



OCI Registry Service

Level 200

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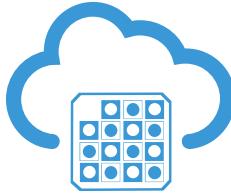
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Objectives

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

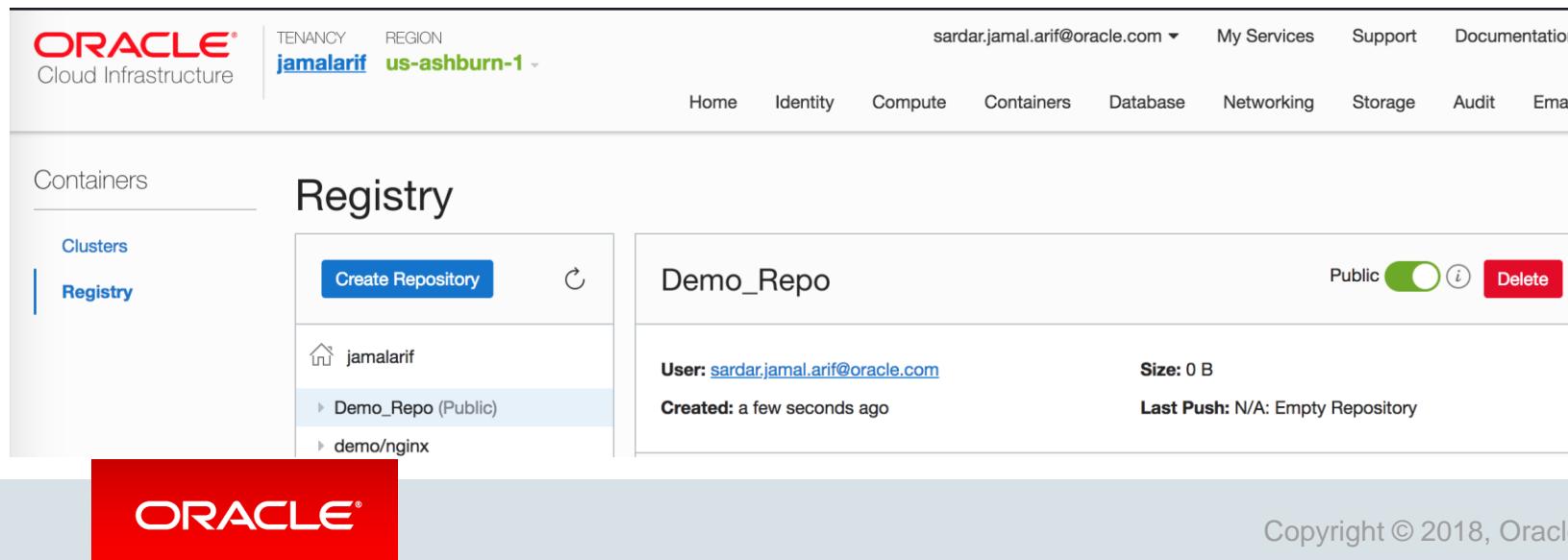
- Full integration with Container Engine for Kubernetes (OKE)
- Registries are private by default, but can be made public by an admin
- Co-located regionally with Container Engine for low latency Docker image deploys
- Leverages OCI for high performance, low latency and high availability

Pre-requisites for OCIR

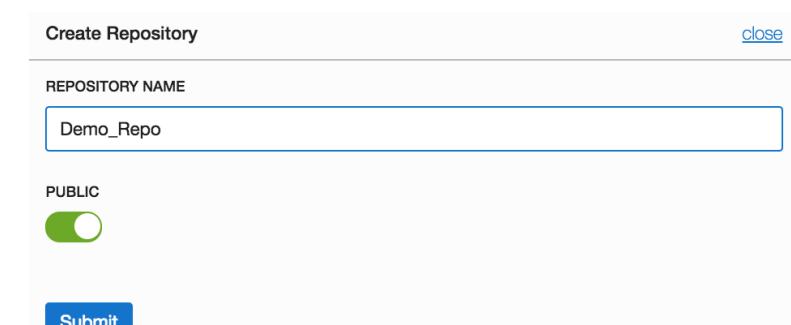
- To use registry service, user is either a part of the admin group or part of a group to which a policy grants the appropriate permissions
 - allow group acme-viewers to inspect repos in tenancy – Ability to see a list of all repositories in Oracle Cloud Infrastructure Registry belonging to the tenancy
 - 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 Registry console. The top navigation bar includes the Oracle logo, TENANCY (jamalarif), REGION (us-ashburn-1), and user information (sardar.jamal.arif@oracle.com). The main menu on the left has 'Containers' selected, with 'Clusters' and 'Registry' also visible. The 'Registry' section title is 'Registry'. Below it is a table with a 'Create Repository' button in the first row. The second row shows a repository named 'Demo_Repo' with a 'Public' toggle switch set to 'Public', a 'Delete' button, and details: User: sardar.jamal.arif@oracle.com, Created: a few seconds ago, Size: 0 B, and Last Push: N/A: Empty Repository. The bottom navigation bar has the Oracle logo.



The screenshot shows the 'Create Repository' dialog box. It has a 'close' button at the top right. The 'REPOSITORY NAME' field contains 'Demo_Repo'. A 'PUBLIC' toggle switch is set to 'Public'. 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

Registry

Clusters Registry

Create Repository

jamalarif

- Demo_Repo (Public)
- demo/nginx
- testing (Public)
- testing/tomcat

1.2

1.2

Full Path: jamalarif/testing/tomcat:1.2

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

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

Repository: [testing/tomcat](#)

Date: 20 minutes ago

Total Pulls: 0

Copy Pull Command Delete

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

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