

Experiment No 7

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D15B 12

Batch A

AIM: Installing SonarQube from the Docker Image

```
$ docker run -d --name sonarqube -e SONAR_ES_BOOTSTRAP_CHECKS_DISABLE=true -p 9000:9000
```

Sonarqube:latest

```
PS D:\Desktop\DockerFile> docker run -d --name sonarqube -e SONAR_ES_BOOTSTRAP_CHECKS_DISABLE=true -p 9000:9000 sonarqube:latest
Unable to find image 'sonarqube:latest' locally
latest: Pulling from library/sonarqube
44ba2882f8eb: Pull complete
2cabec57fa36: Pull complete
c20481384b6a: Pull complete
bf7b17ee74f8: Pull complete
38617faac714: Pull complete
b795b715553d: Pull complete
c5244f6c9231: Pull complete
Digest: sha256:1fffd122cfb37ce982289dc7f5d38bb702ba05af7b5a50f7cb077ae25e60b5b9a
Status: Downloaded newer image for sonarqube:latest
1442c4e613b25aaedec05c060f020a00802b1c6dbaa27e8c5c0dad4ed8fc1f76
```

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715.97 MB / 0 Bytes in use 1 images Last refresh: 30 minutes ago

Search

<input type="checkbox"/>	Name	Tag	Status	Created	Size	Actions
<input type="checkbox"/>	sonarqube bb91606199eb	latest	In use	17 days ago	715.97 MB	⌵ ⋮ 🗑

go to the SonarQube page by typing:

http://localhost:9000/ on your browser.

Installation is successful if you see this page

localhost:9000/sessions/new?return_to=%2F

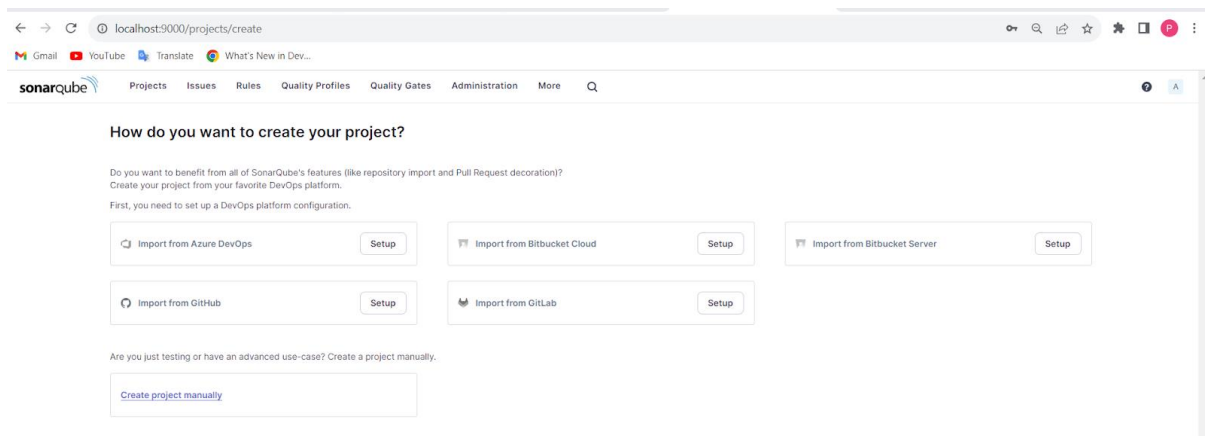
Gmail YouTube Translate What's New in Dev...

Log in to SonarQube

admin

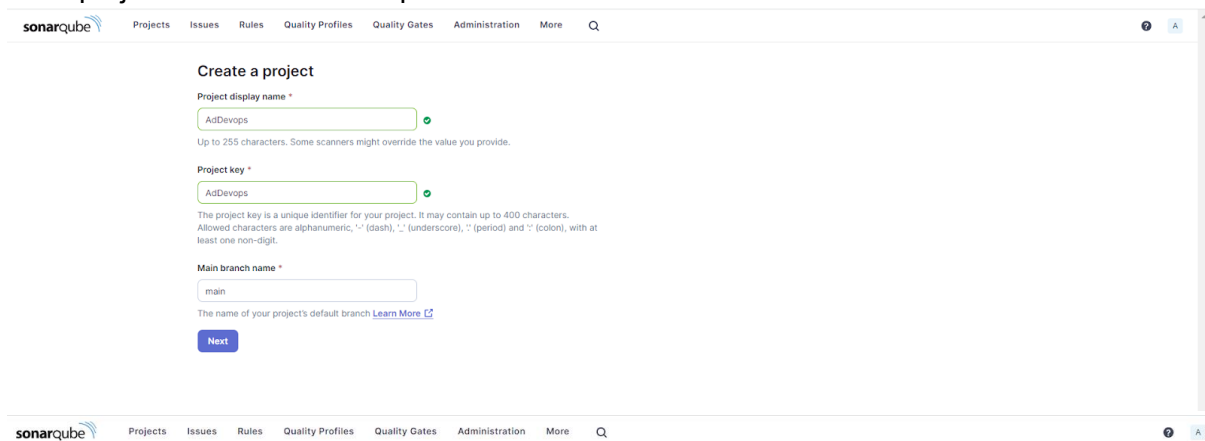
[Log in](#) [Cancel](#)

Update to new password

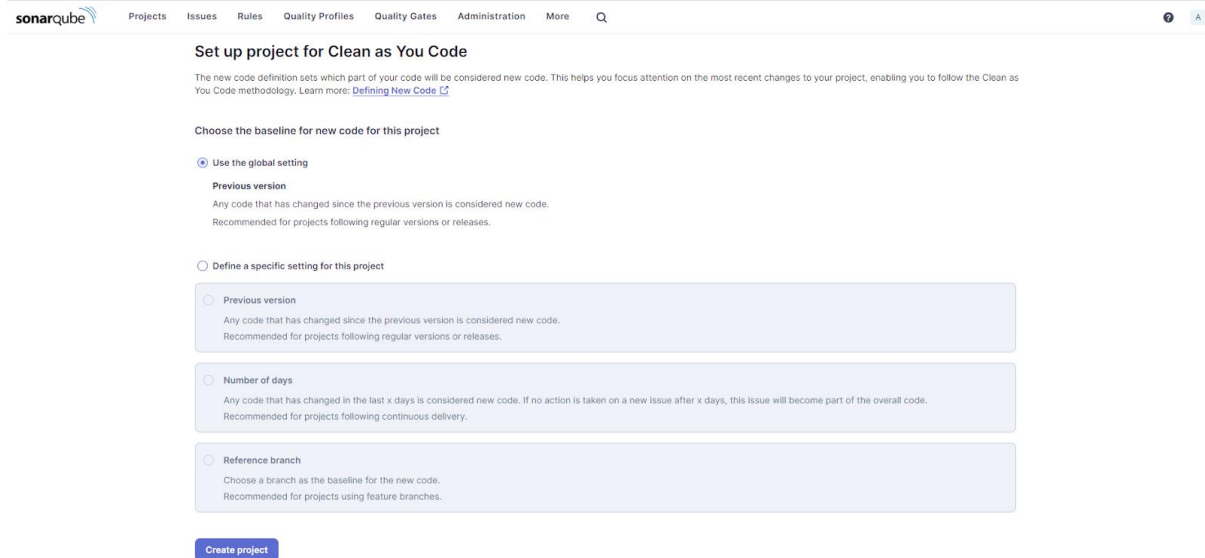


The screenshot shows the SonarQube 'Create Project' page in a web browser. The browser's address bar shows 'localhost:9000/projects/create'. The SonarQube navigation bar is at the top with links for Projects, Issues, Rules, Quality Profiles, Quality Gates, Administration, and More. The main heading is 'How do you want to create your project?'. Below this, there is a sub-heading '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.' and a note 'First, you need to set up a DevOps platform configuration.' There are five 'Import from' buttons: 'Import from Azure DevOps', 'Import from Bitbucket Cloud', 'Import from Bitbucket Server', 'Import from GitHub', and 'Import from GitLab'. Each button has a 'Setup' link next to it. At the bottom, there is a link 'Create project manually' with the text 'Are you just testing or have an advanced use-case? Create a project manually.'

Create project manually: Here project name is “AdDevops”



The screenshot shows the SonarQube 'Create a project' page. The navigation bar is the same as the previous page. The main heading is 'Create a project'. There are three input fields: 'Project display name *' with the value 'AdDevops', 'Project key *' with the value 'AdDevops', and 'Main branch name *' with the value 'main'. Each field has a green checkmark icon to its right. Below the 'Project display name' field, there is a note 'Up to 255 characters. Some scanners might override the value you provide.' Below the 'Project key' field, there is a note 'The project key is a unique identifier for your project. It may contain up to 400 characters. Allowed characters are alphanumeric, '-' (dash), '_' (underscore), '.' (period) and ':' (colon), with at least one non-digit.' Below the 'Main branch name' field, there is a note 'The name of your project's default branch' and a link 'Learn More'. At the bottom of the form is a blue 'Next' button.



The screenshot shows the SonarQube 'Set up project for Clean as You Code' page. The navigation bar is the same as the previous pages. The main heading is 'Set up project for Clean as You Code'. Below this, there is a sub-heading 'The new code definition sets which part of your code will be considered new code. This helps you focus attention on the most recent changes to your project, enabling you to follow the Clean as You Code methodology. Learn more: Defining New Code'. There are two radio buttons: 'Use the global setting' (selected) and 'Define a specific setting for this project'. Under 'Use the global setting', there is a section 'Previous version' with a description 'Any code that has changed since the previous version is considered new code. Recommended for projects following regular versions or releases.' Under 'Define a specific setting for this project', there are three sections: 'Previous version' (described as 'Any code that has changed since the previous version is considered new code. Recommended for projects following regular versions or releases.'), 'Number of days' (described as 'Any code that has changed in the last x days is considered new code. If no action is taken on a new issue after x days, this issue will become part of the overall code. Recommended for projects following continuous delivery.'), and 'Reference branch' (described as 'Choose a branch as the baseline for the new code. Recommended for projects using feature branches.'). At the bottom of the form is a blue 'Create project' button.

open Jenkins

Go to Dashboard -> Manage Jenkins -> Plugin Manager and search for SonarQube Scanner under Available plugins for Jenkins and install without restart.

The screenshot shows the Jenkins Plugin Manager interface. The top navigation bar includes the Jenkins logo, a search bar with the text 'Search (CTRL+K)', and user information 'Ajay Ashokrao Deshmukh' with a 'log out' button. The breadcrumb trail is 'Dashboard > Manage Jenkins > Plugins'. The left sidebar has a 'Plugins' section with links to 'Updates', 'Available plugins' (selected), 'Installed plugins', and 'Advanced settings'. The main content area shows a search for 'sonar'. A table lists the following plugins:

Install	Name	Released
<input checked="" type="checkbox"/>	SonarQube Scanner 2.17.2 External Site/Tool Integrations Build Reports This plugin allows an easy integration of SonarQube , the open source platform for Continuous Inspection of code quality.	7 mo 28 days ago
<input type="checkbox"/>	Sonar Quality Gates 315.v1f12b_e81a_3a_4 Library plugins (for use by other plugins) analysis Other Post-Build Actions Fails the build whenever the Quality Gates criteria in the Sonar 5.6+ analysis aren't met (the project Quality Gates status is different than "Passed")	1 mo 18 days ago
<input type="checkbox"/>	Quality Gates 2.5 Fails the build whenever the Quality Gates criteria in the Sonar analysis aren't met (the project Quality Gates status is different than "Passed")	8 yr 5 mo ago

A warning message is displayed at the bottom: 'Warning: This plugin version may not be safe to use. Please review the following security notices:'.

Download progress

Preparation

- Checking internet connectivity
- Checking update center connectivity
- Success

- SSH server ☒ Success
- Deploy to container ☒ Success
- Loading plugin extensions ☒ Success
- SonarQube Scanner ☒ Success
- Loading plugin extensions ☒ Success

→ [Go back to the top page](#)

(you can start using the installed plugins right away)

→ ☐ Restart Jenkins when installation is complete and no jobs are running

Under Jenkins ,

Dashboard -> Manage Jenkins -> Configure System ,

Look for SonarQube Servers and enter the details. Enter the Server Authentication Token if needed.

SonarQube servers

If checked, job administrators will be able to inject a SonarQube server configuration as environment variables in the build.

☒ **Environment variables** Enable injection of SonarQube server configuration as build environment variables

SonarQube installations

List of SonarQube installations

Name

AdDevops

Server URL

Default is http://localhost:9000

Server authentication token

SonarQube authentication token. Mandatory when anonymous access is disabled.

- none -

Add

Advanced

Save

Apply

Search SonarQube Scanner under Dashboard -> Manage Jenkins -> Global Tool Configuration.

Choose the latest configuration and choose Install Automatically.

SonarQube Scanner

SonarQube Scanner installations

List of SonarQube Scanner installations on this system

Add SonarQube Scanner

≡

SonarQube Scanner

Name

AdDevops

☒ Install automatically ?

≡ Install from Maven Central

Version

SonarQube Scanner 5.0.1.3006

Add Installer

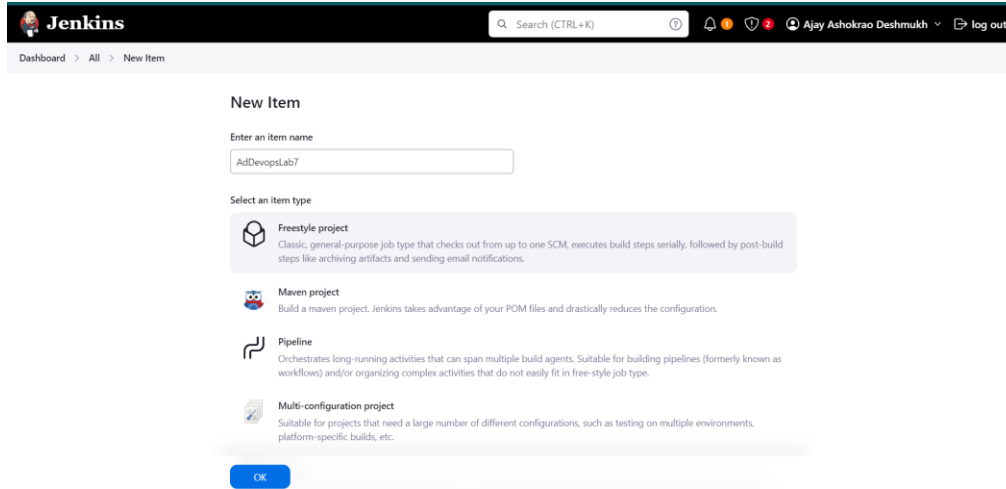
Add SonarQube Scanner

Ant

Save

Apply

create a New Item in Jenkins, choose a freestyle project.



The image shows the Jenkins 'New Item' configuration page. At the top, the Jenkins logo and a search bar are visible. Below the navigation bar, the 'New Item' title is followed by a text input field for 'Enter an item name' containing 'AdDevopsLab7'. Under 'Select an item type', four options are listed: 'Freestyle project' (selected), 'Maven project', 'Pipeline', and 'Multi-configuration project'. Each option has a brief description. At the bottom, there is an 'OK' button.

Choose this GitHub repository in Source Code Management.

https://github.com/shazforiot/MSBuild_firstproject.git

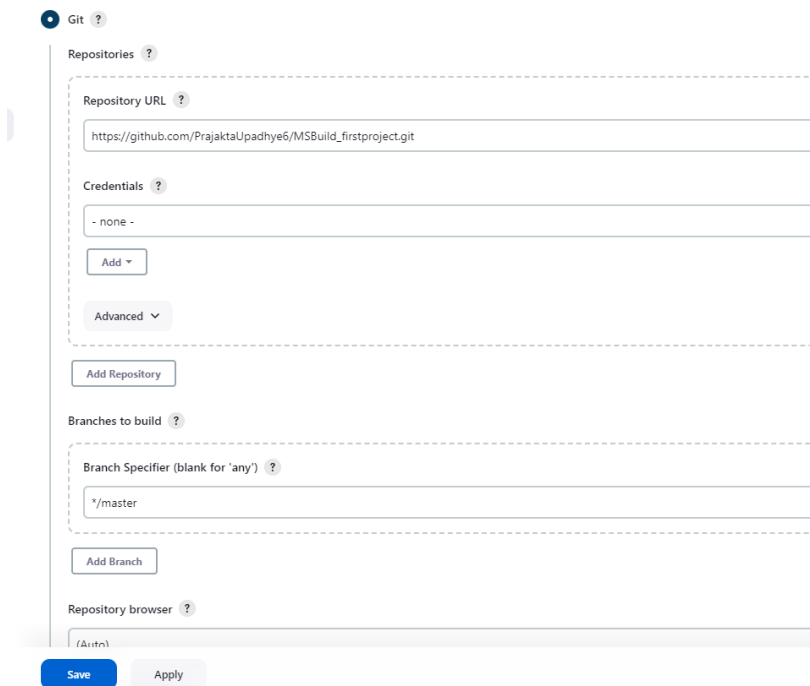
Under Build -> Execute SonarQube Scanner, enter these Analysis properties. Mention the SonarQube Project Key, Login, Password, and Host URL.

sonar.projectKey=AdDevops

sonar.login=admin

sonar.password=abc

sonar.hosturl=<http://localhost:9000/>



The image shows the 'Git' configuration section of the Jenkins 'New Item' form. It includes a 'Repository URL' field with the value 'https://github.com/PrajaktaUpadhye6/MSBuild_firstproject.git'. Below it is a 'Credentials' dropdown menu set to '- none -'. There is an 'Add' button and an 'Advanced' dropdown. An 'Add Repository' button is located below the credentials section. The 'Branches to build' section has a 'Branch Specifier (blank for \'any\')' field with the value '*/master' and an 'Add Branch' button. At the bottom, there is a 'Repository browser' dropdown menu. The 'Save' and 'Apply' buttons are at the very bottom.

Build Steps

Execute SonarQube Scanner

Task to run ?

JDK ?
JDK to be used for this SonarQube analysis

Path to project properties ?

Analysis properties ?
sonar.projectKey=AdDevops
sonar.login=admin
sonar.password=abc
sonar.hosturl=http://localhost:9000/

Additional arguments ?

IVM Options ?

Save Apply

Go to <http://localhost:9000/> and enter your previously created username.
Go to Permissions and grant the Admin user Execute Permissions.

sonarqube

Projects Issues Rules Quality Profiles Quality Gates Administration More

AdDevops main

Overview Issues Security Hotspots Measures Code Activity

Project Settings Project Information

Permissions

Grant and revoke project-level permissions. Permissions can be granted to groups or individual users.
This project is public. Anyone can browse and see the source code.

Public Private

All Users Groups Search for users or groups...

sonar-administrators
System administrators

sonar-users
Every authenticated user automatically belongs to this group

Anyone **DEPRECATED**
Anybody who browses the application belongs to this group. If authentication is not enforced, assigned permissions also apply to non-authenticated users.

Administrator admin

Administer Issues

Administer Security Hotspots

Administer

Execute Analysis

4 of 4 shown

Build and Run:

Dashboard > AdDevopsLab7 >

Status

Changes

Workspace

Build Now

Configure

Delete Project

SonarQube

Rename

Build History trend

Filter builds...

11
See 18, 2023, 10:31 PM

Atom feed for all Atom feed for failures

Project AdDevopsLab7

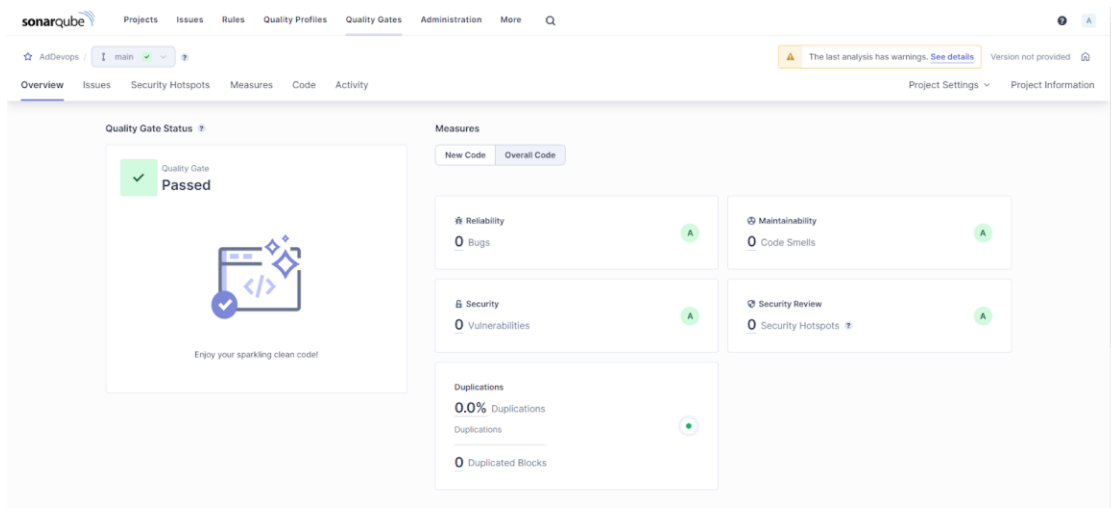
This is Lab 7.

SonarQube

Permalinks

Edit description

Disable Project



Conclusion: Thus, we have successfully installed SonarQube from Docker image.