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Overview

1. OpenShift is a cloud development Platform as a Service (PaaS) hosted by Red Hat. It’s an open source cloud-based user-friendly platform used to create, test, and run applications, and finally deploy them on cloud.
2. OpenShift is capable of managing applications written in different languages, such as Node.js, Ruby, Python, Perl, and Java. One of the key features of OpenShift is it is extensible, which helps the users support the application written in other languages
3. Setup of openshift:

System requirements:-

Step 1:  First install Linux on the machines. By using commands we have to Active Red Hat subscription

Step 2: Configure Docker so that it should allow insecure communication on the local network. By using public and private key authentication we have to create password-less communication between master and node

Step 3:  As OpenShift uses Docker registry for configuring images, we need to configure Docker registry. This is used for creating and storing the Docker images after build.

Step 4: Next, login to the master machine using the default admin credentials, which gets created while setting up the registry.

Step 5: By default, OpenShift uses OpenVswitch as software network. Use the following command to create a default routing. This is used for load balancing and proxy routing. The router is similar to the Docker registry and also runs in a registry.

Step 6: In order to handle URL request, OpenShift needs a working DNS environment. This DNS configuration is required to create a wild card, which is required to create DNS wild card that points to a router.

Step 7: Once the above setup is complete, you can verify by test and deploy applications, which we will know more about in the subsequent chapters.

Setup of Jenkins:

1.Jenkins is an open source automation tool written in Java often used for Continuous Integration / Continuous Delivery

2. At the same time it can improve the quality of the software it builds by running tests

3. We will place our Jenkins instance in a new project called **ci**. Jenkins is a stateful application, so we need to provide persistent storage to it. The Jenkins template we’re going to use will automatically create a PVC using the default storage class

4. After a few seconds the Jenkins pod will be up and running.