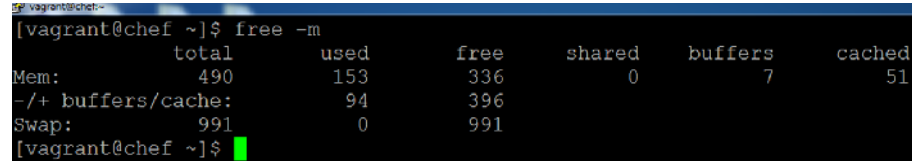## Memory Increase:

Before proceeding CHEF Installation we need to check the Memory space of our Vagrant 10 Machine. run the following command

#free -m

```
[vagrant@chef ~]$ free -m
             total       used       free     shared    buffers     cached
Mem:           490        153        336          0          7         51
-/+ buffers/cache:         94        396
Swap:          991          0        991
[vagrant@chef ~]$
```
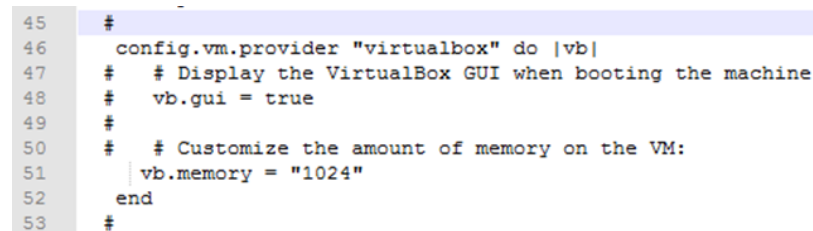
We can see memory is 490MB, to install CHEF we need minimum 1 GB space and we need to increase the memory to 1 GB(996MB) for chef configuration

Go to Vagrant 10 folder which is in Desktop and we can see VagrantFile.

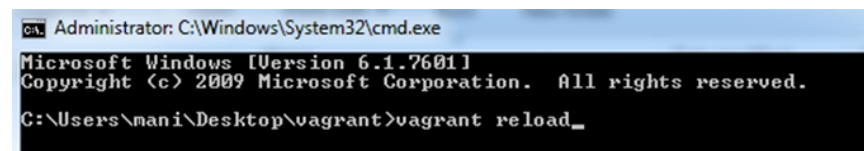Open the file in Notepad++ and do changes as per the below screen shot.

```
45    #
46      config.vm.provider "virtualbox" do |vb|
47    #    # Display the VirtualBox GUI when booting the machine
48    #    vb.gui = true
49    #
50    #    # Customize the amount of memory on the VM:
51         vb.memory = "1024"
52      end
53    #
```

Once we increase vb.memory = "1024" save and close the file.

Go to Vagrant 10 folder URL and type cmd, it will show command prompt.

Type below command to get changes reflected at Vagrant 10 Machine.
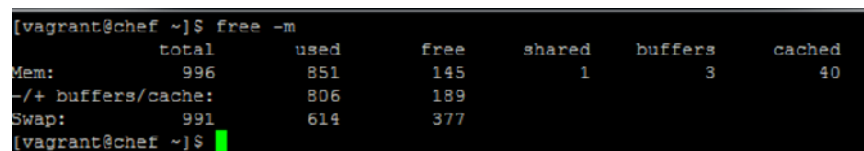
Command: **vagrant reload**

```
Administrator: C:\Windows\System32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation.  All rights reserved.

C:\Users\mani\Desktop\vagrant>vagrant reload_
```

Once Vagrant 10 rebooted and comes up type in the same command prompt "free –m".

We can see memory space got increased to 1GB (996)

```
[vagrant@chef ~]$ free -m
             total       used       free     shared    buffers     cached
Mem:           996        851        145          1          3         40
-/+ buffers/cache:        806        189
Swap:          991        614        377
[vagrant@chef ~]$
```

CHEF-Installation

1. We need create two more Vagrant servers in Virtual Box.
2. First create 2 folders in desktop and name it as Vagrant11 and Vagrant12.
3. Go inside the folder Vagrant11 and Vagrant12.
4. before this copy VagrantFile from vagrant10 Folder to Vagrant11 and Vagrant12 which will be in Desktop.
5. Edit the VagrantFile and change the IP Address, if we are using Vagrant11 it will be 192.168.33.11 and if it is Vagrant12 it will be 192.168.33.12.
6. Save the file.
7. Type cmd from URL.
8. At Command prompt type "vagrant up".
9. After that again type command "vagrant reload".

Changing the Host Name:
Login into Vagrant 10 via putty.
Commands:
1. cd ../
2. cd ../
3. cd /etc/
4. ls
5. sudo su
6. **vi hosts**

In the hosts file we need to change the host name.
192.168.33.10 chef.mycompany.com
127.0.0.1 localhost
Esc: wq! To save the changes.
7. cd /etc/sysconfig/
8. ls
9. **vi network**

Here change the hostname
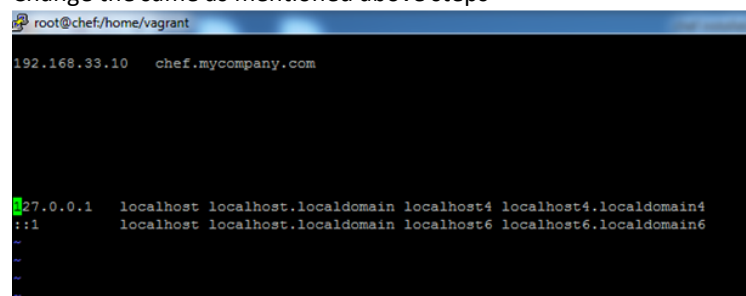HOSTNAME=chef.mycompany.com
Save the file by giving Esc :wq!

Login into Vagrant 11 Machine via putty
1. cd ../
2. cd ../
3. cd /etc/
4. sudo su
5. **vi hosts**
Change the same as mentioned above steps

Reboot both servers by giving command "reboot".

Setting up the Chef Server

Create one Folder in Desktop and copy the chef server installation files to it.

1. chefdk-0.10.0-1.el6.x86_64.rpm
2. Chef-manage-2.2.0-1.el6.x86_64.rpm
3. Chef-server-core-12.3.0-1.el6.x86_64.rpm

Vagrant10:

Login into 192.168.33.10 via WinScp and copy below two files to Vagrant10 machine.

1) chef-manage-2.2.0-1.el6.x86_64.rpm
2) chef-server-core-12.3.0-1.el6.x86_64.rpm

Vagrant11:

Login into 192.168.33.11 via WinScp and copy below two files to Vagrant11 machine.

1) chefdk-0.10.0-1.el6.x86_64.rpm

Now go back to Putty Vagrant 10 Machine and type below commands:
Commands:
#cd /home/vagrant/
#ls
To deploy rpm files we need to be in sudo su.
#rpm –ivh chef-server-core-12.3.0-1.e16.x86_64.rpm
After giving this command we can see Installation process gets started.
Once done give below command.
#chef-server-ctl reconfigure
#rpm –ivh chef-manage-2.2.0-1.e16.x86_64.rpm
#chef-server-ctl reconfigure

Now go back to Putty Vagrant 11 Machine and type below commands:
#cd /home/vagrant/
#ls
#sudo su
#rpm chefdk-0.10.0-1.el6.x86_64.rpm
After giving this command we can see Installation process gets started.
Once done give below command.
#chef-server-ctl reconfigure

Once Installation done, go to Vagrant10 Putty console
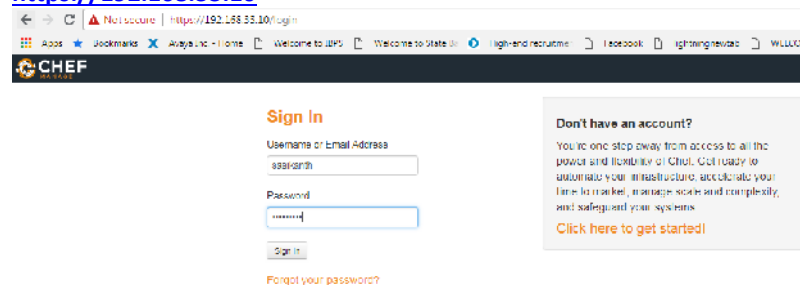**Create the Chef User and password by using following command:**
#chef-server-ctl user-create <loginname> <First Name> <Last Name> <Email id> <Password> - -
filename /home/vagrant/user.pem

**# chef-server-ctl user-create sasikanth devops testing Sasikanth.ch@gmail.com sasikanth123 - -
filename /home/vagrant/user.pem**

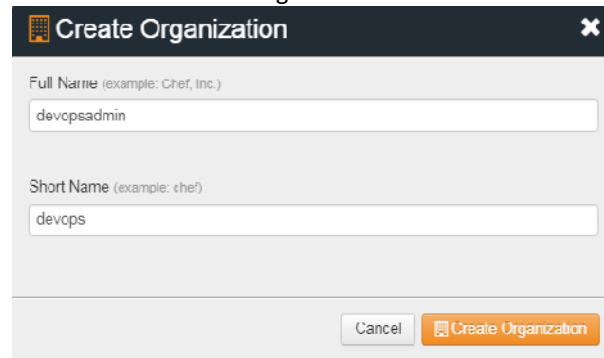Once account is created now go to Chrome Browser and type the **Vagrant10** ip address**.**
https://192.168.33.10

Provide user name and password and click on **SignIn** button.

It will ask us to create organization

Provide Full Name as "devopsadmin"
Short Name as "devops" and click on Create Organization button.
After creating the organization...Please down load the starter kit, it is downloaded as **chef-starter.zip file**
Copy the **chef-starter.zip** file to desktop and do extract there the file.
It will create one folder chef-repo.
Copy the chef-repo entire folder.

Login to WinScp vagrant11 machine and paste the chef-repo folder in Vagrant11 machine.

Login into Putty Vagrant 11 Machine.
Vagrant 11 Machine:
#chef - -version <To check whether Chef installed our server or not and also to find out the version>
Chef Development Kit Version: 0.10.0
chef-client version: 12.5.1
berks version: 4.0.1
kitchen version: 1.4.2
#ls
#cd chef-repo
#cd /.chef/
#ls
#mkdir trusted_certs <Create one folder to store the certificates>
#cd /truster_certs

From Vagrant 10 Machine copy the certificate to Vagrant 11 Server.
Putty Vagrant 10
Vagrant 10 Machine:
#cd /var/opt/opscode/nginx/
#ls
#cd ca
#ls
Copy the chef.mycompany.crt file to 192.168.33.11 Vagrant 11 Server.
#scp chef.mycompany.com.crt vagrant@192.168.33.11:
It will prompt to enter Vagrant 11 Password: vagrant

Putty Vagrant 11 Machine.
Vagrant 11 Machine:
#ls <here we can see chef.mycompany.crt certificate>
 # mv chef.mycompany.crt /home/vagrant/chef-repo/.chef/trusted_certs
cd /home/vagrant/chef-repo/.chef/trusted_certs/
#ls
[root@chef trusted_certs]#knife ssl check
Connecting to host chef.mycompany.com:443
Successfully verified certificates from `chef.mycompany.com'