

.NET 6 – Stand der Dinge



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Meine Person- Thorsten Kansy

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Entwickler, Trainer & Fachautor



Azure Cosmos DB

Mein Service- Ihr Benefit

- Individuelle Inhouse Trainings
- (Online on-demand) Projektbegleitung
- Beratung
 - Problemanalyse und Lösungen
 - Technologieentscheidungen



Agenda

- .NET Core Roadmap
- Übersicht
- Was kann .NET 6 und was nicht?
- Fazit

A photograph of two farmers working in a flooded rice paddy. The farmer on the left is wearing a pink and white patterned shirt and a traditional conical hat. The farmer on the right is wearing a yellow shirt and a similar conical hat. They are both bent over, working in the shallow water. The background shows a vast expanse of green rice plants under a clear sky.

Verwendete Software

Verwendete Software

- Visual Studio 2022 17.2+
- .NET 6

About Microsoft Visual Studio

? X

Visual Studio

[License status](#)

[License terms](#)

Microsoft Visual Studio Professional 2022 (64-bit) - Current
Version 17.2.1
© 2022 Microsoft Corporation.
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Microsoft .NET Framework
Version 4.8.04161
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Installed products:

Visual C++ 2022 - 00476-80000-00000-AA667
.NET Core Debugging with WSL - 1.0
ADL Tools Service Provider - 1.0
ASA Service Provider - 1.0
ASP.NET and Web Tools 2019 - 17.2.388.21846
Azure App Service Tools v3.0.0 - 17.2.388.21846
Azure Data Lake Tools for Visual Studio - 2.6.5000.0
Azure Functions and Web Jobs Tools - 17.2.388.21846
Azure Stream Analytics Tools for Visual Studio - 2.6.5000.0
C# Tools - 4.2.0-4.22252.24+47cdc16a21bbb8a4aadfb666h011e2050e1be5d2

Copy Info

System Info

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Product details:

Microsoft Visual C++ 2022

Warning: This computer program is protected by copyright law and international treaties. Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under the law.

OK



„One .NET“ Roadmap

„One .NET“

- Offizieller Name: .NET 6 (ohne "Core", ohne ".0")
- Aber ASP.NET Core 6.0 und Entity Framework Core 6.0
- Microsoft hält sich aber selbst nicht überall daran

.NET Core Roadmap

Upcoming Ship Dates

Milestone	Release Date
.NET Core 3.1.x	LTS (Long Term Support) release. Approximately every 1-2 months or as needed.
.NET 5.0	Current release. Approximately every 1-2 months or as needed.
.NET 6.0	LTS (Long Term Support) release. Approximately every 1-2 months or as needed.
.NET 7.0	Release scheduled for November 2022
.NET 8.0	LTS (Long Term Support) release, scheduled for November 2023



<https://github.com/dotnet/core/blob/master/roadmap.md>

GA & LTS



- **.NET Core 3.1 (03.12.2019)**
- .NET 5.0 Nov 2020
- **.NET 6 (09.11.2021)**
- Major releases every year
- LTS (Long Term Support, 3 Jahre) grade Versionen



<https://www.microsoft.com/en-us/build>



<https://github.com/dotnet/core/blob/master/roadmap.md>

Und .NET Framework?

- .NET Framework 4.8 ist die letzte .NET Framework Feature-Version
- Migration auf 4.8 nur bei neuen Features notwendig

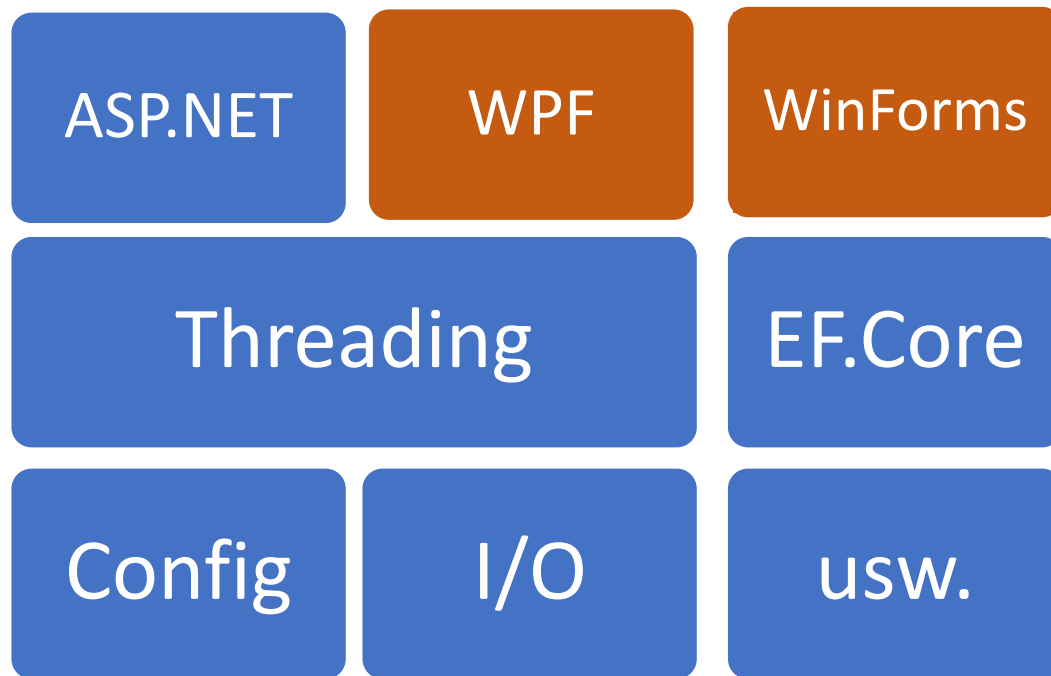


Übersicht

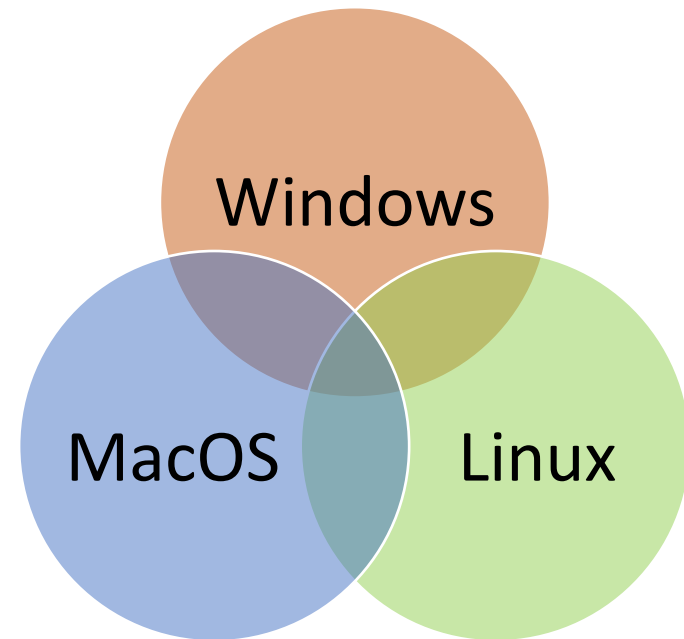


.NET-Core-Aufbau

Modular



Multi Plattform

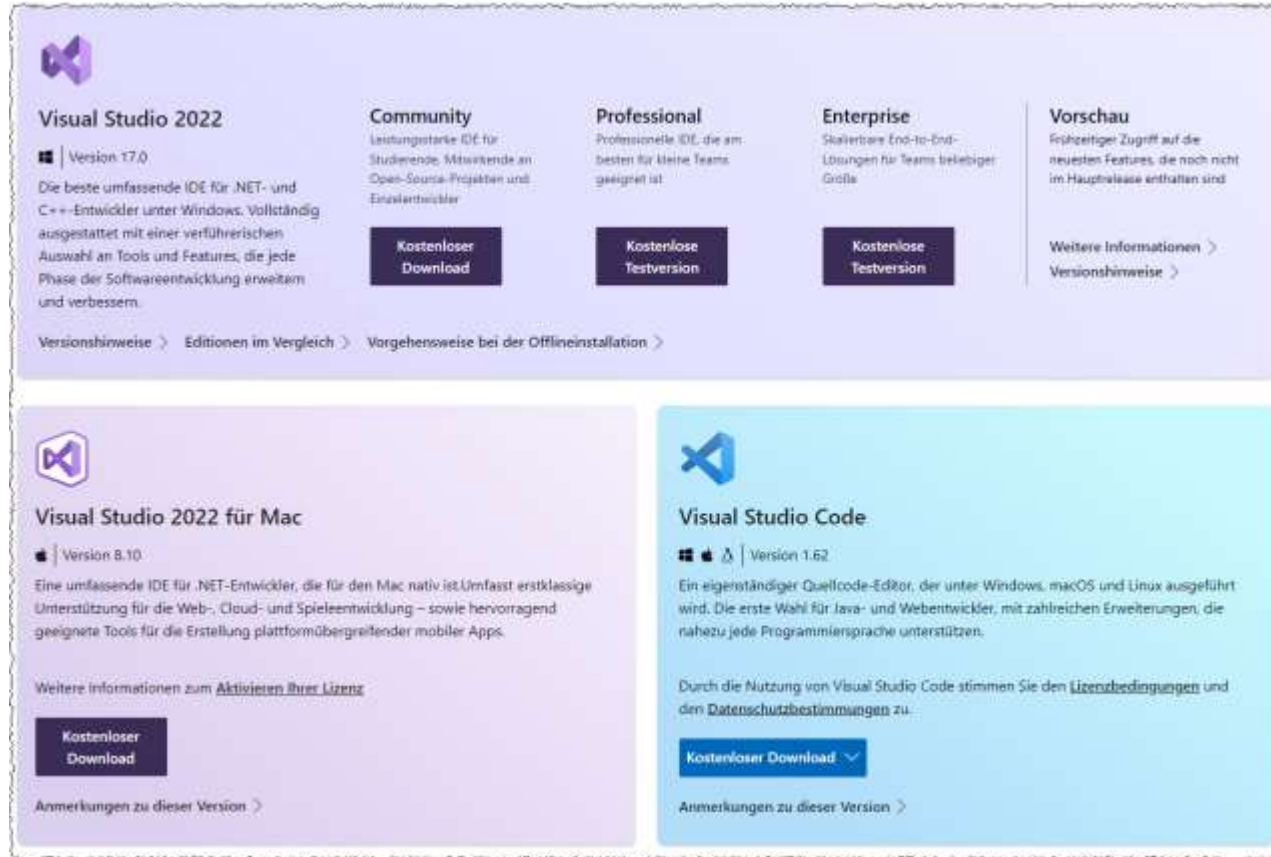


Was spricht für .NET?

- Multiplattform
 - Windows
 - Linux
 - MacOS
- Höhere Performance
 - Modularität
 - ASP.NET, z. B. Entkopplung von `System.Web.dll`
- Geringerer Ressourcenverbrauch
 - Modularität



Visual Studio in Stellung bringen



The screenshot displays the Visual Studio website's download section. It features five main cards: Visual Studio 2022 (Community, Professional, Enterprise), Visual Studio 2022 für Mac, and Visual Studio Code. Each card includes the product name, version number, a brief description, and a 'Kostenloser Download' button. The Visual Studio 2022 card also includes links for 'Versionshinweise', 'Editionen im Vergleich', and 'Vorgehensweise bei der Offlineinstallation'. The Visual Studio Code card includes links for 'Lizenzbedingungen' and 'Datenschutzbestimmungen'.

Visual Studio 2022
Version 17.0
Die beste umfassende IDE für .NET- und C++-Entwickler unter Windows. Vollständig ausgestattet mit einer verführerischen Auswahl an Tools und Features, die jede Phase der Softwareentwicklung erweitern und verbessern.
Kostenloser Download
Versionshinweise > Editionen im Vergleich > Vorgehensweise bei der Offlineinstallation >

Community
Leistungstarke IDE für Studierende, Mitwirkende an Open-Source-Projekten und Einzelentwickler
Kostenlose Testversion

Professional
Professionelle IDE, die am besten für kleine Teams geeignet ist
Kostenlose Testversion

Enterprise
Skalierbare End-to-End-Lösungen für Teams beliebiger Größe
Kostenlose Testversion

Vorschau
Frühzeitiger Zugriff auf die neuesten Features, die noch nicht im Hauptrelease enthalten sind
Weitere Informationen > Versionshinweise >

Visual Studio 2022 für Mac
Version 8.10
Eine umfassende IDE für .NET-Entwickler, die für den Mac nativ ist. Umfasst erstklassige Unterstützung für die Web-, Cloud- und Spieleentwicklung – sowie hervorragend geeignete Tools für die Erstellung plattformübergreifender mobiler Apps.
Kostenloser Download
Anmerkungen zu dieser Version >

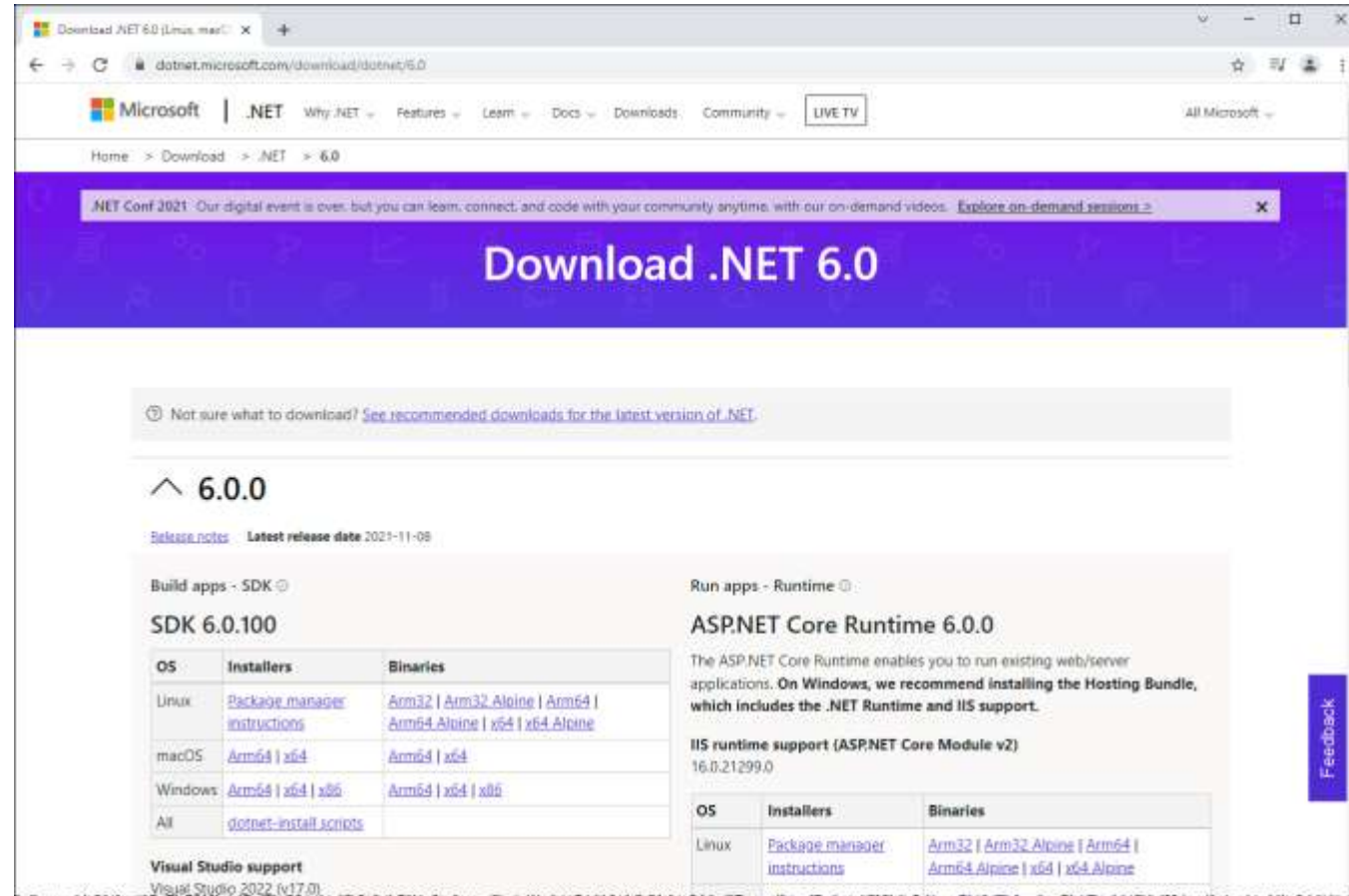
Visual Studio Code
Version 1.62
Ein eigenständiger Quellcode-Editor, der unter Windows, macOS und Linux ausgeführt wird. Die erste Wahl für Java- und Webentwickler, mit zahlreichen Erweiterungen, die nahezu jede Programmiersprache unterstützen.
Kostenloser Download
Anmerkungen zu dieser Version >



<https://www.visualstudio.com/de/downloads>

.NET Core in Stellung bringen

- Windows
- Linux
- MacOS



The screenshot shows the Microsoft .NET 6.0 download page. The page has a blue header with the Microsoft logo and navigation links. Below the header, there's a purple banner that says "Download .NET 6.0". Underneath the banner, there's a section for "6.0.0" with a "Release notes" link and the latest release date "2021-11-08". The page is divided into two main sections: "Build apps - SDK" and "Run apps - Runtime".

Build apps - SDK

SDK 6.0.100

OS	Installers	Binaries
Linux	Package manager instructions	Arm32 Arm32 Alpine Arm64 Arm64 Alpine x86 x64 Alpine
macOS	Arm64 x64	Arm64 x64
Windows	Arm64 x64 x86	Arm64 x64 x86
All	dotnet-install scripts	

Visual Studio support
Visual Studio 2022 (v17.0)

Run apps - Runtime

ASP.NET Core Runtime 6.0.0

The ASP.NET Core Runtime enables you to run existing web/server applications. On Windows, we recommend installing the **Hosting Bundle**, which includes the .NET Runtime and IIS support.

IIS runtime support (ASP.NET Core Module v2)
16.0.21299.0

OS	Installers	Binaries
Linux	Package manager instructions	Arm32 Arm32 Alpine Arm64 Arm64 Alpine x64 x64 Alpine

Feedback



<https://dotnet.microsoft.com/download/dotnet/6.0>

 Demo 



Was kann .NET 6 und was nicht?

Was wird nicht mehr unterstützt?

- ASP.NET Webforms
- ASP.NET Webservices
- .NET Remoting
- WCF (REST & SOAP) => CoreWCF
- Windows Workflow Foundation (WF)
- Xamarin

Windows Compatibility Pack

- Code Pages
- CodeDom
- Configuration
- Directory Services
- Drawing
- ODBC
- Permissions
- Ports
- Windows Access Control Lists (ACL)
- Windows Communication Foundation (WCF)
- Windows Cryptography
- Windows EventLog
- Windows Management Instrumentation (WMI)
- Windows Performance Counters
- Windows Registry
- Windows Runtime Caching
- Windows Services



<https://docs.microsoft.com/en-us/dotnet/core/porting/windows-compat-pack>

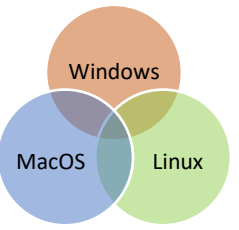
Multi-Plattform-Code

Einsatz mit Guarding

```
if (RuntimeInformation.IsOSPlatform(OSPlatform.Windows))
{
    // Windows Code, Zugriff auf Registry
    using (RegistryKey key = Registry.CurrentUser.OpenSubKey(@"Software\Fabrikam\AssetManagement"))
    {
        if (key?.GetValue("LoggingDirectoryPath") is string configuredPath)
            Console.WriteLine(configuredPath);
    }
}
else if (RuntimeInformation.IsOSPlatform(OSPlatform.Linux))
{
    // Linux Code
    // ...
}
```

```
Install-Package Microsoft.Windows.Compatibility
```

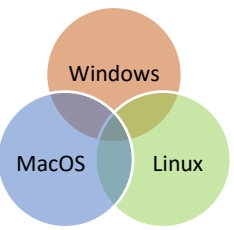
```
Install-Package Microsoft.DotNet.Analyzers.Compatibility
```

Entity Framework Core

- Relationale Datenbanken
 - SQL Server
 - DB2
 - Oracle
 - MySQL
 - PostgreSQL
 - ...
- NoSQL Datenbanken
 - Azure Cosmos DB

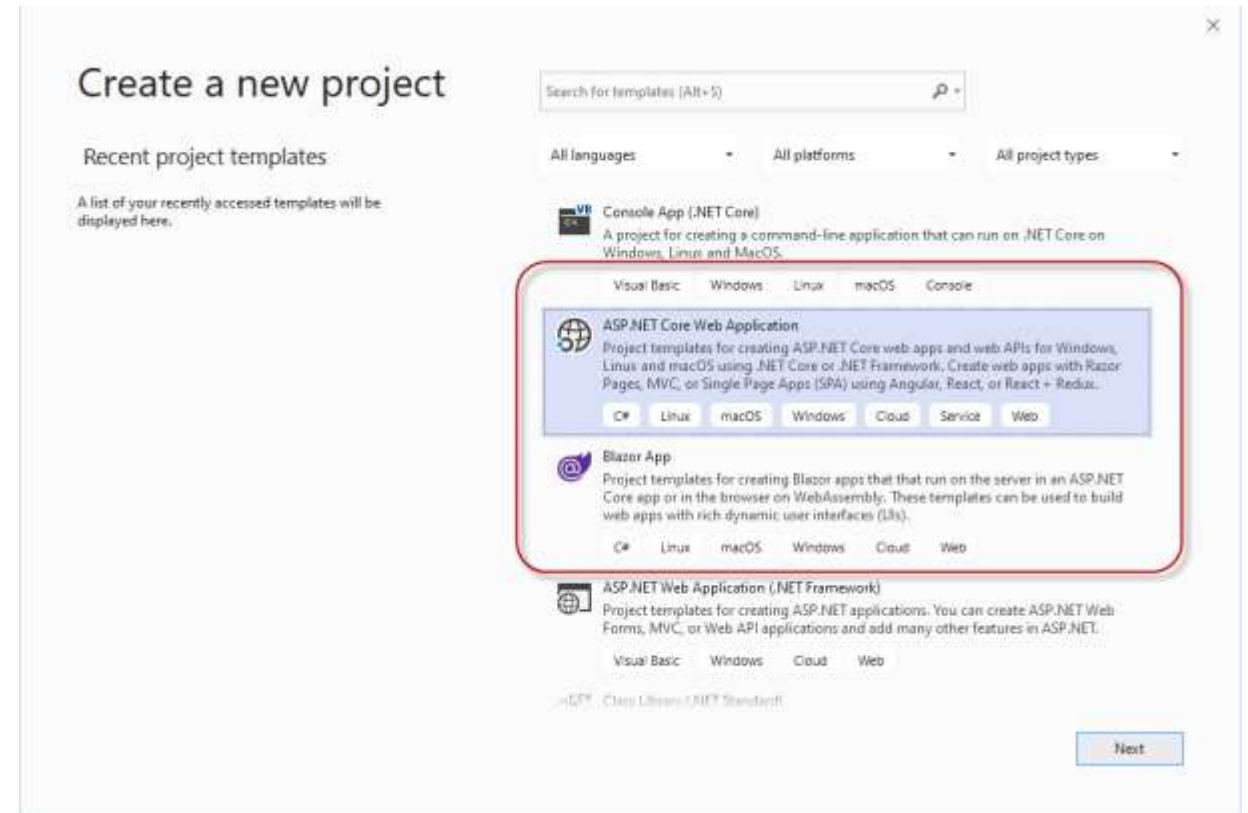
 Demo 



ASP.NET Core (Razor, Blazor, WebAPI)

Fehlendes:

-

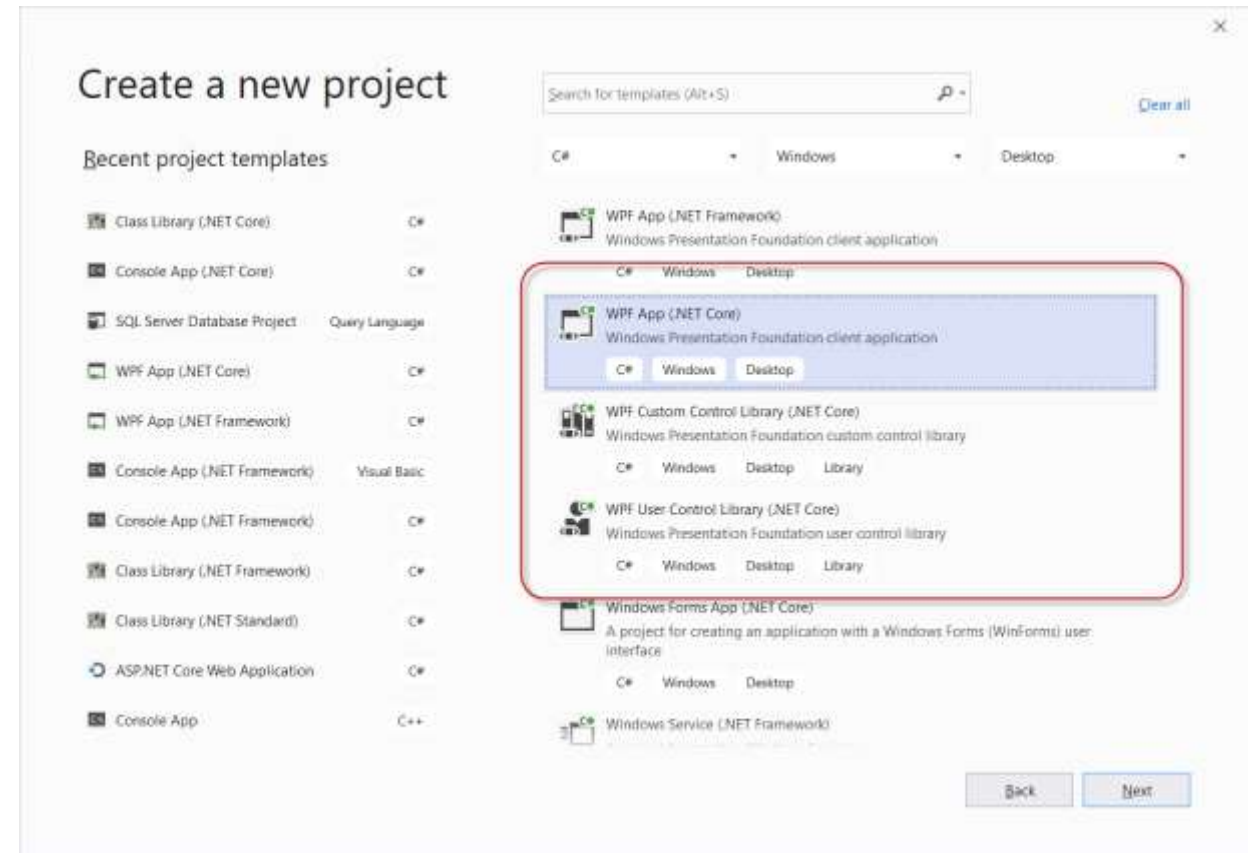


 Demo 

Windows Presentation Foundation

Fehlendes:

- -



<https://devblogs.microsoft.com/dotnet/introducing-net-core-windows-forms-designer-preview-1/>

Sogar neue Features

- Hot reload
- Blazor Desktop Integration (WebView2 mit Chromium engine)
- ...

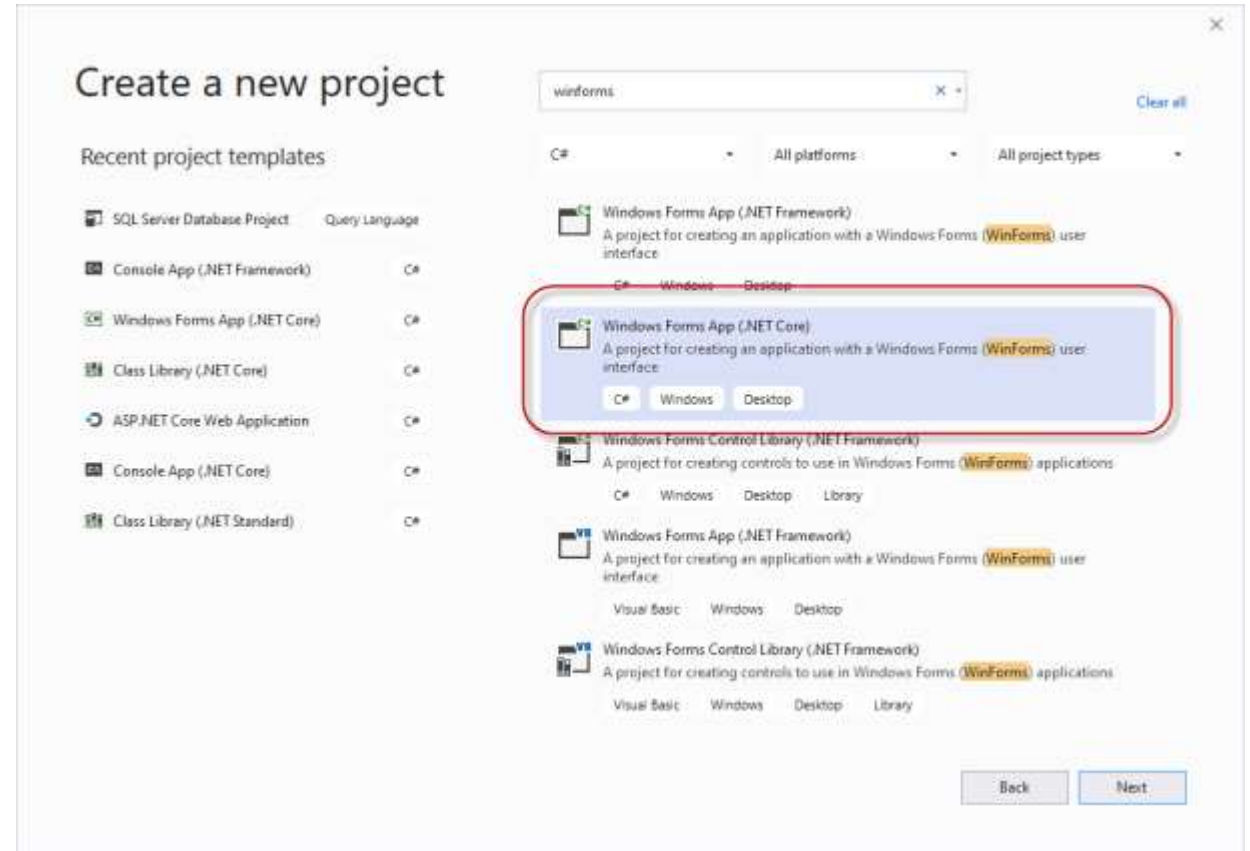
Demo

WinForms

Fehlendes:

- Alte Controls

Old Control (API)	Recommended Replacement	Other associated APIs removed
DataGrid	DataGridView	DataGridCell, DataGridRow, DataGridTableCollection, DataGridColumnCollection, DataGridTableStyle, DataGridColumnStyle, DataGridLineStyle, DataGridParentRowLabel, DataGridParentRowLabelStyle, DataGridBoolColumn, DataGridTextBoxColumn, GridColumnStylesCollection, GridTableStylesCollection, HitTestType
ToolBar	ToolStrip	ToolBarAppearance
ToolBarButton	ToolStripButton	ToolBarButtonClickEventArgs, ToolBarButtonClickEventHandler, ToolBarButtonStyle, ToolBarTextAlign
ContextMenu	ContextMenuStrip	
Menu	ToolStripDropDown, ToolStripDropDownMenu	MenuItemCollection
MainMenu	MenuStrip	
MenuItem	ToolStripMenuItem	



<https://devblogs.microsoft.com/dotnet/introducing-net-core-windows-forms-designer-preview-1/>

Fehlendes: Alte Controls

Old Control (API)	Recommended Replacement	Other associated APIs removed
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ToolBar	ToolStrip	ToolBarAppearance
ToolBarButton	ToolStripButton	ToolBarButtonClickEventArgs, ToolBarButtonClickEventHandler, ToolBarButtonStyle, ToolBarTextAlign
ContextMenu	ContextMenuStrip	
Menu	ToolStripDropDown, ToolStripDropDownMenu	MenuItemCollection
MainMenu	MenuStrip	
MenuItem	ToolStripMenuItem	

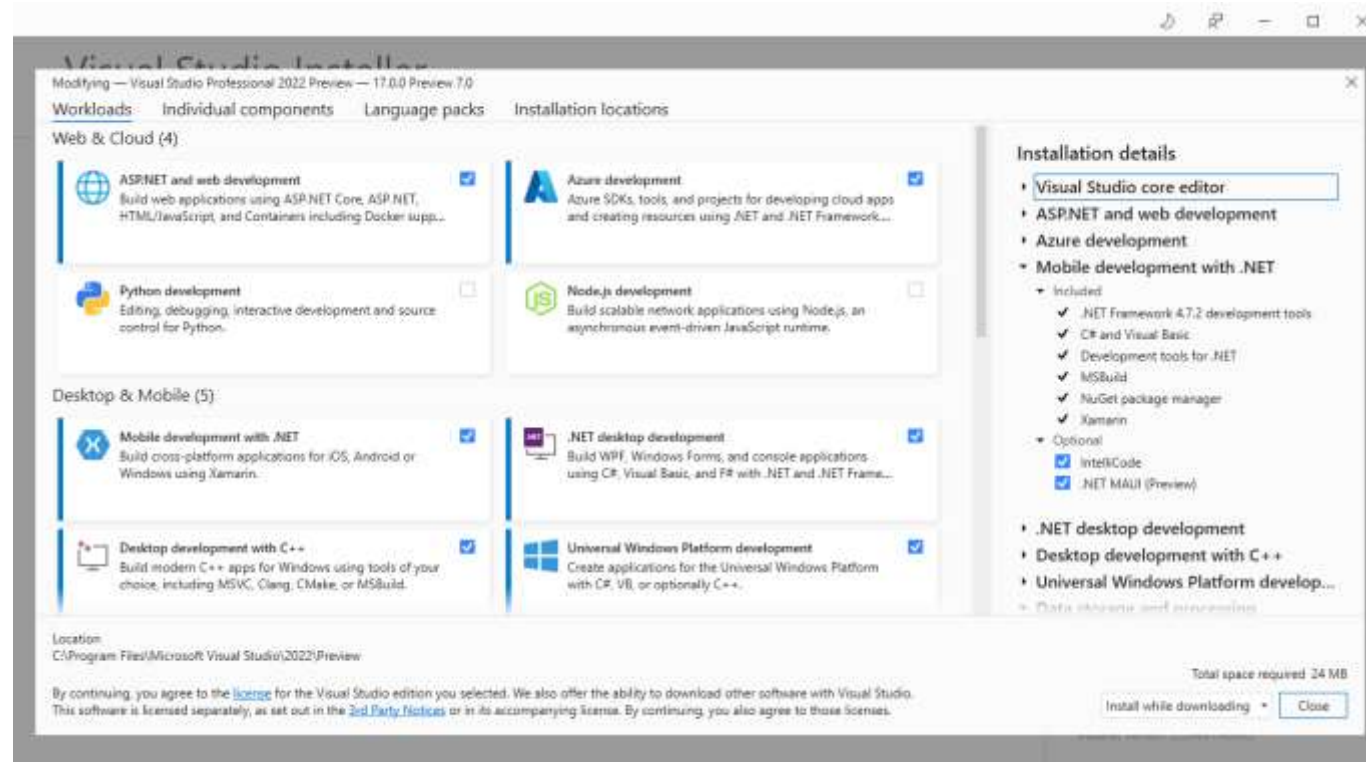
Dafür neue Features

- Hot reload
- Blazor Desktop Integration (WebView2 mit Chromium engine)
- Application-wide default font
- More runtime designers
- Accessibility improvements
- High DPI Support
- ...

Demo

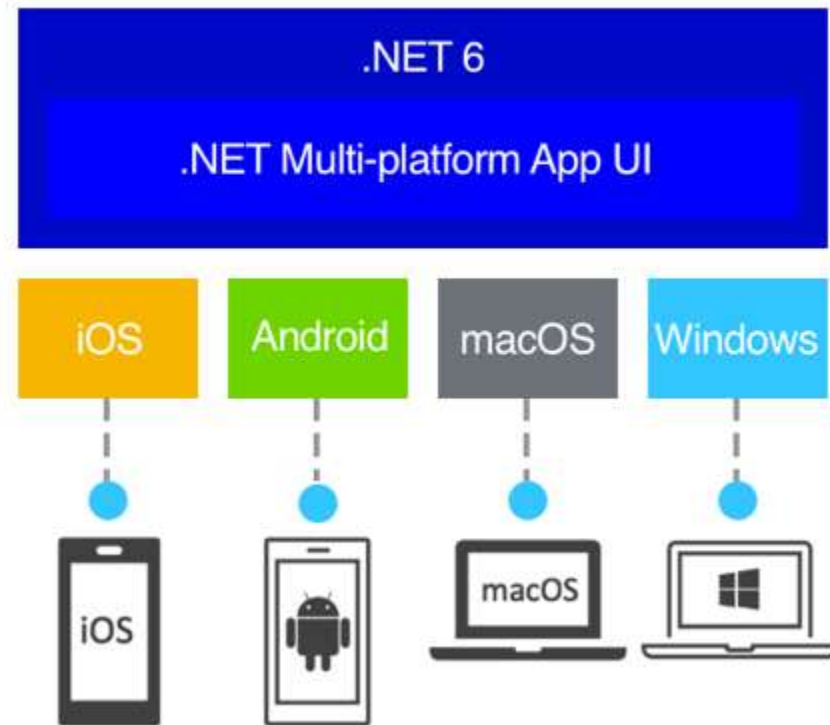
MAUI-Multi-platform App UI

Verfügbarer, aber verschoben auf Q2/2022



<https://visualstudiomagazine.com/articles/2021/09/15/net-maui-delay.aspx>

Eine Codebase für iOS, Android, macOS & Win



Läuft auf mehreren PC nicht ;-(





Fazit



Ist .NET bereit für den Einsatz?

- Ja, im Web-Bereich
 - WebAPI & SPA
 - MVC
 - Blazor
- Ja, im Windows-Bereich
 - WPF
 - WinForms
- Ja, mit Entity Framework Core
- Nein, MAUI wurde verschoben
- Wenige API-Breaks zwischen Versionen

Fragen? Jetzt oder später!



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Links



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