



Web Application Programming Interface (API)

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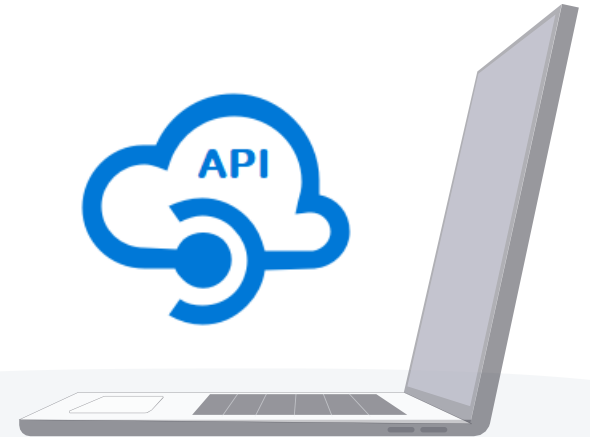
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Overview Of ASP.NET Core



ASP.Net Core is the latest version of Microsoft's .NET Framework, which is a free, open-source, general-purpose development platform. It's a cross-platform framework that works with Windows, Mac OS X, and Linux.





Many applications can be made using ASP.NET Core, Such as Internet of Things (IoT) apps, web apps, and mobile backends. Can run on the cloud or on-premises.





Why ASP.NET Core ?



- ☐ Architected for testability.
- ☐ Cross-platform and Open-source.
- ☐ A high-performance and lightweight framework.
- ☐ Ability to host on Docker, Apache, IIS, and self-hosting.
- ☐ A cloud-ready.
- ☐ Built-in dependency injection.





DI (Dependency Injection) is a design pattern for software. It enables us to write code that is loosely coupled. Dependency Injection's goal is to make code more manageable. Dependency Injection helps in the reduction of tight coupling between program components. Dependency Injection eliminates hard-coded dependencies between your classes by injecting them at runtime rather than at design time.





Differences between ASP.NET Core and ASP.NET



BASED ON	.NET Core	.NET Framework
Open Source	.Net Core is an open source.	The .Net Framework contains a few open source components.
Cross-Platform	(cross-platform) compatible with various operating systems — Windows, Linux, and Mac OS.	compatible with the only windows operating system.
Application Models	. Net Core does not support the development of desktop applications; instead, it is focused on the web, Windows Mobile, and the Windows Store.	. The Net Framework is used to create desktop and web applications, and it also supports WPF and Windows Forms applications.



BASED ON	.NET Core	.NET Framework
Compatibility	.NET Core is compatible with various operating systems — Windows, Linux, and Mac OS.	.NET Framework is compatible only with the Windows operating system.
Packaging and Shipping	.Net Core software is distributed as a collection of Nugget packages.	The .Net Framework libraries are all packaged and provided as a single unit.



BASED ON	.NET Core	.NET Framework
Support for Micro-Services and API Services	Micro-services may be created and implemented using .Net Core, and a REST API is created in order to accomplish this.	While REST API services are supported by .Net Framework, microservice creation and implementation are not.
Performance and Scalability	High performance and scalability are advantages of.NET Core.	In terms of performance and application scalability,.Net Framework performs less effectively than.Net Core.



Difference between MVC & Web API



While **Asp.Net MVC** is used to build web applications that provide both views and data, **Asp.Net Web API** is used to quickly and easily create HTTP services that just return data.





Web API will also take care of returning data in a certain format, such as JSON, XML, or any other dependent on the Accept header in the request, so you don't have to bother about it. JsonResult is an **MVC** feature that exclusively returns data in JSON format.





Use **ASP.Net MVC** if you want to provide services that are only relevant to one application. On the other hand, if your business requirements require you to offer the functionality generally, you would desire a **Web API** approach.





While the request is mapped to actions in **Web API** based on HTTP verbs, it is mapped to action names in **MVC**.

Additionally, **Web API** is a lightweight design that may be utilized with mobile apps in addition to web applications.





The ASP.NET Web API is a framework for creating HTTP-based services that can be used in a variety of applications on a variety of platforms, including web, Windows, and mobile. It functions in a similar way to an ASP.NET MVC web application, except instead of sending an HTML view, it transmits data as a response.





To communicate with the **Web API** server, the ASP.NET Web API framework contains a new HttpClient. HttpClient may be used in **ASP.MVC** server-side applications, Windows Forms applications, Console applications, and other applications.

