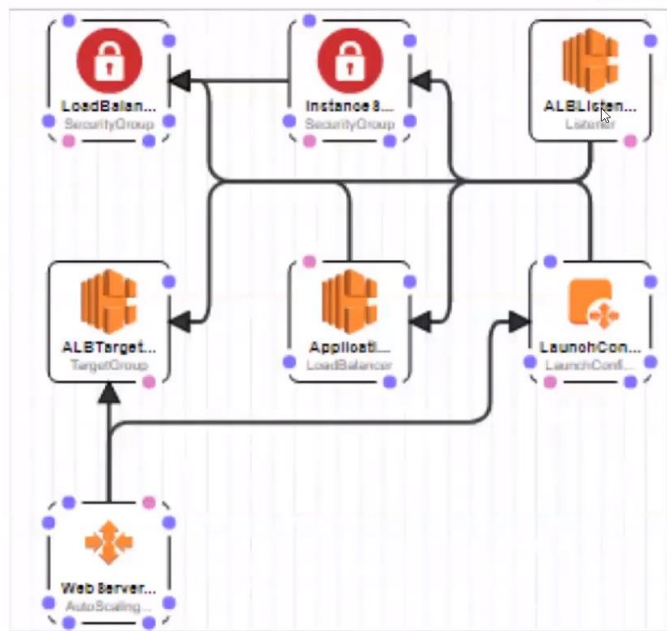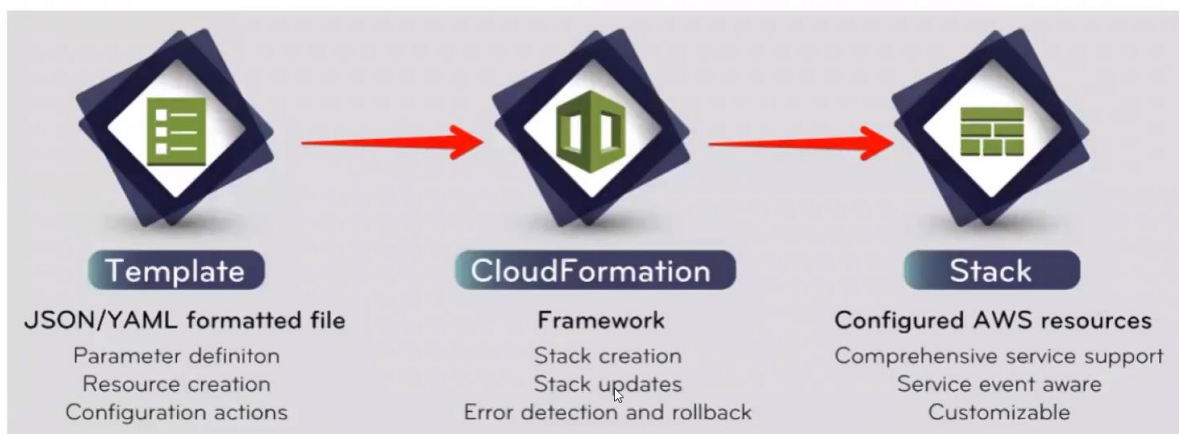# Stacks

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**.
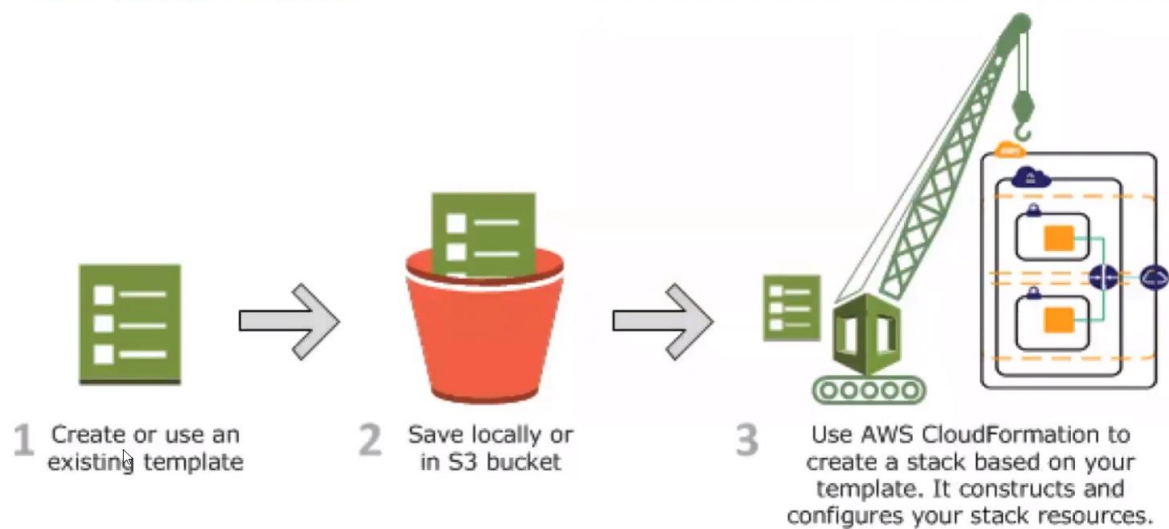

CloudFormation's Working Process

How does it work?

Template	CloudFormation	Stack
JSON/YAML formatted file	Framework	Configured AWS resources
Parameter definiton	Stack creation	Comprehensive service support
Resource creation	Stack updates	Service event aware
Configuration actions	Error detection and rollback	Customizable

CloudFormation's Working Process

How does it work?

1. Create or use an existing template

2. Save locally or in S3 bucket

3. Use AWS CloudFormation to create a stack based on your template. It constructs and configures your stack resources.

Templates

Structure

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

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```
{
  "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
  }
}
```