

# ncca RenderFarm Tool

Houdini: DOP Simulation

Constantinos Glynos

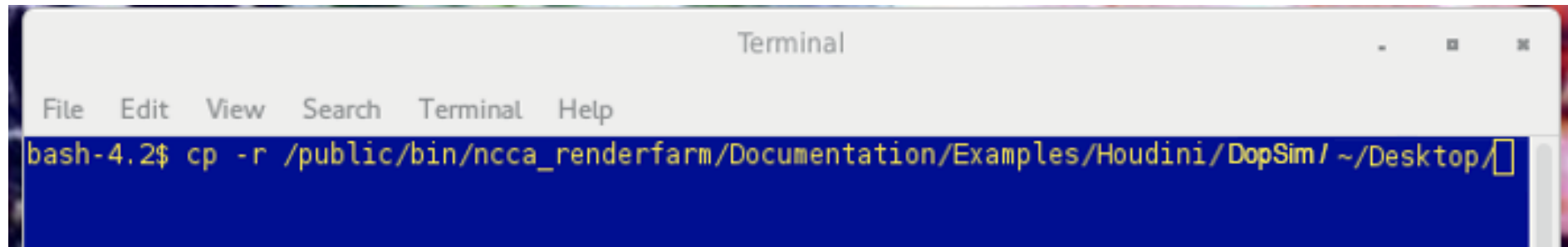
Michail Agoulas



# Copy the example scene

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

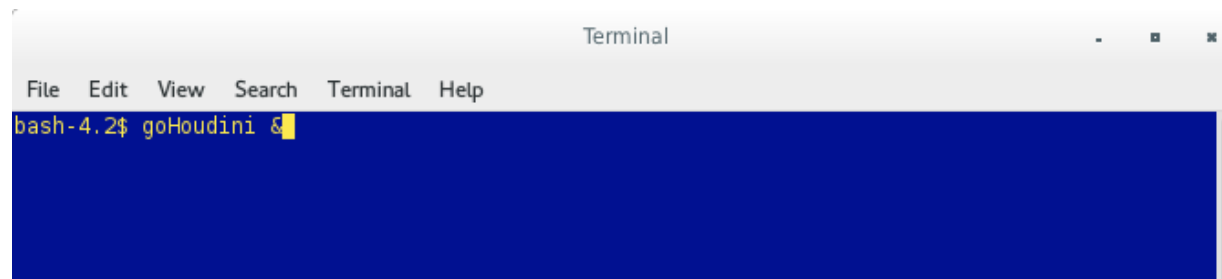
```
cp -r /public/bin/ncca_renderfarm/Documentation/Examples/Houdini/DopSim/ ~/Desktop
```

A screenshot of a terminal window titled "Terminal". The window has a menu bar with "File", "Edit", "View", "Search", "Terminal", and "Help". The terminal text shows a prompt "bash-4.2\$" followed by the command "cp -r /public/bin/ncca\_renderfarm/Documentation/Examples/Houdini/DopSim/ ~/Desktop/" and a cursor at the end of the line.

```
Terminal
File Edit View Search Terminal Help
bash-4.2$ cp -r /public/bin/ncca_renderfarm/Documentation/Examples/Houdini/DopSim/ ~/Desktop/
```

# Open Houdini

```
goHoudini &
```

A screenshot of a terminal window titled "Terminal". The window has a menu bar with "File", "Edit", "View", "Search", "Terminal", and "Help". The terminal text shows a prompt "bash-4.2\$" followed by the command "goHoudini &" and a cursor at the end of the line.

```
Terminal
File Edit View Search Terminal Help
bash-4.2$ goHoudini &
```

# Set project directory

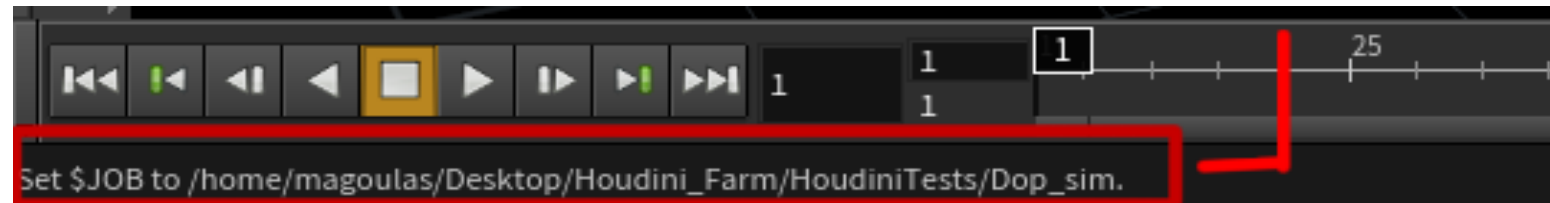
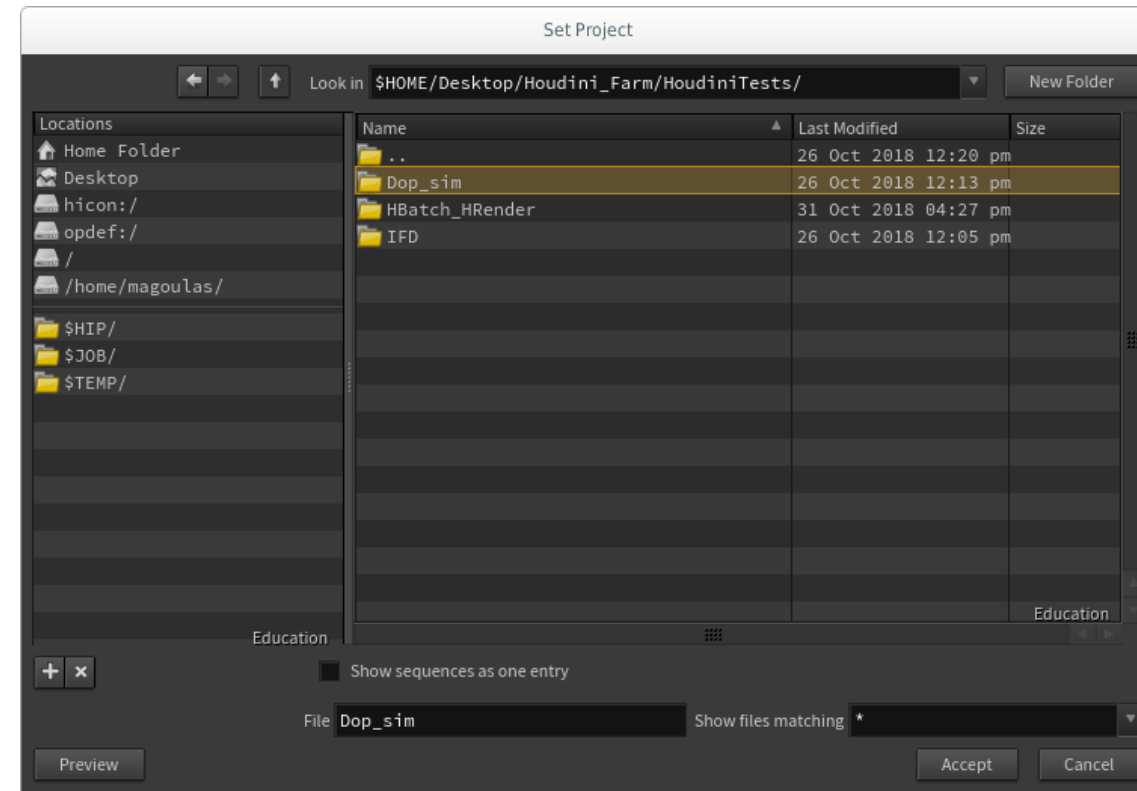
File -> Set Project...

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

**Do not dive in the directory that you plan to store your .hip projects and project files.**

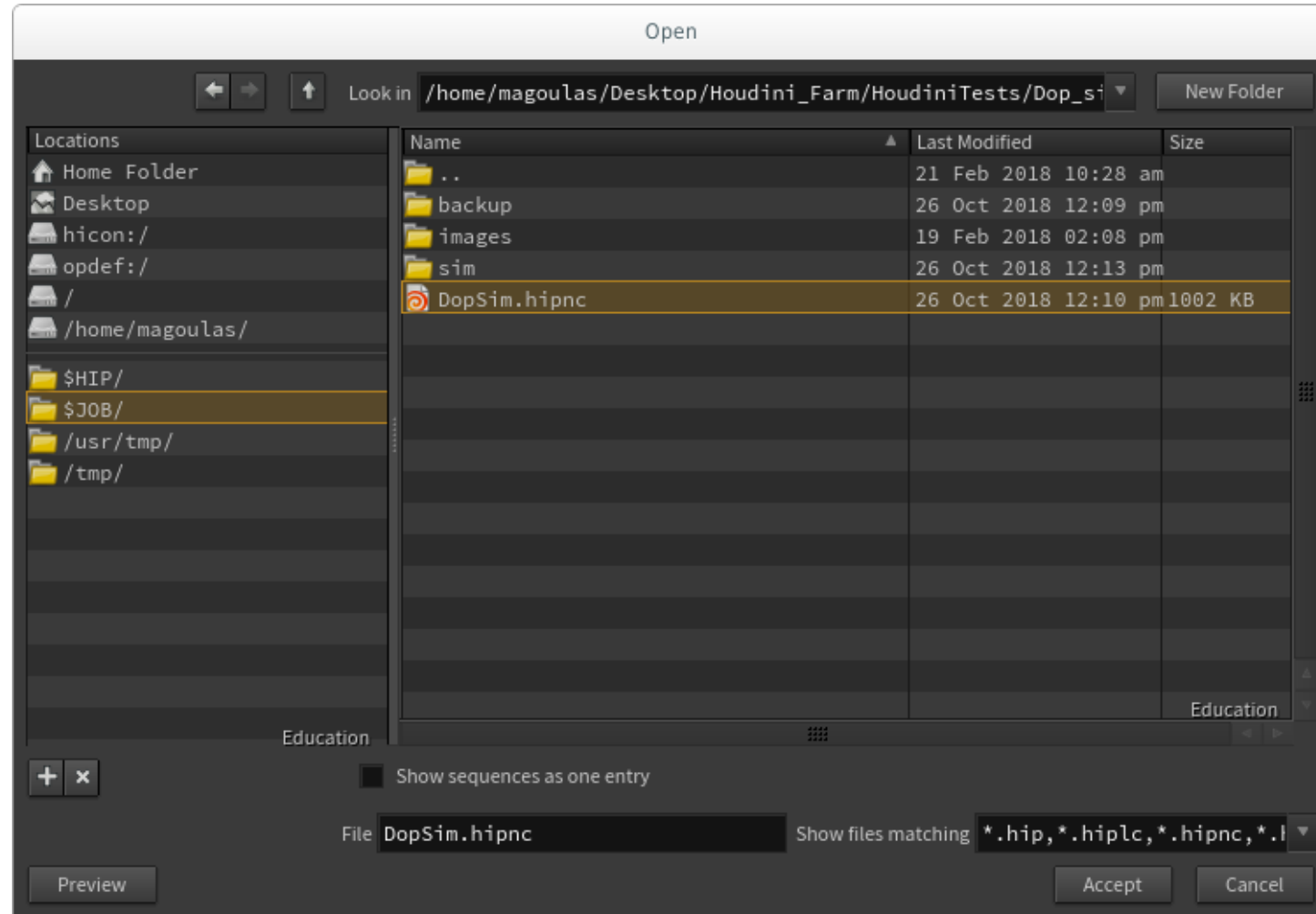
Click [Accept](#)

Now Houdini has set the folder of your project as the root folder.



# Open the example scene

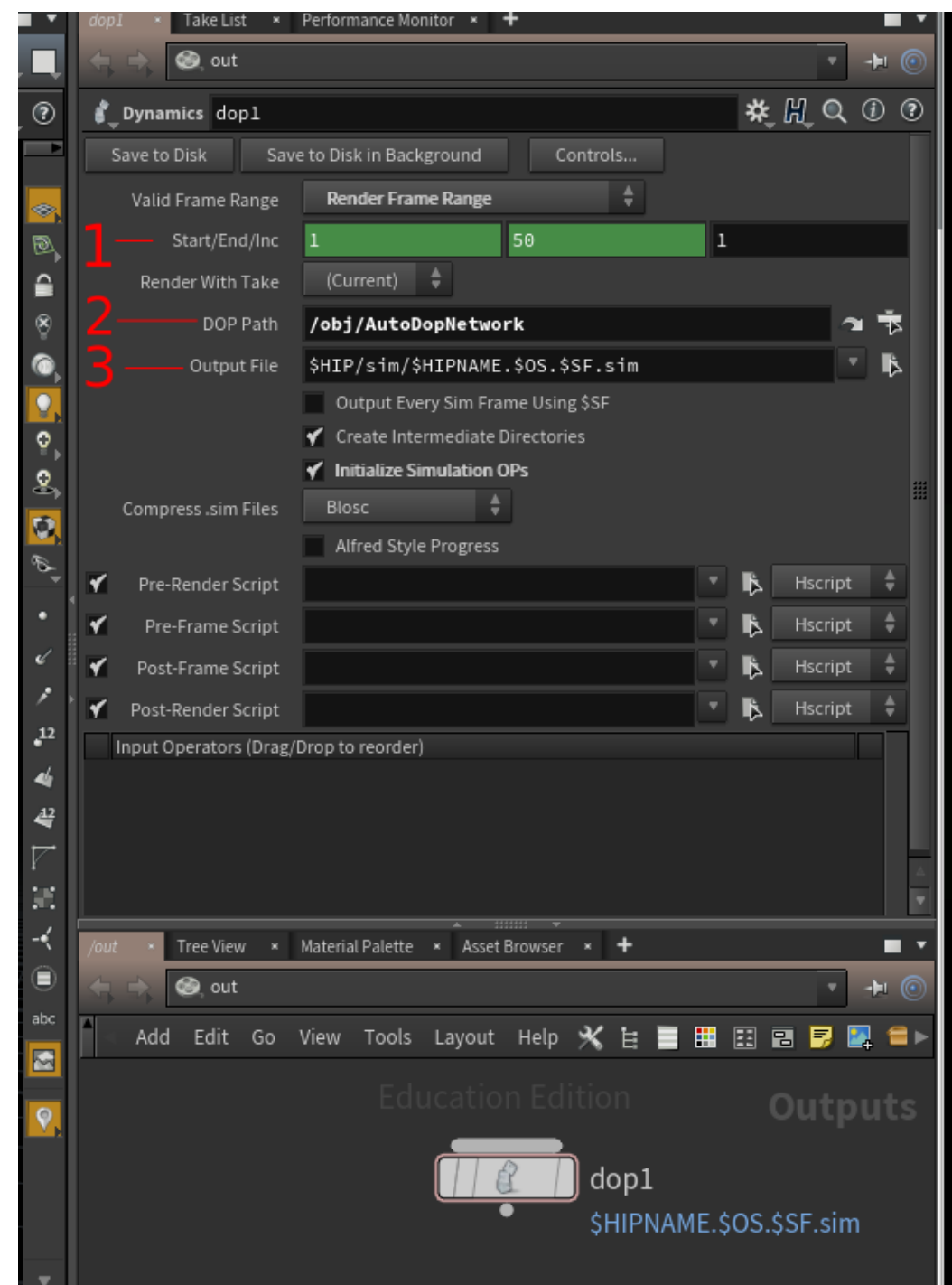
File -> Open -> DopSim.hipnc



# Check OUT/Dynamics Settings

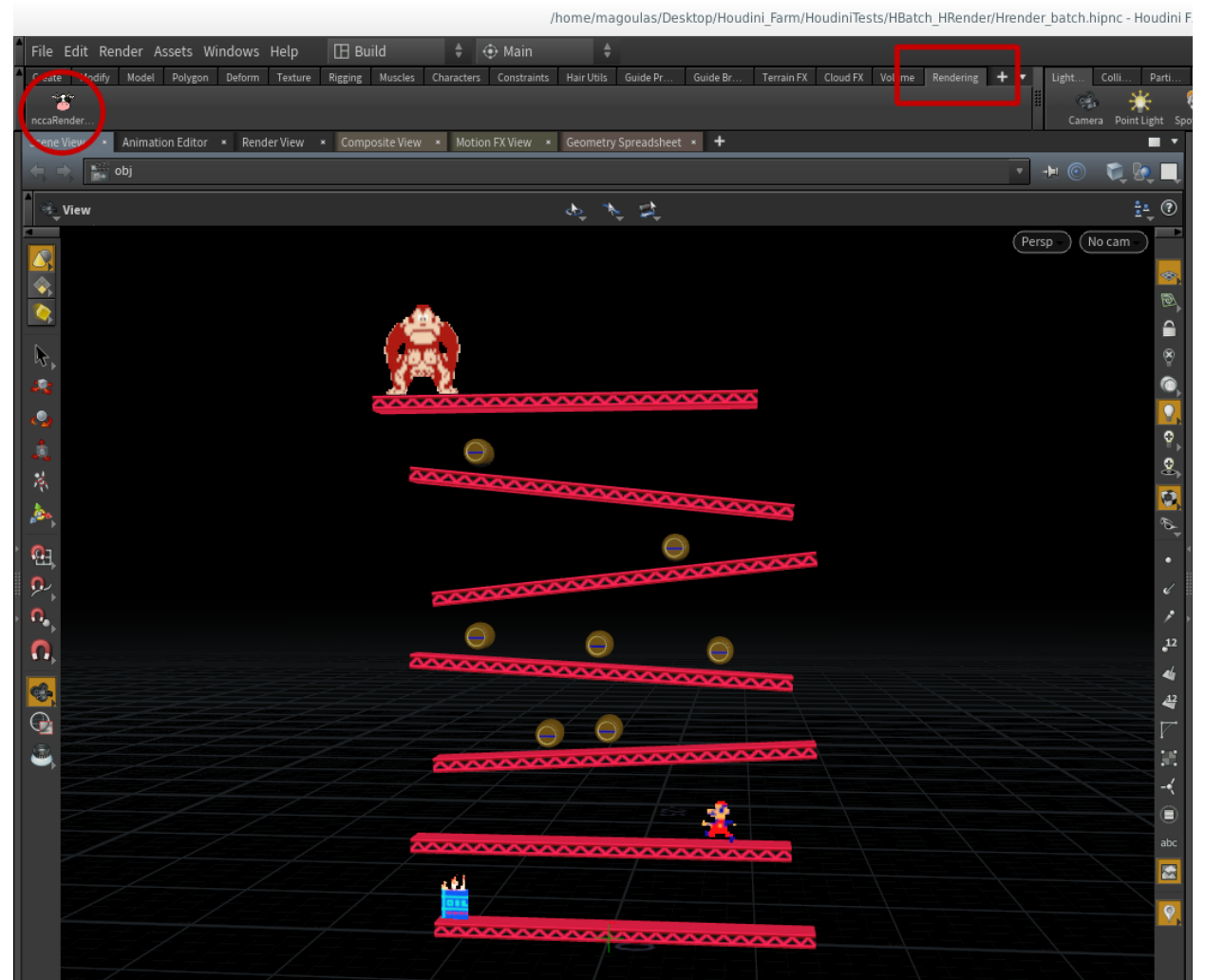
Check that your Dynamics node settings are correct:

1. Select the desirable frame range
2. Select the DOP node that you want to cache
3. Select the output filename and path



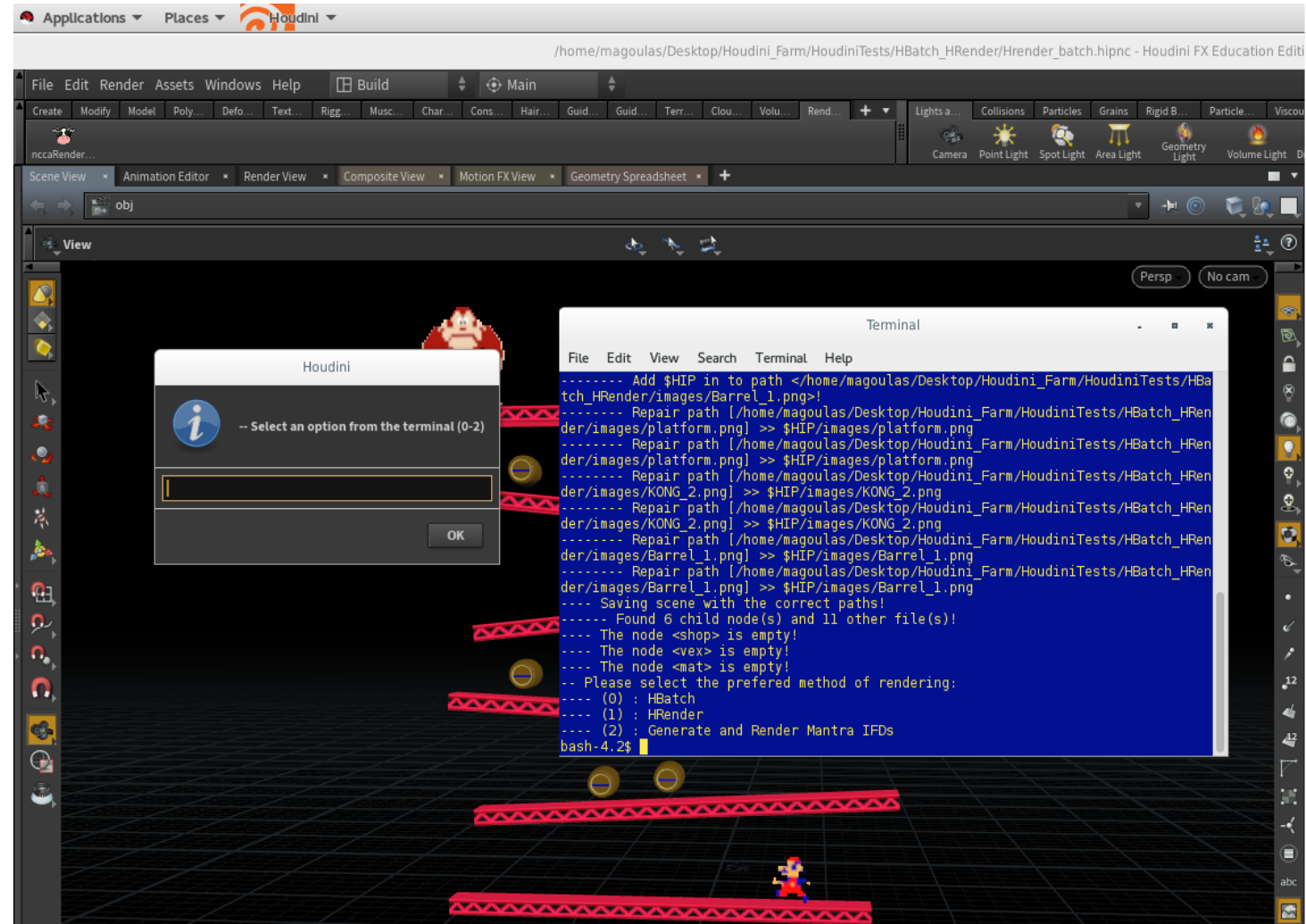
# Let's Simulate

- Press **Ctrl + S** to save the scene
- Go to the **rendering shelf**
- Hit the cow!



# Using the tool

- Check your local disk space (quota), or [skip](#) if not needed.
- Check the [terminal](#) for any warnings about the version of the tool you are using.
- We will choose the HBatch method by entering 0 in the window.



# Using the tool

- Now the tool will ask you to enter your user password in order to connect to the tete server. It is the same as your student account.
- Once you enter your password the tool will start uploading the project files.
- Do not interrupt this process nor continue working on your project.

```
> Start Frame: 1
> End Frame: 50
> Frame Padding:
> Renderer Node: dop1
> Ifd info: ['False', '']
> Server: magoulas@tete:/home/magoulas

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

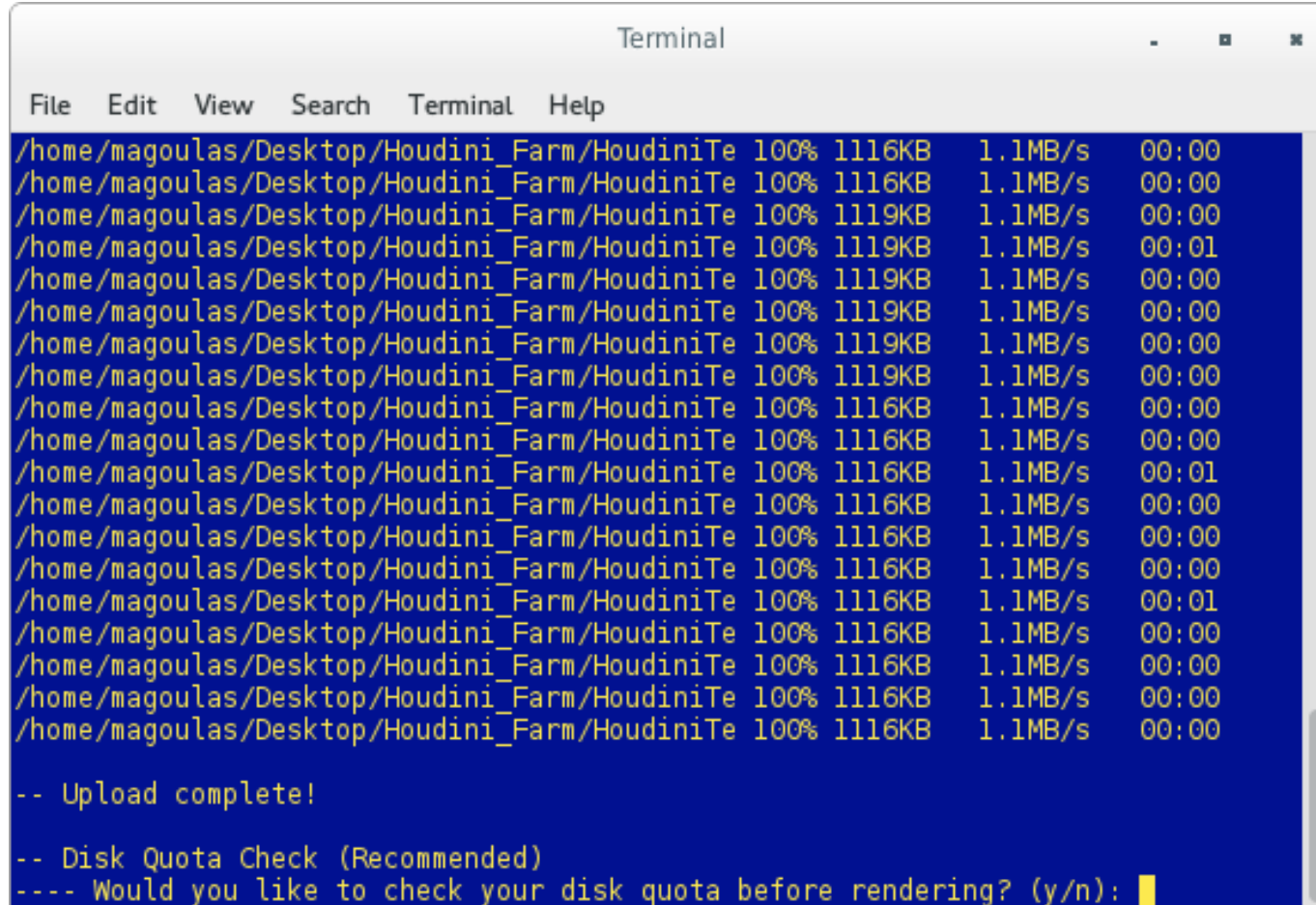
-- Connecting to tete server.
Password: █

/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1113KB 1.1MB/s 00:01
Entering /home/magoulas/Desktop/Houdini_Farm/HoudiniTests/HBatch_HRender/backup
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1113KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1119KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1119KB 1.1MB/s 00:01
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1119KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1119KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1119KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1119KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1119KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1116KB 1.1MB/s 00:01
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1116KB 1.1MB/s 00:01
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 0% 0 0.0KB/s --- ETA █
```



# Using the tool

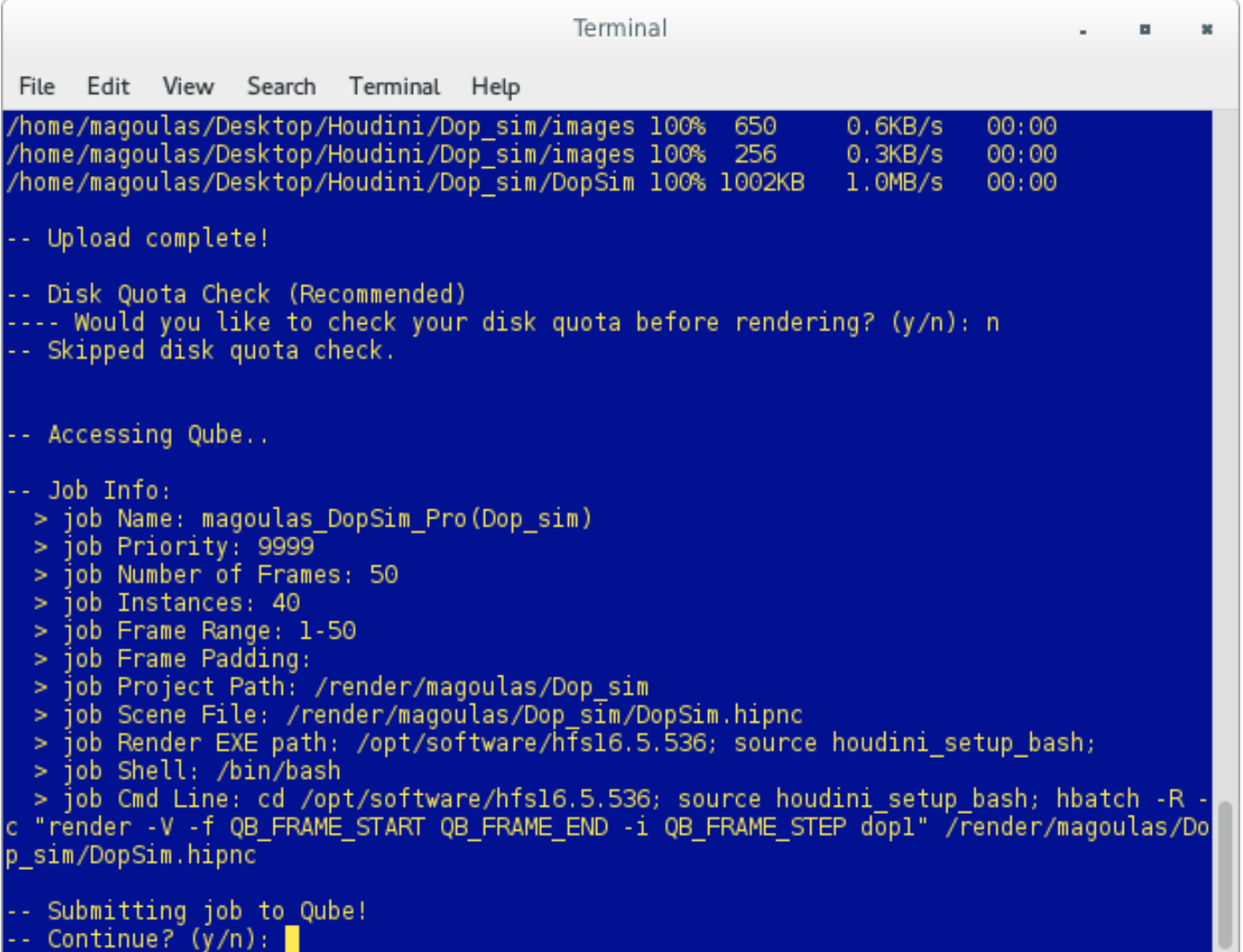
- Once the files are uploaded, the tool will prompt for a quota check on the server.
- If you do not have enough disk space (quota) available on the server, your renders will not be saved anywhere.
- [Skip](#) online quota check if you are sure you have enough space available.



```
Terminal
File Edit View Search Terminal Help
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1119KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1119KB 1.1MB/s 00:01
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1119KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1119KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1119KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1119KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1116KB 1.1MB/s 00:01
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1116KB 1.1MB/s 00:01
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini_Farm/HoudiniTe 100% 1116KB 1.1MB/s 00:00
-- Upload complete!
-- Disk Quota Check (Recommended)
---- Would you like to check your disk quota before rendering? (y/n):
```

# Using the tool

- The [output images directory](#) is set from within your Mantra Settings.
- Check the [Job info](#) data before submitting the job to Qube.
- Type [y](#) and [Enter](#) to continue.



```
Terminal
File Edit View Search Terminal Help
/home/magoulas/Desktop/Houdini/Dop_sim/images 100% 650 0.6KB/s 00:00
/home/magoulas/Desktop/Houdini/Dop_sim/images 100% 256 0.3KB/s 00:00
/home/magoulas/Desktop/Houdini/Dop_sim/DopSim 100% 1002KB 1.0MB/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: magoulas_DopSim_Pro(Dop_sim)
> job Priority: 9999
> job Number of Frames: 50
> job Instances: 40
> job Frame Range: 1-50
> job Frame Padding:
> job Project Path: /render/magoulas/Dop_sim
> job Scene File: /render/magoulas/Dop_sim/DopSim.hipnc
> job Render EXE path: /opt/software/hfsl6.5.536; source houdini_setup_bash;
> job Shell: /bin/bash
> job Cmd Line: cd /opt/software/hfsl6.5.536; source houdini_setup_bash; hbatch -R -
c "render -V -f QB_FRAME_START QB_FRAME_END -i QB_FRAME_STEP dop1" /render/magoulas/Do
p_sim/DopSim.hipnc

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

# Using the tool

- **Wrangle** your sim files from the terminal.
- At this point you can **safely close the terminal** and wrangle your simulation 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.

```
Terminal
```

File	Edit	View	Search	Terminal	Help
-worker< 02 >	-->	pending	-instance< 01 >	-->	running
-worker< 03 >	-->	pending	-instance< 02 >	-->	running
-worker< 04 >	-->	pending	-instance< 03 >	-->	running
-worker< 05 >	-->	pending	-instance< 04 >	-->	running
-worker< 06 >	-->	pending	-instance< 05 >	-->	running
-worker< 07 >	-->	pending	-instance< 06 >	-->	running
-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 )					

# 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 might get asked to enter your student account credentials. **Enter** them so you can get access to the server.
- Navigate in the sim cache folder or wherever you have told the Dynamics node to save the files and copy them to your computer.

```
-worker< 00 > --> None | -instance< 15 > --> complete
| -worker< 00 > --> None | -instance< 16 > --> complete
| -worker< 00 > --> None | -instance< 17 > --> complete
| -worker< 00 > --> None | -instance< 18 > --> complete
| -worker< 00 > --> None | -instance< 19 > --> complete
| -worker< 00 > --> None | -instance< 20 > --> complete
| -worker< 00 > --> None | -instance< 21 > --> complete
| -worker< 00 > --> None | -instance< 22 > --> complete
| -worker< 00 > --> None | -instance< 23 > --> complete
| -worker< 00 > --> None | -instance< 24 > --> complete
| -worker< 00 > --> None | -instance< 25 > --> complete
| -worker< 00 > --> None | -instance< 26 > --> complete
| -worker< 00 > --> None | -instance< 27 > --> complete
| -worker< 00 > --> None | -instance< 28 > --> complete
| -worker< 00 > --> None | -instance< 29 > --> complete
| -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( complete ) : final instances( complete )

-- Rendering is complete !
---- Open project directory on the server? (y/n) █
```

