

How to list files in a stopped Docker container

Asked 5 years ago Modified 2 years, 6 months ago Viewed 47k times



[This question](#) shows how to copy files out of a stopped container. This requires that I know the full path to the file including its file name. I know the directory I want to copy a file out of, but I do not know its file name since that is generated dynamically. How do I **list** the files in a directory in a stopped Docker container?

The following Docker command works great if the Docker container is running. But, it fails if the Docker container is stopped.

```
docker exec --privileged MyContainer ls -l /var/log
```

Note: The files are not stored in a persistent volume.

docker

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edited Aug 31, 2020 at 14:24

asked Feb 16, 2018 at 19:52



Nathan

7,832 ● 7 ● 47 ● 72

6 Answers

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[This answer](#) to another question shows how to start a stopped container with another command. Here are the commands to list files in a stopped container.

1. Commit the stopped container to a new image: `test_image`.

- `docker commit $CONTAINER_ID test_image`

2. Run the new image in a new container with a shell.

- `docker run -ti --entrypoint=sh test_image`

3. Run the list file command in the new container.

- `docker exec --privileged $NEW_CONTAINER_ID ls -l /var/log`

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answered Feb 20, 2018 at 19:27



Nathan

7,832 ● 7 ● 47 ● 72

5 This is neat if you can start the docker, but if it's blocked and you can't start it, that's really not helpful. Is there really no way to list the files of a docker that isn't running?! – Alexis Wilke Apr 9, 2020 at 19:35

- 2 @AlexisWilke I have never encountered a blocked container. Since this solution works for all of my use cases, I have never tried to figure out how to list the files or copy a file out of a container. If you figure out a solution, please post an answer. You could try posting a question with your specific situation. – [Nathan](#) Apr 10, 2020 at 14:27
-
- 1 @AlexisWilke is right about the container to be running at the time I need to list the files. Anyway it worked for me to run `docker commit $CONTAINER_ID test_image` as it created the test_image container and I went inside the container to list the files. It helped to use Docker Desktop because I didn't need the 2nd and 3rd steps. – [Roberto C. Rodriguez-Hidalgo](#) May 30, 2021 at 21:31
-
- 1 you saved my life man!! I lost the original files of my project and all I had is the docker containers, which I couldn't run without having the docker files. thanx to your solution I was able to retrieve the data from inside the exited containers. – [LazerDance](#) Jun 7, 2021 at 16:13
-

When starting the container is not an option, you can always export your image (a bit overkill but..) and list its contents:

```
docker export -o dump.tar <container id>

tar -tvf dump.tar
```

Reference: [Baeldung - Exploring a Docker Container's Filesystem](#)

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edited Aug 28, 2020 at 18:14

answered Aug 28, 2020 at 14:25



[LVillaca](#)

301 ● 2 ● 4

- 2 The command `docker diff` will list the added, deleted and changed files and directories since a Container started. This is much faster than exporting. – [Nathan](#) Aug 31, 2020 at 14:36
-

The command `docker diff *CONTAINER*` will list the files added, deleted and changed since the Container started.

If a file did not change since the container was started, then you would have to know the contents of the original image that started the container. So, this answer is not ideal but avoids creating an image and running it.

Unlike `container-diff`, this command does not require first creating a Docker image.

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answered Aug 31, 2020 at 14:35



[Nathan](#)

7,832 ● 7 ● 47 ● 72

If you want to see a certain file content, I would suggest using `docker container cp` command. Here is the [doc](#). It works on stopped container. Example:

`docker container cp 02b1ef7de80a:/etc/nginx/conf.d/default.conf ./`

This way I got the config file that was generated by templating engine during start.

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answered Apr 27, 2020 at 10:09



Azat Khadiev

367 ● 4 ● 14

- 2 This answer is already mentioned in the link in the question. It does not answer the question. The question is to list the files in a directory in a stopped container. The question is not about how to copy the file. – Nathan Apr 28, 2020 at 14:35

`docker container cp <STOPPED_CONTAINER_ID>:<PATH_TO_FILE> -` Notice the "-" at the end of the command. It actually "copies" the specified file from the stopped container into "stdout". In other words, it just prints the file contents. Thanks @azat-khadiev for your direction (I don't know why you got "-1 for that answer...") – David Peleg Aug 31, 2020 at 9:02

@DavidPeleg This answer and your comment do not answer the question. The question is about *listing* the files and not about *copying* the files. – Nathan Aug 31, 2020 at 14:10

Please post your answer to this question. stackoverflow.com/questions/34429757/... – Nathan Aug 31, 2020 at 14:11

Try using `container-diff` with the `--type=file` option. This will compare two images and report the files added, deleted and modified.

2

If a file did not change since the container was started, then you would have to know the contents of the original image that started the container. So, this answer is not ideal but avoids creating an image and running it.

This tool requires that you first create an image of the stopped Docker container with `docker commit`.

Here is the command to install it:

```
curl -LO https://storage.googleapis.com/container-diff/latest/container-diff-linux-
amd64 \
  && chmod +x container-diff-linux-amd64 \
  && mkdir -p $HOME/bin \
  && export PATH=$PATH:$HOME/bin \
  && mv container-diff-linux-amd64 $HOME/bin/container-diff
```

Here is the command to use the utility:

```
container-diff analyze $IMAGE --type=file
```

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edited Aug 31, 2020 at 14:35



Nathan

7,832 ● 7 ● 47 ● 72

answered Apr 24, 2020 at 7:09



Exp3ct_m3

31 ● 2

The command `docker diff` will list the added, deleted and changed files and directories since a Container started. This is much faster than creating an image, installing a tool and running the tool. I added this as another answer. – [Nathan](#) Aug 31, 2020 at 14:31

1

```
docker container cp <STOPPED_CONTAINER_ID>:<PATH_TO_FILE> -
```

Notice the "-" at the end of the command.

It actually "copies" the specified file from the stopped container into "stdout". In other words, it just prints the file contents.

Thanks @azat-khadiev for your direction (I don't know why you got "-1 for that answer...)

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answered Aug 31, 2020 at 9:03

[David Peleg](#)
374 ● 1 ● 9

This answer does not answer the question. The question is to list the files in a directory in a stopped container. The question is not about how to copy the file. The link in the question is where this answer belongs. – [Nathan](#) Aug 31, 2020 at 14:09

Please post your answer to this question. stackoverflow.com/questions/34429757/... – [Nathan](#) Aug 31, 2020 at 14:12
