Qube Renderfarm Guide: Houdini Mantra IFD file rendering

Scene setup

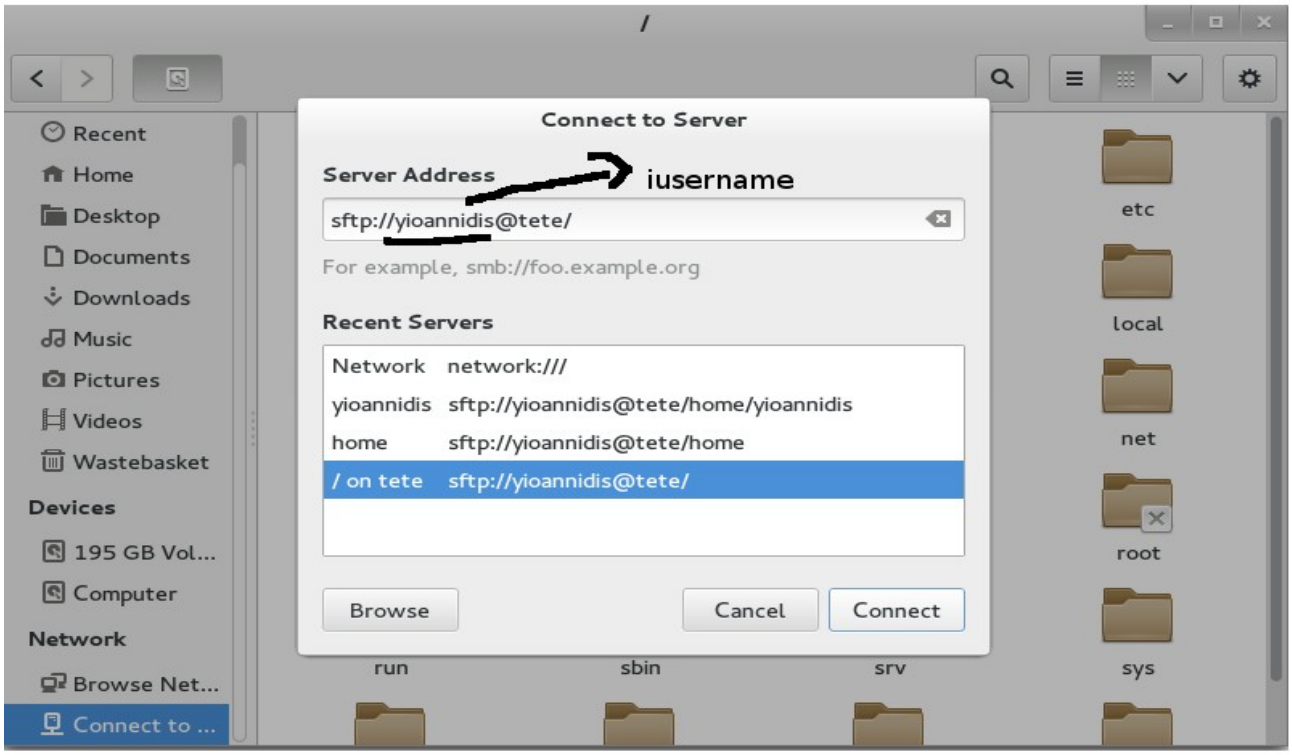
In order to prepare your scene for submission to the renderfarm, the following steps are suggested:

• Place scene file, and associated scene assets (eg. Textures, Sims etc.) in folders, within a single directory

• Make use of relative file paths using the $HIP or $JOB variables when assigning all scene assets
• (If $JOB is being used it can be set in the textport i.e.
set -g JOB = /render/**isuername**/**SimulationQubeTest**)

• Copy the entire scene folder to your directory within /render on the tete server.

◦ This can be done using the Connect to Server... option which can be found in the Places main linux menu, all the way down



server address: **sftp://iusername@tete/**

◦ It is sensible to add a bookmark to this location, so it can be easily accessed when setting up and accessing future renders.

◦ Copy and Paste can be used to copy your scene directory into this directory ready for use on the render farm.

◦ Alternatively files can be copied using the sftp command line tool.

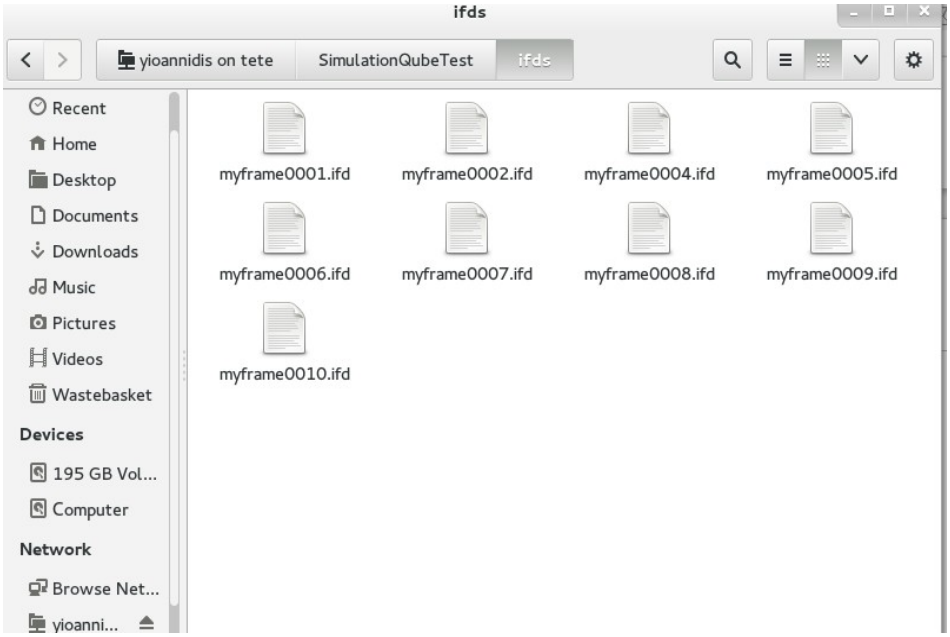
• Start Qube:

• Submit a Houdini job by clicking on: **Submit–Cmdrange Job...**

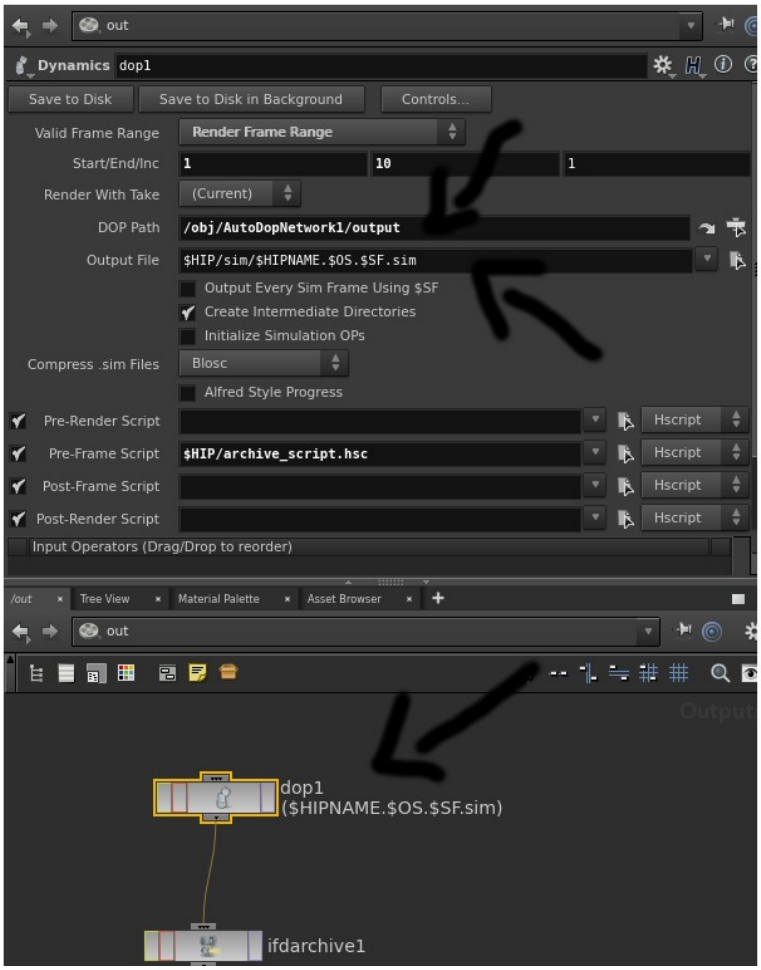
Suggested Qube Settings

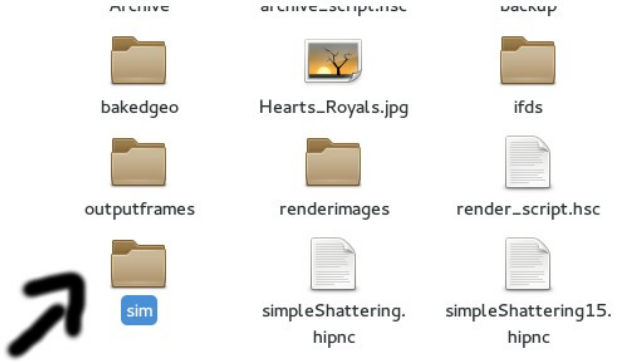
The following defaults are a good starting point for starting a Houdini job on the renderfarm.

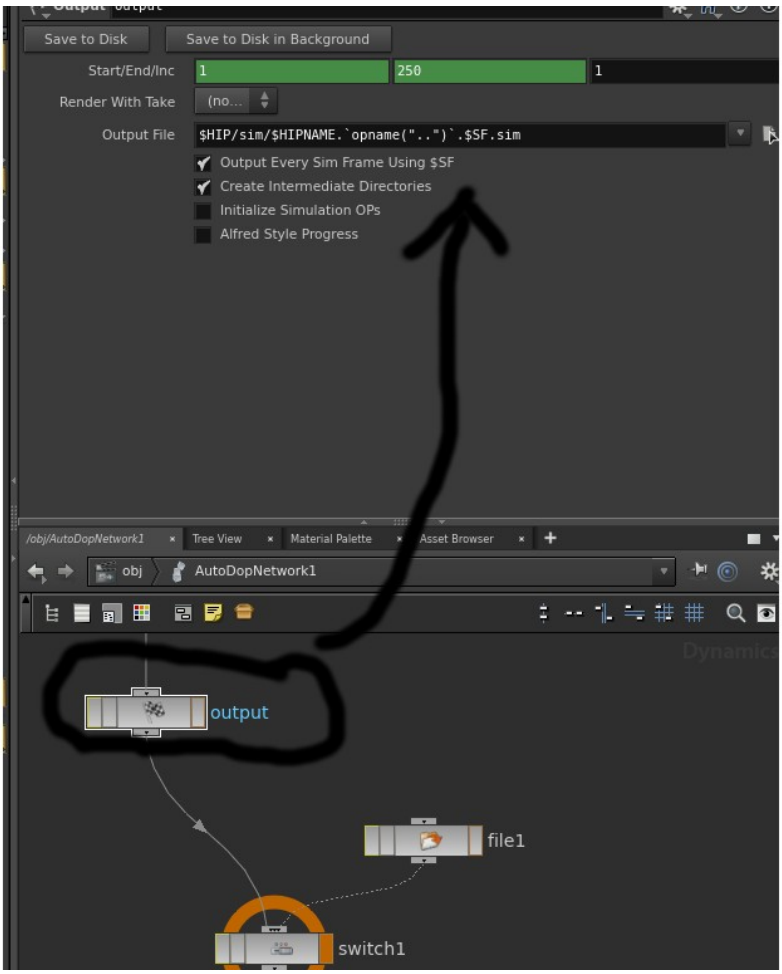
Make sure the there is a directory with all the ifd files need for mantra to read.



The same applies if you are want to render a Simulation on the farm:
Make sure the there is a directory with all the sim files needed, as well as a similar setup inside the AutoDopNetwork to export the sim files to it.
Additionally, a Dynamics dop in the Output network needs to be added to render out the sim files from the AutoDopNetwork.
(see scene setup bellow):




bakedgeo
Hearts_Royals.jpg
ifds
outputframes
renderimages
render_script.hsc
sim
simpleShattering.
hipnc
simpleShattering15.
hipnc



(To generate the ifds refer to the **Qube_Renderfarm_Guide_Houdini_Hrender.docx** guide) (basically resubmit a HRender job on Qube and remember that the .hipnc scene file you are trying to render needs to have the “Save IFD files to disk” checkbox of your mantra out driver ticked)

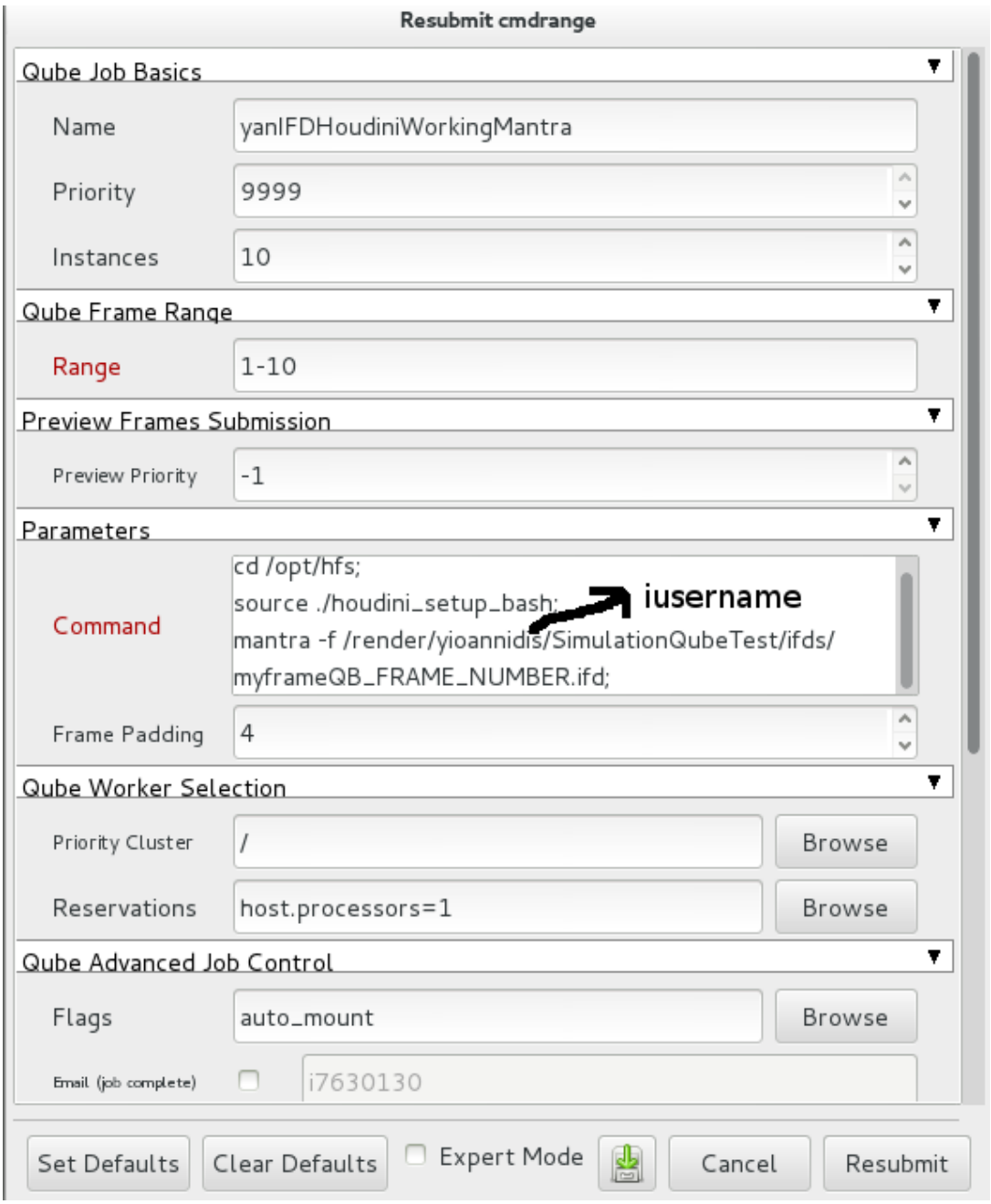
Instances: Set number of frames to render in parallel (not more than 40)

Range: Specify frame range in the format start-end.

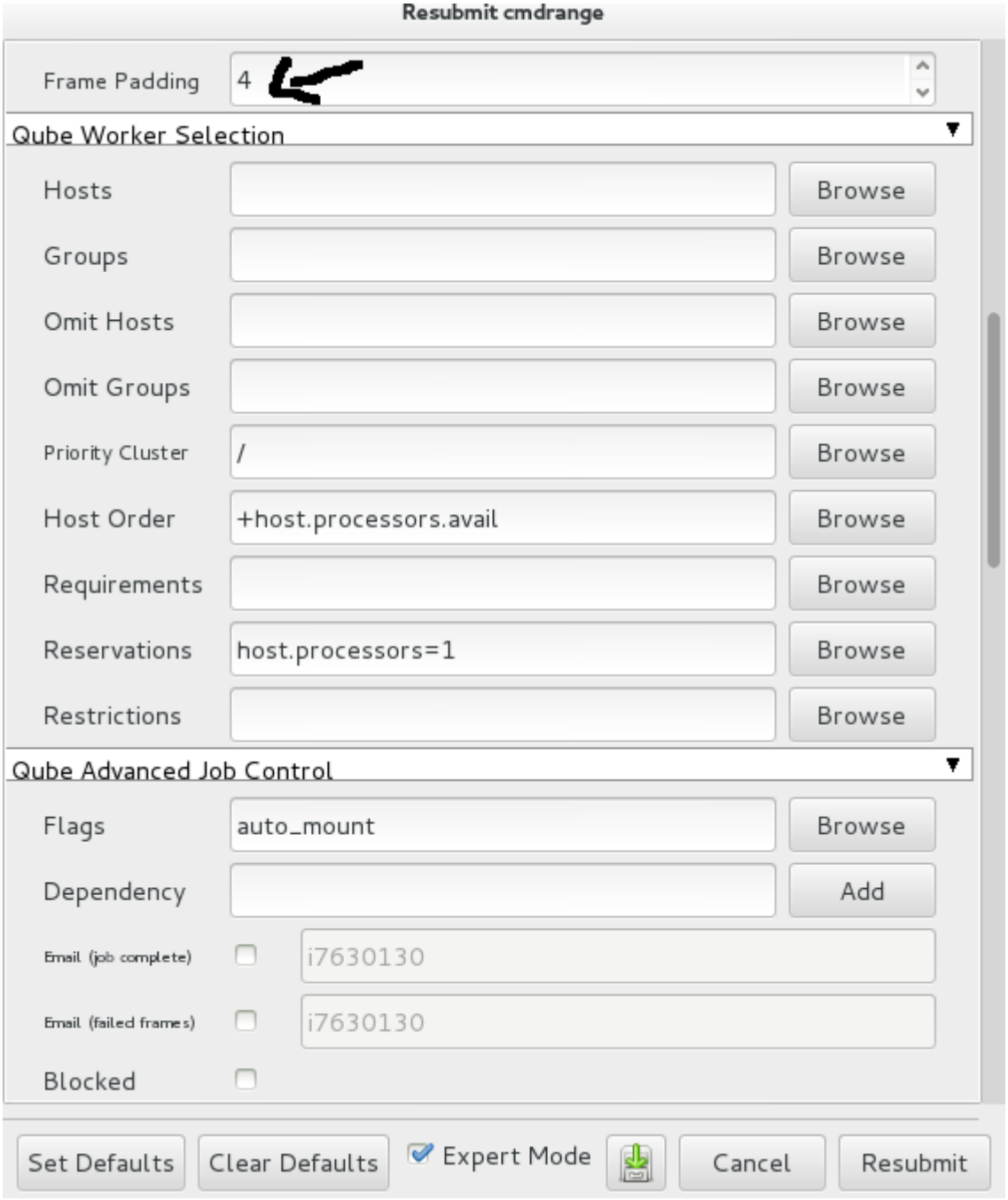
IFD file: Enter path to the ifd file to render i.e.
/render/iusername/SimulationQubeTest/ifds/myframe.ifd

Command: Render command to be executed. This needs to include commands to initialize the HoudiniEnvironment. We recommend starting with the entire template shown here:

cd /opt/hfs;source ./houdini_setup_bash;
mantra -f /render/iusername/SimulationQubeTest/ifds/myframeQB_FRAME_NUMBER.ifd;

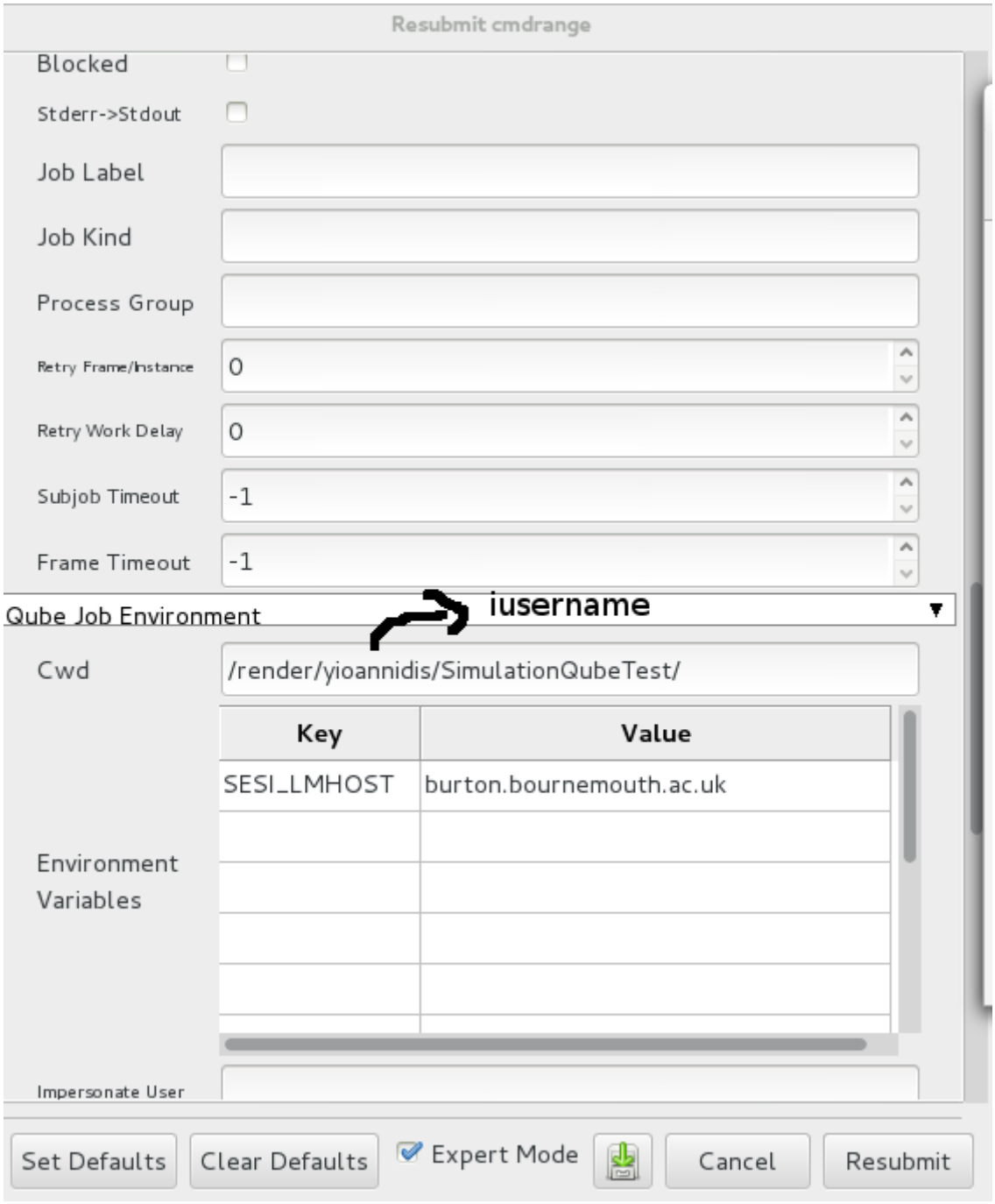


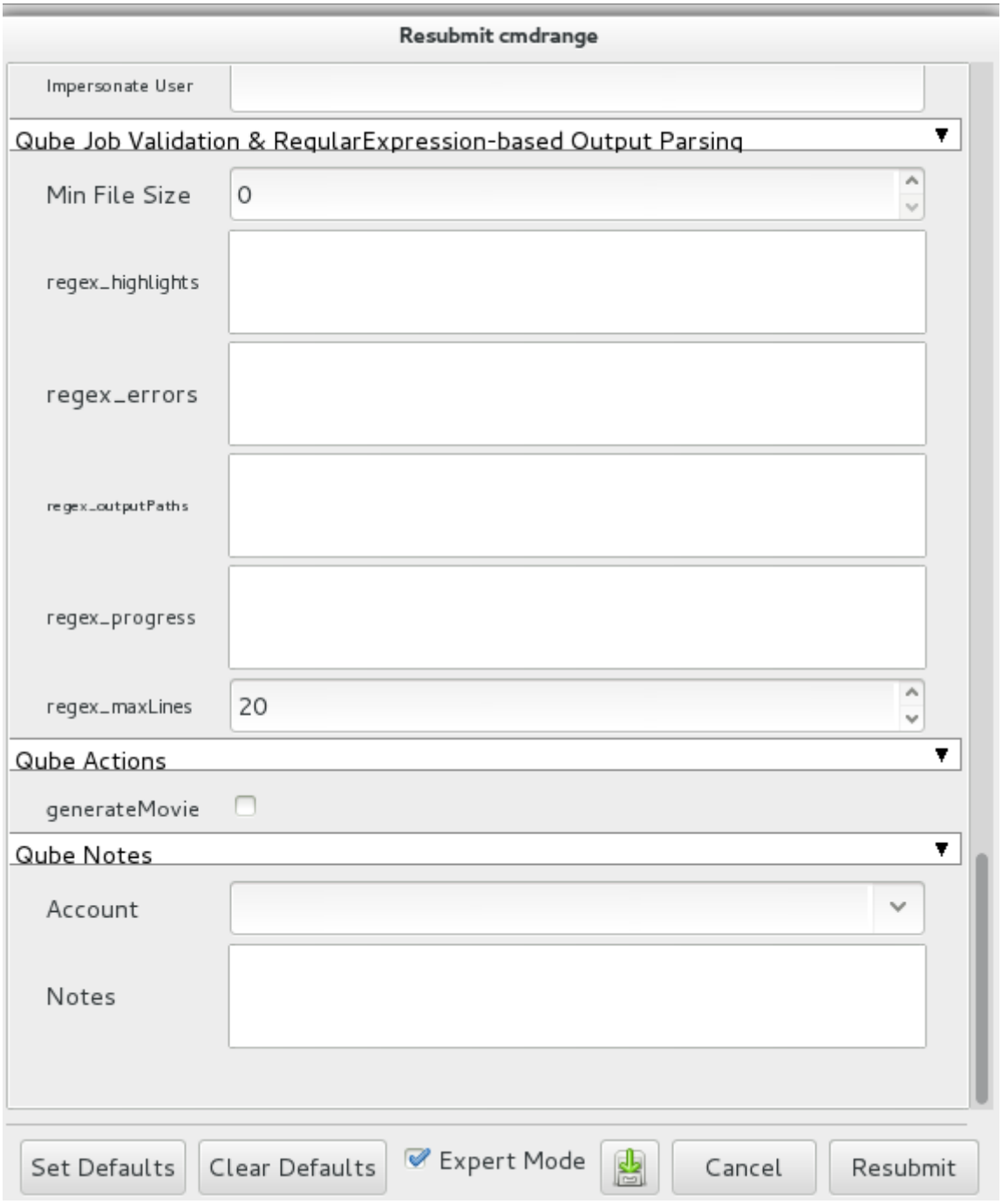
Be careful and use the same frame padding as the one in the scene you generated the ifds from



Environment Variables: Used to add environment variables.

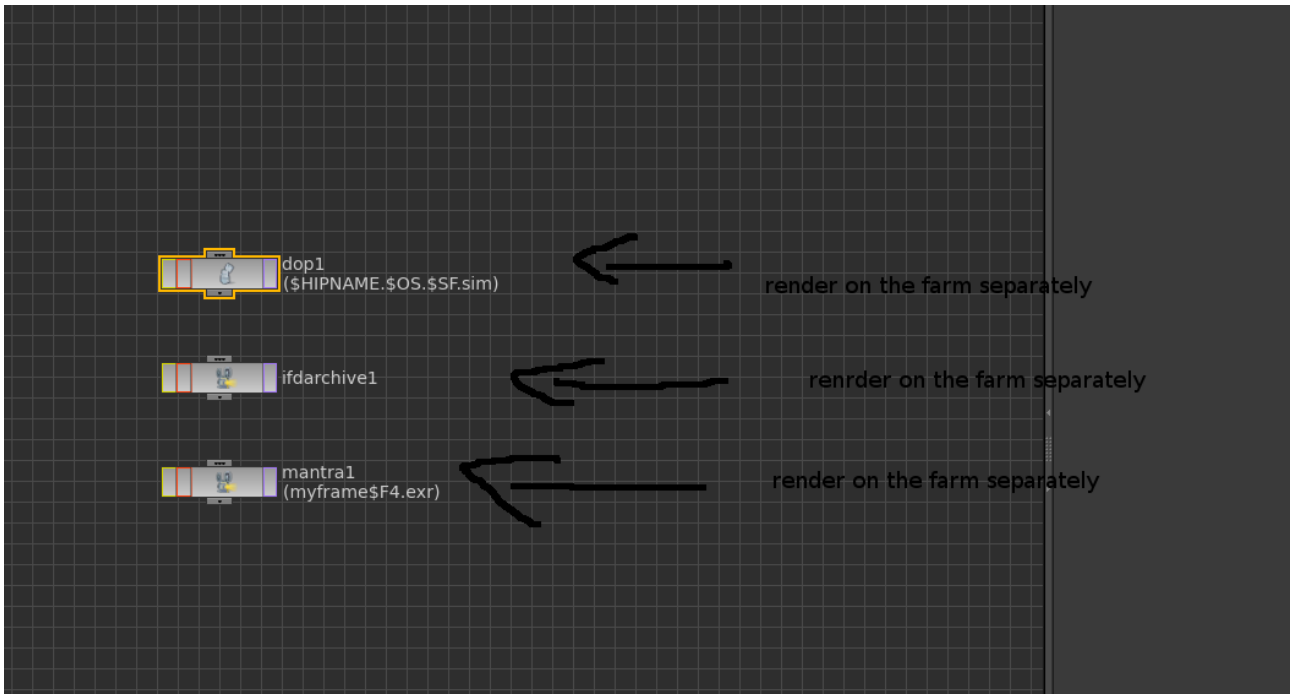
Must have variable for license server set here

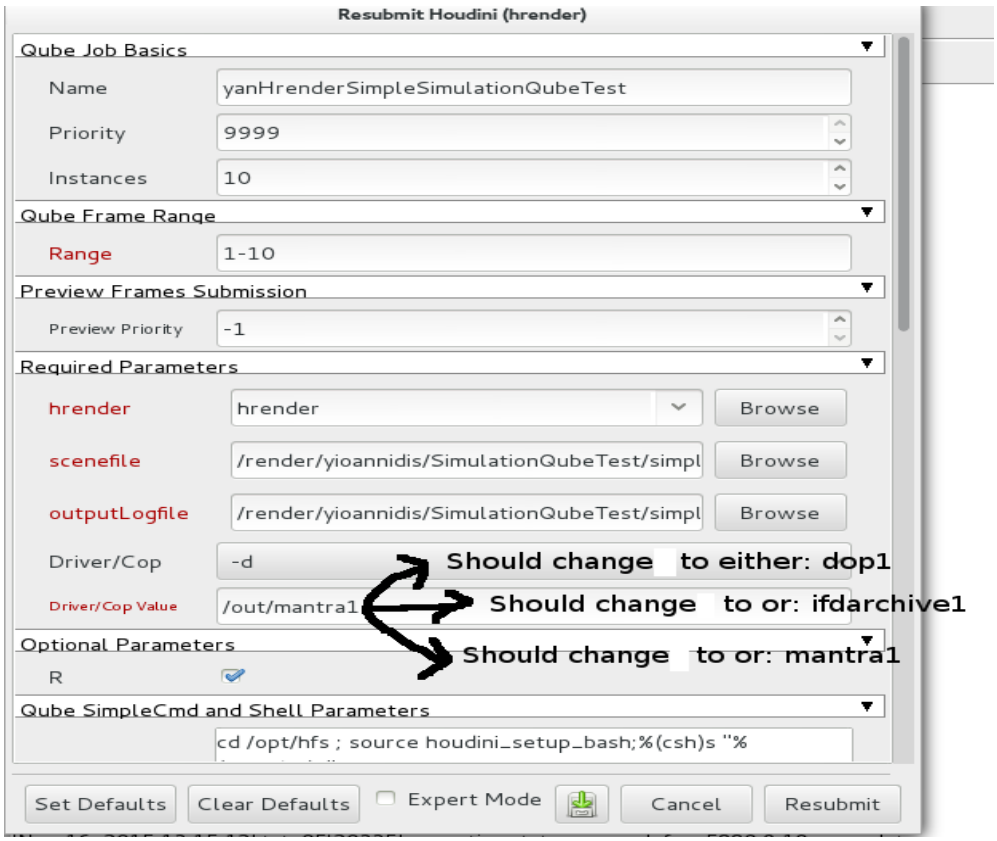



Resubmit cmdrange
Impersonate User
Qube Job Validation & RegularExpression-based Output Parsing
Min File Size
0
regex_highlights
regex_errors
regex_outputPaths
regex_progress
regex_maxLines
20
Qube Actions
generateMovie
Qube Notes
Account
Notes
Set Defaults
Clear Defaults
Expert Mode
Cancel
Resubmit

Tips if you find you get dropped frames:

If you see that some of your ifd frame files are dropped for no apparent reason, you can **re-render** and **try to re-generate the IFD files**, which shouldn't take long usually cause they are much faster to generate rather than rendering from the live Houdini scene network.
OR
Instead of using a chain in the outputs level in Houdini, just disconnect and render separately each one of them




Resubmit Houdini (hrender)
Qube Job Basics
Name
yanHrenderSimpleSimulationQubeTest
Priority
9999
Instances
10
Qube Frame Range
Range
1-10
Preview Frames Submission
Preview Priority
-1
Required Parameters
hrender
hrender
Browse
scenefile
/render/yioannidis/SimulationQubeTest/simpl
Browse
outputLogfile
/render/yioannidis/SimulationQubeTest/simpl
Browse
Driver/Cop
-d
Driver/Cop Value
/out/mantra1
Optional Parameters
R
Qube SimpleCmd and Shell Parameters
cd /opt/hfs ; source houdini_setup_bash;%(csh)s "%
Set Defaults
Clear Defaults
Expert Mode
Cancel
Resubmit
Should change to either: dop1
Should change to or: ifdarchive1
Should change to or: mantra1