Backup and Restore Rancher

Lab 7

What are you Learning?

In this lab you'll Backup and Restore your Docker-based Rancher cluster.

Why is it important?

Disaster happens. While optimally you would love to be able to restore your environment via automation, that's not always possible. Even so, prior to an upgrade, you should know how to backup your Rancher installation. Even if you never have to restore a backup, you should test that you can restore a backup. What good is a backup if it's useless when you actually need it.

Backup and Restore Rancher

This lab will have two paths. One path, if you installed Rancher with a bind-mounted volume (i.e. used the -v argument), another path if you installed Rancher with a Docker volume (i.e. did not use the -v argument).

Backup a Bind-Mounted Volume

1. Stop the running container, you can find the name using the `docker ps` command.
2. Copy the Rancher data file. Move the backup to a safe place.
3. Start the container. Here's an example of the whole process

```
~$ docker ps
CONTAINER ID        IMAGE                  COMMAND
CREATED             STATUS              PORTS
                    NAMES
5dff4c71d487        rancher/rancher:v2.4.1   "entrypoint.sh"     3
minutes ago       Up 3 minutes        0.0.0.0:80->80/tcp, 0.0.0.0:443-
>443/tcp   beautiful_swanson
~$ docker stop beautiful_swanson
beautiful_swanson
~$ cp -Rp /opt/rancher /opt/rancher.bak
~$ mv /opt/rancher.bak /asafeplace/
~$ docker start beautiful_swanson
beautiful_swanson
~$
```

Restore a Bind-Mounted Volume

1. Stop the running container, you can find the name using the `docker ps` command.
2. Remove the rancher directory
3. Copy and rename the backup of the Rancher data file to the bind-mounted directory, from the safe place.
4. Start the container. Here's an example of the whole process

```
~$ docker ps
```

```
CONTAINER ID        IMAGE                     COMMAND
CREATED             STATUS              PORTS
                           NAMES
5dff4c71d487        rancher/rancher:v2.4.1   "entrypoint.sh"     3
minutes ago       Up 3 minutes        0.0.0.0:80->80/tcp, 0.0.0.0:443-
>443/tcp   beautiful_swanson
~$ docker stop beautiful_swanson
beautiful_swanson
~$ rm -rf /opt/rancher
~$ cp -Rp /asafespace/rancher.bak /opt/rancher
~$ docker start beautiful_swanson
beautiful_swanson
~$
```

Backup a Rancher Cluster with a Docker Volume

1. Stop the Container
2. Create the backup archive, per the Rancher documentation.
    a. Remember to put that backup in a safe place.
3. Start the Container

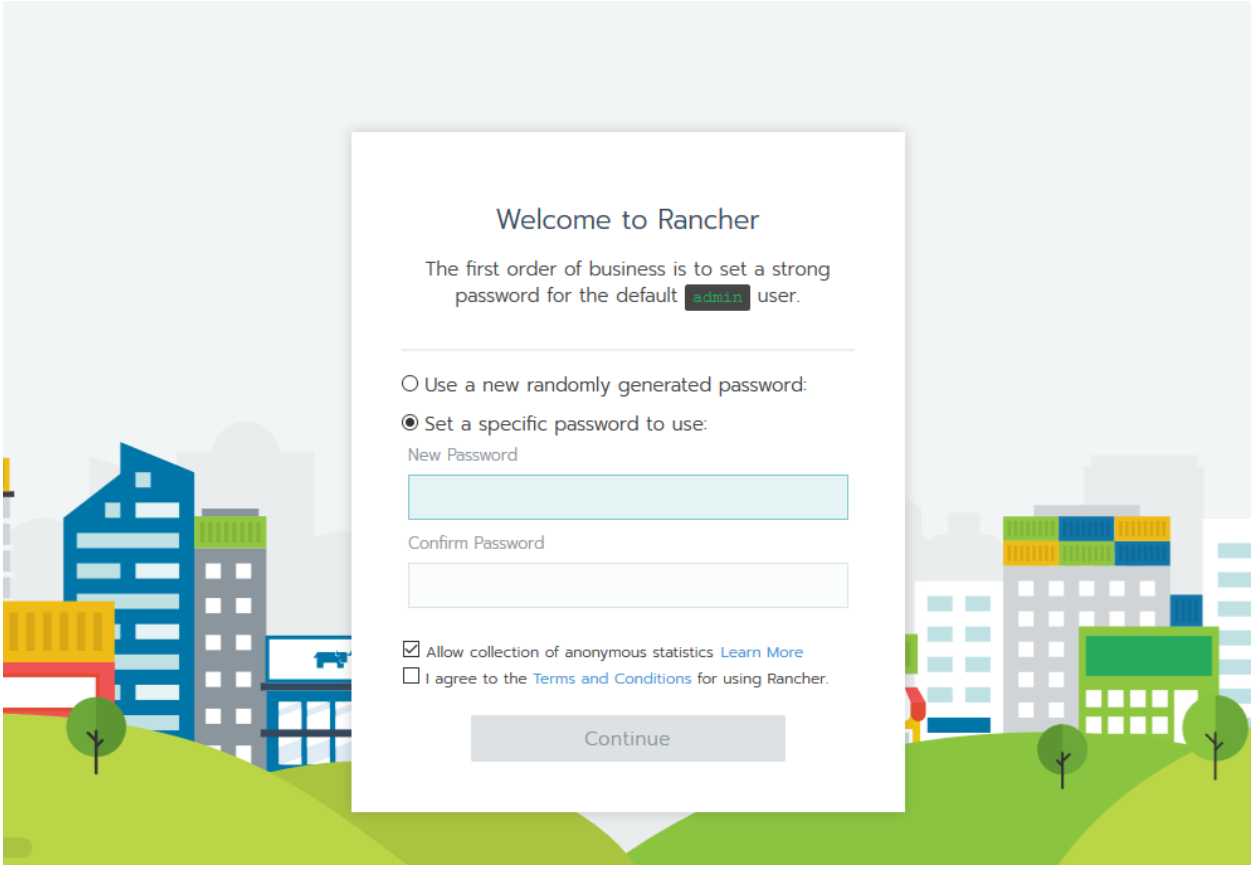
Restore a Rancher Cluster with a Docker Volume

1. Stop the Container
2. Use the backup you put in a safe place to restore Rancher, per the documentation.
3. Start the Container

Testing That It Works

Regardless of the method you used to backup and restore the backup, success looks the same. Be sure to test both installation methods, as well as backup and restore techniques.

1. Once again, you should be able to navigate to the Rancher cluster in a browser, via the machine's public IP address. Again, don't set a password and leave the cluster as is.



References

- Backing up Rancher Installed with Docker - https://rancher.com/docs/rancher/v2.x/en/backups/backups/single-node-backups/
- Restoring Backups – Docker Installs - https://rancher.com/docs/rancher/v2.x/en/backups/restorations/single-node-restoration/