



AWS CloudFormation





Table of Contents

- ▶ Introduction to CloudFormation
- ▶ Templates
- ▶ Stacks
- ▶ CF's Working Process




1

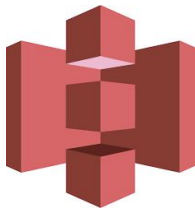
Introduction to CloudFormation



Introduction to CloudFormation

What is CloudFormation?

- Create-Delete-Modify one or few AWS resources
 - Easy 
- Hundreds ?





Introduction to CloudFormation

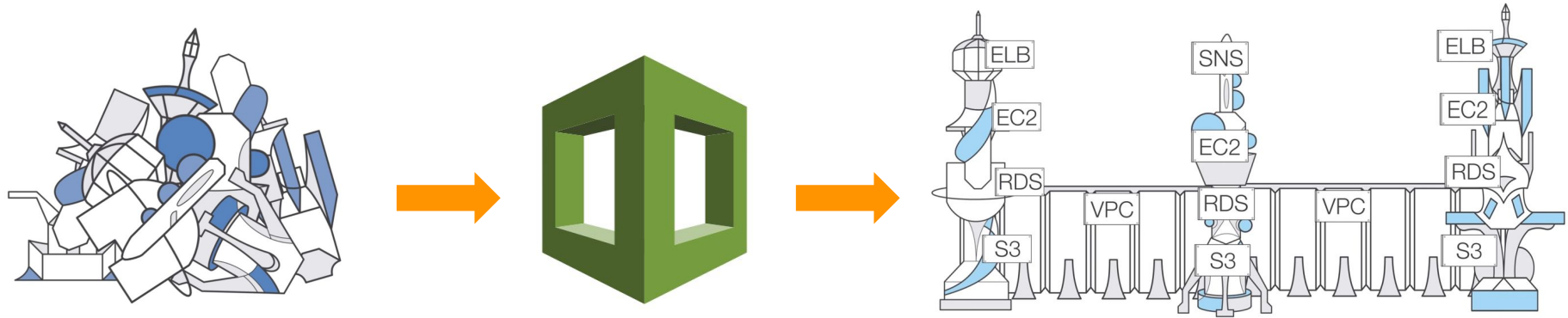
What is CloudFormation?



- CloudFormation is an AWS service which enables you to create, manage, configure, replicate and delete AWS resources easily and rapidly using templates.

Introduction to CloudFormation

What is CloudFormation?



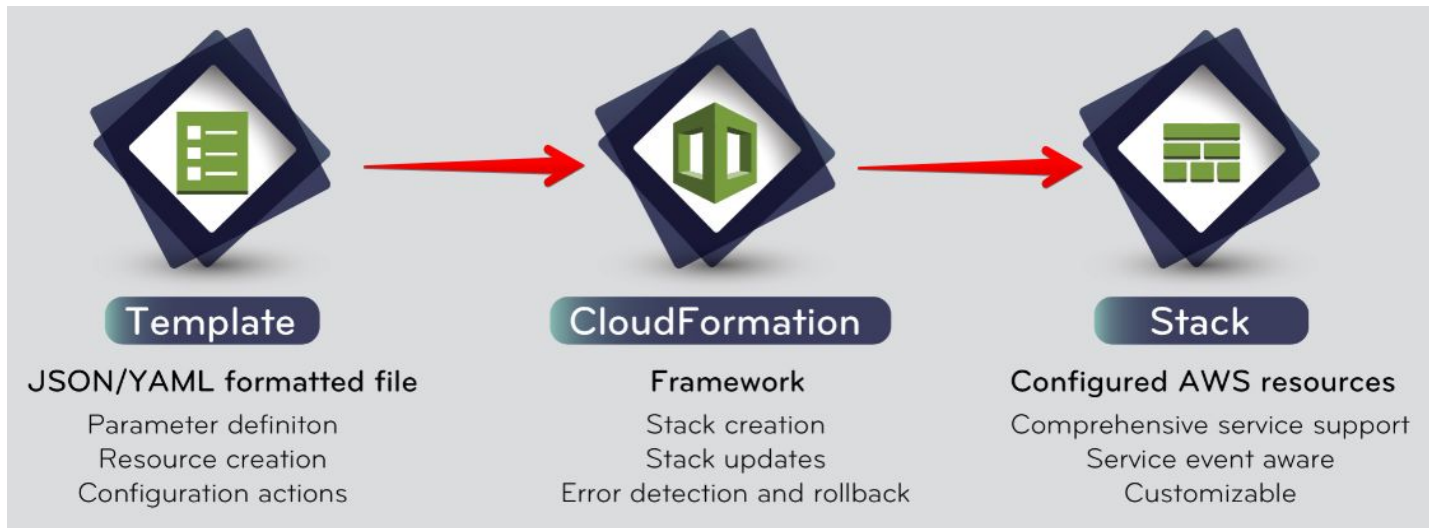
- **Provisions** and **manages** stacks of AWS resources based on **templates** you create to model your **infrastructure architecture**.

YAML and JSON were used for that



Introduction to CloudFormation

Templates and Stacks



- **Templates** and **Stacks** are the main components of AWS CloudFormation.



Introduction to CloudFormation

Pricing



- You **don't pay** for using **AWS CloudFormation**.
- You **pay** for the **resources you use**.



2 Templates



Templates

What is a Template?

```
{
  "AWSTemplateFormatVersion" : "2010-09-09",
  "Description" : "A simple EC2 instance",
  "Resources" : {
    "MyEC2Instance" : {
      "Type" : "AWS::EC2::Instance",
      "Properties" : {
        "ImageId" : "ami-0ff8a91507f77f867",
        "InstanceType" : "t1.micro"
      }
    }
  }
}
```

- A template is a **JSON** or **YAML** formatted text file which you specify the AWS resources you want to create.



Templates

What is a Template?

- You create resources, define the parameters and configure your settings with templates.
- Templates can have the extensions `.json`, `.yaml`, `.yml`, `.template`, or `.txt`.

Templates

Structure

- Template Version
- Description
- Metadata
- Parameters
- Mappings
- Conditions
- Transform
- Resources
- Outputs

```
{
  "AWSTemplateFormatVersion" : "version date",

  "Description" : "JSON string",

  "Metadata" : {
    template metadata
  },

  "Parameters" : {
    set of parameters
  },

  "Mappings" : {
    set of mappings
  },

  "Conditions" : {
    set of conditions
  },

  "Transform" : {
    set of transforms
  },

  "Resources" : {
    set of resources
  },

  "Outputs" : {
    set of outputs
  }
}
```





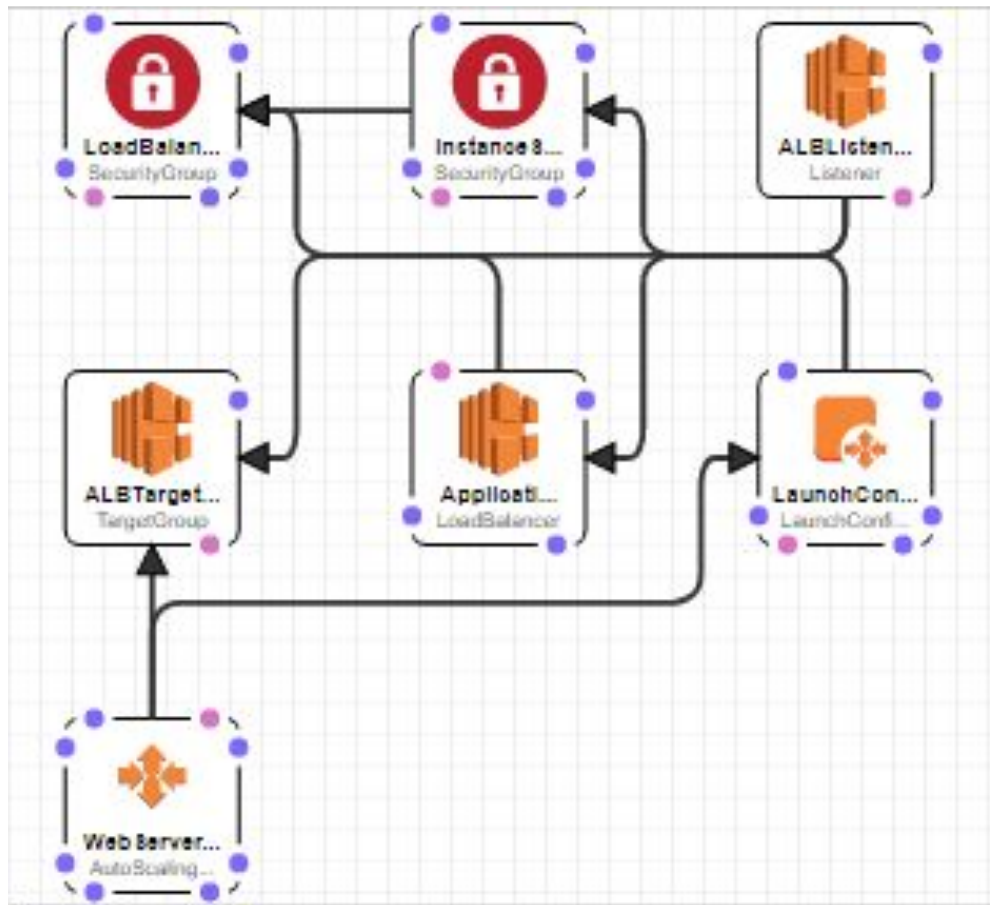
3

Stacks

Stacks

What is a Stack?

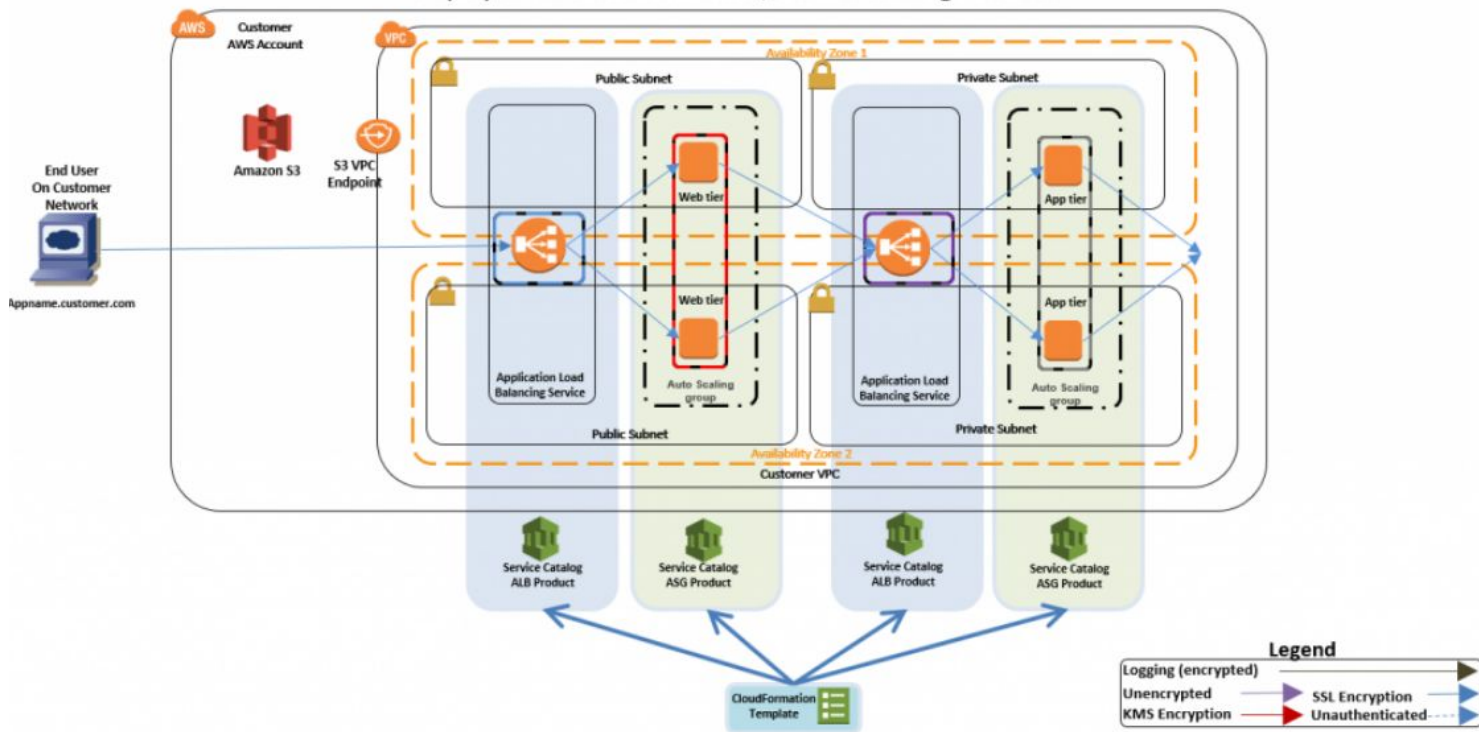
- A stack is a single unit **composed of the AWS resources** provisioned by CloudFormation.
- All of the resources in a **stack** are defined and configured by the **related template**.



Stacks

What is a Stack?

- A stack can be either a single EC2 instance or a very complex VPC.



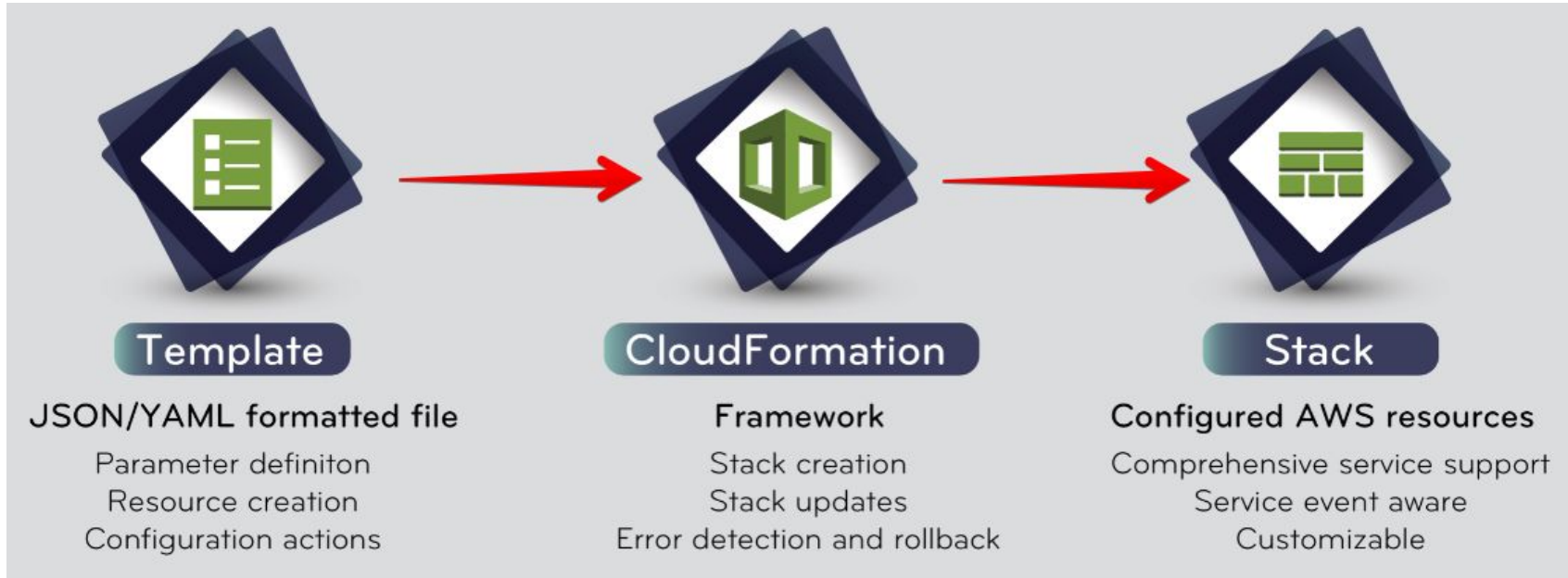


4

CloudFormation's Working Process

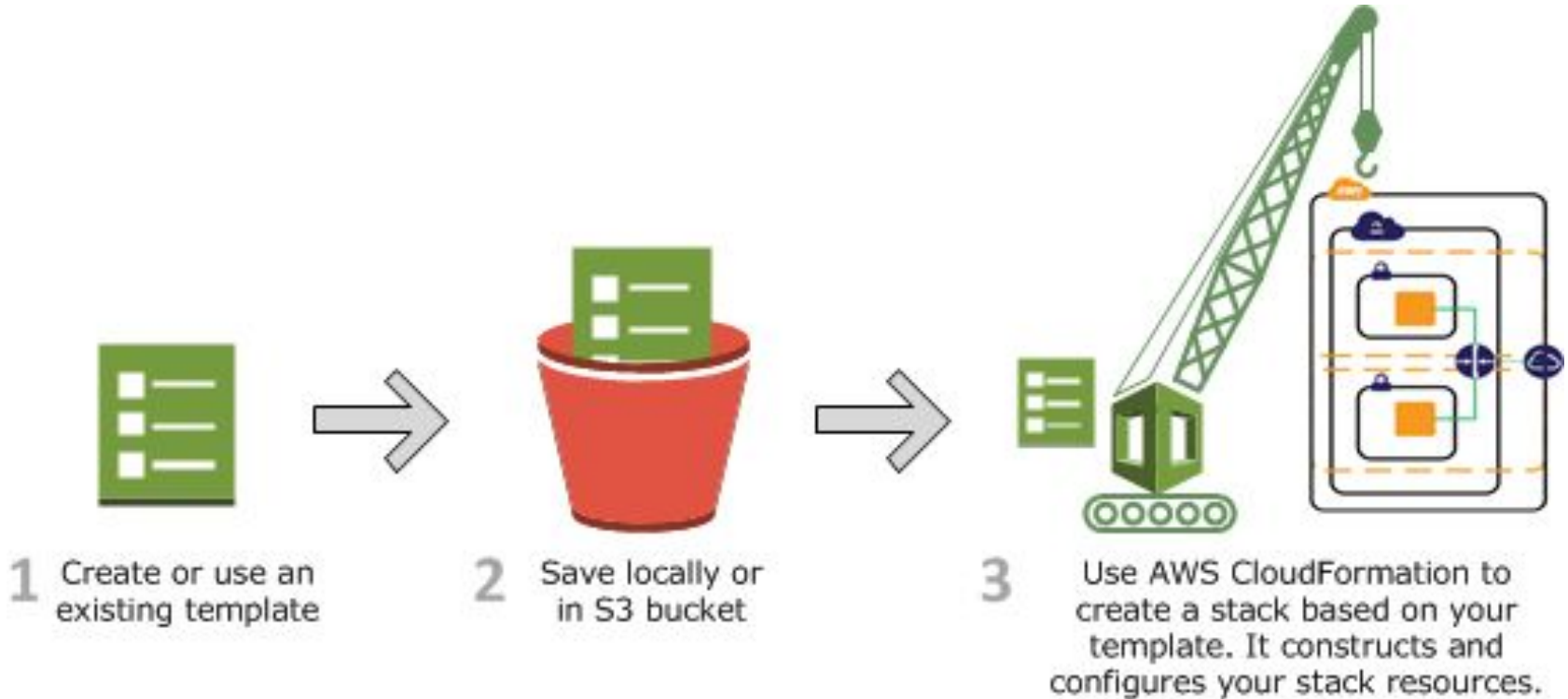
CloudFormation's Working Process

How does it work?



CloudFormation's Working Process

How does it work?





THANKS!

Any questions?

You can find me at:

- ▶ @guile
- ▶ guile@clarusway.com

