

FILE URI Scheme

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Introduction

The file **URI scheme** specified in RFC 1630 and RFC 1738, and is typically used to retrieve files from the host computer. Figure 1 below shows NetAnalysis with a number of file entries filtered, as stored by Microsoft Internet Explorer v9 in its history INDEX.DAT files.

These entries are created (along with Microsoft Windows Shortcut entries) by accessing files on the computer system which typically have an HKEY_CLASSES_ROOT entry in the registry to inform Explorer how the file should be dealt with.

Entry Type	Scheme	Tag	Date Visited [UTC]	Date Visited [Local]	Visits	Decoded URL
Master	file	<input checked="" type="checkbox"/>	2014-06-01 14:37:32.571	2014-06-01 15:37:32.571	1	file:///C:/Users/Craig Wilson/Desktop/URL WITH FOREIGN CHARACTERS.txt
Master	file	<input checked="" type="checkbox"/>	2014-06-07 08:50:23.161	2014-06-07 09:50:23.161	4	file:///C:/Users/Craig Wilson/Desktop/HstEx v4/HstEx.sln
Master	file	<input checked="" type="checkbox"/>	2014-06-04 13:07:10.619	2014-06-04 14:07:10.619	3	file:///C:/Users/Craig Wilson/Dropbox/Solutions Backup/2014-06-02 Projects.rar
Master	file	<input checked="" type="checkbox"/>	2014-06-07 11:34:29.117	2014-06-07 12:34:29.117	1	file:///C:/Users/Craig Wilson/Desktop/search.txt
Master	file	<input checked="" type="checkbox"/>	2014-06-07 14:16:21.298	2014-06-07 15:16:21.298	1	file:///C:/Users/Craig Wilson/Desktop/twitter search.png
Weekly	file	<input checked="" type="checkbox"/>	2014-06-01 14:42:19.552	2014-06-01 15:42:19.552	1	file:///D:/Browser Dump/Internet Explorer v9/2014_06_01_15_38_52_728/Environment.txt
Daily	file	<input checked="" type="checkbox"/>	2014-06-03 15:26:34.116	2014-06-03 16:26:34.116	4	file:///C:/Users/Craig Wilson/Desktop/NetAnalysis v2/NetAnalysis.sln
Daily	file	<input checked="" type="checkbox"/>	2014-06-03 13:16:45.404	2014-06-03 14:16:45.403	2	file:///C:/Users/Craig Wilson/Desktop/iedownload.png
Daily	file	<input checked="" type="checkbox"/>	2014-06-03 14:33:16.032	2014-06-03 15:33:16.030	1	file:///C:/Users/Craig Wilson/Desktop/TDS-187/Local/Microsoft/Windows/WebCache/t.txt
Daily	file	<input checked="" type="checkbox"/>	2014-06-04 13:24:04.027	2014-06-04 14:24:04.026	2	file:///C:/Users/Craig Wilson/Desktop/firefox.vol
Daily	file	<input checked="" type="checkbox"/>	2014-06-04 13:32:20.772	2014-06-04 14:32:20.771	1	file:///C:/Users/Craig Wilson/Desktop/IE10 Download_HstEx.jpg
Daily	file	<input checked="" type="checkbox"/>	2014-06-04 13:32:50.382	2014-06-04 14:32:50.382	2	file:///C:/Users/Craig Wilson/Desktop/IE10 download_HstEx_.jpg

Record 1 of 12

[Tag] = 'Checked' Edit Filter

Figure 1

Meaning of Slash Character

The **slash character** (/), depending on its position, has different meanings within a file URL.

- The // after the file: is part of the general syntax of URLs. (The double slash // should always appear in a file URL according to the specification, but in practice many Web browsers allow it to be omitted).
- The single slash between **host** and **path** is part of the syntax of URLs.
- The slashes in **path** separate directory names in a hierarchical system of directories and subdirectories. In this usage, the slash is a general, system-independent way of separating the parts, and in a particular host system it might be used as such in any pathname (as in Unix systems).

Examples

Unix

Here are two Unix examples pointing to the same /etc/fstab file:

```
file://localhost/etc/fstab
file:///etc/fstab
```

Windows

Here are some examples which may be accepted by some applications on Windows systems, referring to the same, local file `c:\WINDOWS\clock.avi`

```
file://localhost/c|/WINDOWS/clock.avi
file:///c|/WINDOWS/clock.avi
file://localhost/c:/WINDOWS/clock.avi
```

Here is the URI as understood by the Windows Shell API:

```
file:///c:/WINDOWS/clock.avi
```

On Microsoft Windows systems, the normal colon (:) after a device letter has sometimes been replaced by a vertical bar (|) in file URLs. This reflected the original URL syntax, which made the colon a reserved character in a path part.

Since Internet Explorer 4, file URIs have been standardised on Windows, and should follow the following scheme. This applies to all applications which use `URLMON` or `SHLWAPI` for parsing, fetching or binding to URIs. To convert a path to a URL, use `UrlCreateFromPath`, and to convert a URL to a path, use `PathCreateFromUrl`.

To access a file "the file.txt", the following might be used.

For a network location:

```
file://hostname/path/to/the%20file.txt
```

Or for a local file, the hostname is omitted, but the slash is not (note the third slash):

```
file:///c:/path/to/the%20file.txt
```

This is not the same as providing the string "localhost" or the dot "." in place of the hostname. The string "localhost" will attempt to access the file as `\\localhost\c:\path\to\the file.txt`, which will not work since the colon is not allowed in a share name. The dot "." results in the string being passed as `\\.c:\path\to\the file.txt`, which will work for local files, but not shares on the local system. For example `file://./sharename/path/to/the%20file.txt` will not work, because it will result in sharename being interpreted as part of the DOSDEVICES namespace, not as a network share.

Do not be mistaken that these entries mean the files were opened in the browser. Accessing local files on a Windows system will result in file entries being created.