

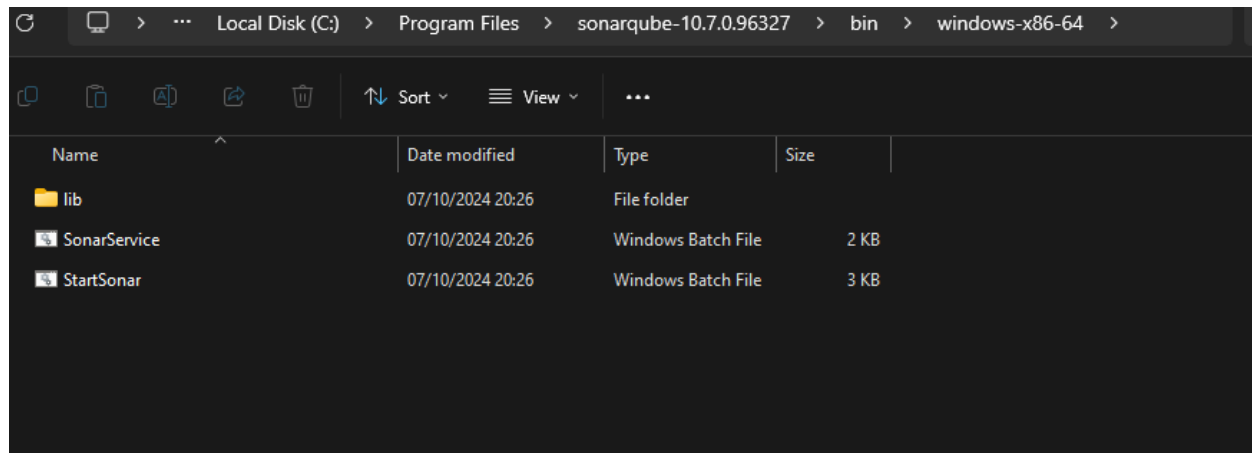
Exp 9 :- Sonarqube With Jenkins

Step 1 :- Go To <https://www.sonarsource.com/products/sonarqube/downloads> and download Community Editions.

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

- Navigation Bar:** sonarqube logo, Deploy, What's new, Why upgrade, Documentation, Download (active), Pricing, Request trial button.
- Community Edition:**
 - Free and open source for productivity & code quality
 - Download for free** button
 - All of the following features:**
 - Static code analysis for 20 languages and frameworks: Java, C#, JavaScript, TypeScript, CloudFormation, Terraform, Docker, Kubernetes, Helm Charts, Kotlin, Ruby, Go, Scala, Flex, Python, PHP, HTML, CSS, XML, VB.NET, and Azure Resource Manager
 - Detect issues in AI generated code
 - SonarQube server runs in
- Developer Edition:**
 - Essential capabilities for small teams & businesses
 - Download** button
 - Community Edition plus:**
 - Additional languages: C, C++, Obj-C, Swift, ABAP, T-SQL and PL/SQL
 - AutoConfig for C and C++ projects
 - Taint analysis with deeper SAST for Java, C#, JavaScript, and TypeScript
 - Detection of advanced bugs causing runtime errors and crashes in Python & Java
- Enterprise Edition:**
 - Designed to meet Enterprise requirements
 - Download** button
 - Developer Edition plus:**
 - Additional languages: Apex, COBOL, JCL, PL/I, RPG and VB6
 - Unlimited integrations with DevOps platforms
 - Security engine custom configuration for more powerful taint analysis
 - Custom rules to detect private secret patterns
 - Aggregate projects and applications into a
- Data Center Edition:**
 - For high availability, scalability, & performance
 - Download** button
 - Enterprise edition plus:**
 - Autoscaling in a Kubernetes cluster
 - Component redundancy
 - Data resiliency
 - Horizontal scalability
 - High performance under extreme load
 - Standard commercial support included
 - 24/7 white glove

Step 2 :- Now Go To bin/windows-x86-64 and start StartSonar



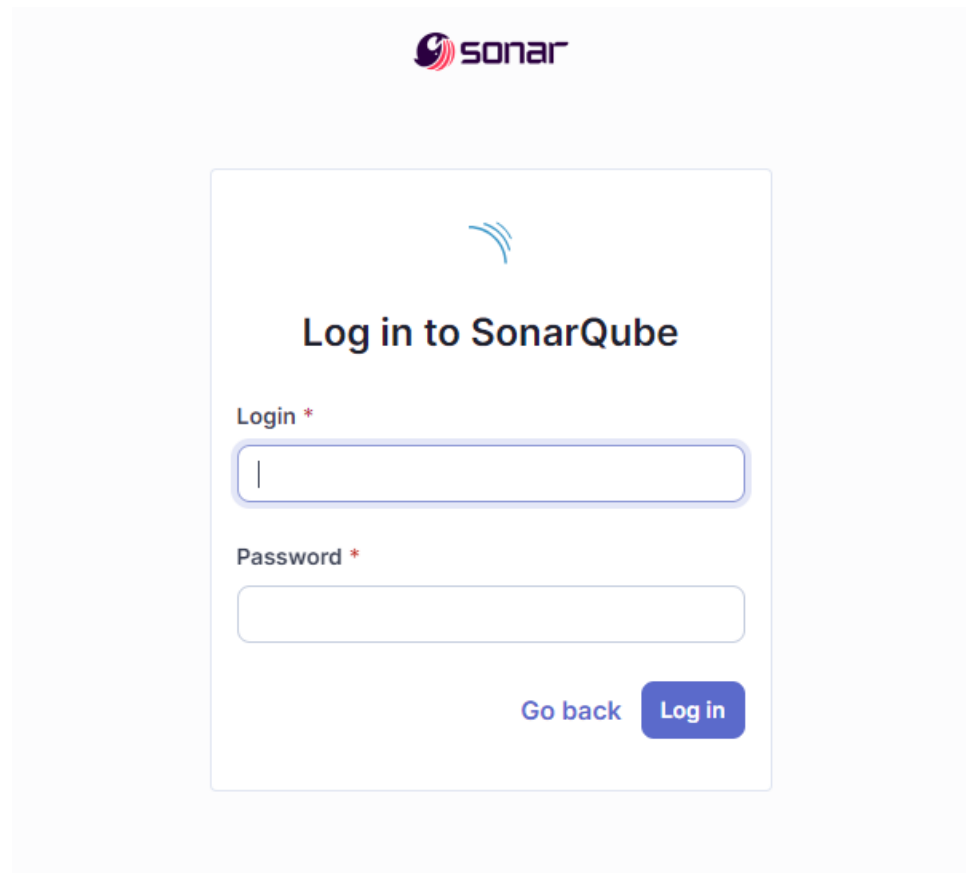
Step 3 :- You Will See Process Is Up & Sonarqube Is Operational

```

736858properties
WARNING: A terminally deprecated method in java.lang.System has been called
WARNING: System::setSecurityManager has been called by org.sonar.process.PluginSecurityManager (file:/C:/Program%20Files/sonarqube-10.7.0.96327/lib/sonar-application-10.7.0.96327.jar)
WARNING: Please consider reporting this to the maintainers of org.sonar.process.PluginSecurityManager
WARNING: System::setSecurityManager will be removed in a future release
2024.10.07 21:15:04 INFO app[[o.s.a.SchedulerImpl] Process[web] is up
2024.10.07 21:15:04 INFO app[[o.s.a.ProcessLauncherImpl] Launch process[COMPUTE_ENGINE] from [C:\Program Files\sonarqube-10.7.0.96327]: C:\Program Files\OpenLogic\jdk-17.0.12.7-hotspot\bin\java -Djava.awt.headless=true -Dfile.encoding=UTF-8 -Djava.io.tmpdir=C:\Program Files\sonarqube-10.7.0.96327\temp -XX:-OmitStackTraceInFastThrow --add-opens=java.base/java.util=ALL-UNNAMED --add-exports=java.base/jdk.internal.ref=ALL-UNNAMED --add-opens=java.base/java.lang=ALL-UNNAMED --add-opens=java.base/java.nio=ALL-UNNAMED --add-opens=java.base/sun.nio.ch=ALL-UNNAMED --add-opens=java.management/sun.management=ALL-UNNAMED --add-opens=jdk.management/com.sun.management.internal=ALL-UNNAMED -Xmx512m -Xms128m -XX:+HeapDumpOnOutOfMemoryError -Dhttp.nonProxyHosts=localhost|127.*|[:1] -cp ./lib/sonar-application-10.7.0.96327.jar;C:\Program Files\sonarqube-10.7.0.96327\lib\jdbc\h2\h2-2.2.224.jar org.sonar.ce.app.CeServer C:\Program Files\sonarqube-10.7.0.96327\temp\sq-process16549977733649395237properties
2024.10.07 21:15:05 WARN app[[startup] #####
#####
2024.10.07 21:15:05 WARN app[[startup] Default Administrator credentials are still being used. Make sure to change the password or deactivate the account.
2024.10.07 21:15:05 WARN app[[startup] #####
#####
WARNING: A terminally deprecated method in java.lang.System has been called
WARNING: System::setSecurityManager has been called by org.sonar.process.PluginSecurityManager (file:/C:/Program%20Files/sonarqube-10.7.0.96327/lib/sonar-application-10.7.0.96327.jar)
WARNING: Please consider reporting this to the maintainers of org.sonar.process.PluginSecurityManager
WARNING: System::setSecurityManager will be removed in a future release
2024.10.07 21:15:09 INFO app[[o.s.a.SchedulerImpl] Process[ce] is up
2024.10.07 21:15:09 INFO app[[o.s.a.SchedulerImpl] SonarQube is operational

```

Step 4:- Go to <http://localhost:9000> and login to Sonarqube



The image shows the SonarQube login page. At the top, there is the Sonar logo. Below it, the text "Log in to SonarQube" is displayed. There are two input fields: "Login *" and "Password *". The "Login *" field is currently empty. Below the "Password *" field, there are two buttons: "Go back" and "Log in". The "Log in" button is highlighted in blue.

Step 5 :- Create A Local Project.

sonarqube

ProjectsIssuesRulesQuality ProfilesQuality GatesAdministrationMore

1 of 2

×

Create a local project

Project display name *

retail-store-jenkins-project

Project key *

retail-store-jenkins-project

Main branch name *

main

The name of your project's default branch [Learn More](#)

CancelNext

Embedded database should be used for evaluation purposes 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.

Step 6 :- Choose Global Setting As Baseline

2 of 2

×

Set up project for Clean as You Code

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](#)

Choose the baseline for new code for this project

☒ Use the global setting

Previous version

Any code that has changed since the previous version is considered new code.
Recommended for projects following regular versions or releases.

☐ Define a specific setting for this project

☐ Previous version

Any code that has changed since the previous version is considered new code.
Recommended for projects following regular versions or releases.

☐ Number of days

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.

☐ Reference branch

Choose a branch as the baseline for the new code.
Recommended for projects using feature branches.






BackCreate project

Step 7 :- Now Select Analysis Method As Locally

Analysis Method

Use this page to manage and set-up the way your analyses are performed.

How do you want to analyze your repository?

 With Jenkins	 With GitHub Actions	 With Bitbucket Pipelines
 With GitLab CI	 With Azure Pipelines	Other CI SonarQube integrates with your workflow no matter which CI tool you're using.
Locally Use this for testing or advanced use-case. Other modes are recommended to help you set up your CI environment.		

Step 8 :- Generate Token

Analysis Method > Locally


Analyze your project

We initialized your project on SonarQube, now it's up to you to launch analyses!

1 Provide a token

Generate a project token

Use existing token



Token name 

Expires in

30 days

▼

Generate

 Please note that this token will only allow you to analyze the current project. If you want to use the same token to analyze multiple projects, you need to generate a global token in your [user account](#). See the [documentation](#)  for more information.

The token is used to identify you when an analysis is performed. If it has been compromised, you can revoke it at any point in time in your [user account](#).

2 Run analysis on your project

Step 9 :- After Generating Token Continue

Analyze your project

We initialized your project on SonarQube, now it's up to you to launch analyses!

1 Provide a token

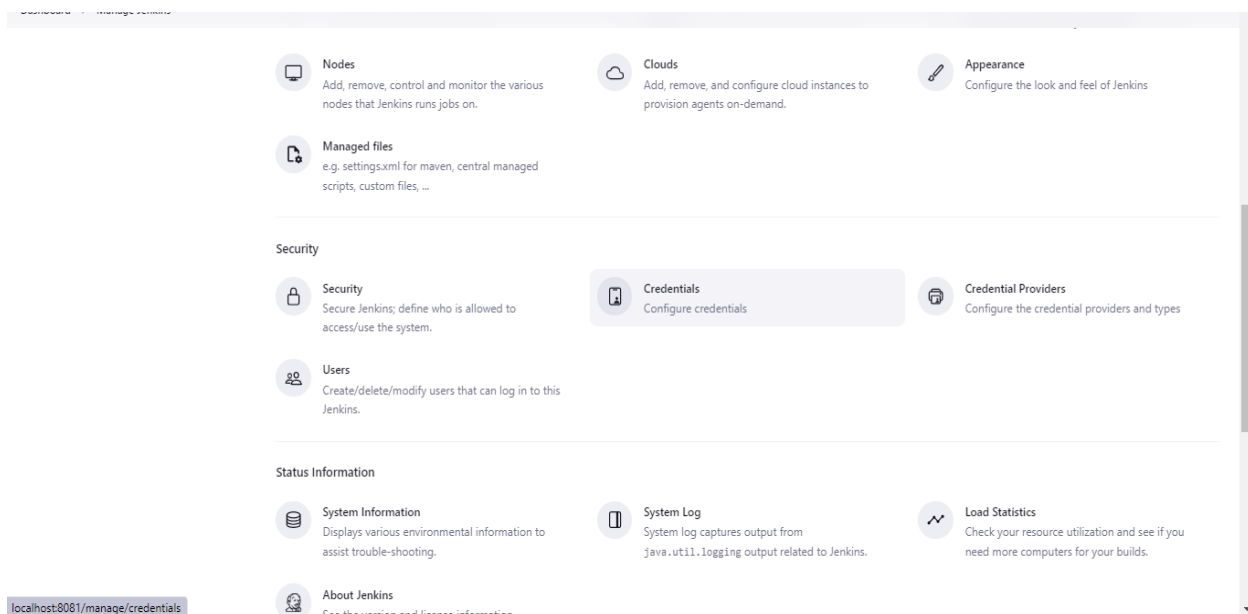
"retail-store-jenkins-project": sqp_5595f187938bad2e643a6da8cc9c0c8a2979da44 🔑

The token is used to identify you when an analysis is performed. If it has been compromised, you can revoke it at any point in time in your [user account](#).

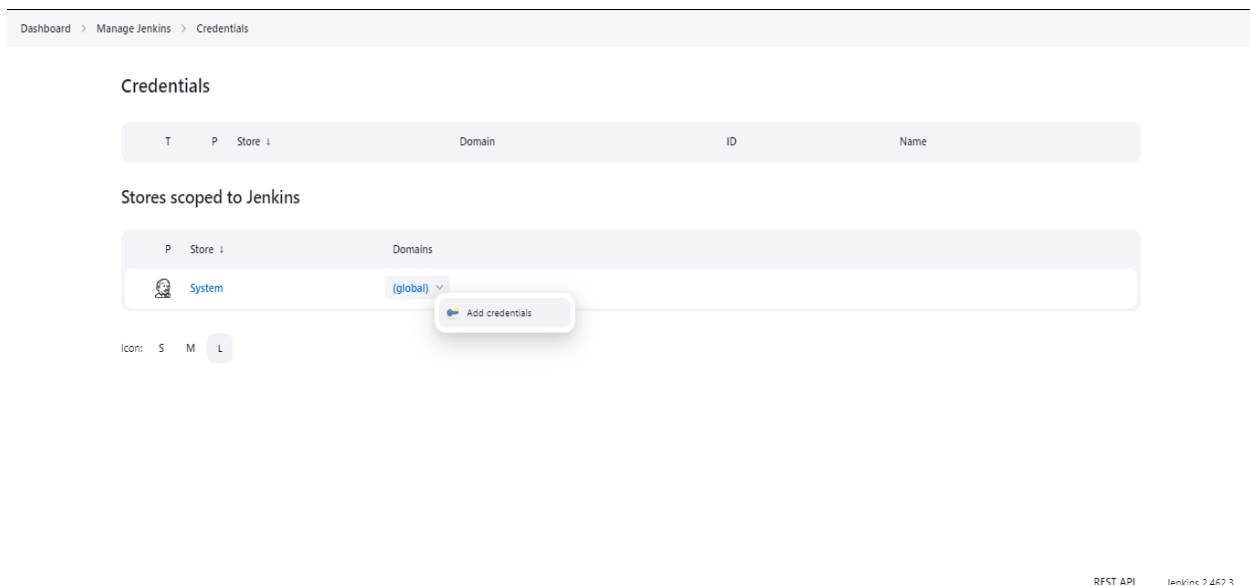
Continue

2 Run analysis on your project

Step 10 :- Now In Jenkins Go To Manage Jenkins/Credential :-



Step 11 :- Now Go To Add Credential



Step 12 :- Now Select “Kind” as Secret Text and Enter Your Token



The screenshot shows the 'New credentials' form in Jenkins. The breadcrumb trail is 'Dashboard > Manage Jenkins > Credentials > System > Global credentials (unrestricted)'. The form has the following fields: 'Kind' (a dropdown menu with 'Secret text' selected), 'Scope' (a dropdown menu with 'Global (Jenkins, nodes, items, all child items, etc)' selected), 'Secret' (a text input field with masked characters), 'ID' (a text input field with the value 'real-token'), and 'Description' (a text input field with the value 'real-token'). A blue 'Create' button is at the bottom left.

Step 13 :- Now You can see that Your Credential Is Created

Global credentials (unrestricted)

+ Add Credentials

Credentials that should be available irrespective of domain specification to requirements matching.

ID	Name	Kind	Description
 reatli-token	reatai-token	Secret text	reatai-token 

Icon: S M L

Step 14 :- Go To Manage Jenkins/System/Sonarqube Server

SonarQube servers

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

☒ Environment variables

SonarQube installations

List of SonarQube installations

Name

Sonarqube

Server URL

Default is http://localhost:9000

http://115.96.216.106:9000

Server authentication token

SonarQube authentication token. Mandatory when anonymous access is disabled.

reatai-token

+ Add

Advanced

Save Apply

Step 15 :- Create A New Project

New Item

Enter an item name

retail-store-jenkin-project

Select an item type



Freestyle project

Classic, general-purpose job type that checks out from up to one SCM, executes build steps serially, followed by post-build steps like archiving artifacts and sending email notifications.



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/or organizing complex activities that do not easily fit in free-style job type.



External Job

This type of job allows you to record the execution of a process run outside Jenkins, even on a remote machine. This is designed so that you can use Jenkins as a dashboard of your existing automation system.

OK

Step 16 :- Add Your Git Repository

☐ None☒ Git ?

Repositories ?

Repository URL ?

https://github.com/sunny-shaw/retail-store.git

Credentials ?

- none -

+ Add

Advanced ▾

Add Repository

Branches to build ?

Branch Specifier (blank for 'any') ?

*/main

Step 17 :- In Build Environment Select Prepare Sonarqube Scanner Environment and enter your Token

Build Environment

- ☐ Delete workspace before build starts
- ☐ Use secret text(s) or file(s) ?
- ☐ Provide Configuration files ?
- ☐ Add timestamps to the Console Output
- ☐ Inspect build log for published build scans
- ☒ Prepare SonarQube Scanner environment ?

Server authentication token

SonarQube authentication token. Mandatory when anonymous access is disabled. Will default to the one defined in the SonarQube installation.

reatail-token

+ Add

⚠ Cannot find any credentials with id reatail-token

- ☐ Terminate a build if it's stuck
- ☐ With Ant ?

Step 18 :- In Execute Sonar Scanner Add Your Analysis Properties

Execute SonarQube Scanner

JDK ?

JDK to be used for this SonarQube analysis

(Inherit From Job)

SonarQube Scanner

❗ Jenkins needs to know where your SonarQube Scanner is installed.
Please do so from the [global tool configuration](#).

Path to project properties ?

Analysis properties ?

```
sonar.projectKey=retail-store-jenkin-project
sonar.projectName=retail-store-jenkin-project
sonar.projectVersion=1.0
sonar.language=java
sonar.tests=src/test/java
sonar.sources=src/main/java
```

Additional arguments ?

JVM Options ?

Save Apply

Step 19 :- Click On Build Now

Status

</> Changes

Workspace

Build Now

Configure

Delete Project

Favorite

SonarQube

Open Blue Ocean

Rename

retail-store-jenkin-project

SonarQube

Permalinks

Add description

Build History

trend

Filter...

Oct 7, 2024, 10:37 PM

Atom feed for all

Atom feed for failures

Step 20 :- Console Output

Console Output

cannot find the file specified
at java.base/java.lang.ProcessBuilder.start(ProcessBuilder.java:1143)
at java.base/java.lang.ProcessBuilder.start(ProcessBuilder.java:1073)
at hudson.Proc\$LocalProc.<init>(Proc.java:252)
at hudson.Proc\$LocalProc.<init>(Proc.java:221)
at hudson.Launcher\$LocalLauncher.launch(Launcher.java:994)
at hudson.Launcher\$ProcStarter.start(Launcher.java:506)
at hudson.Launcher\$ProcStarter.join(Launcher.java:517)
at PluginClassLoader for sonar//hudson.plugins.sonar.SonarRunnerBuilder.executeSonarQubeScanner(SonarRunnerBuilder.java:300)
at PluginClassLoader for sonar//hudson.plugins.sonar.SonarRunnerBuilder.perform(SonarRunnerBuilder.java:271)
at PluginClassLoader for sonar//hudson.plugins.sonar.SonarRunnerBuilder.perform(SonarRunnerBuilder.java:226)
at hudson.tasks.BuildStepMonitor\$1.perform(BuildStepMonitor.java:20)
at hudson.model.AbstractBuild\$AbstractBuildExecution.perform(AbstractBuild.java:818)
at hudson.model.Build\$BuildExecution.build(Build.java:199)
at hudson.model.Build\$BuildExecution.doRun(Build.java:164)
at hudson.model.AbstractBuild\$AbstractBuildExecution.run(AbstractBuild.java:526)
at hudson.model.Run.execute(Run.java:1894)
at hudson.model.FreeStyleBuild.run(FreeStyleBuild.java:44)
at hudson.model.ResourceController.execute(ResourceController.java:101)
at hudson.model.Executor.run(Executor.java:446)
Caused by: java.io.IOException: CreateProcess error=2, The system cannot find the file specified
at java.base/java.lang.ProcessImpl.create(Native Method)
at java.base/java.lang.ProcessImpl.<init>(ProcessImpl.java:499)
at java.base/java.lang.ProcessImpl.start(ProcessImpl.java:158)
at java.base/java.lang.ProcessBuilder.start(ProcessBuilder.java:1110)
... 18 more
WARN: Unable to locate 'report-task.txt' in the workspace. Did the SonarScanner succeed?
WARN: Unable to locate 'report-task.txt' in the workspace. Did the SonarScanner succeed?
ERROR: SonarQube scanner exited with non-zero code: -1
Finished: FAILURE