

Tuning Ohai

Objectives

After completing this module, you should be able to:

- Describe how you configure the node to automatically load ohai plugins
- Describe how to enable ohai hints
- Describe how to remove plugins that you do not want executed
- Describe where you can find more information about better Ohai performance

After completing this module you will be able to

EXERCISE



Run Ohai Smoother

There are a few more things to learn about Ohai that could help increase performance.

Objective:

- Configure the node to automatically load ohai plugins
- Enable ohai hints
- Remove plugins that you do not want executed
- Choose only the plugins you want executed

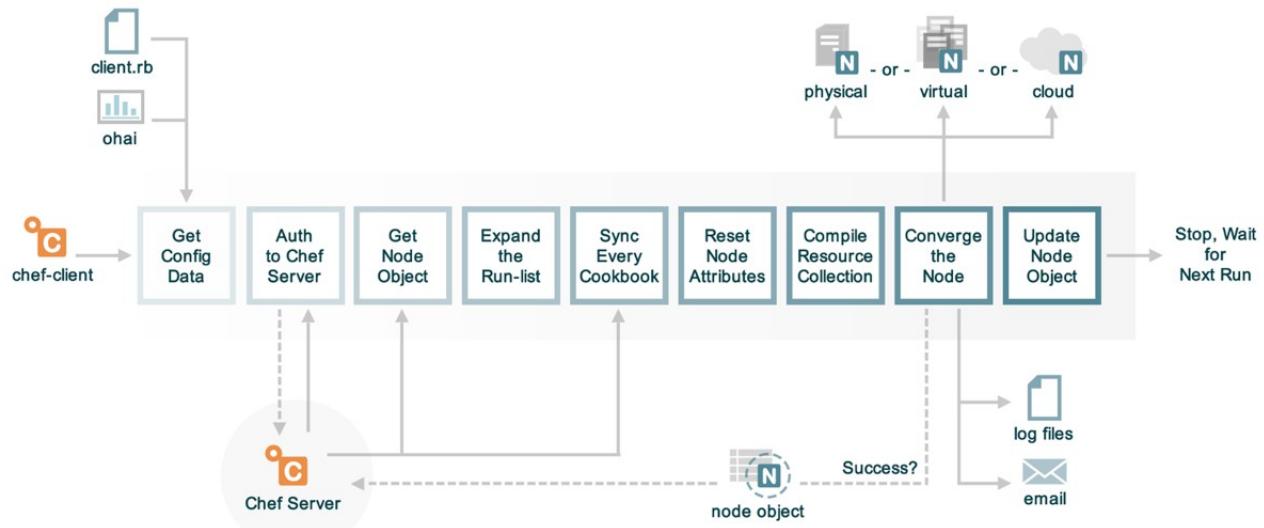
CONCEPT



Node Configuration File

All nodes have a configuration file that contain details about node, overrides, and other data. This is the client.rb file on the node.

The Anatomy of a chef-client Run



CONCEPT



chef-client cookbook

The chef-client cookbook contains a number of useful recipes:

- **service (default)**
Run chef-client as a service, converging at a periodic interval
- **delete_validation**
Remove the organization validation key [SECURITY ISSUE]
- **config**
Define node configuration

<https://supermarket.chef.io/cookbooks/chef-client>

Viewing the chef-client config Recipe

```
~/cookbooks/chef-client/recipes/config.rb
```

```
# ... OTHER RESOURCES ...
template "#{node['chef_client']['conf_dir']}/client.rb" do
  source 'client.rb.erb'
  owner d_owner
  group node['root_group']
  mode '0644'
  variables(
    chef_config: node['chef_client']['config'],
    chef_requires: chef_requires,
    ohai_disabled_plugins: node['ohai']['disabled_plugins'],
    start_handlers: node['chef_client']['config']['start_handlers'],
    report_handlers: node['chef_client']['config']['report_handlers'],
    exception_handlers: node['chef_client']['config']['exception_handlers']
  )
}
```

Source code for chef-client cookbook: <https://github.com/chef-cookbooks/chef-client>

Link to chef-client::config.rb <https://github.com/chef-cookbooks/chef-client/blob/master/recipes/config.rb>

```
~/cookbooks/chef-client/templates/default/client.rb.erb

# ... OTHER STATEMENTS ...

<% unless node["ohai"]["plugin_path"].nil? -%>
ohai.plugin_path << "<%= node['ohai']['plugin_path'] %>"
<% end -%>
<% unless @ohai_disabled_plugins.empty? -%>
ohai.disabled_plugins = [<%= @ohai_disabled_plugins.map { |k| k.match(/:/) ? k.gsub(/^:/, '').to_sym.inspect : k.inspect }.join(",") %>]
<% end -%>

# ... OTHER STATEMENTS ...
```

PROBLEM



The Work

- Add the chef-client cookbook to your cookbook collection
- Provide attributes in a wrapper cookbook, role, or environment for:

```
node['ohai']['plugin_path']
```

- Add chef-client cookbook to every node's run list

EXERCISE



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CONCEPT



Not all Node Plugins are Executed

Some of the plugins will not automatically run against your node. This is particularly true of the cloud provider plugins. As the node does not often know the environment in which it is being run.

CONCEPT



Ohai Hints

For those plugins that are not executed you can leave them a hint file that will ensure they are executed.

PROBLEM



The Work

- Add the ohai cookbook to your cookbook collection
- Define a recipe that uses the ohai cookbook's ohai_hint resource
- Add this recipe to every node's run list

<https://github.com/chef-cookbooks/ohai>

PROBLEM



Custom Resources

`ohai_hint`

Creates Ohai hint files, which are consumed by Ohai plugins in order to determine if they should run or not.

Resource Attributes

- `hint_name` - The name of hints file and key. Should be string, default is name of resource.
- `content` - Values of hints. It will be used as automatic attributes. Should be Hash, default is empty Hash
- `compile_time` - Should the resource run at compile time. This defaults to true

Examples

Hint file installed to the default directory:

```
ohai_hint 'ec2'
```

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<% end -%>
<% unless @ohai_disabled_plugins.empty? -%>
ohai.disabled_plugins = [<%= @ohai_disabled_plugins.map { |k| k.match(/:/) ? k.gsub(/^:/, '') }.to_sym.inspect : k.inspect ].join(",")
<% end -%>
```

<https://github.com/chef-cookbooks/chef-client/blob/master/templates/default/client.rb.erb>

Viewing the chef-client config Recipe

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    report_handlers: node['chef_client']['config']['report_handlers'],
    exception_handlers: node['chef_client']['config']['exception_handlers']
  )
}
```

PROBLEM



The Work

- Add the chef-client cookbook to your cookbook collection
- Select attributes you want to remove
- Find the name of the plugin that provides those attributes
- Provide attributes in a wrapper cookbook, role, or environment for:

```
node['ohai']['disabled_plugins']
```

- Add chef-client cookbook to every node's run list

EXERCISE



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Whitelist Node Attributes

When it seems like you are disabling far too many plugins and you want to consider attacking it from the other side:

<https://docs.chef.io/ohai.html#whitelist-attributes>

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DISCUSSION



Q&A

What questions can we answer for you?



CHEFTM