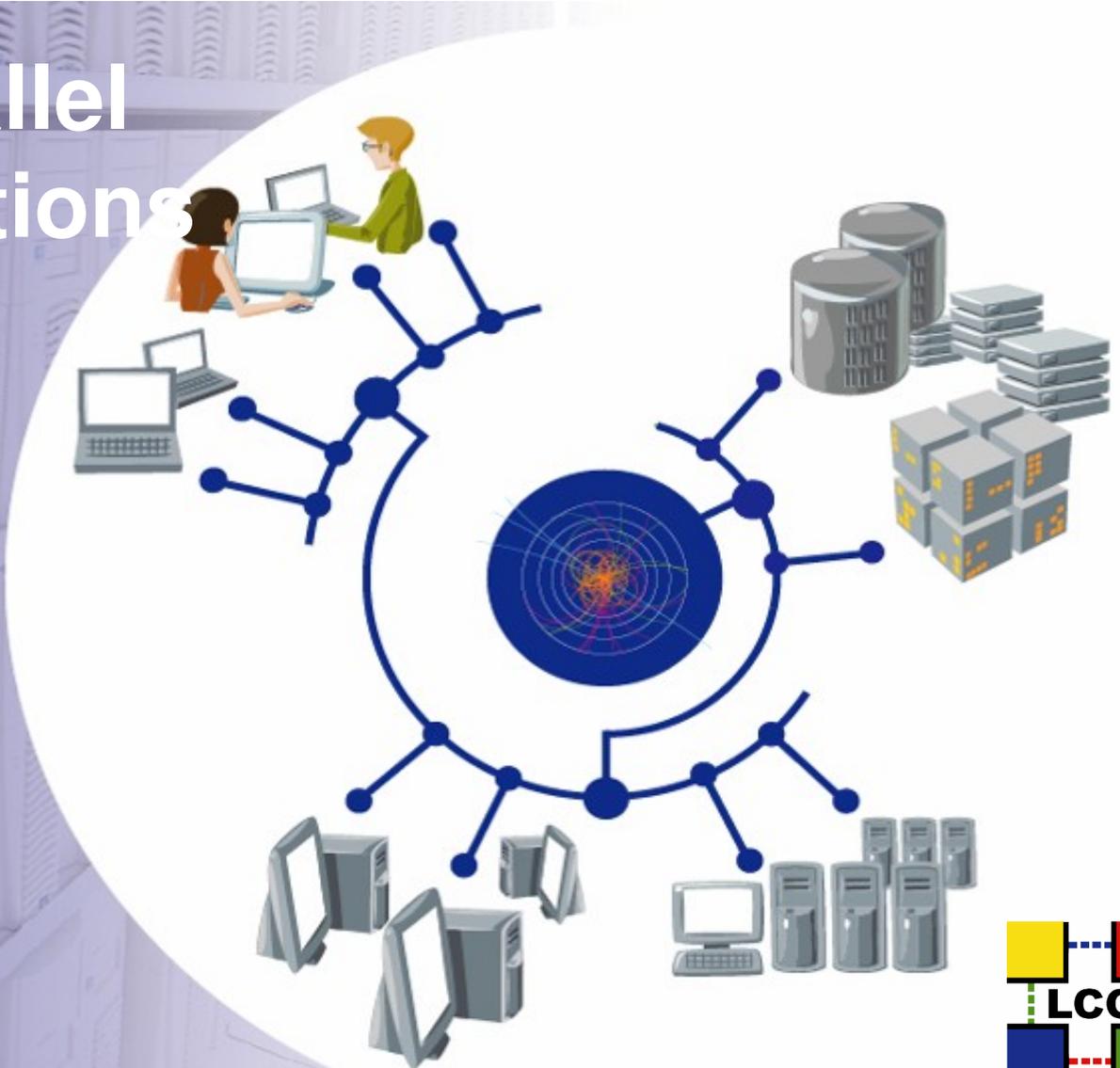


LCG: the LHC Computing Grid project

Enabling parallel
client installations

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Advantages of parallel versions



☞ Flexibility for applications

- ☞ Supports the case where a particular update suits one experiment but not another (or even different applications within one VO).
- ☞ Example; patch #1641 introduced gfal-1.10.7 which
 - ✦ Fixed some segfault problems
 - ✦ Introduced bug #33288 (creation of non-existent sub-directories)

☞ Easy rollback of problematic updates

☞ Finer grained publishing of what's installed

- ☞ Allows experiments to match properly and know what they're going to get when they land on a WN
- ☞ Manage the introduction of support for other platforms, compilers etc

☞ Timely deployment of updates

- ☞ This proposal does not explicitly address speedy rollout of updates, but it should be beneficial
 - updating a WN is less risky
 - operational tracking of which versions of the WN are deployed

Mechanism



- Supply the entire glite-WN as a single rpm, fully relocated and with the version embedded in the name (thus allowing parallel installations).
- Path is fixed, eg /opt/glite-WN-3.1.7-2
 - rpm can be made "zero-config"
 - with the exception the maintenance of a single set of site-wide defaults in the environment such as LCG_GFAL_INFOSYS.
- Publishing of the availability of glite-WN-3.1.7-2
 - need an info provider, installed on the node which is publishing subcluster information, which checks each subcluster for the presence of new updates.
- Current distribution methods (rpms/tarballs) will remain
- The integrated WN releases will also be made available to the application area, as simple versioned directory structures in the usual AFS space, thus allowing them to independently distribute the releases if they wish.

Use



- An application could check for
 - GlueHostApplicationSoftwareRunTimeEnvironment: GLITE-WN-3_1_7_2
 - Frameworks would have to implement the > 3.1.7-2 case.
- rpm lists for WN versions are already available here;
 - <http://glite.web.cern.ch/glite/packages/R3.1/deployment/glite-WN/glite-WN.asp>
- To use a certain version of the Worker Node you would add two attributes to the JDL:

```
MWVersion = "<WN_version>";  
Requirements =  
  Member("<WN_version>", other.GlueHostApplicationSoftwareRunTime  
  Environment);
```
- Extension
 - allow the user to request 'no environment' which would result in no grid specific settings in the environment.

Reference



- The proposal is summarised here;
- <https://twiki.cern.ch/twiki/bin/view/EGEE/ParallelMWClients>