Will docker container auto sync time with the host machine?

Giving I already changed the timezone of docker container correctly. Do I need to install a NTP server inside the docker container to periodically sync the time or the container will sync the time from its host machine?

time   timezone   clock   docker   ntp

asked Apr 2 '14 at 2:51

vantt
521   1   5   4

4 Answers

If you are on OSX running boot2docker, see this issue:
https://github.com/boot2docker/boot2docker/issues/290

Time synch becomes an issue because the boot2docker host has its time drift while your OS is asleep. Time synch with your docker container cannot be resolved by running your container with `-v /etc/localtime:/etc/localtime:ro`

Instead, for now, you have to periodically run this on OSX:

```
/usr/local/bin/boot2docker ssh sudo ntpclient -s -h pool.ntp.org
```

Update for users of Kitematic

If you are running Kitematic, which is now the suggested mechanism for getting up and running on Docker in OSX, you will have to periodically run this command:

```
docker-machine ssh default 'sudo ntpclient -s -h pool.ntp.org'
```

Or, for older versions of docker

```
docker-machine ssh dev 'sudo ntpclient -s -h pool.ntp.org'
```

Update for users of new native Docker for OSX

The new Docker Beta does away with VirtualBox and Docker Machine. The latest builds of docker (currently, 1.12.1-beta25 (build: 11807)) seem to have the ability to detect when there has been a time discontinuity and adjust accordingly. Thus, this should no longer be an issue...hooray!!

edited Sep 12 '16 at 17:50   answered Oct 19 '14 at 18:44

esilver
14.6k   16   98   139

Thank you, kind sir! – seanmcl Oct 30 '14 at 13:37

Thank you so much. This was the only thing that worked. – Mark Bao Nov 9 '14 at 23:36

1   See the purported fix/mitigation: github.com/boot2docker/boot2docker/pull/661 – Max Gasner Jan 30 '15 at 21:24

7   Note that for Docker for OSX Beta, restarting the container didn't work me, and neither did recreating it. Instead, I had to restart Docker itself (from the menubar icon). – Pol Jun 20 '16 at 15:12

I wrote a CLI tool based on this answer to synchronize time on docker-machine VMs every 5 minutes. Works on my OSX El Capitan and Windows 7 Pro – dadads Sep 20 '16 at 23:37

The simplest solution appears to be to run your container with the `-v`

`/etc/localtime:/etc/localtime:ro` option. Thus:

```
#run without tz info:
docker run --rm -t -i ubuntu date
Wed Apr  2 18:40:07 UTC 2014
# run with tz info:
docker run --rm -t -i -v /etc/localtime:/etc/localtime:ro ubuntu date
Wed Apr  2 11:40:29 PDT 2014
```

answered Apr 2 '14 at 18:42

shabbychef
1,298   3   12   20

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19   I don't know if the original question was more about timezones (e.g. making sure that the container will honor DST and timezone changes) or accurate time keeping (e.g. making sure that the container clock will not drift). If it's about timezones, that answer is perfect. If it's about clock drift, you don't have to worry: the clock of the container is the same as the clock of the host (except that the container cannot change it, except when it's running in `--privileged` mode). – jpetazzo Apr 4 '14 at 20:46

@jpetazzo agreed; I should have included a call to `date` on the host machine in my MWE, as it is otherwise perhaps unclear that the container gets its time from the host. – shabbychef Apr 7 '14 at 21:17

1   `setup mount namespace mounting /etc/localtime into /mnt/sda1/var/lib/docker/aufs/mnt/.../etc/localtime not a directory` – Brian Tingle Oct 17 '14 at 16:31

This does not appear to work per docker 1.3 on OSX. Same error as Brian Tingle. – esilver Oct 19 '14 at 18:21

1   @esilver boot2docker can only mount subdirectories under /Users by default – menghan Oct 24 '14 at 4:16

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https://github.com/sameersbn/docker-gitlab/issues/77

See sameersbn's answer.

```
option 1: -v /etc/localtime:/etc/localtime:ro
option 2: -e "TZ=Asia/Shanghai"
```

edited Aug 5 '14 at 2:46   answered Aug 5 '14 at 2:25

Kedarnath   **user3908675**
4,080   5   21   43   **399**   3   2

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2   Why did this get voted down? – Dmitry Minkovsky Oct 6 '14 at 0:27

2   Option 2 worked for me. I actually like that is is more explicit than the other options. – Ryan Walls Jan 7 '15 at 19:25

Thank you option 2 also worked for me. I get an error on my Mac with option 1 as I have no etc/localtime folder. – Zergleb Oct 23 '15 at 18:54

-e "TZ=XXXX/YYYY" works like MAGIC ! – Thiago Born Feb 26 '16 at 19:33

How can i change jre so that i dont have to use command because command line doesnot work for my issue. i need to manually update with tzupdate for daylight stackoverflow.com/questions/40418187/… – mark Nov 6 '16 at 14:33

On Docker for Mac OS X Beta, I experienced significant drift on the VM, which is based on Alpine Linux. From Alpine Linux FAQ you can synchronize the VM's clock with the following command.

```
ntpd -d -q -n -p pool.ntp.org
```

However, o~~_~~   is another question, which can be done if you use the

```
screen ~/Library/Containers/com.docker.docker/Data/com.docker.driver.amd64-
linux/tty
```

That path is a symlink, which on my system points at `/dev/ttys003`.

Once you get in, note that the `moby login` is simply `root` with no password. After you have finished, CTRL-A, D will disconnect from the screen session.

NOTE: This used to be documented on Docker for Mac Trouble Shooting but that seems to have been taken down. I was lucky enough to be shown it while at Dockercon 2016. It seems Docker is trying to abstract the VM completely out of the experience, which explains why it's no longer documented.

edited Aug 18 '16 at 22:10   answered Jun 30 '16 at 21:53

esilver   **Martin Woolstenhulme**
14.6k   16   98   139   **2,600**   4   14   23

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3   This should be the newly accepted answer for people using the new RCs without the intermittent docker-machine – Blizz Jul 6 '16 at 8:17

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