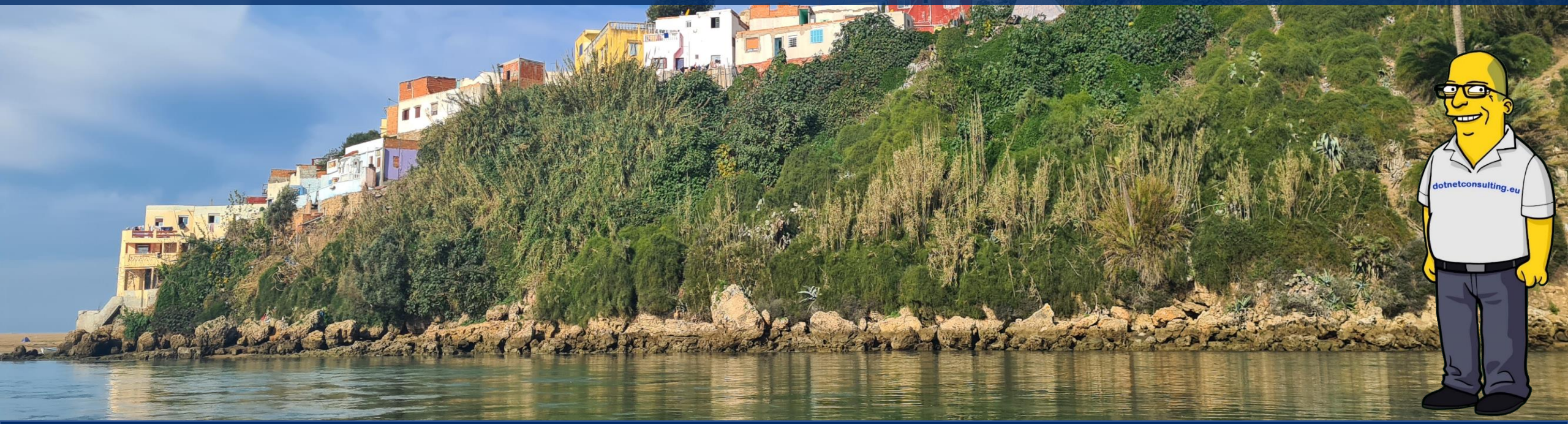
.NET 9 – Stand der Dinge



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Meine Person- Thorsten Kansy

Freier Consultant, Software Architekt,
Entwickler, Trainer & Fachautor

Microsoft SQL Server

.NET Core

ASP.NET Core

Azure Cosmos DB

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Mein Service- Ihr Benefit

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

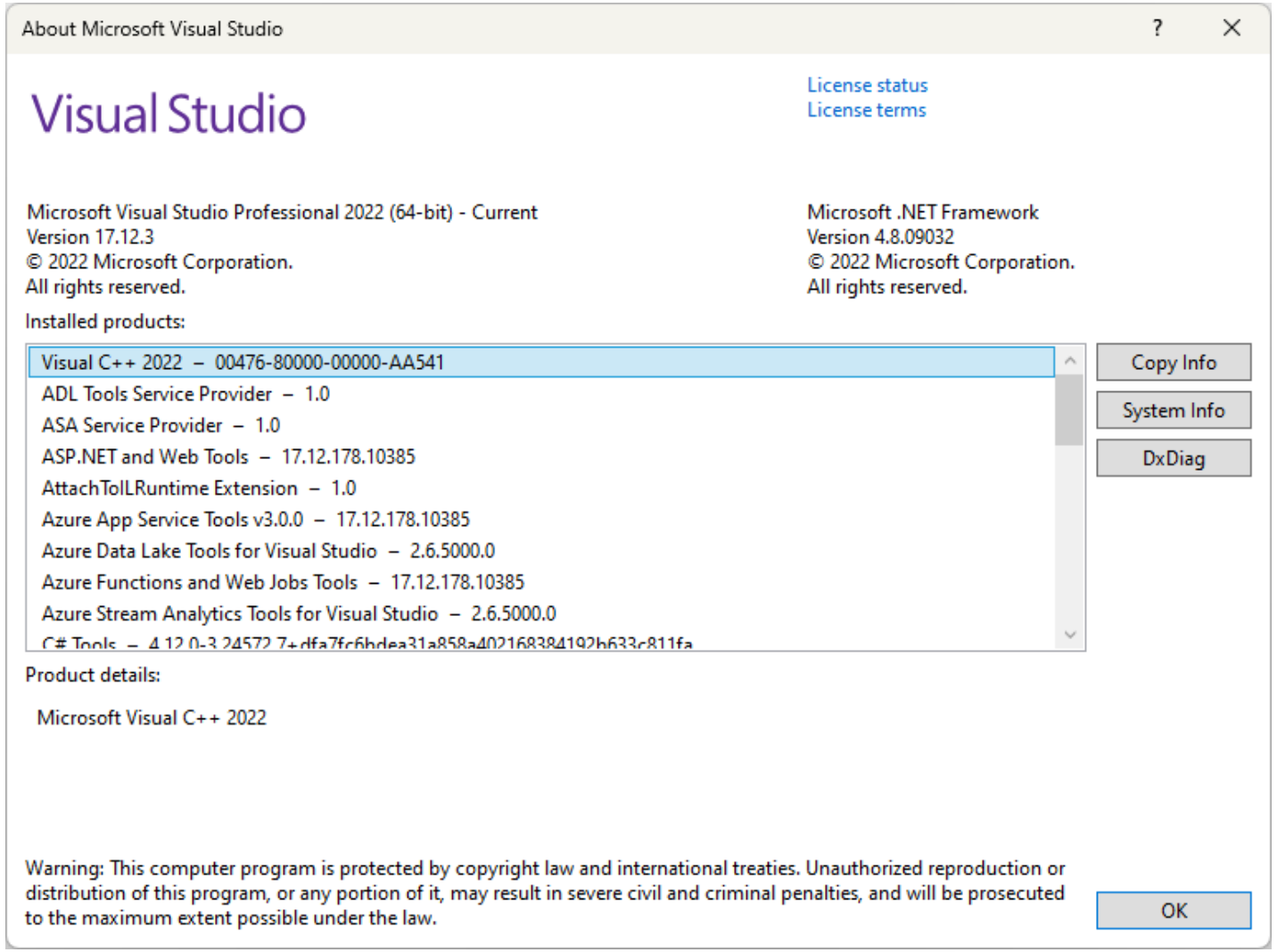
Agenda

- Verwendete Software
- „One .NET“ Roadmap
- Was kann .NET 9?
- C# 13
- Fazit

Verwendete Software

Verwendete Software

- Visual Studio 2022 17.12+
- .NET 9



„One .NET“ Roadmap

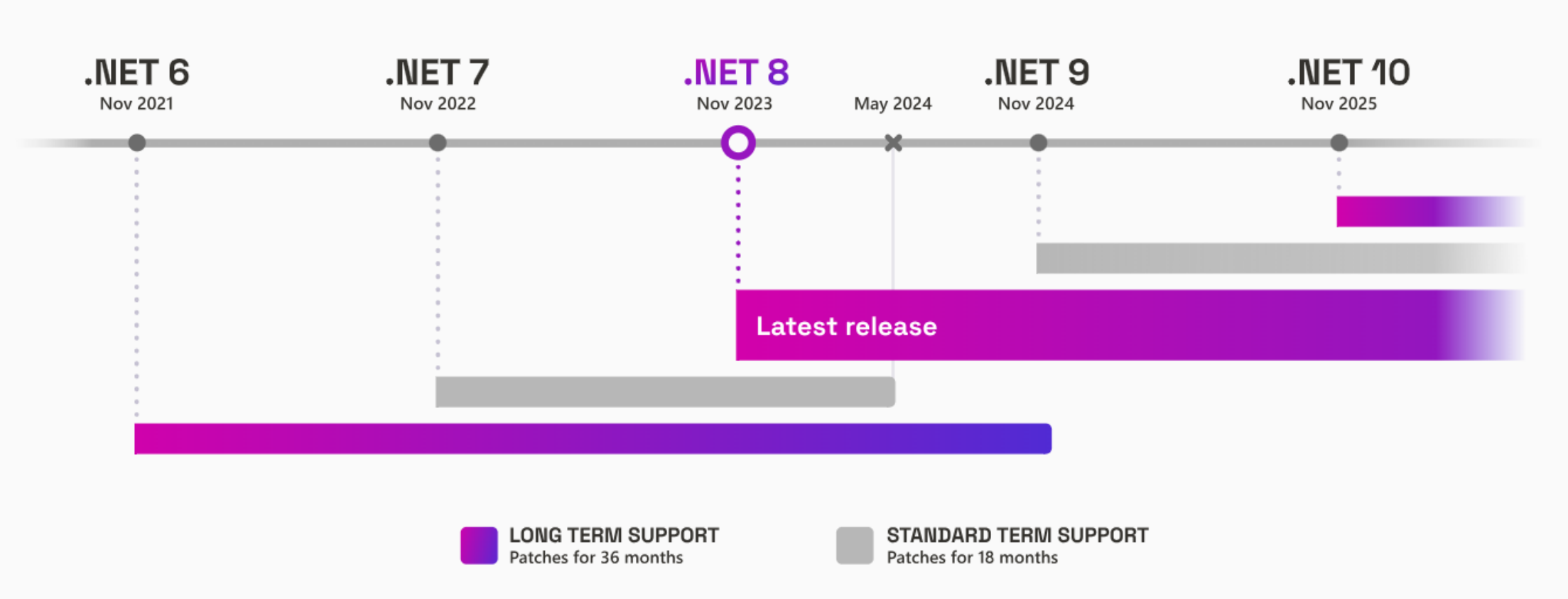
„One .NET“

- Offizieller Name: .NET 9 (ohne "Core", ohne ".0")
- Aber ASP.NET **Core** 9 und Entity Framework **Core** 9

- Microsoft hält sich aber selbst nicht überall daran

Quelle: MicrosoftBuild

Der .NET (Core) Roadmap



https://dotnet.microsoft.com/en-us/platform/support/policy/dotnet-core

Demo

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

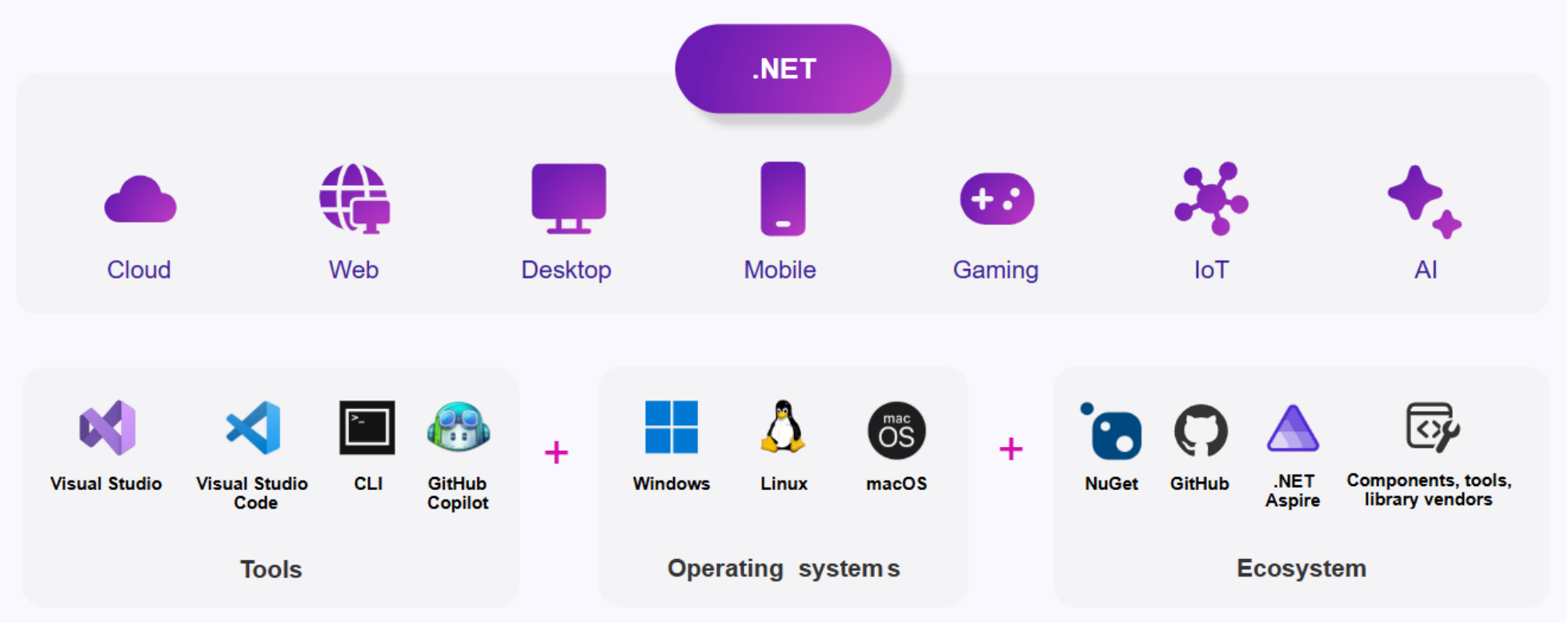
Und .NET Framework?

- .NET Framework 4.8.x ist die letzte .NET Framework Feature-Version
  - Letztes Patch hatte 4.8.1

- Migration auf 4.8.x nur bei neuen Features notwendig

Übersicht

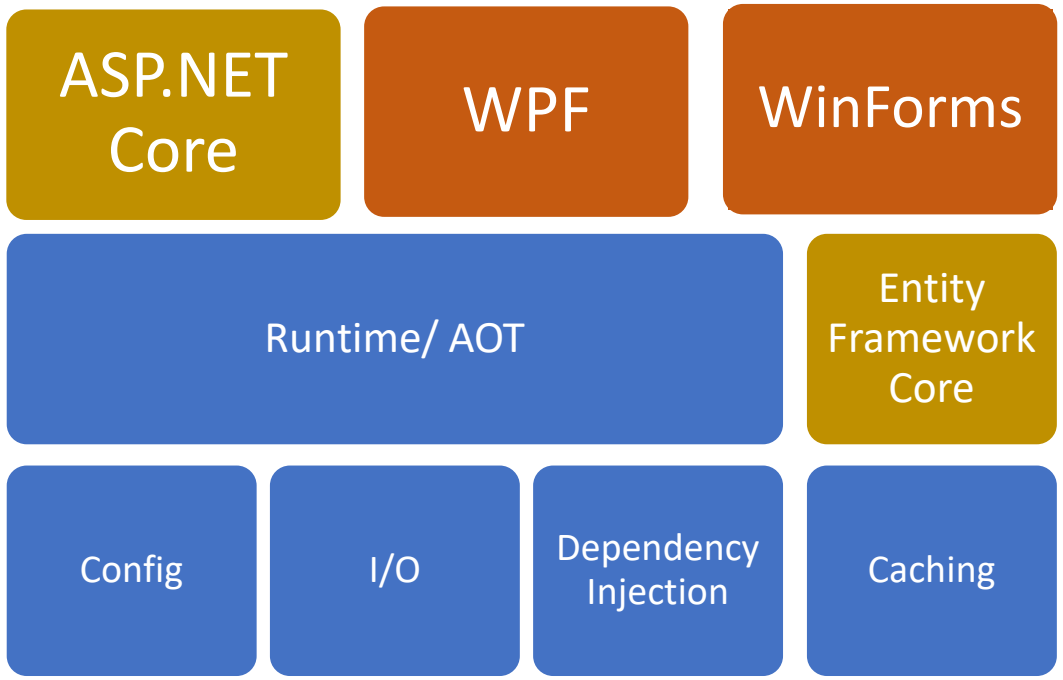
.NET 9



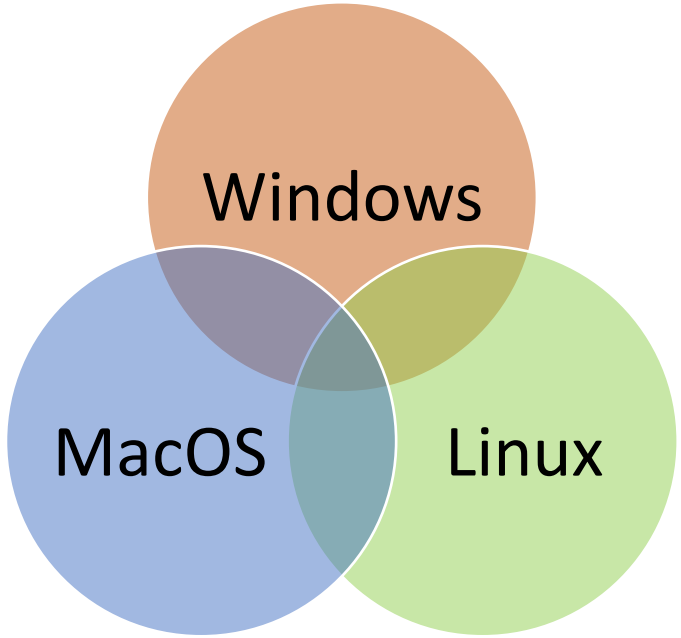
https://devblogs.microsoft.com/dotnet/announcing-dotnet-9/

.NET Komponenten

Modular



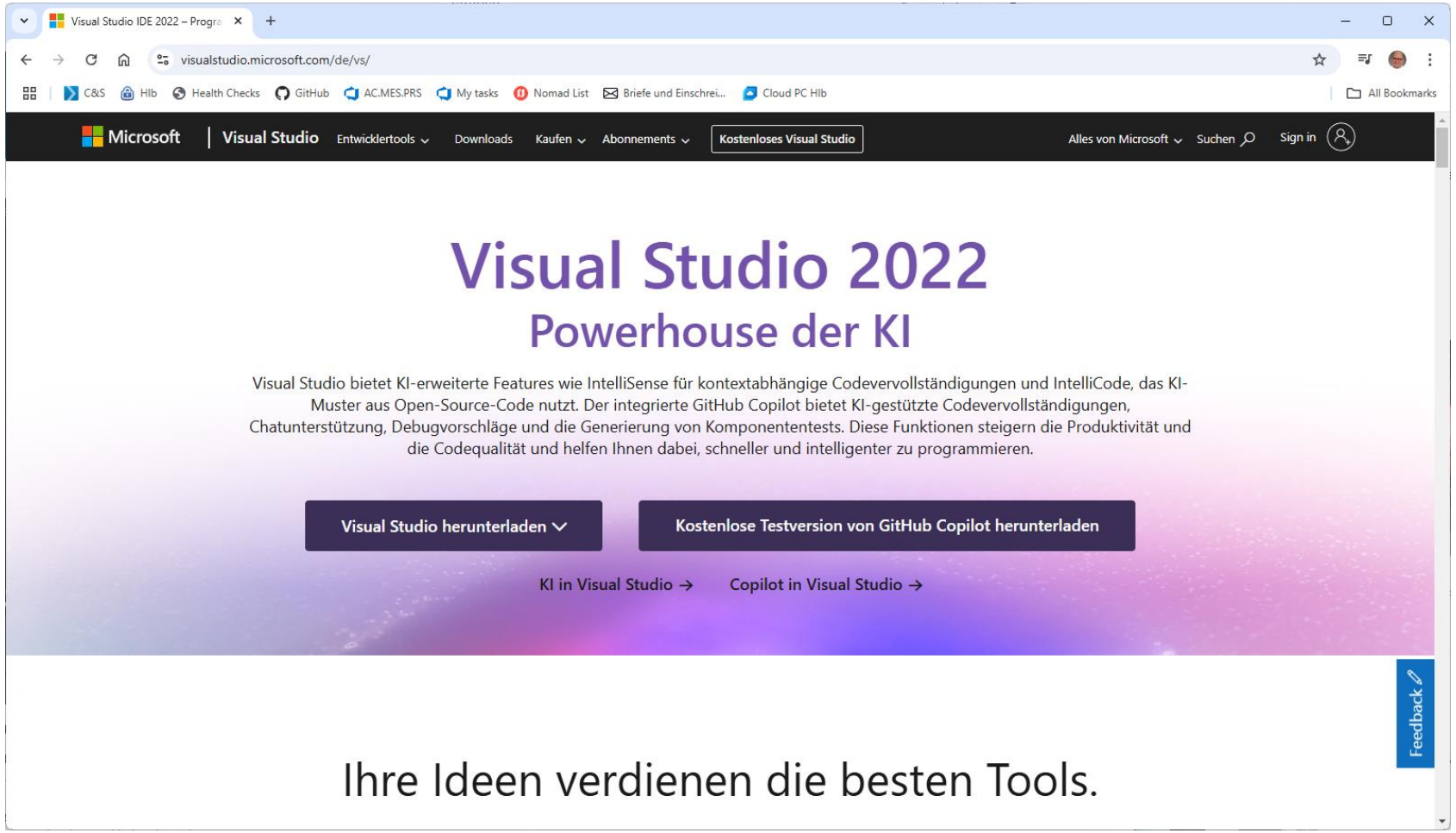
Multi Plattform



Was spricht für .NET?

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

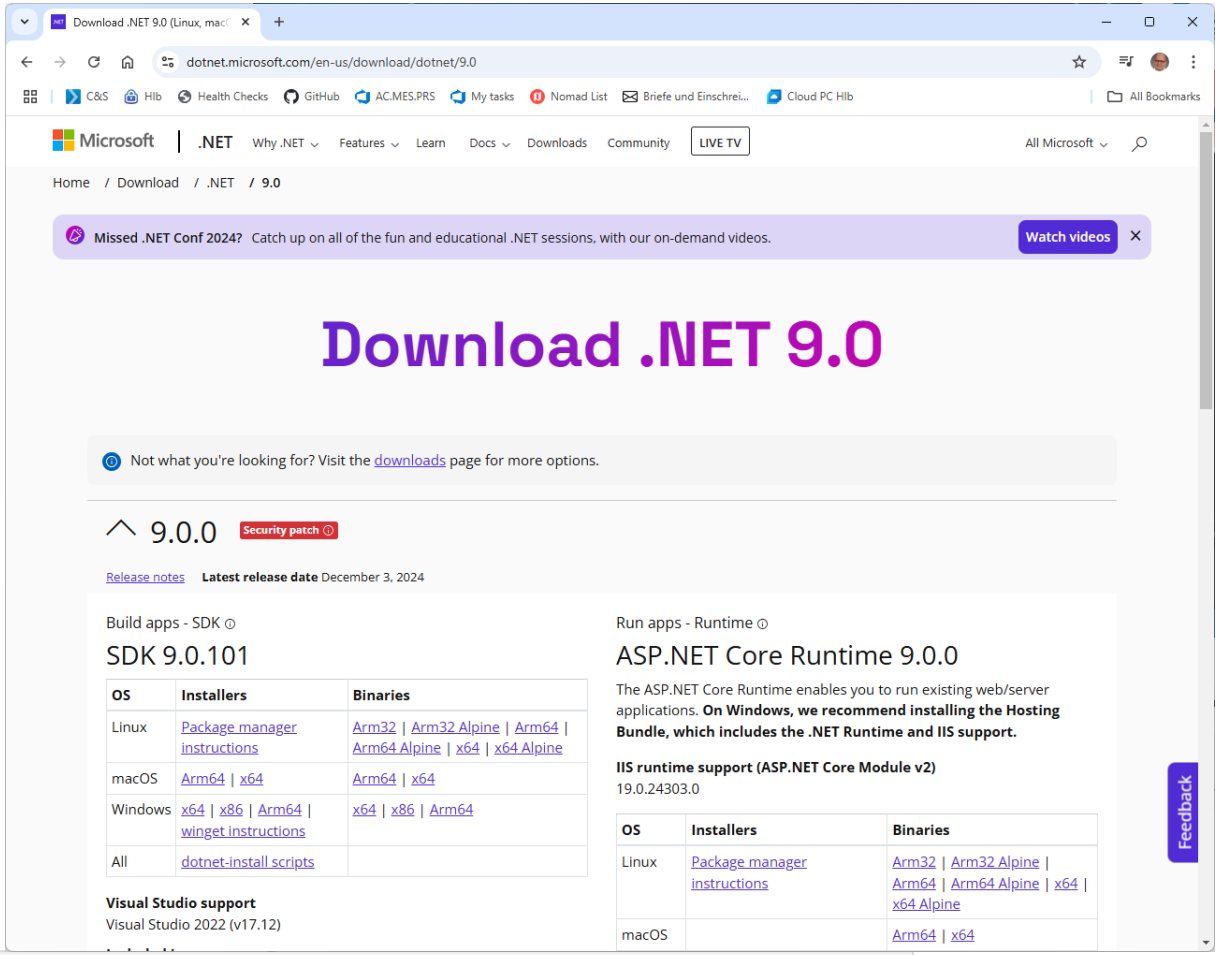
Visual Studio in Stellung bringen



https://visualstudio.microsoft.com/de/vs/

.NET 9 in Stellung bringen

- Windows
- Linux
- MacOS



```
https://dotnet.microsoft.com/download/dotnet/9.0
```

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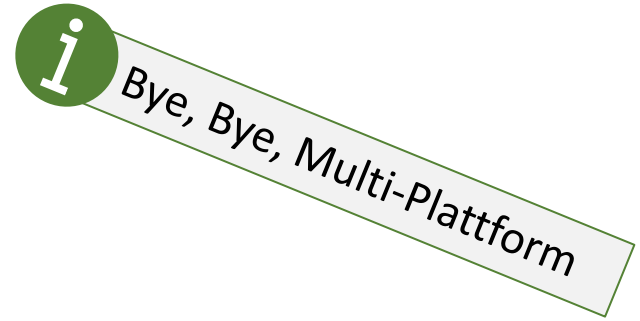
Demo

Was kann .NET 9?

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

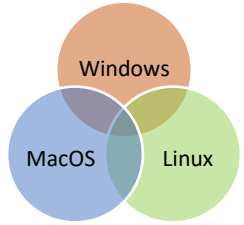
Einsatz mit Guarding

```
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
```

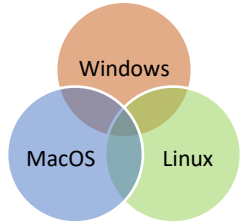
Entity Framework Core



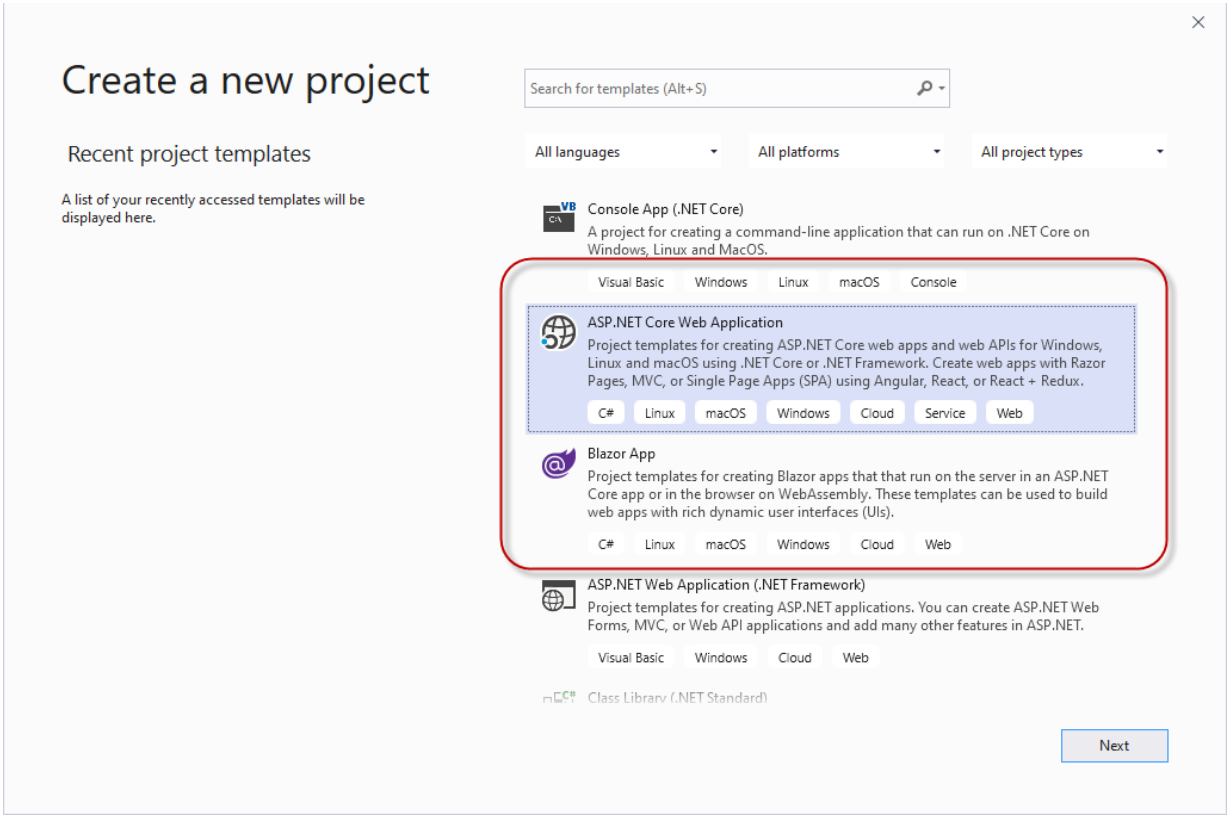
- Relationale Datenbanken
  - SQL Server
  - DB2
  - Oracle
  - MySQL
  - PostgreSQL
  - …
- NoSQL Datenbanken
  - Azure Comos DB

Demo

ASP.NET Core (Razor, Blazor, WebAPI)



Vollständig!



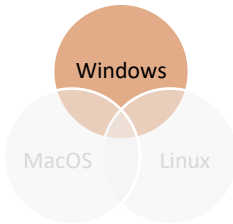
Demo

.NET Aspire

- **Orchestration**: . NET Aspire provides features for running and connecting multi-project applications and their dependencies for local development environments
- **Integrations**: NET Aspire integrations are NuGet packages for commonly used services, such as Redis or Postgres, with standardized interfaces ensuring they connect consistently and seamlessly with your app
- **Tooling**: .NET Aspire integrations are NuGet packages for commonly used services, such as Redis or Postgres, with standardized interfaces ensuring they connect consistently and seamlessly with your app.

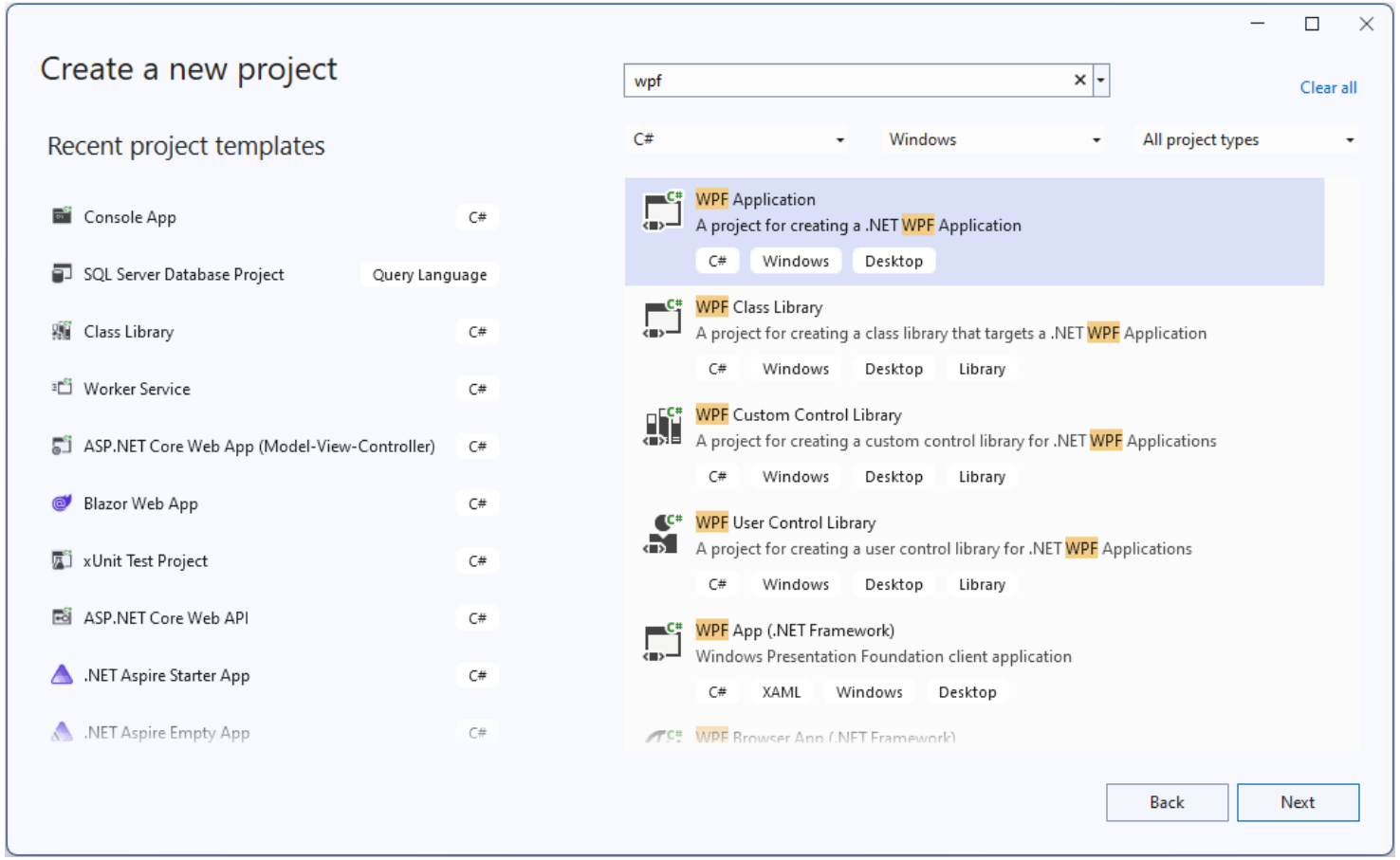
```
https://learn.microsoft.com/en-us/dotnet/aspire/get-started/aspire-overview
```

Demo



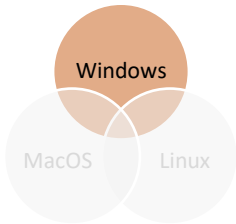
Windows Presentation Foundation

Vollständig!



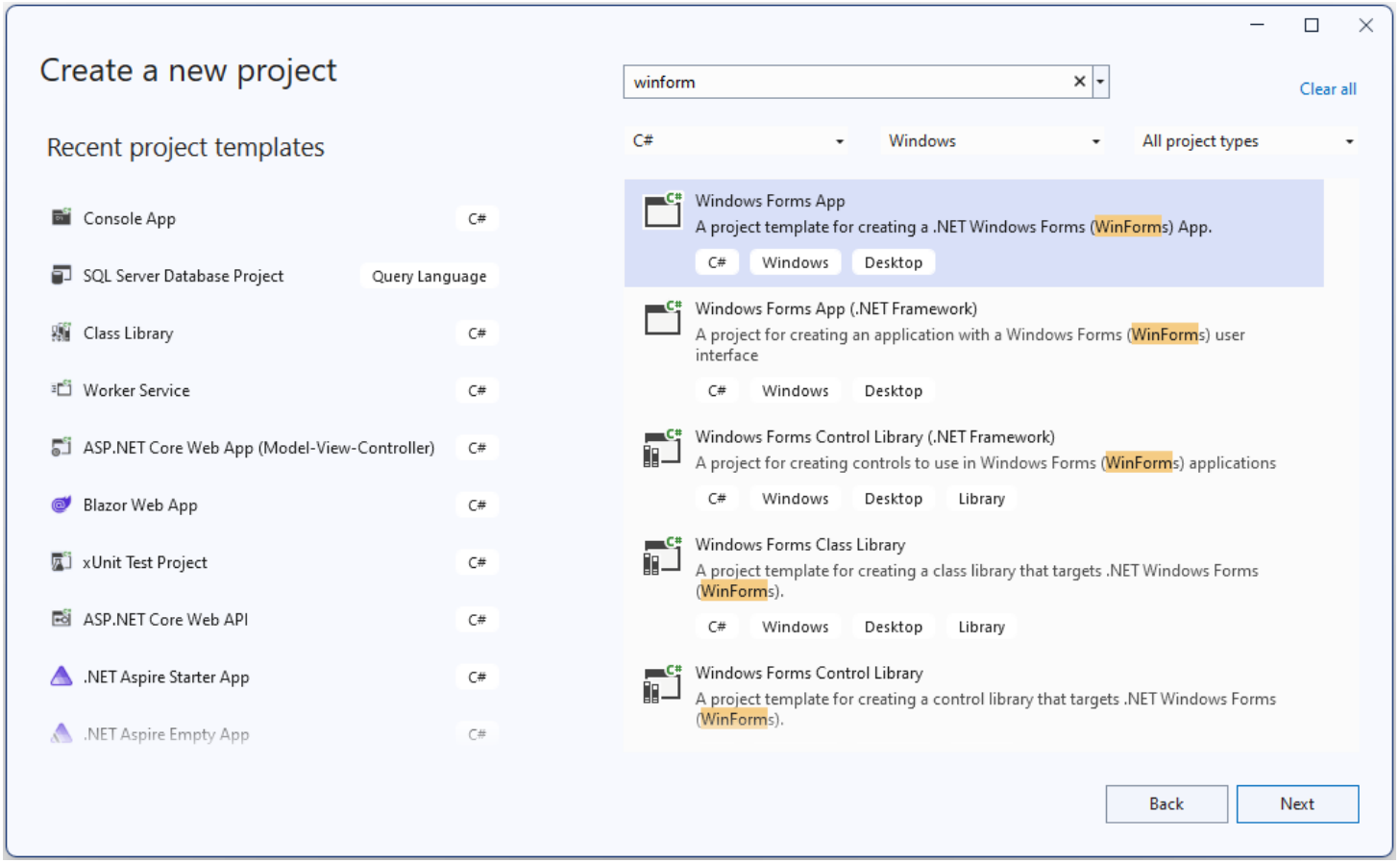
https://learn.microsoft.com/en-us/dotnet/desktop/wpf/whats-new/net90?view=netdesktop-9.0

Demo



WinForms

Vollständig!



```
https://learn.microsoft.com/en-us/dotnet/desktop/winforms/whats-new/net90?view=netdesktop-9.0
```

Demo

Native AOT

- Ahead-of-time Compilation
- Schnelle Ausführung, kleiner Memory-Footprint
- Leider aktuell nur Teile des .NET
  - Kein Entity Framework

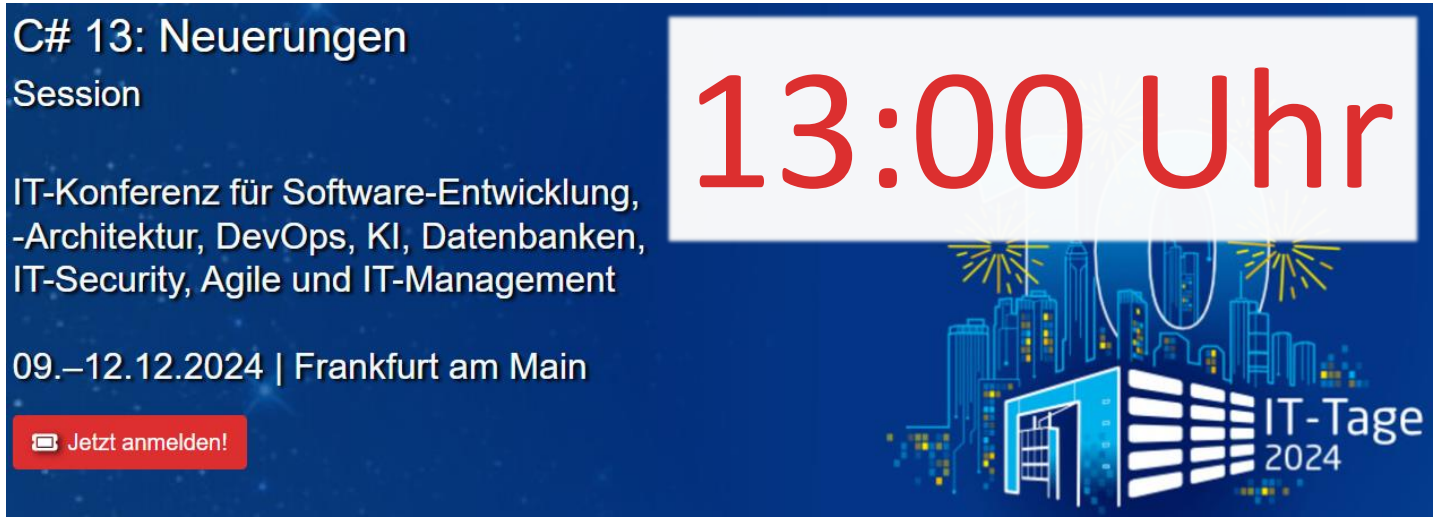
https://learn.microsoft.com/en-us/dotnet/core/deploying/native-aot/?tabs=windows%2Cnet8

Demo

C# 13

C# 13

- Params collections
- New lock object
- New escape sequence
- Implicit index access
- More partial members
- Overload resolution priority
- LINQ



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
- Immer weniger API-Breaks von Version zu Version ;-)

Fragen? Jetzt oder später!

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SQL Server meets .NET (Core)- professionally!

Ich berate, coache und trainiere im Bereich Entwicklung von .NET (Core) Anwendungen mit Microsoft SQL Server- mit Allem, was dazu gehört- und was man vielleicht weglassen sollte.

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