



The Middleware Readiness Working Group

LHCb Computing Workshop

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Mandate

To ensure that operation won't suffer when a site is called to upgrade Middleware (MW) package X to version Y, i.e. that versions are not only **tested** and **certified** internally by the Product Teams (PTs), but also **ready** to be used in operation at the sites, **integrated into the experiment workflows.**

Done so far

- Four meetings since 2013/12/12. Issues addressed:
 - MW PTs use the repository of their choice.
 - A relationship was established between:
 - The PTs responsible for a shortlist of MW products that will be used to start with.
 - The WLCG VOs' workflows, using these MW products.
 - Volunteer sites participating in this effort which:
 - Collaborate with the PTs for testing release candidates
 - Have expert VO contacts on site.

Repositories in more detail

- The PTs use the repository of their choice.
Examples:
 - EPEL
 - MAVEN
 - WLCG
 - Their product's web site
 - EGI-UMD
 - EMI
 - A combination of the above

The shortlist of MW products

- We picked dCache, StoRM, EOS, xrootd, DPM, LFC, FTS3, VOMS Client, as a start.
- Contacted the PTs who were Very helpful with information about release candidates, testing sites and VOs using their products.
- Now expanding the [PT table](#) to include ARC CE, CREAM CE, BDII, ARGUS, UI, WN, lcg_utils, gfal2, gfal_utils for a later stage of the Readiness Verification effort.

The *Volunteer* sites & the VOs

- Experts in the VOs, members of the WG, approached sites where MW products of their choice are tested by the PT, as release candidates.
- They documented experiment application programmes to be used for the testing.
- The sites prepared a special set-up (details [here](#)) for this effort that will appear separately in Monitoring results.

Identifying the MW versions running (production & testing)

- Proposal & implementation by *Lionel Cons* (CERN/IT-SDC) (see his [presentation](#) at the 4th meeting of the WG).
 - Sites report the **RPMs** they use.
 - Their RPM version information is stored in a DB.
 - A sub-set is kept containing the MW packages only used at the site.
 - What is installed for production (or testing) is checked against a reference (baseline or newer but tested) version.
 - Tests run all the time, Hammercloud (HC) is recommended.
 - Test results for release candidates may be distinguished by different site/host/queue names.
 - Historical version data are kept for 1 year to diagnose the point when good test results change status (turn good/bad or unknown=not tested).
 - Existing Grid Monitoring technology will be used to evaluate results. The MW Officer examines the output results.

The WLCG MW Officer (Tasks for operations)

This is a new role in WLCG! The MW Officer is *Andrea Manzi (CERN/IT-SDC)*. For versions in operation he will:

- Maintain and verify the baseline versions for the MW components
- Communicate with sites not compliant with baseline versions
- Monitor and liaise with EGI and UMD for matters regarding the WLCG MW and versions

The WLCG MW Officer (tasks for MW readiness)

- Discover new versions ready for entering Readiness verification
- Make sure that new release candidate versions of clients are available in the agreed CVMFS area `grid.cern.ch`
- Communicate with Volunteer sites to agree which version is tested at which Volunteer site and by which VO
- Monitor results of the Volunteer sites to decide on Readiness of a given release being verified
- Decide if versions can enter production at a subset of these sites, if tests should also run under load.
- Announce to the WLCG community the Readiness Verification results by maintaining a new extended baseline versions table

Next steps

- The WG members (sites, VOs, PTs) contribute to the Readiness Verification effort, in practice, now that the principles are agreed.
- In the next 40 days, we plan to:
 - Take a product from the PT table.
 - Work on the detailed set-up with Volunteer sites and VOs.
 - Develop a prototype of version parsing.
 - Devise a method to display test results, versions in production, versions of release candidates and to document conclusions. (an Extended [Baseline Versions' table](#)).

Documentation & Contact Info

- LHCb members in the MW Readiness WG: Joel Closier, Stefan Roiser.
- Next meeting: 2014/07/02 at 16:00hrs CEST at CERN (also audioconf). Draft [Agenda](#).
- Twiki:
<https://twiki.cern.ch/twiki/bin/view/LCG/MiddlewareReadiness>
- E-group:
wlcg-ops-coord-wg- middleware@cern.ch.