Hybrid cloud cost management

Challenges, opportunities, and best practices

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ENTERPRISE SOFTWARE DEPLOYMENT FORECAST 2020

HYBRID CLOUD IS THE NORM

SOURCE: 451 Research, Voice of the Enterprise: Cloud, Hosting and Managed Services, Workloads and Key Projects 2018
HYBRID CLOUD DOMINATES ENTERPRISE IT STRATEGIES

HYBRID CLOUD IS THE GOAL:

58% of enterprise are moving to hybrid IT environments that integrate on premises systems and off premises cloud and hosted environments

SAAS GROWTH EXPECTED:

32% of businesses expect SaaS to be the largest area of growth in IT spending in 2018

Source: 451 Research Voice of the Enterprise Cloud, Hosting and Managed Services Budgets and Outlooks 2017
THE CLOUD IS EVOLVING

TOTAL MARKET CAGR
2016-2021 (IaaS, PaaS, SaaS)

+21.9%

Source: IDC, Worldwide and Regional Public IT Cloud Services Forecast, 2018–2021, #US43625818
"As multicloud architectures become mainstream, enterprise customers need better cloud management software and SaaS options to help them automate cloud operations, share IT resources, match workloads with appropriate cloud features, and control cloud costs and governance."

Source: Mary Johnston Turner, IDC research vice president for Cloud Management.

MULTICLOUD CHALLENGE

How do I centralize functions across disparate clouds?

Consumption

Policy & Governance

Cost Management & Billing

Workload Placement
RED HAT HYBRID CLOUD MANAGEMENT
Govern, automate, and manage multicloud environments

CLOUD FORMS
On-premises IT Lifecycle Automation:
- Policy driven private cloud provisioning and Day 2 operations
- Capacity Planning

CATALOG
- Unified multicloud catalog
- Easy consumption of cloud IT services
- Frictionless governance of content to users

COST MANAGEMENT
- Multicloud cost transparency
- Cost optimization and analytics for rightsizing, consumption and forecasting
- Effectively communicate cost with consumers and improve trust
COST VISIBILITY
Museo della Scienza e della Tecnologia “Leonardo da Vinci” [CC BY-SA 4.0 (https://creativecommons.org/licenses/by-sa/4.0)]
COST ANALYSIS
MORE THAN VM
UNCLUTTERING

data:

information:

knowledge:

wisdom:

(*) Self elaborated based on Genentech Information meme
MAKING SENSE OF COSTS
CHARGEBACK / SHOWBACK

OPENSHIFT

CPU
Memory
Storage

OPENSHIFT
Request
Actual Usage
Utilization %

OPENSHIFT
Pod
Namespace
Node
Cluster

CHARGEBACK / SHOWBACK
COST MANAGEMENT

Cost distribution
Cost modification and markups
Cost distribution

OPENSHIFT

RED HAT CLOUDFORMS VIRTUALIZATION

AWS

Microsoft Azure

#redhat #rhsummit
CHARGEBACK / COST MANAGEMENT

**CHARGEBACK**

- REPORTING, WEIGHTED
- BASED ON METRICS
- CONSUMPTION ESTIMATE
- TO BE PLUGGED INTO BI TOOLS
- PREDEFINED USE CASES

**COST MANAGEMENT**

- COMPREHENSIVE, ANALYTICS
- BASED ON METRICS & METADATA
- COST & USAGE OPTIMIZATION
- FORECASTING & BUDGETING
- EXTENDED USE CASES
COST MANAGEMENT
BEST PRACTICES
ANALYZE

- Generate a baseline through budgets
- Know what to expect: know your numbers
- Review the data often
- Use forecasts

- Understand your workloads and requirements for SaaS
- Not everything is equal
- Compare, compare, compare!
MAP DATA TO YOUR ORGANIZATION

- Link the service to the business through metadata
- Make it mandatory: enforce use of tags and policies
- Try to be consistent between providers
- Shut down any service that is not tagged
OPTIMIZE

- Manage your waste
  - Identify instance, storage, snapshots, not used
  - Shut down instances when not needed
  - Find the right usage %

- Choose your payment terms:
  - Reserved Instances
  - Spot instances
  - On-demand
  - Back on-premises?

- Optimize within the service:
  - Use optimized instances (storage, memory, compute, AI)
  - Review the new generation of VM
  - Choose the right size

- Improve through Machine Learning
DEMO
Augment insights of OpenShift metering on the four footprints. Chargeback from metrics based on projects / clusters and tags.

Provide insights about how OpenShift costs are distributed from the raw costs accrued in AWS.

Being able to provide insights about the cost of all AWS services, using tags to enable reporting meaningful for the business.
COST MANAGEMENT THEMES

General Availability

Markups & Dynamic Pricing
Being able to define pricing based on cloud prices and markups

New sources
Add support for CloudForms and additional clouds

Forecasting & Budgets(*)
Forecast usage and cost and compare them with defined budgets

Third Party Access (API)

Optimization(*)
THANK YOU

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