GT 5.0.1 Release Notes: GSI-OpenSSH

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<titleabbrev>Release Notes</titleabbrev>

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 credential 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.

2. Feature summary

Supported Features

- The gsissh command provides a secure remote login service with forwarding of X.509 proxy credentials.
- The gsiscp and gsisftp commands provide a secure file transfer service authenticated with X.509 proxy credentials, mimicking the rcp/scp and ftp/sftp commands.
- All standard OpenSSH features are supported, excluding Kerberos authentication. Kerberos authentication 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-mapfile.

Deprecated Features

1 http://grid.ncsa.illinois.edu/ssh/
3. Summary of Changes in GSI-OpenSSH

GT 5.0.1 contains GSI-OpenSSH 5.1. See the GSI-OpenSSH Release History\(^2\) for more details on this and other GSI-OpenSSH versions.

4. Bug Fixes

See the GSI-OpenSSH Release History\(^3\) for details.

5. Known Problems

The following problems and limitations are known to exist for GSI-OpenSSH at the time of the 5.0.1 release:

5.1. Limitations

- No known limitations exist.

5.2. Outstanding bugs

No bugs are known to exist for GSI-OpenSSH.

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

\(^2\) http://grid.ncsa.illinois.edu/ssh/history.html
\(^3\) http://grid.ncsa.illinois.edu/ssh/history.html
\(^4\) http://www.openssh.org/
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
- RFC 4462\(^7\) 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. |

\(^5\) http://www.ietf.org/rfc/rfc2743.txt
\(^6\) http://www.ietf.org/rfc/rfc2744.txt
\(^7\) http://www.ietf.org/rfc/rfc4462.txt