

ncca RenderFarm Tool

Maya: V-Ray

Constantinos Glynos

Gordon Dunn

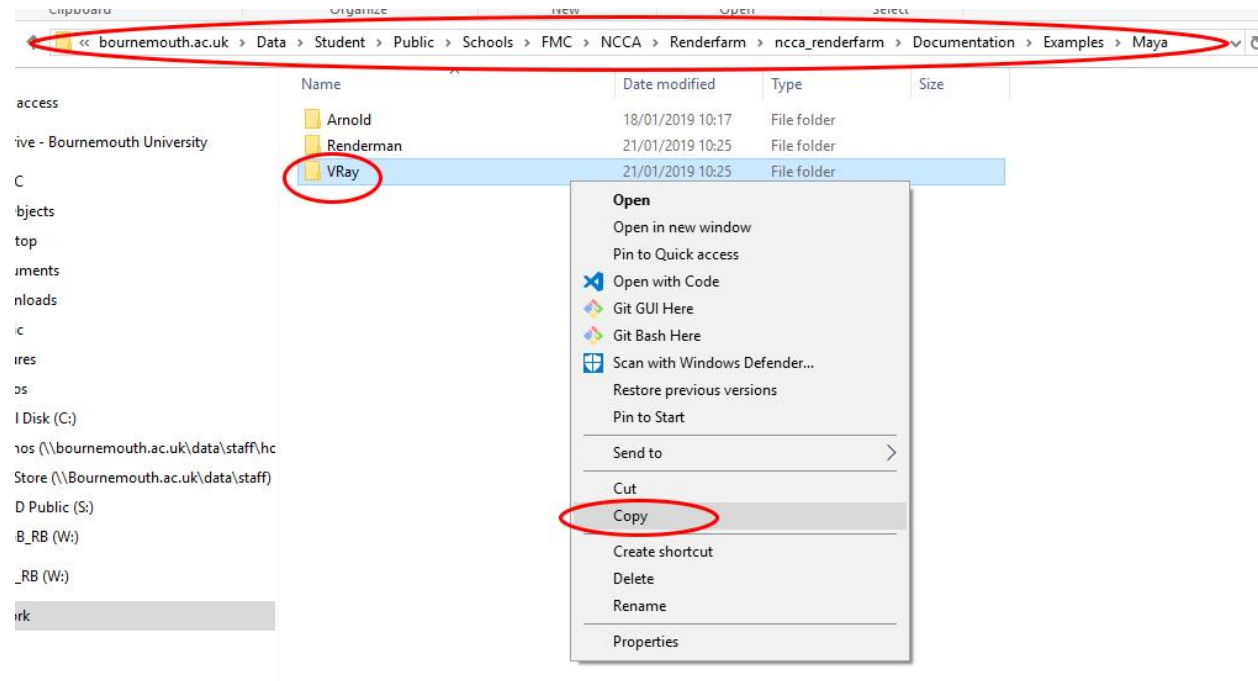


Copy the example scene

The VRay example project directory is at

\\bournemouth.ac.uk\Data\Student\Public\Schools\FMC\NCCA\Renderfarm\ncca_renderfarm\Documentation\Examples\Maya\

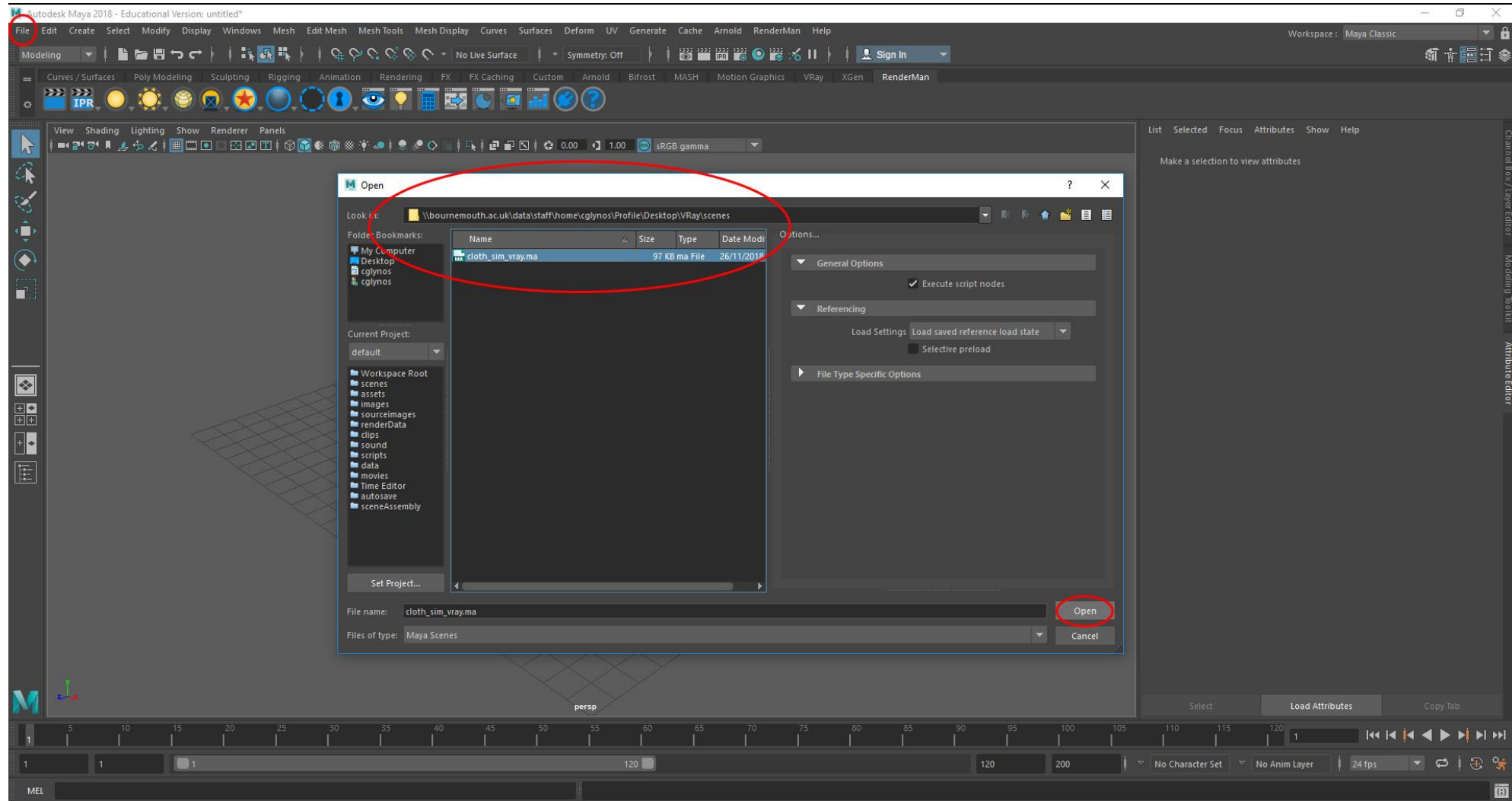
Copy and Paste the project directory to your **Desktop** or to the **D:** drive



Open Maya

Open the example scene

File -> Open -> cloth_sim_vray.ma



Set project directory

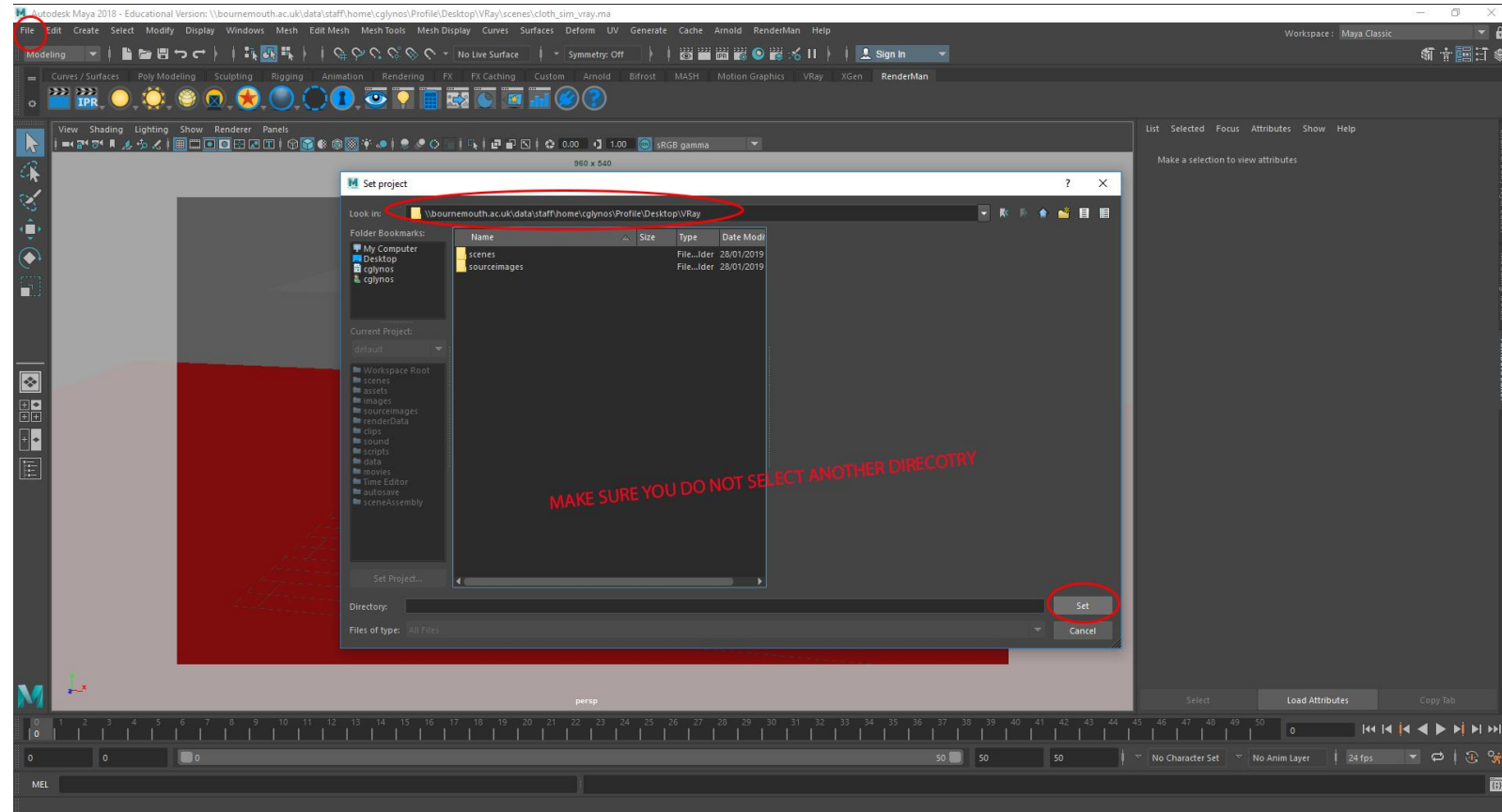
File -> Set Project...

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**

Select **Create default workspace**



Update the textures

Select the **pPlane1** mesh

Go to the **Attribute Editor -> VRayMtl1**

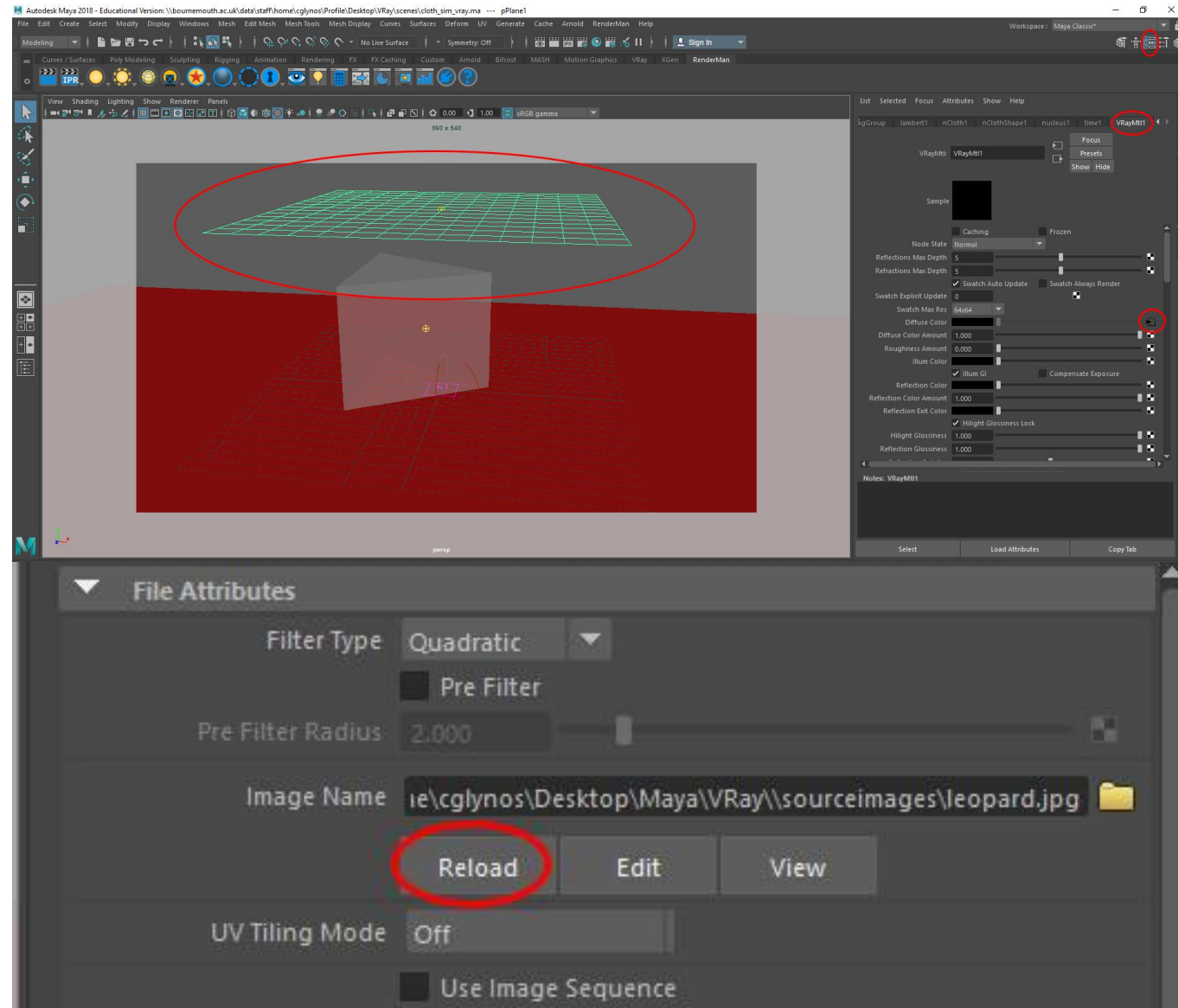
Click on the **Diffuse colour** option box

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

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

sourceimages\leopard.jpg

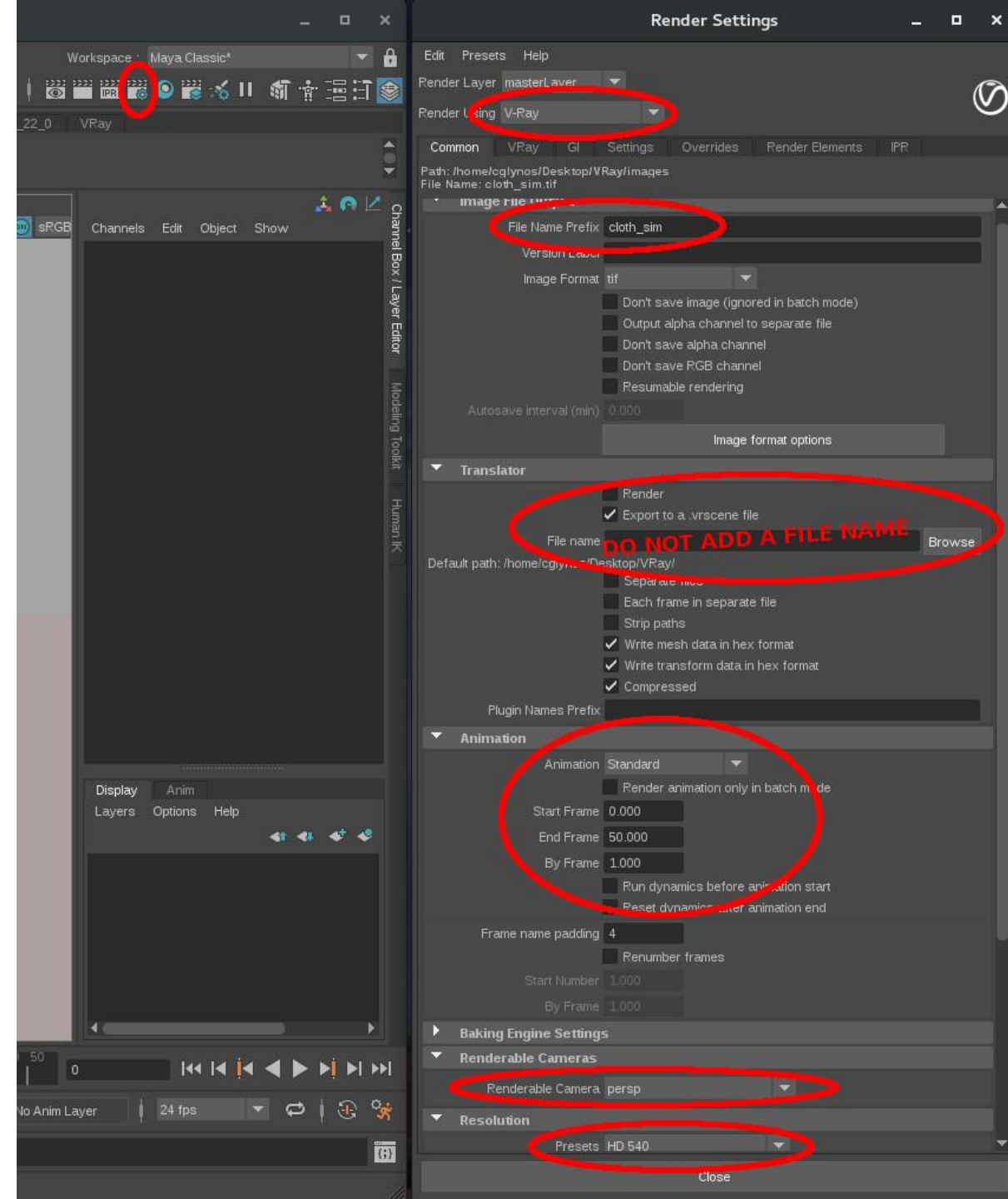
Do the same for the rest of the objects if they have any textures



Check the render settings

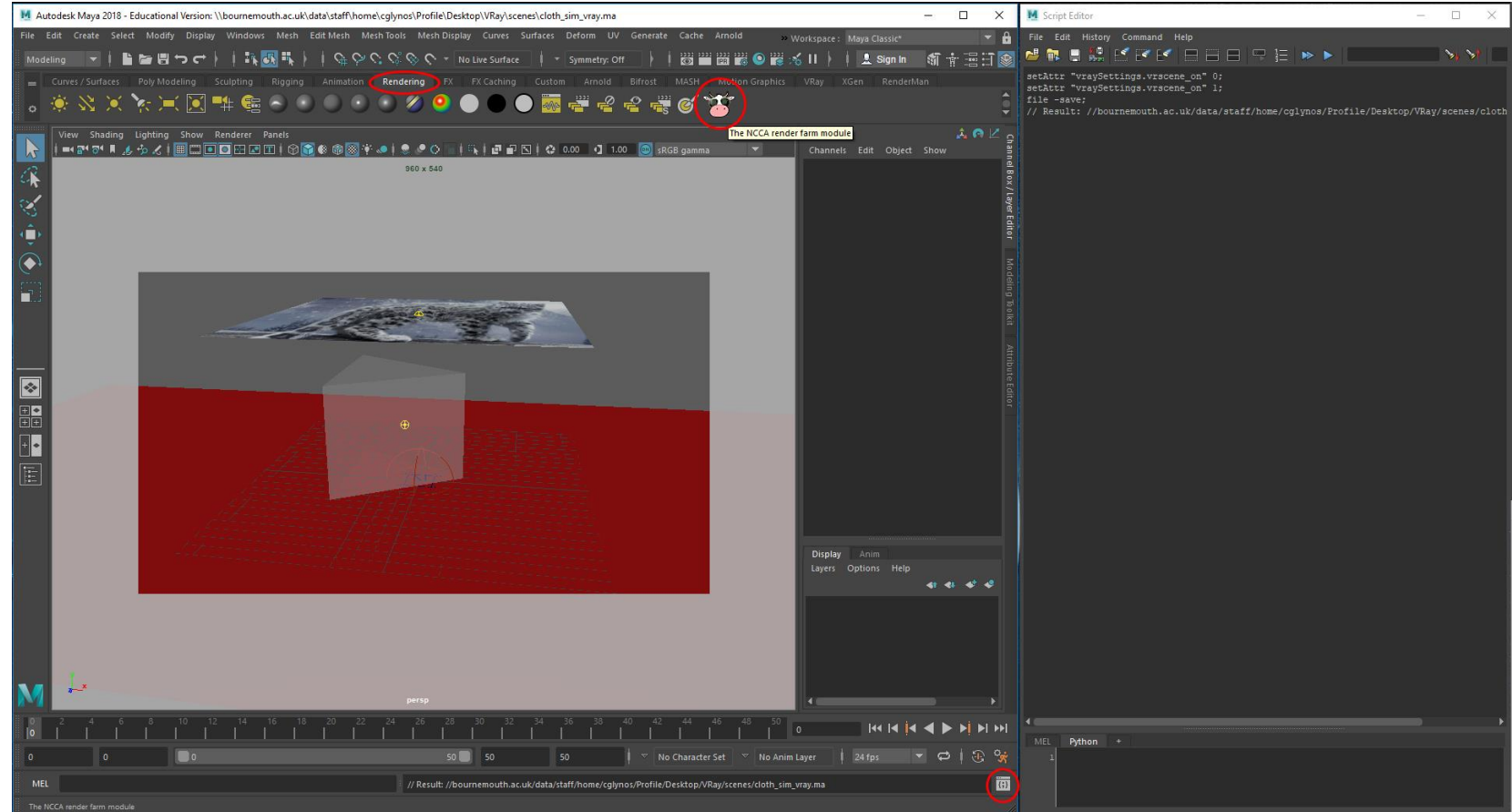
Check that your render settings are correct:

- Select the **VRay** renderer
- Make sure you have a **name** for the output renders
- Tick on **Export to a .vrscape file**
- **Do not give a file name for the .vrscape**
- Check the **format** and **frame padding**
- Make sure your **animation frames** are correct
- Select the **camera** to render from
- Set the correct **resolution**



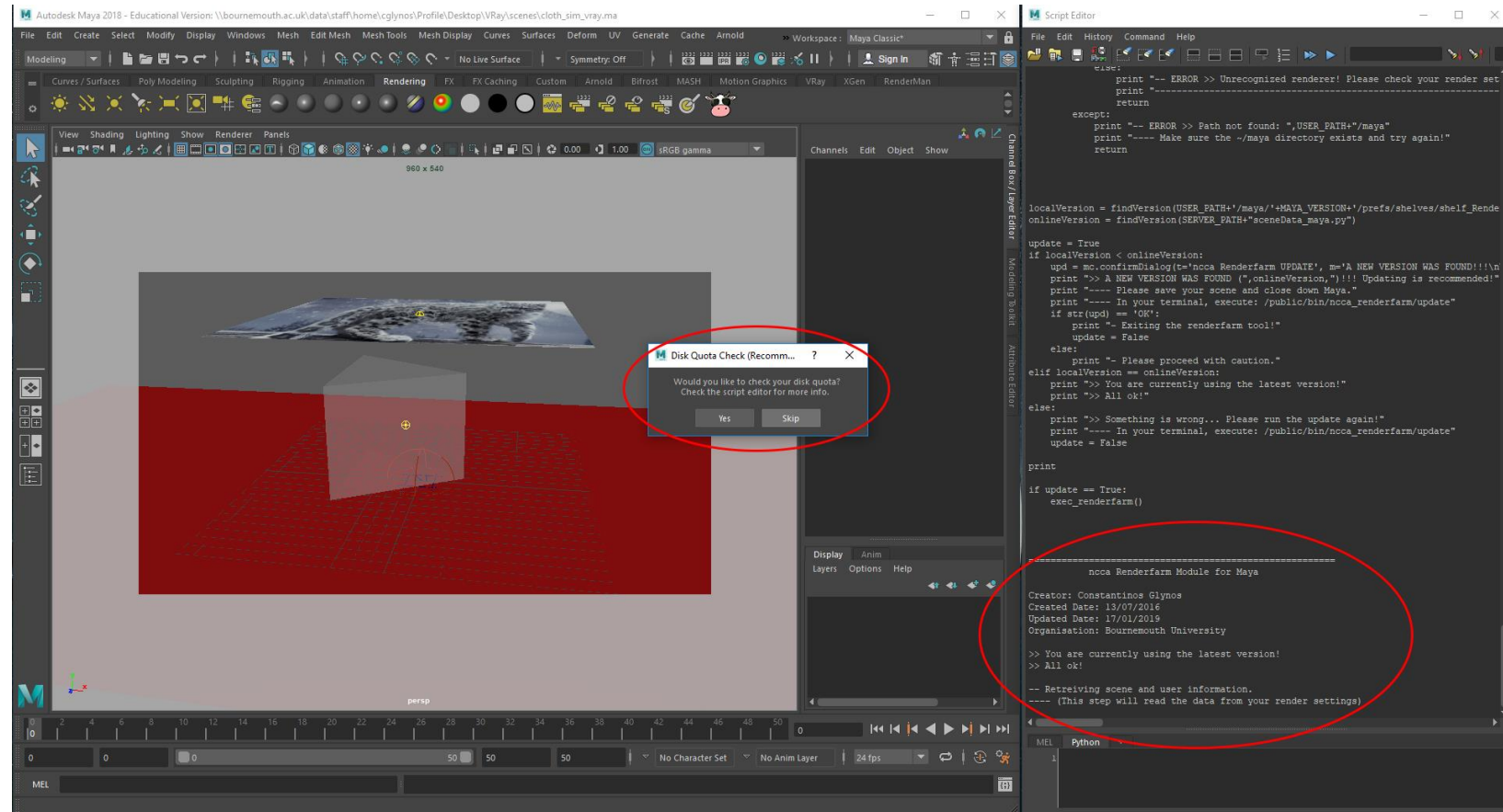
Let's render

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



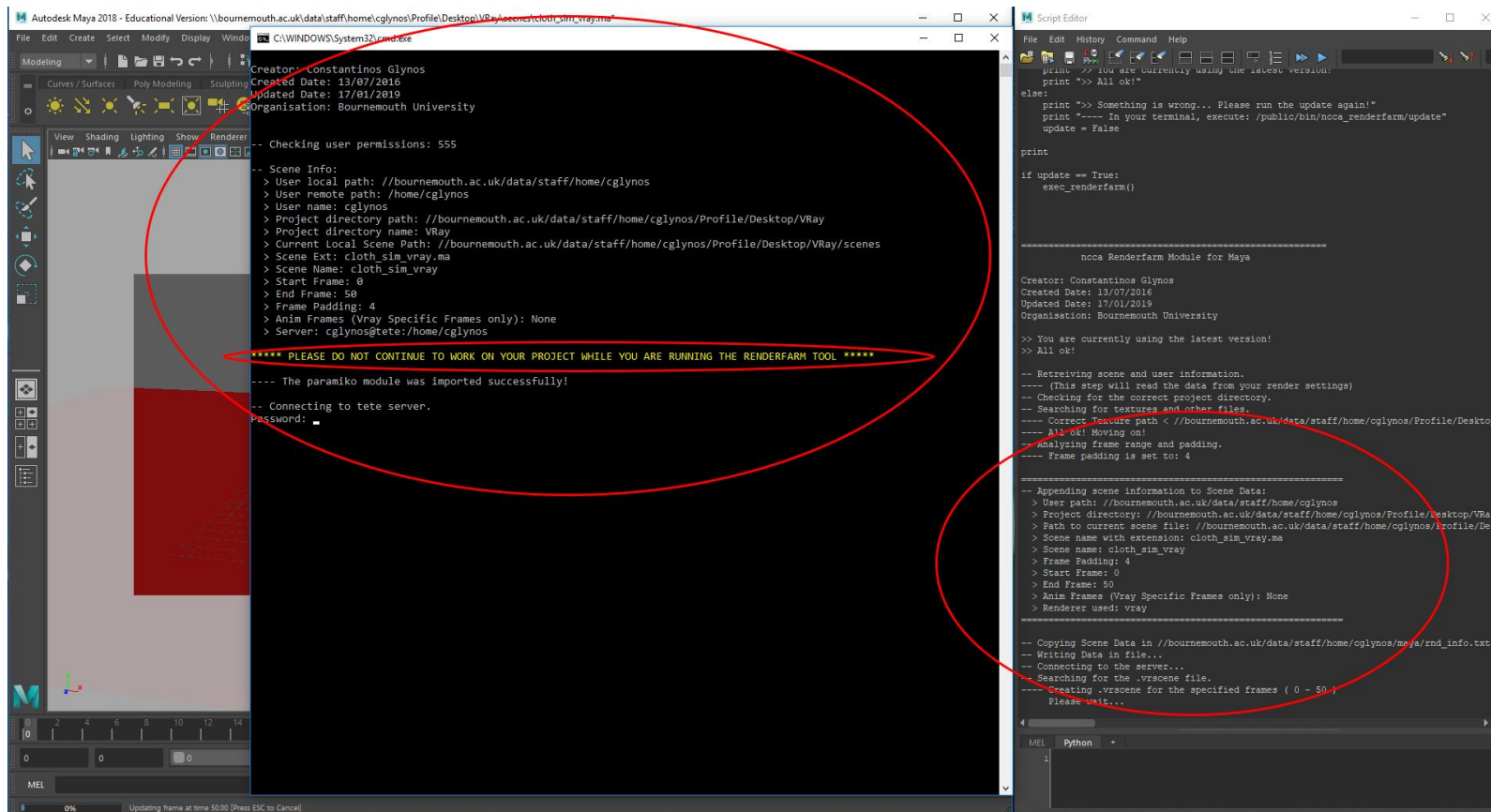
Using the tool

- 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

- The tool will generate your `.vrscene`. If one exists, already it will ask you if you want it to be replaced. Otherwise, it will use the old `.vrscene` for your renders.
- A new `cmd prompt` will appear which links to the renderfarm.
- **[FIRST TIME]** The tool will search for the necessary libraries and install the missing ones. This might take a while.
- Check the data passed on to the renderfarm by reading the `script editor` and the `cmd`. If not correct, just close the cmd prompt 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).
- It will also update your `.vrscene` file to match the paths of the renderfarm.
- Enter your `password` again to upload your project directory onto the tete server.

```
C:\WINDOWS\System32\cmd.exe

-----
ncca Renderfarm Module for V Ray
Creator: Constantinos Glynos
Created Date: 13/07/2016
Updated Date: 17/01/2019
Organisation: Bournemouth University

-- Checking user permissions: 555

-- Scene Info:
> User local path: //bournemouth.ac.uk/data/staff/home/cglynos
> User remote path: /home/cglynos
> User name: cglynos
> Project directory path: //bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay
> Project directory name: VRay
> Current Local Scene Path: //bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/scenes
> Scene Ext: cloth_sim_vray.ma
> Scene Name: cloth_sim_vray
> Start Frame: 0
> End Frame: 50
> Frame Padding: 4
> Anim Frames (Vray Specific Frames only): None
> Server: cglynos@tete:/home/cglynos

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

---- The paramiko module was 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!

-- .vrscene found at: //bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/cloth_sim_vray.vrscene
---- Fixing paths.
----- replacing base path:  img_dir="//bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/images/";
> /render/cglynos/VRay
----- replacing base path:  file="//bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/sourceimages/leopard.jpg";
> /render/cglynos/VRay
---- .vrscene updated successfully!

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

The authenticity of host 'tete (172.16.77.245)' can't be established.
RSA key fingerprint is SHA256:cYunnFeOE59miCyCG298h22lPV+48nrrPOZXKCsui2w.
Are you sure you want to continue connecting (yes/no)?
Warning: Permanently added 'tete,172.16.77.245' (RSA) to the list of known hosts.
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.

```
C:\WINDOWS\System32\cmd.exe
> Current Local Scene Path: //bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/scenes
> Scene Ext: cloth_sim_vray.ma
> Scene Name: cloth_sim_vray
> Start Frame: 0
> End Frame: 50
> Frame Padding: 4
> Anim Frames (Vray Specific Frames only): None
> Server: cglynos@tete:/home/cglynos

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

---- The paramiko module was 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!

-- .vrscene found at: //bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/cloth_sim_vray.vrscene
---- Fixing paths.
----- replacing base path:  img_dir="//bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/images/";
> /render/cglynos/VRay
----- replacing base path:  file="//bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/sourceimages/leopard.jpg";
> /render/cglynos/VRay
---- .vrscene updated successfully!

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

The authenticity of host 'tete (172.16.77.245)' can't be established.
RSA key fingerprint is SHA256:cYunnFeOE59miCyCG298h22lPV+48nrrPOZXKCsui2w.
Are you sure you want to continue connecting (yes/no)?
Warning: Permanently added 'tete,172.16.77.245' (RSA) to the list of known hosts.
cglynos@tete's password:
Connected to tete.
Changing to: /home/cglynos/VRay
sftp> put -r //bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay
Uploading //bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/ to /home/cglynos/VRay/
Entering //bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/
Entering //bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/cloth_sim_vray.vrscene 100% 232KB 232.4KB/s 00:00
Entering //bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/images
Entering //bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/scenes
Entering //bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/scenes/cloth_sim_vra 100% 95KB 95.2KB/s 00:00
Entering //bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/sourceimages
Entering //bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/sourceimages/.mayaSwatches
Entering //bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/sourceimages/.mayaSw 100% 12KB 12.3KB/s 00:00
Entering //bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/sourceimages/.vrayThumbs
Entering //bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/sourceimages/.vrayTh 100% 144KB 144.0KB/s 00:00
Entering //bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/sourceimages/leopard 100% 746KB 746.3KB/s 00:00
Entering //bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/workspace.mel 100% 2806 2.7KB/s 00:00

-- Upload complete!

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

Using the tool

- The **output images directory** is set from within your **.vrscene** and project directory settings.
- Check the **Job info** data before submitting the job to **Qube**.
- Type **y** and **Enter** to continue.

```
C:\WINDOWS\System32\cmd.exe
-- Moving on!
-- .vrscene found at: //bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/cloth_sim_vray.vrscene
-- Fixing paths.
----- replacing base path:  img_dir="//bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/images/";
> /render/cglynos/VRay
----- replacing base path:  file="//bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/sourceimages/leopard.jpg";
> /render/cglynos/VRay
---- .vrscene updated successfully!

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

The authenticity of host 'tete (172.16.77.245)' can't be established.
RSA key fingerprint is SHA256:cYunnFeOE59miCyCG298h221PV+48nrrPOZXKCsui2w.
Are you sure you want to continue connecting (yes/no)?
Warning: Permanently added 'tete,172.16.77.245' (RSA) to the list of known hosts.
cglynos@tete's password:
Connected to tete.
Changing to: /home/cglynos/VRay
sftp> put -r //bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay
Uploading //bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/ to /home/cglynos/VRay/
Entering //bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/
//bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/cloth_sim_vray.vrscene 100% 232KB 232.4KB/s 00:00
Entering //bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/images
//bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/scenes/cloth_sim_vray 100% 95KB 95.2KB/s 00:00
Entering //bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/sourceimages
//bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/sourceimages/.mayaSwatches 100% 12KB 12.3KB/s 00:00
Entering //bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/sourceimages/.vrayThumbs 100% 144KB 144.0KB/s 00:00
//bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/sourceimages/leopard.jpg 100% 746KB 746.3KB/s 00:00
//bournemouth.ac.uk/data/staff/home/cglynos/Profile/Desktop/VRay/workspace.mel 100% 280B 2.7KB/s 00:00

-- 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..

-- Job Info:
> job Name: cglynos_cloth_sim_vray_Pro(VRay)
> job Priority: 9999
> job Number of Frames: 51
> job Instances: 40
> job Frame Range: 0-50
> job Project Path: /render/cglynos/VRay
> job Scene File: /render/cglynos/VRay/scenes/cloth_sim_vray.ma
> job Frame Padding: 4
> job Cmd Line: LD_LIBRARY_PATH=/opt/software/ChaosGroup/V-Ray/Maya2018-x64/lib/linux_x64/gcc-4.4 /opt/software/autodesk/maya/vray/bin/vray.bin -sceneFile=/render/cglynos/VRay/cloth_sim_vray.vrscene -display=0 -frames=QB_FRAME_NUMBER -verbosityLevel=0

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


Using the tool

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

```
C:\WINDOWS\System32\cmd.exe
> job Priority: 9999
> job Number of Frames: 51
> job Instances: 40
> job Frame Range: 0-50
> job Project Path: /render/cglynos/VRay
> job Scene File: /render/cglynos/VRay/scenes/cloth_sim_vray.ma
> job Frame Padding: 4
> job Cmd Line: LD_LIBRARY_PATH=/opt/software/ChaosGroup/V-Ray/Maya2018-x64/lib/linux_x64/gcc-4.4 /opt/software/autode
sk/maya/vray/bin/vray.bin -sceneFile=/render/cglynos/VRay/cloth_sim_vray.vrscene -display=0 -frames=QB_FRAME_NUMBER -ver
boseLevel=0

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

-----
-- Wrangling the latest job in Qube!

--- id( 27998 ) : name( cglynos_cloth_sim_vray_Pro(VRay) )
| -worker< 43 > --> running | -instance< 00 > --> complete
| -worker< 44 > --> running | -instance< 01 > --> running
| -worker< 45 > --> running | -instance< 02 > --> running
| -worker< 46 > --> running | -instance< 03 > --> running
| -worker< 47 > --> running | -instance< 04 > --> complete
| -worker< 48 > --> running | -instance< 05 > --> complete
| -worker< 49 > --> running | -instance< 06 > --> complete
| -worker< 50 > --> running | -instance< 07 > --> complete
| -worker< 51 > --> running | -instance< 08 > --> complete
| -worker< 00 > --> None | -instance< 09 > --> complete
| -worker< 00 > --> None | -instance< 10 > --> complete
| -worker< 00 > --> None | -instance< 11 > --> running
| -worker< 00 > --> None | -instance< 12 > --> complete
| -worker< 00 > --> None | -instance< 13 > --> complete
| -worker< 00 > --> None | -instance< 14 > --> running
| -worker< 00 > --> None | -instance< 15 > --> running
| -worker< 00 > --> None | -instance< 16 > --> running
| -worker< 00 > --> None | -instance< 17 > --> running
| -worker< 00 > --> None | -instance< 18 > --> complete
| -worker< 00 > --> None | -instance< 19 > --> running
| -worker< 00 > --> None | -instance< 20 > --> running
| -worker< 00 > --> None | -instance< 21 > --> running
| -worker< 00 > --> None | -instance< 22 > --> running
| -worker< 00 > --> None | -instance< 23 > --> complete
| -worker< 00 > --> None | -instance< 24 > --> complete
| -worker< 00 > --> None | -instance< 25 > --> running
| -worker< 00 > --> None | -instance< 26 > --> complete
| -worker< 00 > --> None | -instance< 27 > --> complete
| -worker< 00 > --> None | -instance< 28 > --> running
| -worker< 00 > --> None | -instance< 29 > --> running
| -worker< 00 > --> None | -instance< 30 > --> complete
| -worker< 00 > --> None | -instance< 31 > --> complete
| -worker< 00 > --> None | -instance< 32 > --> complete
| -worker< 00 > --> None | -instance< 33 > --> complete
| -worker< 00 > --> None | -instance< 34 > --> complete
| -worker< 00 > --> None | -instance< 35 > --> complete
| -worker< 00 > --> None | -instance< 36 > --> complete
| -worker< 00 > --> None | -instance< 37 > --> complete
| -worker< 00 > --> None | -instance< 38 > --> complete
| -worker< 00 > --> None | -instance< 39 > --> complete
----- final frames( running ) : final instances( running )
```

Finishing off

- Once the renders are **complete**, the tool will prompt you to open **WinSCP** to access your renders on the server.
- Use **tete** as the host name and then **log in** using your student credentials.
- You can now close the **cmd** by pressing **Enter** again or by using the **close button**.

