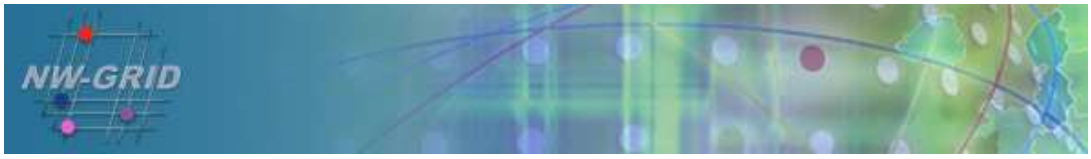

G-R-Toolkit >>>>>>>>>>>>>>>>>>>>>>

What is the G-R-Toolkit?

The G-R-Toolkit combines the best software developed at SFTC during its e-Science Programme from 2001-2007. It allows users of many applications in computational research to manage their high-performance computing and data and information management tasks directly from their desktop systems. Components of G-R-T, some of which are available separately include:

GROWL Scripts – facilitate management of digital certificates and access to datasets on remote Grid resources.	**SRB Client and RCommands** – desktop tools to manage stored datasets and meta-data
RMCS – uses Condor DAGMan to create and enact workflows to integrate data management and remote computation	**R, Perl and Python framework** – scripting interfaces suitable for many research domains from bio-informatics to chemistry
AgentX – a sophisticated semantic toolset using domain specific ontologies to link applications with ASCII, XML and DB formats	**G-R-T C library** – Web service clients appropriate for application programming

How does G-R-T exploit the Grid?

G-R-T uses Grid middleware to perform its tasks on behalf of the user. Well known technology is re-deployed on a dedicated intermediate server, including Condor, Globus, SRB and MyProxy.

Complementarity and Extendability

G-R-T will work alongside and extend existing toolkits. It has a "plug-in" capability allowing Grid client functionality to be imported into applications such as Matlab, Stata, Materials Studio and others. G-R-T is written in a modular style using Web services to achieve a Service Oriented Architecture, a widely adopted pattern in software engineering. This enables its client side to be re-factored or extended to suit most research requirements.

Who are we?

Components of the G-R-Toolkit were developed by Rob Allan, Adam Braimah, Phil Couch, Dan Grose, John Kewley and Rik Tyer in STFC's Grid Technology Group and their partners, see http://www.grids.ac.uk .

North West Grid Resources and Applications

The North West Grid is described at http://www.nw-grid.ac.uk . For more information about access and the commercial services available contact John Bancroft on 01925 603148 or visit the DaComS Web site http://www.dacoms.ac.uk .