

# **Deploying Node.js to Azure App Service**

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You can deploy your Node.js project to Azure App Service as part of your continuous deployment (CD) workflows.

#### Introduction @

This guide explains how to use GitHub Actions to build, test, and deploy a Node.js project to Azure App Service.

**Note**: If your GitHub Actions workflows need to access resources from a cloud provider that supports OpenID Connect (OIDC), you can configure your workflows to authenticate directly to the cloud provider. This will let you stop storing these credentials as long-lived secrets and provide other security benefits. For more information, see "About security hardening with OpenID Connect" and "Configuring OpenID Connect in Azure."

### Prerequisites @

Before creating your GitHub Actions workflow, you will first need to complete the following setup steps:

1 Create an Azure App Service plan.

For example, you can use the Azure CLI to create a new App Service plan:

```
az appservice plan create \
    --resource-group MY_RESOURCE_GROUP \
    --name MY_APP_SERVICE_PLAN \
    --is-linux
```

In the command above, replace MY\_RESOURCE\_GROUP with your pre-existing Azure Resource Group, and MY\_APP\_SERVICE\_PLAN with a new name for the App Service plan.

See the Azure documentation for more information on using the Azure CLI:

- For authentication, see "Sign in with Azure CLI."
- If you need to create a new resource group, see "az group."

For example, you can use the Azure CLI to create an Azure App Service web app with a Node.js runtime:

```
az webapp create \
    --name MY_WEBAPP_NAME \
    --plan MY_APP_SERVICE_PLAN \
    --resource-group MY_RESOURCE_GROUP \
    --runtime "NODE|14-lts"
```

In the command above, replace the parameters with your own values, where MY\_WEBAPP\_NAME is a new name for the web app.

3 Configure an Azure publish profile and create an AZURE\_WEBAPP\_PUBLISH\_PROFILE secret.

Generate your Azure deployment credentials using a publish profile. For more information, see "Generate deployment credentials" in the Azure documentation.

In your GitHub repository, create a secret named AZURE\_WEBAPP\_PUBLISH\_PROFILE that contains the contents of the publish profile. For more information on creating secrets, see "<u>Using secrets in GitHub Actions</u>."

Optionally, configure a deployment environment. Environments are used to describe a general deployment target like production, staging, or development. When a GitHub Actions workflow deploys to an environment, the environment is displayed on the main page of the repository. You can use environments to require approval for a job to proceed, restrict which branches can trigger a workflow, gate deployments with custom deployment protection rules, or limit access to secrets. For more information about creating environments, see "Using environments for deployment."

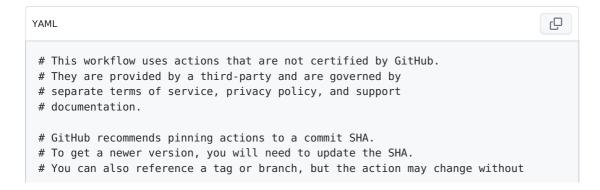
## Creating the workflow &

Once you've completed the prerequisites, you can proceed with creating the workflow.

The following example workflow demonstrates how to build, test, and deploy the Node.js project to Azure App Service when there is a push to the main branch.

Ensure that you set AZURE\_WEBAPP\_NAME in the workflow env key to the name of the web app you created. If the path to your project is not the repository root, change AZURE\_WEBAPP\_PACKAGE\_PATH to your project path. If you use a version of Node.js other than 10.x, change NODE VERSION to the version that you use.

If you configured a deployment environment, change the value of environment to be the name of your environment. If you did not configure an environment or if your workflow is in a private repository and you do not use GitHub Enterprise Cloud, delete the environment key.



```
warning.
on:
  push:
    branches:
     - main
env:
 AZURE_WEBAPP_NAME: MY_WEBAPP_NAME # set this to your application's name
 AZURE WEBAPP PACKAGE PATH: '.' # set this to the path to your web app
project, defaults to the repository root
 NODE VERSION: '14.x'
                                     # set this to the node version to use
jobs:
 build:
    runs-on: ubuntu-latest
    steps:
    - uses: actions/checkout@v4
    - name: Set up Node.js
     uses: actions/setup-node@v3
      with:
        node-version: ${{ env.NODE VERSION }}
        cache: 'npm'
    - name: npm install, build, and test
      run: |
        npm install
        npm run build --if-present
        npm run test --if-present
    - name: Upload artifact for deployment job
      uses: actions/upload-artifact@v3
      with:
        name: node-app
        path: .
  deploy:
    runs-on: ubuntu-latest
    needs: build
    environment:
     name: 'production'
      url: ${{ steps.deploy-to-webapp.outputs.webapp-url }}
    - name: Download artifact from build job
      uses: actions/download-artifact@v3
     with:
        name: node-app
    - name: 'Deploy to Azure WebApp'
      id: deploy-to-webapp
      uses: azure/webapps-deploy@85270a1854658d167ab239bce43949edb336fa7c
      with:
        app-name: ${{ env.AZURE WEBAPP NAME }}
        publish-profile: ${{ secrets.AZURE WEBAPP PUBLISH PROFILE }}
        package: ${{ env.AZURE WEBAPP PACKAGE PATH }}
```

### Additional resources &

The following resources may also be useful:

- For the original starter workflow, see <a href="mailto:azure-webapps-node.yml">azure-webapps-node.yml</a> in the GitHub Actions starter-workflows repository.
- The action used to deploy the web app is the official Azure <u>Azure/webapps-deploy</u> action.
- For more examples of GitHub Action workflows that deploy to Azure, see the <u>actions-workflow-samples</u> repository.

• The "Create a Node.js web app in Azure" quickstart in the Azure web app documentation demonstrates using Visual Studio Code with the Azure App Service extension.

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