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Improvements of the grid infrastructure and services within SEE-GRID

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Enlargement of the grid user community is probably the most important challenge of the grid infrastructure development community. To attract new users, with new applications and needs, the infrastructure should be flexible enough to satisfy their needs and requirements. We present the experience of the development community from the SEE-GRID-SCI project, organized in a Joint Research Activity. The main focus of this JRA was to improve the usability of the infrastructure and Grid services for the end-users from target communities, as well as manageability of the underlying infrastructure.

Detailed analysis

Based on the analysis of the user's needs, taken from the 3 main SEE-GRID user communities, with special emphasis on the commonalities between them, several applications services and operational tool were successfully implemented. Also, some of the preexisting operational tools were enhanced with application-specific extensions, enabling their deeper integration with the current and future grid applications.

The Operational Tools developed or enhanced in this framework were mostly oriented toward better monitoring (BBmSAmEX), alerting (AMS) and job tracking and analysis (JTS, Logwatch-G), but also security (GSSVA), ticketing (NMTT) and portal enhancements (USGIME).

The Application Services aim was to support the current and future applications with a richer set of services, needed for more complex and robust grid applications. They ranged from the advanced usage of workflows (AWT, CWRE), better data and file management (DM-Web, FM-J-API), applications platforms and services for specific areas of grid usage (ESIP, MEWS, RAS, SDSASS), event logging (Event Logger) and advanced, user based monitoring and analysis (UMON).

Conclusions and Future Work

Further development in this (JRA1) and other future frameworks will enable strengthening of the infrastructure in the SEE region and stronger involvement of the scientist from this regions in the European scientific and research activities

Impact

The newly developed tools and services are already helping the SEE-GRID users and site administrators to achieve more productivity, to have more robust and stable sites, to have higher job throughput, to identify and categorize the underlying resources and to have overall higher grid utilisation. Using the applications services, more complex applications in all 3 user communities are already running. With the help of the new tools, better monitoring and overall understanding and utilization of the platform is achieved.

Keywords

grid, tools, services, monitoring, alerting, workflows, portals, security, data management

URL for further information

www.see-grid-sci.eu

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