Faysal Aziz

VB .NET Engineering Masterclass

Architect, build, secure and deploy VB .NET systems from desktop to web with production-grade precision in 2 days

FA-0454 · 2 days

Software Development · DevOps, Cloud & Infrastructure · Cybersecurity

Introduction

In enterprise environments where VB .NET remains in use, engineers must go beyond writing forms and UI logic. They must architect solid systems, build asynchronous processing flows, design REST APIs, embed strong security practices, and deliver software through modern CI/CD pipelines. This two-day advanced course is led by an instructor with **over 30 years of industry experience**, and it emphasises **real-world, production-demanded content**—covering desktop with Windows Presentation Foundation (WPF), web with ASP.NET Core, asynchronous back-ends, REST design, security and deployment.

Learning outcomes

By the end of the course, participants will be able to:

- Architect scalable VB .NET applications (desktop and/or service-oriented) using modern patterns.
- Implement asynchronous processing flows in VB .NET (tasks, async/await, background services).
- Design and build RESTful APIs in VB .NET (ASP.NET Core) aligned with industry best practices.
- Apply robust security measures throughout VB .NET applications (desktop, web and services).
- Set up, execute and manage CI/CD pipelines for VB .NET applications.
- Leverage WPF for rich client apps and ASP.NET Core for web/service layers in VB .NET environments.

- Integrate architecture, asynchronous processing, API design, security and delivery into a cohesive system.

Prerequisites

Participants should have:

- Strong proficiency in VB .NET and the .NET runtime.
- Familiarity with object-oriented programming, delegates/events, and basic asynchronous programming in VB.
- Some experience building desktop (WPF or Windows Forms) or web (ASP.NET) applications.
- Basic familiarity with REST APIs, security fundamentals, Git and build automation concepts.
- Willingness to engage with higher-level architecture, deployment and operational concerns—not just coding features.

Training outline

1. Architectural Design

- Modern VB .NET application architecture
- Designing with WPF and ASP.NET Core in mind
- Patterns and frameworks
- Data and integration architecture
- Operational architecture considerations

2. Asynchronous Processing

- Asynchronous programming fundamentals in VB NET
- Designing asynchronous workflows
- Error handling, cancellation and resource management
- Performance and responsiveness
- Testing and debugging asynchronous code

3. REST API Design

- Principles of RESTful API design in VB NET (ASP.NET Core)
- Building APIs with VB NET in ASP.NET Core

- API design for consumption by desktop (WPF) and web clients
- API lifecycle and versioning
- Performance and operational concerns
- API deployment and management

4. Security Measures

- Threats and secure coding basics in VB NET
- Authentication and authorization strategies
- Protecting data in transit and at rest
- Secure architectural and deployment practices
- Supply chain and dependency security
- Compliance, monitoring and incident readiness

5. CI/CD Implementation

- Overview of CI/CD for VB NET applications
- Building pipelines for VB NET desktop and web/service projects
- Continuous integration best practices
- Continuous deployment strategies
- Deployment patterns for desktop and service components
- Infrastructure as Code and environment consistency

  Monitoring, rollback and feedback loops
  - integration, alerts, post-deployment validation, rollback planning

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