

EGRID Live CD

The EGRID Live CD is a Knoppix Live CD derivative that comes preloaded with all the LCG-2 middleware. You can run all of LCG-2 Grid elements off the live CD, without even installing on the hard-drive!

The EGRID Live CD

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What's the EGRID Live CD

The EGRID Live CD is a Knoppix Live CD derivative that comes preloaded with all the LCG-2 middleware.

You can run all of LCG-2 Grid elements off the live CD, without even installing on the hard-drive!

A menu-driven configuration interface makes it easy to configure and run Grid elements, without having to delve into the intricacies of LCG-2 configuration.

Finally, the Knoppix installer will install Debian GNU/Linux and the LCG-2 middleware on your hard-drive, preserving configuration.

Why the EGRID Live CD

For dissemination and outreach

New and prospective users are often overwhelmed by the amount of technical details they have to master *before* they can install a Grid site. Also, hardware resources are sometimes a concern ---especially at smaller site and in developing countries--- where only limited resources are available, even for production use.

The EGRID Live CD tries to solve this problems by giving people a means of trying the LCG-2 software in a snap: no OS reinstallation, no need to configure tens of parameters.

Watch the Demo: the EGRID Live CD allows you to run an entire Grid out of a CD and two laptops!

Ready for production use

The EGRID Live CD is already in use as the default install method in GRID@Trieste (a metropolitan Grid testbed among scientific institutions in the town of Trieste). The GRID@Trieste testbed currently sports 5 sites (and growing), which were installed by use of the Live CD.

Grid elements on the CD

The configuration interface will let you choose among 4 different Grid node types:

User Interface (UI)

A full LCG-2.4.0 user interface is preloaded on the EGRID Live CD; it is preconfigured for the `egrid` VO, but you may change the configuration to support other VOs (see section *Which Grid will it run in?*).

Super Node (CE+SE+WN)

A *super node* is a CE (Computing Element gatekeeper), WN and SE all running on the same box.

The configuration interface takes care of configuration for the EDG/Globus gatekeeper, it creates pool accounts for each configured VO, sets up queues in the Torque batch system, and lets you manage the supported VOs and the WNs in the execution cluster.

Central services (BDII+RB)

The EGRID Live CD also contains software to run a (site-level or Grid-level) BDII, and a LCG-2.4.0 Resource Broker.

The BDII server can be configured to act as a site-level and/or Grid-level BDII (at the same time); a configuration script allows command-line management of the BDII configuration, including mirroring another BDII (for load balancing purposes, for instance).

The above node types are configured independently, but they may run on one and the same box, so you can actually have BDII+CE+RB+SE+UI+WN on the same Linux PC.

The configuration interface

The program `egrid-conf` runs a menu-driven interface for configuring the grid elements on the CD. Within any menu, you can invoke a short help text to guide you in the configuration process.

Which Grid will it run in?

In order to get a running Grid element, you have to set a few configuration parameters; there are menu items for using pre-loaded sets of parameters (for the EGRID production Grid, or for the GRID@Trieste testbed).

If the preset parameters don't fit your needs, you can set your own from the `Set configuration parameters` menu item.

The VO manager

The VOs manager menu item will let you add VOs to a (already configured) live CD; for each VO that is added, pool accounts are created, and the appropriate configuration directories (for UI software) are made.

You can start using a newly-added VO as soon as you rebuild configuration files with the Build configuration files menu item.

Note that the VO list is cleared if you select the Clean current configuration menu item.

The WN manager

The WNs manager (available under the Super Node node type menu) lets you add and remove WNs on the fly.

Further informations

The EGRID Live CD author and maintainer is Angelo Leto mailto:<angelo.let@ictp.it>

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Download

You can download the latest version of the EGRID Live CD from <http://www.egrid.it/download/software/sn> (but first, get a username/password pair from <http://www.egrid.it/download/software/SN-download.html>)

User Guide

The LiveCD User Guide describe how to setting up a GRID using the Live CD; the guide was produced during the "ICTP/INFM–Democritos Workshop on Porting Scientific Applications on Computational GRIDs".

Bugs

Please report bugs via our issue tracking web interface: <http://www.egrid.it/bugs>

Licence

You can use, modify and (re)distribute the EGRID Live CD under the terms of the GNU GPL version 2, or —at your option— any later version.

(Please note the GNU GPL does not exempt you from acknowledging other people's work and copyrights!)

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The LiveCD group of "ICTP/INFM–Democritos Workshop on Porting Scientific Applications on Computational GRIDs" for the great LiveCD User Guide produced.