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Getting the most out of Desktop Grids for your application

Thursday, 29 March 2012 14:00 (1h 30m)

Programme:

14:00 - 14:15 Peter Kacsuk: Extending your gLite, ARC or UNICORE VO with inexpensive desktop resources

14:15 - 14:30 Ad Emmen: International Desktop Grid Federation and its roadmap

14:30 - 14:45 Peter Kacsuk: Run your existing grid applications on desktop grids without application porting

14:45 - 15:00 Etienne Urbah: XtremWeb in the EDGI infrastructure

15:00 - 15:10 Robert Lovas: Desktop grids in ICT countries - the DEGISCO experience

15:10 - 15:30 Discussion forum on the integrated usage of desktop grids, grids and clouds (Moderator: Tamas Kiss)

- Overview of the EDGI supported Desktop Grid infrastructure connected to EGI and available to EGI users. EDGI operates a 150.000+ computer Desktop Grid, with application repositories, portals, etc., available to users. It is connected to gLite, Unicore, and KnowArc based Grids. It supports QoS unique for Desktop Grids. It also includes an application repository and it includes support for distributed file access.
- Recent developments: a. Tools to create widely deployable applications (including GBAC, GenWrapper). These tools make it easier to port applications to a complex infrastructure that includes Desktop Grids. b. New tools for supporting the deployment of applications (including Attic distributed file system, portals). c. SpeQuloS: The new version of SpeQuloS can be used to obtain a guaranteed job turn around time. SpeQuloS also adds SLAs to a Desktop Grid.

The goal of the tutorial is to take care EGI users are aware of Desktop Grids as a possible computational resource they can use. We expect a number of the Tutorial/workshop participants will start exploring Desktop Grids with help from the community in the International Desktop Grid Federation. This will offer them the possibility to better run their applications, exploring possibly new research areas.
As a more high-level impact the complete eScience infrastructure connected to EGI will be more efficiently used.

During the past year, significant advancements can be reported in the use of Desktop Grids for eScience. This tutorial/workshop focuses on the aspects that are most relevant for users. There are however more topics that could be of interest. Such as how to install a Desktop Grid and integrate it with an EGI connected infrastructure. Several of these (notably from Russia and Ukraine) were already reported during the last Cracow Grid workshop. More information can be found via the International Desktop Grid Federation website at http://desktopgridfederation.org.

Description of the Work

Tutorial (1,5 h)

- Introduction to Desktop Grids For suitable applications they can be in important computational resource. Integration with EGI/NGI operated infrastructures assures easy integration with working environment of users of scientific applications integration with working environment of users of scientific applications
- Overview of the EDGI supported Desktop Grid infrastructure connected to EGI available to EGI users. EDGI operates a +150.000 computer Desktop Grids, with application repositories, portals etc, available to users. It is connected to gLite, Unicore, and KnowArc based Grids. It supports QoS unique for Desktop Grids. It also includes a application repository and it includes support for distributed file access.
- Recent developments: . Tools to create widely deployable applications (including GBAC, GenWrapper) These tools make it easier to port applications to a complex infrastructure that includes Desktop Grids. . New tools for supporting the deployment of applications (Including Attic distributed file system, portals)

Workshop (1,5h)

- Focus on presenting a number of applications

The applications presented will be choosen about a month before the conference, to assure the most recent experiences. (In the EDGI project several ported applications are in the stage of being validated/certified.)

- Green Desktop Grids

How Green are Desktop Grids? A list with 7 attention points developed by the International Desktop Grid Federation can serve as a guidance here.

- Use of private Desktop Grids in university or Research institute integrated with EGI type of infrastructures

A rather recent development is to use Desktop Grid technology for creating private Desktop Grids from University/Research centre resources. This workshop section will discuss how this can help scientific users (from that organisation).

Conclusions

During the past year, significant advancements can be reported in the use of Desktop Grids for eScience. This tutorial/workshop focuses on the aspects that are most relevant for users. There are however more topics that could be of interest. Such as how to install a Desktop Grid and integrate it with an EGI connected infrastructure. Several of these (notably from Russia and Ukrain) were already reported during the last Cracow Grid workshop. More information can be found there or via the International Desktop Grid Federation website.

Impact

The goal of the tutorial is to take care EGI users are aware of Desktop Grids as a possible computational resource they can use. We expect a number of the Tutorial/workshop participants will start exploring Desktop Grids with help of the community in the International Desktop Grid Federation. This will offer them the possibility to better run their applications, exploring possibly new research areas.

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URL

http://desktopgridfederation.org

Overview (For the conference guide)

Since the last Desktop Grid workshop at EGI TF in Lyon considerable progress has been made in the uptake of Desktop Grids for eScience. This tutorial/workshop provides a tutorial with the new technologies available to users - but starting with a general introduction that brings everyone up to date - followed by a workshop that more in detail shows to EGI users how they can benefit from using Desktop Grid based infrastructures.

The tutorial starts with explaining how Desktop Grids can use otherwise idle computing time from Desktop Laptops and other computers.

The workshop will present and discuss a number of applications that have been ported to Desktop Grids recently. They can also serve as an example for users and application developments of what is needed to get applications running.

This 3 hour tutorial workshop will be organised by EDGI for the International Desktop Grid Federation.

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Presenters: EMMEN, Ad (EDGI, DEGISCO, e-IRGSP3 projects); Prof. KACSUK, Peter (MTA SZTAKI)

Session Classification: Making DCIs Work for You