

Refining a Custom Resource

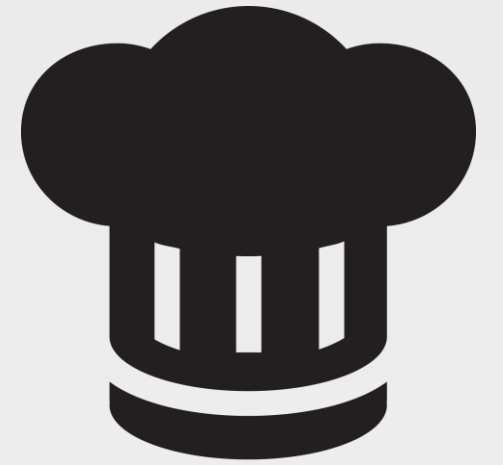
Objectives

After completing this module, you should be able to:

- Set a custom resource's name to a property
- Set a default value for a custom resource property
- Define notifications correctly when creating custom resources

EXERCISE

Refactoring the Resources



Objective:

- ☐ Define a default action for the custom resource
- ☐ Set the resource name as the site_name property
- ☐ Set the default value of the site_port property
- ☐ Move the resource notifications to the recipe

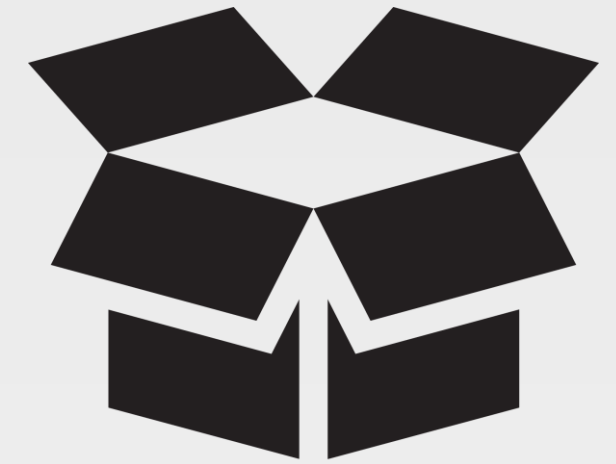
PROBLEM



Selecting a Default Action

Resources often have a default action. The default action is often the action that is the least surprising. For most resources it is an additive/restorative action that moves the system into the desired state.

CONCEPT



The First Action is the Default

The first action within the custom resource definition is the default one. But you can explicitly define the default action within the resource definition.

Defining a Default Action for the Resource



```
~/apache/resources/vhost.rb
```

```
property :site_name, String
property :site_port, Fixnum
```

```
default_action :create
```

```
action :create do
  directory "/srv/apache/#{new_resource.site_name}/html" do
    recursive true
    mode "0755"
  end
end

# ... REMAINING RESOURCE DEFINITION ...
```

Removing the Default Action for Resources



```
~/apache/recipes/default.rb
```

```
# ... INITIAL RECIPE DEFINITION ...
```

```
apache_vhost 'users' do
```

```
  site_port 80
```

```
  site_name 'users'
```

```
  action :create
```

```
end
```

```
apache_vhost 'admins' do
```

```
  site_port 8080
```

```
  site_name 'admins'
```

```
  action :create
```

```
end
```

Executing the Unit Test Suite



```
> chef exec rspec
```

```
.....
```

```
Finished in 1.22 seconds (files took 2.56 seconds to load)
```

```
10 examples, 0 failures
```


Converging and Verifying the Test Instance

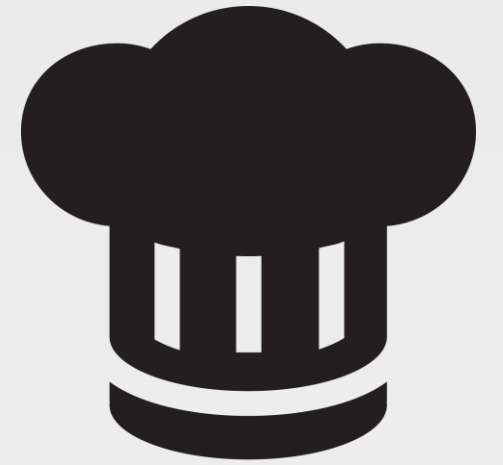


```
> kitchen converge && kitchen verify
```

```
-----> Verifying <default-centos-67>...  
        Use `/home/chef/apache/test/smoke/default` for testing  
  
Target:  ssh://vagrant@127.0.0.1:2222  
  
    ✓ Command curl http://localhost stdout should match /Welcome home/  
    ✓ Command curl http://localhost:8080 stdout should match /Welcome admins/  
  
Summary: 2 successful, 0 failures, 0 skipped  
        Finished verifying <default-centos-67> (0m0.77s) .  
-----> Kitchen is finished. (2m42.37s)
```

EXERCISE

Refactoring the Resources



Objective:

- ✓ Define a default action for the custom resource
- ☐ Set the resource name as the site_name property
- ☐ Set the default value of the site_port property
- ☐ Move the resource notifications to the recipe

PROBLEM



Clarity in the Custom Resource

There is some duplication in the declaration of the resource. The name of the resource and the `site_name`. We want to default to use the name specified in the resource as the `site_name`. This is similar to other resources.

Tying the Resource Name to the Property



```
~/apache/resources/vhost.rb
```

```
property :site_name, String, name_attribute: true
property :site_port, Fixnum

default_action :create

action :create do
  directory "/srv/apache/#{new_resource.site_name}/html" do
    recursive true
    mode "0755"
  end
end

# ... REMAINING RESOURCE DEFINITION ...
```

Removing the site_name Property



```
~/apache/recipes/default.rb
```

```
package 'apache'

apache_vhost 'welcome' do
  site_name 'welcome'
  action :remove
end

apache_vhost 'admins' do
  site_name 'users'
  site_port 80
end
```

Removing the site_name Property

 ~/apache/recipes/default.rb

```
# ... INITIAL RECIPE DEFINITION ...
```

```
apache_vhost 'admins' do
```

```
  site_name 'admins'
```

```
  site_port 8080
```

```
end
```

```
service 'httpd' do
```

```
  action [:enable, :start]
```

```
end
```

Executing the Unit Test Suite



```
> chef exec rspec
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```
.....
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Converging and Verifying the Test Instance

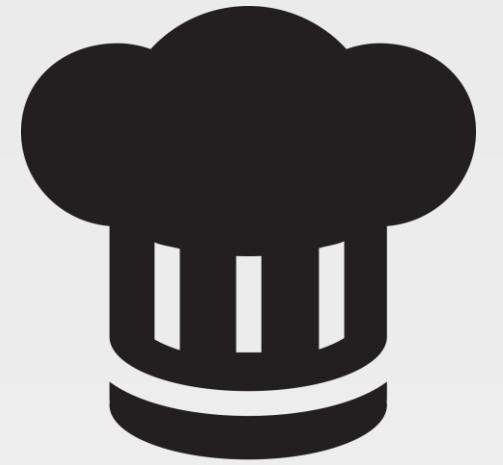


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EXERCISE

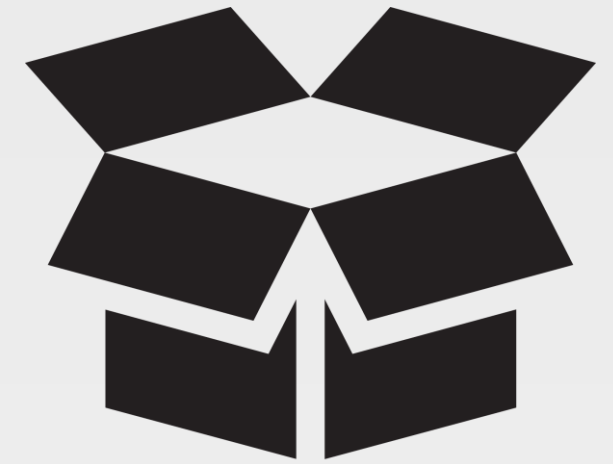
Refactoring the Resources



Objective:

- ✓ Define a default action for the custom resource
- ✓ Set the resource name as the site_name property
- ❑ Set the default value of the site_port property
- ❑ Move the resource notifications to the recipe

CONCEPT



Setting Default Values for Properties

Properties can also have default values. When deploying a website the default port that one would expect to see that site is on port 80.

Setting a Default Value for the Property



```
~/apache/resources/vhost.rb
```

```
property :site_name, String, name_attribute: true
property :site_port, Fixnum, default: 80

default_action :create

action :create do
  directory "/srv/apache/#{new_resource.site_name}/html" do
    recursive true
    mode "0755"
  end
end

# ... REMAINING RESOURCE DEFINITION ...
```

Removing the site_port Property

 ~/apache/recipes/default.rb

```
package 'apache'

apache_vhost 'welcome' do
  site_name 'welcome'
  action :remove
end

apache_vhost 'users' do
  site_port 80
end
```

Executing the Unit Test Suite



```
> chef exec rspec
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```
.....
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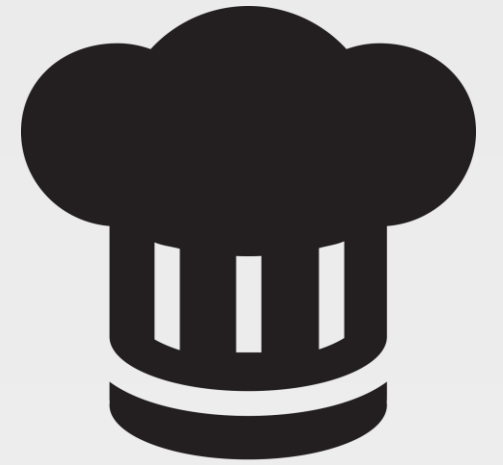


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PROBLEM



Resource Notifications

Defining a notification in a resource within a custom resource creates a fragile relationship. One that we want to address by removing any notifications to outside resources.

Removing the Notification from the Resource



```
~/apache/resources/vhost.rb
```

```
# ... INITIAL RESOURCE DEFINITION ...

template "/etc/httpd/conf.d/#{new_resource.site_name}.conf" do
  source "conf.erb"
  mode "0644"
  variables(
document_root: "/srv/apache/#{new_resource.site_name}/html",
port: new_resource.site_port)
  notifies :restart, "service[httpd]"
end

# ... REMAINDER OF CUSTOM RESOURCE ...
```

Adding the Notification to the Resources



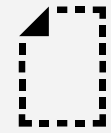
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```

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  notifies :restart, 'service[httpd]'
  action :remove
end

apache_vhost 'users' do
  notifies :restart, 'service[httpd]'
end
```

Adding the Notification to the Resources



```
~/apache/recipes/default.rb
```

```
# ... INITIAL RECIPE DEFINITION ...
```

```
apache_vhost 'admins' do
```

```
  site_port 8080
```

```
  notifies :restart, 'service[httpd]'
```

```
end
```

```
service 'httpd' do
```

```
  action [:enable, :start]
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end
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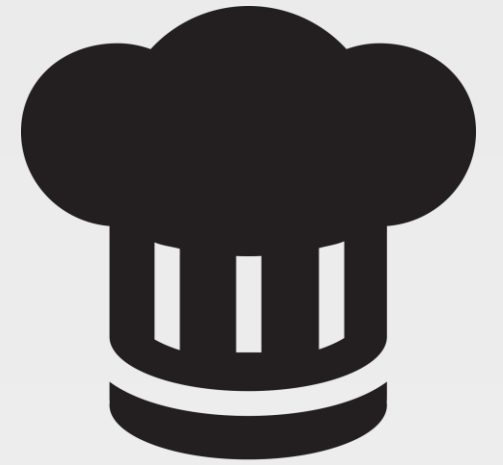


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DISCUSSION



Q&A

What questions can we answer for you?



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