

What's New in Qube!™ 6.2

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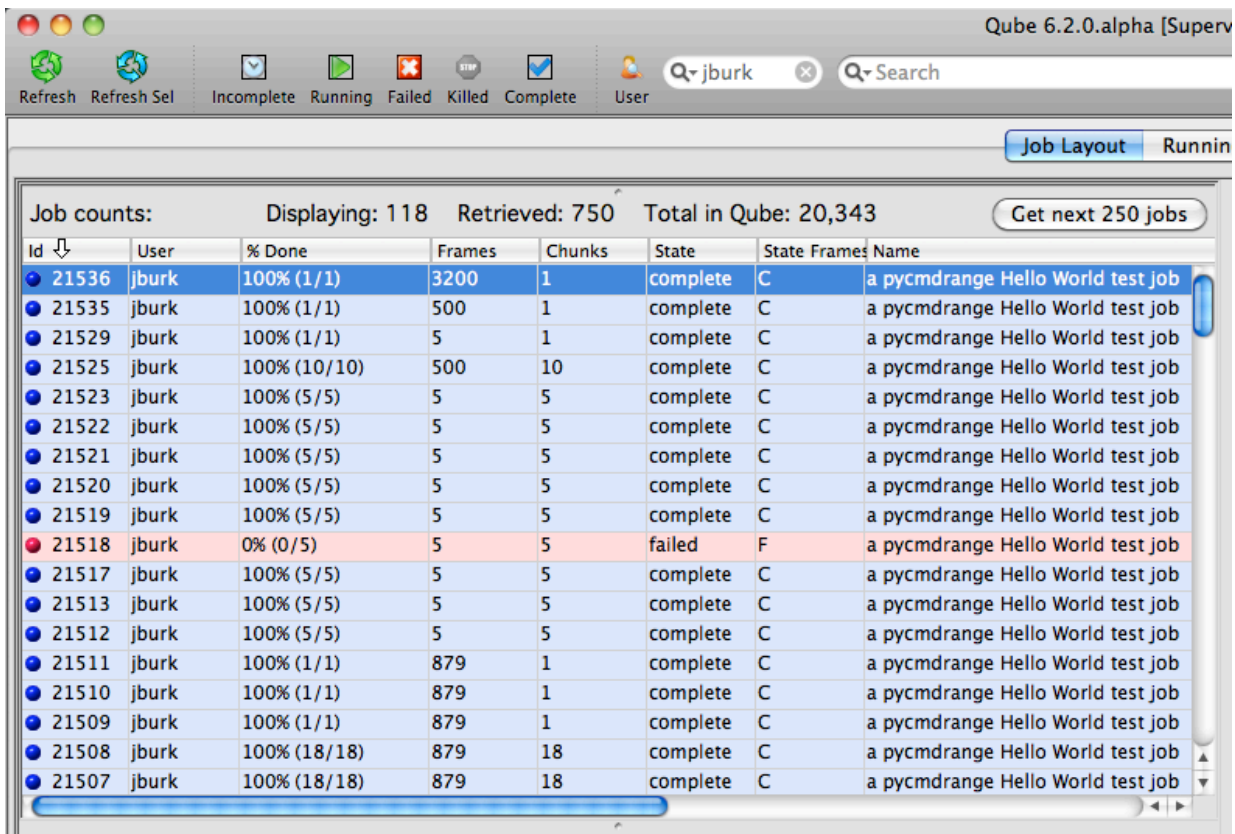
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1. PERFORMANCE

1.1 Qube! GUI



Job counts: Displaying: 118 Retrieved: 750 Total in Qube: 20,343

Id ↓	User	% Done	Frames	Chunks	State	State Frames	Name
21536	jburk	100% (1/1)	3200	1	complete	C	a pycmdrange Hello World test job
21535	jburk	100% (1/1)	500	1	complete	C	a pycmdrange Hello World test job
21529	jburk	100% (1/1)	5	1	complete	C	a pycmdrange Hello World test job
21525	jburk	100% (10/10)	500	10	complete	C	a pycmdrange Hello World test job
21523	jburk	100% (5/5)	5	5	complete	C	a pycmdrange Hello World test job
21522	jburk	100% (5/5)	5	5	complete	C	a pycmdrange Hello World test job
21521	jburk	100% (5/5)	5	5	complete	C	a pycmdrange Hello World test job
21520	jburk	100% (5/5)	5	5	complete	C	a pycmdrange Hello World test job
21519	jburk	100% (5/5)	5	5	complete	C	a pycmdrange Hello World test job
21518	jburk	0% (0/5)	5	5	failed	F	a pycmdrange Hello World test job
21517	jburk	100% (5/5)	5	5	complete	C	a pycmdrange Hello World test job
21513	jburk	100% (5/5)	5	5	complete	C	a pycmdrange Hello World test job
21512	jburk	100% (5/5)	5	5	complete	C	a pycmdrange Hello World test job
21511	jburk	100% (1/1)	879	1	complete	C	a pycmdrange Hello World test job
21510	jburk	100% (1/1)	879	1	complete	C	a pycmdrange Hello World test job
21509	jburk	100% (1/1)	879	1	complete	C	a pycmdrange Hello World test job
21508	jburk	100% (18/18)	879	18	complete	C	a pycmdrange Hello World test job
21507	jburk	100% (18/18)	879	18	complete	C	a pycmdrange Hello World test job

Description: For render farms with tens of thousands of jobs in the active database managing those jobs through the Qube! GUI can seem slow. The version 6.2 GUI allows you to pre-filter your searches by user and specify the number of jobs you'd like to retrieve from the supervisor at one time. By looking at only your own jobs and at only the last x hundred jobs, the GUI performance increases dramatically.

Tip:

The "Get Next *n* Jobs" button will appear if you chose to limit the number of jobs retrieved from the supervisor at one time by setting the "Job Limit" value to a number greater than 0 in the QubeGUI preferences:

Query SQL	<input checked="" type="checkbox"/>
SQL User	<input type="text" value="qube_readonly"/>
Job Limit (# Jobs)	<input type="text" value="250"/> <input type="button" value="▲"/> <input type="button" value="▼"/>
Job Updated Since (Days)	<input type="text" value="0"/> <input type="button" value="▲"/> <input type="button" value="▼"/>
Data Warehouse Server	<input type="text"/>

1.2 Supervisor and Worker Optimizations

Description: The version 6.2 Supervisor and Worker have been optimized for performance across render farms of all sizes. A customer running a beta version recently rendered 485,680 frames in 24 hours on 1,000 hosts with a Supervisor thread count of less than 60. This farm peaked at just over 7,000 simultaneous job slots in use.

This round of optimizations involves several improvements to the dispatch decision-making logic in the supervisor. In particular, the supervisor now replaces many such decision-making codes that were previously evaluated on the workers with code that's locally run on the supervisor itself. This significantly reduces overhead and improves dispatch performance.

Tip: Both the supervisor and workers must be at v6.2 for this optimization to be in full effect.

2. Management

2.1 Host-based licensing

Description: Maximizes investment in licenses for Nuke, Vray, mentalray and older versions of Render Man. The host-based licensing in Qube! v6.2 will allow customer to take advantage of any application that shares licenses across all instances of that application running on a single host.

Qube! has always been able to track application license usage across the farm and limit the number of running jobs requiring a particular license to prevent license starvation. Now with the host-based license tracking in v6.2, Qube! is able to accurately match it's internal license usage with the application's license sharing scheme, and will attempt to dispatch jobs requiring similar shared licenses to workers which have already checked out a license.

2.2 Subjob (job slot) limits

Description: Per-user and per-pgrp running subjobs limit - prevents a user from using too many resources at once.

Tip: Qube! v6.2 provides the ability to apply per-user limits to the number of running jobs on the farm. If a per-user limit is defined, a single user will not be able to take over the entire farm.

Qube! v6.2 also provides the ability to limit the total number of running subjobs for a "process group", which is a set of Qube jobs that are working on a common task. This process-group limit works in concert with the user-limit, and the lower of the two limits is applied.

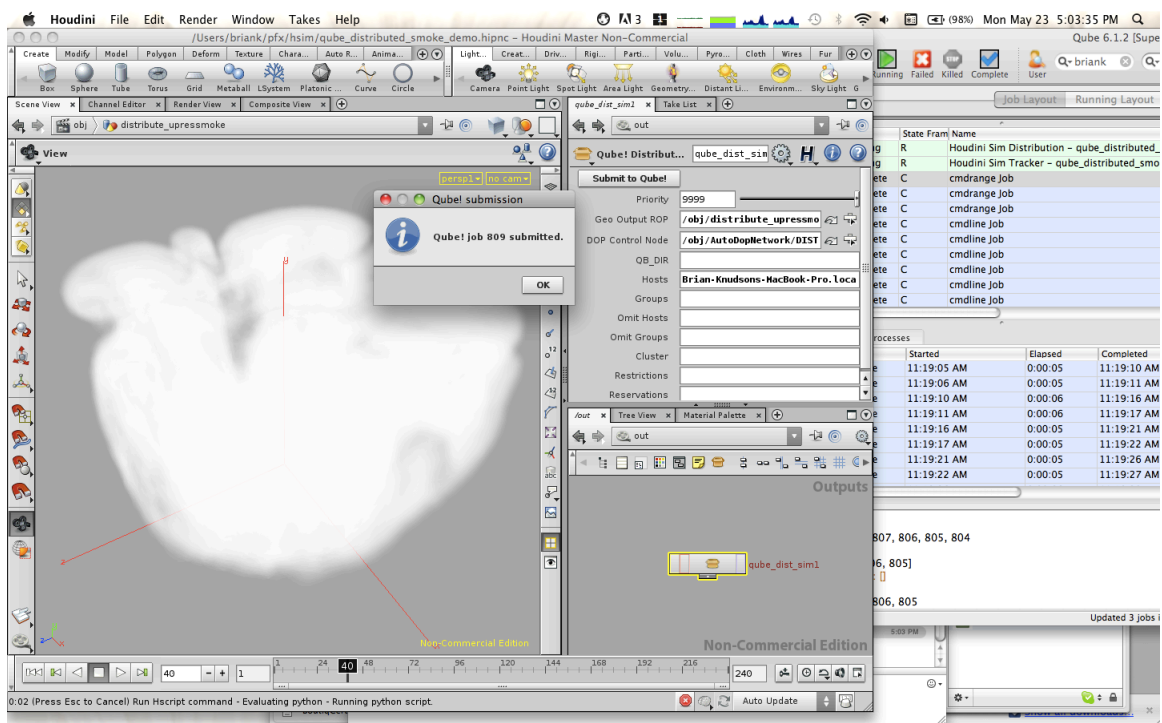
3. Applications

3.1 Dynamic Allocation for Nuke

Description: Loads the application and script once then renders multiple frames without re-load. Available on OSX and Linux.

Tip: This feature is a faster alternative to Nuke commandline batch renders.

3.2 Houdini Distributed Simulation Support

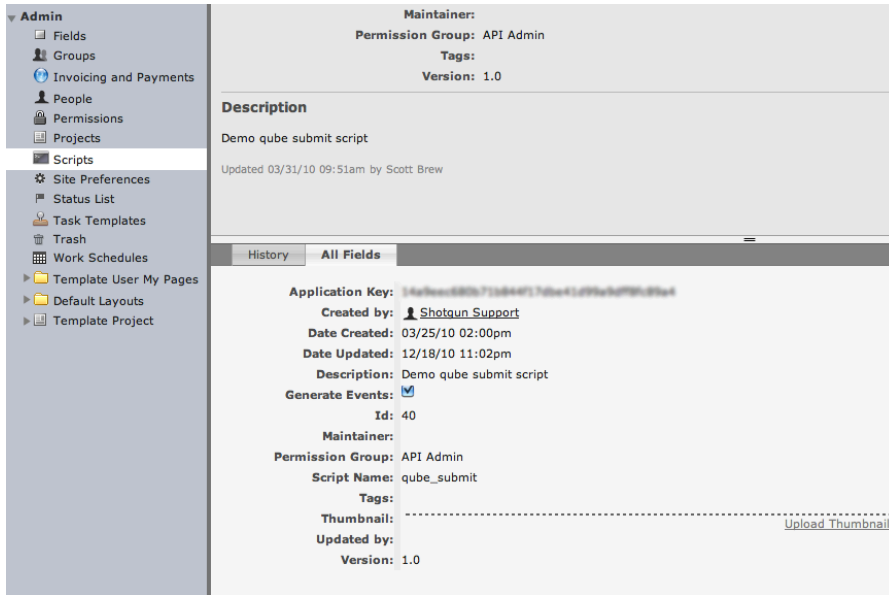


Description: Qube! support for Houdini distributed simulations. No need for Hqueue to manage a distributed sim. Qube! can now gather a pool of machines, run the simulation and return the render nodes to the farm without using Hqueue.

Tip: Houdini simulations run best on either 4, 6 or 8 hosts.

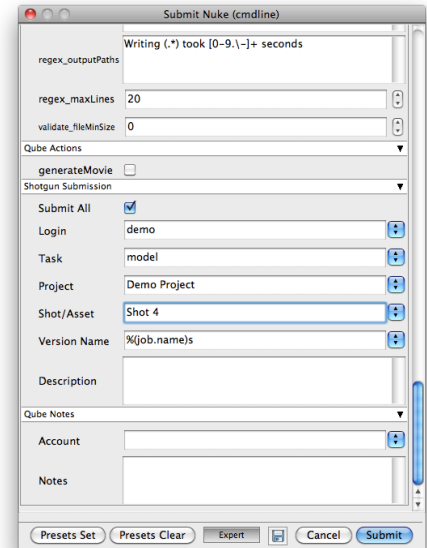
4. Integration

4.1 Enhanced Shotgun Integration



The screenshot shows the Qube! Admin interface. On the left is a navigation menu with categories like Admin, Scripts, and Site Preferences. The main area displays the configuration for a script named 'Demo qube submit script'. The configuration includes:

- Maintainer: API Admin
- Permission Group: API Admin
- Tags: (empty)
- Version: 1.0
- Description: Demo qube submit script
- Updated: 03/31/10 09:51am by Scott Brew
- Application Key: [Redacted]
- Created by: Shotgun Support
- Date Created: 03/25/10 02:00pm
- Date Updated: 12/18/10 11:02pm
- Description: Demo qube submit script
- Generate Events:
- Id: 40
- Maintainer: API Admin
- Permission Group: API Admin
- Script Name: qube_submit
- Tags: (empty)
- Thumbnail: [Redacted] [Upload Thumbnail](#)
- Updated by: (empty)
- Version: 1.0



The screenshot shows the 'Submit Nuke (cmdline)' dialog box. It contains the following fields and options:

- regex_outputPaths: Writing (*) took [0-9.\-]+ seconds
- regex_maxLines: 20
- validate_fileMinSize: 0
- Qube Actions: generateMovie
- Shotgun Submission: Submit All
- Login: demo
- Task: model
- Project: Demo Project
- Shot/Asset: Shot 4
- Version Name: %(job.name)s
- Description: (empty)
- Qube Notes: Account (empty)
- Notes: (empty)

Buttons at the bottom: Presets Set, Presets Clear, Expert, Cancel, Submit.

Description: Shotgun Version Submission allows studios to easily and automatically create Shot/Asset versions when submitting a render job through Qube!. Qube! will automatically create and update the Shotgun tracking data for a render.

Tip: Set the Shotgun preferences in the Qube! GUI first. In Shotgun, under Admin<->scripts, upload your Qube! submission script to generate the key required to authenticate to the Shotgun database.

About Qube!™ and Smart Farming™:

Qube! is an intelligent, mature and highly scalable render management solution that can be quickly integrated into any production workflow, and is backed by world-class technical support. Smart Farming delivers intelligence to production pipelines by providing business-critical insight into render pipelines, maximizing investment in rendering infrastructure and automating manual processes. Qube! works out of the box with all leading content creation applications and is truly cross-platform with all software components available on Windows®, Linux®, and Mac OS®X operating systems.

About PipelineFX:

As the leading provider of intelligent render farm management solutions for digital content creation, PipelineFX provides software, support, consulting and training services worldwide. Over 500 customers across film and visual effects, post production, broadcast, design, games and education include BaseFX, BBC, Cinesite (Europe), Digital Domain, Electronic Arts, General Motors, Herman Miller, L.M.U., Laika Studios, Lockheed Martin, Method Studios, NBC, NHK, Pratt University, Procter & Gamble, Rainmaker Entertainment Inc., Reel FX, Smoke & Mirrors, South Park Studios, Starz Entertainment, Technicolor and Telemundo. PipelineFX is headquartered in Los Angeles, CA, and has offices in Honolulu, Portland, Austin, Las Vegas and Vancouver.

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