Create a Billing Alarm to Avoid Unexpected AWS Charges

A Billing Alarm will notify you by email when your AWS account charges for the month have exceeded a monetary amount you have set. This is an extremely useful tool to stay on-budget. It can also be a way to let you know if you have forgotten to stop or terminate an AWS service – such as an EC2 instance – and help avoid unexpected charges.

Overview of the steps described in this recipe:

A. Prerequisites
B. Enable Billing Alerts for your account
C. Create a Billing Alarm using the CloudWatch console
D. Monitor a Billing Alarm status
E. Delete a Billing Alarm

A) Prerequisites

a. You must have an AWS account. If you don’t have an account, click HERE to create one.

Note: You will need to provide credit card information for your new account.

B) Enable Billing Alerts for your account

Note: Billing Alerts must be enabled on your account before you can create a Billing Alarm.

a. SIGN IN to your AWS account.
   i. Make sure the region is set to US East (N. Virginia) (Fig. 1). This is the region that AWS stores billing information.
b. Click on your account name in the upper right corner.
   i. In the dropdown menu select **My Billing Dashboard** to open the **Billing & Cost Management Dashboard** (Fig. 2).

c. In the left Dashboard menu, click on **Preferences** (Fig. 3).
d. Check the box in front of **Receive Billing Alerts** and then click **Save Preferences**.
   i. **Note**: If you are eligible, make sure the **Receive Free Tier Usage Alerts** box is checked as well.
C) Create a Billing Alarm using the CloudWatch console

a. Click on 🔄 in the upper left of the Billing & Cost Management Dashboard screen to open the AWS Management Console.

b. Type **cloudwatch** in the AWS Management Console search box and then click on **CloudWatch** (Fig. 5).

c. In the **CloudWatch** console menu on the left under **Alarms**, click on **Billing** (Fig. 6).
d. In the *Billing Alarms* window, click the **Create Alarm** button.

![Billing Alarms](image1)

**Figure 7**

e. Scroll to the bottom of the *Create new alarm* page and click on **show advanced** (Fig. 7) (1).

![Create new alarm](image2)
Advanced Settings (Fig. 8)

f. **Alarm details**
   
i. Add a *Name* for your new alarm and a *Description* (optional).
   
   ii. Under **Whenever charges for**: set is: to $\geq$ and USD $ to the amount in dollars you want to set as a limit (2).
   
   *Note*: You will receive email notification when your account charges have reached or exceeded this amount.

g. **Additional settings**
   
i. Under **Treat missing data as**: choose *ignore (maintain the alarm state)* (3).

h. **Actions**
   
i. Under **Email list**: enter *your email address* (4).
   
   ii. Leave the other settings unchanged
i. Click on the Create Alarm button at the bottom of the Create new alarm page (Fig. 9).

**Important:** You will be sent an email to confirm the email address set in your alarm. Open the email and click on the “Confirm subscription” link to enable notifications.

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**D) Monitor a Billing Alarm status**

a. When you create a new alarm, an alarm status window will open (Fig. 10). The State will initially show **INSUFFICIENT_DATA** but will update to **OK** in a minute or so.

**Note:** If the State shows **PENDING_CONFIRMATION**, open the confirmation email that was mailed to you and click on “Confirm subscription”.

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b. To see details of your alarm, check the box in front of the alarm description.

![Image of CloudWatch Management Console with an alarm configuration interface.](Figure 10)

![Image of CloudWatch Management Console with an alarm state change to ALARM.](Figure 11)

c. When the monetary limit set for your alarm has been exceeded, the **State** will change to **ALARM** (Fig. 11), the graph border will be red, and an email will be sent to you notifying you of this.
d. You can check the status of an alarm at any time by opening the CloudWatch console.
   i. Make sure the region is set to **US East (N. Virginia)**.
   ii. In the left menu, under **Alarms**, click **Billing**, then check the box in front of an alarm to see its details.

**E) Delete a Billing Alarm**

![Figure 12](image)

a. Open the CloudWatch console (Fig. 12).
   i. Make sure the region is set to **US East (N. Virginia)**.
   ii. In the left menu, under **Alarms**, click **Billing**, then check the box in front of an alarm to see its details.
   iii. At the top, click on the **Action** tab and select **Delete**.
   iv. When prompted, confirm **Yes, Delete**.

**Note:** To make changes to the settings for your alarm – e.g., set a new billing threshold – select **Modify** under the **Actions** tab.