

## **eServices Project Develops the Workspace Service to Help Create Execution Environments on the Fly**

The eServices project, a collaboration between researchers at Argonne National Laboratory and Lawrence Berkeley National Laboratory, is developing higher-level Grid services vital to the scientific community. A key example is the *workspace service*, which allows a Grid client to dynamically create and manage a remote workspace, currently implemented as a Unix account. This feature significantly facilitates Grid use for scientists who would otherwise be confronted by the lengthy, complex, and error-prone process of procuring and managing accounts on remote sites.

The workspace service infrastructure is composed of a factory service, which allows an authorized Grid client to create individual accounts or groups of accounts, and an account service, which allows an authorized Grid client to manage individual account properties such as account access policy or time to live. These concepts are represented as Web Services Resource Framework (WSRF) services and are implemented by using the Globus Toolkit version 4 implementation of WSRF. Workspace creation and management are implemented in two ways that can be configured according to site policies and preferences: accounts can be created dynamically or can be assigned from an account pool. Further, ways of terminating accounts may be customized.

The workspace service is currently in a technical preview release (see [www.mcs.anl.gov/workspace](http://www.mcs.anl.gov/workspace)) and is being tested by diverse user communities. In January 2005, after successfully passing an evaluation period, the workspace service was deployed on the testbed of the EGEE project (Enabling Grids for eScience in Europe), which provides researchers in high energy physics with round-the-clock access to major computing resources.