how to rsync from a host computer to docker container using docker cp

Asked 7 years ago   **Modified** 3 years, 9 months ago   **Viewed** 31k times

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I am trying to run following:

1. start a container in background

```
docker run -dit -p 8090:80 --name container repository:dockerfile bash
```

2. I want to exclude sub directory `/data` from `/test`

```
docker cp /Users/$USER/test container:/test
```

3. I thought of using rsync for this `docker exec rsync -avP  --exclude /Users/$USER/test/data /Users/$USER/test/ container:/test/`

I get below error:

```
rsync: Failed to exec ssh: No such file or directory (2)
rsync error: error in IPC code (code 14) at pipe.c(85) [sender=3.1.0]
rsync: connection unexpectedly closed (0 bytes received so far) [sender]
rsync error: error in rsync protocol data stream (code 12) at io.c(226)
[sender=3.1.0]
```

How do I rsync from host to container?

`docker`   `dockerfile`

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edited Aug 16, 2017 at 23:09	asked Aug 16, 2017 at 22:23
sauerburger	Brenda Olivia Martis
5,043 ● 4 ● 33 ● 45	**563** ● 2 ● 7 ● 19

5 Answers

Sorted by: [Highest score (default) ⇕]

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Map the host directory first, into the container:

```
docker run -v /Users/$USER/test:/temp-test -dit -p 8090:80 --name container
repository:dockerfile bash
```

Then use the rsync as follows:

```
docker exec container rsync -avP --exclude /temp-test/data /temp-test/ /test/
```

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answered Aug 17, 2017 at 1:14

[Robert](#)
35.9k ● 8 ● 94 ● 98

The way to use rsync to copy files into a Docker container

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Make sure your Docker container has rsync installed, and define this alias:

```
alias drsync="rsync -e 'docker exec -i'"
```

Now, you can use rsync with containers as if they are remote machines:

```
drsync -av /source/ container:/destination/
```

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edited Nov 13, 2020 at 5:23

answered Nov 13, 2020 at 4:34

[Milo Chen](#)
3,915 ● 4 ● 22 ● 38

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protocol version mismatch -- is your shell clean? (see the rsync man page for an explanation) rsync error: protocol incompatibility (code 2) at compat.c(178) [sender=3.1.3] Should I add bin/bash following? – [Kevin wang](#) Oct 26, 2022 at 1:03

How would you do this if the container is running on a remote server? Let's say, I use this command, to transfer files directly to the server: "rsync -avP /source/ user@remote_server:/destination" and the container name is "container". – [Irina S.](#) Feb 1, 2023 at 16:09

2   This is great! I would put more emphasis on **"Make sure your Docker container has rsync installed"**. Without that, you'll get the cryptic error: ["protocol version mismatch -- is your shell clean?"](#) – [Brent Bradburn](#) Aug 26, 2023 at 14:31 ✏

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When you run `docker exec rsync [...]` you execute the `rsync` command in your container. The path `/Users/$USER/test/` corresponds to a directory on you host system, so rsync has a hard time finding it in your container.

There are basically two ways to use `rsync` to transfer files into a container:

1. You can install an ssh server on you host system and use rsync to connect from within your container to the host system *from the outside*. If you have a running ssh server on you host and the host is reachable under the name `host` you can do

```
docker exec rsync -avP --exclude /Users/$USER/test/data host:/Users/$USER/test
/test
```

2. You can install an ssh server inside the container and use rsync on your host system to
   connect to the container *from the outside*. I assume your container is reachable under the
   name `container`, then you can do

```
rsync avP --exclude /Users/$USER/test/data /Users/$USER/test container:/test
```

In this case you have to make sure that the ssh port (default is 22) is published by the
docker daemon.

Share Follow   **edited Nov 9, 2017 at 14:31**   answered Aug 16, 2017 at 22:57

                                                                                       sauerburger
                                                                                       5,043 ● 4 ● 33 ● 45

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1   rsync has a server mode, you dont need ssh for that – Jean-Bernard Jansen Apr 16, 2019 at 11:28

You have to worry about `protocol version mismatch` if you don't install ssh. I ended up installing ssh
too. – Sridhar Sarnobat Mar 16, 2021 at 2:14

▲   This should mirror the command you attempted in the OP...

1
```
rsync -avPe 'docker exec -i' --exclude /Users/$USER/test/data /Users/$USER/test/
container:/test/
```

▼   It works similarly to get files out of the container.

     Credit to https://github.com/moby/moby/issues/13660#issuecomment-165500701

     Share Follow   answered Jun 8, 2020 at 5:50

                                                             Andrew Sharpe
                                                             78 ● 4

▲   The

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> rsync: Failed to exec ssh: No such file or directory (2)

▼   is caused because ssh is not installed for you container. You install it manual or add it to your
     requirements file to install it automaticly.

     Share Follow   answered Aug 23, 2018 at 12:01