A CLOUD GURU

Lesson Guide - Working with Container Images Using Podman and Skopeo - Part 2

Container images are a key part of Podman. In this lesson, we'll examine how to manage container images using Skopeo. Upon completion of this lesson, you will have a solid understanding of how and when to use Skopeo to manage your container images.

Resources

Building, Running, and Managing Linux Containers on Red Hat Enterprise Linux 8 - Working with Container Images

Container Registry Information:

What Is a Container Registry? - Red Hat

How to Implement a Simple Personal/Private Linux Container Image Registry for Internal Use - Red Hat

Instructions

We need to get our container images in order!

Before we start working with Podman containers, we're going to want some container images to work with. We're going to take a look at how we can use `podman` and `skopeo` to manage container images. We'll explore how we can use `podman` and `skopeo` to retrieve container images, display image information, and more.

Let's check it out!

Managing Container Images Using Skopeo

Even though the `podman` command can be used to perform container image management, to take things to the next level requires `skopeo`. How does `skopeo` work?

Let's look at a couple of helpful `skopeo` commands that will help keep you grounded.

If you need to check the version of `skopeo` you're running, use:

```
skopeo --version
```

To get help, or explore all the possibilities of the `skopeo` command:

```
skopeo --help
```

You can also get help on subcommands:

```
skopeo inspect --help
```

We'll grab the latest `ubi7` image from the `registry.access.redhat.com` registry:

```
podman pull registry.access.redhat.com/ubi7/ubi:latest
```

Checking our local container images:

```
podman image list
```

We now have a local image to work with.

Let's log in to our local registry, using `registryuser` and `registryuserpassword`:

```
skopeo login localhost:5000
```

We can use `skopeo` to copy a container image directly from one registry to another:

```
skopeo copy docker://registry.access.redhat.com/ubi7/ubi:latest
docker://localhost:5000/ubi7/ubi
```

In this case, we are copying the `ubi7/ubi:latest` image from the Red Hat registry to our local registry, using the Docker transport.

We can use `skopeo sync` to copy images from one location to another:

```
skopeo sync --src docker --dest docker --scoped
registry.access.redhat.com/ubi7/ubi:latest localhost:5000/ubi7/ubi
```

We can use `skopeo inspect` to get more information on a container image:

```
skopeo inspect docker://localhost:5000/ubi7/ubi:latest | more
```

We can also use `skopeo` to list the tags on an image:

```
skopeo list-tags docker://localhost:5000/ubi8/ubi
```

So, using `podman` to search our local registry:

```
podman search localhost:5000/ubi
```

We can see our `ubi` images.

Let's wrap it up, and log out:

```
skopeo logout localhost:5000
```

Our work here is complete!

Notes

Recording - Environment used: Cloud Playground - Medium 3 unit RHEL 8 Cloud Server

Environment Setup:

Create your Cloud Playground server and log in.

Install Podman and Configure a Container Registry:

Install, enable, and start firewall services:

```
sudo yum -y install firewall* skopeo
```

```
sudo systemctl enable --now firewalld
```

Set up a container registry:

How to Implement a Simple Personal/Private Linux Container Image Registry for Internal Use - Red Hat

I used `localhost` for the hostname, as I'm going to access the container registry using `localhost`.

You're ready to go!