



Lab: Manage Users and Groups

- ☐ Create 3 users and upload them to the 'users' data bag
- ☐ Create and upload a 'groups' data bag with your users as members
- ☐ Update the 'myusers' cookbook to add your users to the group using search
- ☐ Verify 'web' role contains 'myusers', Converge your web server
- ☐ Verify the new users in the /etc/passwd file
- ☐ Verify the new group in the /etc/group file

Create anthony.json

`~/chef-repo/data_bags/users/anthony.json`

```
{  
  "id": "anthony",  
  "comment": "anthony bourdain",  
  "uid": 200,  
  "gid": 0,  
  "home": "/home/anthony",  
  "shell": "/bin/bash",  
  "platform": "centos",  
  "tvshow": "food network"  
}
```

Create gordon.json

`~/chef-repo/data_bags/users/gordon.json`

```
{  
  "id": "gordon",  
  "comment": "gordon ramsay",  
  "uid": 201,  
  "gid": 0,  
  "home": "/home/gordon",  
  "shell": "/bin/bash",  
  "platform": "centos",  
  "tvshow": "MasterChef"  
}
```

Create julia.json

`~/chef-repo/data_bags/users/julia.json`

```
{  
  "id": "julia",  
  "comment": "julia child",  
  "uid": 202,  
  "gid": 0,  
  "home": "/home/julia",  
  "shell": "/bin/bash",  
  "platform": "centos",  
  "tvshow": "baking with julia"  
}
```

Upload data bag item to Chef Server



```
$ knife data bag from file users data_bags/users/anthony.json data_bags/users/gordon.json \  
data_bags/users/julia.json
```

```
Updated data_bag_item[users::anthony]  
Updated data_bag_item[users::gordon]  
Updated data_bag_item[users::julia]
```

Validate Chef Server Received It



```
$ knife data bag list
```

```
users
```

View Details of users Data Bag



```
$ knife data bag show users
```

```
anthony
```

```
gordon
```

```
julia
```

Search the “users” index



```
$ knife search users "*" : "*"
```

```
3 items found

chef_type: data_bag_item
Comment:  julia child
gid:      0
home:     /home/julia
id:       julia
Platform: centos
shell:    /bin/bash
uid:      202
....
```


Create chefs.json

`~/chef-repo/data_bags/groups/chefs.json`

```
{  
  "id": "chefs",  
  "gid": "42",  
  "members": ["anthony", "gordon", "julia"],  
  "platform": "centos"  
}
```

Upload data bag item to Chef Server



```
$ knife data bag from file groups data_bags/groups/chefs.json
```

```
Updated data_bag_item[groups::chefs]
```

Return groups with “platform:centos”



```
$ knife search groups "platform:centos*"
```

```
1 items found

chef_type: data_bag_item
data_bag:  groups
gid:      42
id:       chefs
members:
  julia
  anthony
  gordon
platform: centos
```

Create a 'groups' recipe

```
~/chef-repo/cookbooks/myusers/recipes/groups.rb
```

```
search("groups", "platform:centos").each do |group_data|  
  group group_data['id'] do  
    gid group_data['gid']  
    members group_data['members']  
  end  
end
```

Update the default recipe

`~/chef-repo/cookbooks/myusers/recipes/default.rb`

```
search("users", "platform:centos").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 'myusers::groups'
```

Version the myusers metadata.rb

`~/chef-repo/cookbooks/myusers/metadata.rb`

```
name                'myusers'
maintainer           'The Authors'
maintainer_email     'you@example.com'
license              'all_rights'
description          'Installs/Configures myusers'
long_description     'Installs/Configures myusers'
version              '0.2.0'
```

Change to the cookbooks/myusers Directory



```
$ cd cookbooks/myusers
```

Run berks install



```
$ berks install
```

```
Resolving cookbook dependencies...  
Fetching 'myusers' from source at .  
Fetching cookbook index from https://supermarket.chef.io...  
Using myusers (0.2.0) from source at .
```


Upload the Cookbook to the Chef Server



```
$ berks upload
```

```
Uploaded myusers (0.2.0) to: 'https://api.opscode.com:443/organizations/ORG_NAME'
```

Display Cookbooks within Your Org



```
$ knife cookbook list
```

```
apache          0.2.1
build-essential 7.0.2
compat_resource 12.16.2
cpu             1.0.0
haproxy         2.0.0
mingw           1.2.4
myhaproxy       0.1.0
myusers         0.2.0
ohai            4.2.3
seven_zip       2.0.2
windows         2.1.1
workstation     0.2.1
```

Create new 'base' Role

 ~/chef-repo/roles/base.rb

```
name 'base'  
description 'Base Role For All Servers'  
run_list 'recipe[myusers]'
```

Update the 'web' Role



```
~/chef-repo/roles/web.rb
```

```
name 'web'  
description 'Web Server Role'  
run_list 'role[base]', 'recipe[workstation]', 'recipe[apache]'
```

Update the 'load-balancer' Role

 `~/chef-repo/roles/load-balancer.rb`

```
name 'load-balancer'  
description 'Load Balancer Role'  
run_list 'role[base]', 'recipe[myhaproxy]'
```

Upload Roles to the Chef Server



```
$ knife role from file roles/base.rb roles/web.rb roles/load-balancer.rb
```

```
Updated Role base!  
Updated Role web!  
Updated Role load-balancer!
```

View Details of the Role



```
$ knife role show base
```

```
chef_type:          role
default_attributes:
description:        Base Role For All Servers
env_run_lists:
json_class:         Chef::Role
name:               base
override_attributes:
run_list:
  recipe[myusers]
```

Login to web1



```
$ vagrant ssh web1
```

```
Last login: Sat Dec 31 02:59:27 2016 from 10.0.2.2  
[vagrant@web1 ~]$
```


Run chef-client to converge web1



```
[vagrant@web1 ~]$ sudo chef-client
```

```
Starting Chef Client, version 12.17.44
resolving cookbooks for run list: ["myusers", "workstation", "apache"]
Synchronizing Cookbooks:
  - myusers (0.2.0)
  - apache (0.2.1)
  - workstation (0.2.1)
Installing Cookbook Gems:
Compiling Cookbooks...
Converging 8 resources....
```

Verify the new user has been created



```
[vagrant@web1 ~]$ cat /etc/passwd
```

```
....
```

```
apache:x:48:48:Apache:/usr/share/httpd:/sbin/nologin
```

```
user2:x:101:1:I am user1:/home/user1:/bin/bash
```

```
julia:x:202:0:julia child:/home/julia:/bin/bash
```

```
anthony:x:200:0:anthony bourdain:/home/anthony:/bin/bash
```

```
gordon:x:201:0:gordon ramsay:/home/gordon:/bin/bash
```

```
user1:x:100:1:I am user1:/home/user2:/bin/bash
```

Verify the new group has been created



```
[vagrant@web1 ~]$ cat /etc/group
```

```
....
```

```
apache:x:48:
```

```
chefs:x:42:julia,anthony,gordon
```

Return to your Workstation



```
[vagrant@web1 ~]$ exit
```

```
logout
```

```
Connection to 127.0.0.1 closed.
```



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