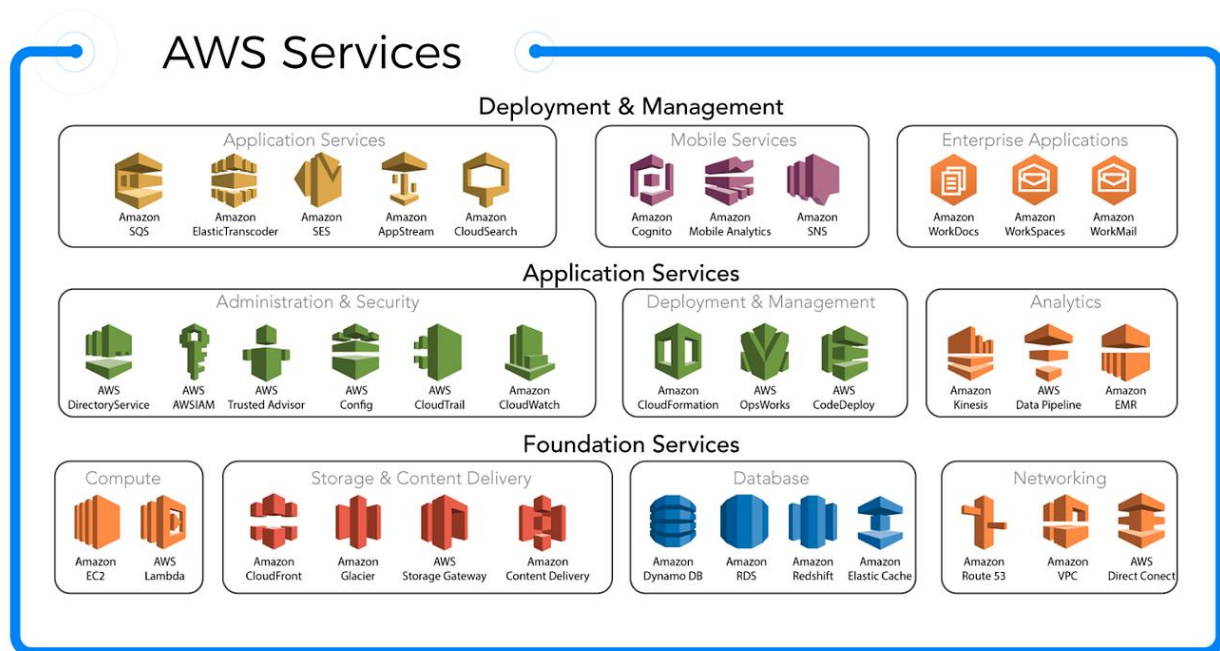


AWS Skills Challenge: Cost Optimization



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Welcome back to another article, another challenge. A friend of mine asked, how do you remember all the AWS services and products? There are too many. My response was simple and short: I DON'T.

It's funny but true. It's impossible to know over 200 services, but I remember those I worked with. For that reason, it's important to keep learning and practicing, even outside of work or client projects.

Background

As stated above, the best way to remember AWS services is to use them in real life or in a personal project. So stay with me. I will provide a step by step guide to you so that you can develop skills in AWS:

1. Costing and Billing
2. Storage (S3)
3. Networking (VPC)
4. Serverless (Lambda)
5. Database (RDS)
6. Compute (EC2)
7. Automation (CloudFormation)

Prerequisite:

For this mini-project, you need an AWS account. Set up a Free Tier account www.aws.amazon.com/free

Project Outline

Costs and Billing: Create a recurring monthly Budget and Budget Alert. Name it: **[name]_BUDGET**. Set budget to \$10.00, scope to All Services. Set a “90% of budget” alert to email to your email address.

Introduction to Budget

A budget is necessary to track and take action on your costs and usage. By default, single accounts, the management account, and member accounts in an organization can create budgets.

When you create a budget, AWS Budgets provides a Cost Explorer graph to help you see your incurred costs and usage.

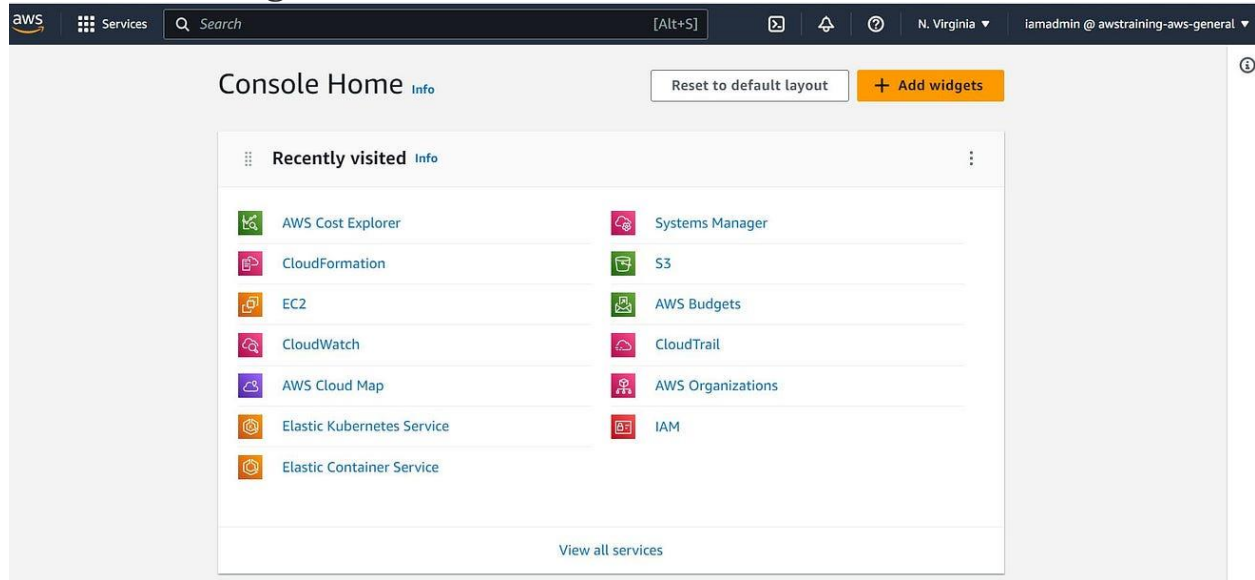
It's possible to track against the following budgets:

- Cost
- Usage
- Savings Plans (Savings Plans utilization, Savings Plans coverage)
- Reservation (Reservation utilization, Reservation coverage)

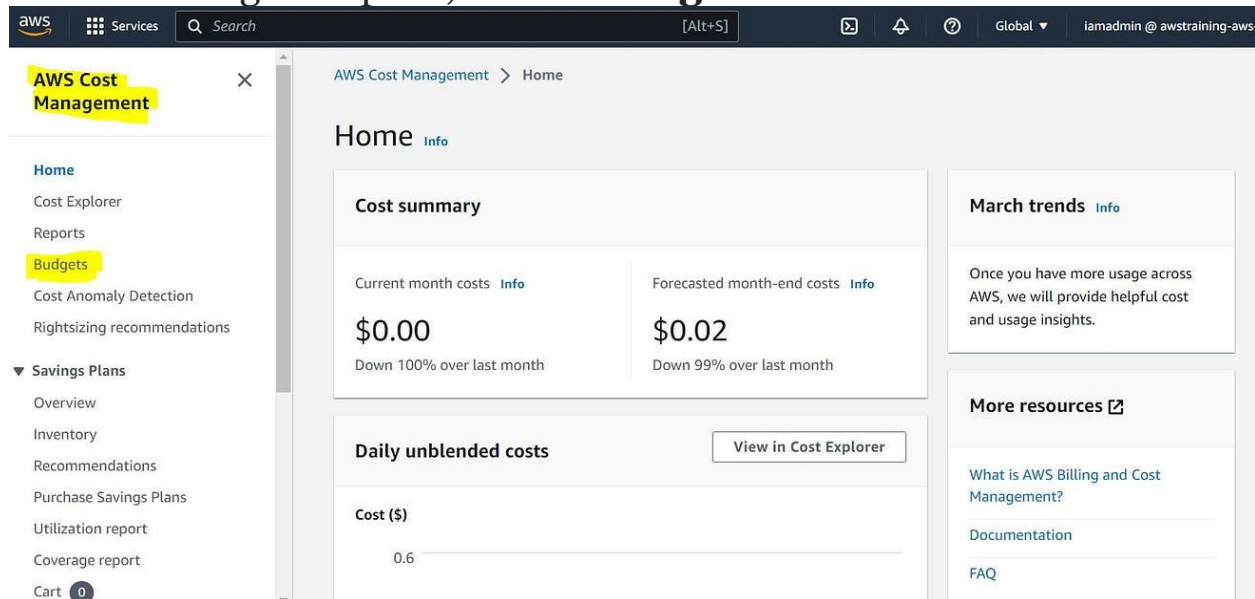
For this exercise, we will focus on Cost budget.

Now let's have fun

- After creating your free tier AWS account, sign in to the AWS Management Console.



- Then open the AWS Cost Management console. In the navigation pane, choose **Budgets**.



- At the top of the page, choose **Create budget**.
Under **Budget setup**, choose between **Use a template (simplified)** and **Customize (advanced)**.

*Note: **Customize (advanced)** gives an option to customize the time period, the start month and specific amounts.*

- Select Use a template (simplified). Scroll down and fill out the form.

The screenshot shows the AWS Budgets console interface. On the left is a navigation sidebar with links like Billing, Bills, Payments, Credits, Purchase orders, Cost & usage reports, Cost categories, Cost allocation tags, Free tier, Billing Conductor, Cost Management, Cost explorer, Budgets, Budgets reports, Savings Plans, Preferences, Billing preferences, and Payment preferences. The main content area is titled 'Choose budget type' with an 'Info' link. It contains two sections: 'Budget setup' and 'Templates - new'. In the 'Budget setup' section, there are two radio button options: 'Use a template (simplified)' (which is selected and highlighted with a yellow box) and 'Customize (advanced)'. The 'Use a template (simplified)' option has a description: 'Use the recommended configurations. You can change some configuration options after the budget is created.' The 'Customize (advanced)' option has a description: 'Customize a budget to set parameters specific to your use case. You can customize the time period, the start month, and specific accounts.' The 'Templates - new' section has a subtitle 'Choose a template that best matches your use case.' and contains four radio button options: 'Zero spend budget', 'Monthly cost budget' (which is selected and highlighted with a yellow box), 'Daily Savings Plans coverage budget', and 'Daily reservation utilization budget'. Each option has a brief description of what the budget type does.

- Select Monthly cost budget (remember our goal, see project outline).
- Add the budget name, the budgeted amount, the email recipient you want to notify when the threshold has exceeded.


Note: it's possible to add several emails.

Budget name
Provide a descriptive name for this budget.
DJ_Budget
Names must be between 1-100 characters.

Enter your budgeted amount (\$)
Last month's cost: \$4.31
10.00

Email recipients
Specify the email recipients you want to notify when the threshold has exceeded.
djkone2025@gmail.com
Maximum number of email recipients is 10.

Scope
All AWS services are in scope in this budget.

 You will be notified when 1) your **actual spend** reaches 85% 2) your **actual spend** reaches 100% 3) if your **forecasted spend** is expected to reach 100%.

▼ Template settings
This template has default configurations that can be changed later. To change any of these settings, see **Custom**. You can also download this template in [JSON](#).

- Once again remember our goal. We must set a “90% of budget” alert.

Note: In order to be notified on the state of our budget, we can create up to 5 different alerts based on your budgeted amount.

▼ Alert #1

Remove

Set alert threshold

Threshold

When should this alert be triggered?

90

% of budgeted amount

▼

Trigger

How should this alert be triggered?

Actual

▼

Summary:

When your actual cost is greater than 90.00% (\$9.00) of your budgeted amount (\$10.00), the alert threshold will be exceeded.

Notification preferences

Select one or more notification preferences to receive alerts.

Email recipients

Specify the email recipients you want to notify when the threshold has exceeded.

djkone2025@gmail.com

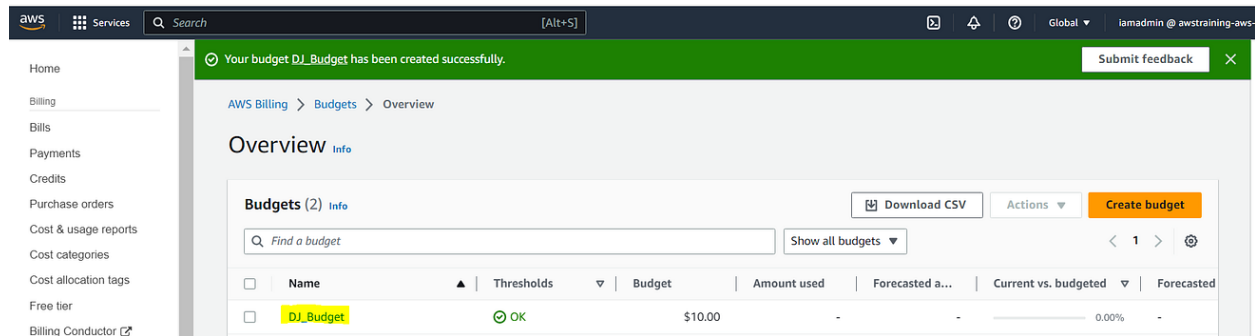
Maximum number of email recipients is 10.

► Amazon SNS Alerts - [Optional Info](#)

► AWS Chatbot Alerts

Also, we have the option to attach actions that run whenever our alert threshold has been exceeded, such as stopping an EC2 instance from incurring any further costs.

- Verify everything has been created and filled out correctly. Then click create budget.



Voila! Our recurring monthly Budget **DJ_BUDGET** and Budget Alert is set budget to \$10.00, scoped to All Services. When a service reaches “90% of budget”, an alert will be sent to my email djkone2025@gmail.com. You’ve now developed an additional AWS skill.

Thank you for reading and/or following along! Please stay tuned for the 2nd challenge (Storage S3) and all my upcoming projects, and feel free to check out the rest of my articles.