Install Chef Server on CentOS 7

1. Download the package from https://downloads.chef.io/chef-server/.

2. Upload the package to the machine that will run the Chef server, and then record its location on the file system. The rest of these steps assume this location is in the `/tmp` directory.

3. As a root user, install the Chef server package on the server, using the name of the package provided by Chef. For Red Hat and CentOS 6:

```
$ rpm -Uvh /tmp/chef-server-core-<version>.rpm
```

For Ubuntu:

```
$ dpkg -i /tmp/chef-server-core-<version>.deb
```

After a few minutes, the Chef server will be installed.

4. Run the following to start all of the services:

```
$ chef-server-ctl reconfigure
```

Because the Chef server is composed of many different services that work together to create a functioning system, this step may take a few minutes to complete.

5. Run the following command to create an administrator:

```
$ chef-server-ctl user-create USER_NAME FIRST_NAME LAST_NAME EMAIL
'PASSWORD' --filename FILE_NAME
```

An RSA private key is generated automatically. This is the user's private key and should be saved to a safe location. The `--filename` option will save the RSA private key to the specified absolute path.
For example:

```
$ chef-server-ctl user-create admin Chef Administrator mohan@y2ytech.com
'test123' --filename /root/admin.pem
```

6. Run the following command to create an organization:

```
$ chef-server-ctl org-create candl 'Course and Labs' --association_user
admin --filename candl-validator.pem
```

The name must begin with a lower-case letter or digit, may only contain lower-case letters, digits, hyphens, and underscores, and must be between 1 and 255 characters. For example: `candl`.
The full name must begin with a non-white space character and must be between 1 and 1023 characters. For example: `'Course and Labs.'`.
The `--association_user` option will associate the `user_name` with the `admins` security group on the Chef server.
An RSA private key is generated automatically. This is the chef-validator key and should be saved to a safe location. The `--filename` option will save the RSA private key to the specified absolute path.
For example:

Install Chef Manage

Use Chef management console to manage data bags, attributes, run-lists, roles, environments, and cookbooks from a web user interface.

On the Chef server, run:

```
$ chef-server-ctl install chef-manage
$ chef-server-ctl reconfigure
$ chef-manage-ctl reconfigure
```

Offline Installation

```
$ wget https://packages.chef.io/stable/el/7/chef-manage-2.4.4-1.el7.x86_64.rpm
$ chef-server-ctl install chef-manage --path /root/chef-manage-2.4.4-1.el7.x86_64.rpm
$ chef-server-ctl reconfigure
$ chef-manage-ctl reconfigure
```

Chef Push Jobs

Use Chef push jobs to run jobs—an action or a command to be executed—against nodes independently of a chef-client run.

On the Chef server, run:

```
$ chef-server-ctl install opscode-push-jobs-server
```

then:

```
$ chef-server-ctl reconfigure
```

and then:

```
$ opscode-push-jobs-server-ctl reconfigure
```

$wget https://packages.chef.io/stable/el/7/opscode-push-jobs-server-2.1.1-1.el7.x86_64.rpm

```
$ chef-server-ctl install opscode-push-jobs-server --path /root/opscode-push-jobs-server-2.1.1-1.el7.x86_64.rpm
$ chef-server-ctl reconfigure
$ opscode-push-jobs-server-ctl reconfigure
```

Reporting

Use Reporting to keep track of what happens during every chef-client runs across all of the infrastructure being managed by Chef. Run Reporting with Chef management console to view reports from a web user interface.

On the Chef server, run:

```
$ chef-server-ctl install opscode-reporting
```

then:

```
$ chef-server-ctl reconfigure
```

and then:

```
$ opscode-reporting-ctl reconfigure
```

$wget https://packages.chef.io/stable/el/7/opscode-reporting-1.6.4-1.el7.x86_64.rpm

Offline Installation

```
$ wget  https://packages.chef.io/stable/el/7/chef-manage-2.4.4-1.el7.x86_64.rpm
$ chef-server-ctl install chef-manage --path /root/opscode-reporting-1.6.4-1.el7.x86_64.rpm
$ chef-server-ctl reconfigure
```

and then:

```
$ opscode-reporting-ctl reconfigure
```

Update config for purchased nodes¶

When using more than 25 nodes, a configuration change to your Chef server needs to be made in order for your Chef server to be properly configured and recognize your purchased licenses. You will need to edit to your chef-server.rb file by following the process below:

1. On your Chef server, if the chef-server.rb file does not exist, create it.

```
2. sudo mkdir /etc/opscode && sudo touch /etc/opscode/chef-server.rb
```

3. Open up the newly created chef-server.rb file in your favorite text editor.

```
4. sudo vi /etc/opscode/chef-server.rb
```

5. Paste or add the following text. Please note the placement of the single quotation (') marks.

```
6. license['nodes'] = N where N is the number of licensed nodes you have
   purchased
```

7. Save the file. Because we are using the vi editor, you can save your changes in vi with the following command:

```
:wq
```

1. Run chef-server-ctl reconfigure for the changes to be picked up by your Chef server.

```
sudo chef-server-ctl reconfigure
```

Install Chef Development Kit

Download

Centos/Redhat 7: https://packages.chef.io/stable/el/7/chefdk-1.0.3-1.el7.x86_64.rpm

Other Platform: https://downloads.chef.io/chef-dk/

```
$wget https://packages.chef.io/stable/el/7/chefdk-1.0.3-1.el7.x86_64.rpm
$rpm -Uvh /root/chefdk-1.0.3-1.el7.x86_64.rpm
```

```
$ chef verify
```

Set System Ruby¶

For many users of Chef, the Chef development kit version of Ruby that is included in the Chef development kit should be configured as the default version of Ruby.

1. Open a command window and enter the following:

```
2. $ which ruby
```

   which will return something like `/usr/bin/ruby`.
3. To use the Chef development kit version of Ruby as the default Ruby, edit the `$PATH` and `GEM`environment variables to include paths to the Chef development kit. For example, on a machine that runs Bash, run:

```
4. echo 'eval "$(chef shell-init bash)"' >> ~/.bash_profile
```

   where `bash` and `~/.bash_profile` represents the name of the shell.

Run `which ruby` again. It should return `/opt/chefdk/embedded/bin/ruby`.

Install git

$sudo yum -y install git

Set up the chef-repo¶

There are two ways to create the chef-repo:

- Use the starter kit built into the Chef server web user interface
- Manually, by using the `chef generate app` subcommand in the chef command-line tool that is packaged in the Chef development kit

```
$chef generate repo chef-repo -p

$ cd chef-repo
$ ls -al
$ ls .chef
```

chef-repo/.chef/knife.rb

```
current_dir = File.dirname(__FILE__)
log_level                :info
log_location             STDOUT
node_name                "USERNAME"
client_key               "#{current_dir}/USERNAME.pem"
validation_client_name "ORGNAME-validator"
validation_key           "#{current_dir}/ORGNAME-validator.pem"
chef_server_url     "https://api.opscode.com/organizations/ORGNAME"
cache_type               'BasicFile'
cache_options( :path =>"#{ENV['HOME']}/.chef/checksums" )
cookbook_path            ["#{current_dir}/../cookbooks"]

$ knife --version
$ knife client list
$ knife help list

Commiting Intial Repository in to GIT
$cd chef-repo
$git init
$git add .
$git commit -m "Initial chef-repo"
```

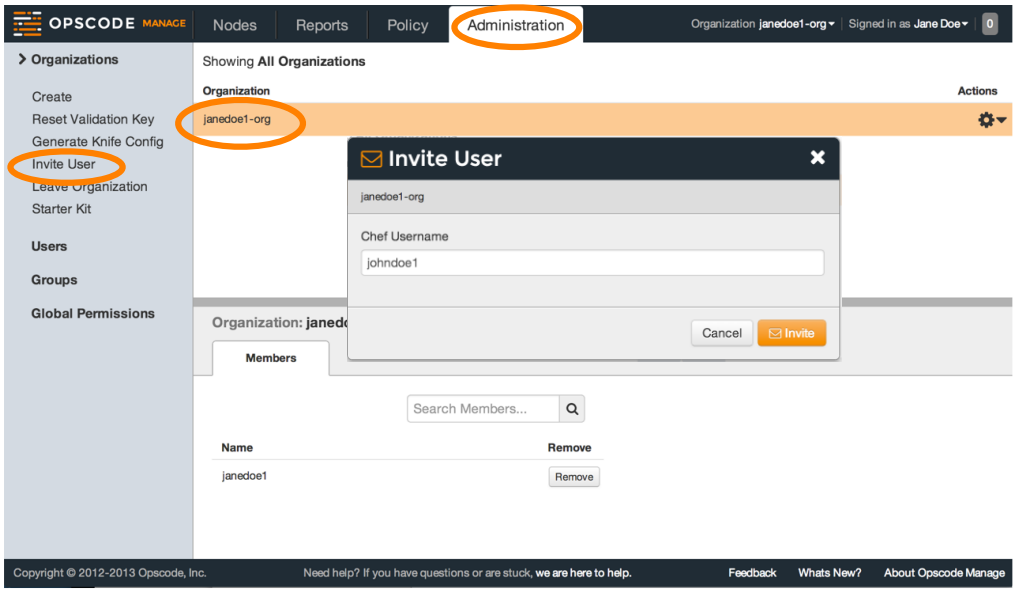
Organization Setup

Click the "Administration" tab,

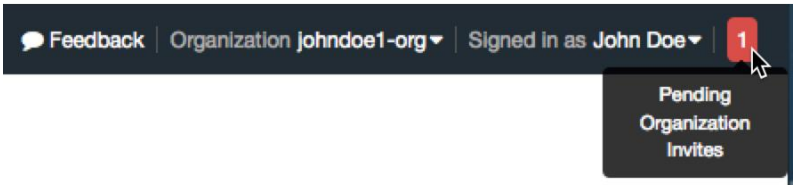
Select the appropriate Organization

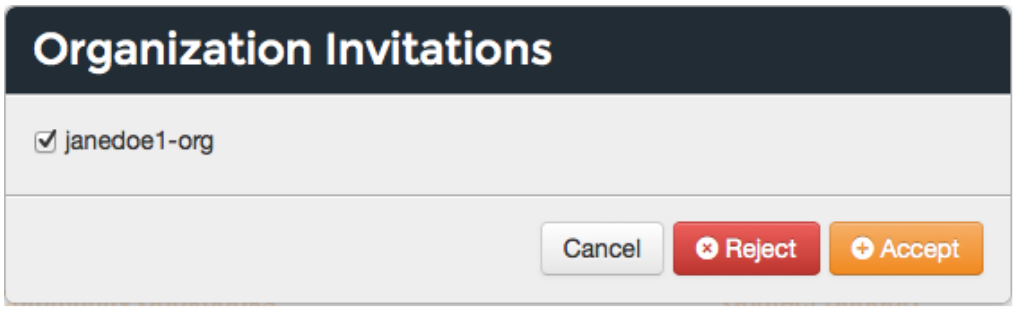
Click "Invite User" from the left menu

Enter your classmate's 'Chef Username' and click Invite

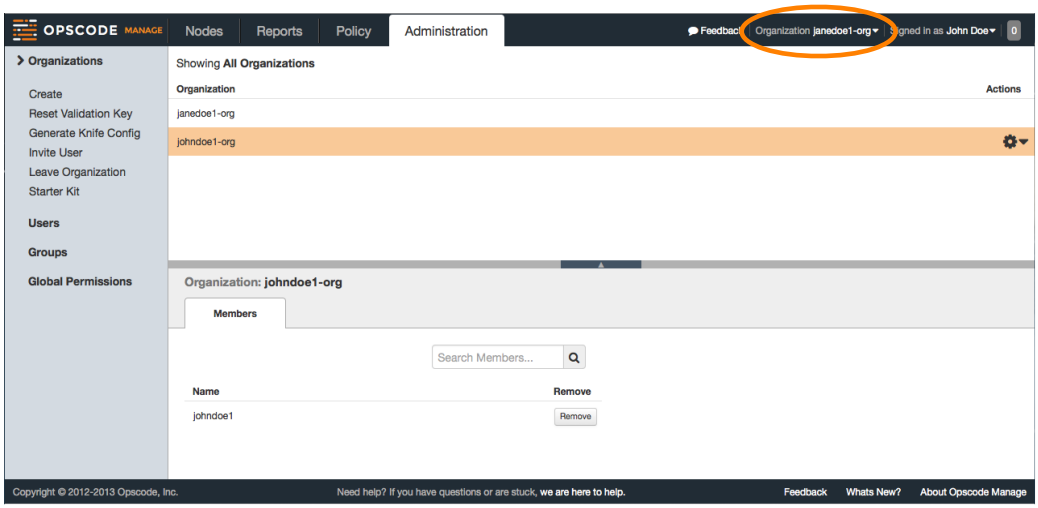


Click the notification, select the Organization and click 'Accept'

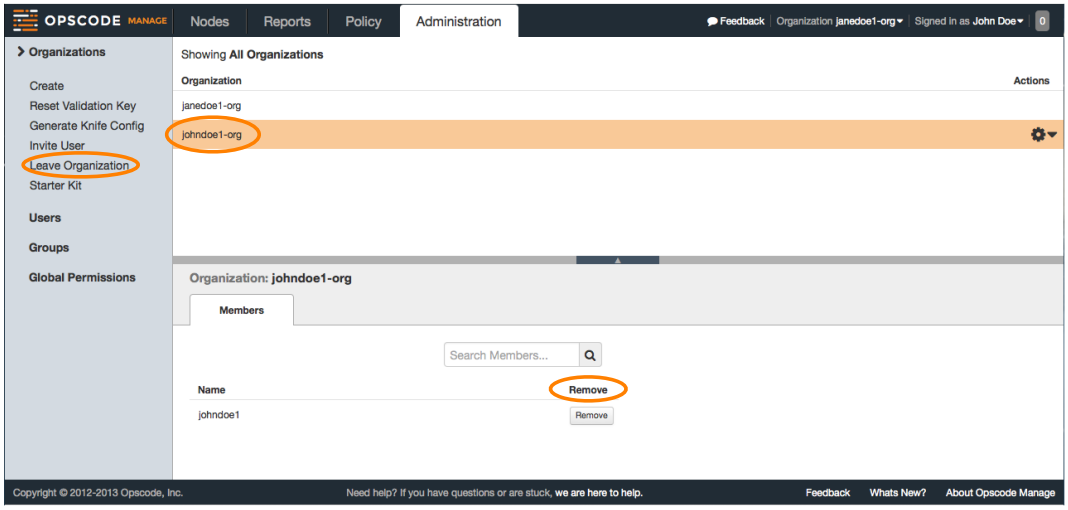




Select your classmate's organization from the drop down list and peruse their org



Now either 'Leave Organization' you've been invited into, or remove your classmate from your organization



Node Setup

```
$ knife bootstrap <EXTERNAL_ADDRESS> --sudo -x chef -P chef -N
"node1"
$ ssh chef@IPADDRESS
chef@node1:~$ ls /etc/chef
chef@node1:~$ which chef-client
chef@node1:~$ cat /etc/chef/client.rb
chef@node1:~$ sudo vi /etc/chef/client.rb
```

Set `log_level` to `:info`

View Node on Chef Server