chef-client

Applying Recipes from Cookbooks

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Objectives

After completing this module, you should be able to use chef-client to:

➢ Locally apply multiple cookbooks' recipes with chef-client

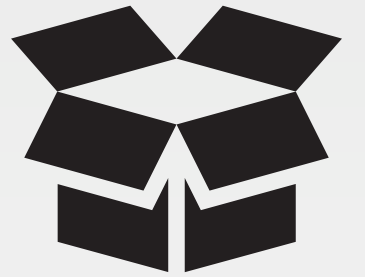➢ Include a recipe from within another recipe

PROBLEM

chef-client

```
> sudo chef-client --local-mode RECIPE_FILE
```

How would we apply both the workstation's setup recipe and apache's server recipe?

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--local-mode

chef-client's default mode attempts to contact a Chef Server and ask it for the recipes to run for the given node.

We are overriding that behavior to have it work in a local mode.

--run-list "recipe[COOKBOOK::RECIPE]"

In local mode, we need to provide a list of recipes to apply to the system. This is called a **run list**. A run list is an ordered collection of recipes to execute.

Each recipe in the run list must be addressed with the format **recipe[COOKBOOK::RECIPE]**.

Demo: Using 'chef-client' to Locally Apply Recipes

```
> chef-client --local-mode -r "recipe[workstation::disable-uac]"
```

Applying the following recipes locally:

The 'disable-uac' recipe from the 'workstation' cookbook

Demo: Using 'chef-client' to Locally Apply Recipes

```
> chef-client --local-mode -r "recipe[myiis::server]"
```

Applying the following recipes locally:

The 'server' recipe from the 'myiis' cookbook

Demo: Using 'chef-client' to Locally Apply Recipes

```
>  chef-client --local-mode -r "recipe[workstation::disable-
uac],recipe[myiis::server]"
```

Applying the following recipes locally:

- The 'disable-uac' recipe from the 'workstation' cookbook
- The 'server' recipe from the 'myiis' cookbook

EXERCISE

Applying a Run List

Using a run list will allow us to specify things more 'logically' instead of with paths.

Group Exercise Objective:

❑ Individually apply the myiis cookbook's server recipe and workstation cookbook's disable-uac recipe

❑ Apply both of the recipes at the same time

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GL: Return Home First

```
> cd ~
```

GL: Apply the Cookbook Recipe Locally

```
> chef-client --local-mode -r "recipe[myiis::server]"
```

```
Starting Chef Client, version 13.3.42
resolving cookbooks for run list: ["myiis::server"]
Synchronizing Cookbooks:
  - myiis (0.1.0)
Installing Cookbook Gems:
Compiling Cookbooks...
Converging 3 resources
Recipe: myiis::server
  * powershell_script[Install IIS] action run
    - execute "C:\Windows\system32\WindowsPowerShell\v1.0\powershell.exe" -NoLogo
-NonInteractive -NoProfile -Execu
tionPolicy Bypass -InputFormat None -File
"C:/Users/ADMINI~1/AppData/Local/Temp/2/chef-script20180913-2420-106bq85.ps1"…
```

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GL: Apply the Cookbook Recipe Locally

```
> chef-client --local-mode -r "recipe[workstation::disable-uac]"
```

```
…
Starting Chef Client, version 13.3.42
resolving cookbooks for run list: ["workstation::disable-uac"]
Synchronizing Cookbooks:
  - workstation (0.1.0)
Installing Cookbook Gems:
Compiling Cookbooks...
Converging 2 resources
Recipe: workstation::disable-uac
  * registry_key[HKLM\Software\Microsoft\Windows\CurrentVersion\Policies\System]
action create (up to date)
  * registry_key[HKLM\Software\Microsoft\Windows\CurrentVersion\Policies\System]
action create (up to date)…
```
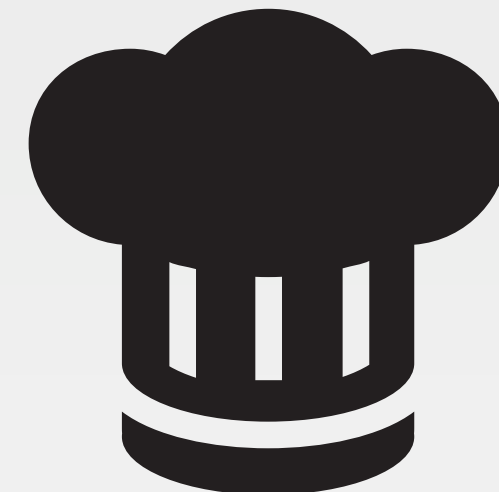
EXERCISE

Applying a Run List

Using a run list will allow us to specify things more 'logically' instead of with paths.

Group Exercise Objective:

✓ Individually apply the myiis cookbook's server recipe and workstation cookbook's disable-uac recipe

❑ Apply both of the recipes at the same time

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GL: Apply Both Recipes Locally

```
> chef-client --local-mode -r
"recipe[myiis::server],recipe[workstation::disable-uac]"
```

```
…
Synchronizing Cookbooks:
  - myiis (0.1.0)
  - workstation (0.1.0)
Installing Cookbook Gems:
Compiling Cookbooks...
Converging 5 resources
Recipe: myiis::server
  * powershell_script[Install IIS] action run
    - execute "C:\Windows\system32\WindowsPowerShell\v1.0\powershell.exe" -
NoLogo -NonInteractive -NoProfile -Execu…
```
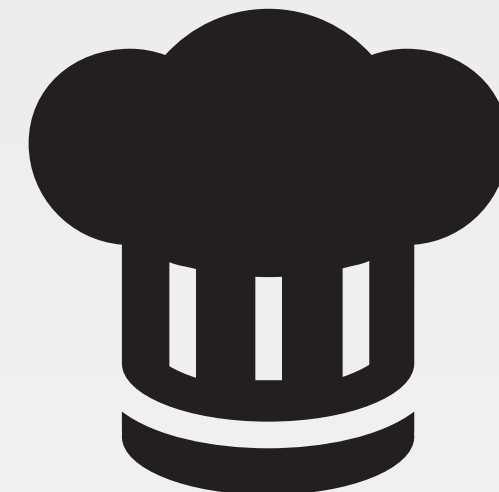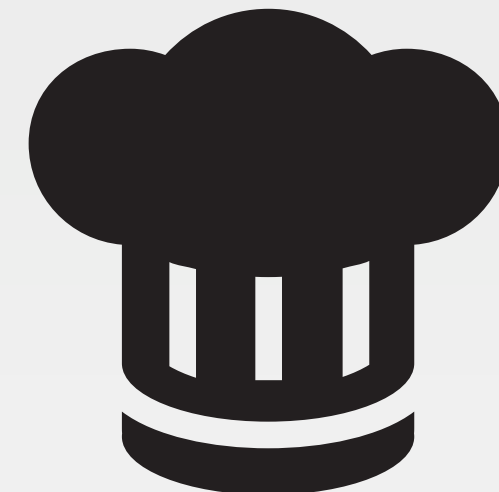
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EXERCISE

Applying a Run List

Using a run list will allow us to specify things more 'logically' instead of with paths.

Group Exercise Objective:

- ✓ Individually apply the myiis cookbook's server recipe and workstation cookbook's disable-uac recipe
- ✓ Apply both of the recipes at the same time

EXERCISE

A Succinct Run List

The cookbook only has one recipe that we care about. Could we set that up as the default?

Group Exercise Objective:

❑ Load the workstation cookbook's disable-uac recipe in the default recipe

❑ Apply the workstation cookbook's default recipe

-r "recipe[COOKBOOK(::default)]"

When you are referencing the default recipe within a cookbook you may optionally specify only the name of the cookbook.

chef-client understands that you mean to apply the default recipe from within that cookbook.

include_recipe

A recipe can include one (or more) recipes located in cookbooks by using the include_recipe method. When a recipe is included, the resources found in that recipe will be inserted (in the same exact order) at the point where the include_recipe keyword is located.

https://docs.chef.io/recipes.html#include-recipes

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Demo: Including a Recipe

```
include_recipe 'workstation::disable-uac'
```

Include the 'disable-uac' recipe from the 'workstation' cookbook in this recipe

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Demo: Including a Recipe

```
include_recipe 'myiis::server'
```

Include the 'server' recipe from the 'myiis' cookbook in this recipe
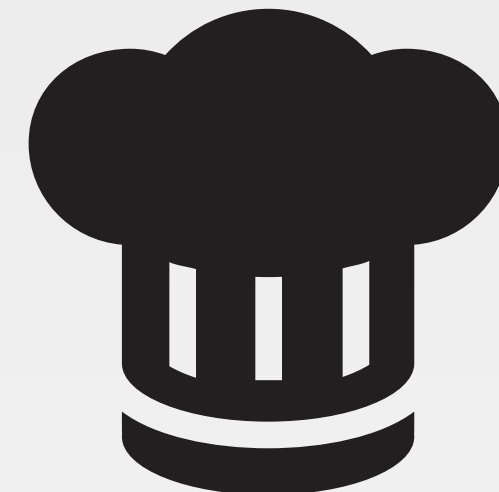
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GL: The Default Recipe Includes the Disable Recipe

`~\cookbooks\workstation\recipes\default.rb`

```
#
# Cookbook Name:: workstation
# Recipe:: default
#
# Copyright (c) 2018 The Authors, All Rights
Reserved.


include_recipe 'workstation::disable-uac'

```

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EXERCISE

A Succinct Run List

The cookbook only has one recipe that we care about. Could we set that up as the default?

Group Exercise Objective:

- ✓ Load the workstation cookbook's disable-uac recipe in the default recipe
- ❑ Apply the workstation cookbook's default recipe
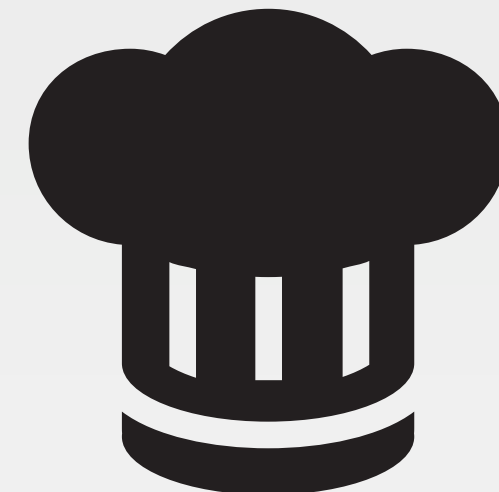
GL: Apply the Cookbook's Default Recipe

```
> chef-client --local-mode -r "recipe[workstation]"
```

```
…

Synchronizing Cookbooks:

  - workstation (0.1.0)

Installing Cookbook Gems:

Compiling Cookbooks...

Converging 2 resources

Recipe: workstation::disable-uac

  * registry_key[HKLM\Software\Microsoft\Windows\CurrentVersion\Policies\System]
action create (up to date)

  * registry_key[HKLM\Software\Microsoft\Windows\CurrentVersion\Policies\System]
action create (up to date)


Running handlers:   …
```

EXERCISE

A Succinct Run List

The cookbook only has one recipe that we care about. Could we set that up as the default?

Group Exercise Objective:

- ✓ Load the workstation cookbook's disable-uac recipe in the default recipe
- ✓ Apply the workstation cookbook's default recipe

GL: Return Home

```
> cd ~
```

EXERCISE

A Succinct Run List

The cookbook only has one recipe that we care about. Could we set that up as the default?

Group Exercise Objective:

- ✓ Load the workstation cookbook's disable-uac recipe in the default recipe
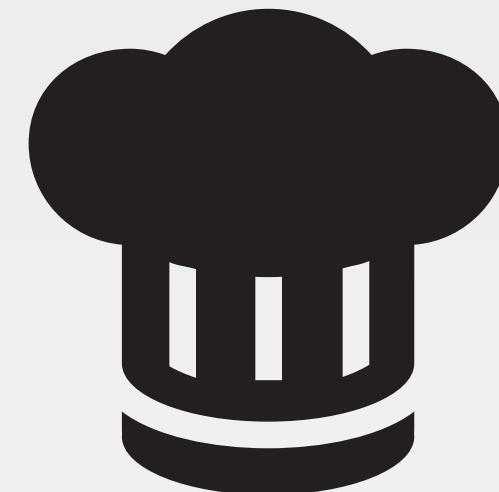- ✓ Apply the workstation cookbook's default recipe

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Lab: Update the myiis Cookbook

❑ Update the "myiis" cookbook's "default" recipe to include the 'server' recipe from the 'myiis' cookbook

❑ Run chef-client and locally apply the run_list: "recipe[myiis]"

Lab: The Default Recipe Includes the myiis Recipe

`~\cookbooks\myiis\recipes\default.rb`

```
#
# Cookbook Name:: myiis
# Recipe:: default
#
# Copyright (c) 2018 The Authors, All Rights Reserved.


include_recipe 'myiis::server'
```

Lab: Applying the myiis Default Recipe

```
> chef-client --local-mode -r "recipe[myiis]"
```

```
Synchronizing Cookbooks:
  - myiis (0.1.0)
Installing Cookbook Gems:
Compiling Cookbooks...
Converging 3 resources
Recipe: myiis::server
  * powershell_script[Install IIS] action run
    - execute "C:\Windows\system32\WindowsPowerShell\v1.0\powershell.exe" -NoLogo
-NonInteractive -NoProfile -Execu
tionPolicy Bypass -InputFormat None -File
"C:/Users/ADMINI~1/AppData/Local/Temp/2/chef-script20180913-3376-d0sso8.ps1"
  * file[C:\inetpub\wwwroot\Default.htm] action create (up to date)
  * windows_service[w3svc] action enable (up to date)
```

Lab: Update the myiis Cookbook

Lab

- ✓ Update the "myiis" cookbook's "default" recipe to include the 'server' recipe from the 'myiis' cookbook

- ✓ Run chef-client and locally apply the run_list: "recipe[myiis]"

Discussion

Why would you want to apply more than one recipe at a time?

What are the benefits and drawbacks of using "include_recipe" within a recipe?

Do default values make it easier or harder to learn?

Q&A

What questions can we help you answer?

- chef-client
- local mode
- run list
- include_recipe

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