

# "The Migrating Desktop as a graphical environment for [BalticGrid](http://www.balticgrid.org) applications"

This presentation will focus on the integration of BalticGrid applications within the Migrating Desktop framework. The Migrating Desktop (<http://desktop.psnc.pl>) was designed and developed by Poznan Supercomputing and Networking Center in close collaboration with other partners within the EU CrossGrid project (IST-2001-32243) (<http://www.crossgrid.org>). As the key product of that project, the Migrating Desktop has proved its usefulness in everyday work of the CrossGrid community. It is an advanced graphical user interface and a set of tools combined with a user friendly outlook, similar to a window-based operating system that hides the complexity of the grid middleware and makes access to the grid resources easy and transparent. The Migrating Desktop offers: a flexible personalised working environment available independently of the user location, scalability and portability, a set of tools, a single sign-on mechanism, support for multiple grid infrastructure and special support for „roaming users”, so that they can use their personalized working environment regardless of their physical location and used operating system. The Migrating Desktop strictly cooperates with the Remote Access Server (RAS), which intermediates between different grid middleware and applications. The RAS offers a well-defined set of web-services that can be used as an interface for accessing HPC systems and services (based on various technologies) in a common, standardized way.

The key feature of the Migrating Desktop is the possibility of easy adding various tools, applications and support visualisation of different formats. Due to the complex nature of grid applications and unpredictability of their requirements, the Migrating Desktop offers a framework that can be easily extended on the basis of a set of well defined plug-ins used for: accessing tools, defining job parameters before submission, and visualisation of job results. It makes that product significantly more flexible than specialized tools (e.g. portals) designed only for a specific application.

The Migrating Desktop framework architecture is designed on the basis of a concept of OSGi specification designed by The OSGi Alliance (<http://www.osgi.org/>). The Migrating Desktop follows OSGi Service Platform specification and is based on the same plugin engine as the Eclipse platform (Equinox, <http://www.eclipse.org/equinox/>) that provides a general-purpose, secure, and managed Java framework that supports discovering, integrating, and running modules called bundles. Open architecture of the Migrating Desktop makes integration with various tools, applications and middleware extremely easy (in contrast to other products that are only Globus-oriented in most cases). Such approach allows increasing functionality in an easy way without the need of architecture changes.

During the talk the functionality of the Migrating Desktop will be shown with emphasis placed on application handling using MD GUI: specification of job parameters, job submission, monitoring and visualisation of job output. The summary of BalticGrid applications requirements regarding to MD integration will be shown - the applications will be divided into groups relating to the possible methods of integration with MD. The ways of using various kinds of plug-ins will be presented. The talk will also include a brief description of an OSGi standard as a base for application plugins development. The plug-in API and guidelines for applications developers will also be presented as a base for a discussion.

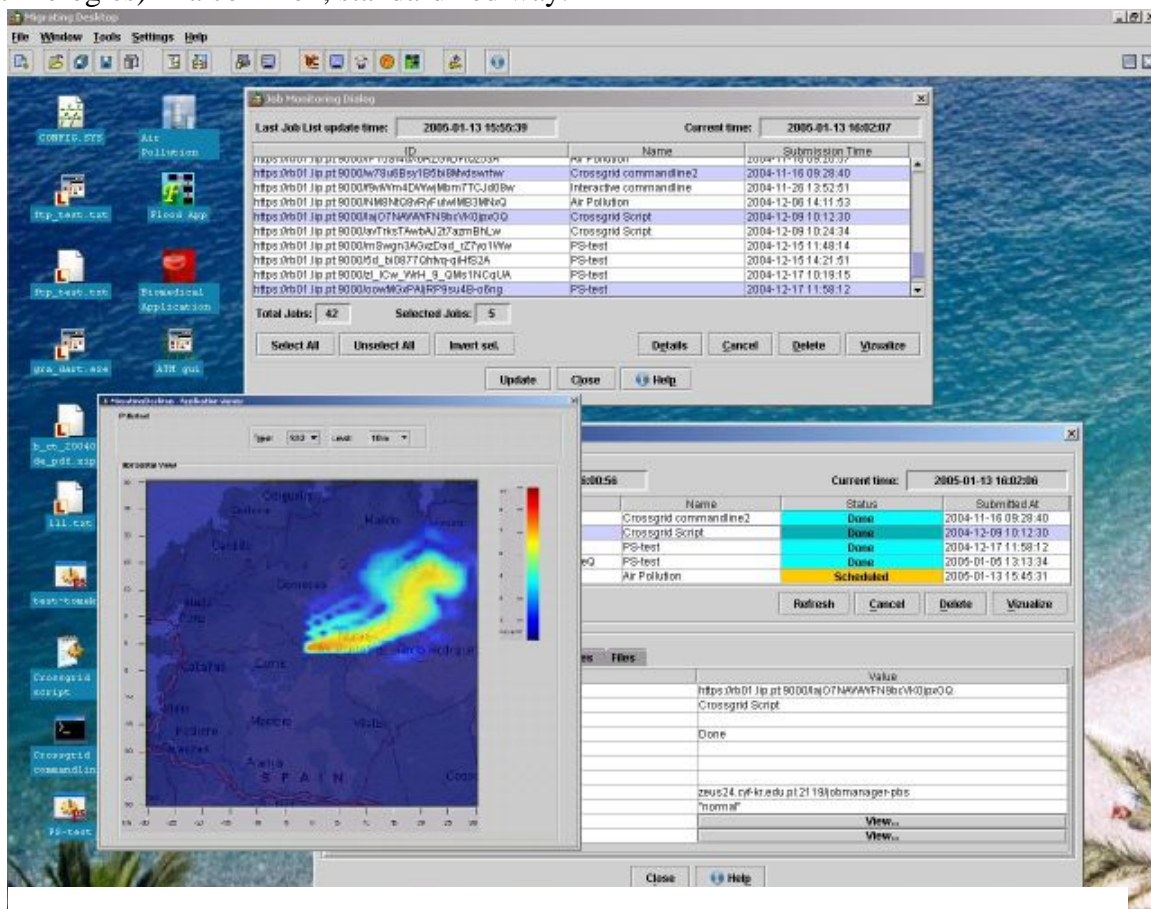


Fig. 1 Migrating Desktop general layout