PENDRICA

Cross-platform Infrastructure Testing with Microsoft Azure, Test Kitchen and InSpec

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ABOUT STUART PRESTON

- Co-founder/Principal Consultant @Pendrica
- OSS owner/maintainer:
  - Chef Provisioning (Azure Resource Manager driver)
  - Test Kitchen (Azure Resource Manager driver)
  - Chef Extension for Visual Studio Code
- Book author:
  - Using Chef with Microsoft Azure

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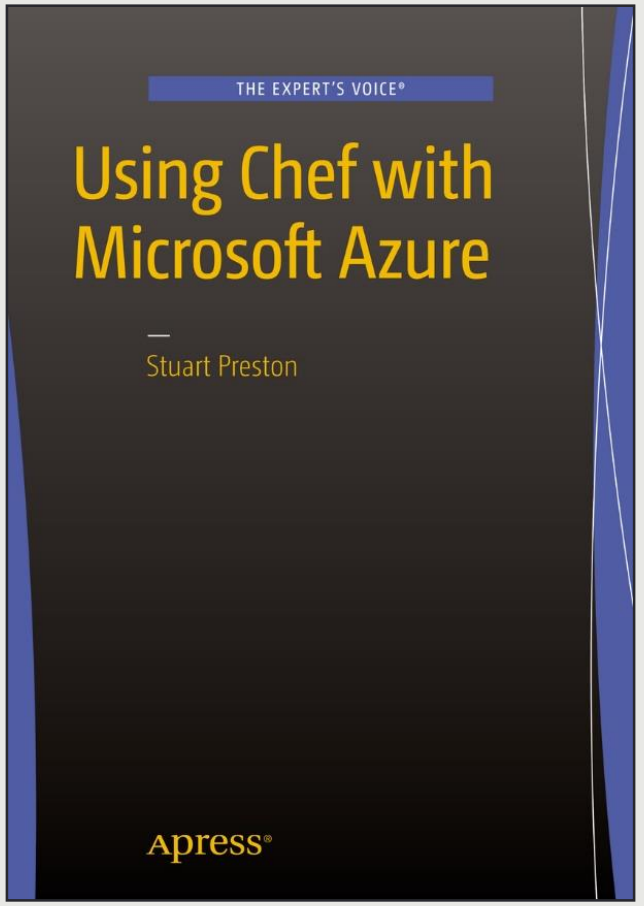


AGENDA

- Why you might want to test your infrastructure code in Microsoft Azure
- Look at how Test Kitchen and InSpec can work with Azure
- Demo
- Break time!

OBLIGATORY DILBERT

SHOW OF HANDS

- Who is using automated tooling such as Test Kitchen, Infratester or something else?
- What's the number 1 barrier to entry for setting up the tool?

WHY TEST IN THE (PUBLIC) CLOUD?

- Pressure on “local” environment utilisation
- We want to lower running costs during development
- We want faster access to the latest software images, public software repository mirrors, etc.

TEST KITCHEN

- Popular tool for verifying infrastructure code especially in the Chef, Puppet and Ansible communities
- Entire test process encapsulated in 4 clear phases:

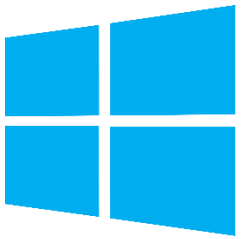
- Great for Continuous Integration!

WHAT DO WE WANT TO KNOW?

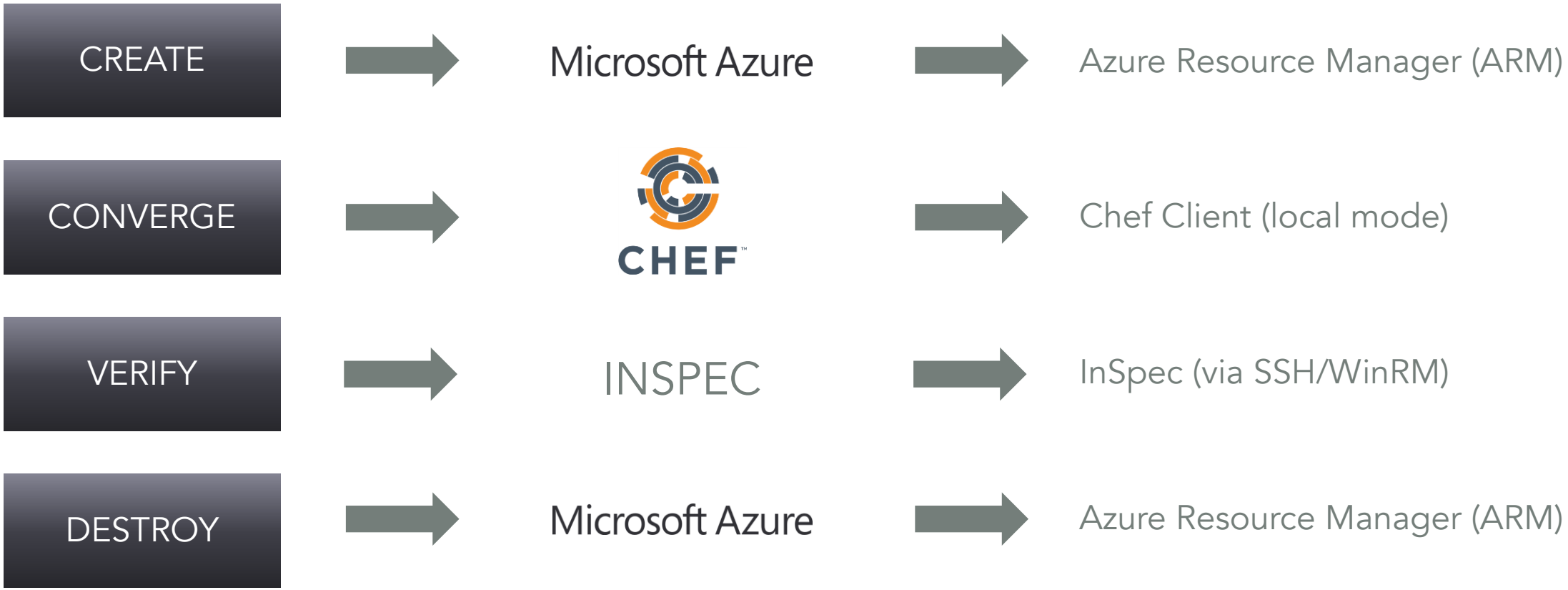
- Did our infrastructure code make the required changes to the system state?
- Is the local configuration correct afterwards?
  - Local firewall configuration
  - Host entries and file permissions
  - Frameworks required
  - Correct ports are being used
- Will our code work on multiple platforms?

TO DO THIS ON MICROSOFT AZURE…

- I built the **kitchen-azurerm** driver
- Creates all the machines required ready for testing and destroys them afterwards
- Windows machines, Linux distributions, anything that can run Chef in Azure can be provisioned in Test Kitchen




TEST KITCHEN PROCESS



INSPEC

- A BDD-like DSL with resources like **windows_feature** and **package** and matchers like **be_enabled**, **be_installed**

```
describe package('apache2') do
  it { should be_installed }
end
```

```
describe windows_feature('Web-Server') do
  it { should be_installed }
end
```

- Understands config file formats and platform differences
- DSL is compatible with auditing and compliance feature set of Chef (see related talks)
- Quite a few InSpec related talks on the schedule

DEMO

GET THE BITS

```
[ChefDK] or gem install test-kitchen
[chef] gem install kitchen-azurerm
[chef] gem install kitchen-inspec
[chef] gem install inspec
```

Readme and examples:

http://github.com/pendrica/kitchen-azurerm

KITCHEN-AZURERM BACKLOG

- SSH key upload/enable access to more Linux distributions
- Custom machine images
- Custom ARM templates for even more flexibility in Azure
- Continued testing and support for “Azure Stack”

Contributions welcome!

http://github.com/pendrica/kitchen-azurerm

SUMMARY

- There are some great tools out there already to test your infrastructure code in the cloud
- Microsoft Azure is a Windows and Linux friendly environment
- You may have access to it already without knowing
- Sign up at http://visualstudio.com for some free credit (coming soon)
- Look out for “Azure Stack” in the Enterprise and be prepared!

Microsoft  Linux

RELATED TALKS

TODAY (FEBRUARY 1)

~~15:40~~ 15:55 B3.019 (Chef community room)

InSpec, or How to translate compliance spreadsheets into code

Michael Goetz

~~16:20~~ 16:45 B3.019 (Chef community room)

Infrastructure Testing

Kimball Johnson

TOMORROW (FEBRUARY 2)

11:40 B.CON (this room)

Skynet testing InSpec from Solaris to Docker

Dominik Richter