

# Lab 12: Deploying AWS Lambda Function

## Objective

Learn how to:

- Create a Lambda function using Python
- Understand Lambda's event-driven model
- Deploy and test the function directly in the AWS Console

## Theory: What is AWS Lambda?

**AWS Lambda** is a serverless compute service that lets you run code **without provisioning or managing servers**. It automatically scales, is event-driven, and charges only for the compute time you consume.

Use cases include:

- Backend logic for apps
- Event processing (e.g., S3 uploads, DynamoDB changes)
- Cron jobs
- Lightweight automation

## Prerequisites

- AWS account with Lambda access
- IAM Role: `AWSLambdaBasicExecutionRole` or equivalent

## Steps to Create & Deploy a Lambda Function

### Step 1: Create Lambda Function

1. Go to **AWS Console > Lambda > Create function**
2. Choose **Author from scratch**
3. Fill in:
  - **Function name:** `greetUser`
  - **Runtime:** `Python 3.10` or above
4. Under **Permissions:**
  - Choose: **Create a new role with basic Lambda permissions**
5. Click **Create function**

### Step 2: Replace Default Code

In the function code editor, replace the default handler with:

```

import datetime

def lambda_handler(event, context):
    name = event.get('name', 'Guest')
    current_time = datetime.datetime.now().strftime("%Y-%m-%d %H:%M:%S")

    message = f"""
    Hello, {name}!
    Current server time: {current_time}

    This message is served by your AWS Lambda function.
    """

    return {
        'statusCode': 200,
        'body': message
    }

```

This code:

- Reads a `name` parameter (if passed via test input)
- Returns a decorated greeting with timestamp

### Step 3: Test the Lambda Function

1. Click **Test**
2. Configure a test event:

```

{
  "name": "Alice"
}

```

3. Click **Test**

You should see:

```

{
  "statusCode": 200,
  "body": "Hello, Alice!\n Current server time: 2025-07-11 20:13:00\n This
message is served by your AWS Lambda function."
}

```

### Optional Cleanup

If required, delete the function to avoid confusion or costs.