



# INTRODUCTION TO DISTRIBUTED SYSTEMS WITH C# AND .NET

Two-day workshop with Dylan Beattie

[www.itkonekt.com](http://www.itkonekt.com)



## DYLAN BEATTIE

// Consultant, Software Developer  
and Microsoft MVP

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**Dylan Beattie** is a consultant, software developer and international keynote speaker. He's been building web applications since the 1990s, and works primarily on Microsoft .NET, HTTP APIs, UX design, and distributed systems. Dylan is a Microsoft MVP for Developer Technologies, and the creator of the Rockstar programming language.

Dylan lives and works in London and when he's not writing code he plays guitar and writes songs.

# About workshop

## INTRODUCTION TO DISTRIBUTED SYSTEMS WITH C# AND .NET

- IF YOU'RE JUST STARTING OUT WITH DISTRIBUTED SYSTEMS DESIGN, THE POSSIBILITIES CAN BE OVERWHELMING. APIS, MESSAGE QUEUEING, REST, GRAPHQL, GRPC... WHAT SHOULD YOU CHOOSE, HOW DOES IT WORK, HOW DO YOU GET STARTED?
- THIS WORKSHOP GIVES YOU A HANDS-ON INTRODUCTION TO THE MOST IMPORTANT MESSAGING PATTERNS USED IN MODERN APPLICATION DEVELOPMENT. USING C# AND .NET, WE'LL BUILD A SERIES OF SMALL EXAMPLE APPS AND SERVICES, WIRE THEM TOGETHER USING THESE PATTERNS, AND DISCUSS HOW – AND WHEN – YOU'D APPLY THE SAME PATTERNS IN YOUR OWN APPLICATIONS.

# About workshop - what will you learn?

## INTRODUCTION

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- ✓ What are “distributed systems”?
- ✓ Monoliths and microservices
- ✓ Common integration patterns
- ✓ Principles of distributed architecture

## CONNECTING COMPONENTS USING HTTP

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- ✓ HTTP architectural patterns – XMLRPC, REST, GraphQL
- ✓ Designing HTTP APIs
- ✓ HTTP frameworks: WebAPI, NancyFX, ServiceStack
- ✓ Working with HTTP APIs: testing and tooling
- ✓ Scaling HTTP APIs: caching strategies
- ✓ Exercise: building an HTTP API client and server

# About workshop - what will you learn?

## MESSAGE QUEUES AND PUB/SUB

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- ✓ Principles of message queues
- ✓ Message queueing in .NET – Redis, MSMQ, EasyNetQ
- ✓ Queueing strategies and error handling
- ✓ Advanced architectural patterns: CQRS, event sourcing
- ✓ Exercise: building a pub/sub system using .NET

## PROTOCOL BUFFERS AND GRPC

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- ✓ History of RPC on .NET – SOAP, DISCO, WSDL, WCF
- ✓ Introduction to Protocol Buffers
- ✓ Contract-first development
- ✓ Advantages of gRPC
- ✓ Exercise: high-performance architecture using gRPC

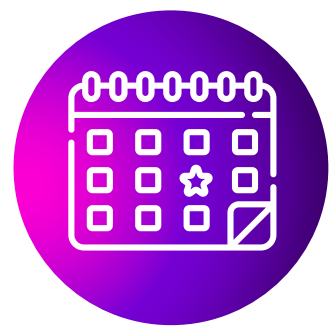
# About workshop - what will you learn?

## CONNECTING TO THE WEB

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- ✓ Integrating browsers with distributed systems
- ✓ The “Backends for Frontends” pattern
- ✓ Working with SignalR
- ✓ Exercise: real-time browser notifications using SignalR

# Workshop details



**JUNE  
13<sup>TH</sup> & 14<sup>TH</sup>**



**TIME: 10h-17h CEST**



**LIMITED NUMBER  
OF PARTICIPANTS:  
24 MAX.**



**ACTIVITIES:  
lectures + live coding  
+ exercises**



**ONLINE**

**NUMBER OF  
PARTICIPANTS IS  
LIMITED! HURRY  
UP AND BOOK  
YOUR SPOT!**

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