

What is SFTP, and how do I use an SFTP client to transfer files?

results per page

Include archived documents

On this page:

- [Overview](#)
- [Graphical clients](#)
- [Command-line SFTP](#)
- [At IU](#)

Overview

The SSH [File Transfer Protocol](#) (also known as Secure FTP and SFTP) is a computing network protocol for accessing and managing files on remote file systems. SFTP also allows file transfers between hosts, similar to the [SCP](#) protocol. Unlike standard File Transfer Protocol (FTP), SFTP encrypt commands and data both, preventing passwords and sensitive information from being transmitted in the clear over a network.

SFTP clients are programs that use [SSH](#) to access, manage, and transfer files. SFTP clients are functionally similar to FTP clients, but they use different protocols. Consequently, you cannot use standard FTP clients to connect to SFTP servers, nor can you use clients that support only SFTP to connect to FTP servers. Graphical clients are available for SFTP, or you can use it from the command line on a [Unix](#) or Mac OS X computer.

[Back to top](#)

Graphical SFTP clients

Graphical SFTP clients simplify file transfers by allowing you to drag and drop icons from one window to another. Each icon represents a file or directory, and each window represents a computer's file system. When you open the program, you specify the name of the remote host to which you want to connect, and then [authenticate](#) with your username and password for that host.

[Back to top](#)

Command-line SFTP

You can use SFTP from the command line on Unix and Mac OS X computers. To start an SFTP session, at the command prompt, enter:

```
sftp username@host
```

For example, if your username is `dvader`, to connect to your

account on the host `empire.gov`, enter:

```
sftp dvader@empire.gov
```

Enter your password when prompted.

Some standard command-line SFTP commands include:

Command	Function
<code>cd</code>	Change the directory on the remote computer.
<code>chmod</code>	Change the permissions of files on the remote computer.
<code>chown</code>	Change the owner of files on the remote computer.
<code>exit</code> (or <code>quit</code>)	Close the connection to the remote computer and exit SFTP.
<code>get</code>	Copy a file from the remote computer to the local computer.
<code>help</code> (or <code>?</code>)	Get help on the use of SFTP commands.
<code>lcd</code>	Change the directory on the local computer.
<code>lls</code>	List the contents of the current directory on the local computer.

Command	Function
<code>cd</code>	Change the directory on the remote computer.
<code>chmod</code>	Change the permissions of files on the remote computer.
<code>chown</code>	Change the owner of files on the remote computer.
<code>exit</code> (or <code>quit</code>)	Close the connection to the remote computer and exit SFTP.
<code>get</code>	Copy a file from the remote computer to the local computer.
<code>help</code> (or <code>?</code>)	Get help on the use of SFTP commands.
<code>lcd</code>	Change the directory on the local computer.
<code>lls</code>	List the contents of the current directory on the local computer.
<code>mkdir</code>	Create a directory on the local computer.
<code>ln</code> (or <code>symlink</code>)	
<code>lpwd</code>	Show the current directory (present working directory) on the local computer.

Command	Function
<code>ls (or dir)</code>	List the contents of the current directory on the remote computer.
<code>lumask</code>	Change the local <code>umask</code> value.
<code>mkdir</code>	Create a directory on the remote computer.
<code>put</code>	Copy a file from the local computer to the remote computer.
<code>pwd</code>	Show the current directory (present working directory) on the remote computer.
<code>rename</code>	Rename a file on the remote computer.
<code>rm</code>	Delete a file on the remote computer.
<code>rmdir</code>	Remove a directory on the remote computer (the directory usually has to be empty).
<code>version</code>	Display the SFTP version.
<code>!</code>	Exit to the Unix shell prompt, where you can enter commands. To get back to SFTP, enter <code>exit</code> . If you combine <code>!</code> with a command (e.g., <code>!pwd</code>), SFTP will execute the command without dropping you to the Unix prompt.

[Back to top](#)

At IU

At Indiana University, specify the following hostnames for SFTP file transfers involving these [UITS](#) resources (authenticate using your [Network ID](#) username and [passphrase](#)):

System	Hostname
Big Red II	<code>bigred2.uits.iu.edu</code>
Quarry	<code>quarry.uits.indiana.edu</code>
Mason	<code>mason.indiana.edu</code>
Research Data Complex	<code>rdc.uits.iu.edu</code>
Research File System	<code>rfs.iu.edu</code>
Scholarly Data Archive	<code>sftp.sdarchive.iu.edu</code>
Mercury (Pages)	<code>mercury.uits.indiana.edu</code>
Webserve	<code>webserve.iu.edu</code>

System	Hostname
Big Red II	<code>bigred2.uits.iu.edu</code>
Quarry	<code>quarry.uits.indiana.edu</code>
Mason	<code>mason.indiana.edu</code>
Research Data Complex	<code>rdc.uits.iu.edu</code>
Research File System	<code>rfs.iu.edu</code>
Scholarly Data Archive	<code>sftp.sdarchive.iu.edu</code>
Mercury (Pages)	<code>mercury.uits.indiana.edu</code>
Webserve	<code>webserve.iu.edu</code>

For IU, students, faculty, and staff, two graphical SFTP clients, CyberDuck (for OS X) and WinSCP (for Windows), are available for free download from [IUware](#). Both applications also are available for

use on the computers in the IU Bloomington and IUPUI [Student Technology Centers](#) (STCs). Additionally, WinSCP is available for use on personal Windows workstations via [IUanyWare](#). For more, see [At IU, what SSH/SFTP clients are supported and where can I get them?](#)

[Back to top](#)

This document was developed with support from [National Science Foundation \(NSF\) grant OCI-1053575](#). Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the NSF.

This is document akqg in the Knowledge Base.

Last modified on 2015-06-23.