One ACE CI/CD Pipeline Documentation

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**📝 1**. Introduction

Purpose**:**

This document describes the CI/CD pipeline workflow for deploying the One ACE solution. It covers automated build, testing, and deployment processes.

Target Audience**:**

* DevOps Engineers,
* Build Automation Teams.

**🔀 2**. CI/CD Pipeline Workflow

**✅ Pipeline Stages:**

1. **Code Pull:** Pull latest CS and Digital flows and APIs.
2. **Merge and Package:** Merge code and create a unified package.
3. **Docker Build:** Create a Docker image from the package.
4. **Unit and Integration Testing:** Run tests to verify integrity.
5. **Push Docker Image:** Push the Docker image to the container registry.
6. **Deployment:** Deploy the Docker image to the respective environment.

Pipeline Configuration

**3.1 Git Integration**

* **Configuration:**

yaml

stages:

- checkout

- merge

- package

**✅ 3.2 Docker Build and Push**

* **Docker Configuration:**

yaml

docker:

image: docker:latest

services:

- docker:dind

**✅ 3.3 Testing Stage**

* **Testing Stage:**

yaml

test:

script:

- pytest tests/

**🚀 4.** Pipeline Triggering and Execution

 Trigger **Type:**

* Push to main or feature branch.

 Manual **Deployment:**

* Approval required for Production deployment.

 Auto**-Tagging:**

* Semantic versioning applied based on commit history.

Rollback Strategy

* Use previous Docker image tag to redeploy in case of failures.