

Cooking Up Windows with Chef Automate

Perth MS Cloud Computing User Group
November 14, 2017

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Software Defined Talk



Every business is a software business



We're no longer an airline. We're a software company with wings.

—Veresh Sita, CIO, Alaska Airlines



Continuous automation success metrics

Quantifying outcomes to deliver software at speed

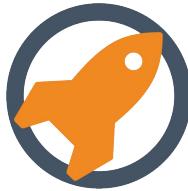


Velocity: time from **idea** to **ship**



SPEED

Measure of rate of software change



Deployment frequency



Time from commit to deploy

RISK

Measure of quality of software change



Compliance audit frequency



Time deploying remediation

EFFICIENCY

Measure of effectiveness of software change



Change failure rate

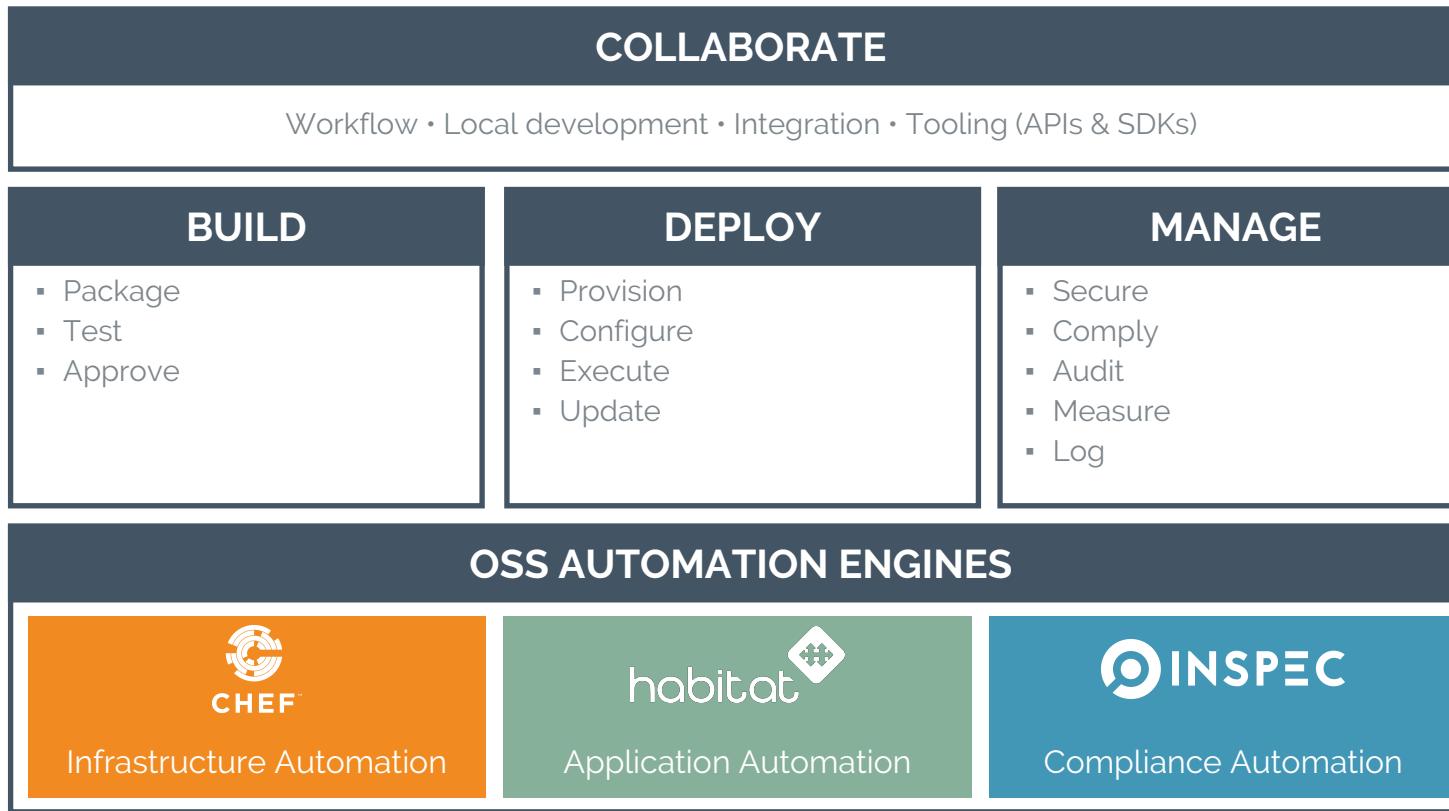


Mean time to resolve

The Chef Automate Platform

Continuous Automation for High Velocity IT

CHEFAUTOMATE



Increase Speed

- Package infrastructure and app configuration as code
- Continuously automate infrastructure and app updates

Improve Efficiency

- Define and execute standard workflows and automation
- Audit and measure effectiveness of automation

Decrease Risk

- Define compliance rules as code
- Deliver continuous compliance as part of standard workflow

Chef

Infrastructure automation
and delivery at scale

- Manages **deployment** and on-going automation
- Define **reusable** resources and infrastructure state as code
- Scale elegantly from one to tens of thousands of **managed** nodes across multiple complex environments
- Community, Certified Partner, and Chef supported content available for **all common automation** tasks

```
windows_feature 'IIS-WebServerRole' do
  action :install
end

windows_feature 'IIS-ASPNET' do
  action :install
end

iis_pool FooBarPool do
  runtime_version "4.0"
  action :add
end

package "apache" do
  action :install
end

template "/etc/httpd/https.conf" do
  source "httpd.conf.erb"
  mode 0075
  owner "root"
  group "root"
end

service "apache2" do
  action :start
end
```

InSpec

Turn security and compliance into code

- Translate **compliance** into Code
- **Clearly** express statements of policy
- Move risk to build/test from **runtime**
- Find issues **early**
- Write code **quickly**
- Run code **anywhere**
- **Inspect** machines, data, APIs, and Cloud platforms



PART OF A PROCESS OF CONTINUOUS COMPLIANCE

Scan for Compliance Build & Test Locally Build & Test CI/CD Remediate Verify



A SIMPLE EXAMPLE OF AN INSPEC CIS RULE

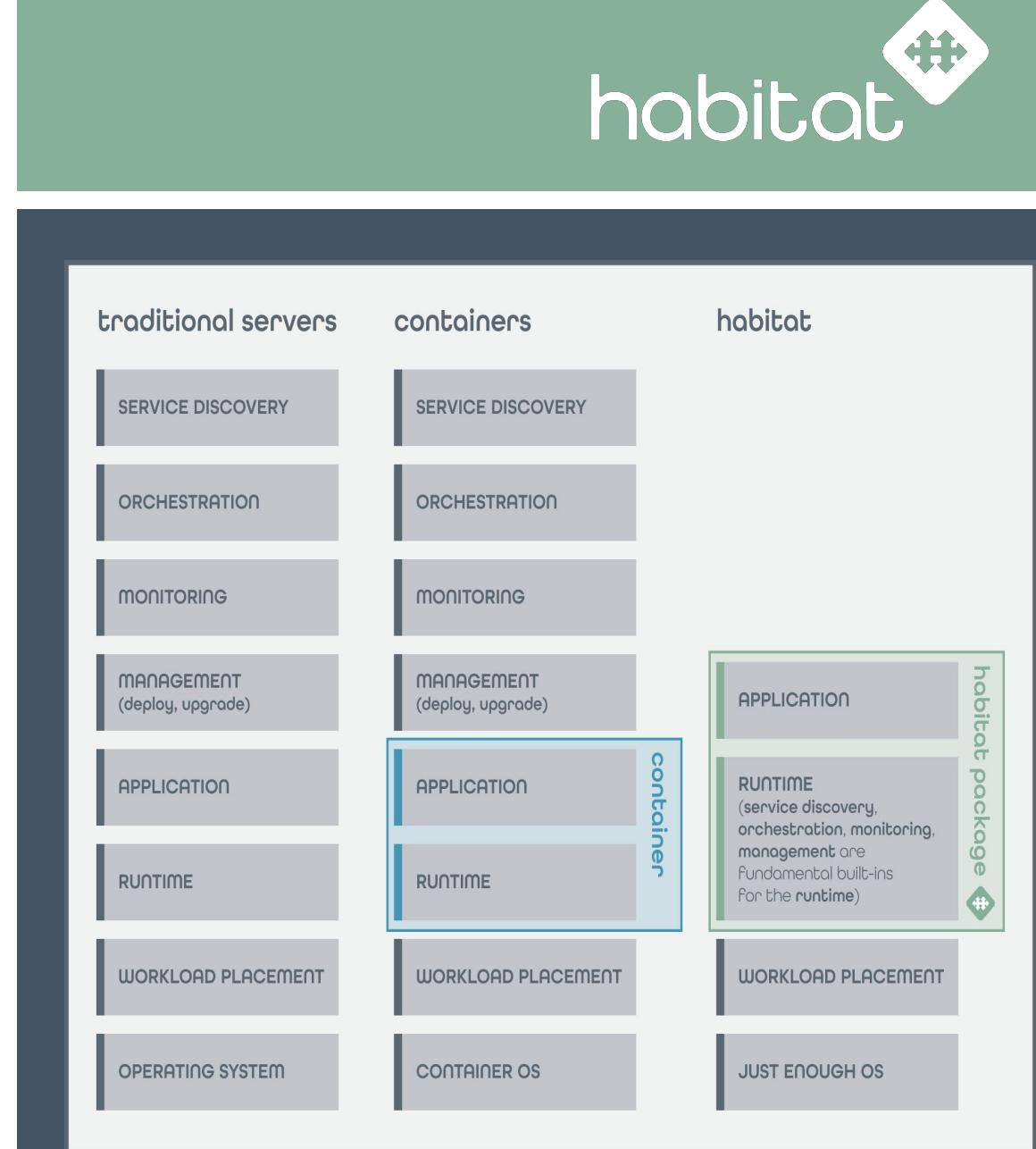
```
control 'windows-base-201' do
  title 'Strong Windows NTLMv2 Authentication Enabled;
Weak LM Disabled'
  desc 'http://support.microsoft.com/en-us/kb/823659'
  impact 1.0

  describe registry_key
    ('HKLM\System\CurrentControlSet\Control\Lsa') do
      it { should exist }
      its('LmCompatibilityLevel') { should eq 4 }
    end
```

Habitat

Automation that travels with the app

- Ease the burden of managing microservice apps and bring **benefits** of apps architected for microservices to traditional applications
 - Gain **consistent** management of new and traditional applications across their lifecycle
 - Provides application **portability** for new and traditional apps
 - Autonomous nodes **self-manage** runtime state of application based upon policy you define
 - APIs expose application behaviors as data for better management
- Works in **tandem** with infrastructure automation
- Makes applications running on containers, PaaS, virtual machines, bare metal, ... **better**



Chef Automate Demo

Chef Automate enables the entire journey

A single platform to Detect, Correct, and Automate

Detect

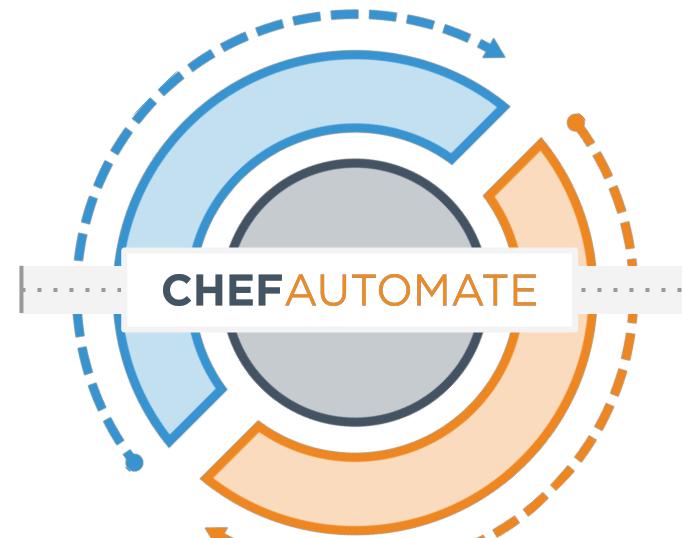
- Test against industry benchmarks
- Report and address audit needs

Correct

- Close detect/correct loop in one platform
- Develop baselines for automation

Automate

- Detect and correct before production
- Single language across DevOps, InfoSec



Chef Automate is a **single platform** to support the entire journey

Chef and Microsoft Integrations

Azure/OMS

- Chef Automate now live on the Azure Marketplace and Azure Gov Cloud
- Supports Azure Stack
- Continue to enhance Chef VM Extension (Linux & Windows)
- OMS integration with Chef client and server
- Knife, Test Kitchen, and InSpec plugins for Azure

Windows

- Support for PowerShell DSC since 2014, WMF 5.0 support added
- New Chef Client resources added, continued focus to bring popular resources into the “core” Chef Client
- Windows Server 2016 and Nano Server as supported platforms as well as Windows Container support
- ChefDK is now supported on Client and Server platforms
- Chef Supermarket contains Windows-specific cookbooks
- Test Kitchen support for Windows via WinRM and SSH
- InSpec resources for Windows
- Habitat support for Windows

Visual Studio

- Chef VSCode extension for syntax and tooling plugins
- Chef and InSpec Extensions for Visual Studio Team Services (VSTS)
- Working with Visual Studio engineering team on other possible integrations/white space, possibly around InSpec & Habitat



New

Dashboard

All resources

Resource groups

App Services

SQL databases

SQL data warehouses

Azure Cosmos DB

Virtual machines

Load balancers

Storage accounts

Virtual networks

Azure Active Directory

Monitor

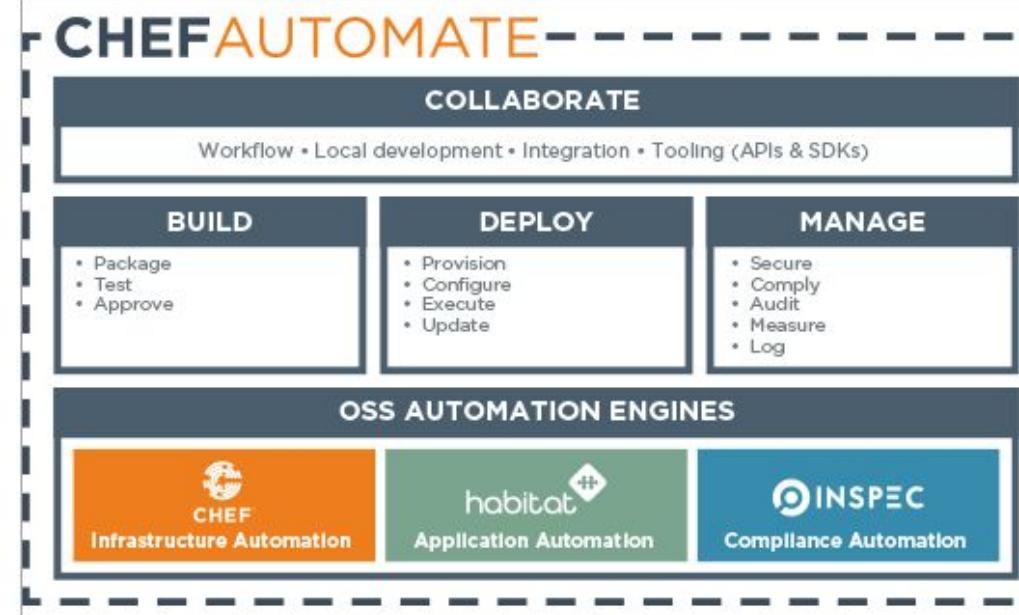
Security Center

Billing

Help + support

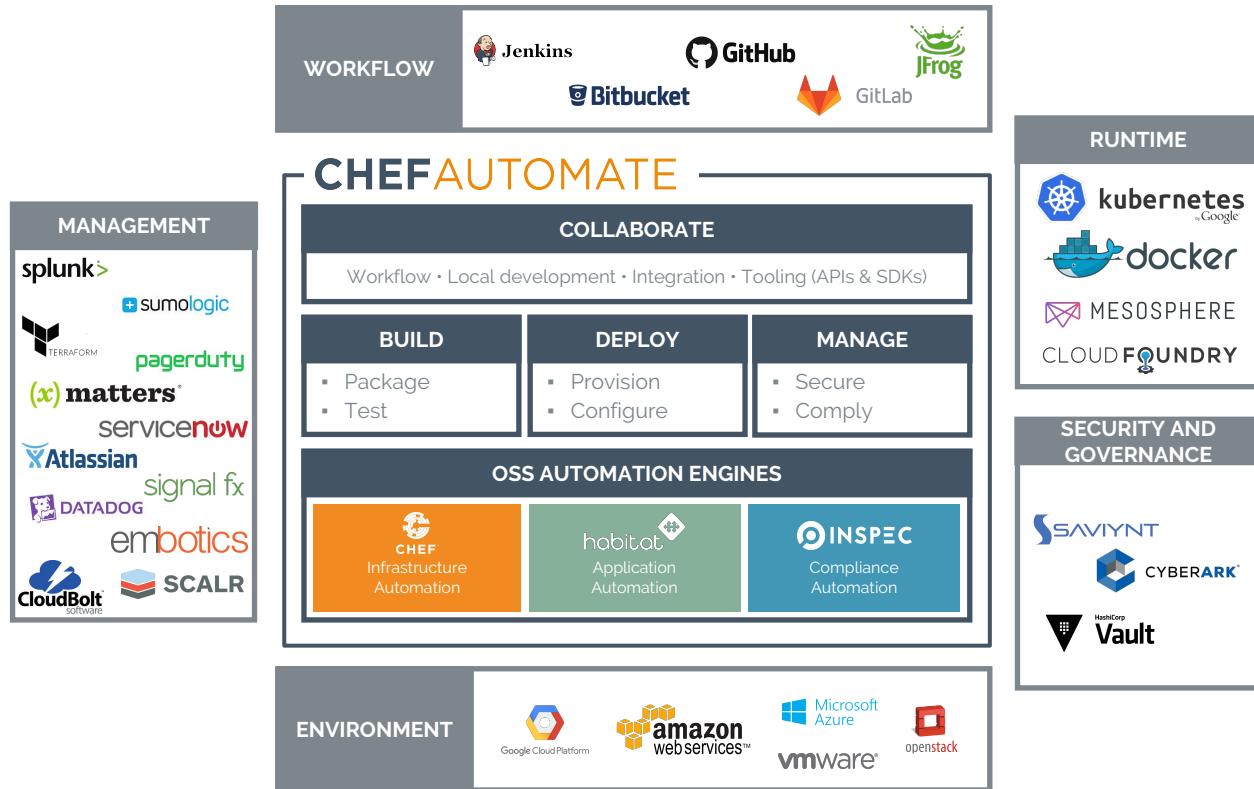
The official Chef Automate with Chef server Azure Marketplace solution template enables you to build, deploy, and manage your infrastructure and applications collaboratively. With 1-click, you get instant access to all commercial features included with Chef Automate; gain end-to-end visibility across your entire fleet, enable continuous compliance, and manage all change with a unified workflow. Chef Automate works with Chef Software open source projects (Chef, InSpec) and associated tools (chef-client, ChefDK, etc). Chef Software Inc. provides support for this Azure Marketplace Image according to standard support SLAs. Don't have a license yet? You can still deploy it today with a free 30 day trial license - just leave the license field blank!

This Chef Automate (includes Chef Server) solution requires that you bring your own license. New users may try this solution without a license for up to 30 days. Contact us at amp@chef.io to obtain a license.



Chef Automate is at the heart of software delivery

The vendors you trust, trust Chef for continuous automation



inspec-azure

- <https://github.com/chef/inspec-azure>
- Azure Ruby SDK
- Will be merged into core InSpec

inspec-azure

```
control 'azure-1' do
  impact 1.0
  title 'Checks that the machine was built from the correct image'

  describe azure_virtual_machine(name: 'example-01', resource_group: 'MyResourceGroup') do
    its('sku') { should eq '16.04.0-LTS' }
    its('publisher') { should eq 'Canonical' }
    its('offer') { should eq 'UbuntuServer' }
  end
end
```



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