



Boxupp's User Manual

An Interface Simplifying Creation Of Virtual Machines and Linux Containers Using Powerful Tools viz.
Vagrant, Puppet and Docker.

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Getting Started

1.1 Pre-requisites to Install Boxupp

1. Oracle Virtualbox - a powerful x86 and AMD64/Intel64 virtualization product which is freely available as Open Source Software under the terms of the GNU General Public License (GPL) version 2.0 . [Learn More](#)
1. Vagrant - a free and open-source software for creating and configuring virtual and repeatable development environments. [Learn More](#)
2. Java Development Kit (JDK)- a development environment for writing Java applications. [Learn More](#)

Note: On execution of Boxupp's installation file all the above pre -requisites will be automatically installed on your machine as part of the installation process. Moreover if you have any or all of the above already installed on your machine the installation intelligent robot will detect them and jump to the next thing to be installed.

Downloading and Configuring Boxupp

2.1 Process of Downloading and Installing Boxupp

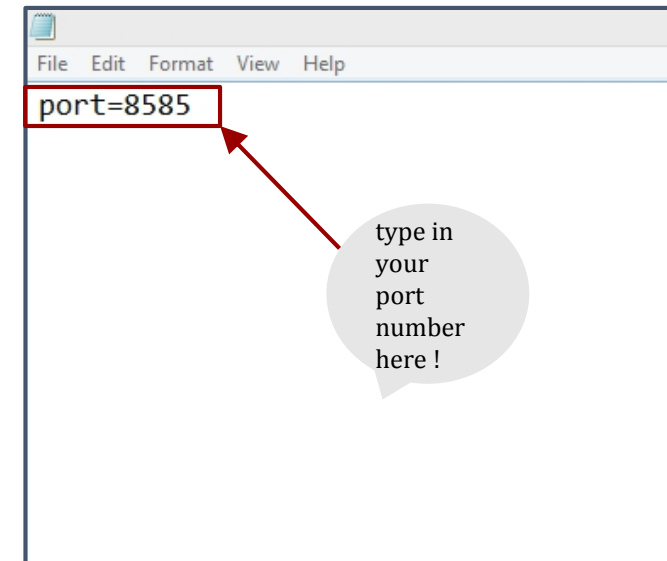
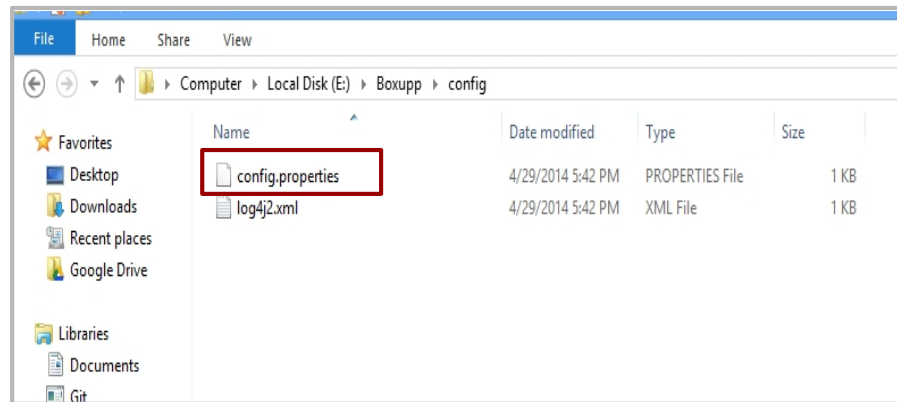
1. Download Boxupp by logging onto: <http://www.boxupp.com/> and clicking on download button. It will ask you to submit your email address.
2. Go to your default download folder and extract the content of downloaded .zip in any directory
3. Windows user have to run **.bat** file and MacOSx and Linux users have to run the **.sh** file to install boxupp.

Configuring Boxupp

By default Boxupp runs on port number: 8585 but we can customize it to run on any of the available ports just browse to the directory location where you have extracted Boxupp.

Move into the **config folder** and look for the file **config.properties** open the file with any of the available text editors and define your port number in front of port parameter as shown in the screenshot shown in the next slide. Restart the BoxUp server if already running for the changes to take effect.

Locate config.properties and open it in a text editor



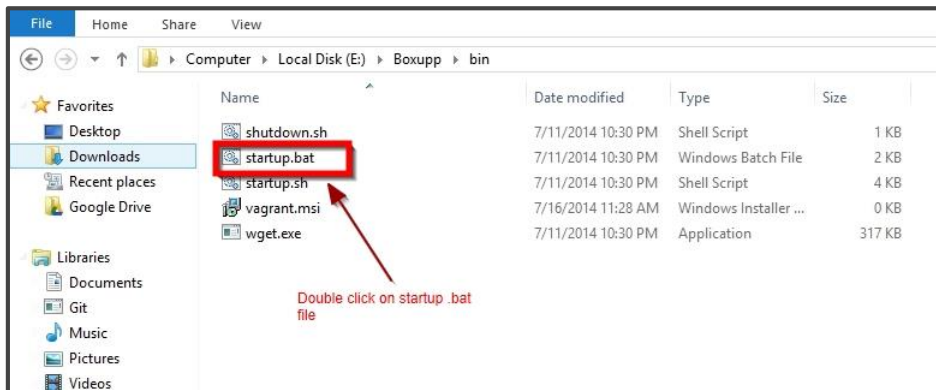
Change the port number in the text editor and click save for the settings to take effect.

Up and Running With Boxupp – Windows, Linux and Mac OSX

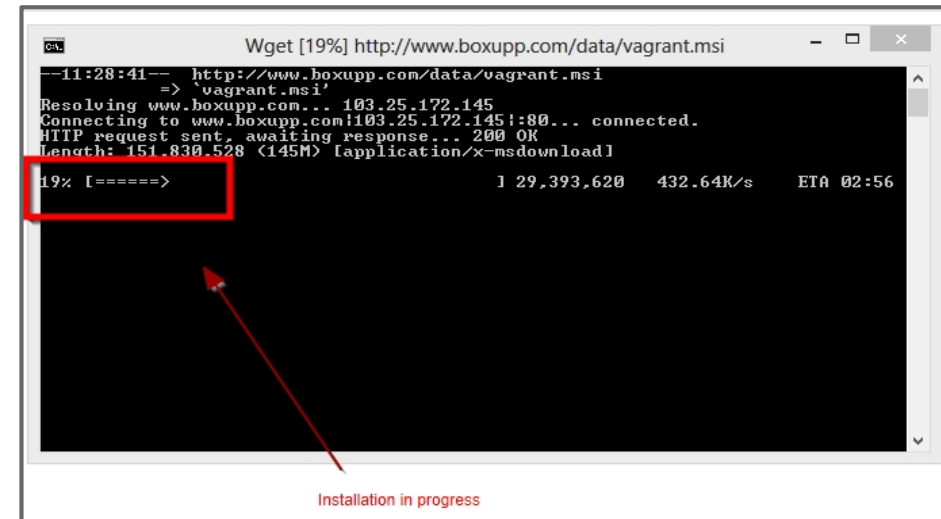
2.2 Up and Running With Boxupp

To run Boxupp on windows environment browse to the folder where you have extracted Boxupp and then move to the bin folder and run startup.bat file. It will commence with the installation. Pictorial view depicted below:

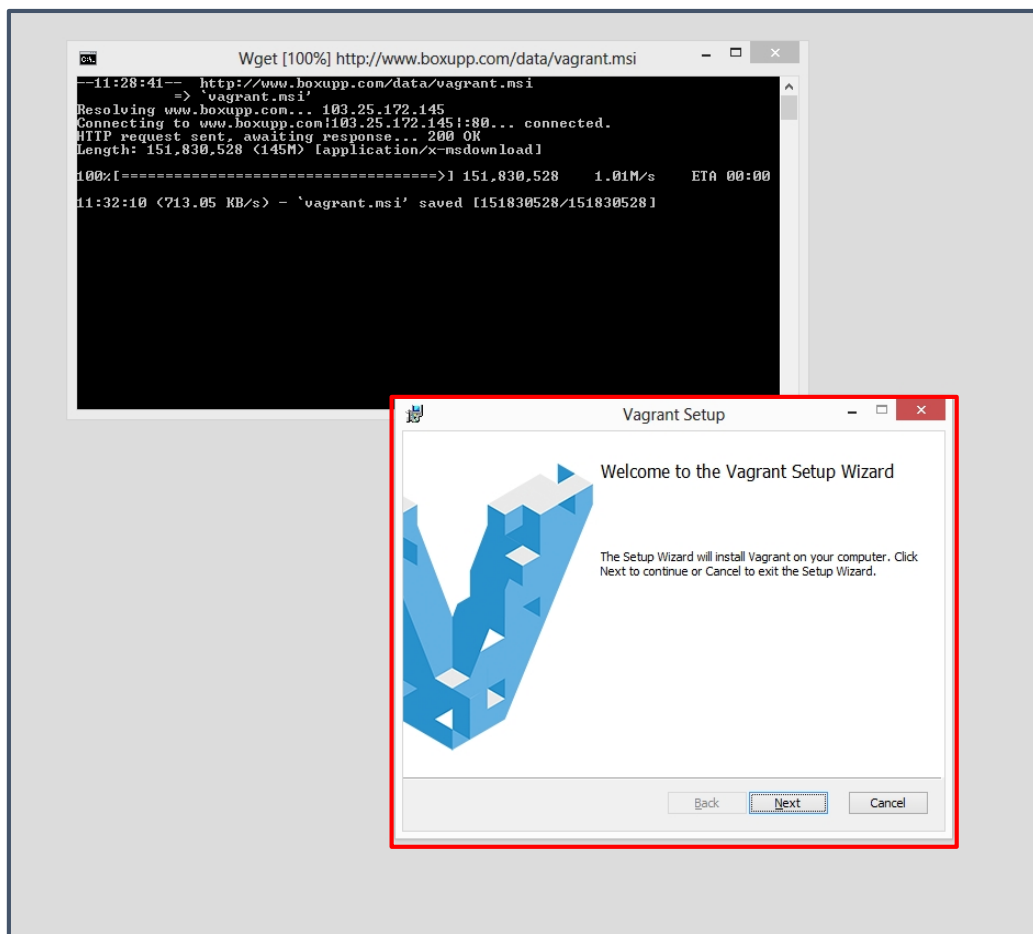
Go to bin folder double click on startup.bat (Windows)



Installation will be shown in a command prompt window



Checkout some more screenshots on the next pages.



Vagrant installation wizard will appear as a part of the boxupp's installation process. The installation intelligence will check whether vagrant is already installed on your machine, if it is then it will skip it.




Checkout some more screenshots on the next pages.



After the installation of Vagrant another software package which will be installed is
Oracle VM Virtualbox. The pictorial view of the same is shown on this slide .

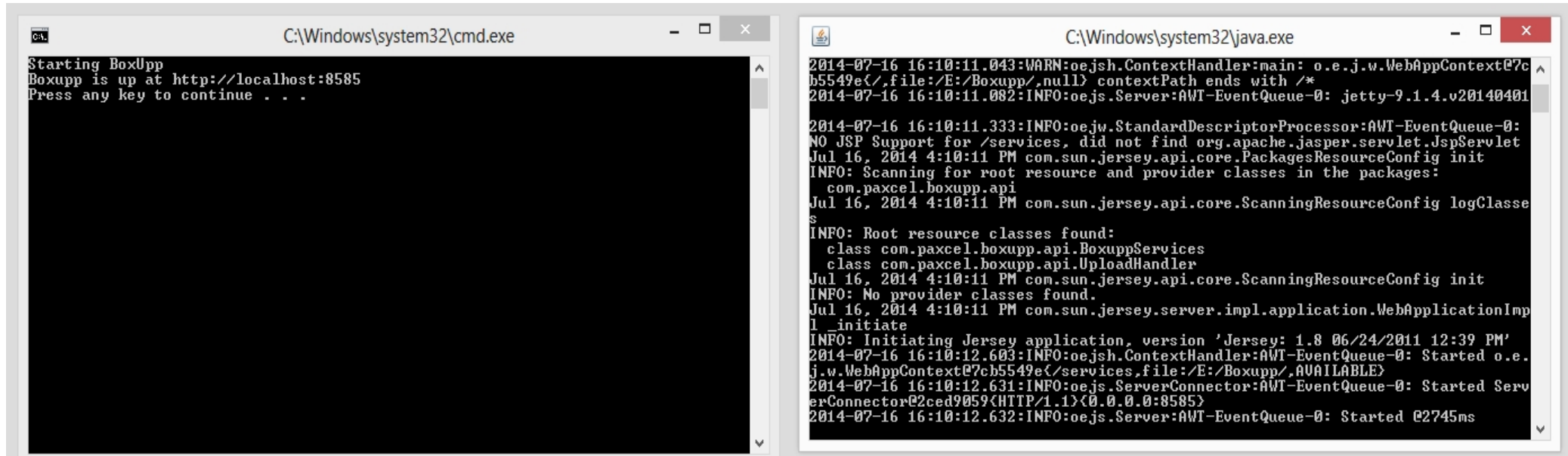
Similar to the vagrant installation, the installation robots will check whether Oracle VM Virtual Box is already installed on your machine, if it is then it will skip it.



Checkout some more screenshots on the next pages.

After the installation of **Vagrant** and **Oracle VM Virtualbox** there will be a prompt to restart your machine. Restart it and then go to bin folder and run **startup.bat**.

It will show you the following 2 screen and **Boxupp** is all set to run on your local host at : <http://localhost:8585/> . Port number may vary if you have changed it



```
C:\Windows\system32\cmd.exe
Starting BoxUpp
Boxupp is up at http://localhost:8585
Press any key to continue . . .

C:\Windows\system32\java.exe
2014-07-16 16:10:11.043:WARN:oejsh.ContextHandler:main: o.e.j.w.WebAppContext@7c
b5549e</file:/E:/Boxupp/,null> contextPath ends with /*
2014-07-16 16:10:11.082:INFO:oejs.Server:AWT-EventQueue-0: jetty-9.1.4.v20140401
2014-07-16 16:10:11.333:INFO:oejw.StandardDescriptorProcessor:AWT-EventQueue-0:
NO JSP Support for /services, did not find org.apache.jasper.servlet.JspServlet
Jul 16, 2014 4:10:11 PM com.sun.jersey.api.core.PackagesResourceConfig init
INFO: Scanning for root resource and provider classes in the packages:
com.paxcel.boxupp.api
Jul 16, 2014 4:10:11 PM com.sun.jersey.api.core.ScanningResourceConfig logClasse
s
INFO: Root resource classes found:
class com.paxcel.boxupp.api.BoxuppServices
class com.paxcel.boxupp.api.UploadHandler
Jul 16, 2014 4:10:11 PM com.sun.jersey.api.core.ScanningResourceConfig init
INFO: No provider classes found.
Jul 16, 2014 4:10:11 PM com.sun.jersey.server.impl.application.WebApplicationImp
l _initiate
INFO: Initiating Jersey application, version 'Jersey: 1.8 06/24/2011 12:39 PM'
2014-07-16 16:10:12.603:INFO:oejsh.ContextHandler:AWT-EventQueue-0: Started o.e.
j.w.WebAppContext@7cb5549e</services,file:/E:/Boxupp/,AVAILABLE>
2014-07-16 16:10:12.631:INFO:oejs.ServerConnector:AWT-EventQueue-0: Started Serv
erConnector@2ced9059<HTTP/1.1><0.0.0.0:8585>
2014-07-16 16:10:12.632:INFO:oejs.Server:AWT-EventQueue-0: Started @2745ms
```

Up and Running With Boxupp – Windows, Linux and Mac OSX

(Mac- OS X)

After you have unzipped the package please execute the file “*startup.sh*” You might get a permission denied error, to resolve this error execute a command “*chmod 777 **” and then again run “*startup.sh*”. This time Boxupp will be successfully installed on your linux or mac machine and you will be able to run that in the browser at : <http://localhost:8585/>

```
[root@localpax bin]# ./startup.sh
bash: ./startup.sh: Permission denied
[root@localpax bin]# chmod 777 *
[root@localpax bin]# ./startup.sh
Boxupp Started Sucessfully
[root@localpax bin]#
```

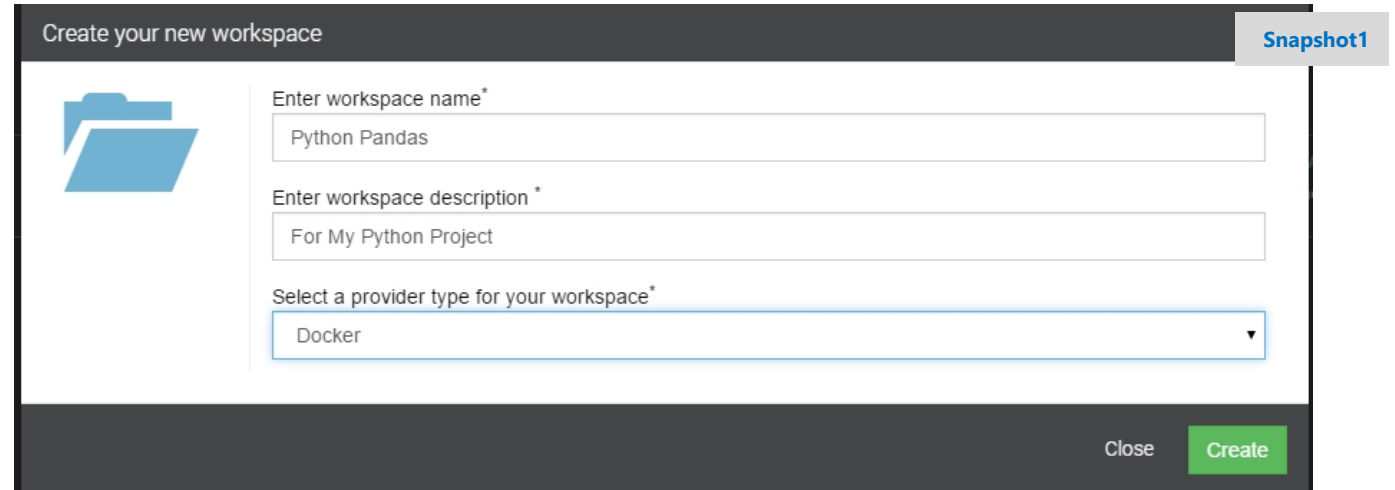
Now since we have successfully installed the Boxupp environment on all the platforms viz. Windows, Linux, Mac OS X. In our next sections we will take a plunge into the interactive and intuitive UI offered by the same.

We will also create virtualized development environment without writing a single line of code. *So Lets Get Started>*

3.1 Workspaces – First Step of The Boxupp Journey

Users will be able to create multiple workspaces according to their requirements using prominent providers viz-

1. **Docker**
2. **Virtual Box**



Create your new workspace

Snapshot1

Enter workspace name*

Python Pandas

Enter workspace description *

For My Python Project

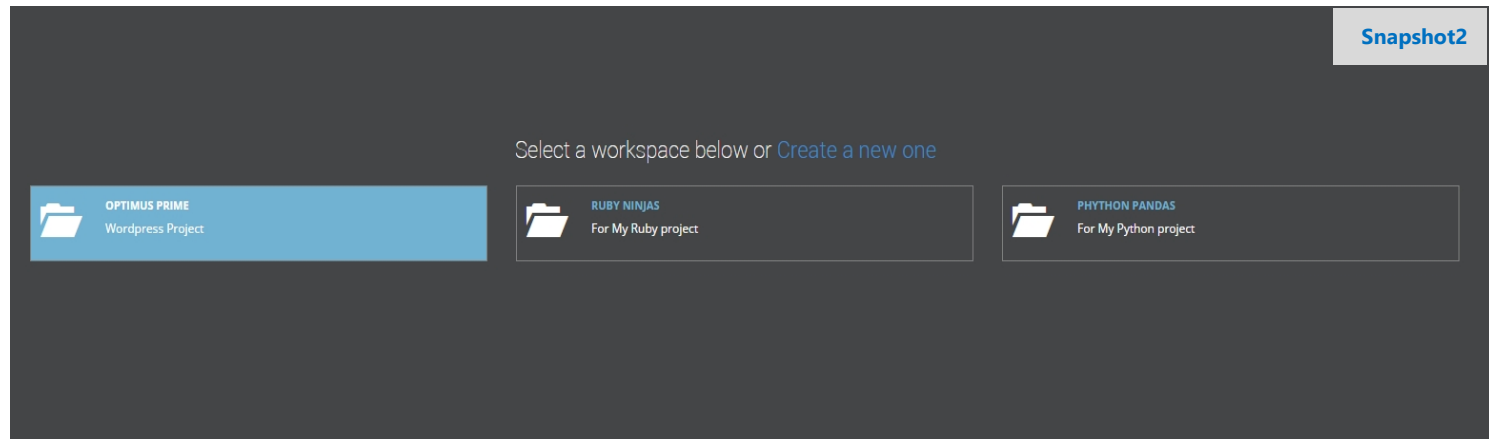
Select a provider type for your workspace*

Docker

Close Create



All the workspaces created will be listed as shown in [Snapshot2](#). Clicking on any of the workspaces will redirect you to the dashboard for that workspace.



Select a workspace below or [Create a new one](#)

OPTIMUS PRIME
Wordpress Project

RUBY NINJAS
For My Ruby project

PYTHON PANDAS
For My Python project

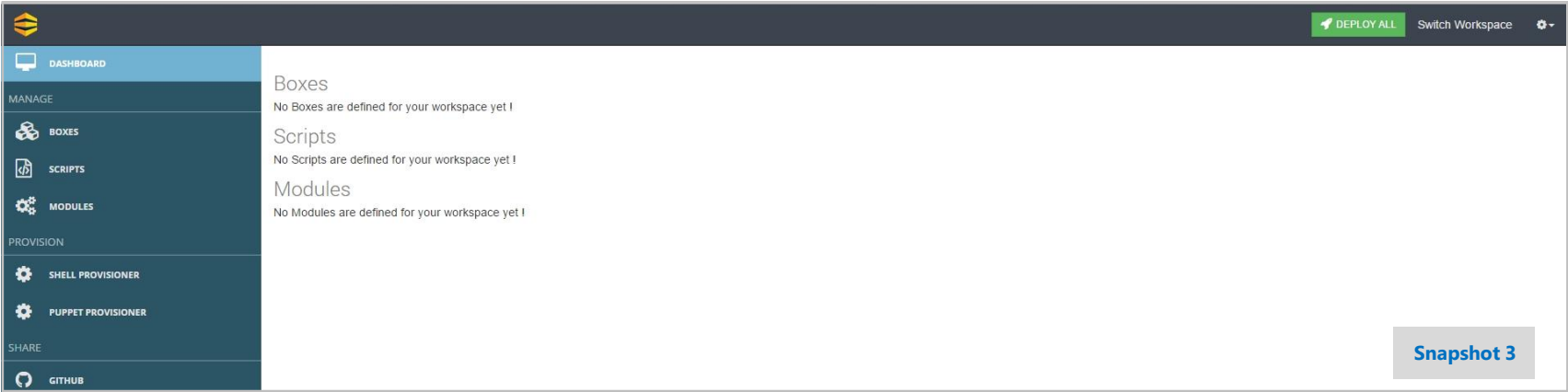
Snapshot2

4.1 Lets Walkthrough Dashboard

As the users will be landing onto the dashboards of specific workspaces they will see a screen something similar to shown in [\(Snapshot 3\)](#)

Left Panel Comprises of Various Main Navigation Elements Viz –


- Boxes
- Scripts
- Modules
- Shell Provisioner
- Puppet Provisioner
- Github



The top Right corner shows call to actions such as **Deploy All, Switch Workspace and Sign out** . We will discuss about all these sections individually an in detail in the upcoming screens of this presentation . Hence the dashbaord will primarily provide you with a hawk eye of various activities performed by the user within a workspace.


This is how the dashboard will look like once you have created some boxes, modules and scripts....







DASHBOARD


MANAGE


 BOXES

 SCRIPTS


 MODULES

PROVISION

 SHELL PROVISIONER


 PUPPET PROVISIONER

SHARE

 GITHUB

DEPLOY ALL

Switch Workspace



Boxes

#	VAGRANTID	HOSTNAME	DOCKER IMAGE
1	VagID009	myhostcouk	boxupp/centos-dev:V1.4
2	VagID786	myhostcouk	boxupp/debian-base

Scripts

#	SCRIPTID	SCRIPT NAME
1	1	Script1
2	2	Script2

Modules

#	MODULEID	MODULE NAME
1	1	mysql
2	2	mysql
3	3	apache

5.1 Creation of Boxes/ Provider Chosen-Docker

Scenario 1– You chose **Docker** as the provider while creation of workspaces.

The tool provides users with 3 super easy methods to **Create Boxes**.

Lets go through each one of those. The first one on the list is

▪ QUICK CREATE –

In this method you just need to specify the following attributes –

- Vagrant ID
- Hostname
- Choose from one of the Docker Images provided in the drop down menu, the selection could also be made by clicking on the thumbnail logos as well.
- Hit Create

The boxes created will be visible as shown in [\(Snapshot 4\)](#)

Choose an option below:

BOX

QUICK CREATE

SCRIPT

CLONE EXISTING




MODULE

CREATE FROM SCRATCH

VAGRANT ID*

HOST-NAME*

DOCKER IMAGE*

Create Box

DASHBOARD

MANAGE

BOXES

SCRIPTS

MODULES

PROVISION

SHELL PROVISIONER

PUPPET PROVISIONER

SHARE

GITHUB

VAGID009

VAGID786

DEPLOY ALL

Switch Workspace

VAGRANTID	HOSTNAME	DOCKER IMAGE
VagID009	myhostcoul	boxupp/centos-dev:V1.4

USERNAME

PASSWORD

PROVIDER

SCRIPTS MAPPED

MODULES MAPPED

Commit changes

Choose an option below:

BOX

QUICK CREATE

SCRIPT

CLONE EXISTING

MODULE

CREATE FROM SCRATCH

VAGRANT ID*

HOST-NAME*

DOCKER IMAGE*





Create Box

Scenario 1– Continued....

Next method on the list is- **Create from Scratch**

- **Create From Scratch-**

As you click on Create from Scratch a pop box will appear with 3 tabs –

- a. Box Settings
- b. Networking
- c. Folders

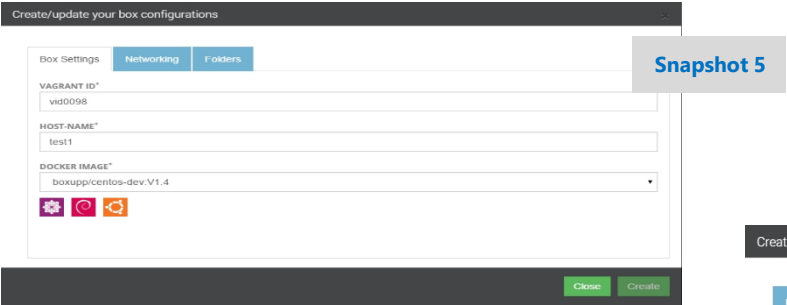
We will explore more on each of these tabs one at a time:

- **Box Settings** – This screen is very similar to the one we have already stumbled across during the discussion of **Quick Create** method So if you need a quick revision on what to do on this screen just jump back to the previous slide. (Ref- Snapshot 5)

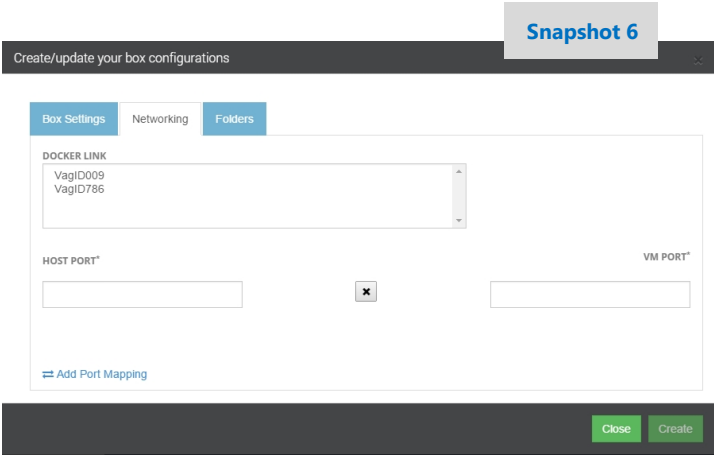
- **Networking** – On this tab you can select from the existent machines with which you want to setup a network and also map the **Host** and the **VM** ports (Ref- Snapshot 6)

- **Folders-** On this tab you can specify the paths of the folders which you need to bring in sync for Host and VM machines. (Ref- Snapshot 7)

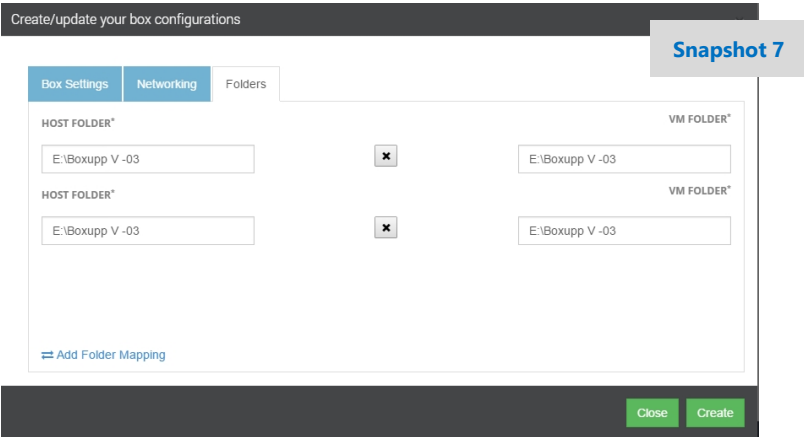
After specifying all the mandatory details hit **Create** and the box will be created and ready to be used.



Snapshot 5



Snapshot 6



Snapshot 7

5.2 Creation of Boxes/ Provider Chosen- Virtual Box

Scenario 2– You chose **Virtual Box** as the provider while creation of workspaces.

When virtual box is chosen aa the provider the screen for the **Quick Create** section looks slightly different

In this method you just need to specify the following attributes –

- a. Vagrant ID
- b. Hostname
- c. Box Type
- d. Box URL

and then click **Create**

The screenshot displays the Vagrant Cloud web interface. On the left is a dark sidebar with navigation links: DASHBOARD, MANAGE, BOXES, SCRIPTS, MODULES, PROVISION, SHELL PROVISIONER, PUPPET PROVISIONER, SHARE, and GITHUB. The main area is titled 'VAG20876' and 'Select a box to manage'. Below this is a 'Choose an option below:' section with buttons for BOX, QUICK CREATE, SCRIPT, CLONE EXISTING, MODULE, and CREATE FROM SCRATCH. The 'QUICK CREATE' button is active, leading to a form with the following fields: VAGRANT ID* (value: vid098), HOST-NAME* (value: test), BOX TYPE* (value: Centos), and BOX URL* (value: http://centos.excellmedia.net/7.0.1406/iso/x86_64/CentOS 7.0-1406-x86_64-DVD.iso). A green 'Create Box' button is at the bottom of the form. A red rectangle highlights the form fields. A 'Scenario 2' label is in the top right corner.

Scenario 2– Continued....

Next method on the list is- **Create from Scratch**

- Create From Scratch-

As you click on Create from Scratch a pop box will appear with 4 tabs –

- a. Box Settings
- b. Networking
- c. Folders
- d. Miscellaneous

We will explore more on each of these tabs one at a time:

- Box Settings – This screen is very similar to the one we have already stumbled across during the discussion of **Quick Create** method So if you need a quick revision on what to do on this screen just jump back to the previous slide. (Ref- [Snapshot 5 \(a\)](#))

- Networking – On this tab you can select from the existent machines with which you want to setup a network and also map the **Host** and the **VM** ports (Ref- [Snapshot 6\(a\)](#))

Create/update your box configurations

Snapshot 5(a)

Box Settings

Networking

Folders

Miscellaneous

VAGRANT ID*

vid0989

HOST-NAME*

test

BOX TYPE*

centos

BOX URL*

http://centos.excellmedia.net/7.0.1406/Isos/x86_64/CentOS-7.0-1406-x86_64-DVD.iso

Close

Create

Create/update your box configurations

Snapshot 6(a)

Box Settings

Networking

Folders

Miscellaneous

NETWORK IP*

192.168.0.1

HOST PORT*

8585

×

9000

VM PORT*

Add Port Mapping

Close

Create

Scenario 2– Continued....

- **Folders**- On this tab you can specify the paths of the folders which you need to bring in sync for Host and VM machines.
(Ref- [Snapshot 7\(a\)](#))

- **Miscellaneous**- On this tab you can input the following values-

- a. Virtual Box Name
- b. CPU Exec Cap
- c. Memory (RAM)
- d. Boot Timeout
- e. GUI Required

(Ref- [Snapshot 7\(b\)](#))

Create/update your box configurations

Box SettingsNetworkingFoldersMiscellaneous

HOST FOLDER*

E:\Boxupp\New Website

×

VM FOLDER*

E:\Boxupp\New Website

Add Folder Mapping

Close

Create

Snapshot 7(a)

Create/update your box configurations

Box SettingsNetworkingFoldersMiscellaneous

VIRTUAL BOX NAME

A

CPU EXEC CAP (%)

20

MEMORY (RAM)

512

BOOT TIMEOUT

100

GUI REQUIRED ☒

Close

Create

Snapshot 7(b)

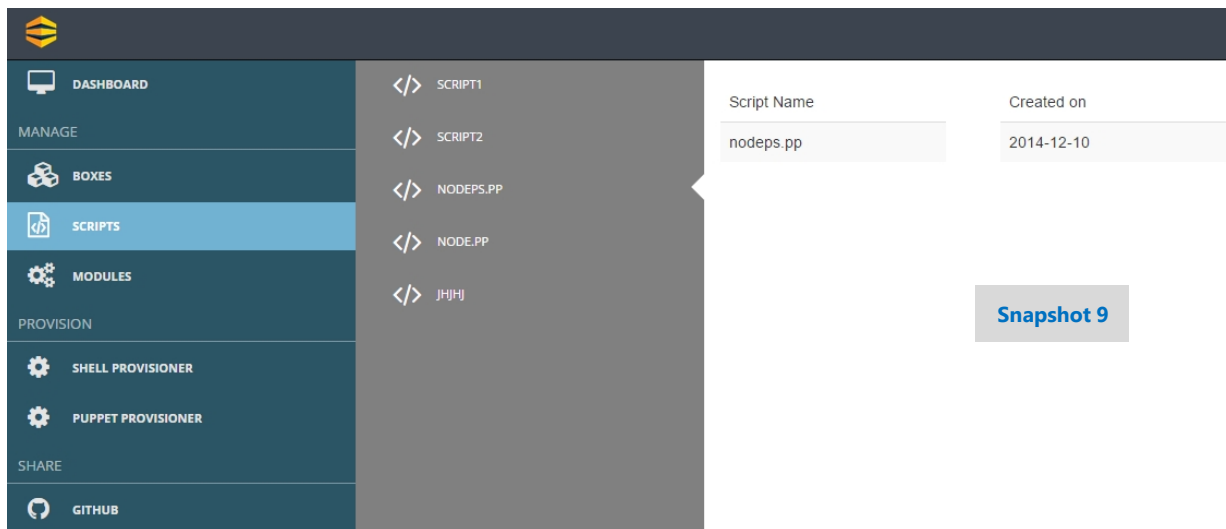
6.1 Introduction to Script Creation

After creation of boxes its time to write some Scripts

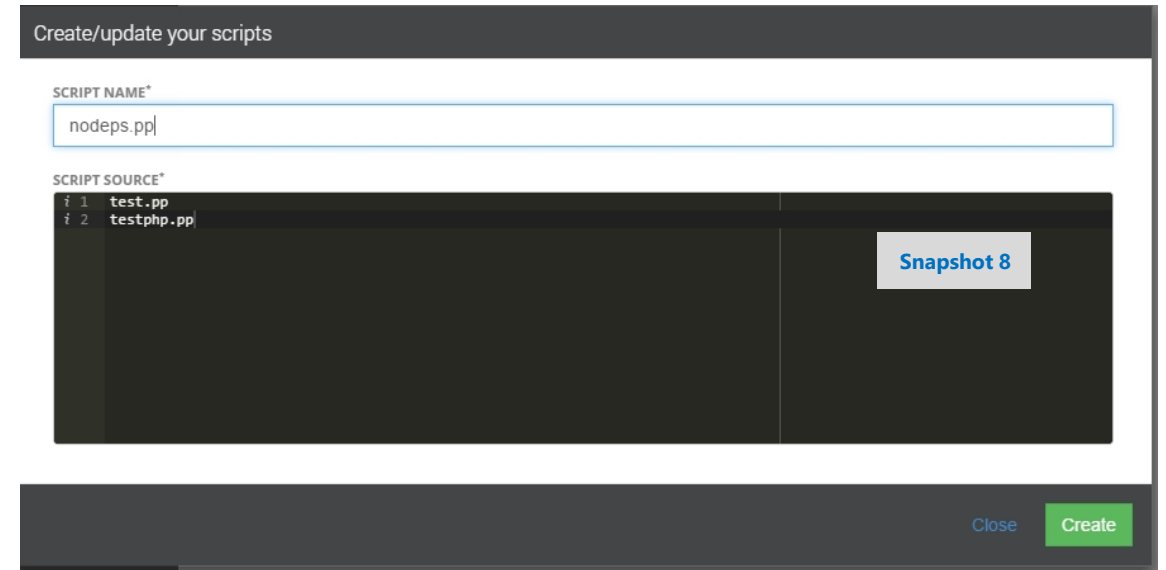
As the user chooses the **Script** tab and clicks on **Create From Scratch** a pop up menu as shown in ([Snapshot 8](#)) will appear.

Here you need to specify the **Script Name** and the **Code Snippet** for your script.

Once you have defined your script click **Create**. The scripts will be listed as shown in the ([Snapshot 9](#))



Script Name	Created on
SCRIPT1	
SCRIPT2	
NODEPS.PP	
NODE.PP	
JHJHJ	



Create/update your scripts

SCRIPT NAME*

nodeps.pp

SCRIPT SOURCE*

```
i 1 test.pp
i 2 testphp.pp
```

Snapshot 8

Close Create

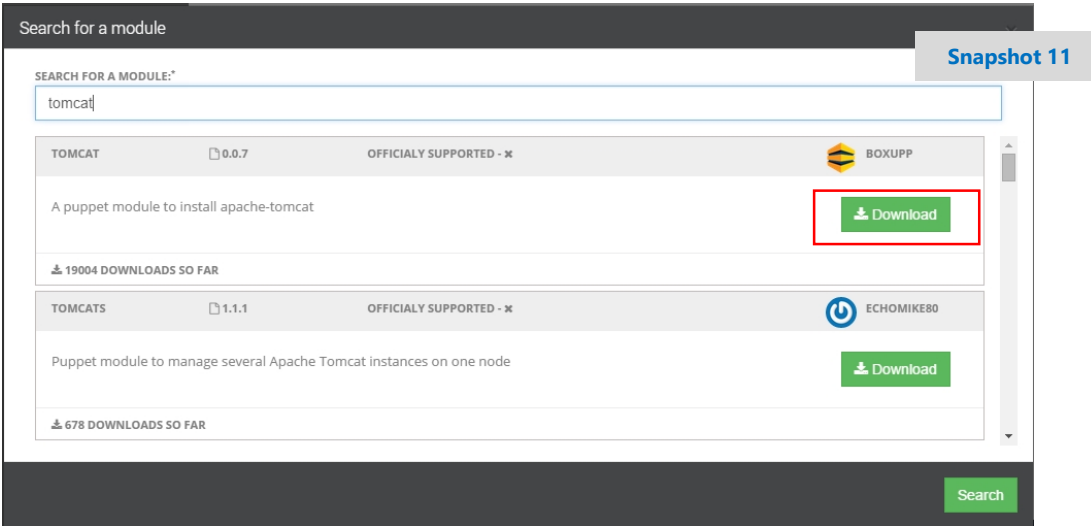
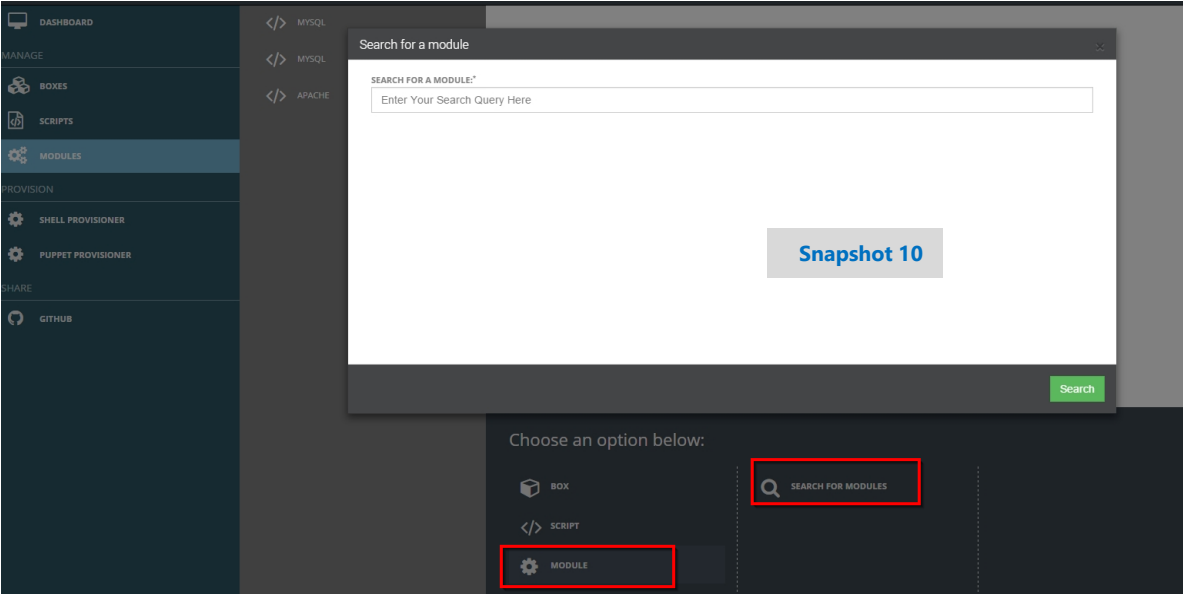
7.1 Introduction to Modules

After we are done creating boxes, writing scripts its time to search for some **Modules**, download them and deploy them on various **VMS or Containers** as per our requirements.

As you will click on the **Boxes** tab and then click on **Search for Modules** a pop box as shown in (Snapshot 10) will appear

Users will be able to search for modules they are looking for viz. tomcat , mysql etc. As the user enters their search query and hit Search our intelligent robots will plunge into the puppet forge database and retrieve back results which will be stacked in the order of maximum number of downloads (Snapshot 11)

A download button will appear for each of the listed results and clicking on download will download the module which can be deployed at any time.



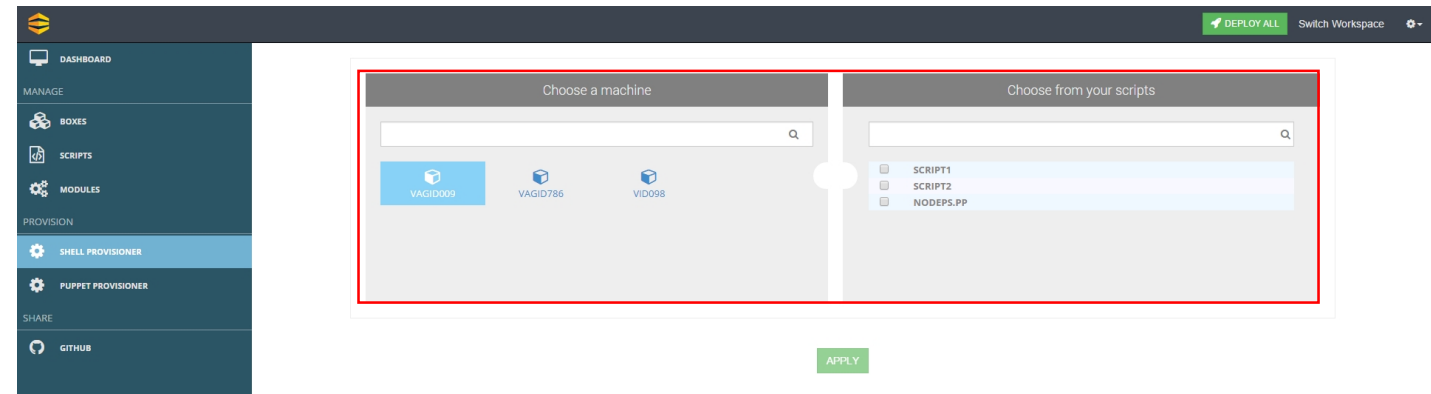
8.1 Lets Learn How to Provision and Deploy

Now we are all set to provision our first machines. Boxupp offers 2 provisioning processes -

- a. **Shell Provisioning** – This is primarily used to provision the scripts created by you . As you will land on to the **Shell Provisioner** tab you will see all your machines listed on the left column and all your scripts listed in the right column.

You will be able to select a machine from the left panel and one or multiple scripts from the right panel and then click on **Apply**. Clicking on apply will queue up the selected scripts and will be ready for deployment on the selected machine.

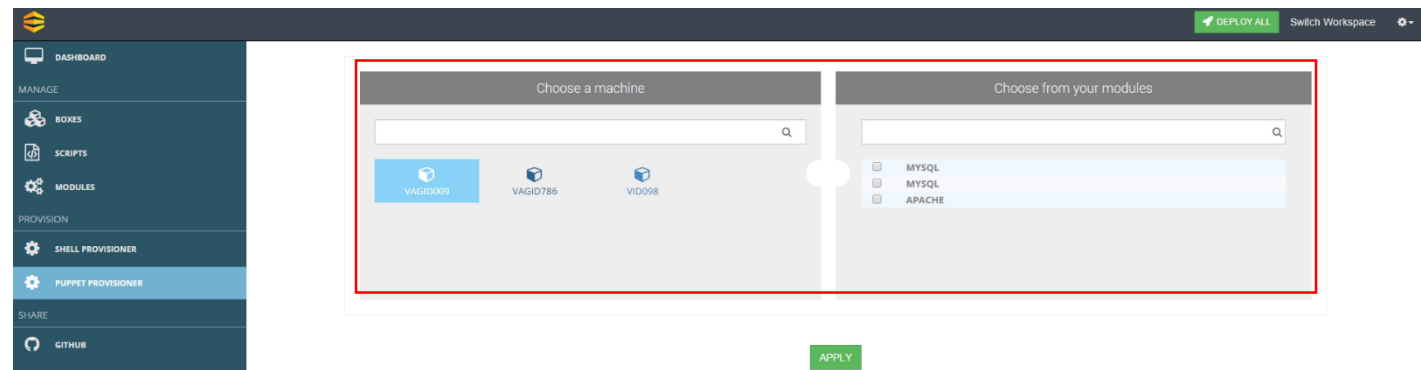
Both columns have the search attribute so that you can quickly jump onto the machine or script you are looking for.



- b. **Puppet Provisioning** – This is primarily used to provision the modules downloaded by you. As you will land on to the **Puppet Provisioner** tab you will see all your machines listed on the left column and all your modules listed in the right column.

You will be able to select a machine from the left panel and one or multiple modules from the right panel and then click on **Apply**. Clicking on apply will queue up the selected modules and will be ready for deployment on the selected machine.

Clicking on **Deploy All** button located on the top right corner will start the deployment process for all the machines. In case you need to commit changes to a specific machines you need to navigate to that machine under Boxes.



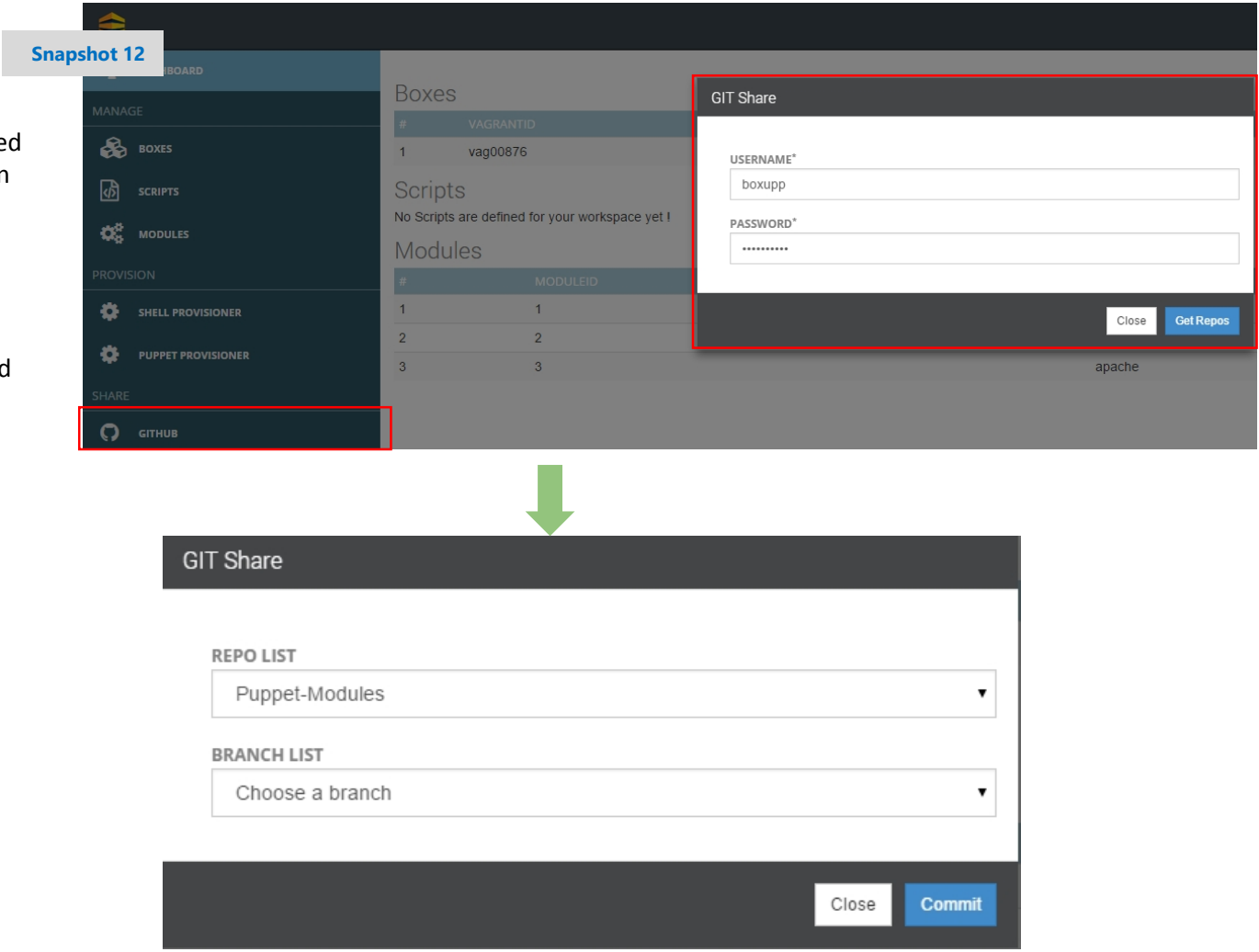
9.1 Collaborate Using Github

Once you are done with your deployments , you can share the infrastructure transformed into code among your team members as well peer group using the most widely used collaboration platform –**Github**.

As you will click on **Github** a pop up window as shown in [\(Snapshot12\)](#) will appear . You just need to input your **Git's Username and Password** and click **Get Repos** this will redirect you to a screen where all your repos and corresponding branches are listed in drop down menus.

Select the **Repo** as well as the **Branch** and click **Commit**. This will share all your deployments on the active workspace to the selected branch.

Behind the scenes it's the **Workspace Specific Vagrant File** which gets committed to the selected branch.



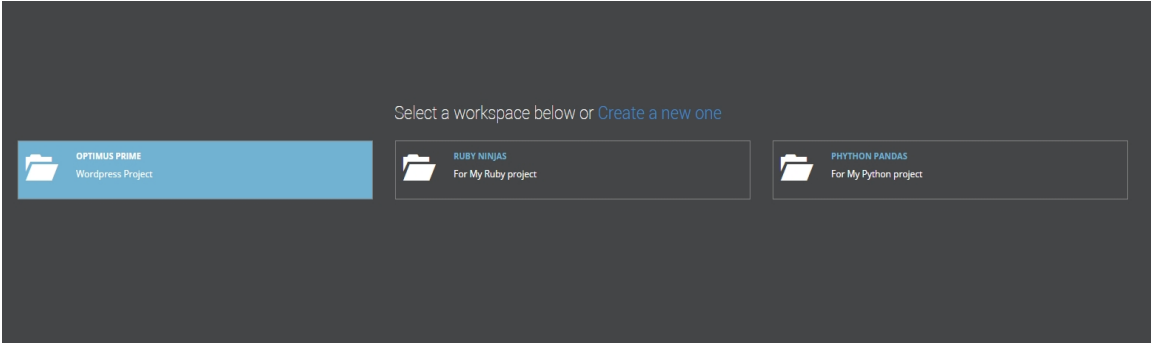
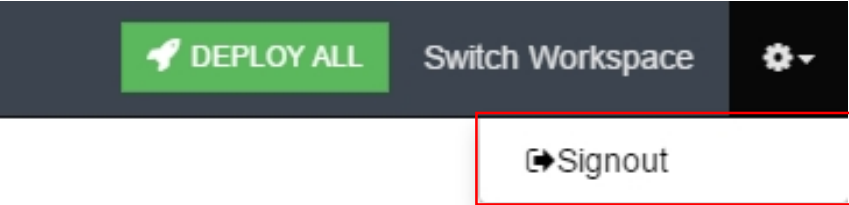
10.1 Switch Workspace and What's Nested Under the Gear Icon

Switch Workspace-

Clicking on **Switch Workspace** call to action will redirect you to the **Workspace Listing** . Hence you can quickly jump from one workspace to another.

Gear Icon-

As you will click on the gear icon shown on the top right corner of your screen it will give you a link to **logout** from the Boxupp's portal.



Cheers !

Happy Browsing! On The Tool

We sincerely hope this user manual answers all your queries.

But In case your come across any issues or facing difficulties to understand the workflow .

Feel free to drop us an email at – support@boxupp.com

Our Client Services Team will revert back to you within 2 Business Days.

To stay informed about the latest updates/ new releases follow us on

<https://www.facebook.com/Boxupp>

<https://www.linkedin.com/company/3768272>

<http://twitter.com/Boxupp>