Installation of ESO MIDAS

Please note: Since Ubuntu 14.10, a debian package of ESO MIDAS is available. It can be installed via

```
sudo apt-get install eso-midas
```

Some notes regarding the installation:

- The official MIDAS web page with detailed hardware and software requirements can be found [here](#).
- The official MIDAS documentation is [here](#)
- This manual is meant for the installation in Linux (Ubuntu, Debian etc.), while some packages and tools might have different names in SuSe, Fedora etc.
- The installation requires a console and root rights (esp. to install the packages). If needed, the admin has to do that part. Beyond that it should be possible to install MIDAS without root rights.

Package dependencies

The following packages need to be installed:

```
sudo apt-get install libmotif-dev libncurses5-dev libx11-dev libXext-dev
libXt-dev gfortran
```

Create the MIDAS directory

Create the directory that shall contain the MIDAS installation:

```
mkdir midas
```

In our default installation this directory is located in the path $HOME/opt/.

Download MIDAS

Open a console, change to the midas directory, and connect to the FTP server:

```
ftp ftp.eso.org
```

The user name is `ftp` and the password is `<your_email_address_here>`.

Remark: The following text is based on version 11FEB of MIDAS (11FEBpl1.0.tar.gz). At the moment, the latest version is 15SEPpl1.0 (15SEPpl1.0.tar.gz). The path /home/username/opt/midas/11FEB and all version numbers need to be adjusted to your installation.

Then get to the MIDAS directory on the server, download the archive and logout:

```
ftp> cd /midaspub/11FEB/sources
ftp> get README.sources
ftp> binary
ftp> get 11FEBpl1.0.tar.gz
ftp> get linux_intel.calib.tar.gz
ftp> quit
```

Then unpack the source files:

```
tar -zxvf 11FEBpl1.0.tar.gz
```

It's useful to set a symbolic link with a shorter name, e.g.

```
ln -s 11FEBpl1.0 11FEB
```

The config script

The config script can be found in this directory:

```
 cd 11FEB/install/unix/
```

then execute it

```
 sh config
```

MIDAS will print the following output to the console

```
 MIDAS CONFIG MENU:
 ==================
 1 - list of MIDAS packages available
 2 - select only MIDAS core
 3 - select all MIDAS packages
 4 - select MIDAS core and packages of your choice
 5 - preinstall MIDAS
 6 - install MIDAS
 7 - update MIDAS
 8 - setup MIDAS
 9 - clean MIDAS
 10 - help
 q - quit
 Select:
```

Selection of the packages

Since, we are usually also interested in the optional packages (such as the packages for the BACHES

spectrograph), we should select the following option

```
3 - select all MIDAS packages
```

alternatively the following option

```
4 - select MIDAS core and packages of your choice
```

provides the opportunity to only install the required packages.

Pre installation

First select

```
5 - preinstall MIDAS
```

Mostly the default settings can be used, if they are valid. 🙂 This step copies pre configured installation files (for your system) to the MIDAS directory.

Installation

Now select

```
6 - install MIDAS
```

This installs MIDAS (how unexpected 🙂). To follow the progress, open another console, and type

```
tail -f
/midas/11FEB/tmp/install.//<some_number_that_needs_to_be_looked_up>//
```

Setup MIDAS

The name of the machine and the email address for the user support can be adjusted with the following option

```
8 - setup MIDAS
```

However, the default values are usually fine for most of the setup options.

Next, copy the executables to a directory that is listed in the $PATH variable, e.g. `/usr/local/bin` (or add the directory to the $PATH variable). Alternatively, only symbolic links can be created. This can be done for a single user or for all.

```
cp /home/username/opt/midas/11FEB/system/unix/inmidas /usr/local/bin
```

```
cp /home/username/opt/midas/11FEB/system/unix/gomidas /usr/local/bin
cp /home/username/opt/midas/11FEB/system/unix/helpmidas /usr/local/bin
cp /home/username/opt/midas/11FEB/system/unix/drs /usr/local/bin
```

Furthermore, the MIDAS man-pages can be made available for all users. So copy them to a directory that is listed in the $MANPATH variable, e.g. /usr/man/man.

```
cp /home/username/opt/midas/11FEB/system/unix/manl/inmidas.l /usr/man/manl
cp /home/username/opt/midas/11FEB/system/unix/manl/gomidas.l /usr/man/manl
cp /home/username/opt/midas/11FEB/system/unix/manl/helpmidas.l /usr/man/manl
cp /home/username/opt/midas/11FEB/system/unix/manl/readline.l /usr/man/manl
```

Alternative, add the path /home/username/opt/midas/11FEB/system/unix/manl to the $MANPATH variable.

Start MIDAS the first time

Create a tmp directory in midas and start it:

```
mkdir $HOME/midas/tmp
cd $HOME/midas/tmp
inmidas
```

Within the MIDAS environment execute this command

```
Midas 001> @ compile.all
```

This prints approximately 40 lines of text and exits MIDAS. The command

```
gomidas
```

returns to the MIDAS environment. Then run the following command to create the LUT and ITT files

```
Midas 002 > @ ascii_bin
```

Then logout and enjoy. 😉

```
Midas 003 > bye
```

Verify MIDAS

MIDAS offers the possibility to test and verify the installation. The first step in the verification process is to create the following directory

```
mkdir $HOME/opt/midas/demo/data
```

Subsequently, a path variable (*MID_TEST*) to this directory needs to be created

```
export MID_TEST=$HOME/opt/midas/demo/data
```

Before downloading the necessary data from the ESO web page, the next step is to move into the above directory and to login into ESO via FTP again. The verification data can be retrieved with the following commands:

```
ftp> cd /midaspub/11FEB/sources
ftp> binary
ftp> get demo_data.tar.gz
ftp> quit
```

Afterwards, the downloaded archive needs to be unpacked. The next step is to move to $HOME/opt/midas/tmp and to run the verification process by starting MIDAS

```
inmidas
```

and executing

```
Midas 001> @ superverify
```

which tests the demo files and by this means verifies MIDAS.

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