



Christian Nagel

<https://csharp.christiannagel.com>



Exploring .NET Aspire

THRIVECONF.COM
#ThriveITConf

3rd – 4th June 2025





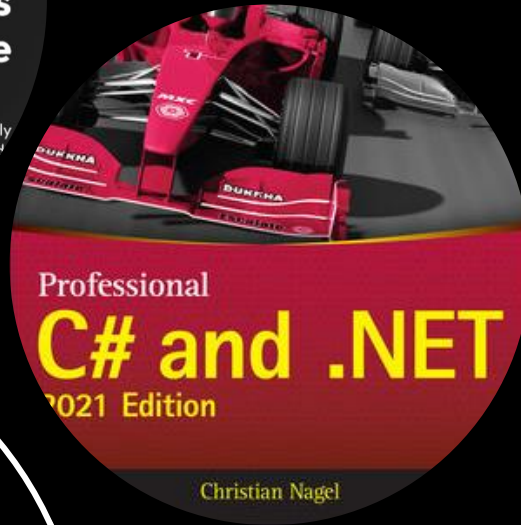
Zahvaljujemo se našim sponzorjem





Pragmatic Microservices with C# and Azure

Build, deploy, and scale microservices efficiently
to meet modern software demand



About me...



- Training
- Coaching
- Consulting
- Development

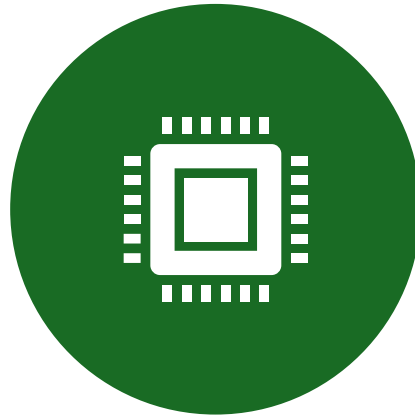
- Microsoft MVP
- www.cninnovation.com
- blogs.cninnovation.com

- Connect via LinkedIn / Bluesky

Topics



WHY .NET ASPIRE?

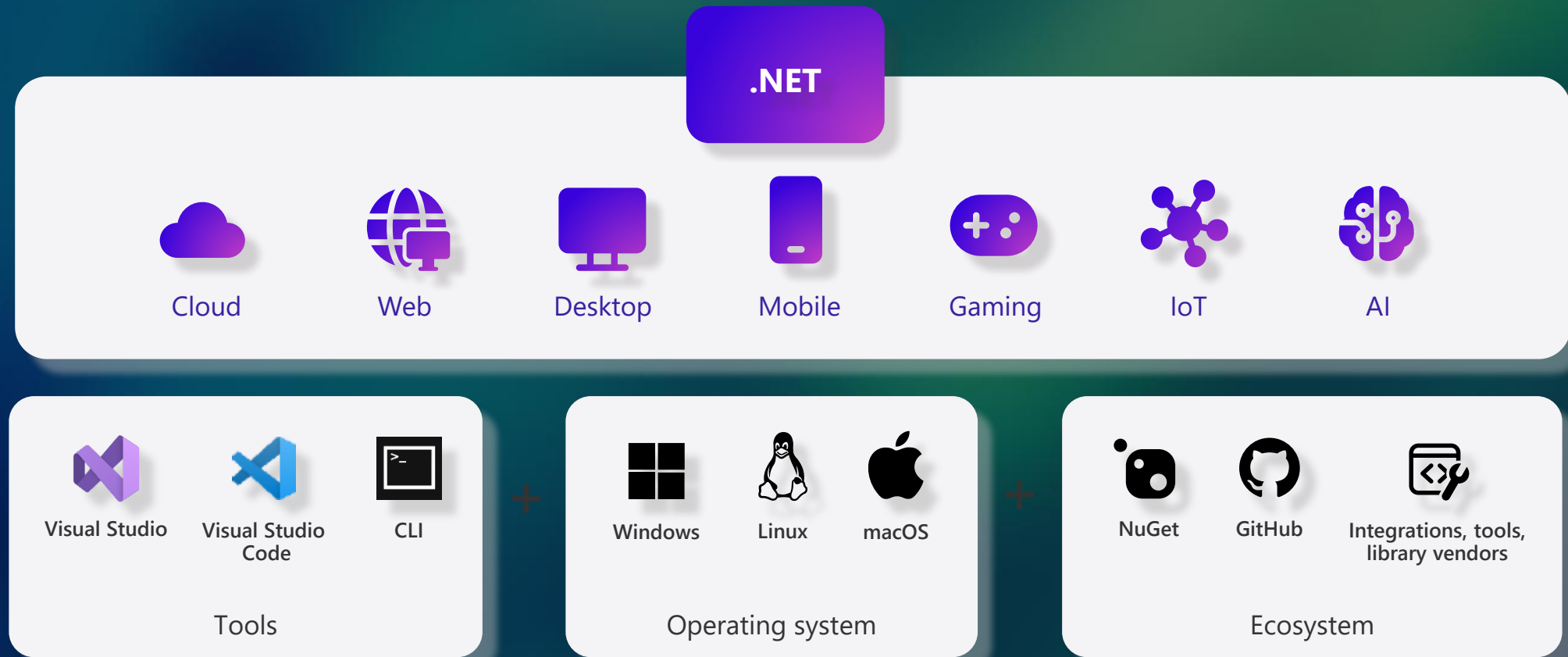


WHAT'S FOR
DEVELOPERS?



WHAT'S FOR
DEPLOYMENT?

.NET: Build anything with a unified platform



Every App Needs



Observability



Resiliency



Scalability



Manageability

.NET Includes



Observability

Logging

Metrics

Distributed Tracing (ActivitySource)

OpenTelemetry Integration



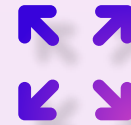
Resiliency

Polly Library

Microsoft.Extensions.Resilience

Microsoft.Extensions.Http.Resilience

Resilience Pipeline



Scalability

Asynchronous Programming

Caching

Containerization

Load Balancing



Manageability

Configuration management

Dependency injection

Health checks

Application Insights

It's still not easy

It's Still Not Easy 🙄



Complex



Getting Started



Choices



Paved Path



.NET Aspire

**A cloud ready stack for building observable,
production ready, distributed applications**

Demo:
Create a
.NET Aspire
solution

Aspire CLI

Services

.NET Service discovery

Integrations

Foundation: .NET Service Discovery

Independent of .NET Aspire, new since .NET 8+

Find services independent of the environment

Provider-based

Configuration provider

Pass-thru provider

DNS provider

DNS SRV provider

YARP provider

Aspire CLI (Preview with 9.3)



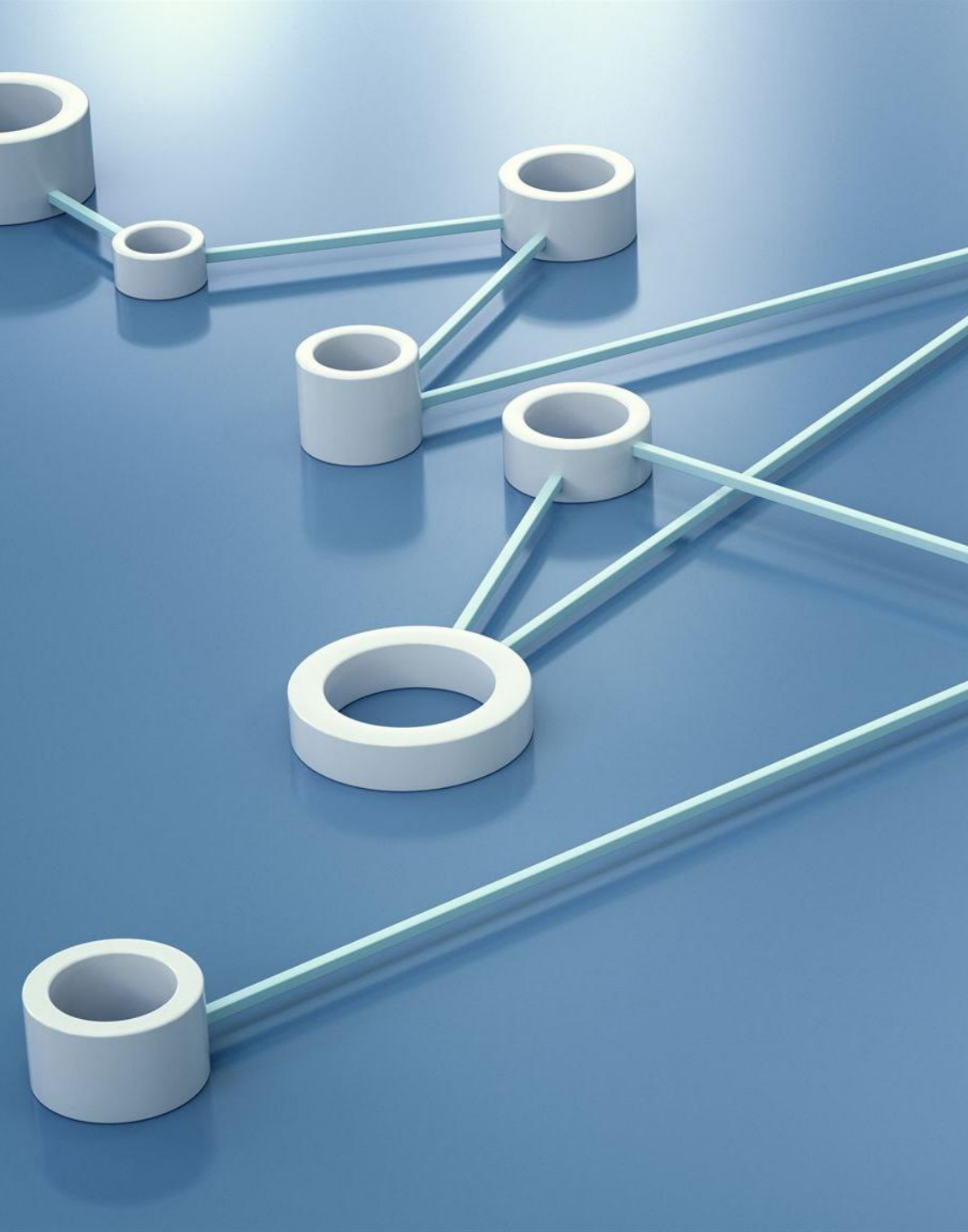
dotnet tool install
aspire.cli -g --prerelease



aspire new aspire-starter
-o FirstAspireApp



aspire run



Understanding .NET Service Discovery

- Service Discovery enables automatic detection of services in a network.
- It simplifies the process of connecting clients to requested services.
- Service Discovery can improve application resilience and performance.
- It supports dynamic scaling and load balancing of services.
- Common protocols include DNS, Consul, and Eureka.

Demo – add
.NET Aspire
to existing
solutions

Existing API service

Add .NET Aspire

AppHost

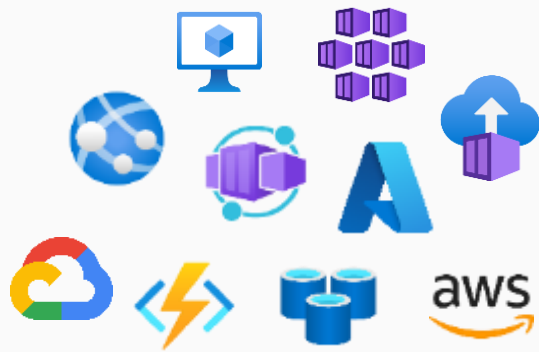
ServiceDefaults



What's in for developers

- Orchestration
- Developer dashboard
 - Structured logging
 - Distributed tracing
 - Metrics
- Smart defaults
- Service discovery

Flexible Integrations & Deployment



How You Do
It Today!



AWS CDK



Azure Dev CLI



Visual Studio

Demo:
Publish

Azure Container Apps

Docker Compose

Kubernetes



Azure Developer CLI

- Create manifest with .NET Aspire
- Create bicep scripts with azd
- Deploy with azd
- Create pipelines with azd



Deploy on-premises

- Create manifest with .NET Aspire
- Use aspir8 to create Docker Compose / Helm charts

Next with .NET Aspire (Preview)



CONFIGURE PUBLISHERS



ASPIRE PUBLISH

There's more!



Integrations, integrations, integrations...



Add Python, Node, Java projects...



Deploy to AWS...



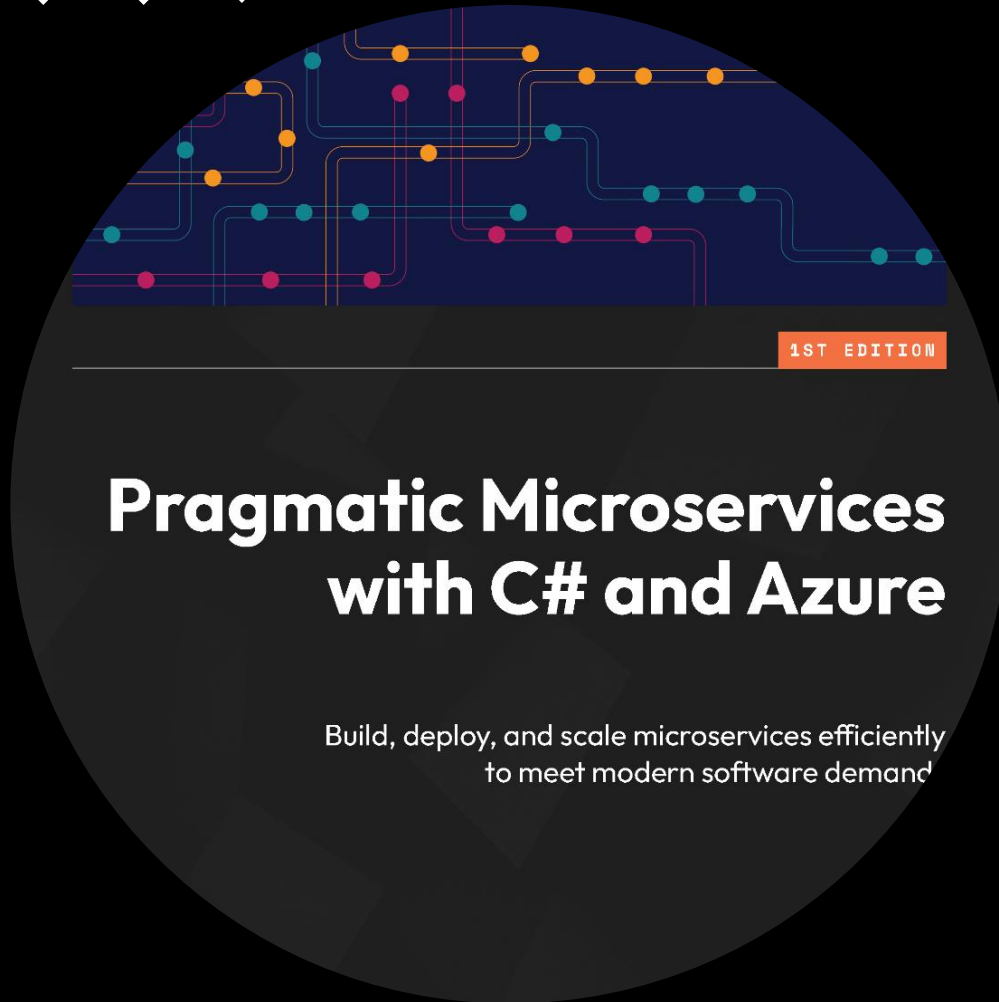
Questions?





More information

- <https://github.com/cnilearn/thrive2025>
- <https://csharp.christiannagel.com>
- <https://www.cninnovation.com>



Thank you

We greatly value your input. Please take a moment to complete our survey, accessible either through the Run.events app or by the link below:

<https://bit.ly/Thrive25Survey>

