

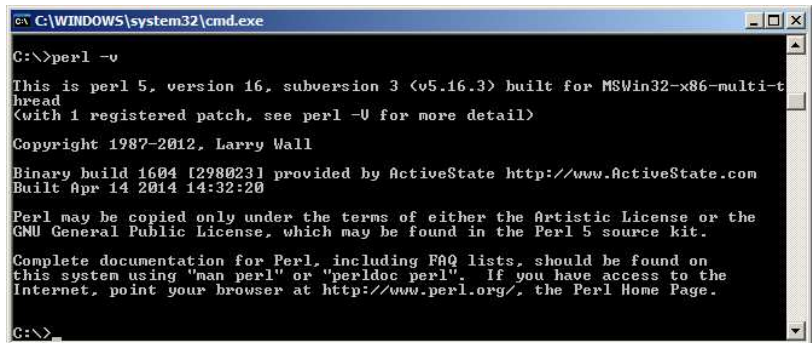
PERL-FTP Installation for Callisto

- A. PERL-FTP is a script written by Christian Monstein to replace FTP-WatchDog as the FTP client for uploading Callisto data to FHNW. New versions of FTP-WatchDog are no longer free plus FTP-WatchDog fails if the data folder reaches a certain (but unknown) size limit.
- B. PERL-FTP does the following:
- ⚙ Check the Callisto data directory for FITS files
 - ⚙ If a new FITS file is available, copy it to the FTP-server at FHNW
 - ⚙ Move the new FITS file to a predetermined location for backup such as another Windows folder, another drive on the same PC, a mapped drive, USB-stick, or USB-disk
 - ⚙ Wait a predetermined time and repeat the whole process

C. Steps needed:

1. Install ActivePERL (PERL5 or higher) on your Windows-PC from <http://www.ActiveState.com> or <http://www.activestate.com/activeperl>

2. Open the Windows console (command line interface) with Start - Run - cmd.exe



```
C:\WINDOWS\system32\cmd.exe
C:\>perl -v
This is perl 5, version 16, subversion 3 (v5.16.3) built for MSWin32-x86-multi-t
hread
(with 1 registered patch, see perl -U for more detail)
Copyright 1987-2012, Larry Wall
Binary build 1604 [2980231] provided by ActiveState http://www.ActiveState.com
Built Apr 14 2014 14:32:20
Perl may be copied only under the terms of either the Artistic License or the
GNU General Public License, which may be found in the Perl 5 source kit.
Complete documentation for Perl, including FAQ lists, should be found on
this system using "man perl" or "perldoc perl". If you have access to the
Internet, point your browser at http://www.perl.org/, the Perl Home Page.
C:\>
```

3. Type perl -v to confirm that PERL is running (image right)

4. Create new folders for the Perl script and Callisto data Backup location, for example,

C:\Callisto\Perl and C:\Callisto\Backup

5. Download PERL-FTP from <http://www.e-callisto.org/Software/perl-ftp.zip>
6. Unzip perl-ftp.zip into the new Perl folder created above, for example, C:\Callisto\Perl
7. Use a text editor such as NotePad to edit the file tst.pl. Go to the new Perl folder, right-click tst.pl and select Open with – Notepad or Choose program... and select your text editor. Change **my \$sourcePath** and **my \$DestinationPath** to your configuration. For example, if your Callisto data and backup folders are C:\Callisto\Data and C:\Callisto\Backup, then:

```
my $SourcePath      = "C:/Callisto/Data";
my $DestinationPath = "C:/Callisto/Backup";
```

Note: The source and destination paths must use forward-slash / as shown; do not use backward-slash \

8. Edit **\$filename** and replace the text **HB9SCT** with your instrument name. This is the [instrument] parameter in your Callisto configuration file, callisto.cfg. For example, if [instrument]=ALASKA, then
if (\$filename =~ /^ALASKA_(\d\d\d\d)(\d\d)(\d\d)_*.fit?\$/)

9. Optionally edit **\$timedelay** to desired time in seconds. The script checks for a new file using this time interval. The default is 20 seconds, but to change to 60 seconds, then

my \$timedelay = 60;

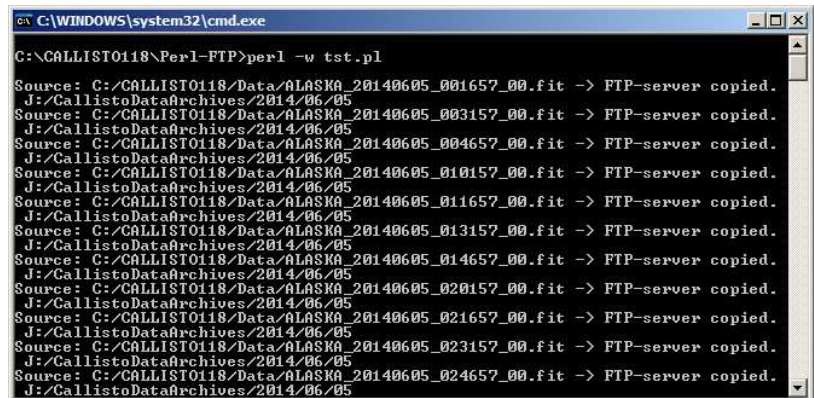
10. Obtain the FTP server password by email inquiry to Christian Monstein at ETH Zurich, monstein@astro.phys.ethz.ch. Replace the word "password" in the line below with the value received,

\$ftp->login("solarradio","password") or die "Cannot login ", \$ftp->message;

11. Save tst.pl

12. Either start the application in a console window by typing: perl -w tst.pl or double click the batch file do.bat

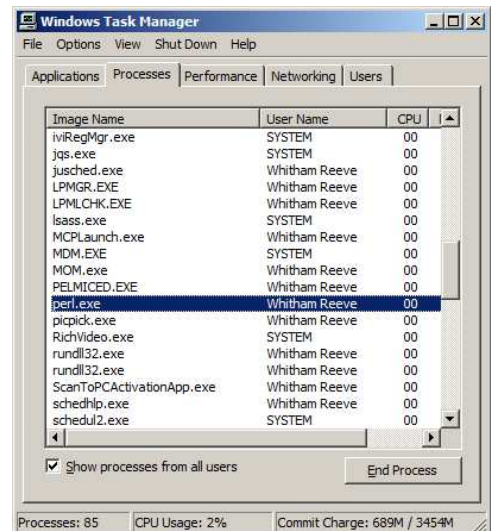
13. When the script is running successfully, the console will look similar to the image right.



```
C:\WINDOWS\system32\cmd.exe
C:\CALLISTO118\Perl-FTP>perl -w tst.pl
Source: C:/CALLISTO118/Data/ALASKA_20140605_001657_00.fit -> FTP-server copied.
J:/CallistoDataArchives/2014/06/05
Source: C:/CALLISTO118/Data/ALASKA_20140605_003157_00.fit -> FTP-server copied.
J:/CallistoDataArchives/2014/06/05
Source: C:/CALLISTO118/Data/ALASKA_20140605_004657_00.fit -> FTP-server copied.
J:/CallistoDataArchives/2014/06/05
Source: C:/CALLISTO118/Data/ALASKA_20140605_010157_00.fit -> FTP-server copied.
J:/CallistoDataArchives/2014/06/05
Source: C:/CALLISTO118/Data/ALASKA_20140605_011657_00.fit -> FTP-server copied.
J:/CallistoDataArchives/2014/06/05
Source: C:/CALLISTO118/Data/ALASKA_20140605_013157_00.fit -> FTP-server copied.
J:/CallistoDataArchives/2014/06/05
Source: C:/CALLISTO118/Data/ALASKA_20140605_014657_00.fit -> FTP-server copied.
J:/CallistoDataArchives/2014/06/05
Source: C:/CALLISTO118/Data/ALASKA_20140605_020157_00.fit -> FTP-server copied.
J:/CallistoDataArchives/2014/06/05
Source: C:/CALLISTO118/Data/ALASKA_20140605_021657_00.fit -> FTP-server copied.
J:/CallistoDataArchives/2014/06/05
Source: C:/CALLISTO118/Data/ALASKA_20140605_023157_00.fit -> FTP-server copied.
J:/CallistoDataArchives/2014/06/05
Source: C:/CALLISTO118/Data/ALASKA_20140605_024657_00.fit -> FTP-server copied.
J:/CallistoDataArchives/2014/06/05
```

14. To ensure the Perl script is automatically run when the PC is rebooted, put a copy of the do.bat file in the Windows Startup folder

15. The PERL application can be ended by pressing Ctrl^C in the console (command line) window or with Windows Task Manager as shown right. Select perl.exe and then click on the End Process button at bottom-right.



16. If PERL-FTP seems to be failing due to not being able to resolve the FTP server name, possibly due to timeouts on satellite links, enter the IP address in place of the FTP server name. The script line below shows the line to be changed. Note that it shows "ftpexchange.cs.technik.fhnw.ch" as the FTP server. It is this field that needs to be changed

Original showing server name:

my \$ftp = Net::FTP->new("ftpexchange.cs.technik.fhnw.ch", Timeout => 500, Passive => 1, Debug => 0);

Modified showing server IP address:

my \$ftp = Net::FTP->new("147.86.8.73", Timeout => 500, Passive => 1, Debug => 0);

Document information

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0.1 (Corrections per C. Monstein, 03 Jun 2014)

0.2 (Added screenshots, link to PERL-FTP, added password, 13 Jun 2014)

0.3 (Added FTP server IP address, 25 Oct 2016)