

HANDS-ON SESSIONS

Installation of SAS and external tools

13th SAS Workshop, ESAC 10-14 June 2012





WILL NEED THE ROOT
PASSWORD OR SUDO



EXTERNAL TOOLS

- Heasoft
- ds9
- Grace
- WCSTools
- Java Development Kit

HEASOFT (1)



- Binary install: Download binary
<http://heasarc.nasa.gov/lheasoft/download.html>
- Move tar.gz archive to installation directory.
- We recommend to install it in system directory, e.g. /usr/local, despite of having a laptop.
- Unpack it.
- Change directory to heasoft-X.Y / <platform> / BUILD_DIR
- `./configure > config.out 2>&1 &`

HEASOFT (2)



- Initialize it (bash):
 - `export HEADAS=/usr/local/headas/architecture`
 - `.$HEADAS/headas-init.sh`
- Recommend include initialization in login script.
- SAS needs \$LHEASOFT be defined to be able to initialize.



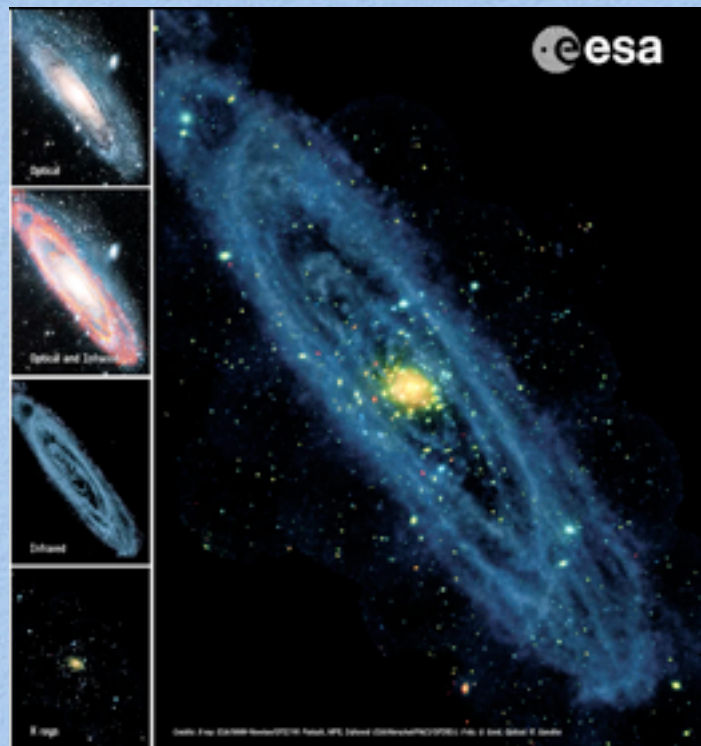
DS9

- Binary install: Download ds9 & xpa
<http://hea-www.harvard.edu/RD/ds9/>
- Install under destination directory.
Suggestion, /usr/local/ds9_X.Y/bin
- Make soft link
/usr/local/ds9 -> /usr/local/ds9_X.X
- Add /usr/local/ds9/bin to PATH.
- Test it.



GRACE

- <http://plasma-gate.weizmann.ac.il/Grace/>
- Most Linux distributions have a binary (rpm package) which can either be installed directly by means of tools like “yum” or by downloading the rpm package.
- Mac OS X: Under Fink there is a binary distribution.



INSTALL SAS

- Download the most appropriate distribution tar.gz archive for your OS
<http://xmm.esac.esa.int/sas/current/download/>
- Choose installation directory.
Recommended: /usr/local
- Unpack.
- Check whether perl is installed or not.
Optionally define SAS_PERL to point to a perl install of your choice.
- Run ./install.sh

SAS download

Which SAS should I take?

The Tables below show all the binaries being distributed for **SAS 13.0.0**. All have been built with **CNU C/C++ 4.3.3** and **SAS Fortran 5.2**, on Intel processors.

All installations of the **SAS** are binary. The whole source code of the **SAS 13.0.0** can be downloaded for reference (`xmmsas_20130501_1951-13.0.0-common-src.tar.gz`) but we do not provide support on building it.

Before downloading a given binary, please consider the following guidelines to help you choose the most appropriate for your system:

- Although you can run a **SAS** built on 32-bit on a system running a 64-bit kernel, this is a misuse and we strongly discourage it. If you have a Linux 64-bit system, please download and install a **SAS** built on 64-bit.
- In general, for a given Linux Operating System, please choose a **SAS** that was built in a system with versions of the kernel and C library (`libc`), the closest to those of your system, regardless of its name being Red Hat, OpenSUSE, Ubuntu, Fedora or any other.
- On Mac OS X, we only distribute **SAS** built on Intel 64-bit for **Snow Leopard**, **Lion** and **Mountain Lion**. For those of you who can only run the 32-bit kernel of Snow Leopard, you still can install and run the 64-bit **SAS** built on Snow Leopard 64-bit.

Downloading

To download the **SAS** of your choice, please click on the links provided in the column "File to download" on the Tables below. Just before you are directed to our ftp server to get the selected file, you will be requested to fill in a short questionnaire that will help us to make up valuable statistics on current and future needs about **SAS**.

Linux 32-bit (x86)

Build on	Kernel version	libc version	File to download
Ubuntu 12.04 LTS	3.2.0	2.15	sas_13.0.0-Ubuntu12.04-32.tgz
Fedora 17	3.6.10	2.15	sas_13.0.0-Fedora17-32.tgz
OpenSUSE 11.2	2.6.31	2.10.1	sas_13.0.0-opensuse11.2-32.tgz
RHEL 5.8	2.6.18	2.5	sas_13.0.0-RHEL5.8-32.tgz

Linux 64-bit (x86_64)

Build on	Kernel version	libc version	File to download
Ubuntu 12.04 LTS	3.2.0	2.15	sas_13.0.0-Ubuntu12.04-64.tgz
Fedora 17	3.6.10	2.15	sas_13.0.0-Fedora17-64.tgz
OpenSUSE 11.2	2.6.31	2.10.1	sas_13.0.0-opensuse11.2-64.tgz
RHEL 5.8	2.6.18	2.5	sas_13.0.0-RHEL5.8-64.tgz

Mac OS X 64-bit (x86_64)

Build on	Kernel version	libc version	File to download
10.6.8 or Snow Leopard (Darwin 10.8.0)	Darwin 10.8.0	125.2.11	sas_13.0.0-Darwin-10.8.0-64.tgz
10.7.5 or Lion (Darwin 11.4.2)	Darwin 11.4.2	159.1.0	sas_13.0.0-Darwin-11.4.2-64.tgz
10.8.3 or Mountain Lion (Darwin 12.3.0)	Darwin 12.3.0	169.3.0	sas_13.0.0-Darwin-12.3.0-64.tgz

Virtual Machines for SAS 13.0.0 (VM4SAS13)

Assembled on	File to download
Linux Fedora 18 32-bit	VM4SAS13-32.7z (3.91 GByte)
Linux Fedora 18 64-bit	VM4SAS13-64.7z (4.02 GByte)

- Initialization of SAS:
 - Must initialize first HEADAS / HEASOFT
 - Suggestion: Include HEADAS initialization in your shell login scripts (.cshrc / .bashrc).
- Use scripts created by SAS installation: setsas.sh (bash) or setsas.csh (tcsh)
- Check: sasversion



JAVA DEVELOPMENT KIT (JDK)

- <http://www.oracle.com/technetwork/java/javase/downloads/index.html>
- Recommend select 'Self Extracting Installer'
- Move to /usr/local and install it.
- Define JDK_HOME pointing to this installation.

CCF REPOSITORY

- Put CCF on a public directory.
Suggestion: /ccf
- rsync CCFs from XMM-Newton server:
`rsync -a xmm.esac.esa.int::XMM_RED_CCF`
- Update periodically (rsync under crontab).