DEVOPS PROFESSIONAL CERTIFICATION PROGRAM

Lab – 1: Tools

- **Getting Started with topgear VDI – Ubuntu (TG-DevOps-OS)**
- **Check availability of tools**
- **Walk through Jenkins**

Prepared By:
avinash.patel@wipro.com

1. Getting Started with Ubuntu (topgear VDI)

- ✓ Recap basic commands (not limited to)
  - Creating / Editing / Deleting Folder or Files
  - Constructing shell scripts and executing
  - View folder contents (including hidden folders)
  - Starting / Stopping/Killing services
  - Setting /Editing system proxy details

2. Check availability of necessary tools

✓ Check environment variable JAVA_HOME and PATH settings in the machine:

```
osgdev@TG-DevOps-OS004:~$ echo $JAVA_HOME
/usr/java/jdk1.8.0_162

osgdev@TG-DevOps-OS004:~$ echo $PATH
/home/osgdev/bin:/home/osgdev/.local/bin:/usr/local/sbin:/usr/local/bin:/usr/sbin:/u
sr/bin:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin:/usr/java/jdk1.8.0_162/bin/:
/opt/apache-maven-3.5.2/bin:/usr/java/jdk1.8.0_162/bin/:/opt/apache-maven-
3.5.2/bin:/usr/java/jdk1.8.0_162/bin/:/opt/apache-maven-3.5.2/bin
```

✓ Availability of java:

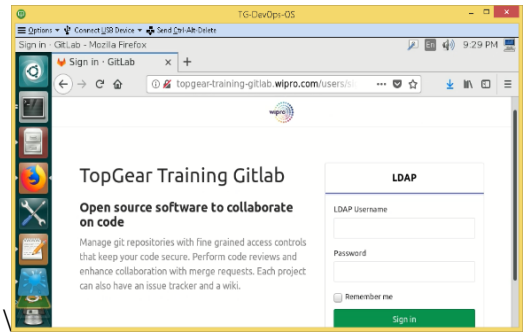
```
osgdev@TG-DevOps-OS004:~$ java -version
java version "1.8.0_161"
Java(TM) SE Runtime Environment (build 1.8.0_161-b12)
Java HotSpot(TM) 64-Bit Server VM (build 25.161-b12, mixed mode)
```

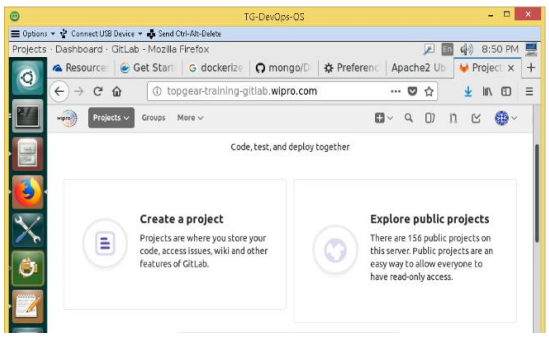
✓ Check availability of Git:

```
osgdev@TG-DevOps-OS004:~$ git --version
git version 2.7.4
```

✓ Check availability /Accessibility of Wipro's Enterprise Gitlab:

Access your account using your AD Credentials.
URL: http://topgear-training-gitlab.wipro.com/users/sign_in





✓ Check availability of Maven:

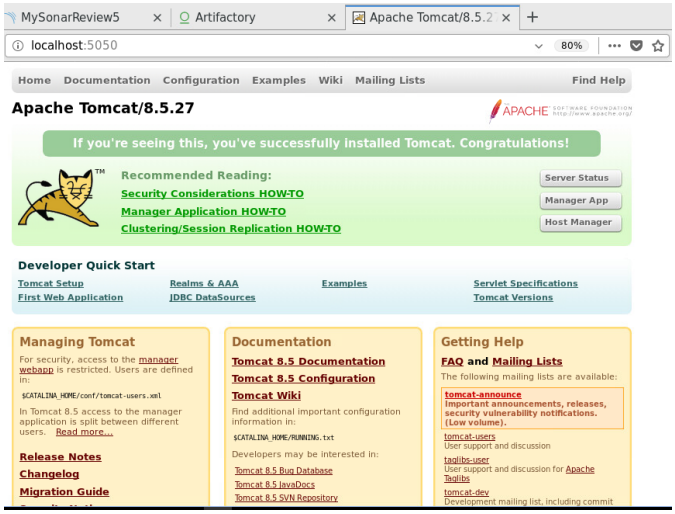
```
Osgd\ev@TG-DevOps-OS004:~$ mvn --version
Apache Maven 3.5.2 (138edd61fd100ec658bfa2d307c43b76940a5d7d; 2017-10-
18T13:28:13+05:30)
Maven home: /opt/apache-maven-3.5.2
Java version: 1.8.0_162, vendor: Oracle Corporation
Java home: /usr/java/jdk1.8.0_162/jre
```

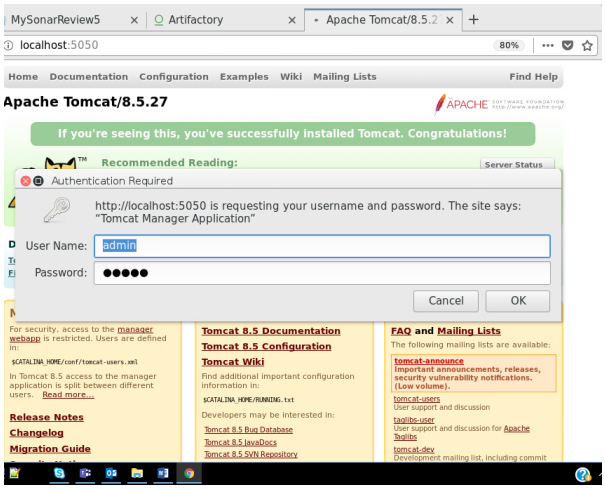
```
Default locale: en_US, platform encoding: UTF-8
OS name: "linux", version: "4.4.0-112-generic", arch: "amd64", family: "unix"
```

✓ Check availability of Apache Tomcat:

- Start tomcat service:
  sudo /opt/tomcat/apache-tomcat-8.5.27/bin/startup.sh
  password: osg@1234
- Apache tomcat will be running at port# 5050;
  Localhost: 5050
  Note: Manager credentials - admin/admin
- Stop tomcat service:
  sudo /opt/tomcat/apache-tomcat-8.5.27/bin/shutdown.sh

- **Verify availability of tomcat @ port# 5050 and manager credentials too.**

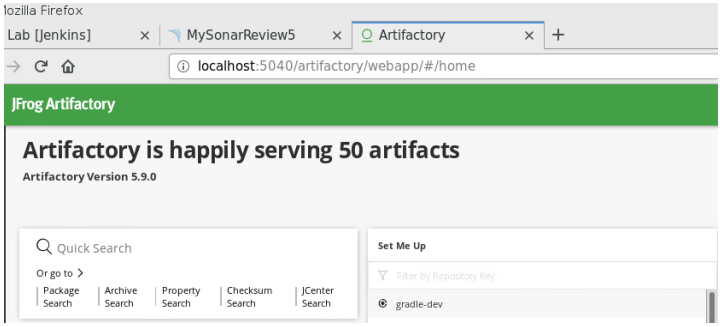


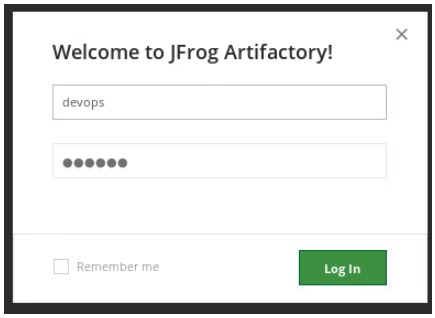


✓ Check availability of JFrog Artifactory:

- Start Jfrog Artifactory
  - $ systemctl stop artifactory.service ... type the password "osg@1234"
  - $ sudo /opt/jfrog/artifactory/bin/artifactory.sh ... type the password "osg@1234"
  - Service available @ "http://localhost:**5040**/artifactory/"
    - Login with devops/devops (Default Admin credentials : admin/password)
- Stop Jfrog Artifactory
  - Use Ctl+c
- Note
  - If any exceptions to start, use ps -ef | grep tomcat to fid PID's of tomcat and kill them
  - Use Sudo kill -9 <PID>
  - To start service at the background use: nohup <./sh> &

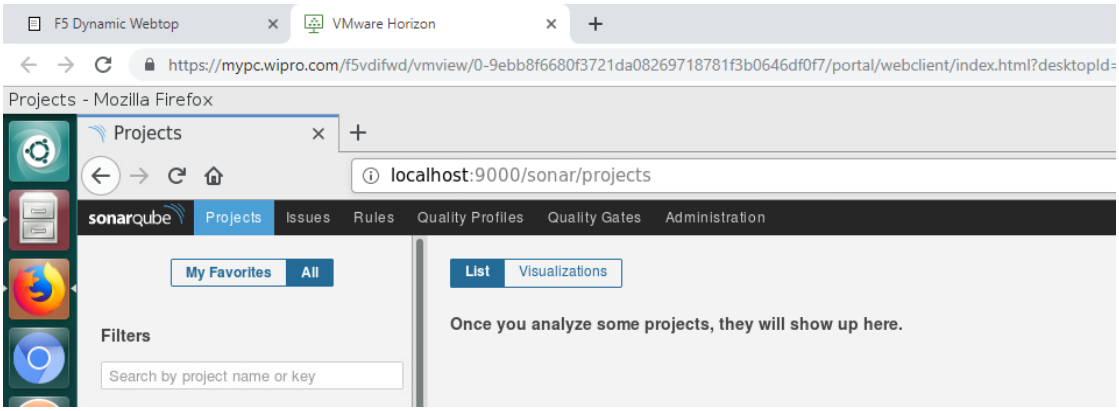
- **Login to Jfrog Artifactory to view artifacts history (credentials: devops/devops)**





✓ Check availability of SonarQube:

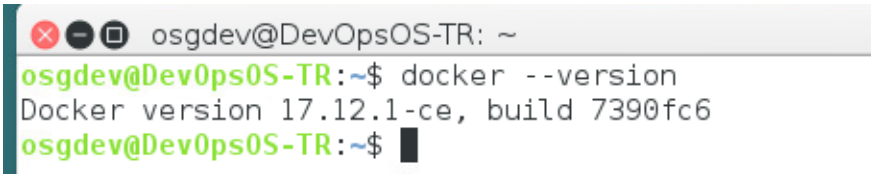
- Start SonarQube Service
  `$ sudo /home/osgdev/mySonarQube/sonarqube-6.4/bin/linux-x86-64/sonar.sh start`
  Open browser to check: http://127.0.0.1:9000/sonar
- Stop SonarQube Service
  $ `sudo /home/osgdev/mySonarQube/sonarqube-6.4/bin/linux-x86-64/sonar.sh stop`
- To check SonarQube status
  $ `sudo /home/osgdev/mySonarQube/sonarqube-6.4/bin/linux-x86-64/sonar.sh status`
- **Login to SonarQube to view reports (credentials: admin/admin)**



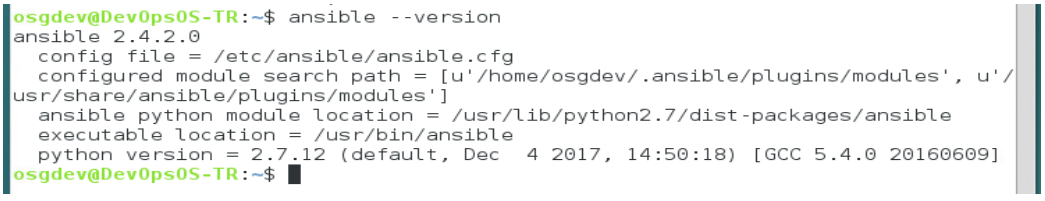
✓ Check availability of Firefox Webdriver (geckodriver):

```
$ whereis geckodriver
geckodriver: usr/bim/geckodriver
```

✓ Check availability of Docker:



✓ Check availability of Ansible:

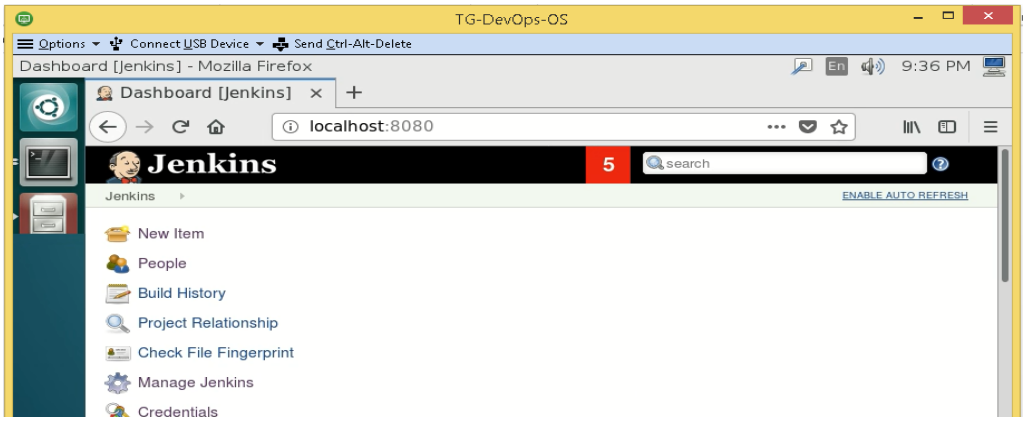


✓ Check availability of Jenkins:

```
osgdev@TG-DevOps-OS004:~$ service jenkins status
â— jenkins.service - LSB: Start Jenkins at boot time
   Loaded: loaded (/etc/init.d/jenkins; bad; vendor preset: enabled)
   Active: active (exited) since Thu 2018-03-29 13:21:06 IST; 2 weeks 6 days ago
     Docs: man:systemd-sysv-generator(8)
  Process: 1665 ExecStart=/etc/init.d/jenkins start (code=exited, status=0/SUCCE
    Tasks: 0
```

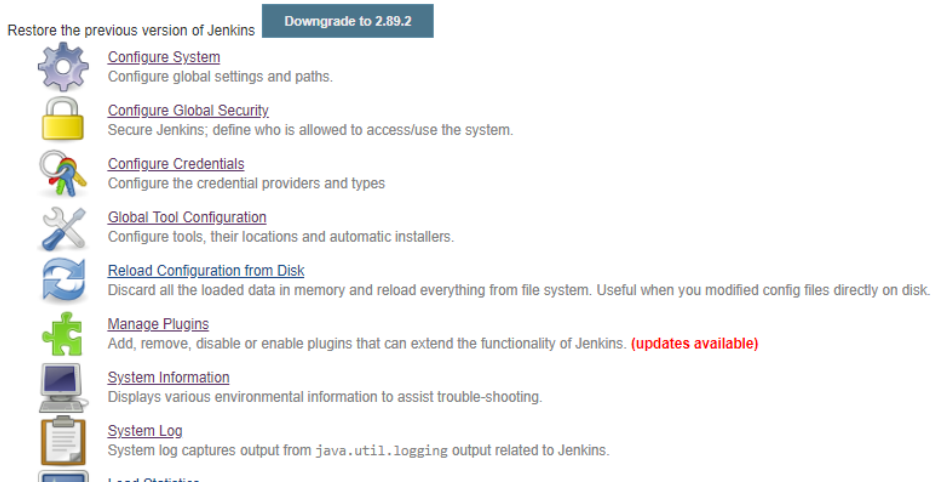
```
Memory: 0B
CPU: 0
```

You can access Jenkins on the browser using the URL: http://localhost:8080/



3. Walk through Jenkins

✓ Manage Jenkins



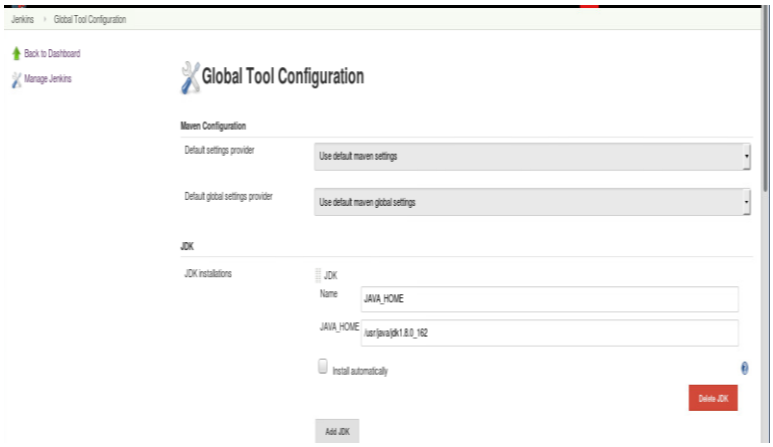
✓ Manage Plugins (Updates|installed|Available|Advanced)

- Select required plugins and install
- Set proxy details (if required)

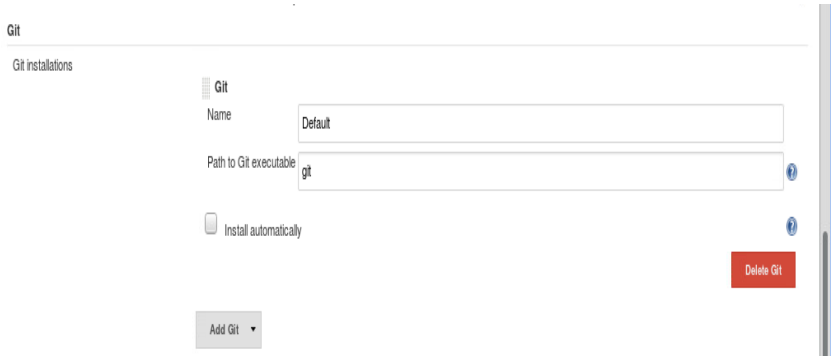
✓ Global Tool Configuration

- **Configure Git, JDK, Maven, Sonar Scanner…**

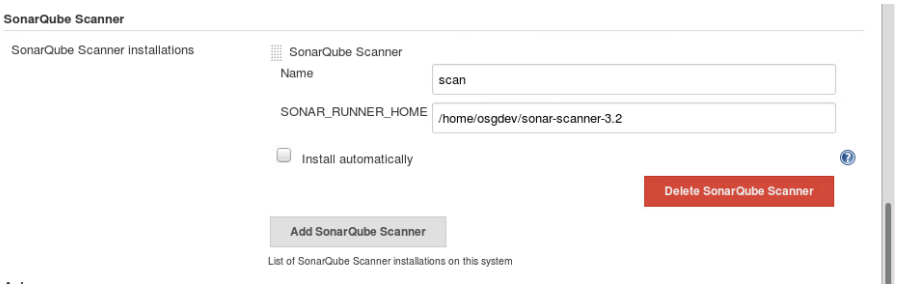
1. JDK Configuration



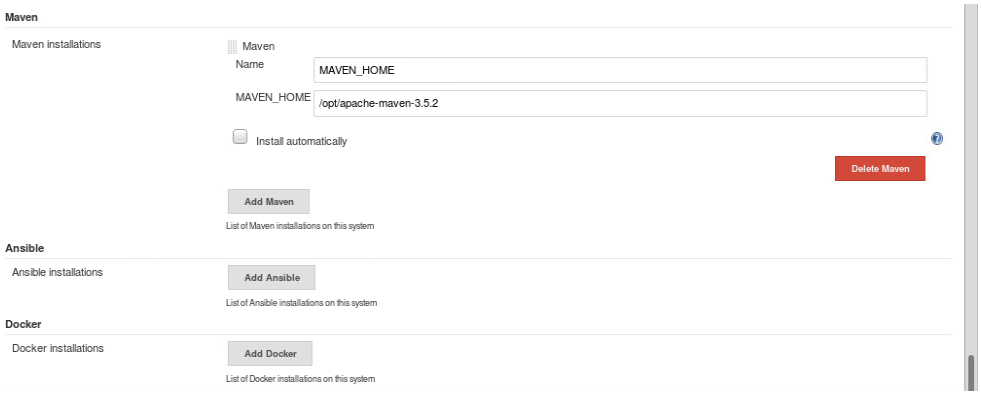
2. Git Configuration



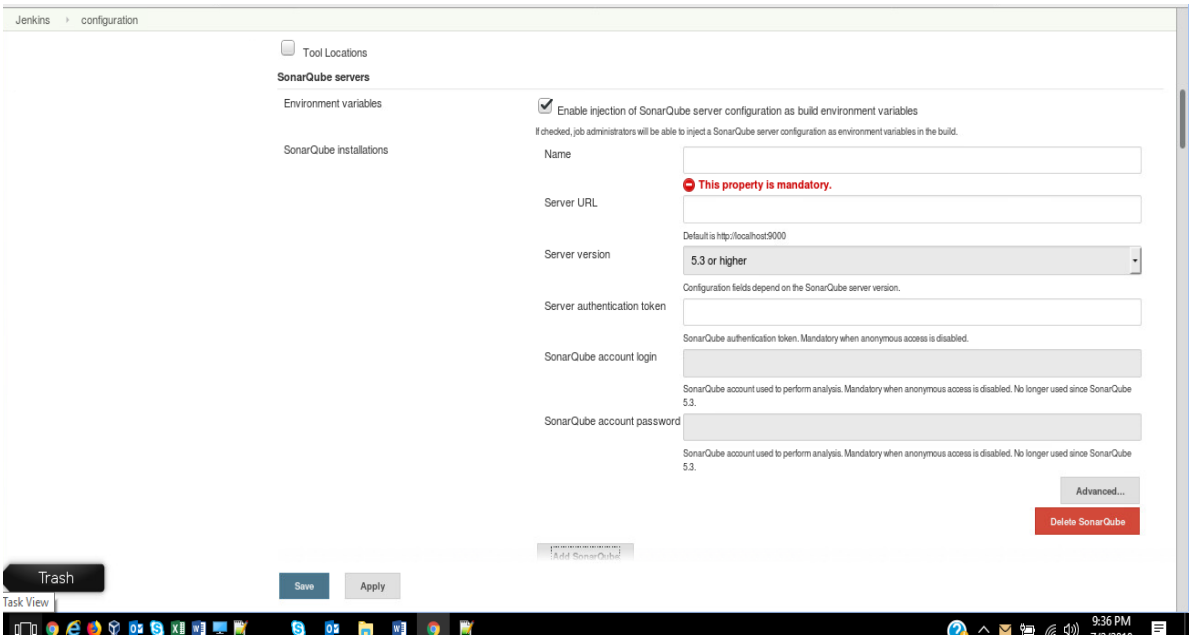
3. Sonar Scanner Configuration

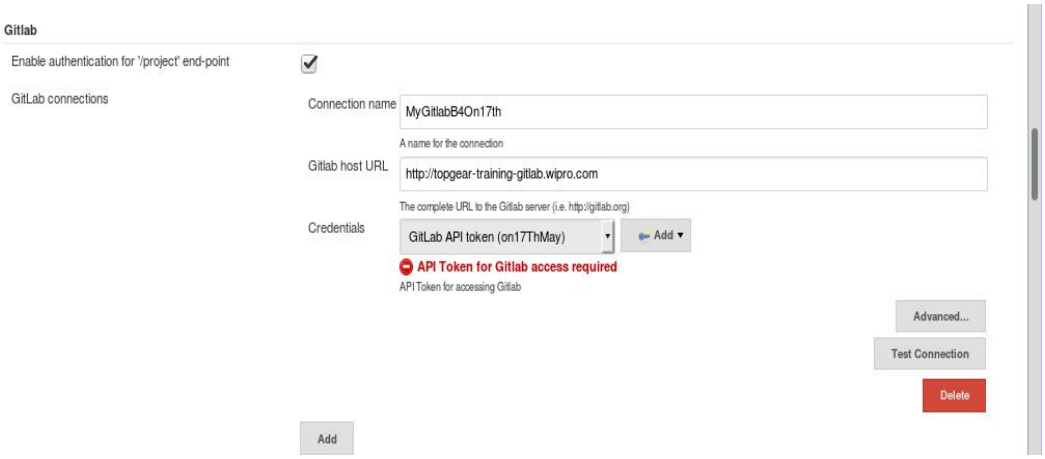


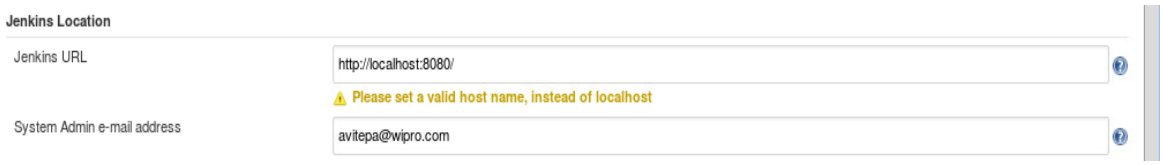
4. Maven Configuration

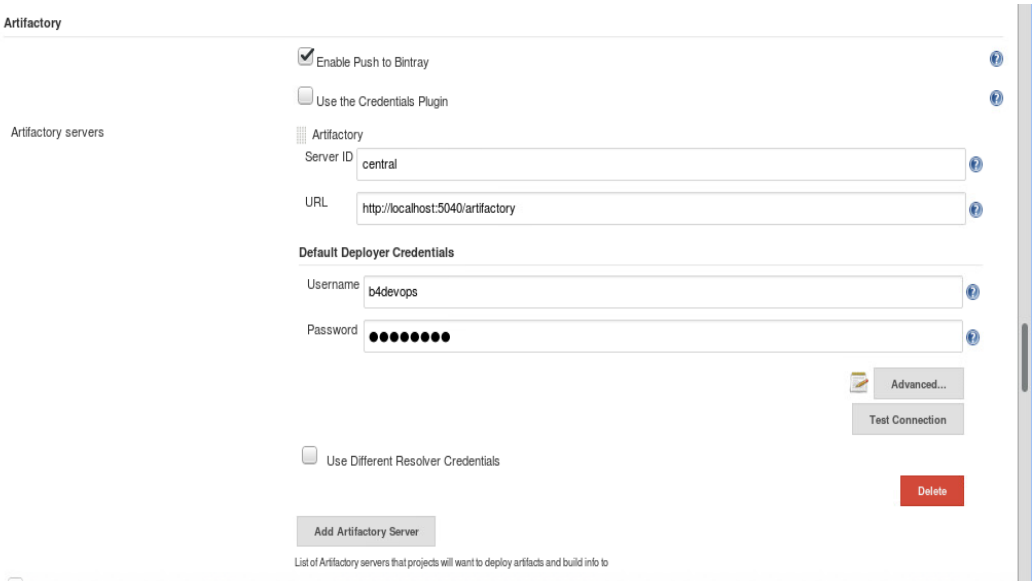


- ✓ **Configure System**
  - **Configure Sonar Server, Artifactory, Gitlab & Email Notification**









Jenkins Job