Build distributed apps with .NET Aspire (AZ-2009)

Course Overview

Learn how to build observable, production ready, distributed applications with .NET Aspire.

Prerequisites

Experience building web applications using .NET and C#

Course Content

Introduction to .NET Aspire

Learn about the .NET Aspire stack in .NET 8 and how you can use it to ease and accelerate the development of cloud-native web applications.

- Introduction
- What is .NET Aspire?
- Learn about .NET Aspire integrations
- Learn about .NET Aspire tools
- Exercise - Use the .NET Aspire eShop
- Knowledge check
- Summary

Create a .NET Aspire project

Learn how to create cloud-native applications from scratch or add orchestration to an existing app by using the .NET Aspire stack in .NET 8.

- Introduction
- Learn how to create a new .NET Aspire project
- Exercise - Create a new .NET Aspire project
- How to add orchestration to an existing .NET app
- Exercise - Integrate an existing ASP.NET Core web app
- Knowledge check
- Summary

Use telemetry in a .NET Aspire project

Learn how to use telemetry in a .NET Aspire project to log data and examine the behavior of a cloud-native application.

- Introduction
- Telemetry APIs in .NET
- Using OpenTelemetry in .NET Aspire
- Using the .NET Aspire dashboard
- Using a logger to add custom log messages
- Exercise - Use telemetry in a .NET Aspire project
- Knowledge check
- Summary

Use databases in a .NET Aspire project

Learn about the database systems that .NET Aspire can connect to using built-in integrations. Then see how to configure connections to, and store data in, relational and nonrelational databases.

- Introduction
- Store data in SQL-compliant databases
- Store data in NoSQL databases
- Exercise - Use database services to persist data from a .NET Aspire project
- Create tests with .NET Aspire
- Knowledge check
- Summary

Improve performance with a cache in a .NET Aspire project

Learn about using Redis caching to increase performance in a cloud-native application. You'll also discover how .NET Aspire makes it easy to access Redis caching services from your microservices.

- Introduction
- Caches and Redis
- Using a Redis distributed cache
- Using a Redis output cache
- Customize connection strings by using .NET Aspire manifests
- Exercise - Cache data in Redis
- Knowledge check
- Summary

Send messages with RabbitMQ in a .NET Aspire project

Learn how to use message queues on RabbitMQ exchange

servers to decouple microservices and manage communications in a cloud-native application built with .NET Aspire.

- Introduction
- What is RabbitMQ?
- Sending messages with RabbitMQ
- Exercise - Send messages between microservices through RabbitMQ
- Knowledge check
- Summary

About Fast Lane

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