redhat.

RED HAT FORUM

RED HAT CLOUDFORMS

Path to Hybrid cloud

Sachin Patil | psachin@redhat.com
Enterprise Cloud Support

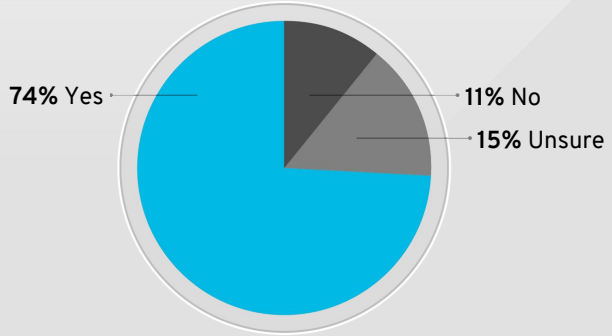
BUSINESS HAS CHANGED – IN RESPONSE, IT OPERATIONS NEEDS TO CHANGE

LINE OF BUSINESS
Challenged to deliver services faster, at scale, and more efficiently

DEVELOPERS
Need to develop applications faster with greater productivity

IT OPERATIONS
Must provide infrastructure on-demand that scales as needed

74% expect to buy new management solutions to support open hybrid clouds and next-generation application architectures.



N=201

Do you believe you will need to purchase new management software solutions between now and 2017?

IDC

Source: Red Hat Hybrid Cloud Management Survey, IDC, October, 2015

redhat

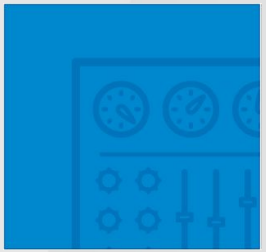
CLOUD CAPABILITIES

EFFICIENCY AND OPTIMIZATION

Improve resource utilization and operational efficiency.

COMPLIANCE AND GOVERNANCE

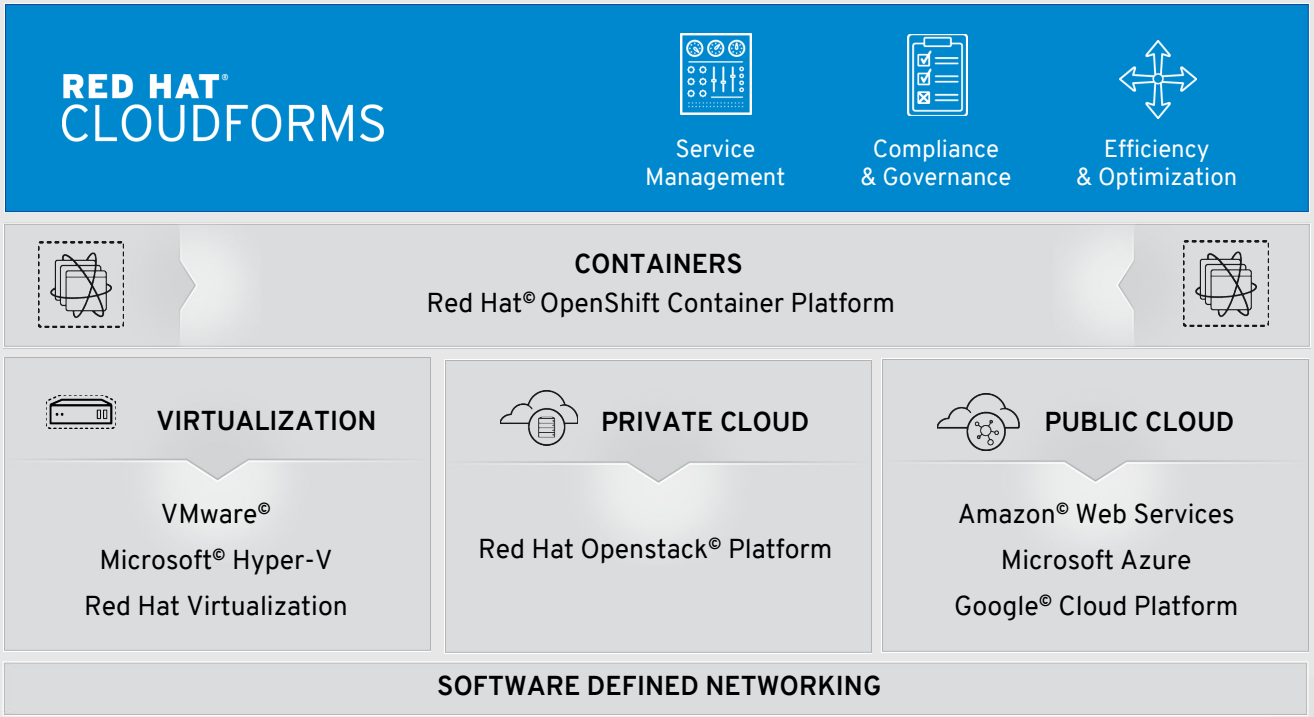
Responsibly enabling users and developers, without being in the way.



SERVICE MANAGEMENT AND SELF SERVICE

Automate and delegate service delivery processes, saving time and money.

AN EVOLUTIONARY PATH TO HYBRID CLOUD



CLOUDFORMS FEATURES

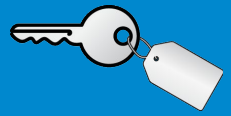
AGENTLESS

EASY DEPLOYMENT

ANSIBLE AUTOMATION

SIMPLE, POWERFUL, AGENTLESS

MULTI-TENANCY AND RBAC



SEGMENT USER ACCESS,
FINE GRAINED ACCESS CONTROL

CONTINUOUS DISCOVERY

BROWN-FIELD MANAGEMENT,
INTEROPERATES WITH OTHER MGMT

VIRTUAL APPLIANCE

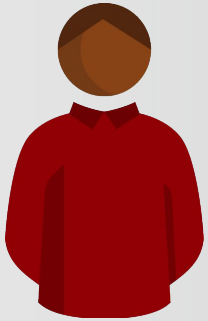
EASY INSTALL, EASY MAINTENANCE

FEDERATED GLOBAL DEPLOYMENTS

HIGHLY SCALABLE, HIGHLY AVAILABLE
MULTI-REGION DEPLOYMENTS

EFFICIENCY AND OPTIMIZATION

HYBRID CLOUD VISIBILITY



- Systems that are not being utilized should be retired to reclaim resources.
- Budgets are tight. We have to make sure that we are utilizing our systems efficiently.
- Tracking problems across infrastructure layers can be a challenge.
- I've got to project infrastructure usage into the future for planning purposes.

CHALLENGES

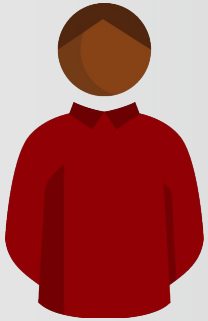
LIFECYCLE MANAGEMENT

RESOURCE OPTIMIZATION

ROOT-CAUSE ANALYSIS

CAPACITY MANAGEMENT

OPERATIONAL VISIBILITY WITH CLOUDFORMS



- Find unused resourced and reclaim them. Assign ownership to resources.
- Automatic resource optimization intelligently places VMs and offers right-sizing recommendations.
- I can drill-down through infrastructure layers to determine the root cause.
- Resource tracking and trending aids in capacity and what-if scenario planning.

CHALLENGES

LIFECYCLE MANAGEMENT

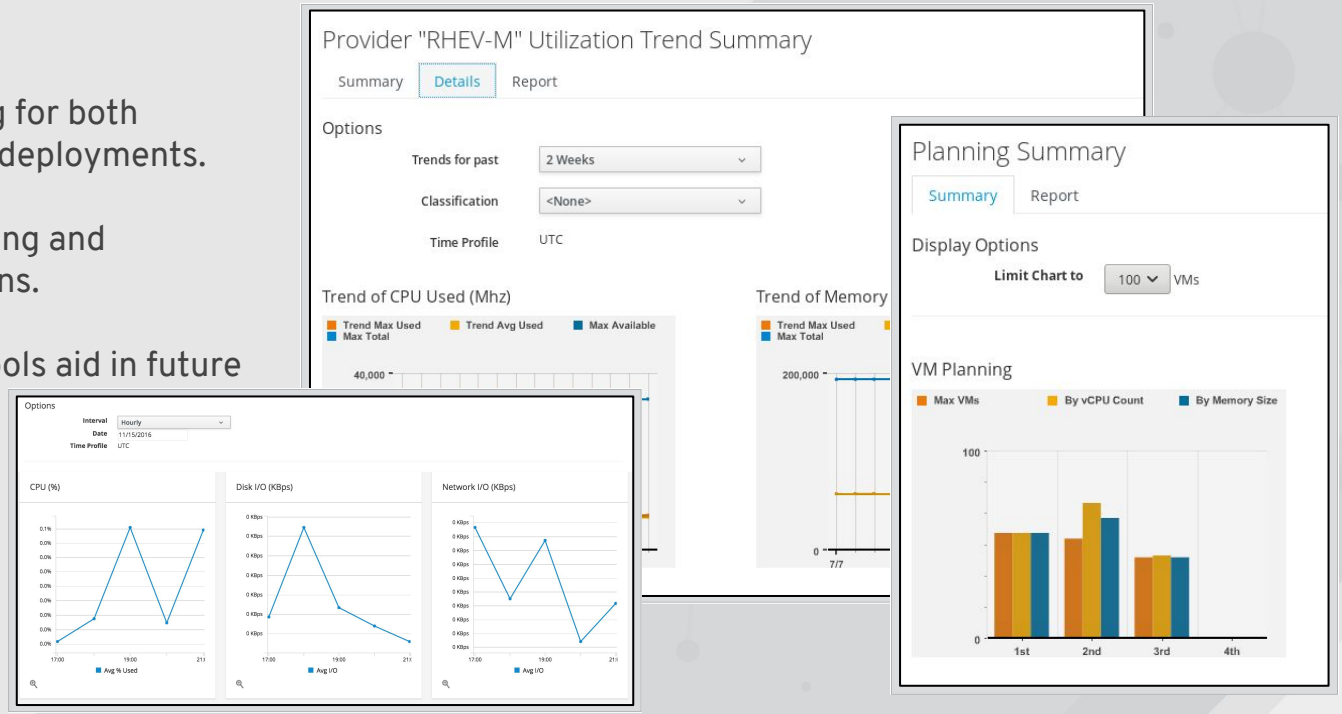
RESOURCE OPTIMIZATION

ROOT-CAUSE ANALYSIS

CAPACITY MANAGEMENT

PERFORMANCE AND CAPACITY MANAGEMENT

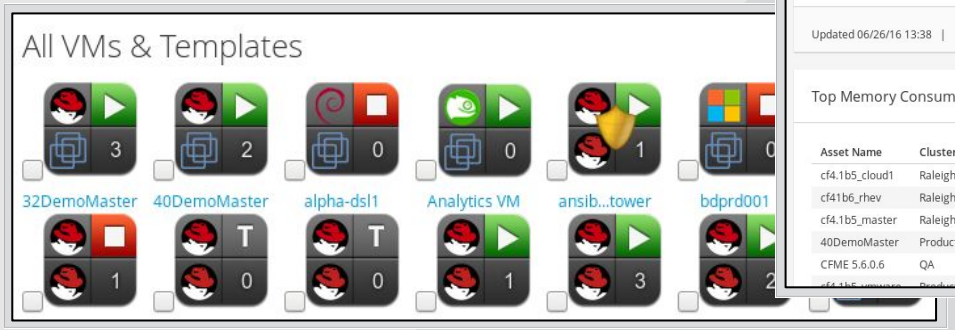
- Continuous data gathering for both greenfield and brownfield deployments.
- Resource utilization tracking and right-size recommendations.
- Projection and “what if” tools aid in future planning.

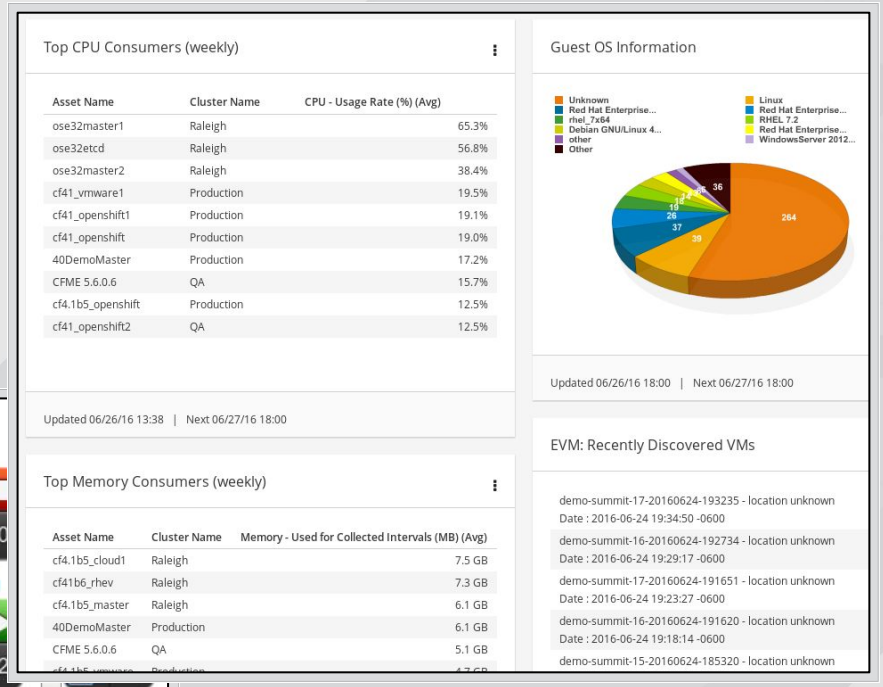


redhat

VIRTUALIZATION MANAGEMENT

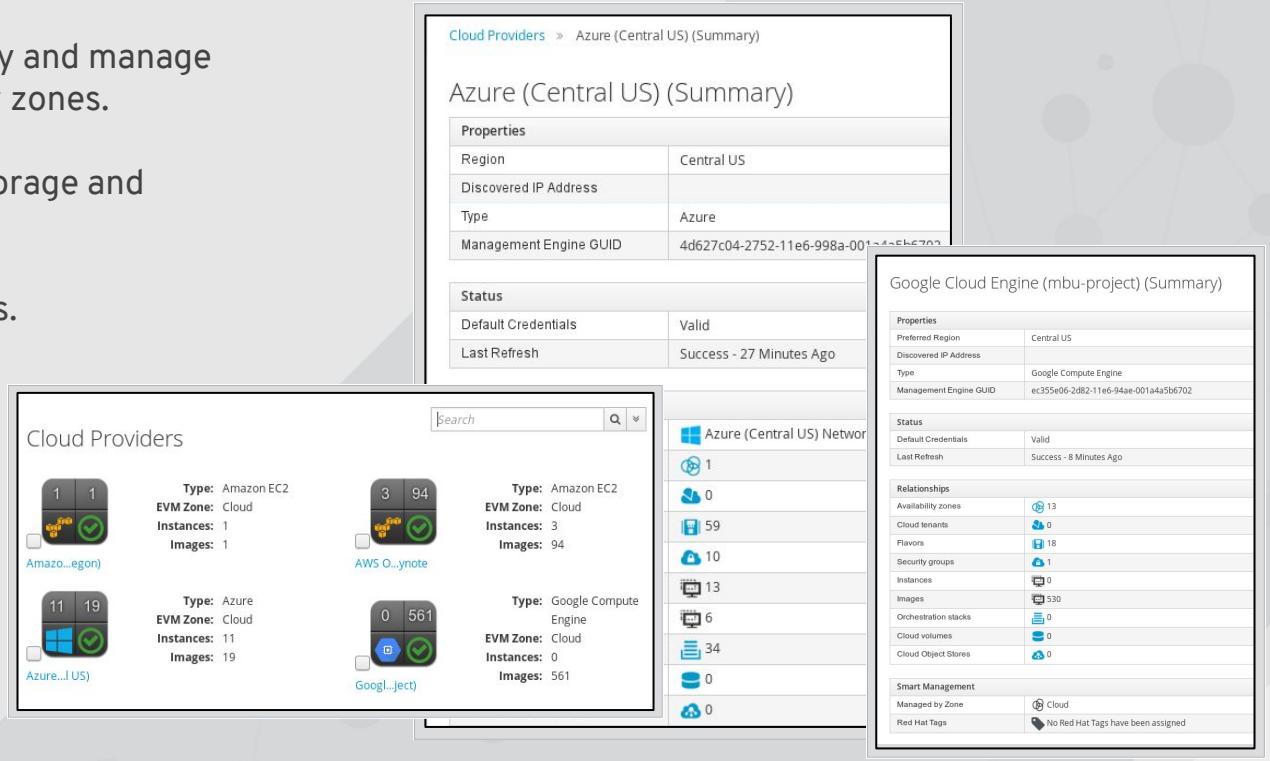
- Provision from clone of existing VM instance or template.
- View VM genealogy and track VM drift from established configurations.
- Execute VM power operations and retire VM instances.





PUBLIC CLOUD MANAGEMENT

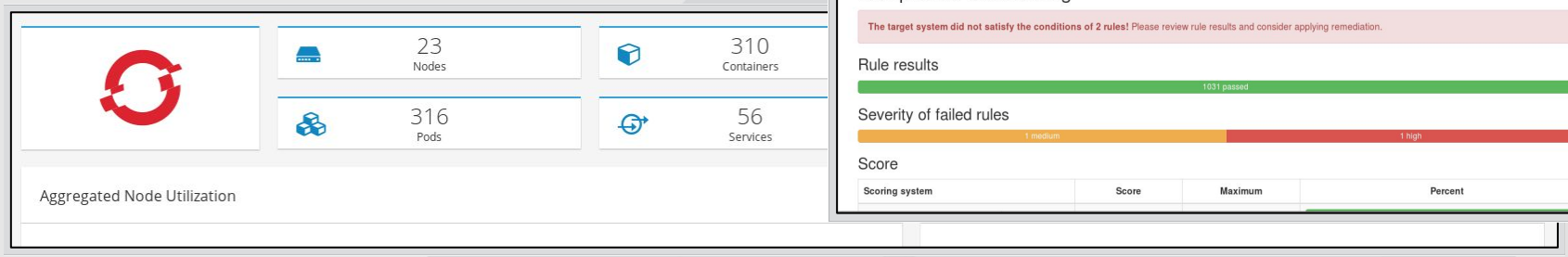
- View virtual instance inventory and manage across regions and availability zones.
- Provision virtual instances, storage and networking.
- Monitor and respond to events.

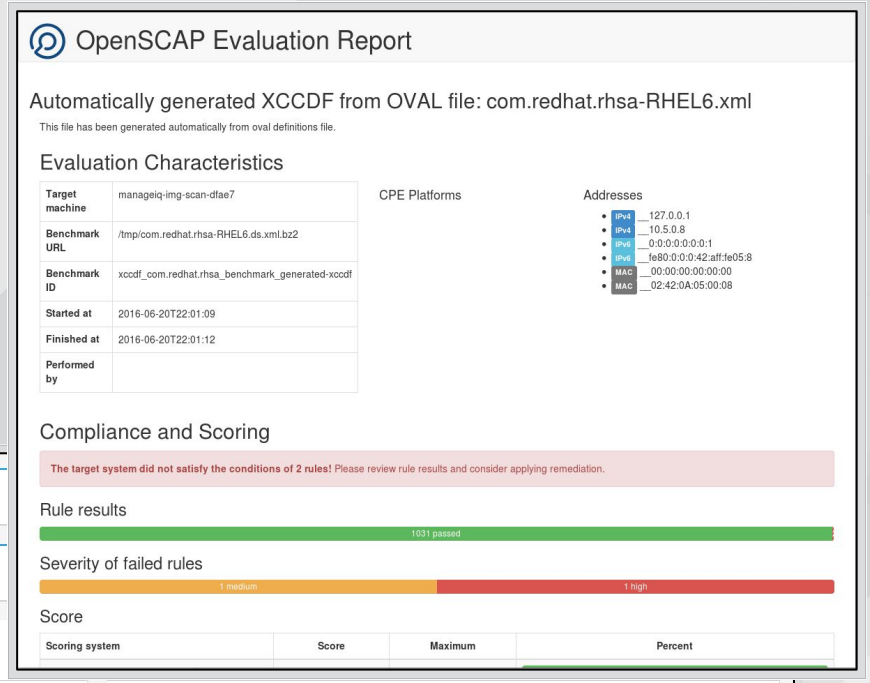


redhat

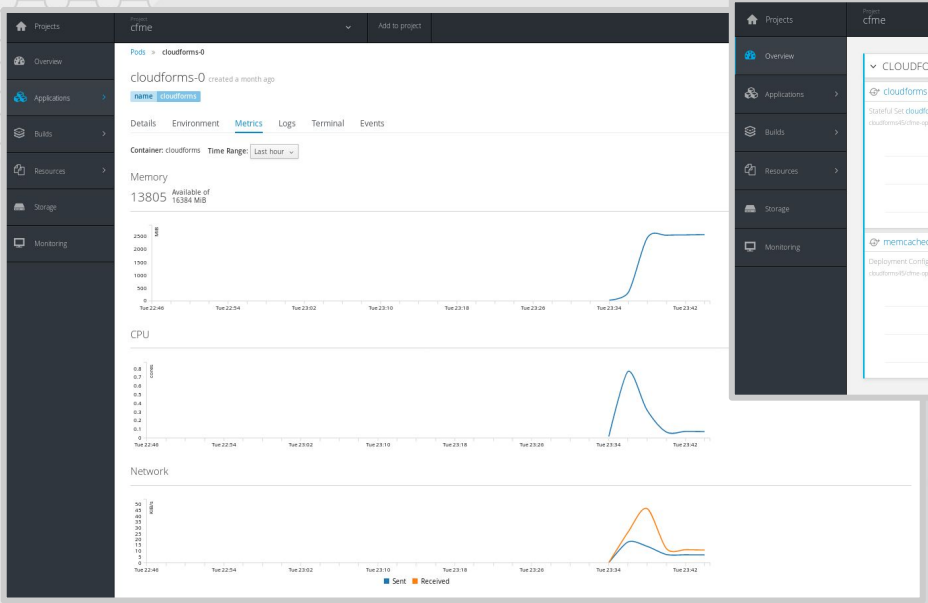
CONTAINER MANAGEMENT

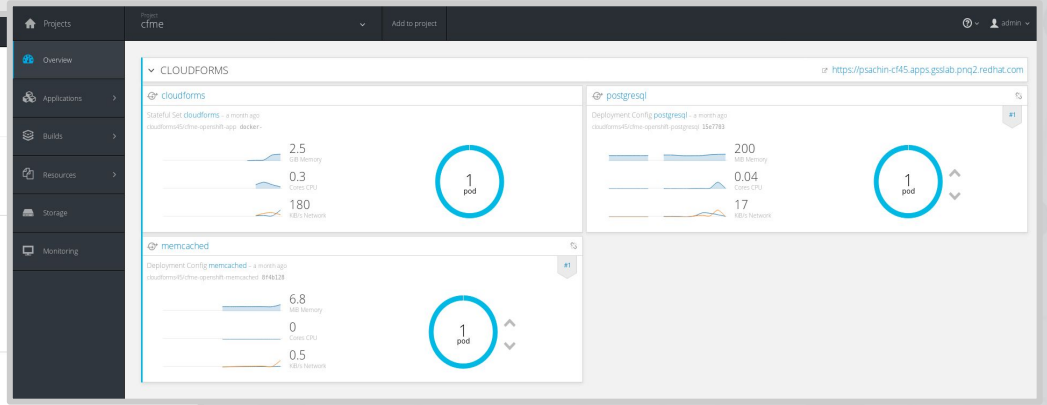
- View connections from the container all the way down through the underlying infrastructure in one interface.
- Apply automation rules and enforce policies for deployed containers.
- Scan containers for known vulnerabilities with OpenSCAP.

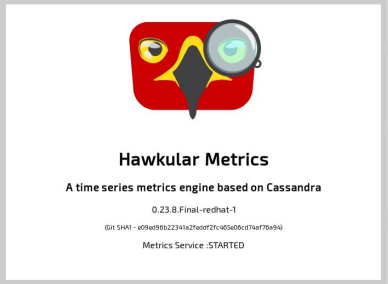




CLOUDFORMS ON OPENSHIFT



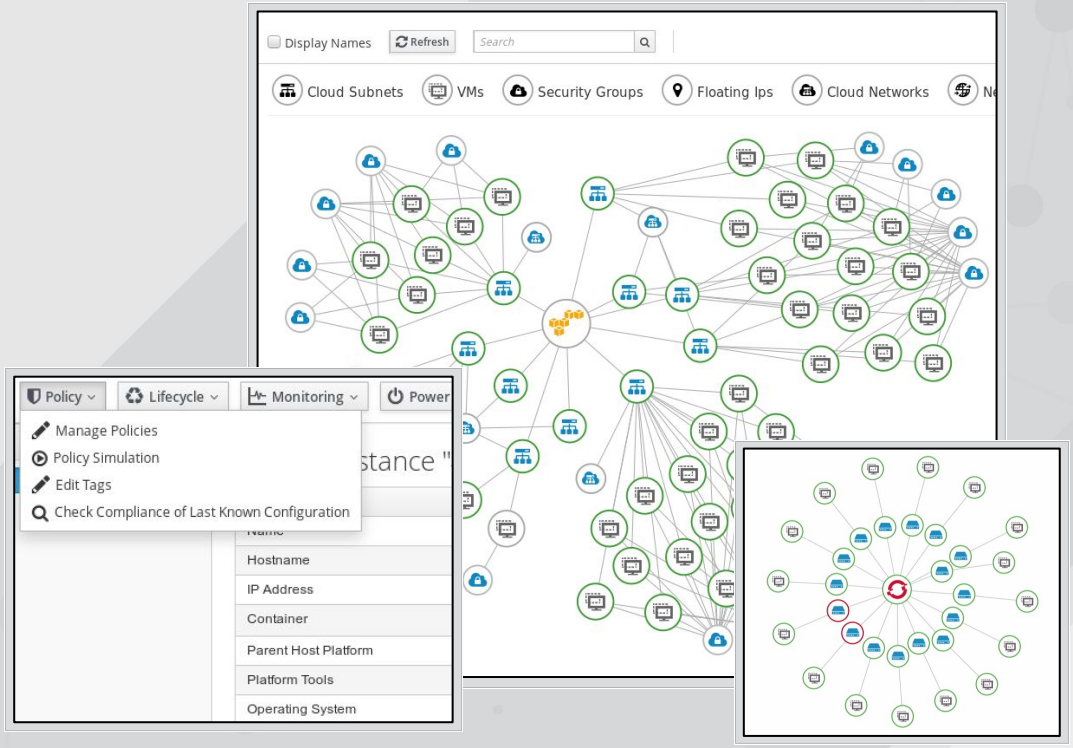




redhat

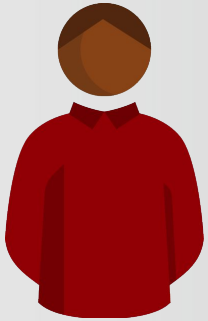
ROOT CAUSE ANALYSIS

- View instance performance and resource usage over time to pinpoint problem initiation.
- Quickly compare system state against known good state or other systems.
- Navigate across relationships and drill down infrastructure layers to identify underlying causes.



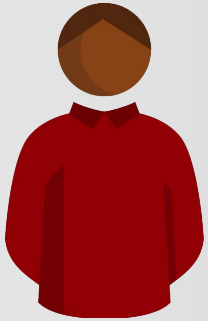
GOVERNANCE AND COMPLIANCE

COMPLIANCE AND GOVERNANCE CHALLENGES



- Monitoring systems so that they remain compliant and secure is time consuming.
- With end user self-servicing, how do I know systems are compliant?
- How to check compliance without “being in the way”?
- How do I govern what resources are consumed and where?
- How do I prevent a huge bill from my cloud provider?

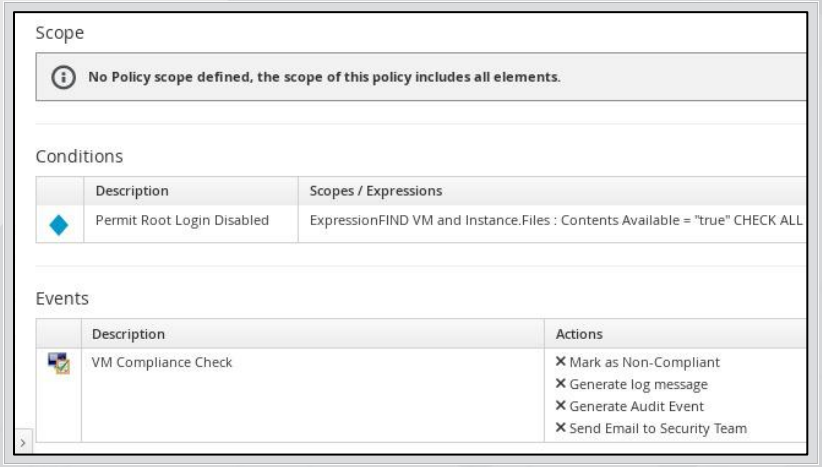
POLICY AND COMPLIANCE WITH CLOUDFORMS

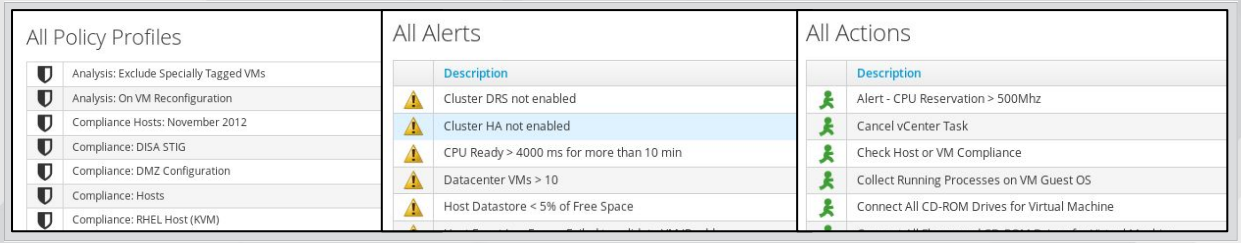


- CloudForms continuously monitors systems so they remain secure.
- Smart State Analysis deeply scans systems to provide policy engine with detailed information.
- Apply policies based on Smart State data without requiring cooperation of users.
- Our automatic provisioning includes automatic placement policies.
- Quotas prevent over-provisioning compute, memory or storage resources.

POLICY ENFORCEMENT

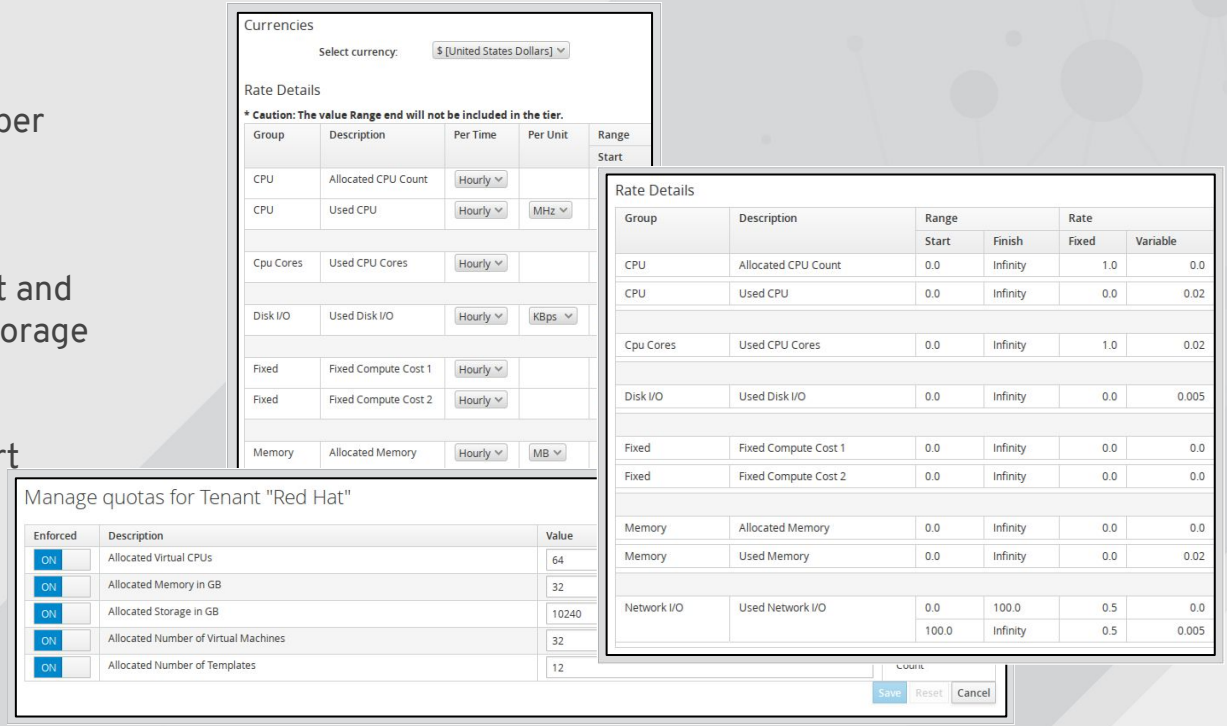
- Continuous discovery and deep SmartState inspection of virtual instances.
- Policy violations can raise alerts or be remediated automatically.
- Policy can be applied uniformly or based on virtual instance criteria.





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.
- Monitor resource usage and report based on workload or tenant.



redhat

SERVICE MANAGEMENT AND SELF SERVICE

SERVICE AUTOMATION CHALLENGES

We can't get systems fast enough!
I'm trying to help the business. IT just slows me down.

Do we have an IP address for this system?
Do we have the resources available for this request?
There's an emergency, I can't work on your request today.
Are you authorized to request these systems?

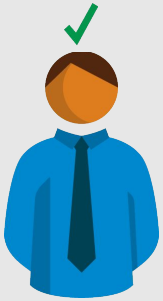
ACTIVITIES REQUIRED

+ **Process requests** for IT resource
+ **Clarify request** and collect needed information
+ **VM creation** from template
+ **Configuration** to desired state
+ **Security** and compliance process
+ **Non-work time** for weekends, emergencies, etc.

= WEEKS OR MONTHS

SERVICE AUTOMATION WITH CLOUDFORMS

I use the self-service portal to request IT resources!
I can get systems configured exactly like I need them.



IP addresses are gathered automatically.
CloudForms checks quotas and available resources.
There's an emergency, I can't work on your request today.
CloudForms takes care of authorization and approvals.

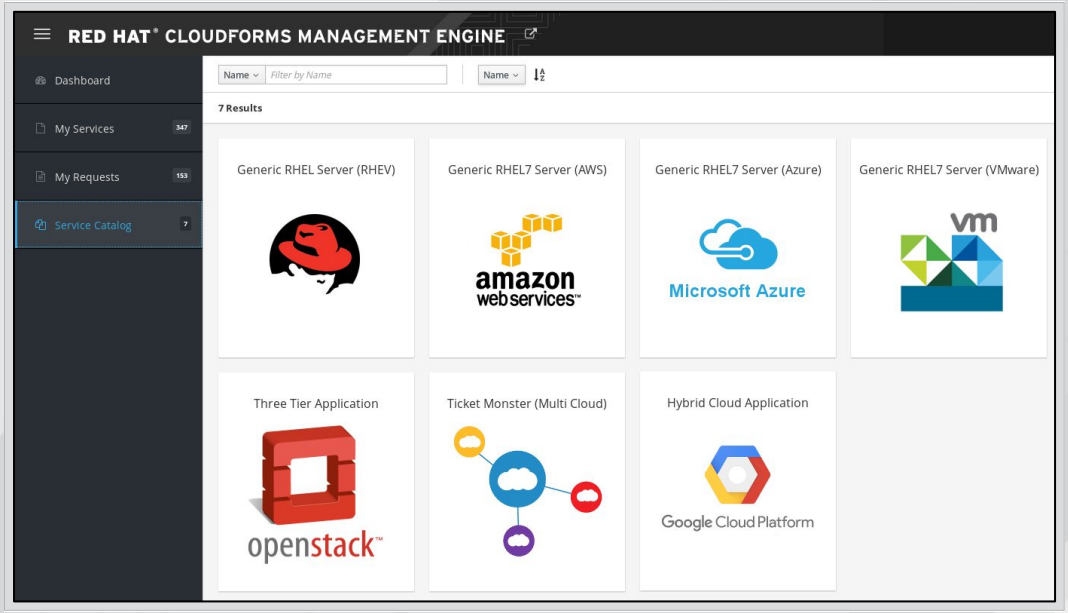
ACTIVITIES REQUIRED

+ **Self-service** catalog
+ **Automated** approval workflow
  + provisioning
  + configuration
  + policy enforcement
+ **No down time** for weekends, emergencies, etc.

= MINUTES

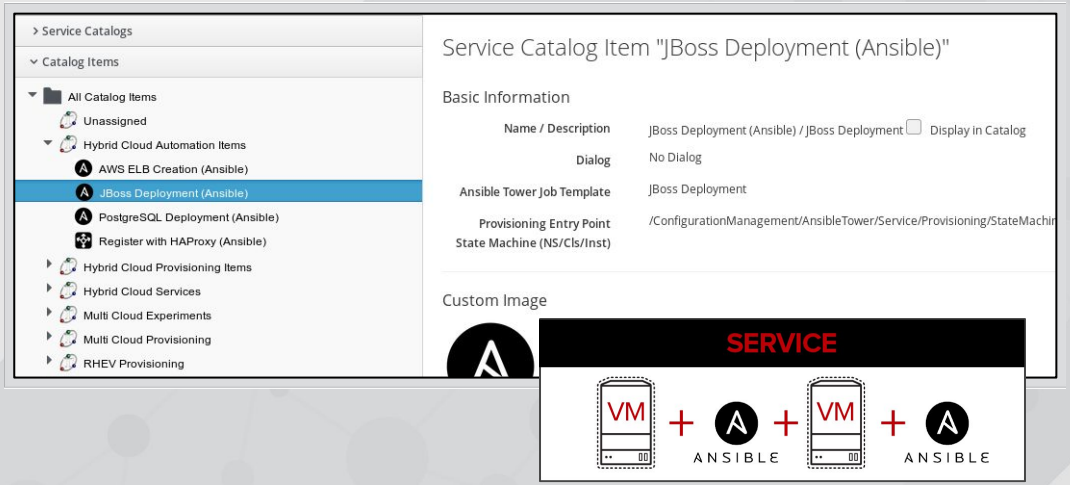
SELF-SERVICE DELIVERY

- 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.

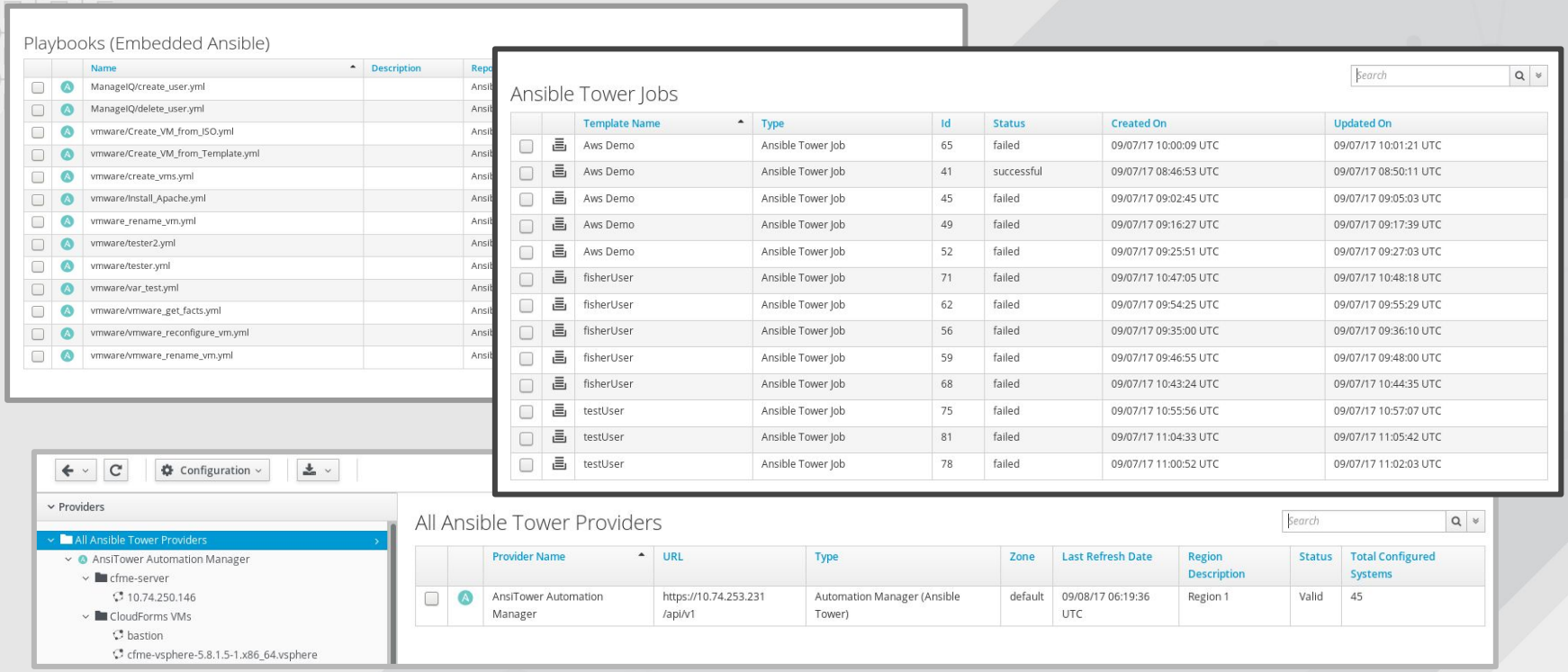


AUTOMATED PROVISIONING

- Automatically deploys and configures requested services on any infrastructure platform.
- Automation steps can be codified in Ansible playbooks or natively in CloudForms.
- Integration to external IT systems allows CloudForms to automate all process steps.



ANSIBLE AUTOMATION



How Cloudforms Automation and Ansible are Different?

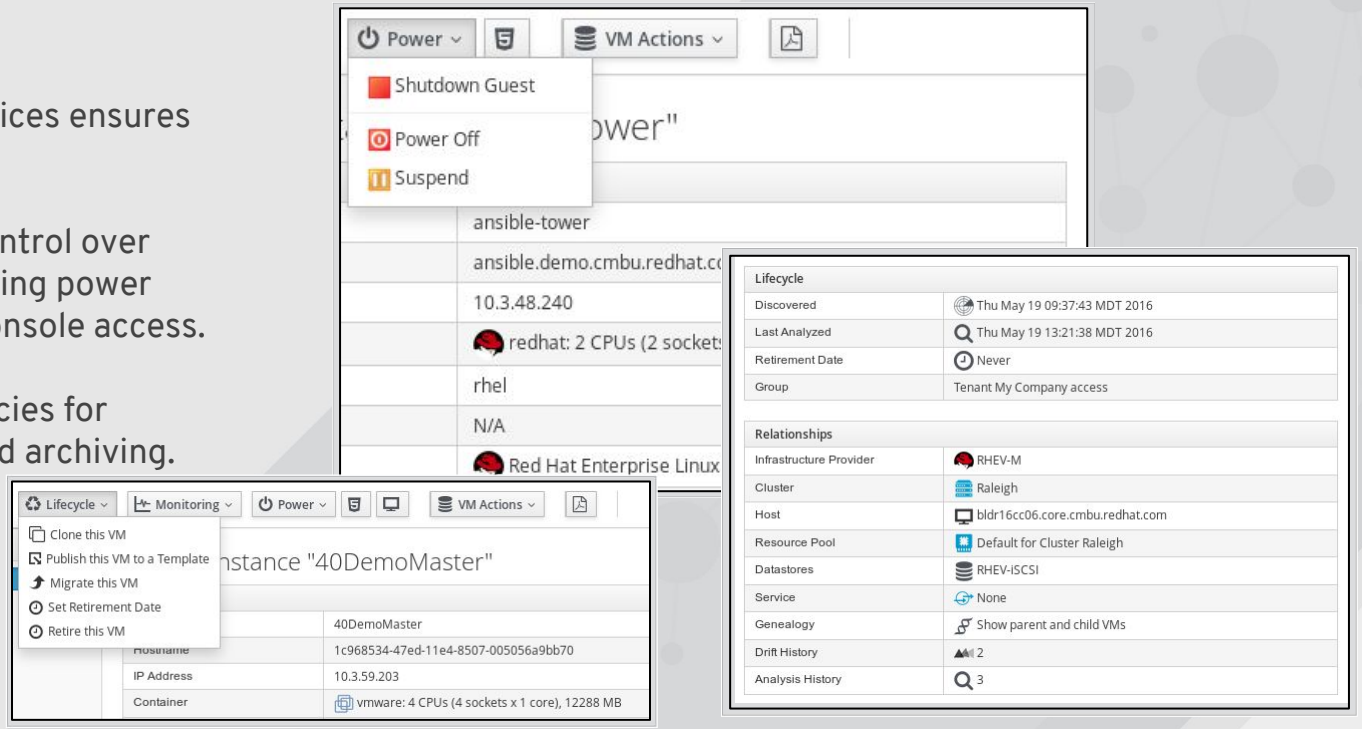
	Ansible Tower	Cloudforms
Primary buyers and people involved in the sales cycle	• Development leadership • IT operators and leaders • Systems Administrators • Enterprise architects • Cyber operations and information security	• Directors/VPs of IT Operations. • Enterprise Architects
Primary users in customer organization	• Developers • IT operators • Systems administrators • Network engineers • Application owners • Cloud engineers	• Development and test teams via self-service • Systems administrators • Service owners • Lines of Business • Security teams
Who is doing the automating	• Systems admins • Application owners • Developers • Network admins • Network engineers • Virtualization admins • Site reliability engineers • Cloud engineers	• IT infrastructure owners • Service owners.
What is being automated	• Any IT process and/or application regardless of platform (Linux, Windows, Unix) • Bare-metal servers • Virtual and cloud servers • Infrastructure deployment • Application deployment and configuration • Network devices	• T service lifecycle management through a self service interface w/ policy based approvals, quotas, and business rules.
Typical sales cycle	2.5 months	9 - 18 months

How Cloudforms Automation and Ansible are Different?

	Ansible Tower	**Cloudforms**
Typical use cases	• Devops, CI/CD • IaaS • Application deployment • Orchestration (Rolling updates, etc.) • Network automation • Tower + other config management (Puppet, Chef, etc.) • Replacing of legacy tools such (i.e, HP SA, BladeLogic)	• AAS+ Self Service. • Operations Management. • IT governance. • IT compliance. • Service management.
Complementary Technologies - What tools are likely to be used in conjunction with this tool?	• Jenkins • Network hardware (load balancers, routers, firewalls, and switches) • GitHub • Atlassian suite • Splunk and other SIEM tools • Other CMPs	• Enterprise service catalogs like ServiceNow ITSM. • CMDBs. • IPAM systems, • Incident and change management systems. • Event monitoring and management systems. • IT financial management systems.
Likely competition - What other products is the customer considering?	• Do-it-yourself (shell scripts, home grown programs) • Puppet • Chef • HPOO/SA • BMC BladeLogic • Various ARA tools (Electric Cloud, UrbanCode, etc.)	• Vmware vRealize Suite. • Cisco CliQr • Scalr • RightScale • ServiceNow ITOM

LIFECYCLE MANAGEMENT

- Ongoing tracking of services ensures continual visibility.
- Complete operational control over service resources, including power operations and virtual console access.
- Automated lifecycle policies for scheduled retirement and archiving.



CLOUDFORMS INTEGRATIONS

CLOUDFORMS INTEGRATIONS

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

redhat.

THANK YOU

plus.google.com/+RedHat

facebook.com/redhatinc

linkedin.com/company/red-hat

twitter.com/RedHatNews

youtube.com/user/RedHatVideos