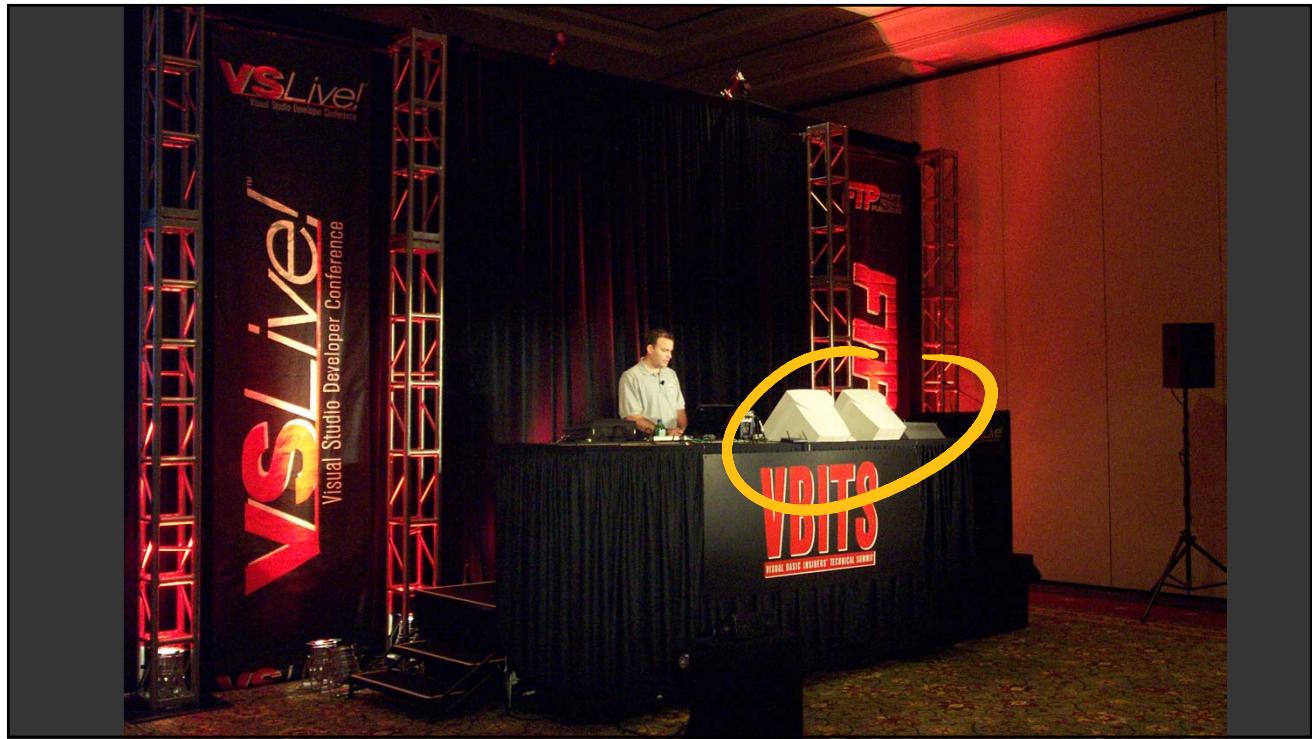


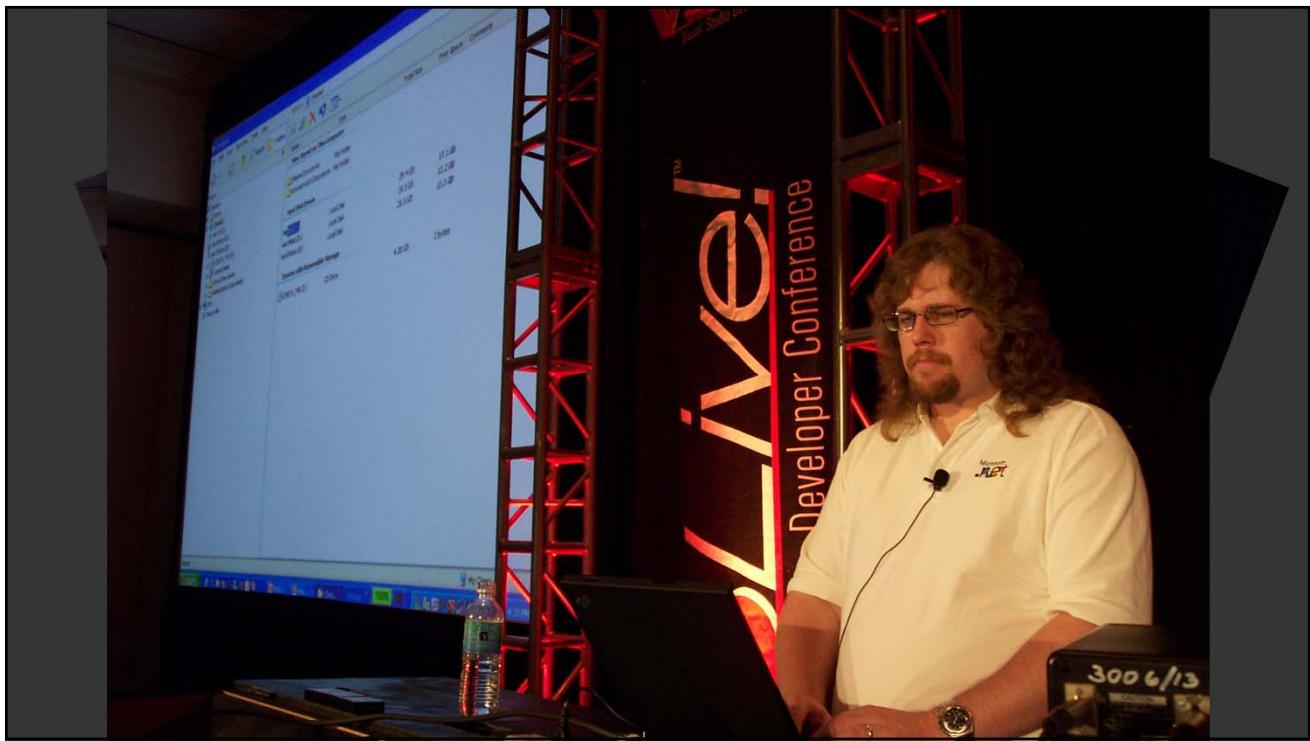
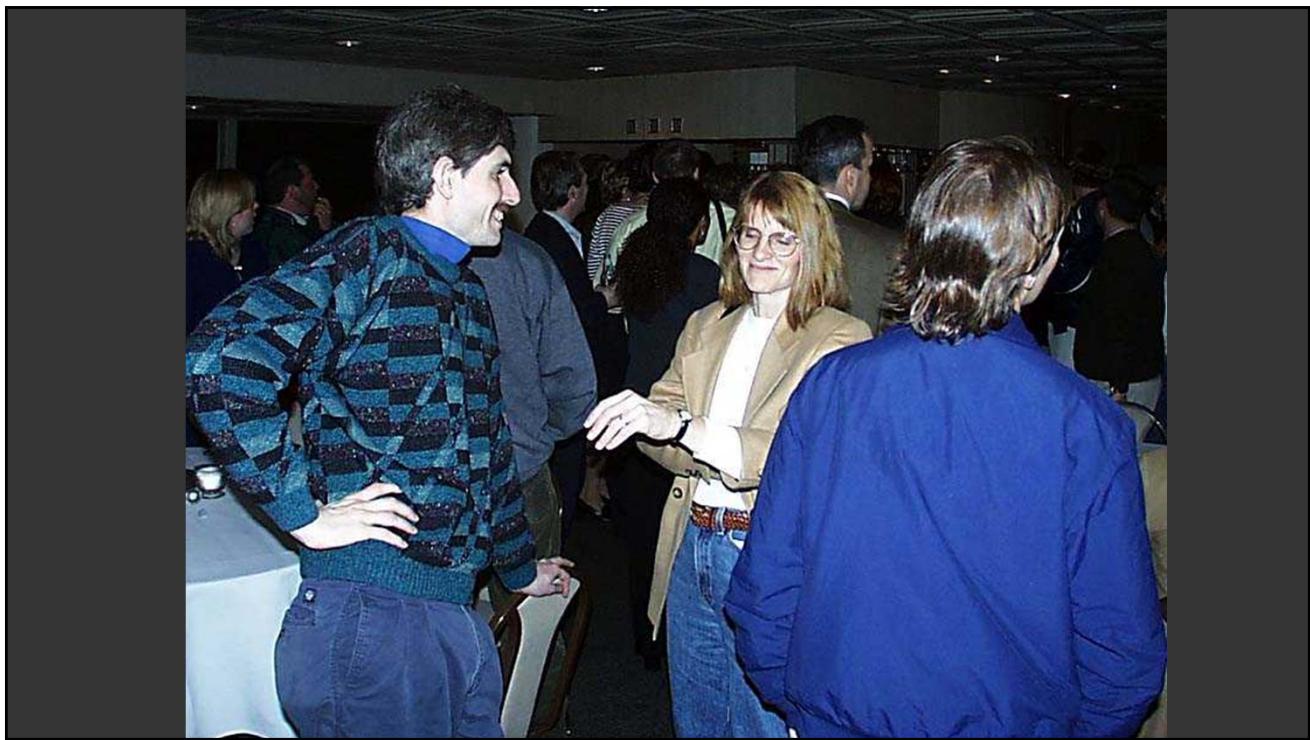


General Session: 25 Years of VSLive!, 25 Years of Software - Laurent Bugnion

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General Session: 25 Years of VS Live!, 25 Years of Software - Laurent Bugnion



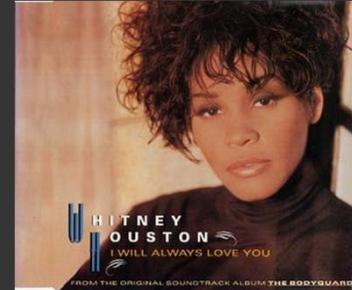
General Session: 25 Years of VSLive!, 25 Years of Software - Laurent Bugnion

What were
you doing
25 years ago?



Visual Studio Live! **25**
YEARS OF CODING INNOVATION

1993 – in the charts

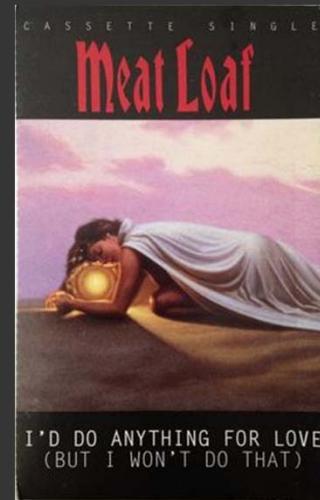


Visual Studio Live! **25**
YEARS OF CODING INNOVATION

General Session: 25 Years of VSLive!, 25 Years of Software - Laurent Bugnion

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1993 – in the charts



In 1993 (more or less...)



General Session: 25 Years of VSLive!, 25 Years of Software - Laurent Bugnion

Engineer school



Programming 25 years ago: Main frames



Mainframes Aren't All That Dead



General Session: 25 Years of VSLive!, 25 Years of Software - Laurent Bugnion

"People say the mainframe is a dinosaur, but in our business it is alive and well for the foreseeable future"

-Allan Loren, president of the Covia Partnership, which runs Apollo, a reservations system owned by airlines like United, British Airways and Swissair

Hello World (1)

```
with .Text_10: use .Text_10;  
procedure Hello is  
begin  
    Put_Line ("Hello, world!");  
end Hello;
```



Hello World (1)

```

type Day_type is range 1 .. 31;
type Month_type is range 1 .. 12;
type Year_type is range 1800 .. 2100; YZNK
type Hours is mod 24;
type Weekday is (Monday, Tuesday, Wednesday, Thursday,
Friday, Saturday, Sunday);
type Date is
  record
    Day : Day_type;
    Month : Month_type;
    Year : Year_type;
  end record;

```



Hello World (2)

File Edit Search Run Compile Debug Tools Options Window Help LAT.PAS 1

```

PROGRAM Lat;
BEGIN
  WriteLn('Hello World');
END.

```

Output 2=[↑]

```

Hello World
Hello World
Hello World
Hello World

```

F1 Help ↑↓←→ Scroll F10 Menu



Programming 22 years ago



Visual Studio Live!
25
YEARS OF CODING INNOVATION

Hello World (3)

```
#include <stdio.h>
int main()
{
    printf("Hello World!");
    return 0;
}
```

THE
C
PROGRAMMING
LANGUAGE

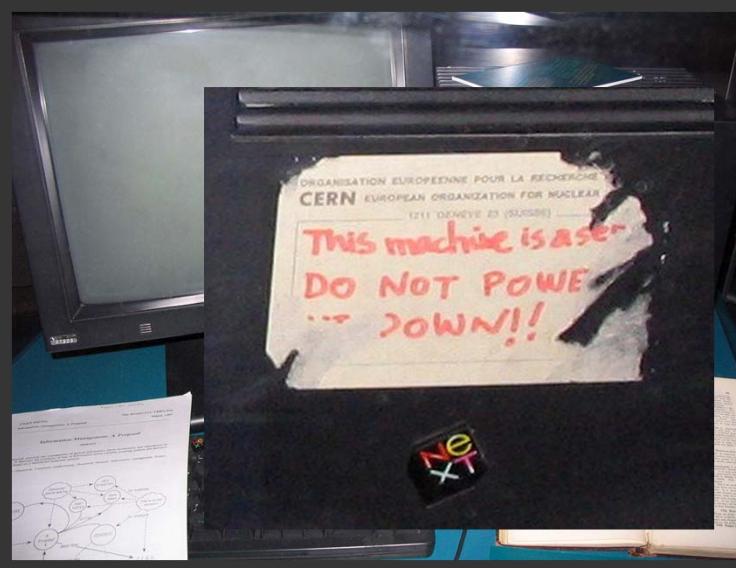
25

The Web Revolution

1989 - 1993



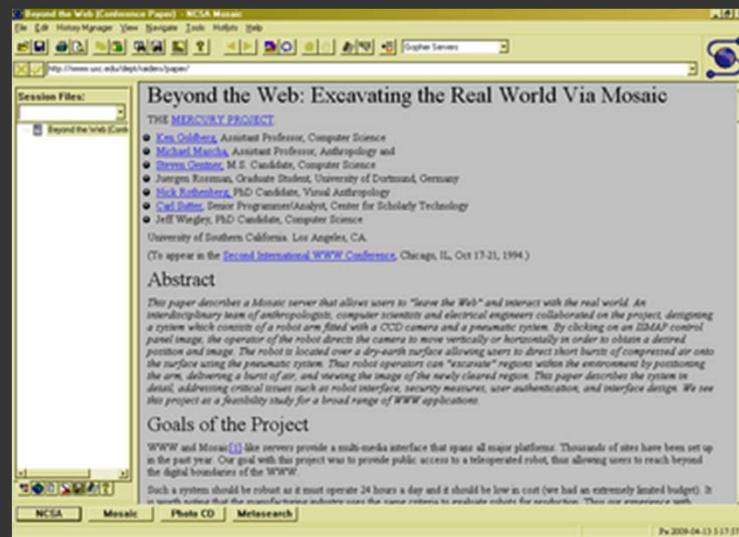
1989 – The World Wide Web



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1993 – NCSA Mosaic



By Source, Fair use,

<https://en.wikipedia.org/w/index.php?curid=22564429>

1996 – My first website



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1996 – My first website

Image = 38KB

Modem → 14400 bit/s

$$38 * 8 * 1024 / 14400 \\ = 22 \text{ seconds}$$



More funny math

Movie = 2.5 GB (1080p)

$$2.5 * 8 * 1024 * 1024 * 1024 \\ = 21,474,836,480 \text{ bits}$$

- ~ 1996 → At 14400 bit/s
→ 1,491'308 seconds
- ~ 1994 → At 2400 bit/s
→ 8'947'848 seconds
- ~ 2018 → At 1Gbps



Hello World (4)



```
function sayHello() {  
    var myVariable = 3;  
    myVariable = "Hello world";  
    alert(myVariable)  
}
```

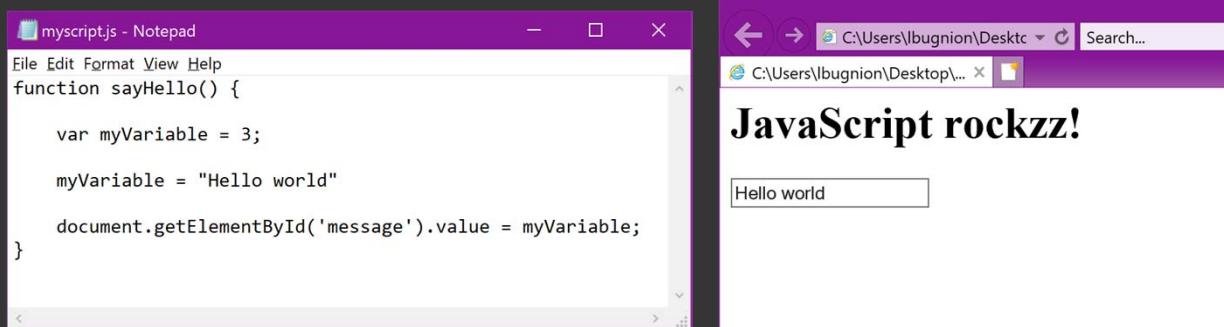


Then
came
JavaScript

1995



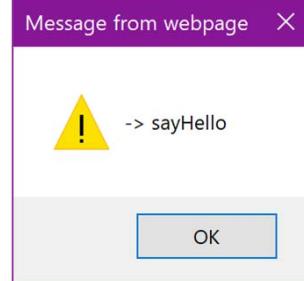
Development environment



Debugging no debugger

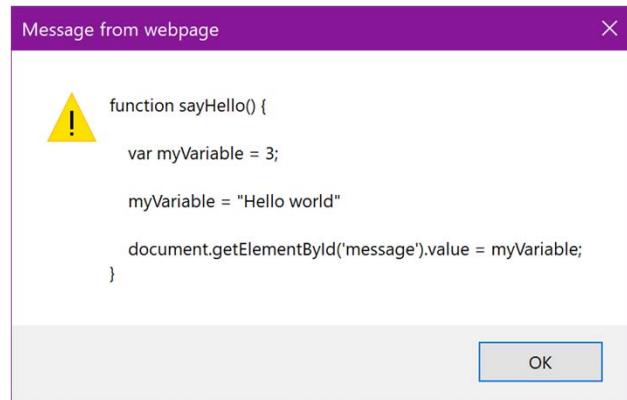
```
function sayHello() {
    alert("-> sayHello");
    var myVariable = 3;
    alert(myVariable);
    myVariable = "Hello world"
    alert(myVariable);
    alert(document);
    alert(document.getElementById('message'));
    alert(document.getElementById('message').value);

    document.getElementById('message').value = myVariable;
    alert("sayHello ->");
}
```



Debugging like crazy

```
<script>  
  
    alert(sayHello);  
  
    sayHello();  
  
</script>
```



There were forums...

RobG said:

[...] JavaScript, the trade mark, and the generic term "javascript" used to describe ECMAScript implementations that interact with DOMs, mostly in browsers.

Thomas 'PointedEars' Lahn replied:

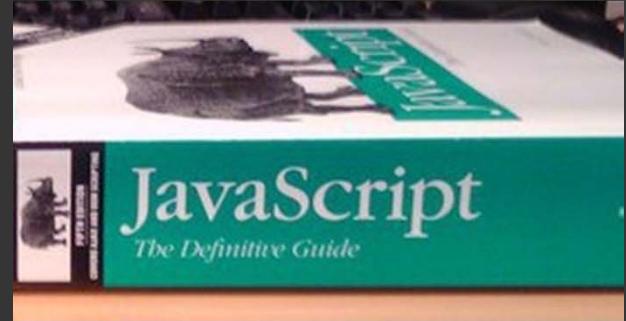
The term "javascript" is the invention of a **wannabe** here that failed to see the differences between the many implementations, and fell into common use because of other **wannabes** here that failed to or did not want to see them.

Richard Cornford posted an answer with the word **JavaScript** capitalised into the trademark name, for any **pedants** reading

And VK said:

I calling police if it's called anyhow else but **JavaScript** 😊 😊

The Good, The Bad and the Ugly...



The
great
simplification



<http://tempuri.org/>



Simple Object Access Protocol

Web Services Description Language

eXtensible Markup Language
(1996)

Used by Windows Communication Foundation

SOAP: Request

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Header>
    <Action s:mustUnderstand="1"
      xmlns="http://schemas.microsoft.com/ws/2005/05/addressing/none">
      http://tempuri.org/IService1/SayHelloUsingDataContract
    </Action>
  </s:Header>
  <s:Body>
    <SayHelloUsingDataContract xmlns="http://tempuri.org/">
      <firstName i:nil="true"
        xmlns:i="http://www.w3.org/2001/XMLSchema-instance" />
    </SayHelloUsingDataContract>
  </s:Body>
</s:Envelope>
```



SOAP: Response

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Header />
  <s:Body>
    <SayHelloUsingDataContractResponse xmlns="http://tempuri.org/">
      <SayHelloUsingDataContractResult
        xmlns:a="http://schemas.datacontract.org/2004/07/MyWcfService"
        xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
        <a:StringValue>
          Hello World, Laurent
        </a:StringValue>
        <a:TimeOnServer>
          2018-09-22T18:52:06.2834488+10:00
        </a:TimeOnServer>
      </SayHelloUsingDataContractResult>
    </SayHelloUsingDataContractResponse>
  </s:Body>
</s:Envelope>
```



Simple Object Access Protocol

Web Services Description Language

eXtensible Markup Language



Java Script Object Notation

JSON

<http://galasoft.ch/sayhello/name/laurent>

```
{  
  "StringValue": "Hello World, Laurent",  
  "TimeOnServer": "2018-09-25T13:40:26.6953831+00:00"  
}
```



Hello World (5)

using System;

class Solution

{

 static void Main(string[] args)

{

 Console.WriteLine("Hello World!");

}

}



From HTML...

```
<h2>
Three new videos on my YouTube channel
</h2>
```

I just published three new videos on my [YouTube channel](http://gslb.ch/myyoutube). These videos are the beginning of a 14-videos series recorded live at the Modern Web Tour this July in Zurich Switzerland. You can see a recap of this session (including slides and source code) [on my Presentations site](http://gslb.ch/modernweb18).

blockquote

If you like what you see, [please subscribe to my YouTube channel](http://gslb.ch/myyoutube). The more subscribers I have, the more motivated I am to create new videos :)

```
<p></p>

<ul>
<li><a href="http://gslb.ch/224">Full Playlist</a> (more videos coming)</li>
<li><a href="http://gslb.ch/210">Introduction</a> (2:30)</li>
<li><a href="http://gslb.ch/211">.NET Code, .NET Standard</a> (5:05)</li>
<li><a href="http://gslb.ch/212">Demo ASP.NET Core on Linux on Azure</a> (5:38)</li>
</ul>
```



From HTML... to Markdown

Three new videos on my YouTube channel

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> If you like what you see, [please subscribe to my YouTube channel](<http://gslb.ch/myyoutube>). The more subscribers I have, the more motivated I am to create new videos :)

![Title slide](https://farm2.staticflickr.com/1897/43893395014_87b0ee6c32_o.jpg)

- [Full Playlist](<http://gslb.ch/224>) (more videos coming)
- [Introduction](<http://gslb.ch/210>) (2:30)
- [.NET Code, .NET Standard](<http://gslb.ch/211>) (5:05)
- [Demo ASP.NET Core on Linux on Azure](<http://gslb.ch/212>) (5:38)



About Markdown

- Markdown specification
<https://daringfireball.net/projects/markdown>
- How to contribute to docs.microsoft.com



Feedback Edit Share

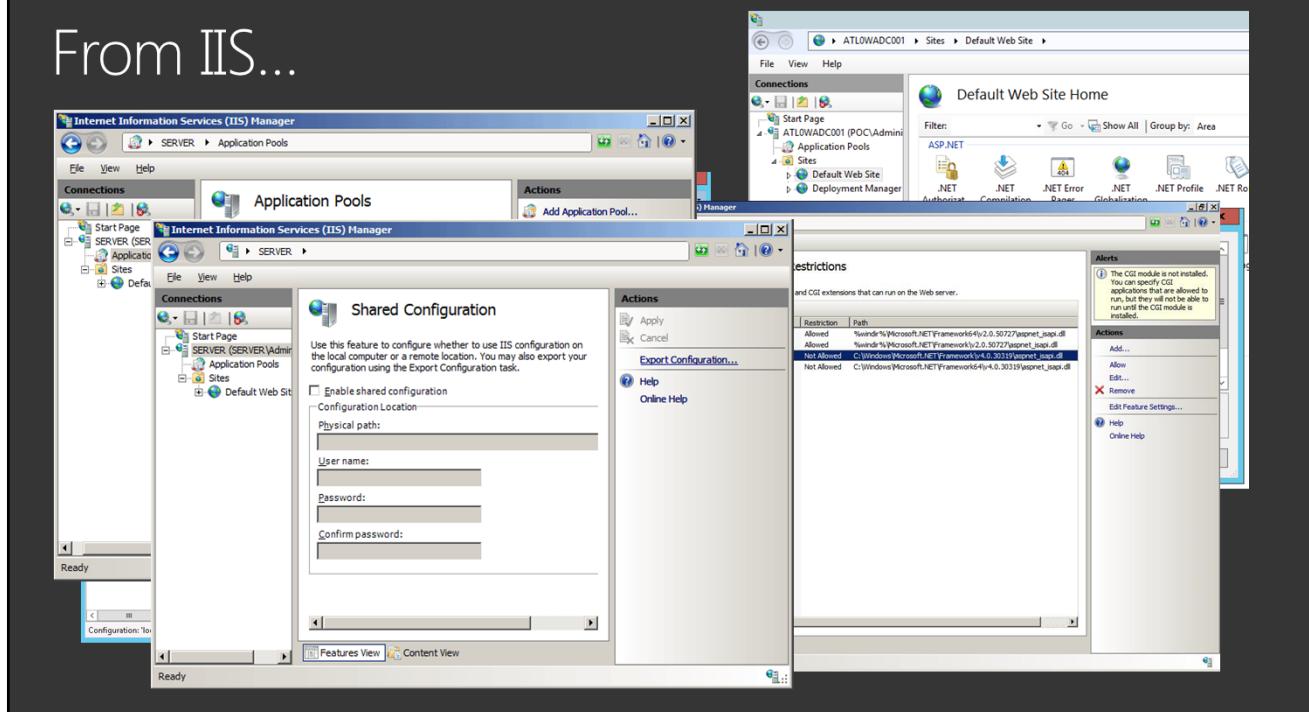
Create your first function in the Azure portal

03/28/2018 • 5 minutes to read • Contributors all

Azure Functions lets you execute your code in a [serverless](#) environment without having to first create a VM or publish a web application. In this topic, learn how to use Functions to create a "hello world" function in the Azure portal.



From IIS...



General Session: 25 Years of VSLive!, 25 Years of Software - Laurent Bugnion

From IIS...

Next Steps

This walkthrough has provided you with an introduction to the ASP.NET MMC, which allows you to make ASP.NET configuration settings as an administrator on the Web server computer. You might also want to explore additional ways to work with ASP.NET configuration settings. Suggestions for more exploration include:

- Use the Web Site Administration Tool to make configuration settings for a single Web site. For more information, see [ASP.NET Web Site Administration Tool](#).
- Use the Configuration APIs to change configuration settings programmatically. For more information, see [ASP.NET Configuration API](#).

See Also

Other Resources

- [ASP.NET Configuration API](#)
- [ASP.NET Web Site Administration Tool](#)
- [ASP.NET Configuration Settings](#)
- [ASP.NET Web Site Administration](#)

Using the Application Setting

You can now test the application setting you created with MMC by creating a Web page that uses the setting.

To use the application setting

- In the folder that you created at the beginning of the walkthrough, create a new text file and name it `Default.aspx`. You can edit the file using any text editor, such as Notepad.
- Copy the following code into the `Default.aspx` page.

```
<?xml version='1.0' encoding='utf-8'>
<configuration>
  <appSettings>
    <add key="CustomBGColor" value="CustomBGColor" />
  </appSettings>
</configuration>
```

Walkthrough: Configuring ASP.NET Applications in IIS 6.0 Using MMC

This walkthrough shows you how to use the Microsoft Management Console (MMC) to configure ASP.NET applications running in Internet Information Services (IIS) 6.0. This walkthrough assumes that you have already installed IIS 6.0 and ASP.NET 2.0, and that you have a basic understanding of how to use the MMC. This walkthrough also assumes that you have a basic understanding of how to use the ASP.NET MMC to make configuration changes to your ASP.NET applications.

The ASP.NET MMC is a management console that allows you to make configuration changes to your ASP.NET applications. You can use the ASP.NET MMC to change existing settings as well. To change the background color of an ASP.NET application, follow these steps:

- In Internet Information Services (IIS) Manager, right-click the virtual directory, and then click **Properties**.
- On the **ASP.NET** tab, click **Edit configuration**.
- On the General tab, under **Application Settings**, click the row containing the **CustomBGColor** setting, and then click **Edit**.
- In the Value box, type `#0000FF` (the hexadecimal color code for blue).
- Click **OK** to close the **Edit/Add Application Settings** dialog box.
- Click **OK** to close the **ASP.NET Configuration Settings** dialog box.
- Click **OK** to close the **<WebSiteName> Properties** dialog box.
- Open the browser, and then enter the following URL:

`http://localhost/SampleWebSite/Default.aspx`

Verify that the background color is blue.

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`http://localhost/SampleWebSite/Default.aspx`

Verify that the background color is blue.

To IIS Express...

Start Action

Current Page
 Specific Page

Start external program

Start URL

Don't open a page. Wait for a request from an external application.

Servers

Apply server settings to all users (store in project file)

IIS Express Bitness: Default

Project Url Create Virtual Directory

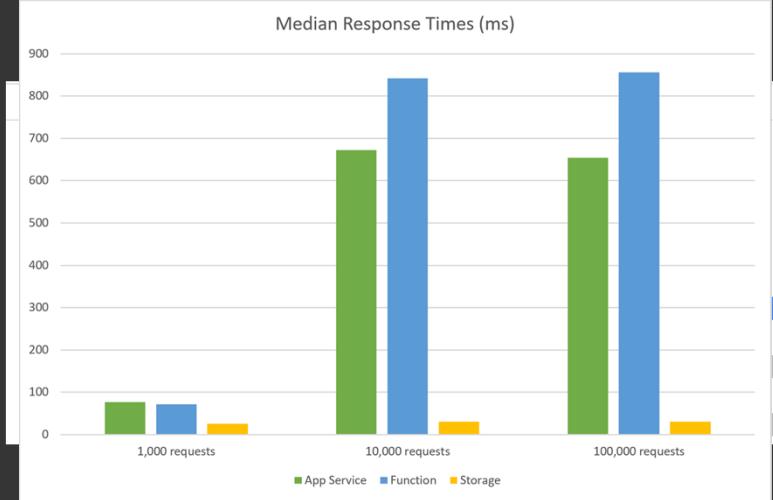
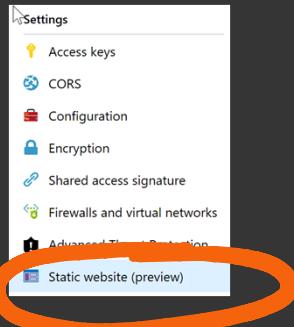
Override application root URL

Debuggers

ASP.NET Native Code SQL Server Silverlight

Enable Edit and Continue

From IIS... to Static websites on Azure



<https://medium.com/@philippbauknecht/best-way-to-host-a-single-page-application-spa-in-microsoft-azure-3e70cbd075c3>



General Session: 25 Years of VSLive!, 25 Years of Software - Laurent Bugnion

From Main frames...



From Main frames... to Cloud VMs



Operating systems

	Windows Server Microsoft
	Ubuntu Server Canonical
	Red Hat Enterprise Linux 7.5 Red Hat
	Windows Client Microsoft
	CentOS-based 7.3 Rogue Wave Software (formerly OpenLogic)
	SLES 12 SP3 SUSE
	Clear Linux OS - Containers Clear Linux Project
	Debian 8 "Jessie" Debian

Images



Templates



General Session: 25 Years of VSLive!, 25 Years of Software - Laurent Bugnion

From Main frames... to Cloud VMs



Select a VM size

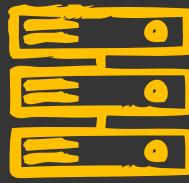
Browse available virtual machine sizes and their features

Search by VM size... Restore default filters

Showing 212 VM sizes. | Subscription: lbugnion | Region: West Europe

VM SIZE	OFFERING	FAMILY	VCPUS	RAM (GB)	DATA DISKS	MAX IOPS	TEMPORARY STOR...	PREMIUM DISK SU...	COST/MONTH (ES...)
M128-32ms	Standard	Memory optimized	32	3,892	64	80000	4096 GiB	Yes	\$27,798.22
M128-64ms	Standard	Memory optimized	64	3,892	64	80000	4096 GiB	Yes	\$27,798.22
M64-16ms	Standard	Memory optimized	16	1,792	64	40000	2048 GiB	Yes	\$10,767.17
M64-32ms	Standard	Memory optimized	32	1,792	64	40000	2048 GiB	Yes	\$10,767.17
M64m	Standard	Memory optimized	64	1,792	64	40000	7168 GiB	Yes	\$10,767.17
M64ms	Standard	Memory optimized	64	1,792	64	40000	2048 GiB	Yes	\$10,767.17

Azure Functions



No
infrastructur
e headaches



Scales on
demand



Very cheap
to run

Cognitive services



- Add the power of machine learning to any app.
- Process images, video, speech, language and more.
- Simple REST APIs or SDKs (.NET, JavaScript, Java and more).



Language



Speech



Vision

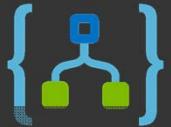


Search



Knowledge

Logic Apps



When I upload a new media

No additional information is needed for this step. You will be able to use the outputs in subsequent steps.

How often do you want to check for items?

Interval: 30 Seconds

Connected to Date-trigger: Change connection

Describe Image (Image)

Choose an Azure function

Azure Functions

For each

Select an output from previous steps: Captions

Post a tweet

Add an action

Choose an action

Search connectors and actions:

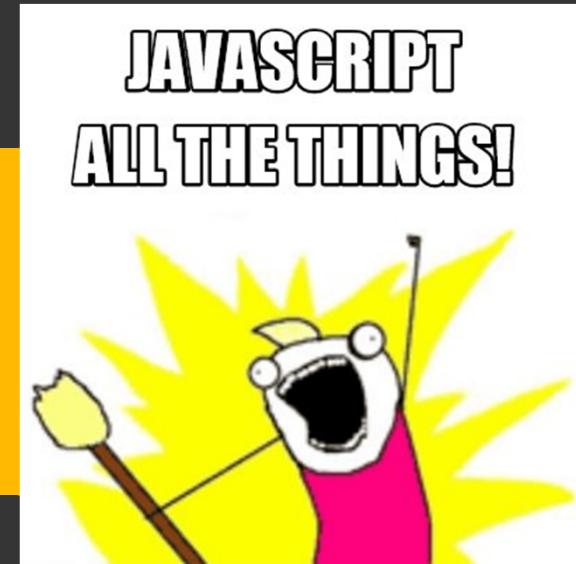
All Built-in Connectors Enterprise Custom

Action categories: Control, HTTP, Service Bus, SQL Server, Azure Functions, Office 365, Outlook, Azure Blob Storage

Actions: Reply to email (Gmail), Send email (Gmail), Create an event (Google Calendar), Create file (Google Drive)



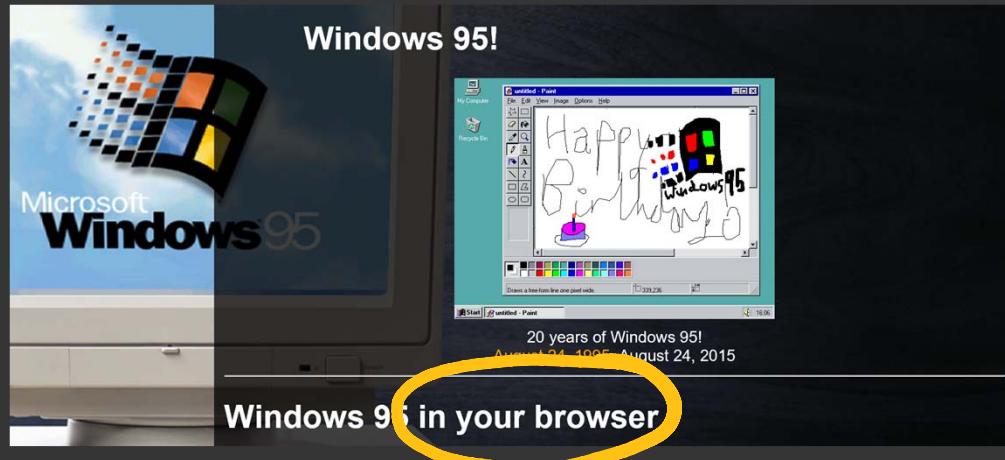
Atwood's law
2007



<https://blog.codinghorror.com/the-principle-of-least-power/>

"JavaScript all the things"

<https://win95.ajf.me/>





From Active Server Pages ...

```
<!DOCTYPE html>  
  
<html>  
  
<body>  
    <%response.write("Hello world")%>  
</body>  
</html>
```

VBSCRIPT
HTML



From ASP ... to Razor

```
@using RazorSample.Model;  
  
{@  
    Layout = "/layout/_MainLayout.cshtml";  
    Page.Title = "Hello Razor Lists!!";  
}  
  
<h1>@Page.Title</h1>  
  
<ul>  
  
    @foreach (var link in list)  
    {  
        <li><a href="@link.Url">@link.Title</a></li>  
    }  
  
</ul>
```

C#

HTML



Others made some books...



From Silverlight...



"Binary instruction format for a stack-based virtual machine"

-<https://webassembly.org>

WebAssembly 1.0 has shipped in 4 major browser engines.



Web assembly



Efficient and fast

Open web platform

Sandboxed

Same-origin

Permission security policies

Various experimental implementations

Blazor, Uno, Ooui

And more...

<https://webassembly.org>



WHAT HAVE WE LEARNED?



1. Some things were slow and complicated
2. Some things are still slow and complicated
3. We're pretty much just goofing around



@LBugnion

<http://gslb.ch/mycda>

LBugnion@microsoft.com

Slides:

<http://gslb.ch/vslivekeynote>

We have
the best amazing job
in the world

