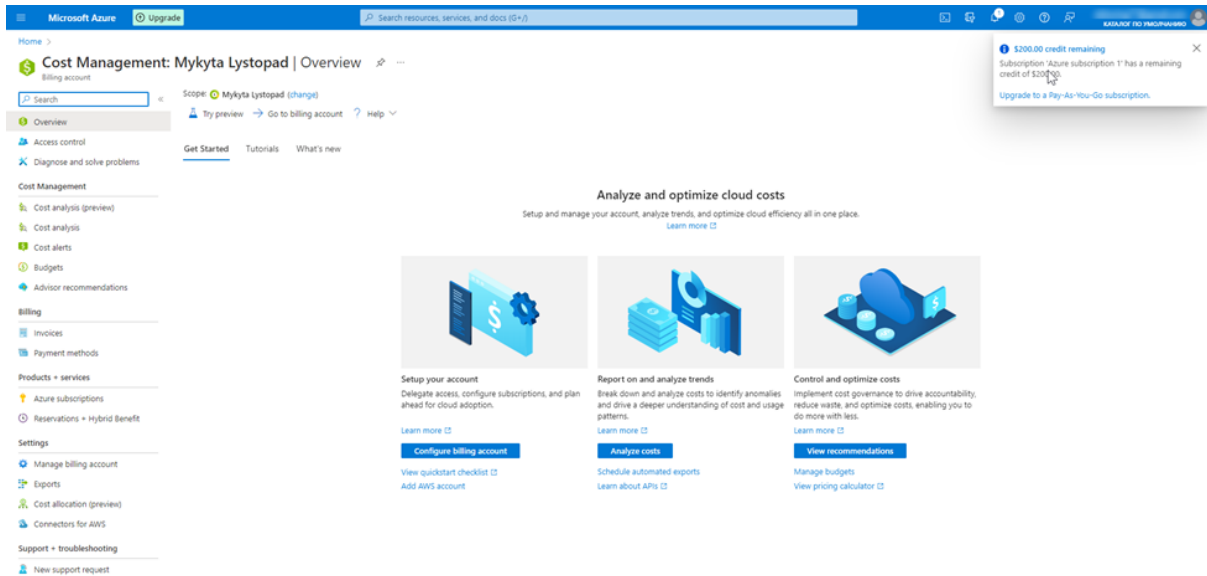


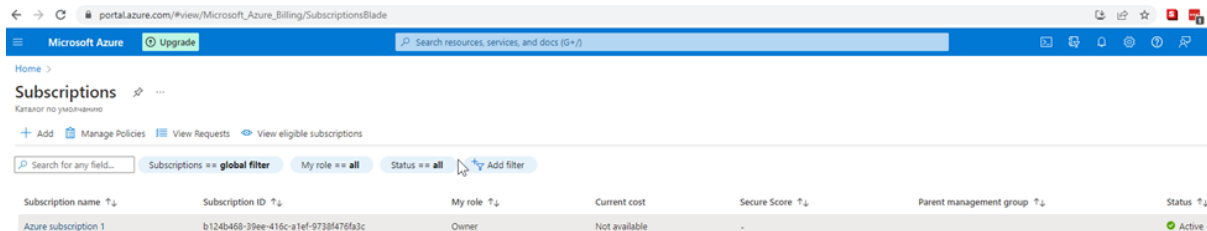
AZURE



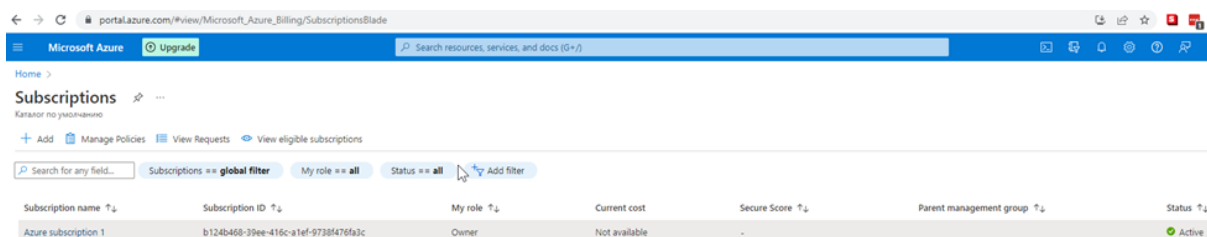
First of all you need to switch subscription in default directory for apply free billing 200 dollars !!!!!!!!!!!

Prerequisites

Create azure subscription



Create azure devops organization



Installing Terraform and Azure Cli

1 Download to any directory

2 Add path in system env this folder

C:\Users\Nik>terraform version

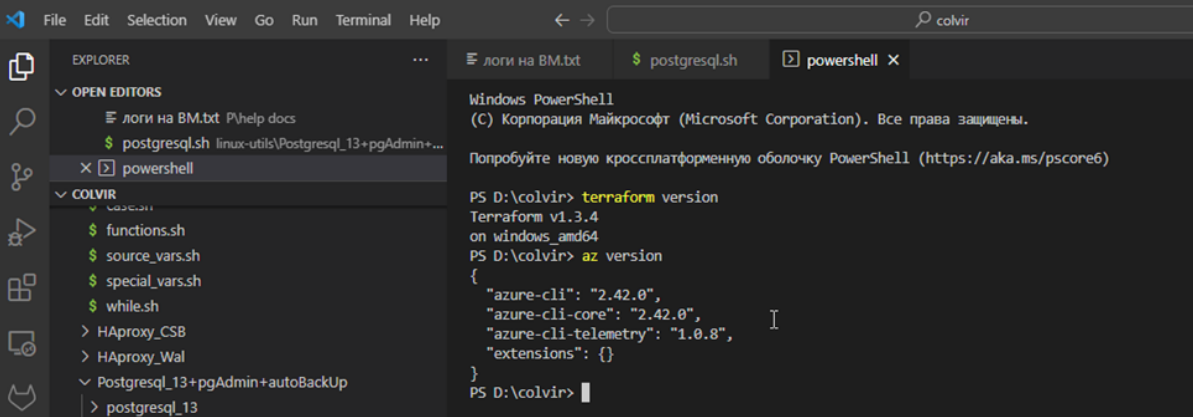
Terraform v1.3.4

on windows_amd64

3 Download and install Azure CLI

C:\Users\Nik>az version

```
{  
  
  "azure-cli": "2.42.0",  
  
  "azure-cli-core": "2.42.0",  
  
  "azure-cli-telemetry": "1.0.8",  
  
  "extensions": {}  
  
}
```



The screenshot shows a Windows PowerShell terminal window with the following content:

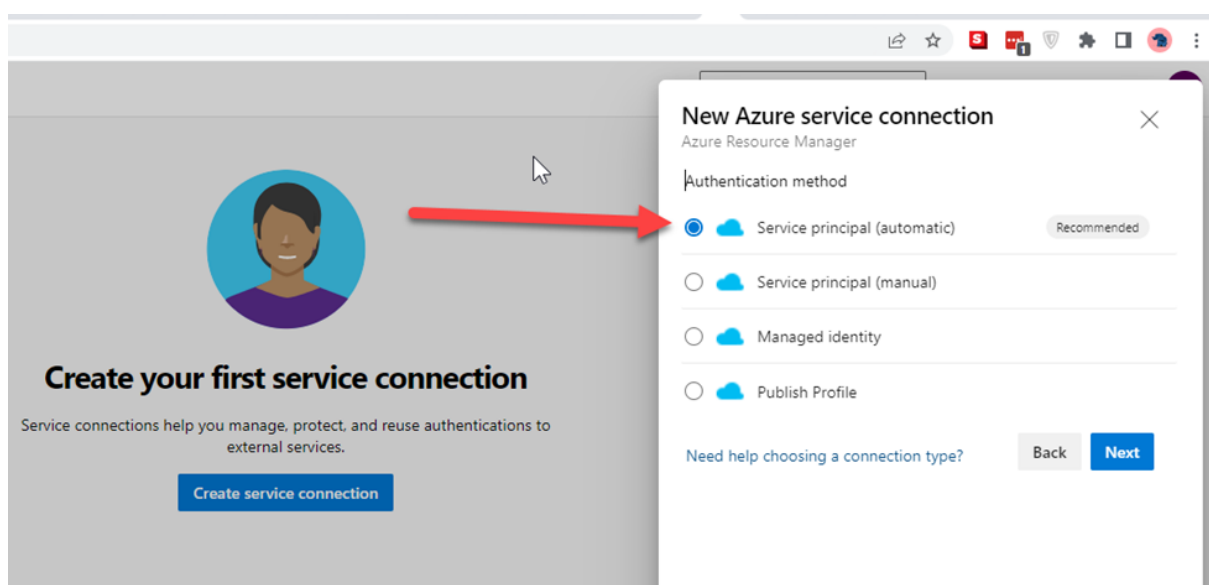
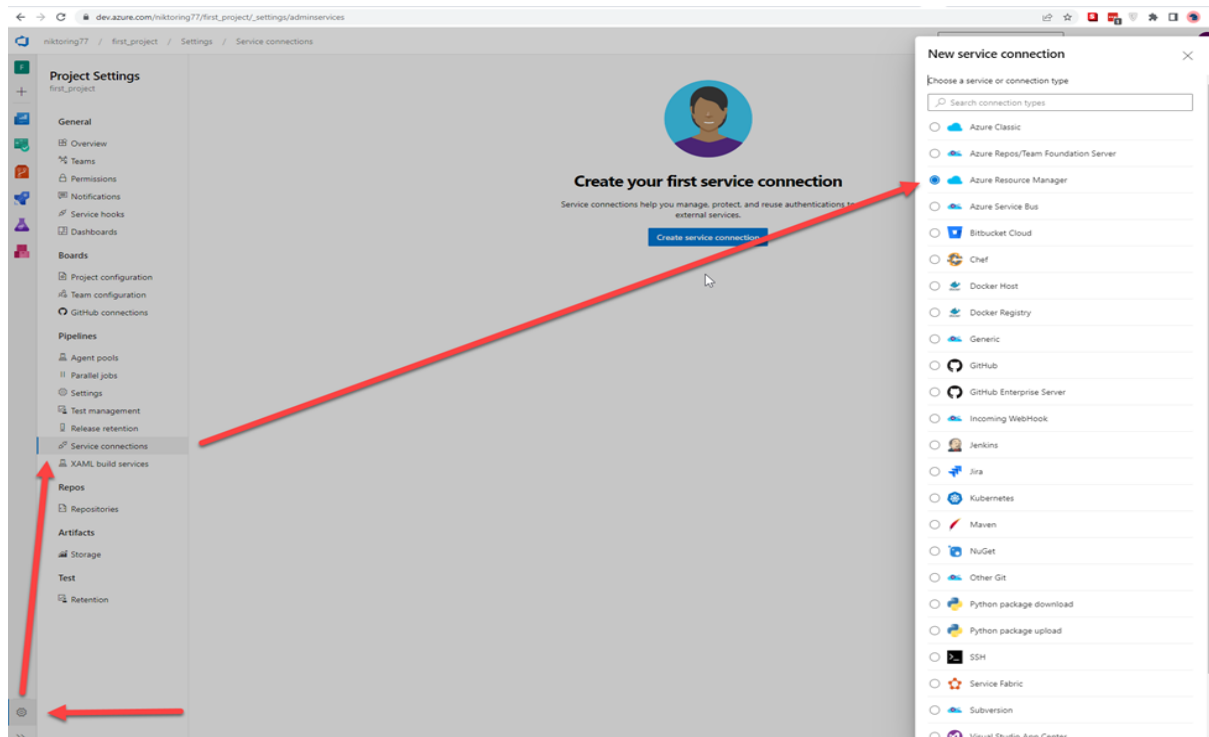
```
Windows PowerShell  
(C) Корпорация Майкрософт (Microsoft Corporation). Все права защищены.  
  
Попробуйте новую кроссплатформенную оболочку PowerShell (https://aka.ms/pscore6)  
  
PS D:\colvir> terraform version  
Terraform v1.3.4  
on windows_amd64  
PS D:\colvir> az version  
{  
  "azure-cli": "2.42.0",  
  "azure-cli-core": "2.42.0",  
  "azure-cli-telemetry": "1.0.8",  
  "extensions": {}  
}  
PS D:\colvir>
```


The terminal window has a dark theme and a menu bar with File, Edit, Selection, View, Go, Run, Terminal, and Help. The Explorer pane on the left shows the file structure of the 'COLVIR' directory, including files like functions.sh, source_vars.sh, special_vars.sh, while.sh, and folders like HAproxy_CSB, HAproxy_Wal, and PostgreSQL_13+pgAdmin+autoBackup.

Homework

Part 1 – Configure application

1. Create a service connection in a Azure DevOps project to your subscription - <https://learn.microsoft.com/en-us/azure/devops/pipelines/library/service-endpoints?view=azure-devops&tabs=yaml>





Create your first service connection

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

Create service connection

New Azure service connection

Azure Resource Manager using service principal (automatic)

Scope level

☒ Subscription

☐ Management Group

☐ Machine Learning Workspace

Subscription

Azure subscription 1 (b124b468-39ee-416c-a1ef-9738f476fa3c) ▾

Resource group

▾

Details

Service connection name

My_Subscription

Description (optional)

My_Subscription for first .net project

Security

☒ Grant access permission to all pipelines

[Learn more](#)

[Troubleshoot](#)

[Back](#) [Save](#)

dev.azure.com/niktoring77/first_project/_settings/adminservices?resourceId=1340354b-a6c6-4a92-aa29-03e8b3dd863a

niktoring77 / first_project / Settings / Service connections

Project Settings

first_project

General

Overview

Teams

Permissions

Notifications

Service hooks

Dashboards

Boards

Project configuration

Team configuration

GitHub connections

Pipelines

Agent pools

Parallel jobs

Settings

Test management

Release retention

Service connections

XAML build services

Repos

Repositories

Artifacts

Storage

Test

Retention

← My_Subscription

Overview Usage history

Details

Service connection type

Azure Resource Manager

using service principal authentication

Manage service connection roles

Manage Service Principal

Description

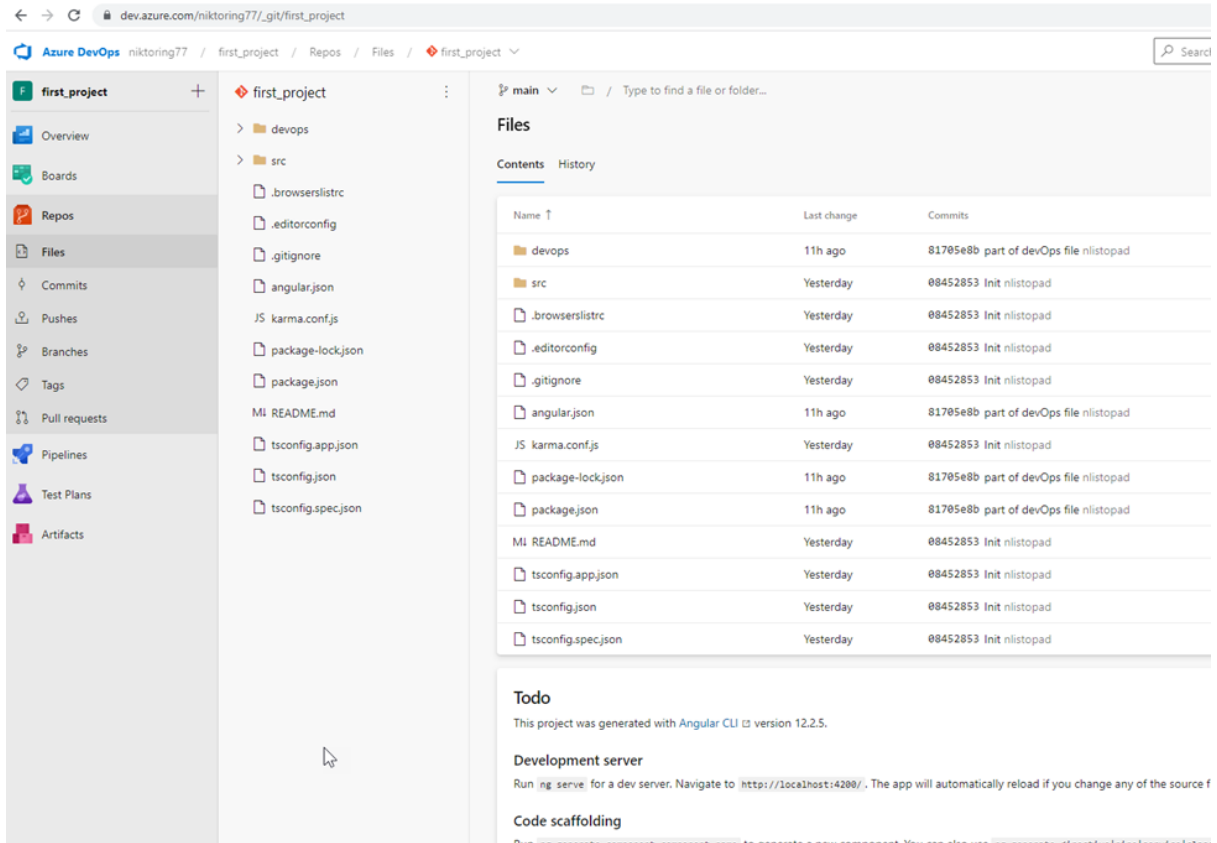
My_Subscription for first .net project

Creator

4 Create an Azure DevOps repo -

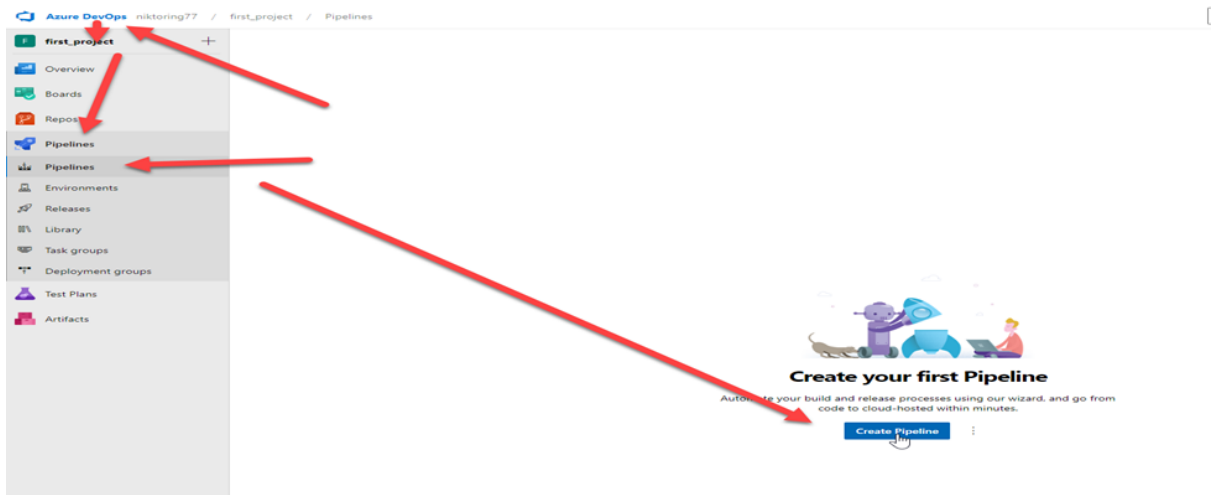
<https://learn.microsoft.com/en-us/azure/devops/repos/git/create-new-repo?view=azure-devops> You can use import repository to import from existing source control version like github

Add to Azure repo my project



2) Find a .net pet project for the experiments. I find my Angular project

Create pipeline



Azure DevOps niktoring77 / first_project / Pipelines

first_project +

- Overview
- Boards
- Repos
- Pipelines
- Environments
- Releases
- Library
- Task groups
- Deployment groups
- Test Plans
- Artifacts

Connect Select Configure

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
- Subversion**
Centralized version control by Apache

Use the classic editor to create a pipeline without YAML.

Azure DevOps niktoring77 / first_project / Pipelines

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- Overview
- Boards
- Repos
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- Environments
- Releases
- Library
- Task groups
- Deployment groups
- Test Plans
- Artifacts

Select your repository

Tell us where your sources are.
You can customize how to get these sources from the repository later.

Select a source

- Azure Repos Git**
- GitHub
- GitHub Enterprise Server

Team project
first_project

Repository
first_project

Default branch for manual and scheduled builds
master

Continue

Azure DevOps niktoring77 / first_project / Pipelines

first_project +

- Overview
- Boards
- Repos
- Pipelines
- Environments

Select a template

Or start with an [Empty job](#)

Configuration as code

- YAML**
Looking for a better experience to configure your pipelines using YAML files? Try the new YAML pipeline creation experience. [Learn more](#)

Featured

- .NET Desktop**
Build and test a .NET or Windows classic desktop solution.

Azure DevOps niktoring77 / first_project / Pipelines

first_project +

- Overview
- Boards
- Repos
- Pipelines
- Environments
- Releases
- Library
- Task groups
- Deployment groups

first_project-CI

Tasks Variables Triggers Options History Save & queue Discard Summary Queue

Pipeline Build pipeline

Get sources first_project master

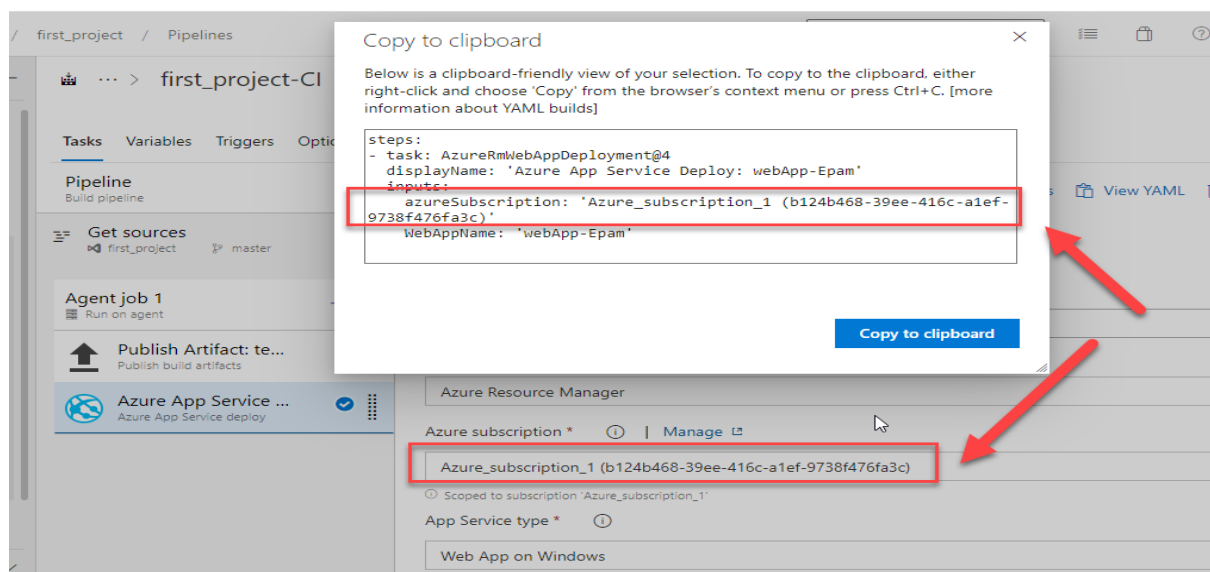
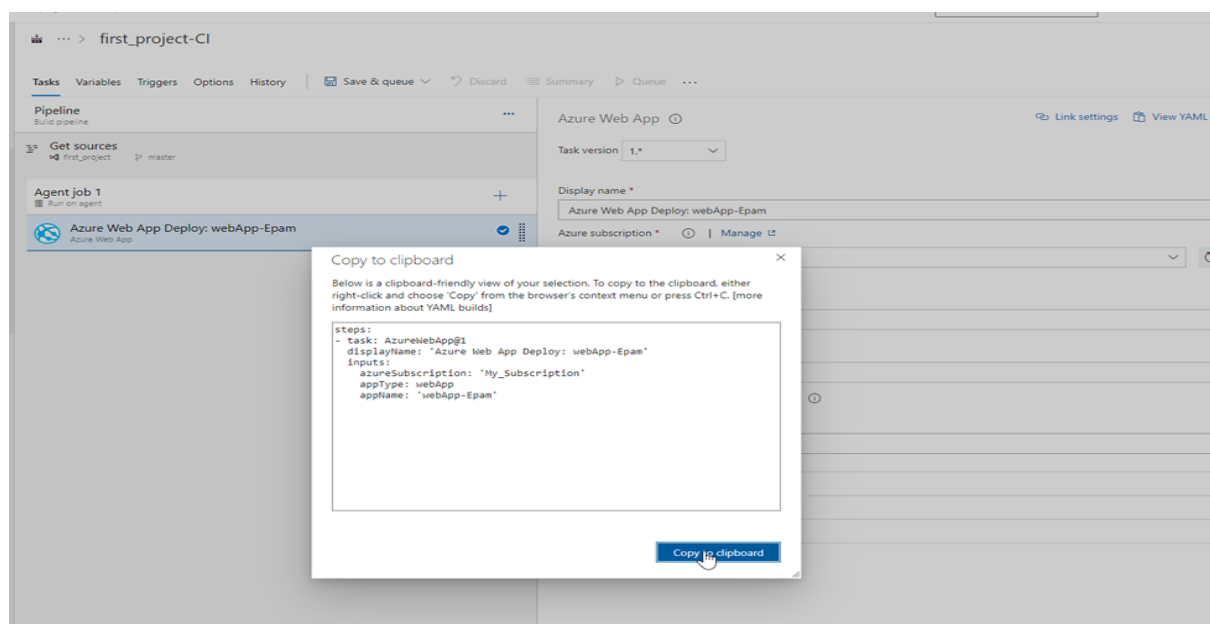
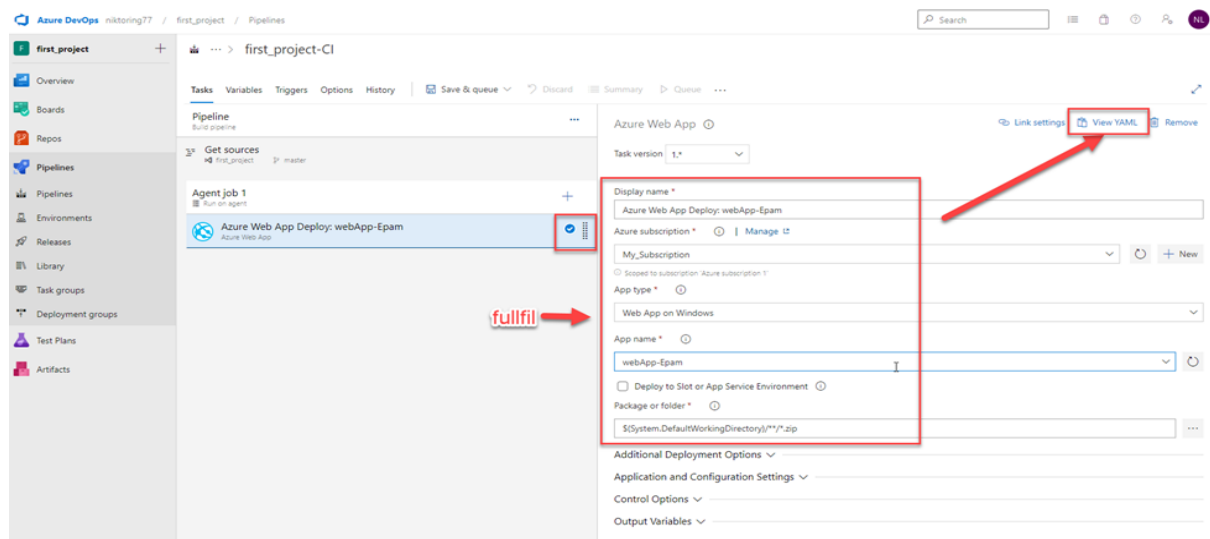
Agent job 1 Run on agent

Add tasks Refresh

- Deploy Azure Static Web App** (PREVIEW) Build and deploy an Azure Static Web App
- Azure Web App for Containers** Deploy containers to Azure App Service
- Azure Web App** Deploy an Azure Web App for Linux or Windows
- Azure App Service Settings** Update/Add App settings on Azure Web App for Linux or Windows

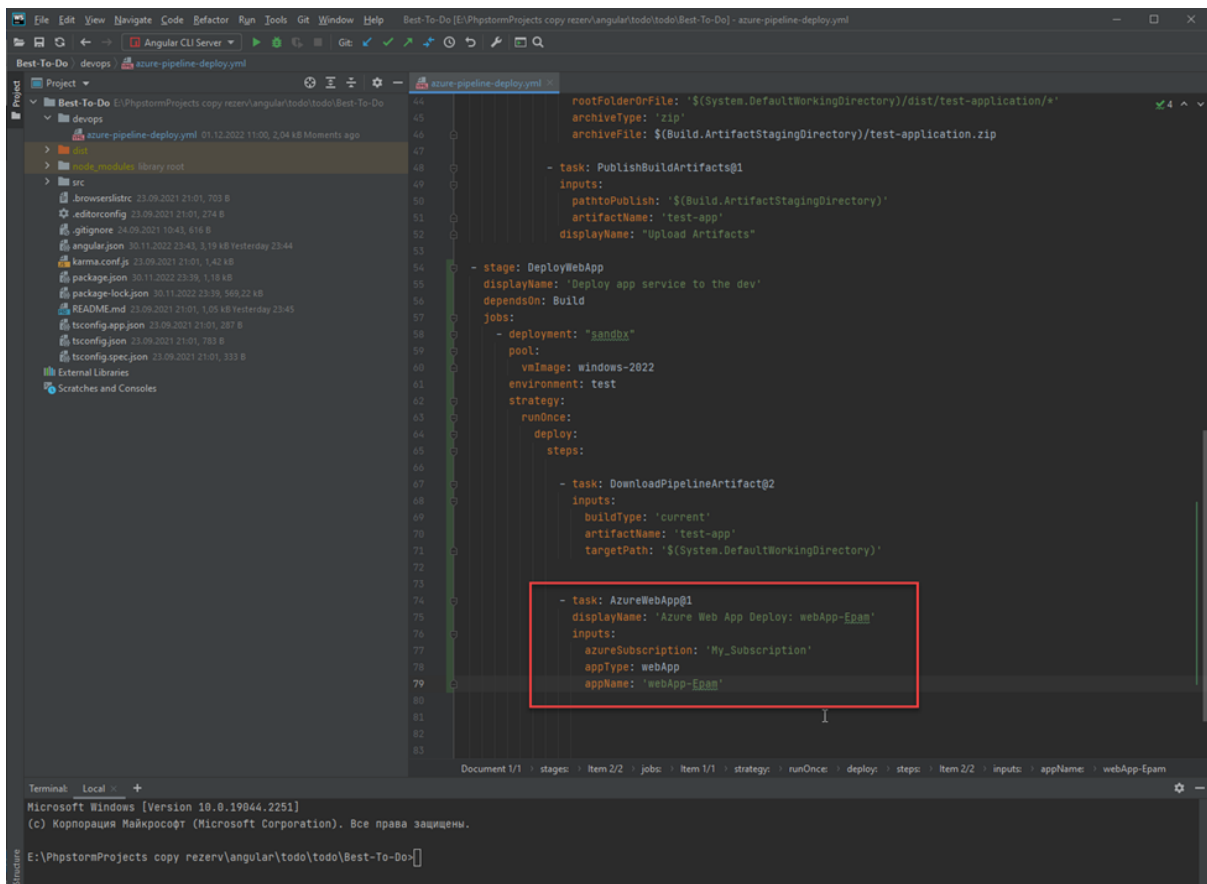
web app

Add



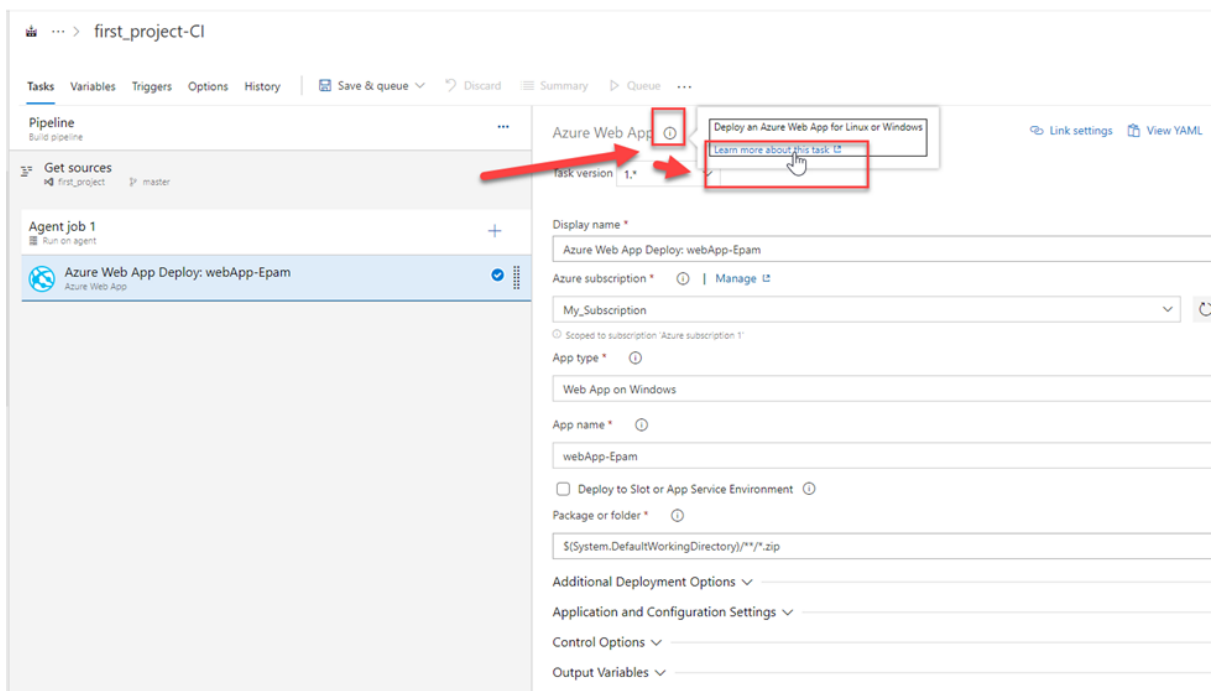
CREATE or APPROVE your subscribe !!!!!

Add part of code to project



+ We need to add some parameters

Read in manual



mounted by the Functions runtime. With this option, files in the wwwroot folder become read-only. For more information, see [Run your Azure Functions from a package file](#).

Parameters of the task

The task is used to deploy a Web project to an existing Azure Web App or Function. The mandatory fields are highlighted with a *.

- Azure Subscription*:** Select the AzureRM Subscription. If none exists, then click on the **Manage** link, to navigate to the Services tab in the Administrators panel. In the tab click on **New Service Endpoint** and select **Azure Resource Manager** from the dropdown.
- App Service type*:** Select the Azure App Service type. The different app types supported are Function App, Web App on Windows, Web App on Linux, Web App for Containers and Azure App Service Environments
- App Service Name*:** Select the name of an existing Azure App Service. Enter the name of the Web App if it was provisioned dynamically using the [Azure PowerShell task](#) and [AzureRM PowerShell scripts](#).
- Deploy to Slot:** Select the option to deploy to an existing slot other than the Production slot. Do not select this option if the Web project is being deployed to the Production slot. The Web App itself is the Production slot.
- Resource Group:** Select the Azure Resource Group that contains the Azure App Service specified above. Enter the name of the Azure Resource Group if it has been dynamically provisioned using [Azure Resource Group Deployment task](#) or [Azure PowerShell task](#). This is a required parameter if the option to Deploy to Slot has been selected.
- Slot:** Select the Slot to deploy the Web project to. Enter the name of the Slot if it has been dynamically provisioned using [Azure Resource Group Deployment task](#) or [Azure PowerShell task](#). This is a required parameter if the option to Deploy to Slot has been selected.
- Package or Folder*:** Location of the Web App zip package or folder on the automation agent or on a UNC path accessible to the automation agent like, \\BudgetIT\Web\Deploy\Fabrikam.zip. Predefined system variables and wild cards like, \$(System.DefaultWorkingDirectory)*.zip can be also used here.
- Select deployment method:** Select the option to choose from auto, zipDeploy and runFromPackage. Default value is Auto-detect where the task tries to select the appropriate deployment technology given the input package, app service type and agent OS.
- Runtime Stack:** Web App on Linux offers two different options to publish your application, one is Custom image deployment (Web App for Containers) and the other is App deployment with a built-in platform image (Web App on Linux). You will see this parameter only when you selected 'Linux Web App' in the App type selection option in the task.

We need to add:

```
package: '$(System.DefaultWorkingDirectory)/**/*.zip'
resourceGroupName: test
```

```

50  pathToPublish: '$(Build.ArtifactStagingDirectory)'
51  artifactName: 'test-app'
52  displayName: "Upload Artifacts"
53
54  - stage: DeployWebApp
55    displayName: 'Deploy app service to the dev'
56    dependsOn: Build
57    jobs:
58      - deployment: "sandbox"
59        pool:
60          vmImage: windows-2022
61          environment: test
62          strategy:
63            runOnce:
64              deploy:
65                steps:
66
67                - task: DownloadPipelineArtifact@2
68                  inputs:
69                    buildType: 'current'
70                    artifactName: 'test-app'
71                    targetPath: '$(System.DefaultWorkingDirectory)'
72
73
74                - task: AzureWebApp@1
75                  displayName: 'Azure Web App Deploy: webApp-Edam'
76                  inputs:
77                    azureSubscription: 'My_Subscription'
78                    appType: webApp
79                    appName: 'webApp-Edam'
80                    package: '$(System.DefaultWorkingDirectory)/**/*.zip'
81                    resourceGroupName: test
82
83
```

Push changes to Azure repo

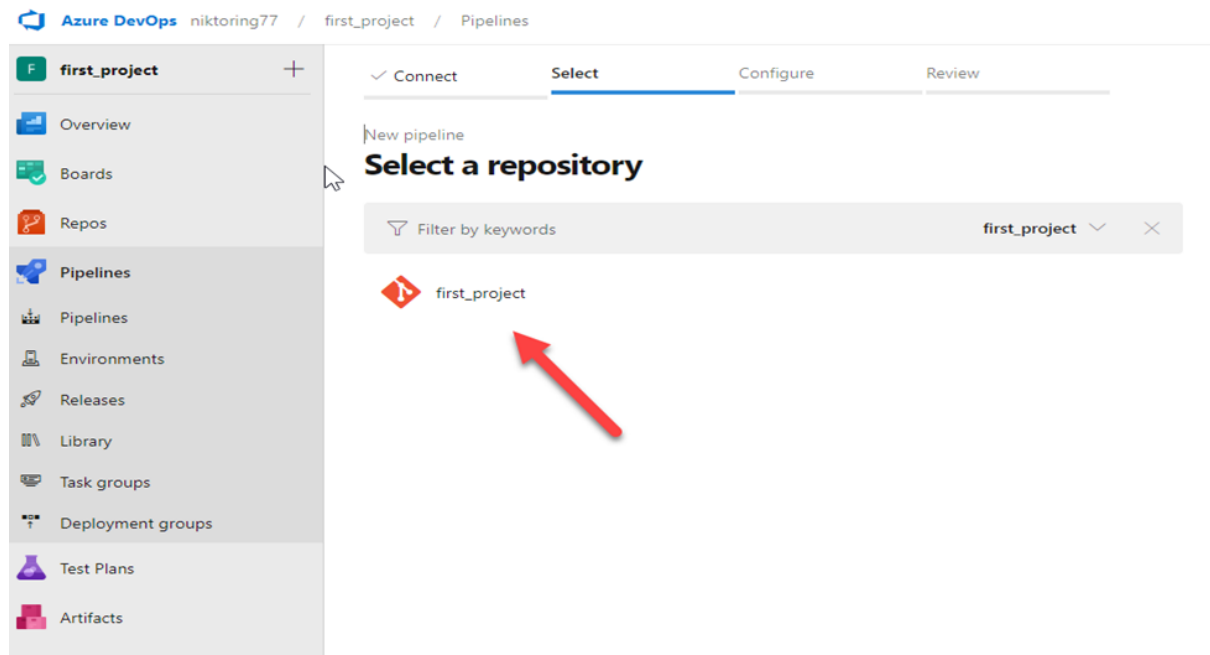
The screenshot shows the Azure DevOps interface for a project named 'first_project'. The left sidebar contains navigation options: Overview, Boards, Repos, Files, Commits, Pushes, Branches, Tags, Pull requests, Pipelines, Test Plans, and Artifacts. The 'Files' view is active, showing a file explorer for 'first_project' with a folder 'devops' containing 'azure-pipeline-deploy.yml'. The main pane displays the content of 'azure-pipeline-deploy.yml' with tabs for Contents, History, Compare, and Blame. The file content is a YAML pipeline definition for deploying an application to Azure. It includes stages for validation, building artifacts, and deploying to a web app. The 'DeployWebApp' stage depends on the 'Build' stage and uses a 'sandbox' deployment strategy with a 'windows-2022' pool. The deployment task 'AzureWebApp@1' is configured with subscription 'My_Subscription', app name 'webApp-Epm', and resource group 'test'.

```
20 environment: validation
21 strategy:
22   runOnce:
23     deploy:
24       steps:
25         - checkout: self
26           clean: true
27           fetchDepth: 5
28         - task: Npm@1
29           displayName: 'npm install'
30           inputs:
31             verbose: false
32         - task: Npm@1
33           displayName: 'npm custom'
34           inputs:
35             command: custom
36             verbose: false
37             customCommand: 'run build'
38         - task: ArchiveFiles@2
39           displayName: 'Create an artifact'
40           inputs:
41             rootFolderOrFile: '$(System.DefaultWorkingDirectory)/dist/test-application/'
42             archiveType: 'zip'
43             archiveFile: '$(Build.ArtifactStagingDirectory)/test-application.zip'
44         - task: PublishBuildArtifacts@1
45           inputs:
46             pathToPublish: '$(Build.ArtifactStagingDirectory)'
47             artifactName: 'test-app'
48             displayName: 'Upload Artifacts'
49
50 - stage: DeployWebApp
51   displayName: 'Deploy app service to the dev'
52   dependsOn: Build
53   jobs:
54     - deployment: "sandbox"
55       pool:
56         vmImage: windows-2022
57       environment: test
58       strategy:
59         runOnce:
60           deploy:
61             steps:
62               - task: DownloadPipelineArtifact@2
63                 inputs:
64                   buildType: 'current'
65                   artifactName: 'test-app'
66                   targetPath: '$(System.DefaultWorkingDirectory)'
67               - task: AzureWebApp@1
68                 displayName: 'Azure Web App Deploy: webApp-Epm'
69                 inputs:
70                   azureSubscription: 'My_Subscription'
71                   appType: webApp
72                   appName: 'webApp-Epm'
73                   package: '$(System.DefaultWorkingDirectory)/**/*.zip'
74                   resourceGroupName: test
```

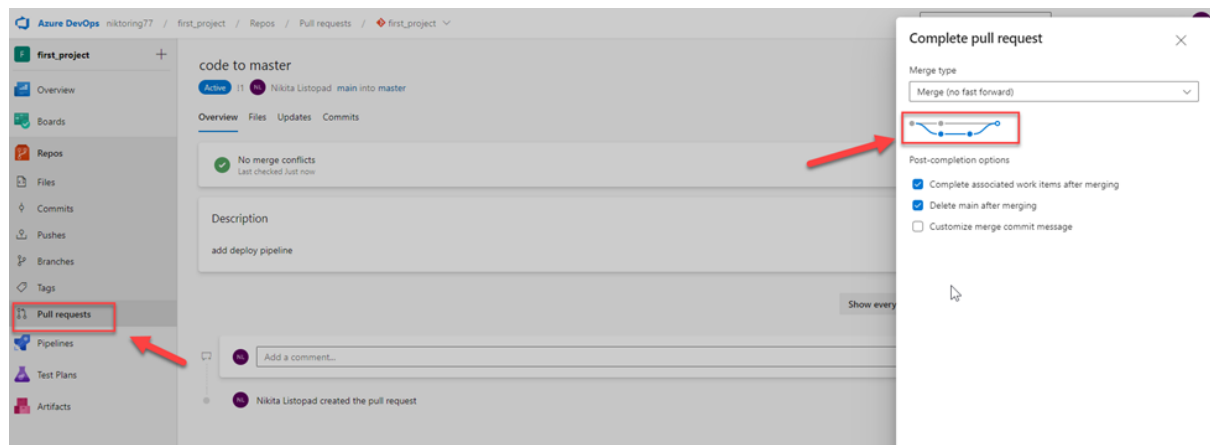
Do pipeline

The screenshot shows the 'New pipeline' wizard in Azure DevOps. The left sidebar is the same as the previous screenshot. The main pane shows the 'Connect' step with the question 'Where is your code?'. Below the question, several options are listed: Azure Repos Git (YAML), Bitbucket Cloud (YAML), GitHub (YAML), GitHub Enterprise Server (YAML), Other Git, and Subversion. The 'Azure Repos Git' option is highlighted with a red box and a red arrow pointing to it from the 'Pipelines' menu item in the sidebar. Below the list, there is a link to 'Use the classic editor to create a pipeline without YAML.'

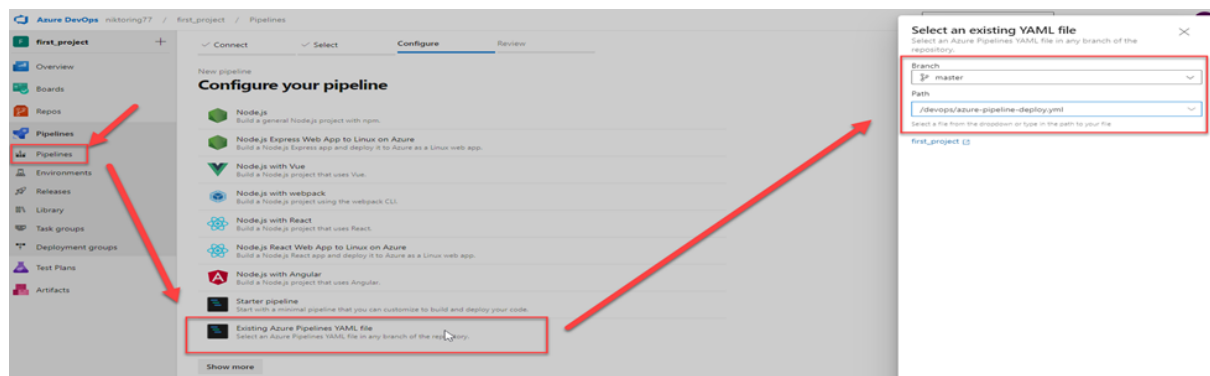
Choose our app



I pushed to main branch. I need create merge request to DEFAULT branch. in my case it is Master



Then



Continue

Azure DevOps nikoring77 / first_project / Pipelines

first_project +

- Overview
- Boards
- Repos
- Pipelines
- Environments
- Releases
- Library
- Task groups
- Deployment groups
- Test Plans
- Artifacts

Review your pipeline YAML

first_project / devops/azure-pipeline-deploy.yml #0

```
1 name: 'Validation running. Attempt ${builderCounter}'
2
3 trigger:
4   - main
5
6 variables:
7   - name: webAppName
8     value: 'webApp-1pan'
9   - name: builderCounter
10    value: '${counter('builderCounter', 1)}'
11
12
13 stages:
14   - stage: Build
15     displayName: 'Npm install/build'
16     jobs:
17       - deployment: 'BuildApp'
18         pool:
19           vmImage: windows-2022
20         environment: validation
21         strategy:
22           runOnce:
23             deploy:
24               steps:
25                 - checkout: self
26                   clean: true
27                   fetchDepth: 5
28
29               Settings:
30                 task: Npm@1
31                 displayName: 'npm install'
32                 inputs:
33                   verbose: false
34
35               Settings:
36                 task: Npm@1
37                 displayName: 'npm custom'
38                 inputs:
39                   command: custom
40                   verbose: false
41               runFromCommand: 'run build'
```

Variables Run

Save

CD - Show assistant

We have useful options

first_project

Runs Branches Analytics

Get started and run this pipeline for the first time!

Run pipeline

Edit Run pipeline

- Manage security
- Rename/move
- Status badge
- Trigger issues
- Settings
- Delete
- Scheduled runs

Edit

first_project / Pipelines / first_project

first_project

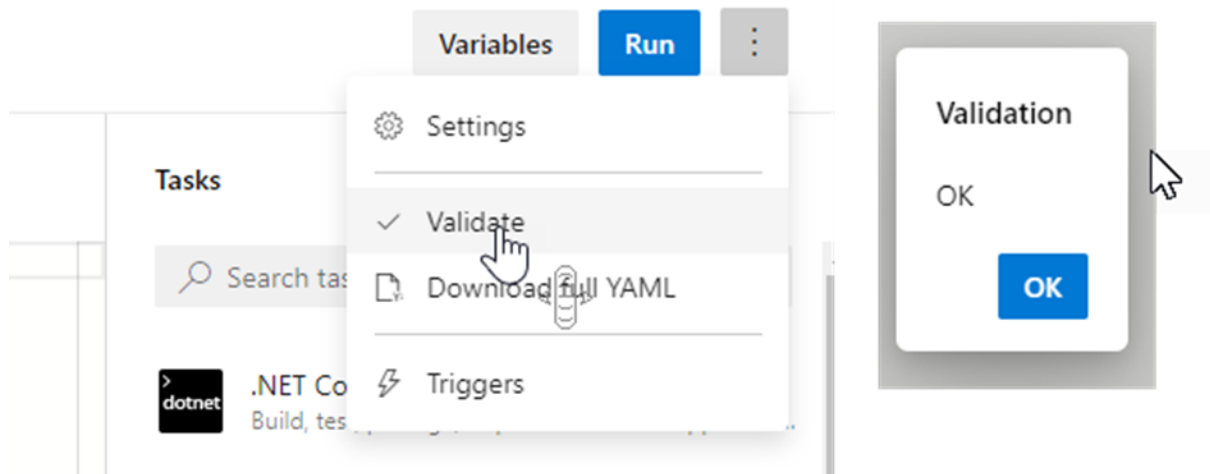
Runs Branches Analytics

Get started and run this pipeline for the first time!

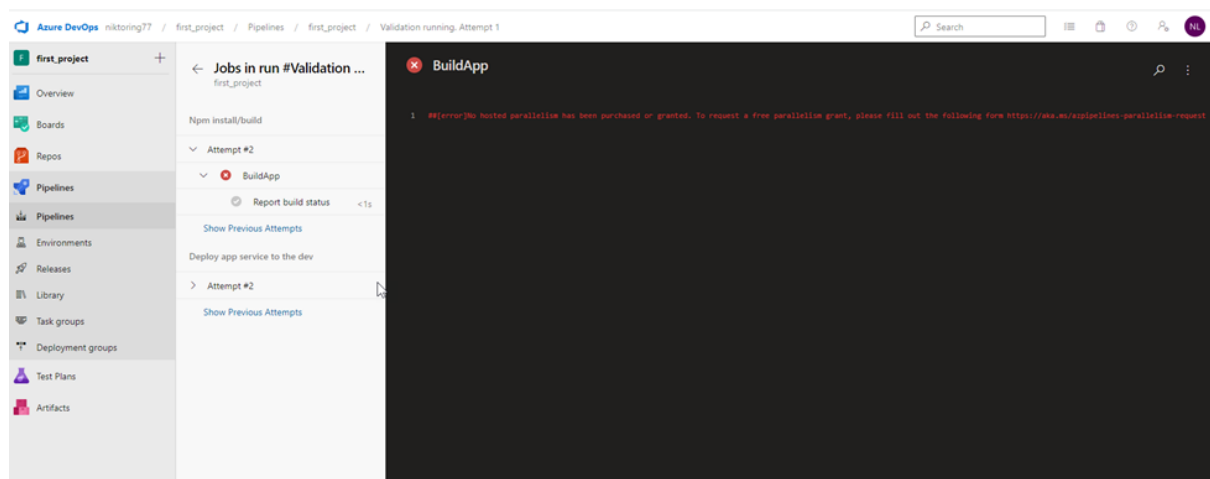
Run pipeline

Edit Run pipeline

Check valid our file .yaml



Run pipeline



Send request

<https://forms.office.com/pages/responsepage.aspx?id=v4j5cvGGr0GRqy180BHbR63mUWPIq7NEsFZhkyH8jChUMIM3QzdDMFZOMkVBWU5BWFM3SDI2QIRBSC4u>

Azure DevOps Parallelism Request

This form is for users to request increased parallelism in Azure DevOps.

Please consider that it could take 2-3 business days to proceed the request. We are working on improving this process at the moment. Sorry for the inconvenience.

...

* Required

1. What is your name? *

Enter your answer

2. What is your email address? *

Enter your answer



3. What is the name of your Azure DevOps Organization? *

(E.g. for <https://myorganization.visualstudio.com> or <https://dev.azure.com/myorganization> link formats - organization name would be 'myorganization')

Enter your answer

4. Are you requesting a parallelism increase for Public or Private projects? *

☐ Private

☐ Public

Submit

Never give out your password. [Report abuse](#)

Approval

Where is code on VM in Web-App

Microsoft Azure Upgrade Search resources, services, and docs (G+)

Home > webApp-Epam

webApp-Epam | Console ☆ ...

App Service

Search

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Microsoft Defender for Cloud

Events (preview)

Deployment

Quickstart

Deployment slots

Deployment Center

Settings

Configuration

Authentication

```
D:\home\site\wwwroot>ls
README.md
angular.json
devops
dist
karma.conf.js
node_modules
package-lock.json
package.json
src
tsconfig.app.json
tsconfig.json
tsconfig.spec.json

D:\home\site\wwwroot>ls dist/todo
3rdpartylicenses.txt
assets
favicon.ico
index.html
main.d56d220b2719db70706f.js
polyfills.fa4c4cc7691890732dfd.js
runtime.16c801cf39e4720f0268.js
styles.bf8d580556def58427d3.css

D:\home\site\wwwroot>
```

Successful pipeline after error bind with:

```
rootFolderOrFile: '$(System.DefaultWorkingDirectory)/dist/todo/*'
```

Azure DevOps niktor77 / first_project / Pipelines / first_project / Validation running, Attempt...

first_project

Overview

Boards

Repos

Pipelines

Pipelines

Environments

Releases

Library

Task groups

Deployment groups

Test Plans

Project settings

Jobs in run #Validation runnin...

Create an artifact 37s

Upload Artifacts 8s

Post-job: Checkout ... <1s

Finalize Job <1s

Deploy app service to the dev

sandbox 1m 0s

Initialize job 7s

Download Artifact 11s

DownloadPipelineAr... 4s

Azure Web App De... 35s

Finalize Job <1s

Finalize build

Report build status <1s

Azure Web App Deploy: webApp-Epam

View raw log

```
1 Starting: Azure Web App Deploy: webApp-Epam
2 =====
3 Task : Azure Web App
4 Description : Deploy an Azure Web App for Linux or Windows
5 Version : 1.211.0
6 Author : Microsoft Corporation
7 Help : https://aka.ms/azurewebapptroubleshooting
8 =====
9 Got service connection details for Azure App Service: 'webApp-Epam'
10 Trying to update App Service Application settings. Data: {"WEBSITE_RUN_FROM_PACKAGE":"1"}
11 Deleting App Service Application settings. Data: {"WEBSITE_RUN_FROM_PACKAGE":"1"}
12 App Service Application settings are already present.
13 Package deployment using ZIP Deploy initiated.
14 Deploy logs can be viewed at https://webapp-epam.scm.azurewebsites.net/api/deployments/9f3c23be80a94fc9997de4
15 Successfully deployed web package to App Service.
16 NOTE: Run From Package makes wwwroot read-only, so you will receive an error when writing files to this direc
17 Successfully added release annotation to the Application Insight : webApp-Epam
18 App Service Application URL: https://webapp-epam.azurewebsites.net
19 Finishing: Azure Web App Deploy: webApp-Epam
```

Show result

