

.NET Core



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.NET Foundation
supporting open source .NET

What's .NET Core

A

跨平台

B

开源

C

强劲性能

D

一致API

E

支持命令行执行所有操作

A

模块化

B

新的.NETCore CLR

C

多样化部署方案

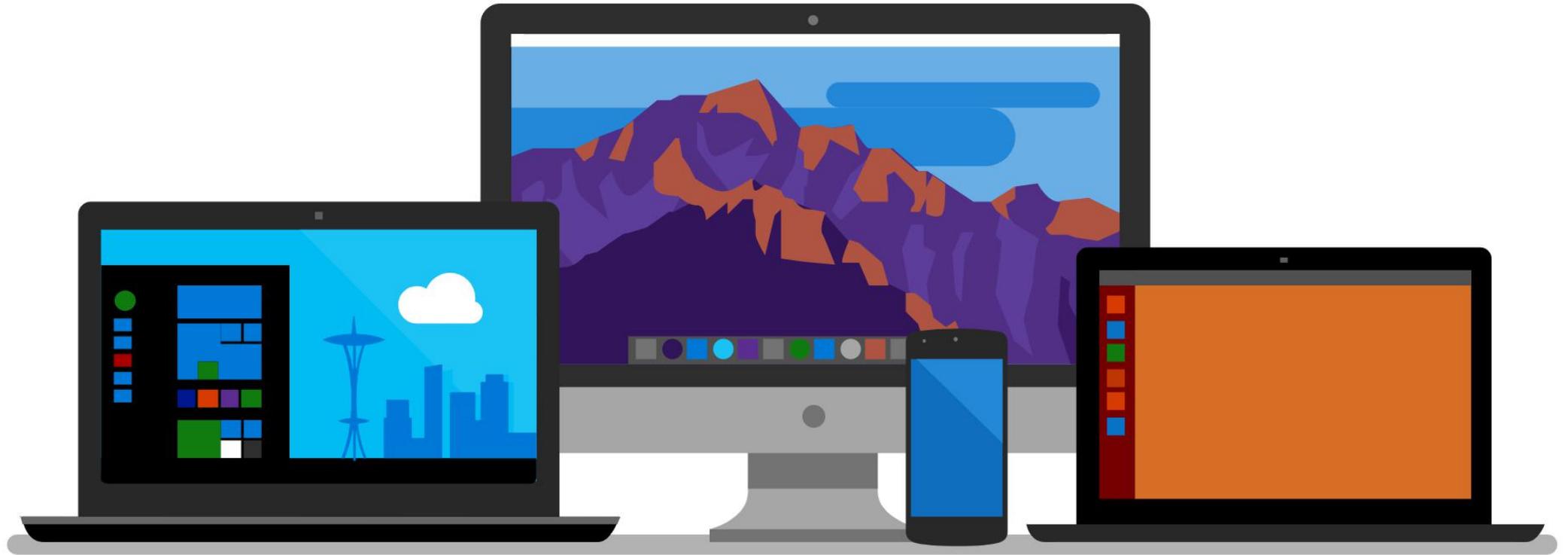
D

ASP.NETCore脱离System.Web.dll和IIS的依赖关系

Windows

Linux

macOS



Cross Platform

微软爱Linux

横跨主流PC操作系统:Windows;Linux;macOS

通过安装.NETCore SDK实现一致的体验

通过VisualStudio Code达到跨平台开发体验

Open source



不断增长的生态



一个庞大而不断增长的生态系

515



资料库

55



成员项目

25000



开发者贡献

1700



公司贡献

- .NET Core从属于.NET基金会，由微软进行官方支持。
- 使用最宽松的MIT和Apache 2开源协议，文档协议遵循CC-BY。这将允许任何人任何组织和企业任意处置，包括使用，复制，修改，合并，发表，分发，再授权，或者销售。唯一的限制是，软件中必须包含上述版权和许可提示，后者协议将会除了为用户提供版权许可之外，还有专利许可，并且授权是免费，无排他性的(任何个人和企业都能获得授权)并且永久不可撤销
- 源代码可在GitHub微软仓库下拉取



Performance



强劲性能

- .NETCore2.1通过Span<>; Memery<>优化以达到最高性能
- 普遍情况下.NETCore2.0速度快过.NET 400倍
- 某些条件下.NETCore2.1速度比.NETCore2.0又提高了40%
- TFB 最新asp.netcore明文每秒响应已达到700万

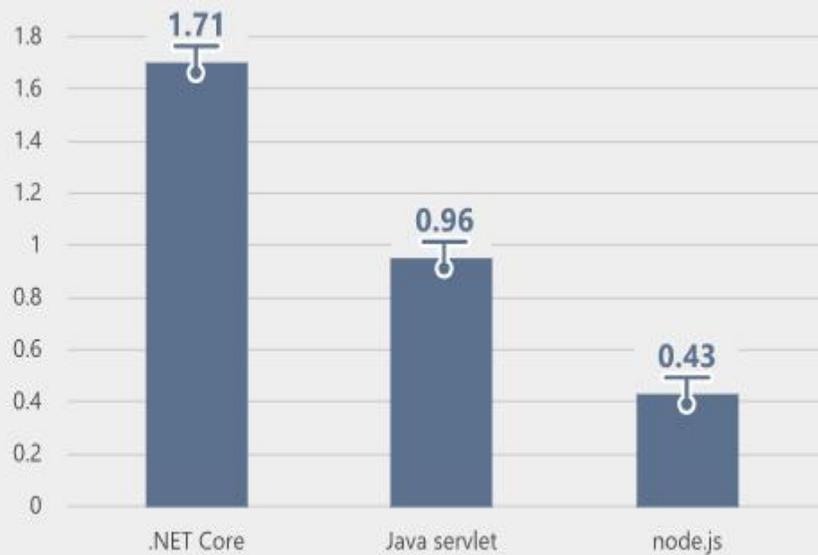


性能不断超越

TFB最新基准测试

JSON serialization	Single query	Multiple queries	Fortunes	Data updates	Plaintext	Physical	Cloud			
<h2>Plaintext</h2>										
Rank	Framework	Best performance (higher is better)	Score	OS	Eng	Plt	PE	POS	IA	Errors
1	ulib_plaintext_fit	7,029,080	100.0%	Plt	C++	Non	ULi	Lin	Rea	0
2	ulib	7,020,322	99.9%	Plt	C++	Non	ULi	Lin	Rea	0
3	wizzardo-http	7,018,370	99.8%	Mcr	Jav	Non	Non	Lin	Rea	0
4	aspcore	7,014,724	99.8%	Plt	C#	.NE	kes	Lin	Rea	0
5	tokio-minihttp	7,012,085	99.8%	Mcr	Rus	Rus	tok	Lin	Rea	0
6	fasthttp	7,004,909	99.7%	Plt	Go	Non	Non	Lin	Rea	0
7	rapidoid	7,003,652	99.6%	Plt	Jav	Rap	Non	Lin	Rea	0
8	libreactor	6,994,414	99.5%	Mcr	C	Non	Non	Lin	Rea	0
9	rapidoid-http-fast	6,990,339	99.4%	Plt	Jav	Rap	Non	Lin	Rea	0
10	may-minihttp	6,974,639	99.2%	Mcr	Rus	Rus	may	Lin	Rea	0
11	actix	6,705,156	95.4%	Mcr	Rus	Non	act	Lin	Rea	0

[.NETCore2.1性能改进](#)



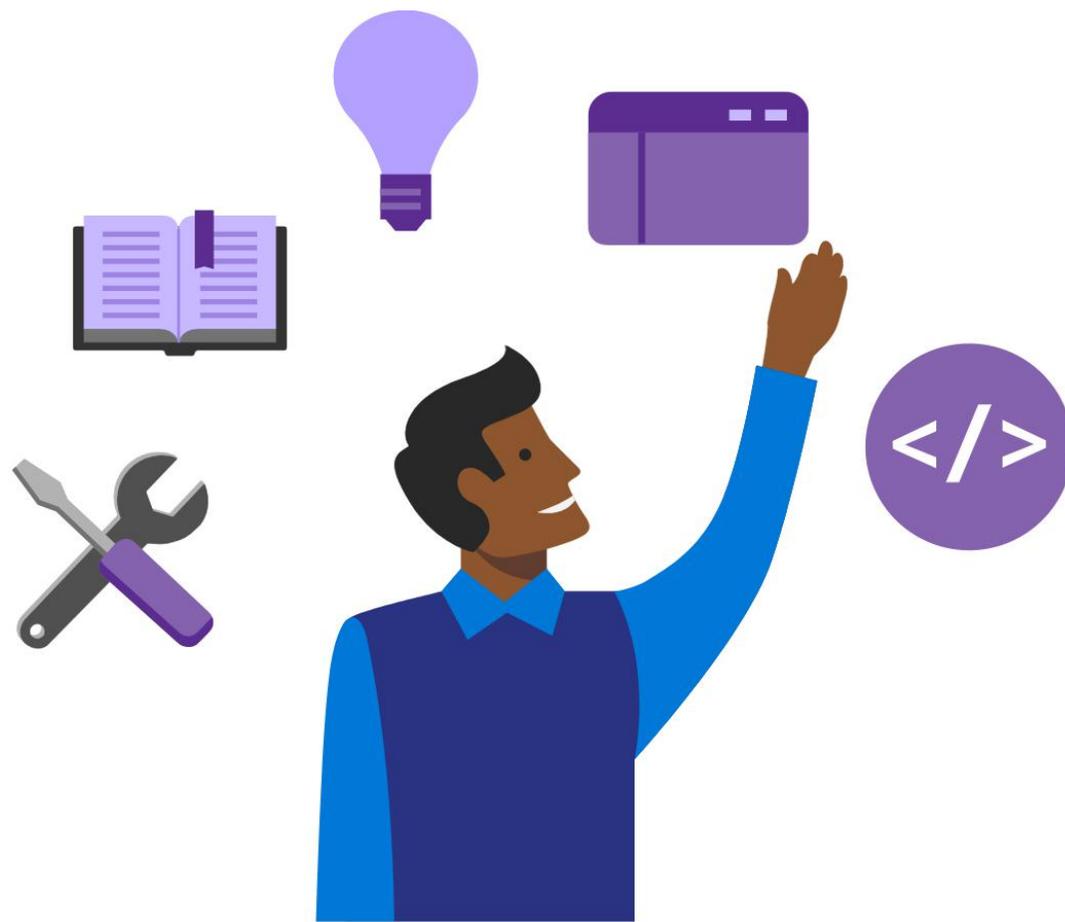
请求/秒 (百万) 根据[TechEmpower第14轮](#)可用的官方测试。

快速和可扩展

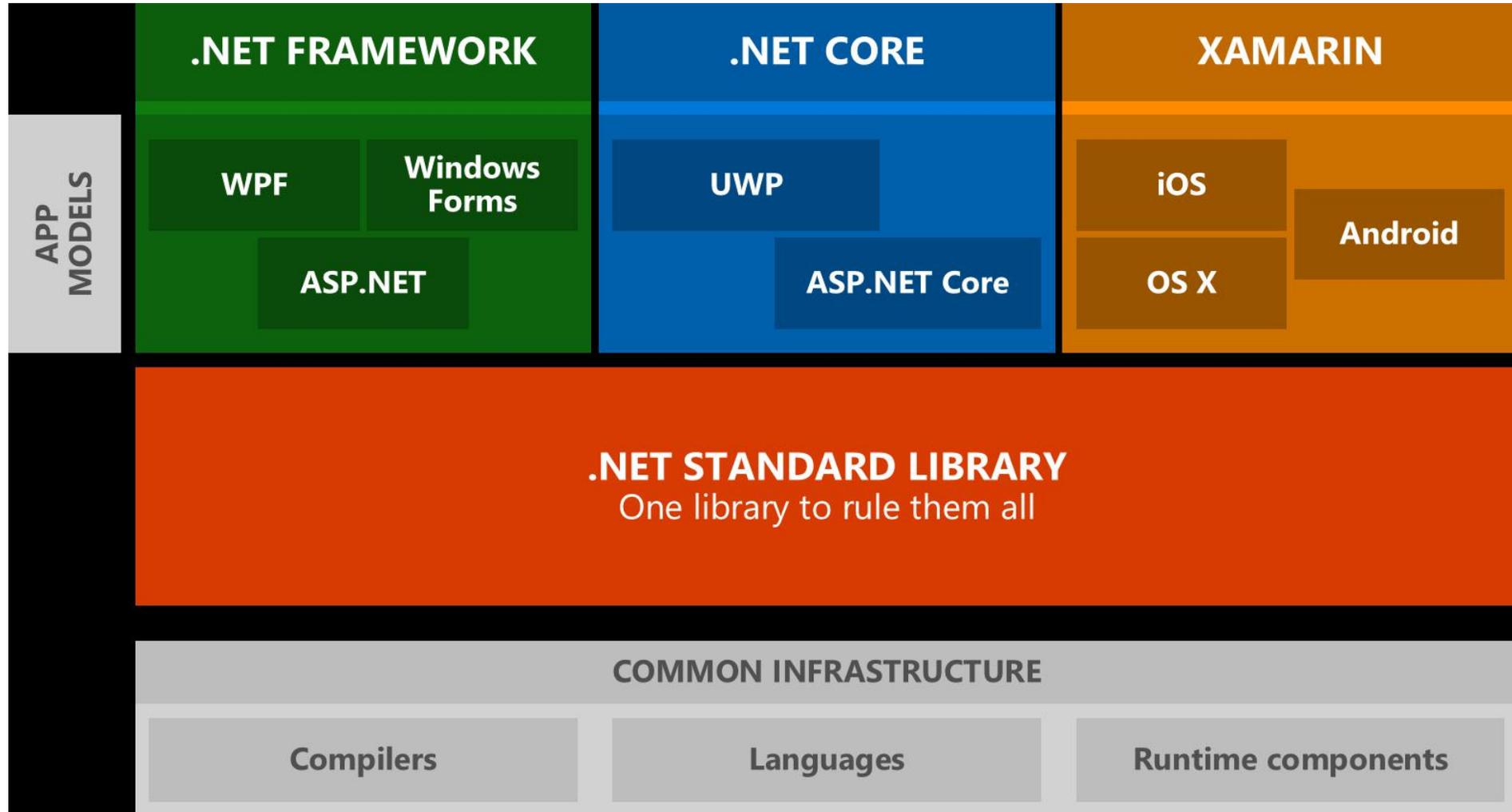
.NET很快。真的很快。适用于Windows, iOS和Android的设备应用程序以本机方式运行, 因此您可以创建使用所有设备功能的丰富和流畅的应用程序。

在服务器端, .NET Core比任何其他流行的框架执行得更快。这意味着应用程序提供更好的响应时间并且需要更少的计算能力

一致API



支持.NET Standard规范



.NET标准的所有版本和支持的平台：

.NET implementation support

The following table lists all versions of .NET Standard and the platforms supported:

.NET Standard	1.0	1.1	1.2	1.3	1.4	1.5	1.6	2.0
.NET Core	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0
.NET Framework ¹	4.5	4.5	4.5.1	4.6	4.6.1	4.6.1	4.6.1	4.6.1
Mono	4.6	4.6	4.6	4.6	4.6	4.6	4.6	5.4
Xamarin.iOS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.14
Xamarin.Mac	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.8
Xamarin.Android	7.0	7.0	7.0	7.0	7.0	7.0	7.0	8.0
Universal Windows Platform	10.0	10.0	10.0	10.0	10.0	10.0.16299	10.0.16299	10.0.16299
Windows	8.0	8.0	8.1					
Windows Phone	8.1	8.1	8.1					
Windows Phone Silverlight	8.0							

版本越高，可用的API就越多。

版本越低，实现它的平台就越多

.NET Standard与平台无关

由.NET实现者维护，主要是Microsoft(.NET Framework, .NET Core和Mono)

和Unity

- 通过支持.NET Standard规范达到代码的共享
- Web开发
- Xbox
- IoT
- MI.Net
- Xamarin开发

Your platform for building **anything**



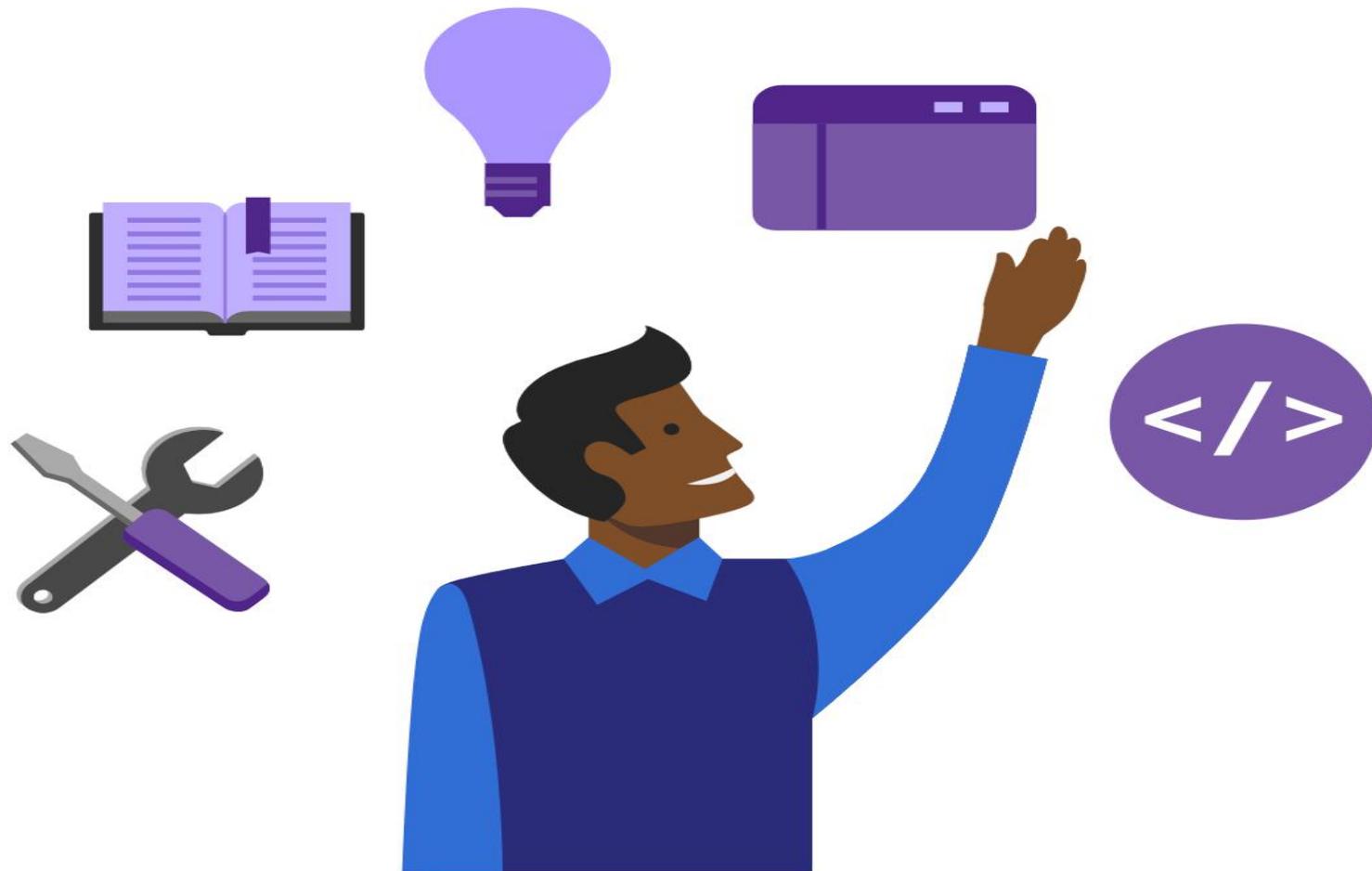
.NET Core的CLI工具



- 提供了.NETCore所有的构建指令工具快速构建
- new
- restore
- build
- publish
- run
- test
- vstest
- pack
- migrate
- clean
- sln
- help
- store

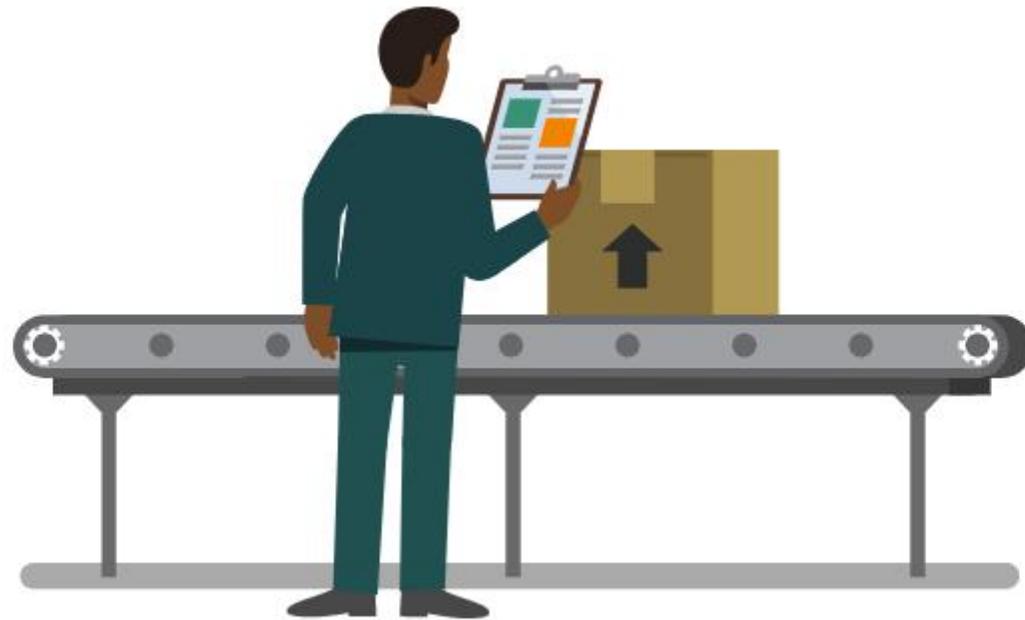
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模块化



- Asp.Net Core是一个模块化框架，即应用程序可以使用最少的必需框架组件运行。所需的框架组件只能包含在应用程序中，而不像传统的Asp.Net，它运行在完整的.Net框架中。
- 包括运行时在内的所有组件均可作为Nuget包使用。

新的.NETCore CLR



- 基于平台抽象层
- 重新实现.NET CLR 到跨平台的.NET Core CLR

多样化部署



- 应用程序可以作为自包含发布（包含.NET运行时dll文件）
- 与框架相关的应用程序发布
- 更容易的发布到Docker容器
- 脱离Windows的IIS使用代理转发更容易的使用流行服务器

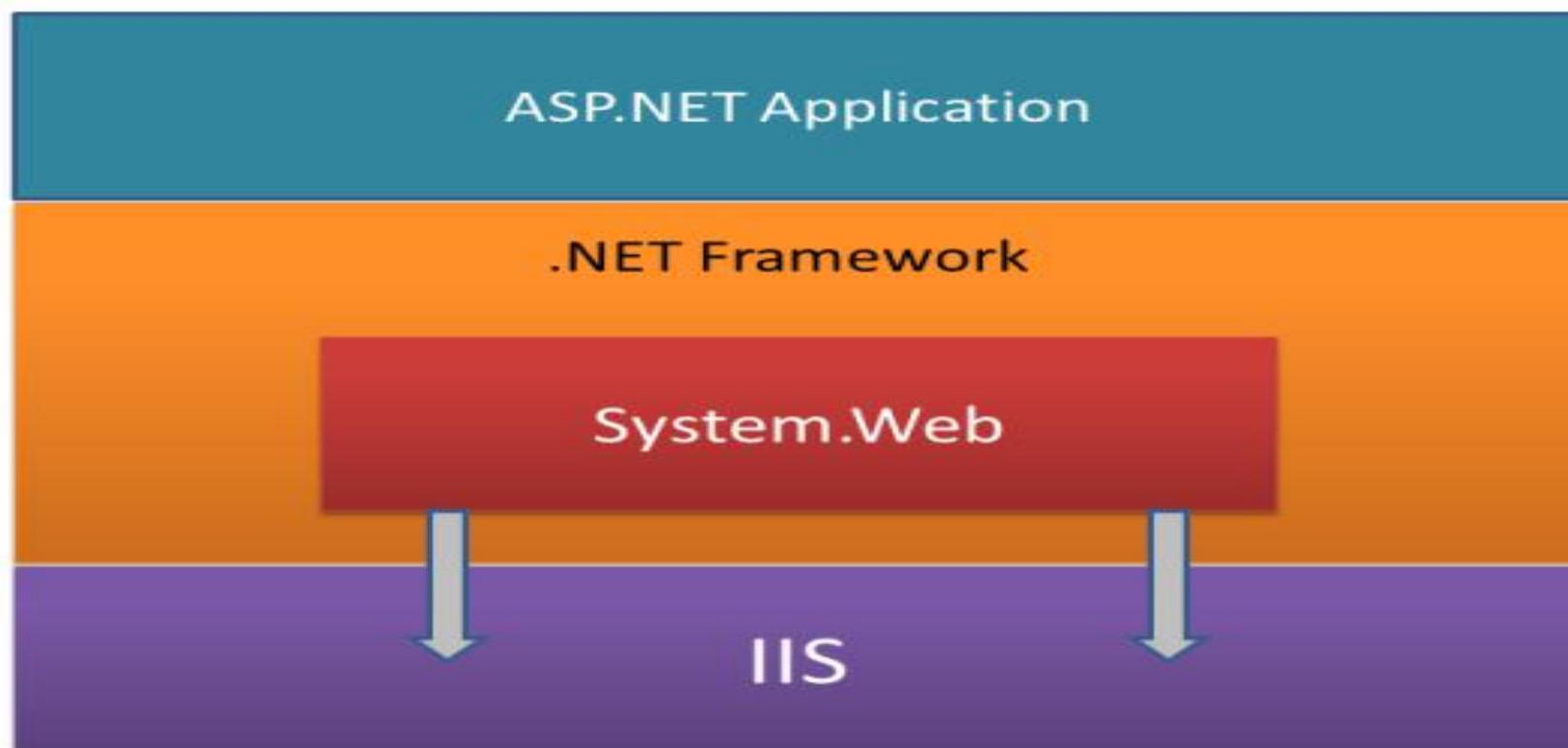
ASP.NET Core脱离System.Web.dll和IIS的依赖关系



- ASP.NET Core支持OWIN规范。它有一个新的OWIN实现
- 没有与System.Web.dll和IIS的依赖关系
- 支持Asp.Net Core Middleware（从OWIN中间件发展而来）
- 脱离依赖于IIS的HttpHandlers和HttpModules进行请求/响应过滤

- 它配备了自己的称为Kestrel的跨平台网络服务器。Asp.NetCore应用程序可以使用Kestrel托管在最常见的网络服务器（如Nginx, Apache, IIS等）转发请求。这些Web服务器充当反向代理，将请求转发给Kestrel服务器。它可以自行托管。

丢弃IIS托管代码





WHO



Stack Overflow

"The Microsoft technology made it easy for us. It just works. We saved months of development time in the process."

- George Beech, System Administrator

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Tencent

"Microsoft designed .NET Core with a microservice architecture in mind, and that fits right in with our redesign plans."

- Shanyou Zhang, Senior Software Architect

[Read story](#)

Tencent 腾讯

NetEase

".NET Core doesn't just help us get to market faster, it also enables our developers to focus on the core logic and what really matters, our players' experience. They don't have to deal with the communication gap and different ways of implementing the algorithm on the back and front end. They can just work on finding better ways to implement their ideas."

- Feng Zhou, Product Director

[Read story](#)





Age of Ascent, Illyriad Games

"Our game microservices are built using ASP.NET Core which gives us superior performance. ASP.NET is open source, that allows us to contribute back to it if we have any performance issues which Microsoft review and together we make a better product."

- Ben Adams, CTO and Co-founder

[Read story](#)

RAYGUN

Raygun

"Using the same-size server, we were able to go from 1,000 requests per second per node with Node.js to 20,000 requests per second with .NET Core."

- John-Daniel Trask, CEO and Co-Founder

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United Parcel Service (UPS)

"Xamarin allowed us to develop a single code base in C# and deploy the application to two completely different mobile phone ecosystems."

- Scott Hildebrand, Application Development Manager

[Read story](#)



SONY

jet



The image features a dark, textured background, possibly representing water or a night sky. A prominent, bright pink rectangular border frames the central content. Inside this border, the words "THANK YOU" are written in a large, bold, white, sans-serif font. The text is centered horizontally and vertically within the pink frame. In the background, behind the text, there are faint silhouettes of mountains and a small sailboat on the left side.

THANK YOU