

gSOAP toolkit fact sheet (<http://gsoap2.sourceforge.net>)

- Intended for C and C++ with optional use of STL containers
- Client and server (HTTP Web server and SOAP/XML engine included)
- High-performance Web services (measured with 2.2KB XML messages over HTTP):
 - 3241 roundtrip calls per second on AMD FX-53 2.4GHz, 64-bit Linux 2.6.5
 - 2990 roundtrip calls per second on AMD Opteron 148 2.2GHz, 64-bit Linux 2.6.5
 - 2265 roundtrip calls per second on 2x Itanium2 1.4GHz, Linux 2.6.9 IA-64
 - 1936 roundtrip calls per second on Pentium4 3GHz (w/o HT), Linux 2.6.5
- Small footprint:
 - 73KB code and 2KB data for XMethods' delayed stock-quote client on Pentium4, Linux 2.6.5, gcc 3.3.3 -O1
 - 100KB code and 2KB data for Google API client on Pentium4, Linux 2.6.5, gcc 3.3.3 -O1
- Portable open-source C/C++ code, (tested on):
 - Windows (Win32, MS-DOS, and Cygwin)
 - Linux (RedHat, SuSE),
 - Unix (Solaris, HP-UX, FreeBSD, TRU64, Irix, QNX, AIX)
 - Mac OS X (universal)
 - small and embedded OSes (VxWorks, WinCE, Palm OS, Symbian).
- SOAP specification support:
 - WS-I Basic Profile 1.0a compliant
 - SOAP 1.1
 - SOAP 1.2
 - SOAP RPC encoding
 - SOAP document/literal style
 - request-response
 - one-way
 - one-way asynchronous
 - SOAP-over-UDP
 - C14N-exc
- Other XML-based protocol support:
 - XML-RPC
 - RSS
- SOAP attachments:
 - MIME (SwA)
 - DIME (streaming)
 - MTOM (streaming)
- WSDL 1.1 specification support:
 - WS-I Basic Profile 1.0a compliant
 - WSDL to C or C++ source code conversion
 - XML schema to C or C++ source code conversion
 - C or C++ source code (header file) to WSDL and XML schema conversion
- UDDI v2
 - inquire API
 - publish API
- WS-* protocol support:
 - WS-Addressing (2003/03, 2004/03, 2004/08, 2005/03)
 - WS-Discovery
 - WS-Enumeration
 - WS-Security (2004/01)
 - ... (user can use others with the 'wsdl2h' translation tool)
- HTTP 1.0/1.1 and HTTPS support:
 - GET and POST
 - cookies
 - compression
 - chunking
 - keep-alive
 - basic authentication
 - digest authentication
 - MD5 checksum
 - SSL/TLS encryption and certificate authentication
 - SSL session caching
 - proxies and proxy authentication
- Networking support:
 - IPv4 and IPv6
 - TCP
 - UDP unicast
 - UDP multicast
 - GSI (Grid Security Infrastructure)
 - ... (other network stream handlers are available as plug-ins)
- Server module support:
 - Apache 1.x and 2.0 mod_gsoap
 - IIS (ISAPI)
 - WinInet
 - CGI
 - FastCGI
 - stand-alone (daemon)
- Architecture features:
 - integrated memory management with automatic leak detection in debug mode
 - compiler-based XML serialization of native C and C++ data structures
 - custom serializers and DOM support
 - plug-ins for extensions (message logging, statistics, etc.)
 - internationalization/localization (UTF8-encoded UCS4, MB strings)
 - extensive documentation and numerous examples included