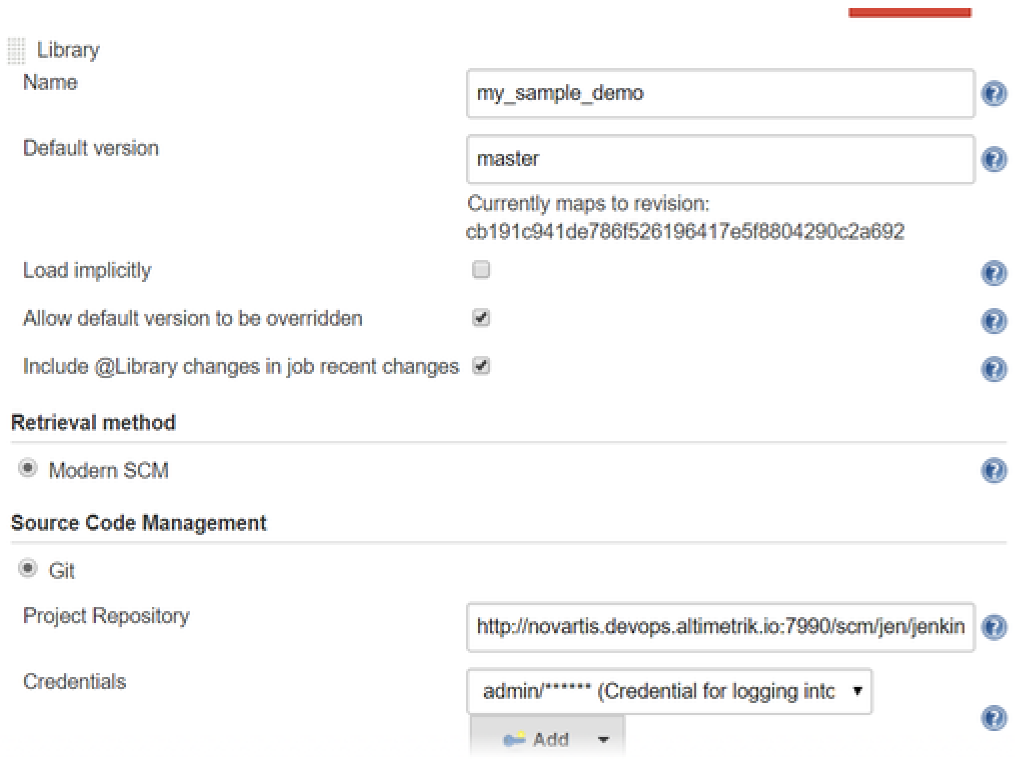
Docker Image Creation Using Global Library

Global library configuration in Jenkins

To do so, go into **Manage Jenkins -> Configure System** and find the **Global Pipeline Libraries** section. The shared library will be loaded on the fly from a git repository, in every job. It is never cached.



Library

Name	my_sample_demo
Default version	master Currently maps to revision: cb191c941de786f526196417e5f8804290c2a692
Load implicitly	☐
Allow default version to be overridden	✓
Include @Library changes in job recent changes	✓

Retrieval method

● Modern SCM

Source Code Management

● Git

Project Repository	http://novartis.devops.altimetrik.io:7990/scm/jen/jenkin
Credentials	admin/****** (Credential for logging intc

The Project repository is the url of your git repo where Global library code is present, Shared Library

Shared Library:

Shared Library

```
#!/usr/bin/groovy
def call(Map config) {

node {
stage('Initialize') {
def dockerHome = tool 'myDocker'
env.PATH = "${dockerHome}/bin:${env.PATH}"
}


stage('Checkout') {
echo "Checking out the sources..."
checkout scm
}

stage('Build') {
echo "Build Stage"
}

stage('Test') {
echo "Test Stage"
}

stage('Package and Build Image') {
sh 'python setup.py bdist'

// Build Image


if (config.DockerFilePath) {
sh "cp ${config.PackagePath} ${config.DockerFilePath}"
def customImage =
docker.build("novartis.devops.altimetrik.io:8081/docker-local/" +
"${config.ImageName}:${config.ImageVersion}",
"${config.DockerFilePath}")
} else {
sh "cp ${config.PackagePath} $WORKSPACE"
def customImage =
docker.build("novartis.devops.altimetrik.io:8081/docker-local/" +
"${config.ImageName}:${config.ImageVersion}")
}

}

}
}
```

1. In order to create a Docker image, the Docker Pipeline plugin provides a `build()` method for creating a new image, from a `Dockerfile` in the repository, during a Pipeline run.Example, docker.build("novartis.devops.altimetrik.io:8081/docker-local/" + "${config.ImageName}:${config.ImageVersion}"

2. config.ImageName and config.ImageVersion will be passed from JenkinsFile as defined below.

Note :- It will search in the root directory for the Dockerfile, if DockerFilePath is not defined.

To refer shared library in your JenkinsFile please use the following code snippet, Example: Sample repo for Integrating with shared library is availabe at Demo Repo.

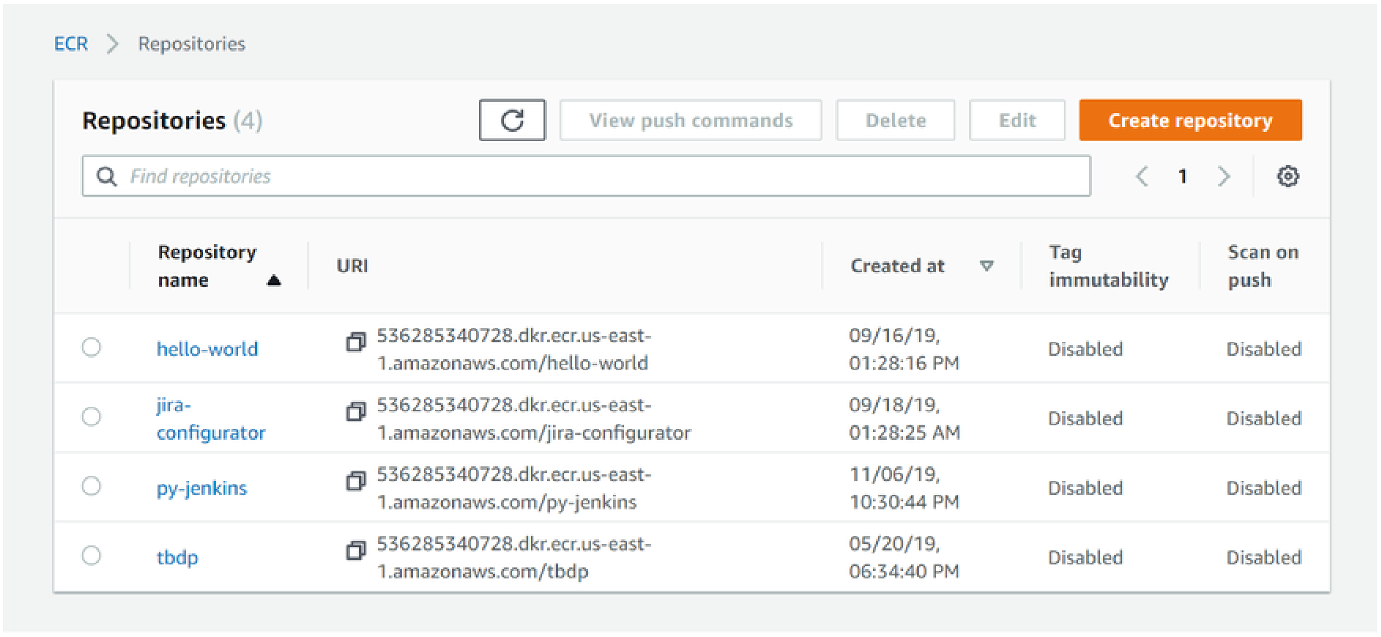
```
@Library('my-shared-library') _

allInOne(
 ImageName: 'py-jenkins',
 ImageVersion: '0.1.0',
 DockerFilePath: './dockerfiles',
 PackagePath: '$WORKSPACE/dist/*'
 )
```

To integrate this jenkins file we can use a pipeline project.

Push Image To ECR

Create the ECR Repository

- Log in to your AWS Console
- Open the **Elastic Container Registry(ECR)** service.
- Click the **Create repository** button in the **Repositories** tab.



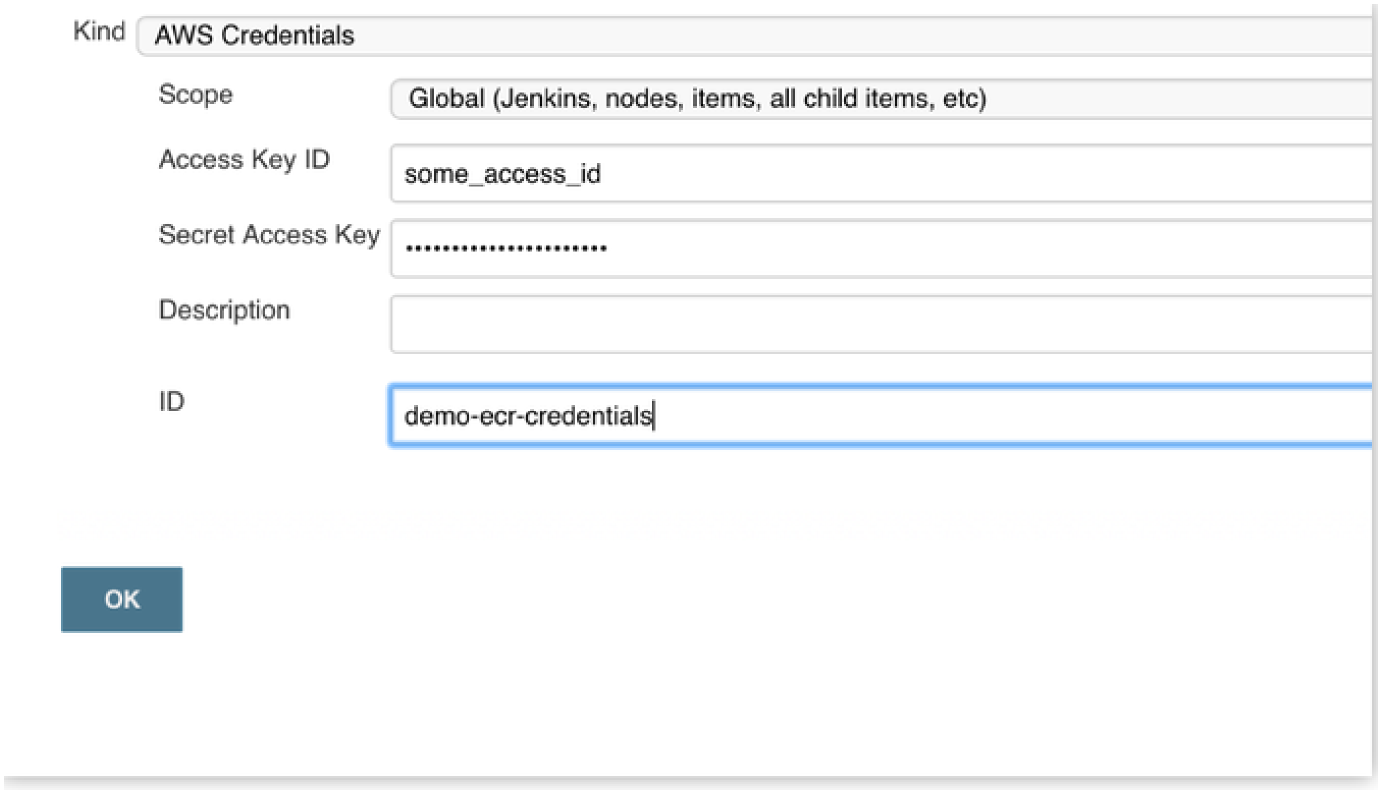
Repository name	URI	Created at	Tag immutability	Scan on push
hello-world	536285340728.dkr.ecr.us-east-1.amazonaws.com/hello-world	09/16/19, 01:28:16 PM	Disabled	Disabled
jira-configurator	536285340728.dkr.ecr.us-east-1.amazonaws.com/jira-configurator	09/18/19, 01:28:25 AM	Disabled	Disabled
py-jenkins	536285340728.dkr.ecr.us-east-1.amazonaws.com/py-jenkins	11/06/19, 10:30:44 PM	Disabled	Disabled
tbdp	536285340728.dkr.ecr.us-east-1.amazonaws.com/tbdp	05/20/19, 06:34:40 PM	Disabled	Disabled

- Give a name to your repository. We can use the Image name as the name of the repository. Then, click the “Next” button.

Add AWS Credentials to Jenkins

- From the home screen, hit the **Credentials** link in the left-side bar.
- Determine where you want to put your credentials. If unsure, go into the **Global credentials**.

- Click the **Add Credentials** link in the left-side navigation.
- For **Kind**, select **AWS Credentials**.
- Enter the *Access ID* and *Secret Access Key* for the AWS user that has access to the ECR repository.
- In the **Advanced** button, specify an ID that will make sense to you (so you don’t have to remember a randomly generated UUID).



Kind	AWS Credentials
Scope	Global (Jenkins, nodes, items, all child items, etc)
Access Key ID	some_access_id
Secret Access Key	••••••••••••••••••••••
Description	
ID	demo-ecr-credentials

Install required plugins (if not already installed)

- Pipeline
- Docker Pipeline Plugin
- Amazon ECR Plugin

Groovy script

```
docker.withRegistry("https://your.ecr.domain.amazonws.com",
"ecr:us-east-1:credential-id"){
docker.image("your-image-name").push()
}
```

In order to obtain an ECR login credential, you must use the ecr provider prefix.