System.UriBuilder Class

```
[ILASM]
.class public UriBuilder extends System.Object

[C#]
public class UriBuilder
```

Assembly Info:

- *Name:* System
- *Public Key:* [00 00 00 00 00 00 00 00 04 00 00 00 00 00 00 00]
- *Version:* 1.0.x.x
- *Attributes:*
    - CLSCompliantAttribute(true)

Summary

Provides a mutable version of the **System.Uri** class.

Inherits From: System.Object

Library: Networking

Thread Safety: All public static members of this type are safe for multithreaded operations. No instance members are guaranteed to be thread safe.

Description

The **System.Uri** and **System.UriBuilder** classes both represent a Uniform Resource Identifier (URI). Instances of the **System.Uri** type are immutable: once the underlying URI is specified, neither it nor its components, or constituent parts, can be changed. The **System.UriBuilder** type permits modifications to the components of the URI it represents. The **System.UriBuilder.Uri** property provides the current contents of a **System.UriBuilder** as a **System.Uri** instance.

[*Note:* For more information on URI, see IETF RFC 2396.]

1 UriBuilder() Constructor

```
[ILASM]
public rtspecialname specialname instance void .ctor()

[C#]
public UriBuilder()
```

6 Summary

7 Constructs and initializes a new instance of the **System.UriBuilder**
8 class.

9 Description

10 This constructor creates a new instance of the **System.UriBuilder**
11 class with its properties initialized as follows:

Property	Initial value
Fragment	**System.String.Empty**
Host	"loopback"
Password	**System.String.Empty**
Path	"/"
Port	80
Query	**System.String.Empty**
Scheme	**System.Uri.UriSchemeHttp**
UserName	**System.String.Empty**

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1 UriBuilder(System.String) Constructor

```
[ILASM]
public rtspecialname specialname instance void .ctor(string
uri)

[C#]
public UriBuilder(string uri)
```

7 Summary

8 Constructs and initializes a new instance of the **System.UriBuilder**
9 class using the specified URI.

10 Parameters

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Parameter	Description
uri	A **System.String** containing a URI.

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14 Description

15 This constructor checks for the presence of a scheme in *uri*. If no
16 scheme is found, **System.Uri.UriSchemeHttp** +
17 **System.Uri.SchemeDelimiter** are prepended to *uri*. The
18 **System.Uri**(**System.String**) constructor is passed *uri*, and the
19 components of the new **System.Uri** instance are used to initialize the
20 properties of the **System.UriBuilder** instance being constructed.
21
22 If *uri*.**Fragment** is not equal to **System.String.Empty**, *uri*.**Fragment**
23 is copied to the **System.UriBuilder.Fragment** property of the current
24 instance, otherwise *uri*.**Query** is copied to the
25 **System.UriBuilder.Query** property of the current instance.
26
27 The **Host**, **Port** and **Scheme** properties of the **System.Uri** instance
28 are used to initialize the corresponding properties in the current
29 instance. The **AbsolutePath** property of the **System.Uri** instance is
30 used to initialize the **Path** property of the current instance.
31
32 The **UserInfo** property of the **System.Uri** instance is used to initialize
33 the **UserName** and **Password** properties of the current instance.

34 Exceptions

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Exception	Condition
System.ArgumentNullException	*uri* is **null**.
System.UriFormatException	*uri* is a zero length string or contains only

	spaces.
	-or-
	The parsing routine detected a scheme in an invalid form.
	-or-
	The parser detected more than two consecutive slashes in a URI that does not use the "file" scheme.
	-or-
	uri is in an invalid form and cannot be parsed.

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1 UriBuilder(System.Uri) Constructor

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```
[ILASM]
public rtspecialname specialname instance void .ctor(class
System.Uri uri)
```

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```
[C#]
public UriBuilder(Uri uri)
```

7 **Summary**

8 Constructs and initializes a new instance of the **System.UriBuilder**
9 class with the specified **System.Uri** instance.

10 **Parameters**
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Parameter	Description
uri	An instance of the **System.Uri** class.

13
14 **Description**

15 The components of the specified **System.Uri** instance are used to
16 initialize the properties of the **System.UriBuilder** instance being
17 constructed.
18
19 If *uri*.**Fragment** is not equal to **System.String.Empty**, *uri*.**Fragment**
20 is copied to the **System.UriBuilder.Fragment** property of the current
21 instance, otherwise *uri*.**Query** is copied to the
22 **System.UriBuilder.Query** property of the current instance.
23
24 The **Host**, **Port** and **Scheme** properties of the **System.Uri** instance
25 are used to initialize the corresponding properties in the current
26 instance. The **AbsolutePath** property of the **System.Uri** instance is
27 used to initialize the **Path** property of the current instance.
28
29 The **UserInfo** property of the **System.Uri** instance is used to initialize
30 the **UserName** and **Password** properties of the current instance.

31 **Exceptions**
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Exception	Condition
System.NullReferenceException	*uri* is **null**.

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UriBuilder(System.String, System.String) Constructor

```
[ILASM]
public rtspecialname specialname instance void .ctor(string
schemeName, string hostName)

[C#]
public UriBuilder(string schemeName, string hostName)
```

Summary

Constructs and initializes a new instance of the **System.UriBuilder**
class with the specified scheme and host.

Parameters

Parameter	Description
schemeName	A **System.String** containing the name of an Internet access protocol.
hostName	A **System.String** containing a DNS host name or IP address.

Description

This constructor creates a new instance of the **System.UriBuilder**
class with its properties initialized as follows:

Property	Initial value
Fragment	**System.String.Empty**
Host	*hostName*
Password	**System.String.Empty**
Path	"/"
Port	-1
Query	**System.String.Empty**
Scheme	*schemeName*
UserName	**System.String.Empty**

[*Note:* **System.UriBuilder.Port** is initialized to the value -1 to
indicate the default port for the scheme should be used.]

UriBuilder(System.String, System.String, System.Int32) Constructor

```
[ILASM]
public rtspecialname specialname instance void .ctor(string
scheme, string host, int32 portNumber)

[C#]
public UriBuilder(string scheme, string host, int
portNumber)
```

Summary

Constructs and initializes a new instance of the **System.UriBuilder** class with the specified scheme, host, and port.

Parameters

Parameter	Description
scheme	A **System.String** containing the name of an Internet access protocol.
host	A **System.String** containing a DNS host name or IP address.
portNumber	A **System.Int32** containing an IP port number.

Description

This constructor creates a new instance of the **System.UriBuilder** class with its properties initialized as follows:

Property	Initial value
Fragment	**System.String.Empty**
Host	*host*
Password	**System.String.Empty**
Path	"/"
Port	*portNumber*
Query	**System.String.Empty**
Scheme	*scheme*
UserName	**System.String.Empty**

Exceptions

Exception	Condition
System.ArgumentOutOfRangeException	*portNumber* is less than zero.

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Exception	Condition

UriBuilder(System.String, System.String, System.Int32, System.String) Constructor

```
[ILASM]
public rtspecialname specialname instance void .ctor(string
scheme, string host, int32 port, string pathValue)

[C#]
public UriBuilder(string scheme, string host, int port,
string pathValue)
```

Summary

Constructs and initializes a new instance of the **System.UriBuilder** class with the specified scheme, host, port number, and path.

Parameters

Parameter	Description
scheme	A **System.String** containing the name of an Internet access protocol.
host	A **System.String** containing a DNS host name or IP address.
port	A **System.Int32** containing an IP port number.
pathValue	A **System.String** containing the path for the resource.

Description

This constructor creates a new instance of the **System.UriBuilder** class with its properties initialized as follows:

Property	Initial value
Fragment	**System.String.Empty**
Host	host
Password	**System.String.Empty**
Path	pathValue
Port	port
Query	**System.String.Empty**
Scheme	scheme
UserName	**System.String.Empty**

Before setting the **System.UriBuilder.Path** property, this constructor converts any backward slashes in pathValue to forward slashes, and calls **System.Uri.EscapeString**(pathValue).

1   **Exceptions**
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Exception	Condition
System.ArgumentOutOfRangeException	*port* is less than zero.

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UriBuilder(System.String, System.String, System.Int32, System.String, System.String) Constructor

```
[ILASM]
public rtspecialname specialname instance void .ctor(string
scheme, string host, int32 port, string path, string
extraValue)

[C#]
public UriBuilder(string scheme, string host, int port,
string path, string extraValue)
```

Summary

Constructs and initializes a new instance of the **System.UriBuilder** class with the specified scheme, host, port number, path, and query string or fragment identifier.

Parameters

Parameter	Description
scheme	A **System.String** containing the name of an Internet access protocol.
host	A **System.String** containing a DNS host name or IP address.
port	A **System.Int32** containing an IP port number.
path	A **System.String** containing the path for the resource.
extraValue	A **System.String** containing a query or fragment component.

Description

This constructor creates a new instance of the **System.UriBuilder** class with its properties initialized as follows:

Property	Initial value
Fragment	If *extraValue* begins with a "#", *extraValue*; otherwise **System.String.Empty**.
Host	*host*
Password	**System.String.Empty**
Path	*path*
Port	*port*
Query	If *extraValue* begins with a "?", *extraValue*; otherwise **System.String.Empty**.

Scheme	*scheme*
UserName	**System.String.Empty**

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2   Before setting the **System.UriBuilder.Path** property, this constructor
3   converts any backward slashes in *path* to forward slashes, and calls
4   **System.Uri.EscapeString**(*path*).

5 **Exceptions**
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Exception	Condition
System.ArgumentOutOfRangeException	*port* is less than zero.
System.ArgumentException	*extraValue* does not have as its first character a number sign ('#') indicating a fragment, or a question mark ('?') indicating a query.

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UriBuilder.Equals(System.Object) Method

```
[ILASM]
.method public hidebysig virtual bool Equals(object rparam)


[C#]
public override bool Equals(object rparam)
```

Summary

Compares the current instance and the specified object for equality.

Parameters

Parameter	Description
rparam	The object to compare with the current instance. The string representation of this argument is used to construct a **System.Uri** for comparison.

Return Value

true if *rparam* represents the same URI as the current instance. If *rparam* is **null**, returns **false**.

Description

This method invokes **System.Uri.Equals**(*rparam*.ToString()) on the **System.Uri** instance returned by the **System.UriBuilder.Uri** property of the current instance.

[*Note:* This method overrides **System.Object.Equals**.]

UriBuilder.GetHashCode() Method

```
[ILASM]
.method public hidebysig virtual int32 GetHashCode()


[C#]
public override int GetHashCode()
```

Summary

Generates a hash code for the current instance.

Return Value

A **System.Int32** containing the hash code for this instance.

Description

The hash code is generated without the fragment component. For
example, the URIs "http://www.contoso.com/index.htm#search" and
"http://www.contoso.com/index.htm" produce the same hash code.

The algorithm used to generate the hash code is unspecified.

[*Note:* This method overrides **System.Object.GetHashCode**.]

UriBuilder.ToString() Method

```
[ILASM]
.method public hidebysig virtual string ToString()

[C#]
public override string ToString()
```

Summary

Returns the escaped form of the URI represented by the current instance.

Return Value

A **System.String** containing the escaped URI contained in the current **System.UriBuilder** instance.

Description

The string returned by this method (shown here as uriString) is constructed as follows:

```
uriString = scheme + scheme delimiter + host.
```

```
If port != -1 and host != "", then uriString = uriString +
":" + port.
```

```
If host != "" and path != "" and path != "/", then
uriString = uriString + "/".
```

```
uriString = uriString + path.
```

```
If fragment != "", then uriString = uriString + fragment,
else uriString = uriString + query.
```

[*Note:* This method overrides **System.Object.ToString**.]

UriBuilder.Fragment Property

```
[ILASM]
.property string Fragment { public hidebysig specialname
instance string get_Fragment() public hidebysig specialname
instance void set_Fragment(string value) }


[C#]
public string Fragment { get; set; }
```

Summary

Gets or sets the fragment component of the current instance.

Property Value

A **System.String** containing the fragment component of the URI
represented by the current instance.

Description

The **System.UriBuilder.Fragment** property contains any text
following a fragment marker ('#') in the URI, including the marker
itself. When setting the **System.UriBuilder.Fragment** property, the
property value does not include the fragment marker as it is added to
the property value by the set operation. Specifying **null** for the
System.UriBuilder.Fragment property value sets the property to
System.String.Empty. If **null** or **System.String.Empty** are
specified in a set operation, the fragment marker is not added to the
property value. The set operation does not escape the fragment value.

Setting the **System.UriBuilder.Fragment** property to any value,
including **null**, sets the **System.UriBuilder.Query** property to
System.String.Empty.

UriBuilder.Host Property

```
[ILASM]
.property string Host { public hidebysig specialname
instance string get_Host() public hidebysig specialname
instance void set_Host(string value) }

[C#]
public string Host { get; set; }
```

Summary

Gets or sets the Domain Name System (DNS) host name or IP address of a machine that provides access to the resource identified by the current instance.

Property Value

A **System.String** containing the DNS host name or IP address of the host machine.

Description

Specifying **null** for a set operation sets this property to **System.String.Empty**.

UriBuilder.Password Property

```
[ILASM]
.property string Password { public hidebysig specialname
instance string get_Password() public hidebysig specialname
instance void set_Password(string value) }

[C#]
public string Password { get; set; }
```

Summary

Gets or sets the password information used to access the resource
represented by the current instance.

Property Value

A **System.String** containing the password used to access the resource
represented by the current instance.

Description

Specifying **null** for a set operation sets this property to
System.String.Empty.

UriBuilder.Path Property

```
[ILASM]
.property string Path { public hidebysig specialname
instance string get_Path() public hidebysig specialname
instance void set_Path(string value) }


[C#]
public string Path { get; set; }
```

Summary

Gets or sets the path to the resource represented by the current instance.

Property Value

A **System.String** containing the path to the resource represented by the current instance.

Description

This property returns the escaped form of the path information in the current instance. Values specified for set operations are escaped, and any backslashes are converted to forward slashes.

Specifying **null** or **System.String.Empty** for a set operation sets this property to "/".

UriBuilder.Port Property

```
[ILASM]
.property int32 Port { public hidebysig specialname
instance int32 get_Port() public hidebysig specialname
instance void set_Port(int32 value) }


[C#]
public int Port { get; set; }
```

Summary

Gets or sets the port number used to connect to the
System.UriBuilder.Host referenced by the current instance.

Property Value

A **System.Int32** containing a non-negative port number.

Description

If no port was specified, the **System.Uri.Port** property returns the
default port as determined by the scheme of the current instance. A
port value of -1 indicates that the current scheme does not use a port,
as is the case when the scheme of the current instance is the
System.Uri.UriSchemeFile scheme.

[*Note:* For the list of default ports used with each scheme, see
System.Uri.Port.]

Exceptions

Exception	Condition
System.ArgumentOutOfRangeException	The value specified for a set operation was less than zero.

UriBuilder.Query Property

```
[ILASM]
.property string Query { public hidebysig specialname
instance string get_Query() public hidebysig specialname
instance void set_Query(string value) }


[C#]
public string Query { get; set; }
```

Summary

Gets or sets the query component of the current instance.

Property Value

A **System.String** containing the query component of the URI
represented by the current instance.

Description

The **System.UriBuilder.Query** property contains any text following a
query marker ('?') in the URI, including the marker itself. When setting
the **System.UriBuilder.Query** property, the property value does not
include the query marker as it is added to the property value by the
set operation. Specifying **null** for the **System.UriBuilder.Query**
property value sets the property to **System.String.Empty**. If **null** or
System.String.Empty are specified in a set operation, the query
marker is not added to the property value. The set operation does not
escape the query value.

Setting the **System.UriBuilder.Query** property to any value,
including **null**, sets the **System.UriBuilder.Fragment** property to
System.String.Empty.

UriBuilder.Scheme Property

```
[ILASM]
.property string Scheme { public hidebysig specialname
instance string get_Scheme() public hidebysig specialname
instance void set_Scheme(string value) }

[C#]
public string Scheme { get; set; }
```

Summary

Gets or sets the scheme component of the current instance.

Property Value

A **System.String** containing the scheme component of the current instance.

Description

Specifying **null** for a set operation sets this property to **System.String.Empty**. If the value specified for a set operation contains a colon (":"), the scheme is set using the substring that includes all characters from the start of the value up to, but not including the colon. The characters in the value are converted to lower case.

UriBuilder.Uri Property

```
[ILASM]
.property class System.Uri Uri { public hidebysig
specialname instance class System.Uri get_Uri() }


[C#]
public Uri Uri { get; }
```

Summary

Gets a **System.Uri** instance constructed using the current instance.

Property Value

A **System.Uri** containing the URI components of the current instance.

Description

This property returns the same **System.Uri** instance until
modifications are made to the current instance, at which time a new
System.Uri instance is constructed by passing the string
representation of the current instance to the
System.Uri(**System.String**) constructor.

Exceptions

Exception	Condition
System.UriFormatException	The URI constructed using the string representation of the current instance is in an invalid form.

UriBuilder.UserName Property

```
[ILASM]
.property string UserName { public hidebysig specialname
instance string get_UserName() public hidebysig specialname
instance void set_UserName(string value) }

[C#]
public string UserName { get; set; }
```

Summary

Gets or sets the user name information used to access the resource
identified by the current instance.

Property Value

A **System.String** containing the user name used to access the
resource identified by the current instance.

Description

Specifying **null** for a set operation sets this property to
System.String.Empty.