**StoneEdge Tunnel Help**

Updated 18 December 2012 by Dave McGinnis

# Overview

The StoneEdge Tunnel is used in concert with the StoneEdgeII Remote Observing web site. This web site provides a graphical user interface (GUI) to control the StoneEdge Telescope. For security reasons, the computers that control the telescope sit behind a firewall to protect the telescope from hackers. The StoneEdge Tunnel sets up a secure shell (ssh) tunnel so a remote observe can control the telescope via the gui without unwanted parties intruding. The StoneEdge Tunnel maps the following ports though the firewall:

* StoneEdgeII Tomcat Server
  + stoneEdge:localhost: 8080 -> localhost:8080
* Telescope Web Server
  + stoneEdge:localhost:80 -> localhost:8081
* Dome Camera
  + stoneEdge:axis:80 -> localhost:8082
* Finder Scope Camera
  + stoneEdge:axis1:80 -> localhost:8083

# Connecting

The tunnel is connected under the Connection menu.

To connect the tunnel to StoneEdge, a security key file is needed to be provided by the observatory coordinator (Vivian Hoette). This key is equivalent to the password for the telescope and should not be distributed.

The Connect sub-menu under the Connection menu will pop up a dialog box asking the user to supply the location of the security key file. If the right security key file is provided, the tunnel will be open and the background image will change from:

|  |  |
| --- | --- |
| Figure 1. Tunnel Closed | Figure 2. Tunnel open |

The StoneEdge Gui can now be viewed in a browser at:

<http://localhost:8080/StoneEdgeII/>

# Transferring Files

The tunnel application also offers the ability to transfer files from the StoneEdge Web GUI image server to the user’s local disk. The application uses secure shell file transfer protocol (sftp) to get the image server directory structure. If the user has a slow internet connection, the application will be slow navigating the directory structure.

The Transfer Files sub-menu is underneath the File menu. The sub-menu is only accessible if the tunnel has been connected first. Once the Transfer files sub-menu item has been selected, the Get Images window will be visible as shown in Figure 2. To minimize network traffic, the window will not display the user directories until the StoneEdge file has been clicked on as shown in Figure 4.

|  |  |
| --- | --- |
| Figure 2. StoneEdge Web GUI image server entry point | Figure 4. Remote User directories |

Next, the user directory is selected as shown in Figure 5 and the observing directories are displayed. As shown in Figure 6, it is possible to download an entire observing directory. Once the download button on the bottom of the window has been clicked, the user will be asked to specify a location on their local disk to store the files. The program will create a directory with the same name as the remote directory at this location and all the files in that observing directory will be downloaded.

|  |  |
| --- | --- |
| Figure 5. User observing directories | Figure 6. Download of entire observing directory |

The status of the download will be shown in the bottom panel of the window as shown in Figure 7. Once the download has been completed, the message “Completed!” will be displayed on the top line of the status panel.

|  |
| --- |
| Figure 7. Status panel showing that entire directory download has been completed |

It is possible to download a single image as shown in Figures 8 and 9.

|  |  |
| --- | --- |
| Figure 8. Single image file selected for download. | Figure 9. Single filed download completed |