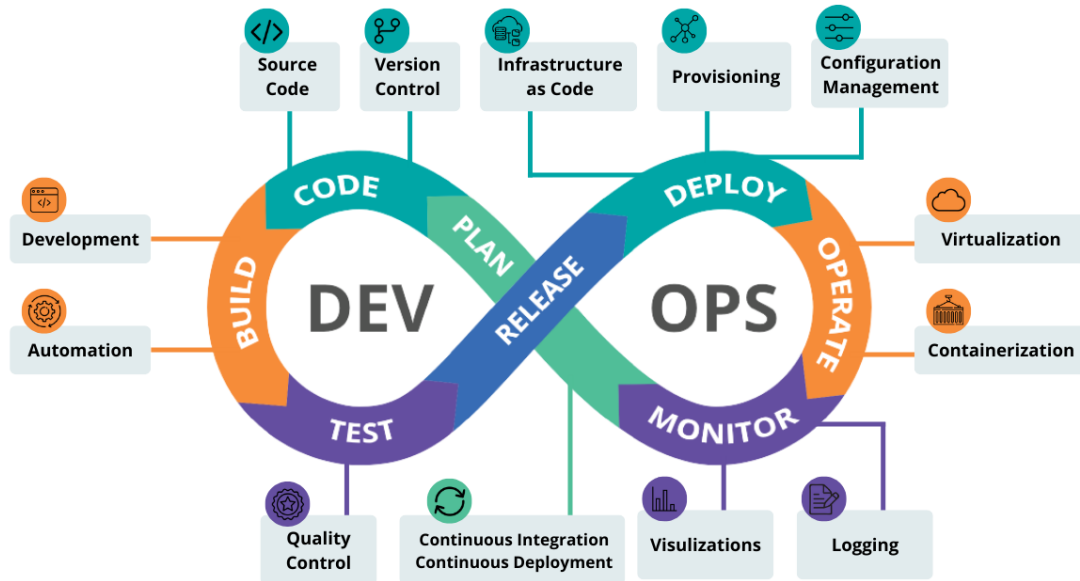


Introduction to Azure DevOps

What is DevOps?

DevOps is the process of integrating Developer and Operation teams in order to improve collaborations and productivity



Why Microsoft Azure DevOps?

- **Reliability** – As a SaaS offering, Azure DevOps is reliable, scalable and globally available. It is also backed by an SLA of 99.9% uptime and by 24×7 support.
- **Easy collaboration among multiple teams** – GIT integrations makes the large / distributed teams life easy.
- **Maintenance cost** – Low maintenance cost since its SAAS. We no longer need to worry about updates and patches.
- **Up-to-date features** – Azure DevOps users get access to new features every 3 weeks.
- **Built in wikis** for sharing information

Starting with Azure DevOps

azure.microsoft.com/en-us/services/devops/



Azure

Explore ▾

Products ▾

Solutions ▾

Pricing ▾

Partners ▾

Resources ▾

Search



Docs

Support

Contact Sales

Sign in

[Home](#) / [Services](#) / Azure DevOps

Azure DevOps

Plan smarter, collaborate better, and ship faster with a set of modern dev services.

Start free

Start free with GitHub

Already have an account?

[Sign in to Azure DevOps >](#)



Components/Services of Azure DevOps



Azure Boards

Allows Work item tracking, Agile planning, Power BI visualization, and similar other reporting tools.



Azure Test Plans

Provides integrated planning and investigation of testing solutions.



Azure Repos

Provides full-support for cloud-hosted private repositories.



Azure Artifacts

Package management Support for Maven, npm, NuGet and Python package feeds from private or public sources.



Azure Pipelines

Defines CI/CD- Continuous Integration and Continuous deployment process with support for containers and Kubernetes.



Overview | Summary

The summary page holds information about the project and is the Home Page of your project. Here you can add a basic description, tags to your project and also show a Readme file or a Wiki page. Not only that, but you will also have a quick view on the project stats with an out-of-box dashboard presenting the number of Work items created and the number of Work items completed. Also, you can see the members in the end of the page.

The screenshot displays the Azure DevOps interface for a project named 'UtilityApp'. The top navigation bar shows the breadcrumb path: StudyJunction / UtilityApp / Overview / Summary. The left sidebar contains a menu with options: Overview, Summary (selected), Dashboards, Wiki, Boards, Repos, Pipelines, Test Plans, and Artifacts. The main content area features a large illustration of a person working at a desk with a dog. Below the illustration, it says 'Welcome to the project!' and 'What service would you like to start with?'. There are buttons for 'Boards', 'Repos', 'Pipelines', 'Test Plans', and 'Artifacts'. At the bottom, it says 'or manage your services'. On the right side, there are two panels. The top panel is titled 'Project stats' and shows a graph icon with the text 'No stats are available at this moment' and 'Setup a service to see project activity.'. The bottom panel is titled 'Members' and shows a count of '1' member.



Overview | Dashboards

In the dashboards page it's possible to create dashboards based on data from the work items, build history and commits done by the team. Each dashboard can be a Team Dashboard or a Project Dashboard, so you can target valuable data to each user and their roles.

The screenshot displays the Azure DevOps interface for the 'UtilityApp' team's 'Overview' dashboard. The left-hand navigation pane lists various sections: UtilityApp, Overview, Summary, Dashboards (highlighted), Wiki, Boards, Repos, Pipelines, Test Plans, and Artifacts. At the bottom of this pane is 'Project settings'. The main area of the dashboard shows a breadcrumb trail: 'StudyJunction / UtilityApp / Overview / Dashboards'. Below this is a search bar and a set of icons for navigation and actions. The central message states, 'This dashboard doesn't have widgets just yet!', followed by the instruction, 'Add one or more widgets to gain visibility into your team's progress.', and a prominent blue button labeled 'Add a widget'.



Overview | Wiki

The wiki page present information in Markdown or simple text/HTML. You can also reference some code as a Wiki if you want to reuse some markdown files. This is very important to be created and maintained by your team to be more productive and distribute information easily.

The screenshot shows the Azure DevOps interface for a project named 'UtilityApp'. On the left is a sidebar with navigation options: Overview, Summary, Dashboards, Wiki (selected), Boards, Repos, Pipelines, Test Plans, and Artifacts. At the bottom of the sidebar is 'Project settings'. The top navigation bar shows the breadcrumb 'StudyJunction / UtilityApp / Overview / Wiki', a search bar, and icons for menu, notifications, help, and a user profile. The main content area features an illustration of a person painting on an easel with a dog nearby. Below the illustration, the heading 'Get everyone on the same page' is followed by the text 'Create wiki pages to enable your team members collaborate'. Two buttons are present: 'Create project wiki' and 'Publish code as wiki'. A 'Learn more' link is located below these buttons.



Boards | Work items

The Work items page gives a quick overview about work items not closed in your project. You can easily create a new work item, define new queries, specify columns, delete them and recover from the recycle bin or import new work items.

Azure DevOps

StudyJunction / UtilityApp / Boards / Work items

Search

Work items

Recently updated ▾ | + New Work Item ▾ | → Open in Queries | Column Options | Import Work Items ...

Filter by keyword

Types ▾ | Assigned to ▾ | States ▾ | Area ▾ | Tags ▾ | X

Find recently updated items

View items that have been recently updated.

[Learn more about work items](#)



Boards | Boards

The Boards page shows the stories in different boards and in different levels. By default, you will see a board in User Story or Feature level, but you can configure to show at Epic level or configure other types of Work Items.

The screenshot displays the Azure DevOps interface for the 'UtilityApp' team. The left sidebar contains a navigation menu with options: Overview, Boards (selected), Work items, Backlogs, Sprints, Queries, Delivery Plans, Repos, Pipelines, Test Plans, Artifacts, and Project settings. The main content area shows the 'Boards' view for the 'UtilityApp Team'. At the top, there's a search bar and a 'View as Backlog' link. Below, the board is organized into columns: New, Active (0/5), Resolved (0/5), and Closed. A 'New item' button is visible in the 'New' column. The top navigation bar includes the Azure DevOps logo, the project path 'StudyJunction / UtilityApp / Boards / Boards', a search bar, and user profile icons.



Boards | Backlogs

The Backlogs page presents a complete view of all the backlog in a Tree view like list where you can expand and configure the parent-child relationship of each one of the work items. This is an important view to plan ahead your backlog until you move it to your active sprint.

The screenshot displays the Azure DevOps interface for the 'UtilityApp' team. On the left, a sidebar lists navigation options: Overview, Boards, Work items, Boards, Backlogs (selected), Sprints, Queries, Delivery Plans, Repos, Pipelines, Test Plans, Artifacts, and Project settings. The main content area is titled 'UtilityApp Team' and shows the 'Backlog' view. It features a large graphic of a laptop with a pencil, followed by the heading 'Get started with your product backlog' and a 'New Work Item' button. Below this is a 'Planning' section with a 'UtilityApp Team Backlog' header and three iterations: 'Iteration 1' (marked 'Current'), 'Iteration 2', and 'Iteration 3'. Each iteration shows 'No work scheduled yet'. The top navigation bar includes a search bar, a list icon, a calendar icon, a help icon, a user profile icon, and a 'BP' badge.



Boards | Sprints

The Sprint page is where your daily work will happen. You can plan and estimate in a granular level (Task or Bug) and effectively track their progress using the columns just like your favorite Kanban board.

The screenshot shows the Azure DevOps interface for the 'UtilityApp' team. The left sidebar contains a navigation menu with options: Overview, Boards, Work items, Boards, Backlogs, Sprints (selected), Queries, and Delivery Plans. Below these are links to Repos, Pipelines, Test Plans, Artifacts, and Project settings. The main content area is titled 'StudyJunction / UtilityApp / Boards / Sprints' and includes a search bar. The team name 'UtilityApp Team' is displayed with a star icon and a user icon. The 'Taskboard' tab is active, showing options for 'Backlog', 'Capacity', and 'Analytics'. A '+ New Work Item' button and a 'Column Options' link are also present. The main area displays a message: 'You do not have any work scheduled yet', with a link to 'Schedule work from your product backlog or create new work items.' and a '+ New Work Item' button. The background of the main area features a large illustration of a Kanban board with a yellow pencil.



Boards | Queries

The Queries page will contain all the predefined and your favorite queries that you can configure to list the work items you want. This is a very powerful option to find the work items present in a release not completed yet, all the bugs from the past sprint, etc.

The screenshot shows the Azure DevOps interface. On the left is a sidebar for the 'UtilityApp' project with a menu including Overview, Boards, Work items, Backlogs, Sprints, Queries (selected), Delivery Plans, Repos, Pipelines, Test Plans, Artifacts, and Project settings. The main area is titled 'Queries' and has tabs for 'Favorites' (selected) and 'All'. It includes buttons for '+ New query' and '↑ Import Work Items', and a 'Filter by keywords' search bar. Below the tabs is a table with columns 'Title', 'Folder', and 'Last modified by'. Under the 'My favorites' section, it displays the message: 'No favorites yet! Favorite a query ★ to quickly access it here.'



Repos | Files

The Files page offers you a view of the files available in your project, organized by project/branches. There you can select the branch you want to look for, navigate to other projects and here you even can access the Clone button. The clone button allows you to clone with different protocols, so you can start working from your machine.

The screenshot shows the Azure DevOps interface for a repository named 'UtilityApp'. The left sidebar contains a navigation menu with options: Overview, Boards, Repos (selected), Files (highlighted), Commits, Pushes, Branches, Tags, Pull requests, Pipelines, and Project settings. The main content area is titled 'UtilityApp is empty. Add some code!' and contains three sections: 1. 'Clone to your computer' with buttons for HTTPS and SSH, a text input field containing the repository URL, a 'Generate Git Credentials' button, and a note about authentication. 2. 'Push an existing repository from command line' with buttons for HTTPS and SSH, a text input field for the command 'git remote add origin https://StudyJunction@dev.azure.com/StudyJunction/UtilityApp/_git/UtilityApp', and a copy icon. 3. 'Import a repository' with an 'Import' button. 4. 'Initialize' section with a checked 'Add a README' checkbox, a dropdown for 'Add a .gitignore: None', and an 'Initialize' button.



Repos | Commits

The Commits page lists all the commits available for each branch and lets you filter by a commit ID to find and recover one specific version. Not only that, but you can also see the Commit graph, just to understand better your commit timeline.

StudyJunction / UtilityApp / Repos / Commits / UtilityApp

Search

BP

dev

Commits

Commit ID

Graph	Commit	Pull Request	Status
	Merged PR 3: templates-build.yml added 9eb227d5 Bhaumik Patel Today at 9:30 AM	3	succeeded
	code correct da753aec Bhaumik Patel Today at 9:26 AM	3	
	format 6f36df6b Bhaumik Patel Today at 9:24 AM	3	succeeded
	variables set f8d27e2c Bhaumik Patel Today at 9:22 AM	3	
	Finaly pipeline 4ddf0d08 Bhaumik Patel Today at 8:59 AM	3	
	parameters 17730d25 Bhaumik Patel Today at 8:47 AM	3	succeeded
	displayName 318e0b99 Bhaumik Patel Today at 8:45 AM	3	
	parameters pass	3	



Repos | Pushes

The Pushes page is very similar to Commits page, but the difference here is to show when the push event happened for each branch and how many commits were contained inside the push.

The screenshot shows the GitHub interface for the 'UtilityApp' repository, specifically the 'Pushes' page for the 'dev' branch. The page displays a list of pushes, grouped by date. The left sidebar contains navigation icons for repository overview, branches, pull requests, and other features. The main content area shows the following pushes:

- 7/27/2022 (1 update)**
 - Pull Request 3: templates-build.yml added**
9eb227d5 Bhaumik Patel Today at 9:30 AM ✓ succeeded
- 7/26/2022 (5 updates)**
 - Updated to f3335879: Update azure-pipelines.yml for Azure Pipelines**
f3335879 Bhaumik Patel Yesterday at 10:18 AM
 - Updated to 6f26f929: Update WeatherForecast-azure-pipelines.yml for Azure Pipelines**
6f26f929 Bhaumik Patel Yesterday at 10:15 AM ✓ succeeded
 - Updated to 1e1bf180: Update WebApp-azure-pipelines.yml for Azure Pipelines**
1e1bf180 Bhaumik Patel Yesterday at 10:15 AM ✓ succeeded
 - Updated to 6f2cf0a2: Update PasswordGenerator-azure-pipelines.yml for Azure Pipelines**
6f2cf0a2 Bhaumik Patel Yesterday at 10:14 AM ✓ succeeded
 - Pull Request 1: Pipeline added**



Repos | Branches

The Branches page is pretty straightforward. There you can find all branches, the ones you created and the stale ones aging for quite some time. You can take advantage of the Behind/Ahead column to understand how long one branch is lagging when comparing to the main branch, usually the master branch.

The screenshot shows the GitHub interface for the 'UtilityApp' repository. The 'Branches' tab is selected, displaying a table of branches. The table includes columns for Branch, Co..., Author, Authore..., Behind | Ahead, Stat..., and Pull... The 'dev' branch is highlighted, showing it is 0 behind and 1 ahead of the 'master' branch. The 'master' branch is marked as the default branch. A 'New branch' button is visible in the top right corner.

Branch	Co...	Author	Authore...	Behind Ahead	Stat...	Pull...
dev	9eb227	Bhaumik Patel	3h ago	0 1	✓	🔗
master	da753a	Bhaumik Patel	3h ago			★



Repos | Tags

The Tags page gives you a shortcut to finding the Tags of your releases and code versions. It's a nice way to find the tags created by your team to control the versioning of your releases.

The screenshot shows the GitHub interface for the 'UtilityApp' repository. The breadcrumb trail at the top reads 'StudyJunction / UtilityApp / Repos / Tags / UtilityApp'. A search bar is located in the top right. On the left sidebar, the 'Tags' tab is selected. The main content area is titled 'Tags' and features a 'New tag' button. Below this is a large illustration of a person with a dog on a small island, looking through a telescope. The text 'This repository has no tags' is displayed in bold, followed by a subtext: 'Use tags to mark a point in history that is relevant to the repository.'



Repos | Pull requests

The Pull requests page is another quite useful page where you can find the Pull Requests you have opened, the ones Active and finally the PRs completed or abandoned. Every time you push new changes to a specific branch, it will show up here with a shortcut to open a new Pull Request to the default branch.

The screenshot shows the GitHub interface for the 'UtilityApp' repository. The breadcrumb navigation at the top reads 'StudyJunction / UtilityApp / Repos / Pull requests / UtilityApp'. A search bar is located on the right. The left sidebar contains navigation icons, with the 'Pull requests' icon highlighted. The main content area is titled 'Pull requests' and includes tabs for 'Mine', 'Active', 'Completed', and 'Abandoned'. The 'Active' tab is selected. A large blue arrow points from the top right towards the center, indicating a new pull request. Below this, a message states: 'Currently, no pull requests need your attention'. A sub-message explains: 'Pull requests allow you to review code and help ensure quality before merge. [Learn more](#)'. A 'New pull request' button is visible at the bottom right of the main content area.



Pipelines | Pipelines

It is a workflow that defines how our test, build, and deployment steps are run.

StudyJunction / UtilityApp / Pipelines

Search









New pipeline

Filter pipelines

Pipelines

Recent All Runs

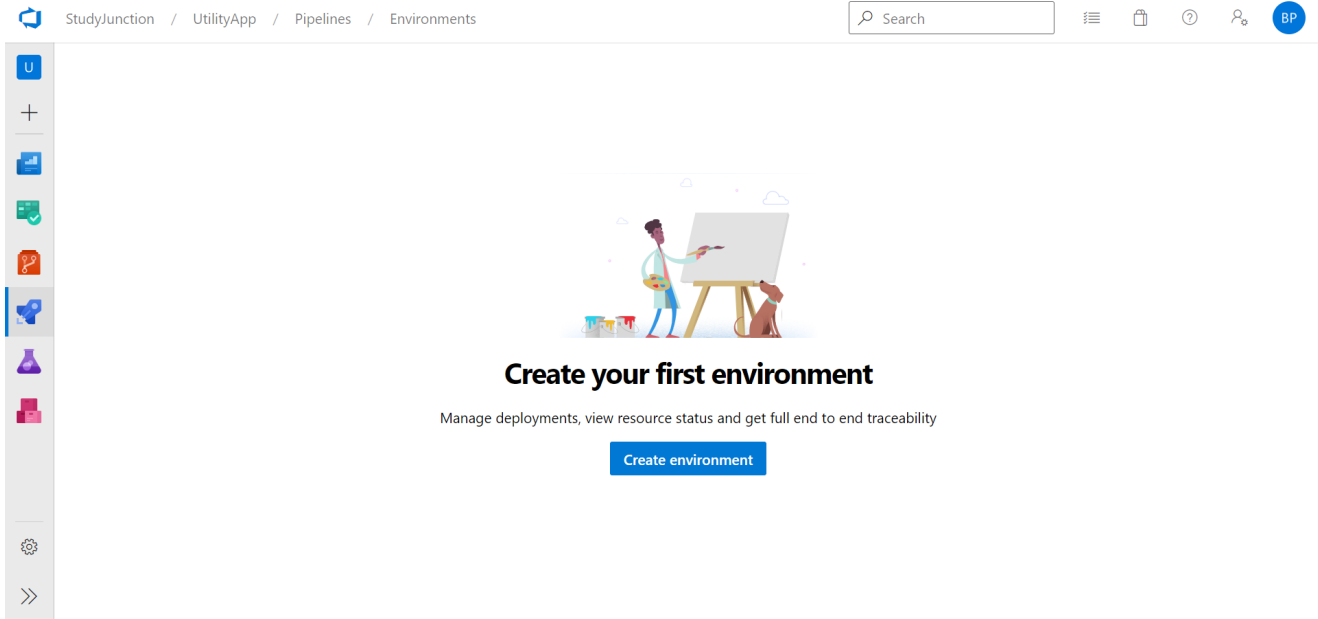
Recently run pipelines

Pipeline	Last run
 Web App	#20220727.1 • Merged PR 3: templates-build.yml added Individual CI for  dev 3h ago 21s
 Password Generator API Pipeline	#20220727.2 • Merged PR 3: templates-build.yml added Individual CI for  dev 3h ago 33s
 Weather Forecast API Pipeline	#20220727.1 • Merged PR 3: templates-build.yml added Individual CI for  dev 3h ago 35s
 UtilityApp	#20220727.3 • parameters Individual CI for  master 4h ago 21s



Pipelines | Environment


It is a collection of resources, where you deploy your application. It contains one or more virtual machines, containers, web apps, etc.






















Pipelines | Releases

Release pipelines in Azure
Pipelines help your team
continuously deliver
software to your customers
at a faster pace and with
lower risk. You can fully
automate the testing and
delivery of your software in
multiple stages all the way
to production.

 StudyJunction / UtilityApp / Pipelines / Releases







No release pipelines found

Automate your release process in a few easy steps with a new pipeline

[New pipeline](#)



Pipelines | Library

Variable groups store values and secrets that you might want to be passed into a YAML pipeline or make available across multiple pipelines. You can share and use variable groups in multiple pipelines in the same project.

StudyJunction / UtilityApp / Pipelines / Library

BP

Library

+

Variable groups

Secure files

+ Variable group

Security

Help

New variable group

Create groups of variables that you can share across multiple pipelines.

+ Variable group

[Learn more about variable groups.](#)



Pipelines | Task groups


A task group allows you to encapsulate a sequence of tasks, already defined in a build or a release pipeline, into a single reusable task that can be added to a build or release pipeline, just like any other task.

StudyJunction / UtilityApp / Pipelines / Task groups

Search

Task groups | Import Security

Filter by name



Import a task group

Standardize and centrally manage common build and deployment steps for your applications.

[Import a task group](#)

[Learn more about task groups](#)



Pipelines | Deployment groups

A deployment group is a logical set of deployment target machines that have agents installed on each one. Deployment groups represent the physical environments; for example, "Dev", "Test", or "Production" environment. In effect, a deployment group is just another grouping of agents, much like an agent pool.

The screenshot shows the Azure DevOps web interface for managing deployment groups. The breadcrumb navigation at the top reads: StudyJunction / UtilityApp / Pipelines / Deployment groups. A search bar is located in the top right corner. The main heading is "Deployment groups". Below this, there are tabs for "Groups", "Available pools", "+ New", "Security", and "Help". The "Groups" tab is active, displaying a table with the following data:

Name	Target status	Deployment status
LocalPC	1 Online	1 Never deployed

On the left side of the interface, there is a vertical sidebar with various icons, including a blue 'U' icon, a plus sign, a folder icon, a green checkmark icon, a red 'X' icon, a blue 'U' icon, a purple flask icon, a pink box icon, a gear icon, and a double arrow icon. The top right corner of the interface includes a search bar, a list icon, a document icon, a help icon, a user profile icon, and a blue circle with the letters 'BP'.



Test Plans | Test plans

A central location where your team can coordinate all your manual test activities, track progress, and get critical insights.



Test Plans | Progress report

To track the progress of more than one test plan or test suite, use the Progress Report.

Azure DevOps

StudyJunction / UtilityApp / Test Plans / Progress report

UtilityApp

Overview

Boards

Repos

Pipelines

Test Plans

Test plans

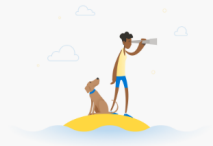
Progress report

Runs

Artifacts

Project settings

Progress report



No test plans found

Start by creating a test plan and executing a few test points. The results will show up here in the report.



Test Plans | Runs

Automate test cases in your test plans and run them directly from Azure Test Plans.

The screenshot shows the Azure DevOps interface for the 'Test Plans | Runs' section. The left sidebar contains a navigation menu with the following items: UtilityApp, Overview, Boards, Repos, Pipelines, Test Plans (highlighted), Test plans, Progress report, Runs (highlighted), Artifacts, and Project settings. The main content area is titled 'StudyJunction / UtilityApp / Test Plans / Runs'. It features a search bar, a 'Go' button, and a 'Recent test runs' section. Below this, there is a table with columns for 'State', 'Run I...', 'Title', and 'Completed Date'. The table currently shows 0 runs (0 selected). The 'Test runs' section also includes a 'Filter' button and a 'Recent exploratory sessions' link.

Azure DevOps

StudyJunction / UtilityApp / Test Plans / Runs

Search

UtilityApp

Overview

Boards

Repos

Pipelines

Test Plans

Test plans

Progress report

Runs

Artifacts

Project settings

Enter Run ID... Go

Recent test runs

0 runs (0 selected)

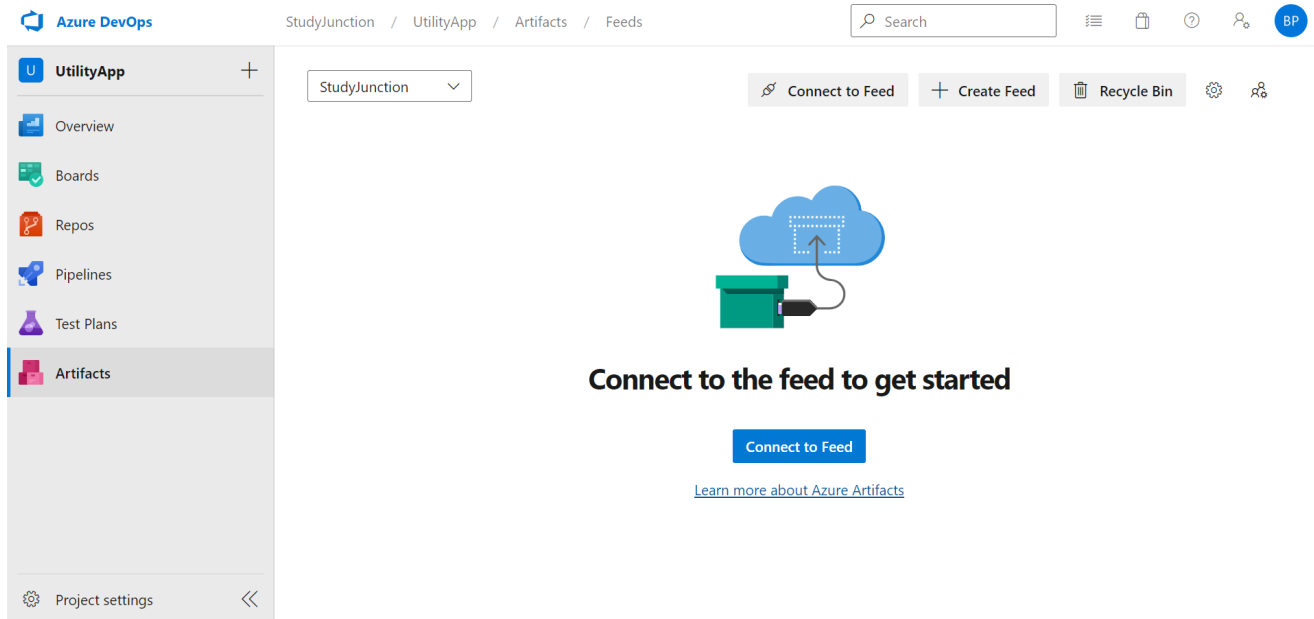
Test runs Filter

State Run I... Title Completed Date



It is a collection of files or packages published by a run. The Artifact is made available to subsequent tasks, such as distribution or deployment.

Allows the teams to easily package the dependencies and other artifacts required for the application deployment and its functionality, thus making it easier to publish and consume the application. There can be different kinds of artifacts such as – Build Artifacts, Maven, Npm, Nuget, Universal Packages and Symbols



Thank You!