

Submitting a "Qube (ImagesToMovie)" job

Below Is an expandable view of the "Qube (ImagesToMovie) Job..." Jobtype Submission UI

Please click on the text below the section of interest

Qube Job Basics	
Name	<input type="text" value="Qube (imagesToMovie) Job"/>
Priority	<input type="text" value="9999"/>
Instances	<input type="text" value="-1"/>

Qube Job Basics

Name

Tooltip - Name of the job



This is the name of the job of the job so it can be easily identified in the Qube! UI

Priority

Tooltip - Numeric priority (



Every job in Qube is assigned a numeric priority. Priority 1 is higher than priority 100. This is similar to 1st place, 2nd place, 3rd place, etc. The default priority assigned to a job is 9999.

Instances

Tooltip -



Instances are the amount of times you would like to spawn a session of your application

Example:

On a 12 slot(core) machine running Maya if you set

"Instances" to 4

"Reservations" to "host.processors=3"

Qube! will open 4 sessions of Maya on the worker simultaneously consuming all slots/cores

if you set

"Instances" to 1

"Reservations" to "host.processors=1+"

Qube will open 1 session of Maya on the worker consuming all slots/cores ("host.processors=1+" is used for all slots/cores)

more on [Instances & Reservations](#)

Required parameters

exe

images_to_movie.py

Browse

jobid

0

transcoder

transcoder_exe

Browse

transcoder_command

transcoder_frameSyntax

movie_ext

mov

movie_path

image_filter

Required Parameters

exe

Tooltip - explicit path to executable



Browse or enter manually the location of executable on the workers

Important : Always double check the location of the workers executable. Be aware that if you are submitting cross platform the path will be different.

jobid

Tooltip - jobid with output images to transcode to a movie



Enter the JobId of the render with output to transcode. If this window is generated from the tick box option "generate movie" this section will be prefilled

transcoder

Tooltip - available transcoders



Choose from the list of available transcoders

transcoder_exe

Tooltip - path to transcoder executable



Browse or enter manually the location of executable on the workers

Important : Always double check the location of the workers executable. Be aware that if you are submitting cross platform the path will be different.

transcoder_command

Tooltip - transcoder command to run



Enter the transcoder commands and flags to be run

transcoder_frameSyntax

Tooltip - the syntax used to indicate frames for the transcoder (ie. # or %4d)



If this window is generated from the tick box option "generate movie" this section will be prefilled

movie_ext

Tooltip - movie extension



Choose the movie extension.

Important: When choosing the output format be aware that extensions such as .MOV or .AVI can not be distributed across the farm. This job will be run only on 1 worker.

movie_path

Tooltip - Directory or movie filename. Override default movie location (same directory as images). End with / to denote a directory. (ie. "../" means up one directory from images dir)



Browse or manually enter the location of the output file or directory you wish to generate

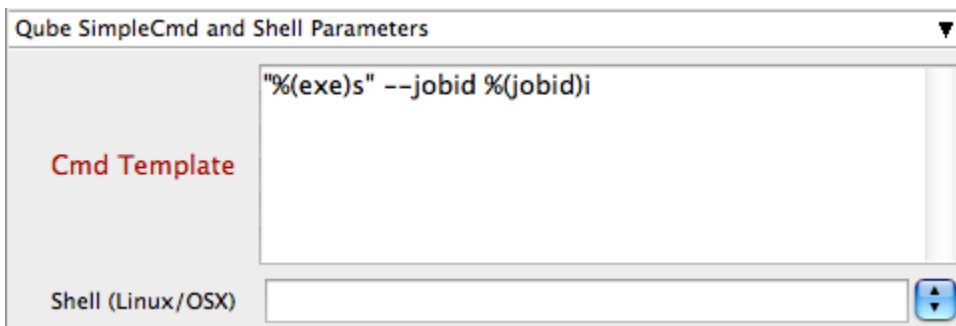
Important: Best practise is to ensure outputs are written to network storage accessible by the workers

image_filter

Tooltip - regular expression (regex) for filtering the images to put into the movie. Useful if multiple layers used in render.



Explanation needed



Qube SimpleCmd and Shell Parameters

Cmd Template

Tooltip - Template used to generate command to execute



This is used to create the command string on the worker

Shell (Linux/OSX)

Tooltip - **Explicitly specify the Linux/OSX shell to use when executing the command (defaults /bin/sh)**



Use a different shell to override defaults

Qube Job Tags

Job Show

Job Shot

Job Seq

Job Client

Job Dept

Job Custom1

Job Custom2

Job Custom3


Job Custom4

Job Custom5

Qube Job Tags

Qube Job Tags

New in Qube 6.5

 see page [Job Tags](#)

Qube Worker Selection

Hosts

Browse

Groups

Browse

Omit Hosts

Browse

Omit Groups

Browse

Priority Cluster

Browse

Host Order

+host.processors.avail

Browse

Requirements

Browse

Reservations

Browse


Restrictions

Browse

Qube Worker Selection


Hosts

Tooltip - Explicit list of Worker hostnames to run the job on (comma-separated)

 Click browse to choose from a list of workers that you want to run the job on


Groups

Tooltip - Explicit list of Worker groups to run the job on (comma-separated)

 Click browse to choose from a list of groups that you want to run the job on


Omit Hosts

Tooltip - Explicit list of Worker hostnames to NOT run the job on (comma-separated)

 Click browse to choose from a list of workers that you do NOT want to run the job on


Omit Groups

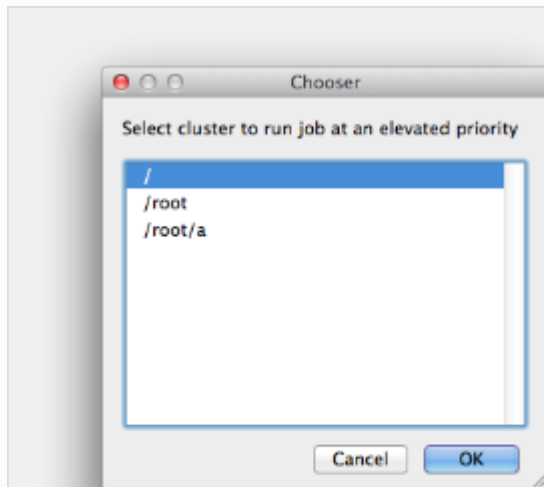
Tooltip - Explicit list of Worker groups to NOT run the job on (comma-separated)

 Click browse to choose from a list of groups that you NOT want to run the job on

Priority Cluster

Tooltip - Worker cluster that the job has elevated priority to run on

 Click browse to choose from a list of Priority Clusters




Clusters are a way of distributing jobs across the farm with the ability to expand and shrink based on the submitted priority cluster

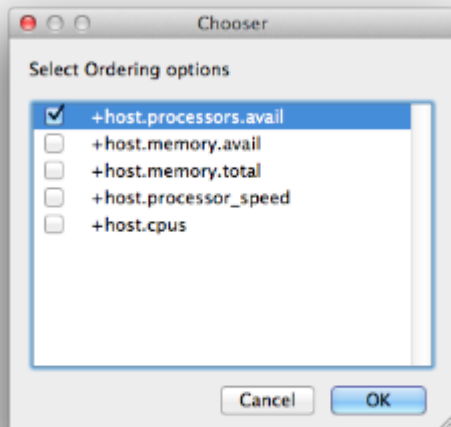
Example:

- A job submitted to /root/ will run on all machines with /root/ assigned as a cluster.
 - At a standard priority
- A job submitted to /root/a will run on all machines with /root/a assigned as a cluster
 - At a higher priority than /root/ meaning that the job will pre-empt a job with the priority cluster

Host Order

Tooltip - Order to select Workers for running the job (comma-separated) [+ means ascending, - means descending]

 Click browse to choose from a list of Host Order Options




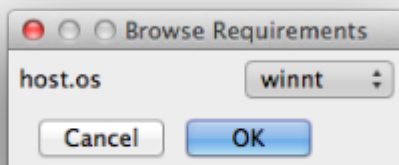
Host Order is a way of telling the job how to select/order workers

- "+host.processors.avail" means prefer workers which have more slots available
- "+host.memory.avail" means prefer workers which have more memory available
- "+host.memory.total" means prefer workers which have more total memory
- "+host.processor_speed" means prefer workers with higher cpu speeds
- "+host.cpus" means prefer workers with higher total cpu slots

Requirements

Tooltip - Worker requirements needed to be met for job to run on that Worker (comma-separated, expression-based)

 Click browse to choose from a list of Host Order Options



Requirements is a way to tell the workers that this job needs specific requirements to be met in order to run

drop-down menu items:


- "winnt" this will fill the field with "host.os=winnt" which means only run on Windows based workers
- "linux" this will fill the field with "host.os=linux" which means only run on Linux based workers
- "osx" this will fill the field with "host.os=osx" which means only run on OSX based workers

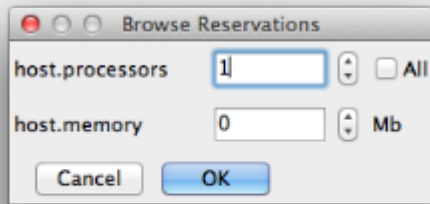
The above is not the limit of what "Requirements" can do see a list below of other alterable variants:

- "host.processors.avail.=4" means only run this job on workers that have 4 or more slots available
- "host.processors.used=0" means only run this job on workers with 0 slots in use
- "host.memory.avail=400" means only run this job on workers that have 400 memory available

Reservations

Tooltip - Worker resources to reserve when running job (comma-separated, expression-based)

 Click browse to choose from a list of Reservation Options



Reservations is a way to tell the workers that this job will reserve the specific resources for this job

Menu items:

- "host.processors" this will fill the field with "host.processors=X" which means reserve X slots on the worker while running this job
- "host.memory" this will fill the field with "host.memory=X" which means only reserve X memory on the worker while running this job


The above is not the limit of what "Reservations" can do see a list below of other alterable variants:

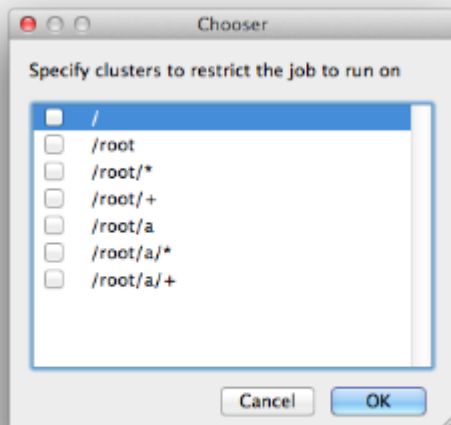
- "host.license.nuke=1" when a [Global Resources](#) entry has been made you can reserve any arbitrary named item.

See also [Job Reservations](#)

Restrictions

Tooltip - Restrict job to run only on specified clusters ("|" separated) [+ means all below, * means at that level]

 Click browse to choose from a list of Restrictions Options



Restrictions is a way to tell the workers that this job can only run on specific clusters

Example:

- submit a job that will run only in /farm:
`"qbsub -cluster /root -restriction /root"`
- submit a job that will prefer to run in /farm/nuke, but could run in any host in /farm or in the first level below /farm
`"qbsub -cluster /root/a -restriction '/root or /root/*'"`
- submit a job that will prefer to run in /farm/nuke/workstations, but could run in any host at any level at /farm or below
`"qbsub -cluster /root/a/workstations -restriction '/root or /root/+' hostname"`

See Also

- [Host Selection](#)
- [How to use qbwrc.conf](#)
- [worker_groups](#)
- [worker_cluster](#)
- [How to use clustering for workers](#)

Qube Advanced Job Control

Flags

expand

Browse

Dependency

Add

Email (job complete)

☐

joshuabretag

Email (failed frames)

☐

joshuabretag

Blocked

☐

Stderr->Stdout

☐

Job Label

Job Kind

Process Group

Retry Frame/Instance

-1

Retry Work Delay

0

Subjob Timeout

-1

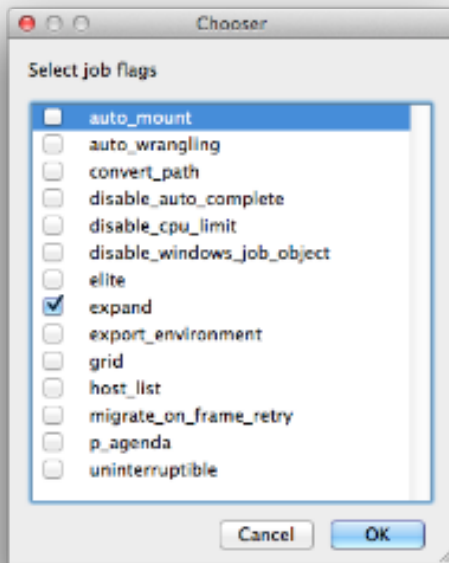
Frame Timeout

-1

Qube Advanced Job Control

Flags

Tooltip - List of submission flag strings (comma separated)

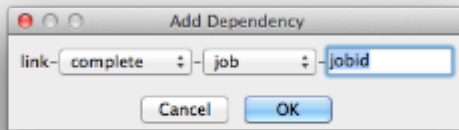


Click browse to choose required job flags

Flag	Decimal Value	Hex Value	Description
auto_mount	8	0x8	Require automatic drive mounts on worker.
auto_wrangling	16384	0x4000	Enable auto-wrangling for this job.
convert_path	131072	0x20000	Automatically convert paths on worker at runtime. New in 6.4-2
disable_auto_complete	8192	0x2000	Normally subjobs are automatically completed by the system when a job runs out of available agenda items. Setting this flag disables that.
disable_cpu_limit	4096	0x1000	Normally, if a job is submitted with the number of subjobs greater than there are agenda items, Qube automatically shrinks the number of subjobs to be equal to the number of agenda items. Setting this flag disables that.
disable_windows_job_object	2048	0x800	Disable Windows' process management mechanism called the "Job Object" that Qube normally uses to manage job processes-- some applications already use it internally, and job objects don't nest within another well, causing jobs to crash unexpectedly.
elite	512	0x200	Submit job as an elite job, which will be started immediately regardless of how busy the farm is. Elite jobs are also protected from preemption. Must be admin.
export_environment	16	0x10	Use environment variables set in the submission environment, when running the job on the workers.
expand	32	-x20	Automatically expand job to use as many subjobs as there are agenda items (limited by the total job slots in the farm).
grid	4	0x4	Make all subjobs start at once (useful for implementation of parallel jobs, such as satellite renders).
host_list	256	0x100	Run job on all candidate hosts, as filtered by other options (such as "hosts" or "groups").
mail	1024	0x400	Send e-mail when job is done.
migrate_on_frame_retry	65536	0x10000	When an agenda item (frame) fails but is retried automatically because the retrywork option is set, setting this flag causes the subjob to be migrated to another worker host, preventing the frame from running on the same host.
p_agenda	32768	0x8000	Enable p-agenda for this job, so that some frames are processed at a higher priority.
uninterruptible	1	0x1	Prevent job from being preempted.

Dependency

Tooltip - Wait for specified jobs to complete before starting this job (comma-separated)



Click Add to create dependant jobs

you can link jobs states to each other by several factors

"complete" means only start this job after designated job completes


"failed" means only start this job if the designated job fails

"killed" means only start this job if the job has been killed

"done" means start this job if the job is killed/failed/complete


Email (job complete)

Tooltip - Send email on job completion (success or failure)

 Sends mail to the designated user based on the status of the job being complete


Email (failed frames)

Tooltip - Send email on job completion (success or failure)

 Sends mail to the designated user based on the status of the job being failed


Blocked

Tooltip - Set initial state of job to "blocked"

 Enable this tickbox to ensure after submission this job is in a blocked state


Stderr->Stdout

Tooltip - Redirect and consolidate the job stderr stream to the stdout stream

 Enable this if you would like to combine you logs

Job Label

Tooltip - Optional label to identify the job. Must be a unique within a Job Process Group (pgrp).

 Legacy method of labelling jobs see [Job Tags](#)

Job Kind

Tooltip - Arbitrary typing information that can be used to identify the job. Common usage: it can be used to restrict only 1 of this "kind" of job from running on a worker at the same time by setting the job's requirements to include "not (job.kind in host.duty.kind)"

 see [How to restrict a host to only one instance of a given kind of job, but still allow other jobs](#)

Process Group

Tooltip - Job Process Group (pgrp) for logically organizing dependent jobs. Defaults to the jobid. Combination of "label" and "Process Group" (pgrp) must be unique for a job.

 see [Process group labels](#)


Retry Frame/Instance

Tooltip - Number of times to retry a failed frame/job instance. Value of -1 means use the default for the studio.

 Set this to retry any failed frames or instances automatically


Retry Work Delay

Tooltip - Number of seconds to wait before automatically retrying a failed frame/work.

 Set this to create a delay in second between the frame/instance retries

Subjob Timeout

Tooltip - Kill the subjob process if running for the specified time (in seconds). Value of -1 means disabled.

 Use this if the acceptable instance/subjob spawn time is known.

Frame Timeout

Tooltip - Kill the agenda/frame if running for the specified time (in seconds). Value of -1 means disabled.

 Use this if the acceptable frame time is known.

Qube Job Environment

Cwd

Environment Variables

Key	Value

Impersonate User

Qube Job Environment


Cwd

Tooltip - Current Working Directory to use when running the job

 Explanation needed

Environment Variables

Tooltip - Environment variables override when running a job

 You can specify key/value pairs of environment variables

This is useful when you might need different settings for your render applications based on different departments or projects

Impersonate User

Tooltip - Submit a job as a specific user. Default is current user. Format <optionldomain>\<username> (advanced --requires impersonate user permissions)

i You can specify which user you would like to submit the job as

This is useful for troubleshooting a job that may fail sent from a specific user

Example:

Setting "qube\josh" would attempt to submit the job with the domain "qube" and the user "josh"

Note: "impersonate user" permissions need to be set on the user submitting this job

Qube Job Run-time-OS-specific Environment Variables

Windows-only Environment Variables

Key	Value

Linux-only Environment Variables

Key	Value

Darwin-only Environment Variables

Key	Value

Qube Job Run-time-OS-specific Environment Variables

Windows-only Environment Variables

Tooltip - Windows Environment variable overrides when running job

i Used to provide OS specific environment variables for Windows

Linux-only Environment Variables

Tooltip - Linux Environment variable overrides when running job

i Used to provide OS specific environment variables for Linux

Darwin-only Environment Variables

Tooltip - OSX Environment variable overrides when running job

i Used to provide OS specific environment variables for OSX

Qube Job Validation & RegularExpression-based Output Parsing

Min File Size

0

regex_highlights

regex_errors

regex_outputPaths

Output Movie: (.*)

regex_progress

regex_maxLines

20

Qube job Validation & RegularExpression-based Output Parsing

Min File Size

Tooltip - Minimum size for identified outputPaths (in bytes). [0 disables test]

Used to test the created output file to ensure that it is of minimum size specified

regex_highlights

Tooltip - Regular expression for highlighting information messages from stdout/stderr

Used to add highlights into logs

regex_errors

Tooltip - Regular expression for identifying fatal errors from stdout/stderr

Used to add errors for known problematic strings. If you enter for example "error: 2145" and this error was present in the logs the job would be marked as failed

regex_outputPaths

Tooltip - Regular expression for identifying outputPaths of images from stdout/stderr

Used to identify the output paths for the job. This is useful for returning information to the Qube GUI so they you can right click browse output.

regex_progress

Tooltip - Regular expression for identifying in-frame/chunk progress from stdout/stderr

Used to identify strings for relaying the progress of frames

regex_maxlines

Tooltip - Maximum number of lines to store for regex matched patterns for stdout/stderr

Used to truncate the size of your log files

Qube Actions



generateMovie ☐

Qube Actions

GenerateMovie

Tooltip - Add linked job to generate movie from output images



Select this option to create a secondary job that will wait for the render to complete then combine the output files into a movie

Note: For this to work correctly the "Qube (ImagesToMovie) Job..." has to be setup to use your studios transcoding application

Qube Notes



Account



Notes

Qube Notes

Account

Tooltip - Arbitrary accounting or project data (user-specified)



This can be used for creating tags for your job

The created tags can be searched in the "Performance Charts" Tab

You can add entries by typing in the drop-down window or select already created accounts from the drop-down

See also "Qube Job Tags"

Notes

Tooltip - Freeform text for making notes on this job



Add text about the job for future reference. Viewable in the Qube UI