

SCP/Stargate Tutorial

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- **Overview**

Keywords: stargate, wireless network, scp

This quick tutorial explains how to data record the auto-pilot data using the *avionics* code, convert it, and then how to get files from the Stargate. By using the PuTTY SCP protocol to access the Stargate and copy the files to a designated target directory.

```
PuTTY Secure Copy client
Release 0.60
Usage: pscp [options] [user@]host:source target
pscp [options] source [source...] [user@]host:target
pscp [options] -ls [user@]host:filespec
Options:
-V print version information and exit
-pgppfp print PGP key fingerprints and exit
-p preserve file attributes
-q quiet, don't show statistics
-r copy directories recursively
-v show verbose messages
-load sessname Load settings from saved session
-P port connect to specified port
-l user connect with specified username
-pw passw login with specified password
-l -2 force use of particular SSH protocol version
-4 -6 force use of IPv4 or IPv6
-C enable compression
-i key private key file for authentication
-noagent disable use of Pageant
-agent enable use of Pageant
-batch disable all interactive prompts
-unsafe allow server-side wildcards (DANGEROUS)
-sftp force use of SFTP protocol
-scp force use of SCP protocol
```

- **Required Components**

All you need is SCP and wireless communication set up with the Stargate. You can find the Putty SCP version for Windows here: <http://the.earth.li/~sgtatham/putty/latest/x86/pscp.exe>.

- **Configure Stargate**

- Add the `-save on` command to the *avionics* code version 1.3+, adding the following option enables data recording to `/mnt/cf1`. For more informatin, enter the command `avionics -help`
 - `avionics -save on`
- Data recording will continue as long as the *avionics* code is running. Note, that it is saved in three different files:
 - `gps.dat` - GPS Data

- imu.dat - IMU Data
- nav.dat - Navigation Data
- The three files are binary files. To decode them, use the *decoder* program that is apart of the avionics autopilot code. This program will decode the binary *.dat* files to *.txt* text files at the same location, */mnt/cf1*
 - decoder
- You can now copy the text files (*gps.txt*, *imu.txt*, *nav.txt*) to your computer using SCP.

• Configure PC

- The wireless communication should be set up as instructed in my [Stargate Tutorial](#). To make sure that the connection is good, *ping* the Stargate from your PC. Ex: *ping 192.168.11.102*
- Download the [SCP executable](#) and save it to a directory. Open your desired command prompt and navigate to the directory where you saved *pscp.exe*. With a properly configured connection to the Stargate use the following command:
- The general form is: `pscp user@hostname:source target`
- Here is an example execution:

```
pscp root@192.168.11.102:/mnt/cf1/imu.txt .
The server's host key is not cached in the registry. You have no guarantee that
the server is the computer you think it is.
The server's dss key fingerprint is:
ssh-dss 1024 a2:5d:0a:7b:09:0b:7f:34:fa:25:32:5a:5f:64:ea:d5
If you trust this host, enter "y" to add the key to
PuTTY's cache and carry on connecting.
If you want to carry on connecting just once, without
adding the key to the cache, enter "n".
If you do not trust this host, press Return to abandon the
connection.
Store key in cache? (y/n) y Enter y
root@192.168.11.102's password: Enter Stargate password, ex: rootme

imu.txt | 28 kB | 28.3 kB/s | ETA: 00:00:00 | 100%
```

- The file has now been transferred to your active directory (.)

• Useful Links

- *Useful Links*
 - [Stargate Tutorial](#) to set up wireless communication
 - [PuTTY Downloads](#)
 - [Contact me](#)