Creating and Deploying Lambda Functions

Dror Helper

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Module Overview

Writing Lambda functions

Deploying Lambda functions

Testing, monitoring, and troubleshooting

```
def handler_name(event, context)
    # insert code here
    return result;
```

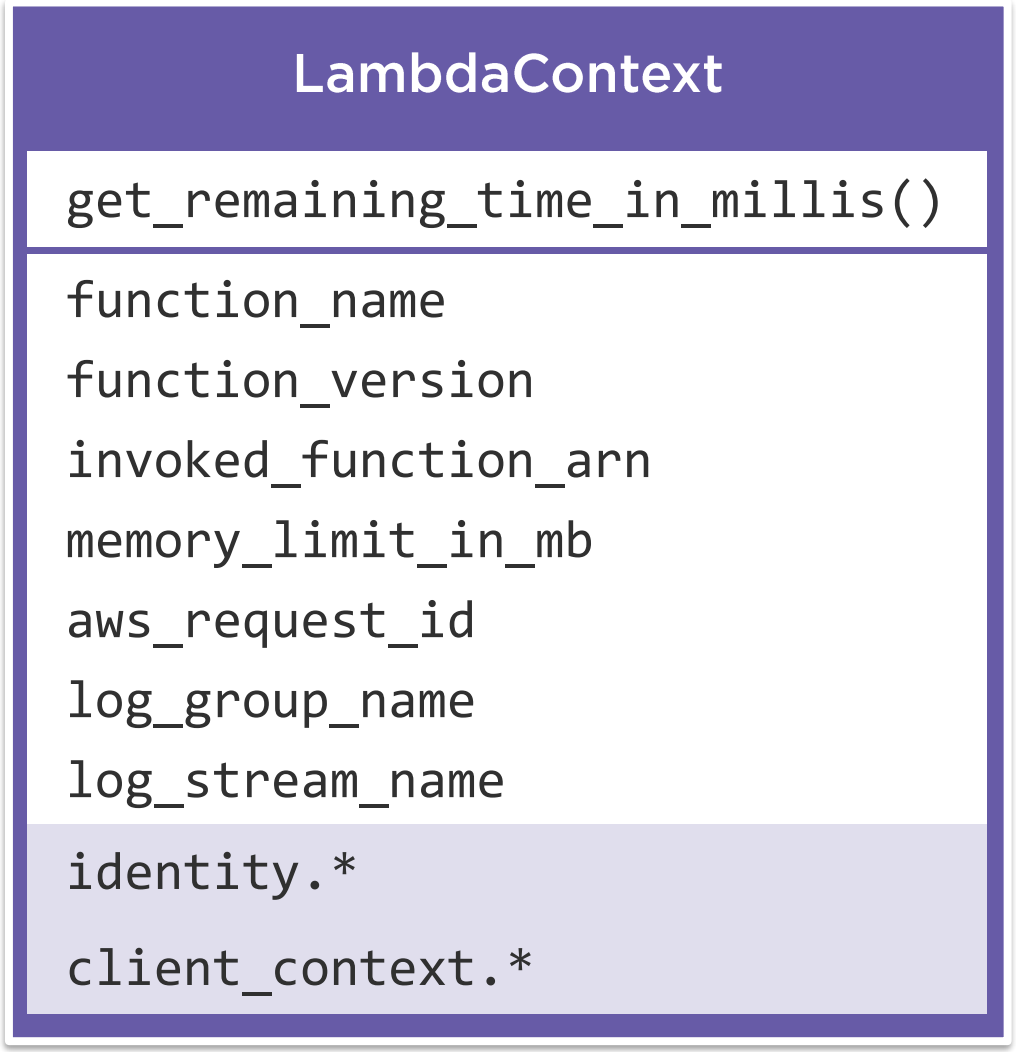
Lambda Function (Python)

Return value optional

Parameters:

- Event data (usually dict) in *event* parameter
- Runtime information passed via the *context* parameter

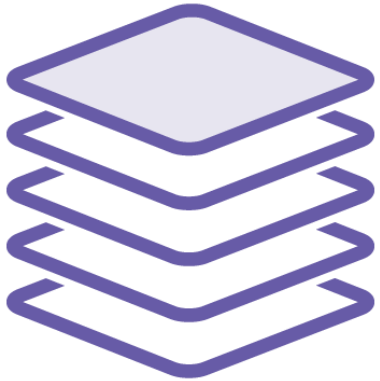
The Context Object (Python)



Creating New AWS Lambda

Create from scratch

Use existing blueprint



Serverless application repository

Uploading Lambda Function

Write code and save as file

Package code file and dependencies in zip

Upload using console or AWS CLI

Deploying Lambda Using AWS CLI

```
aws lambda create-function \
--region us-east-1 \
--function-name MyNewLambda \
--zip-file c://my_package.zip \
--role arn:aws:iam::account-id:role/my_lambda_role \
--handler hello_python.my_handler \
--runtime python3.6 \
--timeout 15 \
--memory-size 512
```

CloudWatch

Monitors AWS resources and applications

- Collects and tracks metrics
- Collects and monitors log files
- Set alarms

Create Events

- Trigger Lambda functions

Monitoring AWS Lambda

CloudWatch Metrics

Real time execution analysis

CloudWatch Logs

Requests handled by your function

Logs generated by your code

```
def my_simplelogging_handler(event, context):
    print('got event{}'.format(event))


def my_logging_handler(event, context):
    logger.info('got event{}'.format(event))
    logger.error('something went wrong')
```

Logging to CloudWatch

Like all AWS services, Lambda logs are stored using CloudWatch

- Use *print* statements and/or l*ogging.** functions
- Lambda return value
- Uncaught exceptions are logged automatically

CloudWatch Events

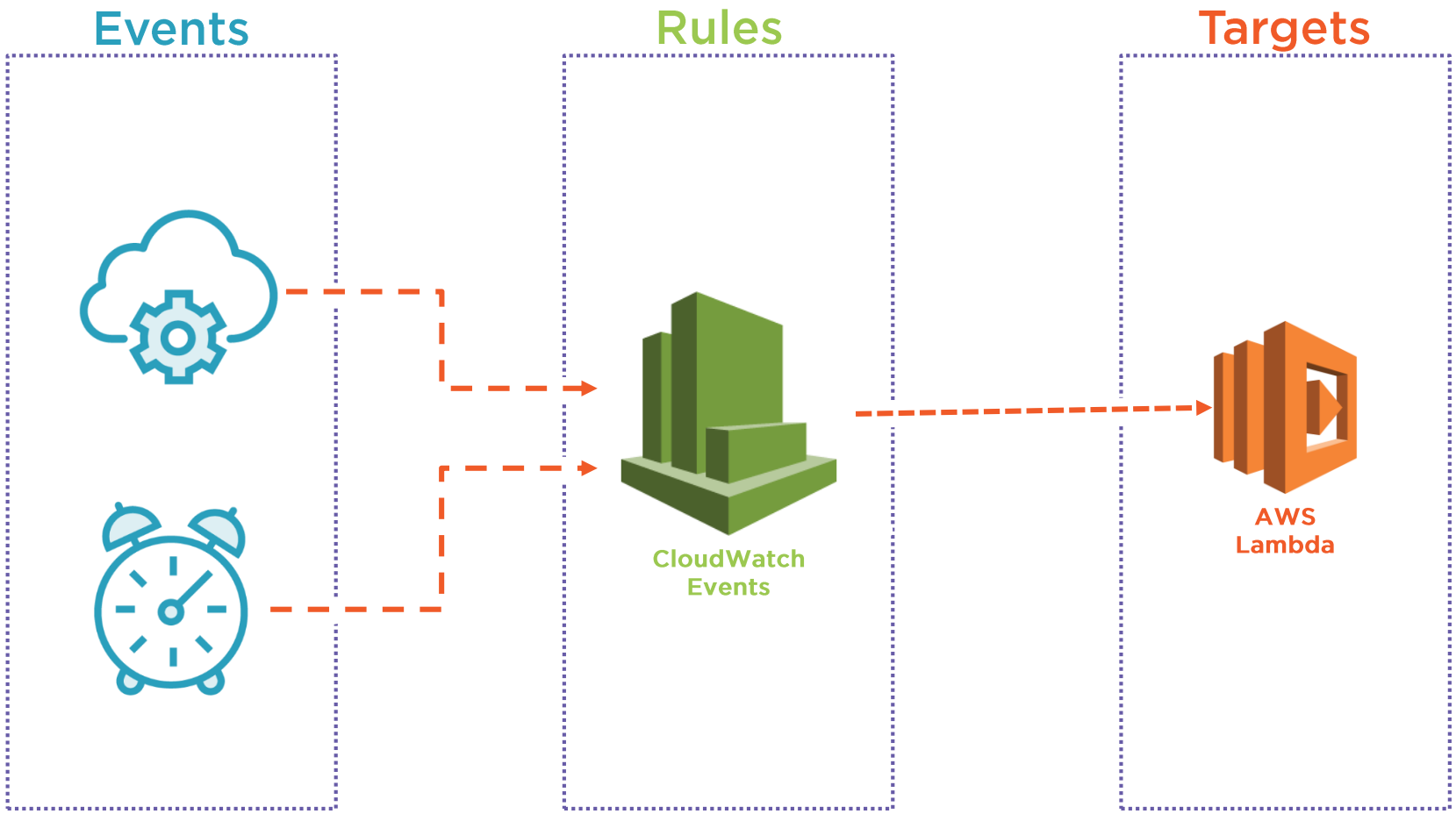
Describe changes in AWS resources

- Near real-time
- Simple rules
- Routing

Schedule automated actions

- Specific time/date
- Intervals

CloudWatch Events



Summary

Create a Lambda Function

Deployment

- Using AWS Console
- Using AWS CLI

AWS Console

- Lambda properties
- Testing

Using AWS CloudWatch

- Logging & Metrics
- Alerts
- Triggering Lambda Using Events