An easy way to receive an SMS message with C# and Twilio

by Marcos Placona (https://www.twilio.com/blog/author/marcos) on September 19, 2016 (https://www.twilio.com/blog/2016/09/an-easy-way-to-receive-an-sms-message-with-c-and-twilio.html)

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I already showed you how to send an SMS message with C# in 30 seconds (https://www.twilio.com/blog/2016/04/send-an-sms-message-with-c-in-30-seconds.html). Today I'm going to show you how to receive an SMS message with C# and Twilio. Here's all the code you'll need.

```csharp
1  using System.Web.Mvc;
2  using Twilio.TwiML;
3  using Twilio.TwiML.Mvc;
4
5  namespace ReceiveSms.Controllers
6  {
7      public class SmsController : TwilioController
8      {
9          // POST: Sms/Message
10         [HttpPost]
11         public ActionResult Message(string From, string Body)
12         {
13             var twiml = new TwilioResponse();
14             var message = twiml.Message($"Hello {From}. You said {Body}");
15             return TwiML(message);
16         }
17     }
18 }
```

If you'd like to see an explanation of how the code above works, watch this short video, or just keep reading.

How to Receive an SMS in .NET with Twilio

When someone texts your Twilio number, Twilio makes an HTTP request
(https://www.twilio.com/docs/api/twiml/sms/twilio_request) to your app with details about the SMS passed in the request body.
Let's use use .NET MVC to handle Twilio's request and send a response.

Let's make sure we have the necessary libraries in our project by opening up the Package Manager Console
(https://docs.nuget.org/docs/start-here/using-the-package-manager-console) in Visual Studio and installing the following Twilio
.NET libraries.

```Shell
1  Install-Package Twilio
2  Install-Package Twilio.Mvc
3  Install-Package Twilio.TwiML
```

With all our dependencies installed we need to make sure our Controller extends `TwilioController` as this will make things easier
when returning TwiML (https://www.twilio.com/docs/api/twiml) later.

```C#
1  public class SmsController : TwilioController
2  {
3  }
```

We then create an endpoint called `message` to accept a POST request with a `From` telephone number and a message `Body`.

```C#
1  public class SmsController : TwilioController
2  {
3      // POST: Sms/Message
4      [HttpPost]
5      public ActionResult Message(string From, string Body)
6      {
7          // rest of code will go here
8      }
9  }
```

When Twilio makes an HTTP request to your app, it expects a response in the form of TwiML, a simple set of XML tags that relay
instructions back to Twilio. We will use the libraries we installed to build the response easily.

```
 1  public class SmsController : TwilioController
 2  {
 3      // POST: Sms/Message
 4      [HttpPost]
 5      public ActionResult Message(string From, string Body)
 6      {
 7          var twiml = new TwilioResponse();
 8          var message = twiml.Message($"Hello {From}. You said {Body}");
 9          return TwiML(message);
10      }
11  }
```

Run the project by clicking the `Start` button with the green arrow at the top, and you will notice your browser opens up automatically. Make a note of the port the application is running on.

This app needs a publicly accessible URL, so you'll either need to deploy it to the cloud or use a tool like ngrok (https://ngrok.com/) to open a tunnel to your local development environment from your command line. We already wrote a blog post showing how to get started with ngrok (https://www.twilio.com/blog/2013/10/test-your-webhooks-locally-with-ngrok.html).

```
C#
 1  ngrok http 51343 -host-header="localhost:51343"
```

Ngrok will provide you with a url that points to the application running on your `localhost`.

Now that we've built our application we need to connect it up to a Twilio number so that it can receive SMS messages and make requests to our app.

Setup Twilio

Sign up for a free Twilio account (http://twilio.com/try-twilio) if you don't have one.

Buy a phone number (https://www.twilio.com/console/phone-numbers/search), then click Setup Number. Scroll to the Messaging section and find the line that says "A Message Comes In."

Fill in the full path to your endpoint (i.e., https://yourserver.com/sms/message) and click *Save*.

Now, send an SMS to your shiny new phone number number and get stoked when you receive the customized response you just wrote.

Next Steps

If you'd like to learn more about how to use Twilio and .NET together, check out :

- The Twilio C# Helper Library (https://www.twilio.com/docs/libraries/csharp)
- The Twilio C# Quickstart (https://www.twilio.com/docs/quickstart/csharp)
- Receive and reply to SMS and MMS messages in C# (https://www.twilio.com/docs/guides/sms/receiving-and-replying/csharp)

(https://www.twilio.com/docs/api/rest/sending-messages)
And if you'd like to chat more about it, hit me up on Twitter @marcos_placona (https://twitter.com/marcos_placona) or by email on marcos@twilio.com (mailto:marcos@twilio.com).

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