

## Chef Advanced Management

### Training brief

**Duration:**

3 Days

**Audience:**

Software Architect,  
Developer,  
System Administrator /  
Operation

**Prerequisites:**

Command line usage,  
Shell scripting,  
A knowledge of the notions of  
Ruby is a plus,  
Introduction to Chef,  
Git

**Learning objectives:**

- Create resources and recipes
- Manage environments
- Manage dependencies between cookbooks
- Cross-platform cookbooks
- Implementing a Deployment Strategy
- Implementing a Test Strategy
- Test Recipes

**Methodology:**

Alternating lectures (30%) and practical work (70%). Chef is a software solution, it is important that participants use the tool as much as possible during the training to ensure they are operational at the end of the session. In this way, the training incorporates as many practical exercises as possible.

### Description

Chef is a management tool that automates server configuration and maintenance tasks. It can integrate with various cloud platforms, and with development environments, in order to provision any new machine.

This training is intended for those working (in general) as a team on critical infrastructures, wanting to set up an operational flow for the development, maintenance and deployment of their infrastructure in different environments (Development, Staging and Production) in order to Ensure the quality assurance of their infrastructure.

At the end of this training, you will be able to set up an operational flow to develop, maintain and deploy your Chef cookbooks within your work environment.

### Training Plan

- I. Reminder of nodes, resources and recipes
  - A. Presentation of the node object
  - B. Resources and recipes
  - C. Attributes, templates, and dependencies between recipes
  - D. Variables and notifications
  - E. Use of Community recipes
  - F. Inclusion of recipes
- II. Reminder of roles and environments
  - A. Configuring a node based on its role
  - B. Configuring a node based on its environment
- III. Presentation of the Chef Development Kit
  - A. Knife
  - B. Cookstyle / Rubocop
  - C. Foodcritic
  - D. Berkshelf
  - E. Knife-spork
- IV. Practice and development process of Cookbook
  - A. Manage Dependencies with Berkshelf
  - B. Coding cross-platform Cookbooks with Ohai
  - C. Management of environments
  - D. Versioning of Cookbooks with Git
  - E. Pull Request
- V. Team work
  - A. Chef Workflow (development / staging / production)

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- B. Using knife-spork
    - C. Integration with communication tools (Slack / Hipchat)
- VI. Test strategy
- VII. Testing your recipes
  - A. Test your recipes with ChefSpec
  - B. Test Kitchen / serverspec / Bats with Vagrant and Docker