AWS UG Ljubljana - May 2023

AWS Community

FinOps on AWS

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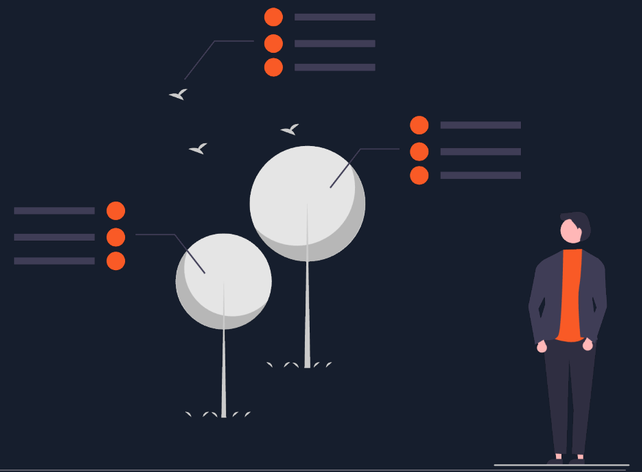
Key Takeaway

- Understanding of the AWS cost optimization pillar
- Implementing FinOps strategies
- Reduce overall cloud expenditure without compromising performance or security
- AWS FinOps Tools

Agenda for Today

- Components of cloud costs
- Implementing cost-effective resource allocation and management
- Utilizing cost optimization tools and services
- Monitoring and controlling costs with budgeting and cost allocation
- Cost optimization best practices and design patterns

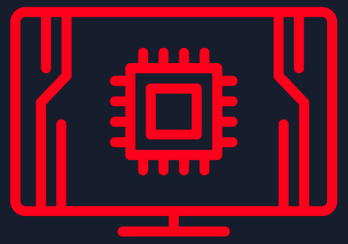


If it seems that FinOps is about saving money, then think again.

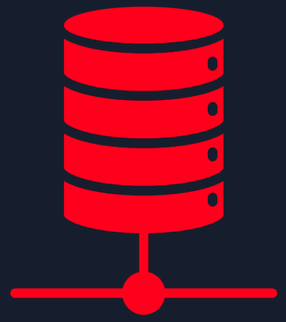
FinOps is about making money.

Components of cloud costs

Breaking Down the Components of Cloud Costs



Compute



Storage

Data Transfer

Cost Breakdown of AWS Resources

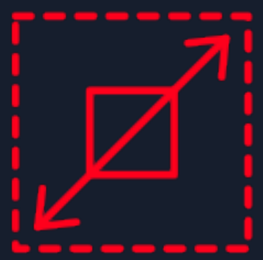
- Compute Purchase Options:
  - On-Demand
  - Reserved
  - Savings
  - Spot

- Compute By Use case:
  - Shared
  - Compute Optimized
  - Memory Optimized
  - Balanced

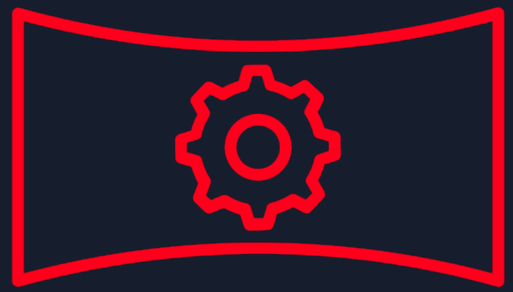
- Multiple choices for Storage and Network

Implementing cost-effective resource allocation and management

Optimize resource allocation and usage



Right Sizing



Auto Scaling

Workload Selection

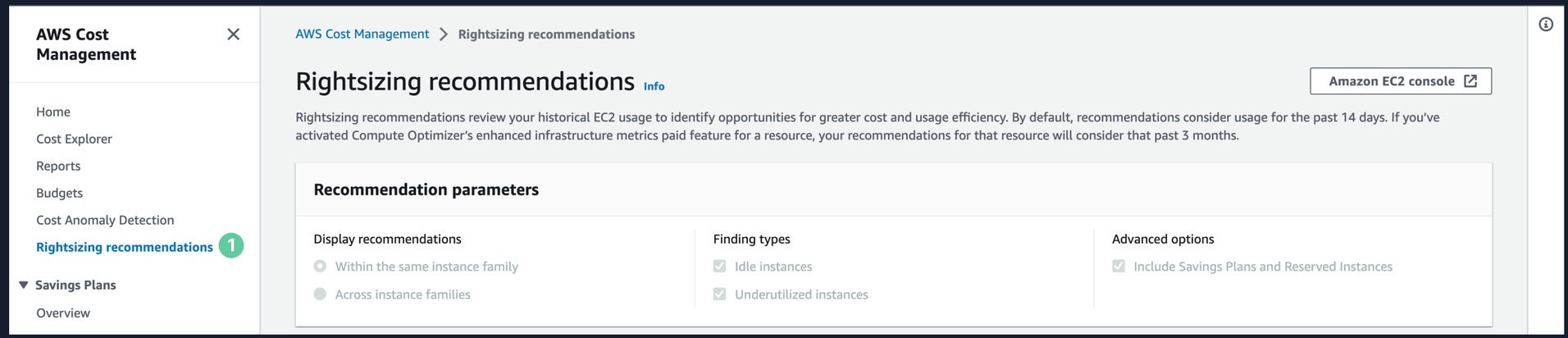
Help is Here !!

AWS Trusted Advisor

https://aws.amazon.com/premiumsupport/technology/trusted-advisor/

Help is Here !!

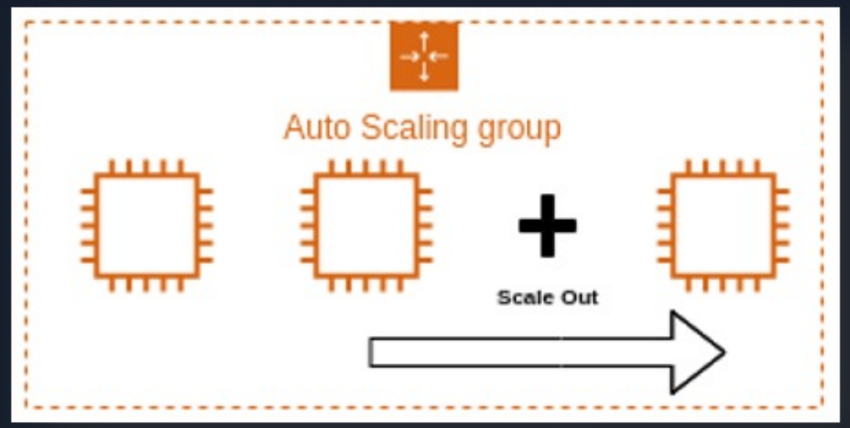
AWS Cost Explorer

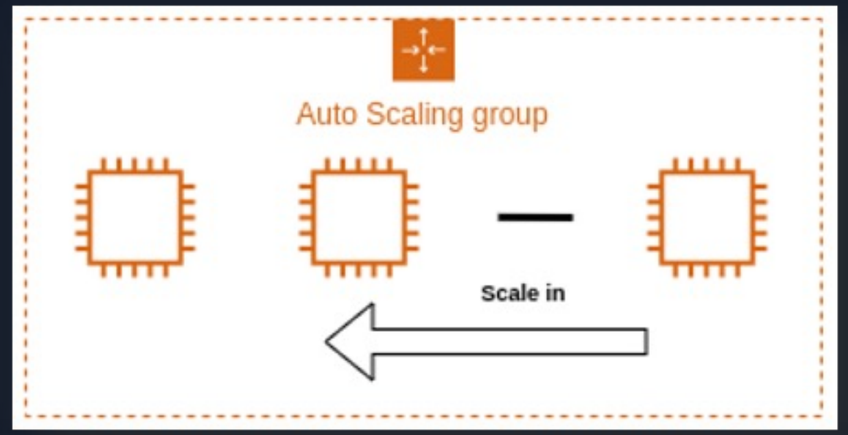


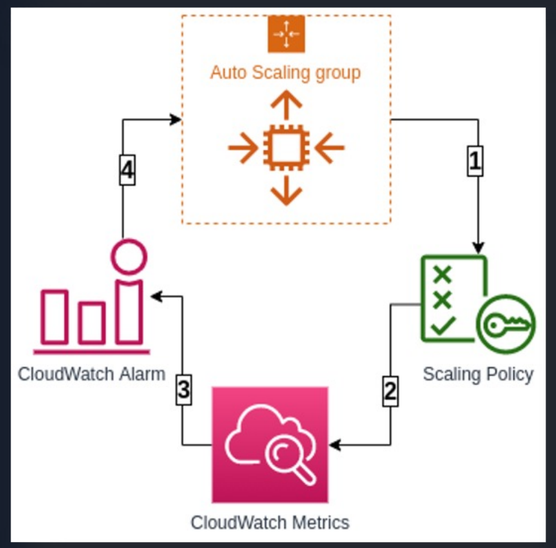
https://docs.aws.amazon.com/cost-management/latest/userguide/ce-rightsizing.html

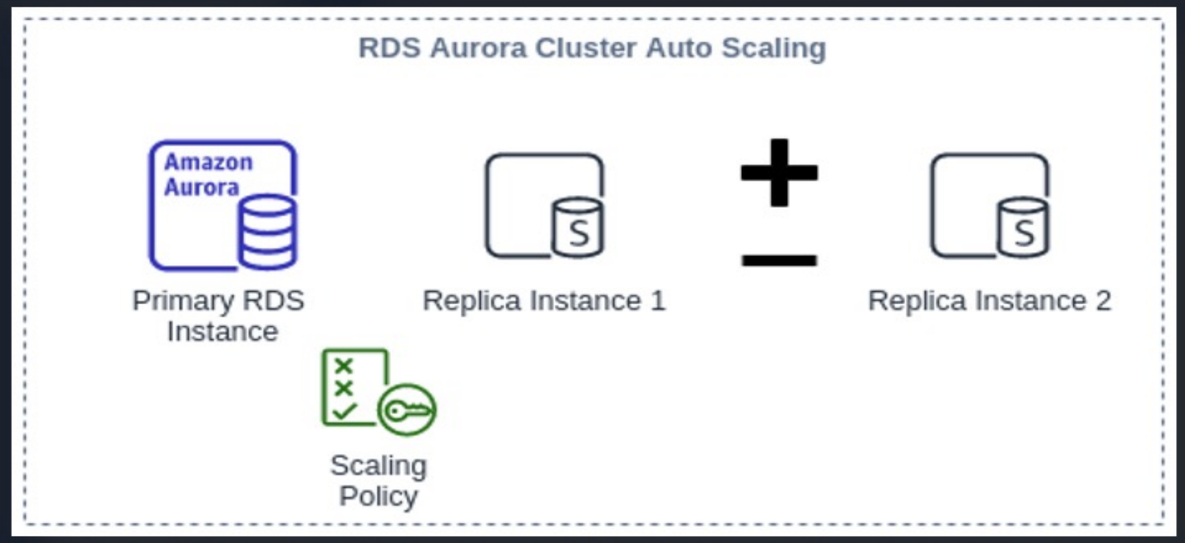
Help is Here !!

AWS Auto Scaling









https://console.aws.amazon.com/awsautoscaling/

Utilizing cost optimization tools and services

AWS Tools for Cost Optimization

AWS Cost Explorer

AWS Budgets

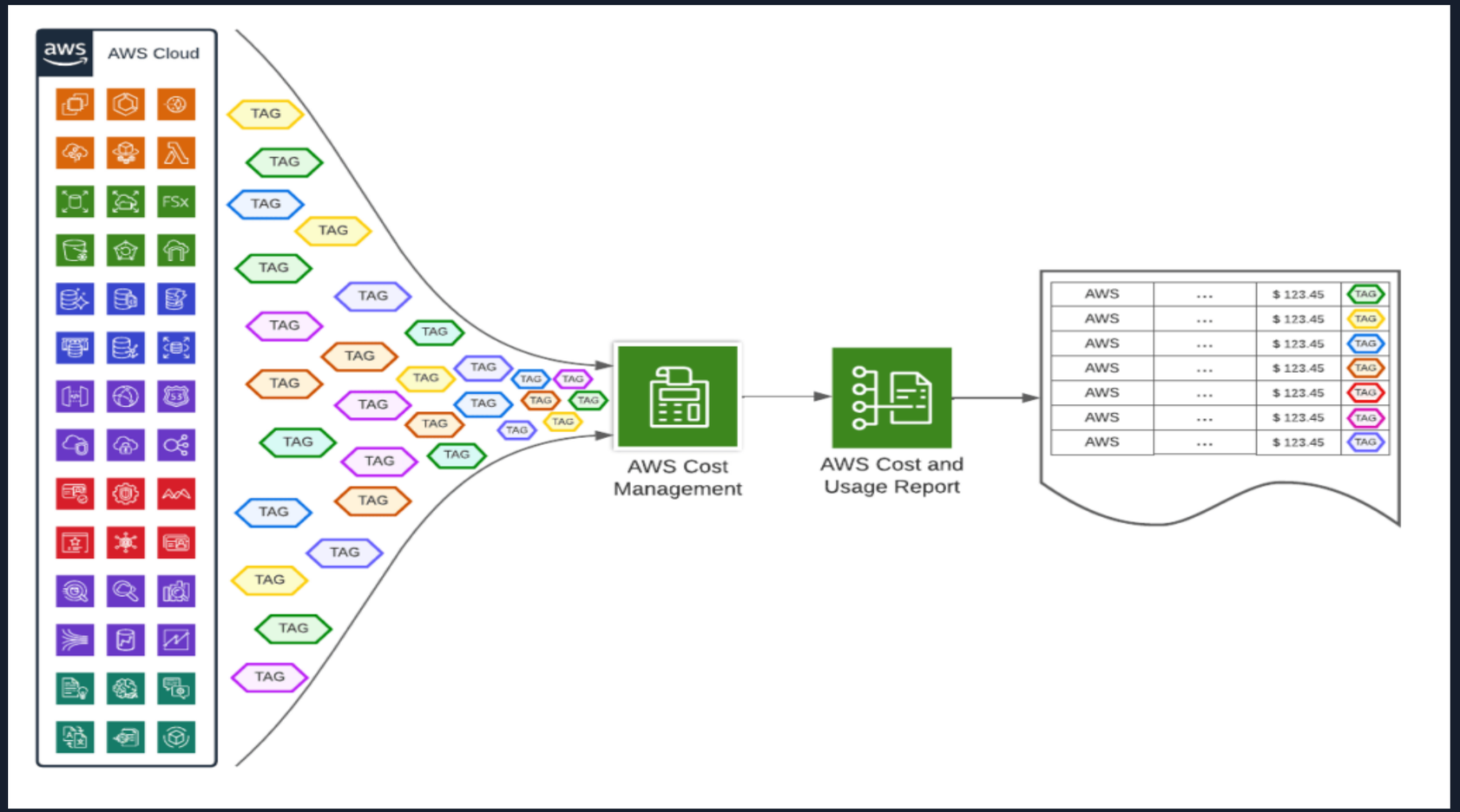
AWS Cost Anomaly Detection

AWS Compute Optimizer

Monitoring and controlling costs with budgeting and cost allocation

AWS Billing and Tags

AWS Billing



https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/configurecostallocreport.html

Cost optimization best practices and design patterns

Cost Optimization Design Patterns and Best Practices

- **Right sizing:** Choose the correct instance type and size to match the workload requirements, and regularly review and adjust as needed.
- **Auto Scaling:** Use AWS Auto Scaling to automatically adjust the number of instances based on demand and pre-defined thresholds, ensuring optimal utilization and cost efficiency.
- **Spot Instances:** Utilize Spot Instances for flexible, non-critical workloads to take advantage of lower cost, unused EC2 compute capacity.
- **Reserved Instances and Savings Plans:** Commit to long-term usage and make upfront payments for significant discounts on EC2 and RDS instances, or use Savings Plans for more flexibility.
- **Storage Optimization:** Optimize storage costs by selecting the appropriate storage type (e.g., Amazon S3, EBS, or EFS), and using lifecycle policies to move data to lower-cost storage classes as it becomes less frequently accessed.

Cost Optimization Design Patterns and Best Practices

- **Data Transfer:** Minimize data transfer costs by using caching, content delivery networks (e.g., Amazon CloudFront), and AWS Direct Connect, and by reducing data redundancy across regions.

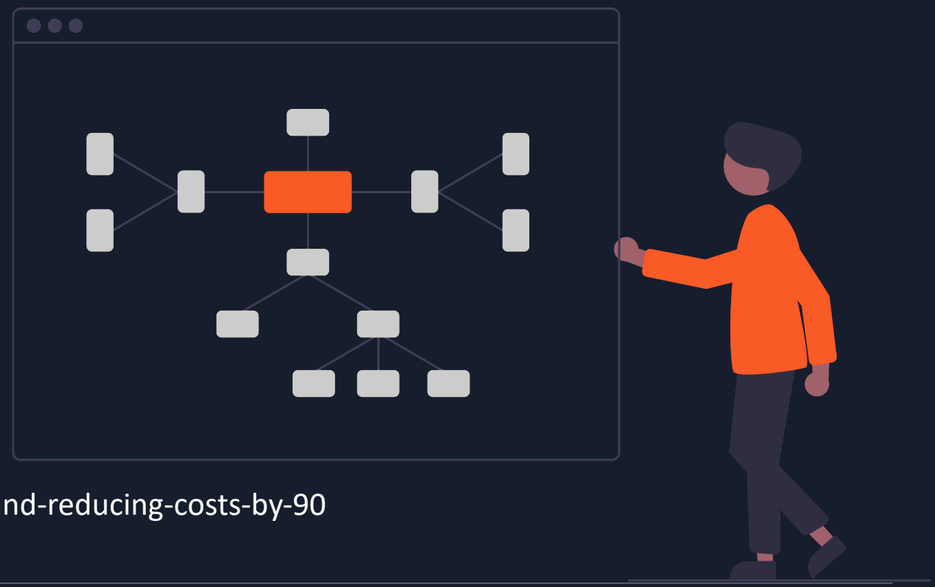
- **Monitoring and Analysis:** Regularly monitor and analyze cost and usage data using tools such as AWS Cost Explorer, AWS Budgets, and AWS Trusted Advisor to identify cost-saving opportunities and optimize spending.

- **Tagging Resources:** Implement a consistent tagging strategy for AWS resources to enable better cost allocation, tracking, and reporting.

- **Containerization:** Use containerization services like Amazon ECS and Amazon EKS for efficient resource utilization, enabling multiple applications to share underlying compute resources and reducing costs.

Cost Optimization Design Patterns and Best Practices

- **Serverless Architectures:** Utilize serverless technologies such as AWS Lambda, Amazon API Gateway, and Amazon S3 to eliminate the need for provisioning and managing servers, and pay only for the compute time consumed.



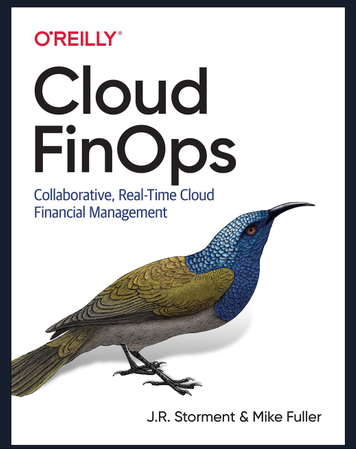
https://www.primevideotech.com/video-streaming/scaling-up-the-prime-video-audio-video-monitoring-service-and-reducing-costs-by-90

Moving Forward ..

Moving Forward ..

- **AWS CUDOS :** https://d1s0yx3p3y3rah.cloudfront.net/anonymous-embed?dashboard=cudos
- Spot.io
- Opt Scale: https://my.optscale.com/live-demo
- AWS Cost Optimization Pillar https://docs.aws.amazon.com/wellarchitected/latest/cost-optimization-pillar
- AWS Cloud Financial Blog: https://aws.amazon.com/blogs/aws-cloud-financial-management/

"FinOps is not just about cost control, but also about unlocking new opportunities for innovation and growth through smarter cloud spending decisions."



Thank you

https://www.awscommunity.dev