**Azure Devops Pipelines**

[Azure devops Pipeline Process Architecture 2](#_Toc131490221)

[How its built? 2](#_Toc131490222)

[1. Build Pipeline 2](#_Toc131490223)

[1.1 How to create? 2](#_Toc131490224)

[1.2 What to Configure? 3](#_Toc131490225)

[2. Release Pipeline 5](#_Toc131490226)

[2.1 How to create? 5](#_Toc131490227)

[2.2 What to Configure? 5](#_Toc131490228)

[2.3 Continuous Deployment? 8](#_Toc131490229)

[2.4 Approval? 9](#_Toc131490230)

[3. How to Use? 9](#_Toc131490231)

[3.1 Steps to use 9](#_Toc131490232)

[3.2 Download solution from history 10](#_Toc131490233)

# Azure devops Pipeline Process Architecture

# How its built?

There are two components configured in Azure devops for building a continuous build deployment.

## Build Pipeline

### How to create?

* Open Devops portal 🡪 select the project on which pipeline need to be setup.
* Click on Pipelines 🡪 New Pipeline**. (refer to create new pipeline image)**

**Create new pipeline image:**

Graphical user interface, text, application

Description automatically generated

### 1.2 What to Configure?

* Add Power Platform tool Installer step in pipeline.
* Add Power Platform Export solutions step.
  + Select from dropdown the Service Connections by choosing the source environment.
  + Configure Environment URL by mentioning a dynamic variable as **$(BuildTools.EnvironmentUrl)**
  + Configure Solution name by creating a variable and mentioning it in solution. name field as **$(SolutionName)**
* Add Publish Artifacts Step.
* Save the pipeline by clicking on save.

**Note: please refer to Pipeline steps configuration image, Variable creation step image and save image for configurations.**

**Pipeline steps configuration image:**

Graphical user interface, text, application, email

Description automatically generated

* Username/Password or Service principal can be used for Authentication
* Service principal can be created via Power shell script or from Azure portal ( <https://learn.microsoft.com/en-us/azure/active-directory/develop/howto-create-service-principal-portal> )

**Variable creation step image:**

Graphical user interface, text, application

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**Save image:Graphical user interface, text, application, email

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## Release Pipeline

### How to create?

* Click on Releases 🡪 **+ New** Pipeline.

### What to Configure?

* Add Build Pipeline as artifacts source.
* Define Stages of Release pipeline either in series or in parallel. (**We have done series release pipeline**)
* Configure the Export Destinations for UAT, Train and Prod environments as mentioned in images below by linking the source file path.
* Add variable names for indirect use of values as mentioned in image below.

**Note: To configure please refer to Rel – Step 1 to Rel – Step 4**

**Rel - Step 1:**

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**Rel - Step 2:**

A picture containing graphical user interface

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**Rel - Step 3:**Graphical user interface

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**Rel - Step 4:**Graphical user interface, text, application

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**Rel - Step 5:**

Graphical user interface

Description automatically generated with medium confidence

### Continuous Deployment?

* For Release pipeline to run in continuity, Continuous deployment trigger must be enabled.
  + Click on button mentioned in image and enable the Continuous deployment trigger.

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### Approval?

* Click on the persons button as mentioned in below image 🡪 enable pre deployment approvals 🡪 Add Approvers.

Graphical user interface

Description automatically generated with medium confidence

## How to Use?

### Steps to use

* Check all the configuration values/ variable values and make sure the solution names are properly defined in the variables in both build and release pipelines.
* Run the Build pipeline by queuing it up and a new Release gets created which runs as per defined configurations and approvals.

**Build Pipeline is run and succeeded in the image**

Text

Description automatically generated

**Release is run and succeeded in UAT and Train. PROD is waiting for approval in this image**

Graphical user interface

Description automatically generated

### Download solution from history

The solution can be downloaded from Pipeline artifacts. 