

Attributes Types

An attribute is a specific detail about a node. Attributes are used by the chef-client to understand:

- The current state of the node
- What the state of the node was at the end of the previous chef-client run
- What the state of the node should be at the end of the current chef-client run

Attributes are defined by:

- The state of the node itself
- Cookbooks (in attribute files and/or recipes)
- Roles
- Environments

Attribute Types	The chef-client uses six types of attributes to determine the value that is applied to a node during the chef-client run. In addition, the chef-client sources attribute values from up to five locations. The combination of attribute types and sources allows for up to 15 different competing values to be available to the chef-client during the chef-client run:
default	A default attribute is automatically reset at the start of every chef-client run and has the lowest attribute precedence. Use default attributes as often as possible in cookbooks.
force_default	Use the force_default attribute to ensure that an attribute defined in a cookbook (by an attribute file or by a recipe) takes precedence over a default attribute set by a role or an environment.
normal	A normal attribute is a setting that persists in the node object. A normal attribute has a higher attribute precedence than a default attribute.
override	An override attribute is automatically reset at the start of every chef-client run and has a higher attribute precedence than default, force_default, and normal attributes. An override attribute is most often specified in a recipe , but can be specified in an attribute file, for a role, and/or for an environment. A cookbook should be authored so that it uses override attributes only when required.
force_override	Use the force_override attribute to ensure that an attribute defined in a cookbook (by an attribute file or by a recipe) takes precedence over an override attribute set by a role or an environment.
automatic	An automatic attribute contains data that is identified by Ohai at the beginning of every chef-client run. An automatic attribute cannot be modified and always has the highest attribute precedence.

Attribute Sources

Attributes are provided to the chef-client from the following locations:

1. Nodes (collected by Ohai at the start of each chef-client run)
2. Attribute files (in cookbooks)
3. Recipes (in cookbooks)
4. Environments
5. Roles

Attributes precedence

1. A default attribute located in a cookbook attribute file
2. A default attribute located in a recipe
3. A default attribute located in an environment
4. A default attribute located in a role
5. A `force_default` attribute located in a cookbook attribute file
6. A `force_default` attribute located in a recipe
7. A normal attribute located in a cookbook attribute file
8. A normal attribute located in a recipe
9. An override attribute located in a cookbook attribute file
10. An override attribute located in a recipe
11. An override attribute located in a role
12. An override attribute located in an environment
13. A `force_override` attribute located in a cookbook attribute file
14. A `force_override` attribute located in a recipe
15. An automatic attribute identified by Ohai at the start of the chef-client run

Attributes E.g.

chef generate cookbook motd_att	
Recipes/default.rb	<pre>node.default['motd_att']['content'] = "It's a wonderful last days of the DevOps course" template '/etc/motd' do source 'motd.erb' mode '0644' end</pre>
chef generate template motd	
nano templates/default/motd.erb	<pre>Welcome to <%= node['motd_att']['company'] %> <%= node['motd_att']['content'] %> This is an example run on platform <%=node['platform']%> The hostname of this node is <%= node['hostname'] %> The IP address of this node is <%= node['ipaddress'] %></pre>
chef generate attribute default	
nano attributes/default.rb	<pre>default['motd_att']['company'] = 'Qshore'</pre>
	<pre>#Run and see the result chef-client --local-mode --runlist 'recipe[motd_att]'</pre>
Experiment by modifying the recipes/default.rb	<pre>node.default['ipaddress'] = '0.0.0.0' node.default['motd_att']['company'] = 'Microsoft' node.default['motd_att']['content'] = "Good morning all!" template '/etc/motd' do source 'motd.erb' mode "0644" End</pre>
	<pre>#Run and see the result chef-client --local-mode --runlist 'recipe[motd_att]'</pre>