

Welcome to SonarQube Dashboard

Since you are able to read this, it means that you have successfully started your SonarQube server. Well done! If you have not removed this text, it also means that you have not yet played much with SonarQube. So here are a few pointers for your next step:

- » Do you now want to run analysis on a project?
- » Maybe start customizing dashboards?
- » Or simply browse the complete documentation?
- » If you have a question or an issue, please visit the Get Support page.

**PROJECTS**

QG	NAME	VERSION	LOC	BUGS	VULNERABILITIES	CODE SMELLS	LAST ANALYSIS
No data							

**PROJECTS**

NAME
No data

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.

SonarQube™ technology is powered by SonarSource SA  
Version 5.6.6 - LGPL v3 - Community - Documentation - Get Support - Plugins - Web API

## Jenkins job setup

Here we are Installing Sonarscanner Plugin in Jenkins

Updates Available Installed Advanced Filter: sonar

Name	Version	Previously installed version	Uninstall
jQuery plugin	1.11.2-0		Uninstall
Maven Integration plugin	2.15.1		Uninstall
Pipeline_Groovy	2.33		Uninstall
<b>SonarScanner for Jenkins</b>	<b>2.6.1</b>		<b>Uninstall</b>

Manage jenkins ->System Configuration -> assign the sonarqube credentials

SonarQube servers

Environment variables

SonarQube installations

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.

Name: sonarqube  
Server URL: http://172.31.31.230:9000  
Server version: 5.2  
Server authentication token:  
SonarQube account login: admin  
SonarQube account password: .....  
SonarQube account used to perform analysis. Mandatory when anonymous access is disabled. No longer used since SonarQube 5.3.  
Default is http://localhost:9000  
Configuration fields depend on the SonarQube server version.

Advanced...

Add SonarQube  
Delete SonarQube

Save Apply

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The screenshot shows the Jenkins configuration interface for SonarQube. Under the 'SonarQube servers' section, there is a configuration for 'sonarqube'. The 'Server URL' is set to `http://172.31.31.230:9000`, 'Server version' is '5.2', and 'SonarQube account login' is 'karunakarg139@gmail.com'. The 'SonarQube account password' field contains several asterisks. There are also fields for 'SonarQube authentication token' and 'SonarQube account used to perform analysis'. Buttons for 'Save', 'Apply', and 'Delete SonarQube' are visible at the bottom.

Global Tool configuration->JDK name =jdk8->  
SonarQubeScanner-> from Maven assign sonar scanner version

The screenshot shows the Jenkins configuration interface for Global Tool Configuration. Under the 'JDK' section, there are two entries: 'jdk8' and 'jre8'. Both entries have 'Name' fields set to 'jdk8' and 'jre8' respectively. The 'Install automatically' checkbox is checked for both. For 'jdk8', the 'Install from java.sun.com' section is visible, showing 'Version Java SE Development Kit 8u131' and a checked 'I agree to the Java SE Development Kit License Agreement' checkbox. Buttons for 'Save', 'Apply', 'Delete Installer', and 'Delete JDK' are present.

Under the 'SonarQube Scanner' section, there is one entry named 'SonarQube'. It has a 'Name' field set to 'SonarQube', 'Install automatically' checked, and an 'Install from Maven Central' section with 'Version SonarQube Scanner 3.0.3.778'. Buttons for 'Save', 'Apply', 'Delete Installer', and 'Delete SonarQube Scanner' are present.

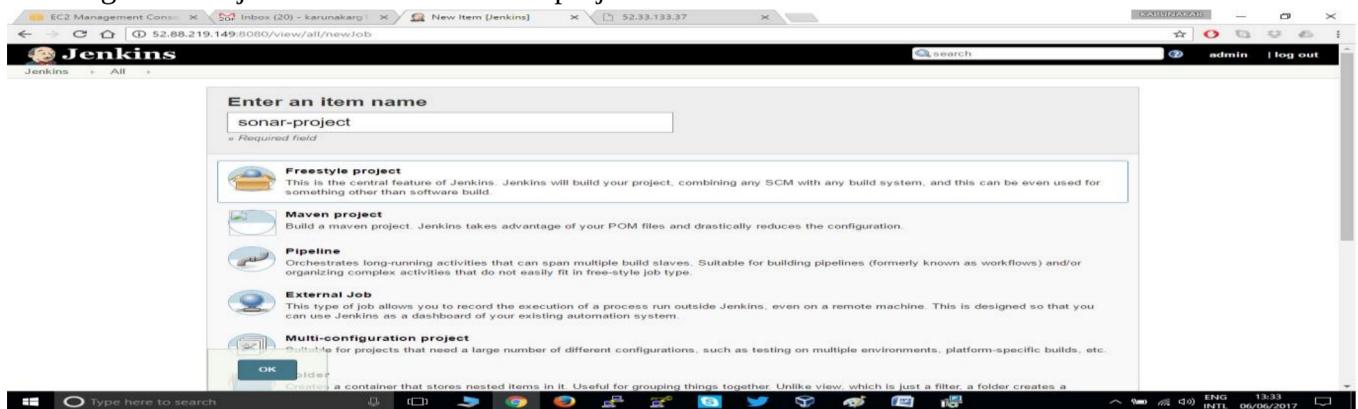
Under the 'Ant' section, there is a 'List of SonarQube Scanner installations on this system' which is currently empty. A 'Add Ant' button is available.

Under the 'Maven' section, there is a 'List of Ant installations on this system' which is currently empty. A 'Maven installations...' button is available.

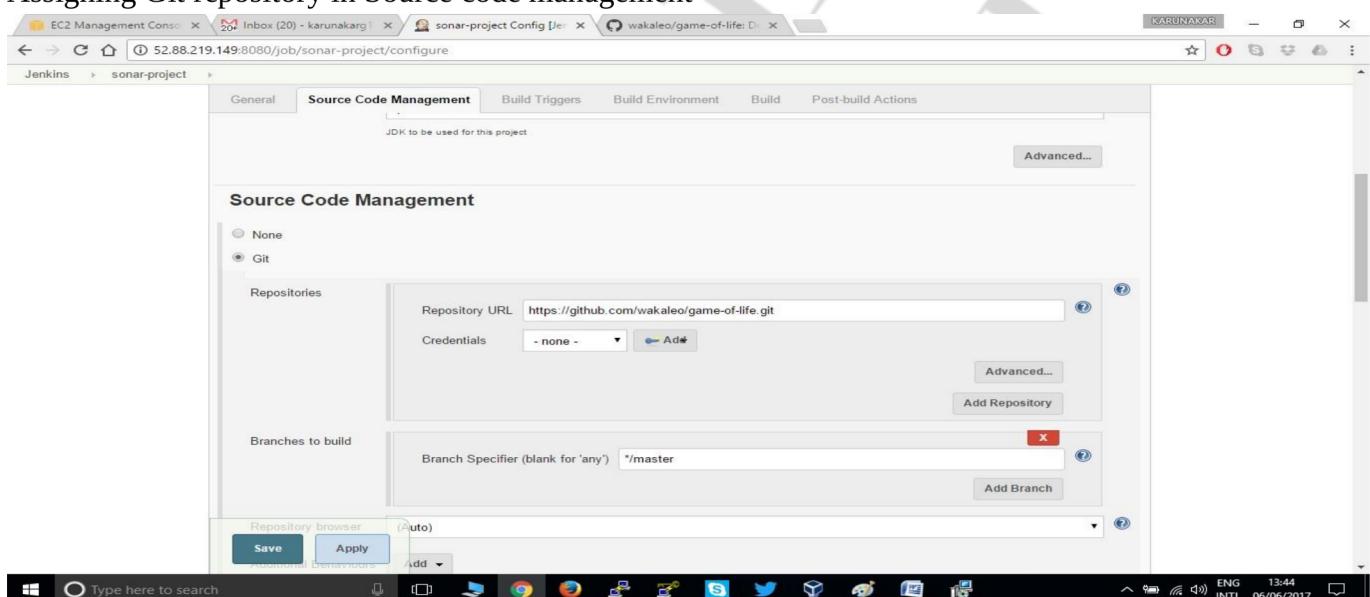
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## Creating New Project with name of Sonar-project



## Assigning Git repository in Source code management



=>In Build section Top level maven project

=>And Execute sonarQube scanner

=>Credentials for SonarQube DashBoard and Sonar properties in Sonarscanner Job

sonar.projectKey=gameoflife

sonar.projectName=gameoflife

sonar.projectVersion=1.0

sonar.login=admin

sonar.password=admin

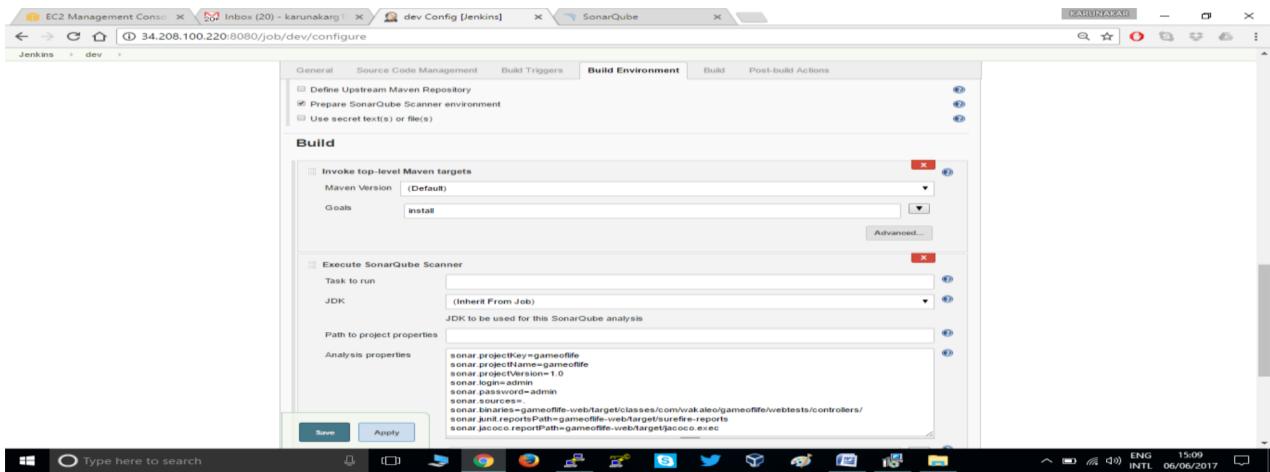
sonar.sources=.

sonar.binaries=gameoflife-web/target/classes/com/wakaleo/gameoflife/webtests/controllers/

sonar.junit.reportsPath=gameoflife-web/target/surefire-reports

sonar.jacoco.reportPath=gameoflife-web/target/jacoco.exec

These snapshot is showing that sonarproperties and credentials of the sonarqube



=>After entering the sonar properties save the project and go to Build now,

=>Below snapshots showing that build process as well as sonar scanner tests

=>After Success The job that sonartest files and reports are stored in Var/lib/jenkins /workspace directory so these files and reports we have to give in sonarDashboard to see the output.

```
[INFO] gameoflife-web ..... SUCCESS [ 8.504 s]
[INFO]
[INFO] BUILD SUCCESS
[INFO]
[INFO] Total time: 23.606 s
[INFO] Finished at: 2017-06-06T06:10:08+00:00
[INFO] Final Memory: 28M/68M
[INFO]
[INFO] -----[dev] $ ./var/lib/jenkins/tools/hudson.plugins.sonar.SonarRunnerInstallation/SonarQube/bin/sonar-scanner -e -
Dsonar.host.url=http://172.31.31.230:9000 ***** Dsonar.sources=. Dsonar.login=admin -
Dsonar.junit.reportPath=gameoflife-web/target/surefire-reports -Dsonar.jacoco.reportPath=gameoflife-web/target/jacoco.exec -
Dsonar.binaries=gameoflife-web/target/classes/com/wakaleo/gameoflife/webtests/controllers/ -Dsonar.projectVersion=1.0 -
Dsonar.projectKey=gameoflife -Dsonar.password=admin -Dsonar.projectName=gameoflife -
Dsonar.java.libraries=/var/lib/jenkins/workspace/dev/target/jacoco-it.exec
INFO Option '-e/-errors' is no longer supported and will be ignored
INFO Scanner configuration file: /var/lib/jenkins/tools/hudson.plugins.sonar.SonarRunnerInstallation/SonarQube/conf/sonar-
scanner.properties
INFO Project root configuration file: NONE
INFO SonarQube Scanner version 3.0.3.778
INFO Java version: 1.8.0_131-b12 Oracle Corporation (64-bit)
INFO Linux 4.4.0-1017-aws #1 SMP Tue Jun 6 14:40:26 UTC 2017
INFO User cache: /var/lib/jenkins/.sonar/cache
INFO Load global repositories
INFO Load global repositories (done) | time=301ms
INFO User cache: /var/lib/jenkins/.sonar/cache
INFO Load plugin index
INFO Load plugins index (done) | time=6ms
INFO SonarQube serve 5.6.6
INFO Default locale: "en_US", source code encoding: "UTF-8" (analysis is platform dependent)
INFO Process project properties
INFO Load project repositories
INFO Load project repositories (done) | time=264ms
INFO Load quality profiles
INFO Load quality profiles (done) | time=11ms
INFO Load active rules
```

```
[INFO] gameoflife-web ..... SUCCESS [ 8.504 s]
[INFO]
[INFO] BUILD SUCCESS
[INFO]
[INFO] Total time: 23.606 s
[INFO] Finished at: 2017-06-06T06:10:08+00:00
[INFO] Final Memory: 28M/68M
```

```
INFO: 108 files indexed
INFO: Quality profile for java: Sonar way
INFO: Quality profile for js: Sonar way
INFO: JaCoCoITSensor: JaCoCo IT report not found: /var/lib/jenkins/workspace/dev/target/jacoco-it.exec
INFO: Sensor JavaSquidSensor
INFO: Configured Java source version (sonar.java.source): none
INFO: JavaClasspath initialization...
WARN: Bytecode of dependencies was not provided for analysis of source files, you might end up with less precise results. Bytecode can be provided using sonar.java.libraries property
WARN: sonar.binaries and sonar.libraries are deprecated since version 2.5 of sonar-java-plugin, please use sonar.java.binaries and sonar.java.libraries instead
INFO: JavaTestClasspath initialization done: 32 ms
INFO: JavaTestClasspath initialization...
WARN: Bytecode of dependencies was not provided for analysis of test files, you might end up with less precise results. Bytecode can be provided using sonar.java.test.libraries property
INFO: JavaTestClasspath initialization done: 0 ms
INFO: Java Main Files AST scan...
INFO: 30 source files to be analyzed
INFO: 30/30 source files have been analyzed
INFO: Java Main Files AST scan done: 4229 ms
INFO: Java bytecode scan...
WARN: Class 'com/wakaleo/gameoflife/domain/Cell' is not accessible through the ClassLoader.
WARN: Class 'com/wakaleo/gameoflife/domain/Grid' is not accessible through the ClassLoader.
WARN: Class 'com/wakaleo/gameoflife/domain/GridReader' is not accessible through the ClassLoader.
WARN: Class 'com/wakaleo/gameoflife/domain/GridWriter' is not accessible through the ClassLoader.
```

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SonarQube Quality Gate

gameoflife **OK**  
server-side processing: **success**

Permalinks

- Last build (#28), 2 hr 16 min ago
- Last stable build (#28), 2 hr 16 min ago
- Last successful build (#28), 2 hr 16 min ago
- Last failed build (#27), 2 hr 35 min ago
- Last unsuccessful build (#27), 2 hr 35 min ago
- Last completed build (#28), 2 hr 16 min ago

After a SonarQube Scanner has finished analysing your code, the result of the analysis (Sources, Issues, Metrics) - the Analysis Report - is sent to SonarQube Server for final processing by the Compute Engine.

In this SonarDashborad contains

- =>code coverage
- =>Bugs
- =>code smells
- => vulnerabilities
- =>unit tests
- =>Duplications

QG	NAME	VERSION	LOC	BUGS	VULNERABILITIES	CODE SMELLS	LAST ANALYSIS
★	gameoflife	1.0	41,306	2,734	21	2,722	06:10

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Screenshot of SonarQube interface showing component issues and measures for the gameoflife project.

### Component Issues

**Type:**

- Bug: 2,734
- Vulnerability: 21
- Code Smell: 2,722

**Resolution:**

- Unresolved: 5,477
- Fixed: 0
- False Positive: 0
- Won't fix: 0
- Removed: 0

**Severity:**

- Status: 0
- New Issues: 0
- Rule: 0
- Tag: 0
- Module: 0
- Directory: 0
- File: 0
- Assignee: 0
- Author: 0

**Issues List:**

- Remove this unused import 'com.wakaleo.gameoflife.webtests.requirements.GameOfLifeApplication': L3 (3 hours ago)
- Remove this unused import 'net.thucydides.core.annotations.Feature': L5 (3 hours ago)
- Remove this unused import 'net.thucydides.core.annotations.Story': L9 (3 hours ago)
- Make this array "private": L31 (3 hours ago)
- Reorder the modifiers to comply with the Java Language Specification: L31 (3 hours ago)
- 7 duplicated blocks of code must be removed.: L31 (3 hours ago)
- Remove this unused import 'com.wakaleo.gameoflife.webtests.requirements.GameOfLifeApplication': L3 (3 hours ago)

### Component Measures

**Reliability:**

2,734 Bugs	0 New Bugs	E Reliability Rating	Reliability Remediation Effort: 51d
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**Security:**

21 Vulnerabilities	0 New Vulnerabilities	D Security Rating	Security Remediation Effort: 5h 40min
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**Maintainability:**

2,722 Code Smells	0 New Code Smells	A Maintainability Rating	Technical Debt: 57d Added Technical Debt: 0 Technical Debt Ratio: 2.2% Technical Debt Ratio on New Code: 0.0% Effort to Reach Maintainability Rating A: 0
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**Coverage:**

90.7% Coverage	7 Unit Tests	Line Coverage: 92.9% Condition Coverage: 83.3% Uncovered Lines: 3 Uncovered Conditions: 2
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SonarQube Dashboard

EC2 Management Console | 204 Inbox (20) - karunakarg | sonar-project [Jenkins] | gameoflife

KARUNAKAR June 6, 2017 11:40 AM Version 1.0

**gameoflife**

Issues Measures Code Dashboards Administration

Search

	LINES OF CODE	BUGS	VULNERABILITIES	CODE SMELLS	COVERAGE	DUPLICATIONS
gameoflife	41k	2.7k	21	2.7k	90.7%	8.7%
gameoflife-acceptance-tests/src/test/java/com/wakaleo/gameoflife/webtests	256	0	2	17	25.0%	
gameoflife-acceptance-tests/src/test/java/com/wakaleo/gameoflife/webtests/pages	100	0	0	2	0.0%	
gameoflife-acceptance-tests/src/test/java/com/wakaleo/gameoflife/webtests/requirements	18	0	0	4	0.0%	
gameoflife-acceptance-tests/src/test/java/com/wakaleo/gameoflife/webtests/steps	58	0	0	9	0.0%	
gameoflife-core/src/main/java/com/wakaleo/gameoflife/domain	227	0	0	7	0.0%	
gameoflife-core/src/test/java/com/wakaleo/gameoflife/domain	526	0	0	8	0.0%	
gameoflife-core/src/test/java/com/wakaleo/gameoflife/integration	10	0	0	4	0.0%	
gameoflife-core/src/test/java/com/wakaleo/gameoflife/test/categories	9	0	0	0	0.0%	
gameoflife-web/src/main/java/com/wakaleo/gameoflife/webtests/controllers	99	1	1	2	90.7%	0.0%
gameoflife-web/src/test/java/com/wakaleo/gameoflife/webtests/controllers	78	0	0	0	0.0%	
gameoflife-web/target/site/thucydides/bootstrap.js	1.4k	62	0	138	0.0%	
gameoflife-web/target/site/thucydides/databables/media.js	4.8k	309	8	400	0.2%	
gameoflife-web/target/site/thucydides/jit	9.2k	703	0	496	7.2%	
gameoflife-web/target/site/thucydides/jit/Extras	1.1k	31	0	41	29.6%	
gameoflife-web/target/site/thucydides/jplot	0	0	0	0	0.0%	
gameoflife-web/target/site/thucydides/jplot/plugins	11k	921	4	710	14.0%	
gameoflife-web/target/site/thucydides/jtree	2.4k	10	0	43	0.0%	
gameoflife-web/target/site/thucydides/jqueryui.js	0	0	0	0	0.0%	
gameoflife-web/target/site/thucydides/nivo-slider	607	198	2	95	6.9%	
gameoflife-web/target/site/thucydides/scripts	6.4k	296	2	470	4.5%	
target/easyb	3.4k	203	4	274	0.0%	

21 of 21 shown

The embedded database should be used for evaluation purpose only.

Windows Taskbar: Type here to search, Start button, File Explorer, Task View, Taskbar icons, Network, Mail, Photos, OneDrive, Edge, Google Chrome, SonarQube, Jenkins, Gameoflife, System tray: ENG INTL 06/06/2017 13:53

## SonarQube Dashboard

EC2 Management Console | 204 Inbox (20) - karunakarg | sonar-project [Jenkins] | SonarQube - gameoflife

KARUNAKAR June 6, 2017 11:40 AM Version 1.0

**gameoflife**

Issues Measures Code Dashboards Administration

Custom

Lines Of Code	Files	Functions
41,306	108	5,230
JavaScript	39,925	Directories Lines Classes Statements Accessors
Java	1,381	21 69,324 36 35,774 1

Unit Tests Coverage	Unit Test Success
90.7%	100.0%
Line Coverage	Condition Coverage
92.9%	83.3%
Failures Errors Tests Execution Time	0 0 7 692 ms

Duplications
6.7%
Lines Blocks Files
4,650 244 27

Documentation	Comments
4.3%	22.9%
Public API Pub. Undoc. API	Comment Lines
162 155	12,291

Issues

Total	Technical Debt	Reliability Remediation Effort	Security Remediation Effort
5,477	57d	51d	5h 40min
	Blocker Critical Major Minor Info	1 30 4,816 568 62	

June 6, 2017 Lines of Code: 41,306

05:55 06 AM 06:05 06:10

UNRESOLVED ISSUES

Total	June 6, 2017
5.5k	5.5k

The embedded database should be used for evaluation purpose only.

SonarQube™ technology is powered by SonarSource SA.

Windows Taskbar: Type here to search, Start button, Taskbar icons, Network, Mail, Photos, OneDrive, Edge, Google Chrome, SonarQube, Jenkins, Gameoflife, System tray: ENG INTL 06/06/2017 13:54

## Pass/Fail Notification:

Once an analysis is done, a report is sent to the SonarQube server to be integrated. At the end of this integration, a standard web hook mechanism lets you notify any external system to do whatever you want: trigger an alarm, update a wallboard, and notify a chat room.

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## 15. Artifactory

### **DOCUMENTED BY PAVAN KUMAR RANJIT.**

As the first, and only, universal Artefact Repository Manager on the market, JFrog Artifactory fully supports software packages created by any language or technology.

Artifactory is the only enterprise-ready repository manager available today, supporting secure, clustered, High Availability Docker registries.

Integrating with all major **CI/CD** and **DevOps** tools, Artifactory provides an end-to-end, automated and bullet-proof solution for tracking artefacts from development to production.

#### **What is a Binary Repository Manager?**

It's a single gateway through which you access external artefacts, and store your own build artefacts. By centralizing the management of all binary artefacts, it overcomes the complexity arising from the diversity of binary types, their position in the workflow and the dependencies between them.

#### **Top 10 Reasons You Should Use a Binary Repository Manager**

- Increase Build Speed and Proxy Remote Artefacts.** Eliminate redundant downloads by automatically caching artefacts for the entire development team.
- Manage Artefact Lifecycle.** Promote artefacts from development through QA to production and distribution.
- Avoid License Violations.** Receive alerts on potential violations. Control all licenses used in your software by managing third party artefacts in one central location.
- Keep Builds Reproducible.** Integrate with leading CI servers and keep builds reproducible with exhaustive build information to track and protect all artefacts used by your CI builds.
- Enforce Module Security.** Control access and track all changes made to artefacts. Block unwanted external requests, and define who can create, delete or overwrite artefacts.
- Control Module Consumption.** Define access rules for users and groups that consume artefacts.
- Share Artefacts Across Teams.** Easily distribute artefacts produced by different teams in your organization, and share them as dependencies between the teams as needed.
- Clean Up CI Artefacts Clutter.** Automatically clean up integration and snapshot artefacts produced during the CI build process.
- Locate Artefacts Instantly.** Easily find artefacts with advanced search capabilities, including class search, and run bulk operations on the result set.
- Automate While You “REST”.** Automate and integrate all aspects of artefact management within your organization using a powerful REST API.

#### **The Most Powerful Repository Around**

#### **Download Blocking**

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We all know that prevention is better than cure. The same is true of your software systems. Removing potentially harmful dependencies once they are already deeply entrenched in your production software can require finding an alternative component, refactoring your software, and running several cycles of QA before you're finally back where you were. Through Artifactory's integration with Xray, you can avoid this kind of scenario by preventing artefacts that X-ray has detected to have issues or vulnerabilities from being downloaded from your repositories and used in the first place.

## Chef

The concept of "Infrastructure as Code" has been widely adopted by most enterprise IT organizations. Chef provides IT and DevOps with the tools they need to manage the different environments they need to spin up. Through support for **Chef Cookbook** repositories, Artifactory brings a new dimension to Infrastructure as Code. By managing configuration packages through a binary repository, IT and DevOps organizations working hard on configuration management with Chef now have many more capabilities at their fingertips.

## Puppet

The concept of "Infrastructure as Code" has been widely adopted by most enterprise IT organizations. Puppet provides IT and DevOps with the tools they need to manage the different environments they need to spin up. Through support for **Puppet** repositories, Artifactory brings a new dimension to Infrastructure as Code. By managing configuration packages through a binary repository, IT and DevOps organizations working hard on configuration management with Puppet now have many more capabilities at their fingertips.

## Docker

Use Artifactory to manage your in-house Docker images. Distribute and share your images among teams across your organization, whether on-site or at remote locations, just like using Docker Hub Enterprise. Control access to your images using secure "docker pull", and never have to rely on the internet to access them. Once your images are stored in your repository, find them easily with smart search.

## Distribution Repository

Artifactory takes its integration with JFrog Bintray to the next step with Distribution Repositories streaming liquid software from Artifactory to Bintray. Distribution repositories provide an easy way to move artefacts from Artifactory to Bintray, for distribution to end users. As opposed to other repositories in Artifactory, distribution repositories are not typed to a particular package format, but rather, are governed by a set of rules that give fine-grained control over how to specify exactly where an artefact in the distribution repository should be routed to in its corresponding repository in Bintray.

## Google Cloud Storage

Upload artefacts indefinitely to Google's secure and highly available storage and let Artifactory manage them for you through full support for Google Cloud Storage (GCS). When used with Artifactory HA your whole system is highly available with no single-point-of-failure. Ready to start

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