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WN Working Group.

The worker node working group is TCG sponsored activity that aims to address the matching and utilization of of worker node resources within the EGEE grid.

The mandate, list of members and mailing list is available here. [Mandate](#)

Steps to Reach Goals for Homogeneous subclusters

A number of steps must be completed to reach a state where we support rich configuration of Glue Clusters and SubClusters. For all deployment dependencies they are within a site or gLite release. We have no expectation that something must be deployed everywhere before we can proceed to the next step.

Key	Item	Development Status	YAIM Status
A	Resolving WN to a GlueSubCluster	Package <code>glite-wn-info</code> exists and can be configured to return this value.	PATCH:2114 is submitted but is in configuration status, i.e YAIM needs to support a richer <code>wn-list.conf</code> file allowing per WN properties.
B	Resolving a GlueSubCluster to an RTEPublisher	Steve Burke's has a provider for this resolution <code>glite-info-provider-service-1.0.3-0.noarch.rpm</code> . I reviewed it recently and gave some comments that were accepted. BUG:45313 .	Trivial configuration, trivial addition to YAIM. New YAIM function attached to <code>WNWorkingGroupInstallLog</code> .
C	Creation of per SubCluster RTE Tags areas	No development.	Not submitted formally as a request to but a trivial function that can be added to current <code>lcg-CE</code> as well. Will do it. Essentially for each SubCluster create <code>/opt/glite/var/info/<SubCluster></code> directories with <code>sgm</code> like permissions.

D	Infoprovider update to publish software tags per SubCluster	Requires an update to <code>lcg-info-dynamic-software</code> BUG:45310 . This is the next thing I will do.	No changes to YAIM
E	<code>lcg-ManageTags</code> and <code>lcg-tags</code> need to support a <code>--cluster</code> option	Developers are expecting bugs from me with a request to support "--subcluster" option. We have to have publication details of the RTEPublisher finalised in B before they can have details of what to query.	No YAIM work.
F	YAIM supporting free style Clusters and SubClusters	There is now a good attempt at this within YAIM not in the main development branch. This is documented well here WNWorkingGroupInstallLog . Its a very good first attempt and all of the complexity needed is present. The items highlighted in the install log are all <i>small</i> fixes. Essentially another round of development process is required.	This is all YAIM.

Comments

A number of comments have already been addressed to the group that might be considered for inclusion within discussions and outputs.

- CPU Numbers - The working group will most likely touch on describing heterogeneous batch farms with multiple GlueSubClusters. Consequently publishing reliable numbers for CPUs in GlueSubCluster for use by e.g. [gstat](#) becomes a sensible objective. Long [lcg-rollout thread](#).
- Passing wallclocktime for jobs. It is very likely that the group will consider the passing to the LRMS values for memory and or disk requirements. Particularly for sites supporting MPI jobs it is vital that jobs are all also submitted with a wall clock time to allow for backfill. While not an objective of the group since different WNs do not generally support different wall clocktimes it is related to argument passing and so can be considered.

Strategy

- VOs to produce a list of constraints related to WN capacity they wish to describe their jobs by, e.g. Memory, Diskspace, anything else?
- Produce an outline of what can be achieved today. By today we are talking about Glue 1.3 Schema, WMS 3.1 and the LCG CE.
 - ◆ We can consider from this if a short term solution is worth implementing given the anticipated constraints of the lcg-CE. Any such solution would likely result in recommendations to the YAIM team for such a deployment.
 - ◆ Some sites notably RAL already run with a configuration such that matching different worker node resources within the same site is possible but far from optimal.
- Run within the PPS a CREAM CE which is expected to be at the very earliest available as pre-pre-release at the end of October 2007.
 - ◆ This will be configured as a CE, torque batch system and two batch workers with different hardware configurations.
 - ◆ Information publishing of this CREAM CE can be tweaked by hand to establish the publishing of this heterogeneous cluster.

Software Tags

The software tags need to be addressed with respect to running multiple SubClusters on the same physical host.

- [WNWorkingGroupVoInstallMethods](#)

Job Signals

The batch systems send various signals on job termination.

- [WNWorkingGroupSignals](#)

Test Rig

A test installation is being set up within the PPS.

See: [WNWorkingGroupInstallLog](#)

Presentations

- [GDB January 7th 2008 GDB Agenda](#).

Relevant Documents

- [del.icio.us egeewnwg tag](#). This is most up to date with relevant links, feel free to add if a del.icio.us user.
- [CREAM Homepage](#)
- [Glue Schema 1.3](#)
- [Guide to publishing different memory GlueSubClusters and GlueClusters](#)
- [HEPiX - Grid Information on Compute Elements](#)
- [HEPiX - Another related HEPiX Page](#)
 - ◆ In particular Francesco's talk and Ulrich's talk.
- [BLAH install guide](#)
- [BLAH draft porting notes](#)
- [JSDL Spec](#), Influences what will be available for GLUE2.0

Meetings.

- First Meeting - September 27th - 14:00 - [WNWorkingGroupMinutes20070920](#)

-- SteveTraylen - 25 Sep 2007

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