



Azure DevOps



Agenda



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Summary

What is Azure?

What is Azure?



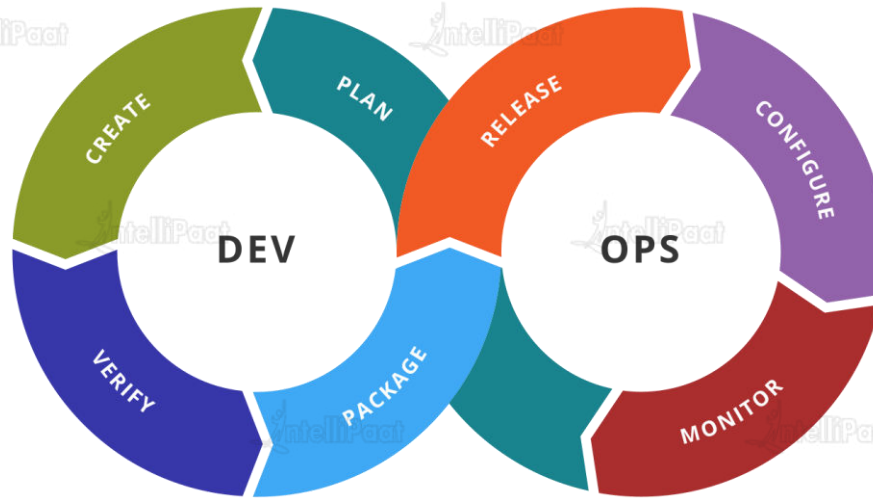
Microsoft Azure is a cloud service provider whose services can be used on a business to solve the challenges and provide architectural solutions



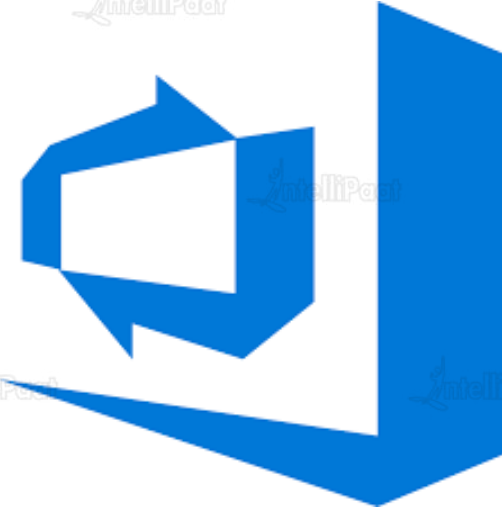
What is DevOps?

What is DevOps?

DevOps is the union of people, process, and products to enable continuous delivery of value to our end users



Introduction to Azure DevOps



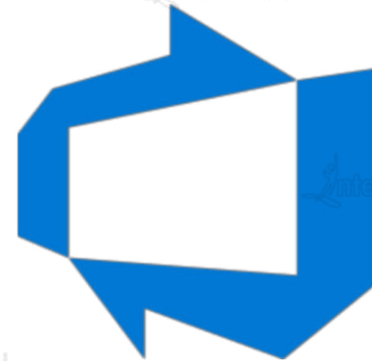
Introduction to Azure DevOps



Azure DevOps is a tool provided by Microsoft Azure which can be used to implement a DevOps lifecycle in a business



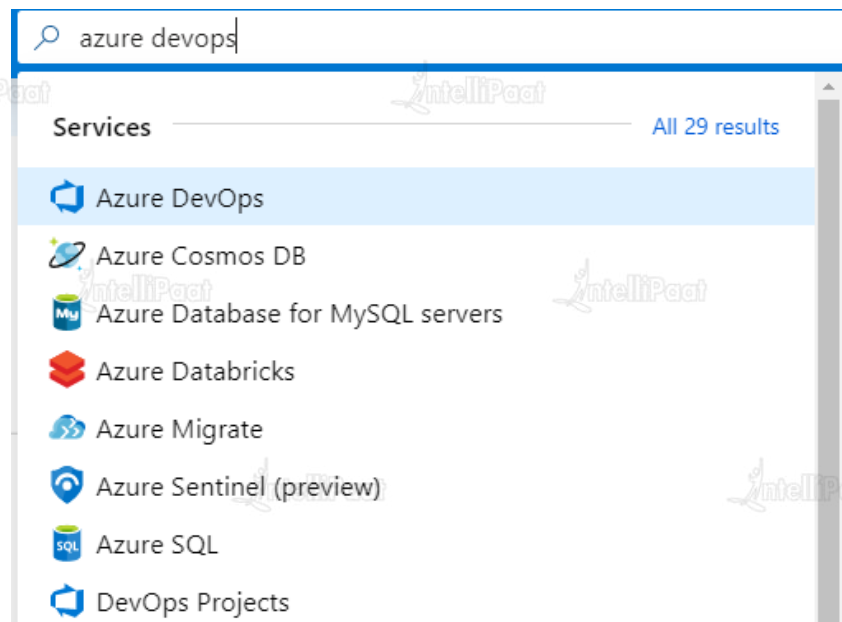
Visual Studio Team Services (VSTS) has been upgraded and rebranded to Azure DevOps



Launching Azure DevOps



Open **portal.azure.com** and search for Azure DevOps or directly open **dev.azure.com**



Introduction to Azure DevOps



A sample Azure DevOps project summary view

The screenshot displays the Azure DevOps interface for a project named 'Angular-app'. The left sidebar contains navigation links: Overview, Summary (selected), Dashboards, Wiki, Boards, Repos, Pipelines, Test Plans, and Artifacts. The main content area shows the project's summary, including a description, languages (HTML, TypeScript), and project statistics. The statistics section includes boards (1 item created, 1 item completed), repos (0 pull requests, 8 commits by 2 authors), and pipelines (67% and 50% completion rates).

Azure DevOps | kodepracticeorg / Angular-app / Overview / Summary

Angular-app | Private | Invite

About this project | Like 0

Creating a DevOps lifecycle for a simple Angular Application

Languages

- HTML
- TypeScript

Project stats | Last 7 days

Boards

- 1 Work items created
- 1 Work items completed

Repos

- 0 Pull requests opened
- 8 Commits by 2 authors

Pipelines

- 67%
- 50%

Benefits of DevOps on Azure



Orchestration



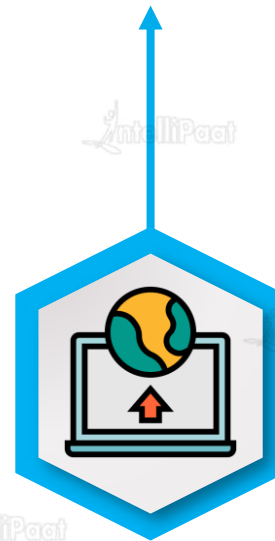
Rapid Deployment



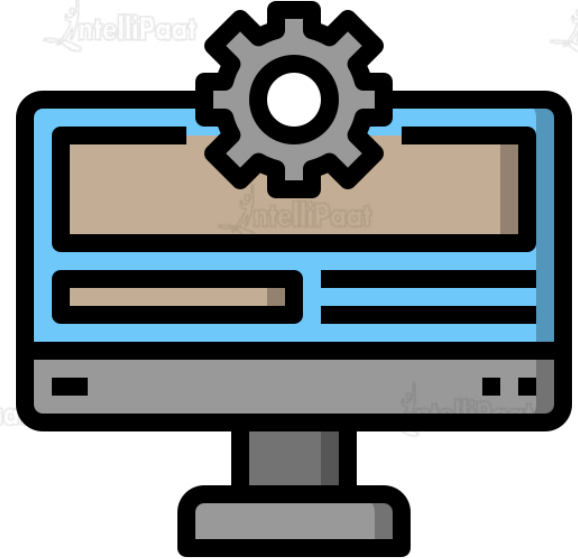
Easy Automation



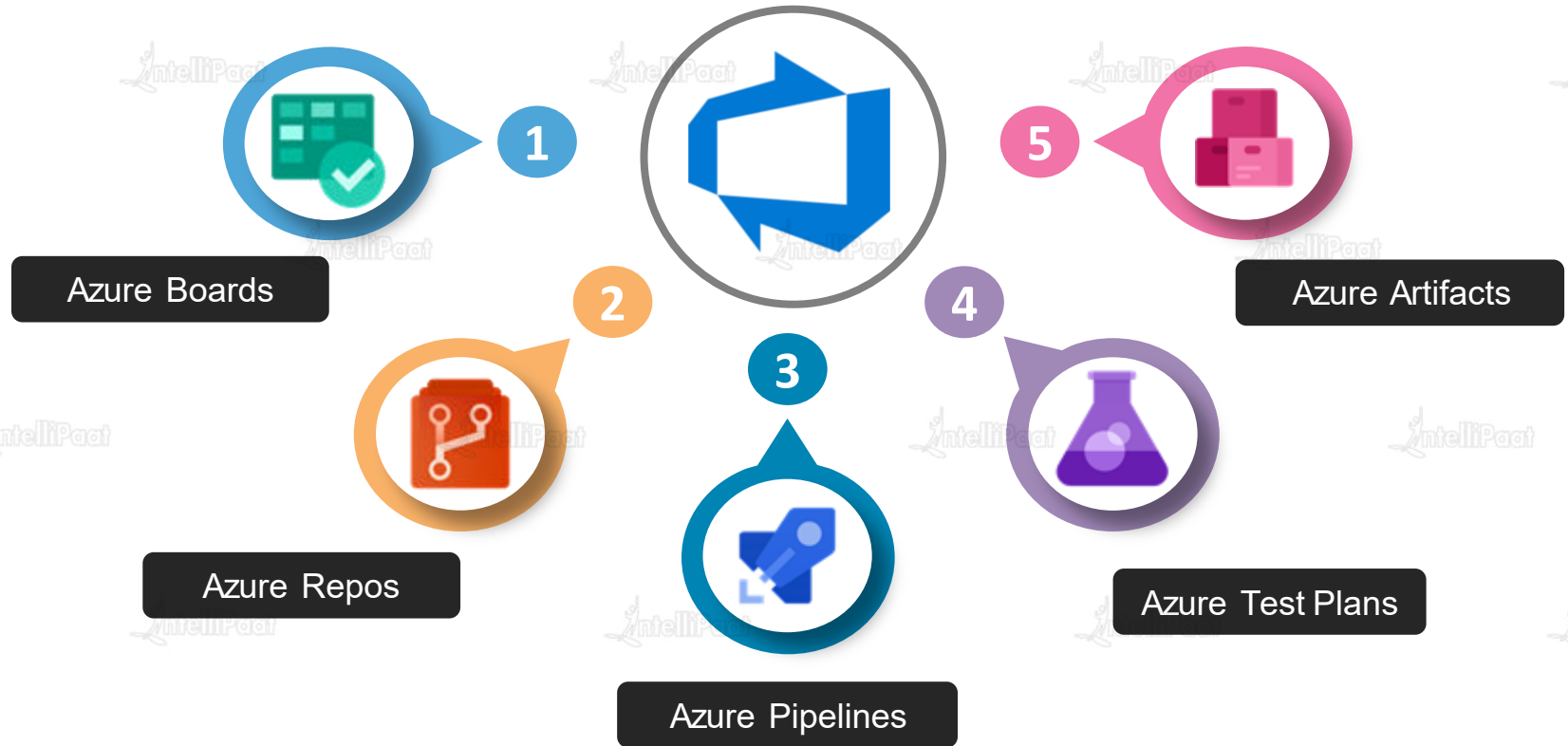
Effective Monitoring



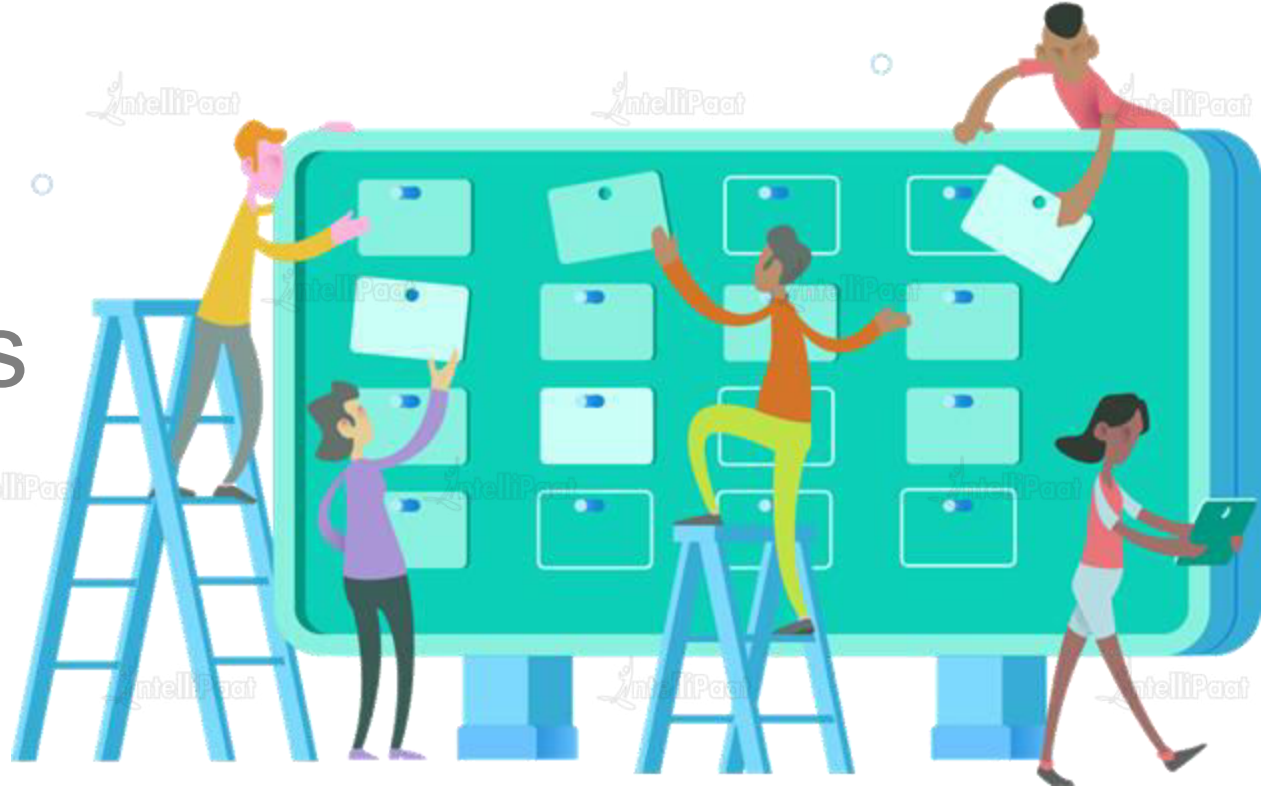
Azure DevOps Services



Tools provided by Azure DevOps



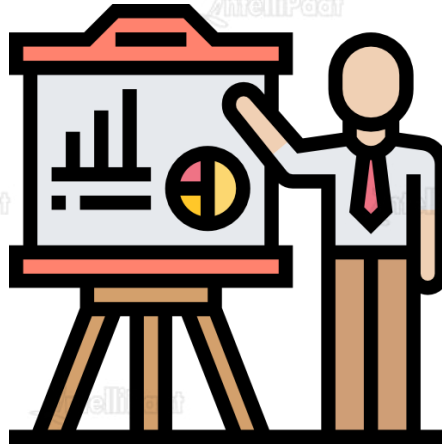
Azure Boards



Why Azure Boards



Tool for tracking work using Kanban boards, backlogs, sprints, team dashboards and custom reporting



Azure Boards Concepts



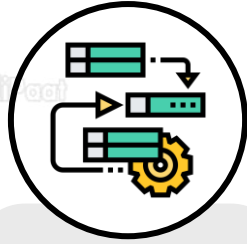
Work Items

Use work items to track anything you want to track. For instance, a bug in the website



Boards

Implement Kanban practices by creating and visualizing a work flow for the team



Backlogs

Plan and prioritize the work for a team within one or multiple products



Sprints

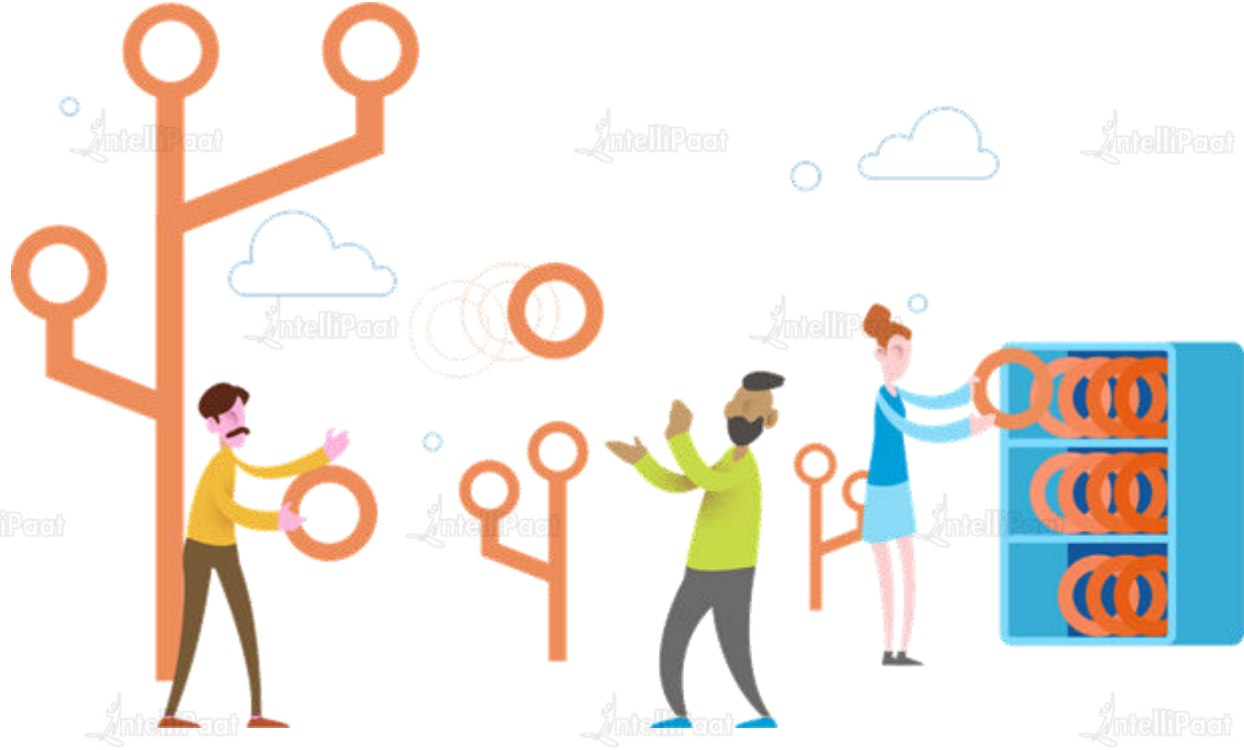
Plan a work for a team which has to be completed in a specified period of time



Queries

Filter criteria to list work items for sharing or performing bulk updates

Azure Repos



Why Azure Repos



Get a free unlimited private repository for hosting software development version control. Also, GitHub connectivity is available if you do not want Azure Repos.

Connect your favorite development environment to Azure Repos to access your repos and manage your work.



Command-line



Visual Studio Code



Visual Studio



Xcode



Eclipse



IntelliJ

What is GitHub?



A version control tool for software development. Discover, share and build better software either open source or private projects. Currently GitHub is owned by Microsoft.



Git Lifecycle



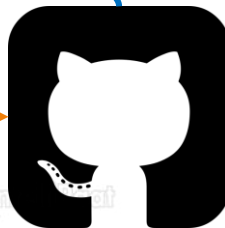
Local WorkSpace

Git Initialized

Staged files in WorkSpace



Developer Team



GitHub



Files committed to the git repo

*Changes pushed by other
developers can be pulled*

*Build and Share
code*

*Pushing the committed
files to the repository*

Common GitHub commands



\$ git init

\$ git status

\$ git add

\$ git commit -m
"message"

Common GitHub commands



```
$ git remote add origin  
<Repo URL>
```

```
$ git push
```

```
$ git clone
```

```
$ git pull
```

Common GitHub commands



```
$ git branch <branch-name>
```

```
$ git checkout <branch-name>
```

```
$ git log
```

```
$ git revert <commit-id>
```



Azure Test Plans



Why Azure Test Plans



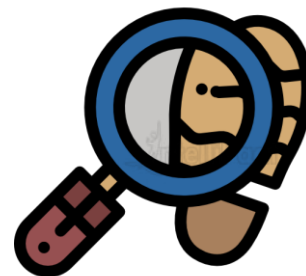
Use Azure Test Plans to improve the quality of your code by using planned and exploratory tests



Capture rich data

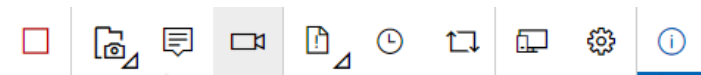


**Test across web
and desktop**



**Get end-to-end
traceability**

Why Azure Test Plans



About

The Exploratory Testing extension is now Test & Feedback. [Learn more.](#)



Test & Feedback

Version : 1.0.150.0

Now everyone on the team can own quality. Capture findings, create issues, and collaborate with the team, directly from the browser.

Quick demo



Watch the 2-min video to know how the extension works!

Help!



Visit our documentation page to learn more.

Feedback



Have something to share with us? Reach out to us.

Rate us!



Liked the extension? You can rate us!

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Exploratory test tool – Test and feedback



Doing a exploratory test on deployed QA site

Creating a Azure DevOps project

Integrating GitHub with the DevOps project and Azure boards

Creating a CI/CD pipeline for a Angular application (Build, staging and production)

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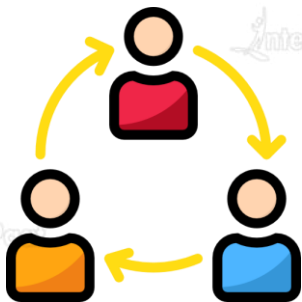
Azure Artifacts



Why Azure Artifacts



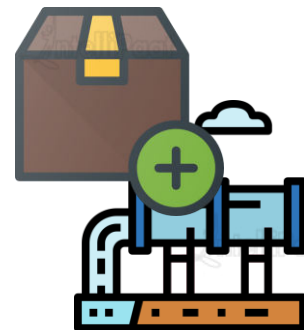
From public and private resources, you can create and share Maven, npm, Python and other packages



Share code efficiently

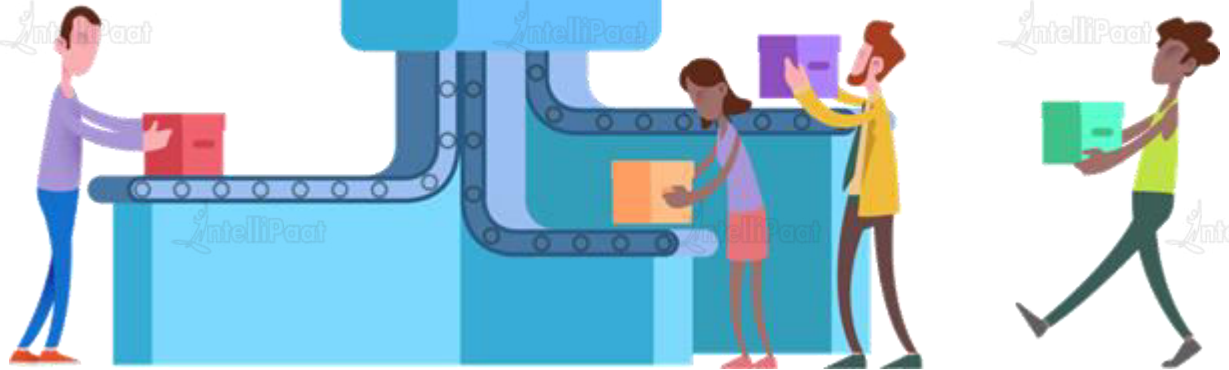


Manage all package types



Add packages to any pipeline

Azure Pipelines



Why Azure Pipelines



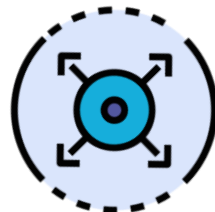
Azure cloud-hosted pipelines for Linux, MacOS, and Windows. Build any kind of application on Any Platform using Any Language and deploy it to any Cloud provider or on-premises.



**Any language,
any platform**



**Deploy to any
cloud**



**Advanced workflows
and features**



Extensible



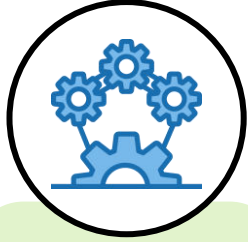
**Containers and
Kubernetes**

Azure Pipelines



Continuous delivery

process by which code is built, tested, and deployed to one or more stages



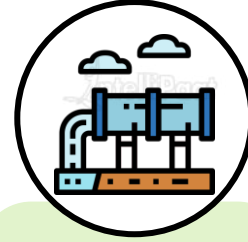
Continuous integration

practice used by development teams to simplify the testing and building of code



Environment

This is a collection of resources, and on which you can launch your application



Pipeline

It defines the multiple stages of CI and CD processes for your application



Run and Stage

Run is one execution of a pipeline and stage is a logical boundary in it

Build on Linux, macOS and Windows with Pipelines

Open source projects

10 Free

Parallel jobs with unlimited minutes per month

Start free >

Microsoft-hosted CI/CD

1 Free

Parallel job with up to 1,800 minutes per month

Then ₹2,643.85 per extra parallel job

Start free >

Self-hosted CI/CD

1 Free

Parallel job with unlimited minutes per month

Then ₹991.444 per extra parallel job

Start free >

Managing a DevOps project using Azure DevOps



- ✓ Creating a Azure DevOps organization
- ✓ Creating a Azure DevOps project
- ✓ Integrating GitHub with the DevOps project and Azure boards
- ✓ Creating a CI/CD pipeline for a Angular application (Build, staging and production)
- ✓ Use Azure Test and Feedback tool to identify and create work items and use manual tests to solve them
- ✓ Creating a dashboard for an overview of the DevOps project

Azure DevOps Demo Outline

Angular app on
local machine



*Changes made
and pushed*

GitHub account
with the repo



*CI/CD pipeline
starts build*

Azure Pipeline
build and release



*Doing some testing
on QA site*

Testing on the QA
server



*After test, approving
the deployment*

Integrating with
the GitHub repo



Summary



Summary





India : +91-7847955955

US : 1-800-216-8930 (TOLL FREE)



sales@intellipaate.com



24X7 Chat with our Course Advisor