

Explore

Sure, I’d be happy to guide you on how to set up a CI/CD pipeline for a .NET project using GitHub Actions. Here are the general steps:

1. [**Create a GitHub Repository**: First, you’ll need a GitHub repository for your .NET project](https://www.milanjovanovic.tech/blog/how-to-build-ci-cd-pipeline-with-github-actions-and-dotnet)[1](https://www.milanjovanovic.tech/blog/how-to-build-ci-cd-pipeline-with-github-actions-and-dotnet).
2. [**Set Up GitHub Actions**: GitHub Actions is a tool that allows you to automate your software workflows directly in your GitHub repository1](https://www.milanjovanovic.tech/blog/how-to-build-ci-cd-pipeline-with-github-actions-and-dotnet). [You can create workflows that build and test every commit to your repository, or deploy to production when a new tag is created1](https://www.milanjovanovic.tech/blog/how-to-build-ci-cd-pipeline-with-github-actions-and-dotnet).
3. [**Create a Workflow File**: To create a GitHub Action, you write a workflow file (.yml or .yaml) in the .github/workflows directory of your repository1](https://www.milanjovanovic.tech/blog/how-to-build-ci-cd-pipeline-with-github-actions-and-dotnet). [This file specifies what actions to run when certain events occur in your repository1](https://www.milanjovanovic.tech/blog/how-to-build-ci-cd-pipeline-with-github-actions-and-dotnet).
4. [**Specify the Workflow Triggers**: In your workflow file, you can specify what events trigger the workflow](https://www.milanjovanovic.tech/blog/how-to-build-ci-cd-pipeline-with-github-actions-and-dotnet)[1](https://www.milanjovanovic.tech/blog/how-to-build-ci-cd-pipeline-with-github-actions-and-dotnet). [For example, you might want the workflow to run whenever there’s a push event to the main branch](https://www.milanjovanovic.tech/blog/how-to-build-ci-cd-pipeline-with-github-actions-and-dotnet)[1](https://www.milanjovanovic.tech/blog/how-to-build-ci-cd-pipeline-with-github-actions-and-dotnet).
5. [**Define the Workflow Steps**: In your workflow file, you can define the steps that make up your workflow1](https://www.milanjovanovic.tech/blog/how-to-build-ci-cd-pipeline-with-github-actions-and-dotnet). [These steps might include building your .NET project, running tests, and deploying your project](https://www.milanjovanovic.tech/blog/how-to-build-ci-cd-pipeline-with-github-actions-and-dotnet)[1](https://www.milanjovanovic.tech/blog/how-to-build-ci-cd-pipeline-with-github-actions-and-dotnet).

Here’s an example of a basic workflow file for a .NET project:

name: .NET Build and Test

on:

push:

branches: [ main ]

jobs:

build:

runs-on: ubuntu-latest

steps:

- uses: actions/checkout@v2

- name: Setup .NET

uses: actions/setup-dotnet@v1

with:

dotnet-version: '6.0.x'

- name: Restore dependencies

run: dotnet restore

- name: Build

run: dotnet build --configuration Release --no-restore

- name: Test

run: dotnet test --no-build --verbosity normal

This workflow file sets up a workflow that runs on every push event to the main branch. [It checks out the code, sets up .NET, restores dependencies, builds the project, and runs tests](https://www.milanjovanovic.tech/blog/how-to-build-ci-cd-pipeline-with-github-actions-and-dotnet)[1](https://www.milanjovanovic.tech/blog/how-to-build-ci-cd-pipeline-with-github-actions-and-dotnet).

1. [**Push the Workflow File to GitHub**: Once you’ve created your workflow file, you can push it to your GitHub repository](https://www.milanjovanovic.tech/blog/how-to-build-ci-cd-pipeline-with-github-actions-and-dotnet)[1](https://www.milanjovanovic.tech/blog/how-to-build-ci-cd-pipeline-with-github-actions-and-dotnet). [GitHub Actions will automatically pick up the workflow file and start running your workflows](https://www.milanjovanovic.tech/blog/how-to-build-ci-cd-pipeline-with-github-actions-and-dotnet)[1](https://www.milanjovanovic.tech/blog/how-to-build-ci-cd-pipeline-with-github-actions-and-dotnet).

Remember, these are general steps and might need to be adjusted based on your specific application and server configuration. Also, ensure that the necessary permissions and security measures are in place when setting up CI/CD pipelines.

Let me know if you need more specific information! 😊