



Enabling Grids for E-science

gsoap plugin

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- **Tight control over communication channel**
 - Non-blocking I/O operations, including configurable timeouts
- **SSL/TLS compatibility on wire**
 - Compatibility with non-GSI world
- **No need for delegation**
 - LB, JP don't impersonate users
- **No plugin fulfilled the requirements at that time**
 - Plugin from Globus tested
- **Putting data back to gsoap context**
 - new requirement needed to combine soap/legacy protocols on single port

- **Org.glite.security.gsoap-plugin**
 - Hooks for basic I/O operations
 - Using org.glite.security.gss
 - Available since early glite versions
- **Stand-alone module**
 - gsoap sources enclosed and built together
 - ← Multiple versions produced at build time
 - Only depends on security.gss
- **Two modes of usage in application**
 - “Standard” – as per gsoap recommendations, ie. One-line initialization of the plugin in the application
 - “expert” – application can retain full control over the network, gsoap libs used to process SOAP/XML messages
 - ← Easier integration with existing applications
- **Currently used by LB, ICE/WMS, JP**

- **Thin layer above GSSAPI, hiding its complexity**
 - Primarily for Globus, but Kerberos works too
 - Works around some Globus bugs
 - In production for many years
 - After restructuring, API doesn't expose any Globus dependencies
- **Calls to establish/accept network communication**
 - Including authentication and channel protection negotiations
- **Calls to send/receive data securely**
- **All network operations non-blocking**
 - Including DNS queries (c-ares)
- **Currently used by LB, JP**