

Experiment No 7

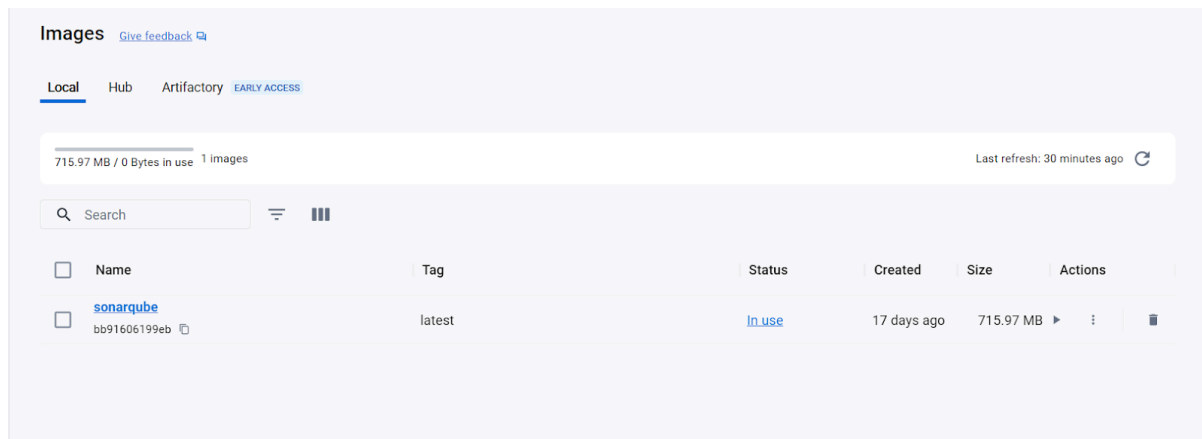
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D15B 07

AIM: Installing SonarQube from the Docker Image

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

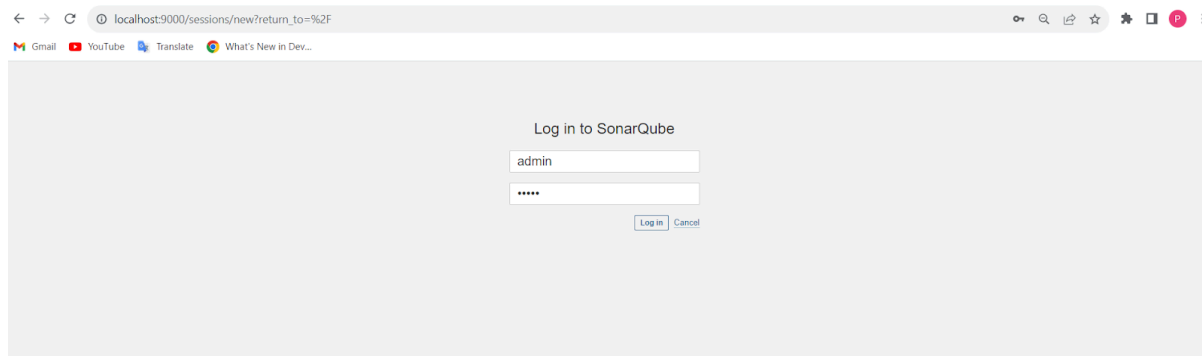
Sonarqube:latest

```
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
```

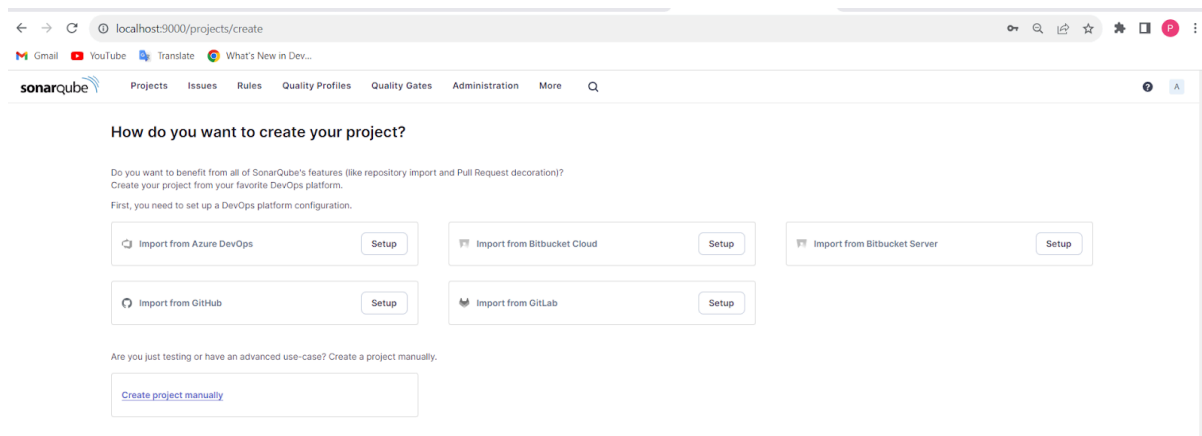


go to the SonarQube page by typing:
http://localhost:9000/ on your browser.

Installation is successful if you see this page

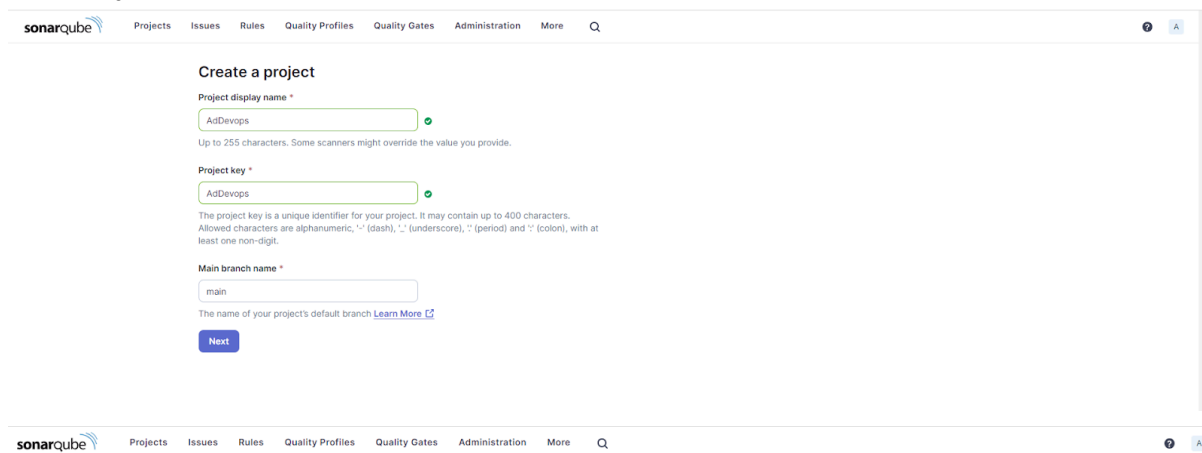


Update to new password

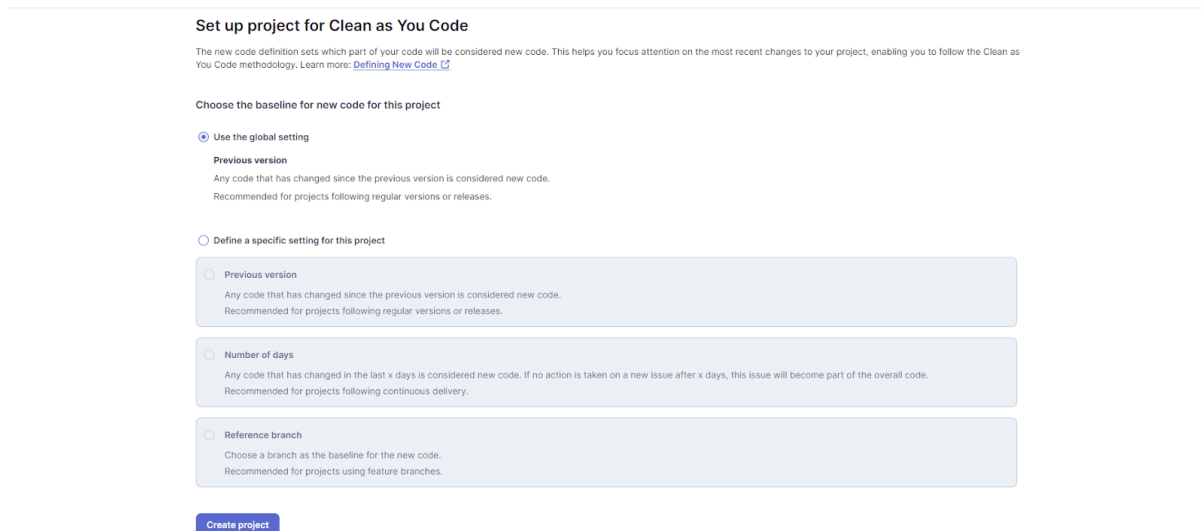


The screenshot shows the SonarQube web interface at the URL `localhost:9000/projects/create`. The page title is "How do you want to create your project?". It provides instructions on how to create a project from various DevOps platforms. There are five buttons labeled "Setup" for importing from Azure DevOps, Bitbucket Cloud, Bitbucket Server, GitHub, and GitLab. At the bottom, there is a link "Create project manually" for users who are just testing or have an advanced use-case.

Create project manually: Here project name is “AdDevops”



The screenshot shows the SonarQube web interface at the URL `localhost:9000/projects/create`. The page title is "Create a project". It contains 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 indicating it is valid. Below the "Main branch name" field, there is a "Next" button.



The screenshot shows the SonarQube web interface at the URL `localhost:9000/projects/create`. The page title is "Set up project for Clean as You Code". It provides instructions on how to set up the project for Clean as You Code. There are three radio buttons: "Use the global setting" (selected), "Define a specific setting for this project" (with sub-options "Previous version", "Number of days", and "Reference branch"), and "Define a specific setting for this project" (with sub-options "Previous version", "Number of days", and "Reference branch"). At the bottom, there is a "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.

Plugins

Install	Name ↓	Released
<input checked="" type="checkbox"/>	SonarQube Scanner 2.15 External Site/Tool Integrations Build Reports This plugin allows an easy integration of SonarQube , the open source platform for Continuous Inspection of code quality.	10 mo ago
<input type="checkbox"/>	Sonar Gerrit 384.vdb_755265c28d External Site/Tool Integrations This plugin allows to submit issues from SonarQube to Gerrit as comments directly.	20 days ago
<input type="checkbox"/>	SonarQube Generic Coverage 1.0 TODO	4 yr 1 mo ago

Install without restart

Download now and install after restart

Update information obtained: 1 day 11 hr ago

Check now

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.

Enter an item name

AdDevopsLab7

» Required field

- Freestyle project**
This is the central feature of Jenkins. Jenkins will build your project, combining any SCM with any build system, and this can be even used
- Maven project**
Build a maven project. Jenkins takes advantage of your POM files and drastically reduces the configuration.
- Pipeline**
Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and
- Multi-configuration project**
Suitable for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific bu
- Folder**
Creates a container that stores nested items in it. Useful for grouping things together. Unlike view, which is just a filter, a folder creates a: as they are in different folders.
- Multibranch Pipeline**
Creates a set of Pipeline projects according to detected branches in one SCM repository.
- Organization Folder**
a set of multibranch project subfolders by scanning for repositories.

OK

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/>

Git ?

Repositories ?

Repository URL ?

https://github.com/PrajaktaUpadhye6/MSBuild_firstproject.git

Credentials ?

- none -

Add +

Advanced ▾

Add Repository

Branches to build ?

Branch Specifier (blank for 'any') ?

*/master

Add Branch

Repository browser ?

(Auto)

Save Apply

Build Steps

Execute SonarQube Scanner

Task to run ?

JDK ?

JDK to be used for this SonarQube analysis

(Inherit From Job)

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

	Users	Groups	Search for users or groups...	Administer Issues	Administer Security Hotspots	Administer	Execute Analysis
sonar-administrators System administrators				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
sonar-users Every authenticated user automatically belongs to this group				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Anyone DEPRECATED Anybody who browses the application belongs to this group. If authentication is not enforced, assigned permissions also apply to non-authenticated users.				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Administrator admin				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4 of 4 shown

Build and Run:

Dashboard > AdDevopsLab7

Status

Changes

Workspace

Build Now

Configure


Delete Project

SonarQube

Rename

Project AdDevopsLab7

This is Lab 7.



Permalinks

Edit description

Disable Project

Build History trend

Filter builds...

1 Sep 18, 2023, 10:31 PM

Atom feed for all Atom feed for failures

Jenkins

Dashboard > AdDevopsLab7 > #1

Status

Changes

Console Output

Edit Build Information

Delete build '#1'

Git Build Data

Build #1 (Sep 18, 2023, 10:31:52 PM)

No changes.

Started by user [Prajakta Upadhye](#)

Revision: f2bc042c04c6e72427c380bcae6d6fee7b49adf
Repository: https://github.com/PrajaktaUpadhye6/MSBuild_firstproject.git

- refs/remotes/origin/master

Console Output:

Dashboard > AdDevopsLab7 > #1 > Console Output

Status
Changes
Console Output
View as plain text
Edit Build Information
Delete build #1
Git Build Data

Console Output

Started by user [Prajakta Upadhye](#)
Running as SYSOP
Building on the built-in node in workspace C:\ProgramData\jenkins\jenkins\workspace\AdDevopsLab7
The recommended git tool is: NONE
No credentials specified
Cloning the remote git repository
Cloning repository https://github.com/PrajaktaUpadhye/MSBuild_FirstProject.git
> git.exe init C:\ProgramData\jenkins\jenkins\workspace\AdDevopsLab7 # timeout=10
Fetching upstream changes from https://github.com/PrajaktaUpadhye/MSBuild_FirstProject.git
> git.exe --version # timeout=10
> git --version # 'git version 2.39.2.windows.1'
> git.exe fetch --tags --progress -- https://github.com/PrajaktaUpadhye/MSBuild_FirstProject.git :refs/heads/*:refs/remotes/origin/* # timeout=10
> git.exe config remote.origin.url https://github.com/PrajaktaUpadhye/MSBuild_FirstProject.git # timeout=10
> git.exe config --add remote.origin.fetch refs/heads/*:refs/remotes/origin/* # timeout=10
Avoid second fetch
> git.exe rev-parse "refs/remotes/origin/master^{commit}" # timeout=10
Checking out Revision f2bc042c04ce72427c380bceaddf6e7b49aaf (refs/remotes/origin/master)
> git.exe config core.sparsecheckout # timeout=10
> git.exe checkout -f f2bc042c04ce72427c380bceaddf6e7b49aaf # timeout=10
Commit message: "updated"
First time build. Skipping changelog.
Unpacking <https://repo.maven.org/maven2/org/sonarsource/scanner/cli/5.0.1.3806/sonar-scanner-cli-5.0.1.3806.zip> to
C:\ProgramData\jenkins\jenkins\tools\hudson.plugins.sonar.SonarRunnerInstallation\AdDevopsLab7\sonar-scanner.bat
[AdDevopsLab7] \$ C:\ProgramData\jenkins\jenkins\tools\hudson.plugins.sonar.SonarRunnerInstallation\AdDevopsLab7\sonar-scanner.bat -Dsonar.projectKey=AdDevops -Dsonar.login=admin -Dsonar.hosturl=<http://localhost:9090/> -Dsonar.password=abc -Dsonar.projectBaseDir=C:\ProgramData\jenkins\jenkins\workspace\AdDevopsLab7
INFO: Scanner configuration file: C:\ProgramData\jenkins\jenkins\tools\hudson.plugins.sonar.SonarRunnerInstallation\AdDevopsLab7\bin\..\.conf\sonar-scanner.properties
INFO: Project root configuration file: NONE
INFO: SonarScanner 5.0.1.3806
INFO: Java 18.0.2.1 Oracle Corporation (64-bit)

Dashboard > AdDevopsLab7 > #1 > Console Output

INFO: Sensor JaC Docker Sensor [jac] (done) | time=74ms
INFO: Run sensors on project
INFO: Sensor C# [csharp]
WARN: Your project contains C# files which cannot be analyzed with the scanner you are using. To analyze C# or VB.NET, you must use the SonarScanner for .NET 5.x or higher, see
<https://redirect.sonarsource.com/doc/install-configure-scanner-msbuild.html>
INFO: Sensor C# [csharp] (done) | time=0ms
INFO: Sensor Analysis Warnings Import [csharp]
INFO: Sensor Analysis Warnings Import [csharp] (done) | time=15ms
INFO: Sensor C# File Caching Sensor [csharp]
WARN: Incremental PR analysis: Could not determine common base path, cache will not be computed. Consider setting 'sonar.projectBaseDir' property.
INFO: Sensor C# File Caching Sensor [csharp] (done) | time=0ms
INFO: Sensor Zero Coverage Sensor
INFO: Sensor Zero Coverage Sensor (done) | time=2ms
INFO: SON Publisher SON provider for this project is: git
INFO: SON Publisher 4 source files to be analyzed
INFO: SON Publisher 4/4 source files have been analyzed (done) | time=792ms
INFO: CPD Executor Calculating CPD for 0 files
INFO: CPD Executor CPD calculation finished (done) | time=0ms
INFO: Analysis report generated in 83ms, dir size=139.0 kB
INFO: Analysis report compressed in 13ms, zip size=19.2 kB
INFO: Analysis report uploaded in 241ms
INFO: ANALYSIS SUCCESSFUL, you can find the results at: <http://localhost:9090/dashboard?id=AdDevops>
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:9090/api/ce/task?id=AVgpPtkG6Kxcbrl74q>
INFO: Analysis total time: 16.844 s
INFO:
INFO: EXECUTION SUCCESS
INFO:
INFO: Total time: 31.521s
INFO: Final Memory: 20M/74M
INFO:
Finished: SUCCESS

Project on sonarqube:

sonarqube

Projects Issues Rules Quality Profiles Quality Gates Administration More Q

AdDevops / main Version not provided

Overview Issues Security Hotspots Measures Code Activity Project Settings Project Information

Quality Gate Status

Quality Gate Passed

Enjoy your sparkling clean code!

Measures

New Code Overall Code

Reliability
0 Bugs

Maintainability
0 Code Smells

Security
0 Vulnerabilities

Security Review
0 Security Hotspots

Duplications
0.0% Duplications
0 Duplicated Blocks

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