

ABOVE Server Documentation

Casey Daniel

March 6, 2015

Contents

1	Introduction	1
2	Directory Tree	1
3	TCP Sever	2
4	File Manager	2
5	Summary Plot Generation	2

1 Introduction

This documentation is meant to be a user guide for the ABOVE server files. These files include the TCP server, Initial Ingestion, plot generation, and shell scripts. All source files can be found on the server on `/data/vlf/src/`, however this may change on the new server once set up.

2 Directory Tree

Quick Reference for the Directory tree, and where to find files. These will also be referenced by name rather than by directory throughout this documentation.

root	<i>/data/vlf/</i>
source directory	<i>/data/vlf/src</i>
raw data	<i>/data/vlf/RawData</i>
malformed files	<i>/data/vlf/malformedFiles</i>
data tree	<i>Year/Month/Day/Site/Hour</i>
chunk files	<i>/data/vlf/chunks/datatree</i>
full data files	<i>/data/vlf/full_files</i>
logs	<i>/data/vlf/logs</i>
summary plots	<i>/data/vlf/summaryPlots/datatree</i>

3 TCP Sever

The Python TCP server it's self is written in Python 2.7, and is needed to run. In the source directory the server is managed by the executable of the form source *directory/tcp_server/tcp_server_PORTNO.py* where PORTNO is the desired port number. This executable looks for one of 3 commands, start, stop, or restart. (i.e. *./tcp_server_26000.py start*)

If another port is desired a few changes need to be made to the python file. The file needs to be renamed with the new port number, and near the top of the file, the variable *PORT_NUMBER* changed to match.

The server flow is described in the figure below, once I finish making it. This will detail the communications flow between the client on the FPGA and the server.

The client will send over chunk files over the internet connection, and will deposit them in the raw data directory.

4 File Manager

The File Manager, as found in source/FileManager.py, is responsible for file management. It runs the same way the tcp server does, and the same commands and format are used. This file looks through the rawData directory and collects the chunk files produced by the server and combines them into a full file, and deposit in the full file tree.

File Manager is also responsible for sending RTEMP Information. These packets are formed and sent from this script, for information on format please contact Darren Chaddock.

This script will also be updated soon with the phase text file generation, provided by Eric at a later date. This will be attached to this script.

5 Summary Plot Generation