JFROG:

Jfrog is binary repository manager. It is a version control for your binary artifacts (any executable files jar, war etc.,)

🡪We are using Jfrog mainly for 2 purpose:

\*For resolving the artifacts: Downloading the plugins, dependencies, packages etc.,

If ‘n’ number of machines are working under same server, instead of downloading the plugins, dependencies from maven’s central repository we will be able to download it from artifactory.

\*For deploying the artifacts: Storing the binary artifacts into the artifactory.

🡪Repositories:

We have Three kinds of repositories:

\*Virtual repository: It contains both local and remote repository in it. It aggregates several repositories in it. The repository is virtual in the sense we can resolve and get the data from artifactory but we cannot deploy the deploy anything to it.

\*Local repository: It is a physical locally managed repositories, that is one where we are goning to depoy our artifacts. By default we will have couple of pre congifured repository in Jfrog repository for deploying.

\*Remote repository: Artifacts are stored and updated in remotes repositories according to various configuration parameters that control the caching and proxing behaviour. We cannot manually deploy anything into a remote repository. By default we will have couple of pre congifured remote repository in Jfrog repository.

🡪Where is Jfrog Artifactory storing the artifacts??

/opt/software/jfrog/artifactory-oss-5.1.3 this is a home directory for jfrog.

Inside this directory we have bin/ filestore folder, in this folder what all artifacts which we are going to deploy in Jfrog arrtifactory will be stored here in an encrypted format.

🡪Will duplication happens??

NO, It follows “once-and-only-once” content storage format.

If we are going to save a file the artifactory will calculate the checksum value(Unique value, that will be calculated by the artifactory based on the file content) for it. If same checksum value is found as a previous or existing file value then artifactory will not allow that file to deploy over their. Instead of that it will create a link to the existing file as a metadata of the newly deployed file.

🡪Dependencies we require:

\*JDK \*Php

🡪How to install Jfrog:

1. Cd /opt/software
2. mkdir jfrog
3. cd jfrog

place the jfrog-artifactory-oss-5.1.3.zip file inside this directory and unzip this.

1. unzip jfrog-artifactory-oss-5.1.3.zip
2. cd /opt/software/jfrog/artifactory-oss-5.1.3/bin
3. vi artifactory.default

Add the below content to this file:

export ARTIFACTORY\_HOME=/opt/software/jfrog/artifactory-oss-5.1.3

export ARTIFACTORY\_USER=jfrog

export JAVA\_HOME=usr/java/jdk 1.8.0\_121

cd /opt/software/jfrog/artifactory-oss-5.1.3/etc

vi default

both default and artifactory.default files should be same

Create a jfrog user:

1. useradd jfrog
2. passwd jfrog
3. chown –R jfrog:jfrog jfrog
4. chown –R jfrog:jfrog jfrog/\*
5. visudo or vi /etc/sudoers

make jfrog as a sudo user

jfrog ALL=(ALL) ALL

Inside bin directory

1. ./installService.sh jfrog (To install a artifactory as a service)

switch as jfrog user

1. service artifactory start
2. service artifactory check

🡪In browser IPAddress:8081/artifactory

Username:admin

Password:admin@123

Configure a proxy: proxy key:HP

Host:web-proxy.sgp.hpecorp.net

Port:8080

Select maven as a create repository.

🡪To uninstall jfrog:

Run this command ./uninstallService.sh and delete the jfrog user also.

🡪How to integrate Jfrog with MYSQL:

* If Jfrog and MYSQL present in same machine

1. cd /opt/software/jfrog/artifactory-oss-5.1.3/misc/db
2. vi mysql.properties

Copy the entire thing

1. cd /opt/software/jfrog/artifactory-oss-5.1.3/etc
2. vi db.properties

Paste it here.

(cp –r mysql.properties ..//..//etc/db.properties)

Change dbname, username and Admin@123

1. mysql –u root –p

password: Admin@123

>CREATE DATABASE jfrogdb CHARACTER SET utf8 COLLATE utf8\_bin;

>use jfrogdb;

>create user jfrog;

//\* If mysql present in same machine\*//

>GRANT ALL PRIVILAGES ON jfrogdb.\* to [jfrog@127.0.0.1](mailto:jfrog@127.0.0.1) identified by ‘Admin@123’;

> GRANT ALL PRIVILAGES ON jfrogdb.\* to jfrog@localhost identified by ‘Admin@123’;

> GRANT ALL PRIVILAGES ON jfrogdb.\* to jfrog@IPADDRESS identified by ‘Admin@123’;

> GRANT ALL PRIVILAGES ON jfrogdb.\* to jfrog@HOSTNAME identified by ‘Admin@123’;

//\* if mysql present in other machine\*//

> GRANT ALL PRIVILAGES ON jfrogdb.\* to jfrog@IPADDRESS(jfrog machine) identified by ‘Admin@123’;

> GRANT ALL PRIVILAGES ON jfrogdb.\* to jfrog@HOSTNAME(jfrog machine) identified by ‘Admin@123’;

>flush privileges;

>exit;

(To drop the database drop database databasename;)

1. Add and edit the file opt/software/jfrog/artifactory-oss-4.5.0/etc/my.cnf

export max\_allowed\_packet=8M

export innodb\_buffer\_pool\_size=1536M

export tmp\_table\_size=512M

export max\_heap\_table\_size=512M

export innodb\_log\_file\_size=256M

export innodb\_log\_buffer\_size=4M

Save and exit the file

* If Jfrog and MYSQL present in other machine

1. cd /opt/software/jfrog/artifactory-oss-5.1.3/misc/db
2. vi mysql.properties

Copy the entire thing

1. cd /opt/software/jfrog/artifactory-oss-5.1.3/etc
2. vi db.properties

Paste it here.

(cp –r mysql.properties ..//..//etc/db.properties)

Change ip address instead of localhost, dbname, username and Admin@123

1. mysql –u root –p

password: Admin@123

>CREATE DATABASE jfrogdb CHARACTER SET utf8 COLLATE utf8\_bin;

>use jfrogdb;

>create user jfrog;

//\* If mysql present in same machine\*//

>GRANT ALL PRIVILAGES ON jfrogdb.\* to [jfrog@127.0.0.1](mailto:jfrog@127.0.0.1) identified by ‘Admin@123’;

> GRANT ALL PRIVILAGES ON jfrogdb.\* to jfrog@localhost identified by ‘Admin@123’;

> GRANT ALL PRIVILAGES ON jfrogdb.\* to jfrog@IPADDRESS identified by ‘Admin@123’;

> GRANT ALL PRIVILAGES ON jfrogdb.\* to jfrog@HOSTNAME identified by ‘Admin@123’;

> GRANT ALL PRIVILAGES ON jfrogdb.\* to jfrog@IPADDRESS(jfrog machine) identified by ‘Admin@123’;

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Save and exit the file

* How to integrate Jenkins, GIT and Jfrog:

1. In Jenkins add these plugins:

\*Artifactory plugin

\*Deployment Dashboard

\*Artifact deploy

2. Manage Jenkins 🡪 Configure system

\*Deployment dashboard🡪 choose repository

3. Artifactory: Disable enable push to bintray

Add 🡪 serverID: jfrog

URL: 192.168.189.135:8081/Artifactory

Click on advance option, connection Timeout:1000

Click on bypass HTTP proxy

Provide username and password of jfrog and click on Testconnection

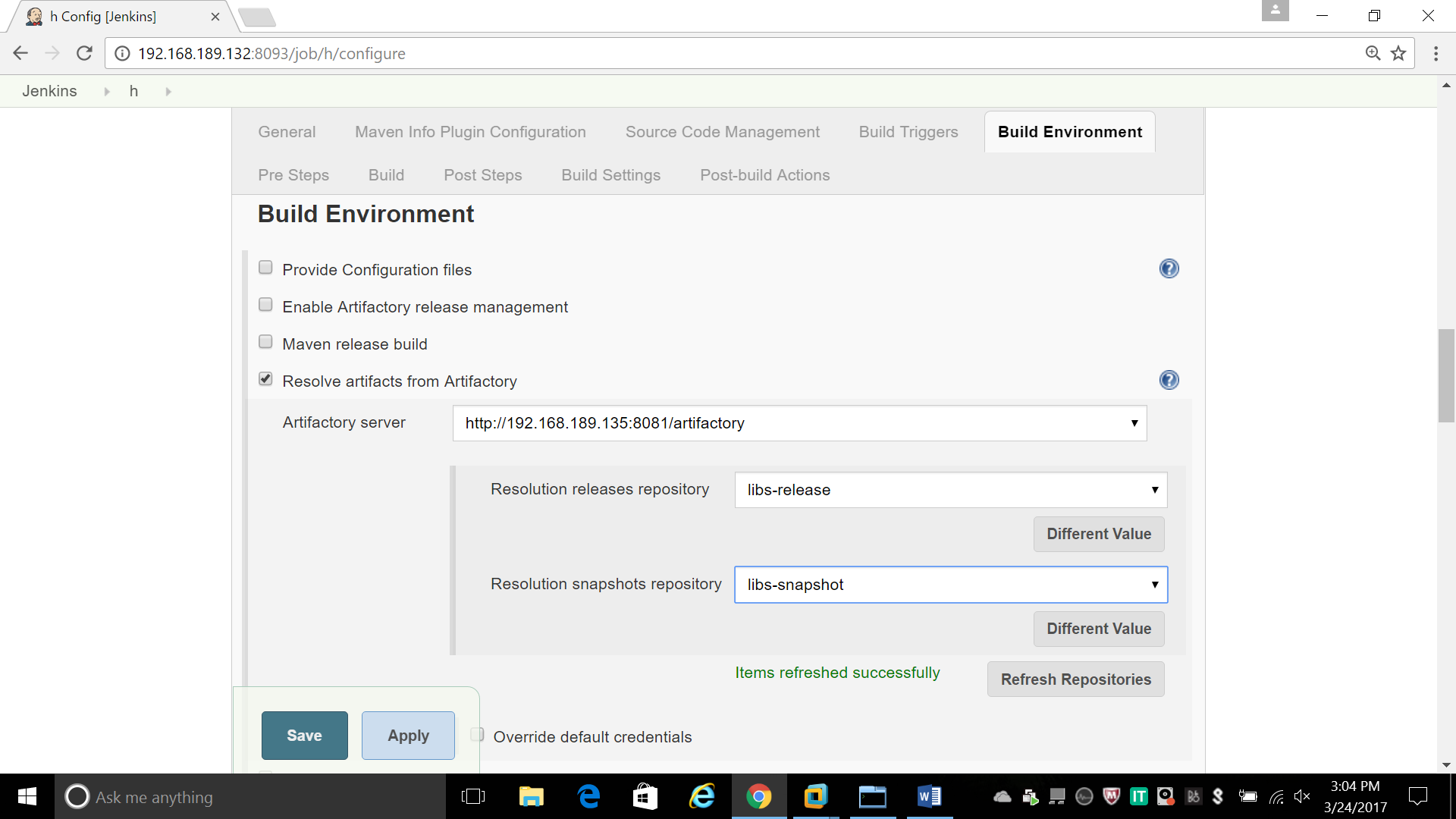
You will get found Artifactory 5.1.3

Click on Apply and Save.

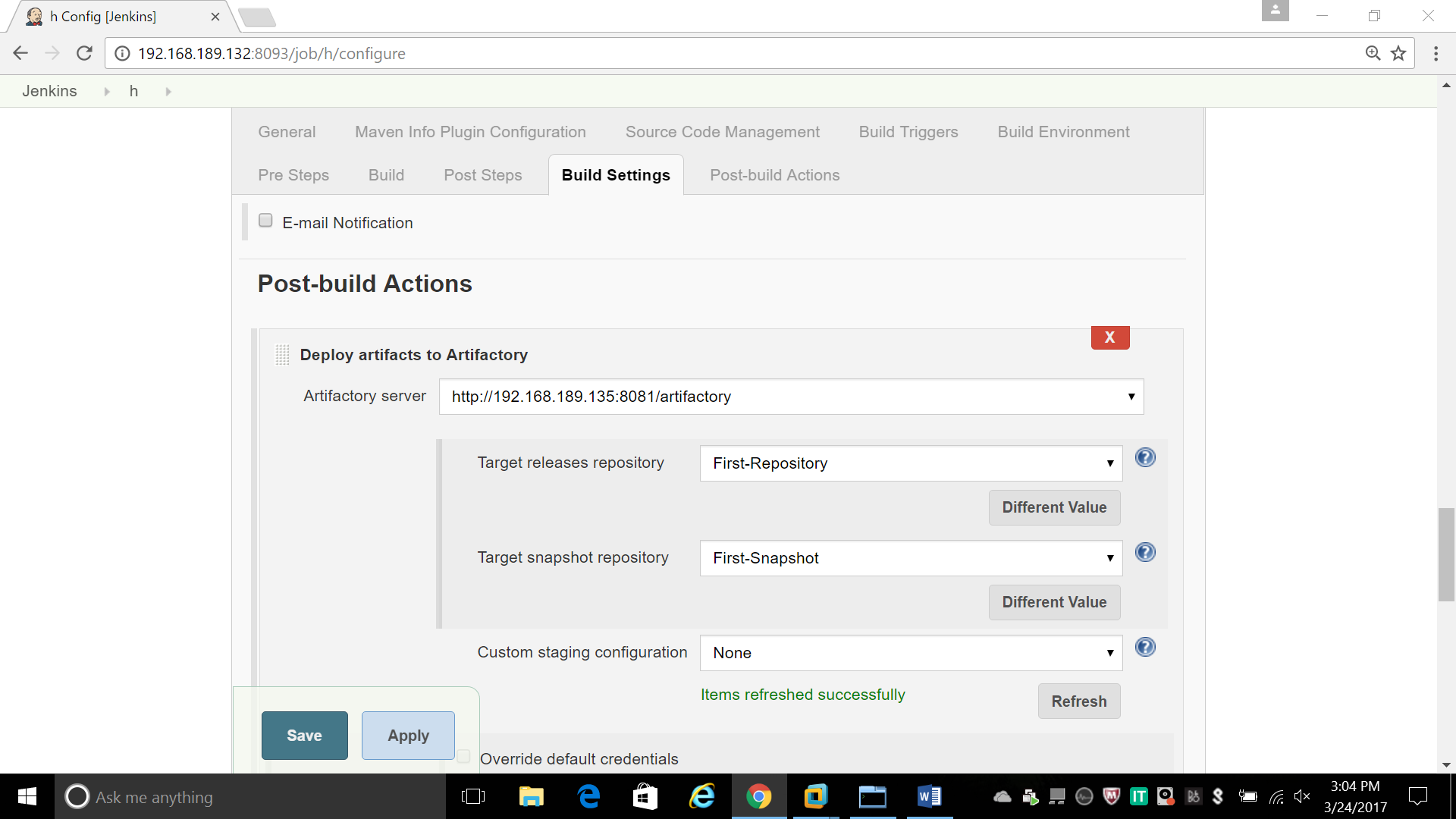
4. New item 🡪 project name 🡪 select maven project 🡪 ok

5. Source code management 🡪 git 🡪 provide git information

6. In Build Environment select Resolve artifacts from Artifactory and provide required information.



1. In post steps select Run only if build succeeds option.
2. In Post Build Actions select Deploy artifacts to Artifactory and provide required information.



1. Click on Apply and save.
2. Build now and after Build Success go and check in Jfrog Artifactory.

* How to integrate Maven and Jfrog: