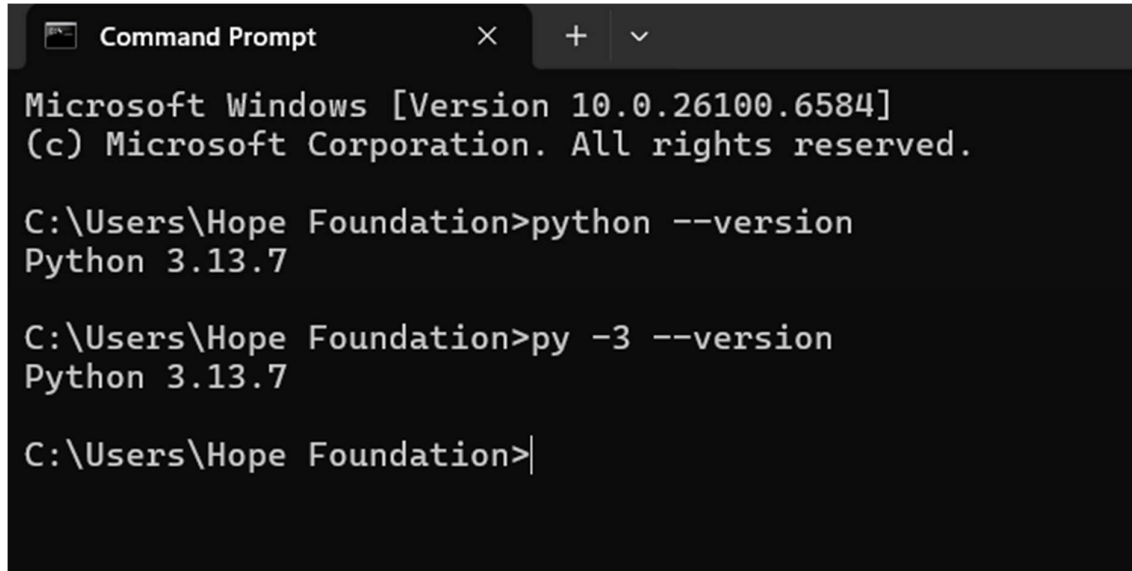


AWS CDK with Python (S3 + Lambda)

Step 1: Install CDK and Set Up Project

Check Python

`py -3 --version`



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

C:\Users\Hope Foundation>python --version
Python 3.13.7

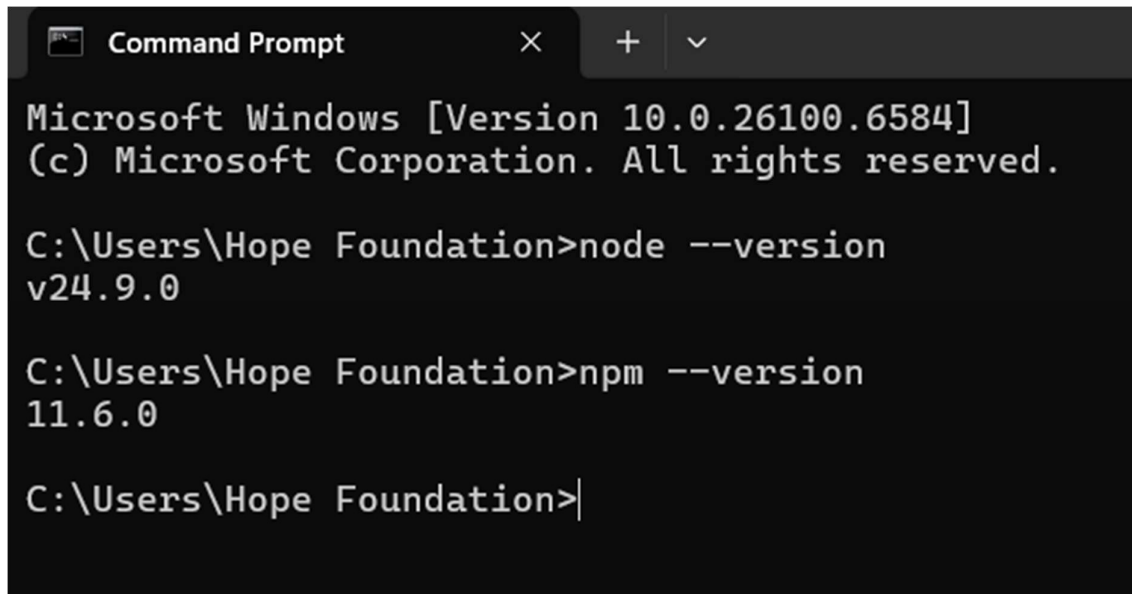
C:\Users\Hope Foundation>py -3 --version
Python 3.13.7

C:\Users\Hope Foundation>|
```

Check Node.js & npm

`node --version`

`npm --version`



```
Command Prompt
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

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25-09-2025

aws --version

```
Command Prompt
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>|
```

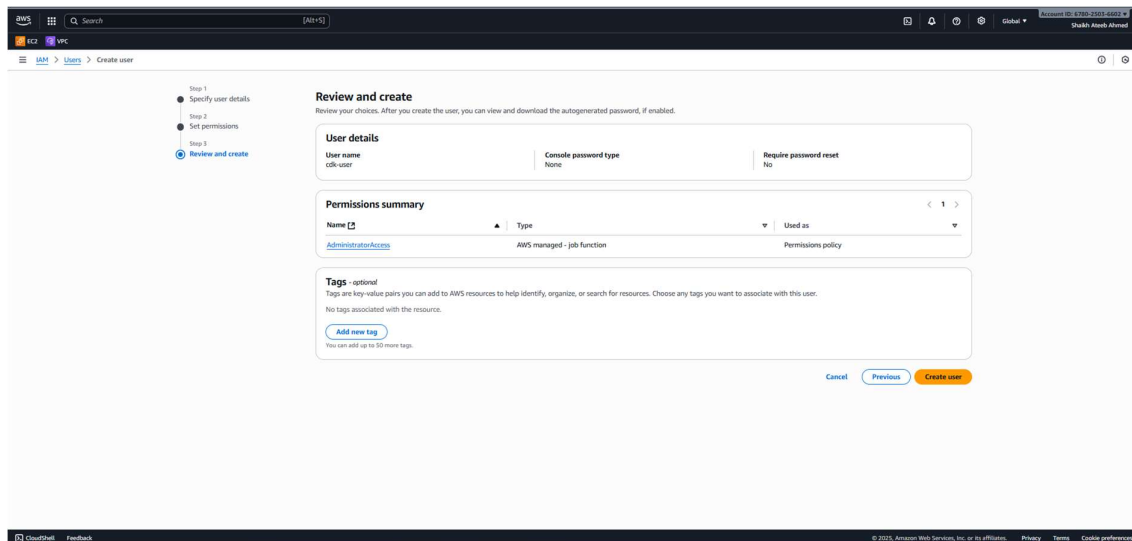
AWS Access Key ID & AWS Secret Access Key

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

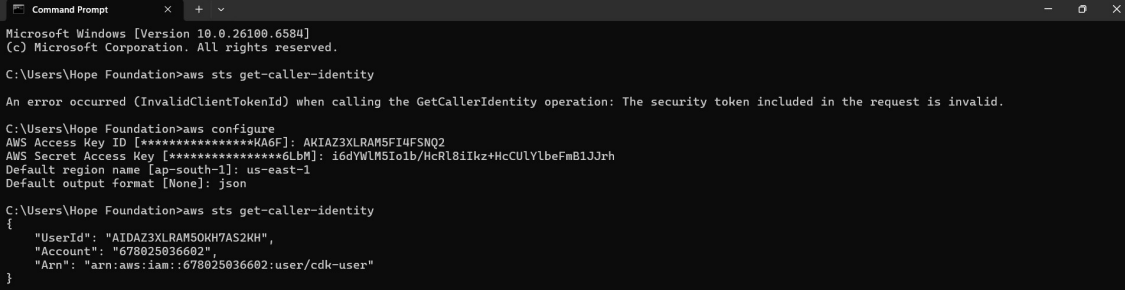
Default output format → json

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 [*****MA6F]: AKIAZ3XLRAM5FIWFSNQ2
AWS Secret Access Key [*****6LbM]: 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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": "AIDAZ3XLRAM5OH7AS2KH",
  "Account": "678025836602",
  "Arn": "arn:aws:iam::678025836602: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 + v
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 [*****KA6F]: AKIAZ3XLRAHSEFI4FSN02
AWS Secret Access Key [*****6LbW]: i6dVwLH5Io1b/HcRl8iIkz+HcCULYlbeFmB1J3rh
Default region name [ap-south-1]: us-east-1
Default output format [None]: json

C:\Users\Hope Foundation>aws sts get-caller-identity
{
  "UserId": "AIDAZ3XLRAH5OH7AS2KH",
  "Account": "678025836602",
  "Arn": "arn:aws:iam::678025836602: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 2f0cfc4)

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

25-09-2025

```
C:\WINDOWS\system32\cmd. x + v
AWS Secret Access Key [*****6LbM]: i6dYwLM5Io1b/HcRL8iIkz+HcCULYlbeFmB1J3rh
Default region name [ap-south-1]: us-east-1
Default output format [None]: json

C:\Users\Hope Foundation>aws sts get-caller-identity
{
  "UserId": "AIDAZ3XLRAM5OKH7AS2KH",
  "Account": "678025836602",
  "Arn": "arn:aws:iam::678025836602: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 2f0cfc4)

C:\Users\Hope Foundation>mkdir cdk-s3-lambda

C:\Users\Hope Foundation>cd cdk-s3-lambda

C:\Users\Hope Foundation\cdk-s3-lambda>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 + v
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-py2.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 cattrs<25.3,>=1.8 (from jsii<2.0.0,>=1.113.0->aws-cdk-lib)
  Downloading cattrs-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-2.9.0.post0-py2.py3-none-any.whl.metadata (8.4 kB)
Collecting typing_extensions<5.0,>=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-py2.py3-none-any.whl.metadata (1.7 kB)
Downloaded aws_cdk_lib-2.217.0-py3-none-any.whl (44.5 MB)
Downloaded aws_cdk_asset_awscli_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 cattrs-25.2.0-py3-none-any.whl (70 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 (27 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-py2.py3-none-any.whl (11 kB)
Installing collected packages: publication, typing_extensions, typeguard, six, importlib_resources, attrs, python-dateutil, cattrs, jsii, constructs, aws-cdk-lib, aws-cdk.asset-node-proxy-agent-v6, aws-cdk.asset-awscli-v1, aws-cdk.cloud-assembly-schema
Successfully installed attrs-25.3.0 aws-cdk-lib-2.217.0 aws-cdk.asset-awscli-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

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25-09-2025

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

Enjoy!

Initializing a new git repository...
(node:11976) [DEP0190] 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 Found
ation\cdk-s3-lambda\.venv\Scripts\python.exe'
Executing Installing dependencies...
[X] 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

```
(.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-c
dk-lib==2.215.0->-r requirements.txt (line 1)) (2.1.0)
Requirement already satisfied: aws-cdk.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 require
ments.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 requireme
nts.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 req
uirements.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)) (6.5.2)
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-c
dk-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

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(

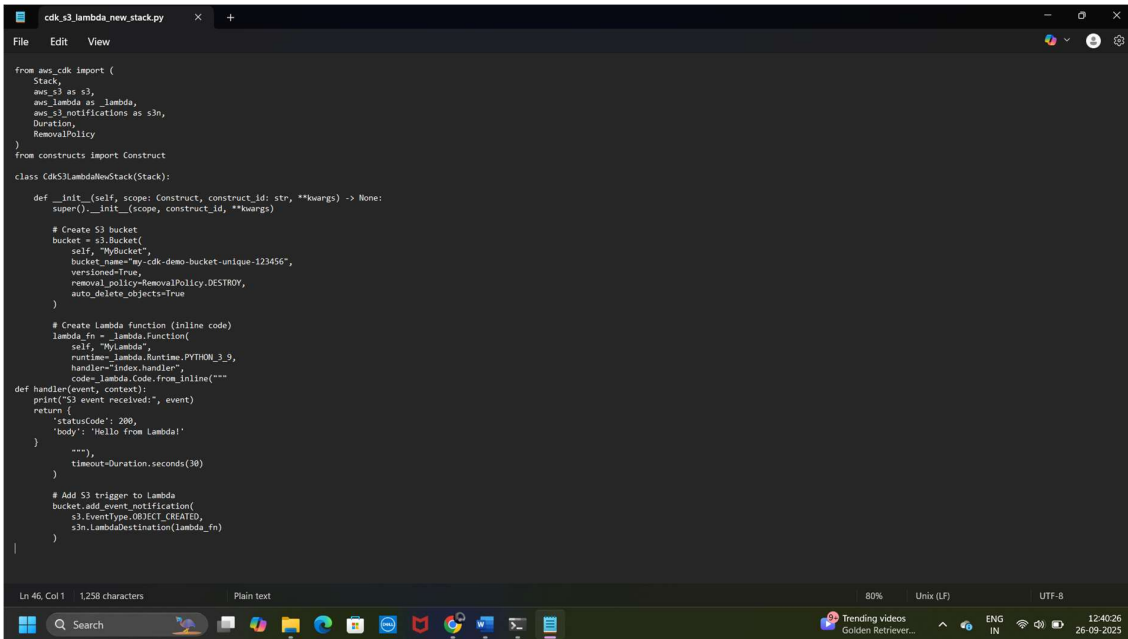
    s3.EventType.OBJECT_CREATED,

    s3n.LambdaDestination(lambda_fn)

)
```


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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",
            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)
        )

Ln 46, Col 1 1,258 characters Plain text 80% Unix (LF) UTF-8
Search 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
```

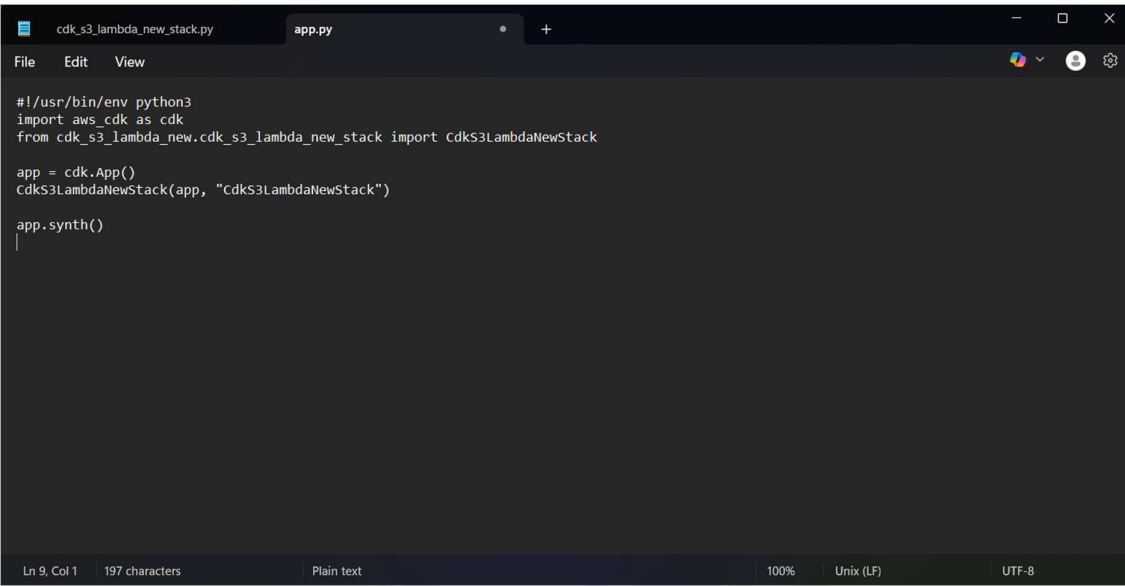
```
app = cdk.App()
```

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

```
app.synth()
```

Shaikh Ateeb Ahmed

25-09-2025

A screenshot of a code editor window with a dark theme. The window has two tabs: 'cdk_s3_lambda_new_stack.py' and 'app.py'. The 'app.py' tab is active, showing a Python script. The script starts with a shebang line, imports 'aws_cdk' as 'cdk', and imports 'CdkS3LambdaNewStack' from 'cdk_s3_lambda_new.cdk_s3_lambda_new_stack'. It then creates an 'app' object using 'cdk.App()', initializes 'CdkS3LambdaNewStack' with the app and its name, and finally calls 'app.synth()'. The status bar at the bottom indicates 'Ln 9, Col 1', '197 characters', 'Plain text', '100%', 'Unix (LF)', and 'UTF-8'.

```
#!/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()
```

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 LookupRole
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::Policy 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::Policy 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://678025036602/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
```

```
C:\WINDOWS\system32\cmd. X + v
| | | | "AWS::SourceArn": "${MyBucket.Arn}" | | | | |
| | | | }, | | | |
| | | | "StringEquals": { | | | |
| | | | | "AWS::SourceAccount": "${AWS::AccountId}" | | | |
| | | | } | | | |
| + | ${MyLambda/ServiceRole.Arn} | Allow | sts:AssumeRole | Service:lambda.amazonaws.com |
| | | | | | | |
IAM Policy Changes
| | Resource | Managed Policy ARN | |
| | | | |
| + | ${BucketNotificationsHandler050a8587b7544547bf325f094a3db834/Role} | arn:${AWS::Partition}:iam::aws:policy/service-role/AWSLambdaBasicExecutionRole |
| | | | |
| + | ${Custom::S3AutoDeleteObjectsCustomResourceProvider/Role} | {"Fn::Sub": "arn:${AWS::Partition}:iam::aws:policy/service-role/AWSLambdaBasicExecutionRole"} |
| | | | |
| + | ${MyLambda/ServiceRole} | arn:${AWS::Partition}:iam::aws:policy/service-role/AWSLambdaBasicExecutionRole |
| | | | |
(NOTE: There may be security-related changes not in this list. See https://github.com/aws/aws-cdk/issues/1299)

Do you wish to deploy these changes (y/n)? y
CdkS3LambdaNewStack: deploying... [1/1]
CdkS3LambdaNewStack: creating CloudFormation changeset...
```

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 | BucketNotificationsHandler050a0587b7544547bf325f094a3db83
4 (BucketNotificationsHandler050a0587b7544547bf325f094a3db8347ECC3691)
CdkS3LambdaNewStack | 13/15 | 12:54:15 pm | CREATE_IN_PROGRESS | Custom::S3BucketNotifications | MyBucket/Notifications (MyBucketNotifications46AC8CD2) Re
source creation initiated
CdkS3LambdaNewStack | 14/15 | 12:54:18 pm | CREATE_COMPLETE | Custom::S3BucketNotifications | MyBucket/Notifications (MyBucketNotifications46AC8CD2) Re
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/ac51adf0-9aa9-11f0-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
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>
```

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 + v
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

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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/
upload: .\testfile.txt to 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:

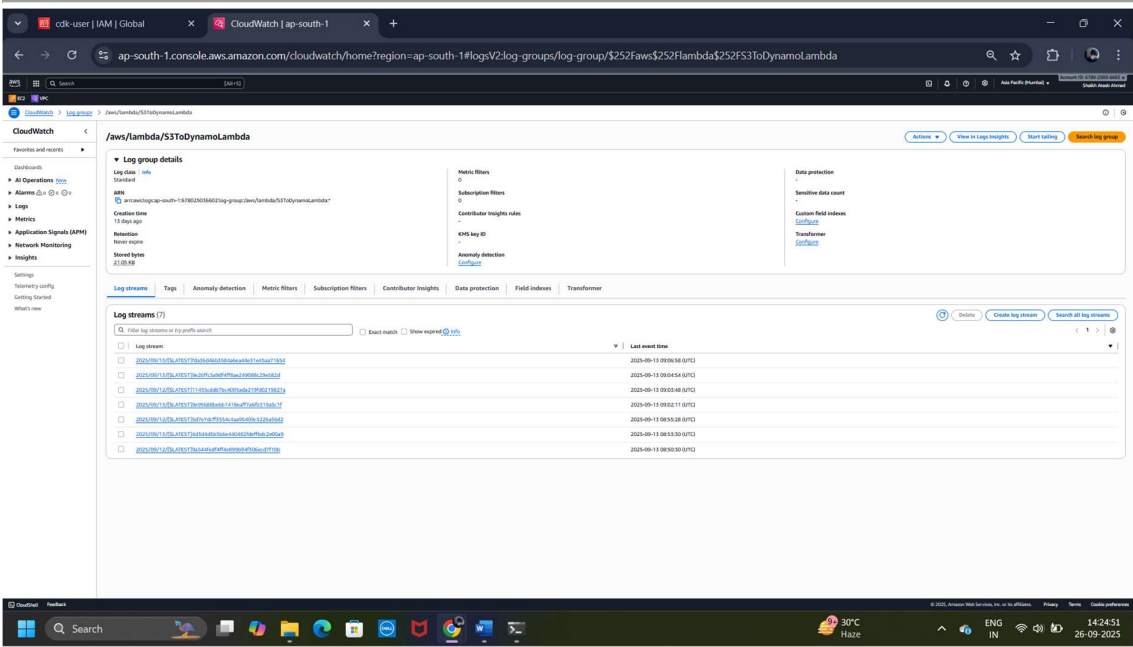
Event received: { "Records": [{ ... S3 event details ... }] }

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

