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managing users in docker

krrrcks edited this page on Jan 16, 2015 · 5 revisions

By default, all rocker images run as the root user.

Justification: This makes them easy to use as base images for other Dockerfiles. Most (all official?) base images leave the default user as root. Someone who uses `FROM r-base` doesn't need to switch back and forth to the root user with a USER root (switching back and forth adds extra layers and is against the current [best practices](#) advised by Docker, as is using `sudo` in Dockerfiles). This is also the most sensible default for running the RStudio images (see below).

However, all rocker images also define a non-root user which can be switched on at run time using the `--user` flag to `docker run`. In a production environment you may consider to run rocker with a non-root user for more security. For historical reasons, this user is `docker` in r-base and [rocker/r-devel](#) but `rstudio` in [rocker/rstudio](#) and the images that build on it ([rocker/hadleyverse](#), [rocker/ropensci](#)), hence:

```
docker run --user docker -ti r-base R
```

but with an RStudio-based image:

```
docker run --user rstudio -ti rocker/rstudio R
```

Or for simplicity, one can specify the user's UID instead. Regardless of the name, the non-root user has UID 1000 (root user has UID 0). Other UIDs are not available at run time.

```
docker run --user 1000 -ti r-base R
docker run --user 1000 -ti rocker/rstudio R
```

When running rocker with a non-root user the `docker` user is still able to install packages. The user `docker` is member of the group `staff` and could write to `/usr/local/lib/R/site-library`.

When using RStudio, the container should always be run as root (e.g. without specifying a `--user`).

This allows Docker to launch the RStudio server ([which needs root to launch](#)). One must then login to the RStudio instance itself as a non-root user (`rstudio` by default; see [Using the RStudio image](#)). Only specify a `--user` on these containers if you are running with a custom command (e.g. the interactive terminal instances of R as shown above).

Configuring a non-root user is most important when sharing volumes with the host; see [Sharing files with the host machine](#) for details. Keep in mind that it is the UID, not the user name, which must match between the container and the host in order to avoid changing permissions.

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