

Guide to the Configuration and Use of SFTP Clients for Uploading Digital Treatment Planning Data to ITC

The ITC has tested several SFTP client programs for submitting digital data to the ITC. These include one commercial package (Ipswitch WS FTP Pro) and two free, open-source SFTP clients programs (FileZilla and WinSCP) for the Windows PC platform, as well as the command-line sftp program (OpenSSH) in Linux. Procedures for configuring these programs to submit data are outlined below.

Other client programs may also support upload of data to the ITC as long as they are capable of connecting to the SFTP/SSH2 server (**ITCsubmit.wustl.edu**, IP address **128.252.17.87**) using network port 22. Configuration of these programs will likely be similar to those shown below.


WS FTP Professional (Windows PC)

WS FTP Professional is a commercial FTP client software package, available from Ipswitch, Inc. (http://www.ipswitch.com/products/ws_ftp/index.asp). Versions of WS FTP Pro as early as 8.02 are known to support SFTP/SSH2 connections. The example shown below is for version 8.02.

Once it is installed, start up WS FTP Pro and click on “Connect” to open the Remote Host menu. Click on “Create Site...”, enter a profile name, and click “Next”.

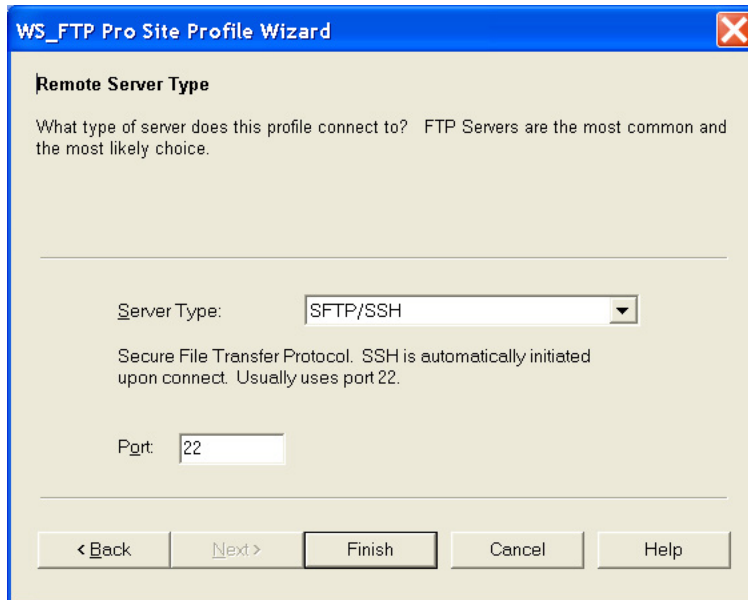
In the Host Address panel, enter “ITCsubmit.wustl.edu” or “128.252.17.87”. Click “Next”.

Enter your login credentials, including your User ID (begins with “rtog-“) and assigned password. (Leave Account blank.) Click “Next”.



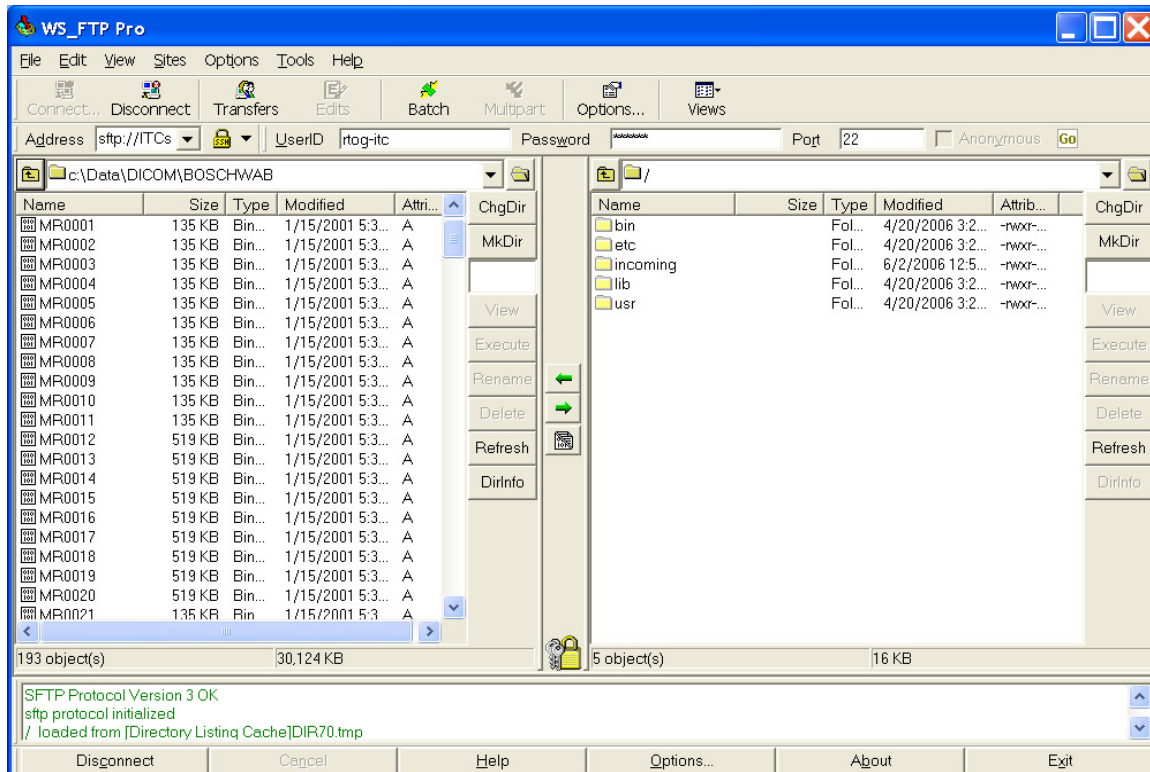
The screenshot shows the "WS FTP Pro Site Profile Wizard" dialog box. The title bar includes the text "WS FTP Pro Site Profile Wizard" and a close button. The main content area is titled "Login Credentials" and contains the following text: "Enter your User ID and Password. These would have been provided to you by your ISP or administrator. When logging in anonymously, it is customary to use your email address as the password. Very few FTP servers require the Account field. You may store your password now, later, or enter it whenever you connect." Below this text are three input fields: "User Id:" with the value "rtog-inst", "Password:" with a masked password, and "Account:" which is empty. To the right of these fields are three checkboxes: "Anonymous" (unchecked), "Save Password" (checked), and "Save Account" (checked). At the bottom of the dialog are five buttons: "< Back", "Next >", "Finish", "Cancel", and "Help".

Finally, in the Server Type dialog, select “SFTP/SSH”. You should see Port: 22 at the bottom of this panel. Click “Finish”.



You should now be able to login to the SFTP server using the profile you have just configured. When you connect to the server for the first time, you will be asked whether you wish to accept the server's host key ("7c:ac:6e:86:fe:ba:85:69:d2:13:f0:df:ca:c5:55:b0"). Click "Yes" to accept the ITC server host key.

You should see window similar to the one below with your local file system on the left side and the remote (ITC SFTP server) directory on the right. Note that you are logged in to your private home directory (/) on the SFTP server. You will only be able to modify files within your own **incoming** directory.



Double-click on the **incoming** directory icon to enter the /incoming directory. Click on the “MkDir” button on the right-hand side and enter a directory name to create a new directory in which to upload data; enter a descriptive name for this directory. (Please use only alphanumeric characters, “_”, and “-“ and avoid using spaces in the directory name.) Click OK to create the directory. Double-click the newly-created directory icon to enter this directory.

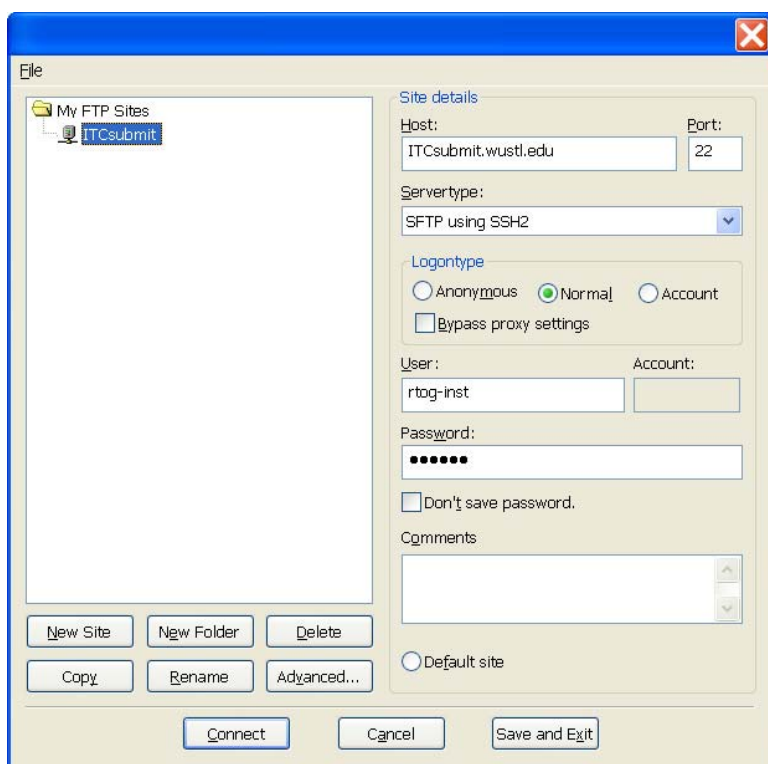
Navigate to the local directory containing the data files to be uploaded on the left-hand “Local Site:” window. Use the right arrow in the middle to upload selected files from the local directory (left side) to the ITC server (right side) Check the status window (bottom) to note the status of file transfers. Select File → Disconnect to logout.

Please remember to submit a DDSI form on the ATC web site and send email to itc@castor.wustl.edu announcing your upload when your transfer is complete.

FileZilla (Windows PC)

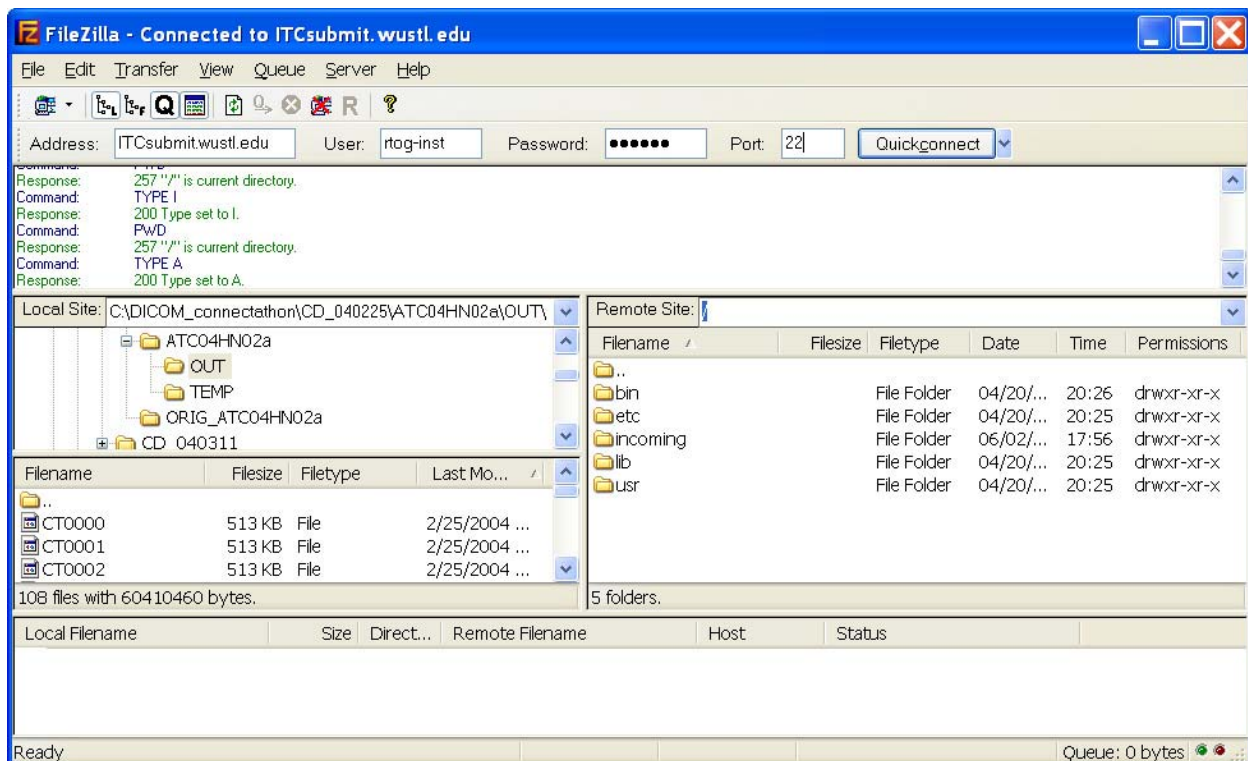
FileZilla can be downloaded from SourceForge.net (<http://sourceforge.net/projects/filezilla/>), Click on “Download FileZilla” and select the FileZilla executable for download (current version, as of 6/12/06, is [FileZilla 2.2.24b setup.exe](#)). Save and run this setup program on your Windows PC.

Once it is installed, start up FileZilla and open File→Site Manager... (or type Ctrl-S). Click on “New Site” and enter a name for this connection, e.g., *Test SFTP*. Fill in Site details as follows: Host: **ITCsubmit.wustl.edu** (or **128.252.17.87**) Port: **22** Server type: **SFTP using SSH2** Logontype: **Normal** User: (enter the user name of your regular FTP account (begins with “rtog-”)) Password: (enter the assigned password for this account). Click “Connect”.



You should now be able to login to the SFTP server using the profile you have just configured. When you connect to the server for the first time, you will be asked whether you wish to accept the server's host key ("7c:ac:6e:86:fe:ba:85:69:d2:13:f0:df:ca:c5:55:b0"). Click "Yes" to accept the ITC server host key.

You should see window similar to the one below with your local file system on the left side and the remote (ITC SFTP server) directory on the right. Note that you are logged in to your private home directory (/) on the SFTP server. You will only be able to modify files within your own **incoming** directory.



Double-click on the **incoming** directory icon to enter the /incoming directory. Right-click on the right-hand side and select "Create Directory" to create a new directory in which to upload data; enter a descriptive name for this directory. (Please use only alphanumeric characters, "_", and "-" and avoid using spaces in the directory name.) Click OK to create the directory. Double-click the newly-created directory icon to enter this directory.

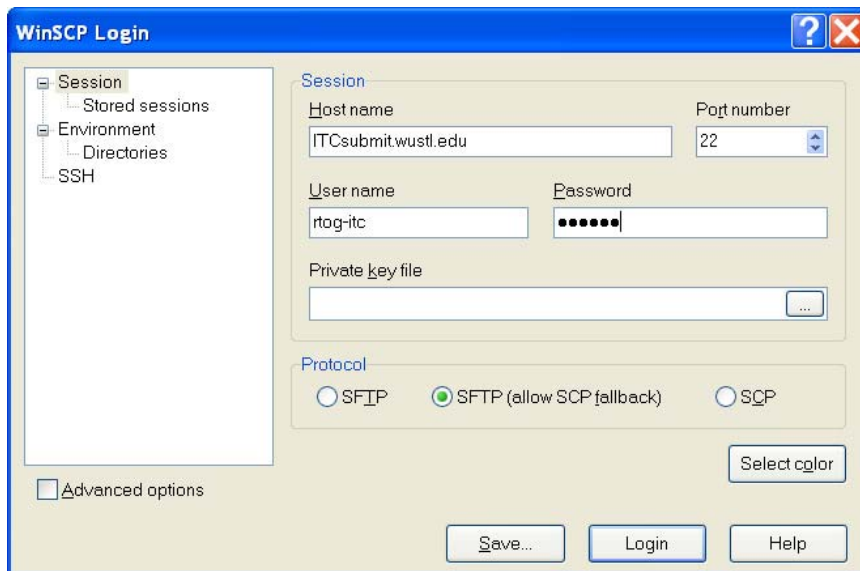
Navigate to the local directory containing the data files to be uploaded on the left-hand "Local Site:" window. Click-drag-and-drop files from the local site to the remote site to upload them to the ITC server. Check the status window (bottom) to note the status of file transfers. Select File → Disconnect to logout.

Please remember to submit a DDSI form on the ATC web site and send email to itc@castor.wustl.edu announcing your upload when your transfer is complete.

WinSCP (Windows PC)

WinSCP can be downloaded from SourceForge.net (<http://sourceforge.net/projects/winscp/>), Click on “Download WinSCP” and select the WinSCP executable for download (current version, as of 6/12/06, is [winscp381setup.exe](#)). Save and run this setup program on your Windows PC.

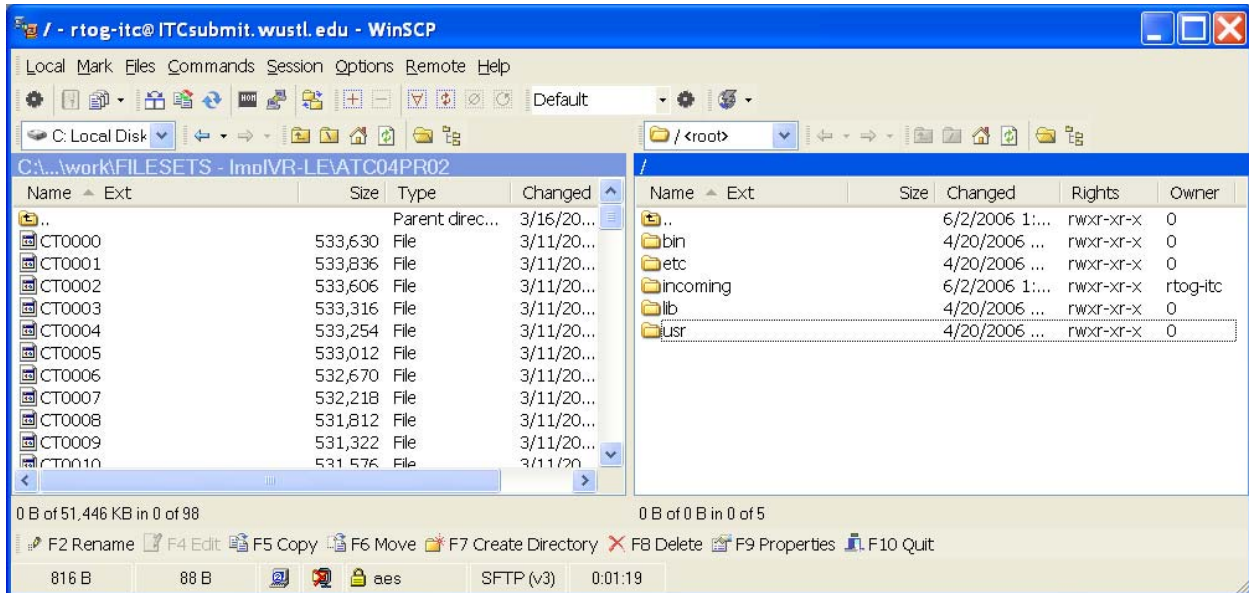
Once it is installed, start the WinSCP3 program. You should see the WinSCP Login window. Enter Session details as follows: Host name: **ITCsubmit.wustl.edu** (or **128.252.17.87**) Port number: **22** User name: (enter the user name of your regular FTP account (begins with “rtog-“)) Password: (enter the assigned password for this account). Private key file. (leave blank) Protocol: **SFTP (allow SCP fallback)** Click “Save...”.



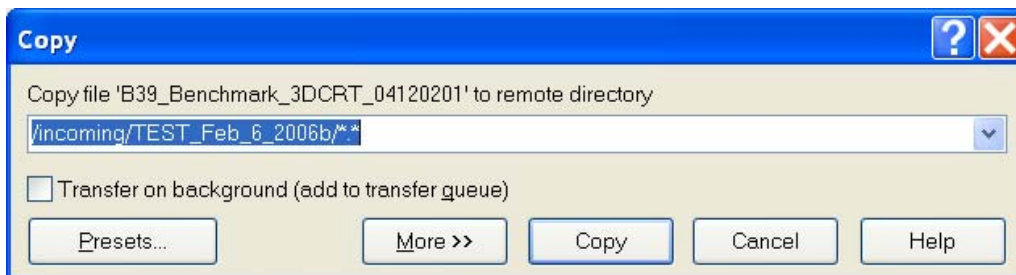
When you connect to the server for the first time, you will be asked whether you wish to accept the server’s host key (“7c:ac:6e:86:fe:ba:85:69:d2:13:f0:df:ca:c5:55:b0”). Click “Yes” to accept the ITC server host key.

Click “Login” to connect to the ITC server. You should see a display similar to the one shown below with your local file system on the left side and the remote (ITC SFTP server) directory on the right. Note that you are logged in to your private home directory (/) on the SFTP server. You will only be able to modify files within your own **incoming** directory.

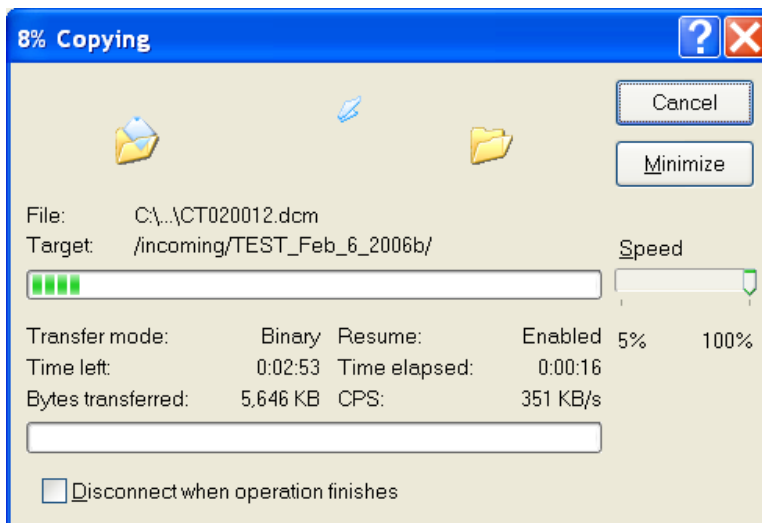
Double-click on the **incoming** directory icon to enter the /incoming directory. Right-click on the right-hand side and select “New → Directory” to create a new directory in which to upload data; enter a descriptive name for this directory. (Please use only alphanumeric characters, “_”, and “-“ and avoid using spaces in the directory name.) Click OK to create the directory. Double-click the newly-created directory icon to enter this directory.



Navigate to the local directory containing the data files to be uploaded on the left-hand “Local Site:” window. Click-drag-and-drop files from the local site to the remote site. Click on “Copy” to upload them to the ITC server.



Copy status is displayed in a popup window:



Use Session→Disconnect to logout. Please remember to submit a DDSI form on the ATC web site and send email to itc@castor.wustl.edu announcing your upload when your transfer is complete.

Command-line sftp (Linux)

A command-line sftp program (OpenSSH) is included with most Linux distributions. An example of uploading all *.dcm files from a directory named data is shown below.

1. The **cd data** command is used to enter the user's local data directory.
2. A connection to the SFTP server is opened using **sftp rtog-inst@128.252.17.87** (where **rtog-inst** is the user name of your regular FTP account. (The password of your regular FTP account is entered at the prompt.)
3. The **cd incoming** command is used to enter the user's writable upload directory on the SFTP server.
4. A new upload directory is created using the **mkdir** command, and **cd** is used to enter the newly created directory.
5. Finally, the **put *.dcm** command is used to start the upload. (Note that, unlike the FTP put command, wildcards may be used for **put** in sftp.)
6. The connection is closed using the **quit** command.

```
% cd data
% sftp rtog-inst@128.252.17.87
Connecting to 128.252.17.87...
rtog-inst@128.252.17.87's password:
sftp> cd incoming
sftp> mkdir TEST_Feb_06_2006
sftp> cd TEST_Feb_06_2006
sftp> put *.dcm
Uploading CT020001.dcm to
/incoming/TEST_Feb_06_2006/CT020001.dcm
CT020001.dcm
CT020001.dcm
100% 513KB 843.2KB/s 00:00
Uploading CT20002.dcm to /incoming/TEST_Feb_06_2006/CT20002.dcm
CT020002.dcm
CT020002.dcm
100% 513KB 753.9KB/s 00:00
sftp> ls
.
..
CT020001.dcm
CT020002.dcm
sftp> quit
%
```

More complete instructions for using this program are found in the Linux sftp manual page. Please remember to submit a DDSI form on the ATC web site and send email to itc@castor.wustl.edu announcing your upload when your transfer is complete.