Introduction

In order to manage the deployment of the lambda function and it's dependencies, I've used AWS's serverless manager that creates a CloudFormation stack with the structures required for this project. Following I'll detail the steps to generate the deployment file based on the template and physically deploy/create the structures to run this project. Since there is no automation, non urgent deployments should be done always on the same day. Currently this is Monday night - GMT.

Configure AWS CLI

Before using the SAM deployment CLI you first must configure the AWS CLI with the credentials that will deploy the serverless structures.

- NOTE: The IAM credentials that should be set must have permission to generate and update structures.

To configure the AWS CLI please follow the guide in:
https://docs.aws.amazon.com/cli/latest/userguide/cli-chap-welcome.html
Please add a named profile to your CLI profile so we can use it during the deployment in case you need several profiles to manage your serverless workloads.

SAM Template File

To generate its structures using CloudFormation AWS you first have to create a YAML file as a template that SAM will use to create the structures. It can be a tedious process to get everything right, so AWS provides some templates in order to hasten this process. Although significant customization is still required, this templating helps a lot. To generate a template for SAM please follow the guide in:
https://medium.com/@edjgeek/meet-aws-sam-cli-sam-init-bab68b4cc0d4
Although not the official guide from AWS it's pretty detailed and explains step by step what you need to know to generate a CloudFormation template.
After the template has been generated we must adapt the *template.yaml* file. It's divided in a broad sense into two sections: Globals - the settings for the resources generated, and Resources - the structures that will be generated by the deployment.
To aid in the development and customization of the file you can also use the Designer tool that AWS provides
https://eu-west-2.console.aws.amazon.com/cloudformation/designer/home?region=eu-west-2#

SAM Build

In order to test/generate the changeset for the deployment you need to run the following command, on the template file directory:

```
sam build
```

This command iterates through your resources and automatically creates deployment artifacts so you can deploy using CloudFormation. It also allows you to test your applications by running:
`sam local invoke`
Details on the SAM build command can be found here:
https://docs.aws.amazon.com/serverless-application-model/latest/developerguide/sam-cli-command-reference-sam-build.html

SAM Deploy

After the structures are all in place in your local environment you can generate a CloudFormation deployment. The first time you deploy an application you should use
`sam deploy --guided`
This means that you follow a wizard to generate the deployment. After setting the options you can choose to save the options in a .toml file. If it's the first tie you're deploying your structures you should use the option --guided. For subsquent deploys, there is no need to use --guided.

- NOTE: As referred before you should explicitly state which AWS profile you intend to use with the option: --profile PROFILE_NAME. Not using it causes SAM CLI to deploy to the default profile. In a multi-profile environment, this might be an issue.

The intricacies of sam deploy go beyond the scope of this documentation. For more information os this, follow:
https://docs.aws.amazon.com/serverless-application-model/latest/developerguide/sam-cli-command-reference-sam-deploy.html