

The background features a vibrant, multi-colored gradient. It starts with a dark blue on the left, transitions through purple and magenta, and then into bright orange and yellow towards the right. A diagonal line separates the darker blue on the left from the lighter colors on the right.

AWS  
re:Invent

**WIN304-R**

# Modernize legacy .NET applications on AWS

## **William Magee**

Cloud Application Architect  
Amazon Web Services

## **Shahab Mohsen**

Senior AWS Solutions Architect  
Amazon Web Services

# Related breakouts and workshops!

GPSTEC348 – .NET from the ground to the cloud

Where: Bellagio, Grand Ballroom 5 Green

When: 12/5/19 (Thursday) 11:30 AM

# Why modernize a legacy .NET application?

Data centers closing and need to migrate to cloud

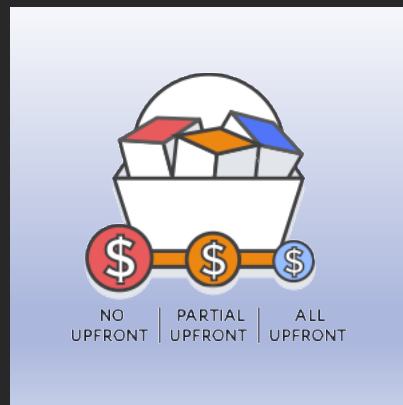
No more releases for .NET Framework

Cost saving

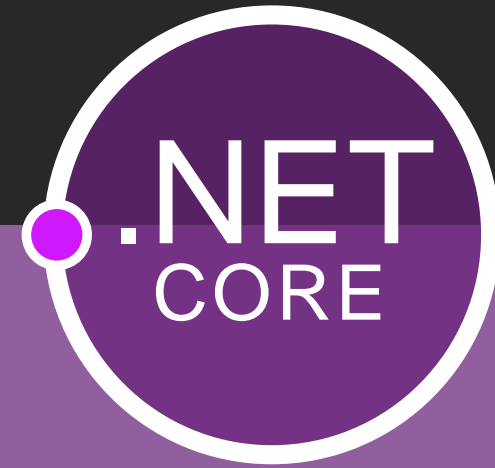
Performance issues


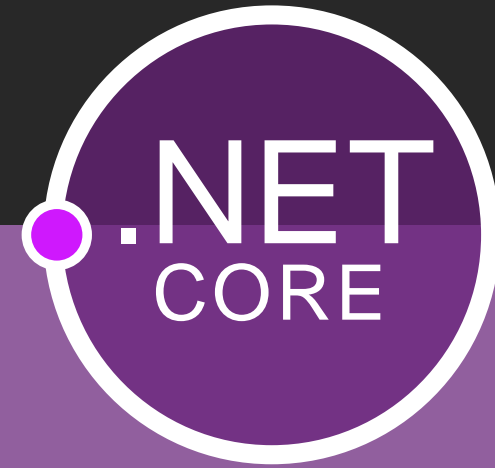
Use serverless services such as AWS Lambda and AWS Fargate

Take advantage of the managed services offered by AWS



# How can .Net Core help in the Modernization pass?



			
Released	2002	2016	
Open source	(Windows)	(Windows, Linux, OS X, FreeBSD, Raspberry Pi)	
Container platform	Windows Server Core	Windows Nano Server	Linux (Debian Jessie)
Docker images	microsoft/servercore (~7 GB)	microsoft/aspnetcore (~185 MB)	microsoft/aspnetcore (~131 MB)
Docker host	Windows Server 2016	Windows Server 2016	Linux (Debian Jessie)

# How can microservices architecture help?

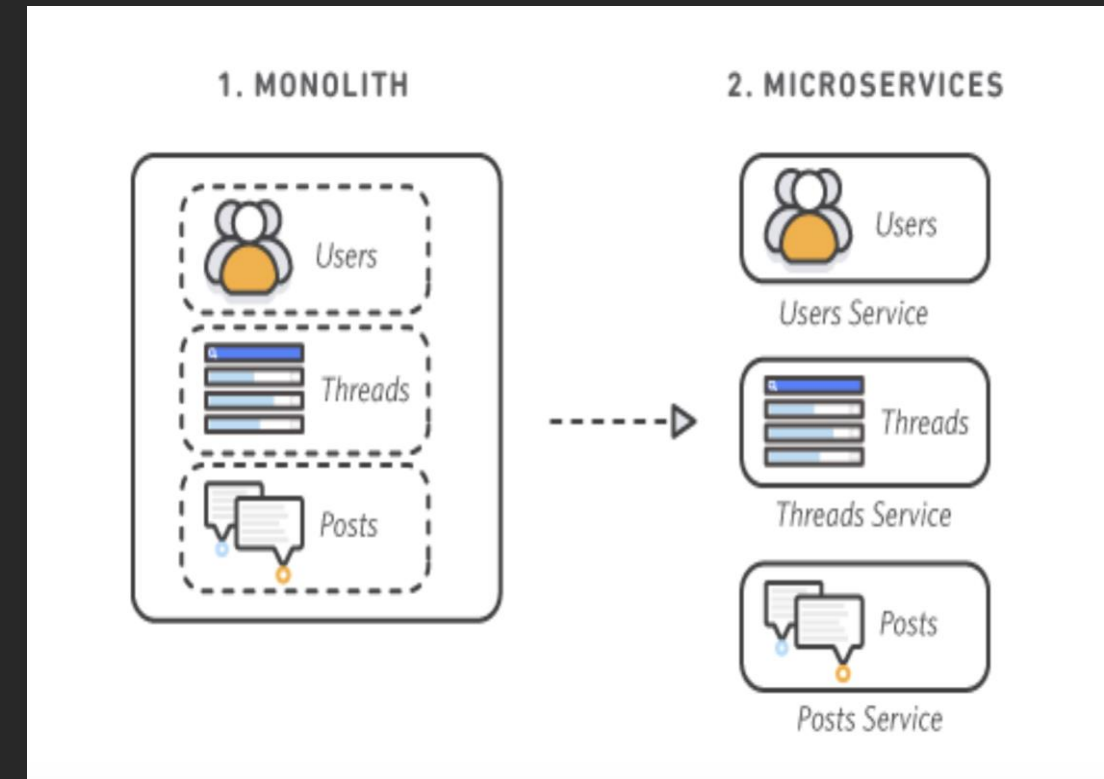
Flexibility in using technologies

Easier to build and maintain apps

Better fault isolation

Easy integration and automatic deployment

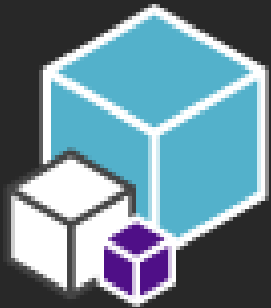
Enables CI/CD



# How can AWS help?

## Different services, tools, and features

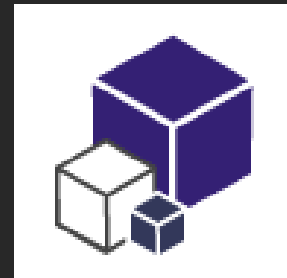
AWS Elastic Beanstalk, AWS Lambda, AWS Fargate, Amazon CloudWatch, AWS Managed Services, Amazon Simple Queue Service (Amazon SQS), Amazon Simple Storage Service (Amazon S3), AWS Code Pipeline, AWS CodeStar, etc.



**AWS Toolkit for Visual Studio**



**AWS Tools for PowerShell**



**AWS Tools for Visual Studio Team Services**



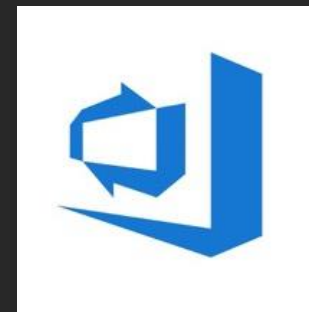
**AWS SDK for .NET**



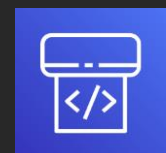
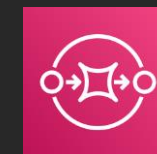
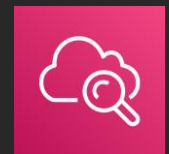
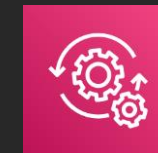
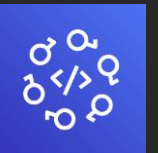
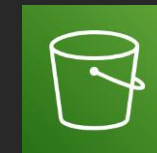
**Visual Studio**



**AWS Tools for PowerShell**



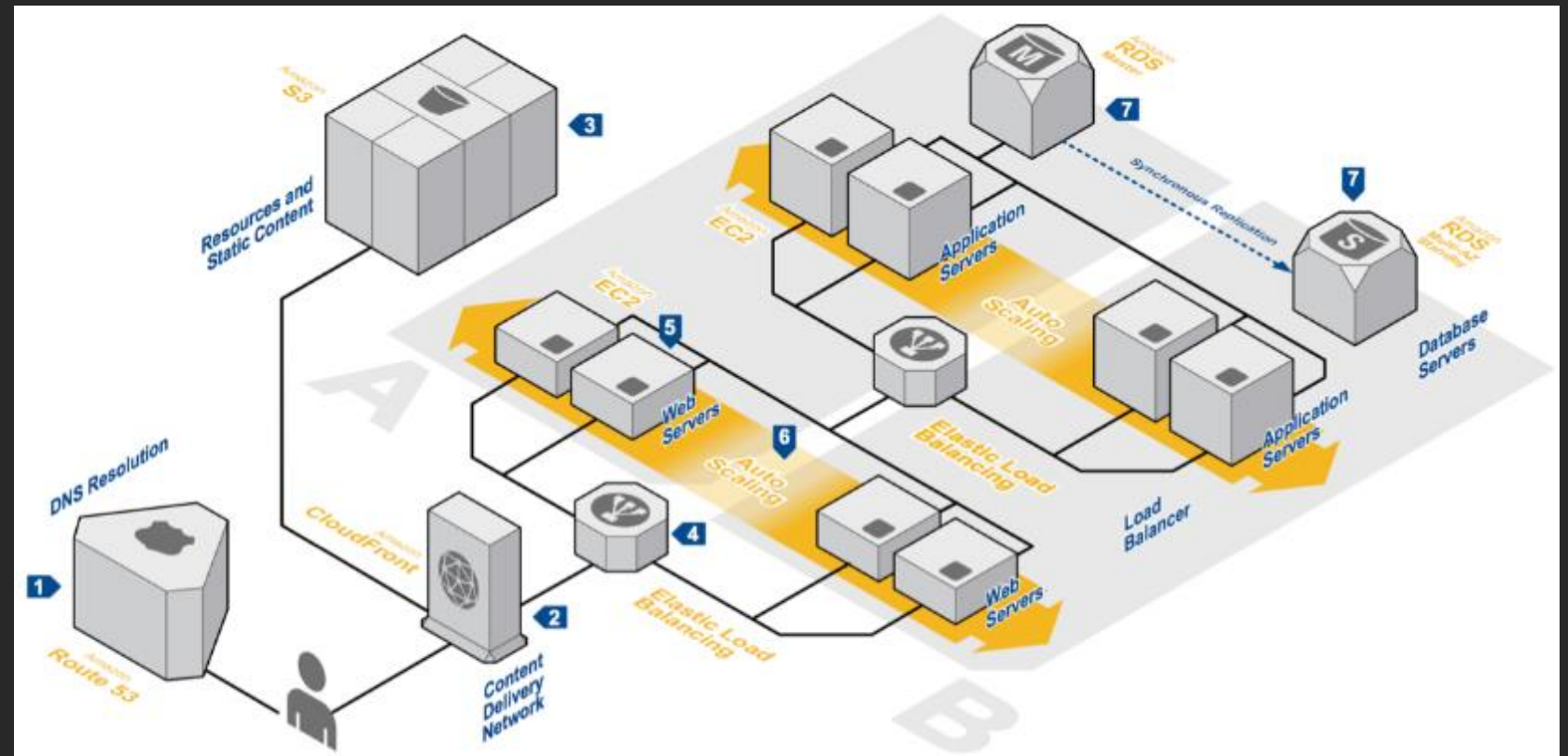
**Visual Studio Team Services**



# AWS Elastic Beanstalk

AWS Elastic Beanstalk is an easy-to-use service for deploying and scaling web applications and services developed with Java, .NET, PHP, Node.js, Python, Ruby, Go, and Docker on familiar servers such as Apache, Nginx, Passenger, and IIS.

- Fast and simple to begin
- Developer productivity
- Impossible to outgrow
- Complete resource control











# AWS CodeStar

CodeStar sets up your entire development and continuous delivery toolchain for coding, building, testing, and deploying your application

Supports ASP.NET Core & Visual Studio




### Choose a project template

Start a new software project on AWS in minutes using a project template. [Help me choose](#)

 <b>ASP.NET Core</b>	 <b>ASP.NET Core</b>
 Web application	 Web service
 Amazon EC2 (runs on virtual servers that you manage)	 Amazon EC2 (runs on virtual servers that you manage)

### Choose how you want to edit your project code

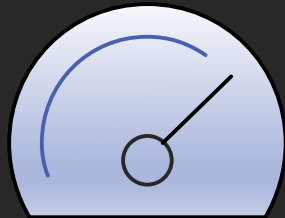
You can always change this choice after the project has been created

 Visual Studio	 Eclipse	 Command line tools
Configure the AWS Toolkit for Visual Studio to edit your AWS CodeStar project code in Microsoft Visual Studio 2015 (or higher.)	Configure the AWS Toolkit for Eclipse to edit your AWS CodeStar project code in Eclipse.	Edit AWS CodeStar project code by connecting directly to your project's Git source repository.

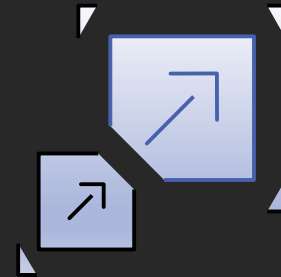
# Serverless



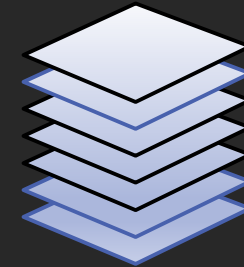
No servers to provision  
or manage



Never pay for idle



Scales with usage



Availability and fault  
tolerance built in



# Containers on AWS



Amazon ECS



Amazon ECR



Fargate

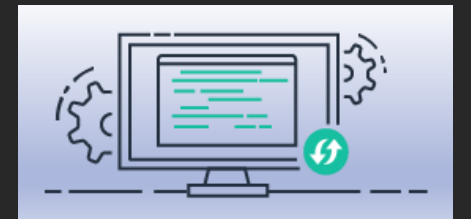


Amazon EKS

# Workshop scenario

You're representing an employee of a multibillion-dollar corporation named LegacyDotNetApps Corp. The company has been around for many years and has grown both organically and through acquisition and now operates in almost every industry.

- Is a .NET shop!
- Has a lot of applications in .NET Framework
- Some apps already run on AWS, others run on-premises
- Closing data centers
- Want to migrate workloads to AWS **and** modernize them
- Monolith architecture



# Workshop modules

- Migrate a simple ASP.NET MVC application to **.NET Core** and deploy to Amazon Elastic Beanstalk to run on **Windows instances**
- Use **AWS CodeStar** to create a CI/CD Pipeline and deploy our .NET Core code to **Linux instances**
- Use **AWS Lambda** to deploy our .NET Core Code to achieve a **serverless** solution
- **Containerize** a **.NET Framework** Application and run it on Amazon Elastic Container Service (**ECS**)
- **Decouple a tightly Coupled Architecture** using AWS services such as AWS Lambda and S3

Lets get started

**<http://bit.ly/2019win304>**

# Thank you!



Please complete the session survey in the mobile app.