Azure DevOps vs. GitHub

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https://azure.com/devops

At the beginning… Azure DevOps

Azure Boards

Deliver value to your users faster using proven agile tools to plan, track, and discuss work across your teams

Azure Pipelines

Build, test, and deploy with CI/CD that works with any language, platform, and cloud. Connect to GitHub or any other Git provider and deploy continuously

Azure Repos

Get unlimited, cloud-hosted private Git repos and collaborate to build better code with pull requests and advanced file management

Azure Test Plans

Test and ship with confidence using manual and exploratory testing tools

Azure Artifacts

Create, host, and share packages with your team, and add artifacts to your CI/CD pipelines with a single click

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Microsoft acquires GitHub for $7.5B

The planet’s largest developer platform

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Microsoft, trusted by enterprise development teams for decades

Now committed to the world’s largest developer community

Azure DevOps

Empowering 1000s of enterprises

15+ years of developer innovation

GitHub

The home of open source software

50 million+ users

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Cloud, On-Prem, or…

Both Azure DevOps and GitHub can be used in the cloud, or on-prem.
Not all the features are available in every version.

- Azure DevOps
- Azure DevOps Server
- GitHub Enterprise Cloud
- GitHub Enterprise Server
- GitHub AE

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Plan

GitHub Issues & Projects
GitHub + Azure Boards
GitHub Discussions

Visual Studio (incl. GitHub extensions)
GitHub Repos
Starter Templates
Codespaces
Dependabot
Code & Secret Scanning
Azure DevTest Labs

GitHub Actions (incl. CI/CD)

- GitHub + AKS
- GitHub + Azure App Service
- GitHub + Azure Key Vault
- GitHub + Azure Policy
- and more…

GitHub + Azure Pipelines
GitHub + Azure Resource Manager
GitHub Packages

GitHub + Azure AD
Azure Security Center
Azure Sentinel
Azure Monitor
GitHub Insights

GitHub Issues & Projects

Project management, made simple

Start with an issue

Create an issue to suggest a new idea or track a bug. Then organize and assign tasks to your team.

Link issues and pull requests

Track updates to your project without complicating your workflow by crosslinking between issues and pull requests anywhere in your GitHub organization.

See your work take shape with Projects

Visualize all of your work and prioritize it right alongside your code with projects boards. See what tasks are planned or in-progress, either in a repository or across your organization.

GitHub loves Azure Boards

Advanced project planning and tracking

Connected from idea to release

Track all your ideas at every development stage and keep your team aligned with all GitHub commits and pull requests, which can be linked directly to Azure Boards work items.

Scales to visualize all your work

Make all your work visible and control work-in-progress using a pre-configured Kanban board, whether you're working within 1 GitHub Repo, 100, or more.

Scrum ready, out-of-the-box

Use built-in scrum boards and agile planning tools to help your teams run sprints, stand-ups, and estimation against capacity.

GitHub Discussions BETA

Join the conversation for better planning

Open conversations about code and community

New threaded discussion format makes it easy to brainstorm feature ideas, help new users get their bearings, and collaborate on software.

Perfect for Q&A

Questions can be marked as answered, so over time a community's knowledge base grows naturally.

Familiar GitHub experience

Discussions live directly in your GitHub project repository, so they're accessible where your community is already working together.

Announcing new features for GitHub Issues BETA

Project planning for developers

Choose between Boards and Tables

Built like a spreadsheet, project tables give you a live canvas to filter, sort, and group issues and pull requests. Tailor them to your needs with custom fields and saved views.

Break issues into actionable tasks

Tackle complex issues with task lists and track their status with new progress indicators. Convert tasks into their own issues and navigate your work hierarchy.

Extend issues with custom fields

Track metadata like priority, story points, dates, notes, and links. Add custom fields to project tables and edit from the issue sidebar.

Automate with code

Automatically add issues to a project, triage them based on labels, and codify your team's process.

https://github.com/features/issues

Develop

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Codespaces BETA

Instant dev environments, running on Azure

Code without compromise

Code, build, test, debug, and deploy with a complete development environment in your browser, running on Azure.

Simplify your workflow

Automatically set up dependencies and SSH keys.
Go from code to commit faster on any project.

Extend and customize

Configure your editor with dotfiles and VS Code extensions to create a consistent environment in every Codespace.

https://github.com/features/codespaces

https://communitydays.it/events/2021/a07/

Dependabot

Automatically update vulnerable dependencies

Automated pull requests for security updates

Dependabot security updates keep your projects secure and up to date by monitoring them for vulnerable components. If a vulnerability is found, we'll automatically open a pull request with suggested fixes.

Integrated with developer workflow

Dependabot is integrated directly into the developer workflow for a frictionless experience and faster fixes.

Rich vulnerability data

GitHub tracks vulnerabilities in packages from supported package managers using data from security researchers, maintainers, and the National Vulnerability Database—including release notes, changelog entries, and commit details. All discoverable in the GitHub Advisory Database.

https://github.com/features/security

Code Scanning

Preventing vulnerabilities from the start

Find and fix vulnerabilities fast

Find and fix vulnerabilities before they are merged into the code base with automated CodeQL scans

Community of top security experts

Your projects are powered by world-class security teams. Use queries created by the security community in your projects.

Integrated with developer the workflow

Integrate security results directly into the developer workflow for a frictionless experience and faster development

https://github.com/features/security

Secret Scanning

Keeping your Azure secrets, a secret

Identifies secrets as early as possible

Finds secrets (including Azure secrets) the moment they are pushed to GitHub and immediately notifies developers when they are found.

Community of secret scanning partners

For every commit made to your repository and its full git history, we'll look for secret formats from secret scanning partners

Supports both public and private repos

Secret scanning watches both public and private repos for potential secret vulnerabilities.

https://github.com/features/security

Azure DevTest Labs

Fast, easy, and agile dev and test environments in Azure

Fast provisioning

Set up VMs in a few clicks, while leveraging reusable templates, custom images, and formulas.

Automation & self-service

Centrally manage dev environments across teams and conduct compatibility and automated testing.

Cost controls and governance

Minimize waste with quotas and policies, while minimizing cost with automated shutdowns.

http://aka.ms/azuredevtestlabs

Deliver

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GitHub Actions

Automate anything, including CI/CD

Accelerate delivery through automation

Automation triggers for 20+ project events allows for workflow automation beyond just CI/CD to any available API

Simple and easy to use

Configuration based on YAML with a host of sample workflows to learn from and get started

Global community for actions

Thousands of open source Actions, maintained by the community and by companies offering integrations, including Microsoft Azure

https://communitydays.it/events/2021/a04/

GitHub loves Azure Pipelines

Advanced cloud-hosted CI/CD pipelines

Any language, platform or cloud

Build, test, and deploy Node.js, Python, Java, PHP, Ruby, Go, C/C++, C#, Android, and iOS apps. Run in parallel on Linux, macOS, and Windows. Deploy to cloud providers like Azure, AWS, and GCP. Distribute mobile apps through beta channels and app stores.

Deep Integration between GitHub and Azure Pipelines

Track which code changes have been deployed to each stage in your pipeline.

Advanced workflows and features

Easy build chaining and multi-phased builds. Support for YAML, test integration, release gates, reporting, and more.

https://github.com/marketplace/azure-pipelines

GitHub Packages

Host your packages and code in one place

Authentication and permissions

Store your packages that inherit permissions in the same secure environment as your source code, all protected by your GitHub credentials.

Discover public and private packages

Explore and reuse your organization's private packages alongside public packages in GitHub.

Package insights

Find packages hosted on GitHub that include all the information you need: package contents, download statistics, version history, and more.

https://github.com/features/packages

Infrastructure as Code

- You need a way to automate resource creation and lifecycle management within your Pipelines/Actions.
- Infrastructure as Code is a way to implement this.

- There are a lot of sessions «related» to IaC during Community Days:
  - Costruisci la tua infrastruttura Azure con Project Bicep
  - Infrastructure as Code con Terraform
  - Pulumi e Azure: IAAC per dev alla massima potenza!
  - Azure ARM per le pipeline di CI/CD

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Operate

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GitHub loves Azure AD

Synchronize GitHub Users with Azure AD

Enforce a secure workplace identity

Automatically provision and de-provision user accounts from Azure AD to GitHub to enforce a secure workplace identity.

Leverage your existing Azure AD solution

Azure AD provisioning allows GitHub customers to leverage their existing Azure AD solution for group membership so that their administrators and developers can focus on their application development.

Improve auditability and security

Azure AD synchronization capability enables customers to reduce their administrative time, improve auditability, and increase user security.

GitHub Insights

Development metrics that matter

Get research-backed guidance

Make sure what you're measuring is making a difference with actionable, helpful, and impactful KPIs validated by the GitHub community

See progress in real-time

Visualize current activity, get up-to-date snapshots, and understand how your team collaborates as quickly as the work happens.

Ship faster through better process

Measure every step of your development process so teams can make decisions that shorten cycles and speed time to market.

https://github.com/features/insights

https://github.com/features
https://azure.com/devops

Azure DevOps & GitHub… Better together!

Azure Boards

Deliver value to your users faster using proven agile tools to plan, track, and discuss work across your teams

GitHub Issues BETA

The new features are on par with Azure Boards, but with a different approach.

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Azure Pipelines & GitHub Actions

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GitHub Actions can be also used for Automation, apart from CI/CD.

Azure Artifacts & GitHub Packages

Create, host, and share packages with your team, and add artifacts to your CI/CD pipelines.
GitHub Packages can be used as Container Images registry,

Azure Repos

Get unlimited, cloud-hosted private Git repos and collaborate to build better code with pull requests and advanced file management

GitHub Repos

Home to the most important open-source projects on the planet.

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Marketplace & Roadmap…

Both Azure DevOps and GitHub have a marketplace full of extensions.

Both have a defined roadmap for the next years.

- Extensions for Visual Studio family of products | Visual Studio Marketplace
- Azure DevOps Feature Timeline | Microsoft Docs
- Marketplace · Tools to improve your workflow · GitHub
- Projects · github/roadmap · GitHub
- GitHub Changelog

Microsoft DevOps Stories

Thank you!

- Slides and videos will be available in the next days on
  http://www.communitydays.it

Connect with me on LinkedIn

LinkedIn.com/in/geniodelmale

CommunityDays.it

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