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Supporting Distributed Computing Infrastructures

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Overview

Establishing EGI.eu to create and maintain a pan-European Grid Infrastructure with the National Grid Initiatives as building blocks, Europe has taken a major step towards providing a long-term sustainable production quality grid infrastructure for multi-disciplinary use by international, national and regional user communities. With the aid of the EGI-InSPIRE project EGI.eu coordinates between user communities, resource providers and technology providers within Europe and with partners from outside Europe.
As all these stakeholders are structured in their own organisations or projects, it is necessary to enable formalised communication between them. Here EGI plays the integrating role.
In the area of user support the integration platform is the Global Grid User Support (GGUS). GGUS is used as the central helpdesk for EGI, as well as for linking support infrastructures of other projects into the the overall EGI set-up.

Impact

EGI is a major part of a larger environment of distributed computing infrastructures from within and outside Europe. These Infrastructures rely on the same or similar technologies and tools. The workflows defined in EGI for the communication between user communities, techology providers and resource providers can therefore be extended and adapted to be utilised other DCIs. This would have the benefit of providing the technology providers and user communities with one channel through which they receive or submit requests from or to the various DCIs.
Such a support infrastructure servicing various DCIs would help harmonising the landscape for scientific computing on the European scale and could also ease the integration of extra-European DCIs. A major benefit would be that the user communities would be provided with one contact point regardless of which DCIs they are using.
Currently, various projects exist that aim at linking multinational grid infrastructures from various regions around the globe to the European grid infrastructure. The relationship between these initiatives and EGI, once established and formalised, need to be aided by a technical infrastructure linking their regional support for user, operations and technology issues to EGI. GGUS could also play the role of the integration platform for these initiatives, by providing tools to set up the regional support, as well as by linking it to EGI. As a prototype a helpdesk for the EUMEDGrid project has been implemented using the xGUS helpdesk template.

Description of the work

Developed during the EGEE project, GGUS has become the central integration platform for user support also for EGI. Projecttwide support is handled through the system and it acts as central information hub for user, operations and technology issues. Integrating existing tools rather than replacing them, GGUS enables

support teams from all areas to communicate with each other.
All NGIs need to interface their helpdesk systems to GGUS. To provide an easy way for small NGIs to do this the xGUS helpdesk template has been developed. Instances of this template, while being hosted and maintained by the GGUS team, can be customised and updated by the NGI staff. xGUS comes with the standard helpdesk features and the interfaces to GGUS already included. xGUS could also be of interest for user communities of the EGI infrastructure wanting to structure their internal user support workflows and to link them to the EGI support.
Several workflows that are needed between EGI and the technology providers are also realised through GGUS. Support requests by users are analysed within EGI by the Deployed Middleware Support Unit (DMSU) and are by the DMSU transferred to the respective Technology Provider's support teams in case they problems are due to a bug in the middleware.
Releases will be announced by the Technology Providers by submitting a GGUS ticket of a special category. EGI then uses the same ticket to communicate its feedback to the Technology Provider. A similar workflow has been defined for middleware bugs found in production. The bug will be reported in a GGUS ticket to the Technology provider, who will then use the ticket to communicate the date and number of the release fixing the bug in the same ticket. An additional benefit of handling these diverse workflows in the same tool is the possibility of creating statistics and reports on the metrics of the support process.

Conclusions

GGUS has shown during EGEE and now in EGI that it has the capabilities of acting as this integration layer between user, resource providers and technology providers. Extending this support infrastructure to cover other DCIs as well would help harmonising the European distributed computing landscape, would ease its multi- and interdisciplinary use and its extension beyond Europe.
This presentation will give an overview of the support infrastructure currently in place and plans how to further improve, extend and consolidated it in the near future.

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