



RED HAT CLOUDFORMS

RED HAT® CLOUDFORMS



Gestion et Portail
de Service



Conformité
et Gouvernance



Efficacité
et Optimization

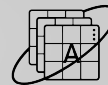


Automatisation



OPERATING SYSTEMS & APPLICATIONS

Red Hat Satellite, Red Hat Insights, Ansible Tower



CONTAINERS

Red Hat® OpenShift Container Platform



VIRTUALIZATION

VMware®
Microsoft® Hyper-V
Red Hat Virtualization



PRIVATE CLOUD

Red Hat OpenStack® Platform



PUBLIC CLOUD

Amazon® Web Services
Microsoft Azure
Google® Cloud



PHYSICAL INFRASTRUCTURE

Lenovo XClarity



SOFTWARE DEFINED NETWORKING



SOFTWARE DEFINED STORAGE



FONCTIONALITÉS CLOUDFORMS

SANS AGENT



FACILE À DÉPLOYER

AUTOMATISER AVEC
ANSIBLE



ANSIBLE

SIMPLE, PUISSANT, MODULAIRE

CONTROLE D'ACCÈS
AUX RESSOURCES



SEGMENTÉ, DÉTAILLÉ ET INTÉGRÉ
AVEC LE ANNUAIRE

DÉCOUVERTE CONTINUE



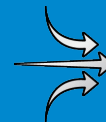
GESTION DES ATOUTS EXISTANTS,
INTEROPERABLE

APPAREIL VIRTUEL



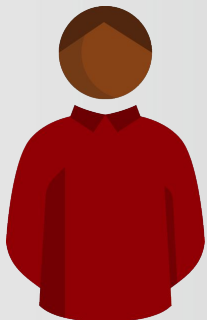
FACILE À INSTALLER ET
METTRE À JOUR

DÉPLOIEMENTS GLOBAUX ET
FÉDÉRÉS



MULTI-REGION, HAUTE
DISPONIBILITÉ ET SCALABILITÉ

VISIBILITÉ OPERATIONELLE



- Découvrir les ressources inutilisées, les récupérer et trouver son propriétaire
- Optimisation automatique et placement intelligemment des machines, recommander le dimensionnement correcte
- Traverse plusieurs couches d'infrastructure pour déterminer la cause première.
- Suivi des ressources et tendances de la capacité, simuler de scénarios hypothétiques

DÉFIS



GESTION DU CYCLE DE VIE



OPTIMISATION
DES RESSOURCES

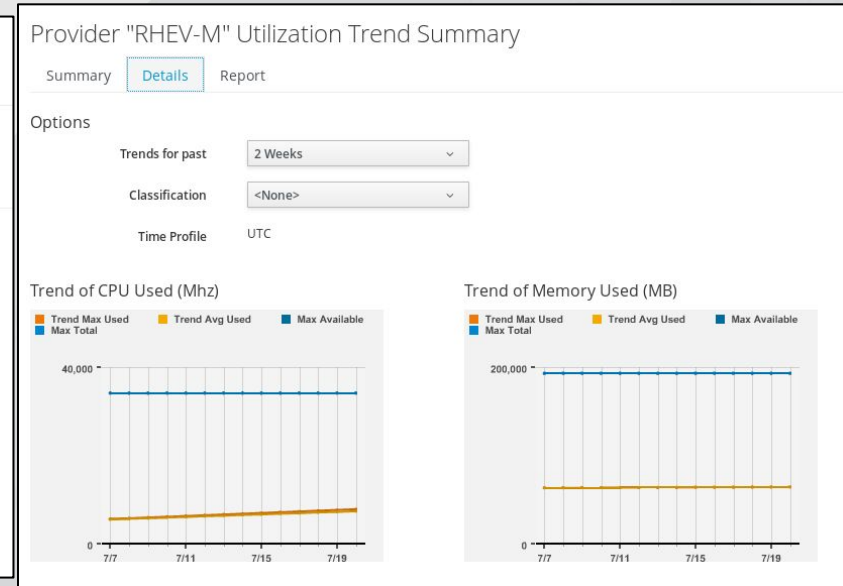
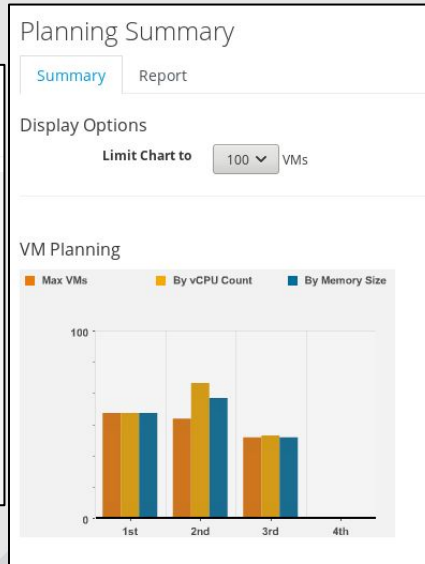
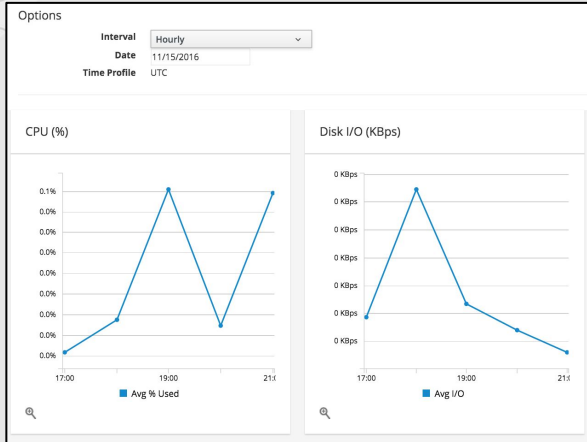


TROUVER LA
CAUSE PREMIÈRE



GESTION DE LA CAPCITÉ

GESTION DE LA PERFORMANCE ET LA CAPACITÉ



GESTION DE LA VIRTUALIZATION

All VMs & Templates

A grid of 14 VM icons arranged in two rows of seven. Each icon features a red hat logo and a play button. The top row icons have counts: 3, 2, 0, 0, 1, 0, 0. The bottom row icons have counts: 1, 0, 0, 1, 3, 2, 0. The names below the icons are: 32DemoMaster, 40DemoMaster, alpha-dsl1, Analytics VM, ansib...tower, bdprd001, and BDPRD002.

Top CPU Consumers (weekly)

Asset Name	Cluster Name	CPU - Usage Rate (%) (Avg)
ose32master1	Raleigh	65.3%
ose32etcd	Raleigh	56.8%
ose32master2	Raleigh	38.4%
cf41_vmware1	Production	19.5%
cf41_openshift1	Production	19.1%
cf41_openshift	Production	19.0%
40DemoMaster	Production	17.2%
CFME 5.6.0.6	QA	15.7%
cf4.1b5_openshift	Production	12.5%
cf41_openshift2	QA	12.5%

Updated 06/26/16 13:38 | Next 06/27/16 18:00

Top Memory Consumers (weekly)

Asset Name	Cluster Name	Memory - Used for Collected Intervals (MB) (Avg)
cf4.1b5_cloud1	Raleigh	7.5 GB
cf41b6_rhev	Raleigh	7.3 GB
cf4.1b5_master	Raleigh	6.1 GB
40DemoMaster	Production	6.1 GB
CFME 5.6.0.6	QA	5.1 GB
cf4.1b5_vmware1	Production	4.3 GB

Guest OS Information



Updated 06/26/16 18:00 | Next 06/27/16 18:00





EVM: Recently Discovered VMs

- demo-summit-17-20160624-193235 - location unknown
Date : 2016-06-24 19:34:50 -0600
- demo-summit-16-20160624-192734 - location unknown
Date : 2016-06-24 19:29:17 -0600
- demo-summit-17-20160624-191651 - location unknown
Date : 2016-06-24 19:23:27 -0600
- demo-summit-16-20160624-191620 - location unknown
Date : 2016-06-24 19:18:14 -0600
- demo-summit-15-20160624-185320 - location unknown

GESTION DU PUBLIC CLOUD

Cloud Providers

Search

 1 1 Amazo...egon)	Type: Amazon EC2 EVM Zone: Cloud Instances: 1 Images: 1	 3 94 AWS O...ynote	Type: Amazon EC2 EVM Zone: Cloud Instances: 3 Images: 94
 11 19 Azure...l US)	Type: Azure EVM Zone: Cloud Instances: 11 Images: 19	 0 561 Googl[...ject)	Type: Google Compute Engine EVM Zone: Cloud Instances: 0 Images: 561

Cloud Providers > Azure (Central US) (Summary)

Azure (Central US) (Summary)

Properties

Region	Central US
Discovered IP Address	
Type	Azure
Management Engine GUID	4d627c04-2752-11e6-998a-001a4a5b6702

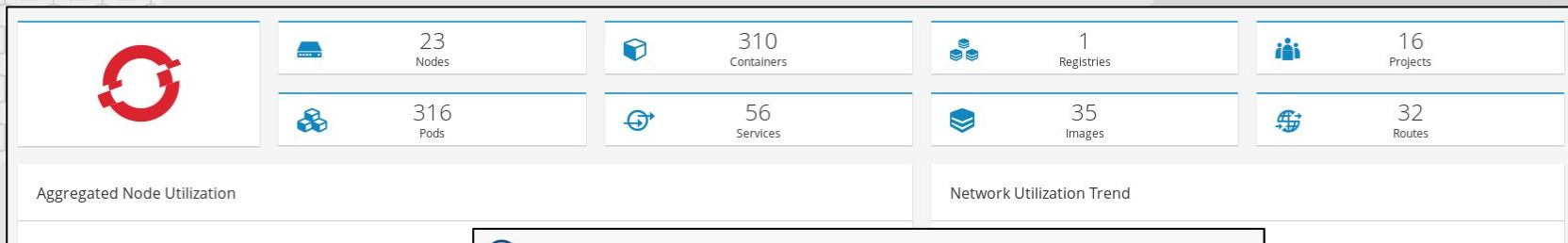
Status

Default Credentials	Valid
Last Refresh	Success - 27 Minutes Ago

Relationships

Network Manager	 Azure (Central US) Network Manager
Availability zones	 1
Cloud tenants	 0
Flavors	 59
Security groups	 10
Instances	 13
Images	 6
Orchestration stacks	 34
Cloud volumes	 0
Cloud Object Stores	 0

GESTION DES CONTENEURS



OpenSCAP Evaluation Report

Automatically generated XCCDF from OVAL file: com.redhat.rhsa-RHEL6.xml

This file has been generated automatically from oval definitions file.

Evaluation Characteristics

Target machine	manageiq-img-scan-dfae7
Benchmark URL	/tmp/com.redhat.rhsa-RHEL6.ds.xml.bz2
Benchmark ID	xccdf_com.redhat.rhsa_benchmark_generated-xccdf
Started at	2016-06-20T22:01:09
Finished at	2016-06-20T22:01:12
Performed by	

CPE Platforms

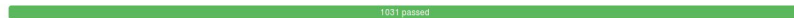
Addresses

- IPV4 127.0.0.1
- IPV4 10.5.0.8
- IPV6 0:0:0:0:0:0:1
- IPV6 fe80:0:0:0:42:aff:fe05:8
- MAC 00:00:00:00:00:00
- MAC 02:42:0A:05:00:08

Compliance and Scoring

The target system did not satisfy the conditions of 2 rules! Please review rule results and consider applying remediation.

Rule results

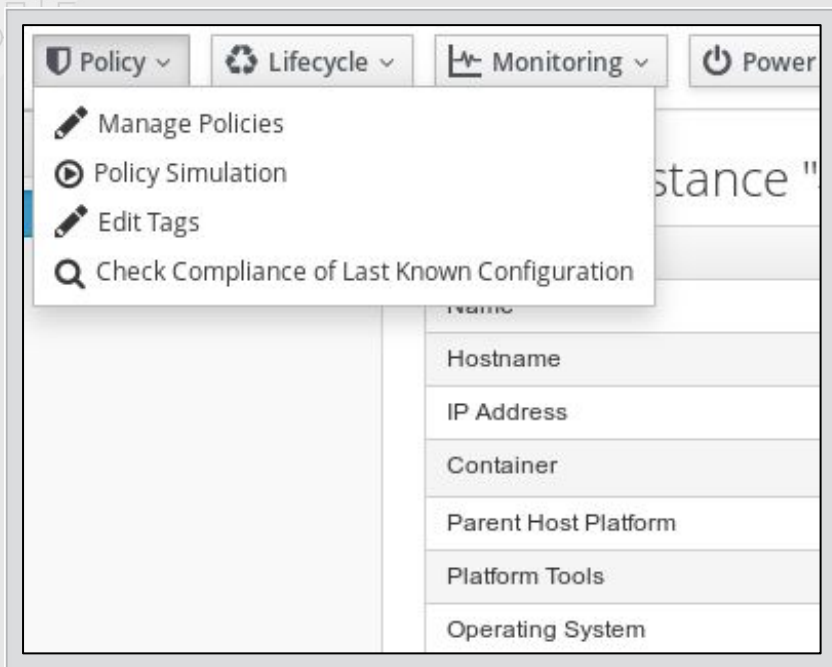


Severity of failed rules



Score

TROUVER LA CAUSE PREMIERE

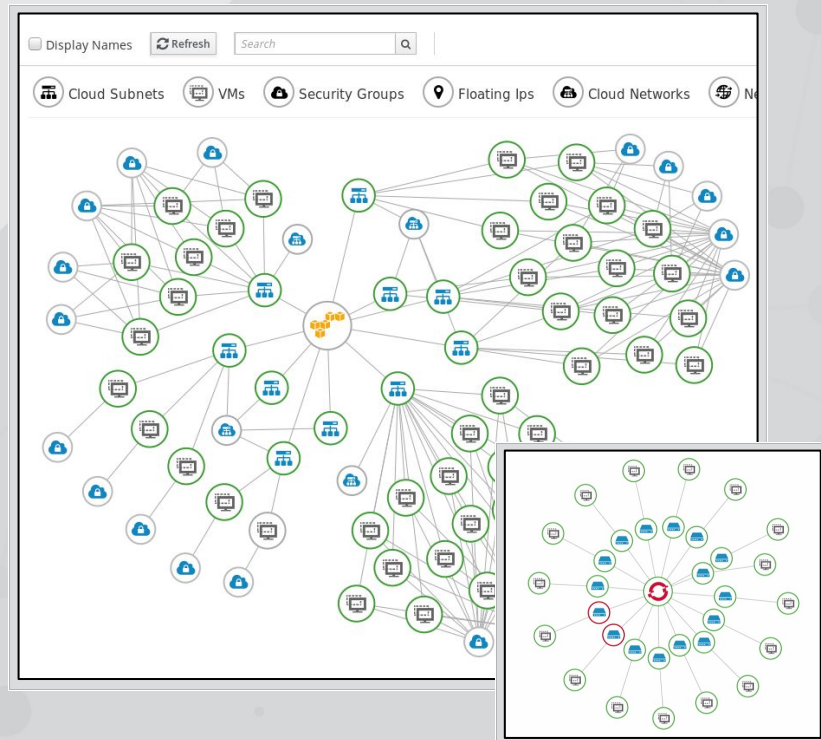


The screenshot shows a cloud management interface with a 'Policy' dropdown menu open. The menu options are:

- Manage Policies
- Policy Simulation
- Edit Tags
- Check Compliance of Last Known Configuration

Below the menu, a table displays configuration details for a resource:

Name
Hostname
IP Address
Container
Parent Host Platform
Platform Tools
Operating System








DÉFINITION DE POLITIQUES ET SES ACTIONS

All Policy Profiles

	Analysis: Exclude Specially Tagged VMs
	Analysis: On VM Reconfiguration
	Compliance Hosts: November 2012
	Compliance: DISA STIG
	Compliance: DMZ Configuration
	Compliance: Hosts
	Compliance: RHEL Host (KVM)


All Alerts

	Description
	Cluster DRS not enabled
	Cluster HA not enabled
	CPU Ready > 4000 ms for more than 10 min
	Datacenter VMs > 10
	Host Datastore < 5% of Free Space


Scope

 No Policy scope defined, the scope of this policy includes all elements.






Conditions

	Description	Scopes / Expressions
	Permit Root Login Disabled	ExpressionFIND VM and Instance.Files : Contents Available = "true" CHECK ALL

Events

	Description	Actions
	VM Compliance Check	<ul style="list-style-type: none">✗ Mark as Non-Compliant✗ Generate log message✗ Generate Audit Event✗ Send Email to Security Team

All Actions

	Description
	Alert - CPU Reservation > 500Mhz
	Cancel vCenter Task
	Check Host or VM Compliance
	Collect Running Processes on VM Guest OS
	Connect All CD-ROM Drives for Virtual Machine

QUOTAS ET CHARGEBACK

Currencies

Select currency:

Rate Details

*** Caution: The value Range end will not be included in the tier.**

Group	Description	Per Time	Per Unit	Range
				Start
CPU	Allocated CPU Count	Hourly		0.0
CPU	Used CPU	Hourly	MHz	0.0
Cpu Cores	Used CPU Cores	Hourly		0.0
Disk I/O	Used Disk I/O	Hourly	KBps	0.0
Fixed	Fixed Compute Cost 1	Hourly		0.0
Fixed	Fixed Compute Cost 2	Hourly		0.0
Memory	Allocated Memory	Hourly	MB	0.0
Memory	Used Memory	Hourly	MB	0.0
Network I/O	Used Network I/O	Hourly	KBps	0.0
				100.0

Manage quotas for Tenant "Red Hat"

Enforced	Description	Value	Units
<input checked="" type="checkbox"/>	Allocated Virtual CPUs	64	Count
<input checked="" type="checkbox"/>	Allocated Memory in GB	32	GB
<input checked="" type="checkbox"/>	Allocated Storage in GB	10240	GB
<input checked="" type="checkbox"/>	Allocated Number of Virtual Machines	32	Count
<input checked="" type="checkbox"/>	Allocated Number of Templates	12	Count

Rate Details

Group	Description	Range		Rate	
		Start	Finish	Fixed	Variable
CPU	Allocated CPU Count	0.0	Infinity	1.0	0.0
CPU	Used CPU	0.0	Infinity	0.0	0.02
Cpu Cores	Used CPU Cores	0.0	Infinity	1.0	0.02
Disk I/O	Used Disk I/O	0.0	Infinity	0.0	0.005
Fixed	Fixed Compute Cost 1	0.0	Infinity	0.0	0.0
Fixed	Fixed Compute Cost 2	0.0	Infinity	0.0	0.0
Memory	Allocated Memory	0.0	Infinity	0.0	0.0
Memory	Used Memory	0.0	Infinity	0.0	0.02
Network I/O	Used Network I/O	0.0	100.0	0.5	0.0
		100.0	Infinity	0.5	0.005

PORTAIL LIBRE SERVICE

The screenshot displays the Red Hat CloudForms Management Engine interface. The top navigation bar includes a hamburger menu, the text "RED HAT® CLOUDFORMS MANAGEMENT ENGINE", and a share icon. A left-hand sidebar contains navigation items: "Dashboard", "My Services" (347), "My Requests" (153), and "Service Catalog" (7), which is currently selected. The main content area features a search bar with "Name" and "Filter by Name" options, and a sort dropdown set to "Name" with a sort icon. Below the search bar, it indicates "7 Results". The results are presented in a grid of seven service cards, each with a title, a logo, and a provider name:

- Generic RHEL Server (RHEV)**: Logo of Red Hat (a red fedora).
- Generic RHEL7 Server (AWS)**: Logo of Amazon Web Services (yellow cubes).
- Generic RHEL7 Server (Azure)**: Logo of Microsoft Azure (blue cloud with a key).
- Generic RHEL7 Server (VMware)**: Logo of VMware (green and blue geometric shapes with "vm" text).
- Three Tier Application**: Logo of OpenStack (red 3D blocks).
- Ticket Monster (Multi Cloud)**: Logo featuring a blue cloud connected to yellow, red, and purple circles.
- Hybrid Cloud Application**: Logo of Google Cloud Platform (a multi-colored hexagon).

APPROVISIONNEMENT AUTOMATIQUE

> Service Catalogs

▼ Catalog Items


- All Catalog Items
 - Unassigned
 - Hybrid Cloud Automation Items
 - AWS ELB Creation (Ansible)
 - JBoss Deployment (Ansible)**
 - PostgreSQL Deployment (Ansible)
 - Register with HAProxy (Ansible)
 - Hybrid Cloud Provisioning Items
 - Hybrid Cloud Services
 - Multi Cloud Experiments
 - Multi Cloud Provisioning
 - RHEV Provisioning

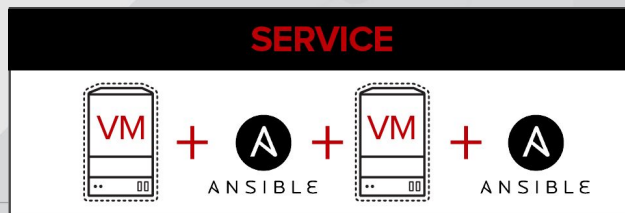
Service Catalog Item "JBoss Deployment (Ansible)"

Basic Information

Name / Description	JBoss Deployment (Ansible) / JBoss Deployment <input type="checkbox"/> Display in Catalog
Dialog	No Dialog
Ansible Tower Job Template	JBoss Deployment
Provisioning Entry Point State Machine (NS/CIs/Inst)	/ConfigurationManagement/AnsibleTower/Service/Provisioning/StateMachin

Custom Image





GESTION COMPLÈTE DU CYCLE DE VIE DES VMs

Power ▾ VM Actions ▾

- Shutdown Guest
- Power Off
- Suspend

ansible-tower
ansible.demo.cmbu.redhat.com
10.3.48.240
redhat: 2 CPUs (2 sockets x 1 core), 2048 MB

Lifecycle ▾ Monitoring ▾ Power ▾ VM Actions ▾

- Clone this VM
- Publish this VM to a Template
- Migrate this VM
- Set Retirement Date
- Retire this VM

Instance "40DemoMaster"	
40DemoMaster	
Hostname	1c968534-47ed-11e4-8507-005056a9bb70
IP Address	10.3.59.203
Container	vmware: 4 CPUs (4 sockets x 1 core), 12288 MB

Lifecycle	
Discovered	Thu May 19 09:37:43 MDT 2016
Last Analyzed	Thu May 19 13:21:38 MDT 2016
Retirement Date	Never
Group	Tenant My Company access

Relationships	
Infrastructure Provider	RHEV-M
Cluster	Raleigh
Host	bldr16cc06.core.cmbu.redhat.com
Resource Pool	Default for Cluster Raleigh
Datastores	RHEV-ISCSI
Service	None
Genealogy	Show parent and child VMs
Drift History	2
Analysis History	3

INTÉGRATIONS AVEC LOGICIELS EXISTANTS

CMDB: ServiceNow, BMC Remedy

Communications: Twilio, Google Voice

Configuration Management: Ansible, Satellite, Foreman, Chef, Puppet, Salt, HP Server Automation

Databases: Oracle, Microsoft SQL Server, MySQL, PostgreSQL

Directories and Identity: Microsoft Active Directory, Red Hat Identity Management, Centrify, Any LDAP directory

Disaster Recovery: VMware SRM, Zerto

DevOps: Calm.io, Jenkins

Firewall: Juniper, Checkpoint, Cisco, Fortinet, Palo Alto

Incident/Change Management: ServiceNow, BMC Remedy, Atlassian JIRA

IPAM/DDI: Infoblox, BlueCat, BIND, Microsoft DNS, Microsoft DHCP, SolarWinds, Men and Mice, PHP IPAM

Load Balancers: F5 BigIP, Citrix Netscaler, AWS Elastic Load Balancer, Neutron LBaaS

Logging: Splunk, Elk Stack

Networking: Cisco APIC

Orchestration: VMware vRealize Orchestrator, HP Operations Orchestration

Operations Management: Microsoft Systems Center Operations Manager, CA Spectrum, HP Operations Manager, Any SNMP enabled system

Patching: IBM BigFix, Satellite, Microsoft Systems Center Configuration Manager

Service Catalogs: ServiceNow, BMC Remedy

Source Control: github

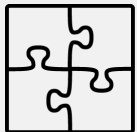
Storage: NetApp WFA

Miscellaneous: Any Web service enabled system

CLOUDFORMS 4.6: Survól

AGENDA

What's New in Red Hat CloudForms 4.6?



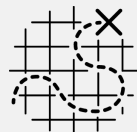
EXTENSIBILITY

DYNAMIC RESOURCE OBJECTS
ANSIBLE AUTOMATION INSIDE
CUSTOM BUTTONS



KEY ENHANCEMENTS

AMAZON EC2 SMART-STATE ANALYSIS
CLOUDFORMS CONTAINER DEPLOYMENT
OTHER PROVIDER IMPROVEMENTS



USABILITY

NEW SERVICE DIALOG EDITOR
USER EXPERIENCE IMPROVEMENTS
OPS & SERVICE UI PARITY



NEW FUNCTIONALITY

VM TRANSFORMATION (VMWARE TO RHV)
LENOVO XCLARITY PROVIDER
ALERT MANAGEMENT (TECH. PREVIEW)

CLOUDFORMS 4.6: Ansible

Credentials

More Ansible Credentials supported

Feature Parity with Ansible Tower

NEW in CF4.6:

- Network
- Azure
- Google Cloud Engine
- OpenStack
- Rackspace
- Satellite6

Add a new Credential

Name

Required

Credential type

<Choose> ▾

<Choose>

Machine

Network

Scm

Amazon

Azure Classic (deprecated)

Azure

Google Compute Engine

OpenStack

Rackspace

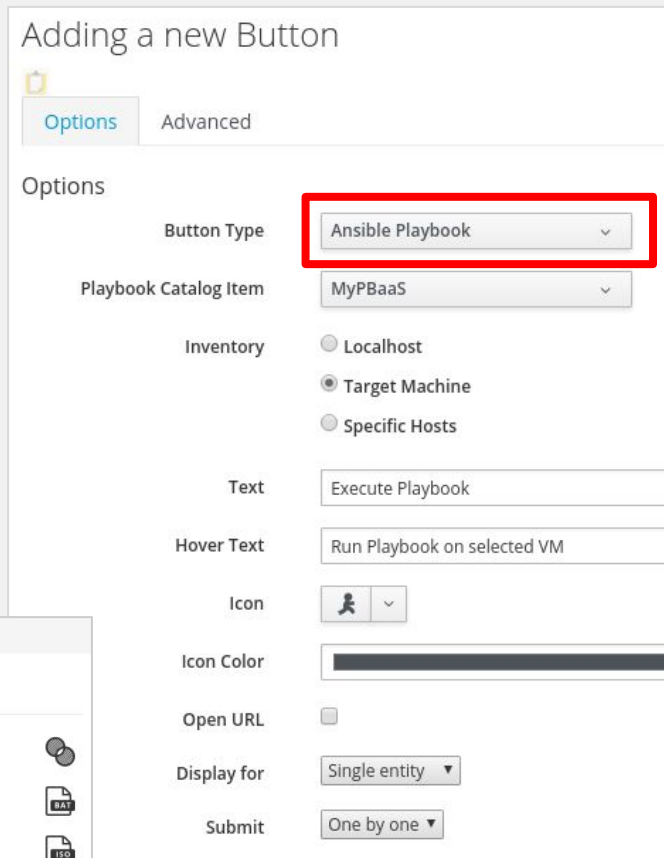
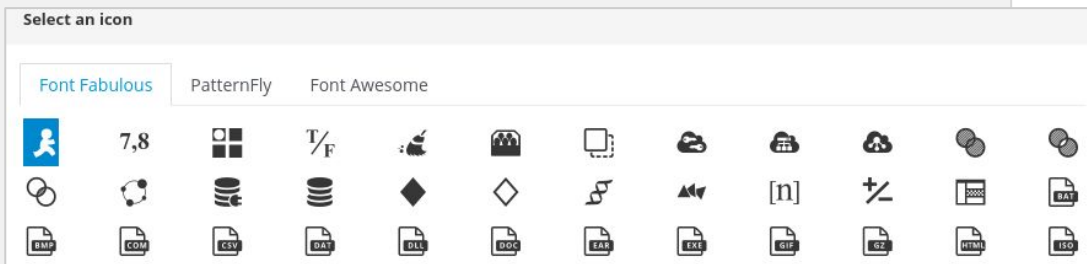
Satellite6

VMware

Add Cancel

Playbook from a Button

1. Set Button Type to “Ansible Playbook”
2. Select previously created “Playbook Catalog Item”
3. Specify Inventory:
 - a. Localhost: run on Appliance
 - b. Target Machine: run on selected VM
 - c. Specific Hosts: enter comma separated list
4. Select an icon and a color (**NEW in 4.6**)



Playbook from a Button

Optional advanced settings:

Enable/Disable button based on Expression allows you to “grey out” the button if requirements are not met

Hide/Show button based on Expression allows you to hide the button, e.g. filter by provider type (“only on Linux”)

VM and Instance : OS Name INCLUDES "linux"

VM and Instance : Power State = "on"

Adding a new Button

Options **Advanced**

Advanced Options

Enablement

Expression

Disabled Button Text

Visibility

Expression

Choose an element of the expression to edit

← → AND OR NOT ×

???

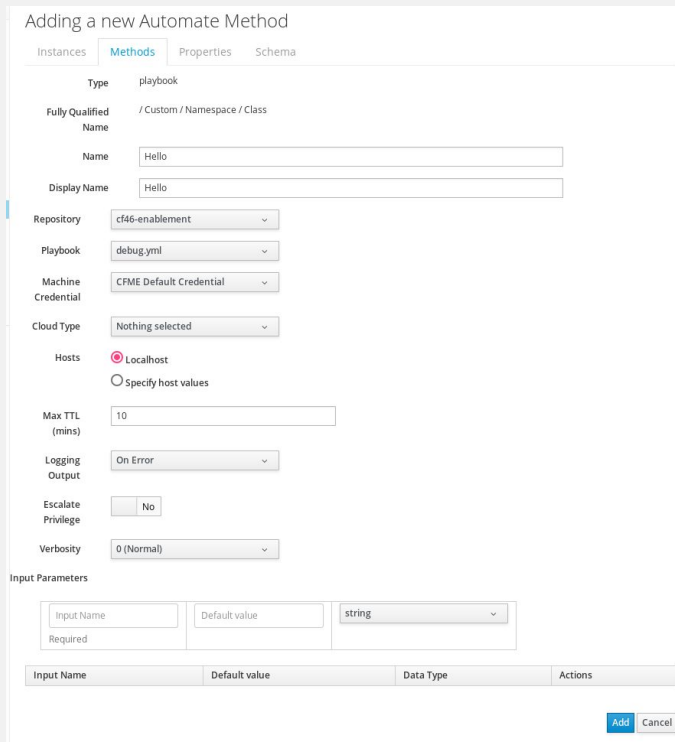
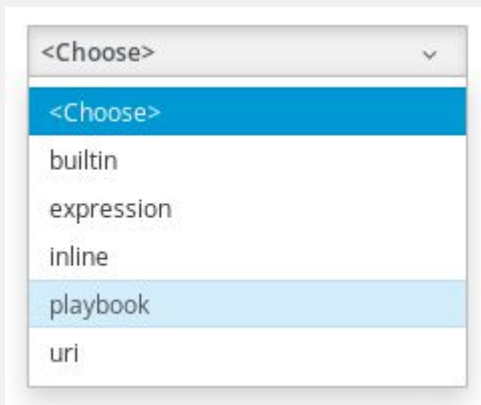
✓ ×

<Choose> ▾

Playbooks StateMachine Method Type

To allow running a playbook as a state of a state machine, CloudForms 4.6 introduces a new method type: **playbook**.

The UI is similar to the service catalog item UI.



Ansible Modules - Service Linking

- name: Create Ec2 Instance

ec2:

```
key_name: "{{ key }}"
instance_tags: {Name: "{{ name }}" }
group_id: "{{ security_group }}"
instance_type: "{{ instance_type }}"
region: "{{ region }}"
image: "{{ image }}"
wait: yes
count: 1
vpc_subnet_id: "{{ subnet }}"
assign_public_ip: yes
```

register: ec2

- name: Service Linking via endpoint

manageiq_vmdb:

```
vmdb: "services/{{ service_id }}"
action: add_provider_vms
data:
  uid_ems:
    - "{{ ec2.instances[0].id }}"
  provider:
    id: {{ provider_id }}
```

-- Credits --

Drew Bomhof (syncrou)
Module and example author

CLOUDFORMS 4.6: OpenShift

OpenShift Template Provisioning - Dialog

- To Create Dialog, first select a template in OpenShift Provider

Configuration Policy

Container Templates » openjdk18-web-basic-s2i (Summary)

openjdk18-web-basic-s2i (Summary)

Properties	
Name	openjdk18-web-basic-s2i
Creation timestamp	Tue, 25 Jul 2017 15:43:42 +0000
Resource version	981



It is not possible to create a Template in CloudForms.

⊕ Create Service Dialog from Container Template

Container Templates » openjdk18-web-basic-s2i (Summary) » Templates

Service Dialog Name

Save Cancel

OpenShift Template Provisioning - Service

- Create new Catalog Item: type: Container Template

Adding a new Service Catalog Item

Catalog Item Type

<Choose>

<Choose>

- Amazon
- Ansible Playbook
- AnsibleTower
- Azure
- Container Template
- Generic
- Google
- OpenStack
- Orchestration

Editing Service Catalog Item "OpenJDK"

Basic Info

Details

Name / Description: Display in Catalog

Catalog:

Dialog:

Provider:

Container Template:

Provisioning Entry Point:

OpenShift Template Provisioning - Order

OpenJDK Dialog

Basic Information

Options

Add To Existing Project ⓘ

(or) Add To New Project ⓘ

Parameters

Image Stream Namespace ⓘ	<input type="text" value="openshift"/>
GitHub Webhook Secret (Auto-generated if empty) ⓘ	<input type="text"/>
Hostname Http ⓘ	<input type="text"/>
Generic Webhook Secret (Auto-generated if empty) ⓘ	<input type="text"/>
Application Name ⓘ	<input type="text" value="openjdk-app"/>
Source Repository Ref ⓘ	<input type="text" value="master"/>
Context Dir ⓘ	<input type="text" value="undertow-servlet"/>
Source Repository Url ⓘ	<input type="text" value="https://github.com/jboss-openshift/openshift-quickstarts"/>

Submit Cancel

Namespace in which the ImageStreams for Red Hat Middleware images are installed. These ImageStreams are normally installed in the openshift namespace. You should only need to modify this if you've installed the ImageStreams in a different namespace/project.

Add to existing Project or create new

Extracted from OCP template. Some fields can be auto-generated

OpenShift Template Provisioning - Order

Service Request

Status	Request State	Request ID	Requester	Request Type	Completed	Description	Approval State	Approved/Denied By	Approved/Denied On	Created On	Last Update	Reason	Last Message
Ok	Pending	49	Administrator	Service Provision		Provisioning Service [Open]DK] from [Open]DK]	Approved	Administrator	12/07/17 03:39:23 UTC	12/07/17 03:39:16 UTC	12/07/17 03:39:23 UTC	Auto-Approved	Service_Template_Provisioning - Request Created

Notification

Events
3 New

- Service: OpenJDK Provision Finished** 12/06/2017 | 9:41:01 PM
- Request Provisioning Service [Open]DK] from [Open]DK] has been approved.** 12/06/2017 | 9:34:32 PM
- Service: OpenJDK Provision Starting** 12/06/2017 | 9:34:41 PM

[Mark All Read](#) [Clear All](#)

Project creation

loic2

Containers Providers > OCP 3.6 QE (All Projects) > loic2 (Summary)

loic2 (Summary)

Properties

Name	loic2
Creation timestamp	Thu, 07 Dec 2017 03:39:36 +0000
Resource version	7775573

Relationships

Containers Provider	OC P 3.6 QE
Routes	1
Container Services	1
Replicators	0
Pods	1
Nodes	1
Container Images	1
Container Templates	0

Smart Management

My Company Tags No My Company Tags have been assigned

Reporting Enhancement - Metering - Project

- New Metering Reports for Project and Image. Similar to Chargeback but no Cost calculation, just number of Hour of usage or existence.

Project Name	Date Range	Cpu Cores Used Metric	Memory Used	Network I/O Used	Existence Hours Metric	Metering Used Metric
test	12/04/2017	0.66	2.81 GB	0.00 KBps	24	14
test	12/05/2017	1.12	4.82 GB	0.00 KBps	24	24
test	12/06/2017	1.10	4.82 GB	0.00 KBps	24	24
test						
Totals:		5.48	25.05 GB	5.14 KBps		113
test1	11/26/2017	0.64	2.78 GB	0.01 KBps	11	11
test1	11/27/2017	1.19	5.75 GB	0.00 KBps	24	24
test1	11/28/2017	0.73	3.59 GB	0.00 KBps	24	15
test1	12/04/2017	0.45	2.94 GB	0.00 KBps	24	14
test1	12/05/2017	1.08	5.03 GB	0.00 KBps	24	24
test1	12/06/2017	1.11	5.03 GB	0.00 KBps	24	24
test1						
Totals:		5.35	25.13 GB	0.01 KBps		112

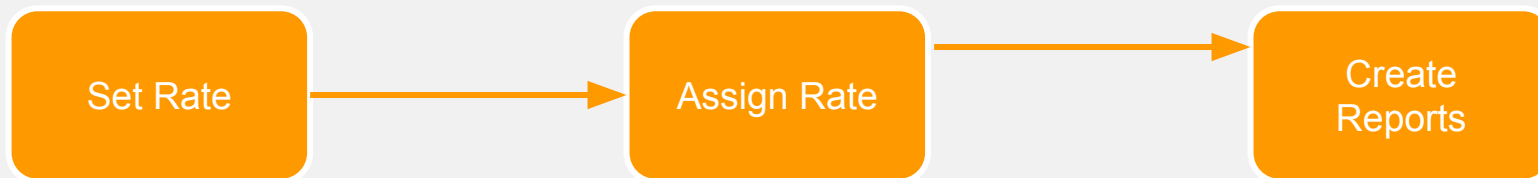
Project exists all day = 24 Hours but we collect metrics only for 14 hours, then Used is 14.


Project exists only for 11 Hours on this day and also ran for 11 Hours.


Total of Average CPU / Hour
= 0.02 + 0.01 + 0.0 +

Chargeback

- Pre-requirement: Metrics endpoint configured and set in OCP Provider
- Reminder of Chargeback process user flow:



- By Usage
- By Allocation 

- The Enterprise
- By Container Provider
- By Image Label 
- By Image Tag

- By Project
- By Image/Project



Alert Management - Tech Preview

- OpenShift 3.7 introduces a new Metrics and Alerting component: **Prometheus**
- Prometheus is currently Tech Preview in OpenShift, and expected to be GA in next release
- Prometheus will replace Hawkular in future release of OpenShift
- CloudForms 4.6 leverages Prometheus for Metrics (similar to Hawkular) and for Alerts



Prometheus is only available in OpenShift 3.7 as Tech Preview

Prometheus Metrics are limited



Alert Management - Monitoring UI

The screenshot shows the ManageIQ Alert Management interface. The top navigation bar includes 'Monitor > Alerts > Overview'. Below this, there are filters for 'Severity', 'Filter by Severity', 'Error Count', and 'Group By Environment'. The main content area displays 10 results, grouped by environment tag: Development (1), Not Grouped (1), Production (4), QA (1), and Quarantine (1). Each cluster card shows the cluster name and a status icon (circle with a number). The 'OpenShift Cluster 00' card in the Production group is highlighted with an orange box and contains an error icon (red circle with 'x'), a warning icon (yellow triangle), and an info icon (blue circle with 'i').

Error, Warning and Info



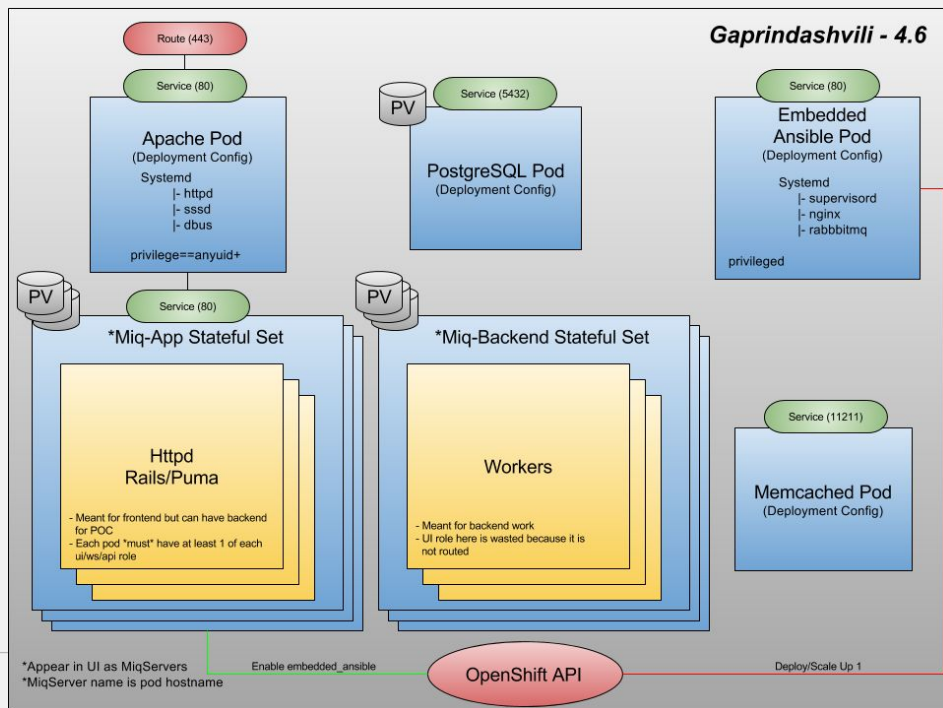
Multiple OpenShift Clusters grouped by Environment Tag

New: Containerized Cloudforms

- Openshift Template to deploy all Cloudforms components (UI, workers and its databases) as containers/pods

GOALS

- Transition CF app to Containers
- Run each worker in a separate pod
- Use OpenShift to manage worker processes
- Reduce worker memory consumption
- Advance current podified version from Tech Preview to production
- Easier to scale, simply add another pod.
- Easier to upgrade, using Images
- Built-in Health Check like probing HTTP



CLOUDFORMS 4.6: UI/UX

User Experience

- Instance Type Selection shows CPU, Memory and Disk Details

The screenshot shows the 'Provision Instances' interface with the 'Properties' tab selected. The 'Instance Type *' dropdown menu is open, displaying a list of instance types with their specifications. The dropdown is highlighted with an orange border.

Instance Type	CPU	RAM	Root Disk
large	2	4 GB	100 GB
small	1	1 GB	10 GB
medium	1	2 GB	20 GB
tiny	1	512 MB	1 GB
ocp_master	2	16 GB	40 GB
ocp_new_master	2	8 GB	30 GB
ocp_node	2	12 GB	30 GB
ocp_new_node	4	16 GB	30 GB
ocp_cloudsoutheast_node	1	8 GB	50 GB

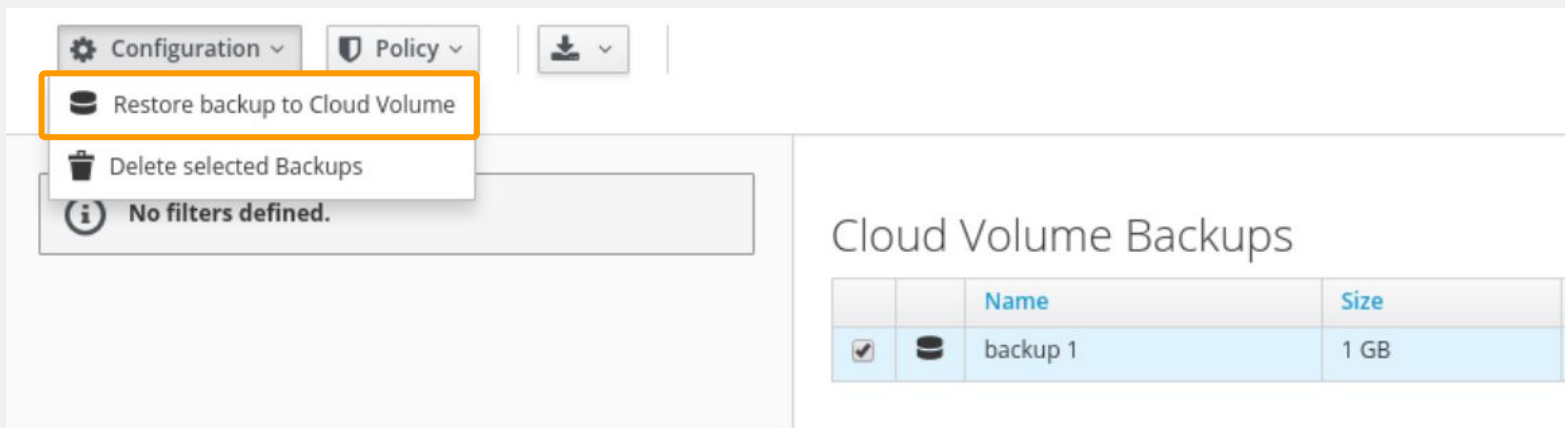


Available in:

- Catalog Item
- Provisioning Instance
- Reconfiguration

User Experience

- “Restore Backup to Cloud Volume” from [Storage>Block Storage>Volume Backups](#)



The screenshot shows the OpenStack dashboard interface for managing Cloud Volume Backups. At the top, there are navigation tabs for 'Configuration', 'Policy', and a download icon. A dropdown menu is open, showing three options: 'Restore backup to Cloud Volume' (highlighted with an orange border), 'Delete selected Backups', and 'No filters defined.' Below the menu, the main content area is titled 'Cloud Volume Backups' and contains a table with one entry.

		Name	Size
<input checked="" type="checkbox"/>		backup 1	1 GB

Dialog Editor: Graphical Interface

RED HAT CLOUDFORMS MANAGEMENT ENGINE

Administrator | EVM

Cloud Intel > Automate Customization

Red Hat Insights > General

Services >

Compute >

Configuration >

Networks >

Middleware >

Storage >

Control >

Automation >

Optimize >

Monitor >

Dialog's name

Dialog's description

New tab Create Tab

New section

Drag your components here

Add Section

Cancel Save

1

2

Drag and Drop elements to sections

Dialog Editor: Edit

Automate Customization

General

Dialog's name

Dialog's description

New tab Create Tab

New section

Text Box

Add Section

Drag element to section

Edit Section Details

Element Information

Label

Description

Cancel Save

Edit Text Box Field

Element Information Options Advanced

Default value

Protected No

Required No

Read only No

Visible Yes

Auto refresh on change No

Validation

Cancel Save

Edit buttons on section and elements pops up configuration options

Dialog Editor: Create New Tabs

General

Dialog's name

Dialog's description

Create Tab

Click 'Create Tab'

General

Dialog's name

Dialog's description

New tab 1 Create Tab

Start with adding a section

Click '+' to add new section'

General

Dialog's name

Dialog's description

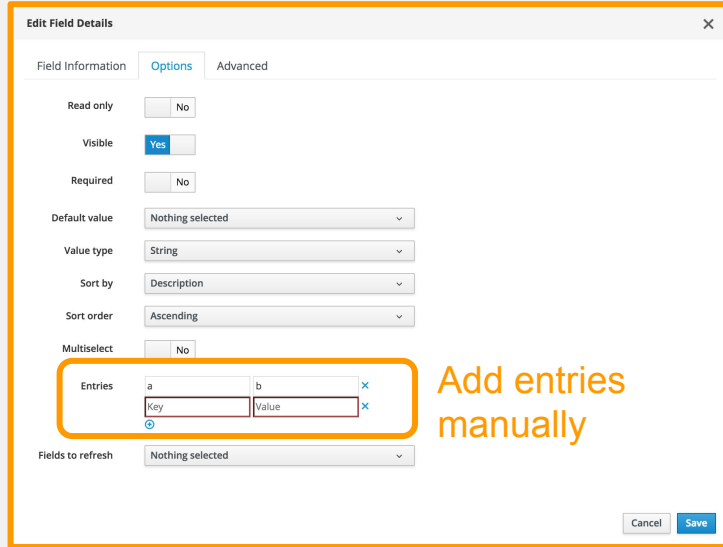
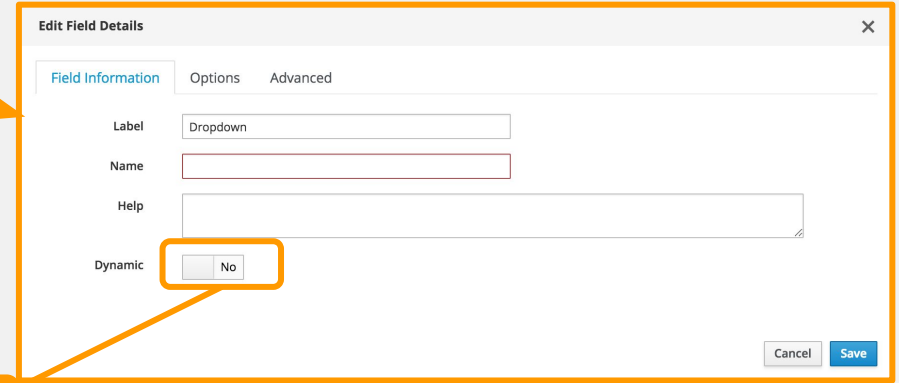
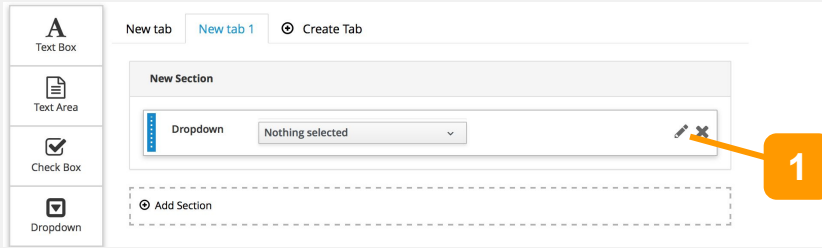
New tab 1 Create Tab

New Section

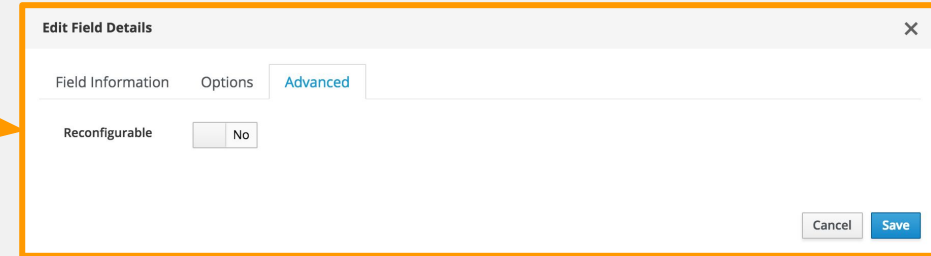
Drag your components here

Add Section

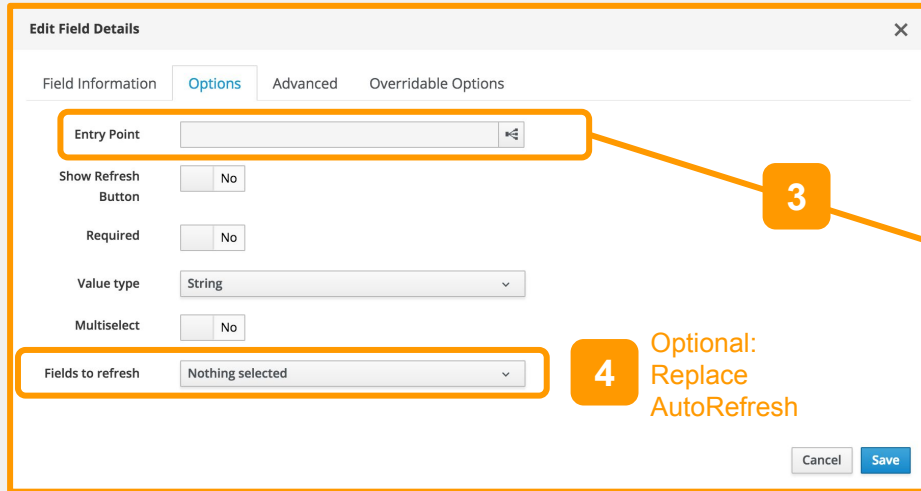
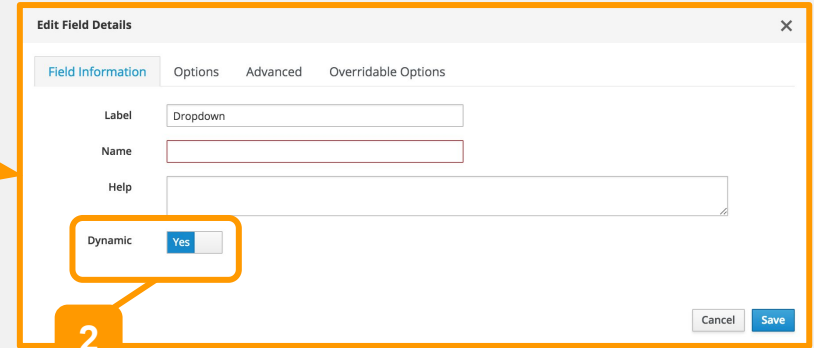
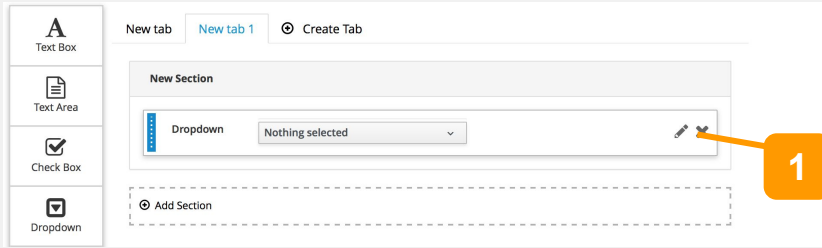
Dialog Editor: Drop Down element - Static



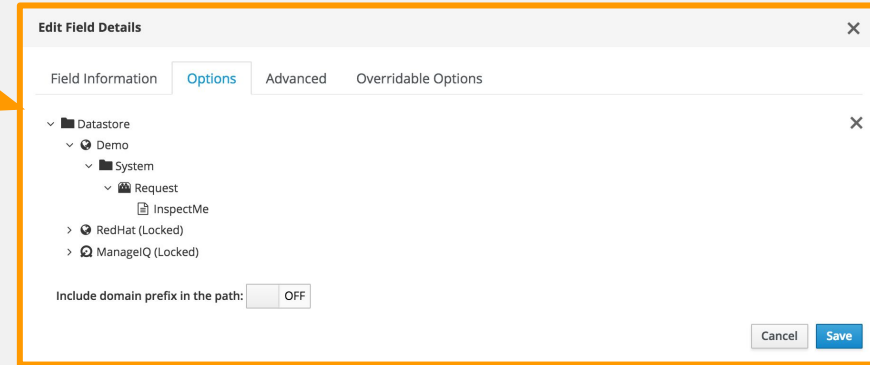
Add entries manually



Dialog Editor: Drop Down element - Dynamic



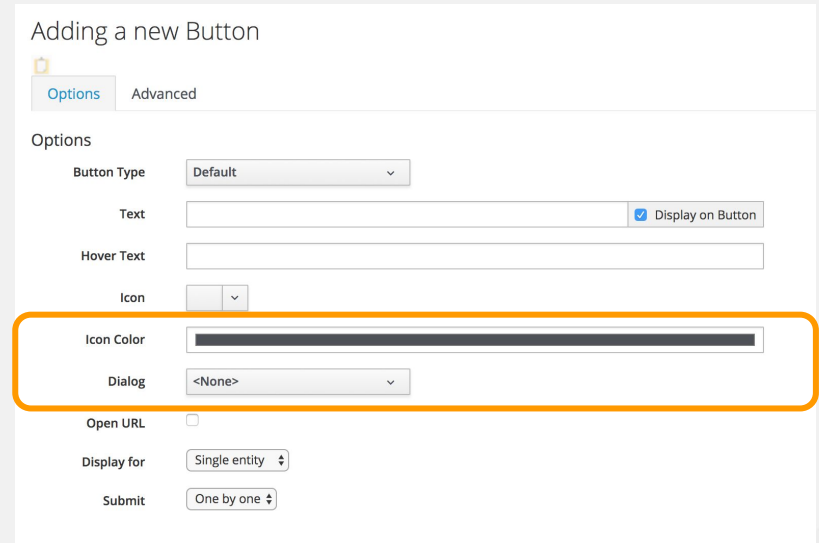
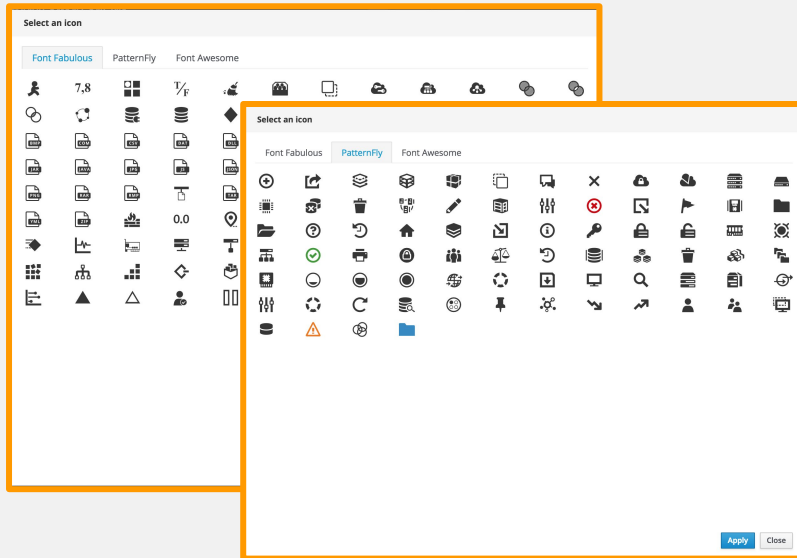
4 Optional:
Replace
AutoRefresh





Custom Button: Icon Selection

- When Adding Button or Button Groups, you can select icon and icon Color



Configuration Menu Enhancement - Menu

In CloudForms 4.5

Settings Region "Region 10 [10]"

Details C & U Collection Red Hat Categories Red Hat Tags Import Tags Import Variables Map Tags
Red Hat Updates Replication

Region 10 [10]
Analysis Profiles (5)
Zones (11)
Schedules (1)

This screenshot shows the configuration menu for Region 10 in CloudForms 4.5. The menu items are arranged in two rows. The first row contains 'Details', 'C & U Collection', 'Red Hat Categories', 'Red Hat Tags', 'Import Tags', 'Import Variables', and 'Map Tags'. The second row contains 'Red Hat Updates' and 'Replication'. Below the menu is a list of resources for Region 10: Region 10 [10], Analysis Profiles (5), Zones (11), and Schedules (1).

In CloudForms 4.6,
Tags related menu
grouped.

Settings Region "Region 1 [1]"

Details C & U Collection Tags Red Hat Updates Replication Help Menu

Region 1 [1]
Analysis Profiles (3)
Zones (1)
Schedules (0)

Details C & U Collection Tags Red Hat Updates Replication Help Menu
My Company Categories My Company Tags Import Tags Import Variables Map Tags

This screenshot shows the configuration menu for Region 1 in CloudForms 4.6. The menu items are arranged in two rows. The first row contains 'Details', 'C & U Collection', 'Tags', 'Red Hat Updates', 'Replication', and 'Help Menu'. The second row contains 'My Company Categories', 'My Company Tags', 'Import Tags', 'Import Variables', and 'Map Tags'. An orange box highlights the 'Tags' menu item in the first row, and an orange arrow points from it to a larger orange box that highlights the 'Tags' menu item in the second row, along with 'My Company Categories', 'My Company Tags', 'Import Tags', 'Import Variables', and 'Map Tags'. Below the menu is a list of resources for Region 1: Region 1 [1], Analysis Profiles (3), Zones (1), and Schedules (0).



Set Retirement Date Enhancement

- Specific a delay

Set/Remove Retirement Date

Enter Retirement Date as

Time Delay: Months Weeks Days Hours

Retirement Date and Time

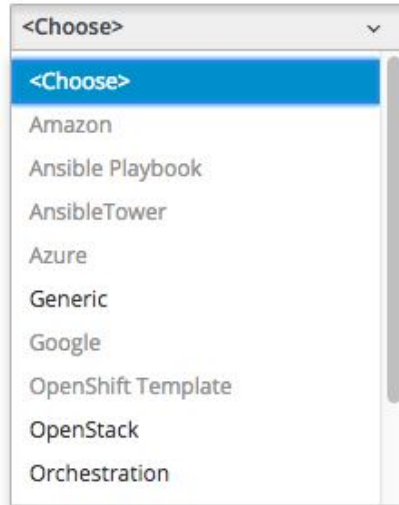
Retirement Warning

Date changed automatically to show the new date based on selection

Catalog Item filtered by Provider Availability

Adding a new Service Catalog Item

Catalog Item Type



In this example, only OpenStack provider is available =>

- OpenStack
- Orchestration
- Generic

CLOUDFORMS 4.6: Virtualization

Single VM transformation from VMware to RHV

The screenshot shows the VMware vSphere interface. A red box highlights the top navigation bar and the Lifecycle menu. The Lifecycle menu is open, and the option 'Transform this VM to RHV' is selected and highlighted with a red box. A red arrow points from this option to the transformation dialog on the right.

The dialog box is titled 'Transform VM cfme005 to RHV'. It contains the following fields and options:

- Name: cfme005_migrated
- Provider: RHV
- Cluster: Default
- Storage: RHEV_NFS
- Thin provisioning:
- Install Windows Drivers:
- Submit button (highlighted with a red box)

A red arrow points from the 'Submit' button back to the table in the lower screenshot.

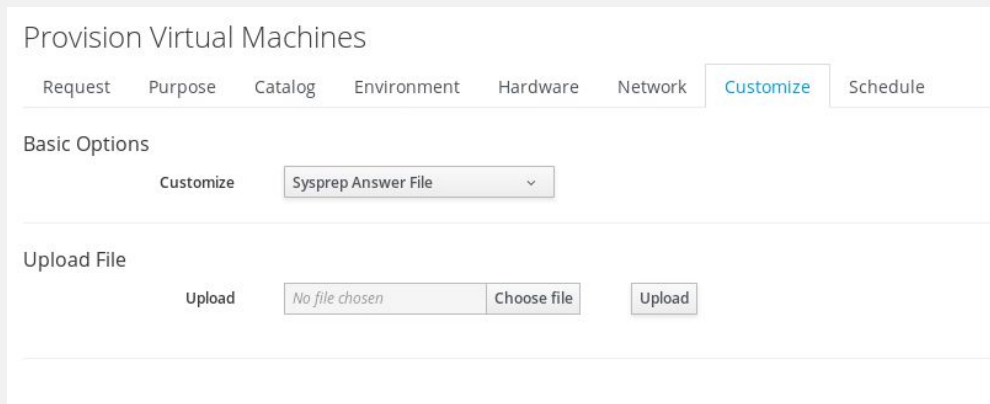
All VMs (Names with "cfme")

	Name	Provider	Cluster	Host	Datastore	Compliant	Total Snapshots	Allocated Size	Last Analysis Time	CFME Region
<input type="checkbox"/>	cfme005	VMware	Raleigh	esxi1	Shared-NFS	False	0	16 GB		Region 10
<input type="checkbox"/>	cfme005_migrated	RHV	Default		RHEV_NFS		1	16 GB		Region 10
<input type="checkbox"/>	cfme008	RHV	Default		RHEV_NFS		1	11 GB	06/08/17	Region

Sysprep Support

Use case: provide the ability to use sysprep - The System Preparation (Sysprep) tool prepares an installation of Windows for duplication, auditing, and customer delivery

- Function: upload a Sysprep XML answer file



The screenshot displays the 'Provision Virtual Machines' interface. At the top, there are several tabs: 'Request', 'Purpose', 'Catalog', 'Environment', 'Hardware', 'Network', 'Customize', and 'Schedule'. The 'Customize' tab is currently selected. Below the tabs, the 'Basic Options' section contains a 'Customize' label and a dropdown menu with the text 'Sysprep Answer File'. Below this, the 'Upload File' section features an 'Upload' label, a text input field containing 'No file chosen', a 'Choose file' button, and an 'Upload' button.

RHV Software defined network via OVN

ovirt-alona Network Manager (Summary)

Properties	
Host Name	alkaplan.usersys.redhat.com
Type	Redhat Network
API Port	35357
Management Engine GUID	

Status	
Default Credentials	Valid
Last Refresh	Success - 1 Minute Ago
Last Refresh Date	2017-09-19 12:55:04 UTC

Relationships	
Parent Cloud Provider	ovirt-alona
Cloud Networks	22
Cloud Subnets	10
Network Routers	0
Security Groups	0
Floating IPs	0
Network Ports	2
Load Balancers	0

Overview	
Topology	

Smart Management	
Managed by Zone	default
My Company Tags	No My Company Tags have been assigned



OVN is Tech
Preview with with
RHV 4.1

Publish VM to Template

Create a template from the existing VM on RHV, with the option to seal it on Linux workloads (remove ssh keys, udev rules, firewall rules)

Publish Virtual Machine

Request Purpose **Catalog** Environment Schedule

Selected VM

Name *	Name	Operating System	Platform	CPUs	Memory	Disk Size	Deprecated	Provider	Snapshots
	test-make-template-xxx	rhel_6	linux	1	1 GB	39.2 MB	false	ovirt-engine-master	1

Seal Template (Applicable for non-Windows OS only)

Number of VMs

Count

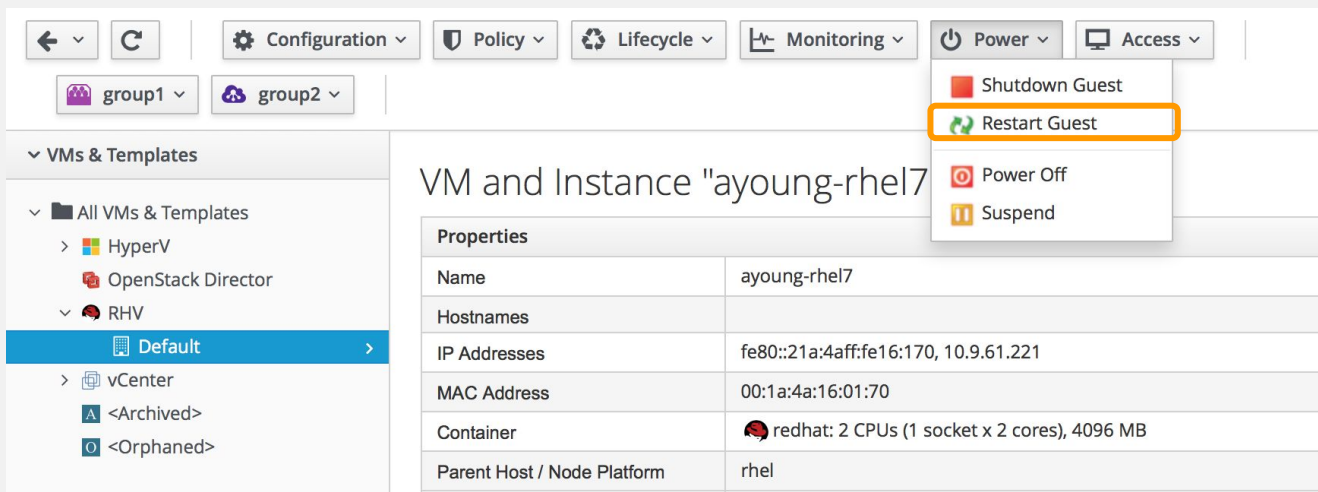
Naming

VM Name *

VM Description (0 / 100)

VM power operation - restart guest support

Use case: provides the ability to perform power cycle on the VM.



The screenshot displays the Red Hat CloudForms interface for managing VMs. The top navigation bar includes tabs for Configuration, Policy, Lifecycle, Monitoring, Power, and Access. The 'Power' dropdown menu is open, showing options: Shutdown Guest, Restart Guest (highlighted with an orange border), Power Off, and Suspend. The left sidebar shows a navigation tree under 'VMs & Templates', with 'Default' selected under 'RHV'. The main content area shows the details for 'VM and Instance "ayoung-rhel7"'. Below the title is a 'Properties' table with the following data:

Properties	
Name	ayoung-rhel7
Hostnames	
IP Addresses	fe80::21a:4aff:fe16:170, 10.9.61.221
MAC Address	00:1a:4a:16:01:70
Container	redhat: 2 CPUs (1 socket x 2 cores), 4096 MB
Parent Host / Node Platform	rhel

Snapshot: Access from Service in User Portal

The screenshot displays the user portal interface for a service named 'OP_vmware_service-20171024-183948'. The breadcrumb path 'My Services > OP_vmware_service-20171024-183948' is highlighted with an orange box. The interface includes a top navigation bar with buttons for 'op', 'Power Operations', 'Lifecycle', 'Policy', and 'Configuration'. Below this is a 'Properties' section with a table of service details. The 'Resources' section shows a 'Compute (1)' resource with a 'Snapshots' dropdown menu highlighted by an orange box, containing 'View' and 'Create' options. The 'Relationships' section at the bottom shows the service as a 'Parent Catalog Item'.

Properties

Name	OP_vmware_service-20171024-183948		
Description	OP_vmware_service		
GUID	35308329-9640-4667-bb9b-7adb3147b261		
Service Id	4	Created On	Oct 24, 2017 11:39:35 PM
Owner	Administrator	Retirement State	Unknown
Monthly Cost	\$0.000	Retires On	Never
Tags	There are no tags for this item.		

Resources

Compute (1)

op001abc	2	Latest op_snap002 - 10/25/...	Last Boot Oct 24, 2017 23:42:12	Snapshots	Access
----------	---	-------------------------------	---------------------------------	-----------	--------

Relationships

OP_vmware_service	Parent Catalog Item	OP_vmware_service
-------------------	---------------------	-------------------

Snapshot: Access from Resource View

The screenshot displays the Red Hat CloudForms interface for a resource named 'op001abc'. The breadcrumb trail is 'My Services > OP_vmware_service-20171024-183948 > op001abc'. The top navigation bar includes 'button 4', 'group1', 'group2', 'Snapshots', and 'Power Operations'. The main content area is divided into several panels:

- Resource Overview:** Shows 'op001abc' as a 'centos-mig' instance running 'Red Hat Enterprise Linux 6 (64-bit)' with IP addresses '10.9.62.109' and '2 IP Addresses'. A tooltip for the resource shows 'Name: op_snap001', 'Date: Wednesday, October 25, 2017, 12:55:16 AM', and a 'Timeline Power Events' chart.
- Specifications:** A 'vmware' icon indicates '1 CPUs (1 sockets x 1 core)' and '1024 MB' of memory.
- Compliance:** Status is 'Never Verified'.
- Retirement:** Status is 'Never'.
- Snapshots:** A camera icon with the number '2' is highlighted by an orange box.

Below the overview panels, there are three utilization gauges and a Smart State Analysis section:

- Utilization:**
 - CPU:** 99.847 % Available of 100%. Gauge shows 0.153 % Used.
 - Memory:** 0.99 GB Available of 1GB. Gauge shows 0.01 GB Used.
 - Storage:** 0.050000000000000004 GB Available of 1.46GB. Gauge shows 1.41 GB Used.
- Smart State Analysis:**
 - 19 Users
 - 35 Groups
 - None Key Pairs
 - 241 Packages
 - 27 Init Processes
 - 21 Files

View
Create

On Click: View

Snapshot: Timeline and List View

My Services > OP_vmware_service-20171024-183948 > op001abc > Snapshots *Path*

Click

Name: op_snap001
Date: Wednesday, October 25, 2017, 12:55:16 AM

Time Zooming

Time scrollbar navigation

Create Snapshot
Delete All Snapshots

Configuration

2 Results

Name	Created	Updated	Actions
op_snap001	Created: 10/25/17 12:55 AM	Updated: 11/22/17 6:31 PM	⋮
op_snap002	Created: 10/25/17 1:11 PM	Updated: 11/22/17 6:31 PM	⋮

Revert
Delete

CLOUDFORMS 4.6: Cloud Providers

CloudForms & OpenStack Tenant Sync.

- Users in OpenStack can be automatically created in CloudForms
 - Sync'ed on demand
 - Select Admin Roles and User Roles
 - Set default Password for Users
 - Random Password recommended
 - External Authentication highly recommended
- Tenant mapping must be enabled
 - Used for creating users group by mapping tenant and role pair

Network Security Groups

Configuration Policy

Edit this Security Group

Delete this Security Group

Edit Security Group "Test Loic"

Network Management Provider

Network Manager: OpenStack Network Manager

Security Group Information

Security Group Name: Test Loic

Security Group Description: Test for Loic

Placement

Cloud Tenant: admin

Firewall Rules

Direction	Network Protocol	Host Protocol	Remote Security Group (name - ref)	IP Range	Port	End Port	Action
outbound	IPV4	Nothing selected	<Choose>				Delete
outbound	IPV6	Nothing selected	<Choose>				Delete

Add a Firewall Rule

Save Reset Cancel

Configuration Policy Lifecycle

group1

Refresh Relationships and Power States

Perform SmartState Analysis

Instances by Provider

- Instances by Provider
 - Amazon
 - Azure (East US)
 - Google (East US)
 - OpenStack
 - No Available
 - nova
 - <Archived>
 - <Orphaned>

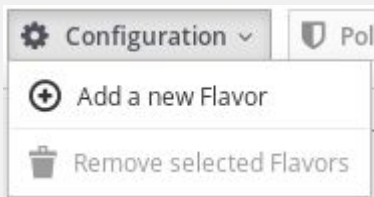
Images by Provider

Instances

- Edit this Instance
- Set Ownership
- Remove Instance from Inventory
- Edit Management Engine Relationship
- Attach a Cloud Volume to this Instance
- Detach a Cloud Volume from this Instance
- Associate a Floating IP with this Instance
- Disassociate a Floating IP from this Instance
- Add a Security Group to this Instance
- Remove a Security Group from this Instance
- Reconfigure this Instance
- Right-Size Recommendations

Compute Flavor

UI: **Compute > Clouds > Flavors**



Flavors > Add a new Flavor

Add a new Flavor

Provider	<input type="text" value="OpenStack"/>
Name	<input type="text"/>
	Required
Ram size in MB	<input type="text"/>
	Required
VCPUs	<input type="text"/>
	Required
Disk size in GB	<input type="text"/>
	Required
Swap size in MB	<input type="text"/>
	Required
RXTX factor	<input type="text" value="1.0"/>
Public?	<input checked="" type="checkbox"/>

Chargeback by Storage Type

- Rate set per Cloud Volume storage type
- Dynamic based on storage types reported by OpenStack

Configuration

Storage Chargeback Rates

Basic Info

Description

Currencies

Select currency: \$ [United States Dollars]

Rate Details

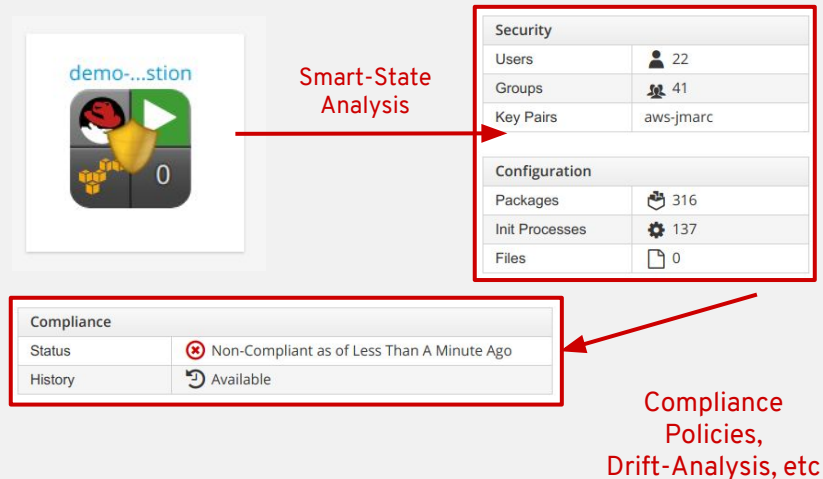
* Caution: The value Range end will not be included in the tier.

Group	Description	Sub Metric	Per Time	Per Unit	Range		Rate (in USD)		Actions
					Start	Finish	Fixed	Variable	
Fixed	Fixed Storage Cost 1		Hourly		0.0	Infinity	0.0		Add
Fixed	Fixed Storage Cost 2		Hourly		0.0	Infinity	0.0		Add
Storage	Allocated Disk Storage	All	Hourly	GB	0.0	Infinity	1.0	0.0	Add
Storage	Allocated Disk Storage	Gp2	Hourly	GB	0.0	Infinity	1.0	0.0	Add
Storage	Allocated Disk Storage	Pd-standard	Hourly	GB	0.0	Infinity	1.0	0.0	Add
Storage	Allocated Disk Storage	Unclassified	Hourly	GB	0.0	Infinity	1.0	0.0	Add
Storage	Used Disk Storage		Hourly	GB	0.0	Infinity	0.0	2.0	Add

Add Cancel

Amazon AWS - SmartState Analysis

- SmartState Analysis for AWS
 - New architecture for cloud
 - Lighter weight and more cost effective
 - Higher scalability
 - Opens up all of the deep introspection
 - Compliance
 - Policy enforcement
- Agents deployed into the cloud via Docker
 - Lightweight - minimizes EC2 costs
 - Performed in cloud - minimizes data transfer costs
 - Results transferred back to appliance



Other Public Cloud Enhancements



- AWS targeted refresh
- AWS graph refresh
- Inventory gathering of AWS Network routers
- AWS marketplace image gathering and provisioning



- Support for inventory collection and provisioning of Managed Disks in Azure
- SmartState Analysis on Azure Managed Disks
- Removal of AWS & Azure discovery
 - removes a virtualization-centric discovery option



- Add user data injection for cloud-init scripts for GCE instance provisioning

CLOUDFORMS 4.6: Lenovo XClarity

Provider Description

The XClarity Administrator (LXCA) provider is the first instance of the **new physical infrastructure provider** for CloudForms that can manage multiple instance of LXCA from a single pane of glass

- Inventory details for physical servers

- Visualize resource relationships between physical and virtual infrastructures

- Basic operations such as power control

- Monitor hardware events and create triggers for policies and automation across physical and virtual

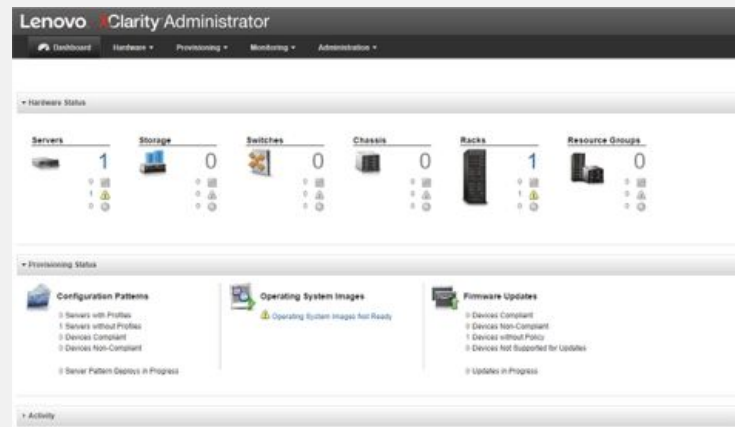
XClarity Administrator

Lenovo™

XClarity™

XClarity Administrator is a centralized resource management solution for Lenovo server systems and solutions.

- **Simplify** – Find the right information and accomplish critical tasks faster, through an uncluttered, centralized, dashboard driven GUI. Remove complexity from IT infrastructure
- **Accelerate** – Automate and scale IT infrastructure deployment with XClarity to reduce to time to market of new systems.
- **Integrate** – Deploy and manage Lenovo infrastructure from your own IT applications by developing custom integration using Clarity's REST APIs or XClarity integrators



LENOVO XCLARITY PROVIDER

Configuration ▾ Power ▾ Identify ▾ Policy ▾ Lifecycle ▾ Monitoring ▾

Physical Infrastructure Providers > Lenovo xClarity (All Physical Servers with Host) > 10.9.57.11 (Summary)

10.9.57.11 (Summary)

Properties	
Server name	10.9.57.11
Model	AC1
Product Name	Lenovo Flex System x240 M5 Compute Node
Manufacturer	LNVO
Machine Type	9532
Serial Number	J10CPZ7
UUID	05B74B63ECC111E5B7E9000E1EAADE20
Total memory (mb)	262144
CPU total cores	16
Health State	Valid
Identify LED State	Off

Networks	
MAC Address	08:94:EF:12:D6:51,08:94:EF:12:D6:52
IPv4 Address	10.9.57.11
IPv6 Address	fe80:0:0:a94:eff:fe12:d651

Relationships	
Host	esxi1
Physical Infrastructure Provider	Lenovo xClarity

Power Management	
Power State	on

Assets	
Support contact	contact
Description	Lenovo Flex System x240 M5
Location	No Location Configured
Room	
Rack name	a15
Lowest rack name	0

Firmware	
Name	Version
Backup IMM2 Backup Firmware-Inactive	1.64
Primary IMM2 Firmware-Active	2.50
Primary DSA Diagnostic Software-Active	10.2
Backup UEFI Backup Firmware/BIOS-Inactive	2.01
Primary UEFI Firmware/BIOS-Active	2.01

Smart Management	
My Company Tags	No My Company Tags have been assigned

LENOVO XCLARITY PROVIDER

The image displays a user interface for the Lenovo XClarity Provider, organized into several functional sections:

- Power** (indicated by a power icon):
 - Power On
 - Power Off
 - Power Off Immediately
 - Restart
 - Restart Immediately
 - Restart to System Setup
 - Restart Management Controller
- Identify** (indicated by a dropdown arrow):
 - Blink LED
 - Turn On LED
 - Turn Off LED
- Policy** (indicated by a shield icon):
 - Manage Policies
 - Edit Tags
- Lifecycle** (indicated by a refresh icon):
 - Provision Physical Server
- Monitoring** (indicated by a line graph icon):
 - Timelines



THANK YOU



plus.google.com/+RedHat



facebook.com/redhatinc



linkedin.com/company/red-hat



twitter.com/RedHatNews

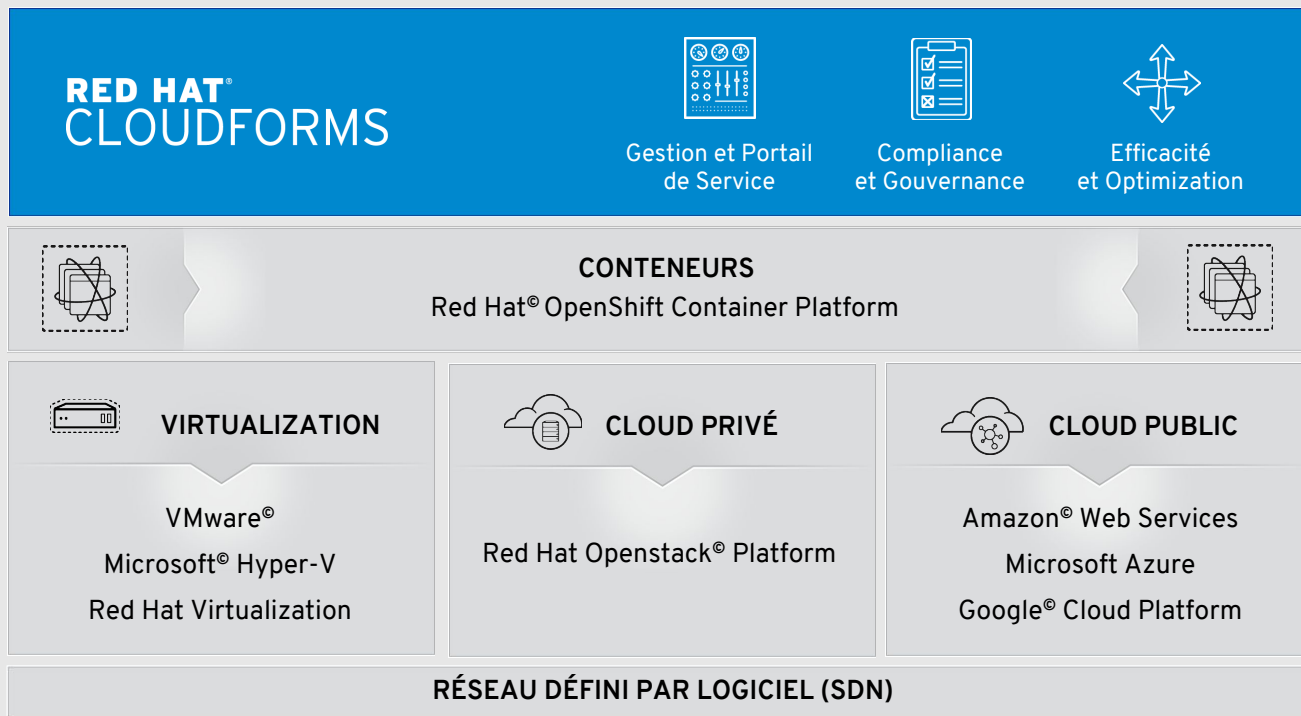


youtube.com/user/RedHatVideos

Nouveautés Cloudforms 4.6

- Améliorations Ansible ++
- Opérations pour OpenShift
- Déploiement de CF en containers
- Améliorations UI/UX
- [“Dynamic Resource Objects”](#)
- Meilleure gestion du cloud publique
- Nouveau provider Lenovo XClarity

EVOLUTION VERS LE INFONUAGIQUE HYBRIDE





**RED HAT[®]
CLOUDFORMS**