GT 5.2.2 Release Notes: GSI-OpenSSH

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1. Component Overview

GSI-OpenSSH is a modified version of OpenSSH that adds support for X.509 proxy certificate authentication and
delegation, providing a single sign-on remote login and file transfer service. GSI-OpenSSH can be used to login to
remote systems and transfer files between systems without entering a password, relying instead on a valid proxy cred-
dential for authentication. GSI-OpenSSH forwards proxy credentials to the remote system on login, so commands
requiring proxy credentials (including GSI-OpenSSH commands) can be used on the remote system without the
need to manually create a new proxy credential on that system. For more information about GSI-OpenSSH, see the
GSI-OpenSSH Home Page.\footnote{\url{http://grid.ncsa.illinois.edu/ssh/}}

2. Feature summary

Supported Features

- The \texttt{gsssh} command provides a secure remote login service with forwarding of X.509 proxy credentials.
- The \texttt{gsiscp} and \texttt{gssftp} commands provide a secure file transfer service authenticated with
  X.509 proxy credentials, mimicking the \texttt{rcp/scp} and \texttt{ftp/sftp} commands.
- All standard OpenSSH features are supported, excluding Kerberos authentication. Kerberos au-
  thentication is not compatible with GSI-enabled OpenSSH.
- The GSI-OpenSSH server can replace the standard system SSH server in typical environments.
- If no username is given on the command-line, GSI-OpenSSH automatically determines the
  username that corresponds to the X.509 proxy certificate subject in the server’s grid-map-
  file.

Deprecated Features

- None

\footnote{\url{http://grid.ncsa.illinois.edu/ssh/}}
3. Summary of Changes in Util OpenSSH

GT 5.2.2 contains GSI-OpenSSH 5.5. See the GSI-OpenSSH Release History\(^2\) for more details on this and other GSI-OpenSSH versions.

4. Fixed Bugs for Util OpenSSH

See the GSI OpenSSH 5.5 Announcement\(^3\) for a list of fixes in this release.

5. Known Problems in Util OpenSSH

None.

6. Technology dependencies

GSI-OpenSSH depends on the following GT components:

- **GSI C**

GSI-OpenSSH depends on the following 3rd party software:

- **OpenSSH**\(^4\)

7. Tested platforms

Tested Platforms for GSI-OpenSSH

- Mac OS X 10.5
- x86/x86_64 GNU/Linux
- PPC AIX 5.3
- Sun4u Solaris 5.10

8. Backward compatibility summary

GSI-OpenSSH is backward compatible.

9. Associated Standards

Associated standards for GSI-OpenSSH:

- **RFC 2743**\(^5\) GSSAPI
- **RFC 2744**\(^6\) GSSAPI: C-bindings

\(^2\) [http://grid.ncsa.illinois.edu/ssh/history.html](http://grid.ncsa.illinois.edu/ssh/history.html)
\(^3\) [http://lists.globus.org/pipermail/gsi-openssh-announce/2012-May/000015.html](http://lists.globus.org/pipermail/gsi-openssh-announce/2012-May/000015.html)
\(^4\) [http://www.openssh.org/](http://www.openssh.org/)
• RFC 4462\textsuperscript{7} GSSAPI Authentication and Key Exchange for the SSH Protocol

## 10. For More Information

See GSI-OpenSSH more information about this component.

### Glossary

#### C

certificate subject

An identifier for the certificate owner, e.g. "/DC=org/DC=doegrids/OU=People/CN=John Doe 123456". The subject is part of the information the CA binds to a public key when creating a certificate.

#### P

proxy certificate

A short lived certificate issued using a EEC. A proxy certificate typically has the same effective subject as the EEC that issued it and can thus be used in its place. GSI uses proxy certificates for single sign on and delegation of rights to other entities.

For more information about types of proxy certificates and their compatibility in different versions of GT, see http://dev.globus.org/wiki/Security/ProxyCertTypes.

proxy credentials

The combination of a proxy certificate and its corresponding private key. GSI typically stores proxy credentials in /tmp/x509up_u<uid>, where <uid> is the user id of the proxy owner.

\textsuperscript{7}http://www.ietf.org/rfc/rfc4462.txt