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.pa
 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 PrintStr
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-3.18.2
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-3.18.2
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-3.18.2
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-3.18.2
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
```
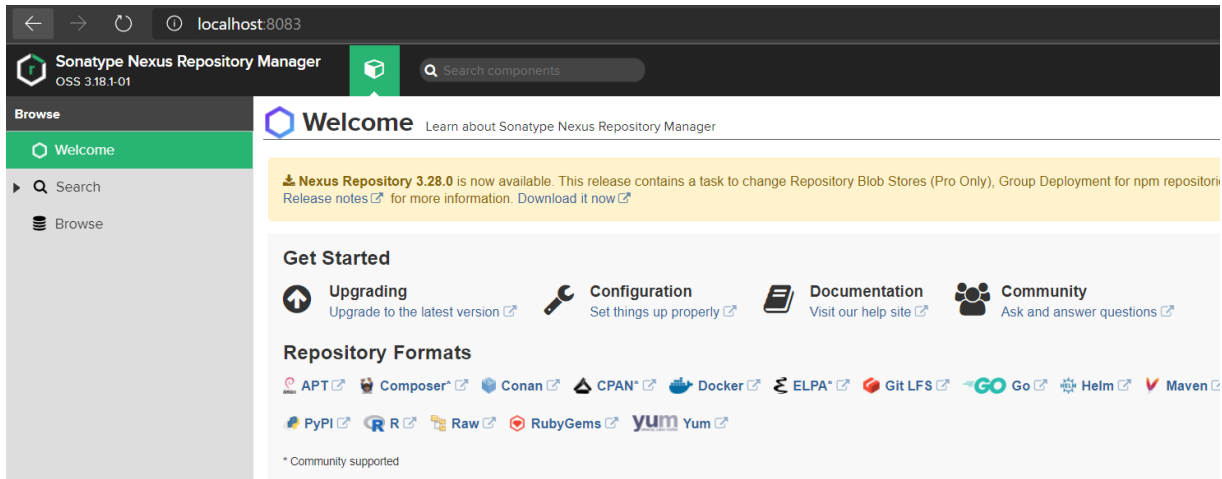
Default port for nexus is 8081, it can be changed in nexus-default file:

```
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
```
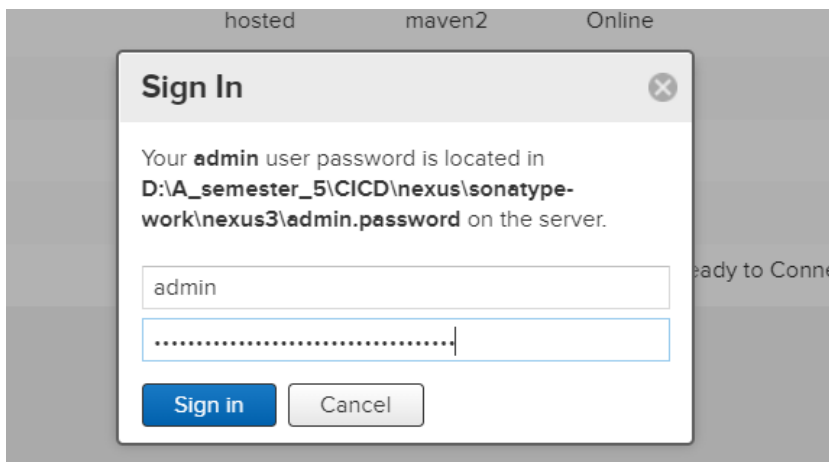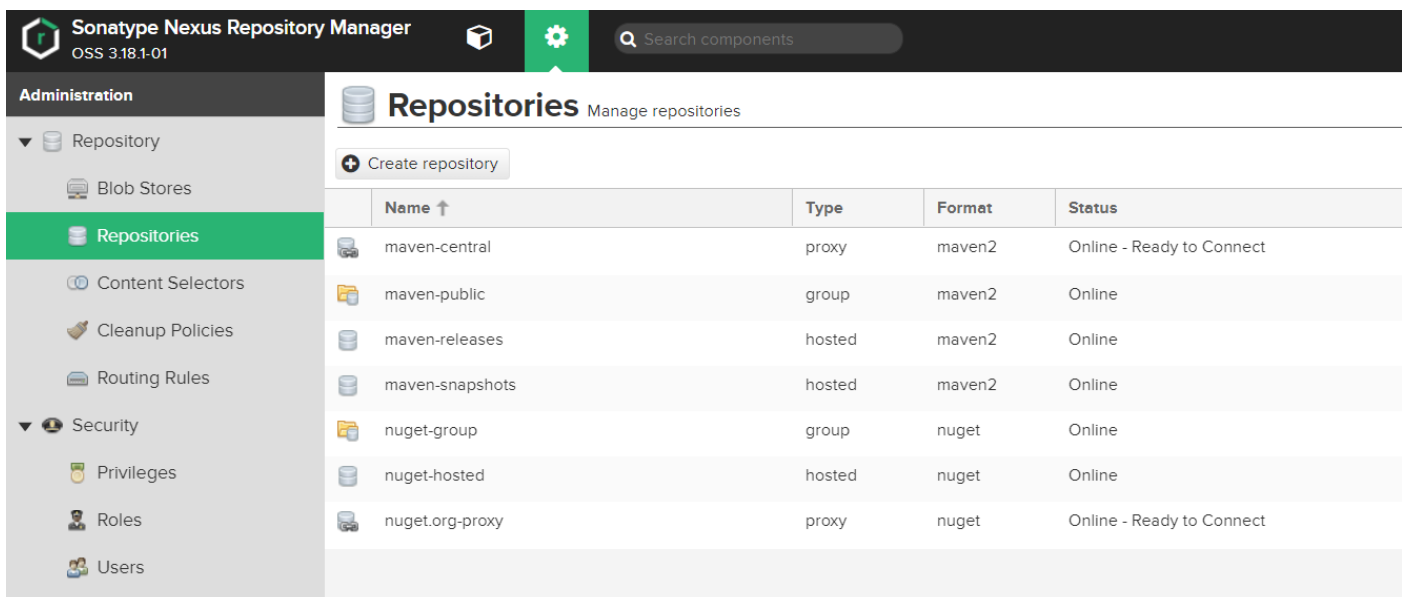
Open http://localhost:8083 on browser:

Login:

Repositories:

Create new repository:

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]
[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]
[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.
```

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>
```

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] 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]
[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] 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]
[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]
[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) @ 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]
[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]
[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) @ 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 ---
Downloading from lab9: http://localhost:8083/repository/repo1_cicd_lab/com/mycompany/app/app-on-nexus/1.0-SNAPSHOT/maven-metada
Uploading to lab9: http://localhost:8083/repository/repo1_cicd_lab/com/mycompany/app/app-on-nexus/1.0-SNAPSHOT/app-on-nexus-1.0
Uploading to lab9: http://localhost:8083/repository/repo1_cicd_lab/com/mycompany/app/app-on-nexus/maven-metadata.xml
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: