Federated Identity in the Earth Science Domain

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We present developments in identity management and access control in the Earth science domain focussing on the access control architecture for the Earth System Grid Federation (ESGF). This will be described in the context of an initiative led via the EGI-Inspire project to enable systems such as ESGF and GENESI-DEC to interoperate with EGI. ESGF itself is an international collaboration to facilitate access to Earth science data which has begun with a deployment to support CMIP5 (The Coupled Model Intercomparison Project, Phase 5). CMIP5 is a framework of climate model experiments, involving the production and interpretation of data from modelling centres around the world. The results from this activity will be available in a large globally accessible archive mirrored at a number of key sites. A federated security infrastructure has been developed employing a standards-based approach and modular design principles. This has led to a highly flexible system suited to meet a demanding set of requirements. The ESGF system has been deployed at a number of sites around the world and a number of projects are exploiting and building on this infrastructure.

Biography

Philip Kershaw is a specialist in federated identity management and access control in the field of environmental data informatics. He has been a major contributor to the Earth System Grid Federation security architecture. Prior to this, he has worked on the security system for the UK NERC (Natural Environment Research Council) DataGrid and has contributed in the area of security to the Information Architecture for NERC's Science Information Strategy. He has a background in Earth Observation and Space Science related software applications development. He has written a number of security-related software packages for the Python programming language including OpenID, MyProxy client, SAML and XACML implementations.