Migrating the Docker Storage Driver to overlay2

by Micah Abbott (/blog/author/miabbott/) – Monday 8 May 2017

On the Project Atomic mailing list (https://lists.projectatomic.io/projectatomic-archives/atomic/2017-March/msg00015.html), Colin Walters (https://twitter.com/cgwalters) posted a quick set of instructions on how to migrate the Docker storage driver from `devicemapper` to `overlay2` on Fedora Atomic Host.

The `overlay2` driver will be the default storage driver in Fedora 26 (https://fedoraproject.org/wiki/Changes/DockerOverlay2), but you can use it on Fedora 25 Atomic now. To switch storage drivers on an installed system, either before or after you `rpm-ostree rebase` to Fedora 26, you can use the following procedure.

Colin noted that the folks working on the `atomic` CLI are developing a way to migrate all of your images and containers (https://trello.com/c/vAunYr5K/310-docker-storage-migrate-images-containers-when-switching-drivers) when you want to switch storage drivers. Until that work is complete, the only way to switch drivers is destructive and results in a loss of your images and containers.

Instead of using the raw commands noted in the email, we can do much of the same thing using the `atomic` CLI. You'll need to have `atomic-1.17.1-2` or later for the the following `atomic` commands to work successfully.

WARNING These steps should only be performed if you understand that this will destroy all of your containers, images, and volumes.

```
$ systemctl stop docker
$ atomic storage reset
  # Reallocate space to the root VG - tweak how much to your liking
$ lvm lvextend -r -l +50%FREE atomicos/root
$ atomic storage modify --driver overlay2
$ systemctl start docker
```

If you want to perform the migration without using the `atomic` CLI, you can use the raw commands.

```
$ systemctl stop docker
$ rm /var/lib/docker/* -rf
$ lvm lvremove atomicos/docker-pool
  # Reallocate space to the root - tweak how much to your liking
$ lvm lvextend -r -l +50%FREE atomicos/root
$ echo STORAGE_DRIVER=overlay2 >> /etc/sysconfig/docker-storage-setup
$ rm /etc/sysconfig/docker-storage
$ systemctl start docker
```

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