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Making your on-prem infrastructure look and feel like the cloud

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Solution Architect


IT Operation Today

AGENDA

Red Hat Forum - 09/10/18

IT operations today

Why do I need a management platform?

How can Cloudforms help?

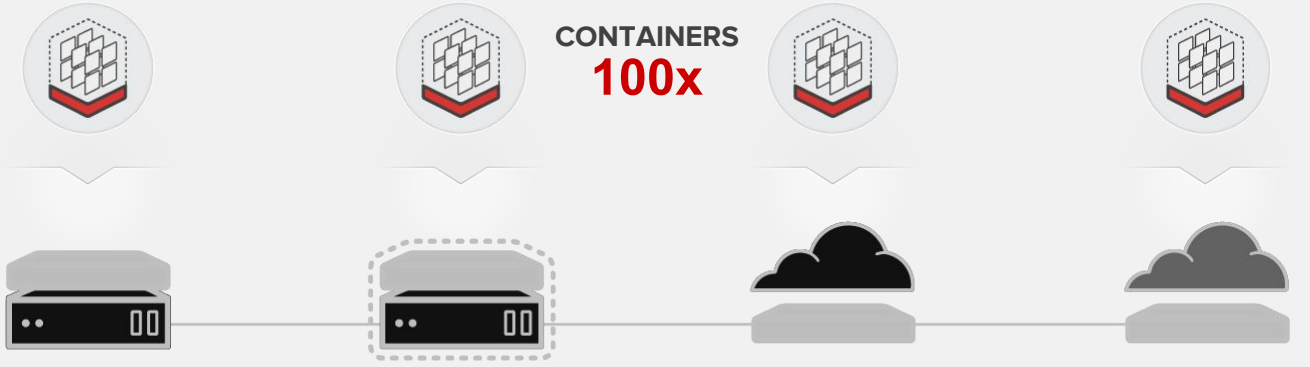
Infrastructure Migration

OPS HAS CHANGED.

I.T. is never static.
Collaboration is now a requirement.
Security is non-negotiable.
The platform is hybrid.
Digital innovation is the goal.

HOW YOU MANAGE OPS HAS TO CHANGE, TOO.

Complexity is going through the roof



SOFTWARE-DEFINED NETWORKING

SOFTWARE-DEFINED STORAGE


Why do I need a
Management Platform?
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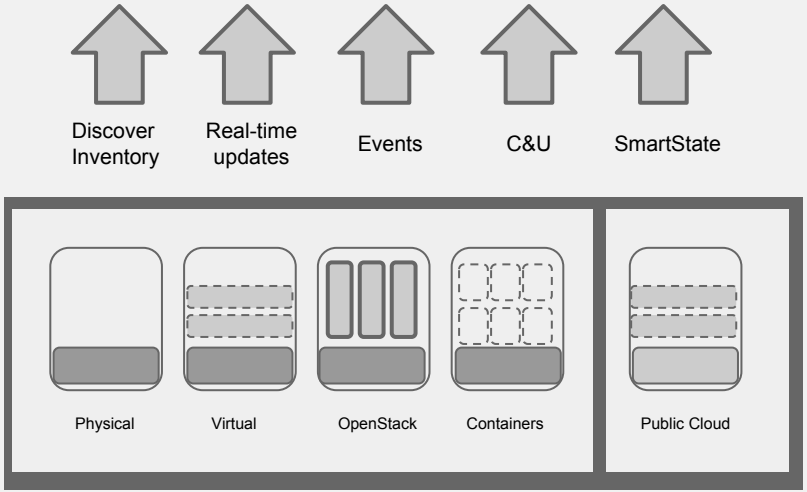
Automation

The power of Ansible Automation

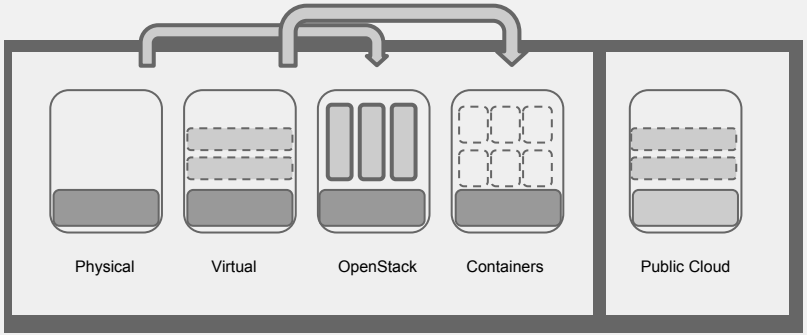
- Integration with Ansible Tower or use embedded Ansible feature
- Use Ansible Playbooks for Service Catalogs, Automate, Buttons, Compliance, Alerts
- Git repositories to store Ansible Playbooks for version control, CI/CD pipelines and auditing
- Leverage existing Ansible roles and modules for third party integration



I.T. Modernization

Management across source and target technologies offers an incremental migration path

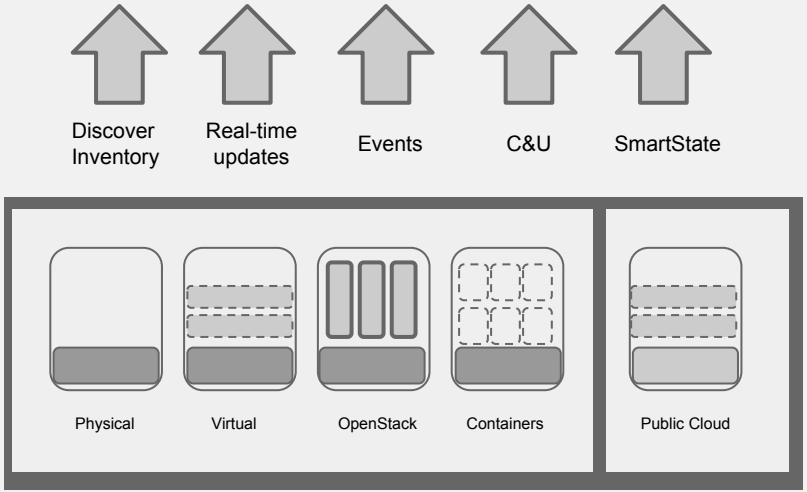
- V2V Migration
- From Legacy to Modern Hypervisor
- Right Sizing



Governance and Compliance

Normalize Compliance Checks across different Technologies

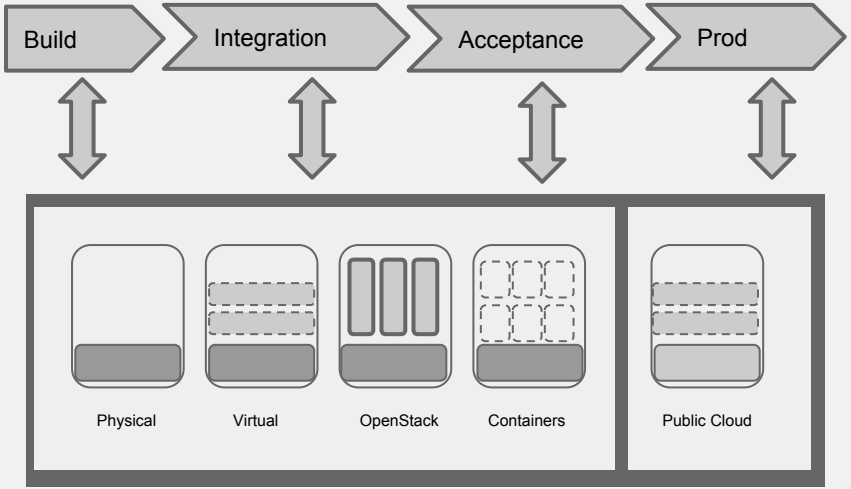
- Define Compliance checks for Hosts, Virtual Machines, Cloud Instances and Containers Images
- Enforce Compliance by triggering Alerts and Actions
- Drift Analysis allows comparison with previous states



DevOps and Agile I.T.

Use Continuous Integration Tools to Deploy Workloads and Services

- Provision and retire test setups
- Drive consistency between different lifecycle stages
- Automated tests ensure Compliance and Governance



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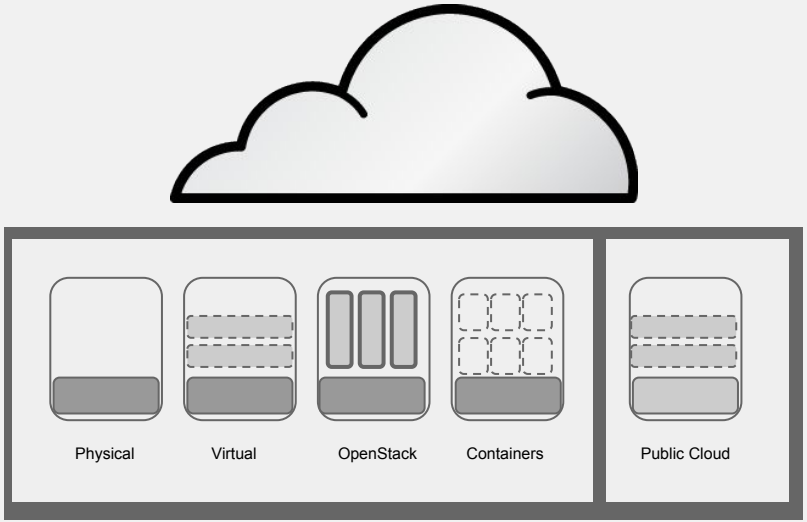
Build Private IaaS

Deliver IT resources as Infrastructure as a Service

- Self Service Portal
- Use VMware, OpenStack, Hyper-V, RHV where appropriate and public cloud, but hide complexity
- Multi-Tenancy, Chargeback, Reporting
- Remove cause for Shadow IT




How can Cloudforms help?
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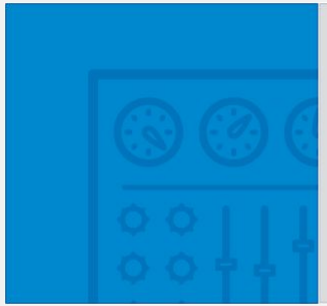
CLOUDFORMS DELIVERS SERVICES ACROSS HYBRID ENVIRONMENTS



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.

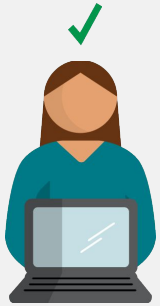
OPERATIONAL VISIBILITY

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

UNIFIED HYBRID MANAGEMENT

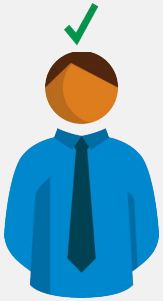
Deploy across virtualization, private cloud, public cloud and container-based environments.

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.

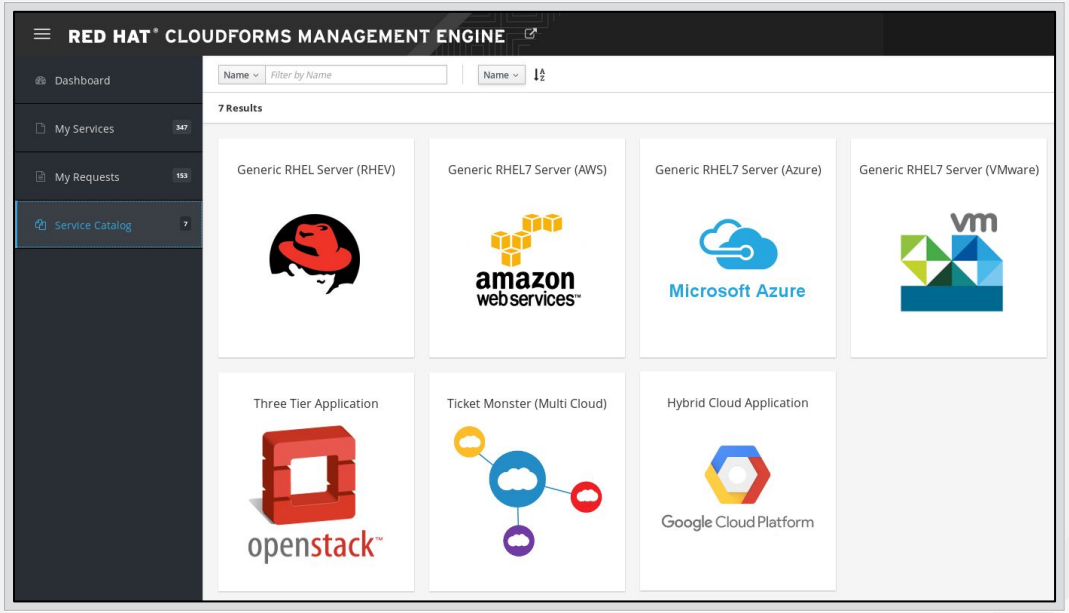
ACTIVITIES REQUIRED

+ **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.



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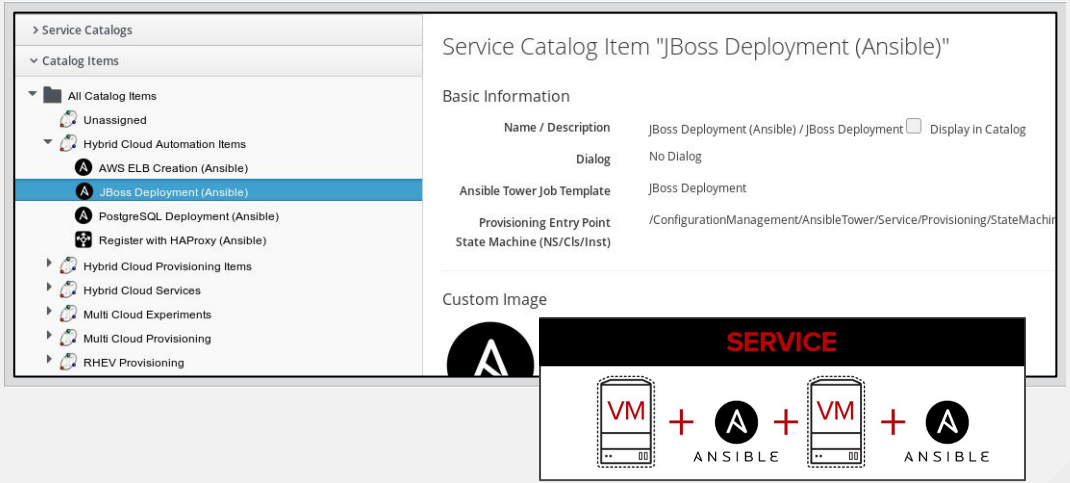
AUTOMATED PROVISIONING

- 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.



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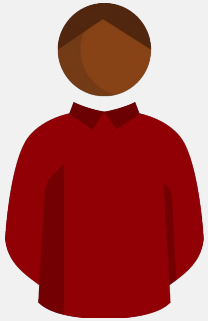
OPERATIONAL VISIBILITY CHALLENGES



- 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 out into the future for planning purposes.

CHALLENGES

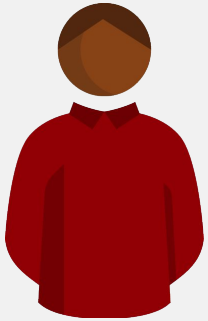
LIFECYCLE MANAGEMENT

RESOURCE OPTIMIZATION

ROOT-CAUSE ANALYSIS

CAPACITY MANAGEMENT

OPERATIONAL VISIBILITY WITH CLOUDFORMS



- We now have complete lifecycle management: provisioning, reconfiguration, deprovisioning, and retirement.
- 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.

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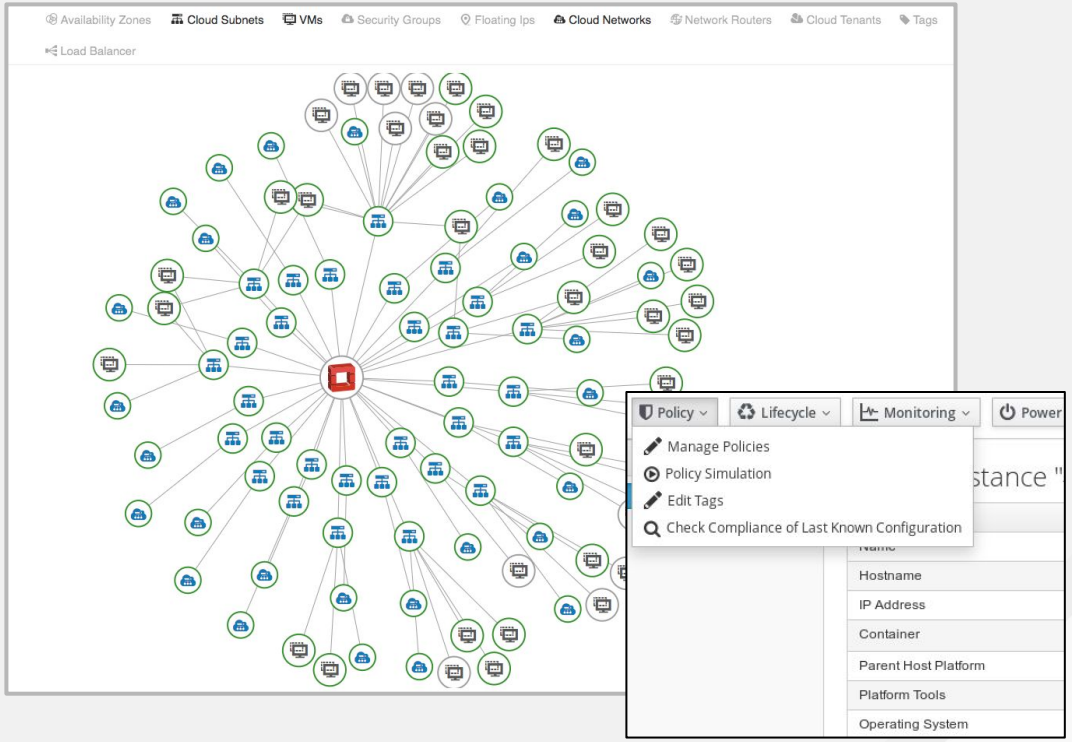
ROOT CAUSE ANALYSIS

- 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.



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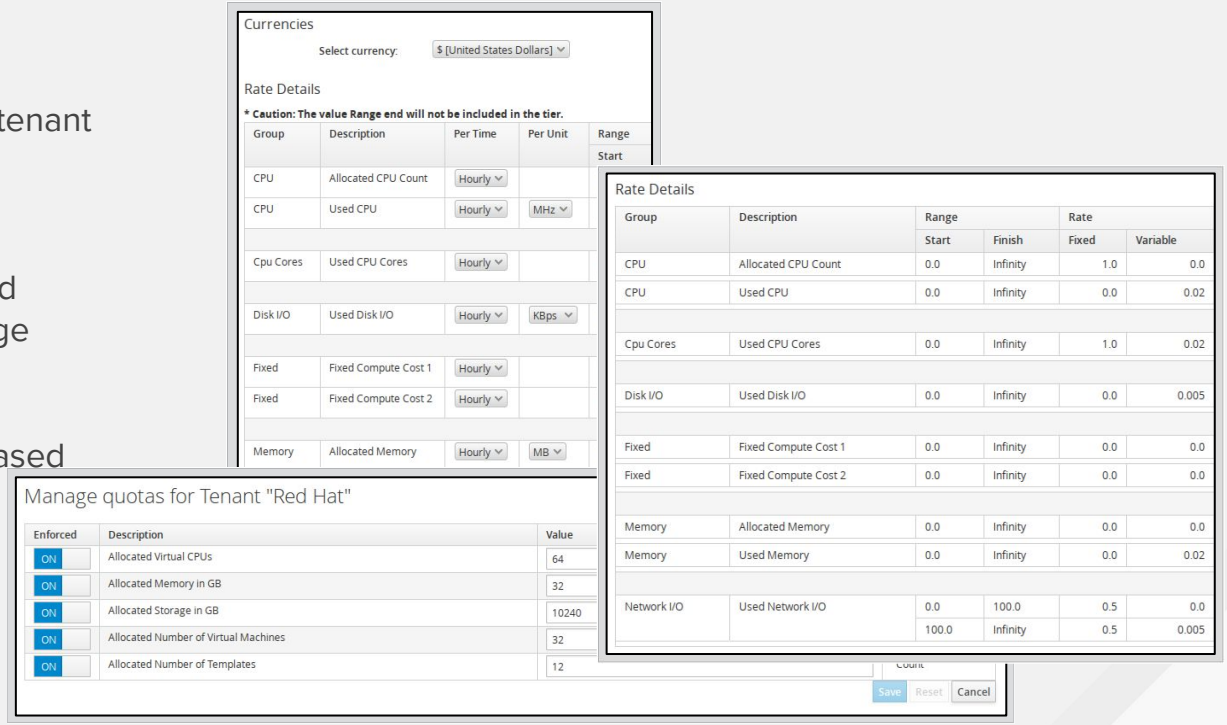
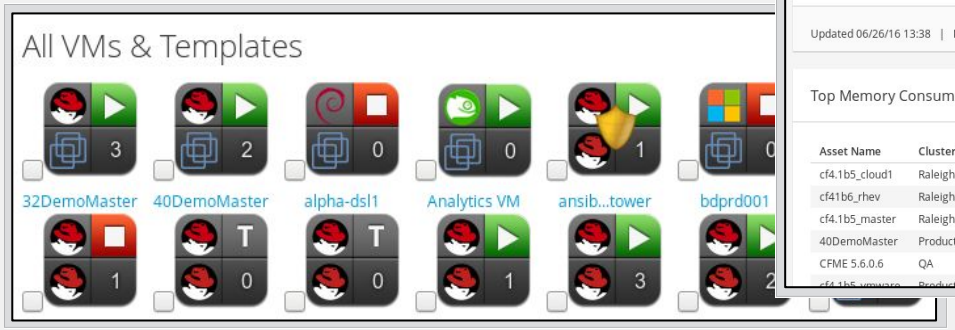
QUOTAS AND CHARGEBACK

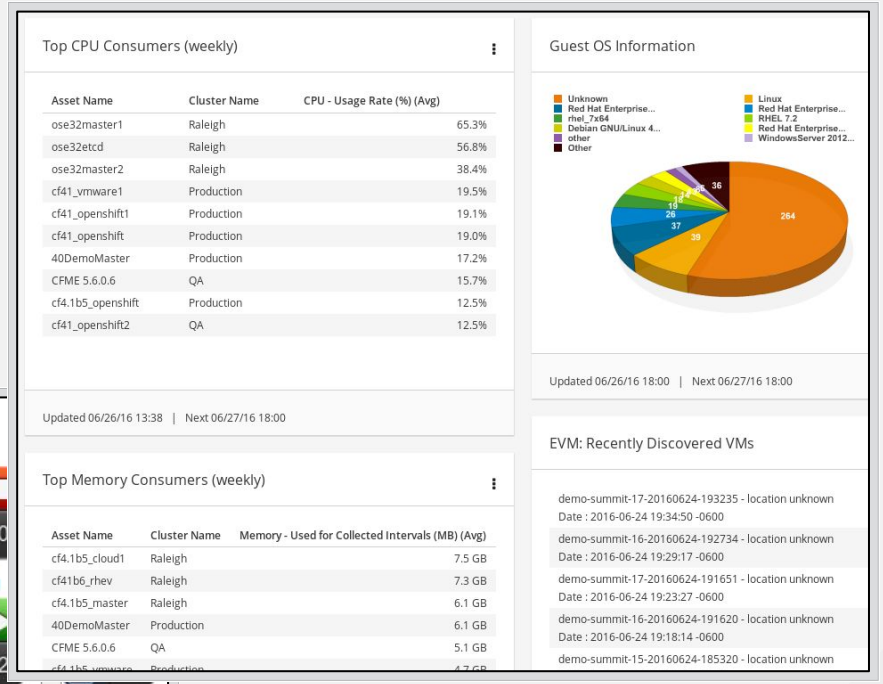
- Rate schedules per platform and per tenant with multi-tiered and multi-currency support.
- Quota set by user, role and tenant and apply to compute, memory and storage resources.
- Monitor resource usage and report based on workload or tenant.



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.





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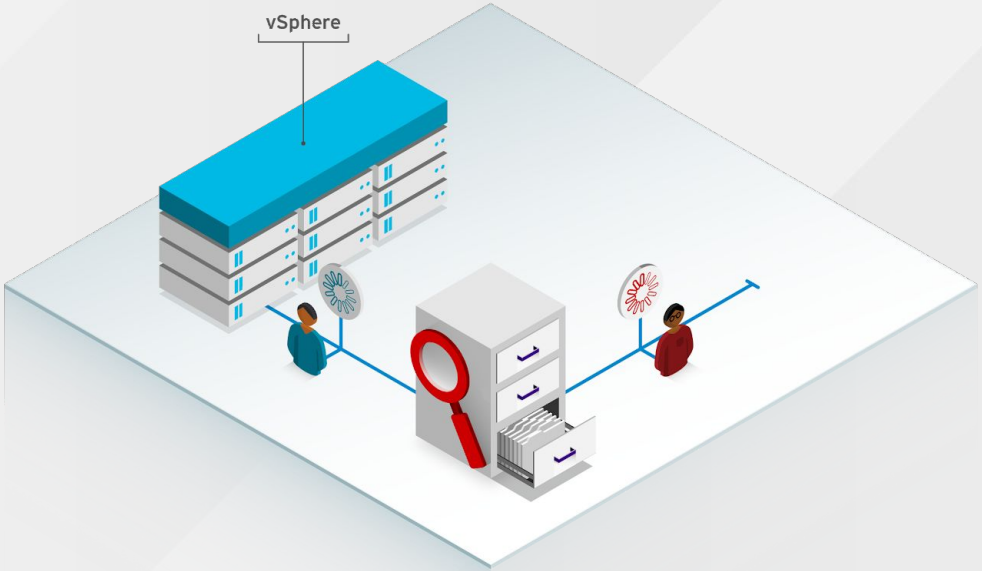
Infrastructure Migration

INFRASTRUCTURE MIGRATION SOLUTION

Discovery and assessment of your migration



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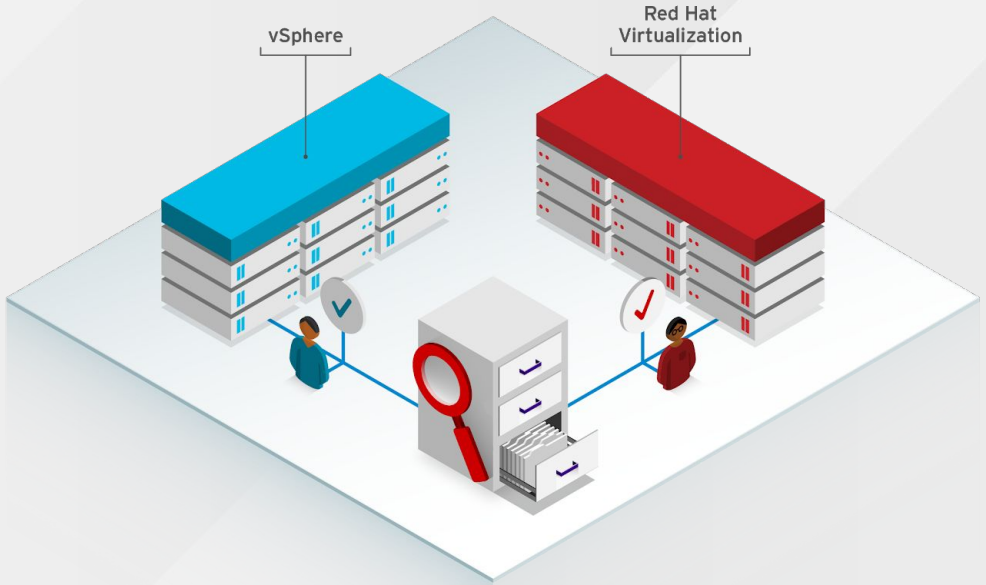
INFRASTRUCTURE MIGRATION SOLUTION

Setting up a Red Hat® Virtualization environment sized for your migration



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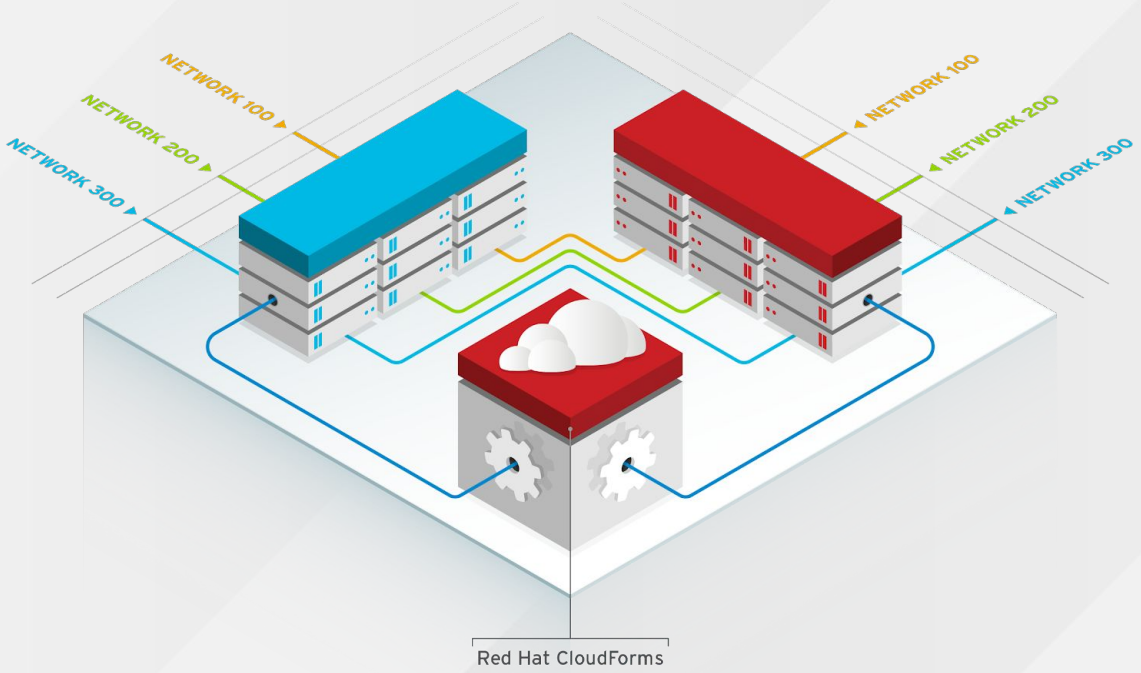
INFRASTRUCTURE MIGRATION SOLUTION

Install Red Hat CloudForms® and configure both providers



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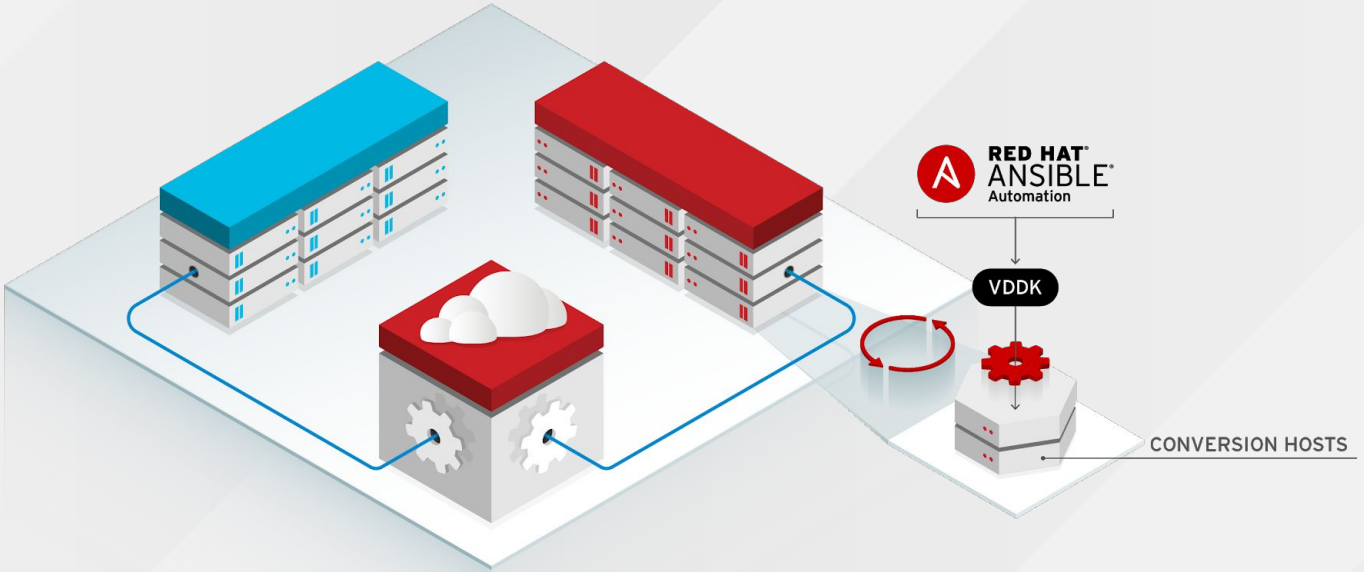
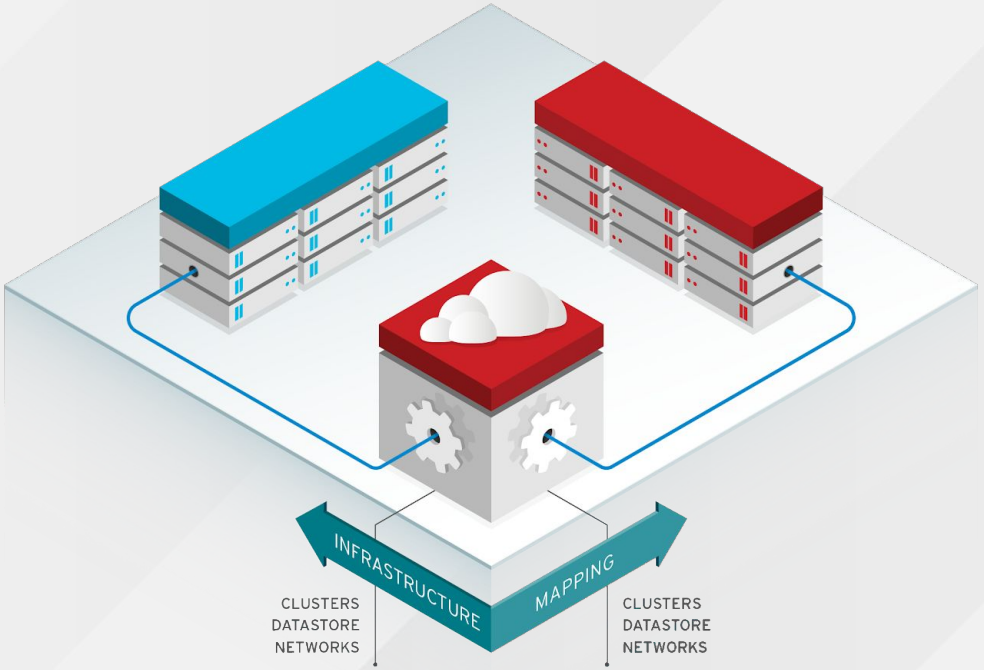
INFRASTRUCTURE MIGRATION SOLUTION

Setup multiple conversion hosts



INFRASTRUCTURE MIGRATION SOLUTION

Use the infrastructure mapping wizard to map both solutions



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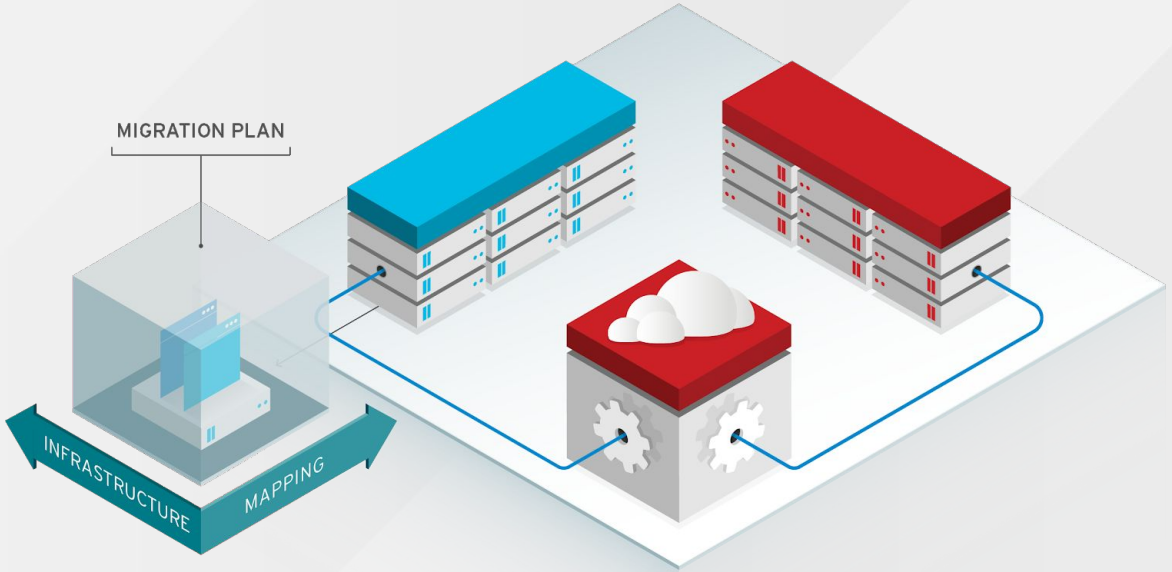
INFRASTRUCTURE MIGRATION SOLUTION

Create your migration plan attached to an infrastructure mapping



Summary

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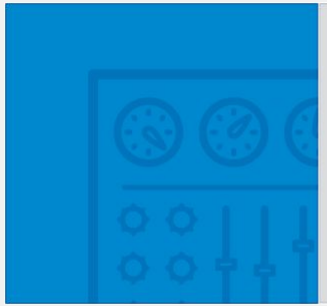

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