Refining a Custom Resource
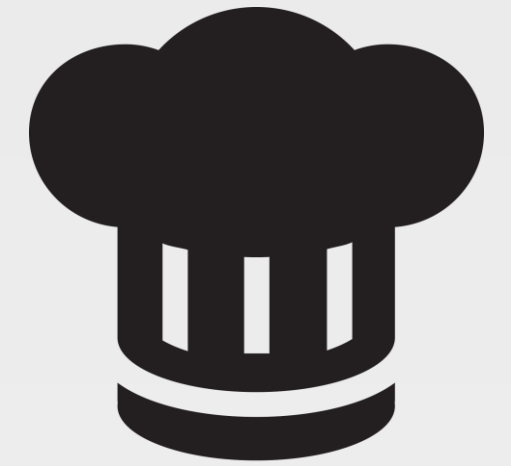
Objectives

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
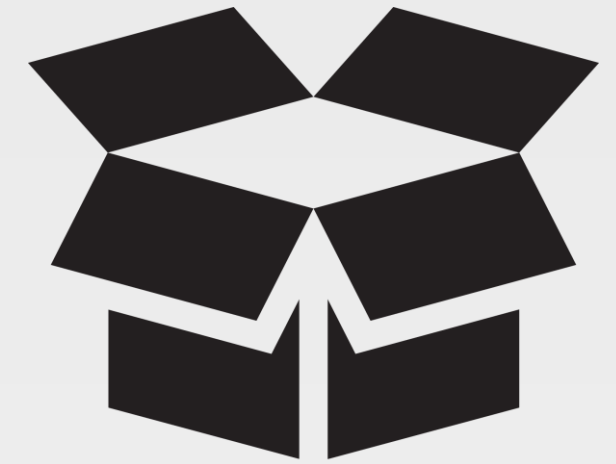
❑ Move the resource notifications to the recipe

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.

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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

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

Removing the Default Action for Resources

~/apache/recipes/default.rb

```ruby
# ... 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
```

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Executing the Unit Test Suite

```
> chef exec rspec
```

```
..........

Finished in 1.22 seconds (files took 2.56 seconds to load)
10 examples, 0 failures
```

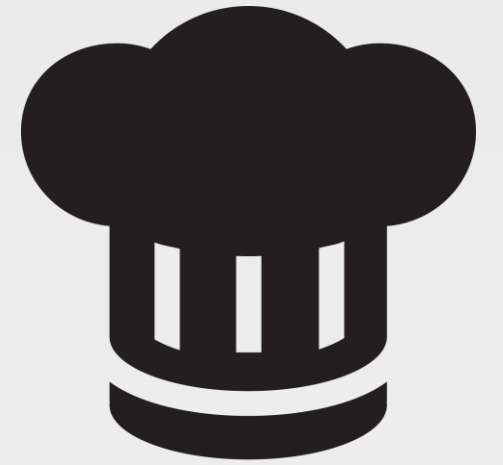# Converging and Verifying the Test Instance

```
> 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)
```

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

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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

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

Removing the site_name Property

```ruby
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

```
# ... 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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10 examples, 0 failures
```

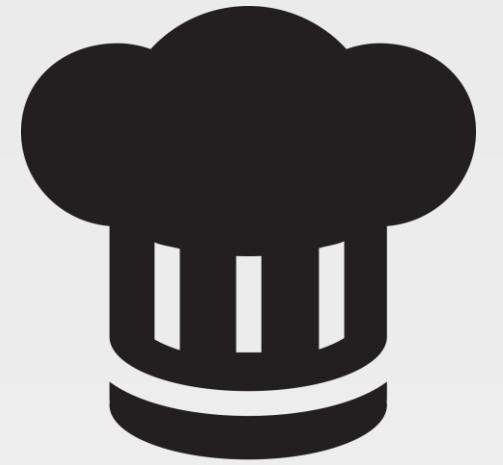# Converging and Verifying the Test Instance

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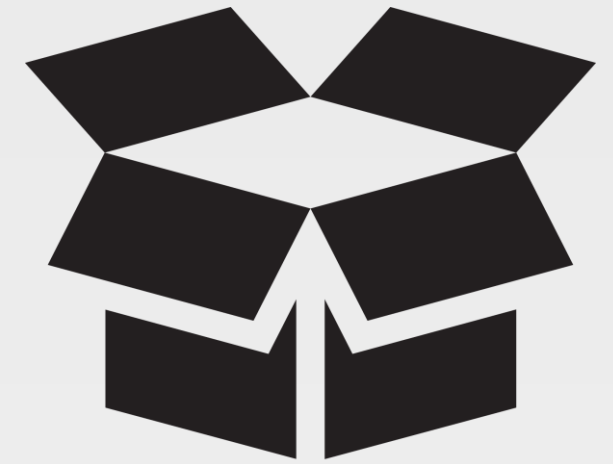
EXERCISE

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

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

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

Removing the site_port Property

```ruby
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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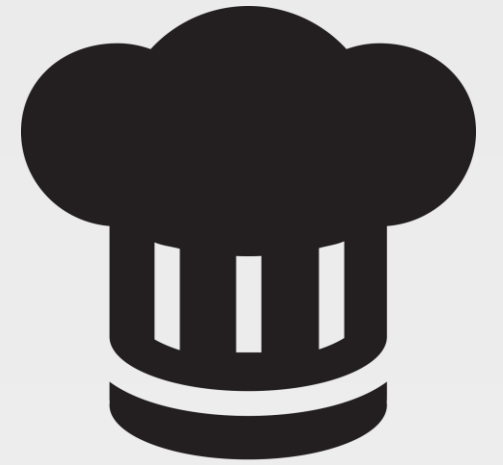# Converging and Verifying the Test Instance

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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

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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

```ruby
# ... 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 ...
```
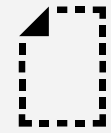
Adding the Notification to the Resources

~/apache/recipes/default.rb

```ruby
package 'apache'


apache_vhost 'welcome' do
  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

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

apache_vhost 'admins' do
  site_port 8080
  notifies :restart, 'service[httpd]'
end


service 'httpd' do
  action [:enable, :start]
end
```

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Executing the Unit Test Suite

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> chef exec rspec
```

```
..........

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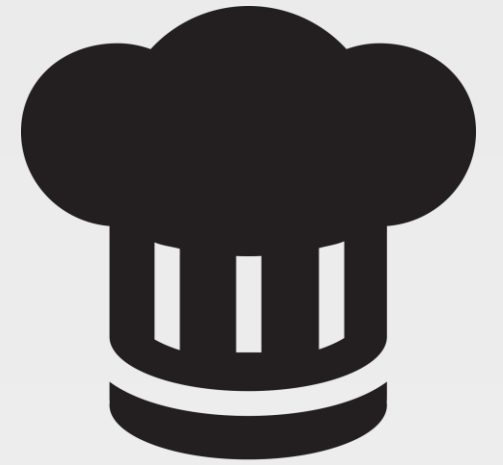# Converging and Verifying the Test Instance

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Refactoring the Resources

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DISCUSSION

Q&A

What questions can we answer for you?

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