



Enabling Grids for
E-science in Europe

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JRA1 All Hands Meeting 15-17 November 2004

gLite Security Testing

JRA1 test team



EGEE is a project funded by the European Union under contract INFSO-RI-508833

- First ideas for security testing put together with John White (JRA3)
- John is making requests to the security group about what developers want to test and what is feasible to test soon
- Areas to cover in testing:
 - Delegation,
 - VOMS
 - soap over https
 - Resource Access Control
 - Message level security

Security Utilities

- Security test utilities rpm provided by JRA3
- Contains tools to generate 4 different CA's and user certificates and proxy chains within each CA.
 - Trusted (certificates are everywhere),
 - Fake (no installed certificates),
 - Expired (out of date certificates), covers revoked certificates
 - Big (large key, probably 8192 since 4096 is becoming common now)
 - CA certificates are included in the rpm
 - option to regenerate them available
 - Proxies will not be distributed as they will all expire
- Currently about 300 certificates available

Delegation

- Delegation is to be tested with other services.
- Need to get information about delegated credentials
- Need some way to retrieve a credentials remotely.
- Are there any delegation APIs that should be tested?
- We probably can't do much until the delegation APIs are implemented.

VOMS server

- Use the VOMS admin client
 - Use list users or list groups in a VO
- Throw a lot of requests/queries at the service
 - How does the server hold up ?
- Test server with certificates from different types of CAs
 - The VOMS server should be able to handle the different certificates from the different CAs
 - VOMS server should sign trusted and big certificates and not sign fake or expired certificates

VOMS client

- voms-proxy-init, voms-proxy-info, voms-proxy-destroy
 - voms-proxy-* should be backwards compatible with grid-proxy-*
 - Test that identical behaviour to the grid-proxy-* commands is exhibited – some tests done
 - Bug # 5502, #5503, #5505
 - Test voms-proxy-init with the different certificates in the security utils module.
 - Proxies shouldn't be generated from expired or fake certificates
 - Bug # 5489
- Resource matching based on VO
 - glite-job-list-match should only list resources available to the VO that the proxy was generated with, even if the user is a member of another VO
 - Need to set up a second VO
 - Assumes that individual user DNs are not explicitly listed in the information index

soap over https

- Will test the security integrated into the services
- Services have soap over https working:
 - glite IO server
 - Uses the edg-rmc and edg-lrc
 - This is a stopgap solution. We will wait for the fireman catalog before testing.
 - Just need to deploy the catalogs both securely and insecurely and run the test suites twice. No additional tests are needed.
 - WMS: What is the current status ?
- Test services using the different certificates
- Test if all attributes are used by the security system or ignored?

Resource Access Control

- At the moment this is the glite-gatekeeper running with LCAS and LCMAPS on a CE
- Test if the voms plugins correctly expressed a user's Unix groups in a job.
 - Submit job directly using globus-job-run
 - Check that returned uid/gid correspond to the VOMS attributes
- Test service reliability
 - Send thousands of jobs to it to see when it dies
 - Do this directly using globus-job-run and a voms-proxy

Message level security

- Apparently this is for much later, no testing plans yet
- Any input ?