Flexible Authentication and Credential Management for e-Science

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We have designed and implemented Tsukuba-GAMA, which allows the user to generate Grid credentials from various sources of identities, if the user does not have Globus user certificate. Therefore, an authentication method should not be changed when an application system adopts GSI-based e-Science infrastructure. Tsukuba-GAMA also supports to generate VO-enabled proxy certificate to access a set of VO-enabled services. In our prototype implementation, it allows the user to generate and register Grid credentials in MyProxy server behind web portal using a pair of username and password, OpenID authentication, and Globus user certificate. Tsukuba-GAMA also provides user interface for both of the user and the administrator as a JSR168 portlet. The administrative interface helps the administrator to manage users and credentials. We have also implemented GridSphere authentication module, in order to perform the application user interface to access VO-enabled service.