Red Hat CloudForms Roadmap

Summer 2017

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Everyone is talking about automation.
AUTOMATION IN ENTERPRISE IT TODAY

SERVERS  CLOUD  NETWORK  CONTAINERS  APPS
AUTOMATION IN ENTERPRISE IT TODAY

AUTOMATED SILOS ARE STILL SILOS
Ansible solves these problems where no other technology has been able to do so.

SIMPLE   AGENTLESS   EXTENSIBLE
Almost here:

CloudForms 4.5
ANSIBLE AUTOMATION INSIDE
Default Automation Language for Red Hat CloudForms

Ansible Automation baked inside of CloudForms

- **Out-of-the Box** - Only CloudForms subscription required.
- **Role Based** - No setup or configuration, turn key and go.
- **Instant Value** - Three top Cloud Management use cases.
- **Re-use** - Take existing playbooks and run.
- **Extensible** - 900+ integrations into Enterprise Management.
- **Easy** - The simplest and fastest growing Automation Language.
Empowering End Users
SERVICE CATALOG, SHOP WINDOW

Request, Order, Approve

Service Centric Management for Users

- Order Apps, IaaS, Containers and Automation
- Manager Approval
- Quota Management
- Detailed User Feedback
- Resource Control
- Chargeback
## Ansible Automates Technologies That You Use

Over 900 Integrations

<table>
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<tr>
<th>Cloud</th>
<th>Virt &amp; Container</th>
<th>Windows</th>
<th>Network</th>
<th>Chat</th>
<th>Monitoring</th>
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<tr>
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+more
Under Control
Events drive business change, can be positive but also detrimental.

**Solution** - Event Based State Management

Administrator made a mistake and removed all the servers from the cluster?

- Let CloudForms detect and Ansible Automation reprovision if Cluster is Empty

Or

- Let CloudForms proactively stop the event happening by Policing changes.
Alert
THRESHOLD, ALERT

Monitor and React

Utilization tracking of resources, clusters and services with Ansible Automation as an Alert action.

- Settings Change
- CPU, Memory utilization
- Scale out
- Scale back
- Reconfigure
- Chargeback Rate Change
- Reclassify
- Backup
Video Demo
CloudForms with Ansible Inside
Managing Red Hat

OPENSHIFT

RED HAT® OPENSTACK® PLATFORM

RED HAT® JBOSS® MIDDLEWARE

RED HAT® VIRTUALIZATION
CONTAINER MANAGEMENT

User Experience & monitoring

User Experience
- Dashboard update, new widgets
- Topology enhancement
- Predefined Container Roles, Reports
- External Logging Integration

Monitoring
- Ad hoc Metrics
- Performance Reports
- From Hawkular
User Experience

- Task & Notification
- Tenant Synchronisation
- Snapshot view

Networking

- Security Group
- Routers Management
- Floating IP Management

Architecture update: Panko, Gnocchi
MIDDLEWARE

Tech Preview

Inventory

- Report, Audit and View Hawkular Middleware assets such as EAP Servers, Domains, Deployments, Data Sources and Messagings

Metrics

- Support for Middleware metrics, such as JVM Heap Size, Garbage Collection, messages count, subscribers...

Life Cycle Management

- Deploy and Operate the Middleware infrastructure. Add/remote datasource, add/remove Deployments.

Topology & Crosslinking

- Visualization of the Middleware infrastructure and applications as well as their relationships to the Virtual, Cloud or OpenShift infrastructure.

Events

- Support for generated Events to drive orchestration and operations.
Performance Enhancements to inventory collection.

Live Migration, move VM’s live across RHV hosts.

Provider updated to use v4 API.

Add disk to RHV VM, supported on PXE and ISO.

Delete disk from RHV VM, including backing option.

Snapshot Management.

V2V - Workload mobility from VMware to RHV. (Tech-Preview)
Managing the Public Cloud(s)
AMAZON WEB SERVICES

Storage Provider
- Full control of AWS EBS storage
- Create, Read, Update, Delete, Attach, and Detach

Eventing
- AWS CloudWatch integration for events
- Bring changes back into CloudForms quickly

Tagging Sync
- Making tags work everywhere
- Pull back all tags(labels) and SYNC to CloudForms native tags as well
Government Clouds
- Support differences in commercial Microsoft Azure and Azure for Government

Stacks
- Enhancement on retirement operations
And much more
MISCELLANEOUS

- **Platform**
  - Chargeback without C&U for Virtualization Providers.
  - Custom Buttons support Multi Select.
  - REST API constant evolution.
  - Enhanced IPv6 support and configuration.
  - Amazon Image for CloudForms (AMI)

- **Operations UI**
  - Performance enhancements, pages minutes to seconds.

- **Self Service UI**
  - Chargeback $/$$/$$$$
  - Snapshot Management for VM resources
  - Resource Property Pages
  - Custom Buttons
  - Resource Power Management
CloudForms.NEXT
ANSIBLE++

Next Generation Ansible Integration

- **Modules**
  - Develop a set of modules to mirror the restAPI. User Management, Appliance Configuration, VMDB Actions etc..

- **Deploying CloudForms from Ansible**
  - Running an Ansible playbook that instantiated CloudForms on the base system (RHEL/CentOS).

- **Policy**
  - Support policy against playbook contents. Check for validity and conformance.

- **Native Custom Button Support**
  - Allow custom buttons to be configured for Service and Resources and be backed by a Playbook (service).

- **Scheduled Task Support**
  - Support playbooks executed from the scheduler.
PERFORMANCE & SCALABILITY

Management at Scale

- Faster User Experience
- Time Series Reporting
- Platform at Scale
- Broader Metrics
TENANCY

For Service Providers

Complete CloudForms Tenancy to provide

- Secure Resource separation within CloudForms.
- Allow for multi branding of the user interfaces.
- External authentication per Tenant.
- Logging, Access and Reporting by Tenant.
CONTAINER MANAGEMENT

Alerting & more monitoring

● Alerts Dashboard and Life-cycle
● Dynamic Metrics and Alerts
  ○ Metrics served by Hawkular to CloudForms
  ○ Support native Hawkular triggers for Alerts
  ○ Knowledge based for Alerts and metrics
● Podify CloudForms for OpenShift
● Automation
  ○ Manage and Provision CloudForms using Ansible
● Integration with Logging and ELK Stack
● Cockpit Integration - SSO
CLOUD FUTURES

Reminder what CF already does, but now even deeper into the clouds

SELF-SERVICE LIFECYCLE
Offers full self-service portal, service catalog and api integration with full lifecycle management—from service design to retirement.

POLICY-BASED GOVERNANCE
Provides unified, policy-based, management of VMs, containers, and instances in private and public clouds. Manages financials, health, operations, and compliance.

CLOUD OPTIMIZATION
Manages and tracks VMs, cloud instances and containers with discovery and tracking from creation through retirement to avoid sprawl, as well as provide right sizing and capacity planning.
CLOUD FUTURES

Expanding what CF already does deeper into the clouds

- Cost controls
- Management of Stacks and Services
- Change Detection, Policy & Alerting
- User and Role Management Automation
- Eventing and Auditing - Reacting to the unknown
S104974 - Red Hat Virtualization and KVM roadmaps
Tuesday May 2, 3:30 PM - 4:15 PM– Room 152

S102603 - OpenShift Roadmap: What's New & What's Next!
Tuesday, May 2, 3:30 PM - 4:15 PM– Room 153B

S111015 - Accelerating your journey to Microsoft Azure with Ansible and CloudForms
Tuesday, May 2, 3:30 PM - 4:15 PM – Room 103

P101718 - Red Hat Cloud Suite roadmap
Wednesday May 3, 3:30 PM - 4:15 PM– Room 157B

L103963 - Hands-on introduction to Red Hat CloudForms
Wednesday, May 3, 3:30 PM - 5:30 PM – Room 251

S105004 - Managing services with Red Hat CloudForms and Ansible by Red Hat
Wednesday, May 3, 11:30 AM - 12:15 PM – Room 157C

S101957 - Hybrid automation at Rabobank
Thursday, May 4, 4:30 PM - 5:15 PM – Room 157C
THANK YOU

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Open Source
ManageIQ