Link Check for Windows 3.x, Windows 95 and Windows NT

- Version 5.3 May 1997
- Copyright (C) Karri Software Ltd. 1994-1997.

Contents for Link Check Help

For latest information, please visit our Web page http://ourworld.compuserve.com/homepages/KarriSL

Please select one of the following:

<u>What's New</u> <u>Ordering Information</u> <u>Introduction</u> <u>System Requirements and Uninstall</u> <u>Command Line Interface and Drag & Drop</u> <u>Guide to the Main Window</u> <u>Keyboard Support</u> <u>Menu Options</u> <u>Toolbar</u> <u>Dialog Boxes</u> <u>Registered Version Details</u> <u>Copyright/License/Warranty</u> <u>Trademarks</u> <u>Official Home of Link Check</u>



Link Check is a suite of three (3) diagnostic programs which allows the user to examine different areas of the system. These are useful not only on solving system problems but also for learning about the system.

All three programs show version and file information on any of the modules (files) for identification purposes as well as interacting with each other.

Armed with these three, you should be able to solve most of your software problems:

Link Check

Link Check enables the user to view the links between an executable file and the modules it requires to run on the system. This tool is useful for analyzing those "Cannot find (filename) or one of its components" system error messages.

You may also use **Link Check** to view which versions of modules (DLLs, VBXs, OCXs) the program will actually use in the system as there are duplicate DLLs frequently lying about the network or the machine.

Link Check mimics the system when a program is finally executed by the operating system (Windows). This will help in determining beforehand whether a program will run or not, or which particular copy of a .DLL it is going to use if there are multiple copies lying around the system.

Any file(s) required by the program that are missing from the system will be highlighted with a red cross. It could be that the file(s) are actually present on the system but will not get picked up by the system during run time. This could be because the system environment variable PATH has been changed.

Link Check is also useful for analyzing software installation problems as well as indicating which support modules should be backed-up with a particular program.

Memory Check

Memory Check allows the user to view, load and unload modules currently in memory. You may also view the current status of memory, including the amount of free memory left.

Important version information about each module can be displayed and you may create and print a summary report of the state of the system.

Memory Check really comes into play when some program has ended abnormally and has left modules lying around in memory. The system might behave irratically or more to the point, those modules take up valuable memory. In these situations you can use **Memory Check** to unload those modules and save yourself a reboot of Windows.

Warning: Sometimes a clean unload is not possible and you may find yourself unceremoniously dumped back on to the C: prompt, so please do use care when unloading.

You may also verify exactly which version of a module is currently loaded in memory. Sometimes some programs will not run because a wrong version of a particular module (.DLL) has already been loaded into memory by some other application. Windows does not load a new copy of a file with the same file name but will simply increase the "usage count" of the module already in memory. These "usage counts" are displayed by **Memory Check** as a number in parenthesis () next to the file name.

WINSOCK.DLL is a very good example of a module which shares very many different versions. Most communications programs require their own particular version of WINSOCK.DLL to be loaded, but if another application has put their version in first, it is highly likely that the second one will fail or behave in manner not designed by the programmers. Use **Memory Check** to solve these type of problems.

Function Check

Function Check allows the user to view actual function calls inside modules. This program is useful for analyzing those "Call to Undefined Dynalink" system error messages.

When a program calls a module (.DLL) to execute a function (piece of code) inside the .DLL and that particular function does not exist in the .DLL, a "Call to Undefined Dynalink" error is raised by the system. These can occur when a newer version of a .DLL is accidentally replaced by an older version of the same .DLL. A program is compiled to use the new functionality of the .DLL but can come unstuck when that .DLL is replaced by an older version which does not contain the new functionality.

Some installation programs are prone to do this "accidental" replacement.

Function Check cross-checks all function calls in an executable with the ones in all of the .DLLs (modules) that it uses, to verify that all of the functions all present.

Should your program throw up one of those "Call to Undefined Dynalink" messages, **Function Check** will show you which module is at fault.



Link Check accepts a file name as a command line parameter.

Win 3.x Syntax:WLCHECK FilenameWin 95Syntax:WLCHK95 FilenameWin NTSyntax:WLCHKNT Filename

Link Check also supports Drag and Drop. You may drag a file to Link Check and drop it in.



The main window supports the keyboard as well as the mouse.

Key actions in the main window are as follows:

Tab Entor	Switch between the main window and the Version/Key windows.
Enlei	Expand/Collapse currently selected module.
Spacebal	Select a module.
Arrow keys	Navigate up/down the list of modules or Version/Key windows.
Control+E	Open executable for examination.
Control+O	Open an ODBC driver for examination.
Control+V	Display Version Information window.
Control+K	Display Key window.
Control+C	Create Version report.
Control+P	Print Version report.
Control+R	Run executable.
Control+X	Expand all levels.
Control+L	Expand one more level.
F1	View Help.
F2	Check function calls in the selected module.
F3	Check currently loaded modules in RAM (memory).
F5	Collapse all open links.
Alt+F4	Quit Link Check.



Please select one of the following:

File:

Open Executable Open ODBC Data Source Create Version Report Print Version Report Run Executable Run Executable with Parameters Exit

Options:

Display Version Information Display Key to Symbols Check Function Calls Check All Modules in Memory Expand All Levels Expand One More Level Collapse All

Preferences:

Show Modules Currently in Memory Show Optional Modules Draw Thick Lines Bold Font Draw Lowercase File Names Show Toolbar Tips Show Toolbar Show Status Bar Show Settings Now Save Settings on Exit

Help:

<u>Contents</u> <u>Search for Help on</u> <u>How to Use Help</u> <u>About Link Check</u>



Please select one of the following:

Open ODBC Data Source dialog Run Executable with Parameters dialog

Open ODBC Data Source Dialog

This dialog box is invoked from the **Open ODBC Data Source** menu option under the **File** menu.

In this dialog, select an **ODBC*** (Open Database Connectivity) data source for examination and click on **OK**.

For this dialog box to appear you need ODBC installed on your computer.

Link Check will find the appropriate ODBC driver for the data source and display the required modules.

Click on **Cancel** to return to the main window without any further action.

* See Trademarks

Run Executable with Parameters Dialog

This dialog box is invoked from the **Run Executable with Parameters** menu option under the **File** menu.

In this dialog, enter any extra parameters that you would like to pass on to the program about to be executed and click on **OK**.

Do not include the program name in the field, only the parameters.

Link Check will precede the parameters with the program name before attempting to execute it.

Click on **Cancel** to return to the main window without any further action.

Guide to the Main Window

Use the **Open Executable** menu option under **File** to open up a module for examination.

The main window shows the links between the opened executable and the modules that it requires to be present on the system.

If you select any one of the shown modules and **double-click** it with the mouse, **Link Check** reveals further links for the selected module.

To identify any particular module, select it with the mouse and choose the **Display Version Information** menu option under **Options**. A version information window will appear at the bottom of the main window.

Each module is prefixed with a symbol identifying the module type. To find out what these symbols mean, please select the **Display Key to Symbols** menu option under **Options**. The key window will appear at the bottom of the main window.

To hide the version or the key windows, please re-select the same menu items as for invoking them. Alternatively, **right-click** with the mouse on top of these windows and select the **Hide** menu option from the popup menu that follows.

As a short cut, you may also **right-click** on the main window to access the options in the **Options** menu.

If you prefer to use the keyboard, please see <u>Keyboard Support</u> for the key assignments.



Click on this menu option or on the short cut on the Toolbar to open an executable file for examination.

File: Open ODBC Data Source

Click on this menu option to open an ODBC data source driver for examination.

The <u>Open ODBC Data Source</u> dialog will pop up for you to select the data source.

Eile: Create Version Report

Click on this menu option or click on the short cut on the Toolbar to create a report listing all of the modules currently shown in the main window with dates, times, sizes and version numbers.

Select <u>Sample Version Report</u> to view a sample report.

File: Print Version Report

Click on this menu option or click on the short cut on the Toolbar to print a report listing all of the modules currently shown in the main window with dates, times, sizes and version numbers.

Select <u>Sample Version Report</u> to view a sample report.



Sample output:

Link	Check	Version	Report
	-=====		

For: C:\MYPROGS\MYPROG.EXE

Filename	Date	Time	Size	File Ver	Prod Ver	Path
MYPROG.EXE	03/12/95	03:10	123456	1.23.456	1.23	C:\
MYPROGS	01/11/02	02.11	220800	2 1 1	2 1 1	$\langle \cdot, \cdot \rangle$
WINDOWS\SYSTEM	01/11/95	03:11	220800	3.11	2.11	0:1
USER.EXE	21/07/95	03:02	264096	3.11	3.11	C:\
WINDOWS\SYSTEM						
KEYBOARD.DRV	01/11/93	03:11	7568	3.10	3.10	C:\
WINDOWS\SYSTEM						
COMMDLG.DLL	01/11/93	03:11	97936	3.11	3.11	C:\
WINDOWS\SYSTEM						
SHELL.DLL	01/11/93	03:11	40944	3.11	3.11	C:\
WINDOWS\SYSTEM						
VER.DLL	01/11/93	03:11	9696	3.11	3.11	C:\
WINDOWS\SYSTEM						
CTL3DV2.DLL	15/06/95	00:00	21648	2.04	2,0,4,0	C:\
WINDOWS\SYSTEM						

8 files listed.



Click on this menu option to run the currently loaded executable file.

File: Run Executable with Parameters

Click on this menu option to run the currently loaded executable file with parameters.

The <u>Run Executable with Parameters</u> dialog will pop up for you to enter the parameters.

Options: Display Version Information

Click on this menu option to show the **Version window** at the bottom of the main window.

This window will show version and file details of the selected module and can also be invoked from the popup menu by **right-clicking** with the mouse anywhere over the main window.

You may hide this window either by **right-clicking** on the mouse whilst over this window or by re-selecting the same menu option.

Options: Display Key to Symbols

Click on this menu option to show the **Key window** at the bottom of the main window.

This window will show an explanation to the symbols used in the main window and can also be invoked from the popup menu by **right-clicking** with the mouse anywhere over the main window.

You may hide this window either by **right-clicking** on the mouse whilst over this window or by re-selecting the same menu option.

In Options: Check Function Calls

Click on this menu option or on the short cut on the Toolbar to launch **Function Check** component of **Link Check**.

You can examine all of the function calls in the module as well as the ones that it requires to be present in the system to run properly.

This menu option can also be invoked by **right-clicking** with the mouse anywhere in the main window or by pressing **F2**.

Options: Check All Modules in Memory

Click on this menu option or on the short cut on the Toolbar to launch **Memory Check** component of **Link Check**.

You can examine all of the modules currently loaded in memory.

This menu option can also be invoked by **right-clicking** with the mouse anywhere in the main window or by pressing **F3**.



Click on this menu option to show every single module required by the executable.

Options: Expand One More Level

Click on this menu option to expand the current level throughout the Main Window.

When a module is first opened, the first level of linked modules are shown. A second level of modules can be seen if any one of the first level modules are expanded by **double-clicking** on the module, and so on for up to 256 levels.

Rather than having to select each first level module for expansion, you can select just one and use this menu option to expand all of the modules on the same level as the selected one. The same holds true for any level.

Note that only the modules on the same level and underneath get expanded, so select the topmost module if you want to see the whole level expanded.



Click on this menu option to collapse all open links of the loaded module.

This menu option is equivalent to re-opening the executable file.

Preferences: Show Lowercase File Names

Click on this menu option to draw the file names in the main window in lowercase or as is. If this menu option is checked, then the file names will be in lowercase, otherwise as is.



Click on this menu option to draw the connecting modules with either thick or thin lines.

If this menu option is checked, then the lines will be thick, otherwise thin.



Click on this menu option to turn bold font on and off.

If this menu option is checked, then the font will be bold, otherwise normal.

Preferences: Show Modules Currently in Memory

Click on this menu option to show the status of each module whether loaded in memory or not.

If a symbol appears next to the module name then the module is loaded in memory.

If a symbol appears next to the module name then the module is **not** loaded in memory.

Preferences: Show Optional Modules

Click on this menu option to make **Link Check** scan the currently open executable for the string **.DLL** to find out if there are any references to some external .DLLs embedded in the code.

Any entries found are shown in Red and these modules are **not** necessarily required by the system for the executable to work properly.



The Toolbar contains the following short cuts:





Prices for Link Check are as follows:

Link Check for Windows 3.x	\$29
Link Check for Windows 95	\$35
Link Check for Windows NT	\$35
Link Check Suite (all three above)	\$50

Site licenses are also available at \$25/\$30/\$30/\$45 respectively for more than 10 purchases.

You may order **Link Check** via:

<u>CompuServe</u> NorthStar Solutions

CompuServe automatically adds the registration fee to your monthly bill.

NorthStar Solutions accept credit cards, checks and money orders via the WWW, Telephone, Fax, Email or Post.

You may also order via the Web through our homepage http://ourworld.compuserve.com/homepages/KarriSL.

The moment either of the above notify us of a successful registration, we will email you the latest retail version of the registered product.



Ordering through CompuServe's Software Registration facility SWREG is quick and easy.

Log onto CompuServe and **GO SWREG**. Follow the instructions on screen and use one of the following registration IDs when prompted:

Link Check for Windows 3.x	ID 7160
Link Check for Windows 95	ID 10627
Link Check for Windows NT	ID 10094
Link Check Suite (all three above)	ID 10095

CompuServe will automatically email us with a registration notification and once upon receipt we will email the license file to you.

Ordering via NorthStar Solutions

Ordering through NorthStar Solutions is quick and easy. Please quote one of the following product IDs when ordering:

Link Check for Windows 3.x	ID 1455
Link Check for Windows 95	ID 1456
Link Check for Windows NT	ID 1457
Link Check Suite (all three above)	ID 1458

INTERNET ORDERS

Visit NorthStar Solutions at http://nstarsolutions.com and fill out their online order form--fast, easy and secure!

Alternatively, a direct link to the Link Check page is http://nstarsolutions.com/904.htm.

PHONED ORDERS

Calls are taken 10 am - 8 pm, EST, Monday thru Saturday. 1-800-699-6395 (From the U.S. only.) 1-803-699-6395

FAXED ORDERS

Available 24 hours. International & business orders are encouraged. **1-803-699-5465**

E-MAILED ORDERS

CompuServe: starmail America Online: starmail Internet: starmail@compuserve.com

MAILED ORDERS

You may register with a check or money order. Make them payable to "NorthStar Solutions" and send them to: PO Box 25262, Columbia, SC 29224, USA

Please provide (or be prepared to provide) the following information:

* The program you are registering and its ID (found at the top of this page)

* Your mailing address

* Your Visa, MasterCard, or Discover # and its expiration date (if using credit card)

* Your E-Mail address (so NorthStar Solutions can send you an E-Mail confirming your order and so we can contact you easily with the license file and any important follow-up information, upgrade announcements, etc.).

NorthStar Solutions will automatically email us with a registration notification and once upon receipt we will email the license file to you.



Major changes from Version 5.00 to Version 5.30

- Visual Basic 4.0 (16-bit) support added to the 16-bit version
- Visual Basic 4.0 (16- and 32-bit) support added to the 32-bit versions
- Visual Basic 5.0 (32-bit) support added to the 32-bit versions
- Print problems resolved to the Windows 95 version
- Open Database Connectivity (ODBC) driver support added
- .OCX, .OLB, .TLB files are now shown
- 32-bit Memory Check for Windows 95 version now shows 16-bit modules too
- Windows NT version released with Memory Check
- Our ordering process has moved totally online now
- Other bugs fixed including the CTL3DV2.DLL problem in Function Check

This is basically a maintenance release but also introduces the possibility of getting the retail version within minutes of registering thanks to the new license file.

Due to this form of registration, all three versions of **Link Check** are now available as **separate** products.

* See Trademarks



Link Check for Windows 3.x requires Windows 3.1* or later or Windows for Workgroups 3.11*.

Link Check for Windows 95 requires Windows 95* or later. Link Check for Windows NT requires Windows NT 3.51* or later.

* See Trademarks

The 16-bit Windows 3.x package consists of the following files:

1) WLCHECK.EXE	Link Check itself
2) WLCHECK.HLP	Link Check Help file
3) WMCHECK.EXE	Memory Check component of Link Check
4) WMCHECK.HLP	Memory Check Help file
5) WFCHECK.EXE	Function Check component of Link Check
6) WFCHECK.HLP	Function Check Help file
7) WLCCOMM.DLL	Common Routines for all of the Link Check components
8) LCHOOKS.DLL	More Common Routines for the Link Check components
9) FILE_ID.DIZ	File for Bulletin Board operators
10) README.TXT	Read Me file

To **uninstall Link Check** delete the above files and the following:

1) WLCHECK.INI	Created by Link Check in the Windows directory
2) WMCHECK.INI	Created by Memory Check in the Windows directory

3) WFCHECK.INI Created by Function Check in the Windows directory

The 32-bit Windows 95 package consists of the following files:

1) WLCHK95.EXE	Link Check itself
3) WMCHK95.EXE	Memory Check component of Link Check
4) WMCHK95.HLP	Memory Check Help file
5) WFCHK95.EXE	Function Check component of Link Check
6) WFCHK95.HLP	Function Check Help file
7) WLCCOM95.DLL	Common Routines for all of the Link Check components
8) LCHKS95.DLL	More Common Routines for the Link Check components
9) FILE ID.DIZ	File for Bulletin Board operators
10) README.TXT	Read Me file

To **uninstall Link Check** delete the above files.

The 32-bit Windows NT package consists of the following files:

1) WLCHKNT.EXE	Link Check itself
2) WLCHKNT.HLP	Link Check Help file
3) WMCHKNT.EXE	Memory Check component of Link Check
4) WMCHKNT.HLP	Memory Check Help file
5) WFCHKNT.EXE	Function Check component of Link Check
6) WFCHKNT.HLP	Function Check Help file
7) WLCCOMNT.DLL	Common Routines for all of the Link Check components
8) LCHKSNT.DLL	More Common Routines for the Link Check components
9) FILE ID.DIZ	File for Bulletin Board operators
10) README.TXT	Read Me file

To **uninstall Link Check** delete the above files.











Click on this menu option or click on the short cut on the Toolbar to exit the program.



Use this menu option to turn the Toolbar button explanations/hints on and off.



Use this menu option to show or hide the Toolbar.



Use this menu option to show or hide the Status Bar.

Preferences: Save Settings Now

Select this menu option if you want the program to save the current position and size of the main window plus all other settings now.

When you restart the program, it will reposition, size and configure itself to the saved values.

Preferences: Save Settings on Exit

Select this menu option if you want the program to save the current position and size of the main window plus all other settings when you exit the program.

When you restart the program, it will reposition, size and configure itself to the saved values.



This menu item shows the Contents page of the help file. Alternatively, click on the short cut on the Toolbar.



This menu item shows the Search dialog box for the help file.



This menu item shows how to use Help.



Use this dialog box to view the copyright information for this program.



Link Check 5.3 Memory Check 5.3 Function Check 5.3 Copyright (C) Karri Software Limited 1994-1997

The above is from now on known as SOFTWARE.

Shareware License

You should read this section carefully **before** using this SOFTWARE. By using this SOFTWARE you are agreeing to the terms and conditions of this license agreement.

This SOFTWARE is shareware and not available for free. You are hereby granted a license for a 21-day evaluation period free of charge for this SOFTWARE. After the evaluation period has passed you **must** either register the SOFTWARE with Karri Software Limited or remove it from your disk(s). Should you use the SOFTWARE after the 21-day evaluation period, you are violating US and International copyright laws and treaties.

You are hereby granted a license to make as many copies of the SOFTWARE as you wish, and distribute it to anyone as long as the SOFTWARE is distributed in its entirety and without any modifications what so ever. Bulletin Board Systems are allowed to add a small file describing the BBS with the SOFTWARE.

You are prohibited from charging or requesting donations from this SOFTWARE in any form. You are also prohibited in distributing the SOFTWARE as part of other products (commercial or otherwise) without prior written permission from Karri Software Limited. Only Disk Vendors approved by the Association of Shareware Professionals are permitted to redistribute the SOFTWARE, subject to the conditions in this license agreement, without prior written permission.

LIMITATIONS:

You may not rent, lease, sell, modify, decompile, disassemble, otherwise reverse engineer or transfer the licensed SOFTWARE except as provided in this agreement. Any such unauthorised use shall terminate this license immediately.

All rights not expressly granted here are reserved to Karri Software Limited.

Retail License

GRANT OF LICENSE: This license grants you the following rights:

You are hereby granted one license of the SOFTWARE. If you are a single entity, you may designate one individual within your organization to have the right to use the SOFTWARE in the manner described in this license agreement.

You may make one (1) copy of the SOFTWARE solely for backup or archiving purposes.

You may also store or install one copy of the SOFTWARE on a storage device, such as a

network server, used only to install or run the SOFTWARE on your other computers over an internal network; however, you must acquire and dedicate a license for each separate computer on which the SOFTWARE is installed or run from the device storage. A license cannot be shared or used concurrently on different computers.

LIMITATIONS:

You may not rent, lease, sell, modify, decompile, disassemble, otherwise reverse engineer or transfer the licensed SOFTWARE except as provided in this agreement. Any such unauthorised use shall terminate this license immediately.

All rights not expressly granted here are reserved to Karri Software Limited.

Disclaimer of Warranty

THIS SOFTWARE AND THE ACCOMPANYING FILES ARE SOLD "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

THE USER MUST ASSUME THE FULL RISK OF USING THIS SOFTWARE.

ANY LIABILITY OF THE SELLER WILL BE LIMITED EXCLUSIVELY TO PRODUCT REPLACEMENT OR REFUND OF THE PURCHASE PRICE WITHIN 90 DAYS OF RECEIPT.

Trademarks

Windows is a registered trademark of Microsoft Corporation.

Windows 3.1, Windows for Workgroups 3.11, Windows 95 and Windows NT are registered trademarks of Microsoft Corporation.

OS/2 is a registered trademark of International Business Machines Corporation. Visual Basic is a trademark of Microsoft Corporation.

ODBC is a trademark of Microsoft Corporation.



The official home of **Link Check** is the **Windows Utility (GO WINUTIL)** forum on CompuServe. You can direct technical questions about **Link Check** to the support staff in this forum.



Link Check is shareware and not available for free. You are allowed a 21-day evaluation period free of charge for this program and then you should either register it with the author or remove it from your disk(s). Should you use it after the 21-day evaluation period, you are violating US and international copyright laws and treaties.

Each registered version of **Link Check** includes:

- 1. Full unrestricted version via a license file
- 2. All references to "Unregistered Shareware" removed
- 3. Your name and organisation in the "About" dialog box

As a registered user of Link Check, you will receive the following benefits:

- 1. Free technical support via Email
- 2. Free upgrades via the license file

Currently (May 97) we have no plans to charge for upgrades. Once the license file is installed, any upgrades will be seamless. All you need to do is to obtain/download a new copy and install over the old version. The presence of the license file will unlock the retail version automatically so you need to register **only once**.