How do I get into a Docker container's shell?

Asked 9 years, 3 months ago Modified 1 month ago Viewed 3.0m times



I'm getting started working with Docker. I'm using the wordPress base image and docker-compose.

2300



I'm trying to **ssh** into one of the containers to inspect the files/directories that were created during the initial build. I tried to run docker-compose run containername 1s -1a, but that didn't do anything. Even if it did, I'd rather have a console where I can traverse the directory structure, rather than run a single command. What is the right way to do this with Docker?



docker docker-container

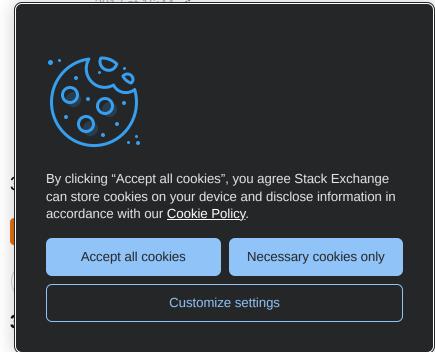
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So it sounds like the answer is docker attach. But how can I get to that from docker-compose? – Andrew May 11, 2015 at 16:27

- 7 Use docker exec <u>askubuntu.com/a/543057/35816</u>. Get the container id using docker ps Mauricio Scheffer May 11, 2015 at 16:45
- sudo docker run -it --entrypoint /bin/bash <container_name> gets you into the container interactively. Then one can inspect the file system in the container using cd <path> Sergei May 25,



not a container ID. I was confused about writing blog.andrewray.me/towards-a-strong-

bdel-of-docker is a broken link, do you have a

rted by: Highest score (default)

ainer, but this isn't really the same thing ample, docker attach will probably won't necessarily give you a shell.



The docker exec command is probably what you are looking for; this will let you run arbitrary commands inside an existing container. For example, to run bash inside a container:



docker exec -it <mycontainer> sh



Of course, whatever command you are running must exist in the container filesystem; if your container doesn't have sh, this will fail with something like:

```
OCI runtime exec failed: exec failed: unable to start container process: exec: "sh": executable file not found in $PATH: unknown
```

[If your container doesn't have sh -- which is a common case for minimal images -- you may need to investigate other ways to explore the container filesystem.]

In the above command <mycontainer> is the name or ID of the target container. It doesn't matter whether or not you're using docker compose; just run docker ps and use either the ID (a hexadecimal string displayed in the first column) or the name (displayed in the final column). E.g., given:

I can run:

```
This is inside the container.

/ # exit
$
```

In commands shown in this answer, the -i and -t options (combined as -it) are necessary to get an interactive shell:

- -i keeps stdin connected; if you don't specify -i, the shell will simply exit.
- [-t] allocates a tty device; if you don't specify [-t], you won't have a very pleasant interactive experience (there will be no shell prompt or job control, for example).

If you're specifically using docker compose, there is a convenience docker compose exec command that works very much like the docker exec command, except:

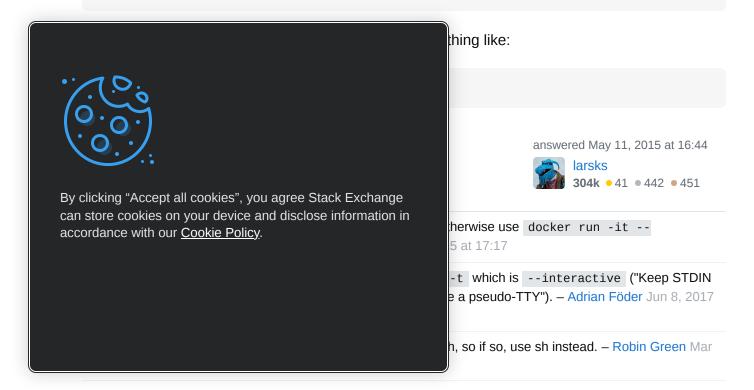
- It defaults to the behavior of -i and -t
- It allows you to refer to containers by their service name in your compose.yaml file.

For example, if you have a compose.yaml like this:

```
services:
web:
image: docker.io/alpinelinux/darkhttpd
```

Then you can run:

docker compose exec web sh



- 48 @LOj1k it is docker run -it --entrypoint /bin/bash <imageid> --any --more --args , just to clarify for people Alexander Mills May 21, 2019 at 1:21 ✓
- @AlexanderMills Yes, and to clarify further, those --any --more --args you have will be fed into whatever the image has defined as its CMD and not Docker (or if your image only defines an ENTRYPOINT and no CMD, then these options will be fed into /bin/bash as you've specified here). So for example any other docker run options (e.g. --net "host") need to go before the <imageid> . L0j1k May 22, 2019 at 17:10 /



To bash into a running container, type this:

522

docker exec -t -i container_name /bin/bash



or



docker exec -ti container_name /bin/bash



or

docker exec -ti container_name sh

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edited Jan 15, 2020 at 22:44

answered Oct 11, 2015 at 1:34



Agustí Sánchez **11.1k** • 2 • 35 • 27

2 Presuming it is a Linux container? – Peter Mortensen Aug 5, 2018 at 13:14



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key Philips Nov 25, 2018 at 15:19

c -t -i - VaTo Mar 1, 2019 at 21:39 🧪

g will allow you to specify the user.

v0003 Apr 6, 2021 at 22:00

2022 at 7:12

of the question was: **"How to ssh into a**

xecute and interact with preinstalled ning container using docker exec, rather



Note: The below answer is based on Ubuntu (of 2016). Some translation of the installation process will be required for non-Debian containers.

Let's say, for reasons that are your own, you really do want to use SSH. It takes a few steps, but it can be done. Here are the commands that you would run inside the container to set it up...

```
apt-get update
apt-get install openssh-server

mkdir /var/run/sshd
chmod 0755 /var/run/sshd
/usr/sbin/sshd

useradd --create-home --shell /bin/bash --groups sudo username ## includes 'sudo'
passwd username ## Enter a password

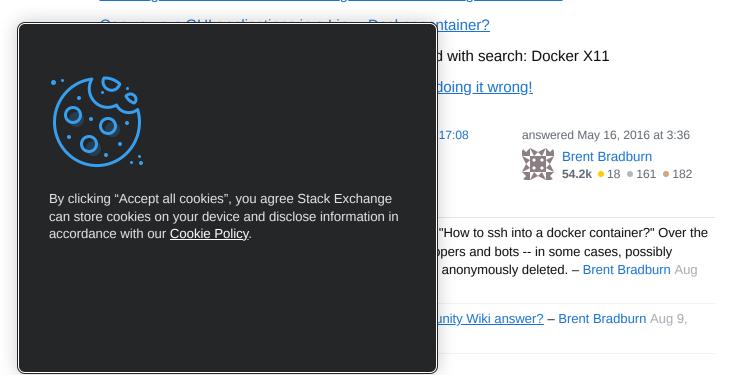
apt-get install x11-apps ## X11 demo applications (optional)
ifconfig | awk '/inet addr/{print substr($2,6)}' ## Display IP address (optional)
```

Now you can even run graphical applications (if they are installed in the container) using X11 forwarding to the SSH client:

```
ssh -X username@IPADDRESS
xeyes ## run an X11 demo app in the client
```

Here are some related resources:

- openssh-server doesn't start in Docker container
- How to get bash or ssh into a running container in background mode?





If the container has already exited (maybe due to some error), you can do:

76

\$ docker run --rm -it --entrypoint /bin/bash image_name



or



\$ docker run --rm -it --entrypoint /bin/sh image_name



or

```
$ docker run --rm -it --entrypoint /bin/bash image_name
```

to create a new container and get a shell into it.

Here is the breakdown of the command:

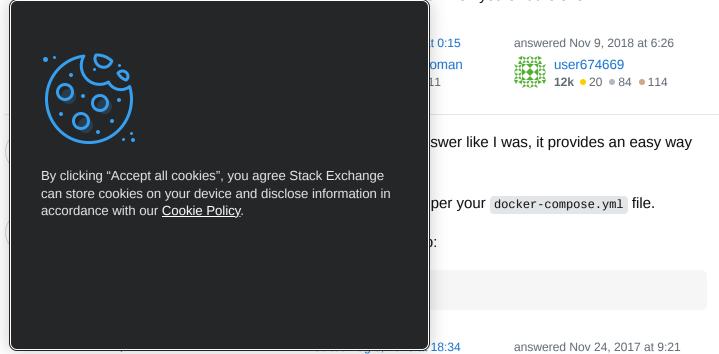
--rm: This option specifies that the container should be automatically removed when it is finished.

-it: These options allow the container to be run interactively with a pseudo-tty terminal. The -i option stands for interactive mode and the -t option stands for a pseudo-tty terminal.

--entrypoint /bin/bash: This option specifies the entry point for the container as /bin/bash, which is the shell program.

image_name: This is the name of the Docker image on which the container will be based.

Since you specified --rm. the container would be deleted when you exit the shell.







docker-compose run works as well, if your container doesn't exist yet. - Paul Apr 1, 2020 at 19:15



Start a session into a Docker container using this command:

32 sudo docker exec -i -t (container ID) bash



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edited Jun 19, 2021 at 15:46

answered Nov 18, 2015 at 9:43



43

2 or a little shorter: sudo docker exec -it <container ID> bash - YakovL Sep 22, 2021 at 12:34 or even shorter docker exec -it <container-id> sh :) - deadcoder0904 Feb 15 at 7:31

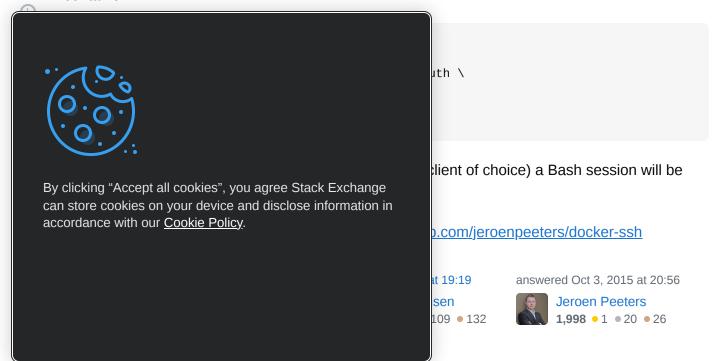


Notice: this answer promotes a tool I've written.

I've created a containerized SSH server that you can 'stick' to any running container. This way you can create compositions with every container. The only requirement is that the container has Bash.



The following example would start an SSH server attached to a container with name 'my-container'.



- 1 That's pretty sweet. The big advantage of doing it this way is you're getting a fully functional terminal. When I used the "docker exec" approach then I couldn't clear the terminal content, less was showing a warning each time I run it etc. Using Jeroen's container is giving me a much better experience so far. Just make sure to **check out the documentation**. The sample command in the response doesn't seem valid any more. − Rafał G. Jun 18, 2016 at 14:26 ✓
- it is a great tool. Do you know how can i use it as a jenkins pipeline docker agent? i Want jenkins to transfer some files by SCP to a remote host and execute them with SSH Gilson Feb 4, 2019 at 18:34

Docker On Windows: docker run -d -p 2222:22 -v //var/run/docker.sock:/var/run/docker.sock -e CONTAINER=my-container -e AUTH_MECHANISM=noAuth --name node-manager jeroenpeeters/dockerssh - GGO Oct 13, 2020 at 12:29



In some cases your image can be Alpine-based. In this case it will throw:

28

OCI runtime exec failed: exec failed: container_linux.go:348: starting container process caused "exec: \"bash\": executable file not found in \$PATH": unknown



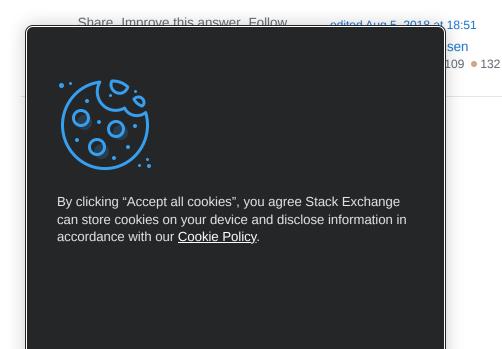
Because /bin/bash doesn't exist. Instead of this you should use:



docker exec -it 9f7d99aa6625 ash

or

docker exec -it 9f7d99aa6625 sh



answered Apr 27, 2018 at 5:26



Deoxyseia 1,389 • 18 • 31



If you're using Docker on Windows and want to get shell access to a container, use this:

27

winpty docker exec -it <container_id> sh



Most likely, you already have Git Bash installed. If you don't, make sure to install it.

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answered Feb 9, 2017 at 9:04



Cosmin Ababei Cosm 7,032 • 2 • 21 • 34

Presumes a Linux Docker container? – Peter Mortensen Aug 5, 2018 at 13:35



To connect to cmd in a Windows container, use

21

docker exec -it d8c25fde2769 cmd



Where d8c25fde2769 is the container id.

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edited Aug 5, 2018 at 13:38



Peter Mortensen **31.5k** • 22 • 109 • 132

lsh.

answered Jun 13, 2017 at 8:50



Aqeel Qureshi **447** • 1 • 4 • 10



2024 version



Use exec with sh as a short-form.

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NAME (last column) by performing docker

CREATED **NAMES**

3 hours ago Up 3 hours

S..." 3 hours ago Up 3 hours

/tcp web_redis

ONTAINER_NAME IS web. To get into web

```
docker exec -it 8e5611ba2567 sh
# or docker exec -it web sh (both are same)
```

For redis:7.2.4, CONTAINER_ID is f3967286c492 & CONTAINER_NAME is web_redis. To get into web_redis container, type:

```
docker exec -it f3967286c492 sh
# or docker exec -it web_redis sh (both are same)
```

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edited Mar 4 at 10:22

answered Feb 15 at 7:32





GOINSIDE SOLUTION

install goinside command line tool with:



sudo npm install -g goinside



and go inside a docker container with a proper terminal size with:

goinside docker_container_name

old answer



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rows \$LINES && bash";

unning container with:

<u>ontainer terminal sizes</u>. Which is very

on for your docker container names too.

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edited Aug 13, 2018 at 9:58

answered Mar 14, 2018 at 15:16



1 Thanks. It works like a charm, at least for those images which have bash already included. Might not work for alpine based images, however, can be fixed with a different function specifically written for sh/ash etc.

- Gaurav Bhaskar Jun 15, 2018 at 22:35 🧪



To inspect files, run docker run -it <image> /bin/sh to get an interactive terminal. The list of images can be obtained by docker images. In contrary to docker exec this solution works also in case when an image doesn't start (or quits immediately after running).



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edited Jan 13, 2020 at 20:04

answered Sep 17, 2017 at 19:45



6,688 • 6 • 43 • 51



Presuming a Linux Docker image? – Peter Mortensen Aug 5, 2018 at 13:44

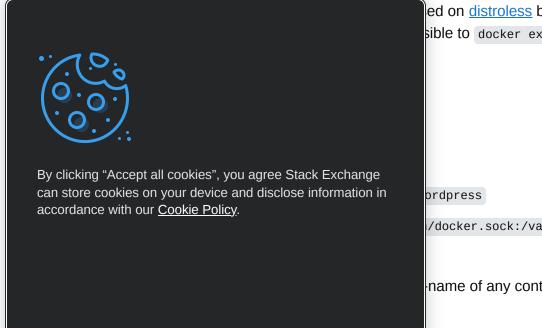


2022 Solution

Consider another option



Why do you need it?



ed on distroless base images (they don't sible to docker exec -it {container-

/docker.sock:/var/run/docker.sock

name of any container you want to

How it works

Opener is a set of python scripts wrapped-up to a docker image. It finds target container by any unique attribute (name, id, port, image), tries to connect to target using bash. If bash is not found opener tries to connect using sh. Finally if sh is not found either opener installs busybox into target container and connects to the target using busybox shell, opener deletes busybox during disconnection.

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edited Mar 27, 2022 at 10:52

answered Mar 27, 2022 at 10:02



artemkaxboy 608 • 6 • 12

1 That is very cool, I tried this and it works great. I love how simple the scripts are that it runs. I never would have thought to try installing busybox in order to get a shell environment working in a docker container.
— SenorCardgage Jul 22, 2022 at 16:53

Love how simple this is. Shell alias set, so this it the last time I'll have to go looking for help on this. Thank you for the tool! – Nick K9 Oct 25, 2022 at 10:46 \nearrow



It is simple!

14

List out all your Docker images:



sudo docker images

On my system it showed the following output:

REPOSITORY TAG TMAGE ID CREATED а5е 9 hours ago 69 5 weeks ago 81.15 run the first one. By clicking "Accept all cookies", you agree Stack Exchange can store cookies on your device and disclose information in accordance with our Cookie Policy. you can do all type of shell operations in the root of the file system. proc root run sbin

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edited Aug 5, 2018 at 18:54

answered Jul 12, 2018 at 8:47



Patel Sunil





I've created a terminal function for easier access to the container's terminal. Maybe it's useful to you guys as well:

So the result is, instead of typing:



docker exec -it [container_id] /bin/bash



you'll write:

```
dbash [container_id]
```

Put the following in your ~/.bash profile (or whatever else that works for you), then open a new terminal window and enjoy the shortcut:

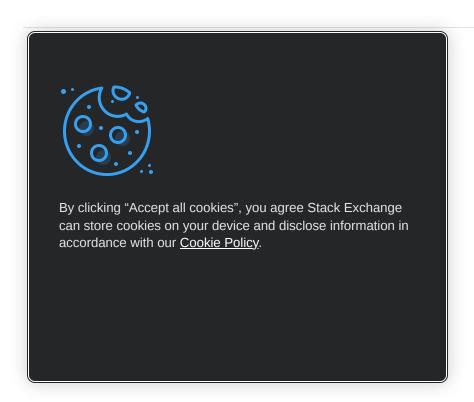
```
#usage: dbash [container_id]
dbash() {
    docker exec -it "$1" /bin/bash
}
```

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answered Jul 16, 2019 at 8:34



1,322 • 18 • 19





\$ docker exec -it <Container-Id> /bin/bash

10

Or depending on the shell, it can be



\$ docker exec -it <Container-Id> /bin/sh

You can get the **container-Id** via docker ps command

- -i = interactive
- -t = to allocate a psuedo-TTY

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edited May 24, 2019 at 12:22



16.1k • 13 • 114 • 128

answered Jan 22, 2019 at 5:46



Ashutosh Chamoli **1.007** • 1 • 12 • 27



you can interact with the terminal in docker container by passing the option -ti

docker run --rm -ti <image-name> eg: docker run --rm -ti ubuntu



-t stands for terminal -i stands for interactive



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answered Mar 11, 2019 at 17:46





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the following commands

it's present

answered May 31, 2020 at 23:52



nischay goyal **3,426** • 1 • 13 • 23



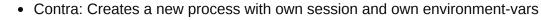
There are at least 2 options depending on the target.

Option 1: Create a new bash process and join into it *(easier)*

• Sample start: docker exec -it <containername> /bin/bash



- Quit: type exit
- Pro: Does work on all containers (not depending on CMD/Entrypoint)



Option 2: Attach to the already running bash *(better)*

- Sample start: docker attach --detach-keys ctrl-d <containername>
- Quit: use keys ctrl and d
- Pro: Joins the exact same running bash which is in the container. You have same the session and same environment-vars.
- Contra: Only works if CMD/Entrypoint is an interactive bash like CMD ["/bin/bash"] or CMD ["/bin/bash", "--init-file", "myfile.sh"] **AND** if container has been started with interactive options like docker run -itd <image> (-i=interactive, -t=tty and -d=deamon [opt])

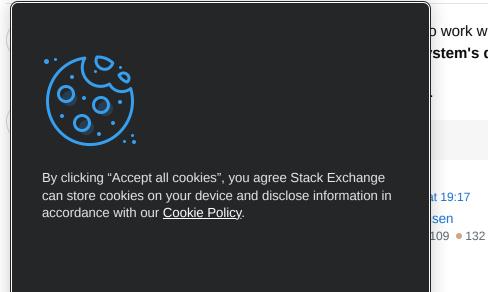
We found option 2 more useful. For example we changed apache2-foreground to a normal background apache2 and started a bash after that.

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edited Aug 4, 2020 at 16:01

answered Jul 23, 2020 at 16:04





work with the question you asked is by stem's directory.

answered May 12, 2015 at 5:19

sen

Pratik **1,216** • 11 • 18

https://stackoverflow.com/questions/30172605/how-do-i-get-into-a-docker-containers-shell

your command is actually mounting the host's directory into the container. – Demonbane Jun 15, 2016 at 14:49 /

Yeah! Take a backup to another directory and then mount the volume, then move the backup to the mounted folder. – Pratik Jun 16, 2016 at 20:37



Use:

7

docker attach <container name/id here>



The other way, albeit there is a danger to it, is to use attach, but if you ctrl + c to exit the session, you will also stop the container. If you just want to see what is happening, use docker logs -f.



:~\$ docker attach --help Usage: docker attach [OPTIONS] CONTAINER

Attach to a running container

Options:

--detach-keys string

Override the key sequence for detaching a container

--help

Print usage

--no-stdin

Do not attach STDIN

--sig-proxy

Proxy all received signals to the process (default true)

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edited Aug 5, 2018 at 13:34



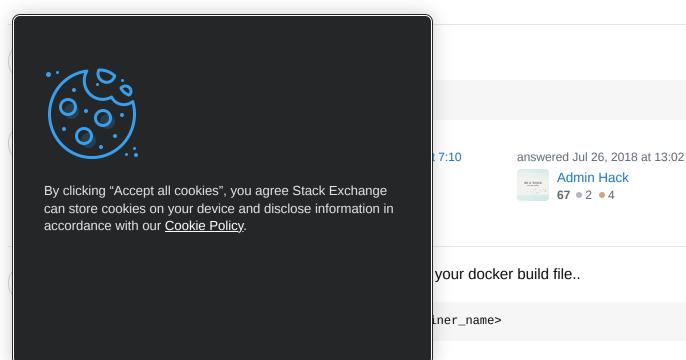
Peter Mortensen

31.5k • 22 • 109 • 132

answered Feb 2, 2017 at 18:03



100 0 1 0 6

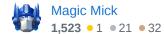




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edited Jul 5, 2023 at 0:27

answered Nov 23, 2022 at 0:20







Shouldn't it be <image_name> instead of <container_name>? - Ulises Jul 9 at 12:55



If you have Docker installed with <code>Kitematic</code>, you can use the GUI. Open <code>Kitematic</code> from the Docker icon and in the <code>Kitematic</code> window select your container, and then click on the <code>exec</code> icon.



You can see the container log and lots of container information (in settings tab) in this GUI too.

#









Documentation Kitematic

afattahi: Sign out

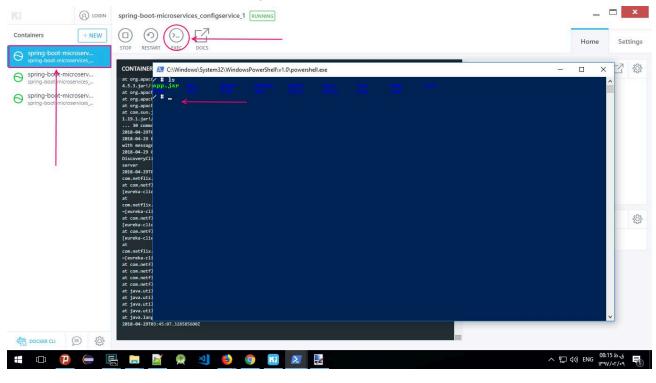
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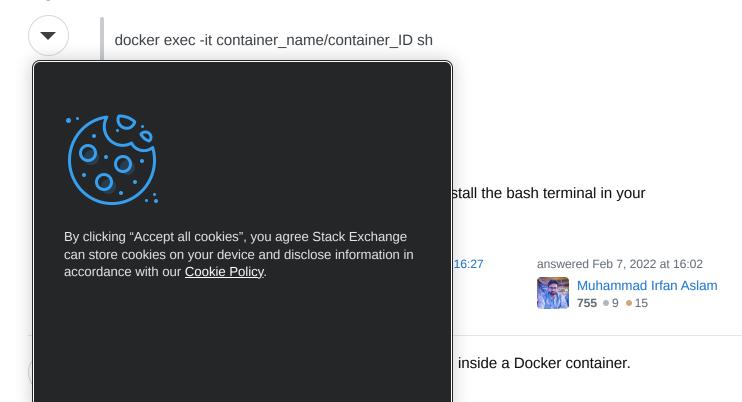


answered Apr 29, 2018 at 3:56





There are two options we can connect to the docker terminal directly with these method shell and bash but usually bash is not supported and defualt sh is supported terminal To sh into the running container, type this:



2

docker-compose run container_name /bin/bash



Inside the container it will take you to WORKDIR defined in the Dockerfile. You can change your work directory by



WORKDIR directory_path # E.g /usr/src -> container's path

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Peter Mortensen
31.5k ● 22 ● 109 ● 132

Sivakumar
Sivak 1,119 • 1 • 14 • 25



In my case, for some reason(s) I need to check all the network involved information in each container. So the following commands must be valid in a container...





ip route netstat ps

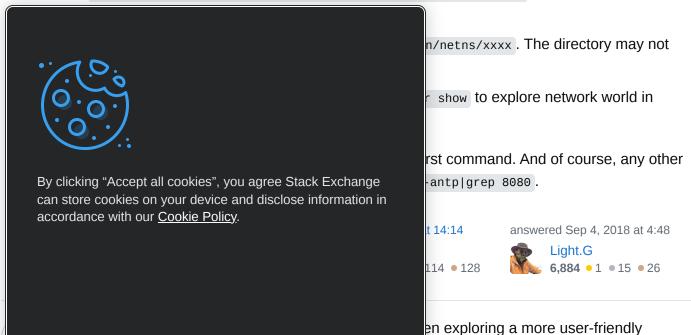


0

I checked through all these answers, none were helpful for me. I've searched information in other websites. I won't add a super link here, since it's not written in English. So I just put up this post with a summary solution for people who have the same requirements as me.

Say you have one running container named light-test. Follow the steps below.

• docker inspect light-test -f {{.NetworkSettings.SandboxKey}}. This command will get

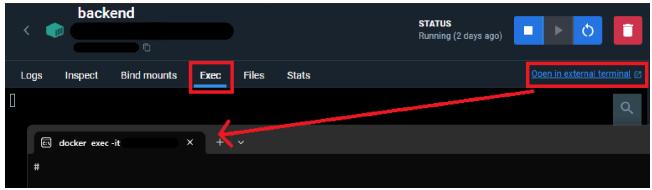




With the Windows <u>Docker Desktop GUI</u>, there's a feature that not only lets you open a direct shell on a container but also opens that shell in an external terminal. Essentially, it creates an instance of your selected terminal, and every command thereafter automatically utilizes 'docker exec -it' without the need for manual input each time.







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edited Sep 27, 2023 at 13:42

answered Sep 27, 2023 at 13:33





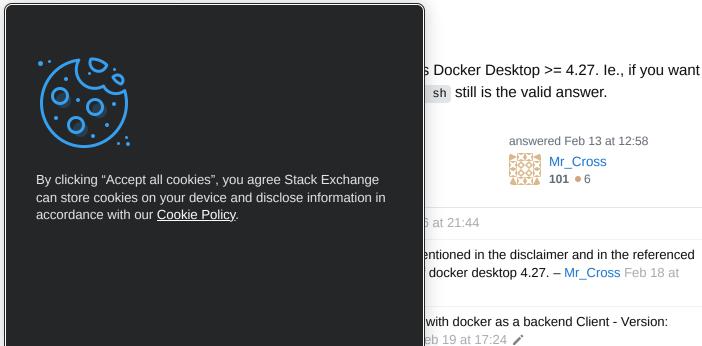
There now is an official docker command for this:

docker debug <container or image>



 \bigcirc

It allows you to get a shell (bash/fish/zsh) into any container. It also works for stopped containers and images. Essentially it's a replacement of docker exec -it <container> sh but with more features and less constraints (eg the debug shell has an install command to add further tools). Using docker debug does not modify your container/image (unless you explicitly do so, and only possible for running containers)



That feature is paywalled: "Docker Debug requires a Pro, Teams, or Business Subcription." – Oscar Jul 10 at 16:29



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