RED HAT®
CLOUDFORMS

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RED HAT CLOUDFORMS MANAGEMENT FOR AMAZON WEB SERVICES

DATASHEET

INTRODUCTION

Organizations today must integrate their traditional IT environments with cloud-native platforms like Amazon Web Services (AWS). Using public clouds gives organizations tremendous benefits, but at the same time introduces significant risk. For example, idle servers can rack up large bills very quickly, and extreme care must be taken to properly and securely configure instances.

Red Hat® CloudForms gives IT operations teams the visibility and control they need to utilize the public cloud in a secure and responsible way, while improving service delivery times. The Red Hat CloudForms self-service catalog, combined with full life-cycle management, ensures cloud deployments are standardized and reduces the need for end users to directly access public cloud accounts. It also ensures that requests are within defined quotas and detects idle servers and relationships, reducing virtual instance sprawl.

Finally, Red Hat CloudForms automatically discovers and tracks the usage of AWS resources. This allows it to bring existing AWS deployments under management without requiring process changes. Once under management, Red Hat CloudForms continuously monitors the AWS environment via Amazon CloudWatch and AWS Config, tracking the life cycle and usage of each resource, identifying idle or high-cost instances. It can then provide detailed chargeback reports that can be used to help manage AWS costs.

SELF-SERVICE WITH COMPLETE LIFE-CYCLE MANAGEMENT

Red Hat CloudForms offers a self-service catalog populated with workloads defined by the IT team. Multiple catalogs can be created, providing a different experience for the various users or departments in the business. Requests made through the self-service catalog by end users are checked against established user or group quotas routed for management approval where required.

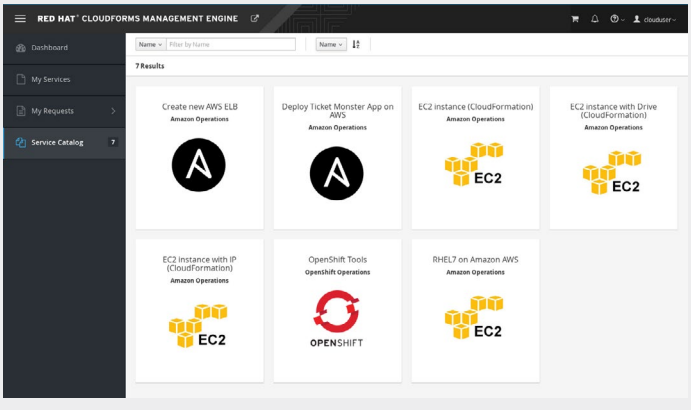

Figure 1. Self-service catalog

When a workload is requested and approved, Red Hat CloudForms provisions the appropriate Amazon machine image (AMI) into the AWS environment and configures it as needed for the specific workload. Configuring can be done via AWS CloudFormation templates, Ansible playbooks, or third-party configuration management solutions. This provides the IT department with a level of control over the AMI instances and the configuration of those instances, which is critical to ensuring the security of applications and data. Finally, Red Hat CloudForms provides complete life-cycle management, giving the IT operations team control over AMI power operations and instance retirement.

POLICY AND COMPLIANCE ENFORCEMENT

Once Red Hat CloudForms is connected to an AWS account, it automatically constructs an inventory by discovering resources, such as Amazon Elastic Compute Cloud (EC2) or Amazon Elastic Load Balancer (ELB) instances, that exist within the account. This inventory is updated every few minutes through the AWS Config service, allowing Red Hat CloudForms to detect new resources quickly, even if those resources are provisioned outside of Red Hat CloudForms.

Using this comprehensive view of the AWS environment, Red Hat CloudForms can track relationships between AMIs, track a particular AMI's genealogy, and even flag AMIs that have been modified from a previously captured state. Red Hat CloudForms can receive instance events and then take automated actions based on those events. This capability is driven by the Red Hat CloudForms policy and compliance engine, which defines conditions and the specific actions that should be taken when they are encountered. Actions may be anything from raising an alert to automatically remediating an issue. Red Hat CloudForms also captures metrics via Amazon CloudWatch so that action can be taken whenever a metric crosses a threshold or goes beyond normal operating range.

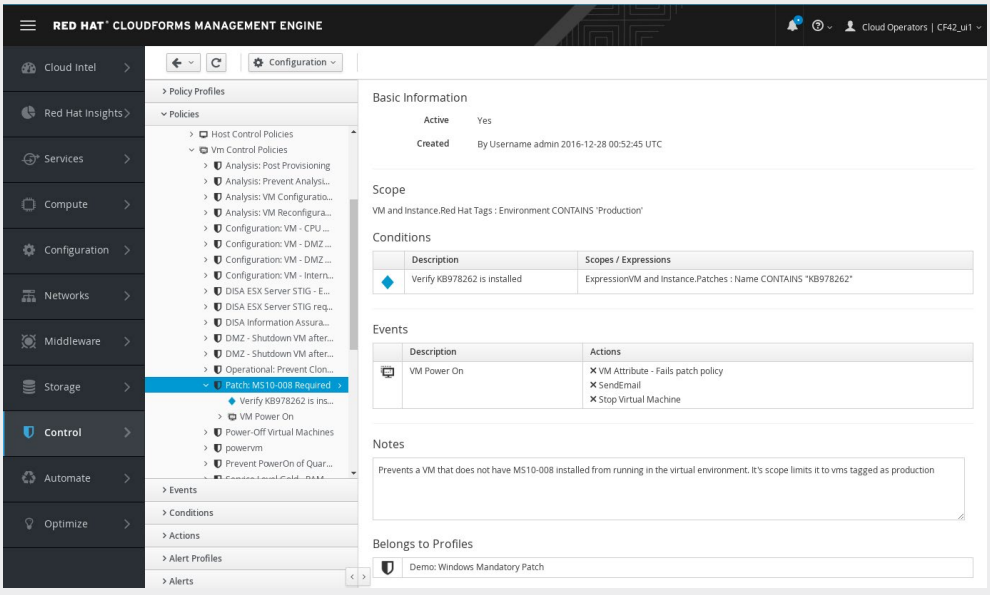

Figure 2. Sample policy

OPERATIONAL EFFICIENCY

With Red Hat CloudForms' comprehensive view of the AWS environment, IT operations can gain greater insight and budgetary control. By capturing events and resource usage over time, Red Hat CloudForms provides utilization reports for expense tracking as well as chargeback to the users or departments. Red Hat CloudForms reduces unnecessary AWS expenses by tracking EC2 instances and automatically triggering retirement processes when an EC2 instance goes unused for an extended period of time. In addition, Red Hat CloudForms integrates with Amazon Identity and Access Management, allowing IT organizations to use the native Amazon system to securely control access to AWS services.

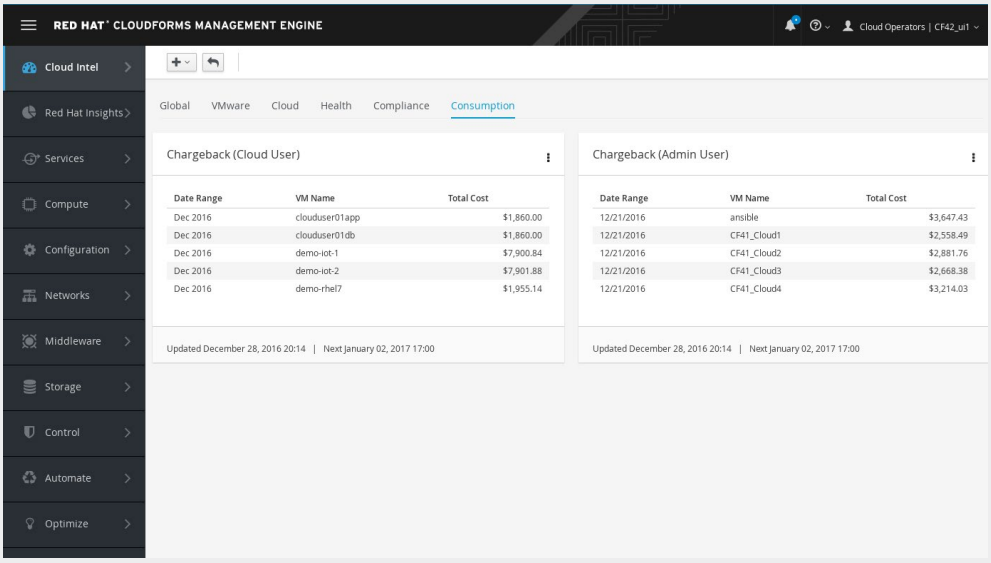

Figure 3. Sample capacity, performance, and chargeback report

CONCLUSION

Red Hat CloudForms provides a complete management platform for both your traditional on-premise infrastructure and AWS, providing the same self-service capability, automated provisioning and policy enforcement, and comprehensive operational insights across both environments. Red Hat CloudForms reduces the IT staff effort required to manage AWS services while maintaining control over costs and policy compliance.

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DATASHEET Red Hat CloudForms management for Amazon Web Services

CLOUDFORMS CAPABILITIES FOR AWS

Managed AWS services	EC2, ELB
Discoverable AWS services	EC2, ELB
Continuous discovery	Yes, including AWS resources provisioned outside of Red Hat CloudForms
Event capture	Instance-specific events, maintains event timeline
Metrics capture	Instance count, instance utilization
Provisioning	CloudFormation template, private AMI to instance
Policy enforcement	Instance enforcement
Compliance check	Instance compliance
Orchestration	Provision a single AMI or multiple AMIs, including an application stack with Ansible or third-party tools
Operations	Virtual machine (VM) power operations and VM retirement
Reporting	Capacity and utilization, trending, performance
Chargeback	Tie Red Hat CloudForms rates to EC2 instance types
Troubleshooting	Instance drift comparison, relationship tracking

ABOUT RED HAT

Red Hat is the world's leading provider of open source software solutions, using a community-powered approach to provide reliable and high-performing cloud, Linux, middleware, storage, and virtualization technologies. Red Hat also offers award-winning support, training, and consulting services. As a connective hub in a global network of enterprises, partners, and open source communities, Red Hat helps create relevant, innovative technologies that liberate resources for growth and prepare customers for the future of IT.

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