AWS CloudFormation

Agenda

- What is CloudFormation
- Benefits
- CloudFormation Templates
- CloudFormation Stack
- How it Works ?
- Use Case & Lab

What is CloudFormation

- AWS CloudFormation provides a common language for you to describe and provision all the infrastructure resources in your cloud environment.
- CloudFormation allows you to use a simple text file to model and provision, in an automated and secure manner, all the resources needed for your applications across all regions and accounts. This file serves as the single source of truth for your cloud environment.
- AWS CloudFormation is available at no additional charge, and you pay only for the AWS resources needed to run your applications.

Benefits of CloudFormation

- All In One
- Deploy and Automate
- Infrastructure as a Code

Overview of CloudFormation Template

A template is a JSON- or YAML-formatted text file that describes your AWS infrastructure. The 6 objects of Template is given below

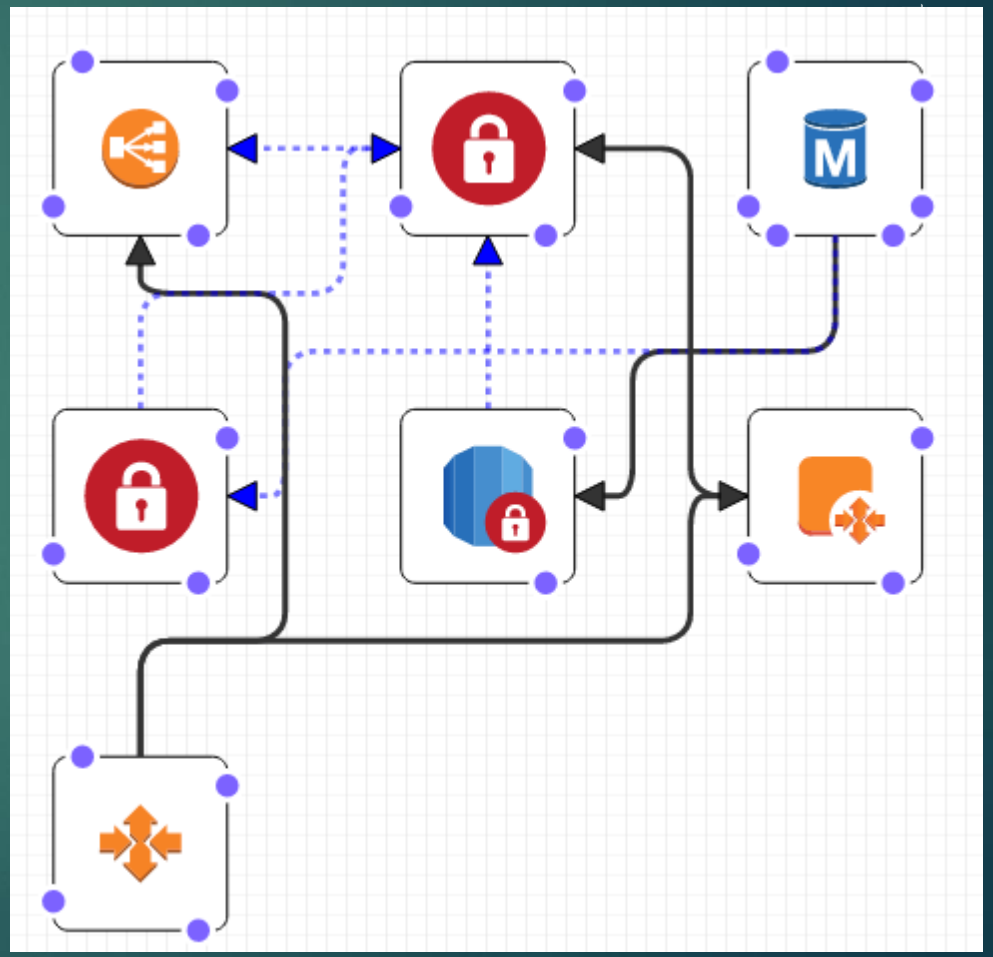
- Format version
- Description
- Parameters
- Mappings
- Resources (Mandatory)
- Outputs

AWS CloudFormation - Template Schema

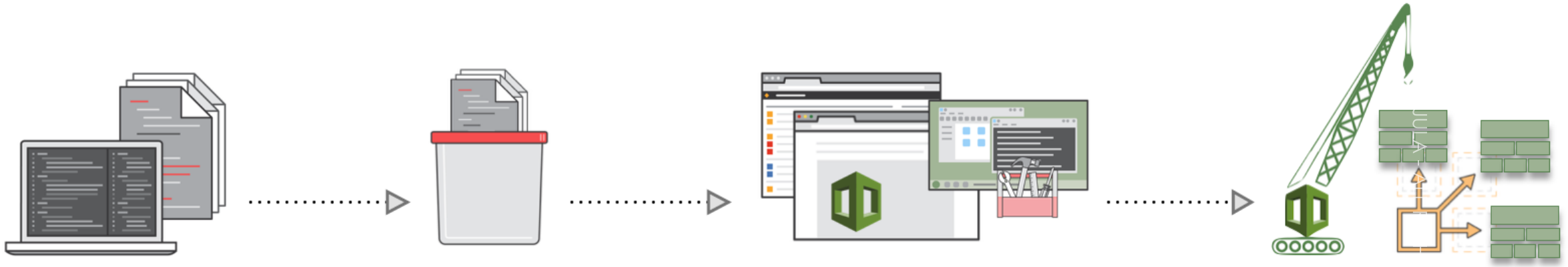
```
{
        "AWSTemplateFormatVersion" : "2010-09-09",
        "Description" : "My AWS CF Template",
        "Parameters" : {
                },
        "Mapping" : {
                },
        "Resources" : {                    Mandatory
                },
        "Output" : {
                }
}
```

CloudFormation Stack

- A stack is a collection of AWS resources that you can manage as a single unit.
- Create, Update or Delete a collection of resources by creating, updating, or deleting stacks.
- All the resources in a stack are defined by the stack's AWS CloudFormation template.



How it Works ?



Code your infrastructure from scratch with the CloudFormation template language, in either YAML or JSON format, or start from many available sample templates

Check out your template code locally, or upload it into an S3 bucket

Use AWS CloudFormation via the browser console, command line tools or APIs to create a stack based on your template code

AWS CloudFormation provisions and configures the stacks and resources you specified on your template

Use Case

https://aws.amazon.com/solutions/case-studies/expedia/

LAB

Creating a Stack using an AWS CloudFormation Template

Thank you