

ncca RenderFarm Tool

Maya: Arnold

Constantinos Glynos

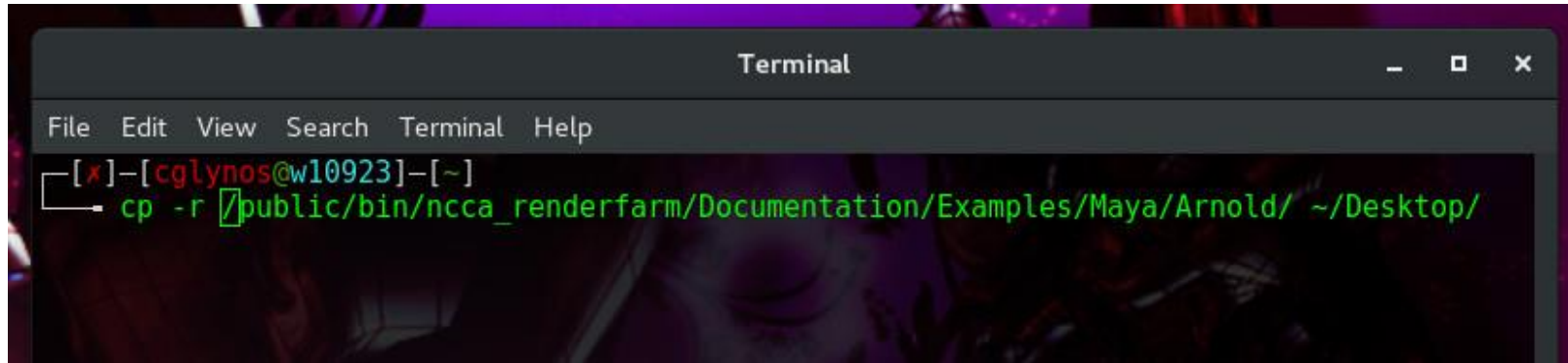
Michail Agoulas



Copy the example scene

run the copy (cp) command with the recursive flag (-r)

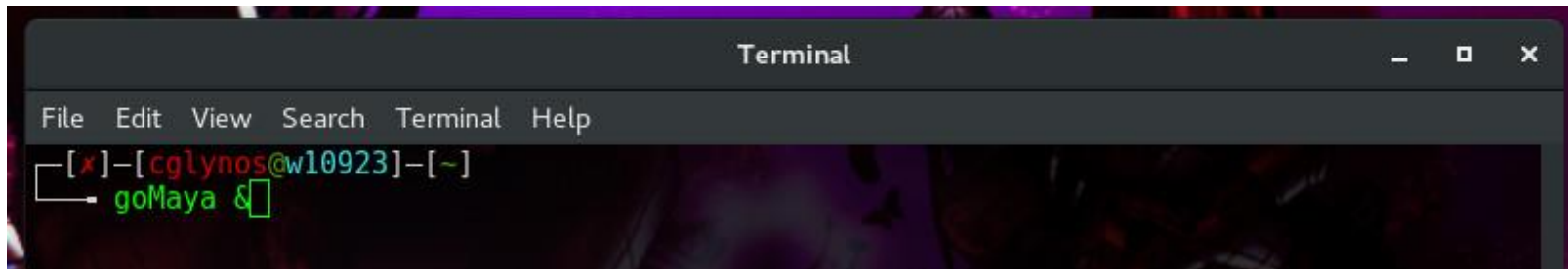
```
cp -r /public/bin/ncca_renderfarm/Documentation/Examples/Maya/Arnold/ ~/Desktop
```

A screenshot of a terminal window titled "Terminal". The window has a menu bar with "File", "Edit", "View", "Search", "Terminal", and "Help". The prompt is "[*]-[cglynos@w10923]-[~]". The command being entered is "cp -r /public/bin/ncca_renderfarm/Documentation/Examples/Maya/Arnold/ ~/Desktop/".

```
Terminal
File Edit View Search Terminal Help
[*]-[cglynos@w10923]-[~]
cp -r /public/bin/ncca_renderfarm/Documentation/Examples/Maya/Arnold/ ~/Desktop/
```

Open Maya

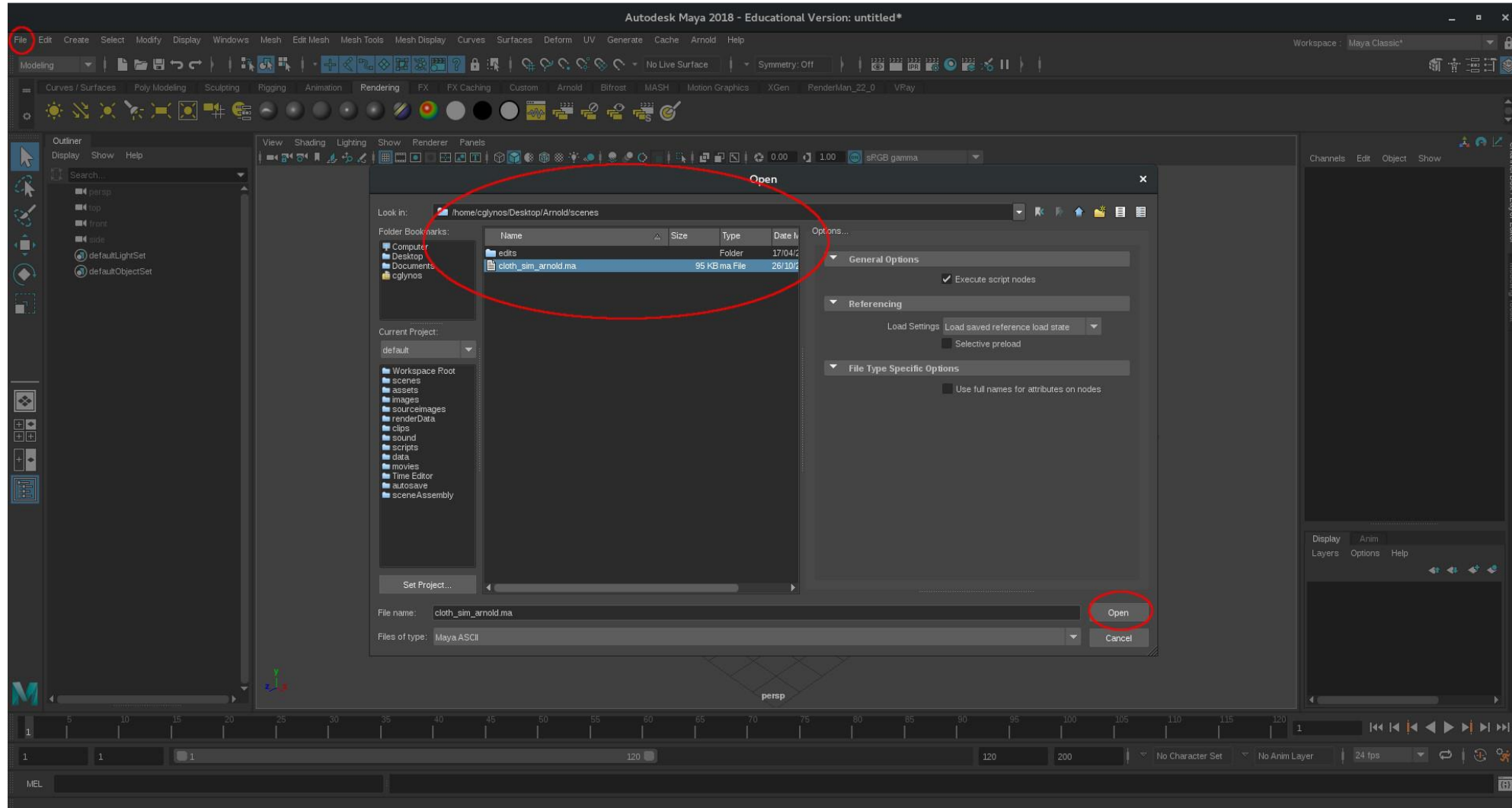
```
goMaya &
```

A screenshot of a terminal window titled "Terminal". The window has a menu bar with "File", "Edit", "View", "Search", "Terminal", and "Help". The prompt is "[*]-[cglynos@w10923]-[~]". The command being entered is "goMaya &".

```
Terminal
File Edit View Search Terminal Help
[*]-[cglynos@w10923]-[~]
goMaya &
```

Open the example scene

File -> Open -> cloth_sim_arnold.ma



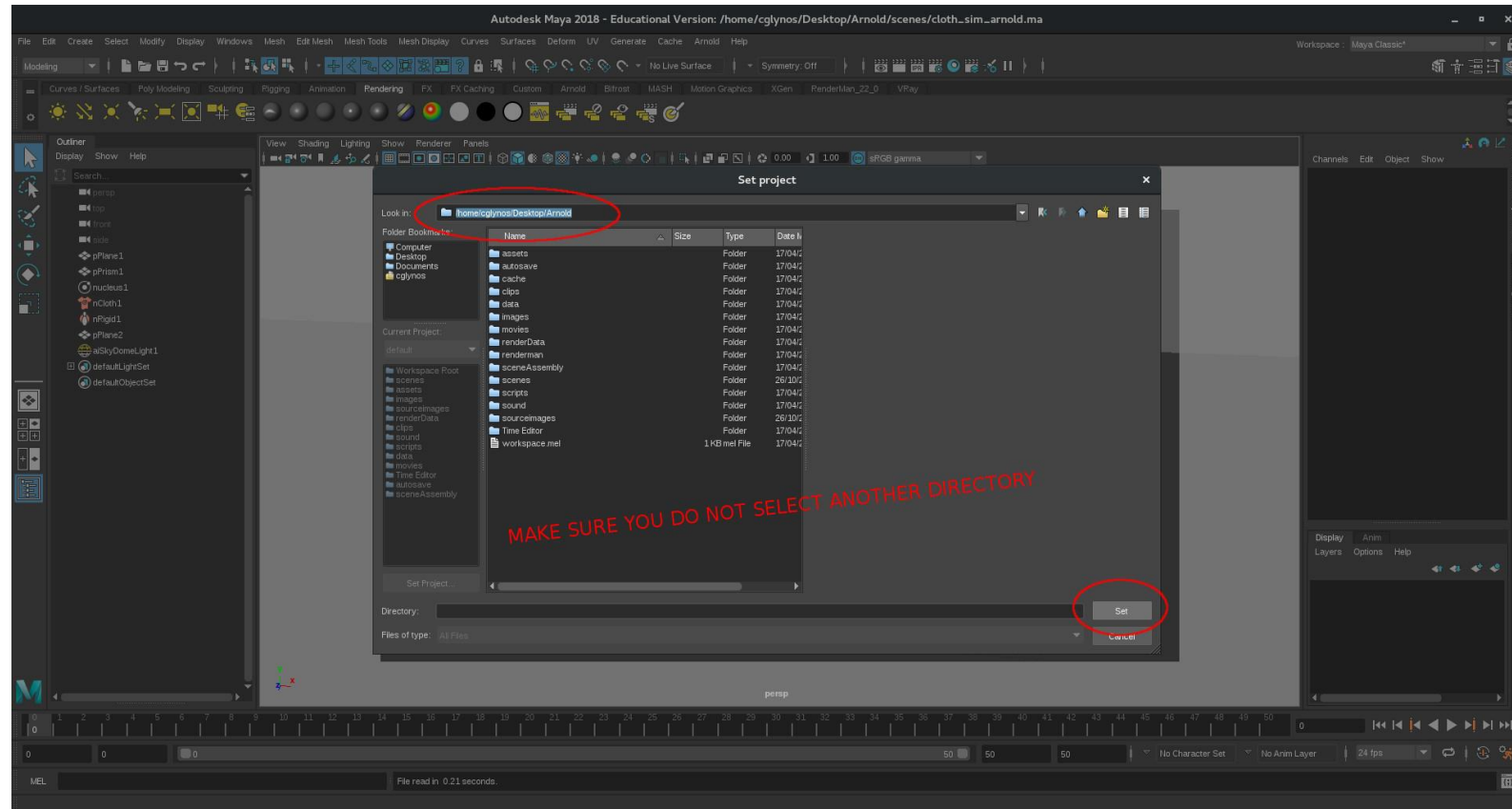
Set project directory

File -> Set Project...

Select the directory which is parent to all the project data files and folders.

Make sure you do not select another directory inside the parent directory

Click **Set**



Update the textures

Select the **pPlane1** mesh

Go to the **Attribute Editor** -> **aiStandard2**

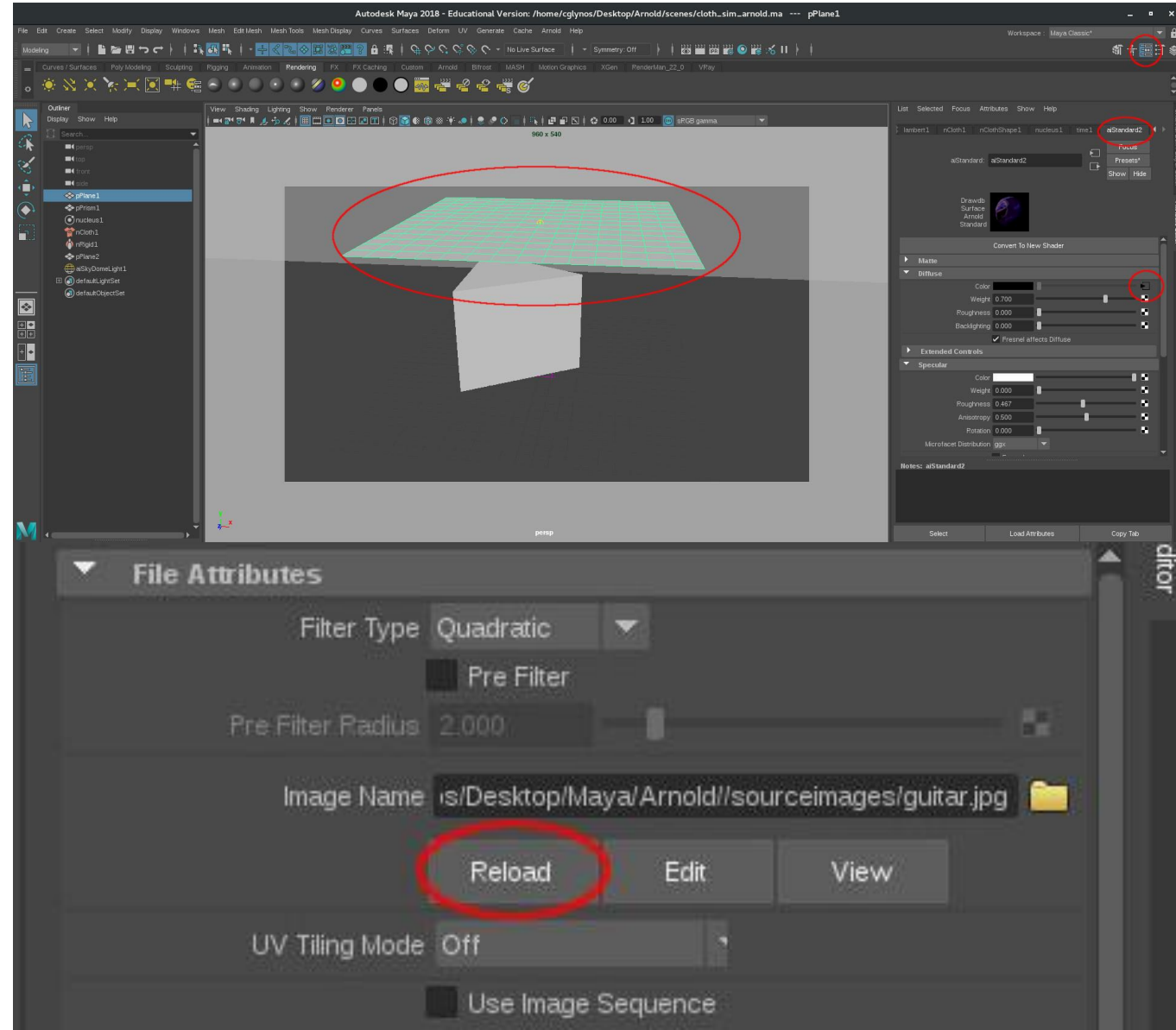
Click on the **Diffuse colour** option box

Under the **Image Name** text box, click on **Reload**.

After hitting **Reload**, that long path should now say:

sourceimages/guitar.jpg

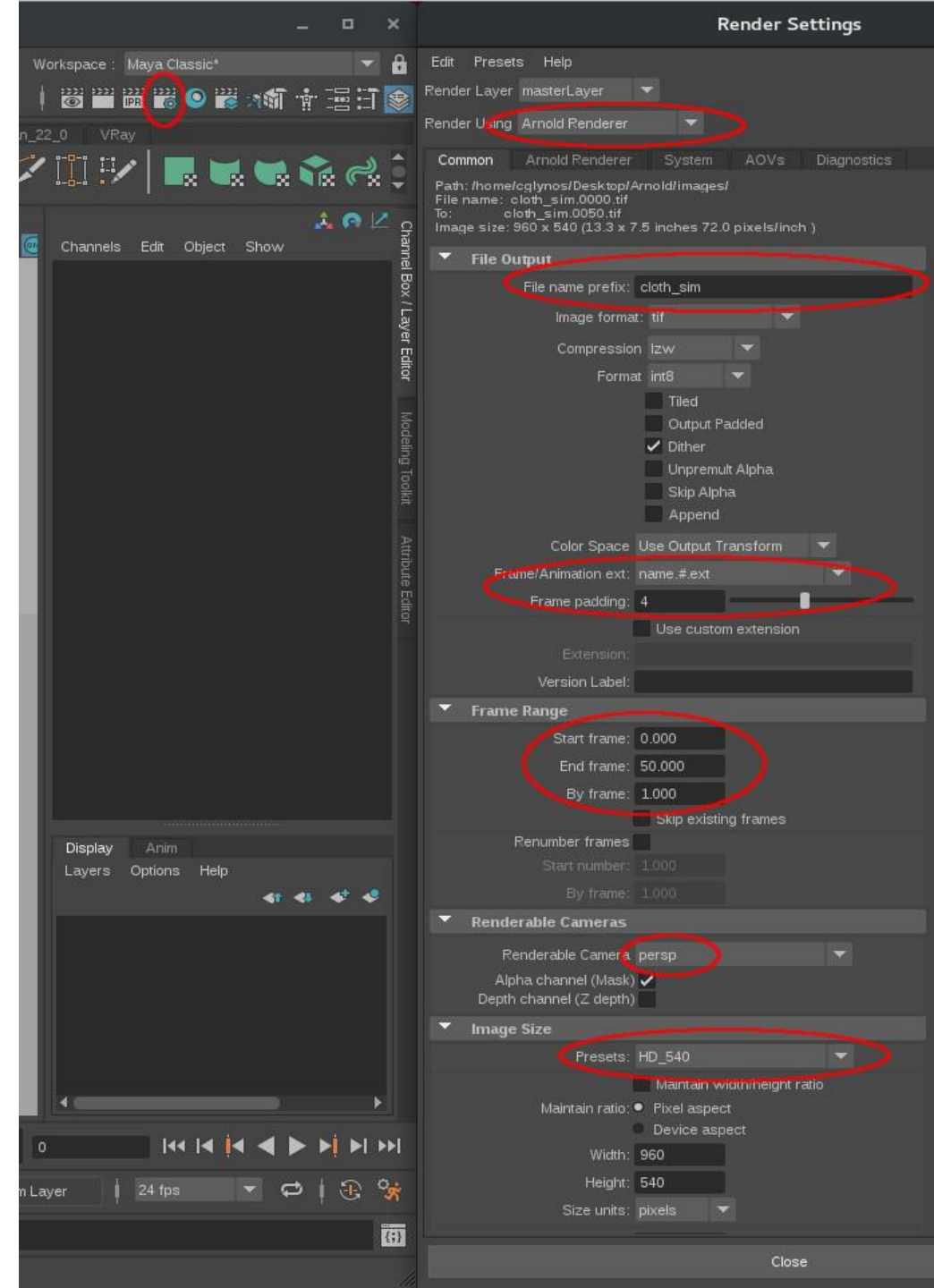
Do the same for the rest of the objects if they have any textures



Check the render settings

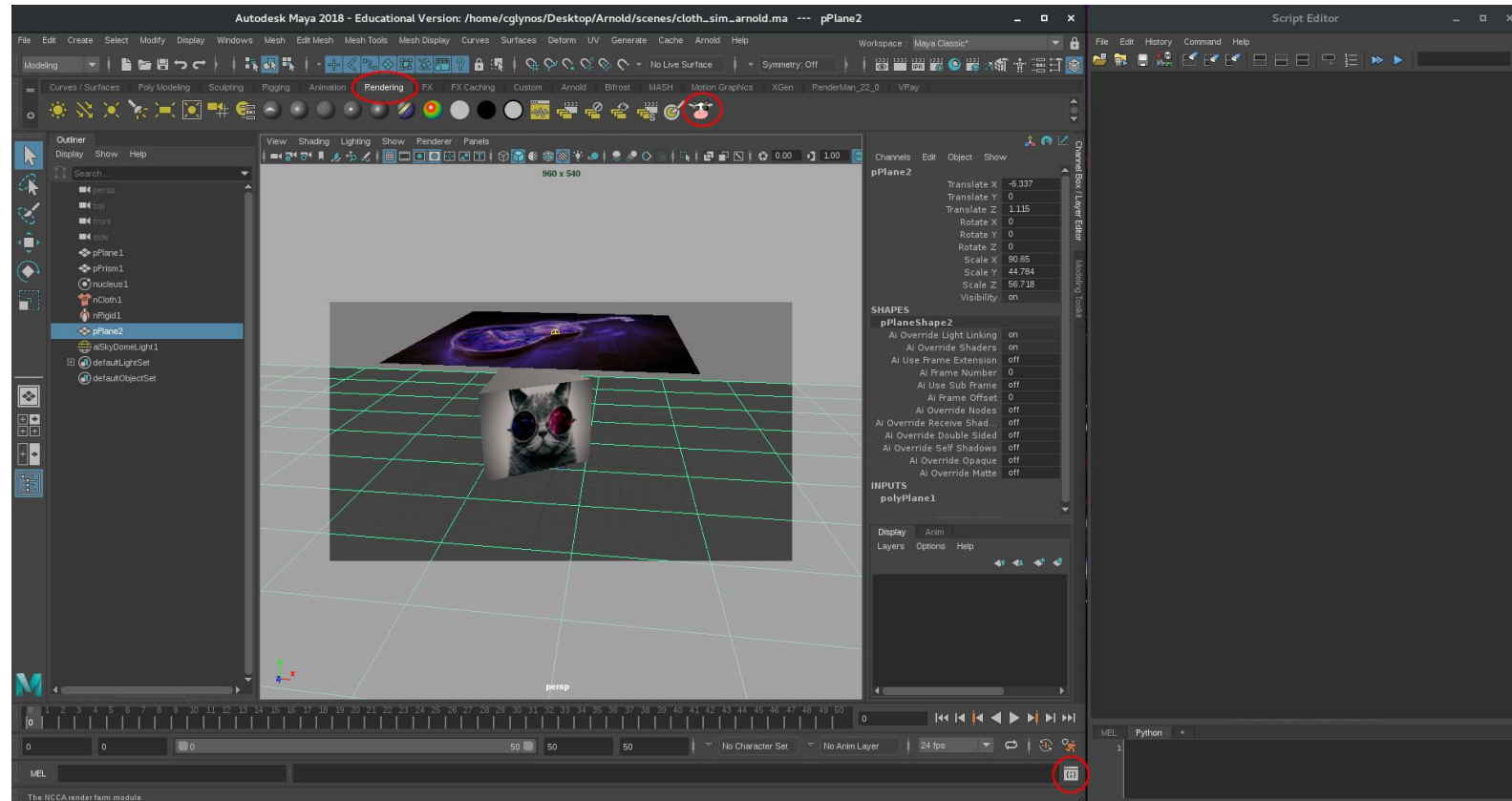
Check that your render settings are correct:

- Select the **Arnold** renderer
- Make sure you have a **name** for the output renders
- Check the **format** and **frame padding**
- Make sure your **animation frames** are correct
- Select the **camera** to render from
- Set the correct **resolution**



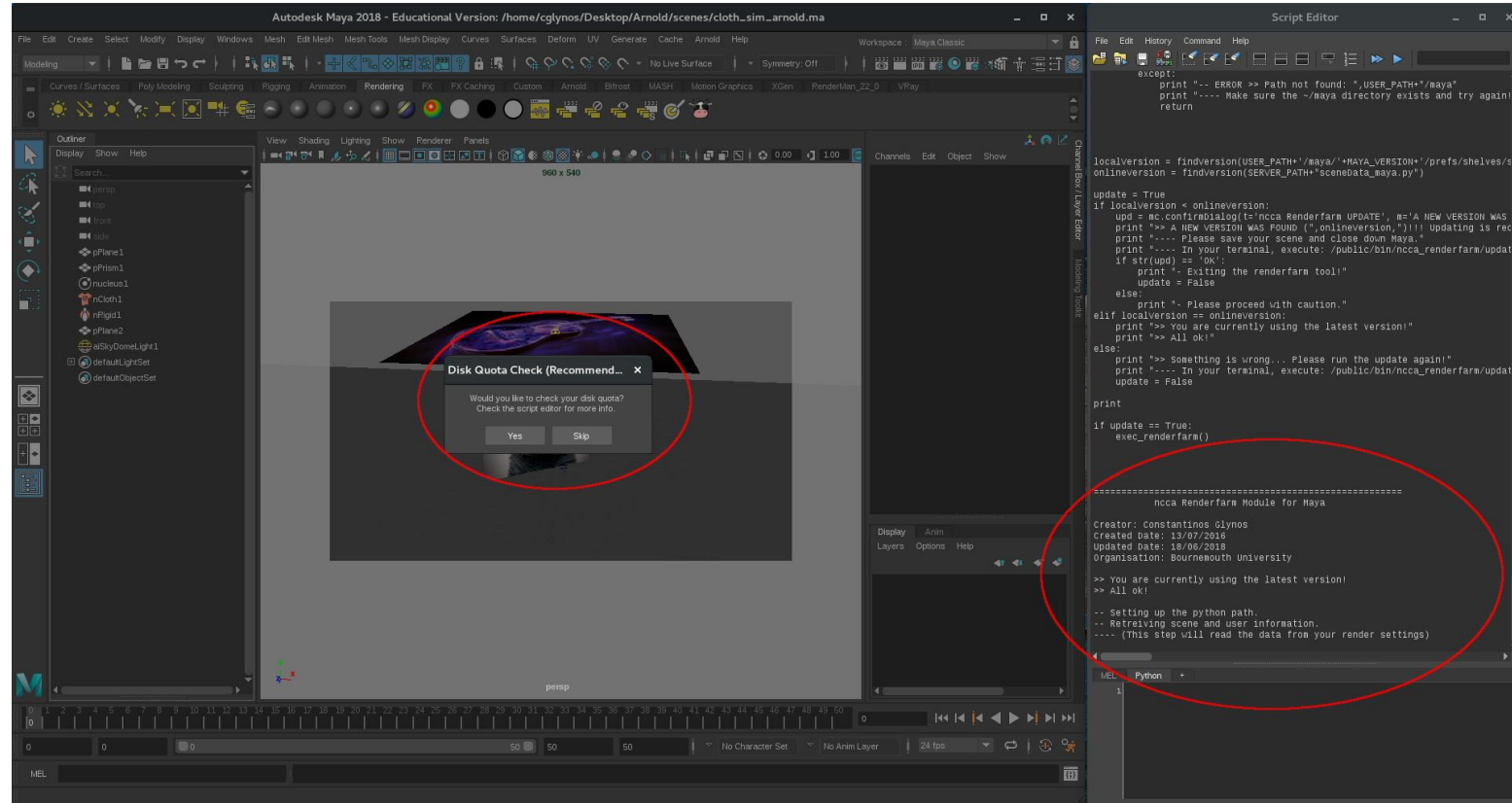
Let's render

- Press **Ctrl + S** to save the scene
- Open the **Script Editor** for debugging information
- Go to the **rendering shelf**
- Hit the cow!



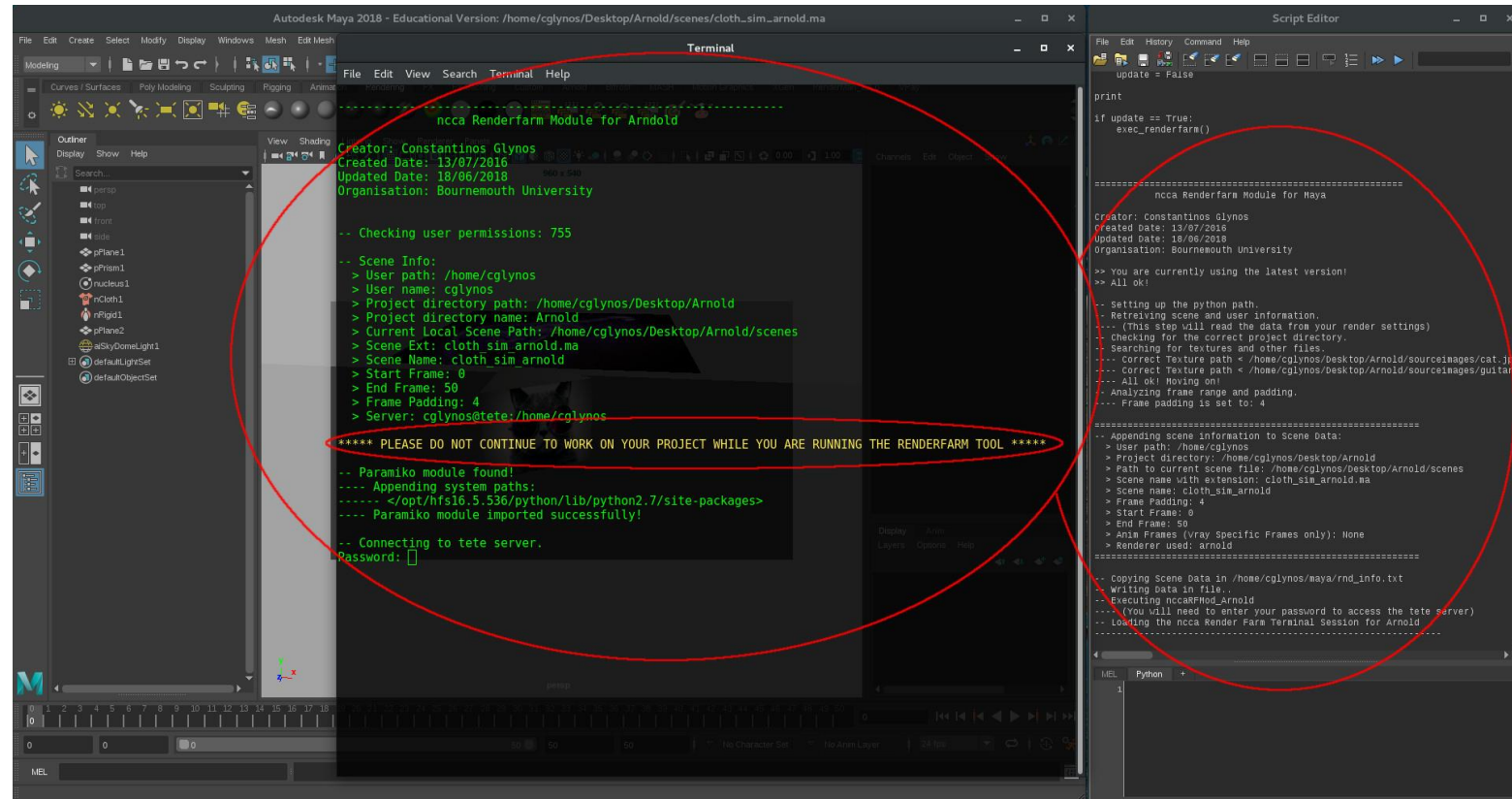
Using the tool

- Check your local disk space (quota), or **skip** if not needed.
- Check the **script editor** for any warnings about the version of the tool you are using.



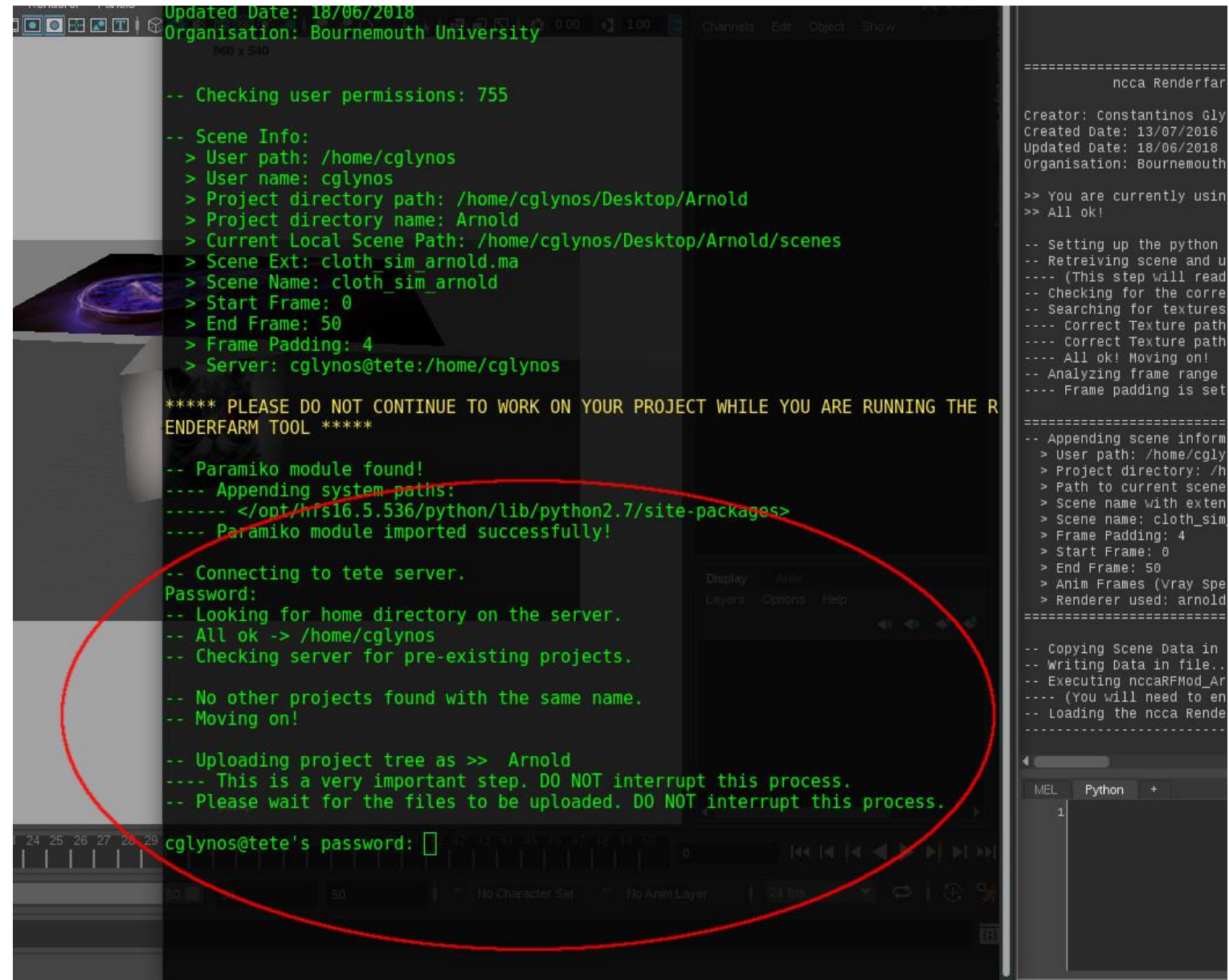
Using the tool

- A new **terminal** will appear which links to the renderfarm.
- Check the data passed on to the renderfarm by reading the **script editor** and the **terminal**. If not correct, just close the terminal to cancel the process.
- DO NOT USE MAYA OR CONTINUE TO WORK ON YOUR SCENE WHILE YOU SUBMIT A JOB TO THE RENDERFARM.**
- Enter your **password** to continue.



Using the tool

- The tool will check if you have any existing directories with the same name on the server and prompt for action (replace or rename).
- Enter your **password** again to upload your project directory onto the tete server.



```
Updated Date: 18/06/2018
Organisation: Bournemouth University

-- Checking user permissions: 755

-- Scene Info:
> User path: /home/cglynos
> User name: cglynos
> Project directory path: /home/cglynos/Desktop/Arnold
> Project directory name: Arnold
> Current Local Scene Path: /home/cglynos/Desktop/Arnold/scenes
> Scene Ext: cloth_sim_arnold.ma
> Scene Name: cloth_sim_arnold
> Start Frame: 0
> End Frame: 50
> Frame Padding: 4
> Server: cglynos@tete:/home/cglynos

***** PLEASE DO NOT CONTINUE TO WORK ON YOUR PROJECT WHILE YOU ARE RUNNING THE R
ENDERFARM TOOL *****

-- Paramiko module found!
---- Appending system paths:
----- </opt/hfs16.5.536/python/lib/python2.7/site-packages>
---- Paramiko module imported successfully!

-- Connecting to tete server.
Password:
-- Looking for home directory on the server.
-- All ok -> /home/cglynos
-- Checking server for pre-existing projects.

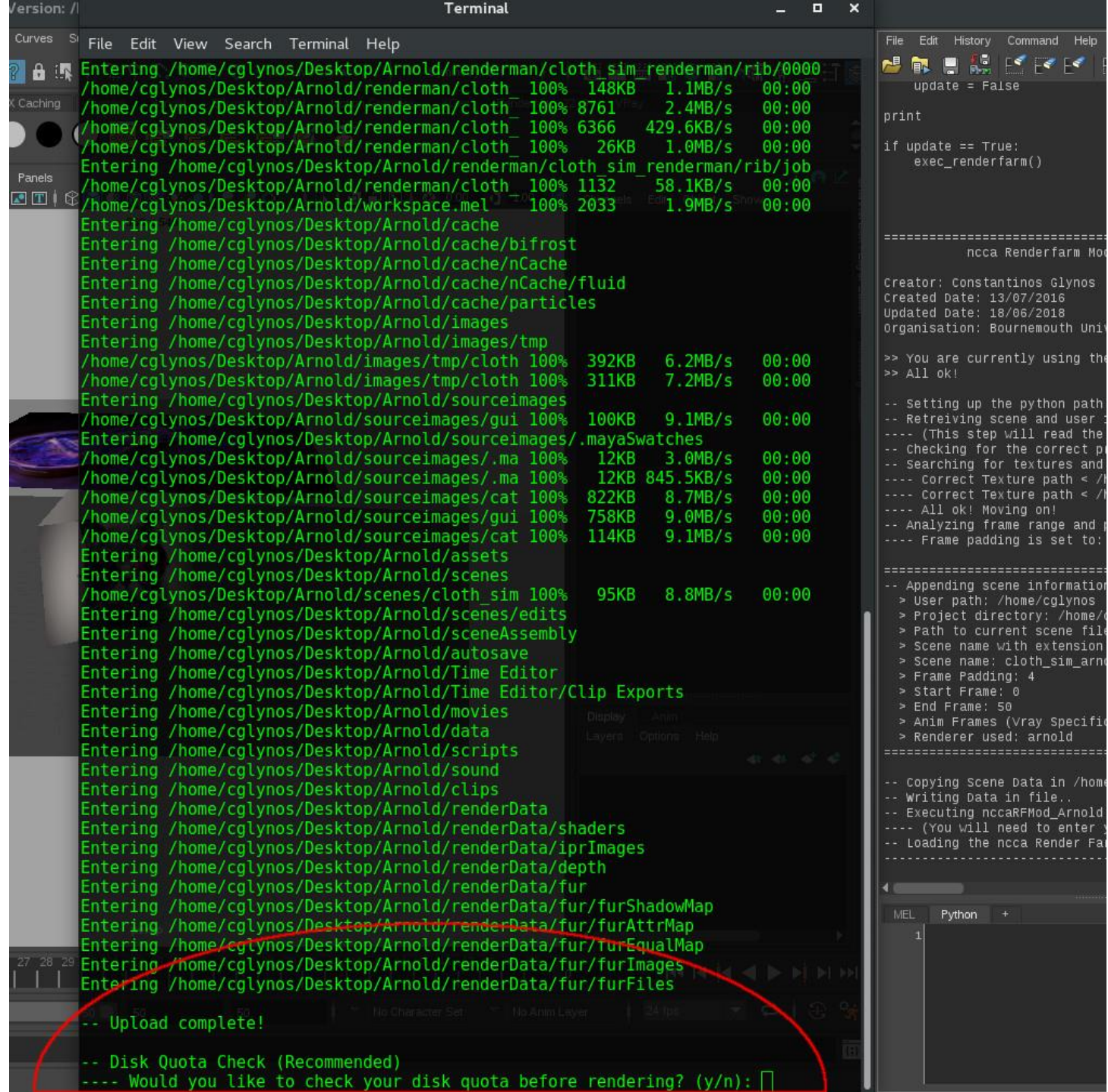
-- No other projects found with the same name.
-- Moving on!

-- Uploading project tree as >> Arnold
---- This is a very important step. DO NOT interrupt this process.
-- Please wait for the files to be uploaded. DO NOT interrupt this process.

cglynos@tete's password: [ ]
```


Using the tool

- Once the files are uploaded, the tool will prompt for a quota check on the server.
- If you do not have enough disk space (quota) available on the server, your renders will not be saved anywhere.
- Skip online quota check iff you are sure you have enough space available.

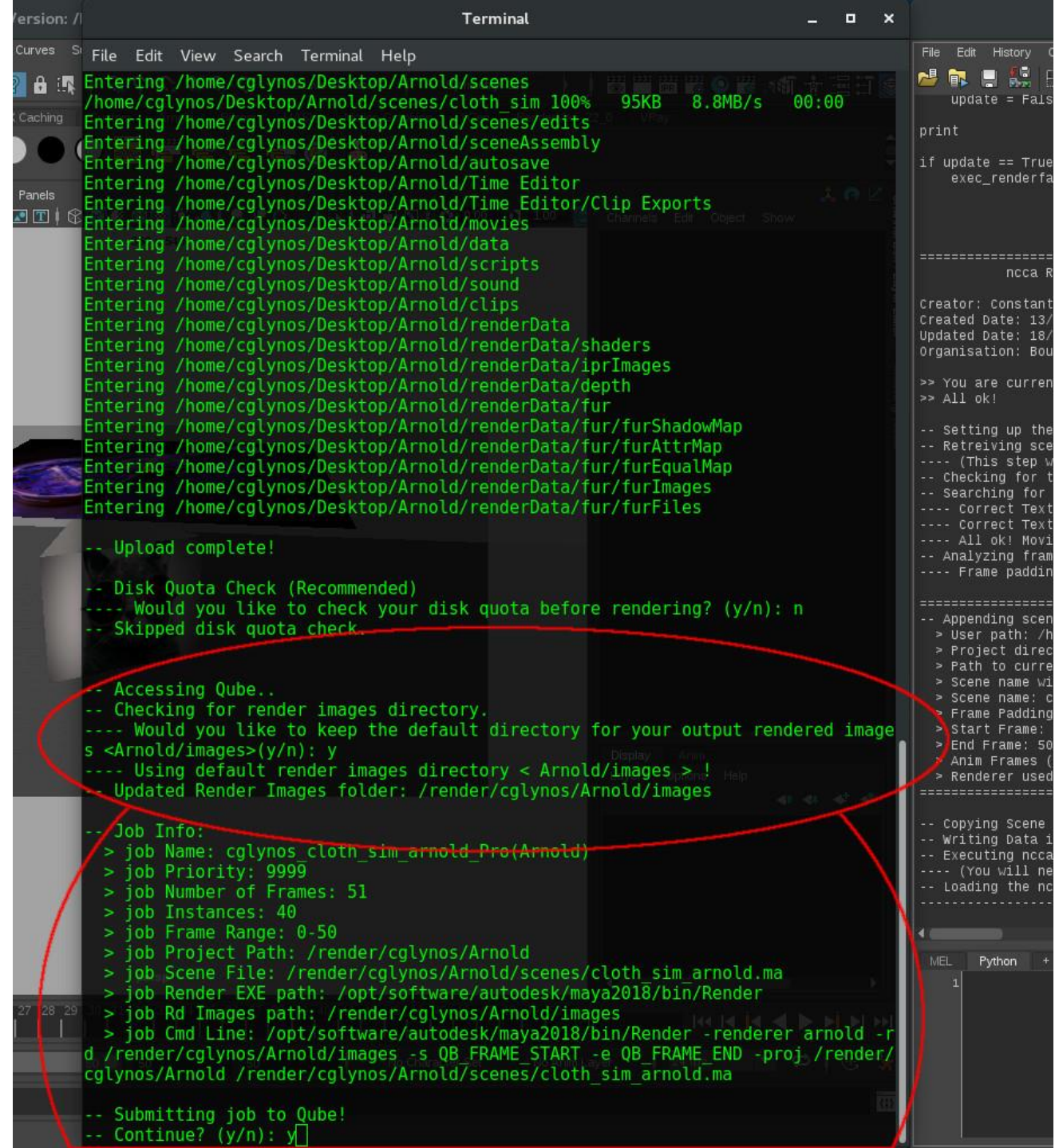


```
Version: /
Curves S
File Edit View Search Terminal Help
K Caching
Panels
Entering /home/cglynos/Desktop/Arnold/renderman/cloth_sim_renderman/rib/0000
/home/cglynos/Desktop/Arnold/renderman/cloth_ 100% 148KB 1.1MB/s 00:00
/home/cglynos/Desktop/Arnold/renderman/cloth_ 100% 8761 2.4MB/s 00:00
/home/cglynos/Desktop/Arnold/renderman/cloth_ 100% 6366 429.6KB/s 00:00
/home/cglynos/Desktop/Arnold/renderman/cloth_ 100% 26KB 1.0MB/s 00:00
Entering /home/cglynos/Desktop/Arnold/renderman/cloth_sim_renderman/rib/job
/home/cglynos/Desktop/Arnold/renderman/cloth_ 100% 1132 58.1KB/s 00:00
/home/cglynos/Desktop/Arnold/workspace.mel 100% 2033 1.9MB/s 00:00
Entering /home/cglynos/Desktop/Arnold/cache
Entering /home/cglynos/Desktop/Arnold/cache/bifrost
Entering /home/cglynos/Desktop/Arnold/cache/nCache
Entering /home/cglynos/Desktop/Arnold/cache/nCache/fluid
Entering /home/cglynos/Desktop/Arnold/cache/particles
Entering /home/cglynos/Desktop/Arnold/images
Entering /home/cglynos/Desktop/Arnold/images/tmp
/home/cglynos/Desktop/Arnold/images/tmp/cloth_ 100% 392KB 6.2MB/s 00:00
/home/cglynos/Desktop/Arnold/images/tmp/cloth_ 100% 311KB 7.2MB/s 00:00
Entering /home/cglynos/Desktop/Arnold/sourceimages
/home/cglynos/Desktop/Arnold/sourceimages/gui 100% 100KB 9.1MB/s 00:00
Entering /home/cglynos/Desktop/Arnold/sourceimages/.mayaSwatches
/home/cglynos/Desktop/Arnold/sourceimages/.ma 100% 12KB 3.0MB/s 00:00
/home/cglynos/Desktop/Arnold/sourceimages/.ma 100% 12KB 845.5KB/s 00:00
/home/cglynos/Desktop/Arnold/sourceimages/cat 100% 822KB 8.7MB/s 00:00
/home/cglynos/Desktop/Arnold/sourceimages/gui 100% 758KB 9.0MB/s 00:00
/home/cglynos/Desktop/Arnold/sourceimages/cat 100% 114KB 9.1MB/s 00:00
Entering /home/cglynos/Desktop/Arnold/assets
Entering /home/cglynos/Desktop/Arnold/scenes
/home/cglynos/Desktop/Arnold/scenes/cloth_sim 100% 95KB 8.8MB/s 00:00
Entering /home/cglynos/Desktop/Arnold/scenes/edits
Entering /home/cglynos/Desktop/Arnold/sceneAssembly
Entering /home/cglynos/Desktop/Arnold/autosave
Entering /home/cglynos/Desktop/Arnold/Time Editor
Entering /home/cglynos/Desktop/Arnold/Time Editor/Clip Exports
Entering /home/cglynos/Desktop/Arnold/movies
Entering /home/cglynos/Desktop/Arnold/data
Entering /home/cglynos/Desktop/Arnold/scripts
Entering /home/cglynos/Desktop/Arnold/sound
Entering /home/cglynos/Desktop/Arnold/clips
Entering /home/cglynos/Desktop/Arnold/renderData
Entering /home/cglynos/Desktop/Arnold/renderData/shaders
Entering /home/cglynos/Desktop/Arnold/renderData/iplImages
Entering /home/cglynos/Desktop/Arnold/renderData/depth
Entering /home/cglynos/Desktop/Arnold/renderData/fur
Entering /home/cglynos/Desktop/Arnold/renderData/fur/furShadowMap
Entering /home/cglynos/Desktop/Arnold/renderData/fur/furAttrMap
Entering /home/cglynos/Desktop/Arnold/renderData/fur/furEqualMap
Entering /home/cglynos/Desktop/Arnold/renderData/fur/furImages
Entering /home/cglynos/Desktop/Arnold/renderData/fur/furFiles
-- Upload complete!
-- Disk Quota Check (Recommended)
---- Would you like to check your disk quota before rendering? (y/n): [ ]

=====
ncca Renderfarm Mod
Creator: Constantinos Glynos
Created Date: 13/07/2016
Updated Date: 18/06/2018
Organisation: Bournemouth Uni
>> You are currently using the
>> All ok!
-- Setting up the python path
-- Retrieving scene and user
---- (This step will read the
-- Checking for the correct p
-- Searching for textures and
---- correct Texture path < /
---- Correct Texture path < /
---- All ok! Moving on!
-- Analyzing frame range and
---- Frame padding is set to:
=====
-- Appending scene information
> User path: /home/cglynos
> Project directory: /home/
> Path to current scene file
> Scene name with extension
> Scene name: cloth_sim_arn
> Frame Padding: 4
> Start Frame: 0
> End Frame: 50
> Anim Frames (vray Specific
> Renderer used: arnold
=====
-- Copying Scene Data in /home
-- Writing Data in file..
-- Executing nccaRFMod_Arnold
---- (You will need to enter
-- Loading the ncca Render Fa
=====
```


Using the tool

- Set your **output renders directory** if you don't want to use the default one.
- Check the **Job info** data before submitting the job to Qube.
- Type **y** and **Enter** to continue.



```
Terminal
File Edit View Search Terminal Help
Entering /home/cglynos/Desktop/Arnold/scenes
/home/cglynos/Desktop/Arnold/scenes/cloth_sim 100% 95KB 8.8MB/s 00:00
Entering /home/cglynos/Desktop/Arnold/scenes/edits
Entering /home/cglynos/Desktop/Arnold/sceneAssembly
Entering /home/cglynos/Desktop/Arnold/autosave
Entering /home/cglynos/Desktop/Arnold/Time Editor
Entering /home/cglynos/Desktop/Arnold/Time Editor/Clip Exports
Entering /home/cglynos/Desktop/Arnold/movies
Entering /home/cglynos/Desktop/Arnold/data
Entering /home/cglynos/Desktop/Arnold/scripts
Entering /home/cglynos/Desktop/Arnold/sound
Entering /home/cglynos/Desktop/Arnold/clips
Entering /home/cglynos/Desktop/Arnold/renderData
Entering /home/cglynos/Desktop/Arnold/renderData/shaders
Entering /home/cglynos/Desktop/Arnold/renderData/iplImages
Entering /home/cglynos/Desktop/Arnold/renderData/depth
Entering /home/cglynos/Desktop/Arnold/renderData/fur
Entering /home/cglynos/Desktop/Arnold/renderData/fur/furShadowMap
Entering /home/cglynos/Desktop/Arnold/renderData/fur/furAttrMap
Entering /home/cglynos/Desktop/Arnold/renderData/fur/furEqualMap
Entering /home/cglynos/Desktop/Arnold/renderData/fur/furImages
Entering /home/cglynos/Desktop/Arnold/renderData/fur/furFiles

-- Upload complete!

-- Disk Quota Check (Recommended)
---- Would you like to check your disk quota before rendering? (y/n): n
-- Skipped disk quota check.

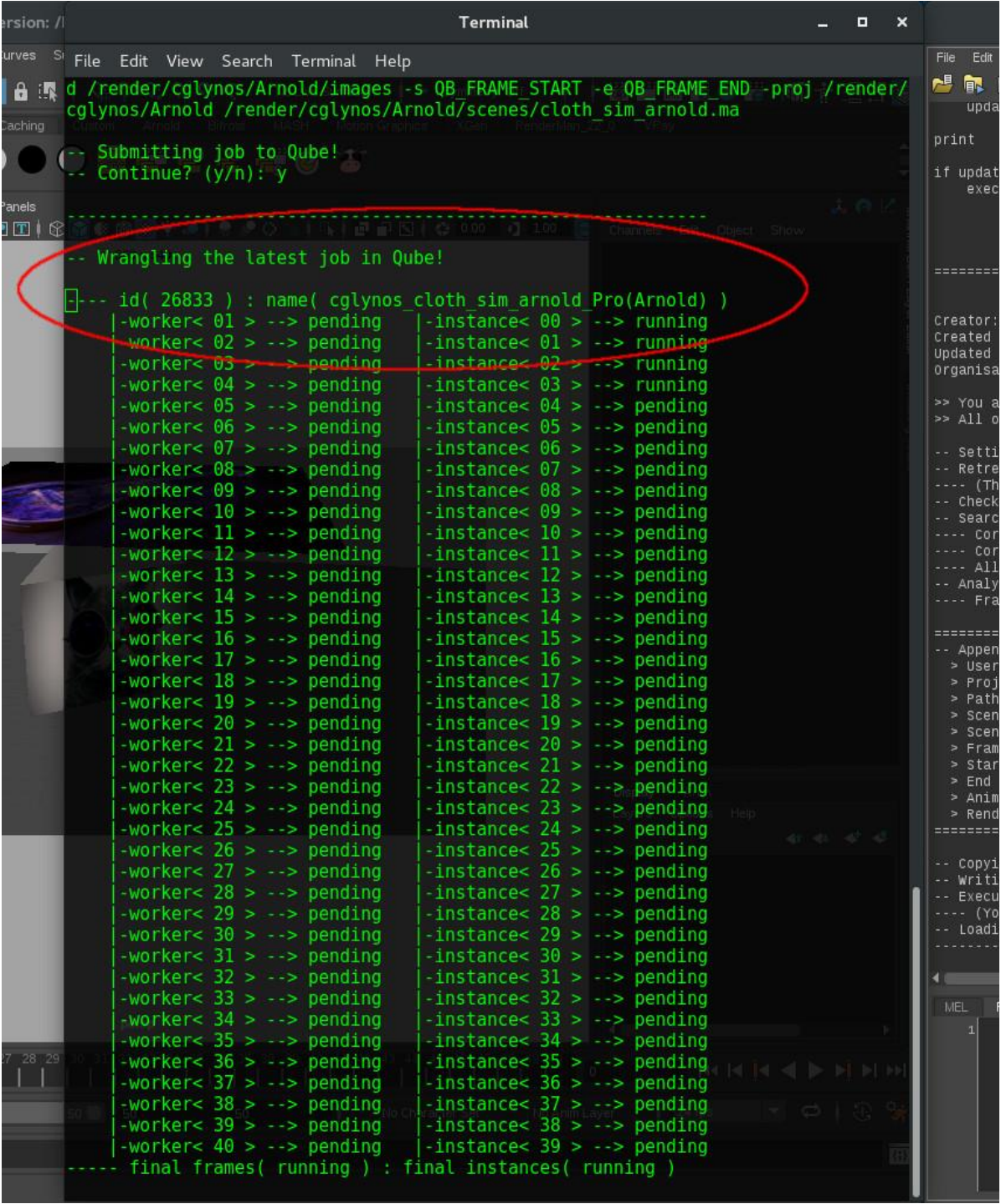
-- Accessing Qube..
-- Checking for render images directory.
---- Would you like to keep the default directory for your output rendered image
s <Arnold/images>(y/n): y
---- Using default render images directory < Arnold/images >.!
-- Updated Render Images folder: /render/cglynos/Arnold/images

-- Job Info:
> job Name: cglynos_cloth_sim_arnold_Pro(Arnold)
> job Priority: 9999
> job Number of Frames: 51
> job Instances: 40
> job Frame Range: 0-50
> job Project Path: /render/cglynos/Arnold
> job Scene File: /render/cglynos/Arnold/scenes/cloth_sim_arnold.ma
> job Render EXE path: /opt/software/autodesk/maya2018/bin/Render
> job Rd Images path: /render/cglynos/Arnold/images
> job Cmd Line: /opt/software/autodesk/maya2018/bin/Render -renderer arnold -r
d /render/cglynos/Arnold/images -s QB_FRAME_START -e QB_FRAME_END -proj /render/
cglynos/Arnold /render/cglynos/Arnold/scenes/cloth_sim_arnold.ma

-- Submitting job to Qube!
-- Continue? (y/n): y
```


Using the tool

- **Wrangle** your renders from the terminal.
- At this point you can **safely close the terminal** and wrangle your renders from **Qube**. But it's advised that you leave the terminal open.
- Now we **wait** for it to finish.
- You can **now continue** to work on your scene.



The screenshot shows a terminal window with a dark background and green text. The terminal output is as follows:

```
version: /  
File Edit View Search Terminal Help  
d /render/cglynos/Arnold/images -s QB_FRAME_START -e QB_FRAME_END -proj /render/  
cglynos/Arnold /render/cglynos/Arnold/scenes/cloth_sim_arnold.ma  
-- Submitting job to Qube!  
-- Continue? (y/n): y  
-----  
-- Wrangling the latest job in Qube!  
[--- id( 26833 ) : name( cglynos_cloth_sim_arnold Pro(Arnold) )  
-worker< 01 > --> pending | -instance< 00 > --> running  
-worker< 02 > --> pending | -instance< 01 > --> running  
-worker< 03 > --> pending | -instance< 02 > --> running  
-worker< 04 > --> pending | -instance< 03 > --> running  
-worker< 05 > --> pending | -instance< 04 > --> pending  
-worker< 06 > --> pending | -instance< 05 > --> pending  
-worker< 07 > --> pending | -instance< 06 > --> pending  
-worker< 08 > --> pending | -instance< 07 > --> pending  
-worker< 09 > --> pending | -instance< 08 > --> pending  
-worker< 10 > --> pending | -instance< 09 > --> pending  
-worker< 11 > --> pending | -instance< 10 > --> pending  
-worker< 12 > --> pending | -instance< 11 > --> pending  
-worker< 13 > --> pending | -instance< 12 > --> pending  
-worker< 14 > --> pending | -instance< 13 > --> pending  
-worker< 15 > --> pending | -instance< 14 > --> pending  
-worker< 16 > --> pending | -instance< 15 > --> pending  
-worker< 17 > --> pending | -instance< 16 > --> pending  
-worker< 18 > --> pending | -instance< 17 > --> pending  
-worker< 19 > --> pending | -instance< 18 > --> pending  
-worker< 20 > --> pending | -instance< 19 > --> pending  
-worker< 21 > --> pending | -instance< 20 > --> pending  
-worker< 22 > --> pending | -instance< 21 > --> pending  
-worker< 23 > --> pending | -instance< 22 > --> pending  
-worker< 24 > --> pending | -instance< 23 > --> pending  
-worker< 25 > --> pending | -instance< 24 > --> pending  
-worker< 26 > --> pending | -instance< 25 > --> pending  
-worker< 27 > --> pending | -instance< 26 > --> pending  
-worker< 28 > --> pending | -instance< 27 > --> pending  
-worker< 29 > --> pending | -instance< 28 > --> pending  
-worker< 30 > --> pending | -instance< 29 > --> pending  
-worker< 31 > --> pending | -instance< 30 > --> pending  
-worker< 32 > --> pending | -instance< 31 > --> pending  
-worker< 33 > --> pending | -instance< 32 > --> pending  
-worker< 34 > --> pending | -instance< 33 > --> pending  
-worker< 35 > --> pending | -instance< 34 > --> pending  
-worker< 36 > --> pending | -instance< 35 > --> pending  
-worker< 37 > --> pending | -instance< 36 > --> pending  
-worker< 38 > --> pending | -instance< 37 > --> pending  
-worker< 39 > --> pending | -instance< 38 > --> pending  
-worker< 40 > --> pending | -instance< 39 > --> pending  
-----  
----- final frames( running ) : final instances( running )
```

A red circle highlights the section of the terminal output that shows the job status, starting with "Wrangling the latest job in Qube!" and the list of workers and instances.

Finishing off

- Once the renders are **complete**, the tool will prompt you to **open the project directory** on the server.
- Type **y** and **Enter** so that the tool can **open your project directory on the server**. Otherwise, type **n** and **Enter**.
- You can now close the terminal by pressing **Enter** again or by using the **close button**.

