

AWS Lambda, Elastic Beanstalk, Opsworks and API Gateway

Assignment – 1 Lambda

Problem Statement

You work for XYZ Corporation. Your corporation wants to launch a new web-based application and they do not want their servers to be running all the time. It should also be managed by AWS. Implement suitable solutions.

Task to be performed:

1. Create a sample python lambda function
2. Set the lambda trigger as SNS and send a message to test invocations

Steps:

- Click the create function
- Select author from scratch and provide a name for the function
- Select the runtime as python
- And select create a new role with basic lambda permissions in execution role
- Finally lambda function is created
- Next select the configuration and select the permission
- Go inside the role and click attach policy
- And select S3 and SNS full access
- Finally click add permission

Screenshot of the AWS Lambda Functions page. The left sidebar shows navigation links like Dashboard, Applications, Functions, Additional resources, and Related AWS resources. The main content area displays a table titled "Functions (0)" with columns for Function name, Description, Package type, Runtime, and Last modified. A message at the bottom says "There is no data to display." The top right corner shows Mumbai and Naveen.

Screenshot of the "Create function" wizard. The top navigation bar includes CloudShell, Feedback, and links to Services, Search, Actions, Create function, and other account details. The main title is "Create function" with an "Info" link. A note says "AWS Serverless Application Repository applications have moved to Create application." Three options are shown: "Author from scratch" (selected), "Use a blueprint", and "Container image". The "Basic information" step shows fields for "Function name" (set to "task") and "Runtime" (set to "Python 3.11"). The bottom navigation bar includes CloudShell, Feedback, and links to Services, Search, Actions, Create function, and other account details.

Screenshot of the "Create function" wizard, continuing from the previous step. It shows the "Change default execution role" section, where "Create a new role with basic Lambda permissions" is selected. A note says "Role creation might take a few minutes. Please do not delete the role or edit the trust or permissions policies in this role." Below this, it says "Lambda will create an execution role named task-role-rj11gohb, with permission to upload logs to Amazon CloudWatch Logs." The "Advanced settings" section is partially visible at the bottom. The bottom navigation bar includes CloudShell, Feedback, and links to Services, Search, Actions, Create function, and other account details.

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Code Test Monitor Configuration Aliases Versions

General configuration Triggers Permissions Destinations Function URL Environment variables Tags VPC Monitoring and operations tools Concurrency

Execution role

Role name task-role-zl812nzk

Resource summary

To view the resources and actions that your function has permission to access, choose a service.

Amazon CloudWatch Logs 3 actions, 2 resources

By action By resource

Resource	Actions

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CloudShell Feedback

▶ Current permissions policies (2)

Other permissions policies (2/906)

Filter by Type

Policy name	Type	Description
AmazonSNSFullAccess	AWS managed	Provides full access to Amazon SNS via...
AmazonSNSReadOnlyAccess	AWS managed	Provides read only access to Amazon S...
AmazonSNSRole	AWS managed	Default policy for Amazon SNS service...
AWSElasticBeanstalkRoleSNS	AWS managed	(Elastic Beanstalk operations role) Allo...
AWSIoTDeviceDefenderPublishFindingsT...	AWS managed	Provides messages publish access to S...

Cancel Add permissions

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AWS Services Search [Alt+S] Global Naveen

CloudShell Feedback

Identity and Access Management (IAM)

Policies have been successfully attached to role.

You can attach up to 10 managed policies.

Filter by Type

Policy name	Type	Attached entities
AmazonS3FullAccess	AWS managed	1
AmazonSNSFullAccess	AWS managed	1
AWSLambdaBasicExecution...	Customer managed	1
AWSLambdaSNSTopicDesti...	Customer managed	1

Permissions boundary (not set)

Generate policy based on CloudTrail events

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Trigger – S3

- click the Create S3 Bucket
- provide a bucket name and select the AWS region
- finally bucket created
- Go inside the bucket and click properties
- click create event notification and provide a name
- select the event type as put
- select the destination as lambda function and also select the created lambda function in specify lambda function
- Finally click save changes

The screenshot shows the 'Create Bucket' wizard in the AWS Management Console. The 'General configuration' tab is active, displaying fields for AWS Region (set to Asia Pacific (Mumbai) ap-south-1), Bucket name (set to task-lambda), and Copy settings from existing bucket (optional). The 'Object Ownership' tab is also visible, showing controls for object ownership and access control lists (ACLs).

General configuration

AWS Region: Asia Pacific (Mumbai) ap-south-1

Bucket name: task-lambda

Copy settings from existing bucket - optional

Object Ownership

Encryption type

- Server-side encryption with Amazon S3 managed keys (SSE-S3)
- Server-side encryption with AWS Key Management Service keys (SSE-KMS)
- Dual-layer server-side encryption with AWS Key Management Service keys (DSSE-KMS)

Bucket Key

Using an S3 Bucket Key for SSE-KMS reduces encryption costs by lowering calls to AWS KMS. S3 Bucket Keys aren't supported for DSSE-KMS.

[Learn more](#)

Enable

Advanced settings

After creating the bucket, you can upload files and folders to the bucket, and configure additional bucket settings.

Create bucket

AWS Services Search [Alt+S] Global Naveen

Amazon S3 > Buckets

Account snapshot View Storage Lens dashboard

General purpose buckets Directory buckets

General purpose buckets (1) [Info](#)

Buckets are containers for data stored in S3. [Learn more](#)

Find buckets by name

Name AWS Region Access Creation date

Name	AWS Region	Access	Creation date
task-lambda	Asia Pacific (Mumbai) ap-south-1	Bucket and objects not public	December 24, 2023, 16:11:29 (UTC+05:30)

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AWS Services Search [Alt+S] Global Naveen

Event notifications (0) Configure in Cloud Trail

Send a notification when specific events occur in your bucket. [Learn more](#)

Edit Delete Create event notification

Name	Event types	Filters	Destination type	Destination
No event notifications				

Choose [Create event notification](#) to be notified when a specific event occurs.

Create event notification

Amazon EventBridge Edit

For additional capabilities, use Amazon EventBridge to build event-driven applications at scale using S3 event notifications. [Learn more](#) or [see EventBridge pricing](#)

Send notifications to Amazon EventBridge for all events in this bucket

Off

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Event types

Specify at least one event for which you want to receive notifications. For each group, you can choose an event type for all events, or you can choose one or more individual events.

Object creation

All object create events s3:ObjectCreated:*

Put s3:ObjectCreated:Put

Post s3:ObjectCreated:Post

Copy s3:ObjectCreated:Copy

Multipart upload completed s3:ObjectCreated:CompleteMultipartUpload

Object removal

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The screenshot shows the AWS Lambda function configuration interface. In the 'Destination' section, the 'Lambda function' option is selected. Under 'Specify Lambda function', the 'Choose from your Lambda functions' option is selected. A dropdown menu shows 'task'. At the bottom right are 'Cancel' and 'Save changes' buttons.

Event notifications (1)

Successfully created event notification "task-notification". Operation successfully completed.

Name	Event types	Filters	Destination type	Destination
task-notification	Put	-	Lambda function	task

Amazon EventBridge

Send notifications to Amazon EventBridge for all events in this bucket
Off

Configure in CloudTrail

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Destination - SNS

- **Click the create Topic**
 - a) Select the standard in type
 - b) And provide a name
 - c) Finally the topic is created
- **Click the create Subscription**
 - a) Select the Email as Protocol
 - b) And provide Email ID in the endpoint to receive notification
 - c) A confirmation notification send to Email ID and Email ID owner should confirm the subscription by clicking confirm subscription
 - d) Finally the subscription is created and subscription confirmed

- Go inside the lambda function and click add destination
- Select asynchronous invocation in source
- Select on success in condition and select the SNS topic in destination type
- And select the destination which was created
- Finally click the save

The screenshot shows the AWS SNS Topics page. At the top, there is a banner for a new feature: "Amazon SNS now supports in-place message archiving and replay for FIFO topics." Below the banner, the page title is "Topics" under "Amazon SNS > Topics". There is a search bar and buttons for "Edit", "Delete", "Publish message", and "Create topic". A table header shows columns for "Name", "Type", and "ARN". A message says "No topics" and "To get started, create a topic." with a "Create topic" button.

The screenshot shows the "Create topic" page under "Amazon SNS > Topics > Create topic". The title is "Create topic". Under the "Details" section, there is a "Type" dropdown with "Info" link. It says "Topic type cannot be modified after topic is created". Two options are shown: "FIFO (first-in, first-out)" and "Standard". "Standard" is selected and highlighted with a blue border. Its description includes: "Best-effort message ordering", "At-least once message delivery", "Highest throughput in publishes/second", and "Subscription protocols: SQS, Lambda, HTTP, SMS, email, mobile application endpoints". Below this, there is a "Name" input field containing "task-topic" and a note about character limits. There is also a "Display name - optional" input field with an "Info" link and a note about SMS message display.

Name

Maximum 256 characters. Can include alphanumeric characters, hyphens (-) and underscores (_).

Display name - optional [Info](#)

To use this topic with SMS subscriptions, enter a display name. Only the first 10 characters are displayed in an SMS message.

Maximum 100 characters.

Encryption - optional

Amazon SNS provides in-transit encryption by default. Enabling server-side encryption adds at-rest encryption to your topic.

Access policy - optional [Info](#)

This policy defines who can access your topic. By default, only the topic owner can publish or subscribe to the topic.

Data protection policy - optional [Info](#)

This policy defines which sensitive data to monitor and to prevent from being exchanged via your topic.

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▼ Access policy - optional [Info](#)

This policy defines who can access your topic. By default, only the topic owner can publish or subscribe to the topic.

Choose method

Basic Use simple criteria to define a basic access policy.

Advanced Use a JSON object to define an advanced access policy.

Publishers

Specify who can publish messages to the topic.

Everyone Anybody can publish

Subscribers

Specify who can subscribe to this topic.

Everyone Any AWS account can subscribe to the topic

JSON preview

```
{ "Version": "2008-10-17", "Id": "__default_policy_ID", "Statement": [ { "Sid": "__default_statement_ID", "Effect": "Allow", "Principal": { "AWS": "*" }, "Action": [ "SNS:Publish" ] } ] }
```

aws Services Search [Alt+S] Mumbai Naveen

- ☰
 - ▶ **Delivery policy (HTTP/S) - optional** Info
The policy defines how Amazon SNS retries failed deliveries to HTTP/S endpoints. To modify the default settings, expand this section.
 - ▶ **Delivery status logging - optional** Info
These settings configure the logging of message delivery status to CloudWatch Logs.
 - ▶ **Tags - optional**
A tag is a metadata label that you can assign to an Amazon SNS topic. Each tag consists of a key and an optional value. You can use tags to search and filter your topics and track your costs. [Learn more](#)
 - ▶ **Active tracing - optional** Info
Use AWS X-Ray active tracing for this topic to view its traces and service map in Amazon CloudWatch. Additional costs apply.

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AWS Services Search [Alt+S] Mumbai Naveen

Amazon SNS

Dashboard Topics Subscriptions

Mobile Push notifications Text messaging (SMS) Origination numbers

Type Standard

Subscriptions Access policy Data protection policy Delivery policy (HTTP/S) Delivery status log

Subscriptions (0)

Edit Delete Request confirmation Confirm subscription Create subscription

Search

ID	Endpoint	Status	Protocol
No subscriptions found You don't have any subscriptions to this topic.			

Create subscription

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AWS Services Search [Alt+S] Mumbai Naveen

Details

Topic ARN: arn:aws:sns:ap-south-1:237981402912:task-topic

Protocol: Email

Endpoint: naveenrajasekaran2000@gmail.com

After your subscription is created, you must confirm it. [Info](#)

Subscription filter policy - optional [Info](#)

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AWS Services Search [Alt+S] Mumbai Naveen

Amazon SNS

Dashboard Topics Subscriptions

Mobile Push notifications Text messaging (SMS) Origination numbers

Amazon SNS > Topics > task-topic > Subscription: 6c23a5b7-37c4-4409-8930-5e081a559492

Subscription: 6c23a5b7-37c4-4409-8930-5e081a559492

Edit Delete

Details

ARN: arn:aws:sns:ap-south-1:237981402912:task-topic:6c23a5b7-37c4-4409-8930-5e081a559492	Status: Pending confirmation
Endpoint: naveenrajasekaran2000@gmail.com	Protocol: EMAIL
Topic: task-topic	
Subscription Principal: arn:aws:iam::237981402912:root	

Amazon SNS

New Feature
Amazon SNS now supports in-place message archiving and replay for FIFO topics. [Learn more](#)

Dashboard Topics Subscriptions ▾ Mobile Push notifications Text messaging (SMS) Origination numbers

Amazon SNS > Subscriptions

Subscriptions (1)

ID	Endpoint	Status	Protocol	Topic
6c23a5b7-37c4-4409-8930...	naveenrajasekara...	Confirmed	EMAIL	task-to...

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Destination configuration [Info](#)

Configure a destination to receive invocation records. Lambda can send records when your function is invoked asynchronously, or when your function processes records from an event source mapping.

Source
Choose the invocation type that Lambda sends records for.
 Asynchronous invocation
 Event source mapping invocation

Condition
Choose whether to send invocation records for event processing failures or for successful invocations.
 On failure
 On success

Destination type
Choose the destination type that Lambda sends invocation records to.
SNS topic

Destination
Choose the ARN of the destination, or enter the ARN manually.
arn:aws:sns:ap-south-1:237981402912:task-topic

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Function overview [Info](#)

[Export to Application Composer](#) [Download function](#)

Diagram [Template](#)

task

S3

Amazon SNS

+ Add trigger + Add destination

Description

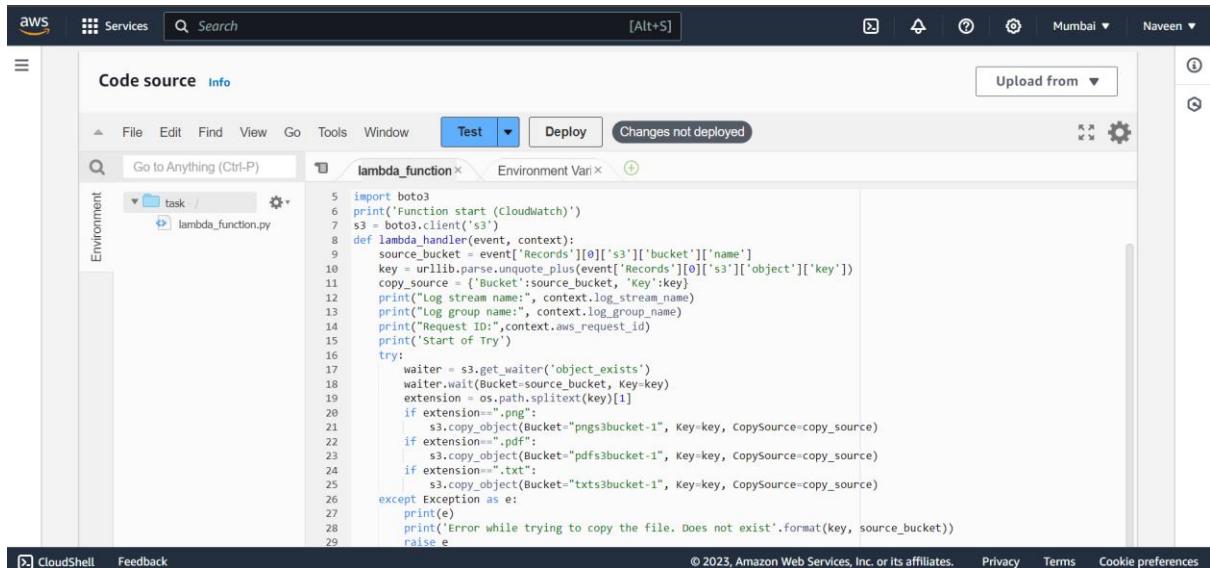
Last modified 2 minutes ago

Function ARN arn:aws:lambda:ap-south-1:237981402912:function:task

Function URL [Info](#)

Code Test Monitor Configuration Aliases Versions

- provide the code to be performed in code source
- And click the deploy
- Once the file uploaded in the bucket the lambda got triggered and send the notification to Email ID

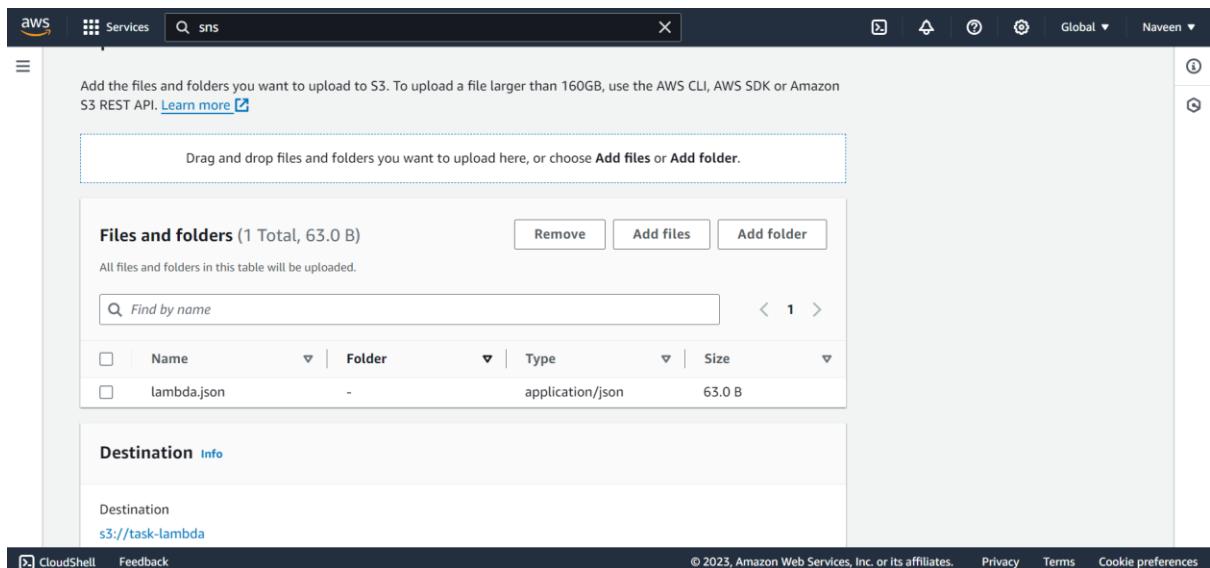


The screenshot shows the AWS Lambda function editor. At the top, there's a navigation bar with 'Services' and a search bar. Below it, the 'Code source' tab is selected. The main area contains a code editor with Python code for a Lambda function named 'lambda_function'. The code handles CloudWatch logs and copies them to different S3 buckets based on their extension. A toolbar at the top of the code editor includes 'Test', 'Deploy', and a status message 'Changes not deployed'. On the left, there's an environment sidebar.

```

5 import boto3
6 print('Function start (CloudWatch)')
7 s3 = boto3.client('s3')
8 def lambda_handler(event, context):
9     source_bucket = event['Records'][0]['s3']['bucket']['name']
10    key = urllib.parse.unquote_plus(event['Records'][0]['s3']['object']['key'])
11    copy_source = {'Bucket':source_bucket, 'Key':key}
12    print("Log stream name:", context.log_stream_name)
13    print("Log group name:", context.log_group_name)
14    print("Request ID:", context.aws_request_id)
15    print('Start of Try')
16    try:
17        waiter = s3.get_waiter('object_exists')
18        waiter.wait(Bucket=source_bucket, Key=key)
19        extension = os.path.splitext(key)[1]
20        if extension==".png":
21            s3.copy_object(Bucket="pngs3bucket-1", Key=key, CopySource=copy_source)
22        if extension==".pdf":
23            s3.copy_object(Bucket="pdfs3bucket-1", Key=key, CopySource=copy_source)
24        if extension==".txt":
25            s3.copy_object(Bucket="txts3bucket-1", Key=key, CopySource=copy_source)
26    except Exception as e:
27        print(e)
28        print("Error while trying to copy the file. Does not exist".format(key, source_bucket))
29    raise e

```



The screenshot shows the AWS S3 console. At the top, there's a navigation bar with 'Services' and a search bar. Below it, the 'sns' tab is selected. The main area has a large text input field with placeholder text 'Drag and drop files and folders you want to upload here, or choose Add files or Add folder.' Below this, there's a table titled 'Files and folders (1 Total, 63.0 B)' showing one file: 'lambda.json'. There are buttons for 'Remove', 'Add files', and 'Add folder'. At the bottom, there's a 'Destination' section with a table showing the destination as 's3://task-lambda'.

Name	Folder	Type	Size
lambda.json	-	application/json	63.0 B

AWS Notification Message Inbox



you have a notification from lambda <no-reply@sns.amazonaws.com>
to me ▾

4:59 PM (3 minutes ago)



```
{"version":"1.0","timestamp":"2023-12-24T11:29:02.474Z","requestContext":{"requestId":"4bccd50a-c70c-4174-8a16-01c7047b2623","functionArn":"arn:aws:lambda:ap-south-1:237981402912:function:task:$LATEST","condition":"Success","approximateInvokeCount":1}, "requestPayload":[{"Records":[{"eventVersion": "2.1", "eventSource": "aws:s3", "awsRegion": "ap-south-1", "eventTime": "2023-12-24T11:29:00.461Z", "eventName": "ObjectCreated:Put", "userIdentity": {"principalId": "A1AZFNAR51EB6B"}, "requestParameters": {"sourceIPAddress": "157.51.129.33"}, "responseElements": {"x-amz-request-id": "AMC3VZ40AHQ5VN5", "x-amz-id-2": "7XKbFvqEg+tgAb eUdC2Y0LsnO5gFDIV12S+s8uqhRgBrsk06At6S1cfzybwEpFeSNXh/1kb9ahMS/nyy0OFbatyumaKmtz9D"}, "s3": {"s3SchemaVersion": "1.0", "configurationId": "task-notification", "bucket": {"name": "task-lambda", "ownerIdentity": {"principalId": "A1AZFNAR51EB6B"}, "arn": "arn:aws:s3:::task-lambda"}, "object": {"key": "lambda.json", "size": 63, "eTag": "bc1e45b615c6118fddb2701be63bc955", "sequencer": "00658815FC6ED3E9BE"}}}}], "responseContext": {"statusCode": 200, "executedVersion": "$LATEST"}, "responsePayload": null}
```

--

If you wish to stop receiving notifications from this topic, please click or visit the link below to unsubscribe:

<https://sns.ap-south-1.amazonaws.com/unsubscribe.html?SubscriptionArn=arn:aws:sns:ap-south-1:237981402912:task-topic:6c23a5b7-37c4-4409-8930-5e081a559492&Endpoint=naveenrajasekaran2000@gmail.com>

Please do not reply directly to this email. If you have any questions or comments regarding this email, please contact us at

<https://aws.amazon.com/support>

Assignment – 2 Elastic Beanstalk

Problem Statement

You work for XYZ Corporation. Your corporation wants to launch a new web-based application and they do not want their servers to be running all the time. It should also be managed by AWS. Implement suitable solutions.

Task to be performed:

1. create an Elastic Beanstalk environment with the runtime as PHP
2. Upload a simple PHP file to the environment once created.

Steps

- Click the create environment
- Select the web server environment in environment tier
- provide the application name
- select the managed platform in platform type and select **PHP** in platform
- select the sample application in application code
- Create a new service role
 - a) Click the create role
 - b) Select the trusted entity type in ASW service
 - c) Select the Elastic beanstalk in use case
 - d) Provide a name for the role
 - e) Finally the role created
 - f) Go inside the role and click permission
 - g) Click add permission and attach policies
 - h) Select the administrator access
 - i) And click add permission
- Next select the created role
- Provide the Key pair
- Create IAM role for EC2 instance
 - a) Click the create role
 - b) Select the trusted entity type in ASW service
 - c) Select the EC2 in use case
 - d) Select the administrator access in permission
 - e) Provide a name for the role
 - f) Finally the role created
- Select the role which was created in EC2 instance profile
- Select the VPC and enable the public ID address

- Finally environment is created
- Click upload and deploy to upload the file
- And click the deploy
- Once the code is deployed now the web page will be reflated in browser

Configure environment [Info](#)

Environment tier [Info](#)
Amazon Elastic Beanstalk has two types of environment tiers to support different types of web applications.

Web server environment
Run a website, web application, or web API that serves HTTP requests. [Learn more](#)

Worker environment
Run a worker application that processes long-running workloads on demand or performs tasks on a schedule. [Learn more](#)

Application information [Info](#)

Application name

Maximum length of 100 characters.

▶ Application tags (optional)

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Platform [Info](#)

Platform type
 Managed platform
Platforms published and maintained by Amazon Elastic Beanstalk. [Learn more](#)

Custom platform
Platforms created and owned by you. This option is unavailable if you have no platforms.

Platform

Platform branch

Platform version

Application code [Info](#)

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Application code Info

Sample application
 Existing version Application versions that you have uploaded.
 Upload your code Upload a source bundle from your computer or copy one from Amazon S3.

Presets Info

Start from a preset that matches your use case or choose custom configuration to unset recommended values and use the service's default values.

Configuration presets
 Single instance (free tier eligible)
 Single instance (using spot instance)
 High availability
 High availability (using spot and on-demand instances)

Identity and Access Management (IAM)

Roles

Roles (7) Info

An IAM role is an identity you can create that has specific permissions with credentials that are valid for short durations. Roles can be assumed by entities that you trust.

Role name	Trusted entities
AWSServiceRoleForAmazonElasticFileSystem	AWS Service: elasticfilesystem (Service-Linked)
AWSServiceRoleForAutoScaling	AWS Service: autoscaling (Service-Linked)
AWSServiceRoleForBackup	AWS Service: backup (Service-Linked)
AWSServiceRoleForElasticLoadBalancing	AWS Service: elasticloadbalancing (Service-Linked)
AWSServiceRoleForSupport	AWS Service: support (Service-Linked)
AWSServiceRoleForTrustedAdvisor	AWS Service: trustedadvisor (Service-Linked)
task	Account: 237981402912, and 1 more

Step 2
Add permissions

Step 3
Name, review, and create

Trusted entity type

AWS service Allow AWS services like EC2, Lambda, or others to perform actions in this account.

AWS account Allow entities in other AWS accounts belonging to you or a 3rd party to perform actions in this account.

Web identity Allows users federated by the specified external web identity provider to assume this role to perform actions in this account.

SAML 2.0 federation Allows users federated with SAML 2.0 from a corporate directory to perform actions in this account.

Custom trust policy Create a custom trust policy to enable others to perform actions in this account.

Use case

Allow an AWS service like EC2, Lambda, or others to perform actions in this account.

Screenshot of the AWS IAM Role Creation Step 1: Set permissions boundary - optional.

The page shows a "Custom trust policy" option selected, with a note: "Create a custom trust policy to enable others to perform actions in this account." Below this is a "Use case" section where "Elastic Beanstalk" is chosen as the service or use case. Under "Use case", "Elastic Beanstalk - Customizable" is selected, described as "Allows Elastic Beanstalk to create and manage AWS resources on your behalf." A "Next" button is visible at the bottom right.

Screenshot of the AWS IAM Role Creation Step 2: Add permissions.

The page shows the "Add permissions" step. It lists "Permissions policies (2)" including "AWSelasticBeanstalkEnhancedHealth" and "AWSelasticBeanstalkService", both marked as "AWS managed". A "Set permissions boundary - optional" section is present. Navigation buttons "Cancel", "Previous", and "Next" are at the bottom.

Screenshot of the AWS IAM Role Creation Step 3: Name, review, and create.

The page shows the "Name, review, and create" step. It includes a "Role details" section with fields for "Role name" (set to "task-elasticbeanstalk") and "Description" (set to "Allows Elastic Beanstalk to create and manage AWS resources on your behalf"). A "Step 1: Select trusted entities" section is at the bottom left, and an "Edit" button is at the bottom right.

Permissions policy summary

Policy name	Type	Attached as
AWSElasticBeanstalkEnhancedHealth	AWS managed	Permissions policy
AWSElasticBeanstalkService	AWS managed	Permissions policy

Step 3: Add tags

Add tags - *optional* [Info](#)

Tags are key-value pairs that you can add to AWS resources to help identify, organize, or search for resources.

No tags associated with the resource.

[Add new tag](#)

You can add up to 50 more tags.

Cancel [Previous](#) **Create role**

Identity and Access Management (IAM)

[Search IAM](#)

- Dashboard
- Access management
 - User groups
 - Users
 - Roles**
 - Policies
 - Identity providers
 - Account settings
- Access reports
 - Access Analyzer
- External access

task-elasticbeanstalk [Info](#)

Allows Elastic Beanstalk to create and manage AWS resources on your behalf.

Summary

Creation date: December 24, 2023, 10:46 (UTC+05:30) ARN: arn:aws:iam::237981402912:role/task-elasticbeanstalk

Last activity: - Maximum session duration: 1 hour

[Edit](#) [Delete](#)

Permissions [Trust relationships](#) [Tags](#) [Access Advisor](#) [Revoke sessions](#)

Permissions policies (2) [Info](#)

You can attach up to 10 managed policies.

[C](#) [Simulate](#) [Remove](#) [Add permissions](#)

Identity and Access Management (IAM)

[Search IAM](#)

- Dashboard
- Access management
 - User groups
 - Users
 - Roles**
 - Policies
 - Identity providers
 - Account settings
- Access reports
 - Access Analyzer
- External access

Permissions [Trust relationships](#) [Tags](#) [Access Advisor](#) [Revoke sessions](#)

Permissions policies (2) [Info](#)

You can attach up to 10 managed policies.

[C](#) [Simulate](#) [Remove](#) [Add permissions](#)

Filter by Type: All types

Policy name	Type	Attached entities
AWSElasticBeanstalkEnhancedHealth	AWS managed	1
AWSElasticBeanstalkService	AWS managed	1

Permissions boundary (not set)

Generate policy based on CloudTrail events

Servicess Search [Alt+S] Global Naveen

▶ Current permissions policies (2)

Other permissions policies (1/905)

Filter by Type

Policy name	Type	Description
<input checked="" type="checkbox"/> AdministratorAccess	AWS managed - job function	Provides full access to AWS services an...
<input type="checkbox"/> AdministratorAccess-Amplify	AWS managed	Grants account administrative permisi...
<input type="checkbox"/> AdministratorAccess-AWSElasticBeanstalk	AWS managed	Grants account administrative permissi...
<input type="checkbox"/> AlexaForBusinessDeviceSetup	AWS managed	Provide device setup access to AlexaFo...
<input type="checkbox"/> AlexaForBusinessFullAccess	AWS managed	Grants full access to AlexaForBusiness ...
<input type="checkbox"/> AlexaForBusinessGatewayExecution	AWS managed	Provide gateway execution access to A...

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Identity and Access Management (IAM) X

Policy was successfully attached to role.

Permissions Trust relationships Tags Access Advisor Revoke sessions

Permissions policies (3) Info

You can attach up to 10 managed policies.

Filter by Type

Policy name	Type	Attached entities
<input type="checkbox"/> AdministratorAccess	AWS managed - job function	1
<input type="checkbox"/> AWSElasticBeanstalkEnhancedHealth	AWS managed	1
<input type="checkbox"/> AWSElasticBeanstalkService	AWS managed	1

Permissions boundary (not set)

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Use case

Allow an AWS service like EC2, Lambda, or others to perform actions in this account.

Service or use case

EC2

Choose a use case for the specified service.

Use case

EC2
Allows EC2 instances to call AWS services on your behalf.

EC2 Role for AWS Systems Manager
Allows EC2 instances to call AWS services like CloudWatch and Systems Manager on your behalf.

EC2 Spot Fleet Role
Allows EC2 Spot Fleet to request and terminate Spot Instances on your behalf.

EC2 - Spot Auto Scaling
Allows Auto Scaling to access and update EC2 spot fleets on your behalf.

EC2 - Spot Fleet Tagging
Allows EC2 to launch spot instances and attach tags to the launched instances on your behalf.

EC2 - Spot Instances

https://ap-south-1.console.aws.amazon.com/console/home?region=ap-sout... © 2023, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

Screenshot of the AWS IAM 'Create role' wizard Step 2: Add permissions.

The 'Permissions policies' section shows a list of available policies:

Policy name	Type	Description
<input checked="" type="checkbox"/> AdministratorAccess	AWS managed - job function	Provides full access to AWS services
<input type="checkbox"/> AdministratorAccess-Amplify	AWS managed	Grants account administrative permission
<input type="checkbox"/> AdministratorAccess-AWSElast...	AWS managed	Grants account administrative permission
<input type="checkbox"/> AlexaForBusinessDeviceSetup	AWS managed	Provide device setup access to AlexaForBusiness
<input type="checkbox"/> AlexaForBusinessFullAccess	AWS managed	Grants full access to AlexaForBusiness

Screenshot of the AWS IAM 'Create role' wizard Step 3: Name, review, and create.

Role details

Role name: task-EC2

Description: Allows EC2 instances to call AWS services on your behalf.

Screenshot of the AWS IAM 'Role task-EC2 created' confirmation page.

Role task-EC2 created.

Last activity	Maximum session duration
-	1 hour

Permissions

Permissions policies (1): AdministratorAccess

Attached entities: 2

Permissions boundary (not set)

Step 2
Configure service access

Step 3 - optional
[Set up networking, database, and tags](#)

Step 4 - optional
[Configure instance traffic and scaling](#)

Step 5 - optional
[Configure updates, monitoring, and logging](#)

Step 6
[Review](#)

Service access
 IAM roles, assumed by Elastic Beanstalk as a service role, and EC2 instance profiles allow Elastic Beanstalk to create and manage your environment. Both the IAM role and instance profile must be attached to IAM managed policies that contain the required permissions. [Learn more](#)

Service role
 Create and use new service role
 Use an existing service role
Existing service roles
 Choose an existing IAM role for Elastic Beanstalk to assume as a service role. The existing IAM role must have the required IAM managed policies.
 task-elasticbeanstalk [View](#) [Edit](#)

EC2 key pair
 Select an EC2 key pair to securely log in to your EC2 instances. [Learn more](#)
 newkeypair [View](#) [Edit](#)

EC2 instance profile
 Choose an IAM instance profile with managed policies that allow your EC2 instances to perform required operations.
 task-EC2 [View](#) [Edit](#)

[View permission details](#)

Step 1
[Configure environment](#)

Step 2
[Configure service access](#)

Step 3 - optional
[Set up networking, database, and tags](#)

Step 4 - optional
[Configure instance traffic and scaling](#)

Step 5 - optional
[Configure updates, monitoring, and logging](#)

Step 6
[Review](#)

Set up networking, database, and tags - optional [Info](#)

Virtual Private Cloud (VPC)

VPC
 Launch your environment in a custom VPC instead of the default VPC. You can create a VPC and subnets in the VPC management console. [Learn more](#)
 vpc-0e0bde1e41aa5d554 | (172.31.0.0/16) [View](#)

[Create custom VPC](#)

Instance settings
 Choose a subnet in each AZ for the instances that run your application. To avoid exposing your instances to the Internet, run your instances in private subnets and load balancer in public subnets. To run your load balancer and instances in the same public subnets, assign public IP addresses to the instances. [Learn more](#)

Public IP address
 Assign a public IP address to the Amazon EC2 instances in your environment.
 Activated

Step 6
[Review](#)

addresses to the instances. [Learn more](#)

Public IP address
 Assign a public IP address to the Amazon EC2 instances in your environment.
 Activated

Instance subnets

<input checked="" type="checkbox"/>	Availability Zone	Subnet	CIDR	Name
<input checked="" type="checkbox"/>	ap-south-1b	subnet-04309299e...	172.31.0.0/20	
<input checked="" type="checkbox"/>	ap-south-1c	subnet-0bf29e4fa...	172.31.16.0/20	
<input checked="" type="checkbox"/>	ap-south-1a	subnet-0c98d3062...	172.31.32.0/20	

Database Info
 Integrate an RDS SQL database with your environment. [Learn more](#)

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Step 1
[Configure environment](#)

Step 2
[Configure service access](#)

Step 3 - optional
[Set up networking, database, and tags](#)

Step 4 - optional
[Configure instance traffic and scaling](#)

Step 5 - optional
[Configure updates, monitoring, and logging](#)

Step 6
[Review](#)

Configure instance traffic and scaling - *optional* [Info](#)

Instances [Info](#)
Configure the Amazon EC2 instances that run your application.

Root volume (boot device)

Root volume type
(Container default)

Size
The number of gigabytes of the root volume attached to each instance.
8 GB

IOPS
Input/output operations per second for a provisioned IOPS (SSD) volume.
100 IOPS

Throughput
The desired throughput to provision for the Amazon EBS root volumes attached to your environment's EC2 instances.

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Step 1
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Step 4 - optional
[Configure instance traffic and scaling](#)

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[Configure updates, monitoring, and logging](#)

Step 6
[Review](#)

Instance types

Add instance types for your fleet. Change the order that the instances are in to set the preferred launch order. This only affects On-Demand instances. We recommend you include at least two instance types. [Learn more](#)

Choose x86 instance types

t3.micro X t3.small X

AMI ID
Elastic Beanstalk selects a default Amazon Machine Image (AMI) for your environment based on the Region, platform version, and processor architecture that you choose. [Learn more](#)

ami-03ffb1e3267196ce1

Availability Zones
Number of Availability Zones (AZs) to use.
Any

Placement
Specify Availability Zones (AZs) to use.
Choose Availability Zones (AZs)

Scaling cooldown
360 seconds

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Step 1
[Configure environment](#)

Step 2
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Step 3 - optional
[Set up networking, database, and tags](#)

Step 4 - optional
[Configure instance traffic and scaling](#)

Step 5 - optional
[Configure updates, monitoring, and logging](#)

Step 6
[Review](#)

Review [Info](#)

Step 1: Configure environment

[Edit](#)

Environment information	
Environment tier	Application name
Web server environment	task
Environment name	Application code
Task-env	Sample application
Platform	
arn:aws:elasticbeanstalk:ap-south-1::platform/PHP 8.2	
running on 64bit Amazon Linux 2023/4.0.4	

Step 2: Configure service access

[Edit](#)

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The screenshot shows the AWS Elastic Beanstalk console. The main panel displays a green banner stating "Environment successfully launched." Below this, the "Task-env" environment is shown with its details: Health status is "Ok", Environment ID is "e-mm9vrsj6v", and Application name is "task". The "Platform" section indicates "Platform version 1". On the left sidebar, there are sections for Applications, Environments, Change history, Application: task (with options for Application versions and Saved configurations), and Environment: Task-env (with links for Go to environment, Configuration, Events, Health, and Logs). At the bottom, there are links for CloudShell and Feedback, along with copyright information and privacy terms.

The screenshot shows a web browser window with multiple tabs open. The active tab displays a "Congratulations!" message from AWS Elastic Beanstalk, stating that a PHP application is now running on its own dedicated environment. It also mentions the PHP version (8.2.9) and the Platform (Elastic Beanstalk PHP). To the right of the browser window, there is a sidebar titled "What's Next?" which lists several AWS services and resources related to Elastic Beanstalk and PHP. The system tray at the bottom of the screen shows the date (24-12-2023), time (11:23 AM), battery level (1%), and other system icons.

Congratulations!

Your AWS Elastic Beanstalk **PHP** application is now running on your own dedicated environment in the AWS Cloud

You are running PHP version 8.2.9

This environment is launched with **Elastic Beanstalk PHP** Platform

What's Next?

- AWS Elastic Beanstalk overview
- Deploying AWS Elastic Beanstalk Applications in PHP Using Eb and Git
- Using Amazon RDS with PHP
- Customizing the Software on EC2 Instances
- Customizing Environment Resources

AWS SDK for PHP

- AWS SDK for PHP home
- PHP developer center
- AWS SDK for PHP on GitHub

Screenshot of the AWS CloudShell interface showing the deployment process for an Elastic Beanstalk environment.

The main window displays the "Upload and deploy" dialog box, which includes the following fields:

- Upload application:** A "Choose file" button.
- File name:** index-4.zip
- Version label:** task-version-1
- Current number of EC2 instances:** 1

At the bottom right of the dialog box are "Cancel" and "Deploy" buttons. The "Deploy" button is highlighted in orange.

The background shows the AWS Elastic Beanstalk console with the "task" environment successfully launched. The sidebar lists "Applications", "Environments", and "Change history".

The status bar at the bottom indicates "CloudShell" and "Feedback". The system tray shows the date and time as "24-12-2023" and "11:33 AM".

