



# Guide to Using Xenu's Link Sleuth

## Table of Contents

[Using Xenu to Check a Web Site](#)

[Checking Multiple Sites](#)

[Options](#)

[Results](#)

[Saving the Results](#)

[Xenu's Link Sleuth FAQ](#)

[Effects on Hit Counters](#)

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## Using Xenu to Check a Web Site

Doubleclick the Xenu.exe program icon to open Xenu's Link Sleuth, or type the path and the xenu.exe filename in the "Run" command found under the Windows "Start" button.

A Xenu window will appear on your desktop. You can now use Xenu's Link Sleuth to check for broken links.

1. Under the **File** menu, select **Check URL**. Or, click on the white 'page' icon located on the left end of the toolbar.
2. A dialogue box called "Xenu's starting point" will appear.
3. Enter the URL of the page you would like to check links on in the first box. You should enter the URL in the format **http://www.server.com/~username/** (enter the correct URL and server information). If you'd like Xenu to check an entire website, you should enter the main or index page of the site. Xenu can check any website, so it will work on [www.microsoft.com](http://www.microsoft.com) and so on.
4. The **Browse** button will allow you to check a local HTML file by browsing to its location on your computer. You can check links before uploading your pages to the web server by using this function.
5. The **Check external links** checkbox is selected by default; if you don't want Xenu to check external links (links to sites outside of your site) then deselect this box.
6. You can set certain URLs as 'internal' in the next box.
7. You can exclude URLs that you don't want checked in the next box.
8. Click on the OK button to begin checking.

Once you've checked a website, a small **DOC** icon will appear to the left of the **File** menu. This contains the list and color-coded status of all the links checked by Xenu.

[Return to Top of Page](#)

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## Checking Multiple Sites

It is easy to check several different sites using the Link Sleuth. Once Xenu has completed checking a URL you can enter another URL in the top box of the "Xenu's starting point" dialogue box.

Even if you have an existing report and have not saved it yet, Xenu will create a new report for additional sites checked. You'll still be able to view the previous results too. By default, Xenu names these various reports XENU1, XENU2, etc.

To access the different sites' (non-HTML) reports within the Xenu main window, you can either click on the **DOC** icon and select **Minimize** (the separate results reports will appear in small windows), or type Control+F6 to view the **Next** report in the full-size Xenu window.

If you have checked several sites and have several different results reports, you may wish to [save](#) them with

different file names to avoid confusion.

[Return to Top of Page](#)

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## Options

There are some options you can set in Xenu to get better results. These can be accessed from the "Xenu's starting point" dialogue box by clicking the **More Options** button, or from the **Options** menu on the main toolbar.

1. Click on the **Options** menu on the main toolbar.
2. Click on **Preferences**.
3. You'll see a **Parallel Threads** slider. The default setting is 30. The author of the software suggests setting this slider at about 70 to get the best results, but depending on how much memory your computer has you may need to experiment to see what setting works the best with your particular machine.
4. The default setting for Maximum Level is 999 - in other words, Xenu will go down 999 levels to check links in a site. You can change this value to a lower number if you don't want Xenu to check items that are located deep within your directory structure.
5. The Options panel also contains a series of checkboxes, all of which are selected by default. You can deselect any of the options that you don't want to use.

[Return to Top of Page](#)

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## Results

After you enter the URL for Xenu to check and click the **OK** button in the "Xenu's starting point" dialogue box, a rapid listing of the links being checked will appear within the Xenu main window.

Xenu colors good links green, broken links red, and "excluded" types of links in brown. When the program has finished checking the links, it will inform you that "Link sleuth finished" and ask you if you want a report.

### HTML Report

Click **Yes** if you'd like the HTML page report.

Xenu's report format is an HTML page that will show you the root URL that was checked and will provide a summary of broken links.

- Broken links:
  - ordered by link
  - ordered by page
- List of redirected URLs (URLs that have moved)
- List of ftp and gopher URLs
- List of valid URLs you can submit to a search engine (HTML or plain text)
- Site Map of valid HTML pages with a title

You'll need to have a browser window open to view the report; if a browser is not open, Xenu will attempt to open your default web browser to display the report.

### Non-HTML Report in the Xenu Main Window

If you don't want to view the HTML version of the report within a browser window, click **No** in the dialog box that asks if you want a report.

You can view the results in the main Xenu window. You should easily be able to see red broken links or any

other problems that the Link Sleuth found by scrolling down the page.

Under the **View** menu you can choose to "**Show broken links only**", which will help you to see any broken links more easily. (Note: if you have selected this option but do not have any broken links, nothing will be displayed in the window. Turn off the "show broken links" option to see all the links that were checked.)

### Locate the Referring Page

Right-click the broken link and select "Properties" to see what pages in your site contain the link. The URLs for the referring pages will appear in the bottom window under "Pages Linking to this one."

[Return to Top of Page](#)

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## Saving the Results

You may want to save the results of Xenu's link check, particularly if there are many links that need to be updated on your site.

To save the results of the link check to a file:

1. Check a URL using Xenu.
2. Click **No** when Xenu asks if you'd like a report.
3. Under the **File** menu, select **Save As**. Or, select the small disk icon from the toolbar. Enter a filename and enter the location where you'd like to save the file on your computer's hard drive.
4. Later, you can **Open** the file to view it again (either click on the small folder icon on the toolbar, or under the **File** menu select **Open**).
5. When you're viewing the saved file at a later time, use Xenu to retry broken links. This is especially useful to find links that may have been only temporarily broken, or if you want to verify that links you have fixed are indeed working properly. Under the **File** menu select **retry broken links** to have Xenu revisit links that were broken in the initial check.

[Return to Top of Page](#)

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## The Xenu FAQ

The Frequently Asked Questions page for Xenu's Link Sleuth is located at <http://home.snafu.de/tilman/xenulink.html#FAQ>

[Return to Top of Page](#)

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## Effects on Hit Counters (and other things to keep in mind)

Hit counters will be affected by using Xenu. Every time you use Xenu to check the links on your pages your counter will record a hit for each page where Xenu checks links, so be aware that your hit counter totals will be increased.

[Return to Top of Page](#)

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## Frequently Asked Questions (FAQ)

1. [Who is Xenu?](#)
2. [Is Xenu's Link Sleuth \(TM\) better than WebAnalyzer?](#)
3. [Is Xenu's Link Sleuth \(TM\) better than Net Mechanic?](#)
4. [Can I support the author financially?](#)
5. [Why does Xenu's Link Sleuth \(TM\) report `http://www.site.com/./page/index.html` as broken?](#)
6. [How can I configure a proxy?](#)
7. [Why does Xenu's Link Sleuth\(TM\) report an URL with a space in it?](#)
8. [I use Mozilla 3.0 Gold and can't get rid of file: URLs for images. What can I do?](#)
9. [What is the maximum number of websites that can be checked?](#)
10. [Can the software check my site locally?](#)
11. [Does it work on Windows NT 3.51?](#)
12. [How is it so damn fast?](#)
13. [Can I have the source code?](#)
14. [Can I buy the source code?](#)
15. [Just for fun, I checked Tilman's web site, and found many broken links. Why?](#)
16. [How do I correct broken links?](#)
17. [What about ftp and gopher sites?](#)
18. [Why can't I launch URLs?](#)
19. [Why is LinkSleuth messing around with cookies?](#)
20. [Why are some links reported as "broken" by Xenu, that can be displayed within my browser?](#)
21. [Why can't I connect to "secure" \(https\) sites ?](#)
22. [Any known problems with Windows 95?](#)
23. [Any known problems with Windows 2000?](#)
24. [Why can't I configure the timeout?](#)
25. [What about JavaScript?](#)
26. [What about passwords entered in a FORM?](#)
27. [How about a WAP version?](#)

### 1. Who is Xenu?

See [here](#).

Do you want to be a **Knight of Xenu**? Then join that [team](#) in the worldwide [RC5-64 key decryption effort](#), which uses "idle time" on thousands of computers all around the world. Here is how to do it:

1. Download the [client](#).
2. Configure the client:
3.
  1. Chose "1" ("General Client Options"), then choose "1" ("Your e-mail address") and enter your e-mail address (without "<" or "("), then go back to the main menu with "0".
  2. Chose "2" ("Buffer and Buffer Update Options"), then chose "9" ("Load-work precedence"), then press the backspace key to delete everything, and enter "RC5,DES=0,CSC=0,OGR=0".
  3. If you are behind a firewall, or use a dial-up line, you will have to chose "6" ("Keyserver <=> Client connectivity options") to configure the use of a proxy, or to watch for an dial-up active connection. Go back to the main menu by entering "0" twice.
  4. Enter "0" to save the settings and exit.
4. Start the client and watch him work.

After one day or two, you can go the [main statistics page](#) and enter your e-mail address. You can then access your very own statistics page. Scroll down and click "Please e-mail me my password". You will receive an e-mail with your ID and your password. Now [click here to join team #3504](#) and enter ID and password when requested.

Please do not participate in this project if you are [on a corporate machine without first getting permission](#) from your supervisor and the security people.

[E-mail me](#) if you have any problems with RC5-64. But read the description above first.

## 2. Is Xenu's Link Sleuth (TM) better than WebAnalyzer?

Yes and No. Xenu's Link Sleuth (TM) does not have the graphic capabilities of WebAnalyzer 2.0 ("Wavefront view"). But here are some of the advantages of Xenu's Link Sleuth (TM):

- It is free
- Simple user-interface
- Better error reports (not just "network error")
- "Save" works also while the software is busy
- The "broken links view" shows only broken links; In WebAnalyzer you'd have to press the button again and again as the window fills with crap.
- While Xenu does not offer an "update" facility (which doesn't work anyway), it has a "recheck broken links" function that works fine.
- It is small, written by one person with 5 years experience of Windows development and 15 years of professional experience as software developer. This means that bugs will be corrected quickly. This is a matter of honour.
- The report can be viewed easily, even when you have long URLs.
- Uses much less disk space for intermediate files, executable file much smaller
- Loading of saved files much faster (WebAnalyzer loses time by displaying the extra graphics)
- Supports SSL websites ("https://")
- Partial testing of ftp and gopher sites
- Search for local orphan files
- Special handling of redirected URLs
- Site Map
- Randomization of checking order, means less concurrent requests on a single server

**Xenu sez:** check your website both with this product and with another product ( [Linkbot](#), [InfoLink](#), [LinkScan](#), [LinkAlarm](#) offer trial versions - WebAnalyzer is no longer available since February 2002 and hasn't been updated for years), and decide what you need and what you are willing to pay.

## 3. Is Xenu's Link Sleuth (TM) better than [Net Mechanic](#)?

Years ago, Net Mechanic was a free WWW based service, and was useful to check very small web sites. It is no longer free. The free trial is too small, and reports about all links, instead just the broken ones.

## 4. Can I support the author financially?

No need to. If you feel the software is useful, you may donate money to causes I support.

- [AFF](#) is a nonprofit, [tax-exempt](#) research center and educational organization founded in 1979. AFF's mission is to study psychological manipulation and cultic groups, to educate the public and professionals, and to assist those who have been adversely affected by a cult-related experience. I suggest a donation of \$20 for individuals and \$200 for corporations. In the US, your donation can be deducted from your income. (AFF does not endorse this site in any way, did not develop this software, does not sell this software, and the use of this software does not depend whether or not you make a donation.)
- If tax deduction isn't an issue, please make a generous donation to the lawsuit of the Lisa McPherson estate against [Scientology](#). Lisa McPherson was a girl who died at the "care" of the scientology organisation. Details on <http://www.lisamcpherson.org>. What happened to Lisa is even [worse](#) than what I have ever heard in stories about nursing home deaths. Here is [how she looked after her death](#).
- Send checks to:
- Lisa McPherson estate defense fund
- c/o Law Offices of Dandar & Dandar
- PO Box 24597
- Tampa, FL 33623

Germans can make a tax deductible donation to the [Dialog Zentrum Berlin e.V.](#), Konto-Nr. 1551390051, Bank für Kirche und Diakonie BLZ 35060190.

Or visit the [Xenu bookstore](#).

## 5. Why does Xenu's Link Sleuth (TM) report `http://www.site.com/./page/index.html` as broken?

The key is the `./` part. It means you have e.g. a top level page that links to a page in a directory above, which doesn't exist. It is true that Mozilla will not have any problems with such a page; but I am less tolerant.

## 6. How can I configure a proxy?

You can configure a proxy in the control application of Windows. Double-Click on the "internet" symbol, then click on the "card" of the dialog box that is named "Connection". You will need a proxy if you are sitting "behind a firewall". This is usually so in big corporate networks.

## 7. Why does Xenu's Link Sleuth(TM) report an URL with a space in it?

Either because you do have a space in the URL, or because you have a carriage return / newline in it. Although Mozilla tolerates this, I do not.

## 8. I use Mozilla 3.0 Gold and can't get rid of `file:` URLs for images. What can I do?

Re-edit the page, double-click on the picture, remove `file:` from the picture location and take care to uncheck "copy image to document's location" in the "properties" dialog box (at the bottom left) before you save and exit the dialog box.

## 9. What is the maximum number of websites that can be checked?

There is no maximum. It is limited by the memory on your computer.

## 10. Can the software check my site locally?

Since september 1998 (1.0n), you can do so without a local web server (your address would then be <http://127.0.0.1>). Use the "Browse" button in the "New" dialog box.

The results will not always be the same as a "remote" check:

- Sometimes you'll get "error 3". It happens because the WININET.DLL is unable to handle directories, i.e. links that end with `/`. You can avoid this by linking to the actual "main file", usually `index.html` or `default.html`. That your browser can handle local directories and display them nicely, is because he does *additional* work, which I do not.
- Mixups of higher/lower case characters in links won't be found, since Windows does not make a difference. But UNIX does!
- The main reason that you still need to make occasional "remote" checks is because you might have forgotten to upload your files to your WWW server.

A user of IE 4.0 reported that when not online, the software checks every "remote" URL like a local file. This is a problem of the newer version of the WININET.DLL; the version with IE 3.0 reports "no connection" or "no such host" instead, which is more logical.

## 11. Does it work on Windows NT 3.51?

One user said it worked fine after he copied a version of WININET.DLL from a Windows 95 system standing nearby, and put it into the directory where Xenu's Link Sleuth (TM) was installed.

## 12. How is it so damn fast?

Because it uses a ([possibly patented](#), see patents [here](#) and [here](#)) technique known as **preemptive multithreading**.

It means that the link checking software retrieves several web pages at the same time; the competition uses the same technique. The maximum count of threads is initially set to 30, but you can configure it to any number between 1 and 100. A number that is too high might result in failed connections or in timeouts, which means you will have to recheck the broken links. At the time I had a dial-up connection, I got good results with 70. Now I have a DSL connection, and I have to set the number to 1-5. I suspect that my DSL provider has installed a brake somewhere to prevent "commercial" customers from using the unexpensive "private" service.

### 13. Can I have the source code?

Hahahahahaha!

### 14. Can I buy the source code?

Sure, make me "an offer I can't refuse".

### 15. Just for fun, I checked Tilman's web site, and found many broken links. Why?

I check my own web site every week on friday. Nevertheless there are always broken links:

- Links that I know to be broken: I keep them like that to remind me to find these people some day. The web page itself has a notice that the link is broken.
- Temporary unreachable hosts: these are temporary routing errors.
- Really broken links: I will usually correct the link or remove it within the next few days.

### 16. How do I correct broken links?

Repairing broken links (i.e. getting the correct ones) is a difficult task that takes time, but with experience, you'll get it done faster and faster.

- if you have the e-mail address of the site owner (because you know him), try an e-mail. Sometimes the address still works, even if the web site is gone.
- find the home page of the site you link to, to see if the site has a "sorry we moved" message. If you linked to `http://www.host.com/~user/page888.html` and this is broken, look at `http://www.host.com/~user/` to see if there is a message, or to see if the site has been reorganized. Some sites reorganize their user pages differently, e.g. `http://www.host.com/homepages/users/page888.html`. Sometimes the web switches changes between the two methods. Other sites are owned by the user himself, e.g. `www.user.com`, so the home page is the root page. If the site exists but you cannot find your page, send an e-mail to the owner.
- use search engines to find the site or the name of the site owner (if you know). To find where the site is, use web search engines (like [Google](#)) and usenet search engines (like [Google](#)).
- - You find the site you searched for
  - You find a site that links to the site you searched for
  - You find the site in the Google Cache (simply enter the URL in the Google search box!), and can use the contents to search for the name of the owner
  - You find a site that links to the site you searched for, but is also broken. E-mail the site owner, and tell him that the link is broken. Bookmark the site and revisit it in a week, to see if the other person has found it. If not, you have nevertheless succeeded in making the other person feel as bad as you, which brings some relief :-)
  - You find the new e-mail address of the user. Either e-mail him, or try to construct the URL yourself (`user@host.com` leads to `http://www.host.com/~user/`)
- post a message in a newsgroup that deals with the topic. Hopefully the site owner or one of his friends reads the messages there.
- if you are still unsuccessful, either delete your link to the site or repeat your attempts after a month (some sites might reappear in a search engine after some time). Sometimes it happens that a host is reorganizing its hard disk, and all user pages get back within a few days.

### 17. What about ftp and gopher sites?



Starting with version 1.0k I have implemented a new ftp checking method that is 100% reliable. Sadly, this method [does not work with proxies](#). The previous method I used (and still use for gopher) was unreliable, as it did not detect certain errors.

The method for checking gopher sites is still unreliable. When an ftp or gopher site is accessed through a proxy, this proxy builds up a web page. Sadly, it doesn't always bring up the information whether the URL exists or not. When you access a gopher site without a proxy, it brings an error message, but not an error code. This seems to be a bug of the OpenURL() function of WININET.DLL.

The output lists ftp and gopher sites as links, which allows you to make a manual check of these sites.

## 18. Why can't I launch URLs?

Starting with version 1.0g (Christmas 1997), URLs are launched with DDE ("dynamic data exchange", a windows method of communication between applications), to open many browser windows but to prevent the opening of several Netscape applications. This is done with the help of the Registry, by searching for `HKEY_CLASSES_ROOT\http\shell\open`. This has the path for the browser, the DDE application name (e.g. "Netscape"), the DDE topic (usually "WWW\_OpenURL"), and a template for the DDE item (usually "%1"). If you cannot launch an URL, do not panic - export and e-mail me the segment of your registry (start REGEDIT.EXE, and search for "http").

The cause is usually that you have not installed Netscape properly (maybe you just transferred the files from another computer). Solution: reinstall Netscape over your current installation.

Starting with version 1.1b, I have stopped displaying an error message when the registry is incomplete, because there were too many complaints. Instead, the browser will simply be launched with the page. This has the disadvantage that the page won't be displayed in an extra window of the current active browser application.

## 19. Why is LinkSleuth messing around with cookies?

If you ask this, then you have configured your internet configuration to be asked before submitting a cookie, and get constantly requests. But sadly I am not responsible for this - it is a part of Microsoft's WININET.DLL. According to [Cookie Central](#), there is not much you can do.

## 20. Why are some links reported as "broken" by Xenu, that can be displayed within my browser?

Some servers read the "User Agent", i.e. the name of the software that tries to access a website. Some websites are programmed only for Netscape and Internet Explorer, and refuse everything else. Some may even specifically refuse Xenu because of past misuse. A user-configurable "User Agent" would be the solution, but this would make abuse possible.

## 21. Why can't I connect to "secure" (https) sites ?

If you have [set your proxy](#) correctly, try to connect with IE. If this doesn't work, [read this usenet post for help](#). If this still doesn't work and you use Windows NT 4.0, [install the latest NT service packs](#) (up to SP5).

## 22. Any known problems with Windows 95?

Some people have reported crashes. These problems were usually solved by installing IE 3.0 (or higher) or the following service packs:

- [Windows 95 Kernel 32 Update](#) (29.7.1997)
- [Windows Socket 2 Update](#) (19.2.1998)
- [Microsoft DUN 1.3 and Winsock2 Year 2000 Update](#)
- [Patch for "File Access URL" Vulnerability](#) (12.11.1999)
- [Microsoft DUN 1.4](#)

One guy had problems with the WININET.DLL (v. 4.70.1300) installed with OEM Windows 95 (v. 95 4.00.950 C).

Changing to version 4.70.1335 solved the problem.

A simpler solution is to go to <http://windowsupdate.microsoft.com> and install whatever they tell you (you need to have IE 4.0 or higher on your system)

## 23. Any known problems with Windows 2000?

Although I received many reports that it runs fine, one user reported a problem and a solution:

Windows 2000 automatically sets a configuration option to use HTTP 1.1 for connecting to web sites. Many, many web sites do not use that version but continue to use HTTP 1.0, so the automatic setting may prevent connections. This is the reason why Xenu would not run for me. When I disabled that setting, Xenu performed properly.

To disable that setting: Control Panel -> Internet Options -> Advanced (tab) -> HTTP 1.1 settings (list heading) -> Use HTTP 1.1 (checkbox: uncheck it)

## 24. Why can't I configure the timeout?

Because I can't... Microsoft Windows has a [bug](#) which prevents me from making it possible to users to configure it.

## 25. What about JavaScript?

The software does not check links generated by JavaScript, because JavaScript is a programming language, not a formatting language. This makes web pages dynamic; they e.g. depend on a mouse movement from minutes ago. While it would probably be easy to check JS links like

```
javascript:newWindow('../popup/glossary.html#xenu')
```

the problem is that not all JavaScript links are done this way. Many authors supply their own newWindow() function. If you have an idea for an easy solution, [e-mail me](#).

## 26. What about passwords entered in a FORM?

The software is not able to enter passwords in a FORM. I just don't see a way to accomplish this easily. I assume it is possible if one combines a set of variable names, values, and a web page that would accept them with a POST command. I have not even taken the time to investigate how others do it; if you have an idea for an easy solution, [e-mail me](#).

## 27. How about a WAP version?

Xenu does check .wml files since February 2001.





## Description



Xenu's Link Sleuth (TM) checks Web sites for broken links. Link verification is done on normal links, images, frames, plug-ins, backgrounds, local image maps, style sheets, scripts and java applets. It displays a continuously updated list of URLs which you can sort by different criteria. A report can be produced at any time.

Additional features:

- Simple, no-frills user-interface
- Can re-check broken links (useful for temporary network errors)
- Simple report format, can also be e-mailed
- Executable file less than 500K
- Supports SSL websites ("https:// ")
- Partial testing of ftp and gopher sites
- Detects and reports redirected URLs
- Site Map





## Future feature List

Things I will do in the future (maybe when hell freezes over!):

- simple conversion from Unicode
- [ROBOTS.TXT](#) support
- Detect [remote loading](#) of images ( [geocities](#) sabotages this)
- Custom views in Xenu Window
- 
- Solution for leftover TGH\*. \* files in temp directory
- Command-line parameters (actually, this has already been done, for a client who agreed to pay my development time to two people I support. If you need something similar, e-mail me, the price is a \$300 donation to be split between two people I support)
- Names of last checked URLs in also file menu
- Server based Link Sleuthing, i.e. to be used as CGI application, so that ISPs could offer link sleuthing to their own users, i.e. users could check their own web sites.
- If you are an ISP who is willing to offer this, contact me to work out details.
- Automatic saving every minute
- A correctly working "Update" feature that rechecks changed sites (tricky, so I will never do it)
- Checking of internal anchors, checking for duplicate anchors
- Ideas from Chris:
  - 
  - What about identifying how many steps it takes to reach a particular page from the home page and how much kb had to be downloaded before one could reach there.
  - [TH: useful e.g. to which steps a user must take to reach the page of a particular product]
- [Read RFCs](#)
- Help file (as soon as I get a clue)
- [Your suggestions](#): e-mail me also if there is something of the above you'd like to have, and persuade me to do it. You can also [report a bug](#).





## Bug List

The software works pretty well, but here the list of things that shouldn't be.

- the thread count is sometimes incorrect if the maximum is changed while active
- the thread count is sometimes incorrect at the end of the session
- The `</A>` closing tag must not have spaces or newlines inside
- `<applet code="myclass.class" archive="jump.zip">` will produce a broken link if `myclass.class` exists, but only in the archive
- leftover TGH\*. \* files in the %TEMP% directory
- weird effects when INI file >64K

If you find another bug, [e-mail me a description](#), **please include the URL you are checking, and if possible try to save your work in a .XEN file and attach it.** Also check <http://windowsupdate.microsoft.com> to make sure that your system has all the updates. E-mail me [your suggestions](#).

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## The Story of Xenu's Link Sleuth (TM)

(for fellow software developers)

In April and May 1997 my employer assigned me on an out-of-town job, because another department needed a guy with MFC experience. So from monday to friday I was away, and on the evenings I was bored to death. Every week-end I was back home, and I usually checked my web site for broken links with *WebAnalyzer*. Sadly the software had a lot of bugs, and their support was ignoring my e-mails, and I was mad as hell, as I had spent quite a lot of money on a product that wasn't worth it. My job was also the first contact with VC++ 4.2 (previously I had only worked with VC++ 1.5, because our customers have a lot of 16bit systems), which had some easy-to-use Internet access classes. I had already experience with WINSOCK programming, but these classes would spare me a lot of time evaluating HTTP result headers and other annoying stuff. On an evening after an excellent italian food with a good chianti I took some hotel letter paper and wrote down a concept for checking links. A month later I took some time to install the development software on my computer and started working, with the help of that hotel-room concept. The work was done on some evenings, but mostly on week-ends, when I had more time.

My philosophy on software development has always been "smaller, simpler, cheaper", long before the NASA realized this (in May 2002 I was told that the actual NASA philosophy was *Faster, Better, Cheaper* - oops!) Because of that, I need no fancy (but totally useless) graphics like in *WebAnalyzer*. Just results. And they'd better be 100% correct or I'd have to kill myself :-)



The application is written in Visual C++, and uses the MFC classes as much as possible: CDocument, CView, CListView, CObArray, CMapStringToOb, CArchive, CInternetSession, CHttpFile, etc, etc. That saved me a lot of time!









## Trademarks

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