Docker Load Save

Saving Images and Containers as Tar Files for Sharing

Imagine a scenario where you have built Docker images and containers that you would be interested to keep and share it with your other collaborators or colleagues. The below methods shall help you achieve it.

Four basic Docker CLI comes into action:

- **The docker export**: Export a container's filesystem as a tar archive
- **The docker import**: Import the contents of a container's and create a filesystem image
- **The docker save**: Save one or more images to a tar archive
- **The docker load**: Load an image from a tar archive

Pull 2 images down

```
docker pull ubuntu
docker pull centos
```

Save one image to tar file

```
docker save ubuntu > ubuntu.tar
docker load < ubuntu.tar
```

Archive one image at the same time and reduce the size

```
docker save ubuntu:latest | gzip > tia_images.tar.gz
docker load < tia_images.tar.gz
```

Archive multiple images at the same time

```
docker save -o my-images.tar ubuntu:latest nginx:latest
Or
docker save -o my-images.tar.gz ubuntu:latest nginx:latest

docker load < my-images.tar
my-images.tar.gz
```

Archive multiple images at the same time and reduce the size

```
docker save ubuntu:latest nginx:latest | gzip > tia_images.tar.gz
docker load < my-images.tar.gz
```

Example:

1. run the container:

```
docker run -it ubuntu:latest /bin/bash
```

1. install your applications or modify the container as you wish
2. exit out of the container and keep the container running without exit

```
ctrl <p> and ctrl <q> : press ctrl + p and ctrl + q simultaneously.
```

1. check if the container is running:

```
docker ps
```

1. log back in the container if needed

```
docker attach  <running container ID>
docker attach 4c765f2dd902
```

1. commit your changes

```
docker <commit running container ID> <new image name>
docker commit 4c765f2dd902 my-ubuntu:my_tag
```

1. stop the running container first because achieving

```
docker stop <running container ID>
```

1. save or archive the image and reduce the size

```
docker save my-ubuntu:my_tag |gzip > tia_image.tar.gz
```

1. clean up and load your image back to into docker-engine

```
docker load < tia_image.tar.gz
```

What is the difference between saving and exporting in Docker?

Learn more here

There are two main differences between `save` and `export` commands.

1. save command saves the whole image with history and metadata but the export command exports only file structure (without history and metadata). So the exported tar file will be smaller than the saved one.
2. When you use the exported file system for creating a new image then this new image will not contain any `USER, EXPOSE, RUN,` etc. commands from your `Dockerfile`. The only file structure will be transferred. So when you are using mentioned keywords in your Dockerfile then you cannot use the export command for transferring images to another machine - **you need always use the save command.**