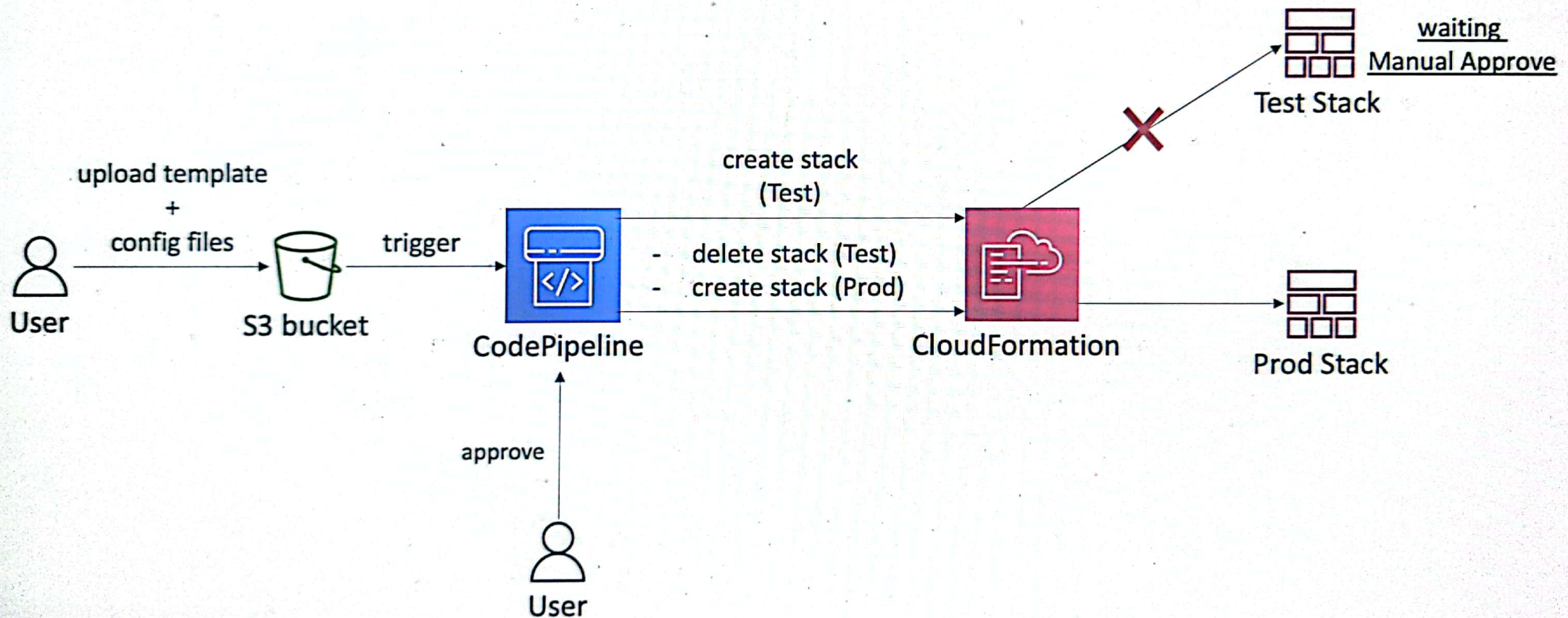# Continuous Delivery with CodePipeline

- Use CodePipeline to build a continuous delivery workflow (building a pipeline for CloudFormation stacks)

- Rapidly and reliably make changes to your AWS infrastructure

- Automatically build and test changes to your CloudFormation templates before promoting them to production stacks

- For example:
  - Create a workflow that automatically builds a test stack when you submit a CloudFormation template to a code repository
  - After CloudFormation builds the test stack, you can test it and then decide whether to push changes to production stack

CD with CodePipeline Example

upload template + config files → S3 bucket → trigger → CodePipeline

create stack (Test) → CloudFormation

- delete stack (Test)
- create stack (Prod)

CloudFormation → Test Stack (waiting Manual Approve) ✗

CloudFormation → Prod Stack

User → approve → CodePipeline

C:\Users\d854317\Desktop\AWS DevOps\CloudFormationTemplates\code\15-cd-with-codepipeline\wordpress-single-instance\wordpress-single-instance.yaml - Notepad++

File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?

new 1   2-cfn-init.yaml   wordpress-single-instance.yaml

```yaml
292      Type: 'AWS::EC2::SecurityGroup'
293      Properties:
294        GroupDescription: >-
295          Enable HTTP access via port 80 locked down to the load balancer + SSH
296          access
297        SecurityGroupIngress:
298          - IpProtocol: tcp
299            FromPort: 80
300            ToPort: 80
301            CidrIp: 0.0.0.0/0
302          - IpProtocol: tcp
303            FromPort: 22
304            ToPort: 22
305            CidrIp: !Ref SSHLocation
306    WebServer:
307      Type: 'AWS::EC2::Instance'
308      Metadata:
309        'AWS::CloudFormation::Init':
310          configSets:
311            wordpress_install:
312              - install_cfn
313              - install_wordpress
314              - configure_wordpress
315          install_cfn:
316            files:
317              /etc/cfn/cfn-hup.conf:
318                content: !Join
 30                mode: '000400'
 31                owner: root
 32                group: root
 33              /etc/cfn/hooks.d/cfn-auto-reloader.conf:
 54            services:
 62          install_wordpress:
 30          configure_wordpress:
 61      Properties:
 97      CreationPolicy:
 00  Outputs:
 10
```

Ln:309 Col:35 Pos:7,476

WS   **Services** ▼   🔍 *Search for services, features, marketplace products, and docs*   **[Option+S]**   ⟩_   🔔

Amazon S3   ❯   Create bucket

Create bucket

Buckets are containers for data stored in S3. Learn more ↗

General configuration

Bucket name

demo-cf-wordpress-stephane

Bucket name must be unique and must not contain spaces or uppercase letters. **See rules for bucket naming** ↗

AWS Region

EU (Frankfurt) eu-central-1   ▼

Copy settings from existing bucket - *optional*
Only the bucket settings in the following configuration are copied.

Choose bucket

Block Public Access settings for this bucket

Public access is granted to buckets and objects through access control lists (ACLs), bucket policies, access point policies, or all. In order to

Upload

Add the files and folders you want to upload to S3. To upload a file larger than 160GB, use the AWS CLI, AWS SDK or Amazon S3 REST API. **Learn more** ↗

> Drag and drop files and folders you want to upload here, or choose **Add files**, or **Add folders**.

Files and folders (1 Total, 5.2 KB)

Remove | **Add files** | **Add folder**

All files and folders in this table will be uploaded.

🔍 Find by name   ‹ 1 ›

	Name ▲	Folder ▽	Type ▽	Size ▽
☐	wordpress-single-instance.zip	-	application/zip	5.2 KB

Destination

Destination

Parameters

Parameters are defined in your template and allow you to input custom values when you create or update a stack.

CodePipeline Settings

PipelineName
A name for pipeline

```
DemoPipeline
```

S3Bucket
The name of the S3 bucket that contains the source artifact, which must be in the same region as this stack

```
demo-cf-wordpress-stephane
```

SourceS3Key
The file name of the source artifact, such as myfolder/myartifact.zip

```
wordpress-single-instance.zip
```

Email
The email address where CodePipeline sends pipeline notifications

```
stephane-aws
```

Test Stack Settings

TestStackName
A name for the test WordPress stack

```
Test-MyWordPressSite
```

✕

DemoPipeline

▶ **Source** • CodeCommit

▶ **Artifacts** • CodeArtifact

▶ **Build** • CodeBuild

▶ **Deploy** • CodeDeploy

▼ **Pipeline** • CodePipeline

Getting started

Pipelines

  Pipeline

  History

  Settings

▶ **Settings**

🔍 Go to resource

⊟ Feedback

| ⏻ Notify ▼ | Edit | Stop execution | Clone pipeline | **Release change** |

⊘ **S3Source**   Succeeded
Pipeline execution ID: fad339f9-e3a4-4573-a750-2895b388d6e2

TemplateSource   ⓘ
Amazon S3 ⧉

⊘ Succeeded - Just now

TemplateSource: Amazon S3 version id: lOooP8I9Kg8FpVjZOimNAIdoA8j3AVDb

---

┌──────────────────────────┐
│   **Disable transition**   │
└──────────────────────────┘

⊙ **TestStage**   In progress
Pipeline execution ID: fad339f9-e3a4-4573-a750-2895b388d6e2

AWS CloudFormation ⧉

⊖ Didn't Run
No executions yet

▶ **Source** • CodeCommit

▶ **Artifacts** • CodeArtifact

TemplateSource: Amazon S3 version id: lOooP8I9Kg8FpVjZOimNAIdoA8j3AVDb

▶ **Build** • CodeBuild

▶ **Deploy** • CodeDeploy

| Disable transition |

▼ **Pipeline** • CodePipeline

Getting started

⊖ **ProdStage**   Didn't Run

Pipelines

Pipeline

CreateChangeSet   ⓘ

History

AWS CloudFormation ⧉

Settings

⊖ Didn't Run
No executions yet

▶ **Settings**

↓

🔍 Go to resource

ApproveChangeSet   ⓘ

🗩 Feedback

Manual approval

⊖ Didn't Run