



**TRAILHEAD**  
TECHNOLOGY PARTNERS

# Old to Gold

How to Modernize Your Legacy  
ASP.NET Apps Gradually



Jonathan "J." Tower

# The Problem



ASP.NET



ASP.NET Core

# Agenda



Migration  
Approaches



Reverse  
Proxies



YARP



.NET  
Upgrade  
Assistant



YARP  
Migration



System.  
WebAdapters

# Agenda



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# Hello. I'm J.

## Jonathan "J." Tower

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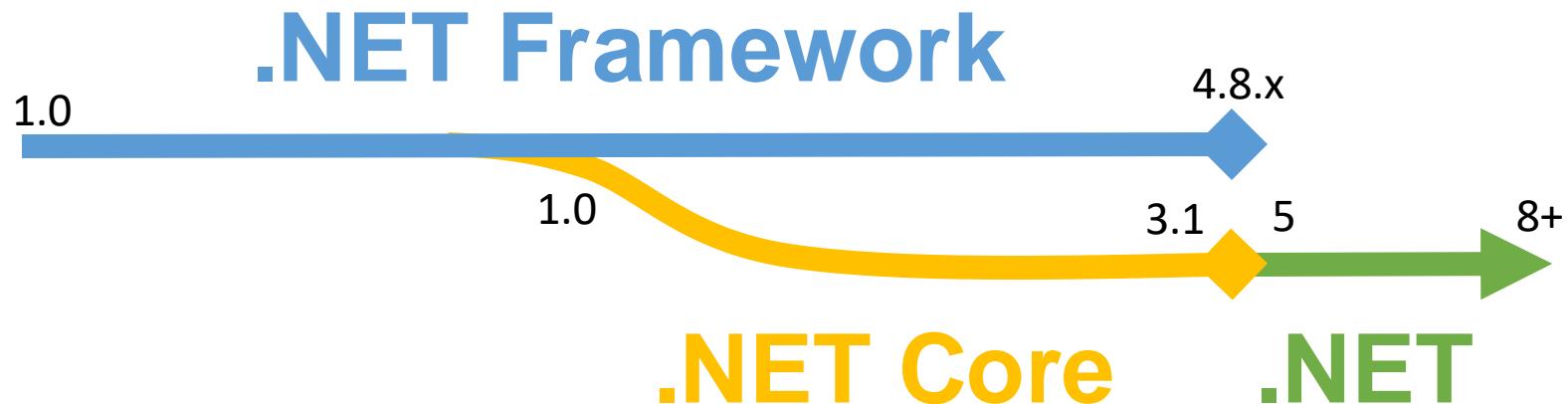
<https://github.com/trailheadtechnology/migrate-with-yarp>

**FREE**  
Consultation



[bit.ly/th-offer](http://bit.ly/th-offer)

# Key Terms



# Key Terms

ASP.NET

.NET Framework

ASP.NET Core  
(v1.0 - 2.2)

.NET Framework

.NET Core

ASP.NET Core  
(v3.0+)

.NET

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ASP.NET

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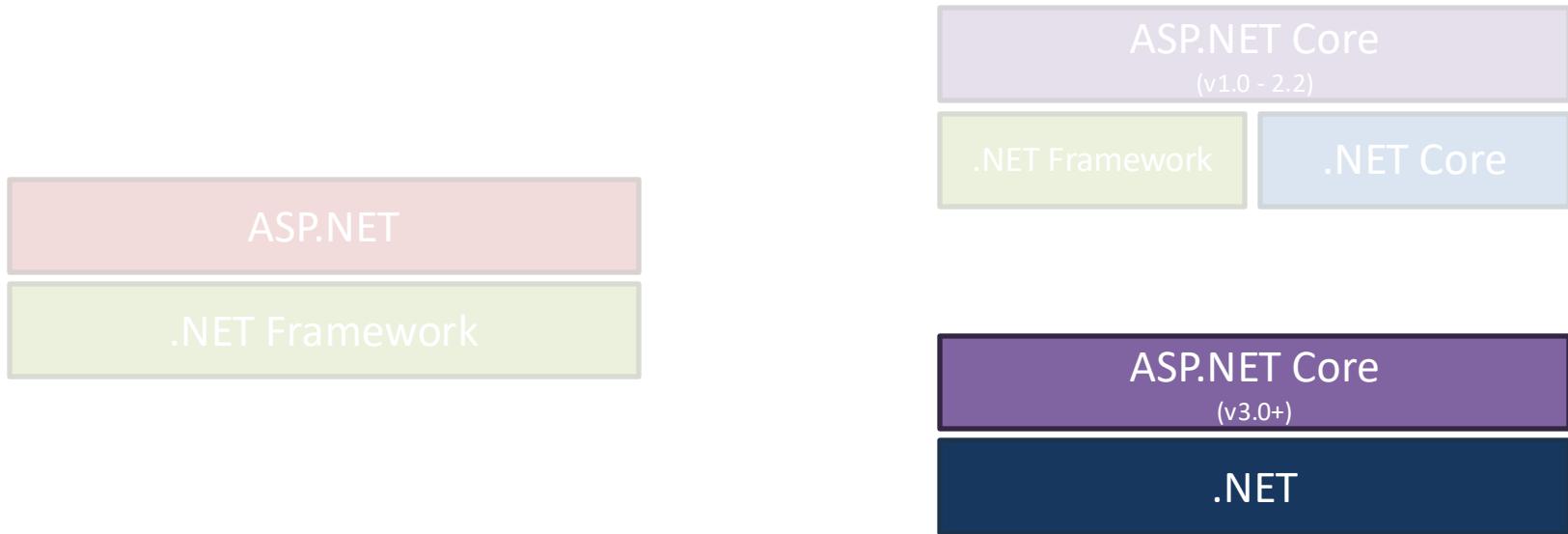
.NET Framework

.NET Core

ASP.NET Core  
(v3.0+)

.NET

# Key Terms



# Migration Approaches



Big Bang



Evolution



Strangler Fig

# Big Bang Approach



# Evolutionary Approach



# Strangler Fig Approach

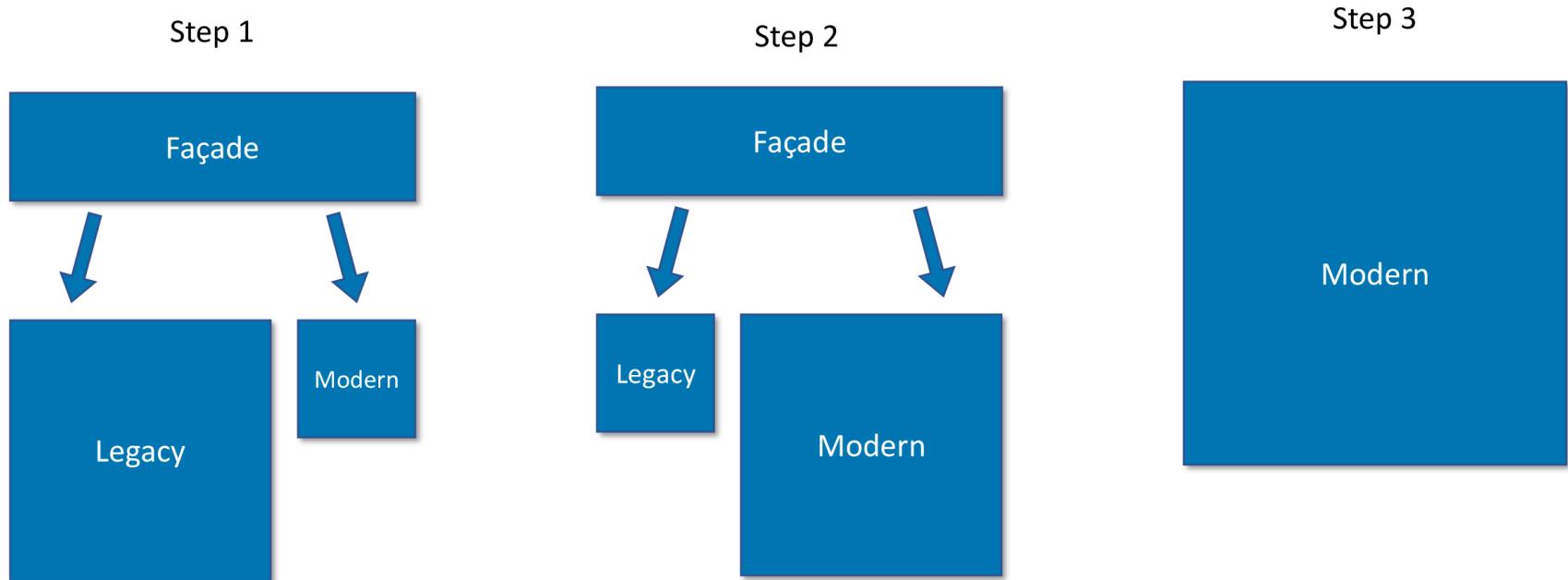


# Strangler Fig



Source: Encyclopedia Britannica

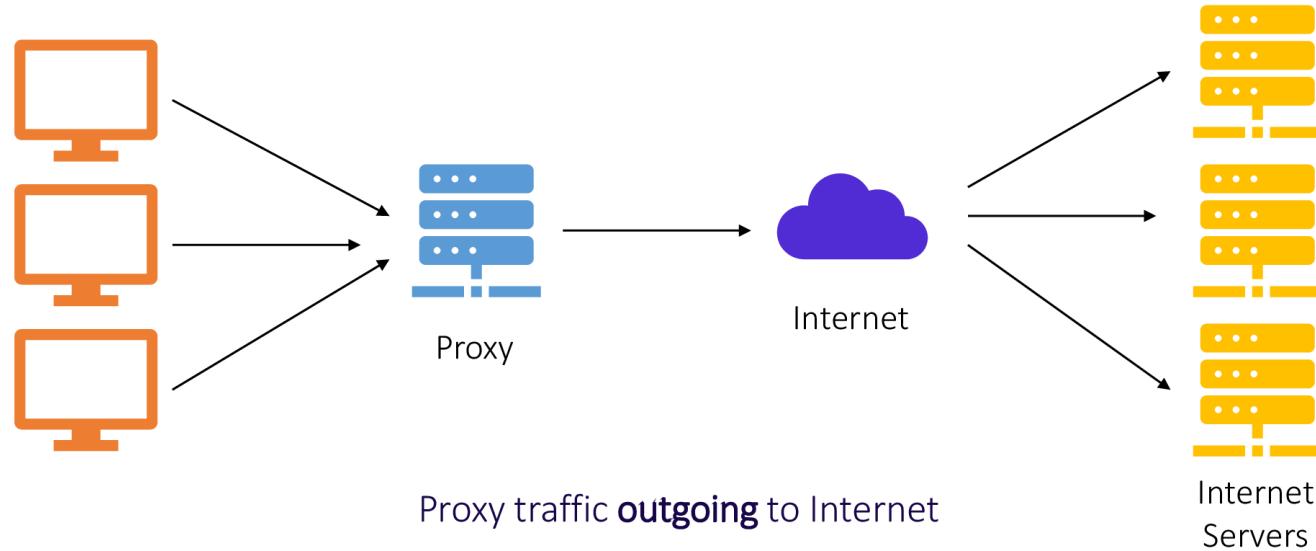
# Strangler Fig Pattern



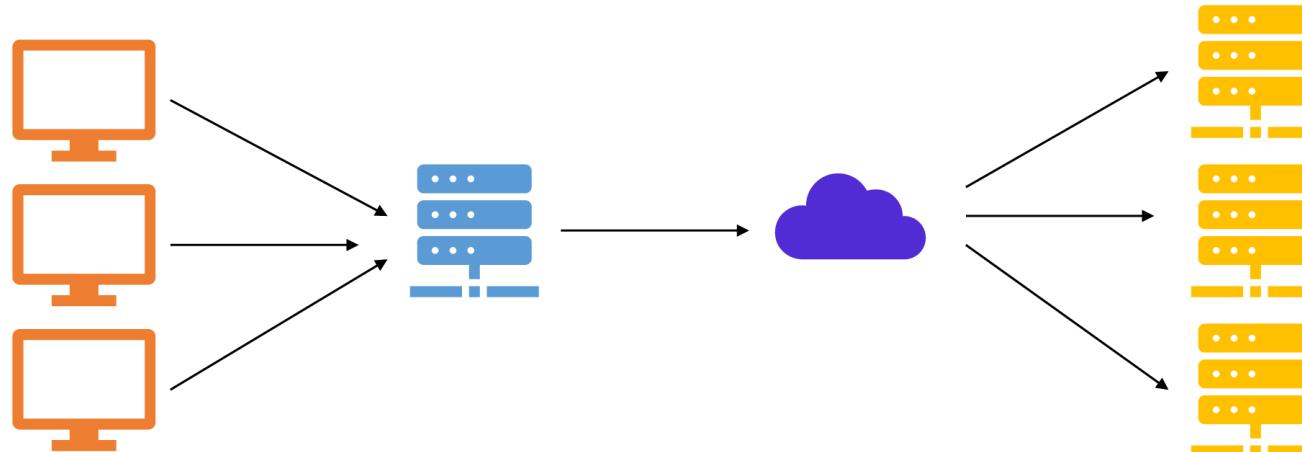


# What is A Reverse Proxy?

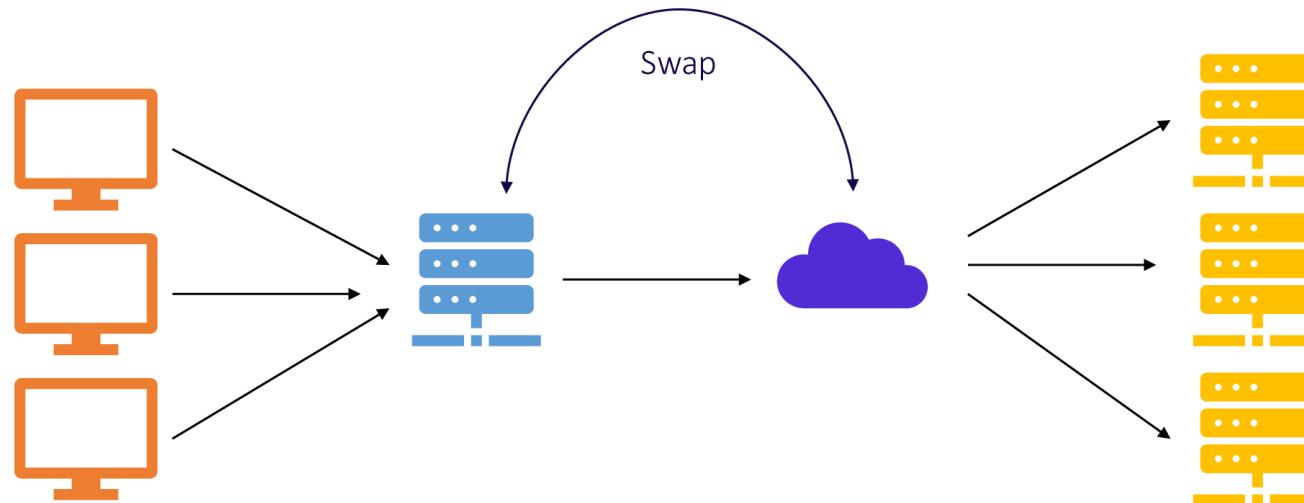
# What is a Regular (Forward) Proxy?



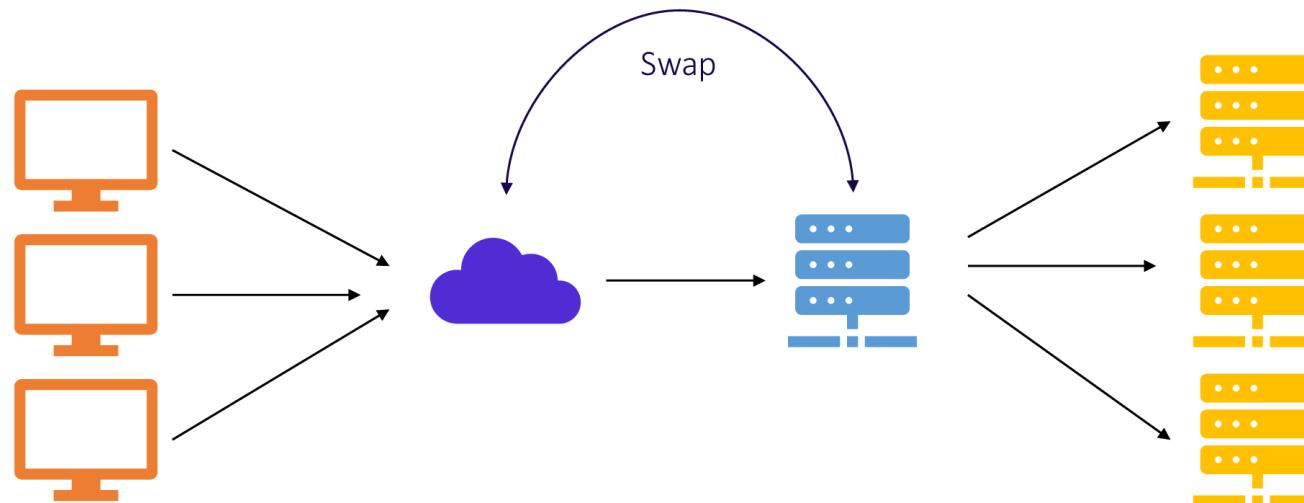
# What is a REVERSE Proxy?



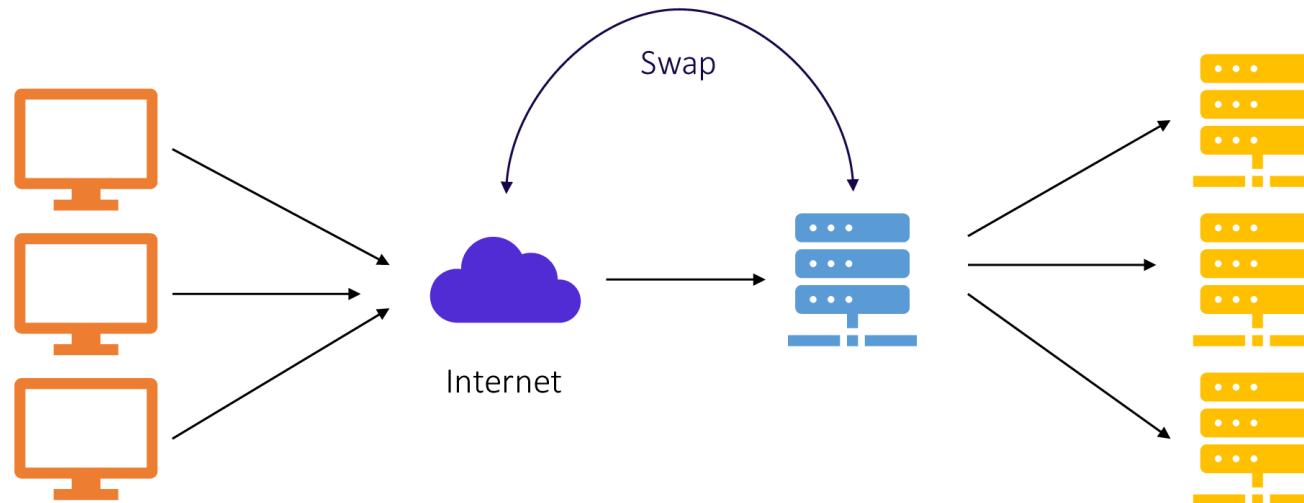
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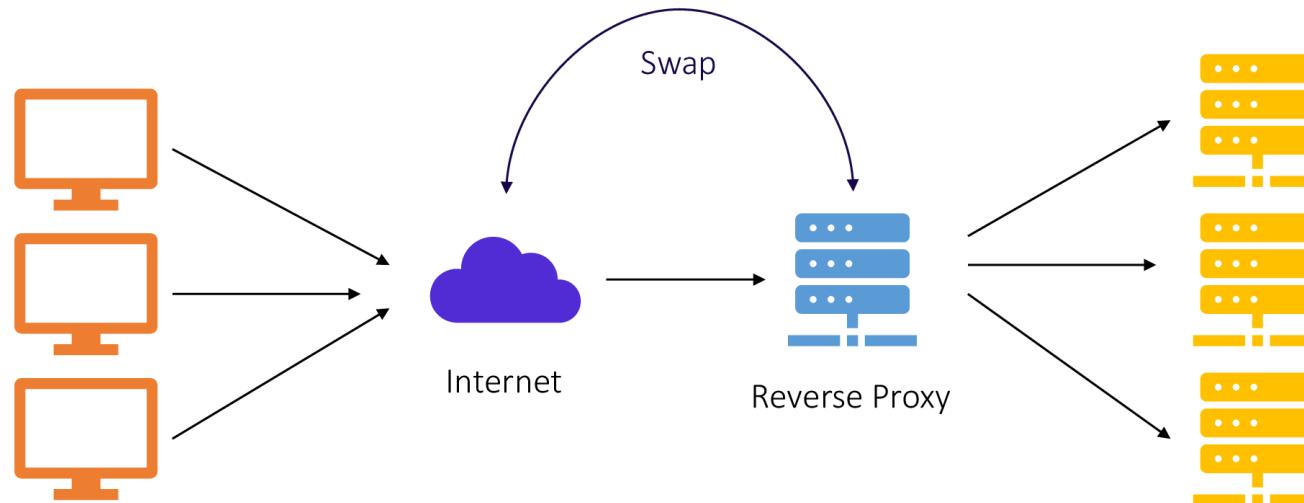
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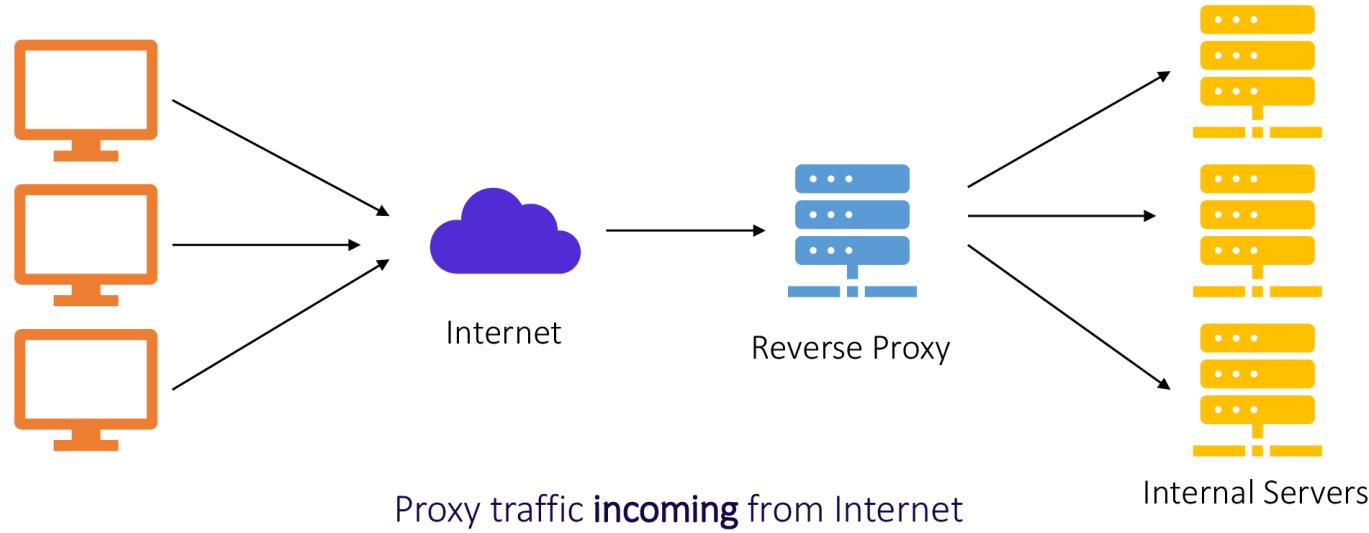
# What is a REVERSE Proxy?



# What is a REVERSE Proxy?



# What is a REVERSE Proxy?



# Use Cases



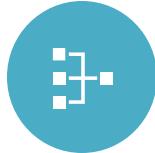
A/B TESTING



URL REWRITING



SECURITY



MICROSERVICES  
API GATEWAY



FEATURE FLAGS

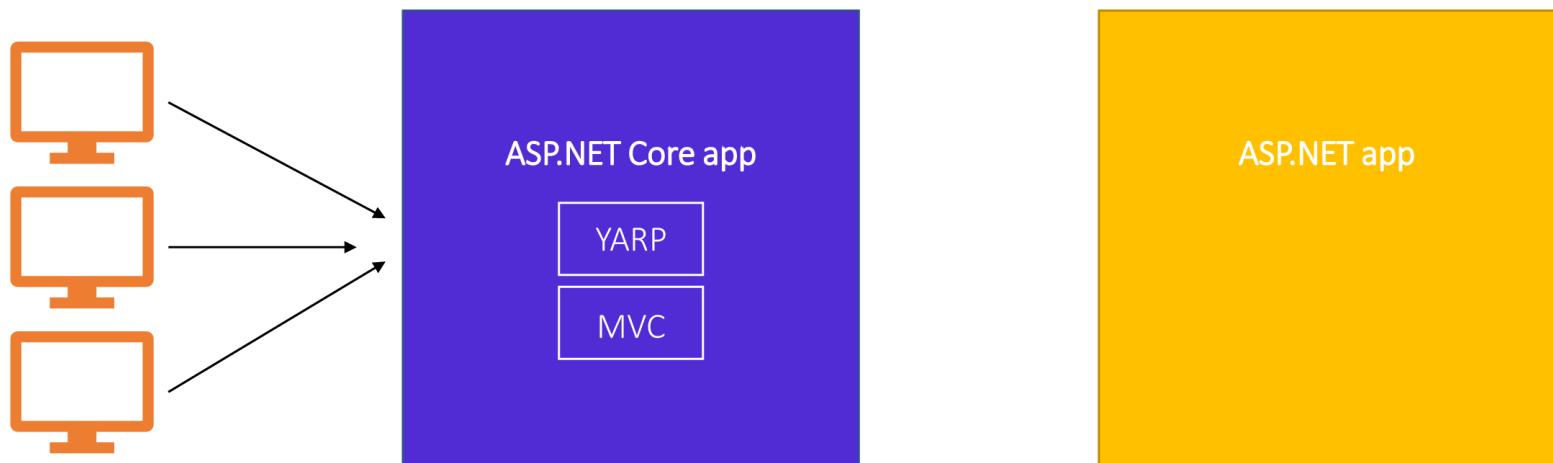


INCREMENTAL  
MIGRATIONS

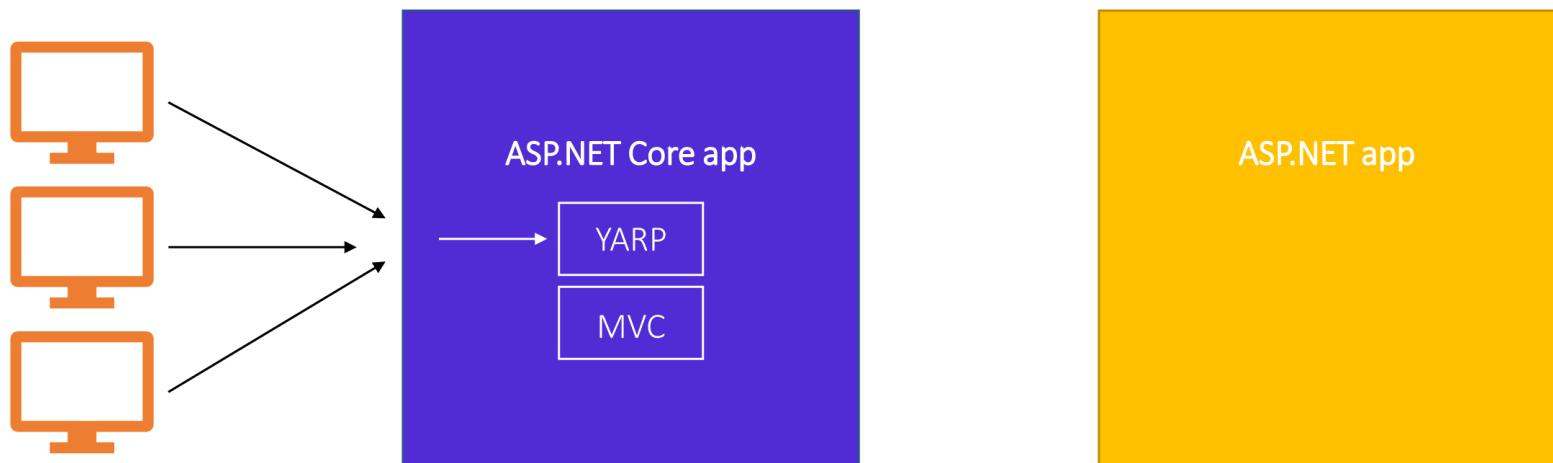


# How YARP Works

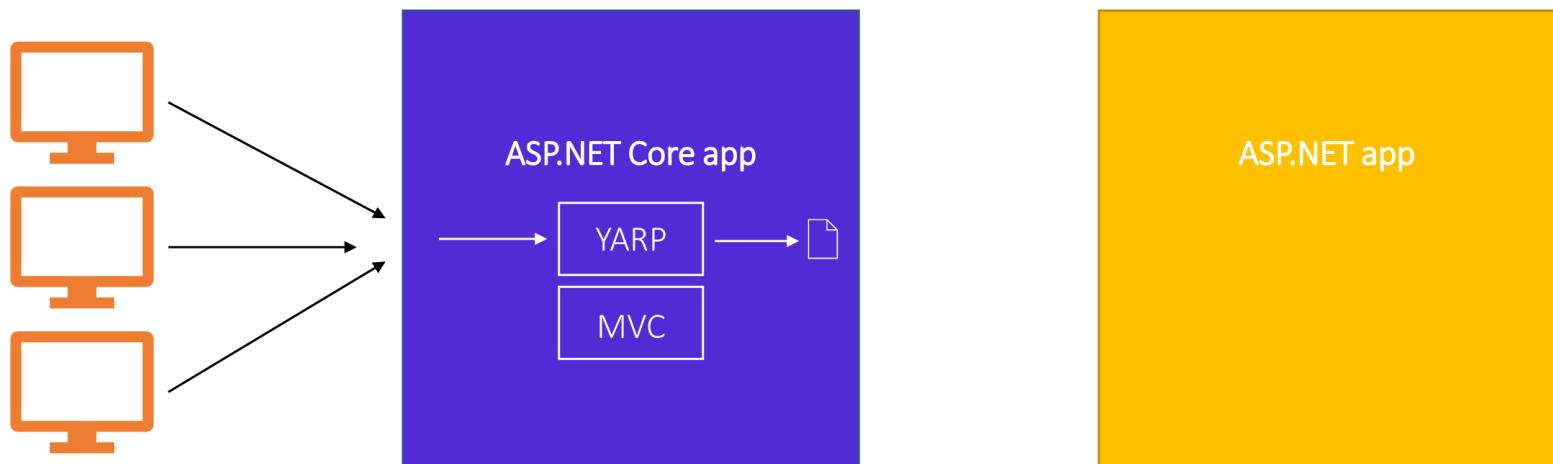
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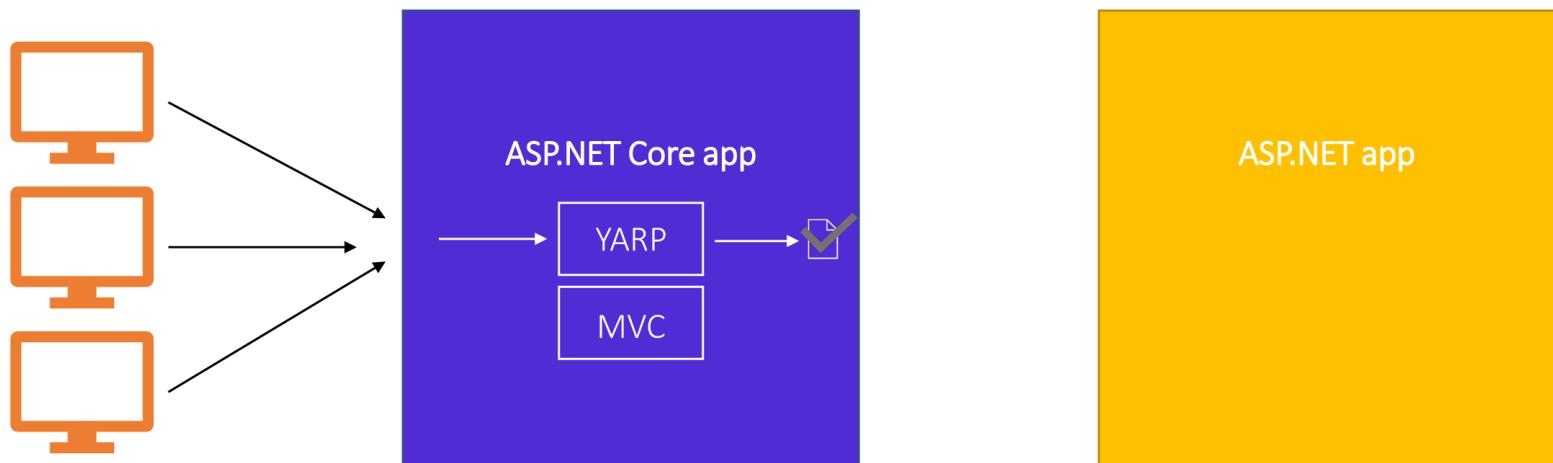
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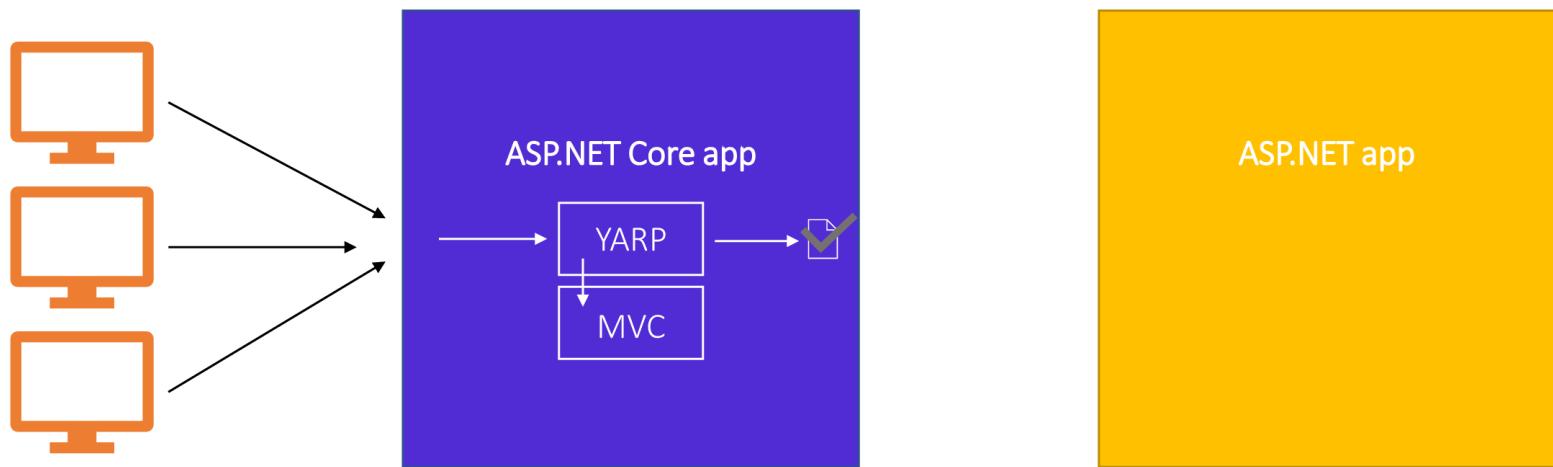
# How YARP Works



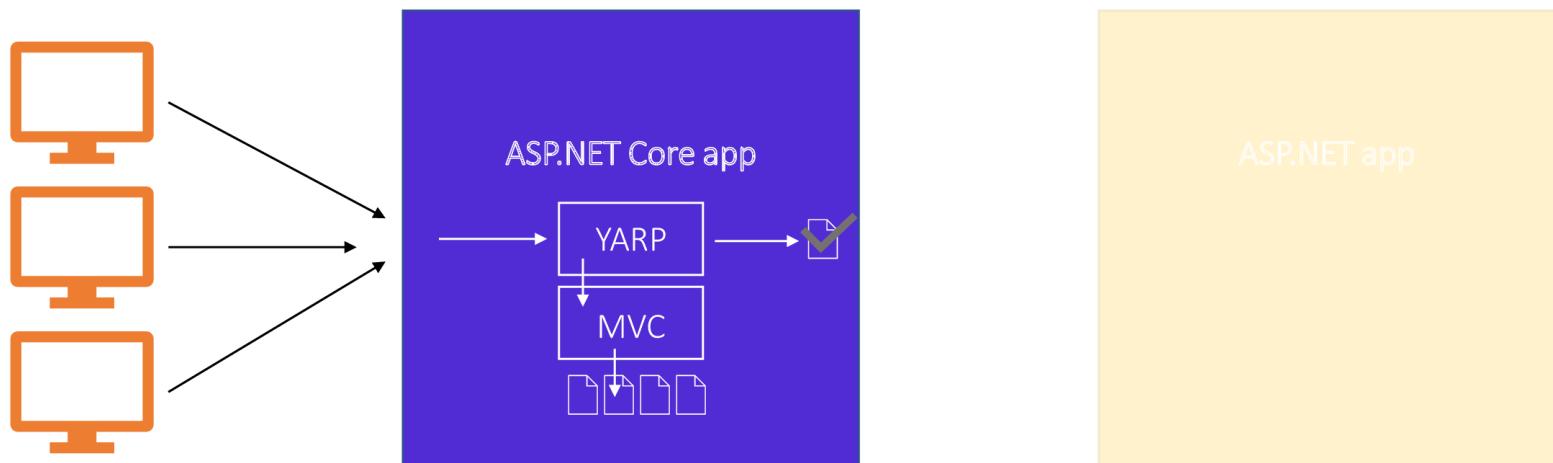
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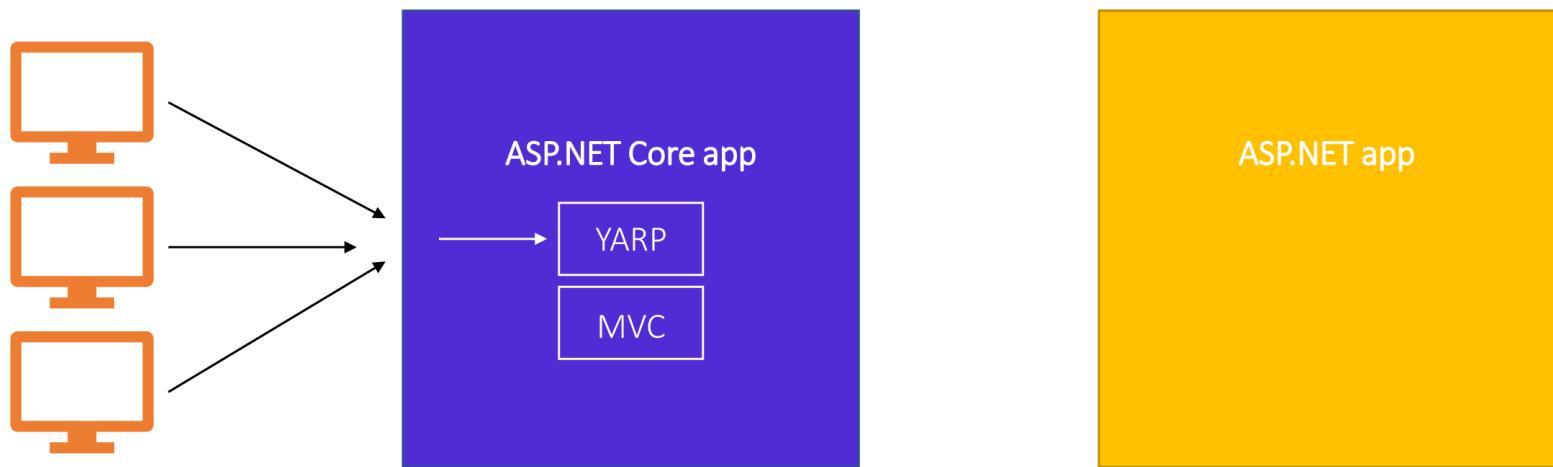
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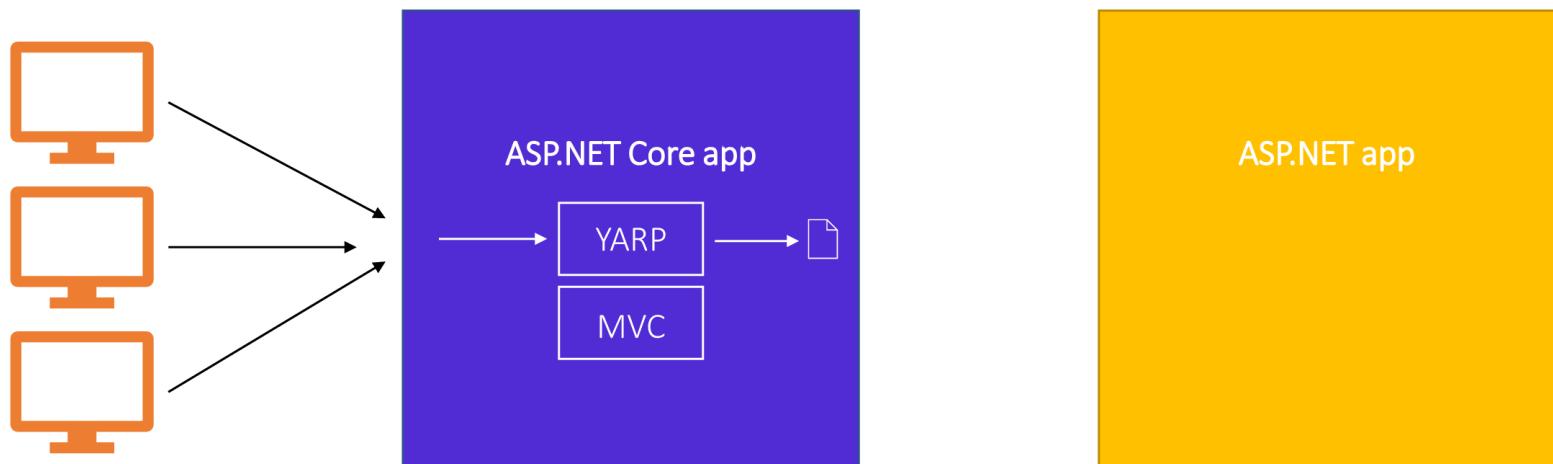
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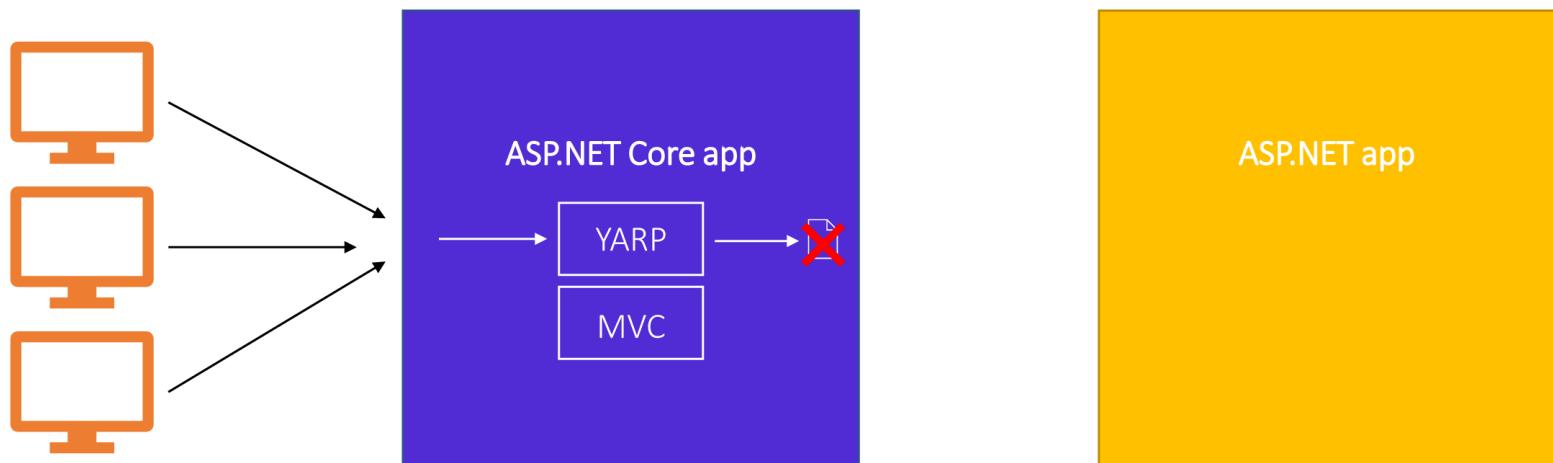
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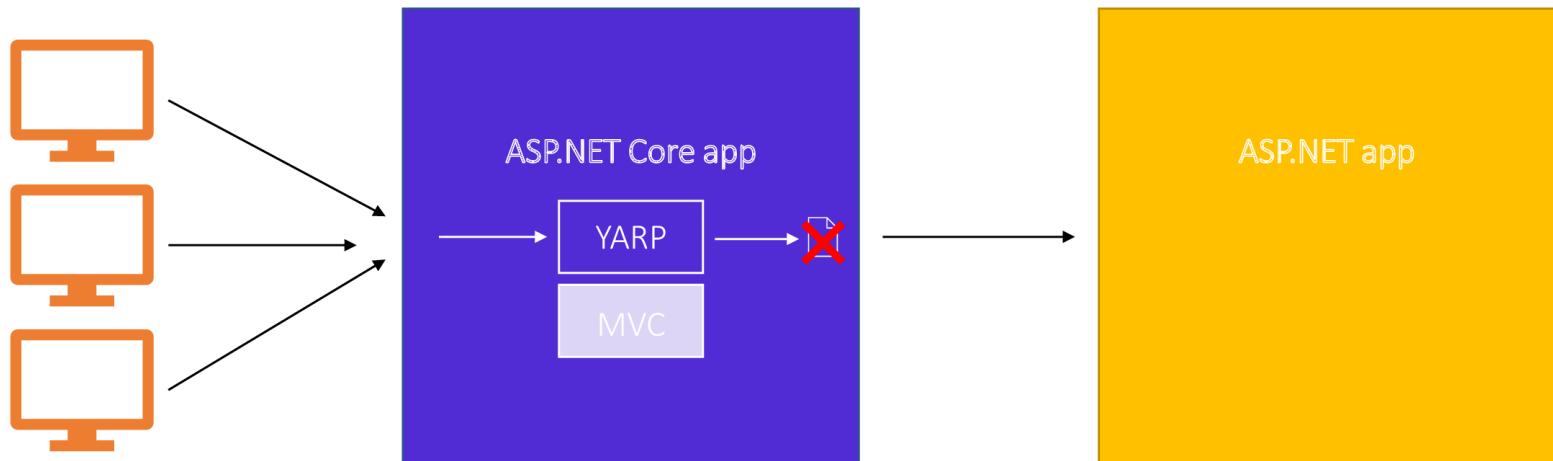
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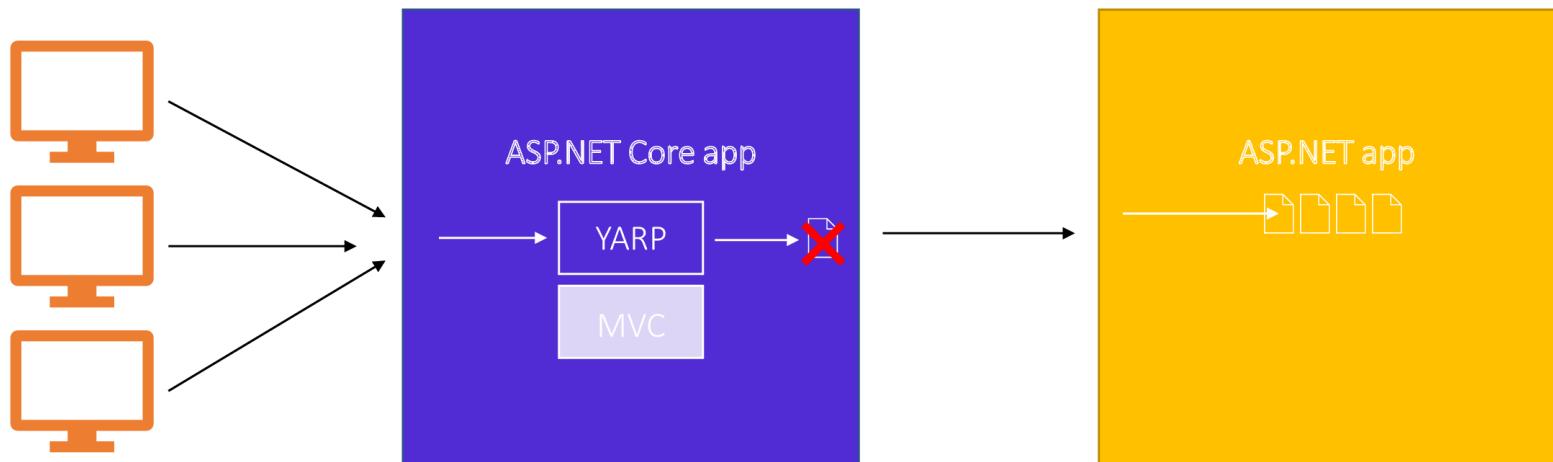
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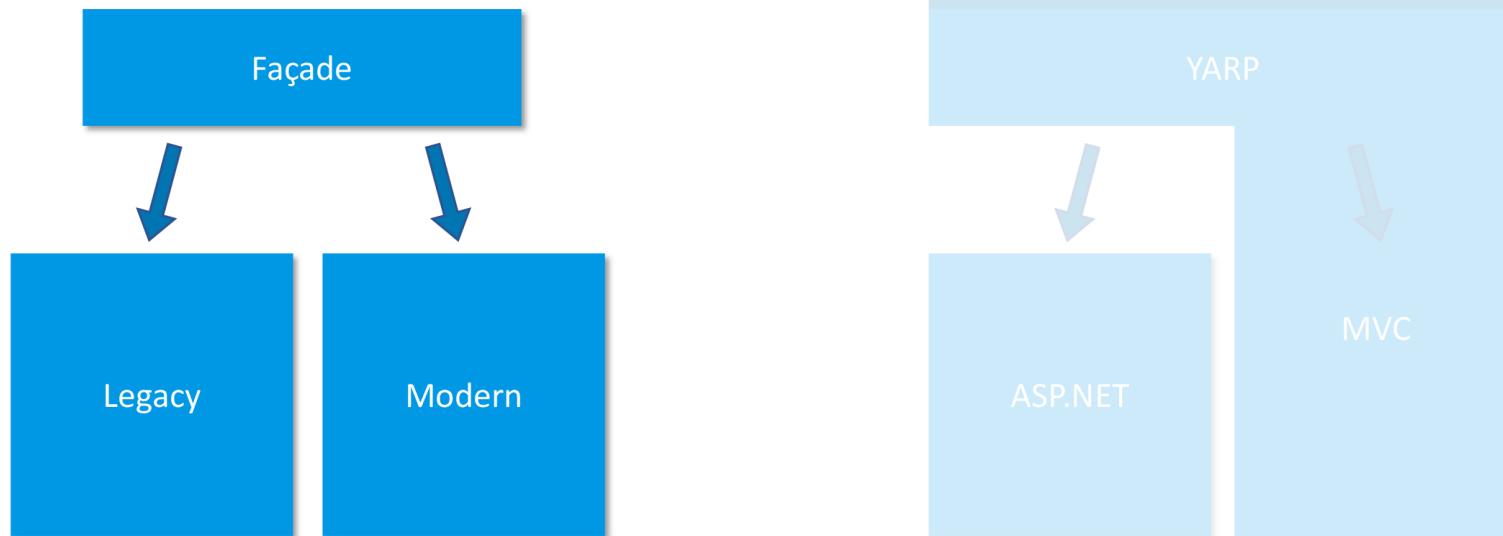
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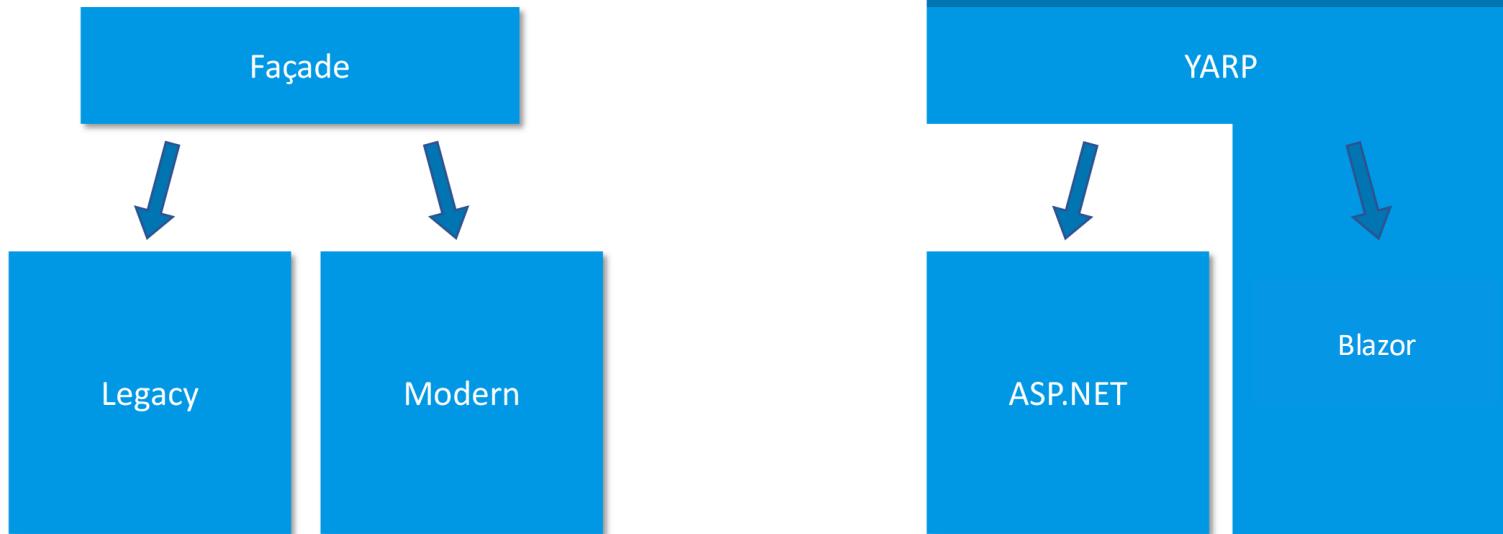
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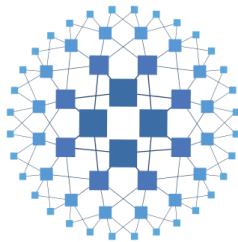
# Strangler Fig with YARP



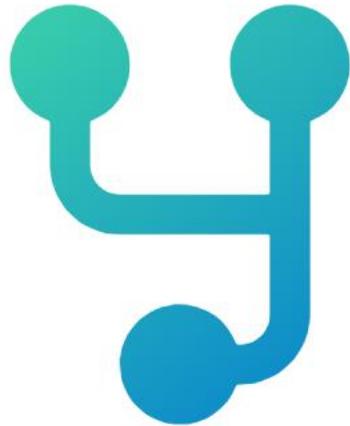
# Strangler Fig with YARP



# Why YARP?



HAProxy



NGINX

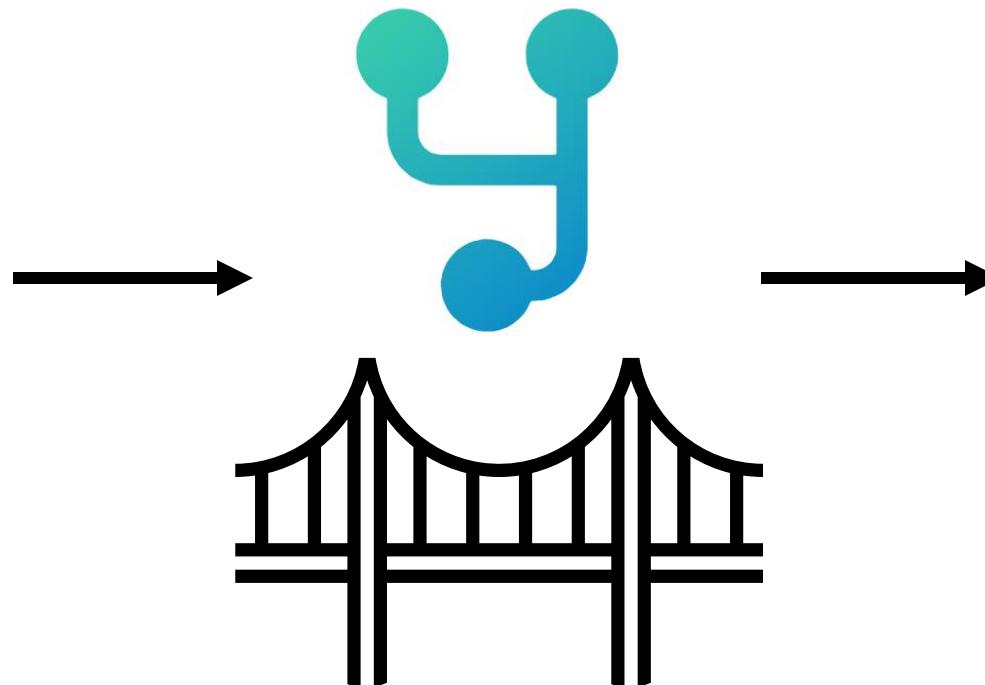
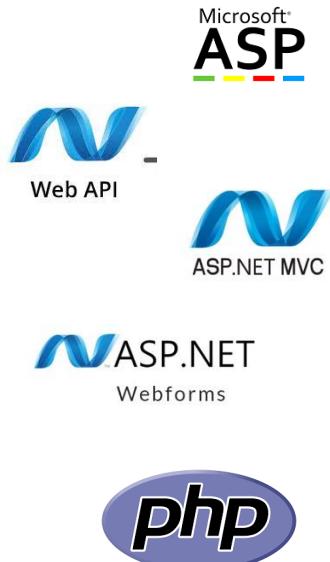


# Why YARP?

- Performance
- Easy to use (Nuget package)
- Extensible, configurable
- Customizable with C# / .NET
- Hosted IN modern app (less to deploy)

# Migration Use Case Examples

Legacy Technologies



Modern .NET





# .NET Upgrade Assistant

# .NET Upgrade Assistant

## Supported .NET upgrades:

- .NET Framework to .NET 6+
- .NET Core to .NET 6+
- Any .NET version to .NET 6+ above current version
- Azure Functions v1, v2, v3 to v4 isolated (targeting net6.0 or net7.0)
- Xamarin.Forms to MAUI\*

# .NET Upgrade Assistant

## Supported project types:

- ASP.NET
- Azure Functions
- WPF
- WinForms
- Class libraries
- Console
- Xamarin.Forms
- .NET MAUI
- UWP
- WCF to CoreWCF



# .NET Upgrade Assistant + YARP Demo



# System.Web Adapters

# System.Web Adapters

## Major Features

1. Subset of `System.Web.dll` API shims
2. Shared **authentication** support
3. Shared **session** state

## Usage

- `Microsoft.AspNetCore.SystemWebAdapters` in both apps
- `Microsoft.AspNetCore.SystemWebAdapters.CoreServices` in Core app
- `Microsoft.AspNetCore.SystemWebAdapters.FrameworkServices` in Framework app

# Status of YARP

## Released

- YARP - v2.2.0
- System.WebAdapters – v1.4.0

## Preview

- .NET Upgrade Assistant - v0.5.\*

# Learn More

## YARP

- <https://github.com/microsoft/reverse-proxy>

## System.Web Adapters

- <https://github.com/dotnet/systemweb-adapters>

## .NET Upgrade Assistant

- <https://dotnet.microsoft.com/en-us/platform/upgrade-assistant>

# Thank You! Questions?

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- 🐦 jtowermi

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<https://github.com/trailheadtechnology/migrate-with-yarp>