Cost Optimization

Agenda

- Fundamental Cost Drivers

- Tools and Services

Fundamental Cost Drivers

An Analogy – Travelling to a new place

Cost Factors

- Transportation

- Hotel

- Activities

Fundamental Cost Drivers

- There are three fundamental drivers of cost with AWS:

Compute (Process)

Storage (Store)

Network (Transfer)

Fundamental Cost Drivers

	Compute	Storage	Network	Other
Amazon EC2	Instance Type	EBS Storage	Data Transfer Charges	OS Tenancy
Amazon S3	No. of API calls	Storage Capacity	Data Transfer Out	Reporting Tagging
Amazon RDS	RDS Instance Type	Storage Snapshots	Data Transfer Charges	Engine Type High Availability
AWS Lambda	Memory	Ephemeral Storage	Data Transfer Charges	Concurrency Streaming

Cost Optimization
Tools and Services

AWS Pricing Calculator

- AWS Pricing Calculator is a free web-based planning tool that you can use to create cost estimates for using AWS services.

- AWS Pricing Calculator is available through a web-based console at https://calculator.aws

- Features
  - View transparent prices
  - Use groups for hierarchical estimates
  - Save your estimates
  - Export your estimates

Budget

AWS Budgets

AWS Budgets

- Using AWS Budgets, you can set a budget that alerts you when you exceed (or are forecasted to exceed) your budgeted cost or usage amount.

- AWS Budget keeps you informed of how your cost and usage progress and responds quickly when cost or usage exceeds a threshold.

- You can set custom budgets to track your cost and usage and get alerted by email or SNS notification when actual or forecasted cost and usage exceed your budget threshold.

- You can configure Budget Actions with IAM policies, Service Control Policies (SCPs), and target running instances.

- Four Budget Types - Cost budget, Usage budget, Savings Plans budget, Reservation budget.

AWS Budgets

AWS Cost Explorer

AWS Cost Explorer

- AWS Cost Explorer provides an easy-to-use interface that lets you visualize, understand, and manage your AWS costs and usage at both a high level and at a detailed level of analysis.

- It has preconfigured views that display at-a-glance information about your cost trends and give you options to customize views that suit your needs.

- You can view data for up to the last 12 months, and forecast how much you're likely to spend for the next 12 months.

- It empowers you to dive deeper using a number of filtering dimensions (e.g., AWS Service, Region, Member Account, etc.).

AWS Cost Explorer
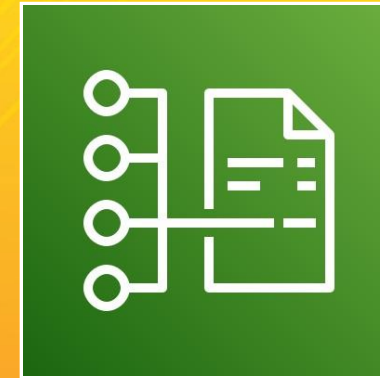
AWS Cost and Usage Report (CUR)

AWS Cost and Usage Report (CUR) – now part of Data Export

- The AWS Cost & Usage Report (CUR) contains the most detailed set of AWS cost and usage data available, including additional metadata about AWS services, pricing, credit, fees, taxes, discounts, cost categories, Reserved Instances, and Savings Plans.

- You can dive deeper into your AWS cost and usage data, understand cost drivers at the resource-level, and identify opportunities for cost optimization.

- You can save report in CSV (GZIP) or Parquet format to use in analytics tools of your choice
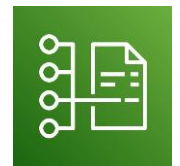
AWS Cost and Usage Report (CUR)
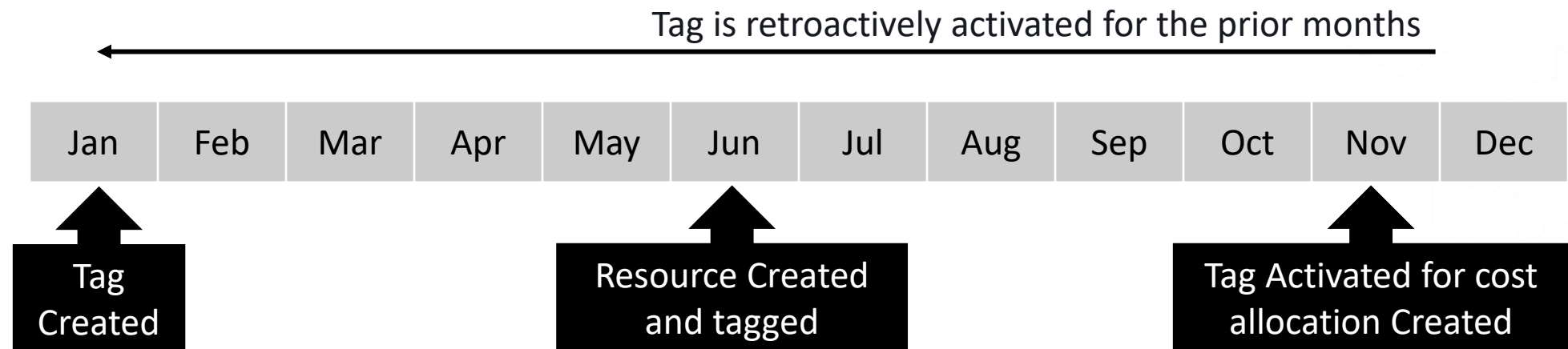
AWS cost allocation tags
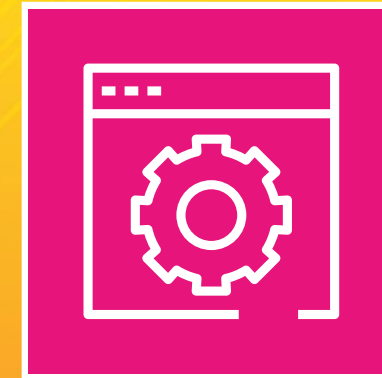
AWS cost allocation tags

- You can use tags to organize your resources, and cost allocation tags to track your AWS costs on a detailed level.

- After you activate cost allocation tags, AWS uses the cost allocation tags to organize your resource costs on your cost allocation report, to make it easier for you to categorize and track your AWS costs.
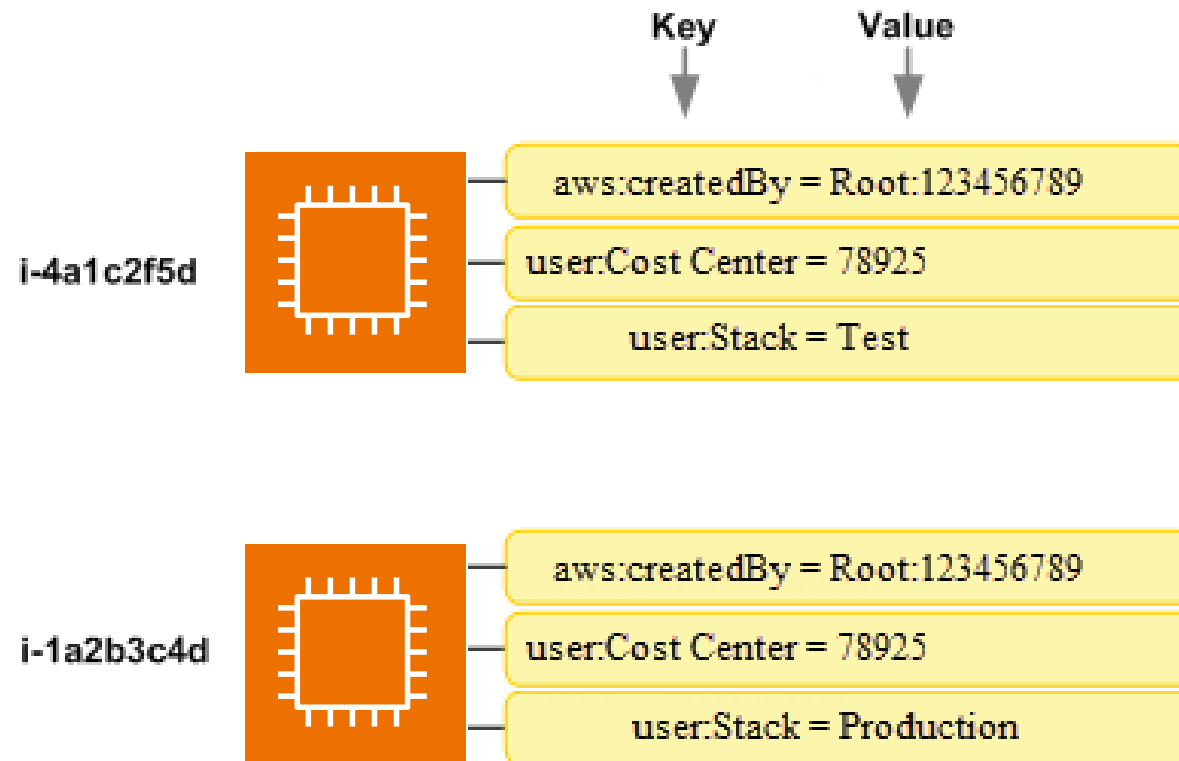
AWS cost allocation tags

- User-defined tags are tags that you define, create, and apply to resources. After you have created and applied the user-defined tags, you can activate by using the Billing and Cost Management console for cost allocation tracking.

- Tags are not applied to resources that were created before the tags were created.

- Management account users can request a backfill of cost allocation tags for up to twelve months.

Tag is retroactively activated for the prior months

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Tag Created

Resource Created and tagged

Tag Activated for cost allocation Created

Cost Optimization Hub

Cost Optimization Hub

- Cost Optimization Hub helps you consolidate and prioritize cost optimization recommendations across your AWS accounts and AWS Regions, so that you can get the most out of your AWS spend.

CUDOS Dashboard

Cost and Usage Dashboards Operations Solution (CUDOS) Dashboard

- CUDOS Dashboard provides you high level details and operational insights with ability to drill down to resource level granularity.

- In CUDOS dashboard you can find auto-generated cost optimization recommendations and actionable insights which can be used by your FinOps practitioners, Product Owners and Engineering teams out of the box
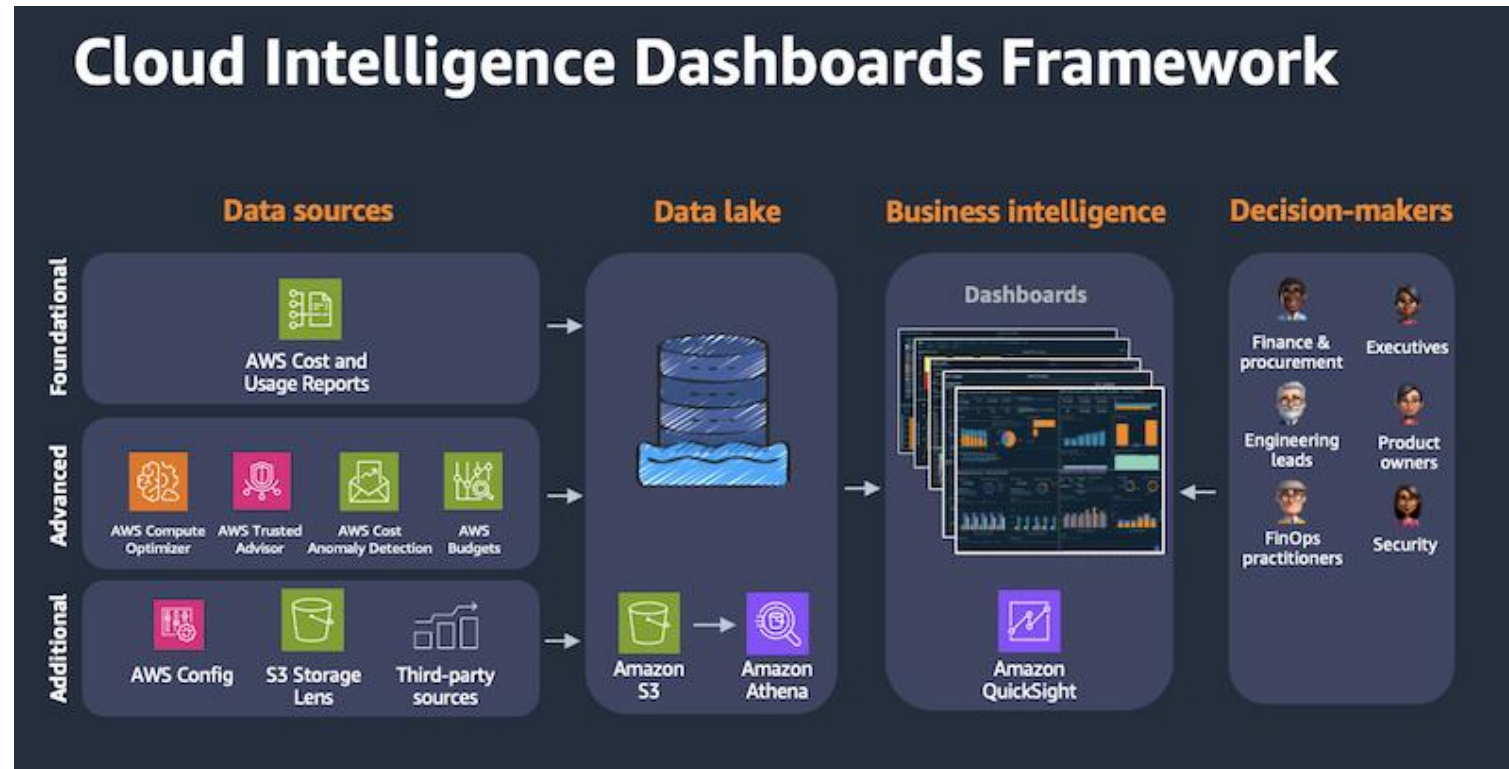
Other Tools and Services

AWS Cloud Financial Management Services

Whether you want to organize and track your cost and usage, enhance control through consolidated billing and access permission, enable better planning through budgeting and forecasting, or further lower cost with resources and pricing optimizations, you can leverage our services, tools, and resources to help reduce your AWS bill.

Use Cases	Capabilities	AWS Resources
Organize	Construct your cost allocation strategy that aligns with your business logic	**AWS Billing Conductor** | **AWS Cost Allocation Tags** | **AWS Cost Categories**
Report	Raise awareness and accountability of your cloud spend with the detailed, allocable cost data	**AWS Cost Explorer** | **AWS Cost and Usage Report** | **AWS Application Cost Profiler**
Access	Track billing information across the organization in a consolidated view	**AWS Consolidated Billing** | **AWS Purchase Order Management** | **AWS Credits**
Control	Establish effective governance mechanisms with the right guardrails in place	**AWS Cost Anomaly Detection** | **AWS Identity and Access Management** | **AWS Organizations** | **AWS Control Tower** | **AWS Service Catalog**

Tools in AWS Marketplace

Cost Optimization Hub

AWS Marketplace ❯ Discover products ❯ Search results

Manage subscriptions

Private offers

Discover products

Vendor Insights

Private Marketplace ⬀

Settings

▼ **Refine results**

Categories

Infrastructure Software (3748)

Professional Services (3699)

DevOps (1854)

Business Applications (922)

Industries (677)

Machine Learning (674)

Data Products (585)

IoT (300)

Cloud Operations (260)

▼ **Delivery methods**

☐ Professional Services (3674)

☐ Amazon Machine Image (1756)

☐ SaaS (1238)

☐ Data Exchange (585)

☐ CloudFormation Template (184)

☐ Container Image (63)

☐ SageMaker Model (51)

Search AWS Marketplace products

🔍 cost

cost (7535 results) showing 1 - 20

⬡ kubecost

Kubecost - Amazon EKS cost monitoring ⬀

By **Kubecost** ⬀ | Ver 2.1.0

2 external reviews ⬀

Gain visibility into your Kubernetes resources to optimiz
right sizing opportunities, abandoned workers and orph

⬤ CLOUDZERO

CloudZero Cloud Cost Intelligence Platform ⬀

By **CloudZero** ⬀

29 external reviews ⬀

🏷 **Free Trial** | **Vendor Insights**

CloudZero is a powerful cloud cost intelligence platform
teams around metrics like cost per product feature, cust