



Create a data bag

```
# mkdir -p data_bags/users
```

Create a data bag named users

```
# knife data_bag create users
```

Create a user item in the users data bag

```
# data_bags/users/ram.json
```

```
{  
  "id": "ram",  
  "comment": "ram raj",  
  "uid": 2000,  
  "gid": 0,  
  "home": "/home/ram",  
  "shell": "/bin/bash"  
}
```

```
# data_bags/users/krishna.json  
{  
    "id": "krishna",  
    "comment": "krishna teja",  
    "uid": 2001,  
    "gid": 0,  
    "home": "/home/krishna",  
    "shell": "/bin/bash"  
}
```

Create the data bag item

```
# knife data_bag from file users ram.json  
# knife data_bag from file users krishna.json
```

Show all the items in users data bag

```
# knife search users "*:*"
```

Find Ram's shell in Chef

```
# knife search users "id:ram" -a shell
```

Create a data bag named groups

```
# mkdir data_bags/groups
```

```
# knife data_bag create groups
```

Create a group item in the group data bag

```
# data_bags/groups/sales.json  
{  
    "id": "sales",  
    "gid": 3000,  
    "members": ["ram", "krishna"]  
}
```

Create the data bag item

```
# knife data_bag from file groups sales.json
```

Show all the groups in Chef

```
# knife search groups "*.*"
```

Create a cookbook named ‘users’

```
# knife cookbook create users
# vi cookbooks/users/recipes/default.rb
search("users", "*:*").each do |user_data|
  user user_data["id"] do
    comment user_data["comment"]
    uid user_data["uid"]
    gid user_data["gid"]
    home user_data["home"]
    shell user_data["shell"]
  end
end
include_recipe "users::groups"
```

```
# vi cookbooks/users/recipes/groups.rb
search("groups", "*:*").each do |group_data|
  group group_data["id"] do
    gid group_data["gid"]
    members group_data["members"]
  end
end
# knife cookbook upload users
# knife node run_list add node1 'recipe[users]
node# chef-client
node# cat /etc/passwd
node# cat /etc/group
```

```
name "webserver"
description "Web Server"
run_list "recipe[apache]"
default_attributes({
  "apache" => {
    "sites" => {
      "admin" => {
        "port" => 8000
      }
    }
  }
})
```

Create a Role:

```
# knife role from file webserver.rb
```

Show the Role with Knife:

```
# knife role show webserver
```

Search a Role with recipe[apache] in runlist:

```
# knife search role "run_list:recipe\[apache\]"
```

Replace recipe[apache] with role[webserver]:

```
# knife node run_list add node2 "role[webserver]" -a  
  "recipe[apache]"
```

```
# knife node run_list remove node2 "recipe[apache]"  
node# chef-client
```

- Click the ‘Nodes’ tab then select node ‘node2’
- Click ‘Edit Run List’ from left navigation bar
- Drag ‘Apache’ over from ‘Current Run List’ to ‘Available Recipes’
- Drag ‘webserver’ over from ‘Available Roles’ to the top of ‘Current Run List’
- Click ‘Save Run List’

Edit Node Run List

node1

Available Roles	Current Run List
	webserver 
	motd
	users

Available Recipes
apache
chef-client
chef-client::arch_service
chef-client::bluepill_service
chef-client::bsd_service
chef-client::config

Cancel **Save Run List**

```
#knife cookbook show apache
```

To List current Environments:

```
knife environment list
```

Make an environments directory

```
# mkdir environments
```

Create a dev environment

```
#vi environments/dev.rb
```

```
name "dev"
```

```
description "For developers!"
```

```
cookbook "apache", "= 0.1.0"
```

- Environments have names
- Environments have a description
- Environments *can* have one or more cookbook constraints
- = Equal to
- There are other options but equality is the recommended practice.

Create the dev environment

#knife environment from file dev.rb

Show your dev environment

#knife environment show dev

Change your node's environment to "dev"

- Click the 'Nodes' tab then select node 'node1'
- Select dev from the 'Environments' drop-down list
- Click 'Save'

Showing All Nodes

Search Nodes...

Node Name	Platform	FQDN	IP Address	Uptime	Last Check-In	Environment
node2	centos	chefnode2.satish.com	10.0.2.15	39 minutes	3 minutes ago	dev
node1	ubuntu	chefnode.satish.com	10.0.2.15	33 minutes	9 minutes ago	dev

Node: node2

Details

Attributes

Permissions

Last Check In: 3 Minutes Ago

2017-04-20 00:45:40 UTC

Uptime: 39 Minutes

Since 2017-04-20 00:09:20 UTC

Environment:

production

Save

_default

dev

production

Manage Environments...

Platforms:

FQDN:

IP Address:

Change your node's environment to "dev"

```
# knife node environment_set node1 dev
```

Re-run the Chef Client

```
# sudo chef-client
```

Create a production environment

```
# environments/production.rb
```

```
name "production"
```

```
description "For Prods!"
```

```
cookbook "apache", "= 0.1.0"
```

```
override_attributes{
```

```
  "pci" => {
```

```
    "in_scope" => true
```

```
  }
```

```
}
```

Create the production environment

```
# knife environment from file production.rb
```

Change your node's environment to "production"

Click the 'Nodes' tab then select node 'node1'

Select production from the 'Environments' drop-down list

Click 'Save'

```
# knife node environment_set node1  
    production
```

```
# chef-client
```