



IRAF Installation

Introduction

The procedure below outlines the process for end users to install IRAF on USQ's HPC. During the installation process you will need to decide:

1. **Where IRAF will place the default directories of imdir and cache:**

These directories are used by IRAF to store images. These directories can be created in numerous places. It is highly recommended they are created in either the users home directory or the system directory *scratch*.

2. **Where IRAF will install its program files:-**

This can be either in the users home directory or use the system installation. It is high recommended that users use the system installation as this will be kept up to date.

Installing IRAF in users home directory

1. Run the IRAF installation script as below:

```
username@hpc-login-prd-t1 ~: /usr/local/opt/software/iraf/iraf/install
```

2. Answer the following five questions:

- a. **Question 1:** "iraf root directory", leave as default.
- b. **Question 2:** "root image storage", leave as default.
- c. **Question 3:** "root cache directory", leave as default.
- d. **Question 4:** "bin directory", change to:

```
/usr/local/opt/software/iraf/bin
```

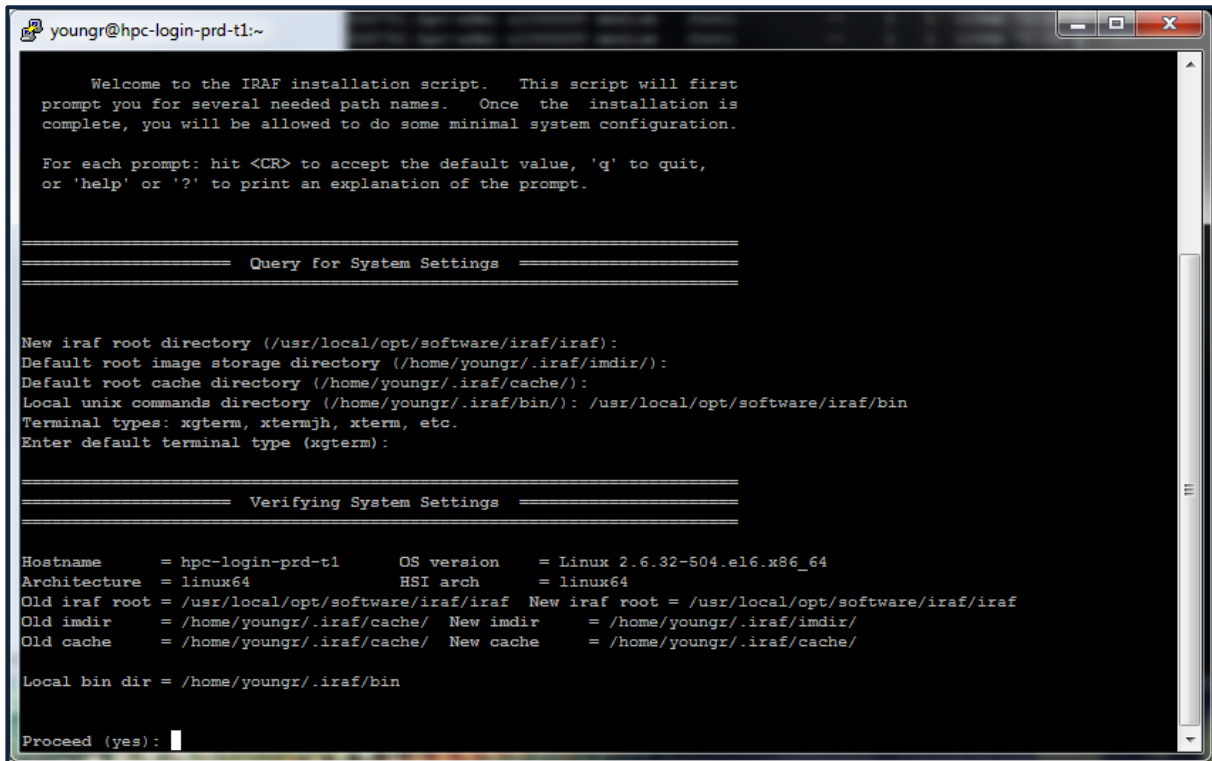
If you wish to copy the IRAF program files to your home directory leave this as the default of:

```
/home/"username"/.iraf/bin
```

- e. **Question 5:** "terminal type", leave as default.
- f. Answer "**yes**" if you wish to proceed.
- g. Once run IRAF will setup the user's home directory to find and use IRAF.

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An example of the installation procedure as follows:



```

youngr@hpc-login-prd-t1:~
Welcome to the IRAF installation script. This script will first
prompt you for several needed path names. Once the installation is
complete, you will be allowed to do some minimal system configuration.

For each prompt: hit <CR> to accept the default value, 'q' to quit,
or 'help' or '?' to print an explanation of the prompt.

===== Query for System Settings =====

New iraf root directory (/usr/local/opt/software/iraf/iraf):
Default root image storage directory (/home/youngr/.iraf/imdir/):
Default root cache directory (/home/youngr/.iraf/cache/):
Local unix commands directory (/home/youngr/.iraf/bin/): /usr/local/opt/software/iraf/bin
Terminal types: xgterm, xtermjh, xterm, etc.
Enter default terminal type (xgterm):

===== Verifying System Settings =====

Hostname      = hpc-login-prd-t1      OS version    = Linux 2.6.32-504.el6.x86_64
Architecture  = linux64               HSI arch     = linux64
Old iraf root = /usr/local/opt/software/iraf/iraf New iraf root = /usr/local/opt/software/iraf/iraf
Old imdir    = /home/youngr/.iraf/cache/ New imdir     = /home/youngr/.iraf/imdir/
Old cache    = /home/youngr/.iraf/cache/ New cache    = /home/youngr/.iraf/cache/

Local bin dir = /home/youngr/.iraf/bin

Proceed (yes):

```

Figure 1 – IRAF Installation using home directories

Installing IRAF using system directories

1. Run the IRAF installation script as follows:

username@hpc-login-prd-t1 ~: `/usr/local/opt/software/iraf/iraf/install`

2. To install directories in system:

Option 1 is too install images and caching in /scratch directory:

- a. **Question 1:** “iraf root directory” leave as default.
- b. **Question 2:** “root image storage” change to “/scratch/imdir”.
- c. **Question 3:** “root cache directory” change to “/scratch/cache”.

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d. **Question 4:** “bin directory” set to:

`/usr/local/opt/software/iraf/bin`

If you wish to copy the IRAF program files to your home directory. If using this option leave this as the default of:

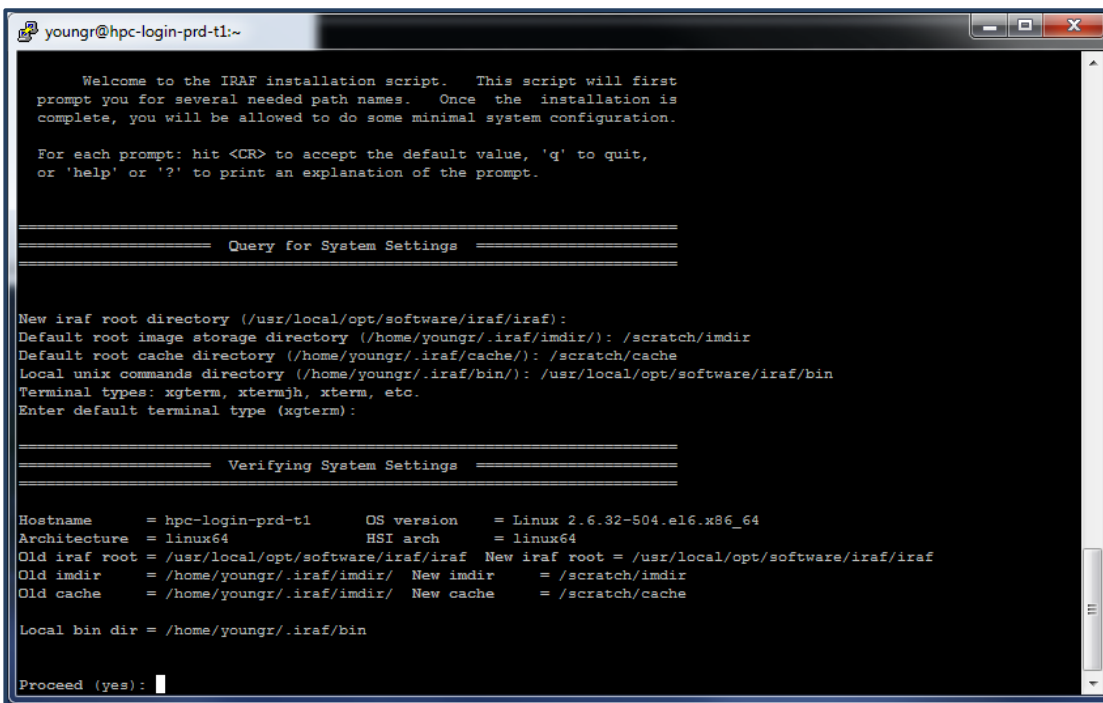
`/home/"username"/.iraf/bin`

e. **Question 5:** “terminal type” leave as default

f. Answer “yes” if you wish to proceed.

g. Once run IRAF will setup the user’s home directory to find and use IRAF.

An example of the installation procedure as follows:



```
youngr@hpc-login-prd-tl:~
Welcome to the IRAF installation script.  This script will first
prompt you for several needed path names.  Once the installation is
complete, you will be allowed to do some minimal system configuration.

For each prompt: hit <CR> to accept the default value, 'q' to quit,
or 'help' or '?' to print an explanation of the prompt.

=====
Query for System Settings
=====

New iraf root directory (/usr/local/opt/software/iraf/iraf):
Default root image storage directory (/home/youngr/.iraf/mdir/): /scratch/mdir
Default root cache directory (/home/youngr/.iraf/cache/): /scratch/cache
Local unix commands directory (/home/youngr/.iraf/bin/): /usr/local/opt/software/iraf/bin
Terminal types: xgterm, xtermjh, xterm, etc.
Enter default terminal type (xgterm):

=====
Verifying System Settings
=====

Hostname      = hpc-login-prd-t1      OS version   = Linux 2.6.32-504.el6.x86_64
Architecture = linux64                 HSI arch    = linux64
Old iraf root = /usr/local/opt/software/iraf/iraf  New iraf root = /usr/local/opt/software/iraf/iraf
Old mdir     = /home/youngr/.iraf/mdir/  New mdir     = /scratch/mdir
Old cache    = /home/youngr/.iraf/cache/  New cache    = /scratch/cache

Local bin dir = /home/youngr/.iraf/bin

Proceed (yes):
```

Figure 2- IRAF Installation using system directories

DS9 Installation



IRAF Installation

For use with IRAF DS9 has been installed in `/usr/local/opt/software/iraf/bin`. To use after installing IRAF simply run `ds9` command. If IRAF hasn't been installed load the `ds9-7.4` module, then run the `ds9` command.