SERVERLESS BLOG WORKSHOP

Mikael Puittinen, CTO
mikael.puittinen@sc5.io
@mpuittinen

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SERVERLESS

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INTRODUCTION

- Introduction to AWS & Serverless Framework

THE SERVERLESS BLOG WORKSHOP

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What we'll do

WORKSHOP THEME: BLOG BACKEND

Create a backend for the blog application running at http://hackathon-blog.serverless.fi/
(sources at https://github.com/SC5/serverless-blog-workshop)

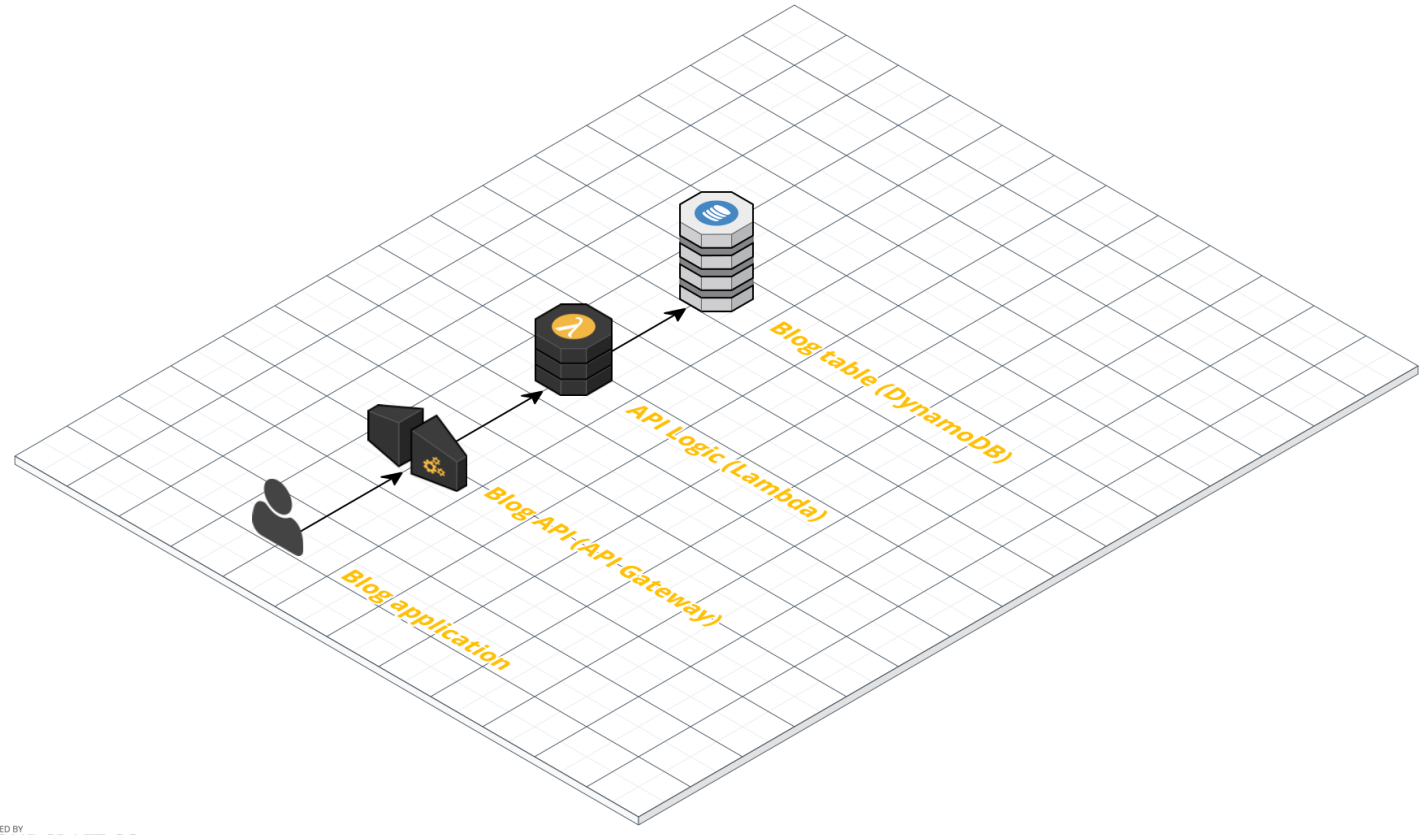
Backend must have a REST API with methods

1. POST /dev/posts
2. GET /dev/posts
3. PUT /dev/posts/{postId} - OPTIONAL
4. DELETE /dev/posts/{postId} – OPTIONAL

Use e.g. AWS DynamoDB as the database for blog posts.

Step-by-step walkthrough available at http://serverless.fi/docs/blog-workshop.pdf

WORKSHOP ARCHITECTURE



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RESOURCES

Blog client:

https://github.com/SC5/aws-serverless-hackathon

Reference implementation:

https://github.com/SC5/serverless-blog-workshop

This presentation:

http://serverless.fi/docs/blog-workshop.pdf

Code snippets:

http://serverless.fi/docs/blog-workshop

GETTING READY FOR THE WORKSHOP / HACKATHON

Instructions for getting set up:

http://serverless.fi/docs/workshop-preps

STEP-BY-STEP INSTRUCTIONS

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1. CREATE SERVERLESS PROJECT

```
> sls install -u https://github.com/SC5/sc5-serverless-boilerplate -n
serverless-blog

> cd serverless-blog

> npm install
```

This creates a new project serverless-blog based on sc5-serverless-boilerplate and installs the node modules required by the project.

2. CREATE DYNAMODB TABLE FOR POSTS (USING SERVERLESS)

- Serverless uses AWS Cloudformation to deploy resources (defined in *serverless.yml*)
- Uncomment resources and Resources in *serverless.yml* and add snippet *blog-table.yml* (check indenting)

Permissions to the table are granted by default in the boilerplate template.

```
# DynamoDB Blog table for workshop
    BlogTable:
      Type: AWS::DynamoDB::Table
      DeletionPolicy: Retain
      Properties:
        AttributeDefinitions:
          - AttributeName: id
            AttributeType: S
        KeySchema:
          - AttributeName: id
            KeyType: HASH
        ProvisionedThroughput:
          ReadCapacityUnits: 1
          WriteCapacityUnits: 1
        TableName: ${self:provider.environment.TABLE_NAME}
```

3. CREATE FUNCTION AND SET ENDPOINTS

- Create function posts for your service

```
> sls create function -f posts --handler posts/index.handler
```

- Add HTTP endpoints by adding the snippet *http-events.yml* to the posts function in *serverless.yml*

```
    events:
      - http:
          path: posts
          method: get
          cors: true
          integration: lambda
      - http:
          path: posts
          method: post
          cors: true
          integration: lambda
       - http:
          path: posts/{id}
          method: put
          cors: true
          integration: lambda
      - http:
          path: posts/{id}
          method: delete
          cors: true
          integration: lambda
```

4. IMPLEMENT THE LOGIC

- Implement the logic for the function into `posts/`. The entry point for the Lambda function is `index.js` in that folder.
- Copy the snippets index`.js` and `BlogStorage.js` from github (unless you want to code them yourself)
- If you opt to code yourself, we recommend to use. `AWS.DynamoDB.DocumentClient` to access the database table. The table name is `${self:provider.environment.TABLE_NAME}`

5. TEST THE FUNCTION

- Copy the snippet `posts.js` to `test/`
- Deploy (requires the resources) and run tests using serverless-mocha-plugin

```
> sls deploy

> sls invoke test --region us-east-1 --stage dev
```

6. SET UP ENDPOINTS IN THE SAMPLE APP

- Launch the blog application at

  `http://hackathon-blog.serverless.fi`

- Enter the endpoint URL (`https://.../dev/posts`) to the form and save (use `sls info` to get the endpoint)
- Try writing, editing, deleting posts

9. YOU DID IT! CONGRATS!

Next:

1. If you want to work more on serverless, check opportunities at https://sc5.io/careers
2. If you are interested in serverless, join the ” Serverless Finland” meetup at http://www.meetup.com/Helsinki-Serverless/ and follow http://serverless.fi

THANK YOU!

mikael.puittinen@sc5.io

@mpuittinen