



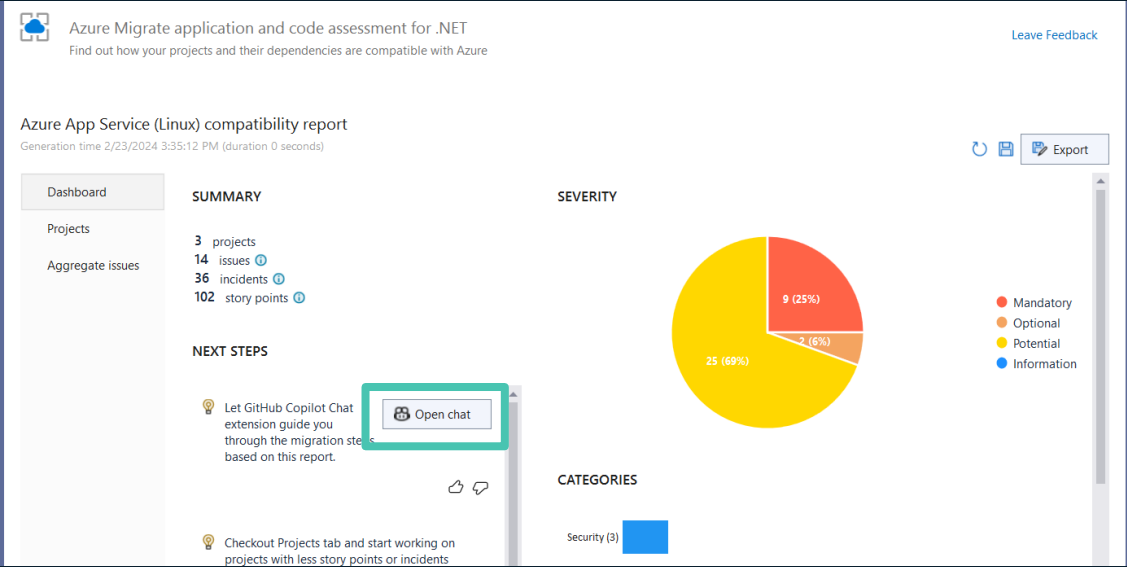
Automating App Modernization

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Agenda

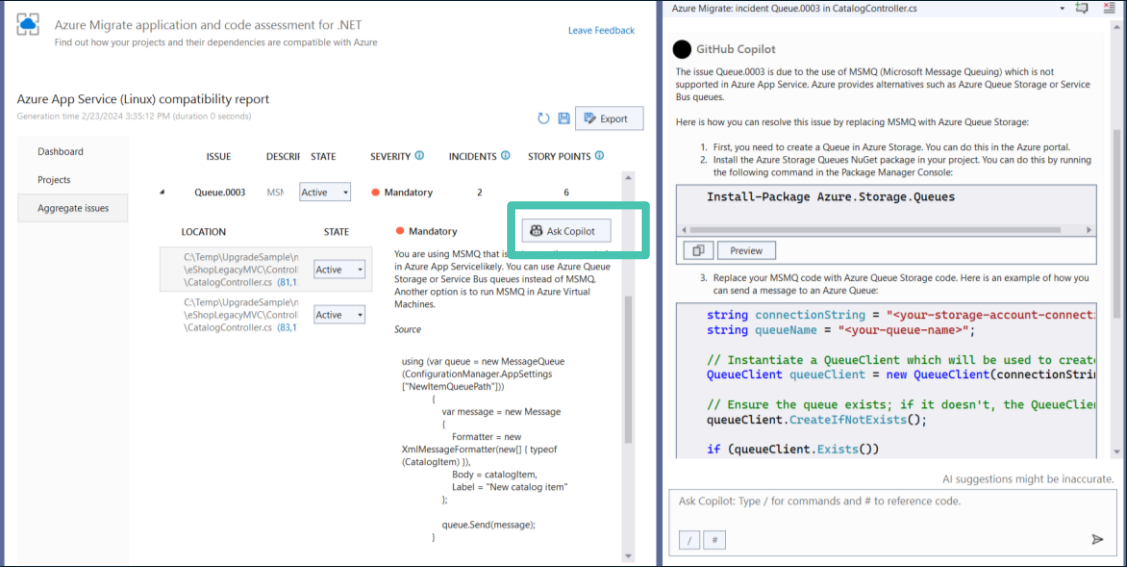
1. AppCat + GitHub Copilot
2. .NET Conversions
3. Prompting Best Practices
4. Other Resources

AppCat + GitHub Copilot



Compatibility Report Summarization and Guided Help

GitHub Copilot Chat can guide you through the migration steps based on the AppCat report that was generated against your code



Issue List – Ask Copilot How to Remediate

For individual issues in the issue list, Copilot Chat can suggest how to fix the issue including sample code and architectural considerations

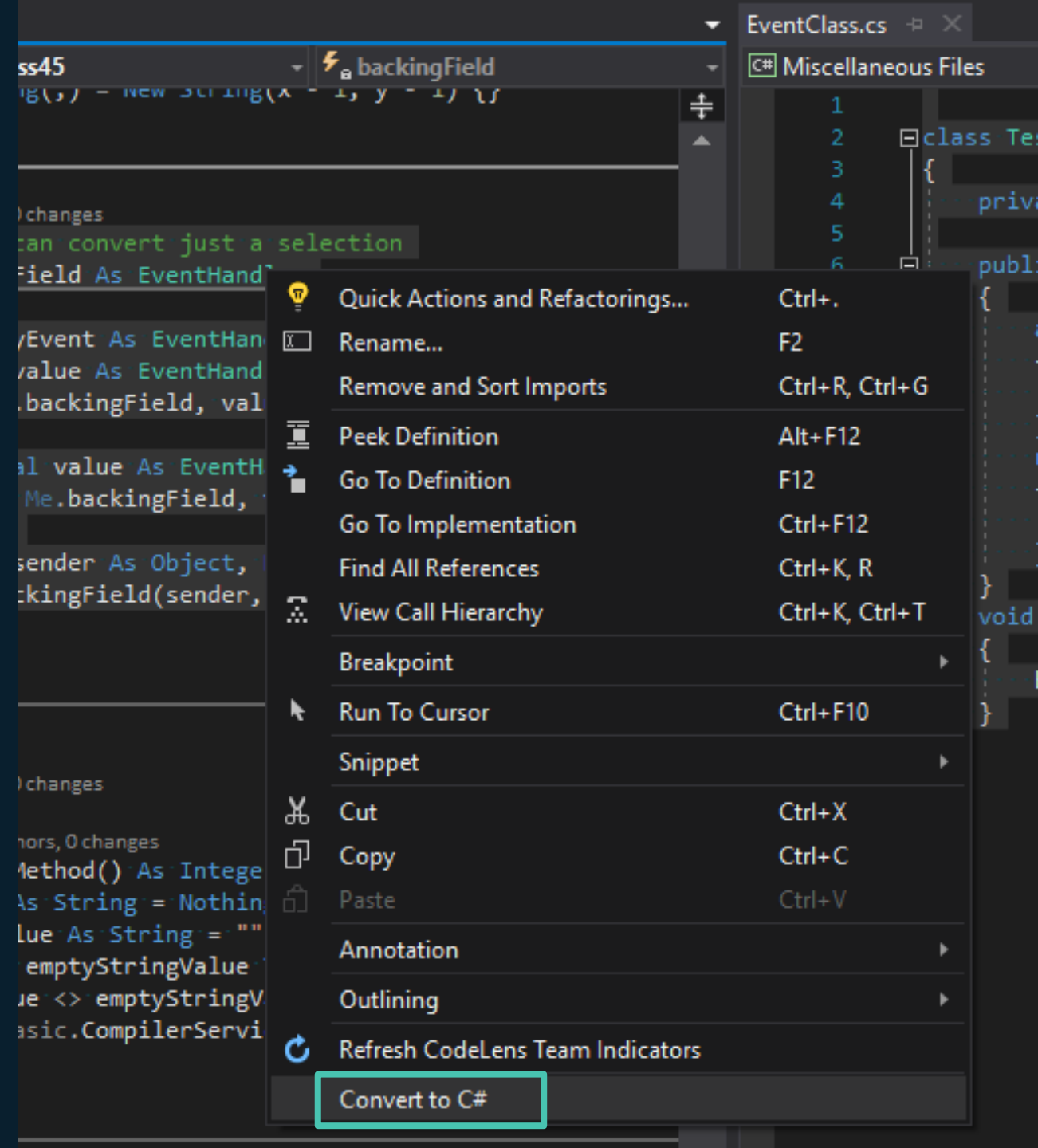
App Cat + GitHub Copilot

Demo

VB to C# Conversion

CodeConverter by icsharpcode

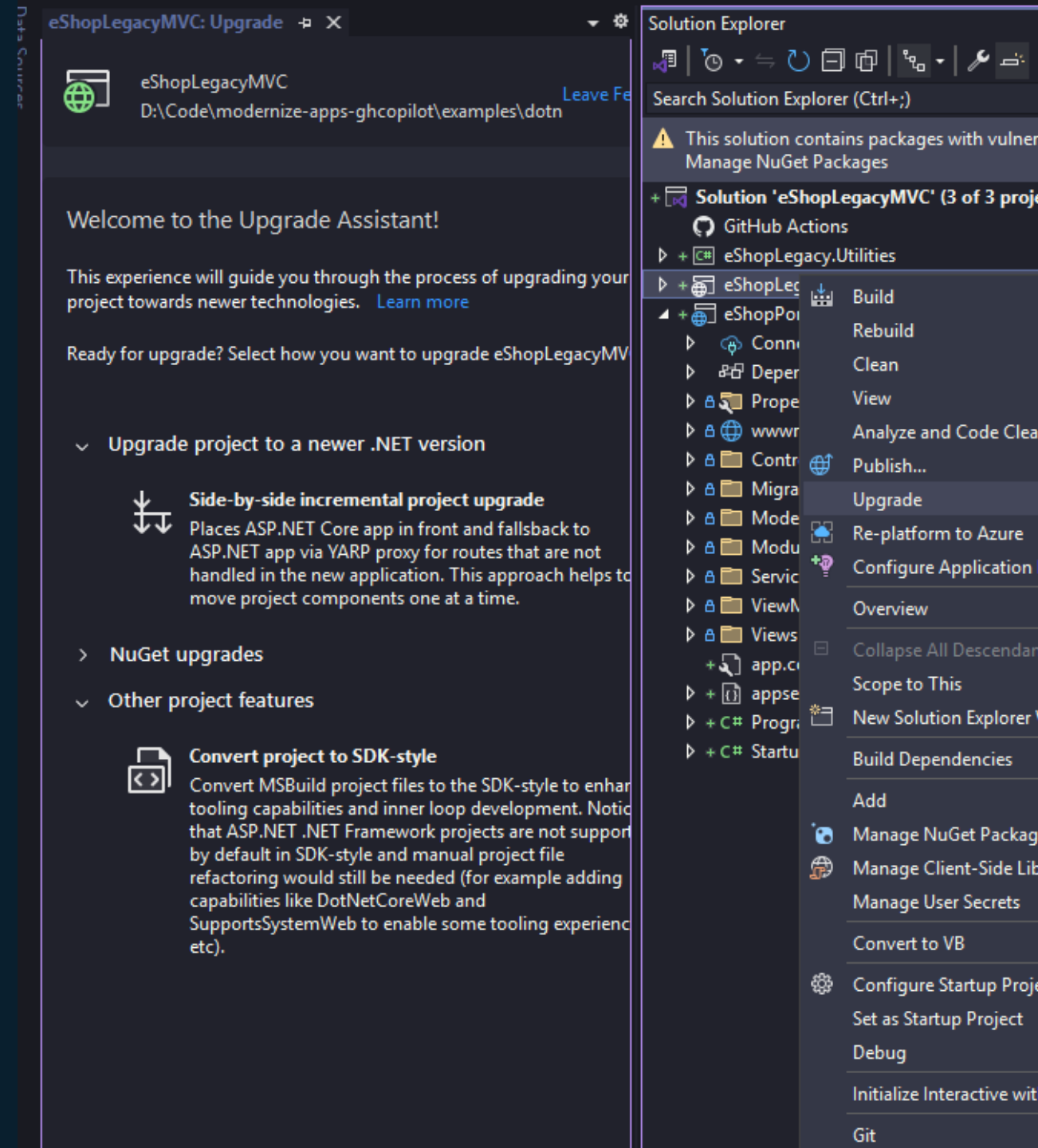
- An open-source Roslyn-based code conversion library and toolchain for conversion of VB.NET code into C#
 - Roslyn is the codename for the .NET compiler, so this toolset uses .NET itself to do the conversion
- Can go back and forth VB \Leftrightarrow C#
- Can convert a whole project at once (resulting code needs to be validated/fixed)
- Our primary use case would be via the Visual Studio Plugin, however other automation tools (CLI, nuget package, etc) exist



.NET Upgrade Assistant

Microsoft tooling for upgrading .NET frameworks

- Upgrade your app to the latest .NET versions with Upgrade Assistant right from Visual Studio or CLI
- Primary use case would be ASP.NET MVC or generic class libraries/console apps – can be upgraded to .NET 6+ for hosting on Linux
- Can convert a whole project at once (resulting code needs to be validated/fixed)
- Our primary use case would be for ASP.NET MVC apps



.NET Conversions

Demo

Prompting Best Practices

Provide Context

- Indicate relevant code to Copilot by:
 - Highlighting code in an open file
 - Opening related files in your IDE
 - Using #file and @workspace
- Document inputs and outputs for the code you want Copilot to generate

Give Copilot an Identity

- Since Copilot is a pair programmer, ask it to behave in a role that suits the task:
 - "Behave as a senior C# developer"
 - "You are a frontend developer skilled in React"

Break Down Complex Tasks

- Break your overall goal into smaller, discrete tasks – one function, one piece of business logic, one file at a time
- Document your overall task in a comment

Embrace Chat

- By far the best results for modernization will come from utilizing Copilot Chat
- Autocompletion and inline code generations are best if you are writing new code
- Don't be afraid to correct Copilot's response

Get Specific

- Start general and get more specific – ask for something, clarify, ask for more detail, reject Copilot's suggestions, et al.
- Avoid ambiguous terms such as "this" and instead refer to the item by name or identifier
- Provide detail when describing what you want – libraries, packages, dependencies, naming conventions, etc

Iterate.

Prompting Best Practices

Demo

Other Resources

App Cat + GitHub Copilot

- [GitHub Copilot Analysis, Customized Rules, and more come to the Azure Migrate application and code assessment - .NET Blog \(microsoft.com\)](#)
- [YouTube: ASP.NET Community Standup - Assessing your app's Azure readiness](#)

VB Conversion

- [icsharpcode/CodeConverter: Convert code from C# to VB.NET and vice versa using Roslyn \(github.com\)](#)
- [GitHub: CodeConverter Wiki - Best Practices](#)

GitHub Copilot Best Practices

- [Prompt engineering for GitHub Copilot - GitHub Docs](#)
- [How to use GitHub Copilot: Prompts, tips, and use cases - The GitHub Blog](#)
- [Using GitHub Copilot in your IDE: Tips, tricks, and best practices - The GitHub Blog](#)

Formal Learning

- [Get started with GitHub Copilot - Training | Microsoft Learn](#)
- [Implement code improvements using GitHub Copilot tools - Training | Microsoft Learn](#)
- [Guided project - Accelerate app development using GitHub Copilot tools - Training | Microsoft Learn](#)
- [skills/copilot-codespaces-vscode: Develop with AI-powered code suggestions using GitHub Copilot and VS Code](#)

