

Porting applications to a Distributed Computing Infrastructure incorporating Desktop Grids

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Desktop Grids are now integral part of Distributed Computing Infrastructures (DCI) used by scientists worldwide supporting computation and data intensive applications. However, porting and deploying applications on a DCI platform incorporating Desktop Grid resources raises several challenges.

The European EDGeS (Enabling Desktop Grids for e-Science) and its follow-up project EDGI (European Desktop Grid Initiative) have supported several large European user communities from diverse application areas in utilizing Desktop Grid resources for their computation. DEGISCO (Desktop Grids for International Scientific Collaboration), another FP7 project supports several non-European user communities in utilizing this infrastructure. Both projects use a generic methodology called EADM (EDGeS Application Development methodology) when porting applications to a combined Service Grid/Desktop Grid platform.

The presentation overviews the challenges of porting applications to a DCI platform extended with Desktop Grid resources, overviews solutions and best practices, and presents several case studies of successfully ported and deployed applications on the combined platform.