

# Nexus Artifactory Configurations With Basic Maven Repository

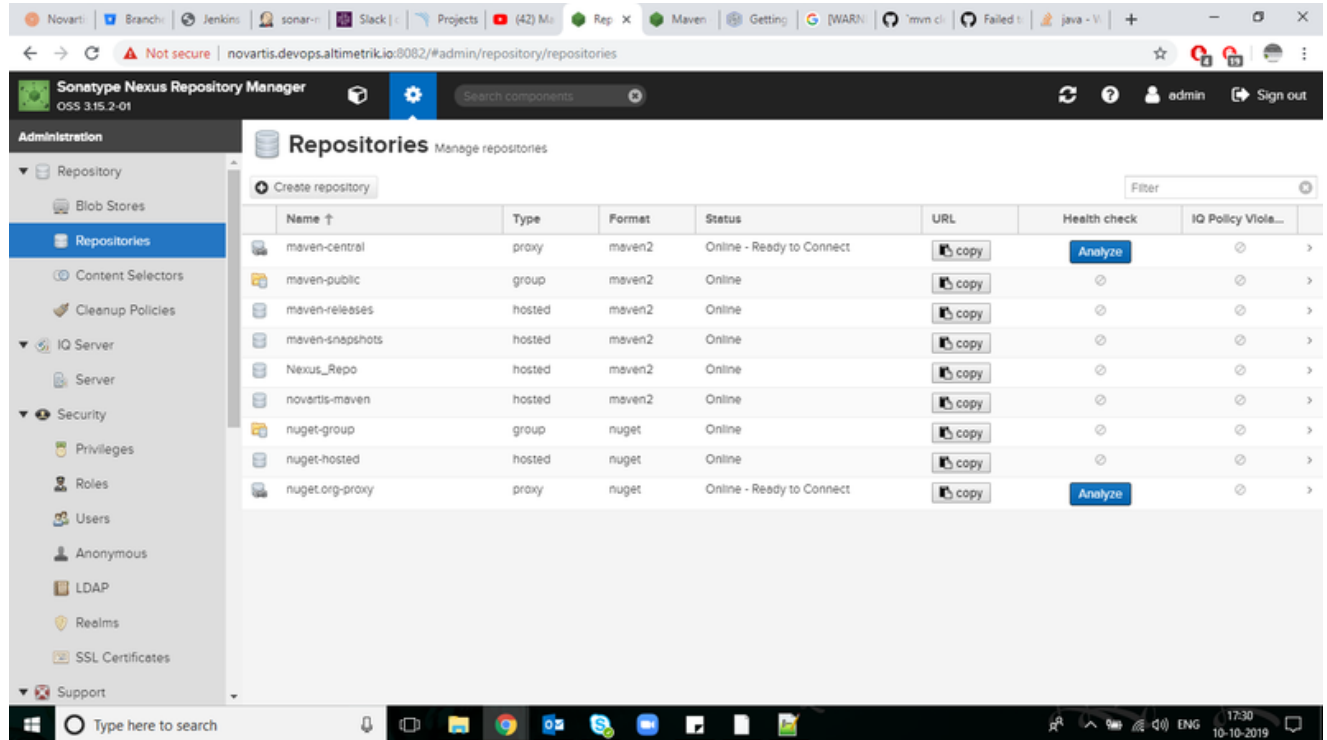
In this document; steps were mentioned for the basic nexus configurations and maven project artifacts upload.

## 1. Nexus Repository Creation -

1.1 Open the Novartis Nexus URL "<http://novartis.devops.altimetrik.io:8082/>"

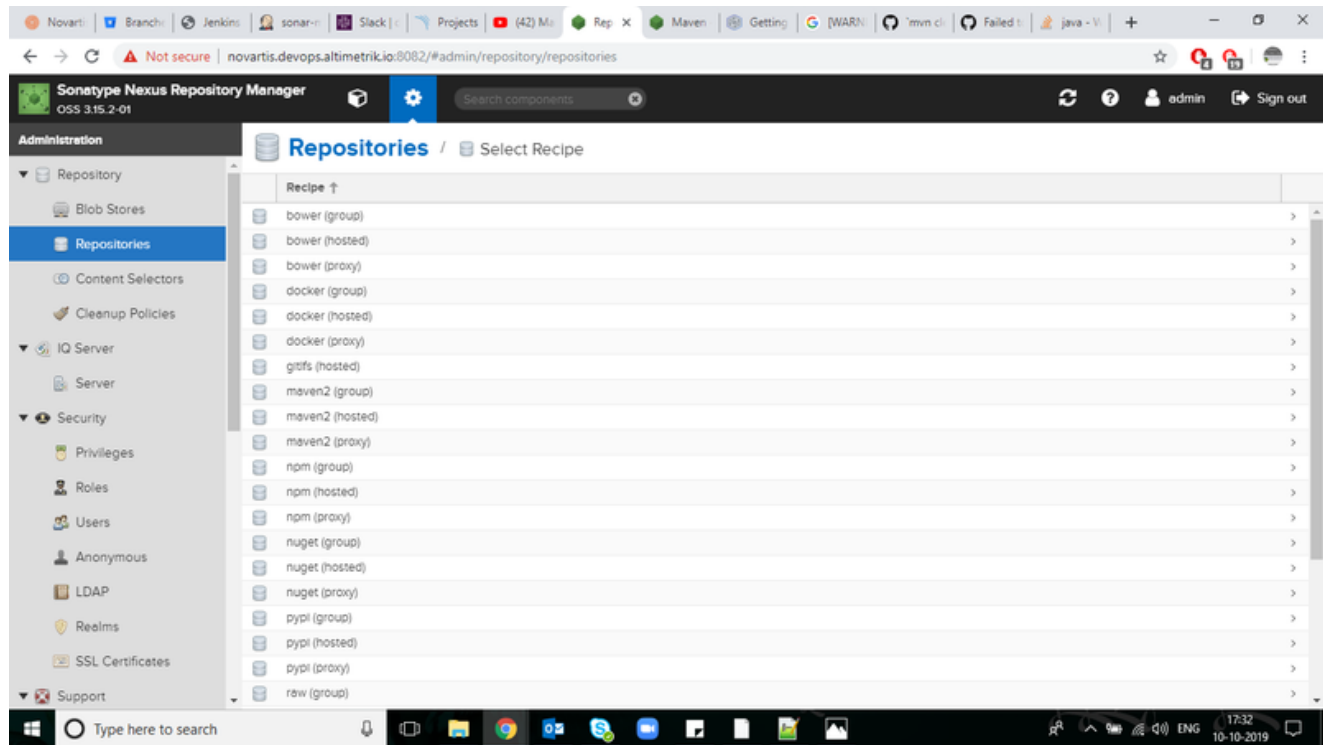
1.2 Login with credentials and Dashboard will be loaded.

1.3 Go to Administration section Repositories admin will be able to see a lot of repositories like below screen shot-

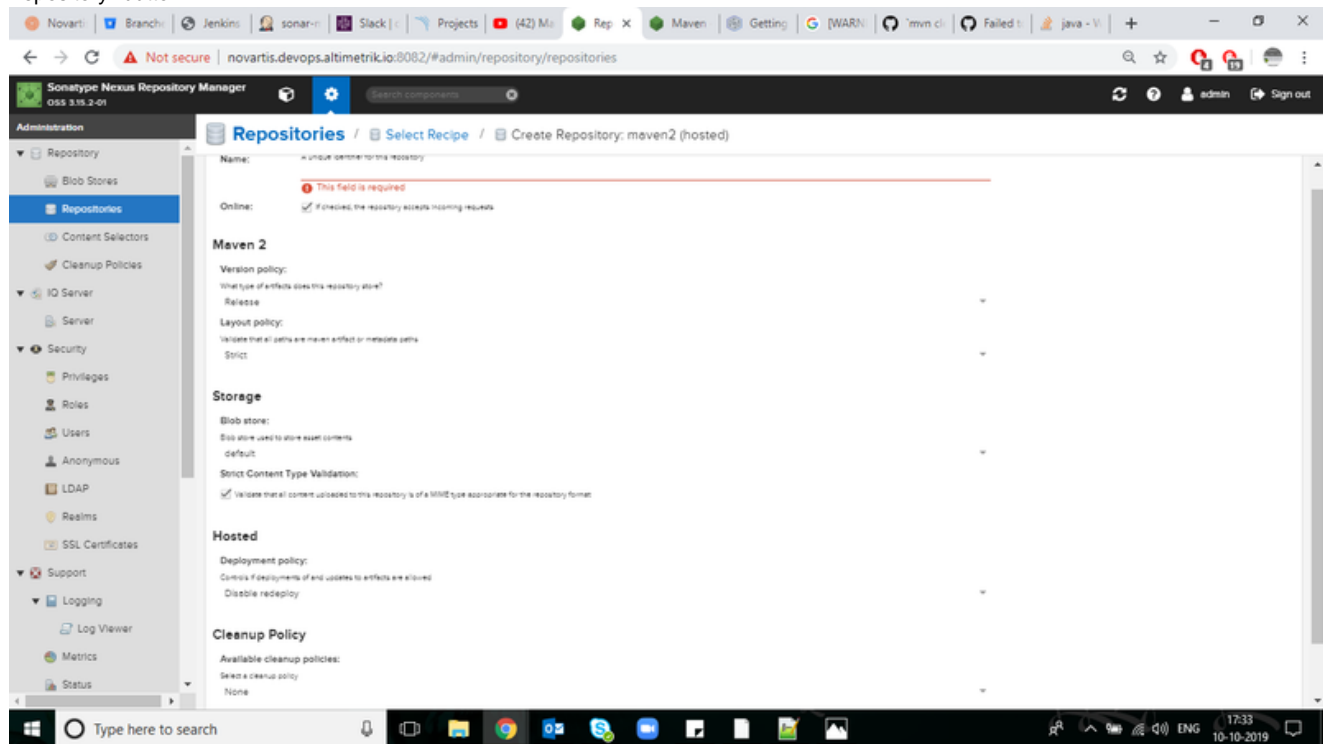


Name ↑	Type	Format	Status	URL	Health check	IQ Policy Viola...
maven-central	proxy	maven2	Online - Ready to Connect	<a href="#">copy</a>	<a href="#">Analyze</a>	
maven-public	group	maven2	Online	<a href="#">copy</a>		
maven-releases	hosted	maven2	Online	<a href="#">copy</a>		
maven-snapshots	hosted	maven2	Online	<a href="#">copy</a>		
Nexus_Repo	hosted	maven2	Online	<a href="#">copy</a>		
novartis-maven	hosted	maven2	Online	<a href="#">copy</a>		
nuget-group	group	nuget	Online	<a href="#">copy</a>		
nuget-hosted	hosted	nuget	Online	<a href="#">copy</a>		
nuget.org-proxy	proxy	nuget	Online - Ready to Connect	<a href="#">copy</a>	<a href="#">Analyze</a>	

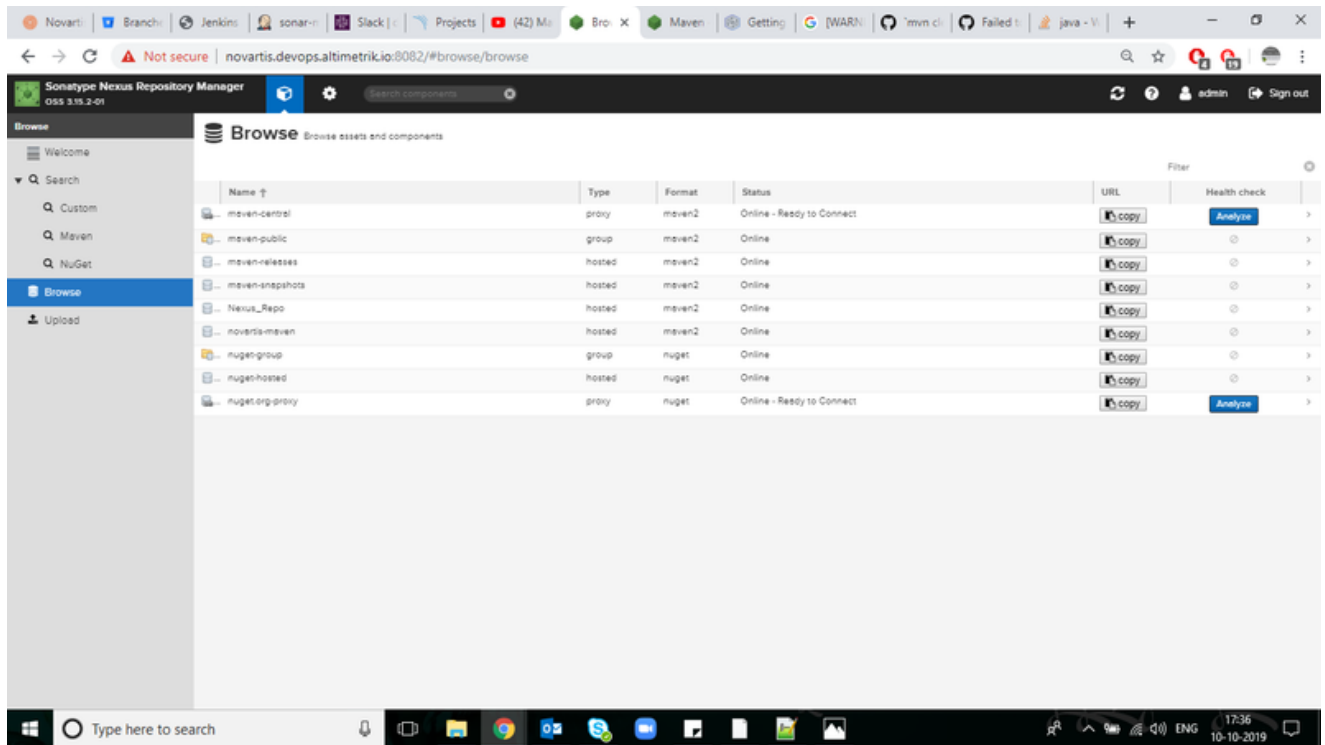
1.4 Create a new repository by clicking on Create Repository. Admin can select the type of repository to be created i.e Maven, Python, Nuget, Npm etc.Choose "maven2 (hosted)" to create the Maven repository.



1.5 Admin needs to mention the Name, Version Policy, Deployment Policy and rest of details can be left as default then click on "Create Repository" button.

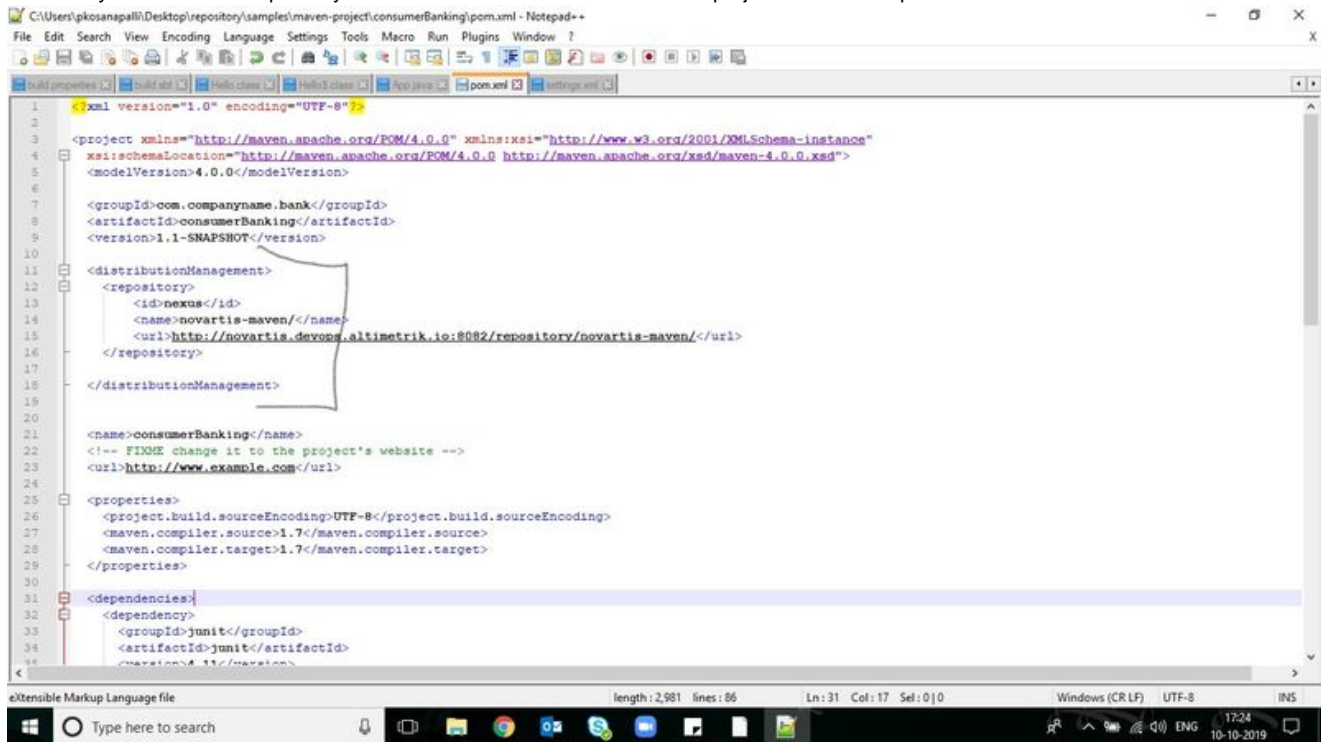


1.6 You will lead to dashboard and can see created maven repositories like below-



## 2. Maven - Nexus Configuration in POM.XML

2.1 Go to your code base repository like Gitlab or Bitbucket. Create maven project and edit the pom.xml as below -



2.2 Edit the setting.xml in .m2 folder like below -

```
1  <?xml version="1.0" encoding="UTF-8"?>
2
3  <settings>
4    <servers>
5      <server>
6        <id>nexus</id>
7        <url>http://novartis.devops.altimetrik.io:8082/</url>
8        <username>admin</username>
9        <password>password123</password>
10     </server>
11   </servers>
12
13   <mirror>
14     <id>nexus</id>
15     <url>http://novartis.devops.altimetrik.io:8082/</url>
16     <mirrorOf>*</mirrorOf>
17   </mirror>
18 </settings>
19
```

2.3 Now build the java application with the maven pom.xml the commands are below-

2.3.1 mvn clean

2.3.2 mvn package

2.3.3 mvn deploy

2.3.4 mvn clean install

```
MINGW64 C:\Users\pkosanapalli\Desktop\repository\samples\maven-project\consumerBanking
$ mvn clean
[WARNING] Some problems were encountered while building the effective settings
[WARNING] Unrecognised tag: 'url' (position: START_TAG seen ...<id>nexus</id><n\t\t<url>... 07:8) @ C:\Users\pkosanapalli\Desktop\documents\apache-maven-3.6.2\bin\apache-maven-3.6.2\conf\settings.xml, line 7, column 8
[WARNING]
[INFO] Scanning for projects...
[INFO] -----< com.companyname.bank:consumerBanking >-----
[INFO] Building consumerBanking 1.0-SNAPSHOT
[INFO] -----[ jar ]-----
[INFO] --- maven-clean-plugin:3.1.0:clean (default-clean) @ consumerBanking ---
[INFO] Deleting C:\Users\pkosanapalli\Desktop\repository\samples\maven-project\consumerBanking\target
[INFO] BUILD SUCCESS
[INFO] Total time: 0.526 s
[INFO] Finished at: 2019-10-10T17:16:05:30
[INFO] -----

MINGW64 C:\Users\pkosanapalli\Desktop\repository\samples\maven-project\consumerBanking
$
$ mvn package
[WARNING] Some problems were encountered while building the effective settings
[WARNING] Unrecognised tag: 'url' (position: START_TAG seen ...<id>nexus</id><n\t\t<url>... 07:8) @ C:\Users\pkosanapalli\Desktop\documents\apache-maven-3.6.2\bin\apache-maven-3.6.2\conf\settings.xml, line 7, column 8
[WARNING]
[INFO] Scanning for projects...
[INFO] -----< com.companyname.bank:consumerBanking >-----
[INFO] Building consumerBanking 1.0-SNAPSHOT
[INFO] -----[ jar ]-----
[INFO] --- maven-resources-plugin:3.0.2:resources (default-resources) @ consumerBanking ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory C:\Users\pkosanapalli\Desktop\repository\samples\maven-project\consumerBanking\src\main\resources
[INFO] --- maven-compiler-plugin:3.8.0:compile (default-compile) @ consumerBanking ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 1 source file to C:\Users\pkosanapalli\Desktop\repository\samples\maven-project\consumerBanking\target\classes
[INFO] --- maven-resources-plugin:3.0.2:testResources (default-testResources) @ consumerBanking ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory C:\Users\pkosanapalli\Desktop\repository\samples\maven-project\consumerBanking\src\test\resources
```

```
MINGW64/c:/Users/pkasanapalli/Desktop/repository/samples/maven-project/consumerBanking
[WARNING] Some problems were encountered while building the effective settings
[WARNING] Unrecognised tag: 'url' (position: START_TAG seen ...<id>nexus</id><n(t)<url>... @7:8) @ C:\Users\pkasanapalli\Desktop\documents\apache-maven-3.6.2-bin\apache-maven-3.6.2\conf\sett
ings.xml, line 7, column 8
[WARNING]
[INFO] Scanning for projects...
[INFO]
[INFO] -----< com.companyname.bank:consumerBanking >-----
[INFO] Building consumerBanking 1.0-SNAPSHOT
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- maven-resources-plugin:3.0.2:resources (default-resources) @ consumerBanking ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory C:\Users\pkasanapalli\Desktop\repository\samples\maven-project\consumerBanking\src\main\resources
[INFO]
[INFO] --- maven-compiler-plugin:3.8.0:compile (default-compile) @ consumerBanking ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 1 source file to C:\Users\pkasanapalli\Desktop\repository\samples\maven-project\consumerBanking\target\classes
[INFO]
[INFO] --- maven-resources-plugin:3.0.2:testResources (default-testResources) @ consumerBanking ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory C:\Users\pkasanapalli\Desktop\repository\samples\maven-project\consumerBanking\src\test\resources
[INFO]
[INFO] --- maven-compiler-plugin:3.8.0:testCompile (default-testCompile) @ consumerBanking ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 1 source file to C:\Users\pkasanapalli\Desktop\repository\samples\maven-project\consumerBanking\target\test-classes
[INFO]
[INFO] --- maven-surefire-plugin:2.22.1:test (default-test) @ consumerBanking ---
[INFO]
[INFO] -----
[INFO] T E S T S
[INFO] -----
[INFO] Running com.companyname.bank.AppTest
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.027 s - in com.companyname.bank.AppTest
[INFO]
[INFO] Results:
[INFO]
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[INFO]
[INFO] --- maven-jar-plugin:3.0.2:jar (default-jar) @ consumerBanking ---
[INFO] Building jar: C:\Users\pkasanapalli\Desktop\repository\samples\maven-project\consumerBanking\target\consumerBanking-1.0-SNAPSHOT.jar
[INFO]
[INFO] BUILD SUCCESS
[INFO]
[INFO] Total time: 3.560 s
[INFO] Finished at: 2019-10-10T17:16:32+05:30
[INFO]
[INFO]
pkasanapalli@BAIPL-LT-711 MINGW64 ~/Desktop/repository/samples/maven-project/consumerBanking (master)
$
```

```
MINGW64/c:/Users/pkasanapalli/Desktop/repository/samples/maven-project/consumerBanking
pkasanapalli@BAIPL-LT-711 MINGW64 ~/Desktop/repository/samples/maven-project/consumerBanking (master)
$ mvn deploy
[WARNING] Some problems were encountered while building the effective settings
[WARNING] Unrecognised tag: 'url' (position: START_TAG seen ...<id>nexus</id><n(t)<url>... @7:8) @ C:\Users\pkasanapalli\Desktop\documents\apache-maven-3.6.2-bin\apache-maven-3.6.2\conf\sett
ings.xml, line 7, column 8
[WARNING]
[INFO] Scanning for projects...
[INFO]
[INFO] -----< com.companyname.bank:consumerBanking >-----
[INFO] Building consumerBanking 1.0-SNAPSHOT
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- maven-resources-plugin:3.0.2:resources (default-resources) @ consumerBanking ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory C:\Users\pkasanapalli\Desktop\repository\samples\maven-project\consumerBanking\src\main\resources
[INFO]
[INFO] --- maven-compiler-plugin:3.8.0:compile (default-compile) @ consumerBanking ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- maven-resources-plugin:3.0.2:testResources (default-testResources) @ consumerBanking ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory C:\Users\pkasanapalli\Desktop\repository\samples\maven-project\consumerBanking\src\test\resources
[INFO]
[INFO] --- maven-compiler-plugin:3.8.0:testCompile (default-testCompile) @ consumerBanking ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- maven-surefire-plugin:2.22.1:test (default-test) @ consumerBanking ---
[INFO]
[INFO] -----
[INFO] T E S T S
[INFO] -----
[INFO] Running com.companyname.bank.AppTest
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.033 s - in com.companyname.bank.AppTest
[INFO]
[INFO] Results:
[INFO]
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[INFO]
[INFO] --- maven-jar-plugin:3.0.2:jar (default-jar) @ consumerBanking ---
[INFO]
[INFO] --- maven-install-plugin:2.5.2:install (default-install) @ consumerBanking ---
[INFO] Installing C:\Users\pkasanapalli\Desktop\repository\samples\maven-project\consumerBanking\target\consumerBanking-1.0-SNAPSHOT.jar to C:\Users\pkasanapalli.m2\repository\com\companyname
\bank\consumerBanking\1.0-SNAPSHOT\consumerBanking-1.0-SNAPSHOT.jar
[INFO] Installing C:\Users\pkasanapalli\Desktop\repository\samples\maven-project\consumerBanking\pom.xml to C:\Users\pkasanapalli.m2\repository\com\companyname\bank\consumerBanking\1.0-SNAPSH
OT\consumerBanking-1.0-SNAPSHOT.pom
[INFO]
[INFO] --- maven-deploy-plugin:2.8.2:deploy (default-deploy) @ consumerBanking ---
```



```
MINGW64/c/Users/pkasanapalli/Desktop/repository/samples/maven-project/consumerBanking
[INFO] --- maven-resources-plugin:3.0.2:testResources (default-testResources) @ consumerBanking ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory C:\Users\pkasanapalli\Desktop\repository\samples\maven-project\consumerBanking\src\test\resources
[INFO]
[INFO] --- maven-compiler-plugin:3.8.0:testCompile (default-testCompile) @ consumerBanking ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- maven-surefire-plugin:2.22.1:test (default-test) @ consumerBanking ---
[INFO]
[INFO] -----
[INFO] T E S T S
[INFO] -----
[INFO] Running com.companyname.bank.AppTest
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.033 s - in com.companyname.bank.AppTest
[INFO]
[INFO] Results:
[INFO]
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[INFO] --- maven-jar-plugin:3.0.2:jar (default-jar) @ consumerBanking ---
[INFO]
[INFO] --- maven-install-plugin:2.5.2:install (default-install) @ consumerBanking ---
[INFO] Installing C:\Users\pkasanapalli\Desktop\repository\samples\maven-project\consumerBanking\target\consumerBanking-1.0-SNAPSHOT.jar to C:\Users\pkasanapalli\.m2\repository\com\companyname\bank\consumerBanking\1.0-SNAPSHOT\consumerBanking-1.0-SNAPSHOT.jar
[INFO] Installing C:\Users\pkasanapalli\Desktop\repository\samples\maven-project\consumerBanking\pom.xml to C:\Users\pkasanapalli\.m2\repository\com\companyname\bank\consumerBanking\1.0-SNAPSHOT\consumerBanking-1.0-SNAPSHOT.pom
[INFO]
[INFO] --- maven-deploy-plugin:2.8.2:deploy (default-deploy) @ consumerBanking ---
[INFO] Downloading from nexus: http://novartis.devops.altimetrik.io:8082/repository/novartis-maven/com/companyname/bank/consumerBanking/1.0-SNAPSHOT/maven-metadata.xml
[INFO] Uploading to nexus: http://novartis.devops.altimetrik.io:8082/repository/novartis-maven/com/companyname/bank/consumerBanking/1.0-SNAPSHOT/consumerBanking-1.0-20191010.114713-1.jar (3.0 kB at 1.2 kB/s)
[INFO] Uploading to nexus: http://novartis.devops.altimetrik.io:8082/repository/novartis-maven/com/companyname/bank/consumerBanking/1.0-SNAPSHOT/consumerBanking-1.0-20191010.114713-1.pom (3.0 kB at 1.1 kB/s)
[INFO] Downloading from nexus: http://novartis.devops.altimetrik.io:8082/repository/novartis-maven/com/companyname/bank/consumerBanking/maven-metadata.xml
[INFO] Uploading to nexus: http://novartis.devops.altimetrik.io:8082/repository/novartis-maven/com/companyname/bank/consumerBanking/1.0-SNAPSHOT/maven-metadata.xml
[INFO] Uploading to nexus: http://novartis.devops.altimetrik.io:8082/repository/novartis-maven/com/companyname/bank/consumerBanking/maven-metadata.xml (779 B at 299 B/s)
[INFO] Uploading to nexus: http://novartis.devops.altimetrik.io:8082/repository/novartis-maven/com/companyname/bank/consumerBanking/maven-metadata.xml (293 B at 112 B/s)
[INFO]
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 16.302 s
[INFO] Finished at: 2019-10-10T17:24:05:30
[INFO]
[INFO] -----
pkasanapalli@BAIPL-LT-711 MINGW64 ~/Desktop/repository/samples/maven-project/consumerBanking (master)
$ |
```

2.4 When build is successful and same can be observed in repository and maven package in nexus. Artifacts are uploaded into Nexus Repository.

The screenshot shows the Sonatype Nexus Repository Manager web interface. The top navigation bar includes links for Novartis, Branches, Jenkins, Sonar, Slack, Projects, and a search bar. The main content area is titled "Maven" and displays search results for components by Maven coordinates. The search criteria are set to "Any" for Group Id, Artifact Id, Version, Base Version, Classifier, and Extension. The results table lists three artifacts:

Name	Group	Version	Format
consumerBanking	com.companyname.bank	1.0-SNAPSHOT	maven2
novawar	com.nova	1.0	maven2
novawar	com.nova	(4)	maven2

The top screenshot shows the Sonatype Nexus Repository Manager interface with the search results for 'consumerBanking' in the 'novartis-maven' repository. The search results table lists the following artifacts:

Name
com/companyname/bank/consumerBanking/1.0-SNAPSHOT/consumerBanking-1.0-20191010.114713-1.jar
com/companyname/bank/consumerBanking/1.0-SNAPSHOT/consumerBanking-1.0-20191010.114713-1.jar.md5
com/companyname/bank/consumerBanking/1.0-SNAPSHOT/consumerBanking-1.0-20191010.114713-1.jar.sha1
com/companyname/bank/consumerBanking/1.0-SNAPSHOT/consumerBanking-1.0-20191010.114713-1.pom
com/companyname/bank/consumerBanking/1.0-SNAPSHOT/consumerBanking-1.0-20191010.114713-1.pom.md5
com/companyname/bank/consumerBanking/1.0-SNAPSHOT/consumerBanking-1.0-20191010.114713-1.pom.sha1

The bottom screenshot shows the 'Browse' view for 'novartis-maven'. The tree structure shows the following hierarchy:

- com
  - companyname
    - bank
      - consumerBanking
        - 1.0-SNAPSHOT
          - consumerBanking-1.0-20191010.114713-1
            - consumerBanking-1.0-20191010.114713-1.jar
            - consumerBanking-1.0-20191010.114713-1.jar.md5
            - consumerBanking-1.0-20191010.114713-1.jar.sha1
            - consumerBanking-1.0-20191010.114713-1.pom
            - consumerBanking-1.0-20191010.114713-1.pom.md5
            - consumerBanking-1.0-20191010.114713-1.pom.sha1
          - maven-metadata.xml
          - maven-metadata.xml.md5
          - maven-metadata.xml.sha1
          - maven-metadata.xml
          - maven-metadata.xml.md5
          - maven-metadata.xml.sha1

The summary panel for 'consumerBanking' shows the following details:

Summary	
Repository	novartis-maven
Format	maven2
Group	com.companyname.bank
Name	consumerBanking
Version	1.0-20191010.114713-1
Most popular version	
Age	
Popularity	

The usage panel shows the following information:

Apache Maven

Insert this snippet into your pom.xml

```
<dependency>
```

2.5 Change the version in pom.xml and build the application again with "MVN CLEAN INSTALL" command.

2.6 New version or changes are also uploaded in Nexus.

Sonatype Nexus Repository Manager OSS 3.15.2-01

Not secure | novartis.devops.altimetrik.io:8082/#browse/browse:novartis-maven

### Browse / novartis-maven

Upload component HTML View Filter Advanced search...

- com
  - companyname
    - bank
      - consumerBanking
        - 1.0-SNAPSHOT
          - 1.1-SNAPSHOT
            - maven-metadata.xml
              - maven-metadata.xml.md5
                - maven-metadata.xml.sha1

Type here to search

Sonatype Nexus Repository Manager OSS 3.15.2-01

Not secure | novartis.devops.altimetrik.io:8082/#browse/search/custom

### Q Custom

Search for components by custom criteria

More criteria

Name	Group	Version	Format
consumerBanking	com.companyname.bank	1.0-SNAPSHOT	maven2 >
consumerBanking	com.companyname.bank	1.1-SNAPSHOT	maven2 >
novartis	com.novartis	1.0	maven2 >
novartis	com.novartis	[4]	maven2 >

Type here to search