**Installing Jenkins and an Artifactory servers using docker containers**

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# General information

* **Jenkins** is**an open-source automation tool written in Java with plugins built for Continuous Integration purposes.** Jenkins is used to build and test software projects continuously, making it easier for developers to integrate changes to the project and making it easier for users to obtain a fresh build.
* In **Devops**, **Artifactory** is a commodity that handles binary **artifacts**. It saves and handles several types like Python packages, npm packages, etc., that you get from the builds and used at deployment and compile time

Why docker containers?

* Lightweight alternative of VMs
* Build once , run everywhere
* All required dependencies for installation are within the container itself.

# Prerequisites

* Docker must already be installed on the Linux server (Ubuntu)
* Add user to the docker group

# Installing Jenkins

## Command

|  |  |
| --- | --- |
| **docker container run --name jenkins\_server -d -v jenkins\_home:/var/jenkins\_home -p 8080:8080 -p 50000:50000 jenkins/jenkins:lts:latest** | - Running a Jenkins docker container  - Using Volumes for data persistence  - Port Binding for accessing the docker container from the internet |

## Explanations

## 

|  |  |  |
| --- | --- | --- |
| Parameters | Purpose | Value |
| --name | Naming the container | jenkins\_server |
| -p | Port binding | 8080:8080  50000:50000 |
| -v | Data persistence | jenkins\_home:/var/jenkins\_home |
| -d | Detached mode | None |
| Docker image | Create the container | jenkins/jenkins:lts:latest |

# Installing Artifactory

## Commands

|  |  |
| --- | --- |
| **sudo mkdir -p /jfrog/artifactory** | Create data directory on host system |
| **sudo chown -R 1030 /jfrog/** |  |
| **docker run --name artifactory -d -p 8081:8081 -p 8082:8082 -v /jfrog/artifactory:/var/opt/jfrog/artifactory**  **docker.bintray.io/jfrog/artifactory-oss:latest** | - Running an Artifactory docker container  - Using Volumes for data persistence  - Port Binding for accessing the docker container from the internet |

## Explanations

|  |  |  |
| --- | --- | --- |
| Parameters | Purpose | Value |
| --name | Naming the container | artifactory |
| -p | Port binding | 8081:8081  8082:8082 |
| -v | Data persistence | /jfrog/artifactory:/var/opt/jfrog/artifactory |
| -d | Detached mode | None |
| Docker image | Create the container | docker.bintray.io/jfrog/artifactory-oss:latest |

# Post Installation checkup

|  |  |
| --- | --- |
| Checking for running containers:  **docker container ps** | Both jenkins server and artifactory server should appear in the output of the command. |
| Checking the web UI -Jenkins: <https://ip_address:8080> |  |
| Checking the web UI Artifactory:  <https://ip_address:8082> |  |