoints (=> Service Discovery)

    ... and much more ....

Enabling Grids for E-sciencE

- **These WMSes are now used by these applications:**

  - **ATLAS (Simone Campana)**

  - **CMS (Vincenzo Miccio and Andrea Sciaba')**

  - **Alice (Patricia Mendez Lorenzo)**

- **Open to these VOs:**

  - **ops, dteam, atlas and cms**

currently users are sending stress tests and taking

measurements on the WMS performance,

so they need some coordination

Enabling Grids for E-sciencE

- **Currently two types of tests are performed:**
  - **Submission of collection of 100 jobs**
  - **Submission of simple jobs with parallel threads** **(https://twiki.cern.ch/twiki/bin/view/CMS/TestinggLite3dot1)**

- **Target:**
  - **15-20K jobs/day, sustained for 1 week**
  - **Performance at the end of week same as at the beginning**
  - **Less than 1% "zombie" jobs**

- **When new bugs are fixed or new required improvements are implemented a new TAG is released and according with the users installed in the WMS.**

Enabling Grids for E-sciencE

- **Tests on the WMS dagless are on-going since March**

- **Every 15/20 days a patch to collect last tags should be released and taken from Imperial College to do parallel tests**

  - April, 2nd : patch #1116
  - April, 24th : patch #1140 => Installed on devel09/11
  - May, 15th : patch # 1167 => Installed on devel10/12

- **Every 2 steps (~month) the rpms of the last available patch should be built and tested also at CERN**

- **The process will be repeated periodically until SA3 arrives to certify the 3.1 version.**

Enabling Grids for E-sciencE

- **Test on release 3.1 started on July at Cern**

- **A lot of parameter tuning has been done in this period**

- **Tests to define the minimum hardware required**

- **A lot of bugs have been fixed**

At the end the WMS reached production quality and was as good as the LCG one

Enabling Grids for E-sciencE

- **Tests to evaluate and improve the efficiency**

- **Services are now more stable**

- **Tests to improve the reliability**

- **... bug fixing...**

WMS reaches the required quality of service:

- **115.000 jobs submitted and processed in 7 days**
  - *a bit more than 16K jobs/day.*

- **All jobs have been processed**
  - *currently in states Aborted or Done*
  - *with the exception of 320 (0.28%) jobs.*

Enabling Grids for E-sciencE

- **With the last patch (#1167) we can start the normal certification process**

- **Some problems need to be fixed:**
  - Cancel of a collection
  - The "global" state of a collection
  - The purger daemon

- **Test submission to ICE-Cream**

- **Try to reach to the limit of the wm (jobs/day) with single and parallel submission threads**