



RED HAT **FORUM**

Europe, Middle East & Africa



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SYSTEM MANAGEMENT UPDATE

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Solution Architect Platform & Cloud
10-10-2017



RED HAT®
ANSIBLE®
Tower

RED HAT®
ANSIBLE®
Engine



RED HAT®
CLOUDFORMS

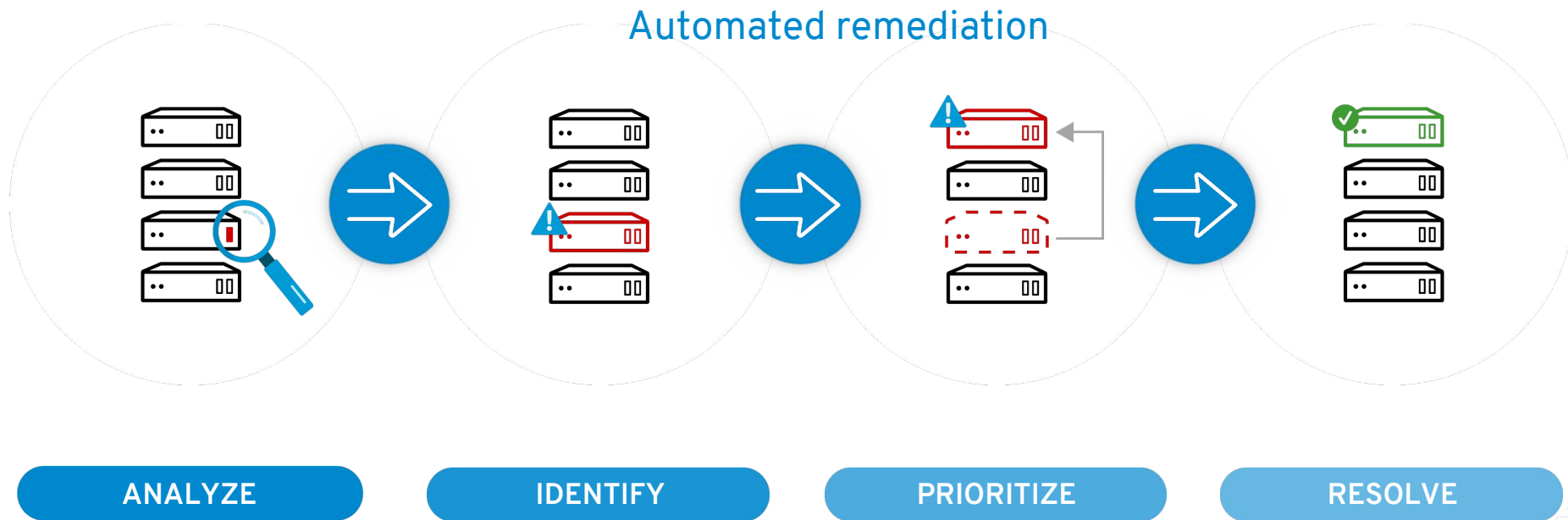
RED HAT®
INSIGHTS

RED HAT®
SATELLITE

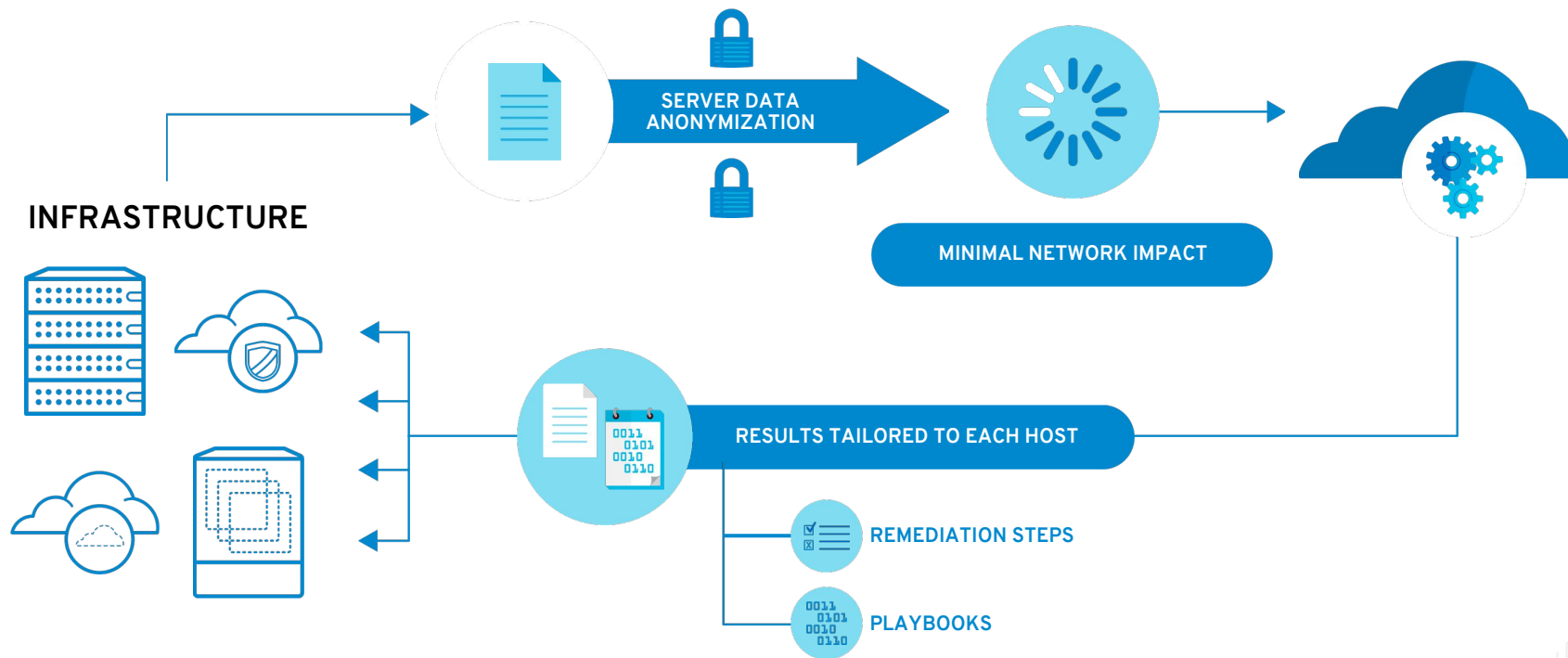
RED HAT®
ENTERPRISE
LINUX®

RED HAT INSIGHTS

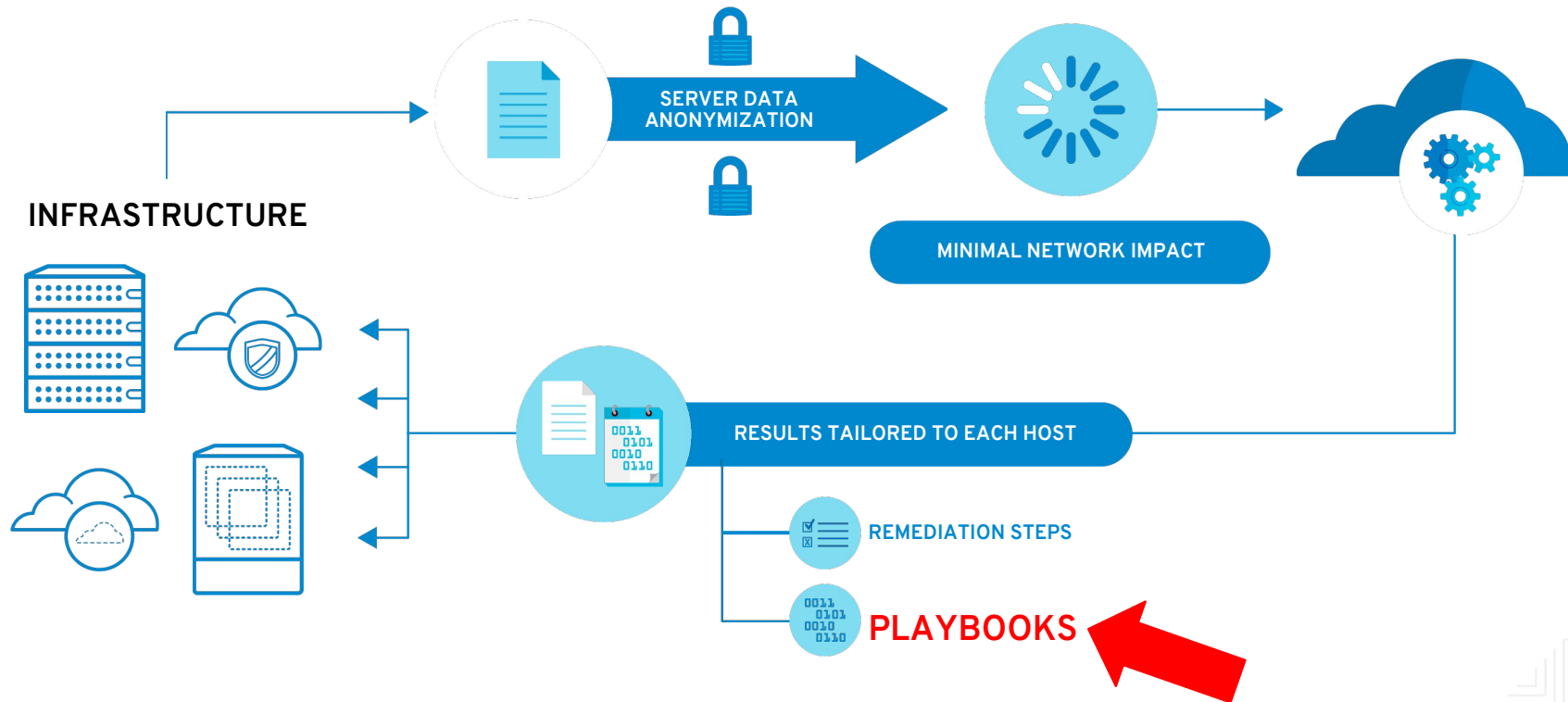
MANAGING INFRASTRUCTURE RISK



RED HAT INSIGHTS ARCHITECTURE



RED HAT INSIGHTS ARCHITECTURE



RED HAT INSIGHTS

GETTING STARTED



ALREADY A RED HAT® ENTERPRISE LINUX® CUSTOMER?

Try Insights at no cost:

<https://access.redhat.com/insights/getting-started>



INTERESTED IN A MANAGEMENT SUITE?

Insights is included in:

Red Hat Cloud Infrastructure + Red Hat Cloud Suite



WOULD YOU LIKE TO LEARN MORE ABOUT INSIGHTS?

<https://www.redhat.com/en/technologies/management/insights>

For more info, visit: <https://access.redhat.com/insights/info>

RED HAT INSIGHTS

ASSESSMENT @NO COST

Run an Insights assessment for 30 days:

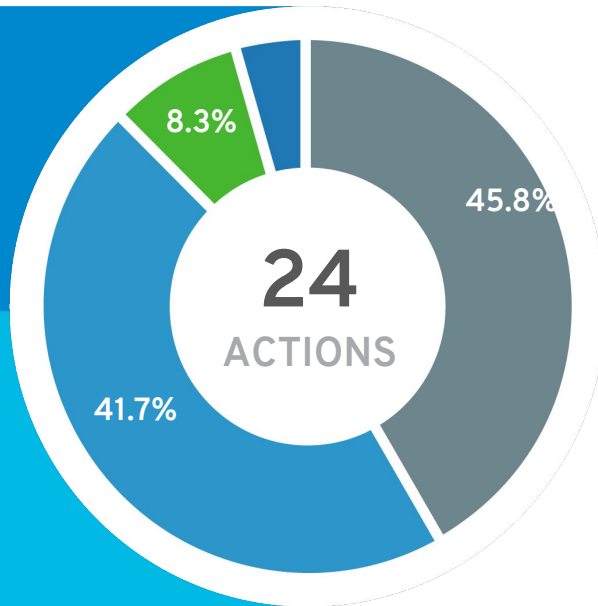
1. Work with your account team to get an Insights eval subscription.
2. Install the Red Hat Insights RPM.
3. Register 50+ systems for best view.
4. See results immediately.
5. Schedule a best practices workshop.

See valuable insights in minutes:

1. Activate eval: <https://access.redhat.com/insights/evaluation>.
2. Installation: <https://access.redhat.com/insights/getting-started>.

QUESTIONS?

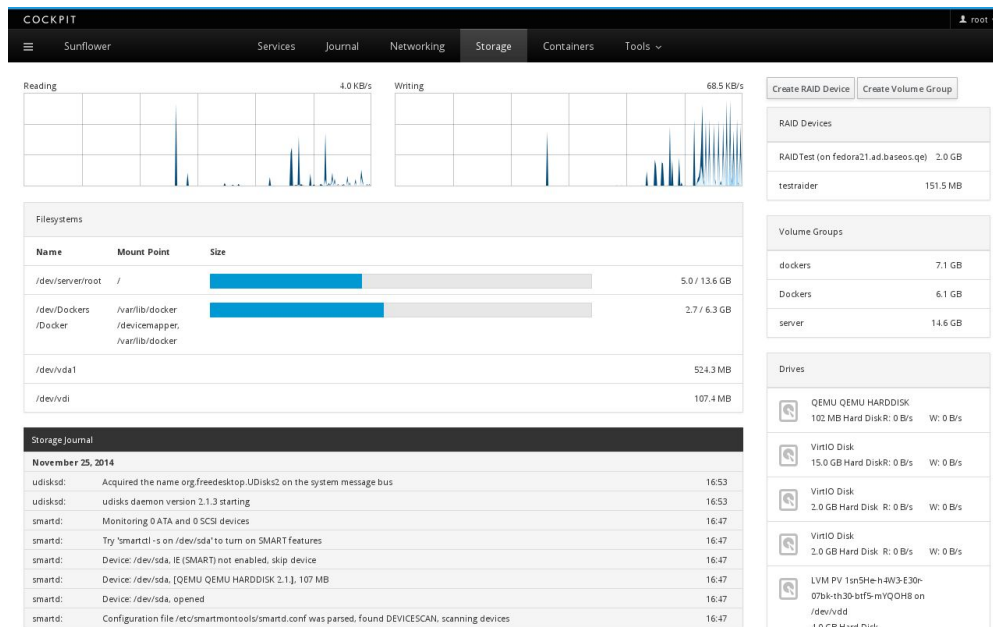
insights@redhat.com



RED HAT ENTERPRISE LINUX

EASE OF MANAGEMENT

Using WEB GUI COCKPIT



Using ANSIBLE SYSTEM ROLES



RED HAT ENTERPRISE LINUX

SYSTEM ROLES

CURRENT ROLES

- email (postfix)
- kdump (kernel crash dump)
- network
- selinux
- timesync

FUTURE ROLES

- Subscription Management
- firewall
- system logging
- storage
- kerberos authentication
- bootloader
- tuned (power management)
- etc

RED HAT ENTERPRISE LINUX

SYSTEM ROLES



Roles and Ansible CLI delivered with RHEL

Extras channel, upstream on git and galaxy

```
# yum --enablerepo=rhel-7-server-extras-rpms install rhel-system-roles ansible
```



From RHEL 6.9+

Abstraction, RHEL version agnostic



Support on System Roles included

Ansible CLI support only in system role use-cases



Control Node on RHEL 7.4+

Managed Nodes RHEL 6.9+

RED HAT SATELLITE

ANSIBLE

Choice:



- Now: Puppet Inside or Puppet Enterprise and/or Ansible Tower
- V6.3: Puppet v3 and/or Puppet v4 and/or Ansible Tower
- V6.4: Puppet and/or Ansible Inside and/or Ansible Tower

For Configuration Management use-cases



Integration with Insights

V6.4: Including Ansible remediation playbook support



Integration with CloudForms

Bare metal insights, utilize Satellite from Ansible Inside CloudForms



Integration with Ansible Tower

Satellite as Inventory Source and Ansible Callbacks



RED HAT ANSIBLE TOWER

Scale + operationalize your automation

CONTROL

KNOWLEDGE

DELEGATION

RED HAT ANSIBLE ENGINE

Support for your Ansible automation

SIMPLE

POWERFUL

AGENTLESS

FUELED BY AN INNOVATIVE **OPEN SOURCE** COMMUNITY

RED HAT ANSIBLE ENGINE

SUPPORT FOR ANSIBLE PROJECT!



NEW PRODUCT OFFERING!

Support for Ansible CLI & Core Modules



SUPPORT FOR NETWORK MODULES

Add-on to Red Hat Engine *



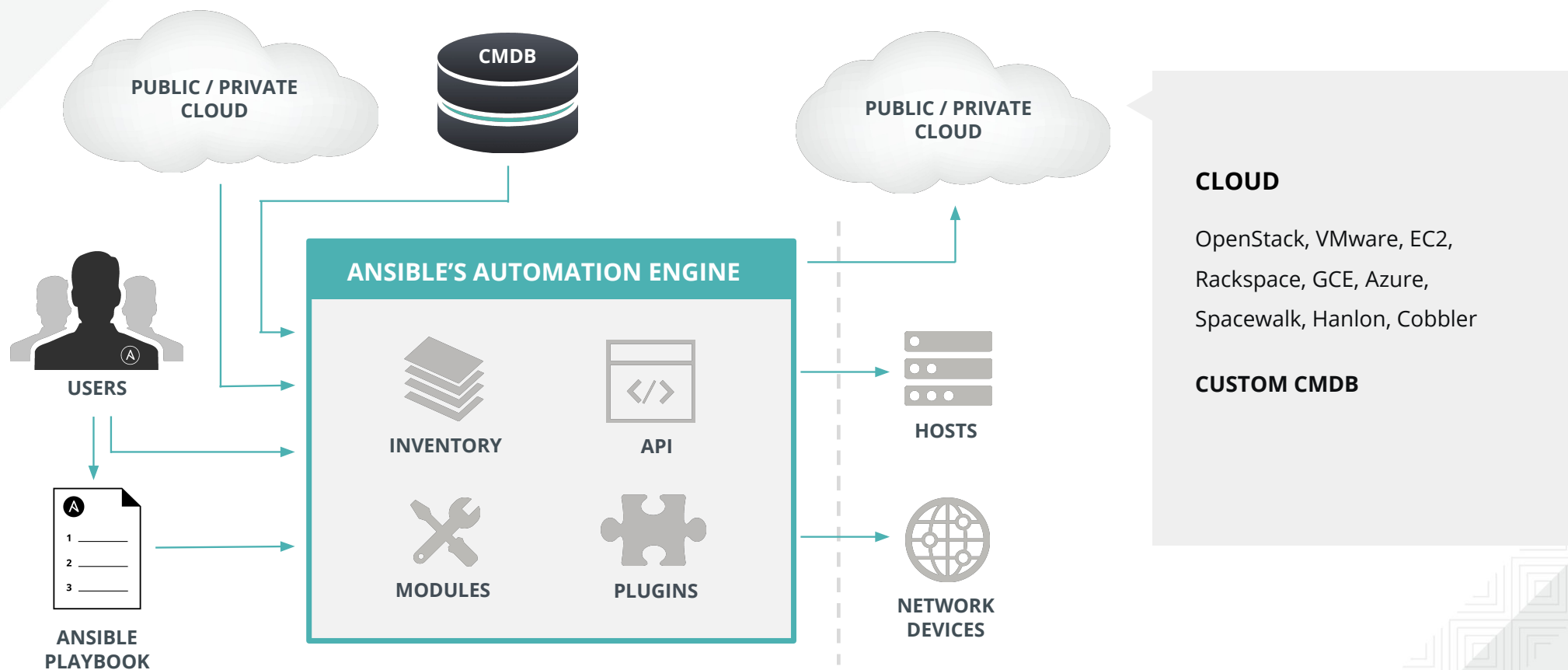
OVER 1250 MODULES INCLUDED

Core, Networking, Certified & Community

*Premium support only

RED HAT ANSIBLE ENGINE

HOW IT WORKS




```
---  
- name: install and start apache  
  hosts: web  
  become: yes  
  vars:  
    http_port: 80  
  
  tasks:  
    - name: httpd package is present  
      yum:  
        name: httpd  
        state: latest  
  
    - name: latest index.html file is present  
      copy:  
        src: files/index.html  
        dest: /var/www/html/  
  
    - name: httpd is started  
      service:  
        name: httpd  
        state: started
```

RED HAT ANSIBLE ENGINE

NETWORK AUTOMATION

Use Ansible to manage, validate, and continuously track heterogeneous network device configurations and deployments.

Network modules are included as part of the Ansible distribution.

33+

Networking platforms

460+

Networking Modules

ansible.com/networking

```
---  
- name: configure ios interface  
  hosts: ios01  
  tasks:  
    - name: collect device running-config  
      ios_command:  
        commands: show running-config interface GigabitEthernet0/2  
        provider: "{{ cli }}"  
      register: config  
  
    - name: verify operational status  
      ios_command:  
        commands:  
          - show interfaces GigabitEthernet0/2  
          - show cdp neighbors GigabitEthernet0/2 detail  
        waitfor:  
          - result[0] contains 'line protocol is up'  
          - result[1] contains 'iosxr03'  
          - result[1] contains '10.0.0.42'  
        provider: "{{ cli }}"
```

RED HAT ANSIBLE ENGINE

WINDOWS AUTOMATION

Use Ansible to deploy and manage Windows systems and applications.

70+

Windows Modules

350+

Powershell DSC resources

```
---  
  
- hosts: new_servers  
  tasks:  
    - name: ensure common OS updates are current  
      win_updates:  
        register: update_result  
  
    - name: ensure domain membership  
      win_domain_membership:  
        dns_domain_name: contoso.corp  
        domain_admin_user: '{{ domain_admin_username }}'  
        domain_admin_password: '{{ domain_admin_password }}'  
        state: domain  
        register: domain_result  
  
    - name: ensure common tools are installed  
      win_chocolatey:  
        name: '{{ item }}'  
        with_items: ['sysinternals', 'googlechrome']
```

E X A M P L E

RED HAT ANSIBLE ENGINE

SUPPORTED PLATFORMS

Control nodes

Red Hat Enterprise Linux 7.2 and later (x86_64 only)

Ubuntu 14.04 LTS (x86_64 only)

Ubuntu 16.04 LTS (x86_64 only)

Managed Nodes

Red Hat Enterprise Linux 6.3 and later (x86_64 only)

Red Hat Enterprise Linux 7.2 and later (x86_64 only)

Ubuntu 14.04 * 16.04 LTS (x86_64 only)

Windows Server 2008, 2008 R2

Windows Server 2012, 2012 R2

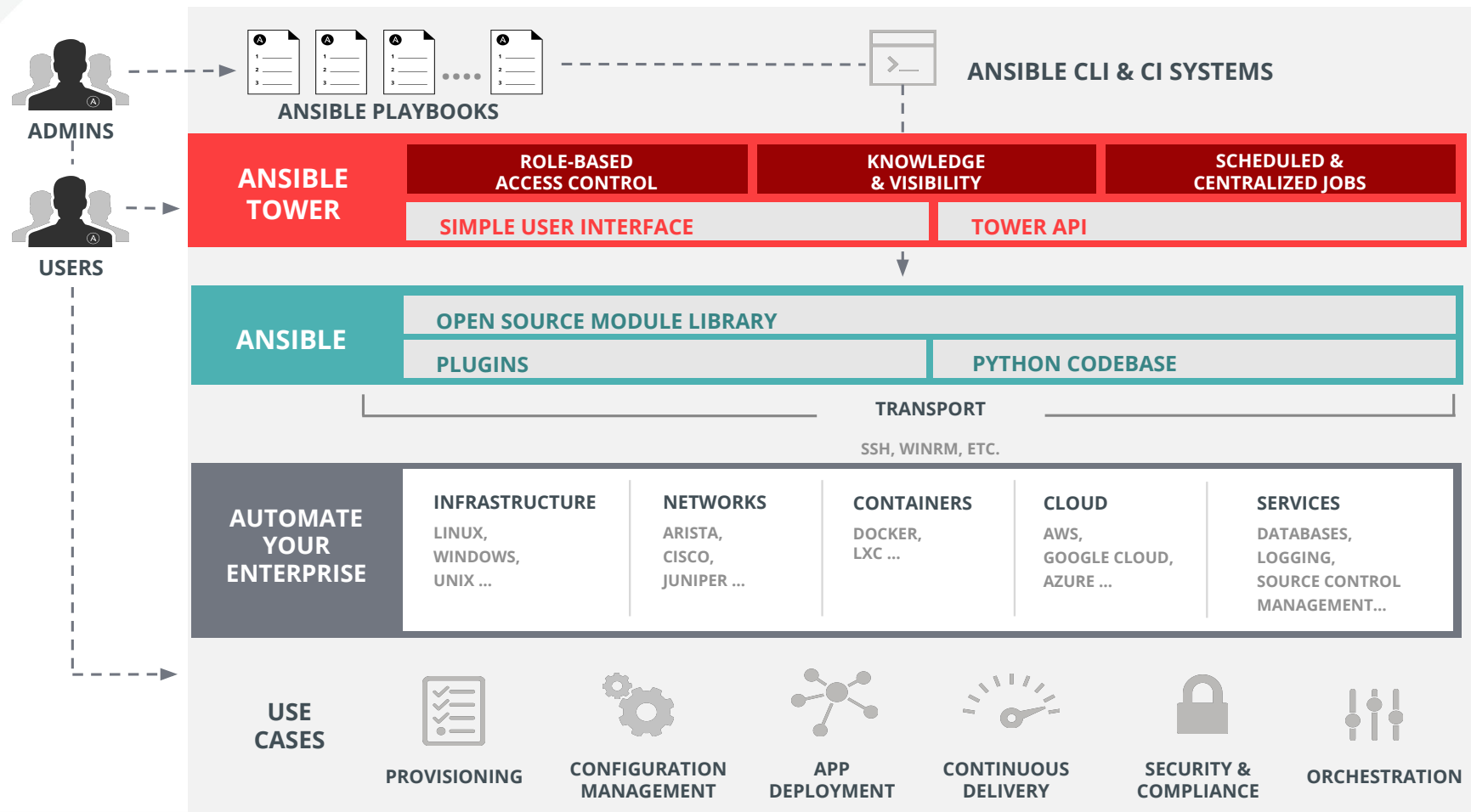
Windows Server 2016

Network Devices
(Arista EOS, Cisco IOS, IOS-XE, IOS-XR, NX-OS, Juniper
Junos OS, VyOS)

Others - unlisted RHEL variants, SuSE, Solaris, AIX, etc.
Commercially reasonable support only

RED HAT ANSIBLE TOWER

USE CASES



RED HAT ANSIBLE TOWER

WHAT IS NEW?



BUILT-IN FACT CACHING

Facts stored in Tower database



SMART INVENTORIES

Dynamic fact based grouping



INVENTORY FROM SOURCE CONTROL

Version controlled inventories

RED HAT ANSIBLE TOWER

WHAT IS NEW?



CUSTOM CREDENTIALS

Define your own credential types



INSTANCE GROUPS

Dynamic fact based grouping

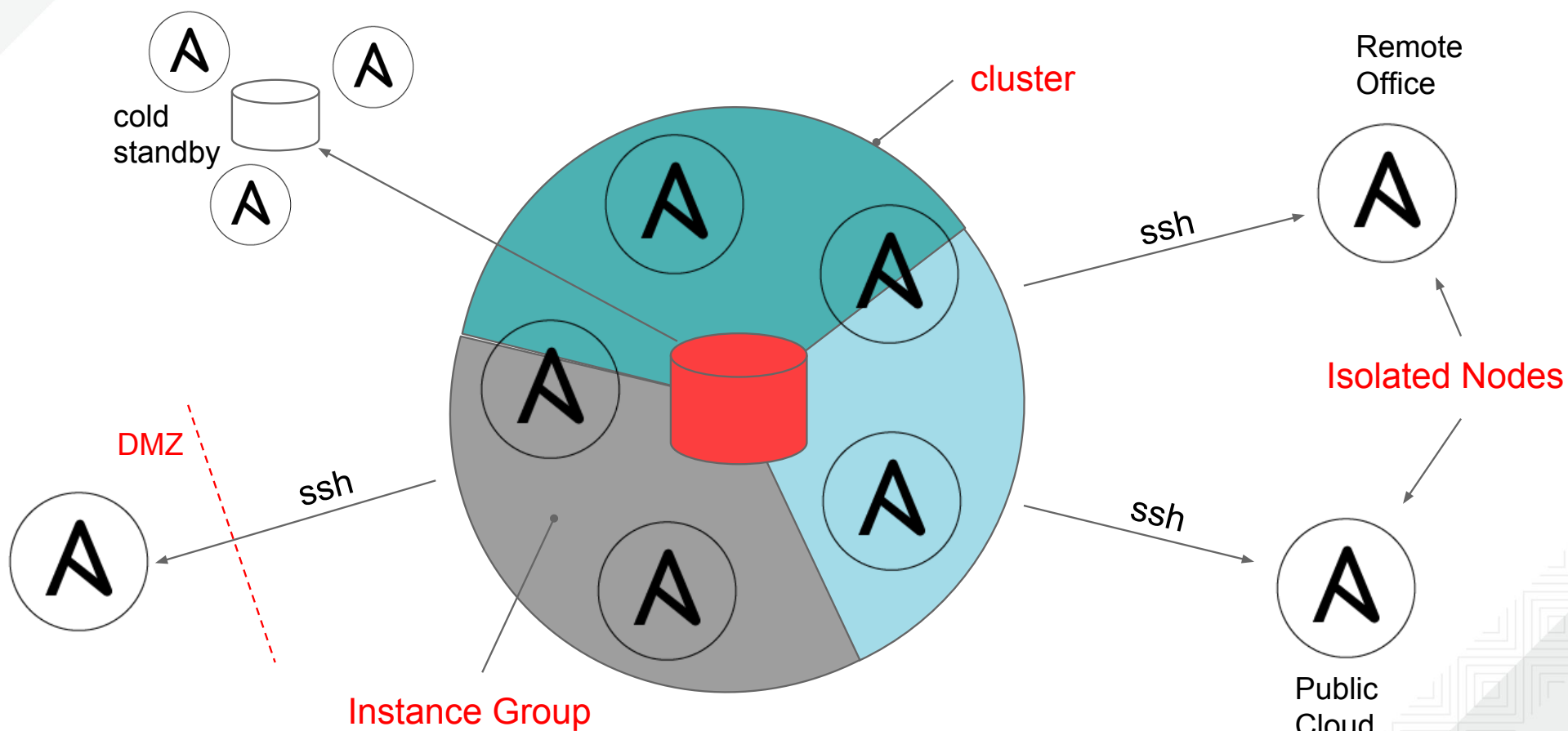


ISOLATED NODES

Offload execution to remote control nodes

RED HAT ANSIBLE TOWER

WHAT IS NEW?



RED HAT ANSIBLE TOWER

WHAT IS NEW?

The screenshot displays the Red Hat Ansible Tower web interface. The top navigation bar includes links for TOWER, PROJECTS, INVENTORIES, TEMPLATES, and JOBS. The user is logged in as 'admin'. The breadcrumb trail shows the path: INVENTORIES / Insights Inventory / HOSTS / apache-server-112 / INSIGHTS.

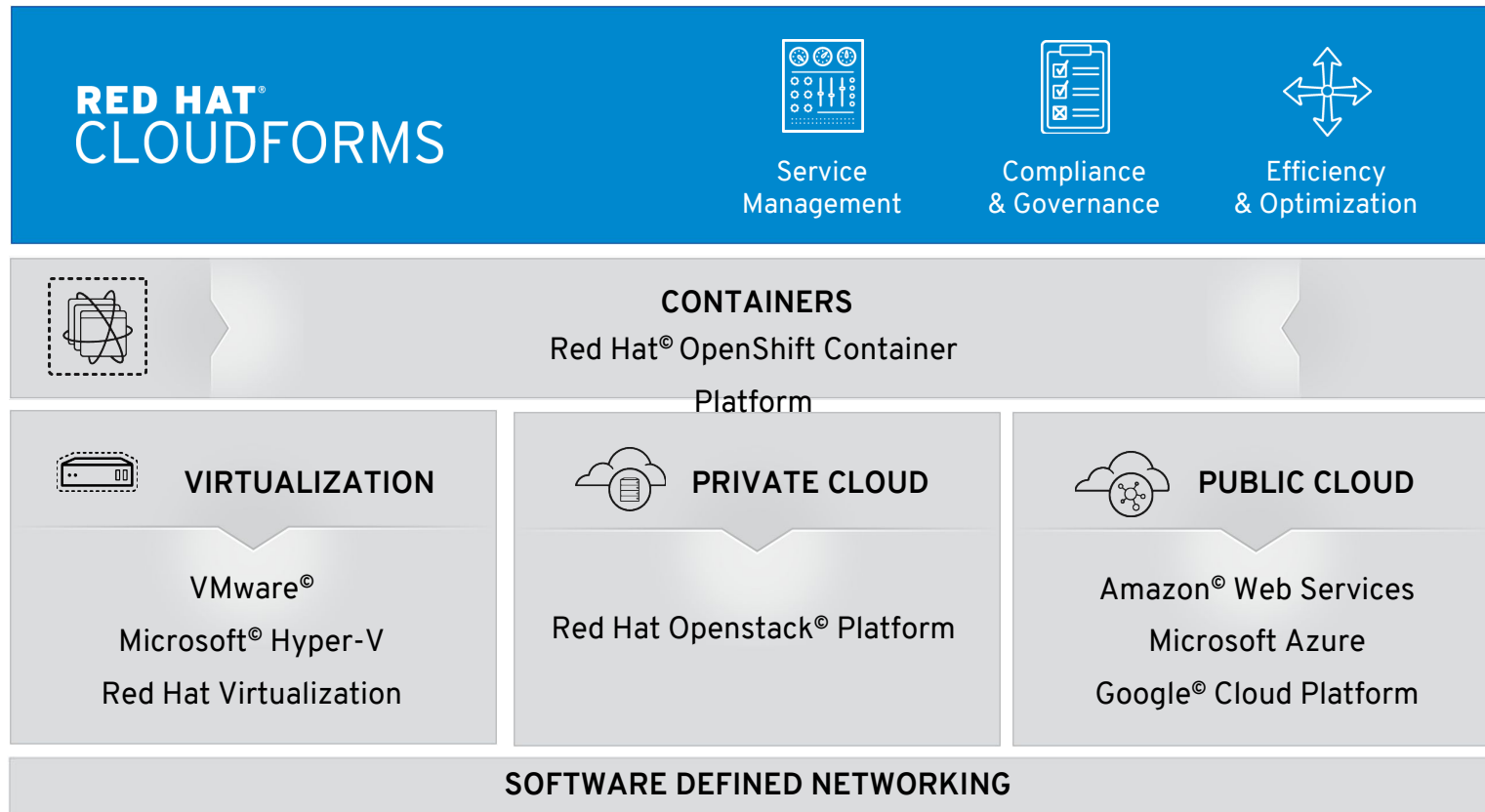
The main content area is titled 'apache-server-112' with a toggle switch set to 'ON'. Below this, there are tabs for DETAILS, FACTS, GROUPS, and INSIGHTS. The INSIGHTS tab is active, showing a summary of issues: TOTAL ISSUES 11, with 2 HIGH, 8 MEDIUM, and 1 LOW severity. A 'SOLVABLE WITH PLAYBOOK' button is also visible.

The following security issues are listed:

- ISSUE: Decreased security in system logging permissions** (SECURITY)
Issues related to system logging and auditing were detected on your system. Important services are disabled or log file permissions are not secure.
[ddddd \(33649\)](#)
- ISSUE: Kernel key management subsystem vulnerable to local privilege escalation (CVE-2016-0728)** (SECURITY)
A vulnerability in the Linux kernel allowing local privilege escalation was discovered. The issue was reported as [CVE-2016-0728] (<https://access.redhat.com/security/cve/cve-2016-0728>).
[ddddd \(33649\)](#)
- ISSUE: Kernel vulnerable to privilege escalation via permission bypass (CVE-2016-5195)** (SECURITY)
A flaw was found in the Linux kernel's memory subsystem. An unprivileged local user could use this flaw to write to files they would normally only have read-only access to and thus increase their privileges on the system.
[ddddd \(33649\)](#)
- ISSUE: Kernel vulnerable to man-in-the-middle via payload injection** (SECURITY)
A flaw in the Linux kernel's TCP/IP networking subsystem implementation of the [RFC 5961](<https://tools.ietf.org/html/rfc5961>) challenge ACK rate limiting was found that could allow an attacker located on different subnet to inject or take over a TCP connection between a server and client without needing to use a traditional man-in-the-middle (MITM) attack.

CLOUDFORMS

AN EVOLUTIONARY PATH TO HYBRID CLOUD



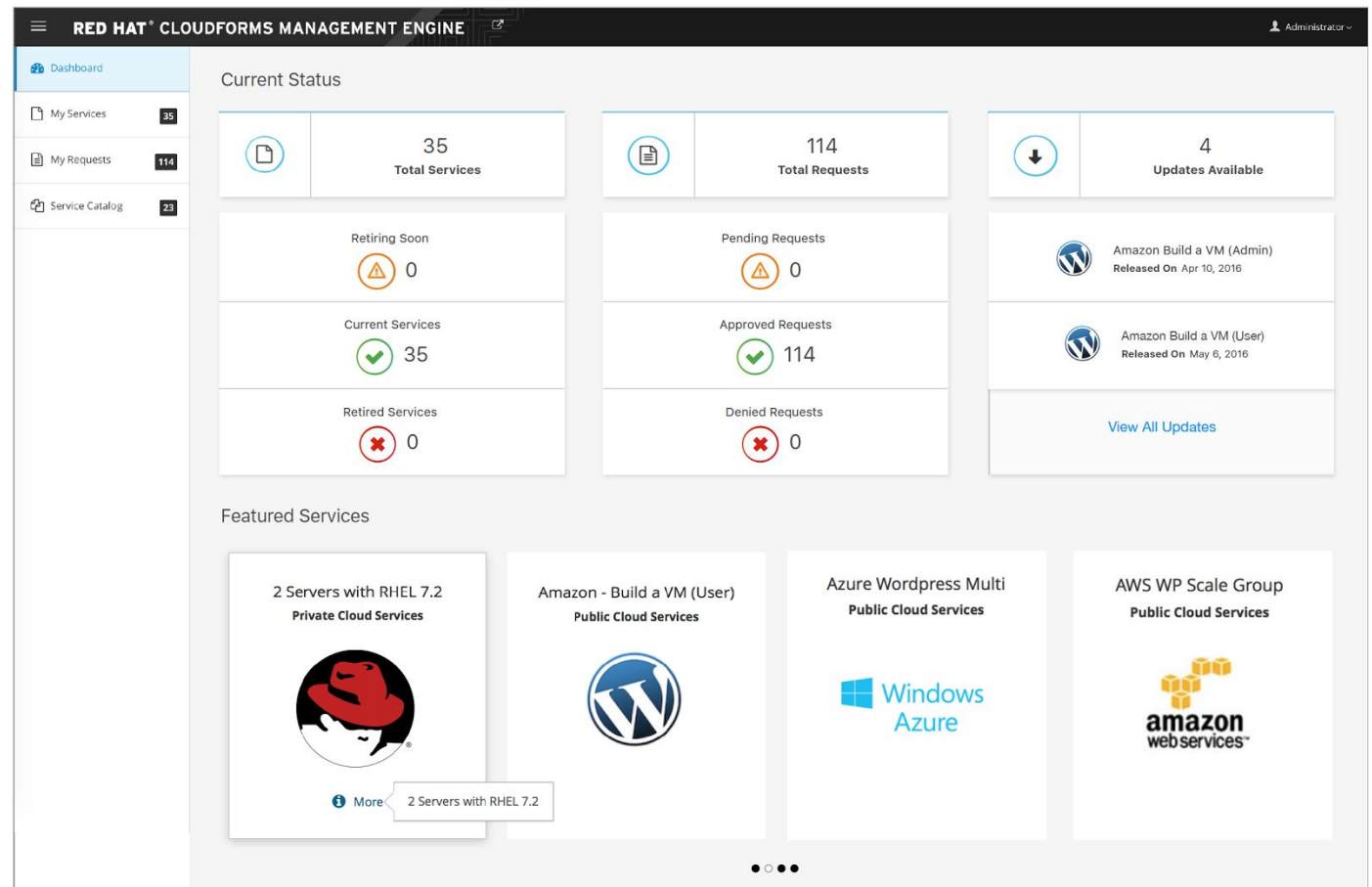
CLOUDFORMS

ANSIBLE INSIDE

Self Service Playbooks

Playbook as a Service

- Order
- Modify (roadmap)
- Retire



CLOUDFORMS

ANSIBLE INSIDE

Policy State Management

Playbook as a Policy Action

See events, Conditionally Process and run a Playbook

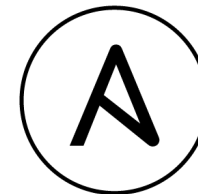


Event

*VM Powers On - Is Database Server - Connect extra Disk
Software Scan - Is Vulnerable - Update Software*



Condition



Playbook

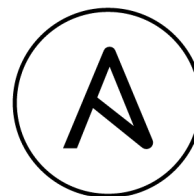
CLOUDFORMS

ANSIBLE INSIDE

Alerts

Playbook as a Alert Action

React to



- | | | |
|-------------------------------|---|------------------------|
| <i>Alert</i> | - | <i>Playbook</i> |
| <i>Out of Disk Space</i> | - | <i>Expand Disk</i> |
| <i>High CPU Long Duration</i> | - | <i>Add More CPU</i> |

CLOUDFORMS

ANSIBLE ROADMAP



Call Ansible Playbooks as methods in a state machine

Allows for Hybrid Ruby and Ansible Orchestration



Compute Resource Linking to CloudForms Services

Provides visibility of Compute items that Ansible deployed.



More credentials supported

OpenStack, (RHV), Azure, Google, Satellite, Subversion, GitLab
Networking



More CloudForms modules

Including secure authentication via Ansible callbacks into CloudForms



Self Service Portal Languages

In het Nederlands!

Q & A



redhat.®