**Chef Server Installation**

1. The below command downloads the Chef Installation Package deb file.

wget https://opscode-omnibus-packages.s3.amazonaws.com/ubuntu/12.04/x86\_64/chef- server\_11.0.10-1.ubuntu.12.04\_amd64.deb

2. This command installs the downloaded chef packages

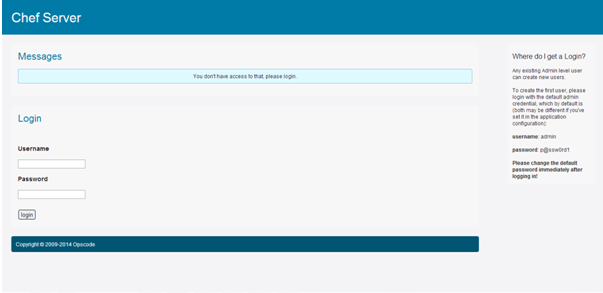
sudo dpkg -i chef-server\_11.0.10-1.ubuntu.12.04\_amd64.deb

3. This command configures the Chef Server Packages

sudo chef-server-ctl reconfigure

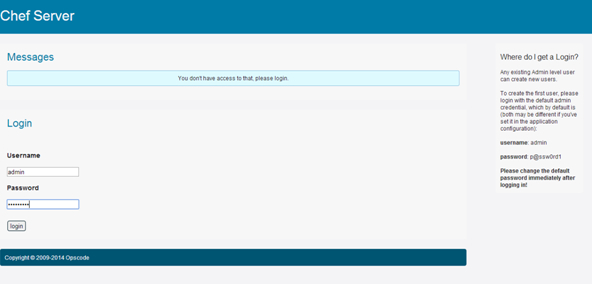
4. Once this step is complete, the server should be up and running. You can access the web interface immediately by typing https:// followed by your server's domain name or IP address.

https://server\_domain\_or\_IP



Username:admin

Password: p@ssw0rd1



When you log in for the first time, you will be immediately prompted to change your password. Select a new password and then click on the "Save User" button on the bottom:

**Chef Workstation Installation**

1. Installing git for version control:

sudo apt-get update

sudo apt-get install git

2. We will now download and run the client installation script from the Chef website. Type this command to complete all of these steps:

curl –L https://www.opscode.com/chef/install.sh | sudo bash

**Create configuration directory for chef**

The next step is to acquire the "chef-repo" directory structure for a properly formatted Chef repository from GitHub. We can clone the structure into our home directory by typing:

git clone https://github.com/opscode/chef-repo.git

This will create a directory called chef-repo in your home directory. This is where the entire configuration for your setup will be contained.

We will create a configuration directory for the Chef tools themselves within this directory:

mkdir ~/chef-repo/.chef

Within this directory, we will need to put some of the authentication files from our Chef server. Specifically, we need two private keys.

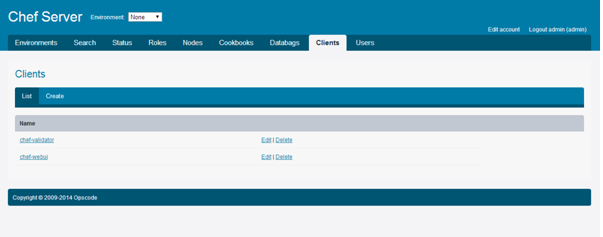
### Generating and Copying Keys from the Server

1. Go back to your Chef server in your web browser:

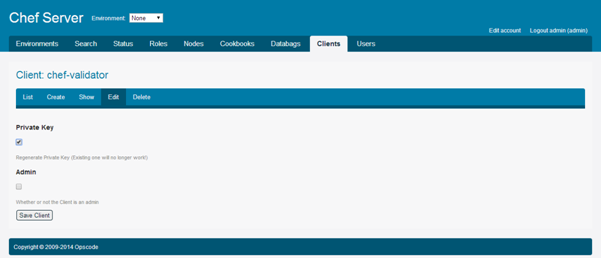
https://server\_domain\_or\_IP

2. Log in using the admin user's credentials that you changed before.

3. Click on the "Clients" tab in the top navigation bar. You will see two clients called chef-validator and chef-webui:



Click on the "Edit" button associated with the chef-validator client. Regenerate the private key by selecting that box and clicking "Save Client":

You will be taken a screen with the newly generated values for the key file.

**Note:** This key will only be available once, so don't click out of this page! If you do, you will need to regenerate the key again

4. Copy the value of the private key field (the one at the bottom).On your workstation machine, change to the Chef configuration directory we created in the repo:

ubuntu@ip-10-67-162-15:~$ cd chef-repo/.chef

ubuntu@ip-10-67-162-15:~/chef-repo/.chef$

5. Open a new file for the validator key we just created:

ubuntu@ip-10-67-162-15:~/chef-repo/.chef$ sudo vi chef-validator.pem

6. In this file, paste the contents of the key you copied from the server's web interface:

-----BEGIN RSA PRIVATE KEY-----

MIIEowIBAAKCAQEA6Np8f3J3M4NkA4J+r144P4z27B7O0htfXmPOjvQa2avkzWwx

oP28SjUkU/pZD5jTWxsIlRjXgDNdtLwtHYABT+9Q5xiTQ37s+eeJgykQIifED23C

aDi1cFXOp/ysBXaGwjvl5ZBCZkQGRG4NIuL7taPMsVTqM41MRgbAcLCdl5g7Vkri

. . .

. . .

. . .

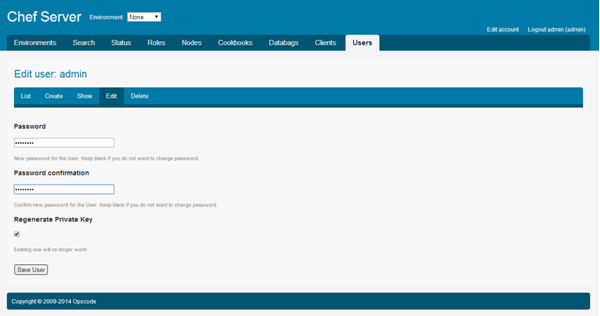
. . .

xGjoTVH1vBAJ7BG1RHJZlx+T9QnrK+fQu5R9mikkLHayxi13mD0C

-----END RSA PRIVATE KEY-----

7.We will follow the same procedure to regenerate and save the admin user's key file. This time, the key is for a user, so click on the "Users" tab on the top.

Again, click on the "Edit" button associated with the admin user, check the "Regenerate Private Key" box and click the "Save User" button:



you will need to create another file for the admin user in the same directory:

ubuntu@ip-10-67-162-15:~/chef-repo/.chef$ sudo vi admin.pem

8. Paste the contents of the key you copied from the server's interface

-----BEGIN RSA PRIVATE KEY-----

MIIEowIBAAKCAQEA6Np8f3J3M4NkA4J+r144P4z27B7O0htfXmPOjvQa2avkzWwx

oP28SjUkU/pZD5jTWxsIlRjXgDNdtLwtHYABT+9Q5xiTQ37s+eeJgykQIifED23C

aDi1cFXOp/ysBXaGwjvl5ZBCZkQGRG4NIuL7taPMsVTqM41MRgbAcLCdl5g7Vkri

. . .

. . .

. . .

. . .

xGjoTVH1vBAJ7BG1RHJZlx+T9QnrK+fQu5R9mikkLHayxi13mD0C

-----END RSA PRIVATE KEY-----

### Configure the Knife Command

ubuntu@ip-10-67-162-15:~/chef-repo/.chef$ knife configure --initial

|  |
| --- |
| WARNING: No knife configuration file found  Where should I put the config file? [/home/ubuntu/.chef/knife.rb] /home/ubuntu/chef-repo/.chef/knife.rb  Please enter the chef server URL: [https://ip-10-67-162-15.ec2.internal:443] https://107.22.247.176:443  Please enter a name for the new user: [ubuntu] userchef  Please enter the existing admin name: [admin]  Please enter the location of the existing admin's private key: [/etc/chef-server/admin.pem] /home/ubuntu/chef-repo/.chef/admin.pem  Please enter the validation clientname: [chef-validator]  Please enter the location of the validation key: [/etc/chef-server/chef-validator.pem] /home/ubuntu/chef-repo/.chef/chef-validator.pem  Please enter the path to a chef repository (or leave blank): /home/ubuntu/chef-repo  Creating initial API user...  Please enter a password for the new user:  Created user[userchef]  Configuration file written to /home/ubuntu/chef-repo/.chef/knife.rb |

This should complete our knife configuration. If we look in our chef-repo/.chef directory, we should see a knife configuration file and the credentials of our new user:

ubuntu@ip-10-67-162-15:~/chef-repo/.chef$ ls

admin.pem chef-validator.pem knife.rb userchef.pem

We can test whether we can connect successfully with the Chef server by requesting some information from the server using the knife command.

This will return a list of all of our users:

ubuntu@ip-10-67-162-15:~/chef-repo/.chef$ knife user list

admin

userchef

If this is successful, then our workstation can successfully communicate with our server.

**Creating a node from a virtual machine where chef client and server is installed**

1.In order to install a plug-in like Knife-ec2 rubygems are required, this may be done using the command

sudo apt-get install ruby1.9.1 ruby1.9.1-dev rubygems1.9.1 irb1.9.1 ri1.9.1 rdoc1.9.1 build-essential libopenssl-ruby1.9.1 libssl-dev

2. Installing knife-ec2 plug-in.

sudo gem install knife-ec2

3. In knife .rb enter the following values

ubuntu@ip-10-218-185-6:~/chef-repo/.chef$ vi knife.rb

knife[:aws\_access\_key\_id] = ' AKIAJBWQUMUPCWWXBXP65Q '

knife[:aws\_secret\_access\_key] =' PQ2++O+05ygtw6UHrewxgMGeZCX9ALYdGlMkUkKNCP '

knife[:aws\_ssh\_key\_id] = 'HelloWorld\_1'

**4.** copy HelloWorld\_1.pem to /home/ubuntu/.ssh folder

ubuntu@ip-10-218-185-6:~/.ssh$ vi HelloWorld\_1.pem

5. Creating ec2 node(VIRTUAL MACHINE)

ubuntu@ip-10-218-185-6:~/chef-repo$

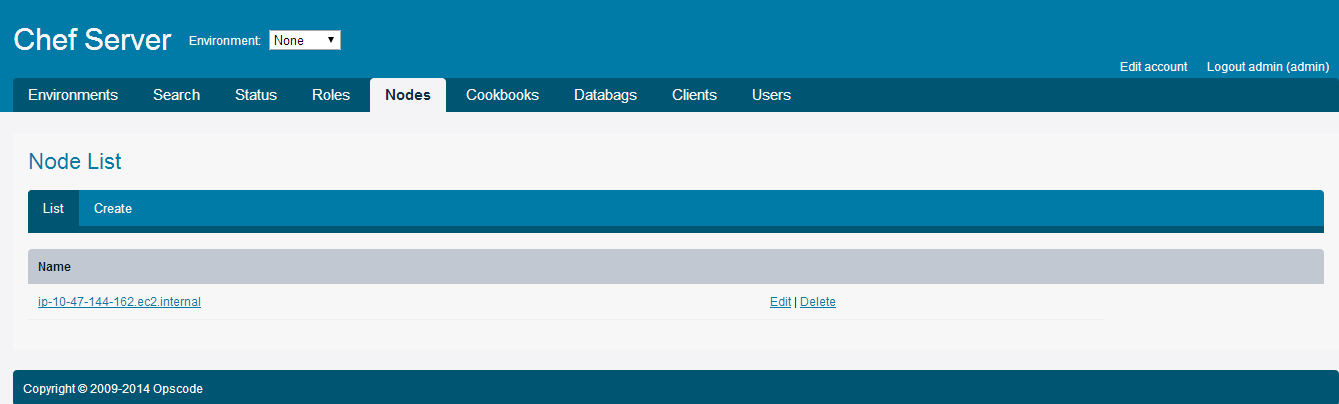
**Note:**

|  |
| --- |
| **FATAL: Cannot find sub command for: 'knife ec2 server create --image ami-864d84ee -i /home/ubuntu/.ssh/HelloWorld\_1.pem --flavor m3.medium -x root --groups HelloWorld\_Win -Z us-east-1c -N ChefNode'**  **The ec2 commands were moved to plugins in Chef 0.10**  **Upgrading Chef Server**  The 0.10 Chef Server is compatible with 0.9.x Chef clients, so the basic upgrade strategy is to upgrade the server first, and then upgrade the clients as time and testing allows  Install Gecode:  echo "deb http://apt.opscode.com/ `lsb\_release -cs` main" | sudo tee /etc/apt/sources.list.d/opscode.list  wget -qO - http://apt.opscode.com/packages@opscode.com.gpg.key | sudo apt-key add –  sudo apt-get update  sudo apt-get install libgecode-dev  Upgrade the gems:  sudo gem install chef-server  Upgrade your solr installation:  sudo chef-solr-installer  **Upgrading Chef Client**  sudo gem install chef |

**Bootstrapping a node on chef server**

sudo knife bootstrap ip-10-81-169-68 -x ubuntu -i /home/ubuntu/.ssh/HelloWorld\_1.pem --sudo

After this the node should be available on chef server node list and also on aws.amazon.com site in the instance list.



**Uploading cookbooks on the chef server and installing on created node.**

1.Download the required cookbook from github(eg:java) or create your own cookbook

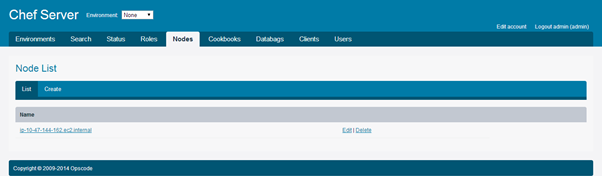
2. create a folder cookbooks inside chef-repo and put the cookbook.

ubuntu@ip-10-203-161-176:~/chef-repo/cookbooks$

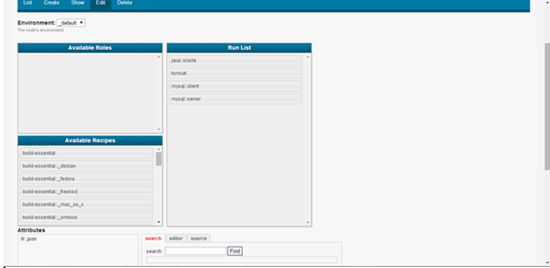
3. Upload the cookbook from the chef workstation to the chef server using the command

ubuntu@ip-10-203-161-176:~/chef-repo/cookbooks$Knife cookbook upload java

4. Go the chef server <https://server_domain_or_IP> and click the nodes tab.



Click the edit button to add the runlist for the node.



Then click save.

5. Then ssh into the newly created node and enter the following command to install the uploaded cookbook.

ubuntu@ip-10-203-161-176:~/sudo chef-client

sudo apt-get install ruby 2.1.5