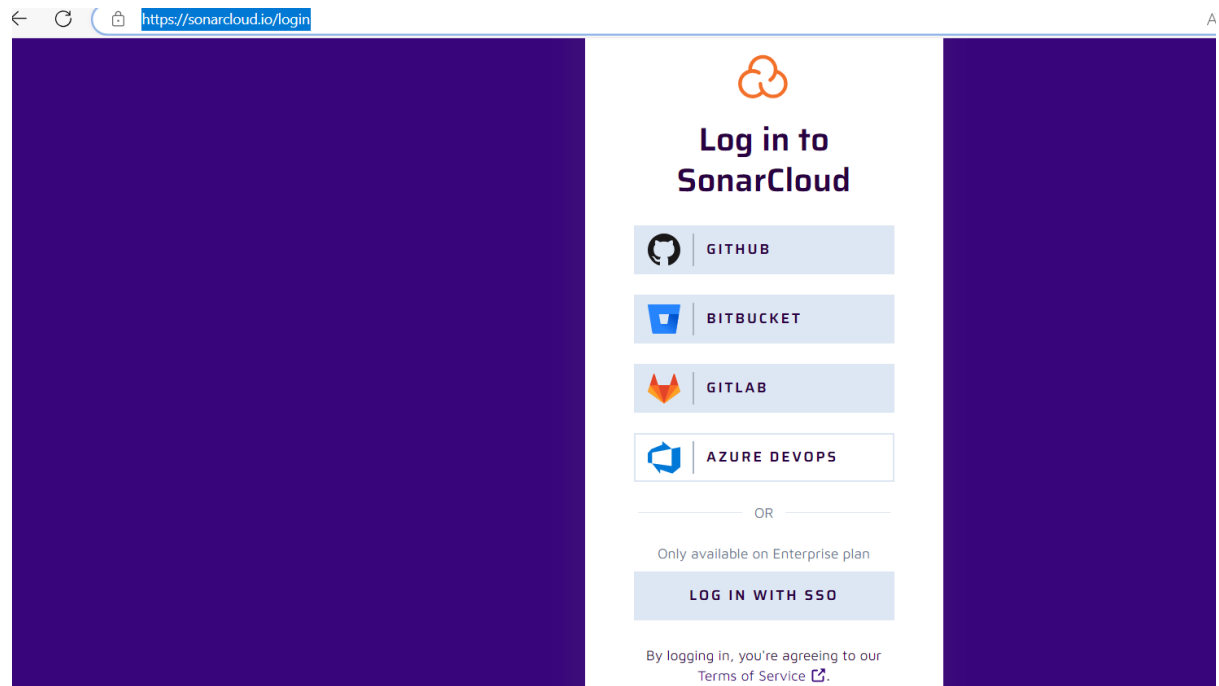
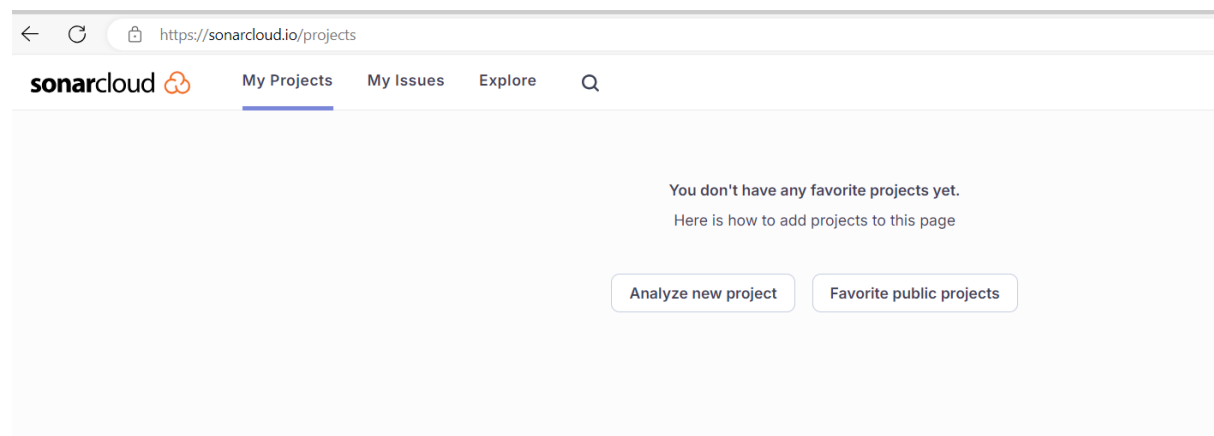


Sonar Cloud Integration with Azure DevOps CI/CD Pipeline

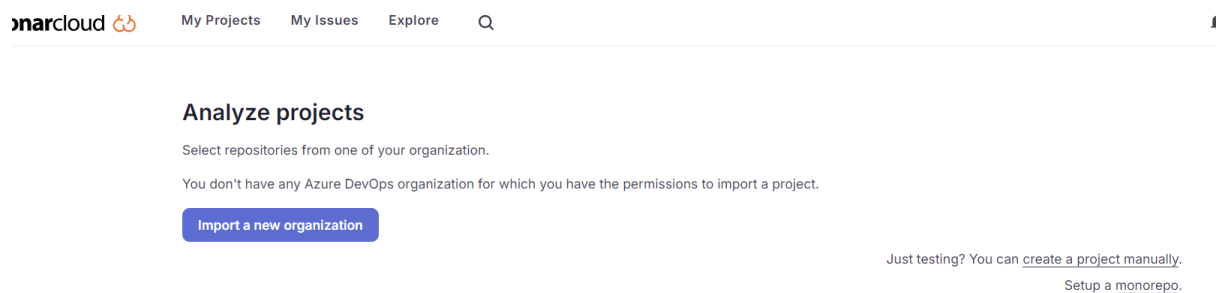
Navigate to [Login - SonarCloud](#) with Azure DevOps Account Credential.



Analyze new project



Click on create a Project Manually



Create other organization

Analyze projects

Manual setup is not recommended, and leads to missing features like appropriate setup of your project or analysis feedback in the Pull Request. We recommend to [import your projects](#)

Organization

Choose an organization...



[Create another organization](#)

Next

Select free plan and provide organization name . create it.

1 Enter your organization details

Name

new-organization



Up to 255 characters

Key *

new-organization



Organization key must start with a lowercase letter or number, followed by lowercase letters, numbers or hyphens, and must end with a letter or number. Maximum length: 255 characters.

[Add additional info](#)

2 Choose a plan

Free

For individual developers, students and open-source projects

0€

Select Free

What's included

Team

Free trial available

Essential capabilities for small teams and business

Starting from

60€ 30€/month - 50% off

Start Free Trial

Everything in Free and

Enterprise

Mission critical flexibility, scalability, and performance.

To get started

talk to sales

Contact sales

Everything in Team and

2 Choose a plan

Free
For individual developers, students and open-source projects

0€
[Select Free](#)

What's included

- ✓ Open-source projects
- ✓ 28 languages supported
- ✓ Advanced issue detection & deeper SAST
- ✓ Analyze the main branch & pull requests
- ✓ DevOps platform integration

Team Free trial available
Essential capabilities for small teams and business

Starting from
~~60€~~ 30€/month - 50% off
[Start Free Trial](#)

Everything in Free and

- ✓ 14-day free trial, cancel any time
- ✓ Private projects
- ✓ Analyze feature branches, maintenance branches, & pull requests
- ✓ Define the quality standard for your team
- ✓ Synchronized user management

Enterprise
Mission critical flexibility, scalability, and performance.

To get started
talk to sales
[Contact sales](#)

Everything in Team and

- ✓ Enterprise-Level Hierarchy
- ✓ Secure SAML single sign-on (SSO)
- ✓ Management reporting
- ✓ Centralized enterprise billing
- ✓ Enterprise-grade security
- ✓ AWS Marketplace transaction option

Available packs

- ✓ Premium Support

[Create Organization](#)

Analyze projects

Manual setup is not recommended, and leads to missing features like appropriate setup of your project or analysis feedback in the Pull Request. We recommend to [import your projects](#)

Organization

new-organization

[Create another organization](#)

Display Name * ?

agileproject

Up to 255 characters

Project Key * ?

new-organization_agileproject

Up to 400 characters. All letters, digits, dash, underscore, period or colon.

Project visibility

☒ Public

Anyone will be able to browse your source code and see the result of your analysis.

☐ Private **PAID PLAN**

Only members of the organization will be able to browse your source code and see the result of your analysis.

[Next](#)

Create the Project as per default settings.

Set up project for Clean as You Code

The new code definition sets which part of your code will be considered new code.

This helps you focus attention on the most recent changes to your project, enabling you to follow the Clean as You Code methodology.

Learn more: [New Code Definition](#)

Set a new code definition for your organisation to use it by default for all new projects
This can help you use the Clean as You Code methodology consistently across projects.
[new-organization - Administration - New Code](#)

The new code for this project will be based on:

☒ **Previous version**

Any code that has changed since the previous version is considered new code.
Recommended for projects following regular versions or releases.

☐ **Number of days**

Any code that has changed in the last x days is considered new code. If no action is taken on a new issue after x days, this issue will become part of the overall code.
Recommended for projects following continuous delivery.

You can change this at any time in the project administration

[Back](#)

[Create project](#)

The screenshot shows the SonarCloud web interface. The browser address bar displays the URL: `https://sonarcloud.io/project/configuration?id=new-organization_agileproject`. The left sidebar shows the project name 'agileproject' with a 'PUBLIC' status and a star icon. Below the sidebar, there are navigation links for 'Overview', 'Main Branch', 'Pull Requests', and 'Branches'. The main content area is titled 'Choose your Analysis Method' and contains four options: 'With Azure DevOps Pipelines', 'With other CI tools', 'With Amazon CodeCatalyst', and 'Manually'. The 'With other CI tools' option is selected, and its description states: 'SonarCloud integrates with your workflow no matter which CI tool you're using.'

Goto MyAccount- Settings-Generate Token. Note it somewhere, It will be used as a service connection in Azure DevOps Project.

This screenshot shows the same 'Choose your Analysis Method' page as the previous one, but with the user profile dropdown menu open in the top right corner. The menu is for the user 'Tanvi Puri' (email: puritanviti@gmail.com) and contains the following options: 'My Account', 'My Organizations', 'new-organization' (with 'PUBLIC' and 'ADMIN' sub-options), and 'Log out'.



Security

If you want to enforce security by not providing credentials of a real SonarCloud user to run your code scan or to invoke web services, you can provide a User Token as a replacement of the user login. This will increase the security of your installation by not letting your analysis user's password going through your network.

Generate Tokens

Generate Token

Existing Tokens

Name	Last use	Created	
Analyze "agileproject"	Never	December 14, 2023	<button>Revoke</button>
Analyze "agileproject" 1	Never	December 14, 2023	<button>Revoke</button>
AzureDevops	9 months ago	December 14, 2023	<button>Revoke</button>
AzureDevOps	9 months ago	December 14, 2023	<button>Revoke</button>
newtoken	16 days ago	August 30, 2024	<button>Revoke</button>

Upgrade

Starting from

- ✓ 14-day
- ✓ Private
- ✓ Analyze branch
- ✓ Define rules
- ✓ Synchronise

Upgrade

Security

If you want to enforce security by not providing credentials of a real SonarCloud user to run your code scan or to invoke web services, you can provide a User Token as a replacement of the user login. This will increase the security of your installation by not letting your analysis user's password going through your network.

Generate Tokens

Generate Token

New token "latesttoken" has been created. Make sure you copy it now, you won't be able to see it again!

4f669818f0deea429186ccecec16a8265ab3fc2a



Navigate to Extensions and Browse MarketPlace under organizational settings.

Azure DevOps demoretail098 / Settings / Extensions / Installed

Organization Settings demoretail098

Search Settings

General

- Overview
- Projects
- Users
- Billing
- Global notifications
- Usage
- Extensions
- Microsoft Entra

Security

- Security overview
- Policies
- Permissions

Extensions

Installed Requested Shared

Mend Bolt (formerly WhiteSource) by WhiteSource
Get real-time security alerts and compliance issues on your open source dependencies within your Azure DevOps Services environment.

Terraform by Microsoft DevLabs
Install terraform and run terraform commands to manage resources on Azure, AWS and GCP.

Security Browse marketplace

Click on first link and install SonarCloud

Visual Studio | Marketplace

Visual Studio Visual Studio Code Azure DevOps Subscriptions

sonarcloud

4 Results Showing: All categories Hosted On: Any Price: Any

Extension	Author	Installs	Rating	Price
SonarCloud	SonarSource	72.8K	★★★★★	FREE
SonarCloud create project	Henry Mosquera	57	★★★★★	FREE
SonarCloud build break	Simon de Lang	2.2K	★★★★★	FREE
Use .NET Core SonarCloud	Stano Petko	207	★★★★★	FREE

<https://marketplace.visualstudio.com/items?itemName=SonarSource.sonarcloud>

Visual Studio | Marketplace Tanvi Puri (purit)

Azure DevOps > Azure Pipelines > SonarCloud

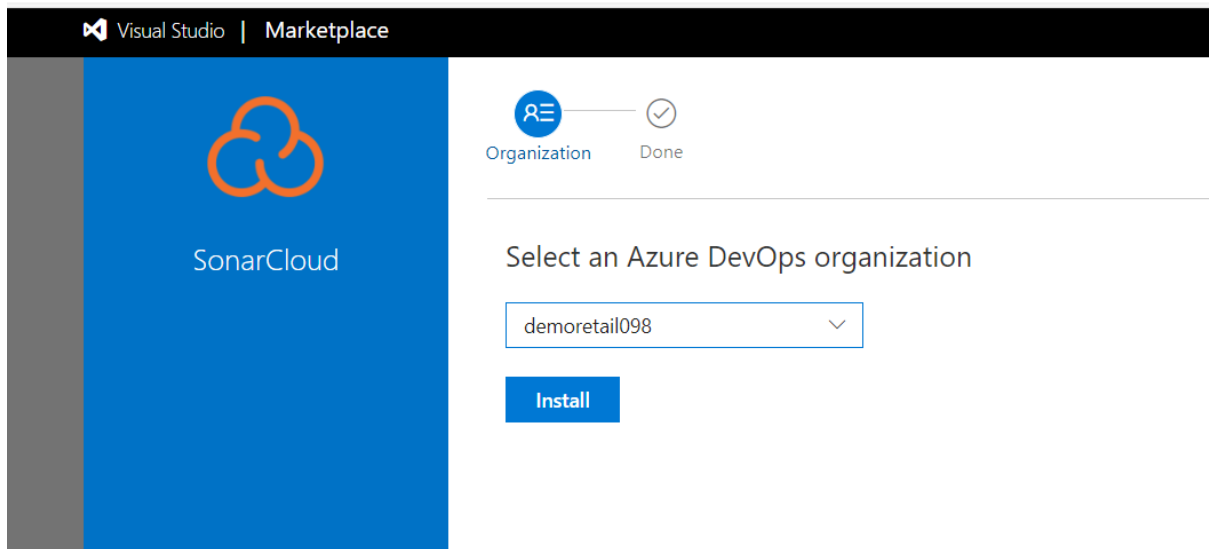
SonarCloud

SonarSource Top Publisher | 72,838 installs | ★★★★★ (17) | Free

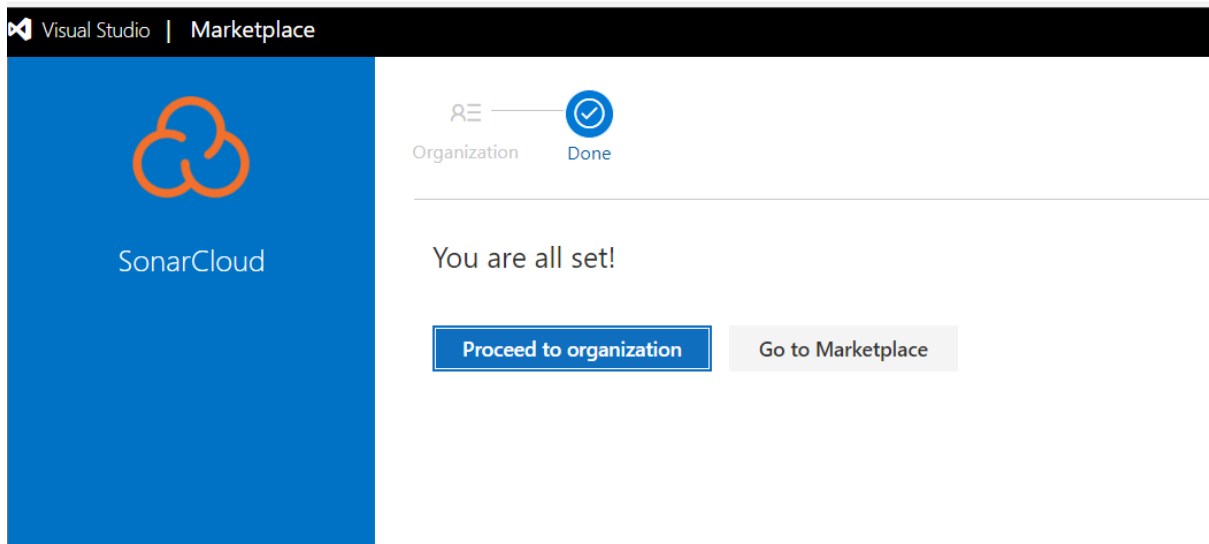
Detect bugs, vulnerabilities and code smells across project branches and pull requests.

Get it free

Overview Q & A Rating & Review



/marketplace.visualstudio.com/?acquisition:ref=msname-sonar-source-sonarcloud



Create project with name agileproject

demoretail098

ProjectsMy work itemsMy pull requests

Aarmtemplate

C

Aarmtemplate

C

Cdemo

Cclassicdemo

Create new project

Project name *

agileproject

Description

Visibility

Public

Anyone on the internet can view the project. Certain features like TFVC are not supported.

Private

Only people you give access to will be able to view this project.

Advanced

Version control

Git

Work item process

Basic

Cancel

Create

In Project settings, create service connection for Sonar Cloud and paste the token from SonarCloud Portal, Grant access to pipelines and save.

demoretail098 / agileproject / Settings / Service connections

Project Settings

agileproject

General

Overview

Teams

Permissions

Notifications

Service hooks

Dashboards

Boards

Project configuration

Team configuration

GitHub connections


Pipelines

Agent pools

Create your first service connection

Service connections help you manage, protect, and reuse authentications to external services.

Create service connection



Create your first service


Service connections help you manage, protect, and connect to external services.

Create service connection

New service connection



Choose a service or connection type

 SonarCloud

[Learn more](#)

Next

New SonarCloud service connection



SonarCloud Token

.....

Authentication Token generated through SonarCloud (go to My Account > Security > Generate Tokens)

Verify



Verification Succeeded

Details

Service connection name

newconnection

Service Management Reference (optional)

Description (optional)

Security



Grant access permission to all pipelines

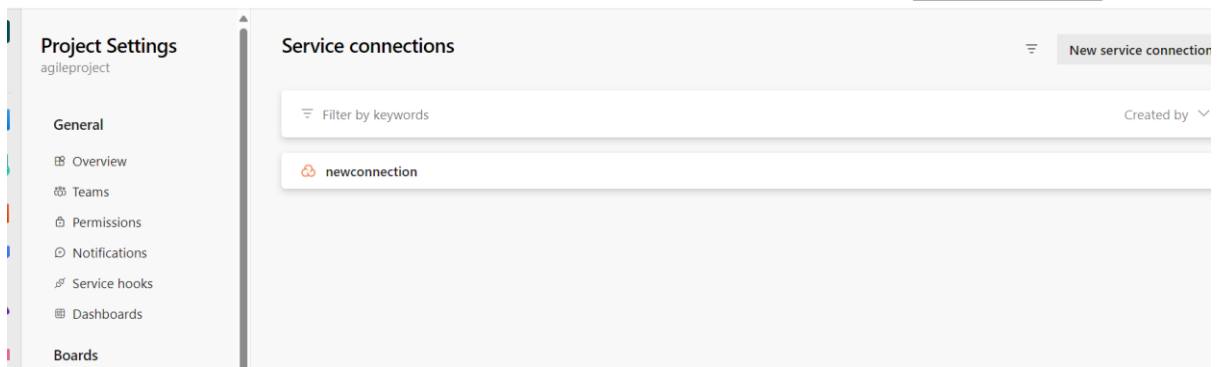
[Learn more](#)

[Troubleshoot](#)

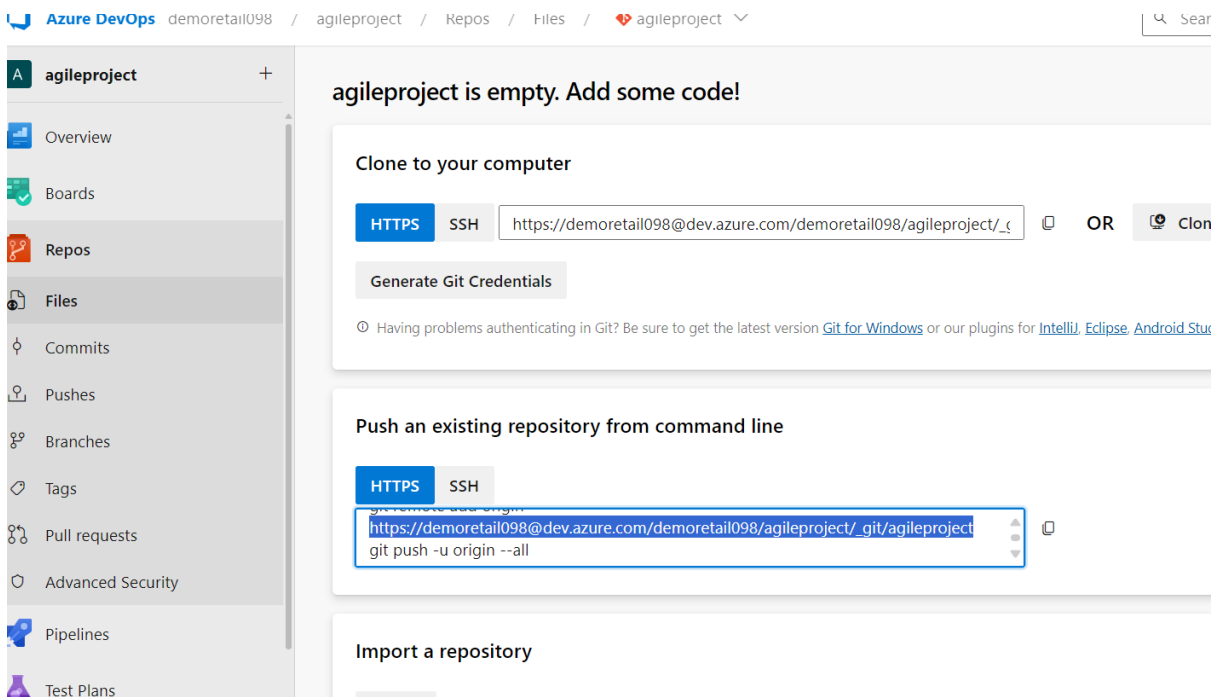
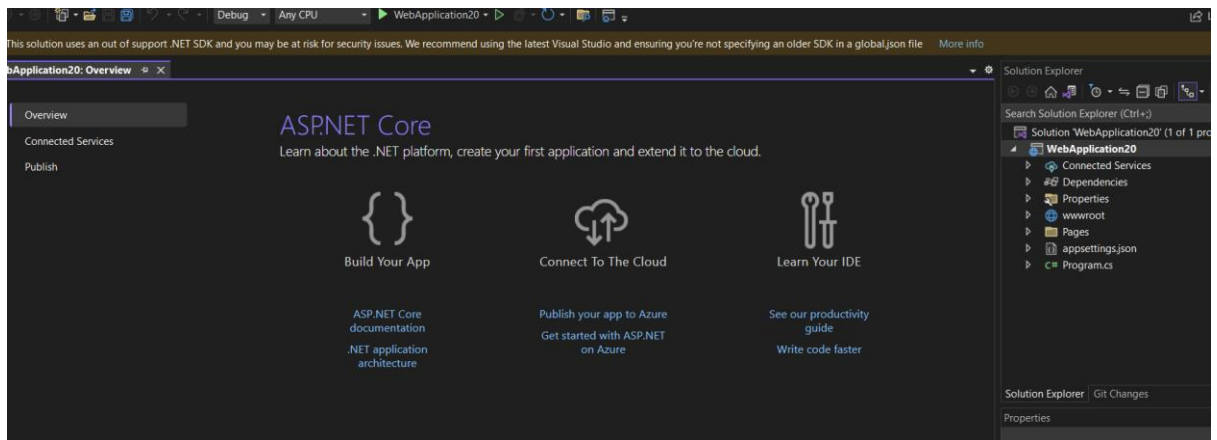
Back

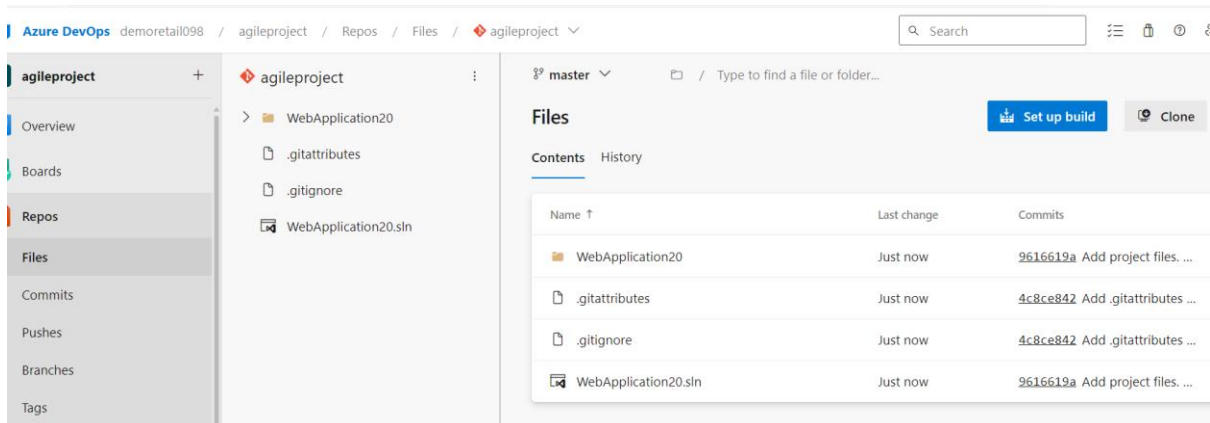
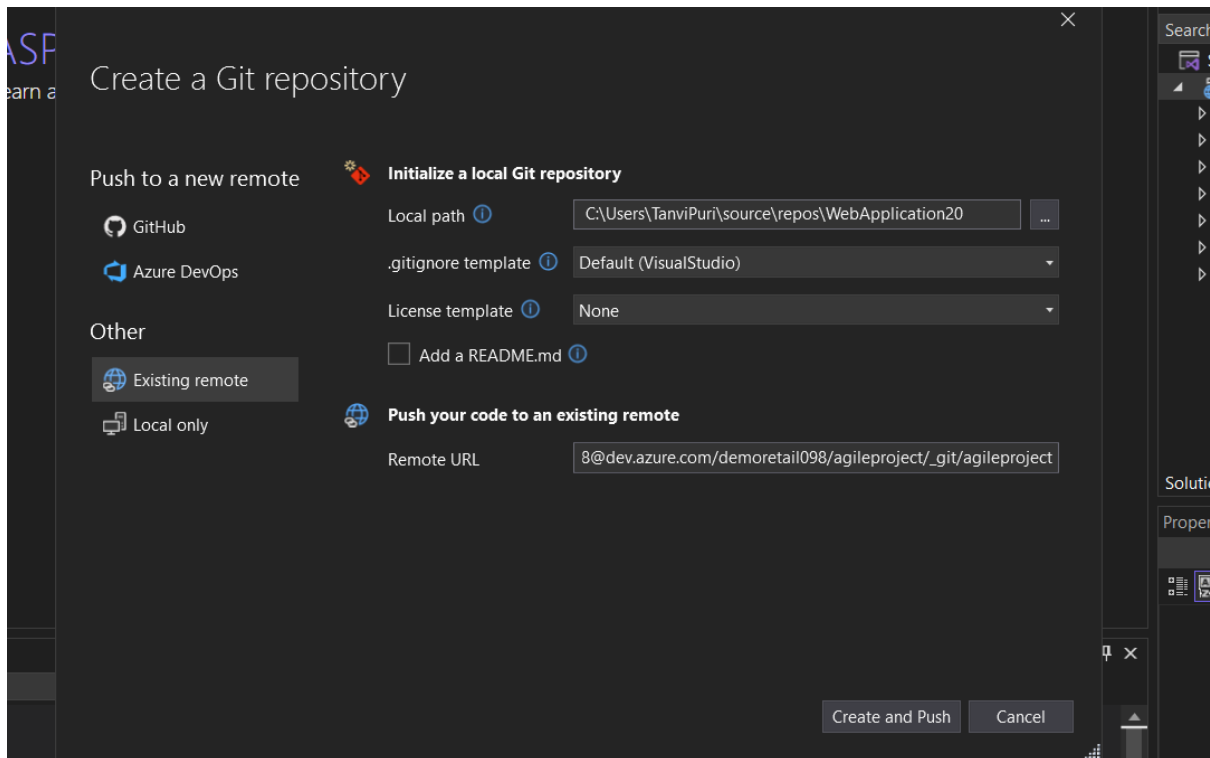
Verify and save





Create a sample ASP.Net web Application code and push it to Azure Repos from local repo.





Create Build Pipeline

agileproject

Overview

Boards

Repos

Pipelines

Pipelines

Environments

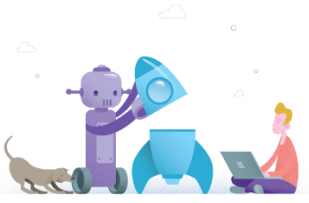
Releases

Library

Task groups

Deployment groups

Test Plans



Create your first Pipeline

Automate your build and release processes using our wizard, and go from code to cloud-hosted within minutes.

Create Pipeline

Azure DevOps demoretail098 / agileproject / Pipelines

agileproject

Overview

Boards

Repos

Pipelines

Pipelines

Environments

Releases


Library

Task groups

ConnectSelectConfigureReview


New pipeline

Where is your code?

 Azure Repos Git


YAML

Free private Git repositories, pull requests, and code search

 Bitbucket Cloud


YAML

Hosted by Atlassian

 GitHub


YAML

Home to the world's largest community of developers

 GitHub Enterprise Server

YAML

The self-hosted version of GitHub Enterprise

 Other Git
Any generic Git repository

A agileproject

Overview

Boards

Repos

Pipelines

Pipelines

Environments

Releases

ConnectSelectConfigureReview

New pipeline

Select a repository

Filter by keywords

agileproject

 agileproject

Select ASP.NET Framework

The screenshot shows the 'Configure your pipeline' step in the Azure Pipelines console. The left sidebar contains a navigation menu with 'Overview', 'Boards', 'Repos', 'Pipelines', 'Environments', 'Releases', 'Library', and 'Task groups'. The 'Pipelines' section is selected. The main area shows the 'Configure your pipeline' step with a list of templates:

- ASP.NET**: Build and test ASP.NET projects.
- ASP.NET Core (.NET Framework)**: Build and test ASP.NET Core projects targeting the full .NET Framework.
- .NET Desktop**: Build and run tests for .NET Desktop or Windows classic desktop solutions.
- Universal Windows Platform**: Build a Universal Windows Platform project using Visual Studio.
- Xamarin.Android**: Build a Xamarin.Android project.

The 'Configure' tab is active, and the 'Review' tab is visible at the top right.

Add task for Prepare Analysis Configuration

The screenshot shows the 'Review your pipeline YAML' step in the Azure Pipelines console. The left sidebar contains a navigation menu with 'Overview', 'Boards', 'Repos', 'Pipelines', 'Environments', 'Releases', 'Library', 'Task groups', 'Deployment groups', 'Test Plans', and 'Artifacts'. The 'Pipelines' section is selected. The main area shows the 'Review your pipeline YAML' step with a list of tasks:

- Prepare Analysis Configuration**: Prepare SonarCloud analysis configuration

The 'Review' tab is active, and the 'Save and run' button is visible at the top right.

The screenshot shows the 'Prepare Analysis Configuration' task configuration in the Azure Pipelines console. The left sidebar contains a navigation menu with 'Overview', 'Boards', 'Repos', 'Pipelines', 'Environments', 'Releases', 'Library', 'Task groups', 'Deployment groups', 'Test Plans', and 'Artifacts'. The 'Pipelines' section is selected. The main area shows the 'Prepare Analysis Configuration' task configuration with the following settings:

- SonarCloud Service Endpoint**: newconnection
- Organization**: new-organization (new-organization)
- Choose the way to run the analysis**:
 - ☒ Integrate with MSBuild
 - ☐ Integrate with Maven or Gradle
 - ☐ Use standalone scanner
- Scanner MSBuild Version**: [empty field]

The 'Save and run' button is visible at the top right.

Add the project key and project name from Sonar Cloud and add the task after NuGet installer / restore operations.

ige /p:PackageAsSingle

Choose the way to run the analysis * ⓘ

☒ Integrate with MSBuild

☐ Integrate with Maven or Gradle

☐ Use standalone scanner

Scanner MSBuild Version ⓘ

Project Key * ⓘ

new-organization_agileproject

Project Name ⓘ

agileproject

Project Version ⓘ

1.0

Advanced ▼

About this task

Add

```

19
    Settings
20 - task: NuGetCommand@2
21 | inputs:
22 |   restoreSolution: '$(solution)'
23
    Settings
24 - task: SonarCloudPrepare@2
25 | inputs:
26 |   SonarCloud: 'newconnection'
27 |   organization: 'new-organization'
28 |   scannerMode: 'MSBuild'
29 |   projectKey: 'new-organization_agileproject'
30 |   projectName: 'agileproject'
31
    Settings
32 - task: VSBUILD@1
33 | inputs:
34 |   solution: '$(solution)'
35 |   msbuildArgs: '/p:DeployOnBuild=true /p:WebPublishMethod=Package /p:PackageAsSingleFile'
36 |   platform: '$(buildPlatform)'
37 |   configuration: '$(buildConfiguration)'
38

```

Add the task for Run code Analyser after Build and Test Task.

New pipeline

Review your pipeline YAML

Variables Save and run

agileproject / azure-pipelines.yml

```

32 - task: VSBUILD@1
33 | inputs:
34 |   solution: '$(solution)'
35 |   msbuildArgs: '/p:DeployOnBuild=true /p:WebPublishMethod=Package /p:PackageAsSingleFile'
36 |   platform: '$(buildPlatform)'
37 |   configuration: '$(buildConfiguration)'
38
    Settings
39 - task: VSTest@2
40 | inputs:
41 |   platform: '$(buildPlatform)'
42 |   configuration: '$(buildConfiguration)'
43
44

```

Tasks

run code

Run Code Analysis
Run scanner and upload the results to the SonarCloud server.

Visual Studio Test
Run unit and functional tests (Selenium, Appium, ...)

New pipeline

Review your pipeline YAML

Variables

Save and run

agileproject / azure-pipelines.yml * 🔍

```
33     - inputs:
34       - solution: '$(solution)'
35       - msbuildArgs: '/p:DeployOnBuild=true /p:WebPublishMethod=Package /p:PackageAsSingle
36       - platform: '$(buildPlatform)'
37       - configuration: '$(buildConfiguration)'
38
39     Settings
40     - task: VSTest@2
41       inputs:
42       - platform: '$(buildPlatform)'
43       - configuration: '$(buildConfiguration)'
44
```

← Run Code Analysis ⓘ

JDK version source for analysis * ⓘ

Use built-in JAVA_HOME_17_X64 (hoste... ▼

Add task for Publish Quality Gate Result.

New pipeline

Review your pipeline YAML

Variables

Save and run

agileproject / azure-pipelines.yml * 🔍

```
33     - inputs:
34       - solution: '$(solution)'
35       - msbuildArgs: '/p:DeployOnBuild=true /p:WebPublishMethod=Package /p:PackageAsSingle
36       - platform: '$(buildPlatform)'
37       - configuration: '$(buildConfiguration)'
38
39     Settings
40     - task: VSTest@2
41       inputs:
42       - platform: '$(buildPlatform)'
43       - configuration: '$(buildConfiguration)'
44
45     Settings
46     - task: SonarCloudAnalyze@2
47       inputs:
48       - jdkversion: 'JAVA_HOME_17_X64'
```

Tasks

publish gu



Publish Quality Gate Result

Publish SonarCloud's Quality Gate result on the A...

Publish SonarCloud's Quality Gate result on the Azure Pipelines build result. To be used after the actual analysis.

Azure Service Bus

Message to Azure Service Bus using an A...

Review your pipeline YAML

Variables

Save and run

agileproject / azure-pipelines.yml * 🔍

```
33     - inputs:
34       - solution: '$(solution)'
35       - msbuildArgs: '/p:DeployOnBuild=true /p:WebPublishMethod=Package /p:PackageAsSingle
36       - platform: '$(buildPlatform)'
37       - configuration: '$(buildConfiguration)'
38
39     Settings
40     - task: VSTest@2
41       inputs:
42       - platform: '$(buildPlatform)'
43       - configuration: '$(buildConfiguration)'
44
45     Settings
46     - task: SonarCloudAnalyze@2
47       inputs:
48       - jdkversion: 'JAVA_HOME_17_X64'
```

← Publish Quality Gate Result ⓘ

Timeout (s) * ⓘ

300

agileproject / azure-pipelines.yml * 🔗

```

37 | | | configuration: '$(buildConfiguration)'
38 |
39 | Settings
40 | - task: VSTest@2
41 |   inputs:
42 |     platform: '$(buildPlatform)'
43 |     configuration: '$(buildConfiguration)'
44 |
45 | Settings
46 | - task: SonarCloudAnalyze@2
47 |   inputs:
48 |     jdkversion: 'JAVA_HOME_17_X64'
49 |
50 | Settings
51 | - task: SonarCloudPublish@2
52 |   inputs:
53 |     pollingTimeoutSec: '300'

```

Tasks

Search tasks

- .NET Core
Build, test, package, or pu
- Android signing
Sign and align Android AF
- Ant
Build with Apache Ant
- App Center distribute
Distribute app builds to te
- App Center test
Test app packages with Vi

Complete YAML Code for the Pipeline. Save and Run.

ASP.NET Core (.NET Framework)

Build and test ASP.NET Core projects targeting the full .NET Framework.

Add steps that publish symbols, save build artifacts, and more:

<https://docs.microsoft.com/azure/devops/pipelines/languages/dotnet-core>

trigger:

- master

pool:

vmImage: 'windows-latest'

variables:

solution: '**/*.sln'

buildPlatform: 'Any CPU'

buildConfiguration: 'Release'

steps:

- task: NuGetToolInstaller@1

- task: NuGetCommand@2

inputs:

restoreSolution: '\$(solution)'

- task: SonarCloudPrepare@2

inputs:

SonarCloud: 'newconnection'

organization: 'new-organization'

scannerMode: 'MSBuild'

projectKey: 'new-organization_agileproject'

projectName: 'agileproject'

- task: VSBuild@1

inputs:

solution: '\$(solution)'

msbuildArgs: '/p:DeployOnBuild=true /p:WebPublishMethod=Package /p:PackageAsSingleFile=true /p:SkipInvalidConfigurations=true /p:DesktopBuildPackageLocation="\$(build.artifactStagingDirectory)\WebApp.zip" /p:DeployIisAppPath="Default Web Site"'

platform: '\$(buildPlatform)'

configuration: '\$(buildConfiguration)'

- task: VSTest@2

inputs:

platform: '\$(buildPlatform)'

configuration: '\$(buildConfiguration)'

- task: SonarCloudAnalyze@2

inputs:

jdkversion: 'JAVA_HOME_17_X64'

- task: SonarCloudPublish@2

inputs:

pollingTimeoutSec: '300'

✓ Connect ✓ Select ✓ Configure **Review**

New pipeline

Review your pipeline YAML

agileproject / azure-pipelines.yml

```
34     solution: '$(solution)'
35     msbuildArgs: '/p:DeployOnBuild=true /p:WebPublishMethod=Package /p:
36     platform: '$(buildPlatform)'
37     configuration: '$(buildConfiguration)'
38
39 Settings
40 - task: VSTest@2
41   inputs:
42     platform: '$(buildPlatform)'
43     configuration: '$(buildConfiguration)'
44
45 Settings
46 - task: SonarCloudAnalyze@2
47   inputs:
48     jdkversion: 'JAVA_HOME_17_X64'
49
50 Settings
51 - task: SonarCloudPublish@2
52   inputs:
53     pollingTimeoutSec: '300'
```

Save and run ×

Saving will commit azure-pipelines.yml to the repository.

Commit message

Set up CI with Azure Pipelines

Optional extended description

Add an optional description...

☒ Commit directly to the master branch

☐ Create a new branch for this commit

Save and run

#20240916.1 • Set up CI with Azure Pipelines

Cancel

SummaryCode CoverageMend Bolt

Triggered by Tanvi Puri

View 3 change

Repository and version

Time started and elapsed

Related

Tests and coverage

agileproject

Just now

0 work items

[Get started](#)

master fd4c2acb

-

0 artifacts

Jobs

Name	Status	Duration
Job	Queued	

agileproject

This run is being retained as one of 3 recent runs by master (Branch).

View

SummaryCode CoverageExtensionsMend Bolt

SonarCloud Analysis Report

Quality Gate none (agileproject)

[See analysis details on SonarCloud](#)

sonarcloud

my projectsmy issuesexplore

new-organization > agileproject > Overview

agileproject

Public

OverviewMain BranchPull Requests0Branches1

InformationAdministration

A agileproject

Last analysis Sep 16, 2024 216 Lines of code

HTMLC#

Main Branch Status

Quality Gate Not computed

The next scan will generate a Quality Gate.

[Learn More about Quality Gates](#)

Main Branch Evolution since 3 minutes ago

No historical data yet

Launch a second analysis on your Main Branch to see historical data

sonarcloud

My Projects My Issues Explore

Filters

Quality Gate

- Passed 0
- Failed 0

Reliability

- A 1
- B 0
- C 0
- D 0
- E 0

Security

- A 1
- B 0
- C 0
- D 0
- E 0

Security Review

- A ≥ 80% 0
- B 70% - 80% 0
- C 50% - 70% 0
- D 30% - 50% 0

Search for projects Perspective Overall Status Sort by Name 1 projects

new-organization / agileproject NEW PUBLIC Not computed

Last analysis: 9/16/2024, 3:09 PM • 216 Lines of Code • HTML, C#, ...

0 Security 1 Reliability 6 Maintainability 0.0% Hotspots Reviewed 0.0% Coverage 0.0% Duplications

1 of 1 shown

sonarcloud

agileproject PUBLIC

Overview Main Branch Pull Requests Branches

Summary Issues Security Hotspots Measures Code Activity

new-organization > agileproject > master

The last analysis has a warning. See details

7 issues 31min effort

Filters Clear All Filters

Clean Code Attribute

- Consistency 0
- Intentionality 7
- Adaptability 0
- Responsibility 0

Software Quality

- Security 0
- Reliability 1
- Maintainability 6

Severity

- High 5
- Medium 2
- Low 0

Type

- Bug 0
- Vulnerability 0
- Code Smell 7

Add to selection Ctrl + Click

WebApplication20/Pages/Error.cshtml.cs

Intentionality

Remove this unread private field "logger" or refactor the code to use its value. cwe unused

Open Not assigned Maintainability Code Smell Critical 5min effort - 6 minutes ago

WebApplication20/Pages/Index.cshtml.cs

Intentionality

Remove this unread private field "logger" or refactor the code to use its value. cwe unused

Open Not assigned Maintainability Code Smell Critical 5min effort - 6 minutes ago

Intentionality

Add a nested comment explaining why this method is empty, throw a "NotSupportedException" or complete the implementation. suspicious

Open Not assigned Maintainability Code Smell Critical 5min effort - 6 minutes ago

WebApplication20/Pages/Privacy.cshtml.cs

Intentionality

Remove this unread private field "logger" or refactor the code to use its value. cwe unused

Open Not assigned Maintainability Code Smell Critical 5min effort - 6 minutes ago

Intentionality

Add a nested comment explaining why this method is empty, throw a "NotSupportedException" or complete the implementation. suspicious