



Golden Nu(g)Get

**Traumhafte Unterstützung von
Jenkins in .NET**

Benjamin Wolf

@ichaos1985

INNOQ

**„Guter Code liest
sich für mich
wie ein gut
geschriebenes
Buch.“**



Benjamin Wolf

Senior Consultant
bei INNOQ

- Entwicklung von Anwendungen in Java / .NET
- Verliebt in Software-Qualität
- Kaffee-Snob

Inhalt

Dramatis Personae

Problem(e)

Lösung

Wie kommen wir dort hin?

Motivation

DDC '16

Der LOGGER*

* Beispielprojekt aus einem Workshop bei Christian Gießwein zum Thema „Architektur Deluxe mit C# und .NET“



Dramatis Personae

NuGet



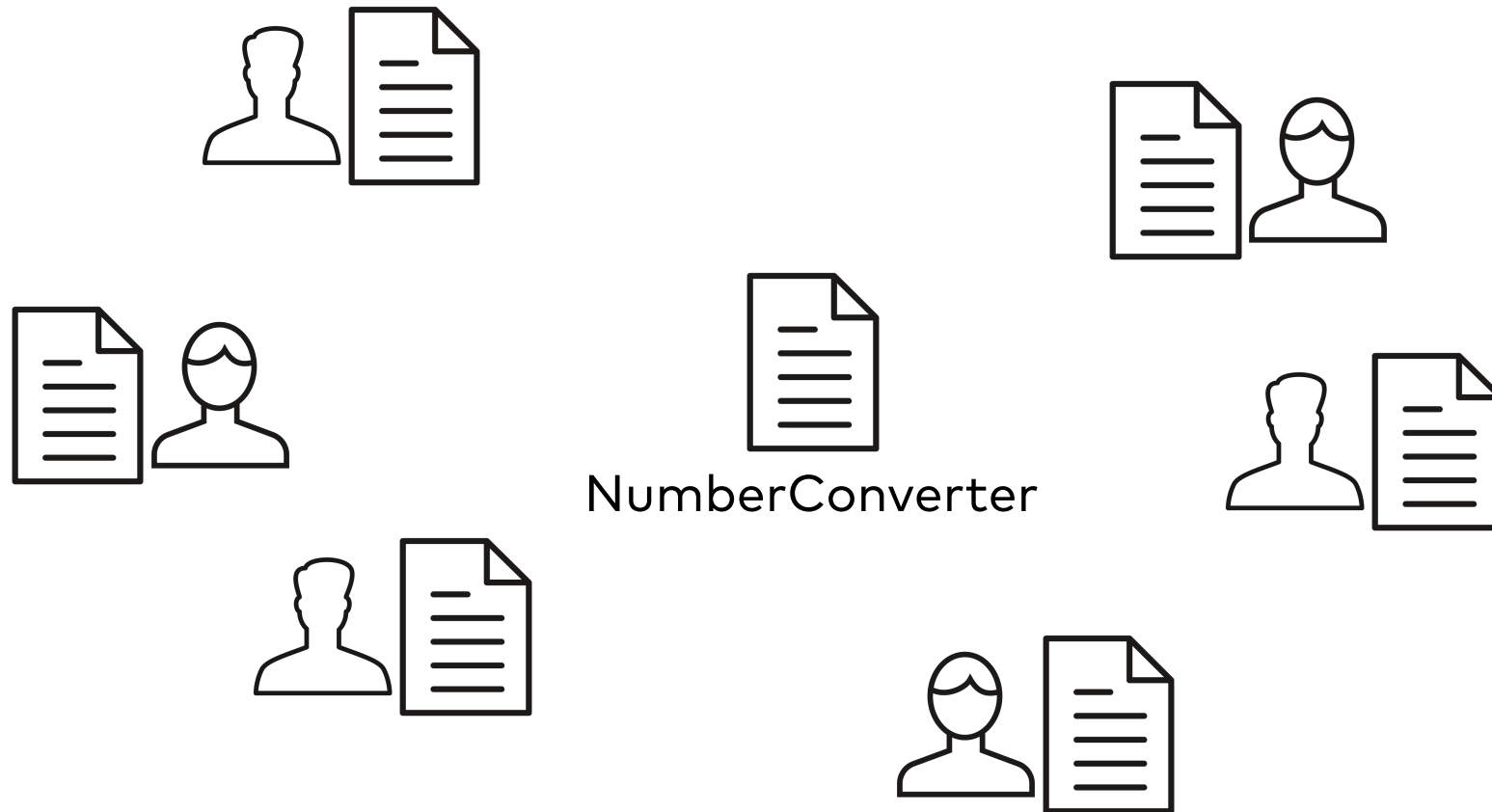
Jenkins



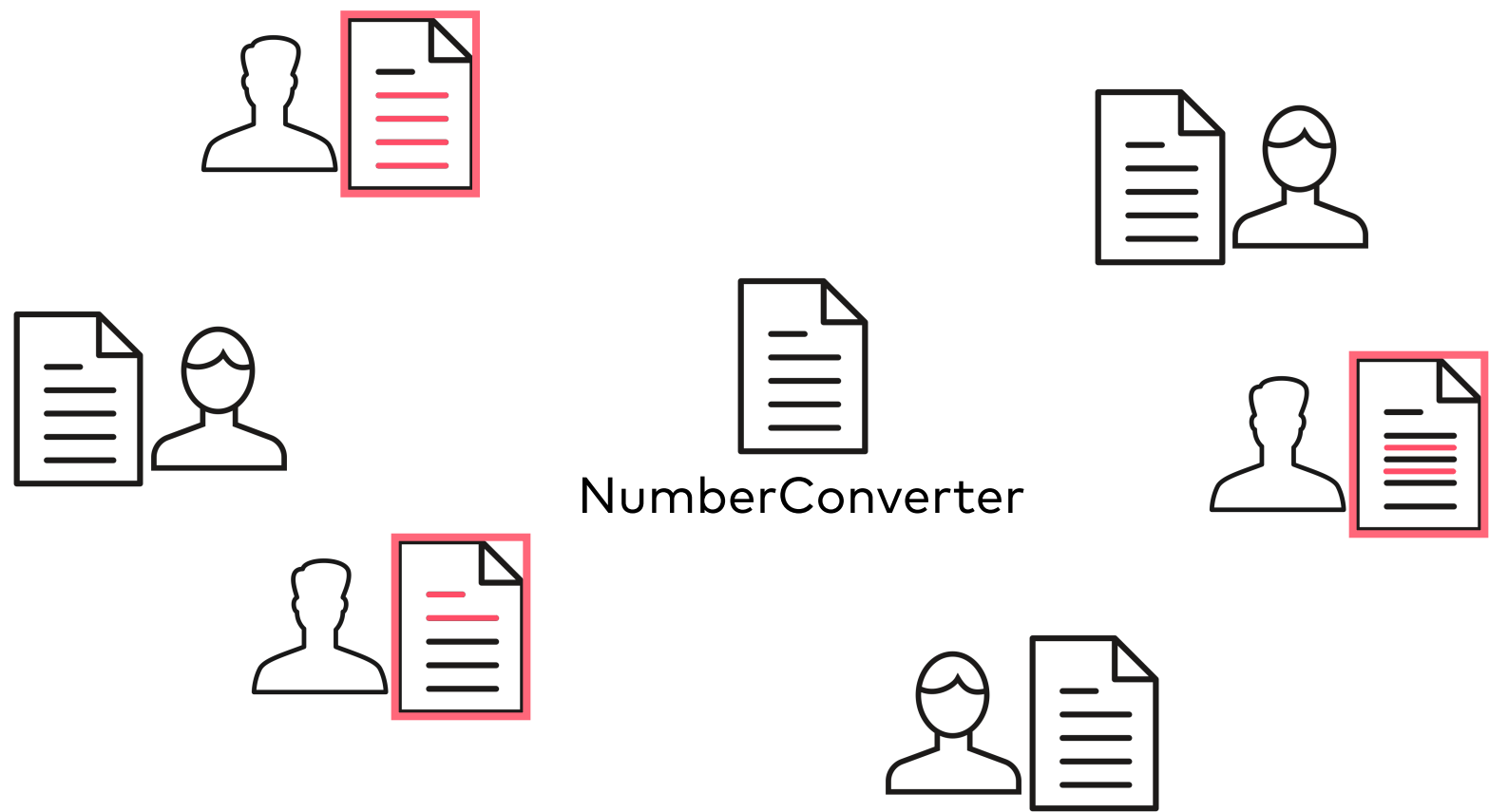


Problem(e) — Zeit-/Wissensmangel

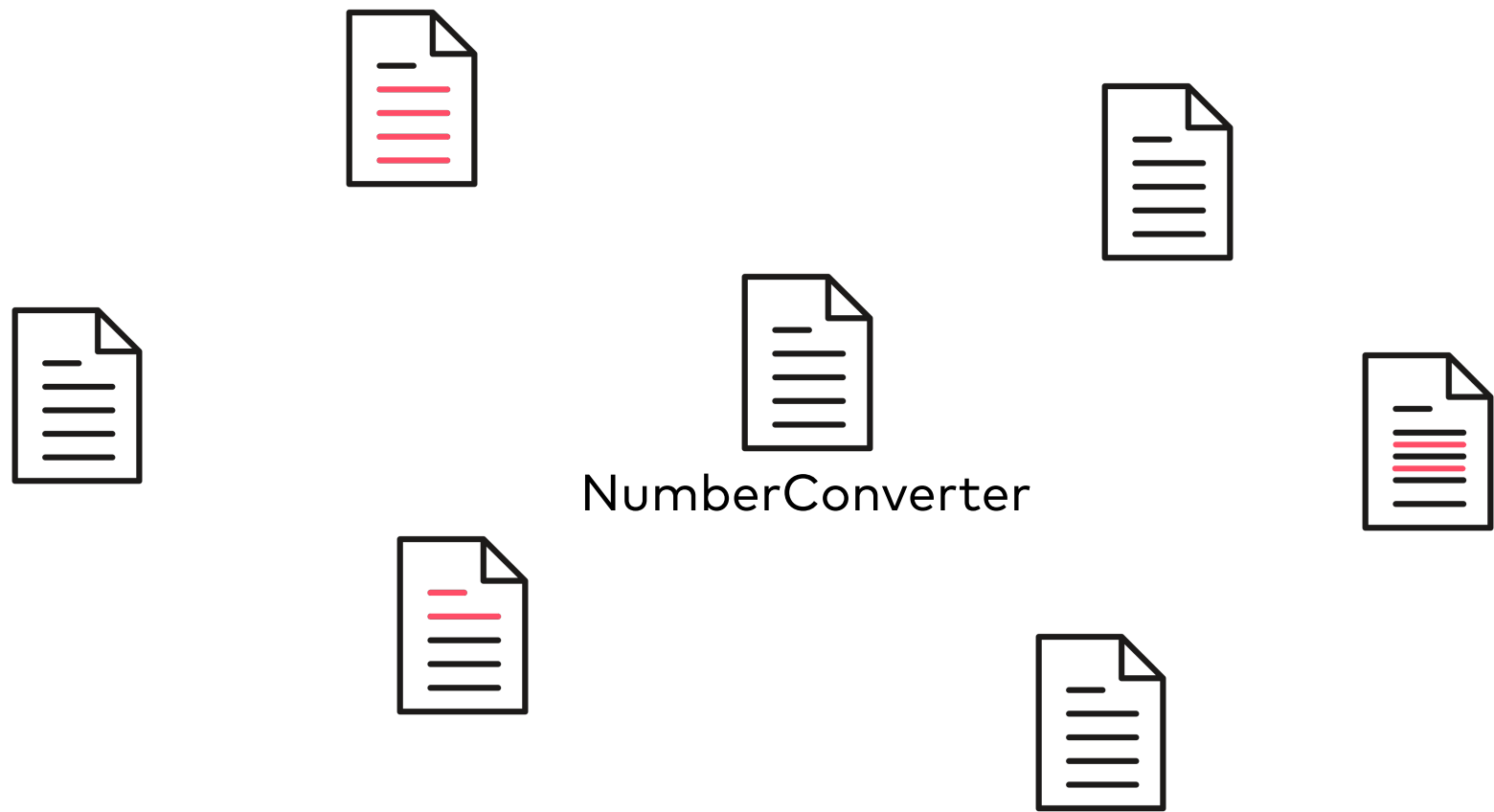
Code-Duplikation durch Zeit-/Wissensmangel



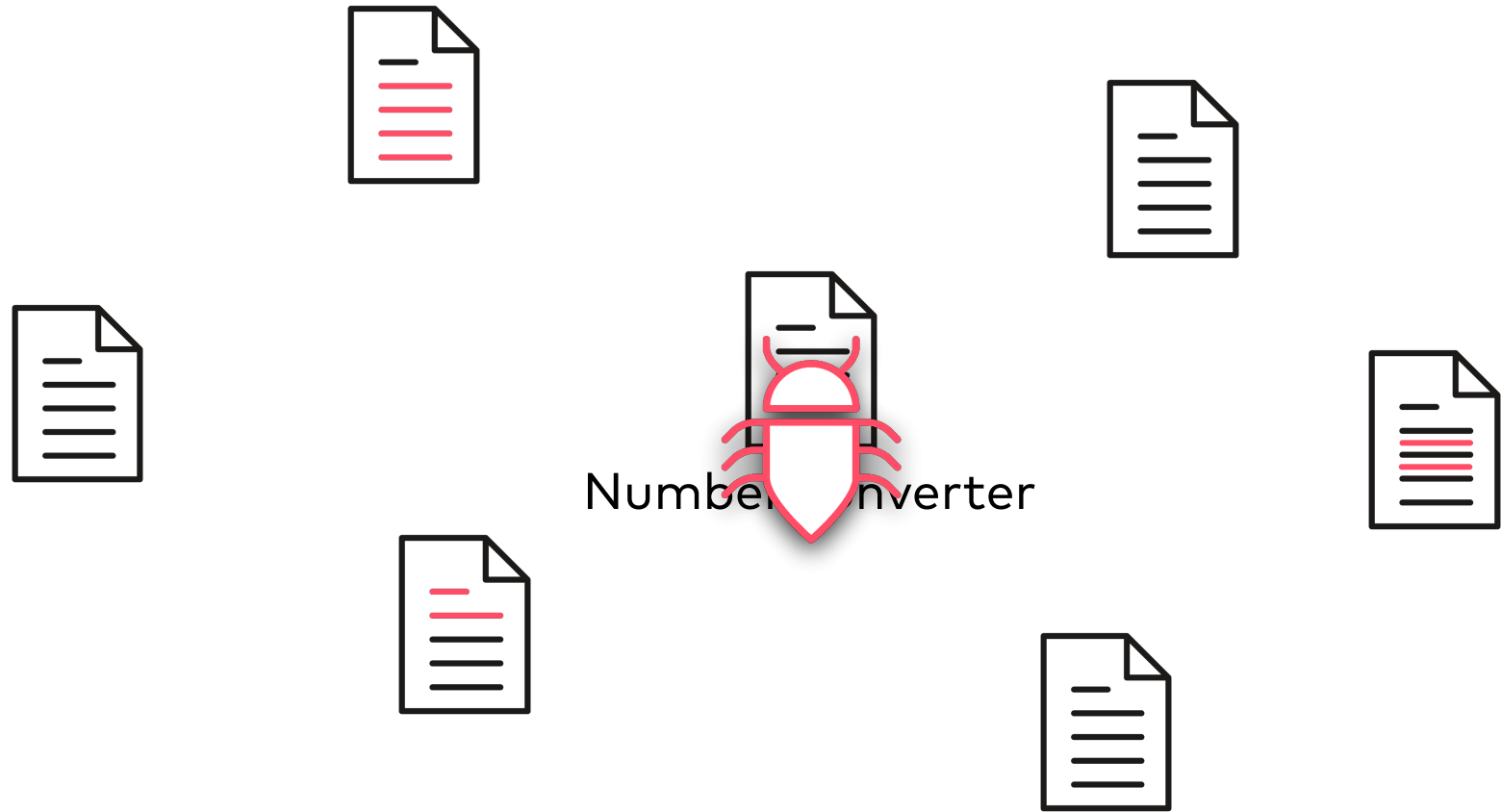
Unterschiedliche Änderungen an Duplikaten



Entwickler*innen verlassen das Projekt



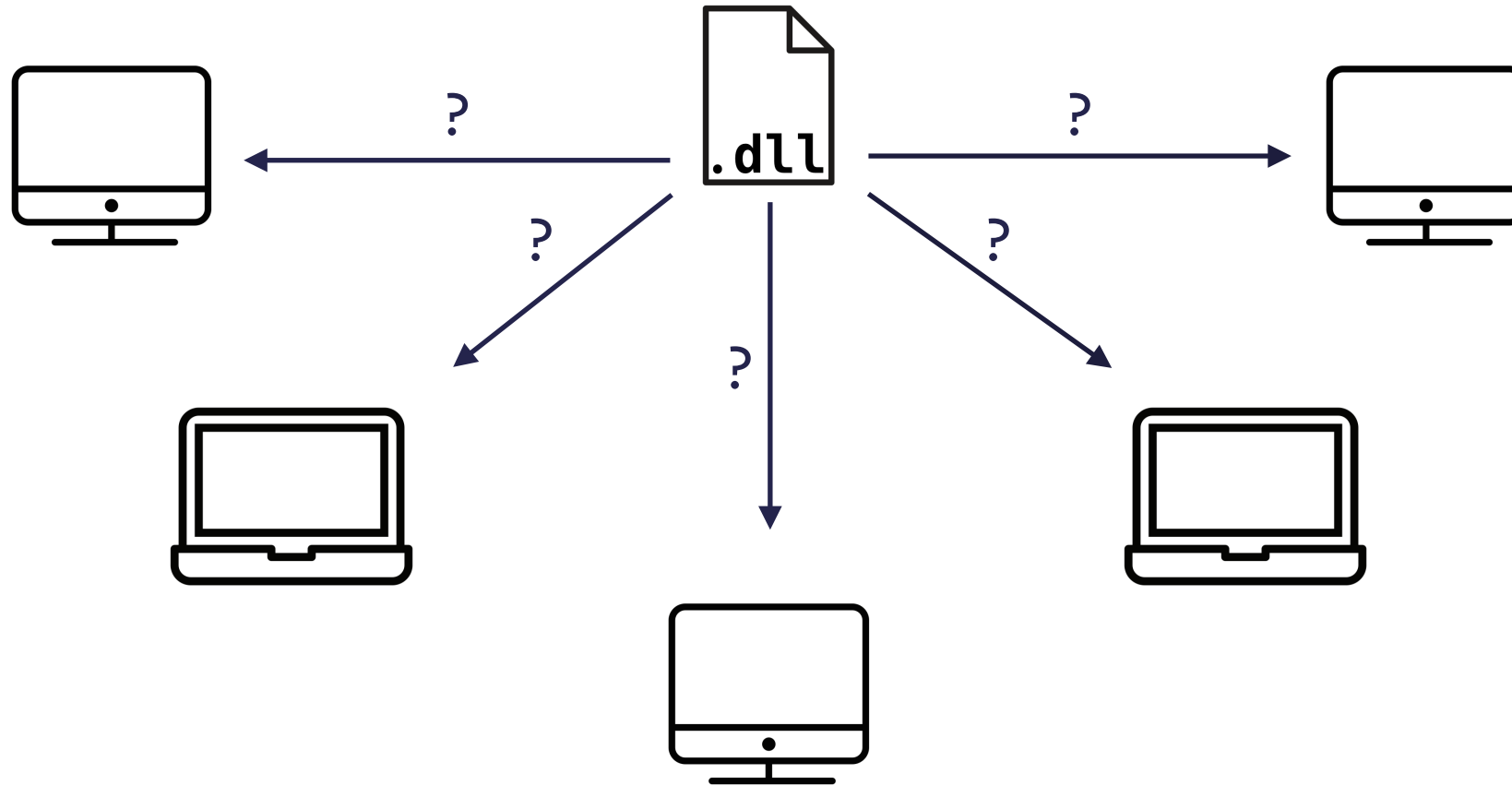
Ein Bug wird gefunden



A man with a beard and mustache is wearing a Microsoft HoloLens mixed reality headset. He is smiling and gesturing with his right hand, palm facing forward. The background is a blurred indoor setting with warm lighting. A semi-transparent dark grey rectangle is overlaid on the image, containing the text.

Lösung — Mach' es perfekt!

„Fertige“ DLL verteilen — aber wie?



  Solution ▾ MyFeed ▾ ☐ *Prerelease*

Installed Packages (0) in Solution

Available Packages (Top 1)

 Der.Konverter 1.0.0

 Der.Konverter

Version 1.0.0 ▾

▼ Info

This is Der Konverter, the best conversion library.

Links: [NuGet.org](#) [Google](#)

Author: Ben Wolf

▼ Dependencies

JetBrains.Annotations ≥ 2018.2.1

 Converter





Wie kommen wir dort hin?

Refactoring — Reduzieren der Code-Duplikate



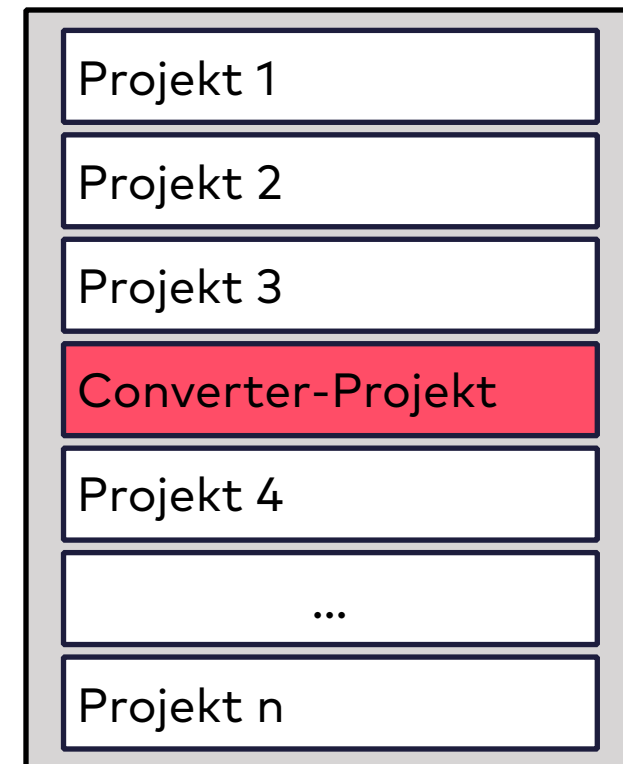
NumberConverter

Refactoring — Reduzieren der Code-Duplikate



Refactoring — Extrahieren in eigene Solution

Master-Solution (*.sln)



Refactoring — Extrahieren in eigene Solution

Converter-Solution (*.sln)

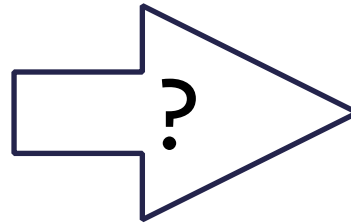


Master-Solution (*.sln)

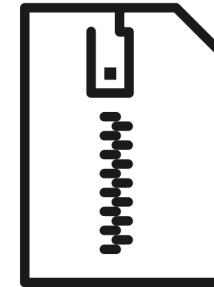


Refactoring – Erstellen eines NuGet Paketes

Converter-Solution (*.sln)



Der.Konverter.1.0.0.nupkg



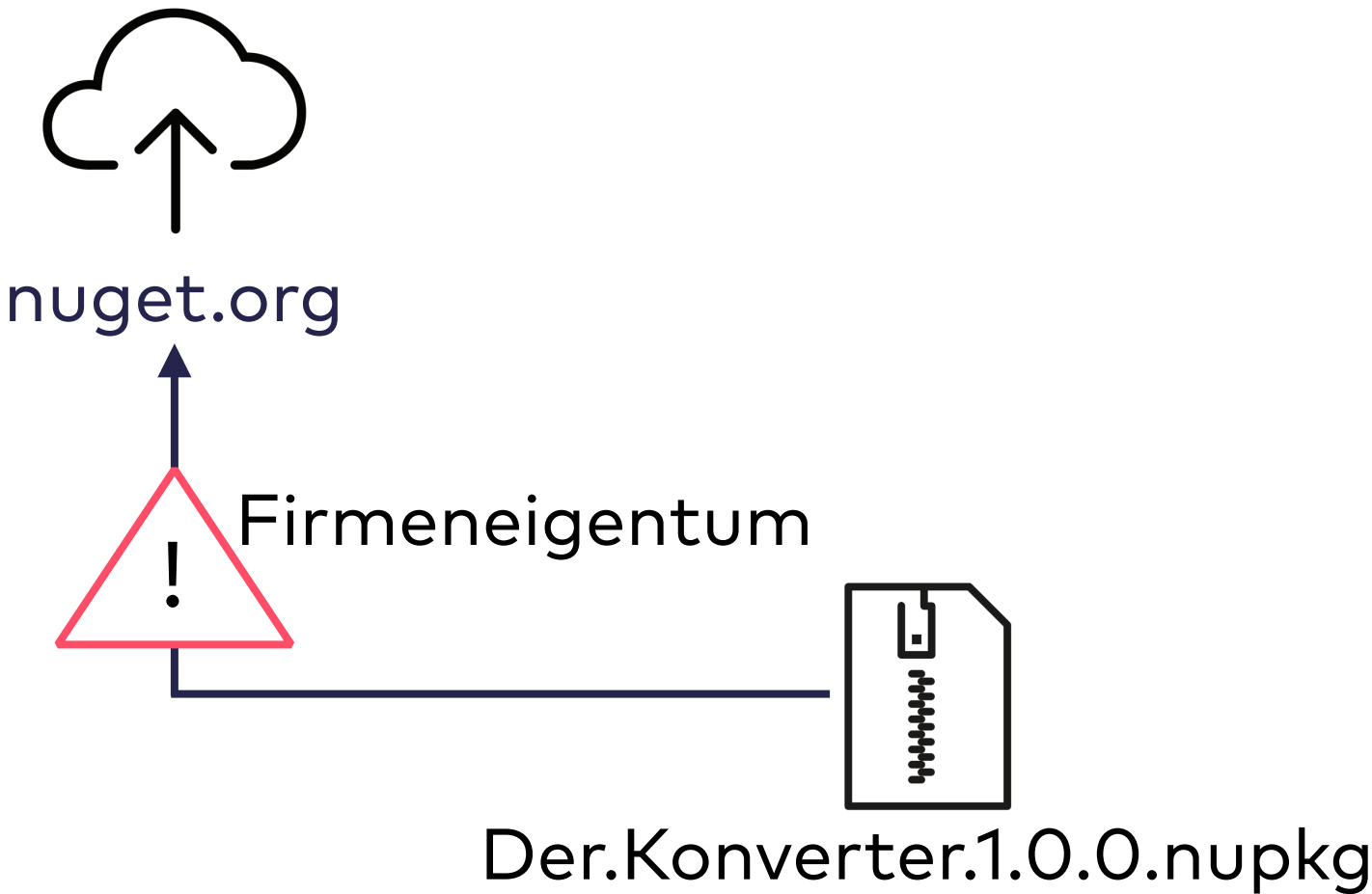
*.nuspec

```
<?xml version="1.0" encoding="utf-8"?>
<package xmlns="http://schemas.microsoft.com/packaging/2010/07/
nuspec.xsd">
  <metadata>
    <!-- Required elements -->
    <id>Der.Konverter</id>
    <version>1.0.0</version>
    <description>This is a cool data converter lib.</description>
    <authors>Ben</authors>
    <!-- Optional elements -->
  </metadata>
</package>
```

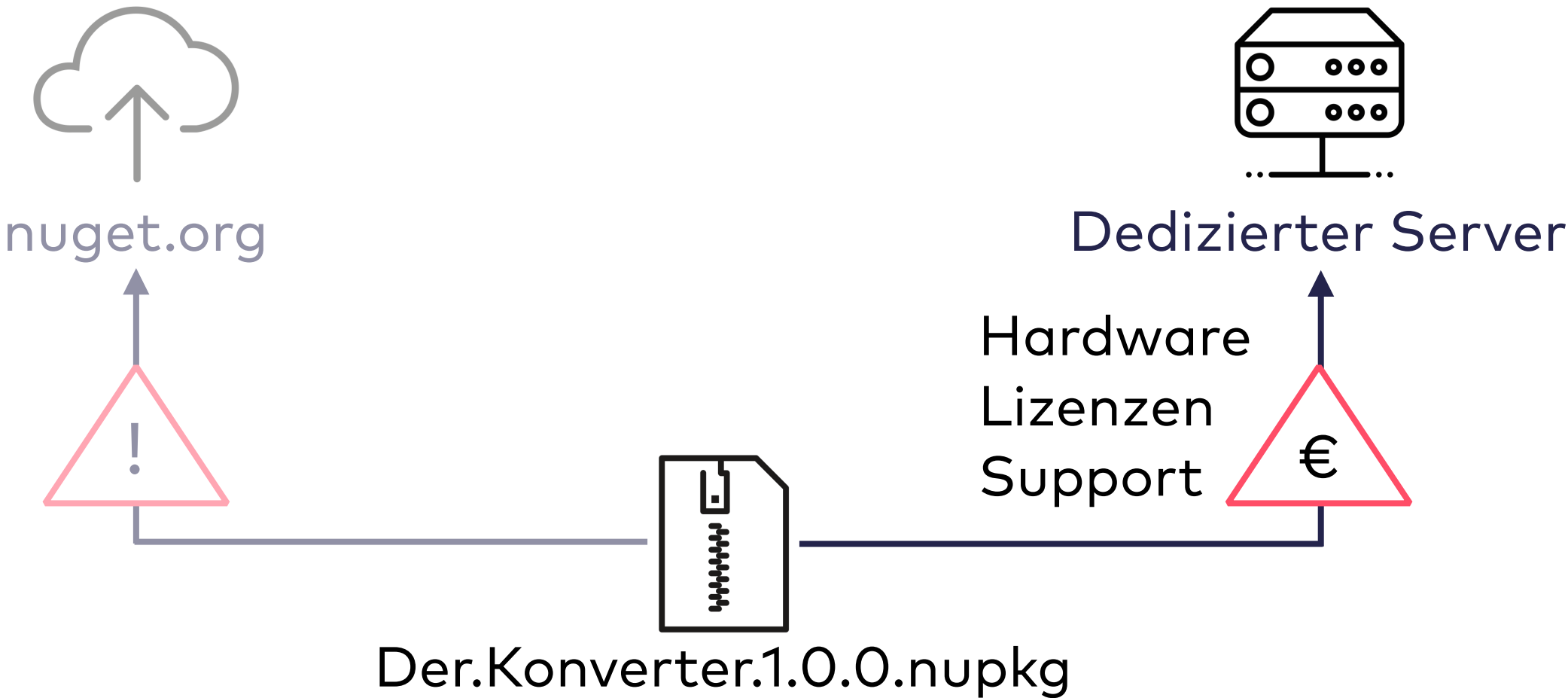
Converter.nuspec

```
<?xml version="1.0"?>
<package>
  <metadata>
    <id>$id$</id>
    <version>$version$</version>
    <title>$title$</title>
    <authors>$author$</authors>
    <owners>$author$</owners>
    <description>$description$</description>
    <releaseNotes>Our amazing first release.</releaseNotes>
    <copyright>Copyright Wolf 2018</copyright>
  </metadata>
</package>
```

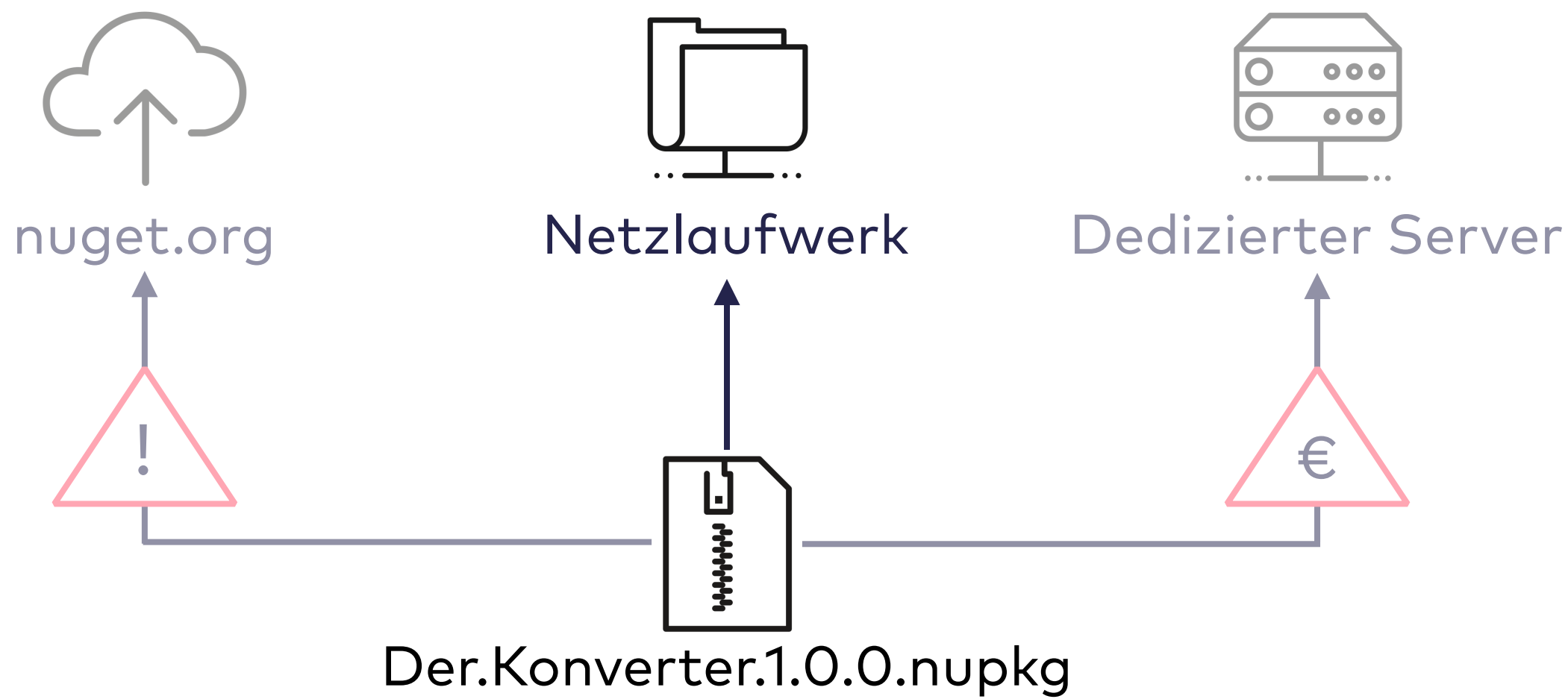
NuGet Deployment



NuGet Deployment



NuGet Deployment



Fünf Schritte zum Erfolg

nuget spec Converter.csproj

Fünf Schritte zum Erfolg

vim Converter.nuspec

Fünf Schritte zum Erfolg

```
msbuild Converter.csproj \  
  /t:Rebuild \  
  /p:Configuration=Release
```


Fünf Schritte zum Erfolg

```
nuget pack Converter.csproj \  
-Properties Configuration=Release
```

Fünf Schritte zum Erfolg

`nuget add`

`Der.Konverter.1.0.0.nupkg \`

`-Source \`

`~/Documents/developer/nuget_repo`

Live-Demo

Jenkins Magic — Pipelines mit BlueOcean

✓ **My Superb Util Library 9**

PipelineChangesTestsArtifacts↺✎⚙️🔗Logout✕

Branch: master🕒 12sChanges by Der User

Commit: d3daebe🕒 5 minutes agoBranch indexing

Start

Checkout✓

Build✓

Make NuGet✓

Deploy NuGet✓

Cleanup workspace✓

End

Make NuGet - 3s

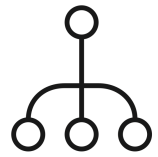
✎📄⬇️

✓ > nuget pack MyCoolStuffSolution/MySuperbUtilities/MySuperbUtilities.csproj -Properties Configuration=Release — Shell Script

3s

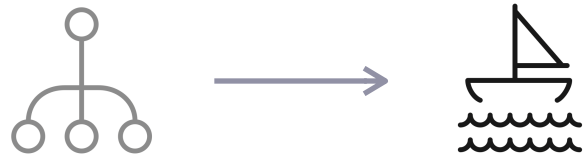
STATUS	RUN	COMMIT	BRANCH	MESSAGE	DURATION	COMPLETED	
✓	9	d3daebe	master	Fix step name	12s	4 minutes ago	↺
✓	8	27a9ff2	master	Remove notFail flag	9s	4 minutes ago	↺
✓	7	2f741f8	master	Add cleanup after build	12s	5 minutes ago	↺
✓	6	572b1c5	master	Add Agent for whole pipeline	2 commits17s	11 minutes ago	↺
✗	5	c6465de	master	Branch indexing	<1s	11 minutes ago	↺
✗	4	37d3f93	master	Fix nodes for all steps	15s	13 minutes ago	↺
✗	3	c06111a	master	Add nuget restore	10s	16 minutes ago	↺
✗	2	6eb262a	master	Branch indexing	9s	18 minutes ago	↺
✓	1	62b9b55	master	Branch indexing	<1s	32 minutes ago	↺

Fünf Schritte zum Erfolg



Neues Multi-Branch Projekt anlegen

Fünf Schritte zum Erfolg



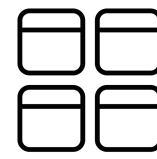
BlueOcean öffnen &
neue Pipeline anlegen

Fünf Schritte zum Erfolg



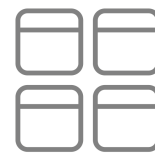
Agenten anlegen

Fünf Schritte zum Erfolg



Stages definieren

Fünf Schritte zum Erfolg

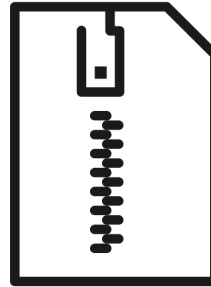


Spaß!

Live-Demo

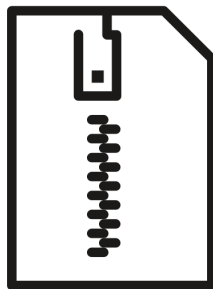
Pre-Release Versionen

Der.Konverter.1.0.3-beta12.nupkg



Pre-Release Versionen

Der.Konverter.**1.0.3**-my-feature-branch+a7d4c42.nupkg



Testen

xUnit.net



Wie steht's um die Qualität?



StyleCop

Roslyn.Analyzers

doxygen

Summary



- Leicht zu verwenden
- Kein Server nötig
- Versionsmanagement



- Automatisches Deployment
- Beta-/Test-Versionen
- Automatisierte Tests
- Prüft Software-Qualität

Summary





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INNOQ

Quellen

- Deckblatt, Schlussblatt: "Gifts in golden Wrapper" by Jeshu John, <http://www.designerspics.com/photographs/gifts-golden-wrapper/>
- Seite 7, 46, 47: "NuGet Logo", cropped for presentation, <https://github.com/NuGet/Media>, License: <https://creativecommons.org/licenses/by/2.0/>
- Seite 8, 46, 47: "Jenkins Logo", <https://jenkins.io>, License <https://creativecommons.org/licenses/by-sa/3.0/>
- Seite 9: "Life is like an hourglass", Photo by [Uroš Jovičić](#) on [Unsplash](#), <https://unsplash.com/photos/BXOXnQ26B7o>
- Seite 9: "Book, Page, Bookstore and Bookshelf", Photo by [Patrick Tomasso](#) on [Unsplash](#), https://unsplash.com/photos/Oaqk7qqNh_c
- Seite 17: "Road, Cloud, Cloudy and Mountain Range", Photo by [Gian-Reto Tarnutzer](#) on [Unsplash](#), <https://unsplash.com/photos/JruCKmJdmng>
- Seite 44: „xUnit Logo", <https://github.com/xunit/media>
- Seite 44: „nunit Logo", <http://www.nunit.org>, License <https://creativecommons.org/licenses/by-nc-sa/4.0/>
- Seite 44: „dotCover Logo", <http://www.jetbrains.com>
- Seite 45: „ReSharper Logo", <http://www.jetbrains.com>

Alles anders mit .NET core?

// NuGet Parameter müssen/können in den Einstellungen des Projektes
// getätigt werden.

```
dotnet pack Converter.csproj /p:Configuration=Release
```

```
dotnet pack --version-suffix "my-branch+127a35e" Converter.csproj  
/p:Configuration=Release
```

```
dotnet nuget push Der.Konverter.1.0.0.nupkg -s \  
~/Documents/developer/nuget_repo
```