



CHEF™

Getting Started with Compliance Automation




Our Vision

the most **enduring** and **transformative** companies
use Chef to become **fast, efficient, and innovative**
software driven organizations

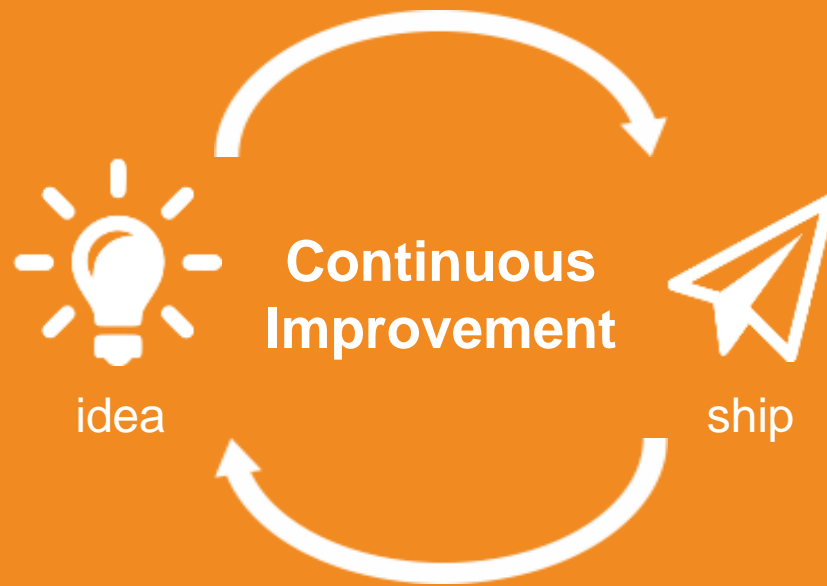
Now every business is a software business



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

– Veresh Sita, CIO, Alaska Airlines

Automation at scale is required for high velocity IT



**No high velocity company
has gotten there without
automation at scale as a
foundation**



Citi relies on Chef as the automation platform used to help transform over 3,000 application teams. Chef is important enough to Citi that Citi became an investor in Chef.



Chef is the platform for a continuous delivery pipeline empowering application teams to ship a thousand plus changes per day across “Carl Sagan size deployments.”



GE touts Chef as the most rapidly adopted technology in the history of GE.

CHEFAUTOMATE

Workflow

Visibility

Compliance



Infrastructure Automation



Application Automation

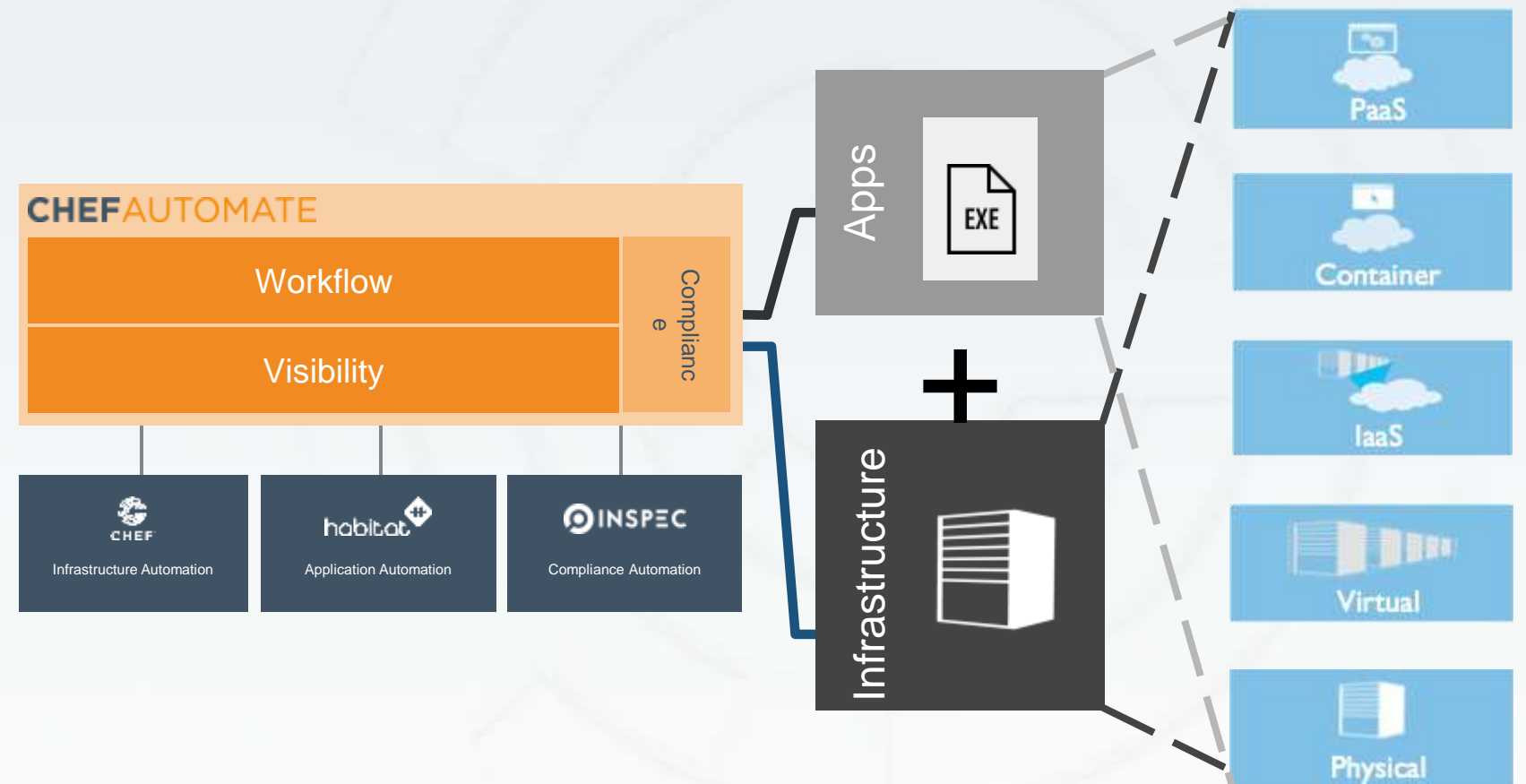


Compliance Automation

Chef Automate removes infrastructure as a speed bump

Move at any speed the business requires safely and without breaking IT processes

- Build, deploy, and manage applications and infrastructure environments with one platform
- Gain consistency, security, and compliance across complex and any-size enterprise environments
- Collaboration, governance, and visibility across dev, security, compliance, and ops teams
- Improve productivity, reinforce the right organizational behaviors, and accelerate time from idea to shipment



Chef Automate: Jumpstart your move to automation

- A complete suite of enterprise capabilities for workflow, visibility and compliance
- Workflow: A pipeline for continuous delivery of infrastructure and applications
- Compliance: Customizable analytics to identify compliance issues, security risks and outdated software
- Visibility: Gives you views into operational, compliance and workflow process events



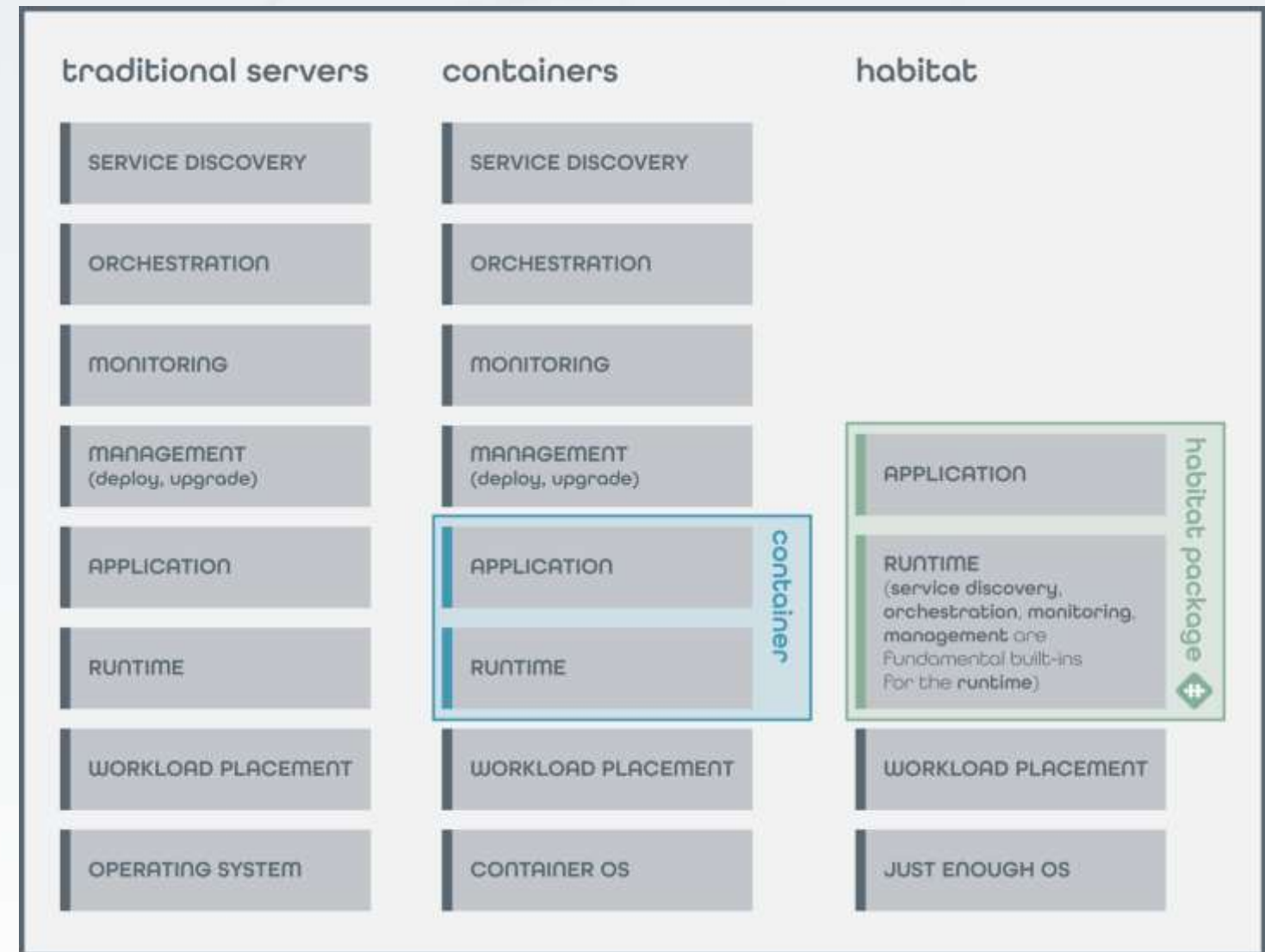
Chef: Infrastructure automation and delivery at scale

- 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, & Chef supported content available for all common automation tasks

```
1  ▼ windows feature 'IIS-WebServerRole' do
2      action :install
3  ▲ end
4
5  ▼ windows feature 'IIS-ASPNET' do
6      action :install
7  ▲ end
8
9  ▼ iis_pool FooBarPool do
10     runtime_version "4.0.30319"
11     action :add
12  ▲ end
13
14  ▼ package "apache" do
15     action :install
16  ▲ end
17
18  ▼ template "/etc/httpd/httpd.conf" do
19     source "httpd.conf.erb"
20     mode 0075
21     owner "root"
22     group "root"
23  ▲ end
24
25  ▼ service "apache2" do
26     action :start
27  done
28
```


Habitat: Automation that travels with the app

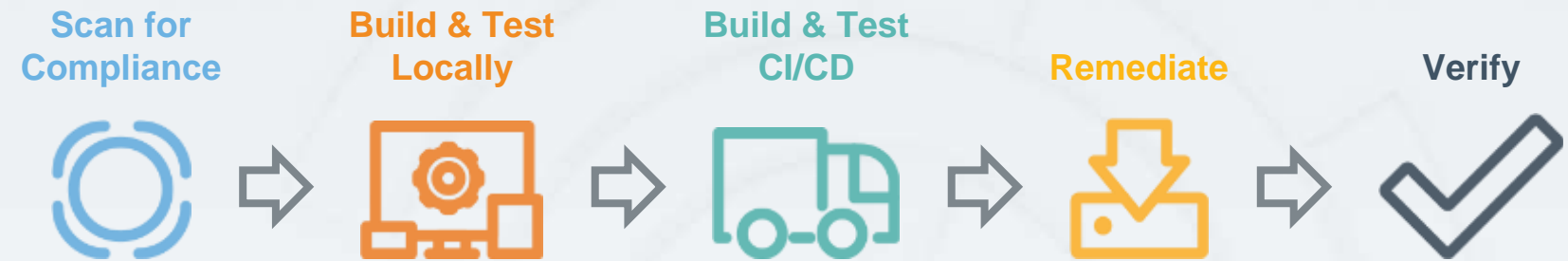
- Ease the burden of managing microservice apps and bring benefits of apps architected for microservices to legacy applications
 - Gain consistent management of new and legacy applications across lifecycle
 - Provides application portability for new and legacy apps
 - Autonomous nodes self-manage runtime 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



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 and APIs

Part of a process of continuous compliance

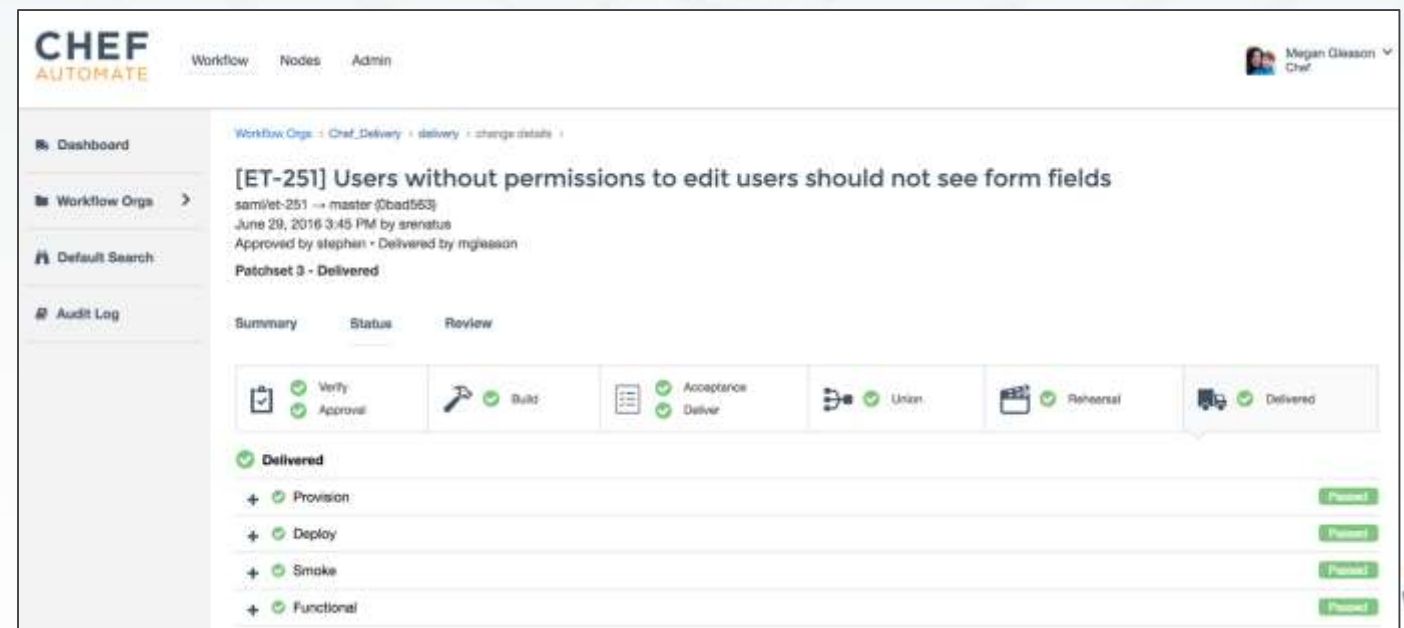


A simple example of an InSpec CIS rule

```
control 'cis-1.4.1' do
  title '1.4.1 Enable SELinux in /etc/grub.conf'
  desc '
    Do not disable SELinux and enforcing in your GRUB configuration.
    These are important security features that prevent attackers from
    escalating their access to your systems. For reference see ...
  '
  impact 1.0
  expect(grub_conf.param 'selinux').to_not eq '0'
  expect(grub_conf.param 'enforcing').to_not eq '0'
end
```

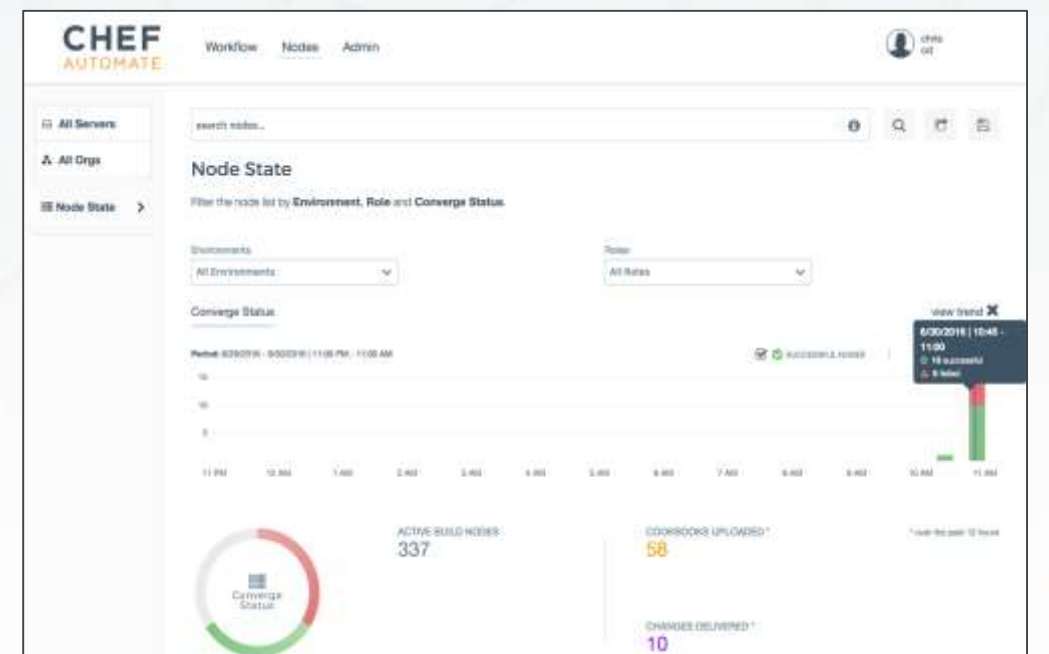
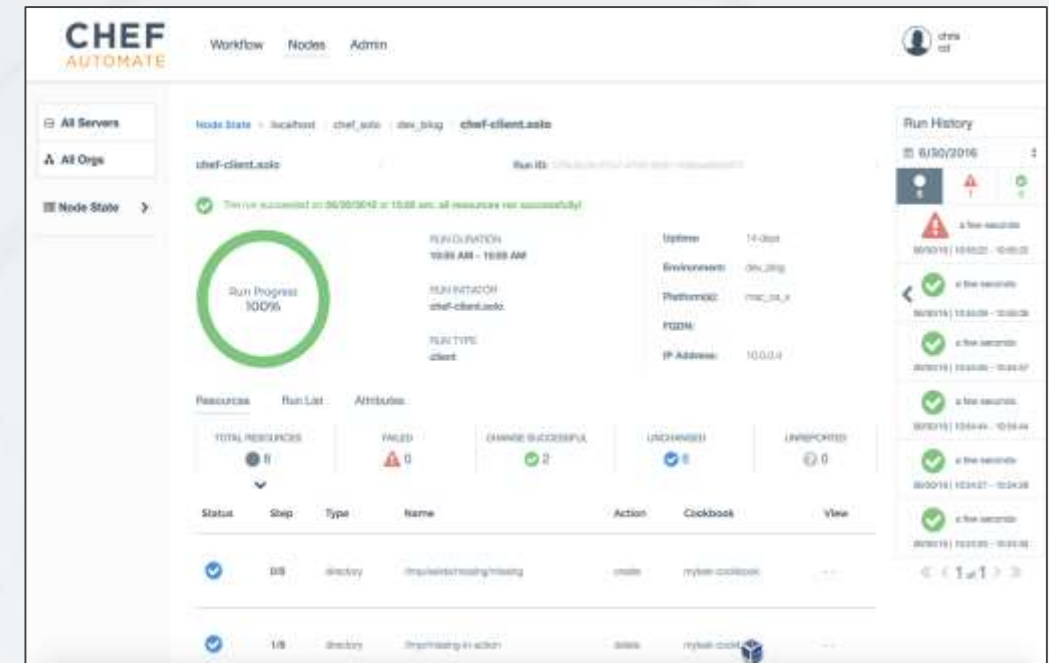
Workflow: Continuous delivery of any code

- Improve collaboration across infrastructure & applications
 - Cross-team productivity enhanced by consistent overall pipeline shape
 - Specific teams given flexibility to configure pipeline automation specific to their app
 - Service dependencies across pipelines are easily mapped and tested
 - Stakeholder visibility keeps teams in the know and involved as needed
 - Robust governance ensures compliance controls are enforced

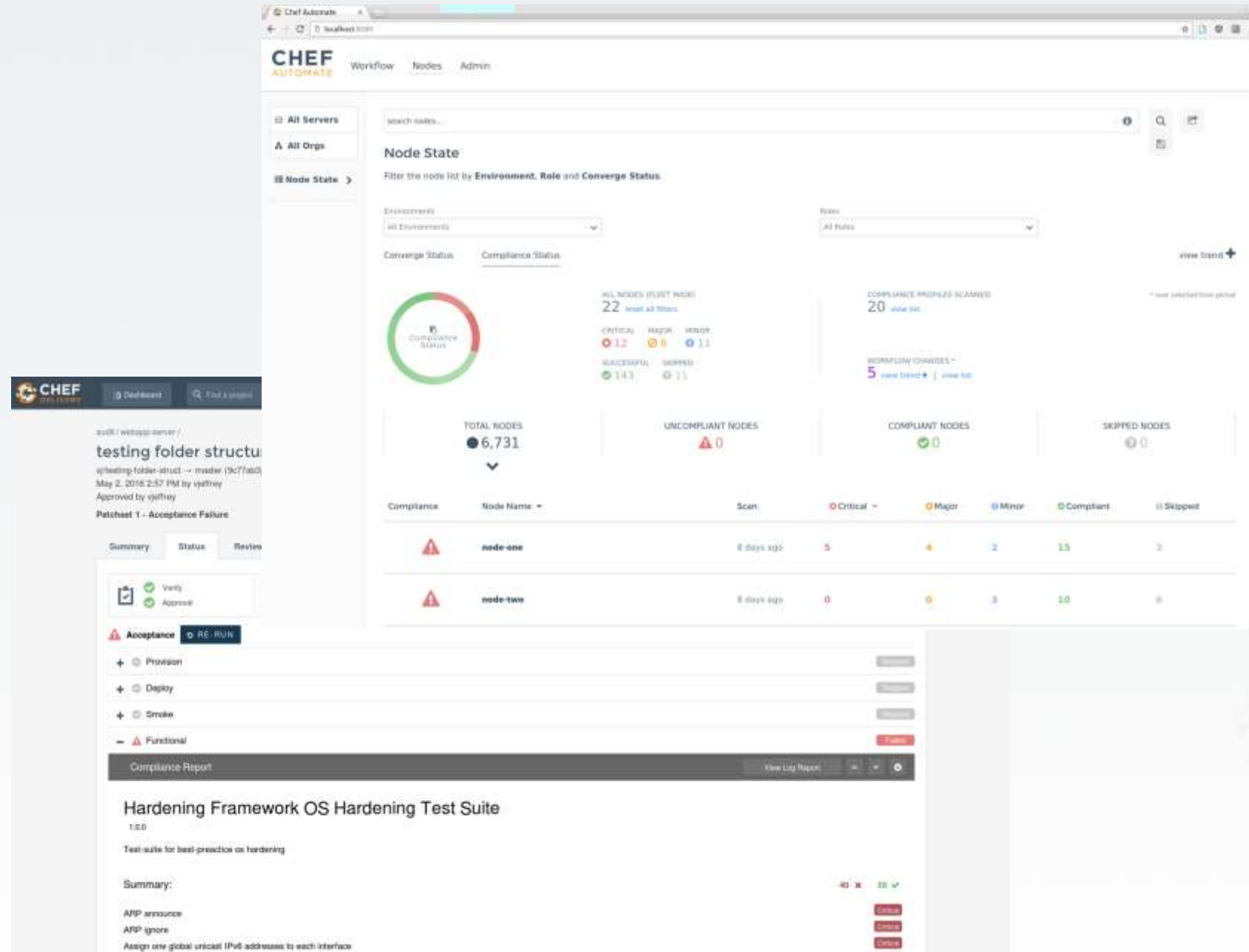


Visibility: Real-time data collection and analysis

- Search, analyze, audit, and report on workflow processes and environment behaviors
 - multiple Chef Servers
 - Chef Solo
 - InSpec
 - Chef Compliance
 - Habitat
 - Chef Automate Workflow
- Better manage ephemeral, long-lived, and large federated environments
- Easily export data to 3rd party analytic platforms and event notification systems



Continuous Compliance/Audit: Compliance as part of software delivery



- Discovery and analysis of compliance risks across environments
- Automated checking of compliance criteria with analytics
- Embed compliance into the software delivery pipeline
- Move compliance risk checking from runtime into build/test stage
- Structured review process during development
- Improve patch management and remediation

Security and compliance at velocity



Regulatory compliance and security concerns are facts of life for every enterprise. At the same time, competitive pressures are increasing. Embed requirements into the software delivery pipeline. Code makes compliance at velocity possible.

- Embed compliance into the software delivery pipeline
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- Structured review process during development
- Discovery and analysis
- Patch management and remediation

CHEFAUTOMATE

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Infrastructure Automation



Application Automation



Compliance Automation

Objectives

After completing this course, you should be able to:

- Describe the capabilities of Chef Compliance.
- Configure the Chef Compliance server.
- Perform scans with Chef Compliance.
- Remediate compliance issues.
- Use InSpec to create, modify, and test Chef Compliance profiles.
- Schedule and run compliance reports.
- Manage users, organizations, teams and permissions.



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