# **Installing Qube**

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The goal of this section is to get you to install and run Qube! as quickly as possible.

### A Qube! farm has 3 main components:

- 1. The Qube! clients, machines that submit jobs. Typically these are artists or end-users workstations.
- 2. The Qube! workers, machines that run jobs. A client can also be a worker.
- 3. The Qube! supervisor, which controls what jobs are sent to which workers.

You will install a Supervisor, a Worker and a Client, and then submit a job from the Client to the Supervisor, which will hand it off to the Worker. All three of these roles can be played by the same machine, so if you want to investigate Qube! on a single laptop, you can do that. Or if your ambitions are larger, you can do that from here as well. Whatever your final goal, to install and start using Qube!, follow these steps.

## **Before You Begin**

- The installer is designed to be run on a machine with a working internet connection, and we suggest saving the downloaded components to a network drive.
- You must have administration privileges to install the software.
  - For Windows users, you may want to right-click > "Run as Administrator" or just log in as the Administrator.
  - For Linux users, you must run as root or a sudoer.
  - macOS users will be prompted to enter an admin password before installation begins.
- Once components have been downloaded, the installer can be run again on other machines without accessing the internet by pointing it to the download location used by the previous install session.

#### Python3 Required!

Python3 (3.6, 3.7 or 3.8) is a prerequisite now for all installations. You need to have it installed on each system, prior to running the QubeInstaller.

### **Linux Prerequisites**

On linux, several packages must be present before Qube can be installed, and some pre-configuration is needed.

install whatever version yum will find in the base repository for your version of CentOS/RHEL

# NOTE: QubeInstaller requires the Qt5Core DSO to be available on the system. Check that you have the "qt5-qtbase" package installed, especially if you are attempting to run it on a "minimal" or "server" OS installation.

Linux Supervisor prerequisites:

install

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- python3 (3.6, 3.7, or 3.8)
- xinetd
- qt5-qtbase
- disable:
  - firewall
  - SElinux

Linux Worker prerequisites:

- install
  - python3 (if using any Python-based jobtypes, such as the built-in pyCmdrange and pyCmdline)
  - xinetd
  - qt5-qtbase
- disable
  - firewallSElinux

Linux Client prerequisites:

< none >

### Install and Go



#### Manually Installing the Qube 7 Supervisor on Windows

If you intend to manually install a Qube 7 supervisor on Windows rather than using the Qube Installer, please refer to the Installing Qube! Manually page for instructions on running the "supe\_postinstall.bat" script after installation in order to initialize the databases; this step is normally performed by the Qube Installer wizard, as Windows security policies prohibit certain operations from being performed by an MSI installer directly.

Follow these steps:

- 1. Download the Install Wizard
- 2. Launch the Install Wizard
- 3. Install the Supervisor
- 4. Install a Worker / Client
- 5. Submit Test Jobs

That's it! After you've got this far, you can submit jobs for hero applications such as Maya, 3dsMax, Nuke, and many others.

### **Additional Possibilities**

Alternatively, you can continue with Qube! administration tasks. The Administrator's Guide explains how to keep building up your Qube! installation, including:

Installing Licenses Adding Additional Workers Adding Additional Clients Tuning Qube! for Optimal Performance

# 2. Launch the Install Wizard

#### Windows

Extract the contents of the installer zip file. Go into the folder created, right mouse click on the installer file, and run as administrator.

Name			Date modified	Туре		Size
dubeInstaller.2.1-3.Win32-x64		1	10/6/2014 11:20 AM	Annlic	ation	46,234 KB
README		Open			cument	9 KB
	۲	Run as	administrator			
		Troubl	eshoot compatibility			
		Share	with	×		
		Restor	e previous versions			
		Send to	D	•		

#### macOS

Double-click on the dmg file that you downloaded. You should see this:



Then double-click on the qubeInstaller icon.

#### Linux

For Linux, the steps are:

```
$ cd /path/to/downloaded/installer
$ tar xvzf qubeInstaller.CentOS_6.5.x86_64.tgz
depending on your Linux distribution
$ cd qubeInstaller-2.1-2.CentOS_6.5.x86
$ sudo ./qubeInstaller.2.1-2.CentOS_6.5
```

- # Note: of course the file name may differ
- # move into the directory that was just created
- # run the installer with sudo or as root

#### All OSs

In all cases, you will now see the opening screen, followed by a license agreement, which you should read and accept before continuing. Note: Depending on your OS, the installer screens may look slightly different, but the content will be exactly the same.



License Agreement
<ul> <li>LICENSE GRANT. Subject to the terms set forth in this Agreement, you may use the increased computer product ("Software") and all associated advance documentation furnished with this package solely for your internal business purposes in the country in which the Software Product was furnished to you. You may make a reasonable nurport of copies of the Software Product was furnished to you. You may make a reasonable nurport of copies of the Software Product was furnished to you. You may make a reasonable nurport of copies of the Software Product was furnished to you. You may make a reasonable nurport of copies of the Software Product was furnished to you. You may make a reasonable nurport of copies of the Software Product was the output in the terms of the Agreement, and PIELINEFX and/or its suppliers retenal minitor in docrease granted to you. You own the mada or within the advance software Product, you may copy in the terms of the Agreement, and PIELINEFX and/or its suppliers retenal minitor in the corresponder to you on the most of the Agreement and PIELINEFX.</li> <li>RESTINCTED or in action was applied to you on the terms of the Agreement and you copy the Contempation accompanying the Software Product, or any copy introduct. You may not return, resell for profit, sublicense, lease or otherwise transfer the Software Product. You may not return, resell for profit, sublicense, lease or otherwise transfer the Software Product. You may not return, resells on Office PIEFX.</li> <li>MAINTENANCE, You may acquire maintenance, training and installation, and consuling services (Sorteenet The Very warrants to you the orginal Loensee) for minet (BELINEFX warrants to you the orginal Loensee) for minet (BELINEFX warrants to you the orginal Loensee) for minet (BELINEFX warrants to you the orginal Loensee) for minet (BELINEFX warrants to you the orginal Loensee) for minet (BELINEFX warrants to you the orginal Loensee) for minet (BELINEFX warrants to you the orginal was applicable or product a sole or done</li></ul>
I agree     I do not agree

You will then see a screen which is asking where the packages to be installed will come from. The default is to download them from the PipelineFX repository, and you should leave this screen at its default and hit 'Continue'. You will then be asked for a location to download the software to. You can choose anywhere, but in general you will want these packages stored in a location that is visible to all machines on the network. For simple installs or evaluations, you can just choose your local Downloads directory, as shown here.

• 0 •	Qubel	Installer 2.1–2	
	Select Package Manifest		
	Select a manifest file from which 'Next', you will be prompted to cl installation files.	to install. Note: If you download hoose a location to save the ma	I a new manifest, when you click nifest file and all of the qube
	<ul> <li>Use PFX Internet repository</li> </ul>	6.6-2	\$
	Manifest version	6.6-2	
	Manifest creation date	Wed 17 Sep 2014	
	OS Selection	MACOSX-10.9-x86_64	*
	Use local manifest (qmf) file		Browse
	Use local kickstart (qks) file		Browse
			Go Back Continue



At this point you are ready to install one of the Qube! components. If this is your first install, keep reading and install a Supervisor. Otherwise, skip that and move to installing a Worker and Client, below

## 3. Install the Supervisor

The Supervisor controls and monitors the jobs that the Clients send to the Workers. There should be only one Supervisor on your network. For evaluation purposes, the Supervisor can be almost any machine, but for production use you should refer to the Supervisor guidelines on the Syst em Requirements page.

If you have been following the installer steps above, you should now be looking at the Component Selection page, shown below. Click on 'Supervisor' as shown here:

00	Qube! Insta	aller 2.1-2		
	Component Selection: Qube! 6	6.6-2 (MACOSX-10.9-x86_64)		
	Select the components you wish to in selections based on the chosen roll. once un/installation is complete. If yo on the left.	nstall. The left-most column pre-defin The right-most column shows the sta u choose to uninstall anything, you m	es compon ite of the co nust choose	ent moponent e "Custom"
		Component	Current	Final
	Upgrade Installed	Qube! Core		6.6-2
	Olicet Only	Qube! Supervisor		6.6-2
	Client Only	Qube! Worker		-
	Worker	🗹 Qube! WranglerView		6.6-2a
		Qube! ArtistView		
	• Supervisor	Maya Jobtype		
	Custom	Mentalray Jobtype		-
		miGen Jobtype		-
	O Uninstall Everything	Modo Jobtype		-
		Mtor Jobtype		
	Download Only	pyHoudini jobtype		-
	MACOSX-10.9-x86_64	pyNuke jobtype		-
		Qube! MobileServer		-
		~	No super	visor found
			Go Back	Continue
			_	_

The install wizard will look to make sure there isn't already a Supervisor installed on this network / subnet, and then it will allow you to click through to install the Supervisor. First it will download the additional components, and then it will install them. You should end up with this screen:

$\Theta \cap \Theta$	Qube! Installer 2.1-2
	Finished/Testing
	Congratulations! Your Qube! Install is now complete. Vising 6.6-2 supervisor at 192.168.0.181 (qb_domain: qube)
	Launch Qube! Interface
	A kickstart file has been saved at:
	/Users/craigzerouni/Downloads/qube-supervisor-6.6-2-kickstart.qks
*	Use this file to repeat this installation on another computer. View online documentation
	Go Back Done

You can launch the Qube! Wrangler GUI from here if you like, but let's keep going and finish the install. So click through to the end and exit the install wizard. But continue following the instructions on this page. If you are installing on Windows, at this point you will see a desktop icon for Qube! WranglerView.

Mindows: V When installi installation.	isual C++ Runtime Error dialog when installing Supervisor ng the supervisor on a Windows system, you may see an ERROF	dialo	g like the following pop up, close to the end of the
This dialog c	an safely be dismissed by clicking its "OK" button. t Visual C++ Runtime Library	×	
8	Runtime Error! Program: C:\Program Files\Python38\python.exe R6034 An application has made an attempt to load the C runtime library incorrectly. Please contact the application's support team for more information.		
	ОК		

# 4. Install a Worker & Client

What's the difference between a Worker and a Client? A **Worker** is going to render frames or run simulations or do whatever tasks you want to submit. You want one of those on every machine that you expect to be able to pick up and execute a task.

A **Client** is a machine or interface that a person submits jobs from. Installing a Client really just means installing the User UI, which is a simpler version of the Wrangler UI. In that sense, it is optional - users can also submit from, and monitor their jobs from, the Wrangler UI.

User's desktop machines tend to be both Workers and Clients, so in that case you would install both. In a larger installation, there would be a lot of Workers and relatively fewer Clients. There is more detail on the Terminology page.

To do the install, we are assuming you already have a Supervisor installed on the network/subnet. You can install the Worker and Client on a different computer, or if you want to do a simple evaluation of Qube!, on the same one you just used for the Supervisor. If it is a different computer, it can have a different OS from the Supervisor - but if it does, you will need to go back to Step 1 and download the appropriate installer for the Worker / Client OS.

For the purposes of this Quickstart, we are going to install both Worker and Client at the same time on the same machine. Launch the installer ag ain, and click through to the Component Selection screen. This time, select Worker, and then **also** click on the checkbox labeled "Qube! ArtistView":



Next, you will be asked which 'mode' to run the Worker in, with a dialog like this:

Selec	ct worker mode:
Desktop U	ser (Current User) 📫
Show Details	Cancel OK

For now, choose the default, which is Desktop User mode. There is an explanation of what this means, and what mode you might want in various environments, on this page.

Again, the installer will download the selected components, and then install them. When this completes, you will see buttons allowing you to submit some test jobs. We'll do that in the next section. So keep reading...

0 0	Qube! Installer 2.0-0
	Finished/Testing
	Congratulations! Your Qube! Install is now complete. If this is the first time you are installing a worker on this machine, it is recommended that you run through the optional test jobs below. Using 6.5-1 supervisor at 127.0.0.1 (qb_domain: bkTest) Local worker found running verision 6.5-1.
	Launch Qube! Interface
	Submit basic test job         status: Success! (Job ID 6609)           Submit file read test job         Test if this worker can read files from your control file server.
$\overline{}$	Submit file write test job         Test if this worker can write files to your central file server.
<b>~</b> ¥	A kickstart file has been saved at: /Users/briank/Perforce/pipelinefx/BKsMac/main/qubeInstaller/tester with spaces/qube-custom-6.5-1-kickstart.qks Use this file to run this same installation on another computer.
	View online documentation
	(Co Back) (Done
	CO Back Done

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# 5. Submit Basic Test Jobs

We assume you have a dialogue box on your screen similar to the above. To verify that the Qube! Supervisor is running and that the Worker and Supervisor can see each other, click on "Submit basic test job". You should see it change to "Pending" and then "Running" and finally "Success!"

Now click on "Submit file read test job". This will pop up a dialogue box. You should choose a file that is accessible to both Worker and Supervisor, typically on a mounted network drive. If you are testing Qube! such that the Worker and the Supervisor are on the same machine, then you can choose a local file.

Applications	qube_manifest_6.6-2.qmf	
	gube-superkickstart.gks	
Desktop	qube-uninstickstart.qks	
Documents	qube-workeickstart.qks	
Downloads	ubenistaliex60_04.umg	
DEVICES		
Remote Disc		
📃 QubeInstaller 🛛 🔺		
SHARED		
💭 5e15c6000000		
phoebes_laptop		
TAGS		
Pad		

You should then seen the same "Pending", "Running" and "Success!" messages.

### ▲ If the job fails

By default, jobs run as user 'qubeproxy'. If the 'Read Test Job' fails, it is likely to be because you chose a file or directory path that is not accessible to the qubeproxy user. You can verify this is the problem by looking at the output of the job in the Wrangler View UI <need a link to a page that deals with this>

At this point, exit the installer. Then launch the Qube! Wrangler View. On Windows, it will be the red & green desktop icon. On macOS, it will be in Applications/pfx/qube. On Linux you type 'qube'. You should see this UI:

		ueue. o							Farm Us	age:	running instances: 0 w	orkers: 0/0	slot	s: 0
					Jobs R	unning Insta	inces	Workers						
Job cou	ints:		Displaying: 7	Retrieve	ed: 7 T	otal in Qub	e: 7			_	Job Properties Job Logs	Output	4	)⊧ 3
۹Û	State	% Done	Name	User	Priority	Instances	Frames	Images	Avg	Tim	No job selected.			
256	complete	100% (1/1)	cmdline Job	dad	9999	0/1								
255	failed	0% (0/1)	cmdline Job	dad	9999	0/1								
254	complete	100% (1/1)	Test (set) job for	dad	1	0/1								
253	failed	0% (0/1)	cmdline Job	dad	9999	0/1								
252	killed	0% (0/2)	Blender Job	craigzer	9999	0/1	2							
251	complete	100% (1/1)	Test (read) job f	root	1	0/1								
250	complete	100% (1/1)	Test (set) job for	root	1	0/1								
		rar .		*					4	×				
Frames	/Work Instar	LCS .				Elapse	d	Complet	ed					
Frames rder 仓	/Work Instar	Status	Auto-retries Image	s Started										
Frames rder 仓	/Work Instar Name	Status	Auto-retries Image	s Started										
Frames rder 순	/Work Instar Name	Status	Auto-retries Image	s Started										
		rar.		*		Elapse	d	Complet	d i	×				

Let's use this to launch a quick commandline job, just to see how this works. From the menu bar, choose Submit -> Cmdline Job. You'll get this UI. Fill in the command with something like the command shown (Linux & macOS):

4	Submit cmdline	×
Qube Job Basics		T
Name	cmdline Job	
Priority	9999	Ŷ
Instances	1	÷
Parameters		Ŧ
	pwd ; whoami ; ls	
Command		
Oube Worker Selec	tion	*

For Windows, the commands could be this:

Parameters		¥	
	dir && set	*	
Command			
		-	
Qube Worker Selectio	ז	▲	

Then click on Submit and refresh the Wrangler view. You should see your job pick up, run and complete. The output from the commands you typed in the box will be in the right pane, under Job Logs / Stdout Log. Notice that the job runs as the user you are logged in as, while the test jobs you submitted from the installer were run as root (except on Windows, where they will still run as the person using the installer).



At this point, your supervisor and worker are up and going. You can install more workers and/or clients by using the installer again, or by using the kickstart files. You can find help with submitting specific kinds of jobs, for example Maya or After Effects, in the Submitting Jobs section.

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# Licensing

Instructions for installing licenses are on the License Installation page.