**AT Data Processing on ATBIGDAWG**

## Introduction

ATBIGDAWG is a Linux server that is used for processing Array Tomography data using the “ATPipeline” software.

Two *non-gui* applications exists on atbigdawg; *atcore* and *atbackend*. The atcore application is used for end user processing at AT data, while the atbackend application is used for management of the *processing backend*.

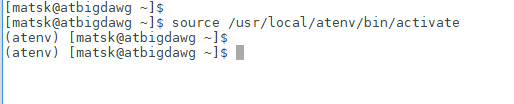
### Setting up your python environment

Access to the atcore and atbackend Python applications is made possible by the activation of an existing *virtual Python environment*, located in the folder:

..> /usr/local/atenv

To *activate* the above environment, put the following line in your *.bashrc* file, or type at the commandline:

/usr/local/atenv/bin/activate

Your command line prompt will change, showing that you are operating in a virtual Python environment, e.g.:  
 

### Docker and Docker containers

The processing backend exist within several *docker* containers.

## Start/reboot/login – atbigdawg

## Set up an environment

## The atcore and atbackend command line clients

## Browsing/inspecting data folders

## Default Parameter settings

## Stitch and align data

## Browse data with ndviz and ATExplorer UI on Windows

Unix/Linux Command 
File Commands 
Is - directory listing 
Is -al — formatted listing with hidden files 
cd dir - change directory to dir 
cd - change to home 
pwd - show current directory 
mkdir dir - create a directory dir 
rm file - delete file 
rm -r dir - delete directory dir 
rm -f file - force remove file 
rm -rf dir — force remove directory dir* 
cp fiLe1 fiLe2 - copy filel to file2 
Reference 
FOSSwire 
System Info 
cp -r dir 1 dir2 - copy dirl to dir2; create dir2 if it 
doesn 't exist 
mv fiLe1 fiLe2 - rename or move filel to file2 
if file2 is an existing directory, moves filel into 
directory file2 
In -s file Link - create symbolic link link to file 
touch file - create or update file 
cat > file - places standard input into file 
more f i Le - output the contents of file 
head file - output the first 10 lines of file 
tail file - output the last 10 lines of file 
tail -f file - output the contents of file as it 
grows, starting with the last 10 lines 
Process Management 
ps - display your currently active processes 
top - display all running processes 
kill pid - kill process id pid 
killaII proc - kill all processes named proc * 
bg - lists stopped or background jobs; resume a 
stopped job in the background 
fg - brings the most recent job to foreground 
fg n brings job n to the foreground 
File Permissions 
chmod octal file - change the permissions of file 
to octal, which can be found separately for user, 
group, and world by adding: 
4 read (r) 
• 2 - write (w) 
1 - execute (x) 
Examples: 
chmod 777 - read, write, execute for all 
chmod 755 - rwx for owner, rx for group and world 
For more options, see man chmod. 
SSH 
ssh user@host - connect to host as user 
ssh -p port user@host - connect to host on port 
port as user 
ssh-copy-id user@host - add your key to host for 
user to enable a keyed or passwordless login 
Searching 
grep pattern files - search for pattern in files 
grep -r pattern dir - search recursively for 
pattern in dir 
command I grep pattern - search for pattern in the 
output of command 
locate file — find all instances of file 
date - show the current date and time 
cal - show this month's calendar 
uptime - show current uptime 
w display who is online 
whoami - who you are logged in as 
finger user - display information about user 
uname -a - show kernel information 
cat /proc/cpuinfo - cpu information 
cat /proc/meminfo - memory information 
man command - show the manual for command 
df - show disk usage 
du - show directory space usage 
free - show memory and swap usage 
whe reis app - show possible locations of app 
which app - show which app will be run by default 
Compression 
tar cf file. tar files - create a tar named 
file.tar containing files 
tar xf file. tar - extract the files from file.tar 
tar czf file. tar.gz files - create a tar with 
Gzip compression 
tar xzf file. tar.gz - extract a tar using Gzip 
tar cjf file. tar.bz2 - create a tar with Bzip2 
compression 
tar xjf file. tar.bz2 - extract a tar using Bzip2 
gzip file 
compresses file and renames it to 
file.gz 
gzip -d fiLe.gz - decompresses file.gz back to 
file 
Network 
ping host - ping host and output results 
whois domain - get whois information for domain 
dig -x host - reverse lookup host 
wget file - download file 
wget -c file - continue a stopped download 
Installation 
Install from source: 
. /configu re 
make 
make install 
dpkg -i pkg. deb - install a package (Debian) 
rpm -Uvh pkg. rpm install a package (RPM) 
Shortcuts 
Ctrl+C - halts the current command 
Ctrl+Z - stops the current command, resume with 
fg in the foreground or bg in the background 
Ctrl+D - log out of current session, similar to exit 
Ctrl+W erases one word in the current line 
Ctrl+R - type to bring up a recent command 
! ! - repeats the last command 
exit - log out of current session 
use with extreme caution. **ATBIGDAWG Cheat Sheet**