Launch EC2 Instance

A screenshot of a computer

Description automatically generated

Setup Lambda Execution Role

*To restart instance , lambda needs permissions to run the execution role code .*

1. ***Create a Role for Lambda:***
   * *Go to the IAM Management Console.*
   * *Navigate to* ***Roles****.*
   * *Click* ***Create role****.*
   * *Select* ***AWS Service****.*
   * *Choose* ***Lambda****.*
   * *Click* ***Next: Permissions****.*
2. ***Create a Policy:***
   * *Open a new tab and go to* ***Policies*** *in the IAM Management Console.*
   * *Click* ***Create policy****.*
   * *Go to the* ***JSON*** *tab.*
   * *Enter your policy code.*
   * *Click* ***Next: Tags****.*
   * *Click* ***Next: Review****.*
   * *Enter a name (e.g.,* ***Lambda\_EC2\_restart\_Policy****).*
   * *Click* ***Create policy****.*
3. ***Attach the Policy to the Role:***
   * *Go back to the IAM Role Creation tab.*
   * *Refresh the policy list.*
   * *Search for* ***Lambda\_EC2\_restart\_Policy****.*
   * *Select the policy.*
   * *Click* ***Next: Tags****.*
   * *Click* ***Next: Review****.*

AWSLambdaBasicExecutionRole

*{*

*"Version": "2012-10-17",*

*"Statement": [*

*{*

*"Sid": "VisualEditor0",*

*"Effect": "Allow",*

*"Action": "logs:CreateLogGroup",*

*"Resource": "arn:aws:logs:us-east-1:553312517925:\*"*

*},*

*{*

*"Sid": "VisualEditor1",*

*"Effect": "Allow",*

*"Action": "ec2:\*",*

*"Resource": "\*"*

*}*

*]*

*}*

*Create Lambda Function to restart EC2*

1. **Create a Lambda Function:**
   * Go to the **Lambda Management Console**.
   * Click **Create function**.
   * Runtime: Select Python 3.9.
   * Architecture: Select x86\_64.
   * Change default execution role:
   * Select Use an existing role.
   * Choose the role Lambda\_EC2\_Start\_Stop\_Role (the one created earlier).
   * Click Create function.
   * In the code: construct the below code – feel free to customize it based on your liking

A screenshot of a computer program

Description automatically generated

**Create an event rule in Event Bridge**

1. **Create an EventBridge Rule:**
   * Go to the **Amazon EventBridge Management Console**.
   * Click **Create rule**.
   * **Name**: Enter **Production-EC2-Monitor** (or follow your organization's naming standards).
2. **Define the Event Pattern:**
   * **Event Source**: Select **Event Pattern**.
   * **Event Pattern**: Select **Pre-defined pattern by service**.
   * **Service Provider**: Choose **AWS**.
   * **Service Name**: Select **EC2**.
   * **Event type**: Choose **EC2 Instance State-change Notification**.
   * **Specific states**: Select **stopped**.
   * **Specific Instance**: Copy and paste the instance ID of the EC2 instance you want to monitor.
3. **Select the Target:**
   * **Target**: Choose **Lambda function**.
   * **Function**: Select **EC2 Restart** (the function created earlier in your case might be different ).
4. **Create the Rule:**
   * Click **Create**.

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

EC2 restarted again after Event triggered. You can change the event trigger to 1 hour or based on the time duration you’d like to.

A screenshot of a computer

Description automatically generated