AWS re:Invent

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Driving a cost-conscious culture with FinOps

Lucas Paratore
Product Line Manager
CloudHealth by VMware

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Agenda

Introduction to CloudHealth

Evolution of FinOps

Tackling FinOps with CloudHealth

Customer stories

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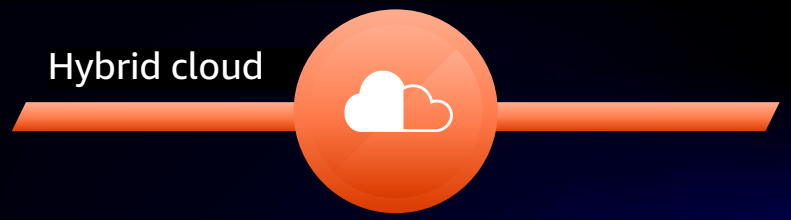
VMware Cloud management strategy

Drive application-aware cloud management

Expand public cloud leadership

Enable VMware Cloud



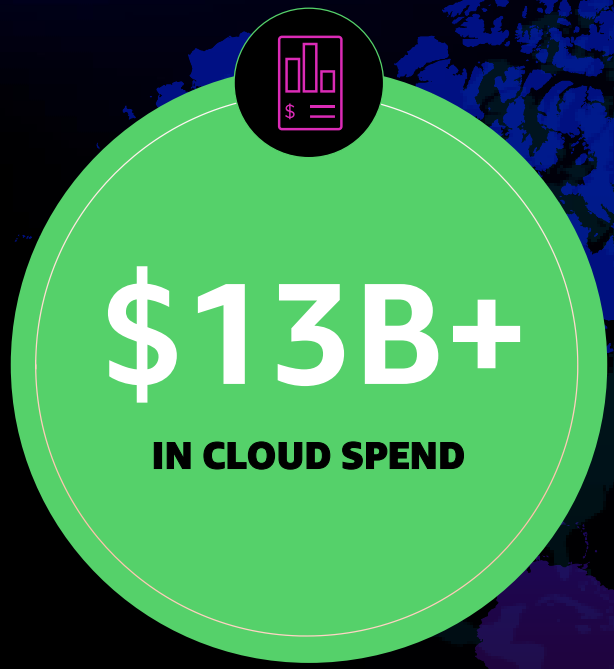


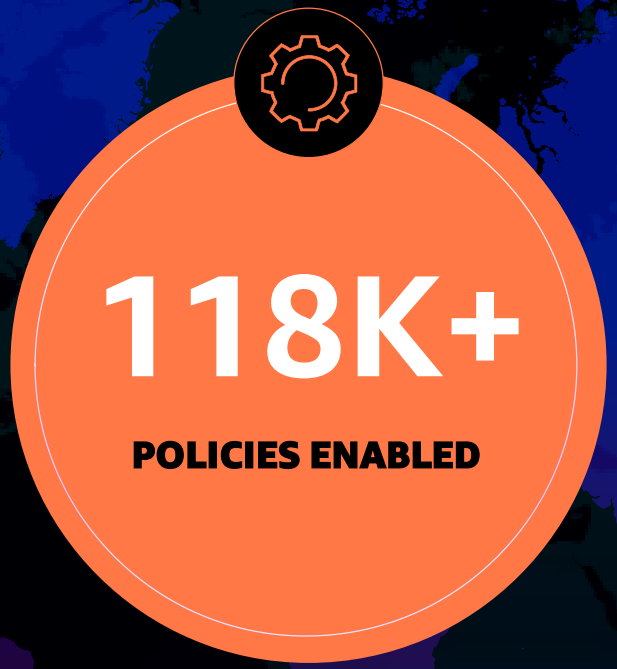
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CloudHealth by VMware Suite

*A GLOBAL LEADER IN MULTI-CLOUD MANAGEMENT







Financial management

- Report spend by team and application
- Drive accountability against budgets
- Align cloud spend to business KPIs

Operations

- Create custom policies
- Automate daily operations
- Increase resource efficiency

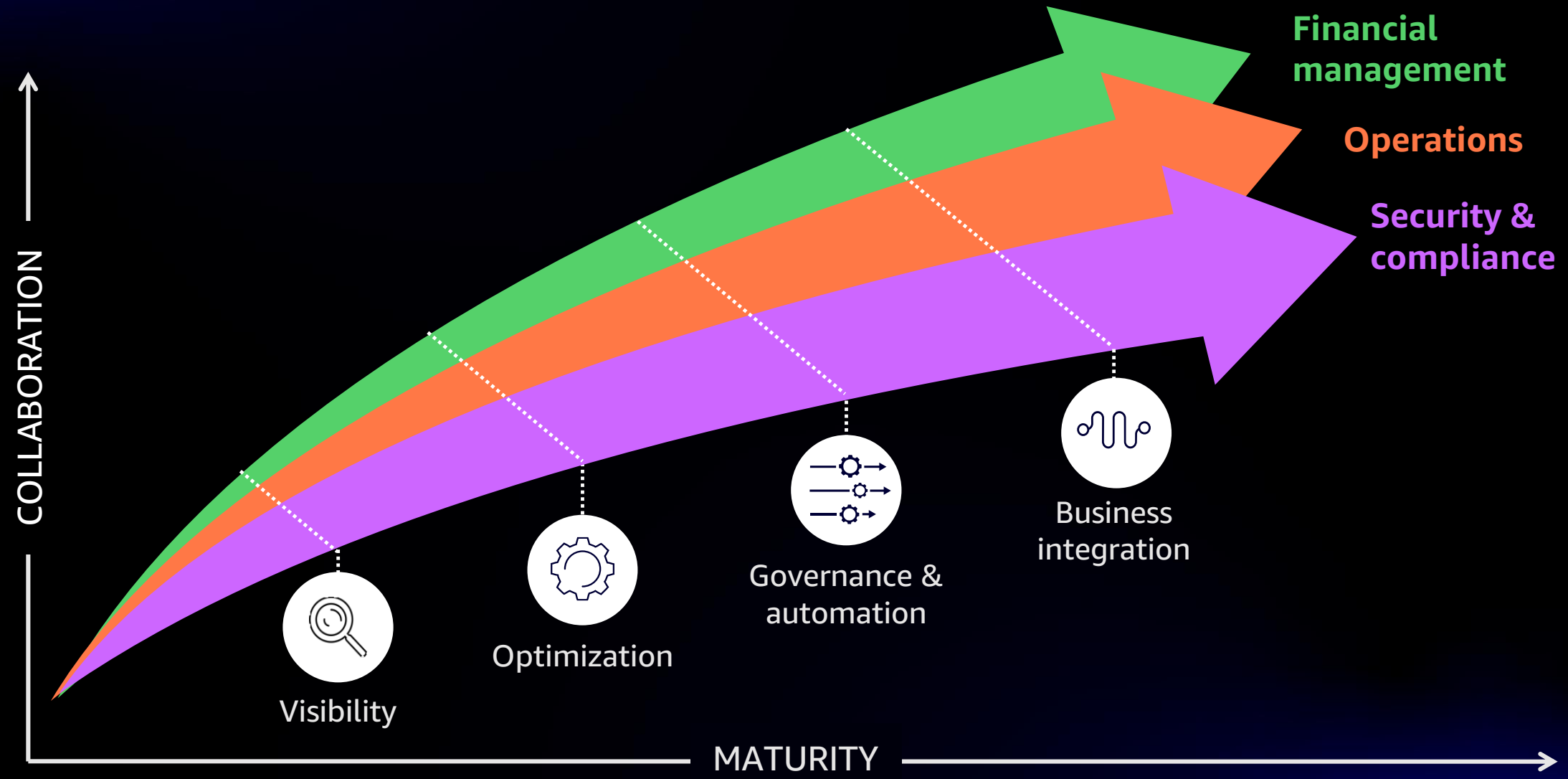
Security & compliance

- Detect misconfigurations in real time
- Prioritize risk & remediate violations
- Scale best practices as you grow

* Named a Leader in “The Forrester Wave: Cloud Cost Management and Optimization, Q4 2020” report

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Deliver on your cloud strategy



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Our cloud management maturity model

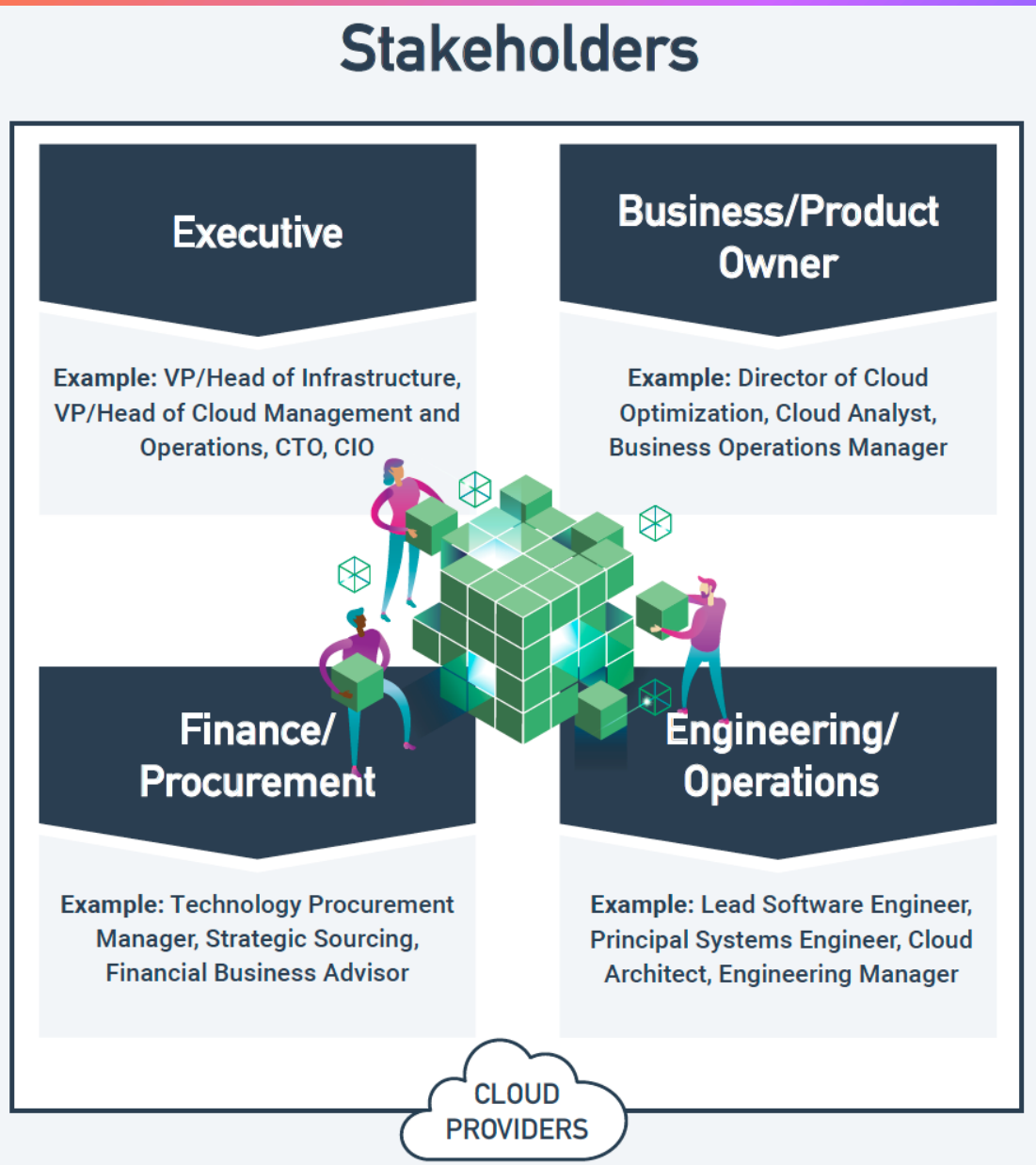


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What is FinOps?

FinOps is the operating model for the cloud

It is the practice of bringing financial accountability to the cloud, enabling distributed teams to make business trade-offs between speed, cost, and quality



Source: FinOps Framework by FinOps Foundation (CC BY 4.0)
finops.org/introduction/what-is-finops/

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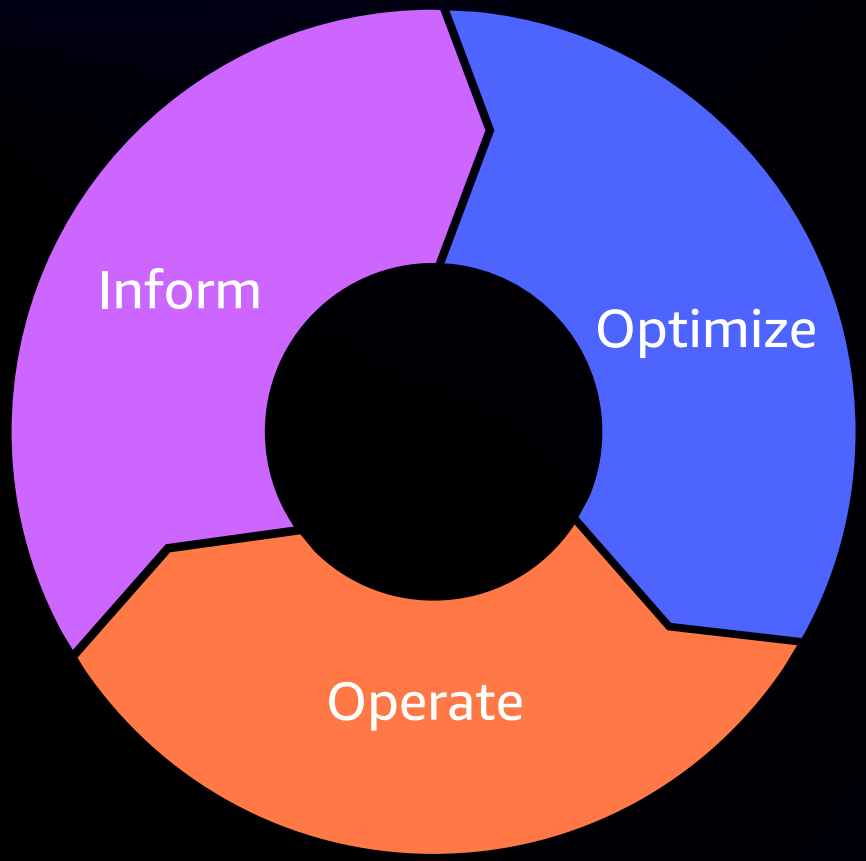
FinOps principles

1. Teams need to collaborate
2. Everyone takes ownership for their cloud usage
3. A centralized team drives FinOps
4. Reports should be accessible and timely
5. Decisions are driven by the business value of the cloud
6. Take advantage of the variable cost model of the cloud

Source: FinOps Framework by FinOps Foundation (CC BY 4.0). finops.org/introduction/what-is-finops/

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FinOps phases



1. INFORM

Gives you visibility for allocation and for creating shared accountability

2. OPTIMIZE

Empowers your teams to identify and measure efficiency

3. OPERATE

Defines and executes processes that drive toward business goals

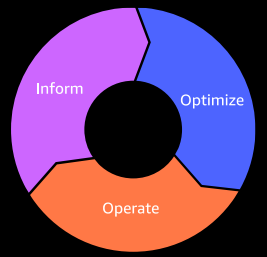
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FinOps domains

KEY CAPABILITIES IN EACH DOMAIN



INFORM

Understanding cloud usage and cost

- Resource metadata and tagging
- Resource hierarchy
- Shared cost management

Performance tracking & benchmarking

- Budget alerting
- Commitment tracking
- Benchmark against peers

OPTIMIZE

Real-time decision-making

- Deliver timely reporting to stakeholders
- Data ingestion and visualization
- Anomaly detection

Cloud rate optimization

- Rightsizing recommendations
- Commitment discounts
- Usage volume discounts

OPERATE

Cloud usage optimization

- Modernize workloads with containers
- Policy management
- Automation

Organizational alignment

- Develop KPIs
- Trending and variance analysis
- Ongoing reviews
- Continuous improvement

Source: FinOps Framework by FinOps Foundation (CC BY 4.0). finops.org/introduction/what-is-finops/

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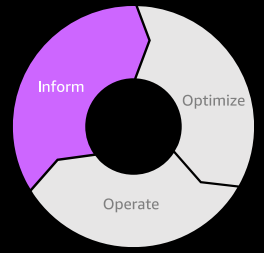
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Understand cloud usage and cost

RESOURCES AND ORGANIZATION







CloudHealth features

- Perspectives
- FlexReports

CloudHealth benefits

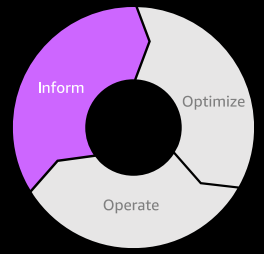
- Dynamically create application definitions and map costs to them
- Display usage and costs relevant to you and your team with a powerful SQL engine

aws

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Understand cloud usage and cost

SHARED COST MANAGEMENT



Tag management

Tag Key	Cloud	Used?	Distinct Values	Asset Count
Kubernetes Cluster App A	AWS	Y	19	6364
Prod Environment 1	AWS	N	5	5
Cost Center C	Other	Y	76	23
Project Venus	Other	Y	43	692

Custom Line Items

Rule Name: Split credits
Cloud: AWS
Accounts: All
Region: All

Type
- (●) Credit: decreases total cost
- ( ) Charge: increases total cost

Frequency
- ( ) One Time
- (●) Monthly Recurring

Cost Details
- ( ) Existing Cost
- (●) Manually Entered Cost

$ Amount

Allocate based on:
Select value
- Account Spend
- Service/Service Item Spend
- Amortized Spend
- Flat amount

Cost Reallocation

Rule Name: Snapshot Costs
Description: Allocate snapshot cost proportional to Amazon EBS testing

Reallocate From:
INDIRECT COST | PERSPECTIVE GROUP

Reallocate To:
ALL GROUPS | SPECIFIC GROUPS

Perspective: Owner
Percentage: 100%

Include credits in Reallocation
On

CloudHealth features

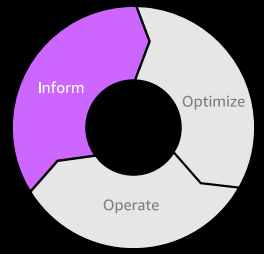
- Tag management
- Custom line items
- Cost reallocation

CloudHealth benefits

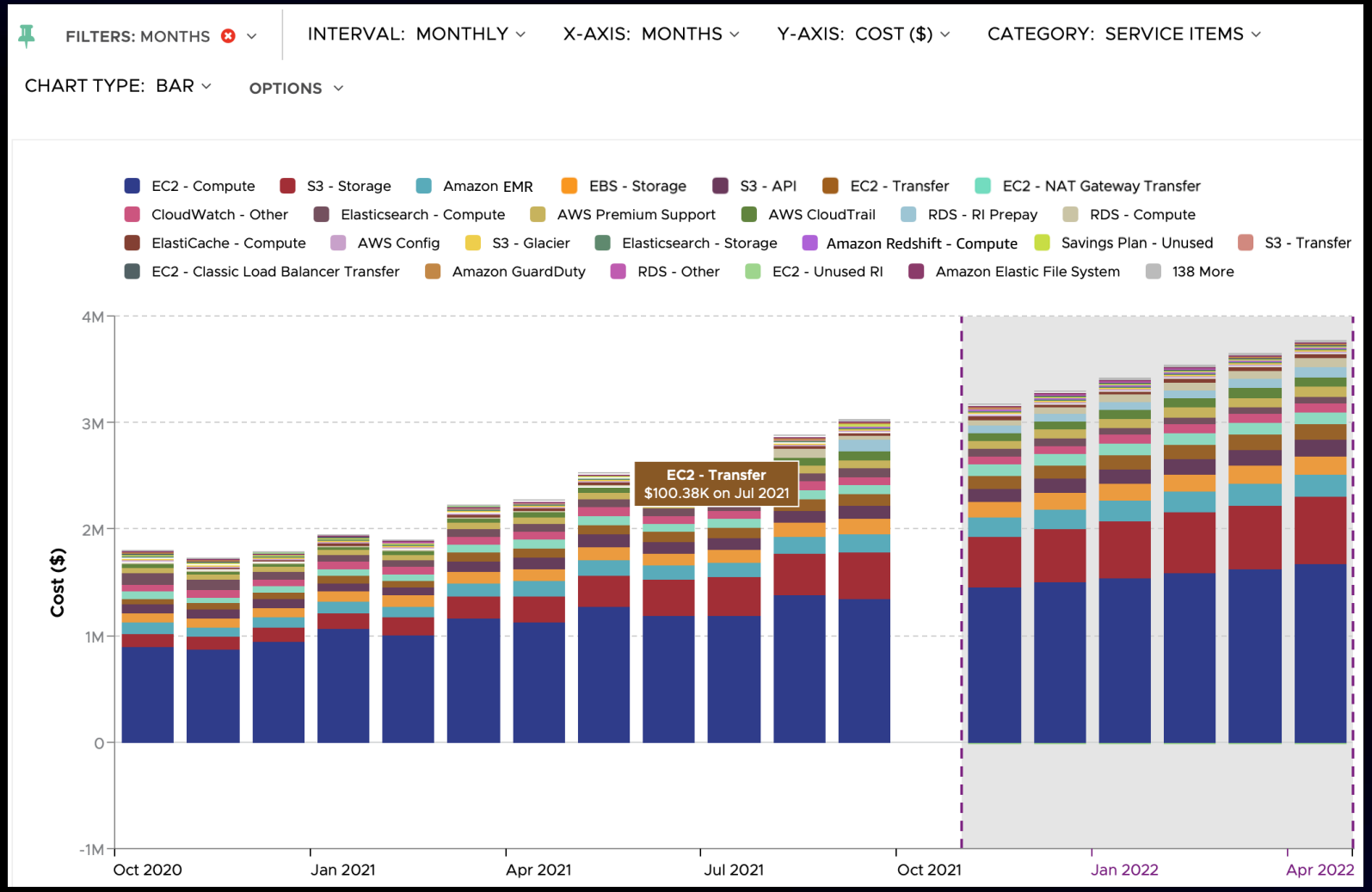
- Understand fully loaded costs
- Perform accurate chargeback and showback
- Have single source of truth across public and hybrid clouds

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Performance tracking and benchmarking



BUDGET MANAGEMENT AND FORECASTING



CloudHealth features

- Forecasting
- Budgeting
- Measure efficiency

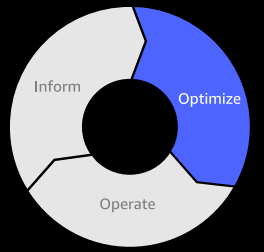
CloudHealth benefits

- Analyze workloads for projected costs to create budgets
- Show savings based on your actions to derive value
- Judge how effective your choices are for creating efficiency

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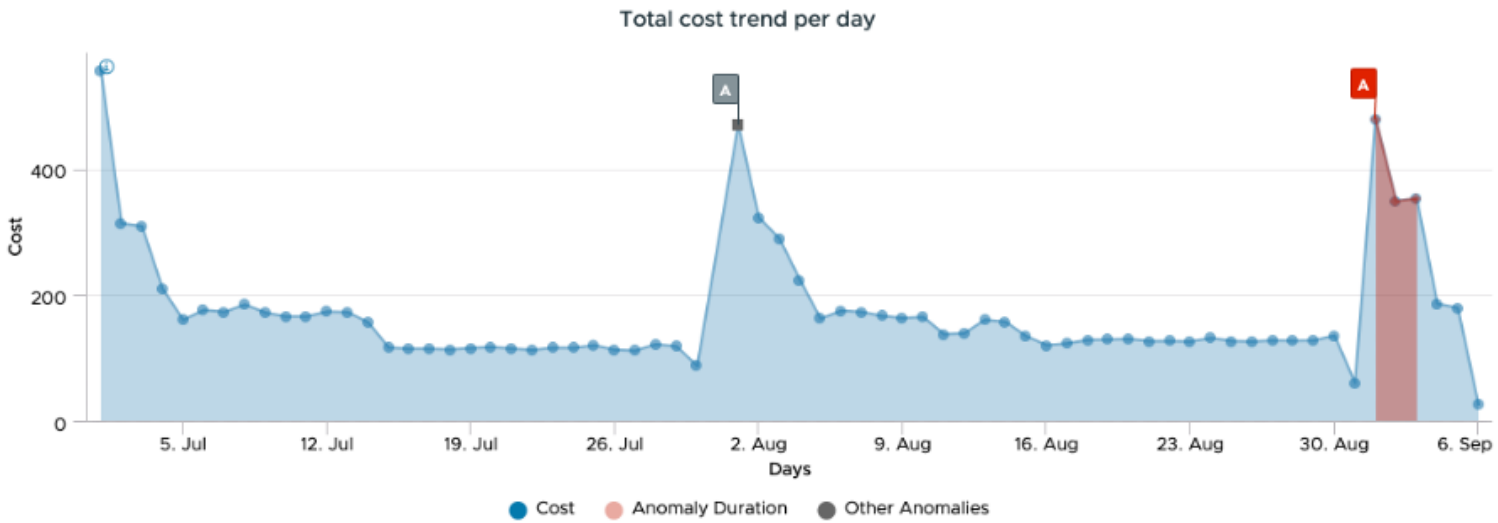
Real-time decision-making

DATA VISUALIZATION AND ANOMALY DETECTION



Start Date	8/31/2021	Duration	3 days	Account	[redacted]
Service	AmazonGuardDuty	End Date	9/2/2021	Cost Impact	$670.00
Account Name	CloudHealth	Region	us-east-1	Feedback	Not Submitted

Cost Report



CloudHealth features

- Data ingestion and analysis
- Anomaly detection
- Detailed optimization techniques

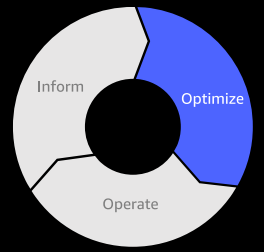
CloudHealth benefits

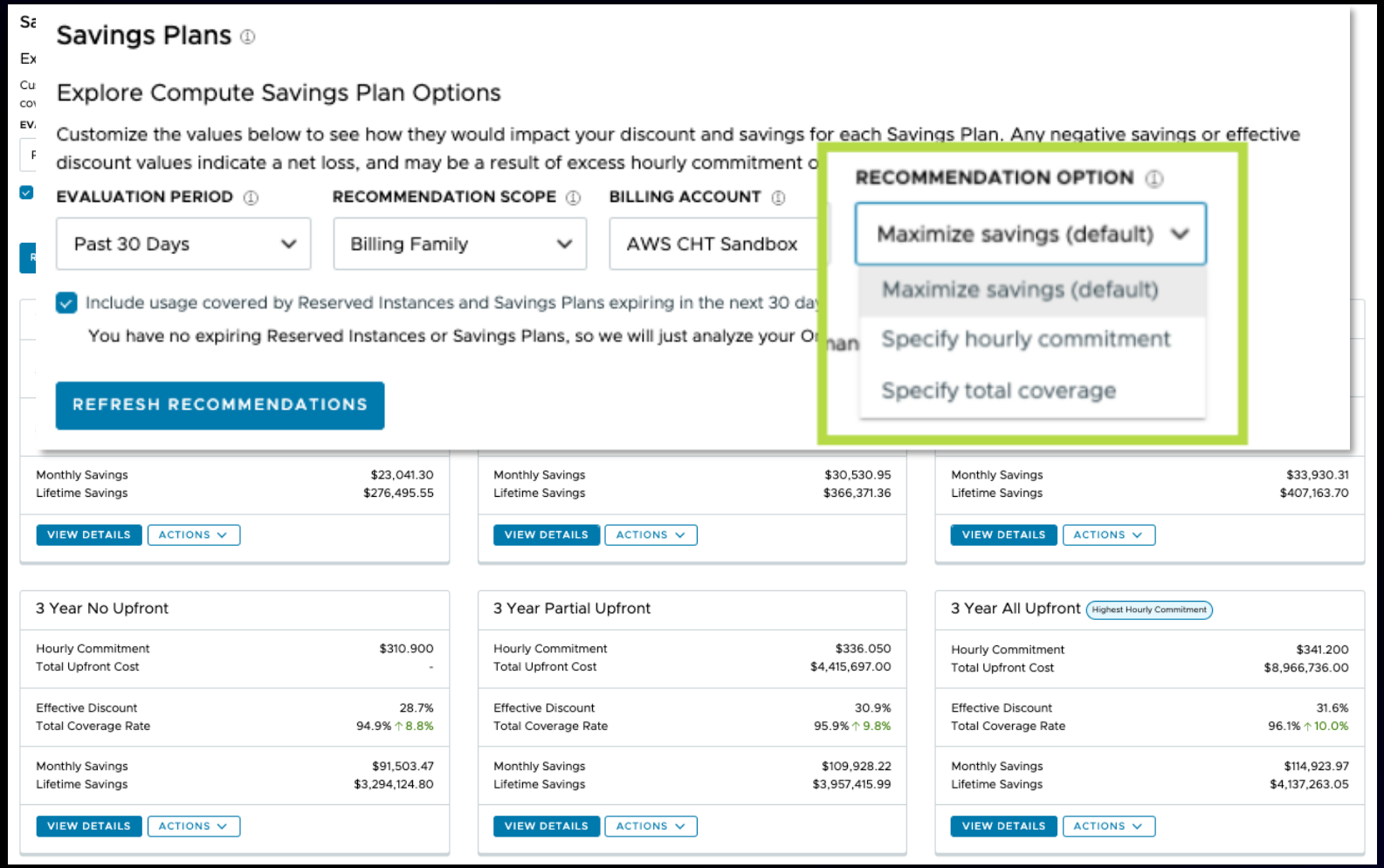
- Platform scale processes trillions of data points
- Analyze your environment and act on impactful findings
- Resource usage with application context creates accountability

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Cloud rate optimization

RIGHTSIZING, USAGE, AND COMMITMENT RECOMMENDATIONS





CloudHealth features

- Rightsizing recommendations
- Commitment discount management
- Underutilized resource reclamation

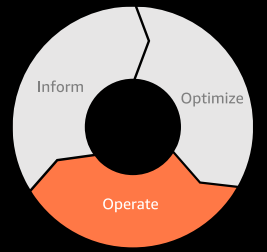
CloudHealth benefits

- Sophisticated recommendations improve application efficiency
- Analysis of RI/SP usage to maximize savings
- Easily eliminate resource waste

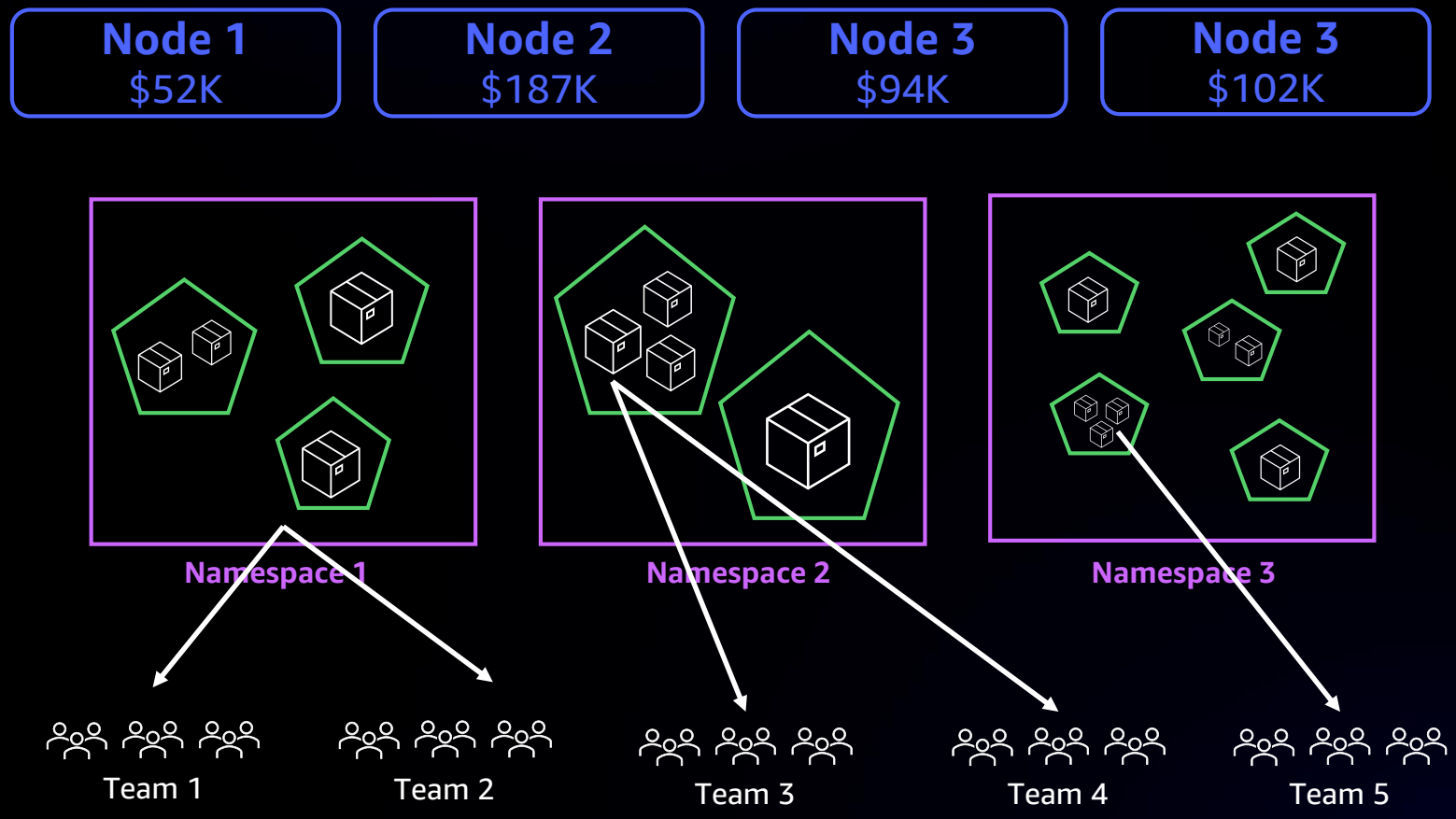
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Cloud usage optimization

MODERNIZE WORKLOADS WITH CONTAINERS



Sample Kubernetes cluster



CloudHealth features

- Container cost reporting
- Container resource and allocation planning
- Migration assessment

CloudHealth benefits

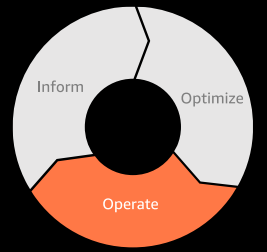
- See cluster costs broken down by application, team, cost center, etc.
- Perform accurate chargeback of containerized costs
- Understand costs to migrate workloads to cloud

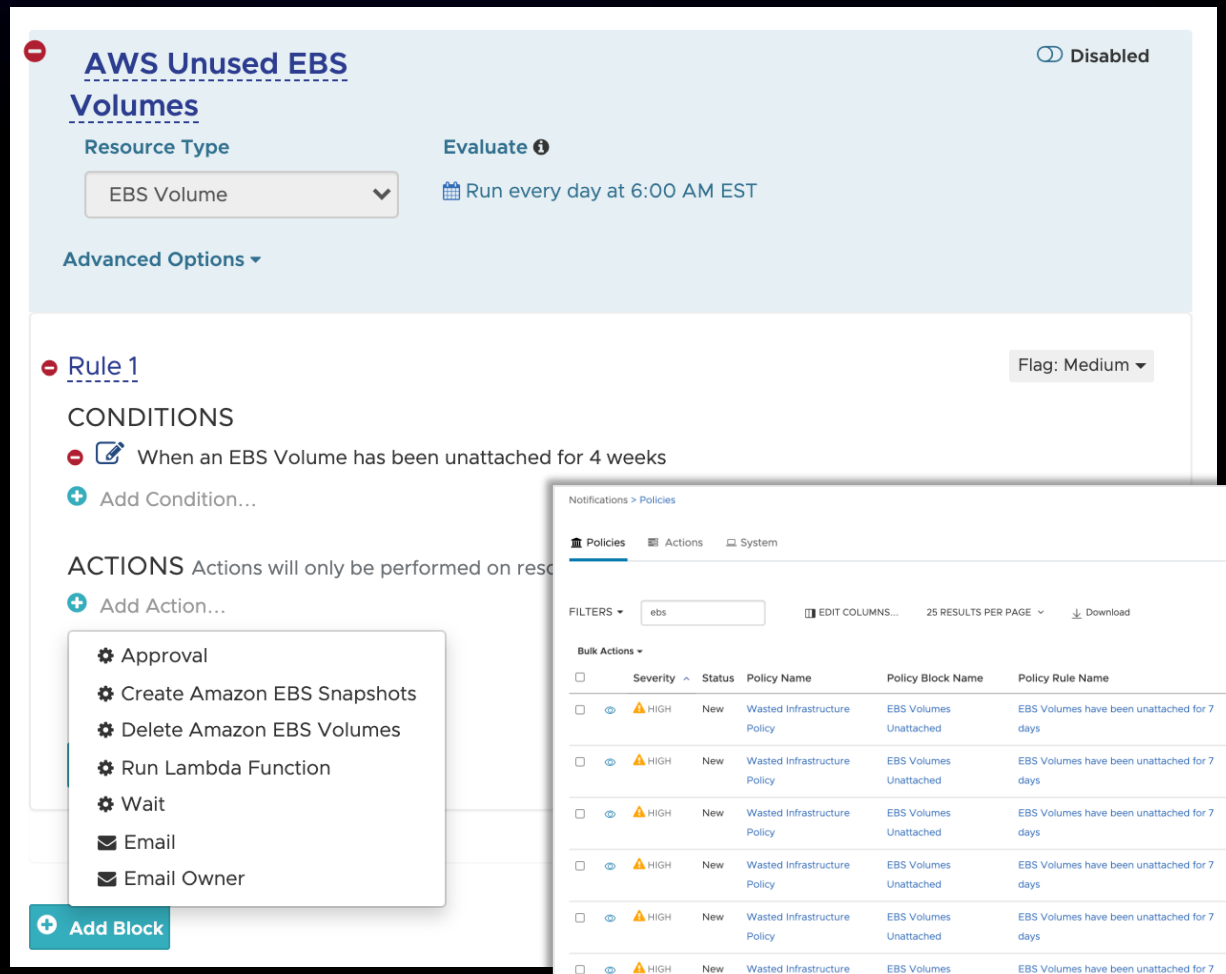
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Cloud usage optimization

POLICY MANAGEMENT AND AUTOMATION





CloudHealth features

- Policy engine
- Automated alerts
- Automated actions

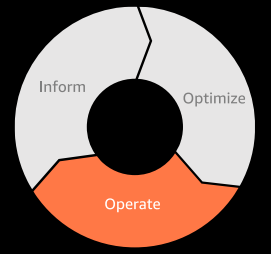
CloudHealth benefits

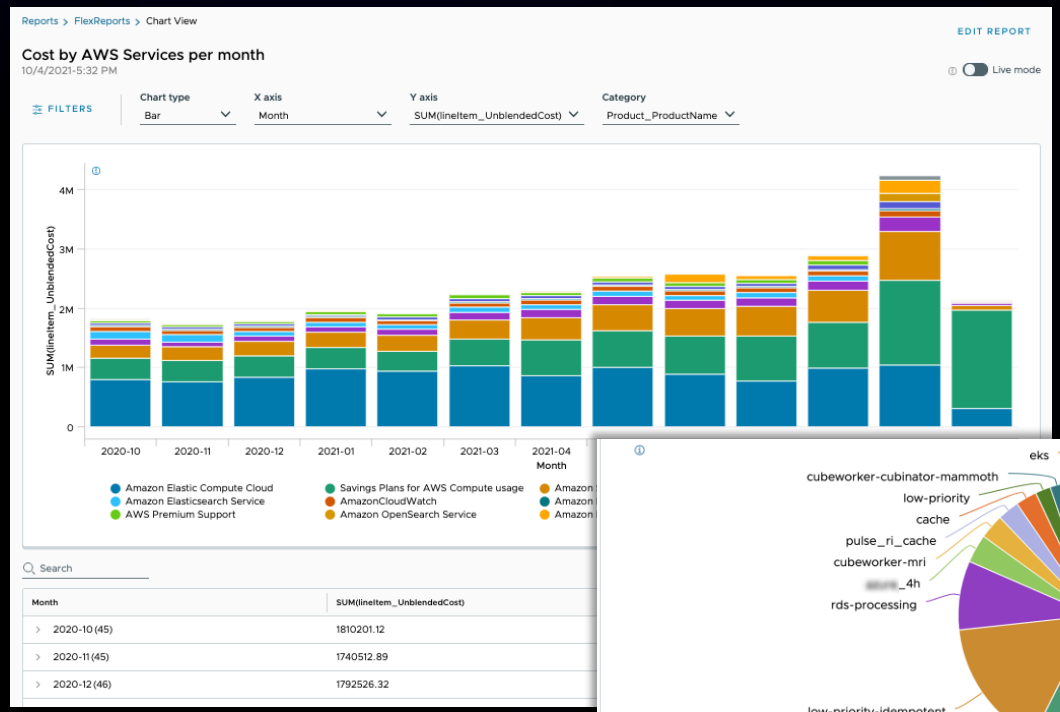
- Easily build policies that continuously monitor your environment
- Create rules using data anywhere in your cloud
- Get alerts or set automated actions when policies are violated

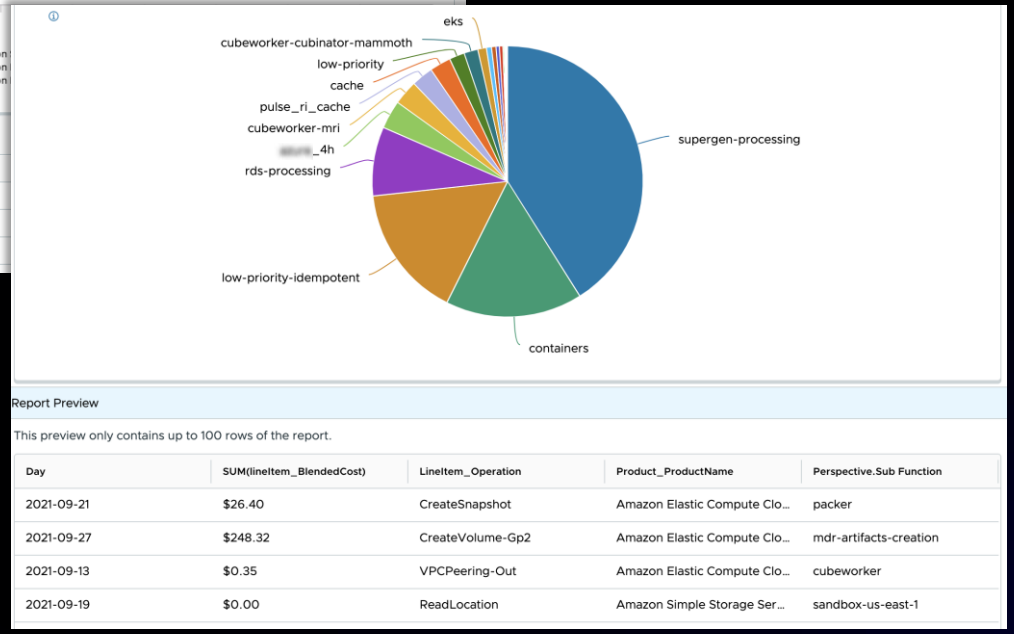
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Organizational alignment

ESTABLISH A FINOPS CULTURE







CloudHealth features

- FlexOrgs
- Governance policies
- FlexReports

CloudHealth benefits

- Get control over user access and sharing across hierarchical organizations
- Implement guideline policies and automation to reclaim employee time
- Improve collaboration across teams with in-context reporting to drive accountability

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Case study: Toast

HOW CLOUDHEALTH HELPED TOAST QUICKLY SCALE THEIR CLOUD ENVIRONMENT DURING COVID-19

Background

- Toast empowers restaurants of all sizes to build great teams, increase revenue, improve operations, and delight guests; Toast's biggest hurdle as a cloud-native startup was decentralization
- With CloudHealth, Toast saved $50,000 during the first month of COVID-19 without negatively impacting business performance

Cloud

aws

toast

Location: Boston, Massachusetts

Industry: Retail & consumer products

"The CloudHealth team has been great to work with. I don't know how we would've gotten to the point we are without them."

Ken Siskind
Engineering Program Manager

Results



The unattached Amazon EBS volumes report shows unused storage volumes that often go unnoticed, saving Toast more than $27K per month



The Amazon RDS instances report is "a quick win" that saves Toast about $1K per month on unused databases



Toast reduced cloud costs amidst a global pandemic without hurting business performance

aws

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Case study: Segment

SEGMENT USES CONTAINERS TO OPTIMIZE OPERATIONS AND DRIVE EFFICIENCY

Background

- Central infrastructure that collects, stores, and routes user data to hundreds of tools in seconds
- 5.8 billion users worldwide, with an average of 300K requests per second
- Uses CloudHealth to increase governance and visibility to efficiently manage containerized workloads

Cloud

aws

Segment

Location: San Francisco, California

Industry: Information technology

Results



Gained valuable insight into business metrics of complex containerized environments



Helped engineers to analyze dashboards and drive greater cost savings initiatives



Analyzed cost optimization dashboards, which led to a 20% increase in their gross margin in a short time span

"The ability to drill down to individual line items in the bill with CloudHealth drove some very interesting changes in how we think about our system. It has helped us deeply understand our costs."

Albert Strasheim
Vice President of Engineering – Segment Core

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Case study: Experian

EXPERIAN ADOPTS CLOUDHEALTH ENTERPRISE-WIDE TO PROACTIVELY SCALE CLOUD ENVIRONMENT

Background

- Experian relies on network connectivity and usage across clouds to power their cloud strategy; as Experian's cloud environment grew rapidly, the team wanted to implement a cloud management solution that could simplify financial management
- Experian trusts CloudHealth to evaluate the enterprise readiness of their multi-cloud environment and to optimize their infrastructure

Cloud

aws

experian™

Location: Costa Mesa, California

Industry: Financial services & insurance

Results



Experian has achieved 100% visibility into their cloud environment with CloudHealth



A CloudHealth report shows savings opportunities by quarter so Experian can analyze savings trends



Since using CloudHealth, Experian has seen a total of about $1.7 million in savings opportunities

"The real value is how we recognize savings opportunities and act on them. There's no question that CloudHealth has provided a tremendous amount of value."

Vinay Rudrappa
Director of Cloud Engineering Services

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