

Copy the Downloads plugins And paste in SonarQube/extensions/plugins

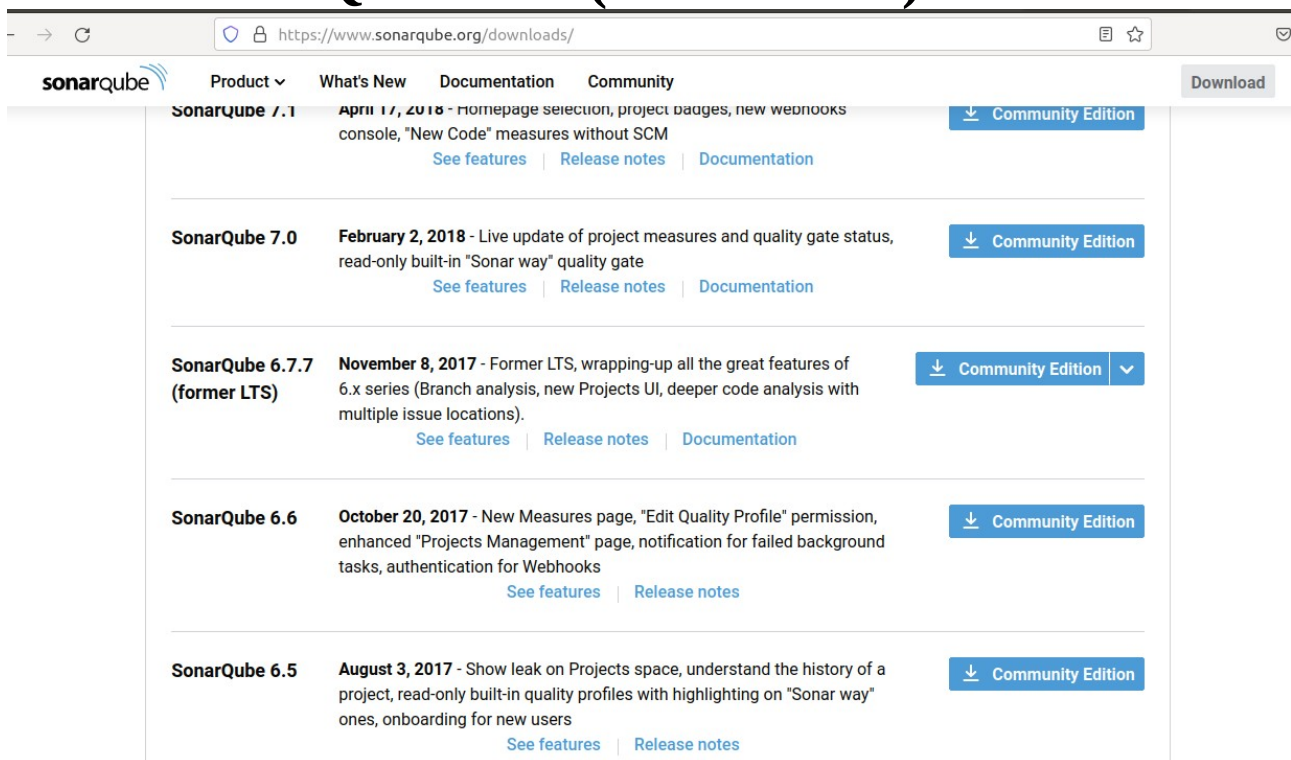
TASK-CI/CD

(SONARQUBE, NEXUS, PUSH IMAGE TO DOCKER-HUB)

Prequisties: SonarQube of version 6.7.7(LTS), Nexus, SonarQube Scanner, Git Hub ,Docker Hub Jenkins

Download Zip file (SonarQube) using below link :
<https://docs.sonarqube.org/latest/analysis/scan/sonarscanner/>

Select SonarQube 6.7.7(former LTS)



The screenshot shows the SonarQube download page with the following content:

Product	What's New	Documentation	Community	Download
SonarQube 7.1	April 17, 2018 - Homepage selection, project badges, new webhooks console, "New Code" measures without SCM	See features Release notes Documentation		Community Edition
SonarQube 7.0	February 2, 2018 - Live update of project measures and quality gate status, read-only built-in "Sonar way" quality gate	See features Release notes Documentation		Community Edition
SonarQube 6.7.7 (former LTS)	November 8, 2017 - Former LTS, wrapping-up all the great features of 6.x series (Branch analysis, new Projects UI, deeper code analysis with multiple issue locations).	See features Release notes Documentation		Community Edition ▼
SonarQube 6.6	October 20, 2017 - New Measures page, "Edit Quality Profile" permission, enhanced "Projects Management" page, notification for failed background tasks, authentication for Webhooks	See features Release notes		Community Edition
SonarQube 6.5	August 3, 2017 - Show leak on Projects space, understand the history of a project, read-only built-in quality profiles with highlighting on "Sonar way" ones, onboarding for new users	See features Release notes		Community Edition

Installing SonarQube:

To Access .Bar files

we need additional Plugins of ESQL and MSGFLOW plugin

To Download these Plugins

For ESQL go to <https://www.sonarplugins.com/esql>

SonarQube™ Plugins Index[INDEX](#)[CATEGORIES](#)[ABOUT](#)[CONTACT](#)

ESQL

★

LANGUAGESAPACHE LICENSE, VERSION 2.0


Sonar plugin to analyze ESQL-sourcecode of IBM Integration Bus projects.
This open source plugin can be used to analyze the ESQL-sourcecode of IBM Websphere Message Broker / IBM Integration Bus projects.

[Go to plugin homepage](#)

Organization: **EXXETA** Last update: **2018-12-08**

Developers: **Thomas Pohl**

Compatibility: **6.7-7.3**

 version 2.3.5

Bugfix release

For MSGFLOW

go to <https://www.sonarplugins.com/msgflow>

SonarQube™ Plugins Index[INDEX](#)[CATEGORIES](#)[ABOUT](#)[CONTACT](#)

MESSAGE FLOW

★

LANGUAGESAPACHE LICENSE, VERSION 2.0

Sonar plugin to analyze messageflows of IBM Integration Bus projects.


The SonarQube Message Flow Plugin is a tool for static code analysis of message flows / integration flows developed for the IBM Websphere Message Broker / IBM Integration Bus. The plugin analyzes msgflow files regarding configuration and wiring of message flow nodes for the IBM Websphere Message Broker / IBM Integration Bus.

[Go to plugin homepage](#)

Organization: **exxeta** Last update: **2018-03-14**

Developers: **Thomas Pohl, Hendrik Scholz**

Compatibility: **6.7**

 version 1.1.3

Copy the Downloaded plugins And paste in SonarQube/extensions/plugins

```
root@bandaru-VirtualBox:/home/bandaru/Downloads# ls
apache-tomcat-9.0.59  esql-plugin-2.3.5.jar  sample.bar  sonar-scanner-4.7.0.2747-linux
apache-tomcat-9.0.59.tar.gz  jenkins.war  sonar-msgflow-plugin-1.1.3.jar  sonar-scanner-cli-4.7.0.2747-linux.zip
Dev  nexus-3.37.3-02  sonarqube-6.7.7  sonatype-work
docker  nexus-3.37.3-02-unix.tar.gz  sonarqube-6.7.7.zip  VBoxGuestAdditions_6.0.4.iso
root@bandaru-VirtualBox:/home/bandaru/Downloads# cd sonarqube-6.7.7
root@bandaru-VirtualBox:/home/bandaru/Downloads/sonarqube-6.7.7# ls
bin  conf  COPYING  data  elasticsearch  extensions  lib  logs  temp  web
root@bandaru-VirtualBox:/home/bandaru/Downloads/sonarqube-6.7.7# cd extensions/
root@bandaru-VirtualBox:/home/bandaru/Downloads/sonarqube-6.7.7/extensions# ls
downloads  jdbc-driver  plugins
root@bandaru-VirtualBox:/home/bandaru/Downloads/sonarqube-6.7.7/extensions# cd plugins/
root@bandaru-VirtualBox:/home/bandaru/Downloads/sonarqube-6.7.7/extensions/plugins# ls
esql-plugin-2.3.5.jar  sonar-javascript-plugin-3.2.0.5506.jar  sonar-scm-svn-plugin-1.6.0.860.jar
README.txt  sonar-msgflow-plugin-1.1.3.jar  sonar-typescript-plugin-1.1.0.1079.jar
sonar-csharp-plugin-6.5.0.3766.jar  sonar-php-plugin-2.11.0.2485.jar  sonar-xml-plugin-1.4.3.1027.jar
sonar-flex-plugin-2.3.jar  sonar-python-plugin-1.8.0.1496.jar
sonar-java-plugin-4.15.0.12310.jar  sonar-scm-git-plugin-1.3.0.869.jar
root@bandaru-VirtualBox:/home/bandaru/Downloads/sonarqube-6.7.7/extensions/plugins#
```

next Installing SonarQube:

SonarQube can be installed only in USER only not as a ROOT user

```
bandaru@bandaru-VirtualBox: ~/Downloads/sonarqube-6.7.7
bandaru@bandaru-VirtualBox: ~/Downloads/sonarqube-6.7.7$ ls
apache-tomcat-9.0.59  esql-plugin-2.3.5.jar  sample.bar  sonar-scanner-4.7.0.2747-linux
apache-tomcat-9.0.59.tar.gz  jenkins.war  sonar-msgflow-plugin-1.1.3.jar  sonar-scanner-cli-4.7.0.2747-linux.zip
Dev  nexus-3.37.3-02  sonarqube-6.7.7  sonatype-work
docker  nexus-3.37.3-02-unix.tar.gz  sonarqube-6.7.7.zip  VBoxGuestAdditions_6.0.4.iso
bandaru@bandaru-VirtualBox: ~/Downloads/sonarqube-6.7.7$ unzip sonarqube-6.7.7.zip
bandaru@bandaru-VirtualBox: ~/Downloads/sonarqube-6.7.7$ ls
bin  conf  COPYING  data  elasticsearch  extensions  lib  logs  temp  web
bandaru@bandaru-VirtualBox: ~/Downloads/sonarqube-6.7.7$ cd bin/
bandaru@bandaru-VirtualBox: ~/Downloads/sonarqube-6.7.7/bin$ ls
jsw-license  linux-x86-32  linux-x86-64  macosx-universal-64  windows-x86-32  windows-x86-64
bandaru@bandaru-VirtualBox: ~/Downloads/sonarqube-6.7.7/bin$ cd linux-x86-64/
bandaru@bandaru-VirtualBox: ~/Downloads/sonarqube-6.7.7/bin/linux-x86-64$ ls
lib  SonarQube.pid  sonar.sh  wrapper
bandaru@bandaru-VirtualBox: ~/Downloads/sonarqube-6.7.7/bin/linux-x86-64$ ./sonar.sh console
```

Installing SonarQube:

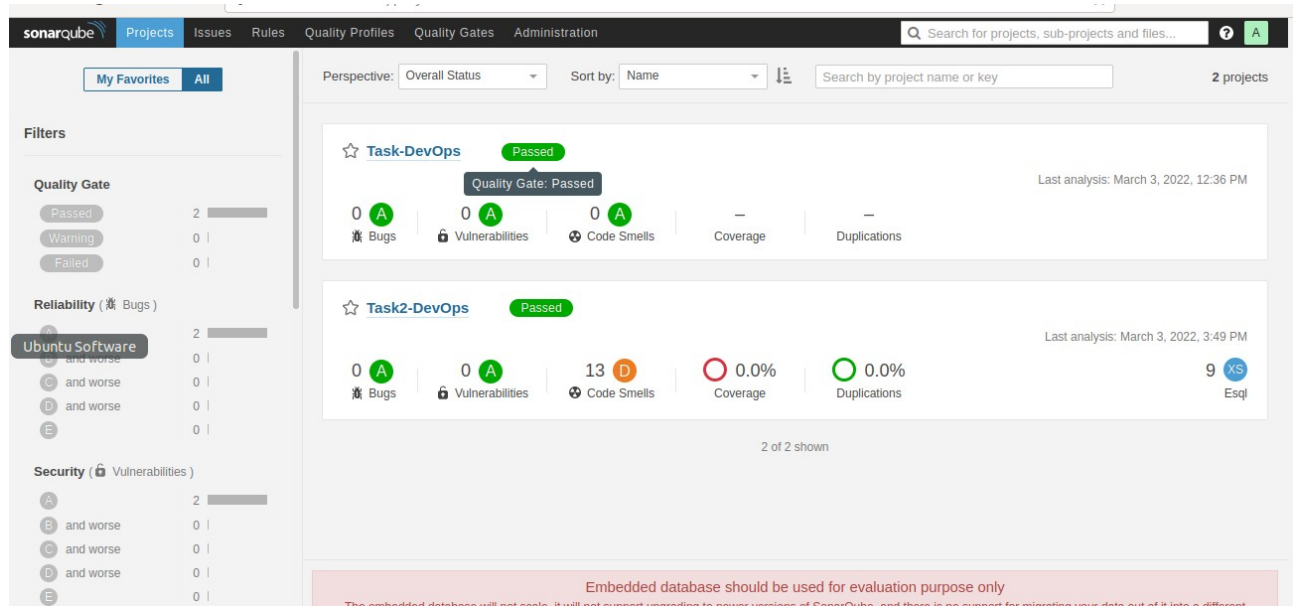
```
bandaru@bandaru-VirtualBox: ~/Downloads/sonarqube-6.7.7/bin/linux-x86-64$ ./sonar.sh console
Running SonarQube...
Removed stale pid file: /home/bandaru/Downloads/sonarqube-6.7.7/bin/linux-x86-64/./SonarQube.pid
wrapper | --> Wrapper Started as Console
wrapper | Launching a JVM...
jvm 1 | Wrapper (Version 3.2.3) http://wrapper.tanukisoftware.org
jvm 1 | Copyright 1999-2006 Tanuki Software, Inc. All Rights Reserved.
jvm 1 | 2022.03.02 15:40:27 INFO app[[o.s.a.AppFileSystem]] Cleaning or creating temp directory /home/bandaru/Downloads/sonarqube-6.7.7/temp
jvm 1 | 2022.03.02 15:40:28 INFO app[[o.s.a.es.Elasticsearch]] Elasticsearch listening on /127.0.0.1:9001
jvm 1 | 2022.03.02 15:40:28 INFO app[[o.s.a.p.ProcessLauncherImpl]] Launch process[[key='es', ipcIndex=1, logFilenamePrefix=es]] from [/home/bandaru/Downloads/sonarqube-6.7.7/elasticsearch]: /home/bandaru/Downloads/sonarqube-6.7.7/elasticsearch/bin/elasticsearch -Epath.conf=/home/bandaru/Downloads/sonarqube-6.7.7/temp/conf/es
jvm 1 | 2022.03.02 15:40:28 INFO app[[o.s.a.SchedulerImpl]] Waiting for Elasticsearch to be up and running
jvm 1 | OpenJDK 64-Bit Server VM warning: Option UseConcMarkSweepGC was deprecated in version 9.0 and will likely be removed in a future release.
jvm 1 | 2022.03.02 15:40:29 INFO app[[o.e.p.PluginsService]] no modules loaded
jvm 1 | 2022.03.02 15:40:29 INFO app[[o.e.p.PluginsService]] loaded plugin [org.elasticsearch.transport.Netty4Plugin]
jvm 1 | WARNING: An illegal reflective access operation has occurred
jvm 1 | WARNING: Illegal reflective access by io.netty.util.internal.ReflectionUtil (file:/home/bandaru/Downloads/sonarqube-6.7.7/lib/common-netty-common-4.1.13.Final.jar) to constructor java.nio.DirectByteBuffer(long,int)
jvm 1 | WARNING: Please consider reporting this to the maintainers of io.netty.util.internal.ReflectionUtil
jvm 1 | WARNING: Use --illegal-access=warn to enable warnings of further illegal reflective access operations
jvm 1 | WARNING: All illegal access operations will be denied in a future release
jvm 1 | 2022.03.02 15:41:04 INFO app[[o.s.a.SchedulerImpl]] Process[es] is up
```

SonarQube by Default run at port no. 9000

To see SonarQube Interface
Migrate to Browser and Type <http://localhost:9000>

Login Credentials by default are

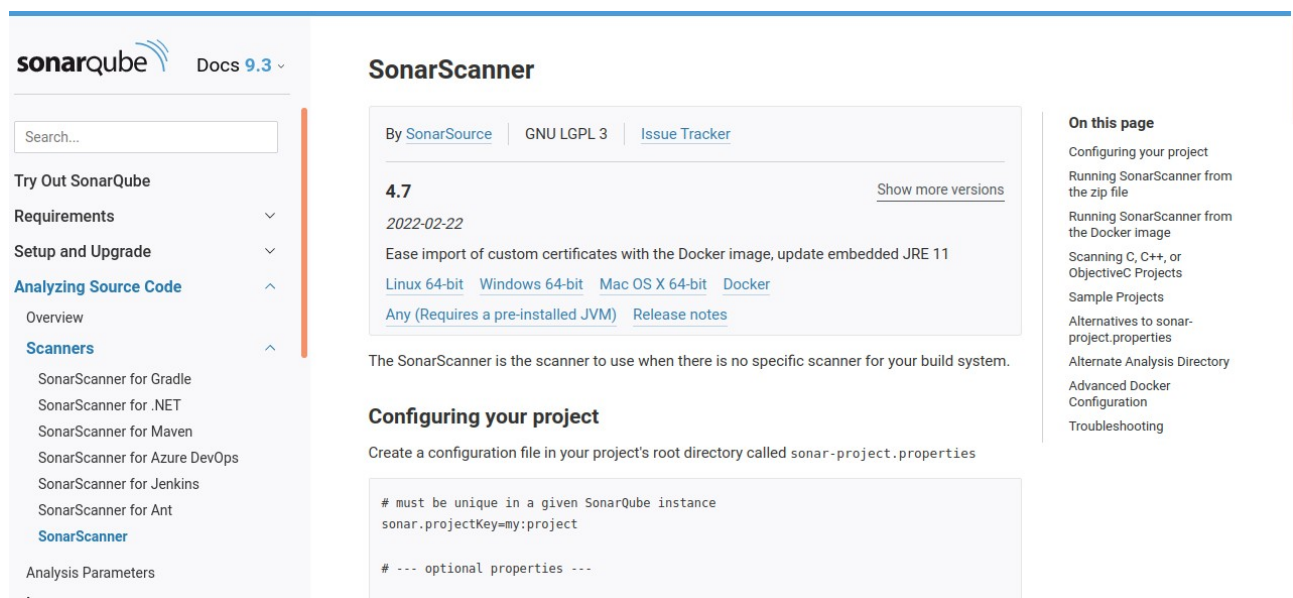
Username: admin
Password: admin



The screenshot displays the SonarQube web interface. The top navigation bar includes links for Projects, Issues, Rules, Quality Profiles, Quality Gates, and Administration. A search bar is present on the right. The main content area shows a list of projects. Two projects are visible: 'Task-DevOps' and 'Task2-DevOps'. Both projects show a 'Passed' status for their Quality Gate. The 'Task-DevOps' project has 0 Bugs, 0 Vulnerabilities, 0 Code Smells, and 0 Duplications. The 'Task2-DevOps' project has 0 Bugs, 0 Vulnerabilities, 13 Code Smells, 0.0% Coverage, and 0.0% Duplications. The interface also includes filters for Quality Gate (Passed, Warning, Failed) and Reliability (A, B, C, D, E). A red banner at the bottom states: 'Embedded database should be used for evaluation purpose only. The embedded database will not scale. It will not support upgrading to newer versions of SonarQube, and there is no support for migrating your data out of it into a different database.'

Download Zip file (SonarScanner) using below link:
<https://www.sonarqube.org/downloads/>

Select Linux-64-bit



The screenshot shows the SonarScanner download page on the SonarQube website. The page title is 'SonarScanner'. It lists the version '4.7' and the date '2022-02-22'. The download links are: Linux 64-bit, Windows 64-bit, Mac OS X 64-bit, Docker, and Any (Requires a pre-installed JVM). The page also includes a section for 'Configuring your project' with a sample configuration file snippet:

```
# must be unique in a given SonarQube instance
sonar.projectKey=my:project

# --- optional properties ---
```


Installing SonarQube Scanner:

```
bandaru@bandaru-VirtualBox: ~/Downloads/sonarqube-6.7.7$ cd ..
bandaru@bandaru-VirtualBox: ~/Downloads$ ls
apache-tomcat-9.0.59      esql-plugin-2.3.5.jar      sample.bar      sonar-scanner-4.7.0.2747-linux
apache-tomcat-9.0.59.tar.gz  jenkins.war      sonar-msgflow-plugin-1.1.3.jar  sonar-scanner-cli-4.7.0.2747-linux.zip
Dev                      nexus-3.37.3-02      sonarqube-6.7.7      sonatype-work
docker                  nexus-3.37.3-02-unix.tar.gz  sonarqube-6.7.7.zip  VBoxGuestAdditions_6.0.4.iso
bandaru@bandaru-VirtualBox: ~/Downloads$ unzip sonar-scanner-cli-4.7.0.2747-linux.zip
```

```
bandaru@bandaru-VirtualBox: ~/Downloads$ cd sonar-scanner-4.7.0.2747-linux/
bandaru@bandaru-VirtualBox: ~/Downloads/sonar-scanner-4.7.0.2747-linux$ ls
bin  conf  jre  lib
bandaru@bandaru-VirtualBox: ~/Downloads/sonar-scanner-4.7.0.2747-linux$ cd conf/
bandaru@bandaru-VirtualBox: ~/Downloads/sonar-scanner-4.7.0.2747-linux/conf$ ls
sonar-scanner.properties
bandaru@bandaru-VirtualBox: ~/Downloads/sonar-scanner-4.7.0.2747-linux/conf$ vim
sonar-scanner.properties      .sonar-scanner.properties.swp
bandaru@bandaru-VirtualBox: ~/Downloads/sonar-scanner-4.7.0.2747-linux/conf$ vim sonar-scanner.properties
```

Uncomment the line sonar.host.url=<http://localhost:9000>

```
bandaru@bandaru-VirtualBox: ~/Downloads/sonar-scanner-4.7.0.2747-linux/conf$ vim sonar-scanner.properties
#Configure here general information about the environment, such as SonarQube server connection details for example
#No information about specific project should appear here

#----- Default SonarQube server
sonar.host.url=http://localhost:9000

#----- Default source code encoding
#sonar.sourceEncoding=UTF-8
```

Download Tar file (Nexus) using below link:

<https://help.sonatype.com/repomanager3/product-information/download>

Select Unix Archive

Download

Download Archives - Repository Manager 3

Release Notes

System Requirements

System Requirements for H2 and PostgreSQL Databases

Repository Manager Pro Features

Repository Manager Feature Matrix

Planning Your Implementation

Installation and Upgrades

Nexus Repository Administration

Using Nexus Repository

Integrations

Nexus Repository OSS is distributed with Sencha Ext JS pursuant to a FLOSS Exception agreed upon between Sonatype, Inc. and Sencha Inc. Sencha Ext JS is licensed under GPL v3 and cannot be redistributed as part of a closed source work.

Distributions for Nexus Repository 3 are available here for the 64-bit versions for Apple macOS, Microsoft Windows and Unix/Linux. They contain all necessary resources to install and run the repository manager.

The download is used for both Nexus Repository PRO and OSS.

See [Installing and Updating Licenses](#) for information on getting your OSS version to PRO with your professional license.

Download the Latest Version

Download **Nexus Repository 3.38.0** for your respective operating system:

Operating System	Link for Download
Unix archive	https://download.sonatype.com/nexus/3/nexus-3.38.0-01-unix.tar.gz (ASC , MD5 , SHA1)
Windows archive	https://download.sonatype.com/nexus/3/nexus-3.38.0-01-win64.zip (ASC , MD5 , SHA1)
OSX archive	https://download.sonatype.com/nexus/3/nexus-3.38.0-01-mac.tgz (ASC , MD5 , SHA1)

If you are performing a new installation, consult [Installation and Upgrades](#) and [System Requirements](#) for further information about next steps.

Installing Nexus :

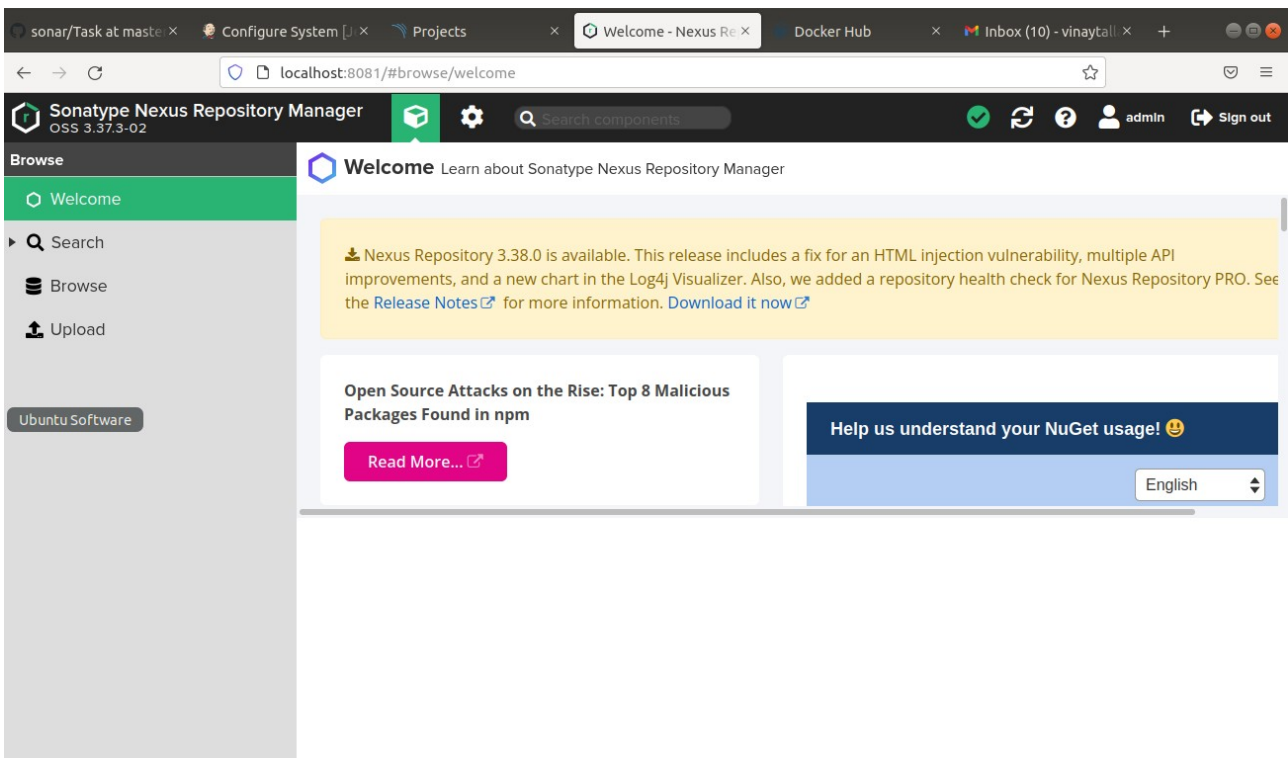
```
root@bandaru-VirtualBox:/home/bandaru/Downloads# ls
apache-tomcat-9.0.59  esql-plugin-2.3.5.jar  sample.bar  sonar-scanner-4.7.0.2747-linux
dev                  nexus-3.37.3-02       sonar-msgflow-plugin-1.1.3.jar  sonar-scanner-cli-4.7.0.2747-linux.zip
docker               nexus-3.37.3-02-unix.tar.gz  sonarqube-6.7.7              sonatype-work
root@bandaru-VirtualBox:/home/bandaru/Downloads# tar -xvzf nexus-3.37.3-02-unix.tar.gz
```

```
root@bandaru-VirtualBox:/home/bandaru/Downloads/nexus-3.37.3-02/bin# ./nexus_run
root@bandaru-VirtualBox:/home/bandaru/Downloads# ls
apache-tomcat-9.0.59  esql-plugin-2.3.5.jar  sample.bar  sonar-scanner-4.7.0.2747-linux
dev                  nexus-3.37.3-02       sonar-msgflow-plugin-1.1.3.jar  sonar-scanner-cli-4.7.0.2747-linux.zip
docker               nexus-3.37.3-02-unix.tar.gz  sonarqube-6.7.7              sonatype-work
root@bandaru-VirtualBox:/home/bandaru/Downloads/nexus-3.37.3-02# cd nexus-3.37.3-02
root@bandaru-VirtualBox:/home/bandaru/Downloads/nexus-3.37.3-02# ls
bin  deploy  etc  lib  NOTICE.txt  OSS-LICENSE.txt  PRO-LICENSE.txt  public  replicator  system
root@bandaru-VirtualBox:/home/bandaru/Downloads/nexus-3.37.3-02/bin# cd bin/
root@bandaru-VirtualBox:/home/bandaru/Downloads/nexus-3.37.3-02/bin# ls
contrib  nexus  nexus.rc  nexus.vmoptions
root@bandaru-VirtualBox:/home/bandaru/Downloads/nexus-3.37.3-02/bin# ./nexus run
and System.err PrintStreams with SLF4JPrintStreams
2022-03-02 15:41:19,139+0530 INFO [FelixStartLevel] *SYSTEM uk.org.lidalia.sysoutslf4j.context.SysOutOverSLF4J - Redirected System.out and Sys
tem.err to SLF4J for this context
2022-03-02 15:41:19,172+0530 INFO [FelixStartLevel] *SYSTEM org.sonatype.nexus.bootstrap.ConfigurationBuilder - Properties:
2022-03-02 15:41:19,173+0530 INFO [FelixStartLevel] *SYSTEM org.sonatype.nexus.bootstrap.ConfigurationBuilder - application-host='0.0.0.0'
2022-03-02 15:41:19,173+0530 INFO [FelixStartLevel] *SYSTEM org.sonatype.nexus.bootstrap.ConfigurationBuilder - application-port='8081'
```

By default Nexus run at port no. 8081

To see Nexus Interface migrate to browser and Type: <http://localhost:8081>

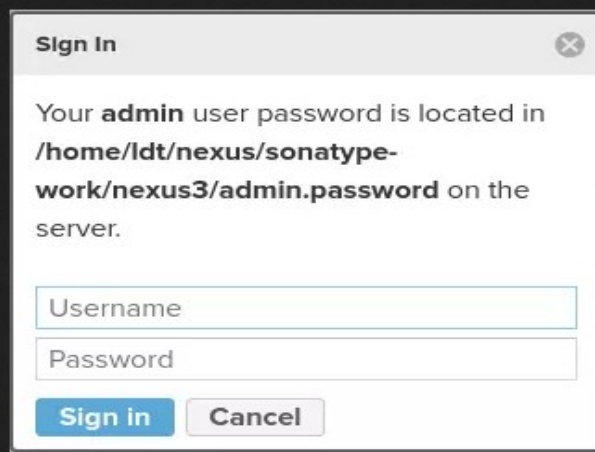
Nexus Interface



To login:

Username: admin

**password is obtained by from the path
copy the path from the login interface
and obtain the password using CAT the path
in Terminal**



Sign In ✕

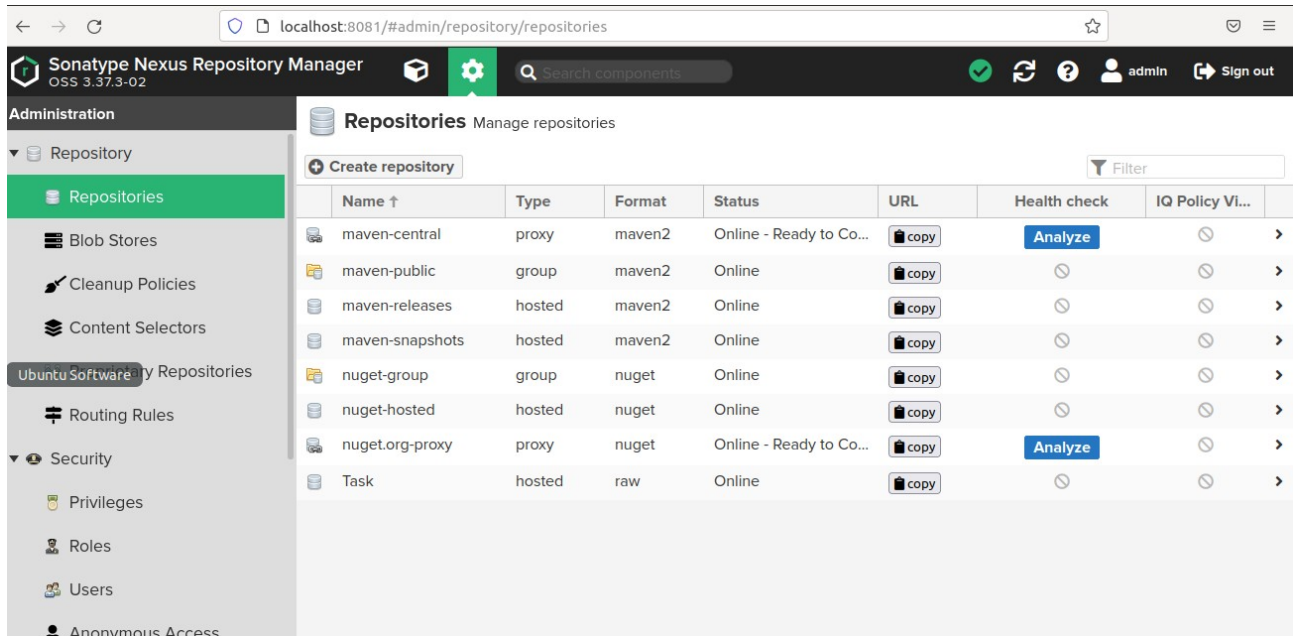
Your **admin** user password is located in
**/home/ldt/nexus/sonatype-
work/nexus3/admin.password** on the
server.

Sign in **Cancel**

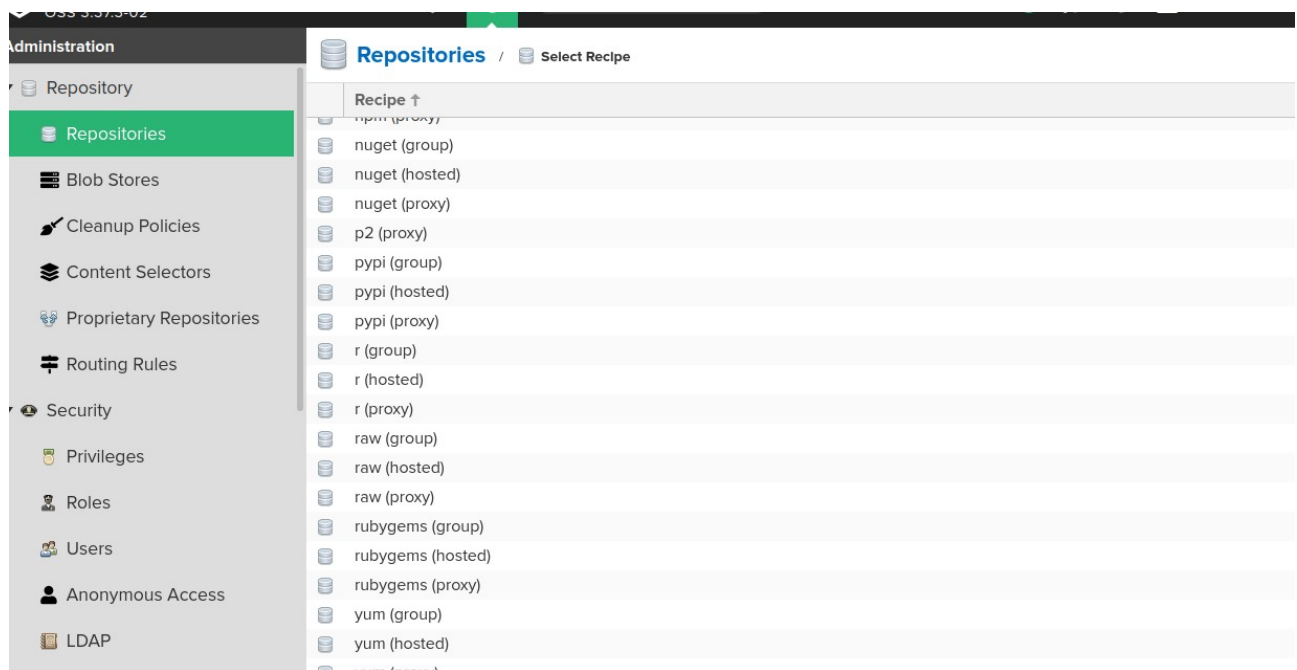
After signing in

Go to settings

select Create Repository



Select Raw(hosted)



Provide name of Repository and Save the Repository

Sonatype Nexus Repository Manager
OSS 3.37.3-02

Search components

adminSign out

Administration

- Repository
 - Repositories**
 - Blob Stores
 - Cleanup Policies
 - Content Selectors
 - Ubuntu Software Repositories
 - Routing Rules
- Security
 - Privileges
 - Roles
 - Users
 - Anonymous Access
 - LDAP

Repositories / Select Recipe / Create Repository: raw (hosted)

Name:
A unique identifier for this repository

This field is required

Online:
☒ If checked, the repository accepts incoming requests

Raw

Content Disposition:
Add Content-Disposition header as 'Attachment' to disable some content from being inline in a browser.

Attachment

Storage

Blob store:
Blob store used to store repository contents

default

Strict Content Type Validation:
☐ Validate that all content uploaded to this repository is of a MIME type appropriate for the repository format

Hosted

Deployment policy:
Controls if deployments of and updates to artifacts are allowed

1.Create Two Jobs of Type Pipeline and FreeStyle

Jenkins

Search

jenkinslog out

Dashboard

New Item

People

Build History

Project Relationship

Check File Fingerprint

Manage Jenkins

My Views

Lockable Resources

New View

Build Queue

No builds in the queue.

Build Executor Status

All

S	W	Name	Last Success	Last Failure	Last Duration
✓	🔗	bar-pipeline	14 min - #43	1 hr 10 min - #41	2 min 9 sec
✓	⚙️	sonar-freestyle	14 min - #7	N/A	21 sec

Icon: S M L Icon legend Atom feed for all Atom feed for failures Atom feed for just latest builds

Download the SonarQube Scanner plugin under manage plugins

UpdatesAvailableInstalledAdvanced

Enabled	Name	Version	Previously installed version	Uninstall
<input checked="" type="checkbox"/>	Caffeine API Plugin Caffeine api plugin for use by other Jenkins plugins.	2.9.2-29.v717aac953ff3		Uninstall
<input checked="" type="checkbox"/>	Credentials Plugin This plugin allows you to store credentials in Jenkins.	1074.v60e6c29b_b_44b_		Uninstall
<input checked="" type="checkbox"/>	Plain Credentials Plugin Allows use of plain strings and files as credentials.	1.8		Uninstall
<input checked="" type="checkbox"/>	SonarQube Scanner for Jenkins This plugin allows an easy integration of SonarQube , the open source platform for Continuous Inspection of code quality.	2.14		Uninstall

REST APIJenkins 2.319.3

2. Setup SonarQube servers in Configure System(Jenkins)

SonarQube servers

☐ **Environment variables** Enable injection of SonarQube server configuration as build environment variables
If checked, job administrators will be able to inject a SonarQube server configuration as environment variables in the build.

SonarQube installations

Name

Server URL

Default is http://localhost:9000

Server authentication token

SonarQube authentication token. Mandatory when anonymous access is disabled.

List of SonarQube installations

3. Set up SonarQube Scanner Configuration in Global Tool Configuration(Jenkins):

uncheck the install automatically option

Add sonar scanner home directory or installation path

List of SonarScanner for MSBuild installations on this system

SonarQube Scanner

SonarQube Scanner installations

[Add SonarQube Scanner](#)

SonarQube Scanner

Name

SONAR_RUNNER_HOME

☐ Install automatically [?](#)

[Delete SonarQube Scanner](#)

[Add SonarQube Scanner](#)

List of SonarQube Scanner installations on this system

Next Push Application To GitHub:

copy all applications to a separate Directory and make sure Directory contains only Applications which you have copied to the Directory.

push the entire Directory containing Applications

suggestion to push entire Directory:

command : git add directoryname/

providing “ / ” copies all the files inside the Directory to staging Area

VinayTalla20 / sonarPublic

PinUnwatch1

<> CodeIssuesPull requestsActionsProjectsWikiSecurityInsightsSettings

master1 branch0 tags

Go to fileAdd fileCode

VinayTalla20

Committing Applicationsa7b1a4f yesterday1 commit

Task

Committing Applicationsyesterday

Help people interested in this repository understand your project by adding a README.

Add a README

About

For bar crea

0 stars1 watching0 forks

Releases

No releases publishedCreate a new release

Packages

Search or jump to...Pull requestsIssuesMarketplaceExplore

PinUnwatch1Fork0Star0

<> CodeIssuesPull requestsActionsProjectsWikiSecurityInsightsSettings

mastersonar / Task /

Go to fileAdd file...

VinayTalla20

Committing Applicationsa7b1a4f yesterdayHistory

..		
.project	Committing Applications	yesterday
app.msgflow	Committing Applications	yesterday
app_Compute.esql	Committing Applications	yesterday
application.descriptor	Committing Applications	yesterday

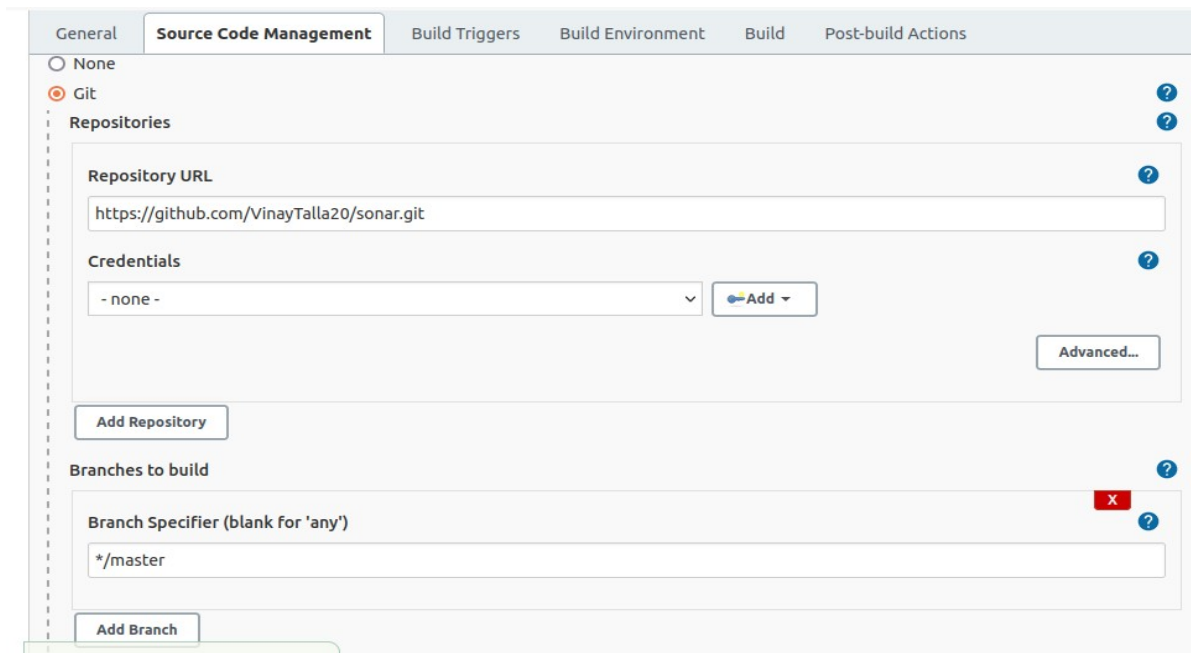
© 2022 GitHub, Inc.

TermsPrivacySecurityStatusDocsContact GitHubPricingAPITrainingBlogAbout

Next Deploying Application in SonarQube for QA

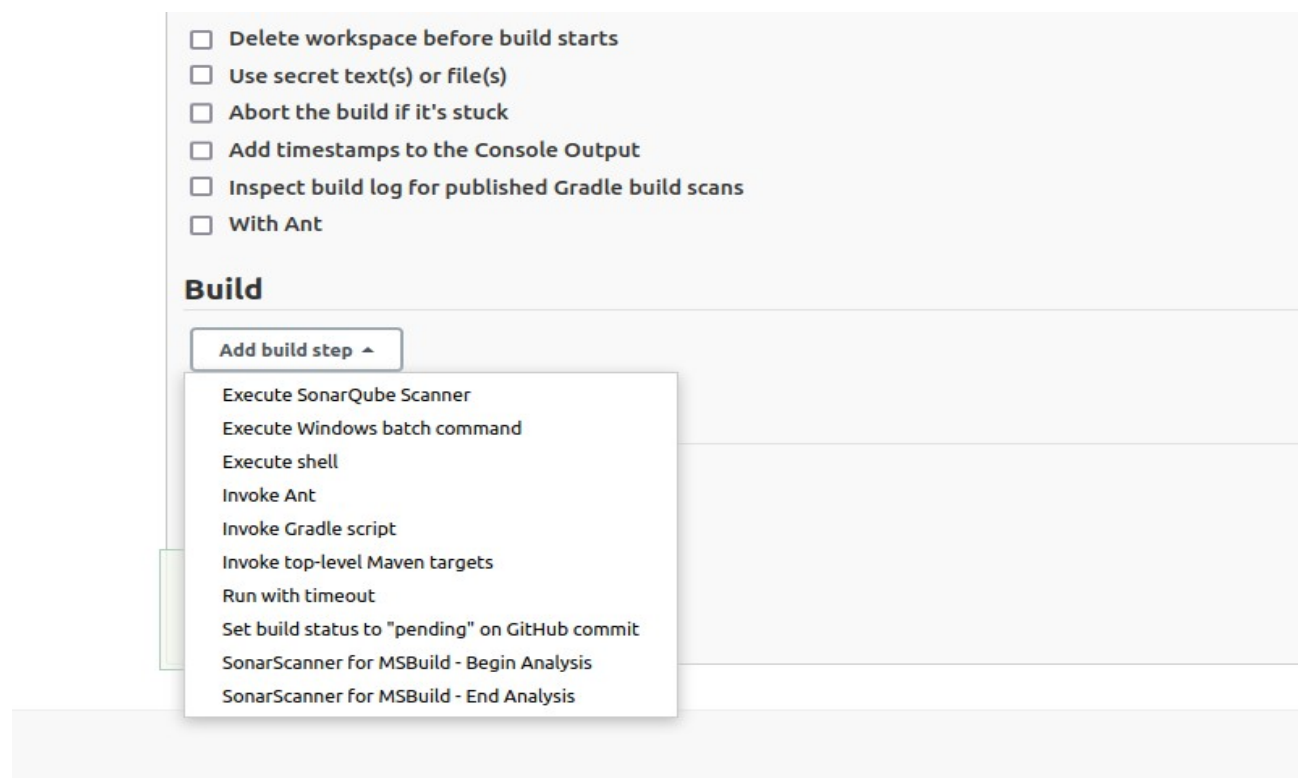
In Free-Style Project next Under Source Code Management

provide Github url and branch name containing the Applications



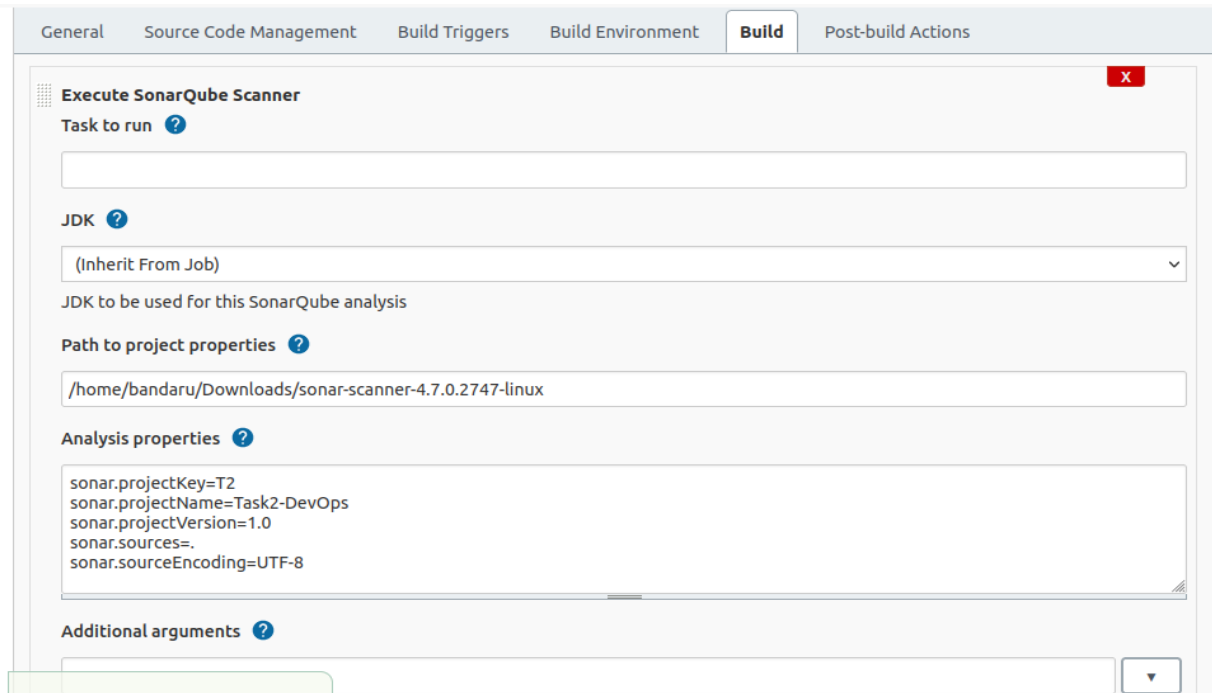
The screenshot shows the 'Source Code Management' tab in the SonarQube configuration interface. The 'Git' option is selected under 'None' or 'Git'. The 'Repository URL' is set to 'https://github.com/VinayTalla20/sonar.git'. The 'Credentials' dropdown is set to '- none -'. The 'Branches to build' section shows a 'Branch Specifier (blank for 'any')' set to '*/master'. There are buttons for 'Add Repository' and 'Add Branch'. An 'Advanced...' button is also present.

select “Execute SonarQube Scanner” under Add Build Step



The screenshot shows the 'Build' section of the SonarQube configuration interface. A dropdown menu is open under the 'Add build step' button, listing various build steps. The 'Execute SonarQube Scanner' option is highlighted. Other options include 'Delete workspace before build starts', 'Use secret text(s) or file(s)', 'Abort the build if it's stuck', 'Add timestamps to the Console Output', 'Inspect build log for published Gradle build scans', 'With Ant', 'Execute Windows batch command', 'Execute shell', 'Invoke Ant', 'Invoke Gradle script', 'Invoke top-level Maven targets', 'Run with timeout', 'Set build status to "pending" on GitHub commit', 'SonarScanner for MSBuild - Begin Analysis', and 'SonarScanner for MSBuild - End Analysis'.

Provide the Home Directory of SonarQube Scanner and Analysis properties as same as below

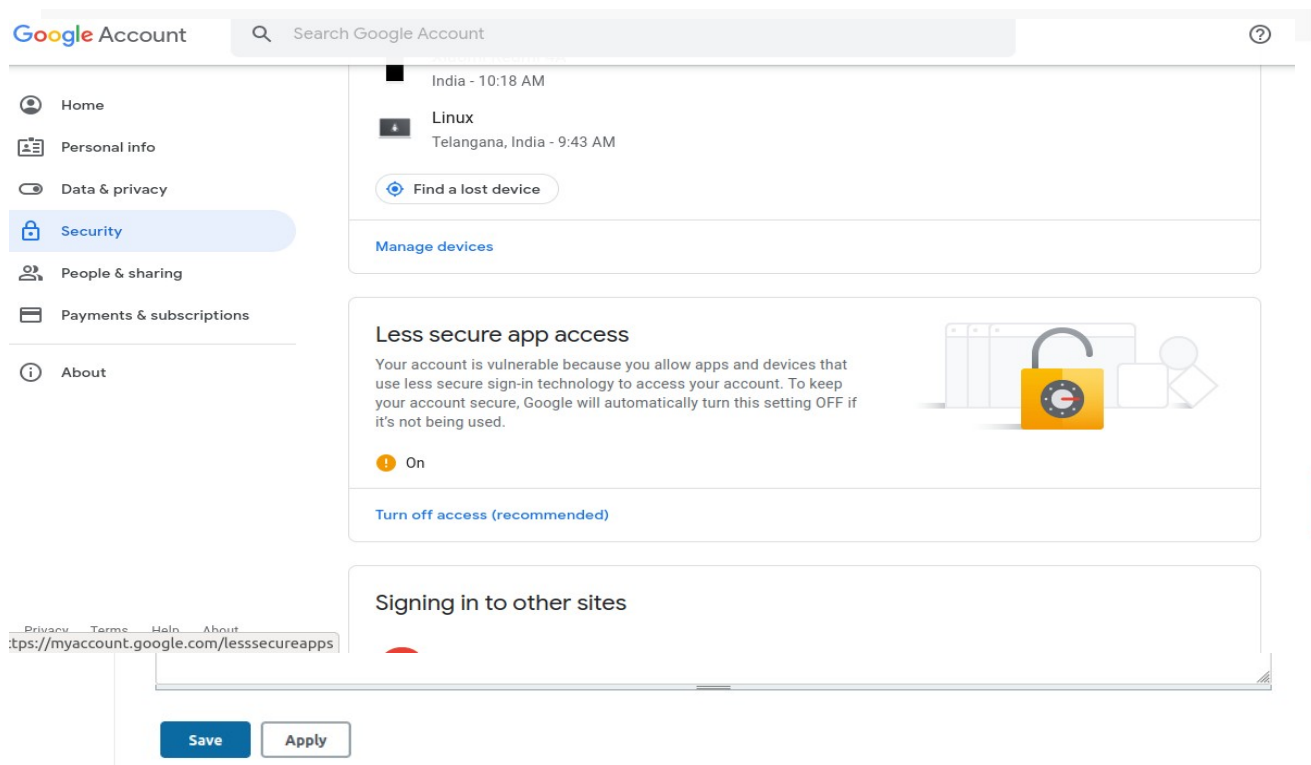


The screenshot shows the Jenkins configuration page for the 'Execute SonarQube Scanner' task. The 'Build' tab is selected. The configuration includes a 'Task to run' field, a 'JDK' dropdown menu set to '(Inherit From Job)', a 'Path to project properties' field set to '/home/bandaru/Downloads/sonar-scanner-4.7.0.2747-linux', and an 'Analysis properties' text area containing the following properties: sonar.projectKey=T2, sonar.projectName=Task2-DevOps, sonar.projectVersion=1.0, sonar.sources=, and sonar.sourceEncoding=UTF-8. There is also an 'Additional arguments' field at the bottom.

E-mail configuration

**To go Configure System in Manager Jenkins Section
Provide Credentials of Gmail Account**

Turn on less Secure App Access in Security settings in your Gmail




The screenshot shows the Google Account Security settings page. The 'Security' tab is selected in the left sidebar. The main content area shows the 'Less secure app access' section, which is currently set to 'On'. A message states: 'Your account is vulnerable because you allow apps and devices that use less secure sign-in technology to access your account. To keep your account secure, Google will automatically turn this setting OFF if it's not being used.' Below this, there is a link to 'Turn off access (recommended)'. The 'Signing in to other sites' section is partially visible at the bottom. At the bottom of the page, there are 'Save' and 'Apply' buttons.

E-mail configuration in Configure System

Select Added Credentials in Credentials Section

and Configure below Details in “**Extended E-mail Notification**”


Shell executable 

Extended E-mail Notification


SMTP server

smtp.gmail.com

SMTP Port

465 

Credentials

vinaytalla20.eidiko@gmail.com/***** (gmail credentials of mail(Eidiko)) 

☒ Use SSL


☐ Use TLS

Advanced Email Properties

Save Apply

Next E-mail notification


select **Advanced** and provide below information

Content Token Reference 


E-mail Notification

SMTP server

smtp.gmail.com

Default user e-mail suffix 



@gmail.com


☒ Use SMTP Authentication 

User Name


vinaytalla20.eidiko@gmail.com


Password

 Concealed 

☒ Use SSL 

☐ Use TLS

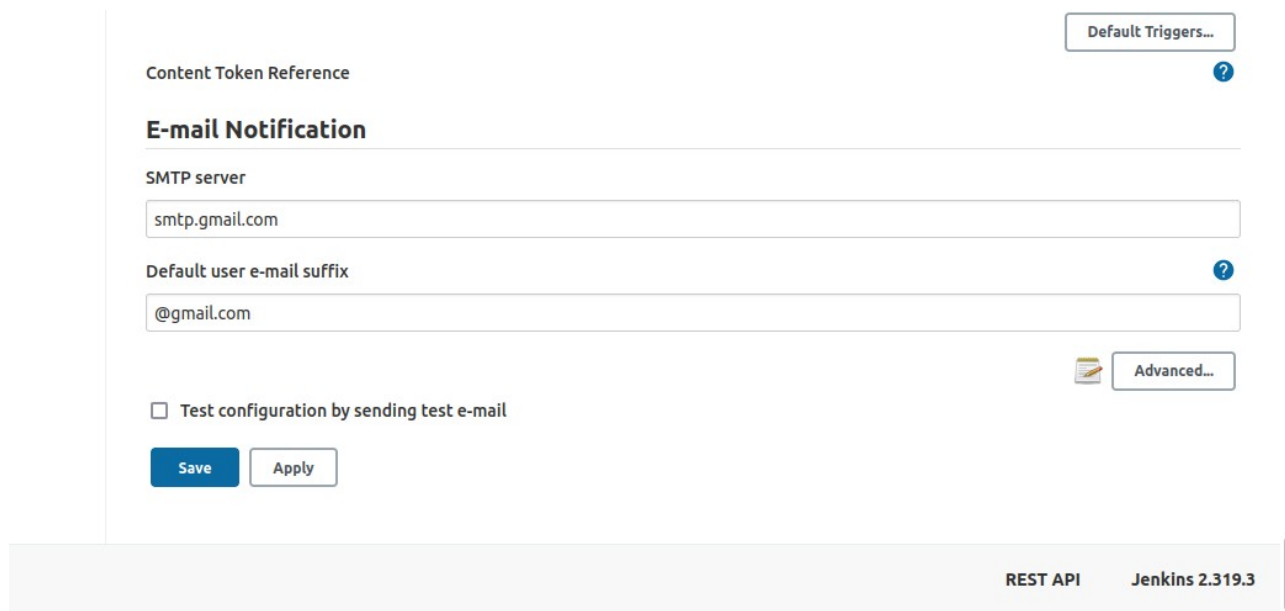
SMTP Port 

465 

Reply-To Address

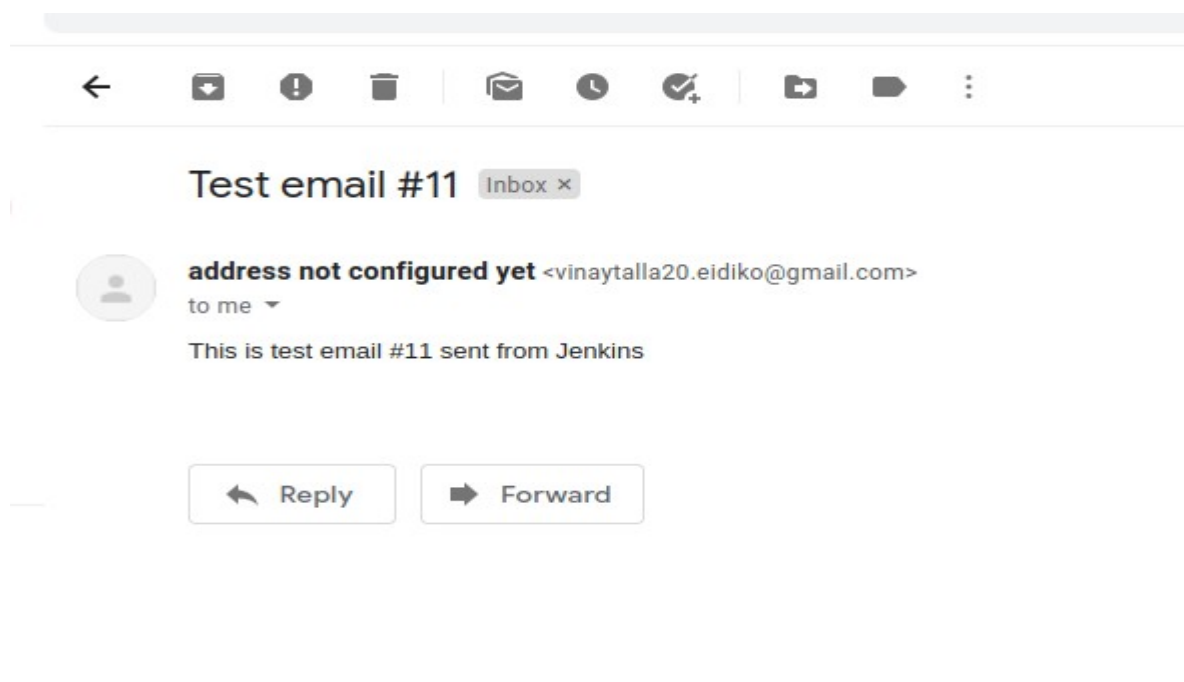
we can Test the Configuration we made to our Gmail Account
Go to **E-Mail Notification**
provide the below details and also the configure the Advanced option
by Providing your gmail credentials

Next go to “**Test Configuration by Sending test e-mail**”
provide gmail credentials as required and select **Test Configuration**



The screenshot shows the Jenkins configuration page for E-mail Notification. At the top right is a 'Default Triggers...' button with a help icon. The main section is titled 'E-mail Notification'. It contains two input fields: 'SMTP server' with the value 'smtp.gmail.com' and 'Default user e-mail suffix' with the value '@gmail.com', both with help icons. Below these is a checkbox labeled 'Test configuration by sending test e-mail' which is currently unchecked. To the right of the checkbox is an 'Advanced...' button with a pencil icon. At the bottom left are 'Save' and 'Apply' buttons. The footer of the page shows 'REST API' and 'Jenkins 2.319.3'.

Check your email for this output Test email



After Completion all the Configuration settings Now Build The Free-Style Project This Output in Available in **Console Output**

```
INFO: Calculating CPD for 0 files
INFO: CPD calculation finished
INFO: Analysis report generated in 84ms, dir size=34 KB
INFO: Analysis reports compressed in 33ms, zip size=11 KB
INFO: Analysis report uploaded in 535ms
INFO: ANALYSIS SUCCESSFUL, you can browse http://localhost:9000/dashboard/index/T2
INFO: Note that you will be able to access the updated dashboard once the server has processed the submitted analysis report
INFO: More about the report processing at http://localhost:9000/api/ce/task?id=AX9PSmvulCtP7S3Nfy7Q
INFO: Task total time: 8.850 s
INFO: -----
INFO: EXECUTION SUCCESS
INFO: -----
INFO: Total time: 14.579s
INFO: Final Memory: 13M/50M
INFO: -----
Triggering a new build of bar-pipeline #43
Email was triggered for: Always
Sending email for trigger: Always
Sending email to: vinaytalla20.eidiko@gmail.com
Finished: SUCCESS
```

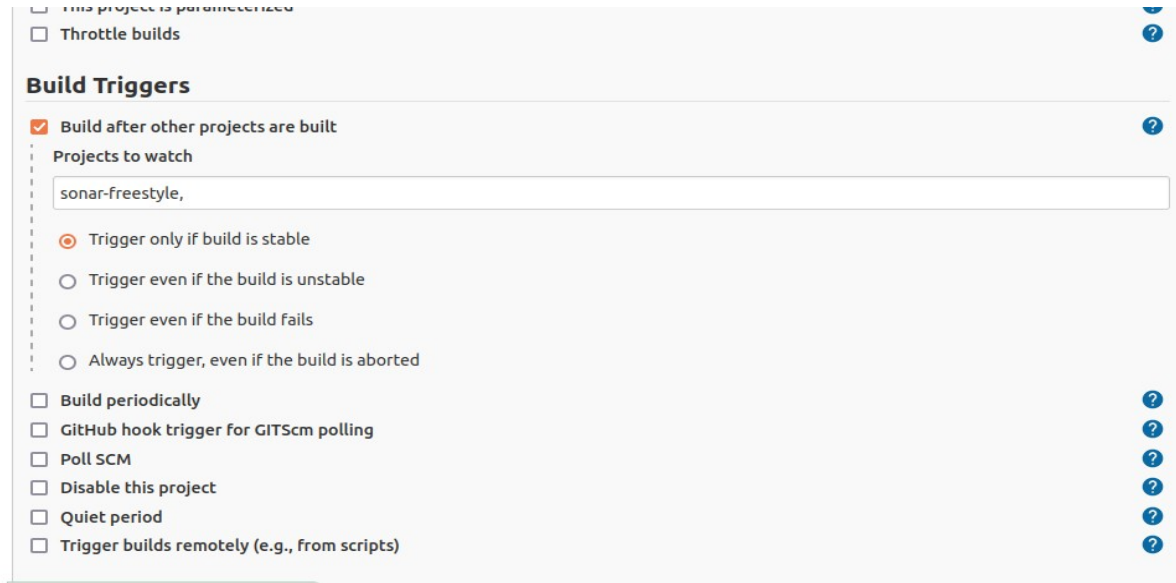
REST API

Jenkins 2.319.3

Go To SonarQube interface and you can see the Output under **Projects** Section

The screenshot displays the SonarQube web interface. The top navigation bar includes links for Projects, Issues, Rules, Quality Profiles, Quality Gates, and Administration. A search bar is present on the right. The left sidebar contains filters for Quality Gate, Reliability (Bugs), Security (Vulnerabilities), and Maintainability (Code Smells). The main content area shows a list of projects. Two projects are visible: 'Task-DevOps' and 'Task2-DevOps'. Both projects show a 'Passed' status. The 'Task-DevOps' project has 0 Bugs, 0 Vulnerabilities, 0 Code Smells, and 0.0% Coverage. The 'Task2-DevOps' project has 0 Bugs, 0 Vulnerabilities, 13 Code Smells, and 0.0% Coverage. A red banner at the bottom states: 'Embedded database should be used for evaluation purpose only. The embedded database will not scale, it will not support upgrading to newer versions of SonarQube, and there is no support for migrating your data out of it into a different database engine.'

Now Go To Next Project that is Pipeline project under Build Triggers Tick the “Build after other projects are Built” and Provide the free-Style project name



The screenshot shows the Jenkins configuration page for a project. At the top, there are two unchecked checkboxes: "This project is parametrized" and "Throttle builds". Below these is the "Build Triggers" section. The first option, "Build after other projects are built", is checked. Under this option, there is a text input field labeled "Projects to watch" containing the text "sonar-freestyle,". Below the input field are four radio button options: "Trigger only if build is stable" (selected), "Trigger even if the build is unstable", "Trigger even if the build fails", and "Always trigger, even if the build is aborted". At the bottom of the "Build Triggers" section, there are several unchecked checkboxes: "Build periodically", "GitHub hook trigger for GITScm polling", "Poll SCM", "Disable this project", "Quiet period", and "Trigger builds remotely (e.g., from scripts)". Each checkbox has a blue question mark icon to its right.

Under Pipeline

Now its All about Script

Provide below Script

Modify the Script as per Requirements and Credentials and Docker Images Names and Docker Hub usernames, Nexus Repositories Names, Nexus Login Credentials

And also Modify Enviroment Variables as per your Installations paths and Storage Directories

Pipeline

Definition

Pipeline script

Script

```
1 pipeline {
2   agent any
3   environment {
4     CREDS = credentials('docker')
5     BARCREATION = '/opt/ace-11.0.0.11/tools/mqsicreatebar'
6     bar = '/home/bandaru/Videos/'
7   }
8 }
9
10
11 stages {
12   stage ('bar-creation') {
13     steps {
14       sh 'echo Building Bar'
15       git branch: 'master', url: 'https://github.com/VinayTalla20/sonar.git'
16       sh 'rm -rf $bar/*.bar'
17       sh '$BARCREATION -data $WORKSPACE -b $bar/$JOB_NAME-$BUILD_NUMBER.bar -a Task'
18     }
19   }
20 }
```

☒ Use Groovy Sandbox

[Pipeline Syntax](#)

Pipeline script

Script

```
10
11 stages {
12   stage ('bar-creation') {
13     steps {
14       sh 'echo Building Bar'
15       git branch: 'master', url: 'https://github.com/VinayTalla20/sonar.git'
16       sh 'rm -rf $bar/*.bar'
17       sh '$BARCREATION -data $WORKSPACE -b $bar/$JOB_NAME-$BUILD_NUMBER.bar -a Task'
18     }
19   }
20
21   stage ('Uploading to Nexus') {
22     steps {
23       sh 'curl -v -u admin:sarasu10 --upload-file $bar/$JOB_NAME-$BUILD_NUMBER.bar http://localhost:8081/repository/Task/'
24     }
25   }
26
27   stage ('docker Build ') {
28     steps {
29       sh 'cd /home/bandaru/Videos/ && docker build -t ace:v1 -f dockerfile .'
30     }
31   }
32
33   stage ('Tagging Image ') {
34     steps {
35       sh 'docker tag ace:v1 vinaytalla/sample:v1'
36     }
37   }
38
39   stage ('Login To Docker Hub') {
40     steps {
41       sh 'docker login -u $CREDS_USR -p $CREDS_PSW'
42     }
43   }
44
45   stage ('Pushing image to Docker-Hub') {
46     steps {
47       sh 'docker push vinaytalla/sample:v1'
48     }
49   }
50 }
```

☒ Use Groovy Sandbox

Pipeline

Definition

Pipeline script

Script

```
29   sh 'cd /home/bandaru/Videos/ && docker build -t ace:v1 -f dockerfile .'
30 }
31
32
33 stage ('Tagging Image ') {
34   steps {
35     sh 'docker tag ace:v1 vinaytalla/sample:v1'
36   }
37 }
38
39 stage ('Login To Docker Hub') {
40   steps {
41     sh 'docker login -u $CREDS_USR -p $CREDS_PSW'
42   }
43 }
44
45 stage ('Pushing image to Docker-Hub') {
46   steps {
47     sh 'docker push vinaytalla/sample:v1'
48   }
49 }
50 }
```

☒ Use Groovy Sandbox

[Pipeline Syntax](#)

Advanced...

Pipeline

Definition

Pipeline script

Script

```

43
44
45
46 stage ('Pushing image to Docker-Hub') {
47   steps {
48     sh 'docker push vinaytalla/sample:v1'
49   }
50 }
51
52 post {
53   always {
54     emailtext body: 'Successfully Build $PROJECT_NAME and Image Pushed to Docker-Hub', recipientProviders: [[${class: 'DevelopersRecip
55   }
56 }
57
58
59
60 }

```

☒ Use Groovy Sandbox

Pipeline Syntax

```

pipeline {
    agent any
    environment {
        CRED = credentials('docker')
        BARCREATION = '/opt/ace-11.0.0.11/tools/mqsicreatebar'
        bar = '/home/bandaru/Videos/'
    }
}

stages {
    stage ('bar-creation') {
        steps {
            sh 'echo Building Bar'
            git branch: 'master', url: 'https://github.com/VinayTalla20/sonar.git'
            sh 'rm -rf $bar/*.bar'
            sh '$BARCREATION -data $WORKSPACE -b $bar/$JOB_NAME-$BUILD_NUMBER.bar -a Task'
        }
    }

    stage ('Uploading to Nexus'){
        steps {
            sh 'curl -v -u admin:sarasu10 --upload-file $bar/$JOB_NAME-$BUILD_NUMBER.bar http://localhost:8081/repository/Task/'
        }
    }

    stage ('docker Build ') {
        steps {
            sh 'cd /home/bandaru/Videos/ && docker build -t ace:v1 -f dockerfile . '
        }
    }

    stage ('Tagging Image ') {
        steps {
            sh 'docker tag ace:v1 vinaytalla/sample:v1'
        }
    }
}

```



```

        sh 'curl -v -u admin:sarasu10 --upload-file $bar/$JOB_NAME-$BUILD_NUMBER.bar http://localhost:8081/repository/Task/'
    }
}

stage ('docker Build ') {
    steps {
        sh 'cd /home/bandaru/Videos/ && docker build -t ace:v1 -f dockerfile .'
    }
}

stage ('Tagging Image ') {
    steps {
        sh 'docker tag ace:v1 vinaytalla/sample:v1'
    }
}

stage ('Login To Docker Hub') {
    steps {
        sh 'docker login -u $CREDS_USR -p $CREDS_PSW'
    }
}

stage ('Pushing image to Docker-Hub') {
    steps {
        sh 'docker push vinaytalla/sample:v1'
    }
}
}

post {
    always {
        emailtext body: 'Successfully Build $PROJECT_NAME and Image Pushed to Docker-Hub', recipientProviders: [[${class:
'DevelopersRecipientProvider'}, [${class: 'RequesterRecipientProvider'}]], subject: 'Build Success for $JOB_NAME'
    }
}
}
}

```

