

Build your world with .NET

Any app, any platform

- Web
- Cloud
- Desktop
- Gaming
- Mobile
- Artificial Intelligence/ Machine Learning (AI/ML)
- IoT (Internet of Things)

Scalable application architectures

- Microservices
- Cloud Design Patterns
- Serverless

Deployment to any point

Containerization and Hosting

- App Service, DockerHub, Kubernetes, AKS

Application Monitoring

- App Insights

Tools to get it done

- Visual Studio
- Visual Studio Code
- Visual Studio for Mac
- Visual Studio App Center
- Visual Studio Team Services
- .NET CLI (command-line-interface)

Components to get you started

- .NET Standard Libraries
- NuGet
- Identity and Security
- Data

A solid core

Multi-language

- C#
- F#
- Visual Basic

Cross-platform

- Windows (Desktop/Server/Nano)
- macOS
- Red Hat Enterprise Linux (RHEL)
- Debian
- Ubuntu
- Alpine

Performance and Reliability Open Source



Azure

kubernetes

Visual Studio

nuget

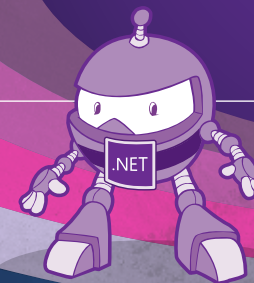
Windows

Linux

android

iOS

macOS



Any app, any platform

Web: Create scalable, high-performance websites and services that run on Windows, macOS, and Linux. <https://aka.ms/startweb>

Cloud: Create powerful, intelligent cloud apps with .NET using a fully managed platform. <https://aka.ms/startcloud>

Desktop: Create beautiful and compelling native desktop apps on Windows and macOS. <https://aka.ms/startdesktop>

Mobile: Use a single code base to build native mobile apps for iOS, Android, and Windows. <https://aka.ms/startmobile>

Gaming: Develop 2D and 3D games for the most popular desktops, phones, and consoles. <https://aka.ms/startgaming>

AI/ML (Artificial Intelligence and Machine Learning): Infuse AI and Machine Learning into your .NET apps such as vision algorithms, speech processing, predictive models, and more. <https://aka.ms/startai>

IoT (Internet of Things): Make IoT apps with native support for the Raspberry Pi and other single-board computers. <https://aka.ms/startiothings>

Scalable application architectures

Microservices: Microservices are highly scalable, resilient, and composable units of deployment for modern applications and .NET is a perfect platform for creating them. Get started with modern .NET application architectures. <https://aka.ms/startarch>

Cloud Design Patterns: Learn about the essential design patterns that are useful for building reliable, scalable, secure applications in the cloud. <https://aka.ms/startpatterns>

Serverless: Serverless computing is the abstraction of servers, infrastructure, and operating systems. When you build serverless apps, you can take your mind off infrastructure concerns. <https://aka.ms/startserverless>

Deployment to any point

Containerization and Hosting: Containers simplify deployment and testing by bundling a service and its dependencies into a single unit, which is then run in an isolated environment. Orchestrators such as Kubernetes automate deployment, scaling, and management of containerized applications.

- Docker container images for .NET on Linux and Windows are available on Docker Hub. <https://aka.ms/startdocker>
- Simplify the deployment, management, and operations of Kubernetes with AKS. <https://aka.ms/startaks>
- Quickly create powerful cloud apps with or without containers using a fully managed platform with App Service. <https://aka.ms/startappservice>

Application Monitoring: Get actionable insights through application performance management and instant analytics with App Insights. <https://aka.ms/startappinsights>

Tools to get it done

Visual Studio Family: Visual Studio provides best-in-class tools for any developer on any operating system. From advanced IDEs and editors to agile tools, CI/CD, monitoring, and learning, they have you covered. Get started for free. www.visualstudio.com

.NET CLI: The .NET CLI (command-line-interface) is a command line tool you can use with any editor to build many types of .NET apps. Get it with the .NET Core SDK. www.dot.net/core

Components to get you started

.NET Standard Libraries: .NET Standard allows sharing code and binaries between all .NET apps. It is an API specification that is implemented by all the flavors of .NET, making it simple to share libraries across the entire platform. <https://aka.ms/netstandardapis>

NuGet: From data components to UI controls and thousands more reusable libraries, the NuGet package manager helps you create .NET apps faster. www.nuget.org

^ solid core

Multi-language: You can write your .NET apps in multiple programming languages.

- **C# (c-sharp)** is a simple, modern, object-oriented, and type-safe programming language with roots in the C family of languages, making it immediately familiar to C, C++, Java, and JavaScript programmers. <https://aka.ms/start-csharp>
- **F# (f-sharp)** is a functional programming language that also includes object-oriented and imperative programming. <https://aka.ms/start-fsharp>
- **Visual Basic** is an approachable language with a simple syntax for building type-safe, object-oriented programs. <https://aka.ms/start-vb>

Cross-platform: Your .NET apps will run on a variety of operating systems, depending on the app you're building. For instance, web apps can be hosted on Windows, macOS, or multiple distros of Linux. Or build mobile apps for Android and iOS all with .NET.

Performance: .NET is fast. Really fast! .NET performs faster than any other popular framework on TechEmpower benchmarks. From providing safer, faster memory access with Span<T> to a faster just-in-time compiler, great performance is at the core of .NET. <https://aka.ms/dotnetperf>

Open Source: .NET is open source under the .NET Foundation. The .NET Foundation is an independent organization to foster open development and collaboration around the .NET ecosystem. www.dotnetfoundation.org

