Jenkins

1.Install Jenkins with Helm v3
brew install helm

Configure Helm

helm repo add jenkinsci https://charts.jenkins.io
helm repo update

Create a persistent volume

kubectl apply -f jenkins-volume.yaml

reference:https://raw.githubusercontent.com/installing-jenkins-on-kubernetes/jenkins-volume.yaml

Create a service account

```

kubectl apply -f jenkins-sa.yaml

```

reference:https://raw.githubusercontent.com/installing-jenkins-on-kubernetes/jenkins-sa.yam

Install Jenkins
jenkins-values.yaml.

reference:raw.githubusercontent.com/jenkinsci/helm-charts/main/charts/jenkins/values.yaml i

change all serviceType to LoadBalancer

```
# For minikube, set this to NodePort, elsewhere uses LoadBalancer
# Use ClusterIP if your setup includes ingress controller
# -- k8s service type
serviceType: LoadBalancer
```
```

chart=jenkinsci/jenkins
helm install jenkins -n jenkins -f jenkins-values.yaml $chart
```

```
● (base) ll@LantingHou course-project-option-1-Lantinghh % kubectl get pods -n jenkins

NAME          READY   STATUS    RESTARTS        AGE
jenkins-0     2/2     Running   2 (7h36m ago)   21h
```

Get your 'admin' user password by running:
```

jsonpath="{.data.jenkins-admin-password}"
secret=$(kubectl get secret -n jenkins jenkins -o jsonpath=$jsonpath)
echo $(echo $secret | base64 --decode)

```
(base) ll@LantingHou course-project-option-1-Lantinghh % jsonpath="{.data.jenkins-admin-password}"
secret=$(kubectl get secret -n jenkins jenkins -o jsonpath=$jsonpath)
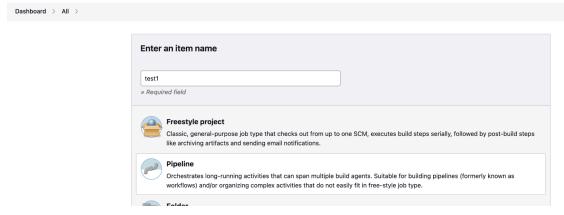echo $(echo $secret | base64 --decode)

hXjJe9ehwRhjP8ONt89SNM
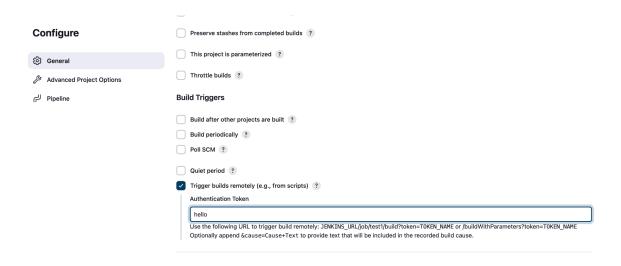```

login

username: admin
password：hXjJe9ehwRhjP8ONt89SNM

Link to SonarQube and GitHub

click new Item

configure as picture
Create your own token , here i use hello

link to Github,In the pipeline part , choose pipeline script from SCM, and choose SCM Git . The repository is https://github.com/Lantinghh/test

Configure

Pipeline

Definition

⚙ General

Pipeline script from SCM   ⌄

🔧 Advanced Project Options

SCM ?

⤵ Pipeline

Git   ⌄

Repositories ?

Repository URL ?   ✕

https://github.com/Lantinghh/test

Credentials ?

admin/******   ⌄

+ Add ⌄

Advanced ⌄

the branch is main

Branches to build ?

Branch Specifier (blank for 'any') ?   ✕

*/main

Add Branch

Apply Configuation

Github part:

Jenkinsfile

creat sonar-project.properties

settings: webHook
in payload part, the IP is Jenkins IP; the token is hello (corresponding with the above we made in Jenkins)

Access		Settings	Recent Deliveries

Access

- ⚘ Collaborators
- 🗩 Moderation options ⌄

Code and automation

- ⅂ Branches
- 🏷 Tags
- 🖃 Rules ⌄
- ▶ Actions ⌄
- 🕸 **Webhooks**
- ▦ Environments
- 🖳 Codespaces
- 🗔 Pages

Security

- ⚙ Code security and analysis
- 🔑 Deploy keys
- ✳ Secrets and variables ⌄

Integrations

- ⊙ GitHub Apps
- ✉ Email notifications
- ↗ Autolink references

We'll send a POST request to the URL below with details of any subscribed events. You can also specify which data format you'd like to receive (JSON, x—www—form—urlencoded, *etc*). More information can be found in our developer documentation.

Payload URL *

http://34.23.252.182:8080/job/test/build?token=hello

Content type

application/x-www-form-urlencoded ⇕

Secret

SSL verification

🔒 By default, we verify SSL certificates when delivering payloads.

● **Enable SSL verification** ○ Disable (not recommended)

Which events would you like to trigger this webhook?

○ Just the push event.
○ Send me **everything**.
● Let me select individual events.

☑ **Active**
We will deliver event details when this hook is triggered.

Update webhook **Delete webhook**

Apply Configuation

Made Tools

🎩 Jenkins

Search (⌘+K) | ? | 👤 Jenkins Admin ⌄ | 🡒 log out

Dashboard > Manage Jenkins

- ＋ New Item
- 👥 People
- 🗄 Build History
- ◎ Project Relationship
- 🖉 Check File Fingerprint
- ⚙ **Manage Jenkins**
- ▢ My Views

Build Queue ⌄

No builds in the queue.

Build Executor Status ⌄

Manage Jenkins

🔍 Search settings |

System Configuration

⚙ **System** Configure global settings and paths.	🔧 **Tools** Configure tools, their locations and automatic installers.	🧩 **Plugins** Add, remove, disable or enable plugins that can extend the functionality of Jenkins.
🖥 **Nodes** Add, remove, control and monitor the various nodes that Jenkins runs jobs on.	👷 **Configuration as Code** Reload your configuration or update configuration source	☁ **Clouds** Add, remove, and configure cloud instances to provision agents on-demand.
🖌 **Appearance** Configure the look and feel of Jenkins		

SonarScanner for MSBuild installations

SonarScanner for MSBuild installations ^   ✎ Edited

Add SonarScanner for MSBuild

☰ **SonarScanner for MSBuild**   ×

Name

SonarScanner

☑ Install automatically ?

☰ **Install from GitHub**   ×

Version

SonarScanner for MSBuild 5.15.1.88158 - .NET Fwk 4.6   ⌄

Add Installer ⌄

Add SonarScanner for MSBuild

SonarQube Scanner installations

SonarQube Scanner installations ^   ✎ Edited

Add SonarQube Scanner

☰ **SonarQube Scanner**   ×

Name

SonarScanner

☑ Install automatically ?

☰ **Install from Maven Central**   ×

Version

SonarQube Scanner 5.0.1.3006   ⌄

Add Installer ⌄

Add SonarQube Scanner

Apply configuration

Build the item we made

Status

Changes

Build Now

Configure

Delete Pipeline

SonarQube

Rename

Pipeline Syntax

Build History

trend ∨

Filter... /

⊘ #9

Apr 4, 2024, 6:10 PM

⊘ #8

Apr 4, 2024, 6:06 PM

⊘ #7

Apr 4, 2024, 5:42 PM

⊘ test

SonarQube Quality Gate

hello Passed

server-side processing: Success

Permalinks

- Last build (#9), 6 hr 36 min ago
- Last stable build (#9), 6 hr 36 min ago
- Last successful build (#9), 6 hr 36 min ago
- Last failed build (#5), 7 hr 10 min ago
- Last unsuccessful build (#6), 7 hr 5 min ago
- Last completed build (#9), 6 hr 36 min ago

SonarQube
1. Installing SonarQube using Helm 3
brew install helm
2.Apply Node Taints
kubectl get nodes

Apply taint to one of the selected nodes
kubectl taint nodes gke-hadoop-cluster-default-pool-2abfa0aa-9cr3
sonarqube=true:NoSchedule

Mark the nodes that apply the taint
kubectl label node gke-hadoop-cluster-default-pool-2abfa0aa-9cr3 sonarqube=true

Modify the SonarQube service type to load balancer:

```
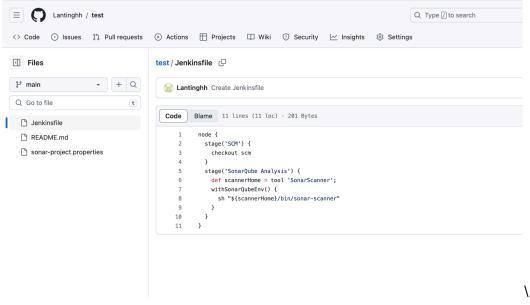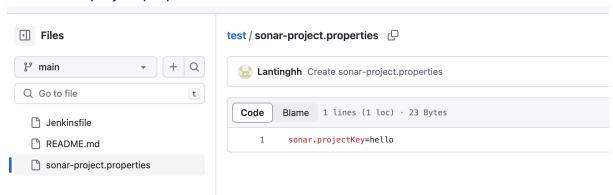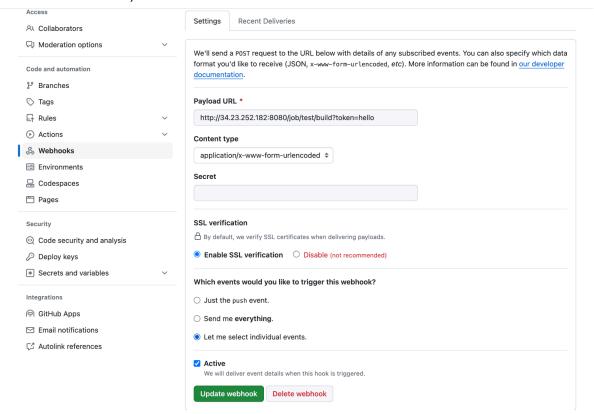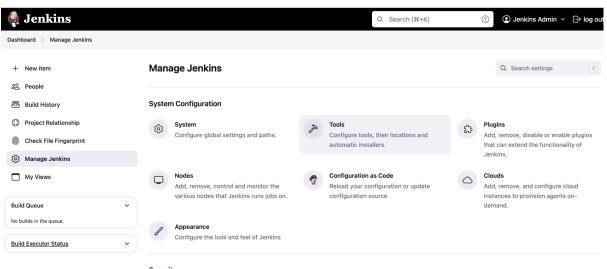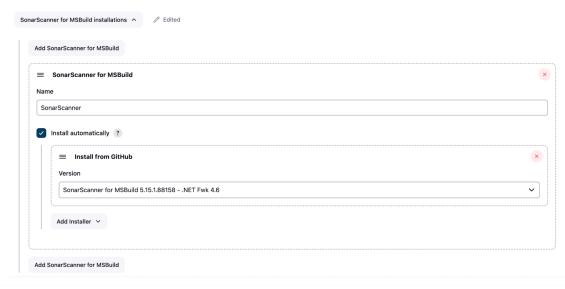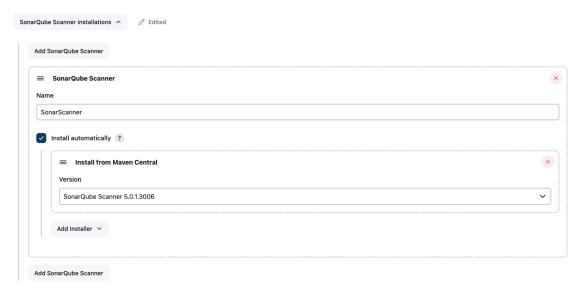service:
  type: LoadBalancer
  externalPort: 9000
  internalPort: 9000
  labels:
  annotations: {}
```

```
● (base) ll@lantinghou api-hadoop7 % kubectl get nodes
NAME                                          STATUS   ROLES    AGE   VERSION
gke-hadoop-cluster-default-pool-2abfa0aa-9cr3   Ready    <none>   14h   v1.27.8-gke.1067004
gke-hadoop-cluster-default-pool-2abfa0aa-g624   Ready    <none>   14h   v1.27.8-gke.1067004
gke-hadoop-cluster-default-pool-2abfa0aa-n6zw   Ready    <none>   14h   v1.27.8-gke.1067004
(base) ll@lantinghou api-hadoop7 % kubectl taint nodes gke-hadoop-cluster-default-pool-2abfa0aa-9cr3 sonarqube=true
:NoSchedule
node/gke-hadoop-cluster-default-pool-2abfa0aa-9cr3 tainted
(base) ll@lantinghou api-hadoop7 % kubectl label node gke-hadoop-cluster-default-pool-2abfa0aa-9cr3 sonarqube=true
node/gke-hadoop-cluster-default-pool-2abfa0aa-9cr3 labeled
(base) ll@lantinghou api-hadoop7 % helm repo add sonarqube https://SonarSource.github.io/helm-chart-sonarqube
helm repo update
kubectl create namespace sonarqube-lts
helm upgrade --install -n sonarqube-lts sonarqube sonarqube/sonarqube-lts
"sonarqube" has been added to your repositories
Hang tight while we grab the latest from your chart repositories...
...Successfully got an update from the "apache-hadoop-helm" chart repository
...Successfully got an update from the "sonarqube" chart repository
...Successfully got an update from the "cloudnativeapp" chart repository
```

3.Install Helm Chart

helm repo add sonarqube https://SonarSource.github.io/helm-chart-sonarqube
helm repo update
kubectl create namespace sonarqube
helm upgrade --install -n sonarqube sonarqube sonarqube/sonarqube -f values.yaml

4.kubectl get external IP

Managed pods

Name	Status	Restarts	Created on ↑
sonarqube-sonarqube-0	✅ Running	0	Apr 3, 2024, 4:03:09 PM

Exposing services ❓

Name ↑	Type	Endpoints
sonarqube-sonarqube	Load balancer	34.139.35.121:9000 ↗

http://34.139.35.121:9000

OVERVIEW   OBSERVABILITY   COST OPTIMIZATION

≡ Filter   (Is system object : False ⊗)   Filter workloads

	Name ↑	Status	Type	Pods	Namespace	Cluster
☐	hadoop-hadoop-hdfs-dn	✅ OK	Stateful Set	2/2	default	hadoop-cluster
☐	hadoop-hadoop-hdfs-nn	✅ OK	Stateful Set	1/1	default	hadoop-cluster
☐	hadoop-hadoop-yarn-nm	✅ OK	Stateful Set	1/1	default	hadoop-cluster
☐	hadoop-hadoop-yarn-rm	✅ OK	Stateful Set	1/1	default	hadoop-cluster
☐	sonarqube-postgresql	✅ OK	Stateful Set	1/1	sonarqube	hadoop-cluster
☐	sonarqube-sonarqube	✅ OK	Stateful Set	1/1	sonarqube	hadoop-cluster

← → C ⚠ Not Secure 34.139.35.121:9000/projects/create   ☆ 🗗 ⬇ 🟣

🗀 a 🗀 useful 🗀 2 🗀 3 🗀 1 🗀 company 🗀 14848-certification   🗀 All Bookmar

sonarqube   Projects   Issues   Rules   Quality Profiles   Quality Gates   Administration   More   🔍   ❓ A

How do you want to create your project?

Do you want to benefit from all of SonarQube's features (like repository import and Pull Request decoration)?
Create your project from your favorite DevOps platform.

First, you need to set up a DevOps platform configuration.

⚙ Import from Azure DevOps	Setup	🪣 Import from Bitbucket Cloud	Setup	🪣 Import from Bitbucket Server	Setup
○ Import from GitHub	Setup	🦊 Import from GitLab	Setup		

Are you just testing or have an advanced use-case? Create a local project.

Create a local project

Reference

https://dev.to/lakkimartin/install-sonarqube-on-kubernetes-aks-49o7