

# OCI Registry Service

## Level 200

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# Safe Harbor Statement

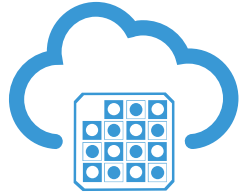
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# Objectives

After completing this lesson, you should be able to:

- Describe the OCI Registry Service
- Managing OCI Registry Service

# Introducing Oracle Cloud Infrastructure Registry - OCIR



## What is It?

- A high availability Docker v2 container registry service
- Stores Docker Images in Private Repositories
- Runs as a fully managed service on Oracle Cloud Infrastructure

## What Problems Does it Solve?

- Without a registry it is hard for Development teams to maintain a consistent set of Docker images for their containerized applications
- Without a managed registry it is hard to enforce access rights and security policies for images
- It is too hard to find the right images and have them available in the region of deployment

## Key Benefits

- Full integration with Container Engine for Kubernetes (OKE)
- Registries are private by default, but can be made public by an admin
- Co-located regionally with Container Engine for low latency Docker image deploys
- Leverages OCI for high performance, low latency and high availability

# Pre-requisites for OCIR

- To use registry service, user is either a part of the admin group or part of a group to which a policy grants the appropriate permissions
  - allow group `acme-viewers` to inspect repos in tenancy – Ability to see a list of all repositories in Oracle Cloud Infrastructure Registry belonging to the tenancy
  - allow group `acme-managers` to manage repos in tenancy – Ability to perform any operation on any repository in Oracle Cloud Infrastructure Registry that belongs to the tenancy (Pull an image, push an image, create/delete repos etc.)
  - **Note:** repos are tenancy-level resources, policies controlling access to them need to go into the root compartment (i.e., the tenancy).
- User needs to have an OCI username and auth token before being able to push/pull an image.

# OCIR Repositories

- Repositories can be private or public.
- Any user with internet access and knowledge of the appropriate URL can pull images from a public repository in Oracle Cloud Infrastructure Registry.
- To Create a Repository via Console
  - Containers → Registry → Create Repository
    - Repository Name
    - Public or Private

The screenshot shows the Oracle Cloud Infrastructure (OCI) console interface. At the top, the Oracle Cloud Infrastructure logo is on the left, and the user's tenancy 'jamalarif' and region 'us-ashburn-1' are displayed. The user's email 'sardar.jamal.arif@oracle.com' and various service links (My Services, Support, Documentation) are on the right. A navigation bar contains links for Home, Identity, Compute, Containers, Database, Networking, Storage, Audit, and Email. The 'Containers' section is active, showing 'Clusters' and 'Registry' links. The 'Registry' page features a 'Create Repository' button and a list of repositories. The 'Demo\_Repo' repository is highlighted, showing it is public, owned by 'sardar.jamal.arif@oracle.com', and is currently empty (0 B size, no last push).

The 'Create Repository' form is shown on the right side of the console. It includes a 'close' link at the top right. The 'REPOSITORY NAME' field contains 'Demo\_Repo'. The 'PUBLIC' toggle switch is turned on. A 'Submit' button is at the bottom.



# Push/Pull images from OCIR

- You use Docker CLI to push/pull images to repos in OCI
- Create a Auth Token for User and copy it
- Login into OCIR
  - `docker login <region-code>.ocir.io`
    - `<tenancy_name>/<username>`
    - `Auth-token`
- Find images in your local repository to be pushed to OCIR and tag it appropriately in the format
  - `<region-code>.ocir.io/<tenancy-name>/<repos-name>/<image-name>:<tag>`
  - `docker tag 9f1191b287da iad.ocir.io/jamalarif/testing/tomcat:1.2`
- Push your tagged image to OCIR
  - `docker push iad.ocir.io/jamalarif/testing/tomcat`
- Similarly images can be pulled using docker pull
  - `docker pull <region-code>.ocir.io/<tenancy-name>/<repos-name>/<image-name>:<tag>`
  - `docker pull iad.ocir.io/jamalarif/testing/tomcat:1.2`

Region Code	Region Name
phx	Phoenix
iad	Ashburn
fra	Frankfurt
lhr	London

# OCIR Image Layers

Google Chrome

Clusters

Registry

Create Repository

jamalarif

Demo\_Repo (Public)

demo/nginx

testing (Public)

testing/tomcat

1.2

1.2

Copy Pull Command

Delete

Full Path: jamalarif/testing/tomcat:1.2

Repository: [testing/tomcat](#)

Size: 186.91 MB

Pushed by: [sardar.jamal.arif@oracle.com](#)

Date: 20 minutes ago

Total Pulls: 0

Digest: ...5749067b82d14dc [Show](#) [Copy](#)

Layers

Associated Tags

Digest	Size	Date
...14f9382db003707 <a href="#">Show</a> <a href="#">Copy</a>	43.22 MB	Fri, 18 May 2018 08:54:46 GMT
...f47a3d365198e5e <a href="#">Show</a> <a href="#">Copy</a>	10.27 MB	Fri, 18 May 2018 08:52:57 GMT
...6b4ea5a40f58545 <a href="#">Show</a> <a href="#">Copy</a>	4.14 MB	Fri, 18 May 2018 08:52:35 GMT
...17eb101518ef81d <a href="#">Show</a> <a href="#">Copy</a>	833.1 KB	Fri, 18 May 2018 08:52:06 GMT
...5d34e9100a1c07a <a href="#">Show</a> <a href="#">Copy</a>	247 B	Fri, 18 May 2018 08:51:56 GMT
...df4b2ec5e4a7e63 <a href="#">Show</a> <a href="#">Copy</a>	130 B	Fri, 18 May 2018 08:51:56 GMT
...4a020339cf4fc28 <a href="#">Show</a> <a href="#">Copy</a>	116.48 MB	Fri, 18 May 2018 08:56:20 GMT
...d342196ee6cf5fe <a href="#">Show</a> <a href="#">Copy</a>	265.74 KB	Fri, 18 May 2018 08:51:54 GMT
...4ce8b40d28d6950 <a href="#">Show</a> <a href="#">Copy</a>	150 B	Fri, 18 May 2018 08:51:53 GMT
...03addb145a896b2 <a href="#">Show</a> <a href="#">Copy</a>	516.32 KB	Fri, 18 May 2018 08:51:55 GMT
...ea3324cc402f946 <a href="#">Show</a> <a href="#">Copy</a>	11.21 MB	Fri, 18 May 2018 08:52:29 GMT
...9a2404b85763e48 <a href="#">Show</a> <a href="#">Copy</a>	131 B	Fri, 18 May 2018 08:51:53 GMT
...0ae04f71a055c91 <a href="#">Show</a> <a href="#">Copy</a>	15.67 KB	Fri, 18 May 2018 08:56:23 GMT



# Pulling images from Registry for Kubernetes Deployments

In order to pull images that reside in Oracle Cloud Infrastructure Registry

- Create a Docker registry secret, containing the Oracle Cloud Infrastructure credentials to use when pulling the image.
  - Specify the image to pull from Oracle Cloud Infrastructure Registry, including the repository location and the Docker registry secret to use, in the application's manifest file.
- ```
• kubectl create secret docker-registry <secret-name> --docker-server=<region-code>.ocir.io --docker-username='<tenancy-name>/<oci-username>' --docker-password='<oci-auth-token>' --docker-email='<email-address>'
```

# Summary

- Describe the OCI Registry Service
- Managing OCI Registry Service



[cloud.oracle.com/iaas](https://cloud.oracle.com/iaas)

[cloud.oracle.com/tryit](https://cloud.oracle.com/tryit)