GammaLib - Bug #2420

Fix MANPATH on Mac OS X

03/26/2018 10:11 AM - Knödlseder Jürgen

Status:	Closed	**Start date:**	03/26/2018
Priority:	Normal	**Due date:**	
Assigned To:	Knödlseder Jürgen	**% Done:**	100%
Category:		**Estimated time:**	0.00 hour
Target version:	1.6.0		

Description

Akira reported the following issue:

Hello Jürgen,

It looks that the MANPATH configuration in $CTOOLS/bin/ctools-setup and $GAMMALIB/bin/gammalib-setup ignore the default man search paths by overriding an empty MANPATH in my environment (macOS 10.13.3, zsh). I have not tested, but I think this issue does not happen on Linux machines.

#

1. Set MANPATH
2. ==========
   if ["x$MANPATH" = x]; then
   manpath=${manpath:-}
   MANPATH="$man_dir:${manpath}"
   else
   MANPATH=`echo ":$MANPATH:" | \
   sed "s%:$man_dir:%:%g" | sed "s%::*$%%"`
   MANPATH="man_dirMANPATH"
   fi

According to "man man" when MANPATH is unset the search paths are taken from /private/etc/man.conf but if ctools or gammalibs sets their search path to MANPATH, the system default paths are not searched by the man command.

You can get the default MANPATH, which is actually empty first, by calling the manpath command. You can add your own man paths to it.

You can find an example from the ROOT configuration script.

```
if [ -z "${MANPATH}" ]; then   # Grab the default man path before setting the path to avoid duplicates
if `which manpath > /dev/null 2>&1` ; then
default_manpath=`manpath`
else
default_manpath=`man -w 2> /dev/null`
fi
fi

if [ -z "${MANPATH}" ]; then
MANPATH=$ROOTSYS/man:${default_manpath}; export MANPATH
else
MANPATH=$ROOTSYS/man:$MANPATH; export MANPATH
fi
```

Regards,

Related issues:

Related to GammaLib - Bug # 2724: Error in csh when sourcing gammalib-init.cs...	**Closed**	**11/08/2018**

History

#1 - 03/26/2018 12:12 PM - Knödlseder Jürgen

- Status changed from New to Pull request

- % Done changed from 0 to 100

I modified the initialisation scripts according to the suggestion.

#2 - 03/26/2018 02:38 PM - Knödlseder Jürgen

- Status changed from Pull request to Closed

Merged into bugfix-1.5.1 and devel.

#3 - 04/02/2018 06:15 AM - Okumura Akira

It also removes my own LD_LIBRARY_PATH setting.

Here is a snippet of my ~/.zshrc.

```
echo "LD_LIBRARY_PATH (before)"
echo $LD_LIBRARY_PATH

# GammaLib and ctools
# http://cta.irap.omp.eu/ctools/users/tutorials/1dc/getting_tools.html
export GAMMALIB=/usr/local/gamma
source $GAMMALIB/bin/gammalib-init.sh
export CTOOLS=/usr/local/gamma
source $CTOOLS/bin/ctools-init.sh
export DIR1DC=$HOME/CTA_AGIS/1DC
export CTADATA=$DIR1DC/1dc
export CALDB=$CTADATA/caldb

echo "LD_LIBRARY_PATH (after)"
echo $LD_LIBRARY_PATH
```

and its output.

```
LD_LIBRARY_PATH (before)
/Users/oxon/Documents/workspace/RootAstroLib:/usr/local/root/lib:/Users/oxon/CTA_AGIS/GCT-SoftwareWorkshop/TargetCalib/install/lib:/Users/oxo
n/CTA_AGIS/GCT-SoftwareWorkshop/TargetDriver/install/lib:/Users/oxon/CTA_AGIS/GCT-SoftwareWorkshop/TargetIO/install/lib:/usr/local/heasoft-6.
20/x86_64-apple-darwin15.6.0/lib
LD_LIBRARY_PATH (after)
/usr/local/gamma/lib
```

#4 - 04/02/2018 10:17 PM - Knödlseder Jürgen

- Status changed from Closed to In Progress

- Target version changed from 1.5.1 to 1.6.0

Re-opened due to problem reported by Akira.

#5 - 04/10/2018 02:20 PM - Knödlseder Jürgen

user#119 wrote:

> It also removes my own LD_LIBRARY_PATH setting.
>
> Here is a snippet of my ~/.zshrc.
> [...]
>
> and its output.
>
> [...]

Do you have this problem on Mac OS X? I'm asking since on Mac OS X it should use DYLD_LIBRARY_PATH instead.

#6 - 04/10/2018 02:30 PM - Okumura Akira

Yes, macOS 10.13.4.

```
$ man dlopen
...
dlopen() searches the following until it
    finds a compatible Mach-O file: $LD_LIBRARY_PATH, $DYLD_LIBRARY_PATH, current working directory, $DYLD_FALL-
    BACK_LIBRARY_PATH.
```

#7 - 04/10/2018 03:09 PM - Knödlseder Jürgen

It looks like the first line in the setup script poses problems on Mac OS X:

```
#! /bin/sh
```

Due to security reasons Mac OS X unsets the DYLD_LIBRARY_PATH environment variable under sh, hence the script thinks that nothing was set before, and consequently drops the older setting.

I removed the first line and things seem to work now.

#8 - 04/10/2018 03:12 PM - Okumura Akira

Ah, thanks SIP! I read the script before submitting the issue, but could not find why XX_LIBRARY_PATH were dropped. I almost forgot about this Sierra and High Sierra limitation.

#9 - 04/10/2018 03:15 PM - Okumura Akira

BTW, I do not find a strong reason to use DYLD as long as library file names are given.
https://developer.apple.com/library/content/documentation/DeveloperTools/Conceptual/DynamicLibraries/100-Articles/DynamicLibraryUsageGuidelines.html
It's been my understanding in the last ~15 years.

#10 - 04/10/2018 05:00 PM - Knödlseder Jürgen

- Status changed from In Progress to Closed

Correction merged into devel.

#11 - 11/08/2018 11:24 AM - Specovius Andreas

- Related to Bug #2724: Error in csh when sourcing gammalib-init.csh and ctools-init.csh added