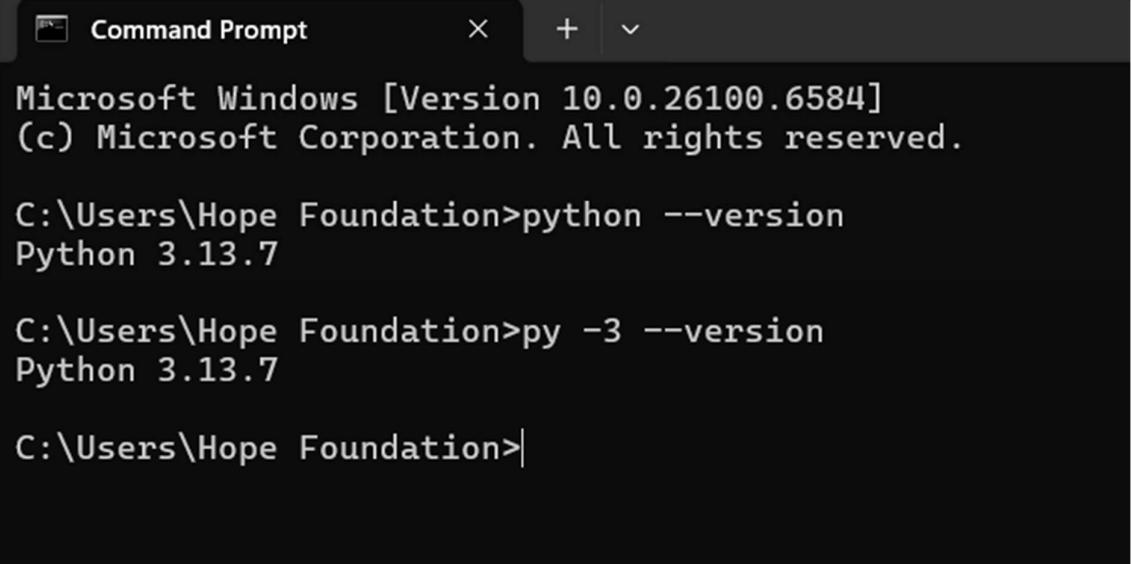


## **AWS CDK with Python (S3 + Lambda)**

### **Step 1: Install CDK and Set Up Project**

#### **Check Python**

```
py -3 --version
```

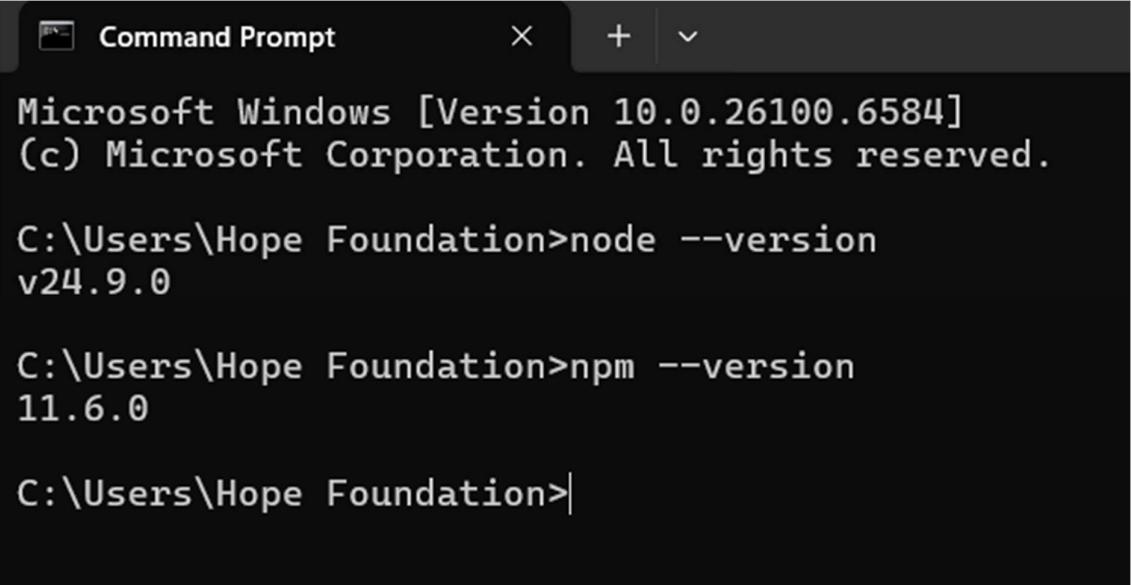


Microsoft Windows [Version 10.0.26100.6584]  
(c) Microsoft Corporation. All rights reserved.  
C:\Users\Hope Foundation>python --version  
Python 3.13.7  
  
C:\Users\Hope Foundation>py -3 --version  
Python 3.13.7  
  
C:\Users\Hope Foundation>

#### **Check Node.js & npm**

```
node --version
```

```
npm --version
```



Microsoft Windows [Version 10.0.26100.6584]  
(c) Microsoft Corporation. All rights reserved.  
C:\Users\Hope Foundation>node --version  
v24.9.0  
  
C:\Users\Hope Foundation>npm --version  
11.6.0  
  
C:\Users\Hope Foundation>

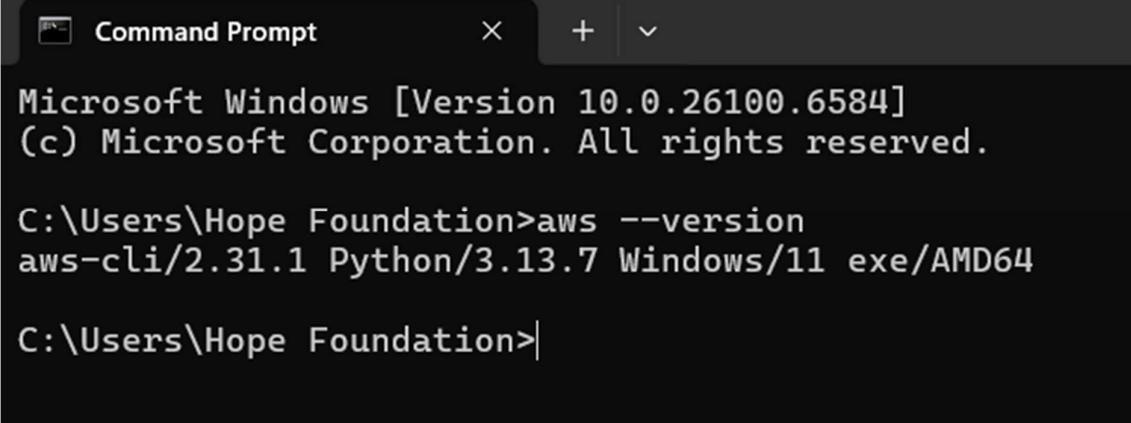
#### **Check AWS CLI**

**Shaikh Ateeb Ahmed**

**25-09-2025**

---

**aws --version**



```
Microsoft Windows [Version 10.0.26100.6584]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Hope Foundation>aws --version
aws-cli/2.31.1 Python/3.13.7 Windows/11 exe/AMD64

C:\Users\Hope Foundation>
```

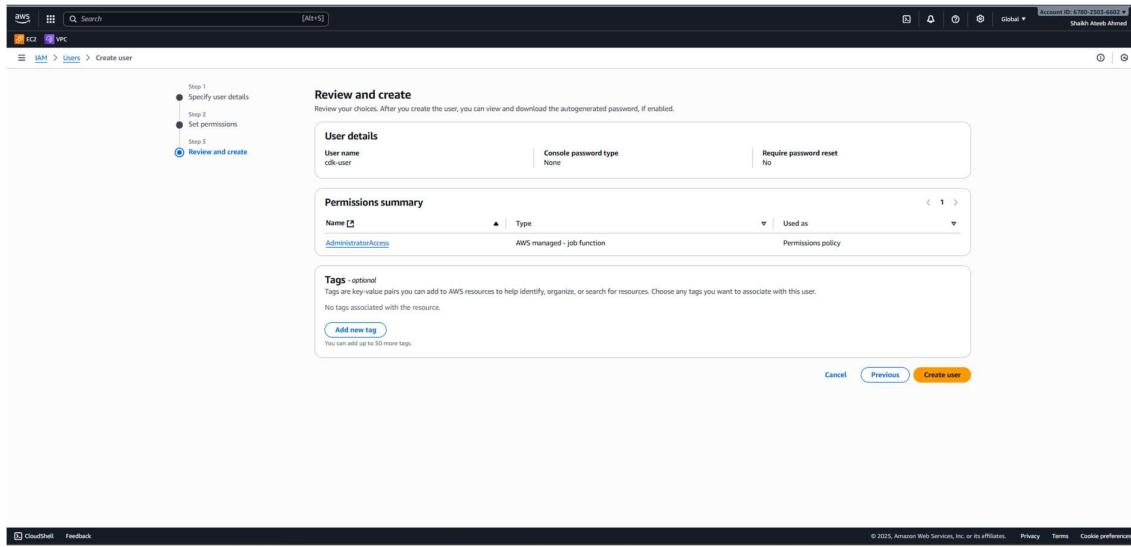
### **AWS Access Key ID & AWS Secret Access Key**

**These are your IAM user credentials.**

**You don't use your root account's keys instead, create an IAM user.**

**Steps in AWS Console:**

**Log in to AWS Management Console. Go to IAM → Users. Click Add users. Enter a name (e.g., cdk-user). Check Access key - Programmatic access. Attach permissions (for CDK, you can start with AdministratorAccess).**



**Select the user then give access key. Finish and download the .csv file with:**

**Access Key ID**

**Secret Access Key**

**Configure AWS CLI again**

## **Shaikh Ateeb Ahmed**

**25-09-2025**

---

**aws configure**

**Enter:**

**AWS Access Key ID → from the .csv**

**AWS Secret Access Key → from the .csv**

**Default region → e.g. us-east-1**

**Default output format → json**

**Verify**

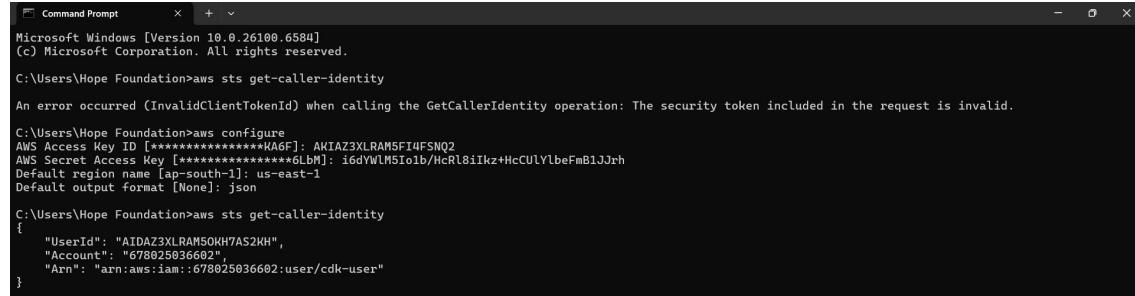
**aws sts get-caller-identity**

**Expected output:**

{

```
"UserId": "AIDAEXAMPLE123",
"Account": "123456789012",
"Arn": "arn:aws:iam::123456789012:user/cdk-user"
```

}



```
Microsoft Windows [Version 10.0.26100.6584]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Hope Foundation>aws sts get-caller-identity
An error occurred (InvalidClientTokenId) when calling the GetCallerIdentity operation: The security token included in the request is invalid.

C:\Users\Hope Foundation>aws configure
AWS Access Key ID [*****KAGF]: AKIAZ3XLRAM5FI4FSNQ2
AWS Secret Access Key [*****GLM]: i6dYWlMS5Io1b/HcRl8iIkz+HcCULYlbeFmB1JJrh
Default region name [ap-south-1]: us-east-1
Default output format [None]: json

C:\Users\Hope Foundation>aws sts get-caller-identity
{
    "UserId": "AIDAZ3XLRAM5FI4FSNQ2KH",
    "Account": "678025036602",
    "Arn": "arn:aws:iam::678025036602:user/cdk-user"
}
```

**Install AWS CDK CLI globally**

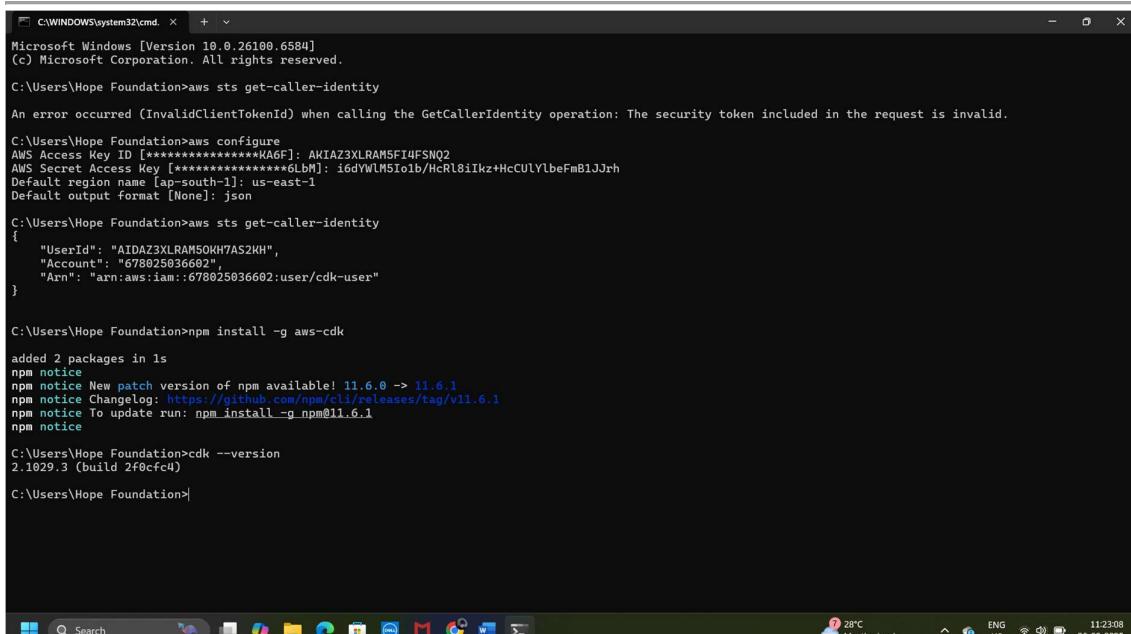
**npm install -g aws-cdk**

**Verify:**

**cdk --version**

# Shaikh Ateeb Ahmed

25-09-2025



C:\WINDOWS\system32\cmd. x + - Microsoft Windows [Version 10.0.26100.6584] (c) Microsoft Corporation. All rights reserved. C:\Users\Hope Foundation>aws sts get-caller-identity An error occurred (InvalidClientTokenId) when calling the GetCallerIdentity operation: The security token included in the request is invalid. C:\Users\Hope Foundation>aws configure AWS Access Key ID [\*\*\*\*\*]: AKIAZ3XLRAM5FI4FSNQ2 AWS Secret Access Key [\*\*\*\*\*]: 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 Default region name [ap-south-1]: us-east-1 Default output format [None]: json C:\Users\Hope Foundation>aws sts get-caller-identity { "UserId": "AIDAZ3XLRAM5FI4FSNQ2", "Account": "678025036602", "Arn": "arn:aws:iam::678025036602:user/cdk-user" } C:\Users\Hope Foundation>npm install -g aws-cdk added 2 packages in 1s npm notice npm notice New patch version of npm available! 11.6.0 => 11.6.1 npm notice Changelog: <https://github.com/npm/cli/releases/tag/v11.6.1> npm notice To update run: npm install -g npm@11.6.1 npm notice C:\Users\Hope Foundation>cdk --version 2.1029.3 (build 2f0fcf4) C:\Users\Hope Foundation>

**Create project directory & virtual environment**

**mkdir cdk-s3-lambda**

**cd cdk-s3-lambda**

**Create venv**

**py -3 -m venv .venv**

**Activate venv**

**.venv\Scripts\Activate.ps1**

# Shaikh Ateeb Ahmed

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```
C:\WINDOWS\system32\cmd. x + ^

AWS Secret Access Key [*****6LbM]: i6dYWLMS5Io1b/HcRl8iIkz+HcCULYlbeFmB1JJrh
Default region name [ap-south-1]: us-east-1
Default output format [None]: json

C:\Users\Hope Foundation>aws sts get-caller-identity
{
    "UserId": "AIDAZ3XLRAM50KH7AS2KH",
    "Account": "678025036602",
    "Arn": "arn:aws:iam::678025036602:user/cdk-user"
}

C:\Users\Hope Foundation>npm install -g aws-cdk
added 2 packages in 1s
npm notice New patch version of npm available! 11.6.0 => 11.6.1
npm notice Changelog: https://github.com/npm/cli/releases/tag/v11.6.1
npm notice To update run: npm install -g npm@11.6.1
npm notice

C:\Users\Hope Foundation>cdk --version
2.1029.3 (build 2f0fcf4)

C:\Users\Hope Foundation>mkdir cdk-s3-lambda
C:\Users\Hope Foundation>cd cdk-s3-lambda
C:\Users\Hope Foundation>py -3 -m venv .venv
C:\Users\Hope Foundation\cdk-s3-lambda> .venv\Scripts\Activate.ps1
'.' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\Hope Foundation\cdk-s3-lambda> .venv\Scripts\Activate.ps1
'.' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\Hope Foundation\cdk-s3-lambda> .venv\Scripts\activate.bat

(.venv) C:\Users\Hope Foundation\cdk-s3-lambda>
```

## Install CDK libraries for Python (CDK v2)

**pip install --upgrade pip**

**pip install aws-cdk-lib constructs**

```
C:\WINDOWS\system32\cmd. x + ^

  Downloading publication-0.0.3-py2.py3-none-any.whl.metadata (8.7 kB)
Collecting typeguard<4.3.0,>=2.13.3 (from aws-cdk-lib)
  Downloading typeguard-4.2.1-py3-none-any.whl.metadata (3.7 kB)
  Downloading typeguard-2.13.3-py3-none-any.whl.metadata (3.6 kB)
Collecting attrs<26.0,>=21.2 (from jsii<2.0.0,>=1.113.0->aws-cdk-lib)
  Downloading attrs-25.3.0-py3-none-any.whl.metadata (10 kB)
Collecting attrs<25.3,>=1.8 (from jsii<2.0.0,>=1.113.0->aws-cdk-lib)
  Downloading attrs-25.2.0-py3-none-any.whl.metadata (8.4 kB)
Collecting importlib_resources>=5.2.0 (from jsii<2.0.0,>=1.113.0->aws-cdk-lib)
  Downloading importlib_resources-6.5.2-py3-none-any.whl.metadata (3.9 kB)
Collecting python-dateutil (from jsii<2.0.0,>=1.113.0->aws-cdk-lib)
  Downloading python_dateutil-2.9.0.post0-py2.py3-none-any.whl.metadata (8.4 kB)
Collecting typing_extensions<8.0,>=3.8 (from jsii<2.0.0,>=1.113.0->aws-cdk-lib)
  Downloading typing_extensions-4.15.0-py3-none-any.whl.metadata (3.3 kB)
Collecting six>1.5 (from python-dateutil->jsii<2.0.0,>=1.113.0->aws-cdk-lib)
  Downloading six-1.17.0-py3-none-any.whl.metadata (1.7 kB)
  Downloading aws_cdk_lib-2.217.0-py3-none-any.whl (44.5 MB)
  44.5/44.5 MB 19.9 MB/s 0:00:02
Downloaded aws_cdk_asset_awsccli_v1-2.2.242-py3-none-any.whl (19.3 MB)
  19.3/19.3 MB 16.8 MB/s 0:00:01
Downloaded constructs-10.4.2-py3-none-any.whl (63 kB)
Downloaded aws_cdk.asset_node_proxy_agent_v6-2.1.0-py3-none-any.whl (1.5 MB)
  1.5/1.5 MB 16.2 MB/s 0:00:00
Downloaded aws_cdk.cloud_assembly_schema-48.11.0-py3-none-any.whl (207 kB)
Downloaded jsii-1.114.1-py3-none-any.whl (601 kB)
  601.8/601.8 kB 6.6 MB/s 0:00:00
Downloaded attrs-25.3.0-py3-none-any.whl (63 kB)
Downloaded attrs-25.2.0-py3-none-any.whl (78 kB)
Downloaded typeguard-2.13.3-py3-none-any.whl (17 kB)
Downloaded typing_extensions-4.15.0-py3-none-any.whl (44 kB)
Downloaded importlib_resources-6.5.2-py3-none-any.whl (37 kB)
Downloaded publication-0.0.3-py2.py3-none-any.whl (7.7 kB)
Downloaded python_dateutil-2.9.0.post0-py2.py3-none-any.whl (229 kB)
Downloaded six-1.17.0-py3-none-any.whl (11 kB)
Installing collected packages: publication, typing_extensions, typeguard, six, importlib_resources, attrs, python-dateutil, cattrs, jsii, constructs, aws-cdk_k.cloud_assembly_schema, aws-cdk.asset-node-proxy-agent-v6, aws-cdk.asset-awsccli-v1, aws-cdk.lib
Successfully installed attrs-25.3.0 aws-cdk-lib-2.217.0 aws-cdk.asset-awsccli-v1-2.2.242 aws-cdk.asset-node-proxy-agent-v6-2.1.0 aws-cdk.cloud_assembly_schema-48.11.0 cattrs-25.2.0 constructs-10.4.2 importlib_resources-6.5.2 jsii-1.114.1 publication-0.0.3 python-dateutil-2.9.0.post0 six-1.17.0 typeguard-2.13.3 typing_extensions-4.15.0

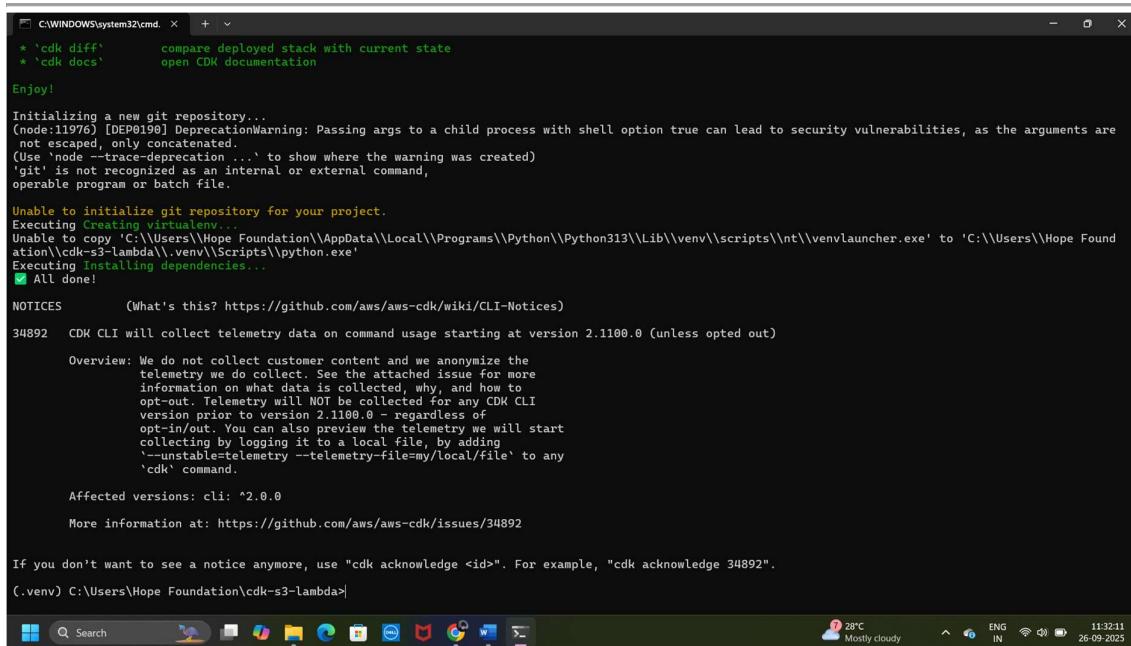
(.venv) C:\Users\Hope Foundation\cdk-s3-lambda>
```

## Initialize CDK Python project

**cdk init app --language python**

# Shaikh Ateeb Ahmed

25-09-2025



```
C:\WINDOWS\system32\cmd. x + 
* `cdk diff`      compare deployed stack with current state
* `cdk docs`      open CDK documentation

Enjoy!

Initializing a new git repository...
(node:11976) [DEP0198] DeprecationWarning: Passing args to a child process with shell option true can lead to security vulnerabilities, as the arguments are not escaped, only concatenated.
(Use 'node --trace-deprecation ...' to show where the warning was created)
'git' is not recognized as an internal or external command,
operable program or batch file.

Unable to initialize git repository for your project.
Executing Creating virtualenv...
Unable to copy 'C:\Users\Hope Foundation\AppData\Local\Programs\Python\Python313\Lib\venv\scripts\nt\venvlauncher.exe' to 'C:\Users\Hope Foundation\cdk-s3-lambda\.venv\Scripts\python.exe'
Executing Installing dependencies...
All done!

NOTICES      (What's this? https://github.com/aws/aws-cdk/wiki/CLI-Notices)

34892  CDK CLI will collect telemetry data on command usage starting at version 2.1100.0 (unless opted out)

    Overview: We do not collect customer content and we anonymize the
    telemetry we do collect. See the attached issue for more
    information on what data is collected, why, and how to
    opt-out. Telemetry will NOT be collected for any CDK CLI
    version prior to version 2.1100.0 - regardless of
    opt-in/out. You can also preview the telemetry we will start
    collecting by logging it to a local file, by adding
    '--unstable=telemetry --telemetry-file=my/local/file' to any
    'cdk' command.

    Affected versions: cli: ^2.0.0

    More information at: https://github.com/aws/aws-cdk/issues/34892

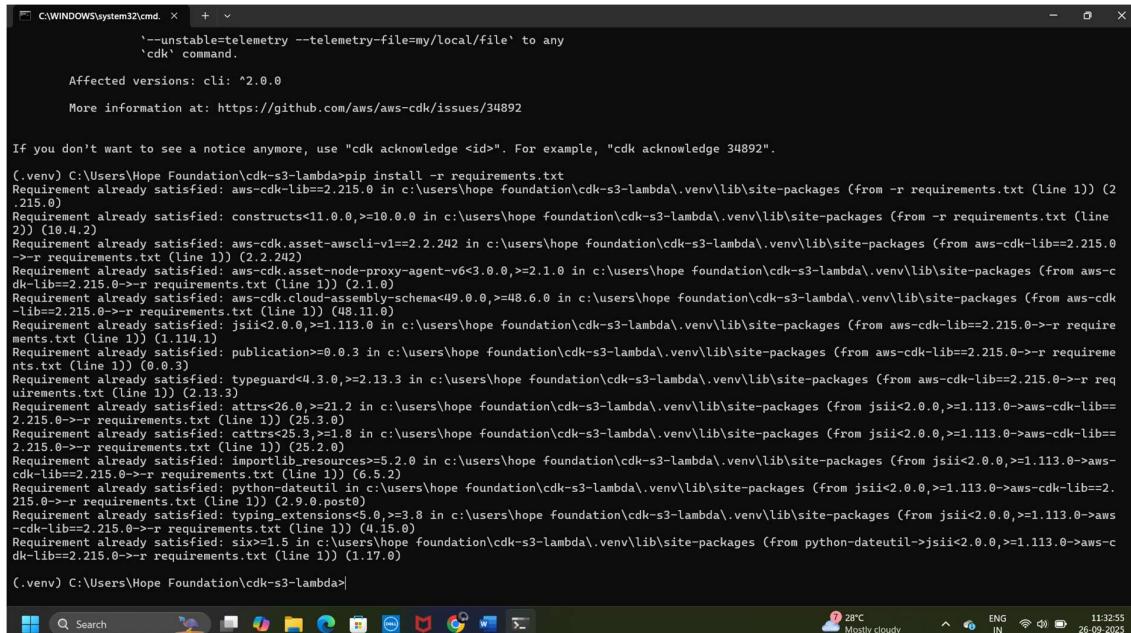
If you don't want to see a notice anymore, use "cdk acknowledge <id>". For example, "cdk acknowledge 34892".

(.venv) C:\Users\Hope Foundation\cdk-s3-lambda>
```

## Step 2: Install Python Dependencies

### Install project dependencies

`pip install -r requirements.txt`



```
C:\WINDOWS\system32\cmd. x + 
'--unstable=telemetry --telemetry-file=my/local/file' to any
'cdk' command.

Affected versions: cli: ^2.0.0

More information at: https://github.com/aws/aws-cdk/issues/34892

If you don't want to see a notice anymore, use "cdk acknowledge <id>". For example, "cdk acknowledge 34892".

(.venv) C:\Users\Hope Foundation\cdk-s3-lambda>pip install -r requirements.txt
Requirement already satisfied: aws-cdk-lib==2.215.0 in c:\users\hope foundation\cdk-s3-lambda\.venv\lib\site-packages (from -r requirements.txt (line 1)) (2.215.0)
Requirement already satisfied: constructs<11.0.0,>=10.0.0 in c:\users\hope foundation\cdk-s3-lambda\.venv\lib\site-packages (from -r requirements.txt (line 2)) (10.4.2)
Requirement already satisfied: aws-cdk.asset-awscli-v1==2.2.242 in c:\users\hope foundation\cdk-s3-lambda\.venv\lib\site-packages (from aws-cdk-lib==2.215.0->r requirements.txt (line 1)) (2.2.242)
Requirement already satisfied: aws-cdk.asset-node-proxy-agent-v6<3.0.0,>=2.1.0 in c:\users\hope foundation\cdk-s3-lambda\.venv\lib\site-packages (from aws-cdk-lib==2.215.0->r requirements.txt (line 1)) (2.1.0)
Requirement already satisfied: aws-cloud-assembly-schema<49.0.0,>=48.6.0 in c:\users\hope foundation\cdk-s3-lambda\.venv\lib\site-packages (from aws-cdk-lib==2.215.0->r requirements.txt (line 1)) (48.11.0)
Requirement already satisfied: jsii<2.0.0,>=1.113.0 in c:\users\hope foundation\cdk-s3-lambda\.venv\lib\site-packages (from aws-cdk-lib==2.215.0->r requirements.txt (line 1)) (1.114.1)
Requirement already satisfied: publication>=0.0.3 in c:\users\hope foundation\cdk-s3-lambda\.venv\lib\site-packages (from aws-cdk-lib==2.215.0->r requirements.txt (line 1)) (0.0.3)
Requirement already satisfied: typeguard<4.3.0,>=2.13.3 in c:\users\hope foundation\cdk-s3-lambda\.venv\lib\site-packages (from aws-cdk-lib==2.215.0->r requirements.txt (line 1)) (2.13.3)
Requirement already satisfied: attrs<26.0,>=21.2 in c:\users\hope foundation\cdk-s3-lambda\.venv\lib\site-packages (from jsii<2.0.0,>=1.113.0->aws-cdk-lib==2.215.0->r requirements.txt (line 1)) (25.3.0)
Requirement already satisfied: cattrs<25.3,>=1.8 in c:\users\hope foundation\cdk-s3-lambda\.venv\lib\site-packages (from jsii<2.0.0,>=1.113.0->aws-cdk-lib==2.215.0->r requirements.txt (line 1)) (25.2.0)
Requirement already satisfied: importlib_resources>=5.2.0 in c:\users\hope foundation\cdk-s3-lambda\.venv\lib\site-packages (from jsii<2.0.0,>=1.113.0->aws-cdk-lib==2.215.0->r requirements.txt (line 1)) (5.5.2)
Requirement already satisfied: python-dateutil in c:\users\hope foundation\cdk-s3-lambda\.venv\lib\site-packages (from jsii<2.0.0,>=1.113.0->aws-cdk-lib==2.215.0->r requirements.txt (line 1)) (2.9.0.post0)
Requirement already satisfied: typing_extensions<5.0,>=3.8 in c:\users\hope foundation\cdk-s3-lambda\.venv\lib\site-packages (from jsii<2.0.0,>=1.113.0->aws-cdk-lib==2.215.0->r requirements.txt (line 1)) (4.15.0)
Requirement already satisfied: six>=1.5 in c:\users\hope foundation\cdk-s3-lambda\.venv\lib\site-packages (from python-dateutil->jsii<2.0.0,>=1.113.0->aws-cdk-lib==2.215.0->r requirements.txt (line 1)) (1.17.0)

(.venv) C:\Users\Hope Foundation\cdk-s3-lambda>
```

## Step 3: Edit Stack Code

## **Shaikh Ateeb Ahmed**

**25-09-2025**

---

Open:

```
notepad .\cdk_s3_lambda_new\cdk_s3_lambda_new_stack.py
```

Replace contents with:

```
from aws_cdk import (
    Stack,
    aws_s3 as s3,
    aws_lambda as _lambda,
    aws_s3_notifications as s3n,
    Duration,
    RemovalPolicy
)
from constructs import Construct
```

```
class CdkS3LambdaNewStack(Stack):
```

```
    def __init__(self, scope: Construct, construct_id: str, **kwargs) -> None:
        super().__init__(scope, construct_id, **kwargs)

        # Create S3 bucket
        bucket = s3.Bucket(
            self, "MyBucket",
            bucket_name="my-cdk-demo-bucket-unique-123456",
            versioned=True,
            removal_policy=RemovalPolicy.DESTROY,
            auto_delete_objects=True
)
```

```
# Create Lambda function (inline code)

lambda_fn = _lambda.Function(
    self, "MyLambda",
    runtime=_lambda.Runtime.PYTHON_3_9,
    handler="index.handler",
    code=_lambda.Code.from_inline(""""

def handler(event, context):
    print("S3 event received:", event)
    return {
        'statusCode': 200,
        'body': 'Hello from Lambda!'
    }
    """),

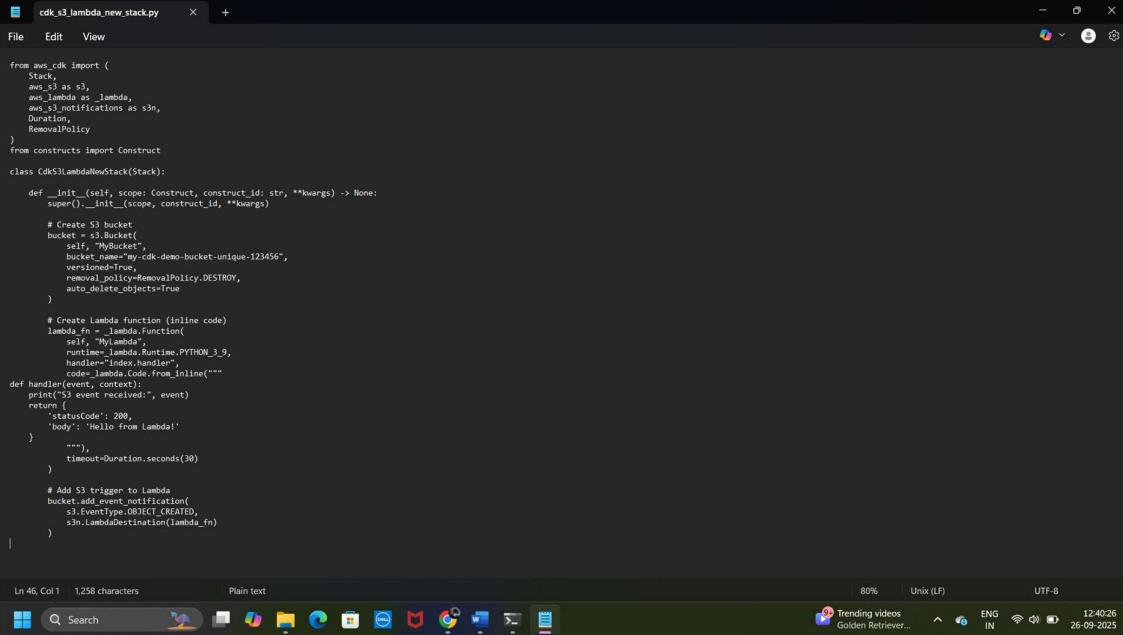
    timeout=Duration.seconds(30)
)

# Add S3 trigger to Lambda

bucket.add_event_notification(
    s3.EventType.OBJECT_CREATED,
    s3n.LambdaDestination(lambda_fn)
)
```

# Shaikh Ateeb Ahmed

25-09-2025



```
cdk_s3_lambda_new_stack.py
File Edit View
from aws_cdk import (
    Stack,
    aws_s3 as s3,
    aws_lambda as lambda,
    aws_s3_notifications as s3n,
    Duration,
    RemovalPolicy
)
from constructs import Construct

class CdkS3LambdaNewStack(Stack):
    def __init__(self, scope: Construct, construct_id: str, **kwargs) -> None:
        super().__init__(scope, construct_id, **kwargs)

        # Create S3 bucket
        bucket = s3.Bucket(
            self, "MyBucket",
            bucket_name="my-cdk-demo-bucket-unique-123456",
            versioning=s3.VersioningType.MANAGED,
            removal_policy=RemovalPolicy.DESTROY,
            auto_delete_objects=True
        )

        # Create Lambda function (inline code)
        lambda_fn = lambda.Function(
            self, "MyLambda",
            runtime=lambda.Runtime.PYTHON_3_9,
            handler="index.handler",
            code=lambda.Code.fromInline("""
def handle(event, context):
    print("event received:", event)
    return {
        'statusCode': 200,
        'body': 'Hello from Lambda!'
    }
    """
),
            timeout=Duration.seconds(30)
        )

        # Add S3 trigger to Lambda
        bucket.add_event_notification(
            s3.EventType.OBJECT_CREATED,
            s3n.LambdaDestination(lambda_fn)
        )
    }

Ln 46, Col 1 1,258 characters Plain text 80% Unix (LF) UTF-8
Windows Search File Explorer Task View Start Taskbar Trending videos Golden Retriever... ENG IN 12:40:26 26-09-2025
```

## Edit app.py

Open:

notepad .\app.py

Replace contents with:

```
#!/usr/bin/env python3
```

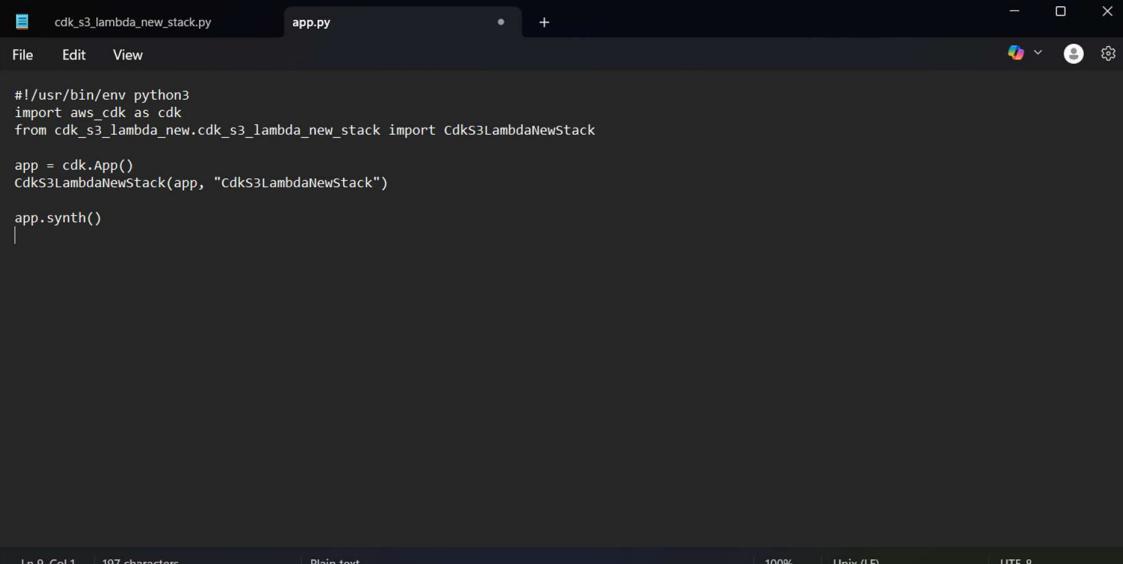
```
import aws_cdk as cdk
```

```
from cdk_s3_lambda_new.cdk_s3_lambda_new_stack import CdkS3LambdaNewStack
```

```
app = cdk.App()
```

```
CdkS3LambdaNewStack(app, "CdkS3LambdaNewStack")
```

```
app.synth()
```



The screenshot shows a code editor window with two tabs: 'cdk\_s3\_lambda\_new\_stack.py' and 'app.py'. The 'app.py' tab is active, displaying the following Python code:

```
#!/usr/bin/env python3
import aws_cdk as cdk
from cdk_s3_lambda_new_stack import CdkS3LambdaNewStack

app = cdk.App()
CdkS3LambdaNewStack(app, "CdkS3LambdaNewStack")

app.synth()
```

The code defines a new AWS CloudFormation stack named 'CdkS3LambdaNewStack' using the AWS CDK. It imports the necessary modules and creates an app object, then adds the stack definition and performs a synthesis.

---

#### **Step 4: Bootstrap and Deploy**

**Check if it's installed via pip**

**pip list | findstr aws-cdk-lib**

**pip list | findstr constructs**

**You should see something like:**

**aws-cdk-lib 2.123.0**

**constructs 10.1.92**

**Test import interactively**

**python**

**Then in the Python REPL:**

**import aws\_cdk**

**import aws\_cdk.aws\_s3 as s3**

**import aws\_cdk.aws\_lambda as \_lambda**

**Exit REPL:**

**exit()**

**Next step**

**After confirming that the packages are installed and importable, run:**

**Shaikh Ateeb Ahmed**

25-09-2025

## cdk bootstrap

**cdk deploy**

- Make sure your .venv is active before running CDK commands.
  - Remember: CDK v2 uses aws-cdk-lib instead of the old aws-cdk.core.

```
C:\WINDOWS\system32\cmd. x + v

CDKToolkit | 3/12 | 12:51:16 pm | CREATE_IN_PROGRESS | AWS::S3::BucketPolicy | StagingBucketPolicy Resource creation Initiated
CDKToolkit | 4/12 | 12:51:16 pm | CREATE_COMPLETE | AWS::S3::BucketPolicy | StagingBucketPolicy
CDKToolkit | 5/12 | 12:51:17 pm | CREATE_COMPLETE | AWS::IAM::Role | CloudFormationExecutionRole
CDKToolkit | 6/12 | 12:51:17 pm | CREATE_COMPLETE | AWS::IAM::Role | ImagePublishingRole
CDKToolkit | 7/12 | 12:51:17 pm | CREATE_COMPLETE | AWS::IAM::Role | FilePublishingRole
CDKToolkit | 8/12 | 12:51:17 pm | CREATE_COMPLETE | AWS::IAM::Role | LookoutRole
CDKToolkit | 8/12 | 12:51:18 pm | CREATE_IN_PROGRESS | AWS::IAM::Policy | FilePublishingRoleDefaultPolicy
CDKToolkit | 8/12 | 12:51:18 pm | CREATE_IN_PROGRESS | AWS::IAM::Role | DeploymentActionRole
CDKToolkit | 8/12 | 12:51:18 pm | CREATE_IN_PROGRESS | AWS::IAM::Policy | ImagePublishingRoleDefaultPolicy
CDKToolkit | 8/12 | 12:51:18 pm | CREATE_IN_PROGRESS | AWS::IAM::Policy | FilePublishingRoleDefaultPolicy Resource creation Initiated
CDKToolkit | 8/12 | 12:51:19 pm | CREATE_IN_PROGRESS | AWS::IAM::Policy | ImagePublishingRoleDefaultPolicy Resource creation Initiated
CDKToolkit | 8/12 | 12:51:19 pm | CREATE_IN_PROGRESS | AWS::IAM::Role | DeploymentActionRole Resource creation Initiated
CDKToolkit | 9/12 | 12:51:34 pm | CREATE_COMPLETE | AWS::IAM::Policy | FilePublishingRoleDefaultPolicy
CDKToolkit | 10/12 | 12:51:34 pm | CREATE_COMPLETE | AWS::IAM::Role | ImagePublishingRoleDefaultPolicy
CDKToolkit | 11/12 | 12:51:37 pm | CREATE_COMPLETE | AWS::IAM::Role | DeploymentActionRole
CDKToolkit | 12/12 | 12:51:38 pm | CREATE_COMPLETE | AWS::CloudFormation::Stack | CDKToolkit

✓ Environment aws://678825836682/us-east-1 bootstrapped.

NOTICES (What's this? https://github.com/aws/aws-cdk/wiki/CLI-Notices)

34892 CDK CLI will collect telemetry data on command usage starting at version 2.1100.0 (unless opted out)

Overview: We do not collect customer content and we anonymize the telemetry we do collect. See the attached issue for more information on what data is collected, why, and how to opt-out. Telemetry will NOT be collected for any CDK CLI version prior to version 2.1100.0 - regardless of opt-in/out. You can also preview the telemetry we will start collecting by logging it to a local file, by adding '--unstable-telemetry --telemetry-file=my/local/file' to any 'cdk' command.

Affected versions: cli: *~2.0.0

More information at: https://github.com/aws/aws-cdk/issues/34892

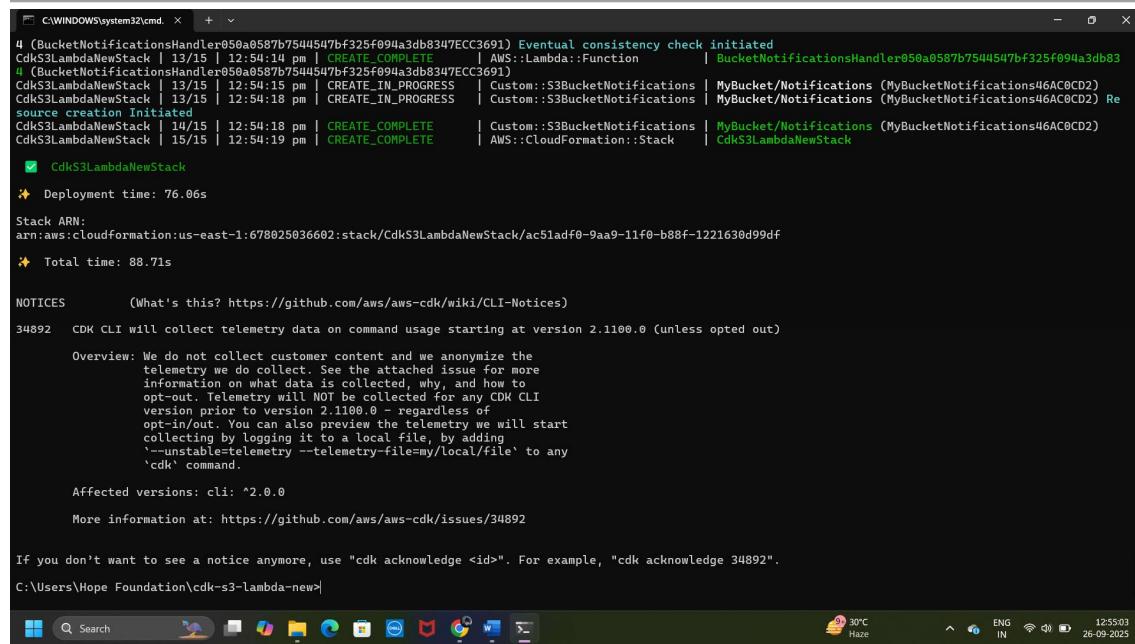
If you don't want to see a notice anymore, use "cdk acknowledge <id>". For example, "cdk acknowledge 34892".

C:\Users\Hope Foundation\cdk-s3-lambda-new>cdk deploy

|
```

# Shaikh Ateeb Ahmed

25-09-2025



```
C:\WINDOWS\system32\cmd. x + ^

4 (BucketNotificationsHandler050a0587b7544547bf325f094a3db8347ECC3691) Eventual consistency check initiated
CdkS3LambdaNewStack | 13/15 | 12:54:14 pm | CREATE_COMPLETE | AWS::Lambda::Function | BucketNotificationsHandler050a0587b7544547bf325f094a3db8347ECC3691
4 (BucketNotificationsHandler050a0587b7544547bf325f094a3db8347ECC3691)
CdkS3LambdaNewStack | 13/15 | 12:54:15 pm | CREATE_IN_PROGRESS | Custom::S3BucketNotifications | MyBucket/Notifications (MyBucketNotifications46AC0CD2)
CdkS3LambdaNewStack | 13/15 | 12:54:18 pm | CREATE_IN_PROGRESS | Custom::S3BucketNotifications | MyBucket/Notifications (MyBucketNotifications46AC0CD2) Re
source creation Initiated
CdkS3LambdaNewStack | 14/15 | 12:54:18 pm | CREATE_COMPLETE | Custom::S3BucketNotifications | MyBucket/Notifications (MyBucketNotifications46AC0CD2)
CdkS3LambdaNewStack | 15/15 | 12:54:19 pm | CREATE_COMPLETE | AWS::CloudFormation::Stack | CdkS3LambdaNewStack

☒ CdkS3LambdaNewStack
❖ Deployment time: 76.06s

Stack ARN:
arn:aws:cloudformation:us-east-1:678025036602:stack/CdkS3LambdaNewStack/ac51adff-9aa9-11f0-b88f-1221630d99df

❖ Total time: 88.71s

NOTICES (What's this? https://github.com/aws/aws-cdk/wiki/CLI-Notices)

34892 CDK CLI will collect telemetry data on command usage starting at version 2.1100.0 (unless opted out)

    Overview: We do not collect customer content and we anonymize the
    telemetry we do collect. See the attached issue for more
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    version prior to version 2.1100.0 - regardless of
    opt-in/out. You can also preview the telemetry we will start
    collecting by logging it to a local file, by adding
    '--unstable-telemetry --telemetry-file=my/local/file' to any
    'cdk' command.

    Affected versions: cli: *2.0.0
    More information at: https://github.com/aws/aws-cdk/issues/34892

If you don't want to see a notice anymore, use "cdk acknowledge <id>". For example, "cdk acknowledge 34892".
C:\Users\Hope Foundation\cdk-s3-lambda-new|
```

## Step 5: Test the Setup

### Get your bucket name

You can check the S3 bucket created by your CDK stack in AWS Console → S3 or use the output from cdk deploy.

For example, if your stack uses:

```
bucket_name="my-cdk-demo-bucket-unique-123456"
```

Create a test file locally

In PowerShell, run:

```
echo "Hello CDK Lambda!" > testfile.txt
```

This creates testfile.txt in your current folder.

Upload the file to the S3 bucket

Via AWS CLI:

```
aws s3 cp .\testfile.txt s3://my-cdk-demo-bucket-unique-123456/
```

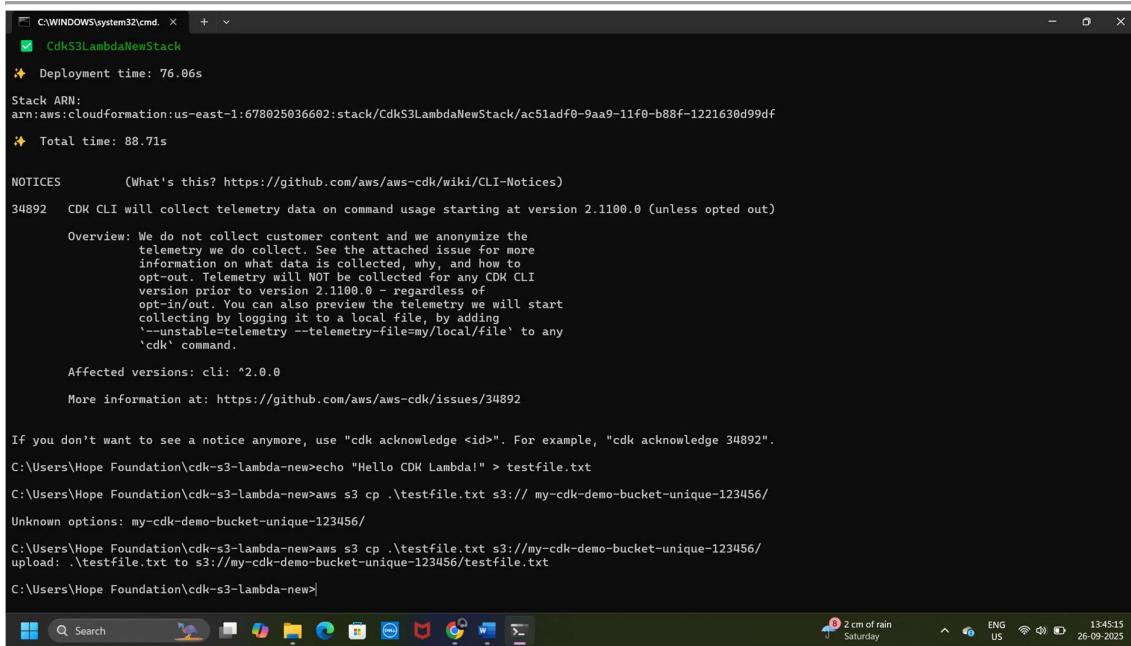
Replace my-cdk-demo-bucket-ateeb-20250926 with your actual bucket name.

You should see:

```
upload: .\testfile.txt to s3://my-cdk-demo-bucket-unique-123456/testfile.txt
```

# Shaikh Ateeb Ahmed

25-09-2025



```
C:\WINDOWS\system32\cmd. x + 
CdkS3LambdaNewStack
✖ Deployment time: 76.06s
Stack ARN: arn:aws:cloudformation:us-east-1:678025036602:stack/CdkS3LambdaNewStack/ac51adf0-9aa9-11f0-b88f-1221630d99df
✖ Total time: 88.71s

NOTICES      (What's this? https://github.com/aws/aws-cdk/wiki/CLI-Notices)
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collecting by logging it to a local file, by adding
`--unstable-telemetry --telemetry-file=my/local/file` to any
`cdk` command.

Affected versions: cli: ^2.0.0
More information at: https://github.com/aws/aws-cdk/issues/34892

If you don't want to see a notice anymore, use "cdk acknowledge <id>". For example, "cdk acknowledge 34892".
C:\Users\Hope Foundation\cdk-s3-lambda-new>echo "Hello CDK Lambda!" > testfile.txt
C:\Users\Hope Foundation\cdk-s3-lambda-new>aws s3 cp ./testfile.txt s3://my-cdk-demo-bucket-unique-123456/
Unknown options: my-cdk-demo-bucket-unique-123456/
C:\Users\Hope Foundation\cdk-s3-lambda-new>aws s3 cp ./testfile.txt s3://my-cdk-demo-bucket-unique-123456/testfile.txt
C:\Users\Hope Foundation\cdk-s3-lambda-new>
```

## Check Lambda execution in CloudWatch

Go to AWS Console → CloudWatch → Logs → Log groups.

Look for a log group matching your Lambda name:

/aws/lambda/S3ToDynamoLambda

Click the latest log stream.

You should see logs like:

Event received: { "Records": [ { ... S3 event details ... } ] }

and the message:

Hello from Lambda!

**Shaikh Ateeb Ahmed**

25-09-2025

## **Step 6: Clean Up**

To avoid unnecessary charges, delete the stack:

`cdk destroy`

```
C:\WINDOWS\system32\cmd. x + v

ode|Default|Policy | BucketNotificationsHandler@050a0587b7544547bf325f094a3db834RoleDefaultPolicy2CF63D36)
CdkS3LambdaNewStack | 7 | 2:29:46 pm | DELETE_COMPLETE | AWS::Lambda::Function | Custom::S3AutoDeleteObjectsCustomResourceProvider/Handler (Custom::S3AutoDeleteObjectsCustomResourceProviderHandler@090184F)
CdkS3LambdaNewStack | 8 | 2:29:46 pm | DELETE_COMPLETE | AWS::IAM::Policy | BucketNotificationsHandler@050a0587b7544547bf325f094a3db834RoleDefaultPolicy2CF63D36)
CdkS3LambdaNewStack | 9 | 2:29:46 pm | DELETE_COMPLETE | AWS::Lambda::Function | MyLambda (MyLambdaCCE802FB)
CdkS3LambdaNewStack | 9 | 2:29:46 pm | DELETE_IN_PROGRESS | AWS::IAM::Role | Custom::S3AutoDeleteObjectsCustomResourceProvider/Role (Custom::S3AutoDeleteObjectsCustomResourceProviderRole@e81BD992)
CdkS3LambdaNewStack | 9 | 2:29:46 pm | DELETE_IN_PROGRESS | AWS::IAM::Role | BucketNotificationsHandler@050a0587b7544547bf325f094a3db834RoleDefaultPolicy2CF63D36)
CdkS3LambdaNewStack | 9 | 2:29:46 pm | DELETE_IN_PROGRESS | AWS::IAM::Role | MyBucket (MyBucketF68F3F0)
CdkS3LambdaNewStack | 9 | 2:29:46 pm | DELETE_IN_PROGRESS | AWS::IAM::Role | MyLambda/ServiceRole (MyLambdaServiceRole4539ECB6)
CdkS3LambdaNewStack | 10 | 2:29:46 pm | DELETE_COMPLETE | AWS::S3::Bucket | MyBucket (MyBucketF68F3F0)
CdkS3LambdaNewStack | 11 | 2:29:56 pm | DELETE_COMPLETE | AWS::IAM::Role | BucketNotificationsHandler@050a0587b7544547bf325f094a3db834RoleDefaultPolicy2CF63D36)
CdkS3LambdaNewStack | 12 | 2:29:58 pm | DELETE_COMPLETE | AWS::IAM::Role | MyLambda/ServiceRole (MyLambdaServiceRole4539ECB6)

✓ CdkS3LambdaNewStack: destroyed

NOTICES      (What's this? https://github.com/aws/aws-cdk/wiki/CLI-Notices)
34892 CDK CLI will collect telemetry data on command usage starting at version 2.1100.0 (unless opted out)

Overview: We do not collect customer content and we anonymize the telemetry we do collect. See the attached issue for more information on what data is collected, why, and how to opt-out. Telemetry will NOT be collected for any CDK CLI version prior to version 2.1100.0 – regardless of opt-in/out. You can also preview the telemetry we will start collecting by logging it to a local file, by adding '--unstable-telemetry --telemetry-file=my/local/file' to any 'cdk' command.

Affected versions: cli: ^2.0.0

More information at: https://github.com/aws/aws-cdk/issues/34892

If you don't want to see a notice anymore, use "cdk acknowledge <id>". For example, "cdk acknowledge 34892".

C:\Users\Hope Foundation\cdk-s3-lambda-new>
```