Comprehensive Guide for EC2 Backup and Notification System Using AWS Services

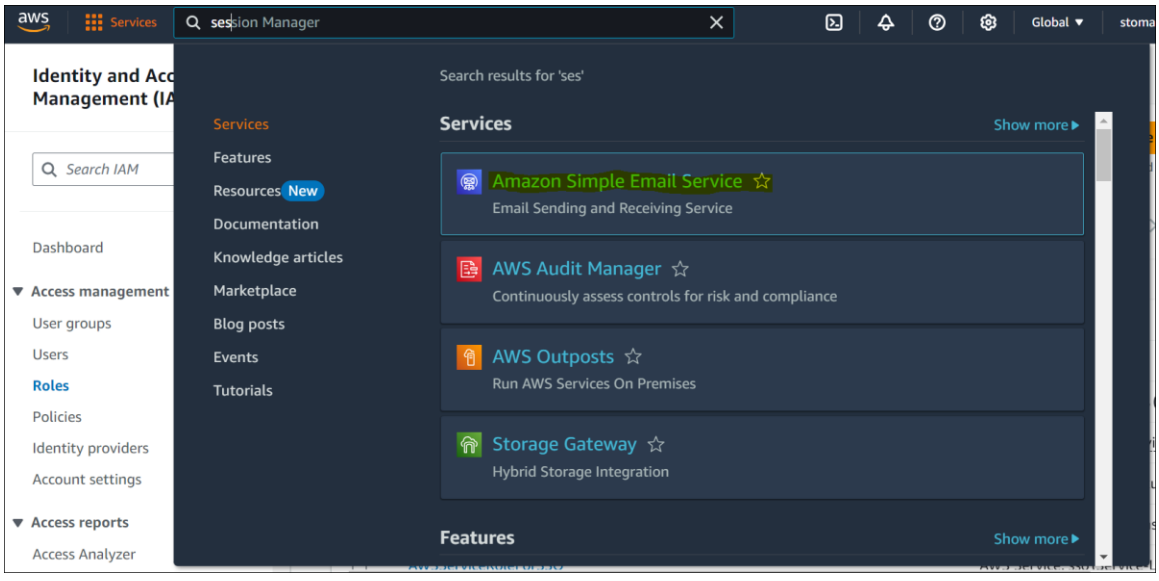
Contents

1. Setting up AWS SES for Sending Emails

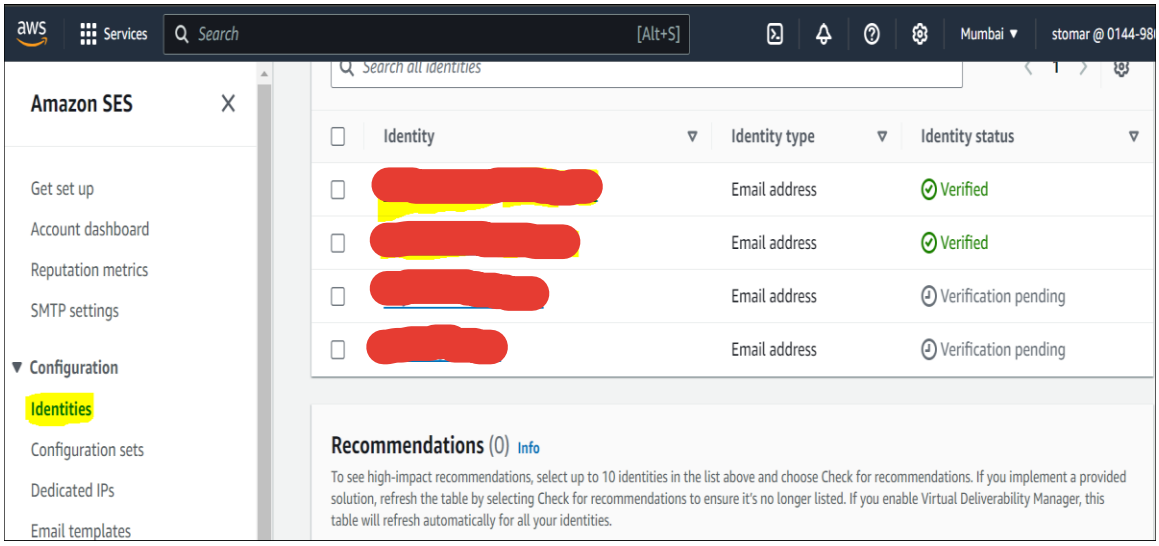
Before sending email notifications, AWS Simple Email Service (SES) needs to be configured.

Steps to Set up AWS SES:

1. Navigate to SES: Go to the SES console by searching for "SES".



2. Verify Email Address: Click Email Addresses under Identity Management and Verify a New Email Address. Enter and verify the sender and recipient email addresses.

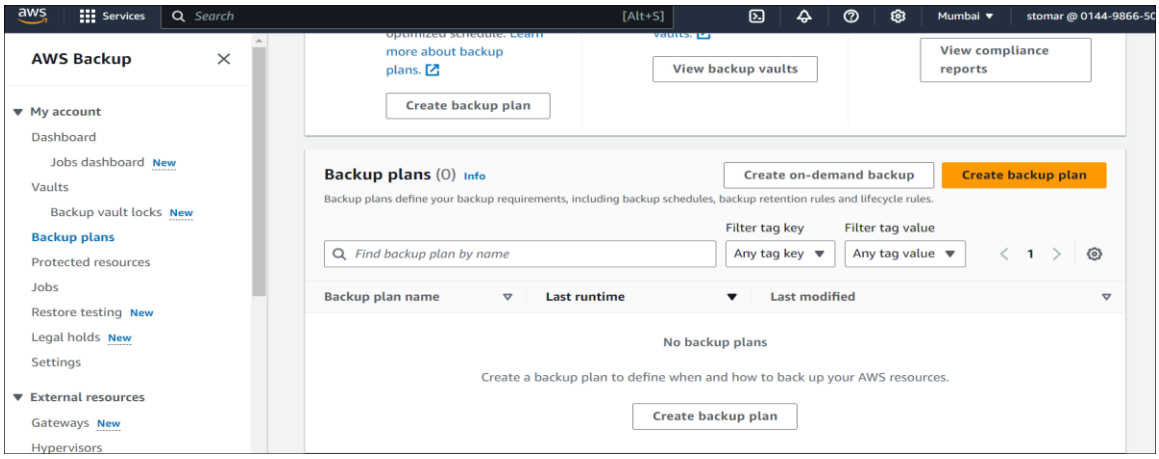


2. Request Production Access: If needed, submit a request to move SES out of the sandbox to send emails to unverified addresses.

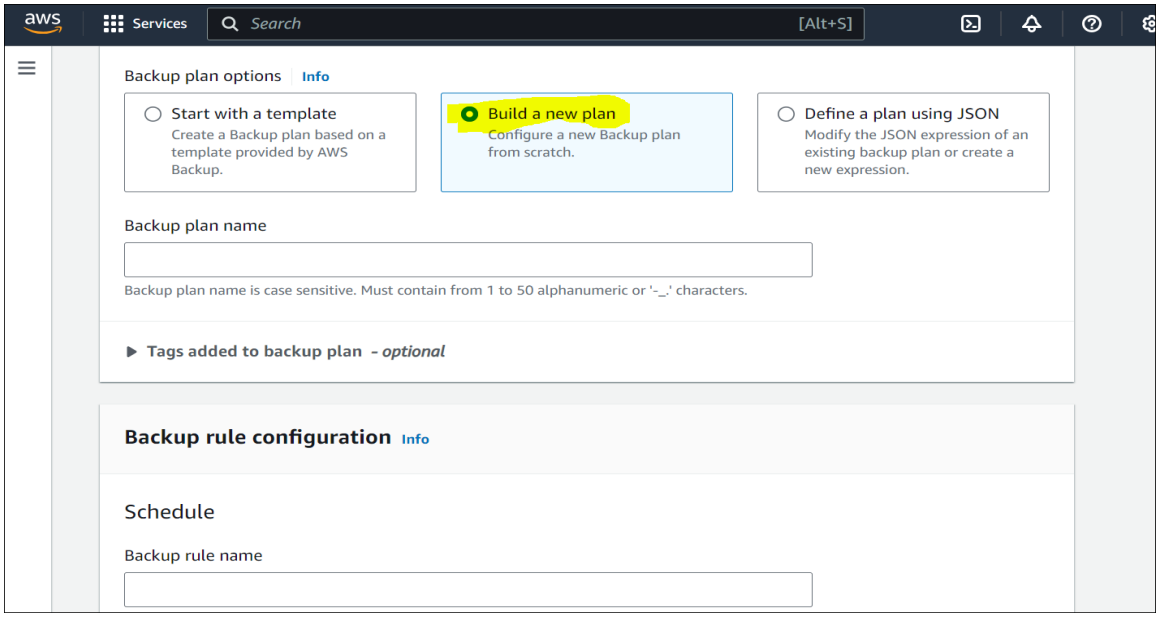
2. Configuring AWS Backup for EC2 (Optional if no backup policy exists)

Steps to Set Up AWS Backup for EC2:

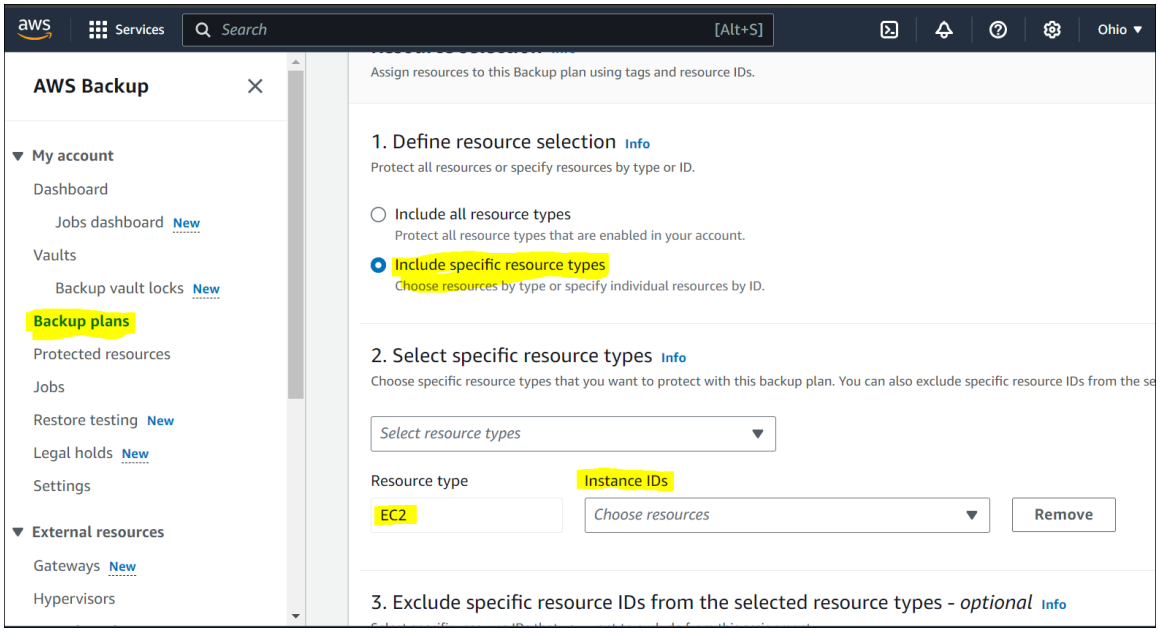
1. Go to AWS Backup Console.



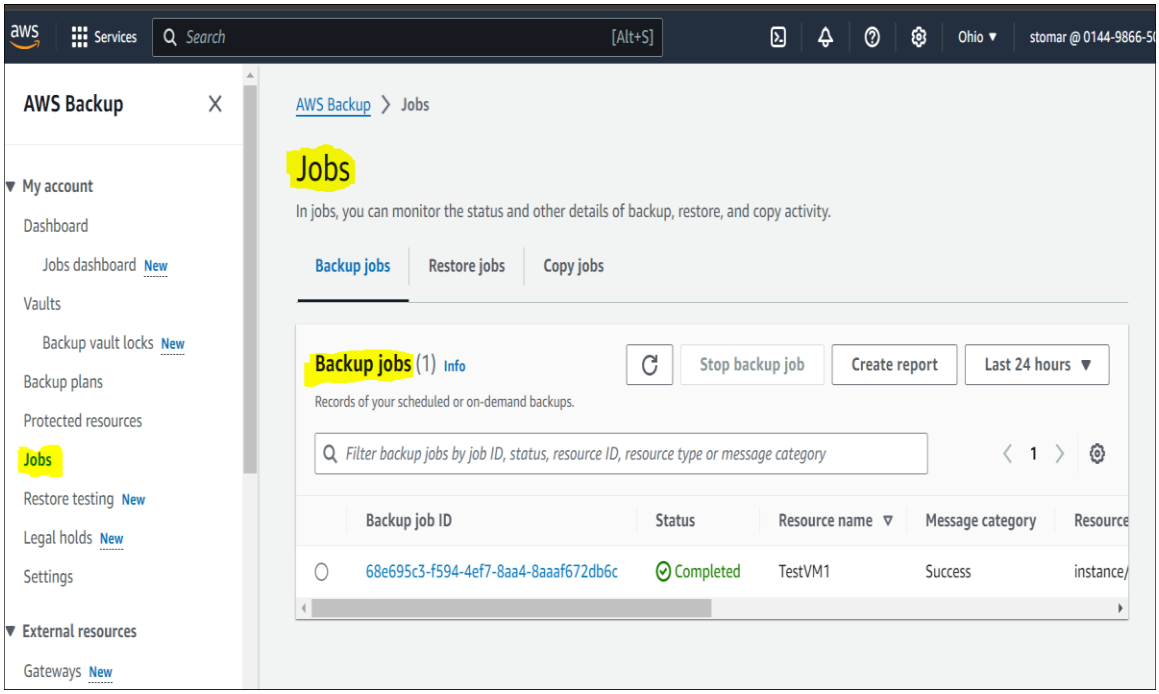
2. Create a Backup Plan: Name it, set the backup frequency (e.g., daily), and retention period (e.g., 7 days). Choose EC2 as the resource type.



3. Assign Resources: Choose your EC2 instance by selecting its ID.



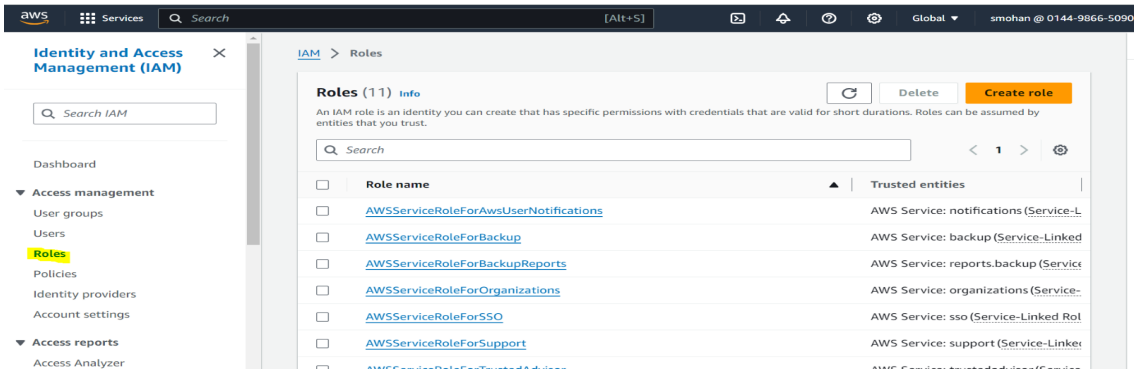
4. Monitor Backups: The backups will automatically start based on the schedule defined in the plan. You can monitor the backups under Backup Jobs in the Backup console.



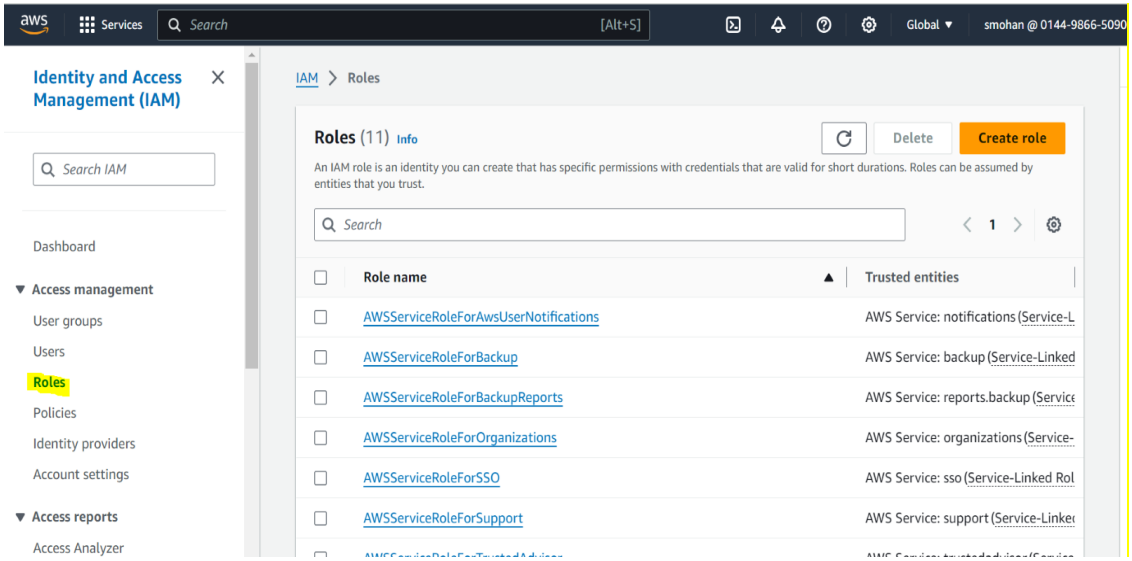
3. IAM Roles and Permissions

Steps to Create an IAM Role for Lambda:

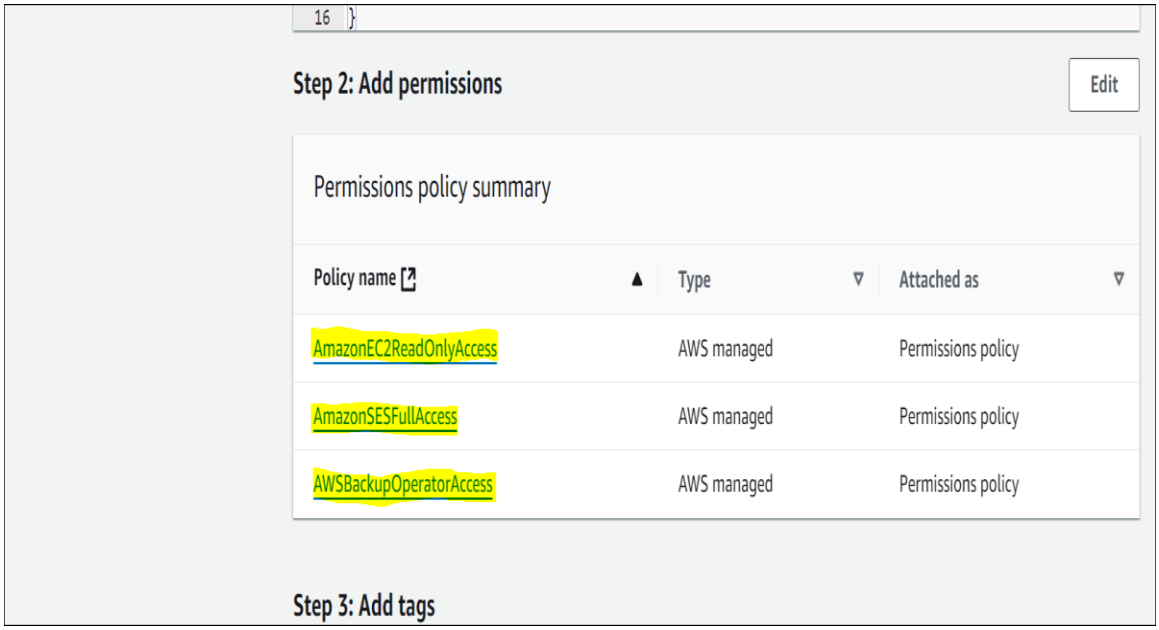
1. Go to IAM Console.



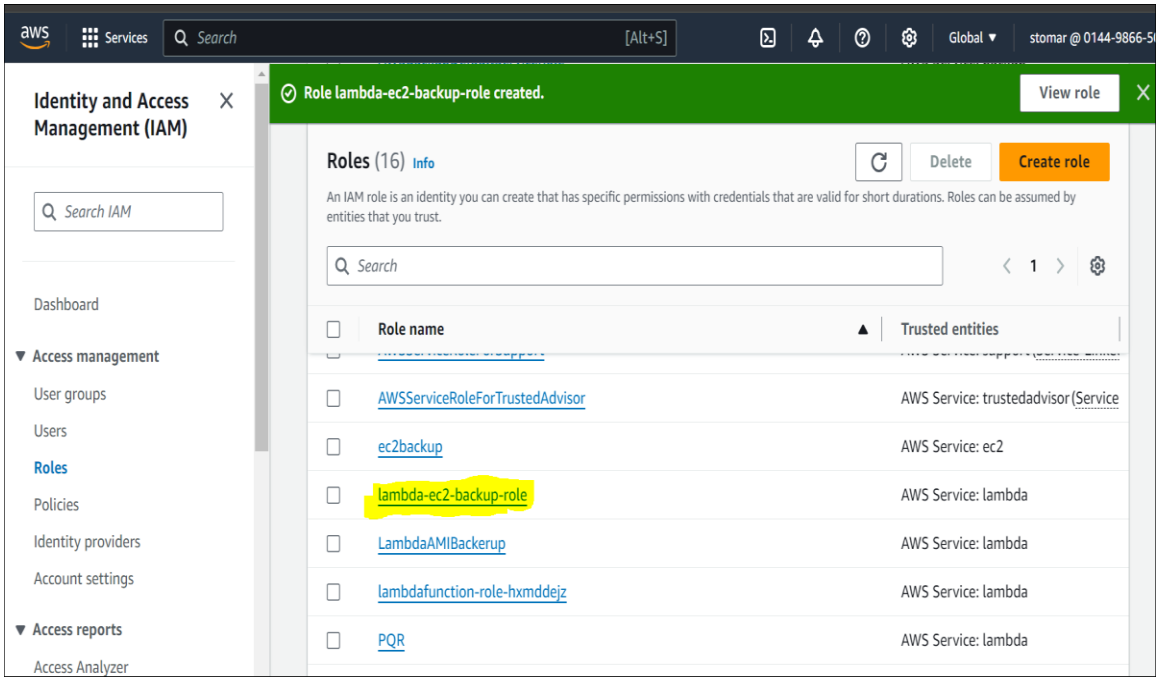
2. Create a New Role: Choose AWS Service as the trusted entity and select Lambda.



3. Attach Policies: Attach AmazonEC2ReadOnlyAccess, AWSBackupOperatorAccess, and AmazonSESFullAccess policies.



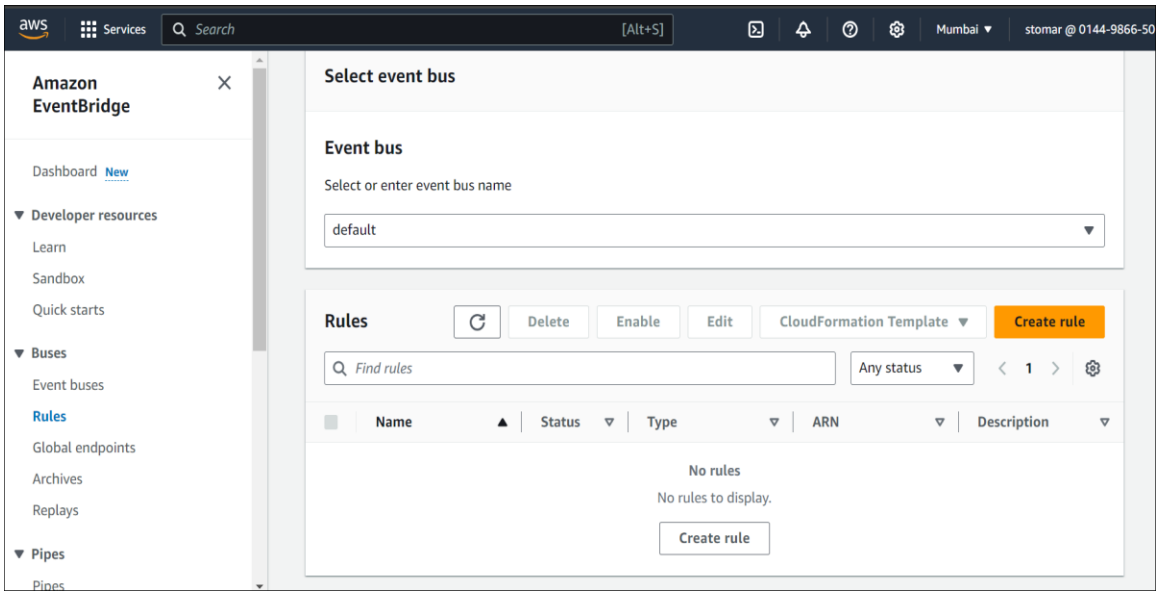
4. Name the Role: Name the role (e.g., lambda-ec2-backup-role).



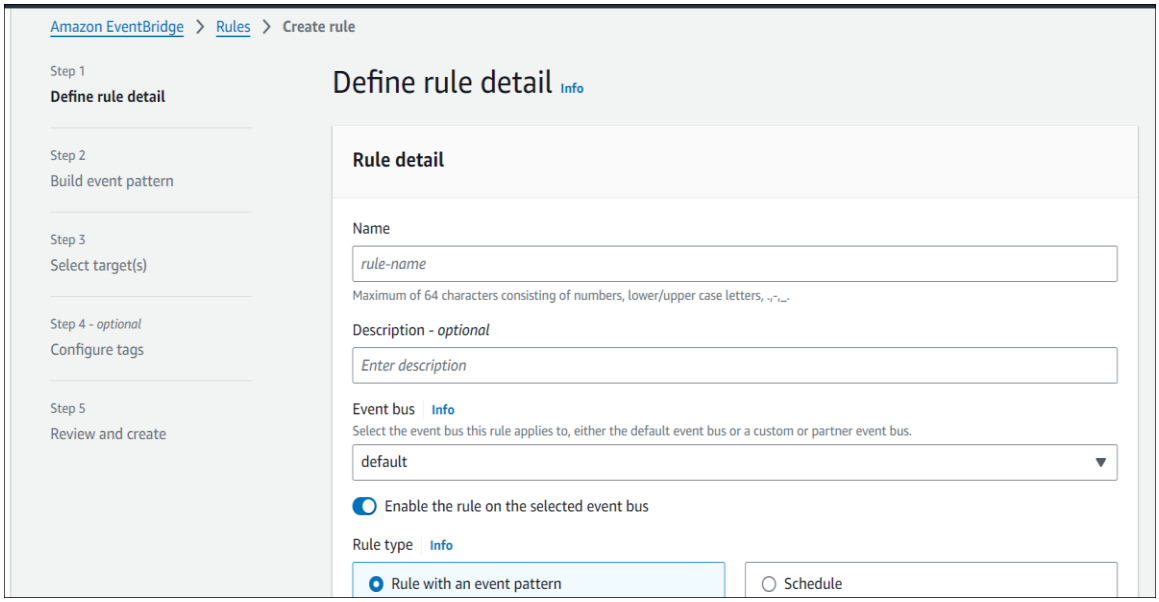
4. Create EventBridge Rule for Lambda Trigger

Steps to Set Up EventBridge Rule:

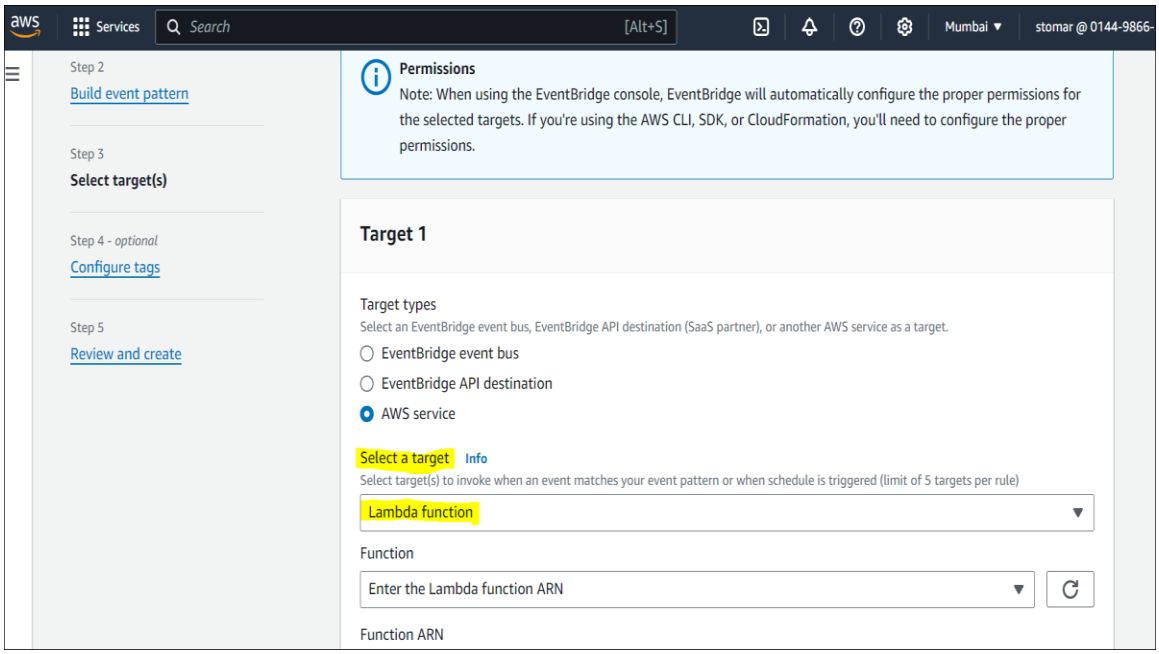
1. Go to EventBridge Console.



2. Create a New Rule: Name it, choose Event Source and AWS Services with Backup as the service name, or schedule a daily cron trigger (e.g., cron(0 8 * * ? *)).



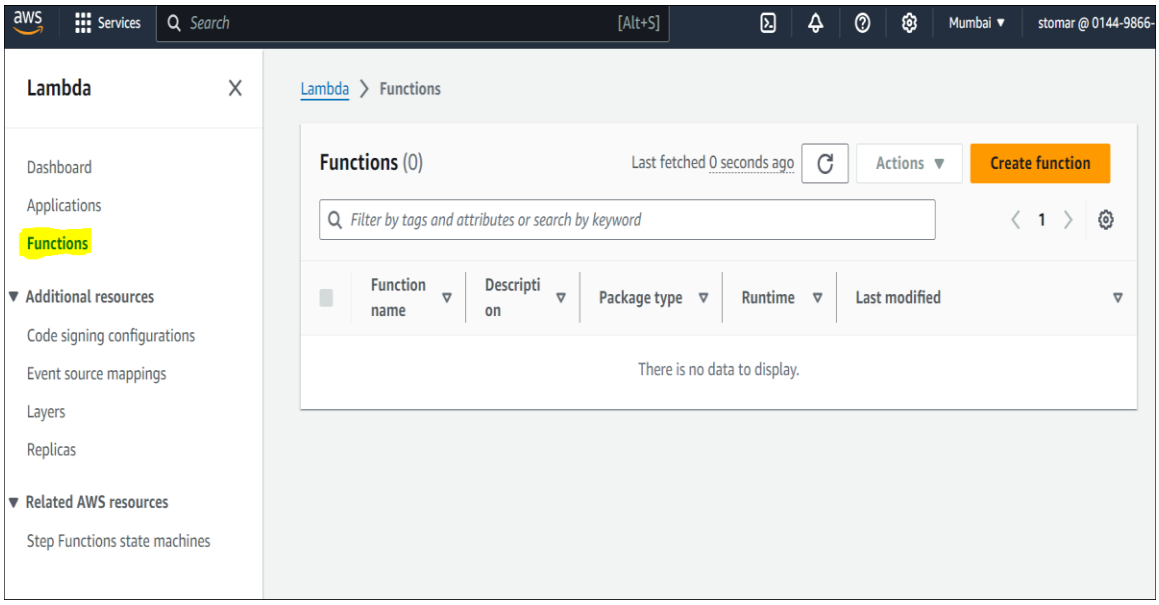
3. Set Lambda as the Target: Select the Lambda function as the target.



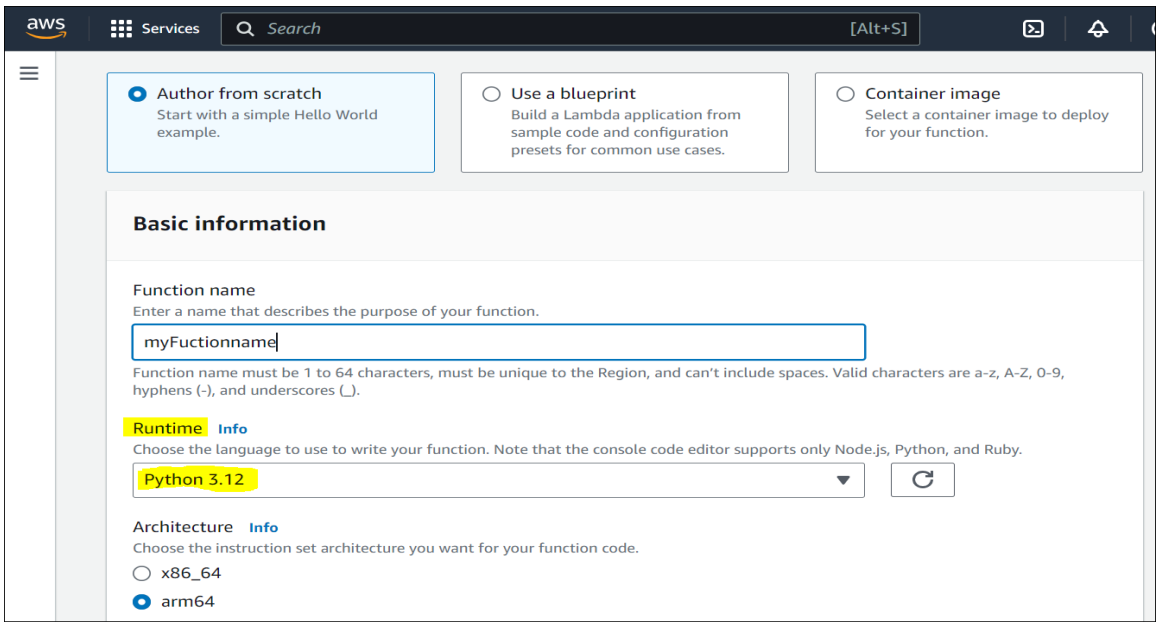
5. Creating the Lambda Function

Steps to Create Lambda Function:

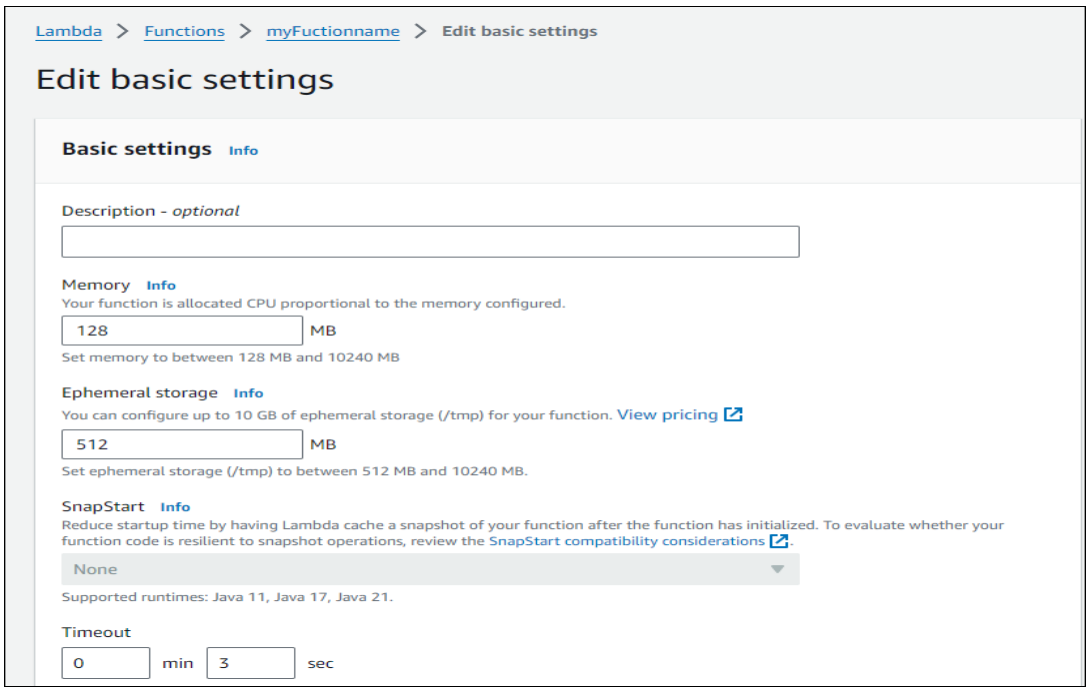
1. Go to Lambda Console.



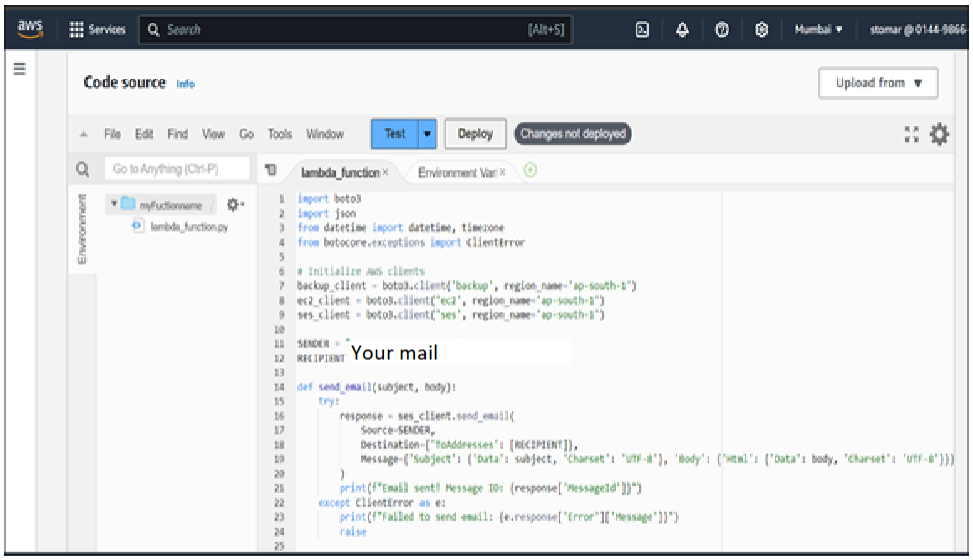
2. Create Lambda Function: Name it, set Python 3.9 (or higher) as the runtime, and choose the IAM role.



3. Set Timeout and Memory: Adjust timeout and memory as needed.



4. Deploy Code: Copy the Lambda code (in the next section) into the Lambda editor.



Output :-

Hello Team,

This is an autogenerated report that shows AWS VMs Backup status.

VM Name	Backup Status	Resource ID	Resource Type	Message Category
TestVM2	COMPLETED	i-0bde6586122055223	EC2	N/A
TestVM1	COMPLETED	i-0cf9b9aea56cd2824	EC2	N/A

Thanks and Regards

Team Azure