



Red Hat CloudForms

From on-premise data center to public cloud

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CLOUDFORMS DELIVERS SERVICES ACROSS HYBRID ENVIRONMENTS



SERVICE AUTOMATION

Streamline complex service delivery processes, saving time and money.



POLICY & COMPLIANCE

Draws on continuous monitoring and deep insights to raise alerts or remediate issues.



OPERATIONAL VISIBILITY

Complete lifecycle and operational management that allows IT to remain in control.

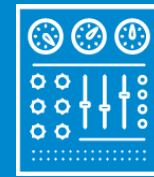


UNIFIED HYBRID MANAGEMENT

Deploy across virtualization, private cloud, public cloud and container-based environments.

EVOLUTION NOT REVOLUTION

RED HAT®
CLOUDFORMS



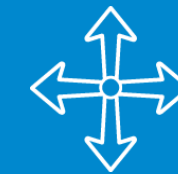
Service
Automation



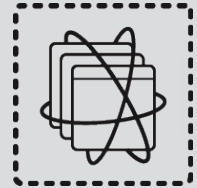
Policy &
Compliance



Operational
Visibility

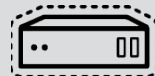
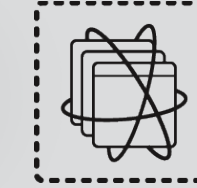


Unified Hybrid
Management



CONTAINERS

Red Hat Atomic | OpenShift by Red Hat®



VIRTUALIZATION

VMware®
Microsoft® Hyper-V
Red Hat Virtualization



PRIVATE CLOUD

Red Hat® Openstack Platform



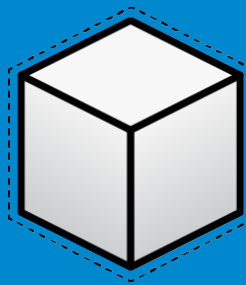
PUBLIC CLOUD

Amazon® Web Services
Windows Azure
Google® Cloud Platform

SOFTWARE DEFINED NETWORKING

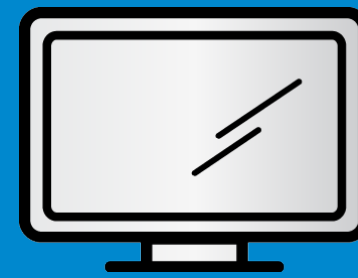
CLOUDFORMS FEATURES

**AGENTLESS,
VIRTUAL APPLIANCE**



NON-INVASIVE, EASY MAINTENANCE

**WEB-BASED, SELF-SERVICE,
ADMIN AND OPERATIONS**



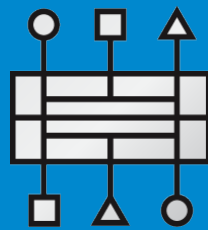
ACCESS FROM ANY BROWSER

**MULTI-TENANT AND
MULTI-LOCATION**



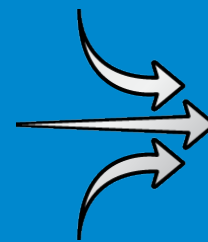
SECURELY SHARE INFRASTRUCTURE

**PLUGABLE API
FRAMEWORK**



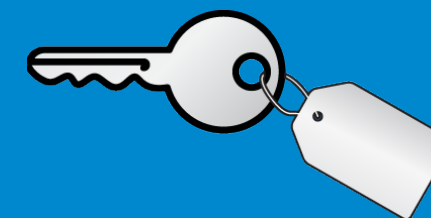
**EASY TO INTEGRATE AND
EXTENSIBLE TO OTHER PLATFORMS**

**HORIZONTALLY SCALABLE,
LOAD-BALANCED**



**HIGHLY SCALABLE, HIGHLY AVAILABLE
WITH FAILOVER AND FALLBACK**

**ROLE-BASED ACCESS CONTROL
AND ENTITY TAGGING**

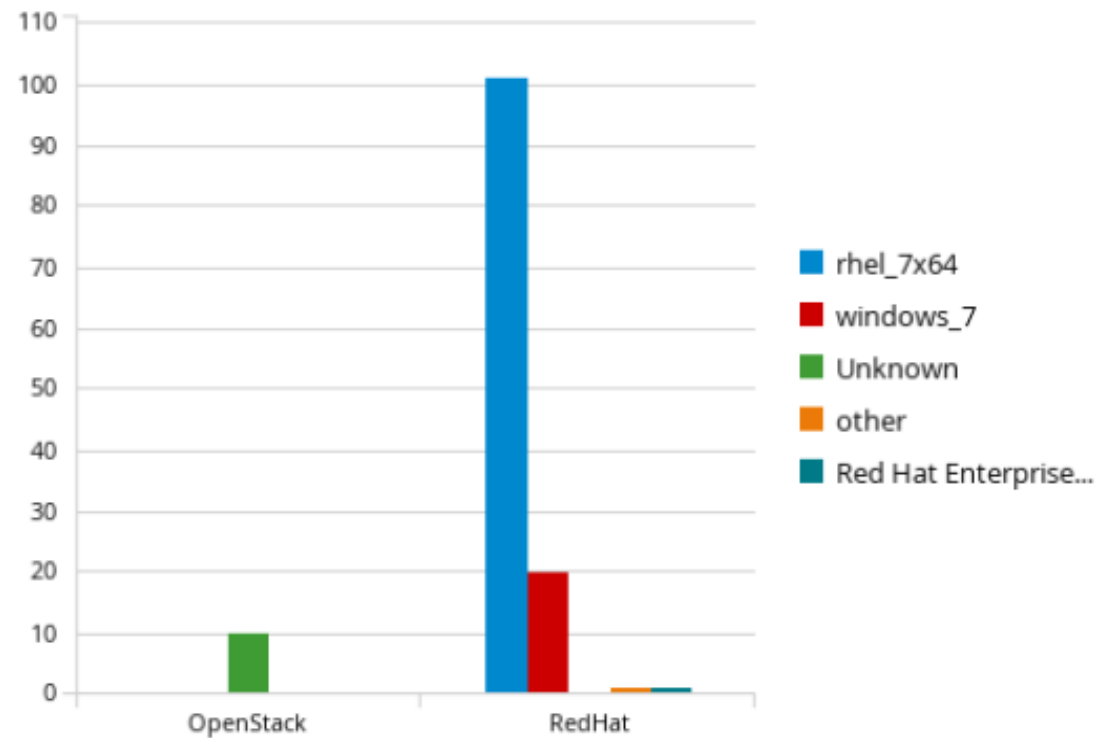


**SEGMENT USER ACCESS AND DRIVE
COMPLIANCE, CONTROL AND REPORTING**

DATACENTER IN SINGLE PANE OF GLASS

Default Dashboard

Vendor and Guest OS Chart



Updated March 30, 2017 00:00 | Next March 31, 2017 00:00

Top CPU Consumers (weekly)

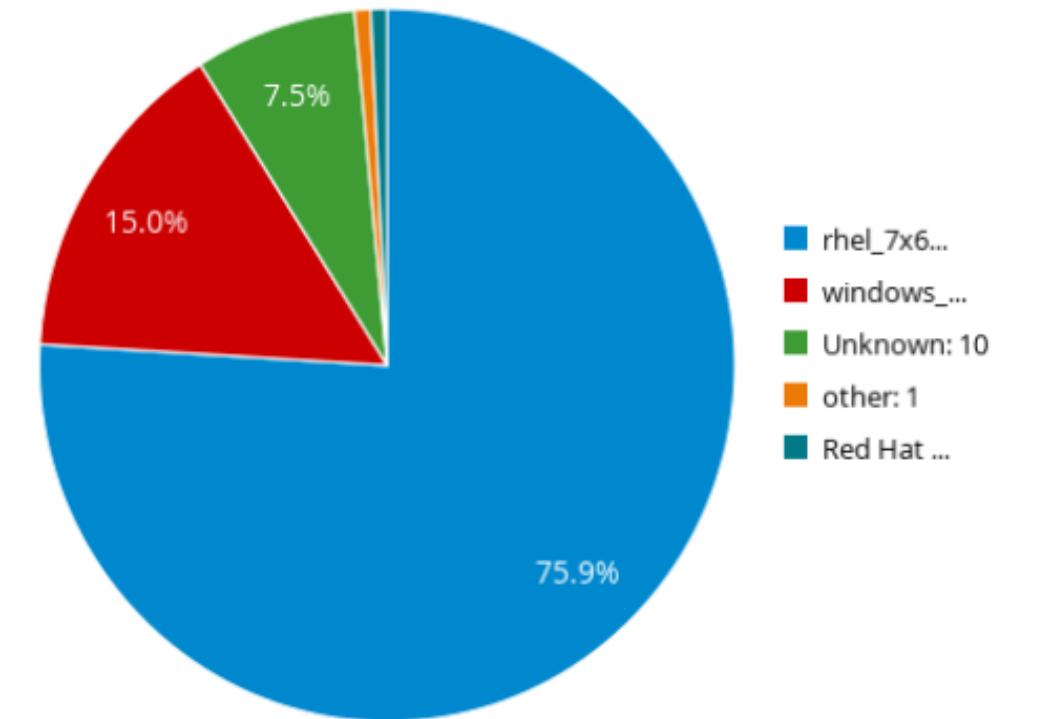
Asset Name	Cluster Name	CPU - Usage Rate (%) (Avg)
ospcontroller	MicroCluster	19.1%
cloudforms	MicroCluster	9.4%
win7	MicroCluster	1.2%

Updated March 30, 2017 00:00 | Next March 31, 2017 00:00

Top Memory Consumers (weekly)

Asset Name	Cluster Name	Memory - Used for Collected Intervals (MB) (Avg)
cloudforms	MicroCluster	9.9 GB
ospcontroller	MicroCluster	6 GB
win7	MicroCluster	689.5 MB

Guest OS Information



Updated March 30, 2017 00:00 | Next March 31, 2017 00:00

VIRTUALIZATION MANAGEMENT

- Provision from clone of existing VM instance or template.
- View VM genealogy and track VM drift from established configurations.
- Execute VM power operations and retire VM instances.

Top CPU Consumers (weekly)

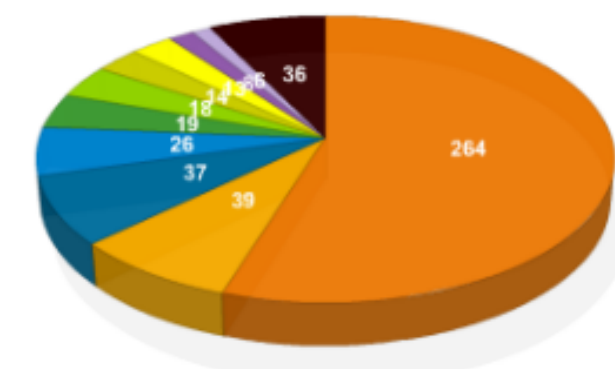
Asset Name	Cluster Name	CPU - Usage Rate (%) (Avg)
ose32master1	Raleigh	65.3%
ose32etcd	Raleigh	56.8%
ose32master2	Raleigh	38.4%
cf41_vmware1	Production	19.5%
cf41_openshift1	Production	19.1%
cf41_openshift	Production	19.0%
40DemoMaster	Production	17.2%
CFME 5.6.0.6	QA	15.7%
cf4.1b5_openshift	Production	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_vmware	Production	4.7 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

All VMs & Templates



32DemoMaster (3), 40DemoMaster (2), alpha-dsl1 (0), Analytics VM (0), ansib...tower (1), bdprd (1), 40DemoMaster (0), alpha-dsl1 (0), Analytics VM (1), ansib...tower (3), bdprd (0)

CONTAINER MANAGEMENT

- View connections from the container all the way down through the underlying infrastructure in one interface.
- Apply automation rules and enforce policies for deployed containers.
- Scan containers for known vulnerabilities with OpenSCAP.

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	CPE Platforms	Addresses
Benchmark URL	/tmp/com.redhat.rhsa-RHEL6.ds.xml.bz2		• IPv4 127.0.0.1
Benchmark ID	xccdf_com.redhat.rhsa_benchmark_generated-xccdf		• IPv4 10.5.0.8
Started at	2016-06-20T22:01:09		• IPv6 0:0:0:0:0:0:1
Finished at	2016-06-20T22:01:12		• IPv6 fe80:0:0:0:42:aff:fe05:8
Performed by			• 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

1031 passed

Severity of failed rules

1 medium, 1 high

Score

Scoring system	Score	Maximum	Percent

Aggregated Node Utilization

- 23 Nodes
- 310 Containers
- 316 Pods
- 56 Services

SELF-SERVICE DELIVERY

- Create service delivery catalogs for users to choose the services the services that they need to deploy.
- Shopping cart functionality allows multiple services to be requested at one time.
- Service requests can be routed for approval.

The screenshot displays the Red Hat CloudForms Management Engine interface. The top navigation bar includes a menu icon, the text "RED HAT® CLOUDFORMS MANAGEMENT ENGINE", and a search icon. A left-hand sidebar contains navigation options: "Dashboard", "My Services" (347), "My Requests" (153), and "Service Catalog" (7), with "Service Catalog" being the active selection. The main content area features a search bar with "Name" and "Filter by Name" options, and a sort dropdown set to "Name" with a downward arrow. 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) with the Red Hat logo.
- Generic RHEL7 Server (AWS) with the Amazon Web Services logo.
- Generic RHEL7 Server (Azure) with the Microsoft Azure logo.
- Generic RHEL7 Server (VMware) with the VMware logo.
- Three Tier Application with the OpenStack logo.
- Ticket Monster (Multi Cloud) with a multi-cloud icon.
- Hybrid Cloud Application with the Google Cloud Platform logo.

AUTOMATED PROVISIONING

- Automatically deploys and configures requested services on any infrastructure platform.
- Automation steps can be codified in Ansible playbooks or natively in CloudForms.

The screenshot shows the CloudForms Service Catalog interface. On the left, a tree view under 'Service Catalogs' shows 'Catalog Items' expanded to 'All Catalog Items'. The item 'JBoss Deployment (Ansible)' is selected and highlighted in blue. Other items include 'Unassigned', 'AWS ELB Creation (Ansible)', 'PostgreSQL Deployment (Ansible)', 'Register with HAProxy (Ansible)', 'Hybrid Cloud Provisioning Items', 'Hybrid Cloud Services', 'Multi Cloud Experiments', 'Multi Cloud Provisioning', and 'RHEV Provisioning'.

The right pane displays the details for '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


SERVICE

The diagram illustrates the service composition as a sequence of four components: a Virtual Machine (VM) icon, followed by a plus sign, an Ansible icon (a circle with 'A'), followed by another plus sign, another VM icon, followed by another plus sign, and a final Ansible icon. The word 'SERVICE' is written in red above the diagram.


POLICY ENFORCEMENT

- Continuous discovery and deep SmartState inspection of virtual instances.
- Policy violations can raise alerts or be remediated automatically.
- Policy can be applied uniformly or based on virtual instance criteria.


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"> <input checked="" type="checkbox"/> Mark as Non-Compliant <input checked="" type="checkbox"/> Generate log message <input checked="" type="checkbox"/> Generate Audit Event <input checked="" type="checkbox"/> Send Email to Security Team

All Policy Profiles	All Alerts	All Actions																																						
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td></td><td>Analysis: Exclude Specially Tagged VMs</td></tr> <tr><td></td><td>Analysis: On VM Reconfiguration</td></tr> <tr><td></td><td>Compliance Hosts: November 2012</td></tr> <tr><td></td><td>Compliance: DISA STIG</td></tr> <tr><td></td><td>Compliance: DMZ Configuration</td></tr> <tr><td></td><td>Compliance: Hosts</td></tr> <tr><td></td><td>Compliance: RHEL Host (KVM)</td></tr> </table>		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)	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr><th></th><th>Description</th></tr> </thead> <tbody> <tr><td></td><td>Cluster DRS not enabled</td></tr> <tr style="background-color: #e0f0ff;"><td></td><td>Cluster HA not enabled</td></tr> <tr><td></td><td>CPU Ready > 4000 ms for more than 10 min</td></tr> <tr><td></td><td>Datacenter VMs > 10</td></tr> <tr><td></td><td>Host Datastore < 5% of Free Space</td></tr> </tbody> </table>		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	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr><th></th><th>Description</th></tr> </thead> <tbody> <tr><td></td><td>Alert - CPU Reservation > 500Mhz</td></tr> <tr><td></td><td>Cancel vCenter Task</td></tr> <tr><td></td><td>Check Host or VM Compliance</td></tr> <tr><td></td><td>Collect Running Processes on VM Guest OS</td></tr> <tr><td></td><td>Connect All CD-ROM Drives for Virtual Machine</td></tr> </tbody> </table>		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
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QUOTAS AND CHARGEBACK

- Rate schedules per platform and per tenant with multi-tiered and multi-currency support.
- Quota set by user, role and tenant and apply to compute, memory and storage resources.

Currencies

Select currency: \$ [United States Dollars] v

Rate Details

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

Group	Description	Per Time	Per Unit	Range
CPU	Allocated CPU Count	Hourly v		
CPU	Used CPU	Hourly v		
Cpu Cores	Used CPU Cores	Hourly v		
Disk I/O	Used Disk I/O	Hourly v		
Fixed	Fixed Compute Cost 1	Hourly v		
Fixed	Fixed Compute Cost 2	Hourly v		
Memory	Allocated Memory	Hourly v		
Memory	Used Memory	Hourly v		

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

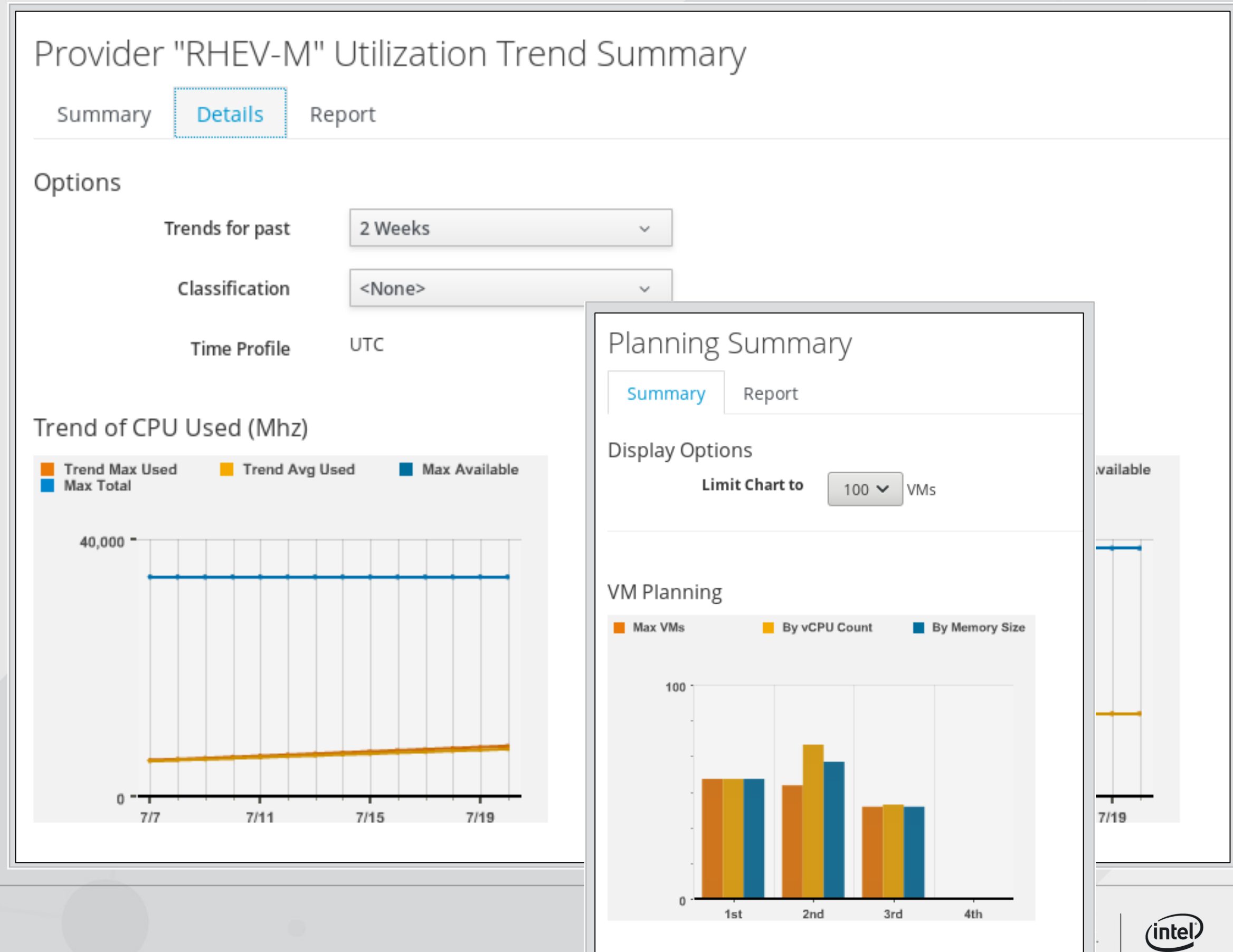
Manage quotas for Tenant "Red Hat"

Enforced	Description
<input checked="" type="checkbox"/>	Allocated Virtual CPUs
<input checked="" type="checkbox"/>	Allocated Memory in GB
<input checked="" type="checkbox"/>	Allocated Storage in GB
<input checked="" type="checkbox"/>	Allocated Number of Virtual Machines
<input checked="" type="checkbox"/>	Allocated Number of Templates

10240	
32	
12	Count
<input type="button" value="Save"/> <input type="button" value="Reset"/> <input type="button" value="Cancel"/>	

PERFORMANCE AND CAPACITY MANAGEMENT

- Resource utilization tracking and right-size recommendations.
- Projection and “what if” tools aid in future planning.



WHY CLOUDFORMS?

- **INTEGRATED VIRTUAL APPLIANCE** provides both automation and insight, speeding installation and easing version to version upgrades
- **AGENTLESS SCANNING** with deep inspection of managed environments provides insights for policy and automation
- **CONTINUOUS MONITORING** and optimization maximizes resource utilization and aids in capacity planning
- **OPEN, FLEXIBLE INTEGRATION** makes it easier to automate every step in complicated IT processes

Dziękuję

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