Supporting user communities with customised science gateways – The SCI_BUS project

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Grids and clouds are providing robust infrastructures for scientific applications. However, the wider take-up of these technologies have been limited for a long time due to the lack of user friendly interfaces that enable e-scientists to get transparent access to these platforms. Science gateways are frameworks (or toolsets) which incorporate applications, data and tools to enable running applications on Distributed Computing Infrastructures (DCIs) in a user friendly and intuitive way.

The European SCI-BUS (SCIentific gateway Based User Support) project designs and implements a framework that contains a gateway technology (or toolset) and a customization methodology to support end-users running their applications on DCIs in a seamless way. The gateways, based on widely used production quality frameworks and solutions (Liferay and WS-PGRADE), provide access to a wide range of DCIs incorporating clouds and desktop and service grid systems. The project not only targets e-scientists, but citizens and businesses as end-users too.

Two different types of gateways are being developed for wide ranges of disciplines. Generic-purpose gateways offer generic services for small communities and a small number of users who do not have the resources to tailor gateways to their own specific requirements. Customized (or application-specific) gateways are tailored to the specific needs of particular medium- or large-sized communities to provide access to resources and services.

The presentation will provide an overview of the gateway technology and customization methodology developed by the SCI-BUS project, and will demonstrate how a diverse set of user communities can gain access to robust grid and cloud based resources via these gateways. The WS-PGRADE gateway framework will be introduced with examples for application specific gateways from various disciplines. Special emphasis will be put to earth sciences and seismology, and it will be demonstrated how the South-East European Statistical Seismology community has built a custom gateway utilising this technology