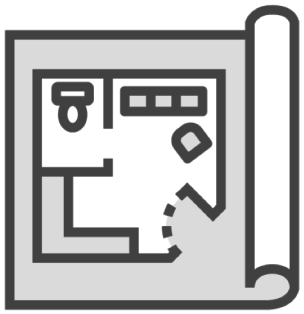
Preparing to Improve Your Architecture

Mike Erickson
DEVELOPER, ARCHITECT, TRAINER, SPEAKER, AUTHOR

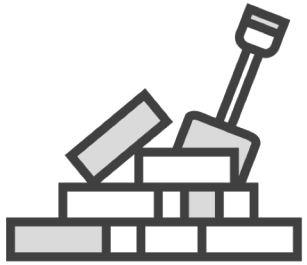
@mgerickson



You're done!

But...

- Unexpected usage patterns
- Poor performance
- New services
- New requests



Repeatable builds

Rebuildable infrastructure

Controlled tests

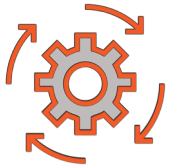
CI/CD

Team

Architect
Code
Test

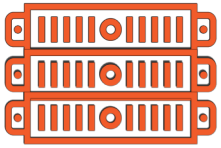
Artifacts

Source Code
Infrastructure



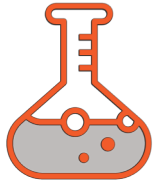
Build

Compile
Validate



Deploy

Infrastructure
Application



Test

Automation
Integration
Performance

Release

Real users

CloudFormation

Infrastructure template

Automate creation

Ensure consistency

Create or update

Manages dependencies

Preview changes

Extensible

Source control

Demo

AWS architecture resources

Introducing CloudFormation Templates

Common Template Sections

```
AWSTemplateFormatVersion: 2010-09-09
Description:
    Simple Example - S3 Website
Parameters:
    BucketName:
        Type: String
        Default: simples3site
        Description: Name of Bucket
```

- Template version (optional)
- Description (optional)

- Parameters (optional)
- Defines name we will use for the S3 Bucket we create

```
Resources:
    WebSiteBucket:
        Type: AWS::S3::Bucket
        Properties:
            AccessControl:
               PublicRead
            BucketName:
                !Ref BucketName
        WebsiteConfiguration:
            IndexDocument:
               index.html
        DeletionPolicy: Retain
```

- Resources (required)
- Resource name
- Resource type
- Properties
- Reference to a parameter
- Keep bucket when deleting stack

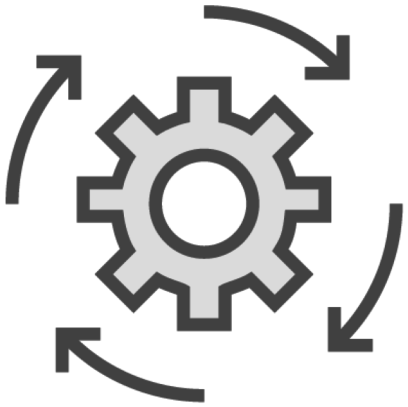
```
Outputs:

    WebsiteURL:

        Value:

            !GetAtt [
            "WebSiteBucket",
            "WebsiteURL"]

        Description:

            URL of website
```

- Outputs (optional)
- Output name
- Define the value
- Get the WebsiteURL value from the WebSiteBucket resource
- Description of the output value

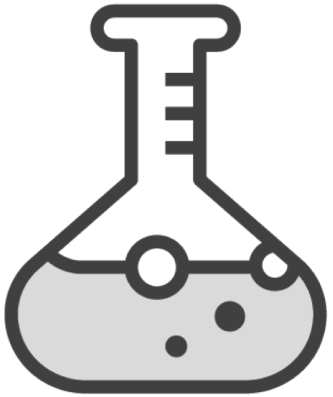
Learn More from Pluralsight

Keys to Support Improvement

CloudFormation



CI/CD



Test

Monitoring your architecture