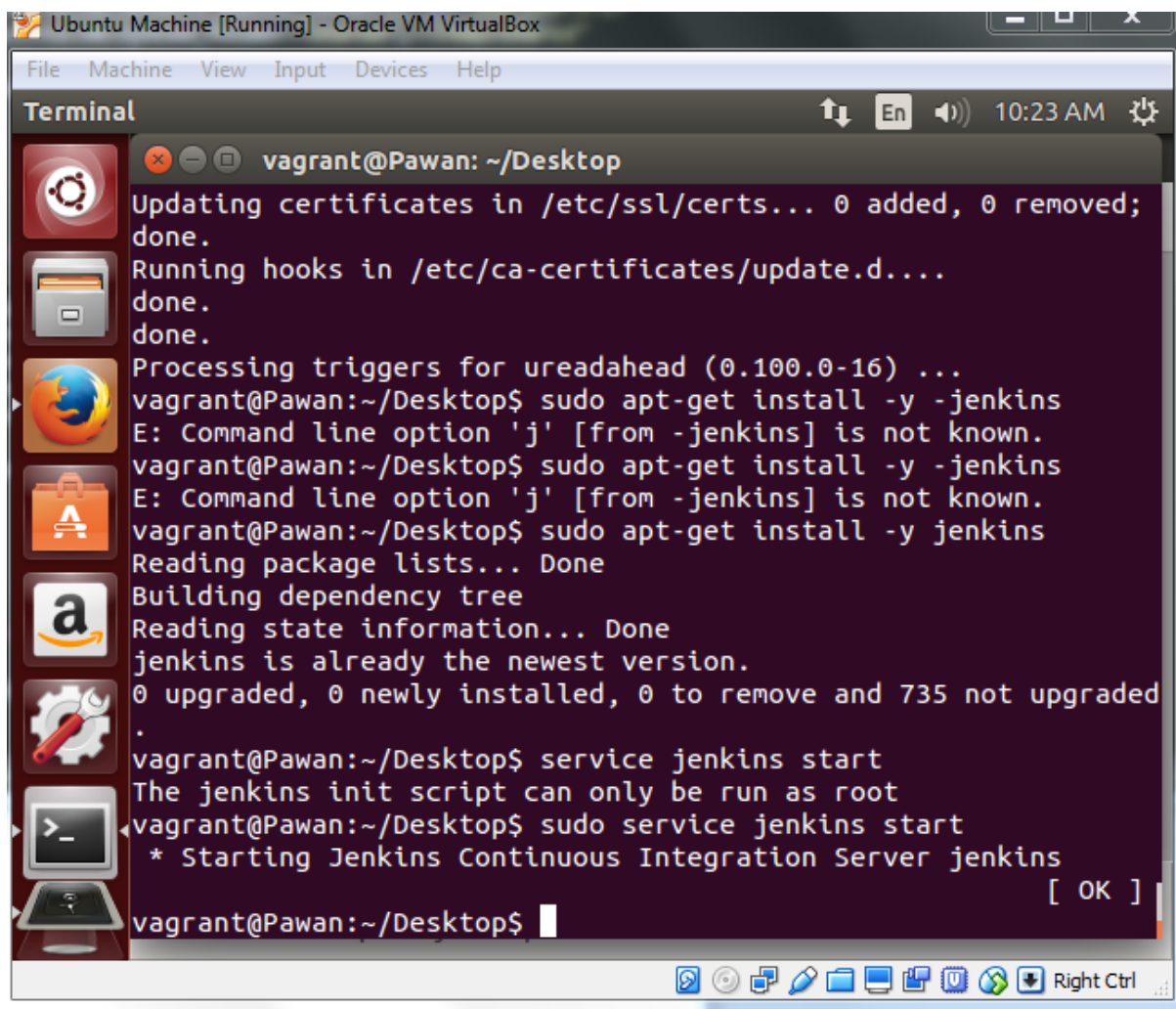


Tooling

Task 1a – Setting up Jenkins

```
sudo scp jenkins_2.1_all.deb /home/vagrant/Desktop/  
cd /home/vagrant/Desktop  
sudo dpkg -i jenkins_2.1_all.deb  
sudo apt-get install -y -f  
sudo apt-get install -y jenkins  
sudo service jenkins start
```



The screenshot shows a terminal window titled "Ubuntu Machine [Running] - Oracle VM VirtualBox". The terminal output is as follows:

```
File Machine View Input Devices Help  
Terminal 10:23 AM  
vagrant@Pawan: ~/Desktop  
Updating certificates in /etc/ssl/certs... 0 added, 0 removed;  
done.  
Running hooks in /etc/ca-certificates/update.d....  
done.  
done.  
Processing triggers for ureadahead (0.100.0-16) ...  
vagrant@Pawan:~/Desktop$ sudo apt-get install -y -jenkins  
E: Command line option 'j' [from -jenkins] is not known.  
vagrant@Pawan:~/Desktop$ sudo apt-get install -y -jenkins  
E: Command line option 'j' [from -jenkins] is not known.  
vagrant@Pawan:~/Desktop$ sudo apt-get install -y jenkins  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
jenkins is already the newest version.  
0 upgraded, 0 newly installed, 0 to remove and 735 not upgraded  
.  
vagrant@Pawan:~/Desktop$ service jenkins start  
The jenkins init script can only be run as root  
vagrant@Pawan:~/Desktop$ sudo service jenkins start  
* Starting Jenkins Continuous Integration Server jenkins  
[ OK ]  
vagrant@Pawan:~/Desktop$
```



Task 1b – Setting up Bamboo

Navigate to directory to install bamboo, e.g. /opt

```
sudo wget https://www.atlassian.com/software/bamboo/downloads/binary/atlassian-bamboo-5.8.1.tar.gz
```

```
sudo tar xvzf atlassian-bamboo-5.8.1.tar.gz
```

After installed, edit **/opt/atlassian-bamboo/WEB-INF/classes/bamboo-init.properties** and add the proper home directory.

```
## You can specify your bamboo.home property here or in your system environm
bamboo.home=/opt/
```

Execute the **bamboo.sh** file.

```
ubuntu@ip-172-31-7-183:/opt$ ls
atlassian-bamboo-5.8.1  atlassian-bamboo-5.8.1.tar.gz
ubuntu@ip-172-31-7-183:/opt$ cd atlassian-bamboo-5.8.1/
ubuntu@ip-172-31-7-183:/opt/atlassian-bamboo-5.8.1$ ls
atlassian-bamboo  conf      logs      README.txt  tomcat-docs
bamboo.sh        lib      NOTICE   scripts     webapps
bin              licenses README.html temp        work
ubuntu@ip-172-31-7-183:/opt/atlassian-bamboo-5.8.1$ sudo ./bamboo.sh
```

Make sure java is installed. If not use **sudo apt-get install default-jdk** to install required java

Welcome to Atlassian Bamboo continuous integration server!

Please enter your license information and choose a setup method below to complete the installation of Bamboo.

Enter your license

Server id **BH76-KOVR-T5N0-324M**

License key*

Please enter your Bamboo license key above - either commercial or evaluation. Contact [Atlassian](#) if you require a license key.

Select setup method

Express installation
Installs Bamboo with default settings and an embedded database.
Recommended if you are evaluating or demonstrating Bamboo, as it will get you up and running as quickly as possible.

Custom installation
Installs Bamboo but allows you to configure Bamboo with an external database, customise the default settings, and/or initialise the server with your own data.
Recommended if you are setting up a production instance.

Express installation

Custom installation

Task 2 – Setting up Jira

cd /opt/

sudo chmod a+x jira.bin

sudo ./jira.bin

Choose custom install, install on port 8081, custom port 80

```
Please wait a few moments while JIRA starts up.
Launching JIRA ...
Installation of JIRA 6.4.9 is complete
Your installation of JIRA 6.4.9 is now ready and can be accessed via your browser.
JIRA 6.4.9 can be accessed at http://localhost:8081
Finishing installation ...
vagrant@Pawan:/opt$
```

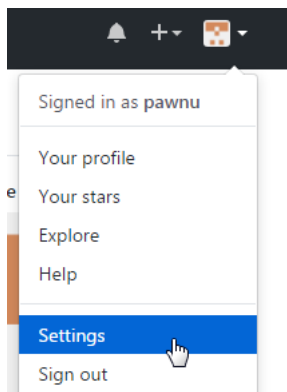


Task 3 – Configuring Jira and Git

<https://confluence.atlassian.com/adminjiracloud/connect-jira-cloud-to-github-814188429.html>

Install Jira and Git on machine.

On github, select your profile



Under developer settings, click OAuth applications.


Developer settings
OAuth applications
GitHub Apps
Personal access tokens

Next, click register a new application

Register a new application

Fill in the details, the homepage URL and callback URL must be same.

Application logo


Drag & drop

Upload new logo

You can also drag and drop a picture from your computer.

Application name

JIRA

Something users will recognize and trust

Homepage URL

http://localhost:8084

The full URL to your application homepage

Application description

JIRA

This is displayed to all potential users of your application

Authorization callback URL

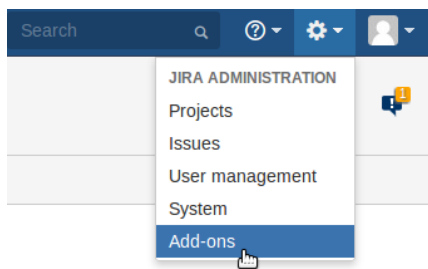
http://localhost:8084

Your application's callback URL. Read our [OAuth documentation](#) for more information.

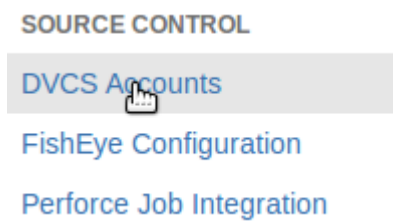
Update application

Delete application

On Jira, go to add-ons page.



Select DVCS accounts under Source Control



Click link github account

DVCS Accounts

Connect your [Bitbucket](#) and [GitHub](#) accounts to JIRA and link

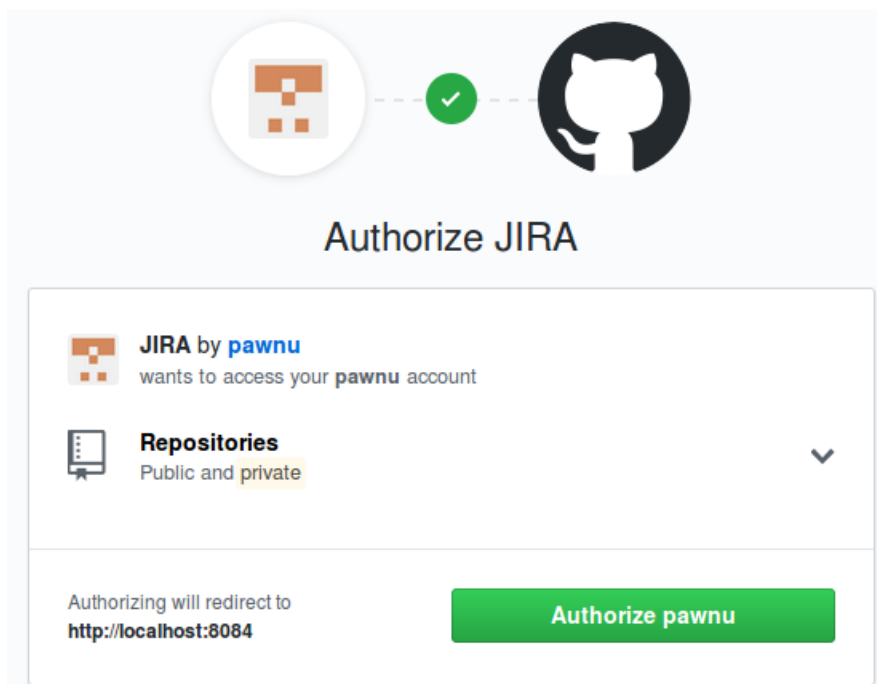
[Link Bitbucket or GitHub account](#)

Fill the required information from github page on popup window.

A screenshot of the 'Add New Account' popup window in Jira. The window contains the following fields and options:




- Host: A dropdown menu with 'GitHub' selected.
- Team or User Account*: A text input field containing 'pawnu'.
- OAuth Key*: A text input field containing 'a40edcf12980f09ae778'. Below it is a link: 'Help with my key and secret.'
- OAuth Secret*: A text input field containing 'cb0a2842ea689d9a979bbbd5c03ca0'.
- Auto Link New Repositories: A checked checkbox.
- Enable Smart Commits: A checked checkbox. Below it is a link: 'Transition JIRA issues through commit messages.'

At the bottom right, there are 'Add' and 'Cancel' buttons.



When prompted, click **Authorize** to allow jira to link with github.

Select which projects to sync with JIRA

 pawnu ⚙️ ▼				
Enabled	Repository	Last Activity	Sync Repo	Smart Commits
<input checked="" type="checkbox"/>	DevOps-Exercise-Book	Fri Jun 02 2017		<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	JAVA-SE-Basic	Wed May 17 2017		<input checked="" type="checkbox"/>

Task 4 – Installing Nexus

```
cd /opt/
sudo scp nexus-2.14.4-03-bundle.tar.gz /usr/local
cd /usr/local
sudo tar xvfz nexus-2.14.4-03-bundle.tar.gz
sudo ln -s nexus-2.14.4-03 nexus
echo "1" | sudo update-alternatives --config java
sudo chown -R vagrant nexus* sonatype-work
cd /usr/local/nexus
./bin/nexus console
./bin/nexus start
```

Notes:

nexus-3.* didn't work with this setup

nexus won't run with sudo, change a user to be owner of nexus and sonawork directory to run

nexus requires JVM 1.8. JVM might show as 1.7. Make sure java 1.8 is installed.

Use **sudo update-alternatives - --config java** and select the 1.8 version of java to run nexus

```
vagrant@Pawan: /opt
vagrant@Pawan:/usr/local/nexus$ sudo update-alternatives --config java
There are 2 choices for the alternative java (providing /usr/bin/java).

  Selection    Path
Priority      Status
-----
* 0            /usr/lib/jvm/java-7-openjdk-amd64/jre/bin/java
1071          auto mode
  1            /opt/jdk1.8.0_45/bin/java
  1            manual mode
  2            /usr/lib/jvm/java-7-openjdk-amd64/jre/bin/java
1071          manual mode

Press enter to keep the current choice[*], or type selection number: 1
update-alternatives: using /opt/jdk1.8.0_45/bin/java to provide /usr/bin/java (java) in manual mode
vagrant@Pawan:/usr/local/nexus$ java -version
java version "1.8.0_45"
Java(TM) SE Runtime Environment (build 1.8.0_45-b14)
Java HotSpot(TM) 64-Bit Server VM (build 25.45-b02, mixed mode)
```

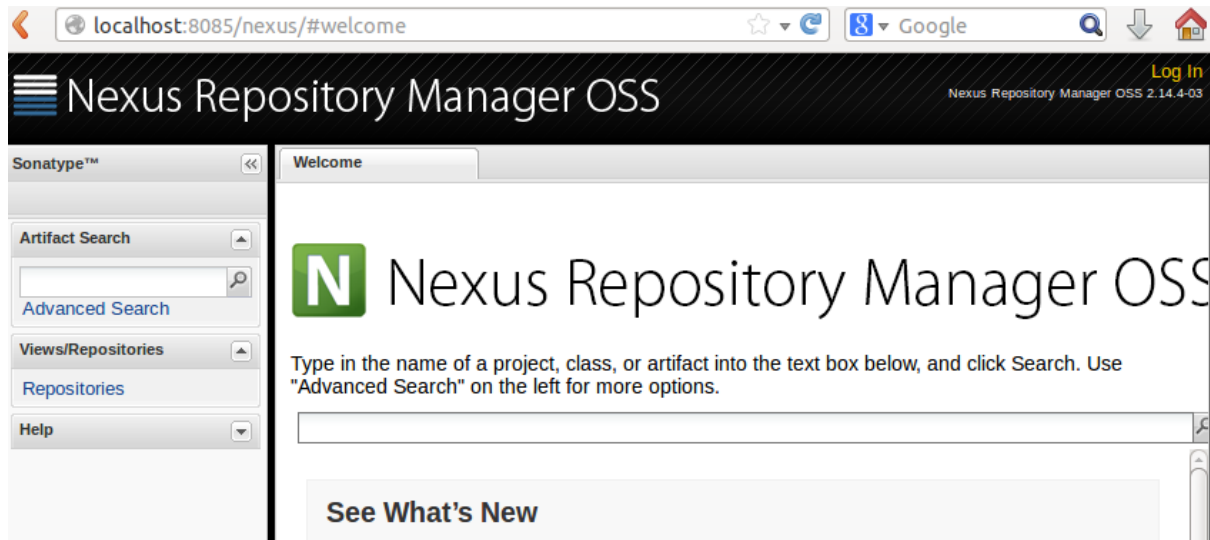
Nexus by default runs on port 8081, to change it edit the **conf/properties** file

```
# Sonatype Nexus
# =====
# This is the most basic configuration of Nexus.

# Jetty section
application-port=8085
application-host=0.0.0.0
nexus-webapp=${bundleBasedir}/nexus
nexus-webapp-context-path=/nexus
```

Run nexus as follows:


```
vagrant@PUPPADEY:/usr/local/nexus$ ./bin/nexus stop
Stopping Nexus OSS...
Nexus OSS was not running.
vagrant@PUPPADEY:/usr/local/nexus$ ./bin/nexus start
Starting Nexus OSS...
Started Nexus OSS.
vagrant@PUPPADEY:/usr/local/nexus$ ./bin/nexus status
Nexus OSS is running (18921).
```



Task 5 – Install Zabbix

```
cd /opt/
```

```
wget http://repo.zabbix.com/zabbix/2.4/ubuntu/pool/main/z/zabbix-release/zabbix-release_2.4-1+trusty_all.deb
```

```
sudo dpkg -i zabbix-release_2.4-1+trusty_all.deb
```

```
sudo apt-get install -y zabbix-server-mysql zabbix-frontend-php php5-mysql
```

Edit **/etc/php5/apache2/php.ini**

```
post_max_size = 16M
```

```
max_execution_time = 300
```

```
max_input_time = 300
```

```
date.timezone = Europe/London
```

```
sudo service apache2 restart
```

Create **/etc/zabbix/apache.conf**

```
# Define /zabbix alias, this is the default
```

```
<IfModule mod_alias.c>
```

```
Alias /zabbix /usr/share/zabbix
```

```
</IfModule>
```

```
sudo cp /etc/zabbix/apache.conf /etc/apache2/conf-available/zabbix.conf
```

```
sudo a2enconf zabbix.conf
```

```
sudo service apache2 restart  
sudo service zabbix-server start
```

