

Chef Roles

About me!



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Lesson Objectives

- After completing the lesson, you will be able to
 - Explain what Roles are, and how they are used to provide clarity
 - Manipulate a node's run_list using a Role
 - Use attributes in a Role
 - Show a Role with Knife

What is Role?

- So far, we have been just adding recipes directly to a single node
- But that's not how your infrastructure works – think about how you refer to servers
 - It's a web server
 - It's a database server
 - It's a monitoring server

What is Role?

- Roles allow you to conveniently encapsulate the run list and attributes required for a server to “be” what you already think it is.
- In practice, Roles makes it **easy to configure many node identically** without repeating yourself each time

Lets write our first role

- Under roles directory, lets create one file called “webservice.rb”

```
# roles/webservice.rb
```

```
name “webservice”
```

```
description “Web servers”
```

```
run_list “recipe[my-company]”, “recipe[apache]”
```

```
default_attributes ( {“company” => “Opsocde” } )
```

Lets write one more

```
# roles/base-ubuntu.rb
```

```
name "base-ubuntu"
```

```
description "Base role for Ubuntu servers"
```

```
run_list "recipe[apt]"
```

Upload roles to chef Server

```
$ knife role from file base-ubuntu.rb
```

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

List all the roles

\$ knife role list

\$ knife role show base-ubuntu

Delete the roles

```
$ knife role delete <role_name>
```

Assign the roles to nodes

- Assign the roles to nodes using chef server

Run the role

- Login to nodes where you want to run the roles.

```
$ sudo chef-client
```

Attributes with roles

A role attribute can only be set to be a default attribute or an override attribute. A role attribute cannot be set to be a normal attribute.

Other knife commands with Roles

To create a role in chef server

```
$ knife role create <role_name>
```

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In the \$EDITOR enter the role data in JSON:

sample:

```
{
  "name": "role1",
  "default_attributes": {
  },
  "json_class": "Chef::Role",
  "run_list": ['recipe[cookbook_name::recipe_name],
               role[role_name]'],
  "description": "",
  "chef_type": "role",
  "override_attributes": {
  }
}
```

Reference

- <https://docs.chef.io/roles.html>
- <http://www.scmgalaxy.com/scm/configuration-management-tools/implement-chef-roles-using-chef-server.html>