

KASM Workspaces - Your Desktop in a Browser

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Introduction

This whole experience started with a simple question:

How can I safely open a suspicious link in a disposable container. Spent some time with docker trying to get this going. A bit of pyperclip and a bit of python coding and got a bit of it working.

Then did a google search and came across something called KASM-workspaces and life got better.

What makes KASM interesting?

KASM quite simply streams docker containers to you in a browser window. It has simple setup and lets you do most of the things that docker lets you do.

It is pretty easy to use.

Prereqs for KASM

O/S

Ubuntu 18.04, 20.04 (doesn't support other versions of ubuntu)

Debian 9, 10, 11

CentOS 7, 8

Resource

CPU 2 cores

Memory 4GB

Storage 50GB

KASM Versions

Self-hosted

Community (Free)

All Features in Enterprise :-)

5 simultaneous session limit

There are also Professional and Enterprise versions.

SaaS

Available for \$5 or \$10 user/month 100-300 hours

KASM - Disclaimer

I've just played with the self-hosted community edition

Demo (Available Images, basic run)

Let's take a look at some of the images that are available in the interface.

There is a lot of documentation on how to create custom images and so on.

Demo - DOOM

Everything has to play Doom. So lets give it a spin. By default Doom is not turned on in the images, but I've already enabled it.

Demo - DOOM

Where is my save file?

This is docker so by default all of your images are ephemeral. They don't save any info and always go back to a pristine state.

This means you can't save your state in Doom to the docker container. You have to mount a volume to preserve data.

We'll show you how to do this with the CentOS image next.

Demo - CentOS 7

Let's take a look at the settings for the "Volume Mappings"

```
{"/data/centos/":{"bind":"/share","mode":"rw","uid":1000,"gid":1000,"required":true}}
```

This mounts the directory on my Server VM `/data/centos` as `/share` into the CentOS image

Data stored here will be persistent between machine runs

Demo - CentOS 7

How do I get root on this image?

By default you can't. We'll see how to do this for the Kali Linux we'll look at next.

Demo - Kali Linux

Certain tools and utilities that you'll be using with Kali require root privileges.

For this we need to use the "Docker Run Config Overrid"

```
{"user":"root"}
```

Now we can become root in that image

Updates

KASM updates the images nightly. You can also change which version of the docker image you want to try.

KASM - Other Cool Things

Webfiltering is built lets build a simple policy and show how it can be applied to an image.

We'll create a simple policy and apply it to the brave browser instance.

Failing to add an Image

Played around with this a bit last night. Tried to get the reactos image to the system.

Not KASM-modified, didn't follow directions. Actually runs a bit but isn't set to forward the data back through the VNC connection, there is a lot of documentation about how to do this inside

Pointer to the documentation I ignored:

https://www.kasmweb.com/docs/latest/how_to/building_images.html

Back to the Browser Demo

Back to the Intro.

There is a Firefox/Chrome extension available that will plug into your browser on your desktop and create a container that will stream it from a container running through your browser.

Let's do it

How to Get Started

I've got my KASM machine running under VirtualBox on my new workstation. I've pretty much just put down the minimum requirements.

You can also get a \$20/month Hosting solution (Linode/Digital Ocean/Vultr) that will let you try it out

You can also sign up for the Kasm workspaces and start with them as well.

5 Things I wish I knew before

1. Do NOT try and use an unsupported OS, you will not be pleasantly surprised
2. Kick off the install and go to bed, it takes a while
3. The KASM documentation is well laid out, read at least a bit of it instead of just diving in
4. Enable Doom and play it right away
5. Audio is a bit hit or miss sometimes, doesn't work with mobile browsers yet

Alternatives

You can roll your own solution to a lot of this as well.

<https://medium.com/geekculture/streaming-docker-containers-to-your-browser-75ae9d6e27f8>

One option that sounds interesting is webtops from the linuxserver.io project -

<https://docs.linuxserver.io/images/docker-webtop> seems to be designed to be more of a VDI solution

There are a lot more alternatives but I've been impressed at how easy KASM Workspaces made everything

Is it Worth it?

Got to say the ability to open suspicious links easily in a safe environment is what I was looking for. So very much so. Would like to see if there is a way to modify the extension plugin so it would open suspicious .docx/.xlsx files and so on in only office.

Had some fun with it, and think it is worthwhile.

Give it a spin. Think you might enjoy it.

Summary and Q&A

That is about all I've got tonight.

Thanks for listening.

Any questions???

Links

KASM Workspaces

- <https://www.kasmweb.com/>

Stream your Docker instance to your browser

- <https://medium.com/geekculture/streaming-docker-containers-to-your-browser-75ae9d6e27f8>

WebTops

- <https://docs.linuxserver.io/images/docker-webtop>