Creation of EC2 Amazon Machine Images (AMIs) using AWS Lambda SOP

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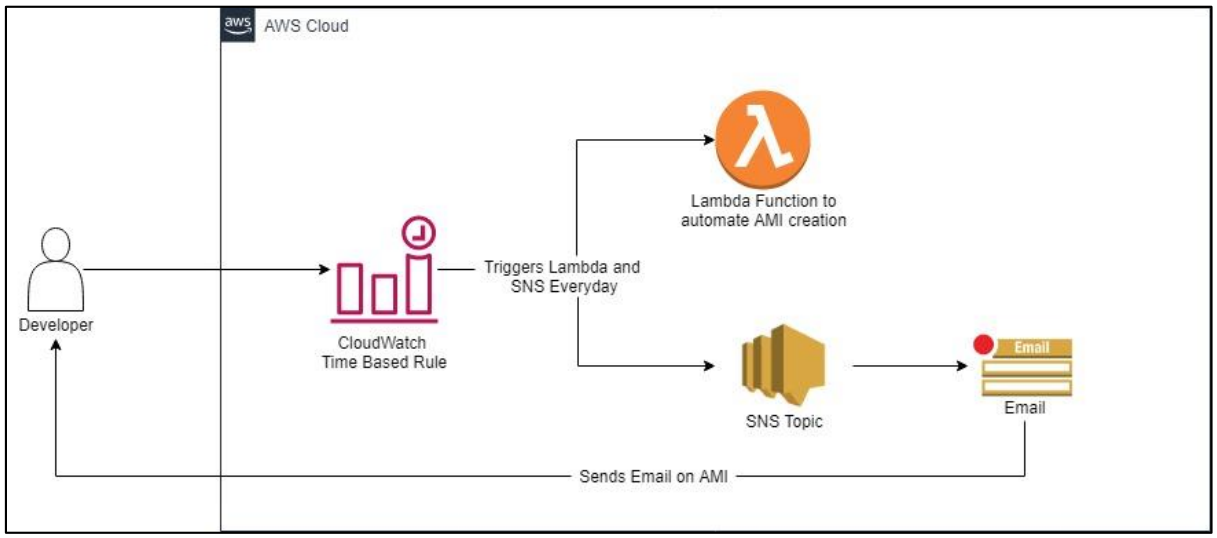
1. Creation of EC2 Amazon Machine Images (AMIs) using AWS Lambda

1.1 Description

Creating and storing AMI's are essentials for any backup/disaster recovery plan. Automating the creation process allows for reliable backup planning. And by utilizing SNS in this process, we can inform an administrator when each image creation job has begun.

1.2 Architecture Diagram

The diagram below displays a visual representation of the application architecture:



1.3 Lab Steps

Follow the steps outlined below to achieve the objective of this lab exercise:

1. From the AWS Management Console dashboard, navigate to **EC2**.
2. Click **Launch Instance**.
3. Select an **Amazon Linux AMI 2 (**first in the list).
4. Select **t2.micro** from instance types list.
5. Click **Review and Launch**.
6. Click **Launch**.
7. Enter a key pair name, and click **Download Key Pair**.
8. Click **Launch Instances**.
9. Note the Instance Id of the instance that is getting created.
10. Navigate to **Lambda** Service and create a Lambda function. Specify a name to the function, with runtime as **Python 3.8** and Role as **CCL-Lambda-Role** and create function.
11. Copy and paste the following code there - replacing **INSTANCE_ID** with the instance id you noted in Step 9 and save the function:

12. Navigate to **SNS** service and create an SNS Topic and specify a name to the Topic.
13. After creating the topic, open the topic you created and create the subscription for the topic.
14. Click on **Create Subscription**, select the protocol as **Email**, give your email address and create the subscription.
    Note: You will receive a verification email from AWS to your email address. Click on that link and confirm your subscription.
15. Navigate to **CloudWatch** > **Events** > **Rules**.
16. Click on **create rule**, select **Schedule**, set the Rate as **1 Day** and in **targets** select your SNS Topic and Lambda Function you created in the previous steps.
17. Click on **Next** and specify a name to the rule and create the rule.
    Note: When the rule triggers after some time, you will receive an email and also the image will get created.
18. You can navigate to **EC2** and find the image that got created from the instance.

1.4 Supporting References

Refer the below links for additional information:

1. https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/AMIs.html
2. https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ec2-instances-and-amis.html