Setup instructions:

1. Create an account in aws if available
2. Install Ansible in the master machine
3. If the operating system “ubuntu” enters/etc/ansible/host and adds a managed host
4. Install docker in the local machine
5. Install Jenkins on the local machine
6. Install SonarQube on the local machine
7. Add credentials for open-shift
8. Add credentials for Sonarquabe

* Architecture overview:
* 1- create Githop repo
* 2- create EC2 instance with vpc and security group to specific access
* 3- create an Ansible role to install required packages
* 4- change the docker file “dependencies” to be compatible to the repo
* 5- using repo to build image in the docker hub using Jenkins
* 6- build stages “ checkout” to check configuration, build image , test, measure code quality using sonarquabe and analysis, finally Deploy in openshift
* 7- logging and monitoring application using elastic search and flaunted , Kibna using the dashboard
* 8- AWS integration use s3 as the backend and integrates Cloud watch to EC2
* An instance using IAM role and policies

**Troubleshooting guidelines :**

**1- Error in ansible role “using public Key”**

**Enter .ssh/authorized key and edit the public key to the actual public key**

**In managed host**

**2- Error inventory file conflict with the same file in local machine**

**Solution : using /etc/ansible/hosts instead to /etc/hosts**

**Finally, the task ran successfully**

**3- Error “Dependeces in docker hub “**

**Solution install Gradles with all dependencies**

**4-** **ERROR: [1] bootstrap checks failed**

**[1]: the default discovery settings are unsuitable for production use; at least one of [discovery.seed\_hosts, discovery.seed\_providers, cluster.initial\_master\_nodes] must be configured**

**5- ERROR: Elasticsearch did not exit normally - check the logs at /usr/share/elasticsearch/logs/docker-cluster.log**

**Solution :**

**env:**

**- name: discovery.seed\_hosts**

**value: "elasticsearch-0.elasticsearch.logging.svc.cluster.local"**

**Error [6] : pull the image “ : docker pull fluent/fluentd-kubernetes-daemonset:v1.16-debian-elasticsearch8-2**

**Solution :**

**Pull this image : docker pull fluent/fluent-Kubernetes-daemonset:v1.16.3-debian-elasticsearch8-2.1**

**Error[7]: Error credentials in the docker hub in Jenkins using public key**

**aborted**

**Solution: add GPG key ID and enter the config file into the path to Jenkins**

**Error[8]: Error when installing sonarquabe**

**Solution: edit the configuration file to solve the problem**

**Error[9]: error when installing sonarquabe : edit in configuration to work**

**Error[9] build. gradle is not installed sonarquabe edit to install**