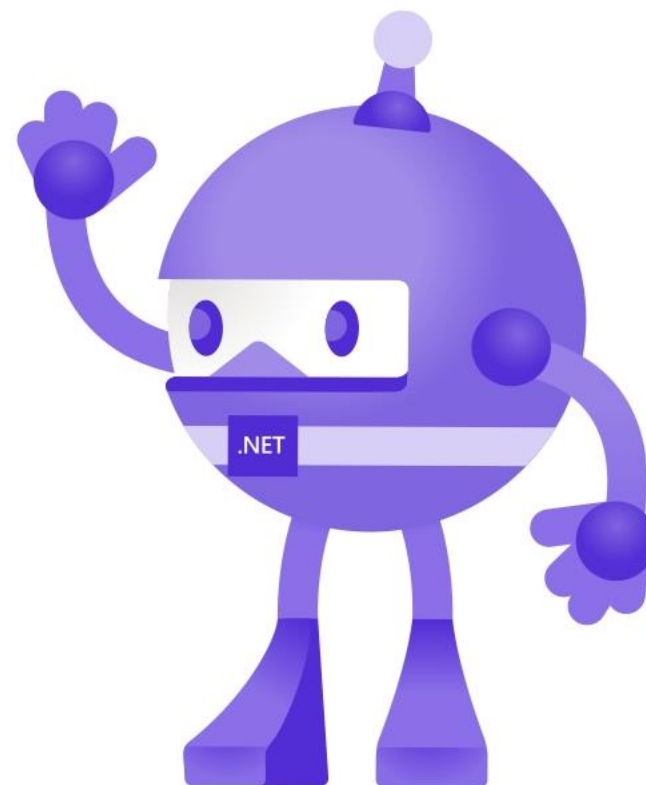


# Production Ready Distributed Application with .NET Aspire



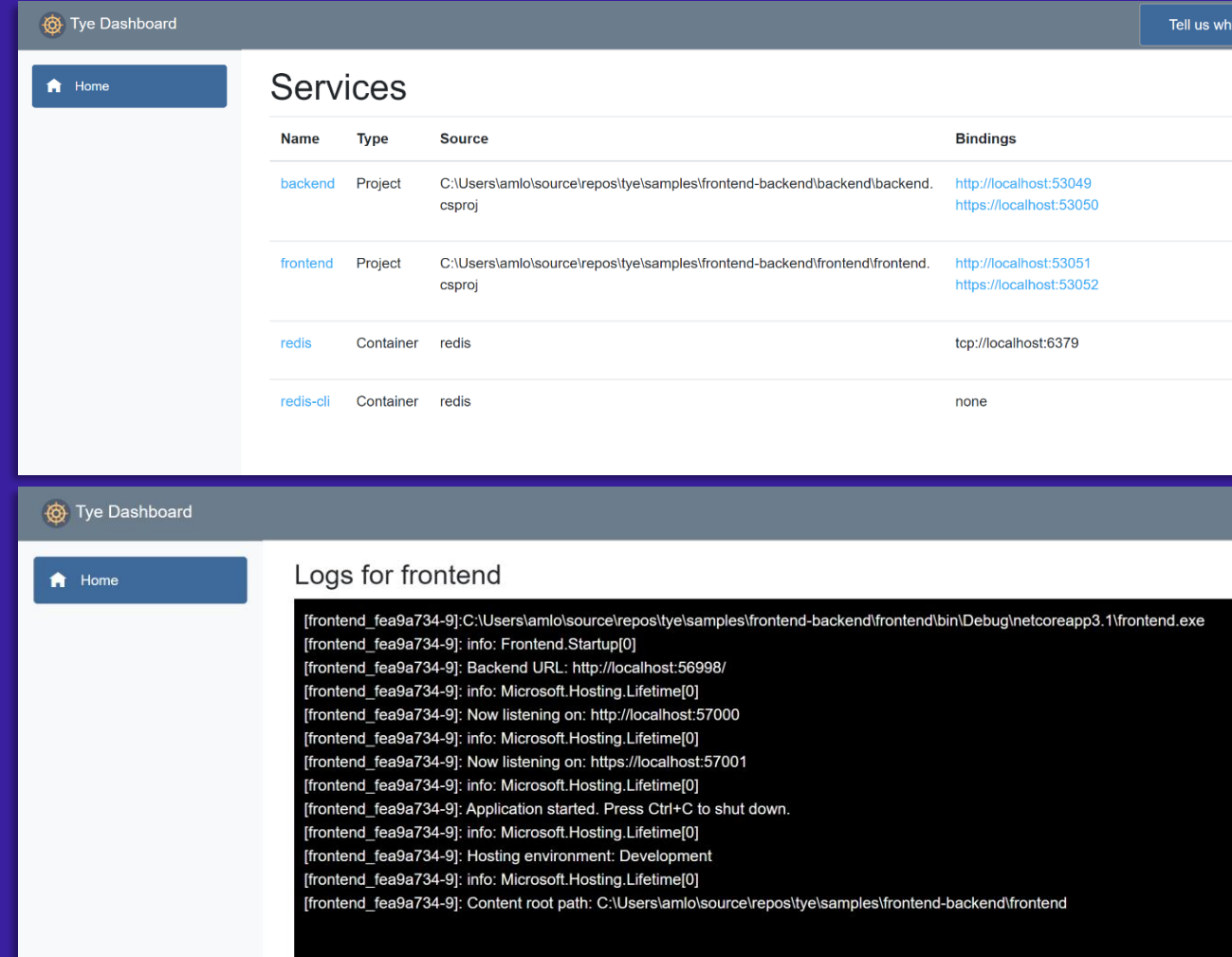
Tommaso Stocchi



# Bit of History - Tye

## Project Tye

- **Goal:**  
Make building and deploying .NET cloud apps running on Kubernetes trivial.
- **Customer Experience:**
  - YAML file to describe solution/topology
  - Tye could run external container dependencies (Redis, Postgres)
  - Developer dashboard
  - Run as containers or processes
  - Deploy directly to K8S via a temporary manifest
- **Reaction:**  
People loved the developer experience – orchestration, containerization, the dashboard –  
but saw no real value in the K8S deployment part.



The screenshot displays the Tye Dashboard interface, which is divided into two main sections: Services and Logs for frontend.

**Services Section:**

Name	Type	Source	Bindings
backend	Project	C:\Users\amlo\source\repos\tye\samples\frontend-backend\backend\backend.csproj	<a href="http://localhost:53049">http://localhost:53049</a> <a href="https://localhost:53050">https://localhost:53050</a>
frontend	Project	C:\Users\amlo\source\repos\tye\samples\frontend-backend\frontend\frontend.csproj	<a href="http://localhost:53051">http://localhost:53051</a> <a href="https://localhost:53052">https://localhost:53052</a>
redis	Container	redis	tcp://localhost:6379
redis-cli	Container	redis	none

**Logs for frontend Section:**

```
[frontend_fea9a734-9]: C:\Users\amlo\source\repos\tye\samples\frontend-backend\frontend\bin\Debug\netcoreapp3.1\frontend.exe
[frontend_fea9a734-9]: info: Frontend.Startup[0]
[frontend_fea9a734-9]: Backend URL: http://localhost:56998/
[frontend_fea9a734-9]: info: Microsoft.Hosting.Lifetime[0]
[frontend_fea9a734-9]: Now listening on: http://localhost:57000
[frontend_fea9a734-9]: info: Microsoft.Hosting.Lifetime[0]
[frontend_fea9a734-9]: Now listening on: https://localhost:57001
[frontend_fea9a734-9]: info: Microsoft.Hosting.Lifetime[0]
[frontend_fea9a734-9]: Application started. Press Ctrl+C to shut down.
[frontend_fea9a734-9]: info: Microsoft.Hosting.Lifetime[0]
[frontend_fea9a734-9]: Hosting environment: Development
[frontend_fea9a734-9]: info: Microsoft.Hosting.Lifetime[0]
[frontend_fea9a734-9]: Content root path: C:\Users\amlo\source\repos\tye\samples\frontend-backend\frontend
```



**Running distributed applications in your local development environment is hard**

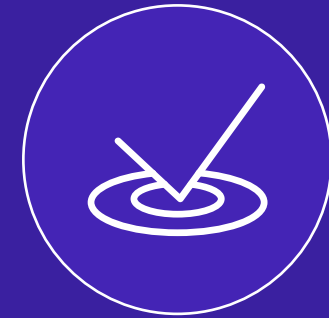
# .NET Aspire



.NET Aspire is a **stack** for building **resilient**, **observable**, and **configurable** cloud-native applications with .NET



.NET Aspire includes a curated set of components enhanced for cloud-native fundamentals including **Telemetry**, **Resilience**, **Configuration**, **Health Checks**, and **Composition**



.NET Aspire makes it easy to **discover**, **acquire**, and **configure** essential dependencies for cloud-native applications on day 1 and day 100

# Aspire components



Telemetry (metrics, logs, distributed tracing)

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Health Checks

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Configurable

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Composition



Secrets management

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Quality documentation

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Servicing & secure supply chain guidance

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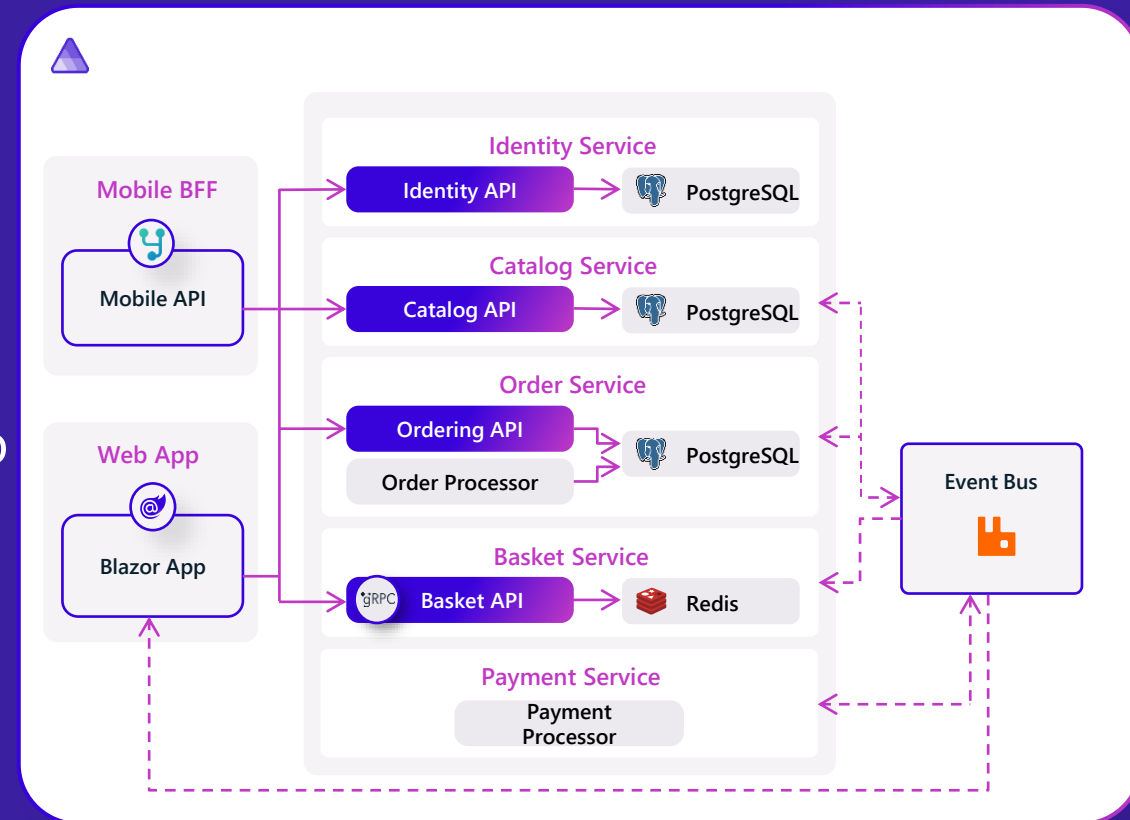


Resilience

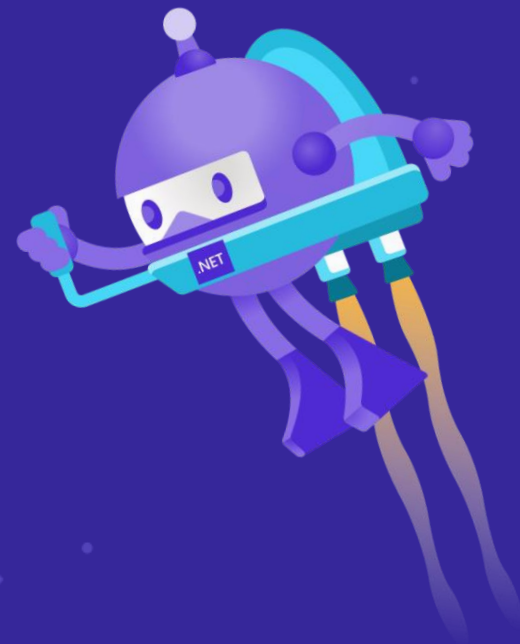


# App Model

- Orchestrates resources in your dev environment
  - Projects, containers, executables, live dependencies
- Grows with you:
  - From a single web app with a database to many microservices and their dependencies.
- Can generate a manifest that can be examined by other process, such as deployment pipelines or tooling.



# DEMO



# Useful Links 😊

- [.NET Aspire overview - .NET Aspire | Microsoft Learn](#)
- [.NET Aspire preview 4 - .NET Aspire | Microsoft Learn](#)
- [aspire-samples/samples/AspireWithDapr at main · dotnet/aspire-samples \(github.com\)](#)
- [aspire-samples/samples/AspireWithJavaScript/AspireJavaScript.AppHost/Program.cs at main · dotnet/aspire-samples \(github.com\)](#)
- [Deploy a .NET Aspire app to Azure Container Apps using `azd` \(in-depth guide\) - .NET Aspire | Microsoft Learn](#)
- [.NET Aspire manifest format for deployment tool builders - .NET Aspire | Microsoft Learn](#)



# Questions?



# .NET Conference 2024



## VOTAZIONE

La tua opinione è importante  
Aiutaci a migliorare dandoci  
il tuo feedback sull'evento

