

Colyseus Server

Extension for Colyseus server : <https://colyseus.io/>

This is how to run your own Colyseus Server.

There are a few options:

- Virtual Machine and install the necessary packages
- Virtual Machine with a docker image (Windows/Linux possibly Mac)
- VPS https://en.wikipedia.org/wiki/Virtual_private_server

Dockers

Personally I have far more experience with running a docker on a Linux system. But it can be done using windows. The steps I have made for the Windows version are a bit old and might not exactly work with the splitted docker container and the docker_files tar bundle.

Docker for Windows

Windows 10 pro : i5 M430 @ 2.27Ghz

I had already installed the Oracle Virtual Box 5.2.8 on my system

You will need an older version of docker on a Windows 10 Home system. But my system was too low on spec so this procedure didn't work on my win10home. You can also install a linux VM on Windows 10 Home. [Toolbox Overview v17.03](#)

When you have Windows 10 Enterprise or Pro you can install Docker Desktop.:

[Docker for Windows 10 Pro or Enterprise](#)

Then skip to instructions 'docker For Windows 10 Home :

Click on the Get Docker Toolbox from this link:

[Toolbox Overview : Windows Download](#)DockerToolbox.exe

All the defaults during the wizard

C:\Users\me\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\Docker

Docker Quickstart Terminal

(Gave error on connection to another party)

Kitematic (Alpha)

[Use VirtualBox]

Takes a while to install ...

Allow VirtualBox Interface to access system (twice)

(Skip Docker Hub)

[Docker CLI]

OPTIONAL TEST

```
docker pull admik/oraclelinux7
```

```
docker run --name=oel -h oel --dns=8.8.8.8 -p 54321:80 -t -d admik/oraclelinux7  
/bin/bash
```

```
docker exec -ti oel /bin/bash
```

END OF TEST

For both Windows 10 Home and up :

Get the http://photoquesting.com/colyseus/docker_colyseus.tar.gz image extract it somewhere as a .tar. DO NOT extract the TAR. This tar will be used to do the import

From a command window (CLI for v17 and Dos Prompt for v18) :

Type is a dos command in this line:

```
TYPE docker_colyseus.tar | docker import - oel
```

This will take quite some time. On my win10home system I've stopped two times since I couldn't work on the system due to slow performance

Run the image:

```
docker run --name=YourName -h HostName --dns=googleDNS -p  
ServerIPAddress:ServerPort:3567 -t -d IMAGE COMMAND
```

If your server has been defined on the router to listen/react to port 54321 then you should do `-p 54321:3567` The port 3567 is the port that is being used inside the container to listen to network traffic.

The ServerIPAddress is used when the host has multiple network IPs address to it.

Suppose you have

internal network IP address 10.0.0.1

and

public network IP address 192.168.2.121

then this `_public_` IP address is needed for the docker command:

```
docker run --name=oel -h oel --dns=8.8.8.8 -p 192.168.2.121:3567:3567 -t -d col sh  
-c "cd /root/serjek/colyseus-hxjs-examples && ./run.sh"
```

You may need to copy the `docker_files` from Colyseus to the correct path.

Make sure that the outside world can connect to this server 3567 port. If not adjust your router or IPS rules.

Modify the example for the connection : `[colyseusSimple: Init server: [your server ip address]:3567]` with application id `[BLADIEBLA]`]

Run the example

Debugging/Information: Chrome Browser : Right Mouse -> Inspect : Console

HTML Console:

```
WebSocket connection to 'ws://192.168.2.121:3567/?colyseusid=' failed: Error in  
connection establishment: net::ERR_CONNECTION_REFUSED
```

That means that the client cannot connect to the server. Check port forwarding, firewall and other things on the host that runs docker.

When this procedure doesn't work you can try this one. I needed it because my system specification was probably too low to do get the docker colyseus image to work. This worked for my i3 4GB Windows 10 Home system: [Docker for Windows 10 Home \(win7/8\)](#)

Better way but you need Linux skills:

Windows 10 Home Colyseus Linux Docker

The Docker import of the image failed at three attempts. So here is another approach on Windows 10 Home on my i3 4GB system. Since Oracle VirtualBox is required anyway on Windows you might as well install a linux virtual machine.

The default installation of Docker will install a lightweight linux kernel called: boot2docker.iso

But we are going to install a larger image.

Download Oracle VirtualBox (5.2.8) If you don't already have a virtual box environment

Download CentOS minimal:

http://isoredirect.centos.org/centos/7/isos/x86_64/CentOS-7-x86_64-Minimal-1810.iso

File -> New VM

Linux type, Other 64-bit

1705 MB RAM

2 CPUs

VDI : automatic size (64GB)

CD / DVD Image : CentOS-7-x86_64-Minimal-1810.iso

Default Keyboard/language settings

On the installation Summary page

Software : Local Media

Installation Destination : 64GiB ATA VBOX HARDDISK () automatically configure partitioning [Done]

[Begin Installation]

root password : set to something you can remember

(reb00t)

Virtual Machine settings : Network : connected to Network Bridge

localhost login: root

password you remembered

- ip addr show

Note the interface. Don't use the lo which is loopback. In my case there was enp0s3, so:

- vi /etc/sysconfig/network-scripts/ifcfg-enp0s3

```
TYPE=Ethernet
BOOTPROTO=static
DEFROUTE=yes
NAME=enp0s3
ONBOOT=yes
IPADDR=192.168.2.101
NETMASK=255.255.255.0
GATEWAY=192.168.2.254
```

DNS1=192.168.2.254

DNS2=8.8.8.8

Esc:wq

- service network restart
- ping 192.168.2.254
- ping www.google.com
- yum install -y
http://vault.centos.org/centos/7.3.1611/extras/x86_64/Packages/container-selinux-2.9-4.el7.noarch.rpm
- yum install -y yum-utils device-mapper-persistent-data lvm2
- yum-config-manager --add-repo
<https://download.docker.com/linux/centos/docker-ce.repo>
- yum install -y docker-ce
- docker -v
- systemctl enable docker
- systemctl start docker

Download the Colyseus image:

- yum install -y wget
- cd /tmp
- Download or wget the docker_colyseus.tar.gz
http://photoquesting.com/colyseus/docker_colyseus.tar.gz
- gzip -d docker_colyseus.tar.gz
- cat docker_*.tar | docker import - oel

Prepare docker files.

The container can work with files outside of the container. This is really helpful for making back-ups and alter the server-code.

- cd /home
- mkdir extern
- cd /home/extern
- Download or wget the http://photoquesting.com/colyseus/docker_files.tar.gz
- extract: gzip -d docker_files.tar.gz
- tar xvf docker_files.tar

Now you can run the docker and point to the /home/extern folder.

Make the docker files inside the container available on the same path:

/home/extern

- docker run --name=colyseus -h colyseus --dns=8.8.8.8 -p 192.168.2.121:34321:3567 -v /home/extern:/home/extern -t -d colyseus sh -c "cd /home/extern/colyseus-hxjs-examples && ./run.sh && sleep infinite"

What to do when you restart/stop the virtual machine

- vi /etc/systemd/system/docker.sh

```
#!/bin/bash
echo "Starting Docker in 120 seconds" >>/tmp/docker.inf
sleep 120
/usr/bin/docker stop oel;/usr/bin/docker rm oel;
/usr/bin/docker run --name=oel -h oel --dns=8.8.8.8 -p
192.168.2.101:3567:3567 -t -d oel sh -c "cd
/root/serjek/colyseus-hxjs-examples && ./run.sh"
echo "Docker started" >> /tmp/docker.inf
Escape :wq
```

```
chmod +x /etc/systemd/system/docker.sh
```

- vi /etc/systemd/system/mydocker.service

```
[Unit]
Description=Docker starting Colyseus
After=network.target

[Service]
Type=simple
ExecStart=/etc/systemd/system/docker.sh
TimeoutStartSec=0

[Install]
WantedBy=default.target
Escape :wq
```

- `systemctl daemon-reload`
- `systemctl enable mydocker.service`
- `systemctl start mydocker.service`

reb00t

Linux & HaXe & Colyseus (Server) Installation WITHOUT a docker

Install the software on your own linux server.

- `yum install -y git`
- `cd /root`

```
# nodejs
```



```
# rpi uses 06 version, CentOS 7 uses 11
● curl -sL https://rpm.nodesource.com/setup_11.x | sudo -E bash -
● yum install -y nodejs

● npm -version

● npm i lix -g

● node -v
● npm -v

● npm i yarn -g
● yarn
```

```
# lix
● cd /root
● npm i lix -g

● lix install haxe 4.0.0-rc.2 --global

● lix use haxe 4.0.0-rc.2
```

Install the serjek haxe externs

- cd /root
- git clone https://github.com/serjek/colyseus-hxjs-examples.git
- cd /root/colyseus-hxjs-examples
- lix download

- haxe server.hxml
- cd bin/server
- yarn
- node index.js

```
#
# copy colyseus haxe software from stencyl extension folder
#
● cd /root
```

Download http://photoquesting.com/colyseus/docker_files.tar.gz

- gzip -d docker_files.tar.gz
- tar xvf docker_files.tar

- cd /root/colyseus-hxjs-examples
- /run.sh

src/MainServer.hx:43: -- listening on 0.0.0.0:3567... --

Change ports according to your own configuration-needs.

=====

docker commands

Make a backup :

- docker export colyseus > /root/docker_colyseus.tar
- cd /home/colyseus
- tar cvf colyseus_docker_files.tar colyseus-hxjs-examples

New Docker Host

Import a backup

- cat docker_colyseus.tar | docker import - colyseus

What are the container images:

- docker images

<pre>

```
colyseus      latest      2395300fe24b    4 minutes ago    676 MB
```

</pre>

- mkdir /home/colysues
- cd /home/colyseus
- wget http://photoquesting.com/colyseus/docker_files.tar.gz
- gzip -d docker_files.tar.gz
- tar xvf docker_files.tar
- docker run --name=colyseus -h colyseus --dns=8.8.8.8 -p 192.168.0.100:34321:3567 -v /home/colyseus:/home/extern -t -d colyseus sh -c "cd /home/extern/colyseus-hxjs-examples && ./run.sh && sleep infinite"

