



Experiment No. 9

Uploading Artifacts on Nexus Server using Command Line

Download nexus:

Name	Date modified	Type	Size
 nexus-3.18.1-01	10/6/2020 1:21 PM	File folder	
 sonatype-work	10/6/2020 1:21 PM	File folder	

Run nexus on command line:

```
D:\A_semester_5\CICD\nexus\nexus-3.18.1-01\bin>nexus.exe /run
2020-10-13 16:16:26,461+0530 INFO [FelixStartLevel] *SYSTEM org.sonatype.nexus.pax.logging.NexusLogActivator - start
2020-10-13 16:17:21,047+0530 WARN [FelixStartLevel] *SYSTEM uk.org.lidalia.sysoutslf4j.context.SysOutOverSLF4JInitialiser - Your logging framework class org.ops4j.p
it needs access to the standard println methods on the console you will need to register it by calling registerLoggingSystemPackage
2020-10-13 16:17:21,049+0530 INFO [FelixStartLevel] *SYSTEM uk.org.lidalia.sysoutslf4j.context.SysOutOverSLF4J - Package org.ops4j.pax.logging.slf4j registered; all
e allowed to print to System.out and System.err
2020-10-13 16:17:21,056+0530 INFO [FelixStartLevel] *SYSTEM uk.org.lidalia.sysoutslf4j.context.SysOutOverSLF4J - Replaced standard System.out and System.err PrintSt
2020-10-13 16:17:21,061+0530 INFO [FelixStartLevel] *SYSTEM uk.org.lidalia.sysoutslf4j.context.SysOutOverSLF4J - Redirected System.out and System.err to SLF4J for th
2020-10-13 16:17:21,072+0530 INFO [FelixStartLevel] *SYSTEM org.sonatype.nexus.bootstrap.ConfigurationBuilder - Properties:
2020-10-13 16:17:21,074+0530 INFO [FelixStartLevel] *SYSTEM org.sonatype.nexus.bootstrap.ConfigurationBuilder - application-host='0.0.0.0'
2020-10-13 16:17:21,075+0530 INFO [FelixStartLevel] *SYSTEM org.sonatype.nexus.bootstrap.ConfigurationBuilder - application-port='8083'
2020-10-13 16:17:21,076+0530 INFO [FelixStartLevel] *SYSTEM org.sonatype.nexus.bootstrap.ConfigurationBuilder - fabric.etc='D:\A_semester_5\CICD\nexus\nexus-3.18.1
2020-10-13 16:17:21,076+0530 INFO [FelixStartLevel] *SYSTEM org.sonatype.nexus.bootstrap.ConfigurationBuilder - jetty.etc='D:\A_semester_5\CICD\nexus\nexus-3.18.1
2020-10-13 16:17:21,077+0530 INFO [FelixStartLevel] *SYSTEM org.sonatype.nexus.bootstrap.ConfigurationBuilder - karaf.base='D:\A_semester_5\CICD\nexus\nexus-3.18.1
2020-10-13 16:17:21,077+0530 INFO [FelixStartLevel] *SYSTEM org.sonatype.nexus.bootstrap.ConfigurationBuilder - karaf.data='D:\A_semester_5\CICD\nexus\sonatype-wor
2020-10-13 16:17:21,078+0530 INFO [FelixStartLevel] *SYSTEM org.sonatype.nexus.bootstrap.ConfigurationBuilder - karaf.etc='D:\A_semester_5\CICD\nexus\nexus-3.18.1
2020-10-13 16:17:21,079+0530 INFO [FelixStartLevel] *SYSTEM org.sonatype.nexus.bootstrap.ConfigurationBuilder - karaf.home='D:\A_semester_5\CICD\nexus\nexus-3.18.1
2020-10-13 16:17:21,080+0530 INFO [FelixStartLevel] *SYSTEM org.sonatype.nexus.bootstrap.ConfigurationBuilder - karaf.instances='D:\A_semester_5\CICD\nexus\sonatyp
2020-10-13 16:17:21,080+0530 INFO [FelixStartLevel] *SYSTEM org.sonatype.nexus.bootstrap.ConfigurationBuilder - logback.etc='D:\A_semester_5\CICD\nexus\nexus-3.18
2020-10-13 16:17:21,081+0530 INFO [FelixStartLevel] *SYSTEM org.sonatype.nexus.bootstrap.ConfigurationBuilder - nexus-args='D:\A_semester_5\CICD\nexus\nexus-3.18.1
nexus\nexus-3.18.1-01/etc/jetty/jetty-http.xml,D:\A_semester_5\CICD\nexus\nexus-3.18.1-01/etc/jetty/jetty-requestlog.xml'
2020-10-13 16:17:21,081+0530 INFO [FelixStartLevel] *SYSTEM org.sonatype.nexus.bootstrap.ConfigurationBuilder - nexus-context-path='/'
2020-10-13 16:17:21,082+0530 INFO [FelixStartLevel] *SYSTEM org.sonatype.nexus.bootstrap.ConfigurationBuilder - nexus-edition='nexus-pro-edition'
2020-10-13 16:17:21,082+0530 INFO [FelixStartLevel] *SYSTEM org.sonatype.nexus.bootstrap.ConfigurationBuilder - nexus-features='nexus-pro-feature'
2020-10-13 16:17:21,083+0530 INFO [FelixStartLevel] *SYSTEM org.sonatype.nexus.bootstrap.ConfigurationBuilder - nexus.hazelcast.discovery.isEnabled='true'
2020-10-13 16:17:21,083+0530 INFO [FelixStartLevel] *SYSTEM org.sonatype.nexus.bootstrap.ConfigurationBuilder - ssl.etc='D:\A_semester_5\CICD\nexus\nexus-3.18.1-01
```

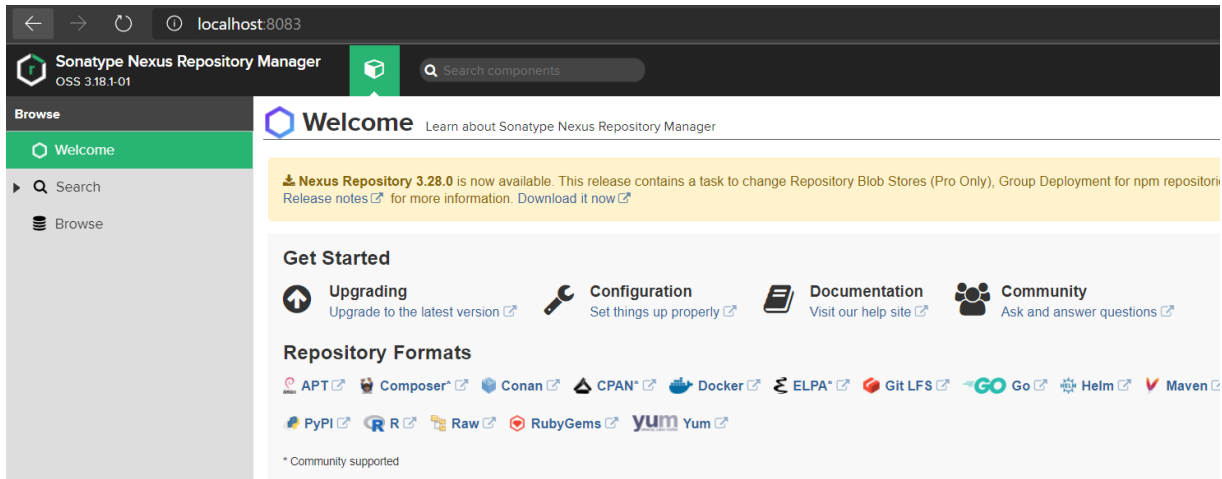
Default port for nexus is 8081, it can be changed in nexus-default file:

```
nexus-default - Notepad
File Edit Format View Help
## DO NOT EDIT - CUSTOMIZATIONS BELONG IN $data-
##
# Jetty section
application-port=8083
application-host=0.0.0.0
nexus-args=${jetty.etc}/jetty.xml,${jetty.etc}/j
nexus-context-path=/

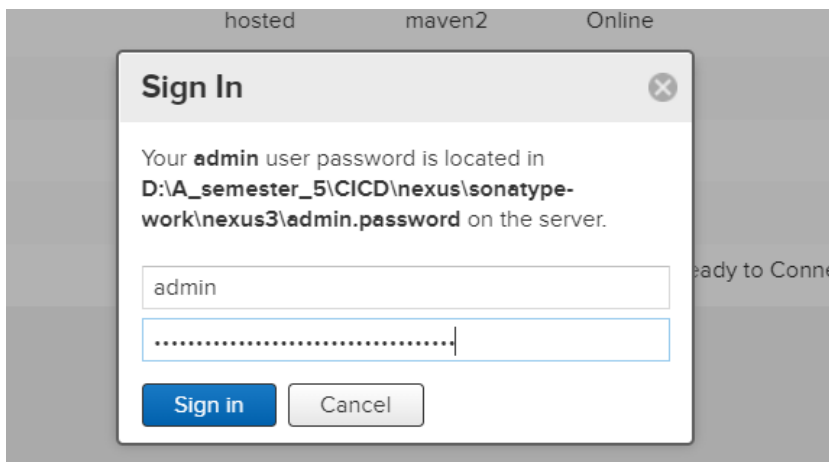
# Nexus section
nexus-edition=nexus-pro-edition
nexus-features=\
nexus-pro-feature

nexus.hazelcast.discovery.isEnabled=true
```

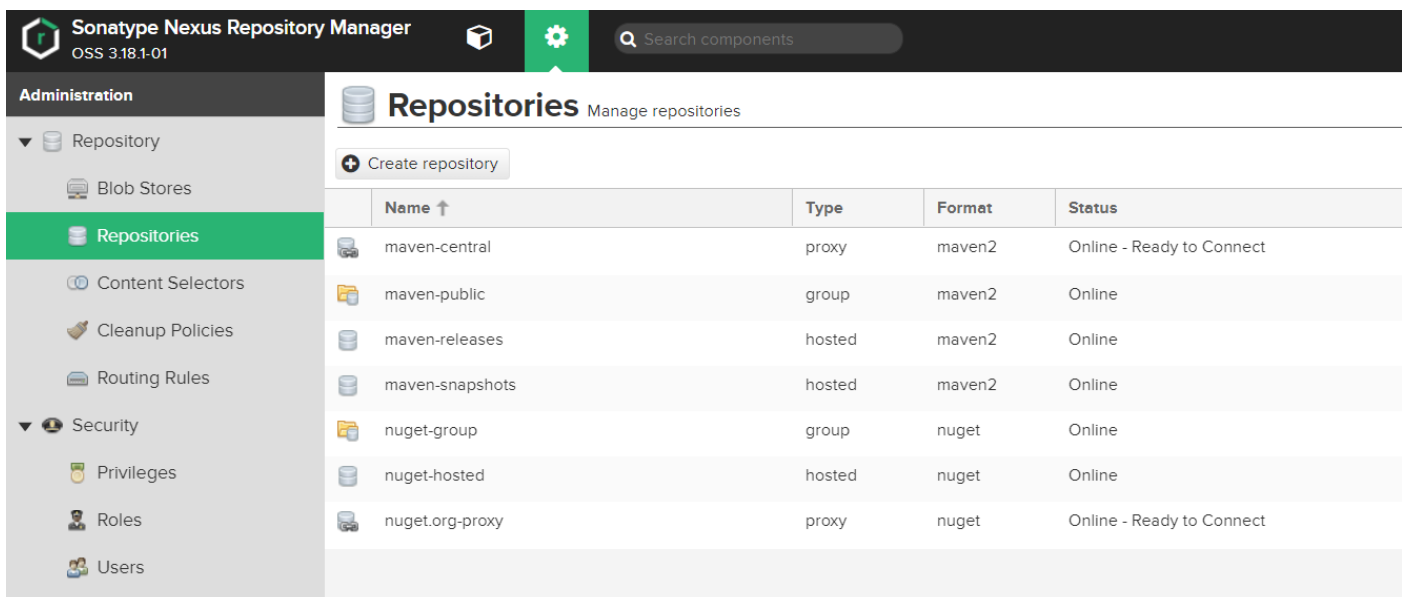
Open <http://localhost:8083> on browser:



Login:



Repositories:



Create new repository:

Administration

▼ Repository

Blob Stores

Repositories

Content Selectors

Cleanup Policies

Routing Rules

▼ Security

Privileges

Roles

Users

Anonymous

LDAP

Realms

SSL Certificates

Repositories / Select Recipe

Recipe ↑

apt (hosted)

apt (proxy)

bower (group)

bower (hosted)

bower (proxy)

docker (group)

docker (hosted)

docker (proxy)

gitlfs (hosted)

go (group)

go (proxy)

maven2 (group)

maven2 (hosted)

maven2 (proxy)

npm (group)

npm (hosted)

npm (proxy)

nuget (group)

nuget (hosted)

Administration

▼ Repository

Blob Stores

Repositories

Content Selectors

Cleanup Policies

Routing Rules

▼ Security

Privileges

Roles

Users

Anonymous

LDAP

Realms

SSL Certificates

IQ Server

► Support

► System

Repositories / repo1_cicd_lab

Delete repository

Rebuild index

Settings

Name: repo1_cicd_lab

Format: maven2

Type: hosted

URL: http://localhost:8083/repository/repo1_cicd_lab/

Online: ☒ If checked, the repository accepts incoming requests

Maven 2

Version policy:
Snapshot

Layout policy:
Validate that all paths are maven artifact or metadata paths
Strict

Storage

Blob store:
default

Strict Content Type Validation:
☒ Validate that all content uploaded to this repository is of a MIME type appropriate for the repository format

Hosted

Deployment policy:

Controls if deployments of and updates to artifacts are allowed

Allow redeploy

Cleanup Policy

Available cleanup policies:

Select a cleanup policy

None

Save

Discard

Create maven project:

```
D:\A\semester_5\CICD\CICD LAB\lab3>mvn archetype:generate -DgroupId=com.mycompany.app -DartifactId=app-on-nexus -DarchetypeArtifactId=maven-archetype-quickstart -DarchetypeVersion=1.4 -Dinteract
[INFO] Scanning for projects...
[INFO] -----< org.apache.maven:standalone-pom >-----
[INFO] Building Maven Stub Project (No POM) 1
[INFO] -----[ pom ]-----
[INFO]
[INFO] >>> maven-archetype-plugin:3.2.0:generate (default-cli) > generate-sources @ standalone-pom >>>
[INFO]
[INFO] <<< maven-archetype-plugin:3.2.0:generate (default-cli) < generate-sources @ standalone-pom <<<
[INFO]
[INFO] --- maven-archetype-plugin:3.2.0:generate (default-cli) @ standalone-pom ---
[INFO] Generating project in Batch mode
[INFO] -----
[INFO] Using following parameters for creating project from Archetype: maven-archetype-quickstart:1.4
[INFO] -----
[INFO] Parameter: groupId, Value: com.mycompany.app
[INFO] Parameter: artifactId, Value: app-on-nexus
[INFO] Parameter: version, Value: 1.0-SNAPSHOT
```

settings.xml

settings - Notepad

File Edit Format View Help

```
<server>
  <id>deploymentRepo</id>
  <username>repouser</username>
  <password>repopwd</password>
</server>
-->

<!-- Another sample, using keys to authenticate.
<server>
  <id>siteServer</id>
  <privateKey>/path/to/private/key</privateKey>
  <passphrase>optional; leave empty if not used.</passphrase>
</server>
-->

<server>
<id>lab9</id>
<username>admin</username>
<password>admin</password>
</server>
</servers>

<!-- mirrors
| This is a list of mirrors to be used in downloading artifacts from remote repositories.
|
| It works like this: a POM may declare a repository to use in resolving certain artifacts.
| However, this repository may have problems with heavy traffic at times, so people have mirrored
```

pom.xml

```
pom - Notepad
File Edit Format View Help
<?xml version="1.0" encoding="UTF-8"?>

<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/xsd/maven-4.0.0.xsd">
  <modelVersion>4.0.0</modelVersion>

  <groupId>com.mycompany.app</groupId>
  <artifactId>app-on-nexus</artifactId>
  <version>1.0-SNAPSHOT</version>

  <properties>
    <maven.compiler.source>1.7</maven.compiler.source>
    <maven.compiler.target>1.7</maven.compiler.target>
  </properties>

  <distributionManagement>
    <snapshotRepository>
      <id>lab9</id>
      <name>repo1_cicd_lab</name>
      <url>http://localhost:8083/repository/repo1_cicd_lab/</url>
    </snapshotRepository>
  </distributionManagement>

  <dependencies>
    <dependency>
      <groupId>junit</groupId>
      <artifactId>junit</artifactId>
      <version>4.11</version>
      <scope>test</scope>
    </dependency>
  </dependencies>

  <build>
    <pluginManagement><!-- lock down plugins versions to avoid using Maven defaults (may be moved to parent pom) -->
      <plugins>
        <!-- clean lifecycle, see https://maven.apache.org/ref/current/maven-core/lifecycles.html#clean_lifecycle -->
        <plugin>
          <artifactId>maven-clean-plugin</artifactId>
          <version>3.1.0</version>
        </plugin>
      </plugins>
    </pluginManagement>
  </build>
</project>
```

Run “mvn clean”

```
D:\A_semester_5\CICD\CICD LAB\lab3\app-on-nexus>mvn clean
[INFO] Scanning for projects...
[INFO]
[INFO] -----< com.mycompany.app:app-on-nexus >-----
[INFO] Building app-on-nexus 1.0-SNAPSHOT
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- maven-clean-plugin:2.5:clean (default-clean) @ app-on-nexus ---
[INFO]
[INFO] BUILD SUCCESS
[INFO]
[INFO] -----
[INFO] Total time: 0.424 s
[INFO] Finished at: 2020-10-13T16:47:58+05:30
[INFO] -----
```

src	10/13/2020 4:30 PM	File folder	
pom	10/13/2020 4:48 PM	XML Document	1 KB

Run “mvn install”

```
D:\A_semester_5\CICD\CICD LAB\lab3\app-on-nexus>
D:\A_semester_5\CICD\CICD LAB\lab3\app-on-nexus>mvn install
[INFO] Scanning for projects...
[INFO] -----< com.mycompany.app:app-on-nexus >-----
[INFO] Building app-on-nexus 1.0-SNAPSHOT
[INFO] -----[ jar ]-----
[INFO] --- maven-resources-plugin:3.0.2:resources (default-resources) @ app-on-nexus ---
[WARNING] Using platform encoding (Cp1252 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] skip non existing resourceDirectory D:\A_semester_5\CICD\CICD LAB\lab3\app-on-nexus\src\main\resources
[INFO] --- maven-compiler-plugin:3.8.0:compile (default-compile) @ app-on-nexus ---
[INFO] Nothing to compile - all classes are up to date
[INFO] --- maven-resources-plugin:3.0.2:testResources (default-testResources) @ app-on-nexus ---
[WARNING] Using platform encoding (Cp1252 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] skip non existing resourceDirectory D:\A_semester_5\CICD\CICD LAB\lab3\app-on-nexus\src\test\resources
[INFO] --- maven-compiler-plugin:3.8.0:testCompile (default-testCompile) @ app-on-nexus ---
[INFO] Changes detected - recompiling the module!
[WARNING] File encoding has not been set, using platform encoding Cp1252, i.e. build is platform dependent!
[INFO] Compiling 1 source file to D:\A_semester_5\CICD\CICD LAB\lab3\app-on-nexus\target\test-classes
[INFO] --- maven-surefire-plugin:2.22.1:test (default-test) @ app-on-nexus ---
[INFO] -----
[INFO] T E S T S
[INFO] -----
[INFO] Running com.mycompany.app.AppTest
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.049 s - in com.mycompany.app.AppTest
[INFO] Results:
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0
[INFO] --- maven-jar-plugin:3.0.2:jar (default-jar) @ app-on-nexus ---
[INFO] Building jar: D:\A_semester_5\CICD\CICD LAB\lab3\app-on-nexus\target\app-on-nexus-1.0-SNAPSHOT.jar
[INFO] --- maven-install-plugin:2.5.2:install (default-install) @ app-on-nexus ---
[INFO] Installing D:\A_semester_5\CICD\CICD LAB\lab3\app-on-nexus\target\app-on-nexus-1.0-SNAPSHOT.jar to C:\Users\akkan\.m2\
[INFO] Installing D:\A_semester_5\CICD\CICD LAB\lab3\app-on-nexus\pom.xml to C:\Users\akkan\.m2\repository\com\mycompany\app\
[INFO] -----
[INFO] BUILD SUCCESS
```

Target folder created:

NAME	DATE MODIFIED	TYPE	SIZE
src	10/13/2020 4:30 PM	File folder	
target	10/13/2020 4:51 PM	File folder	
pom	10/13/2020 4:54 PM	XML Document	3 KB

Run “mvn deploy” to upload the project on nexus repository:

```
D:\A_semester_5\CICD\CICD LAB\lab3\app-on-nexus>mvn deploy
[INFO] Scanning for projects...
[INFO]
[INFO] -----< com.mycompany.app:app-on-nexus >-----
[INFO] Building app-on-nexus 1.0-SNAPSHOT
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- maven-resources-plugin:3.0.2:resources (default-resources) @ app-on-nexus ---
[WARNING] Using platform encoding (Cp1252 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] skip non existing resourceDirectory D:\A_semester_5\CICD\CICD LAB\lab3\app-on-nexus\src\main\resources
[INFO]
[INFO] --- maven-compiler-plugin:3.8.0:compile (default-compile) @ app-on-nexus ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- maven-resources-plugin:3.0.2:testResources (default-testResources) @ app-on-nexus ---
[WARNING] Using platform encoding (Cp1252 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] skip non existing resourceDirectory D:\A_semester_5\CICD\CICD LAB\lab3\app-on-nexus\src\test\resources
[INFO]
[INFO] --- maven-compiler-plugin:3.8.0:testCompile (default-testCompile) @ app-on-nexus ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- maven-surefire-plugin:2.22.1:test (default-test) @ app-on-nexus ---
[INFO]
[INFO] -----
[INFO] T E S T S
[INFO] -----
[INFO] Running com.mycompany.app.AppTest
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.049 s - in com.mycompany.app.AppTest
[INFO] Results:
[INFO]
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[INFO] --- maven-jar-plugin:3.0.2:jar (default-jar) @ app-on-nexus ---
[INFO]
[INFO] --- maven-install-plugin:2.5.2:install (default-install) @ app-on-nexus ---
[INFO] Installing D:\A_semester_5\CICD\CICD LAB\lab3\app-on-nexus\target\app-on-nexus-1.0-SNAPSHOT.jar to C:\Users\akkan\.m2\re
[INFO] Installing D:\A_semester_5\CICD\CICD LAB\lab3\app-on-nexus\pom.xml to C:\Users\akkan\.m2\repository\com\mycompany\app\ap
[INFO]
[INFO] --- maven-deploy-plugin:2.8.2:deploy (default-deploy) @ app-on-nexus ---
[INFO] Downloading from lab9: http://localhost:8083/repository/repo1_cicd_lab/com/mycompany/app/app-on-nexus/1.0-SNAPSHOT/maven-metada
[INFO] Uploading to lab9: http://localhost:8083/repository/repo1_cicd_lab/com/mycompany/app/app-on-nexus/1.0-SNAPSHOT/app-on-nexus-1.0
[INFO] Uploading to lab9: http://localhost:8083/repository/repo1_cicd_lab/com/mycompany/app/app-on-nexus/maven-metadata.xml
[INFO] Uploaded to lab9: http://localhost:8083/repository/repo1_cicd_lab/com/mycompany/app/app-on-nexus/maven-metadata.xml (287 B at 1.9 kB/s)
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 7.574 s
[INFO] Finished at: 2020-10-13T16:55:46+05:30
[INFO] -----
```

Artifact uploaded on nexus server:

The screenshot displays the Sonatype Nexus Repository Manager web interface. The browser address bar shows `localhost:8083/#browse/browse:repo1_cicd_lab`. The page header includes the Sonatype logo, the text "Sonatype Nexus Repository Manager OSS 3.18.1-01", a search bar with the placeholder "Search components", and a settings gear icon.

The left sidebar contains a "Browse" section with the following options: "Welcome", "Search", "Custom", "Maven", "NuGet", "Browse" (highlighted in green), and "Upload".

The main content area is titled "Browse / repo1_cicd_lab" and shows a "HTML View" of the repository structure. The tree view displays the following hierarchy:

- com
 - mycompany
 - app
 - app-on-nexus
 - 1.0-SNAPSHOT
 - 1.0-20201013.112544-1
 - app-on-nexus-1.0-20201013.112544-1.jar
 - app-on-nexus-1.0-20201013.112544-1.jar.md5
 - app-on-nexus-1.0-20201013.112544-1.jar.sha1
 - app-on-nexus-1.0-20201013.112544-1.pom
 - app-on-nexus-1.0-20201013.112544-1.pom.md5
 - app-on-nexus-1.0-20201013.112544-1.pom.sha1
 - maven-metadata.xml
 - maven-metadata.xml.md5
 - maven-metadata.xml.sha1
 - maven-metadata.xml
 - maven-metadata.xml.md5
 - maven-metadata.xml.sha1