

IBM Tivoli License Manager



Readme File for the kfixer Utility

Note

Before using this information and the product it supports, read the information in "Notices" on page 11.

First Edition (December 2003)

This edition applies to the utility kfixer, created for version 1, release 1, modification 1 of IBM Tivoli License Manager (program number 5724-D33).

IBM welcomes your comments.

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Readme file for the IBM Tivoli License Manager kfixer utility

This readme file provides important information about the kfixer utility for IBM® Tivoli® License Manager. This readme file is the most current information for the utility and takes precedence over all other documentation.

Please review this section thoroughly before installing or using this utility.

This section includes the following topics:

- “About kfixer”
- “Installation, migration, upgrade, and configuration information” on page 3
- “Other useful information” on page 7

About kfixer

This section includes the following topics:

- “Introduction”
- “Problem”
- “Solution” on page 2
- “How kfixer works” on page 2
- “Backward compatibility” on page 2

Introduction

This utility is the first to be issued for Tivoli License Manager.

It is available by download from the IBM Support Web site, to all users. It forms part of the fix for the following APAR:

IY50187

Problem

The following problem on the Tivoli License Manager agent is fixed by running this utility.

The Tivoli License Manager agent uses a system kernel extension to detect starting and stopping processes of applications. The kernel extension is downloaded from the runtime server when the agent first registers with the server. On selected Windows® platforms, and all AIX® and SUN platforms, under heavy processing and in exceptional circumstances, a system kernel panic could occur during the unload of the Tivoli License Manager agent kernel extension. An unload occurs when the agent code is uninstalled, upgraded, or reinstalled, by any method: Web registration, the **installagent** command, or the agent self-update option on the runtime server. An unload also occurs if a shell or a software distribution program such as the Software Distribution component of Tivoli Configuration Manager, runs the **installagent** command.

What happens in these exceptional circumstances is that the uninstall, upgrade, or reinstall process unloads the kernel extension before it has completed its current task. This can cause a kernel panic.

The supported agent platforms to which this problem applies are as follows:

All AIX platforms
All SUN platforms
Windows 2000 Professional
Windows 2000 Server
Windows 2000 Advanced Server
Windows NT 4.0 Server (service packs 6 and 6a)
Windows NT 4.0 Workstation (service packs 6 and 6a)
Windows XP (32-bit only)

Other supported agent platforms are NOT affected by the problem that this utility resolves, and the utility should not be run on agents running on them:

Windows 98 Second Edition
Windows ME

Solution

The fix requires you to do the following:

1. Upgrade the agent code on the runtime servers that serve agents running the above-listed operating systems, by installing interim fix 1.1.1–TLM–0005 or later.
2. Upgrade the agents by applying the following steps at each:
 - a. Run the `kfixer` utility
 - b. Update or re-install the agent code, using any of the methods available to you.

Note: If you want to use the agent's self-update facility to upgrade the agent after using the utility, you must wait until you have run the utility on all agents before enabling the self-update facility at the runtime servers.

After completing this procedure, the agent software can be unloaded without causing a kernel panic.

How `kfixer` works

The `kfixer` utility patches the system memory to prevent the existing kernel extension from being unloaded (until the next reboot of the computer), and erases the kernel extension from disk. If, prior to the next reboot, you upgrade or reinstall the agent, a new, fixed, kernel extension is loaded into memory and stored on disk.

At the next reboot, the old kernel extension is unloaded from memory by the reboot process, only after all application tasks have finished. When the computer restarts, it either already has a new kernel extension, because you have upgraded or reinstalled the agent, or it cannot find any kernel extension and so downloads the new, fixed, kernel extension from the runtime server.

In either case, the agent is now running with the new kernel extension, that has been fixed so that it does not allow itself to be unloaded until its current task is complete.

Backward compatibility

Dependencies:

- Interim fix 1.1.1–TLM–0005 or later must be installed on the runtime server where the agent to be fixed is registered. You are recommended to install the fix on ALL runtime servers before starting to run the utility.

- The IBM Tivoli License Manager agent, version 1.1.1.11 or less (Tivoli License Manager, version 1.1.1 with interim fix 1.1.1-TLM-0003LA, or less) should be on the node where you run the utility.

Notes:

1. If you run the utility on a node with no agent installed, no adverse affects will be experienced by the node. Further, you can run the utility on a node where you have already run it, whether or not the agent on the node has been upgraded, similarly without adverse affects.
2. The utility can be used on Tivoli License Manager, version 1.1 agents, provided that the runtime server has been upgraded to version 1.1.1 and interim fix 1.1.1-TLM-0005 is installed.

Installation, migration, upgrade, and configuration information

This section includes the following topics:

- “Hardware and software requirements”
- “Run the kfixer utility”

Hardware and software requirements

This section includes the following topics:

- “Supported platforms”
- “System requirements”

Supported platforms

Supported platforms for this utility are those for which it is provided, as listed in “Problem” on page 1.

System requirements

The hardware and software requirements for this utility are as follows:

AIX

- Disk space required: 15KB
- Memory required: negligible

SUN

- Disk space required: 240KB
- Memory required: negligible

Windows

- Disk space required: 40KB
- Memory required: negligible

Run the kfixer utility

The kfixer utility must be used BEFORE any attempt to upgrade the agent’s software, by any method.

The instructions are different, depending on the platform of the agent. See:

- “Running kfixer on AIX agents” on page 4
- “Running kfixer on SUN agents” on page 5
- “Running kfixer on Windows agents” on page 6

Running kfixer on AIX agents

Perform the following steps:

1. Log on to the agent as root.
2. Copy the kfixer utility tar (kfixer.tar) to the node.
3. Unpack the utility tar file into a temporary directory (hereafter referred to as <TEMP_DIR>). The following structure will be created in <TEMP_DIR>:

```
/kfixer
  /aix
    kfixer.sh
    ucfgtlmkagent_kfix
  /sun
    tlmfixer
  /win
    tlmkfixer.exe
    tlmkfilter.sys
```

4. Change to the <TEMP_DIR>/kfixer/aix directory.
5. Run the following file:
kfixer.sh
6. Check that the utility has worked successfully by viewing the kfixer.log file in the <TEMP_DIR> directory. The expected contents should be as follows, depending on the status of the agent when the utility was run:
 - The agent was installed
 - The agent was installed but the utility had already been run (no harm will come from running the utility more than once)
 - The agent was not installed

Note: If the agent is installed but not running at the moment of running the utility, a slight variation in these messages may be noted, but the substance will be the same.

Agent installed

```
kfixer.sh - Log
Remove kernel extension load at boot time
1 objects deleted
Copying new unconfigure method any way
Subsystem      Group      PID      Status
  tlmagent          16884    active
ITLM Service is registred
  tlmagent          16884    active
ITLM Service is running ... stopping it
0513-044 The tlmagent Subsystem was requested to stop.
Waiting for ITLM Service to stop .
Waiting for ITLM Service to stop ..
Waiting for ITLM Service to stop ...
Waiting for ITLM Service to stop ....
Waiting for ITLM Service to stop .....
  tlmagent                      inoperative
ITLM Service is now stopped
  tlmagent                      inoperative
ITLM Service stop for sure
tlmkagent Available  N/A
ITLM Driver installed
tlmkagent Available  N/A
ITLM Driver is Available ... unconfigure
tlmkagent Defined
ITLM Driver unconfigured
```



```

tlmkagent Defined N/A
ITLM Driver is now not active
ITLM Service was running ... starting it
0513-059 The tlmagent Subsystem has been started.
Subsystem PID is 19954.

```

Agent installed but utility already run

The file contents are similar, except that the third line is:

```
0 objects deleted
```

This is because this line refers to the deletion of the kernel extension on disk.

Agent not installed

```

kfixer.sh - Log
Remove kernel extension load at boot time
0 objects deleted
Copying new unconfigure method any way
0513-085 The tlmagent Subsystem is not on file.
ITLM Service is not registred
ITLM Driver is not installed

```

Note: If you are using a shell or a software distribution program to run the utility you can monitor the program return code: 0 indicates that the utility was successful and 1 indicates that an error occurred.

IF THE LOG FILE CONTAINS ANYTHING OTHER THAN THE ABOVE, OR IF A SHELL OR SOFTWARE DISTRIBUTION PROGRAM DETECTS AN ERROR CODE OF 1, CONTACT IBM SOFTWARE SUPPORT, AND DO NOT ATTEMPT TO UPGRADE THE AGENT SOFTWARE.

Running kfixer on SUN agents

Perform the following steps:

1. Log on to the agent as root.
2. Copy the kfixer utility tar (kfixer.tar) to the node.
3. Unpack the utility tar file into a temporary directory (hereafter referred to as <TEMP_DIR>). The following structure will be created in <TEMP_DIR>:

```

/kfixer
    /aix
        kfixer.sh
        ucfgtlmkagent_kfix
    /sun
        tlmfixer
    /win
        tlmkfixer.exe
        tlmkfilter.sys

```

4. Change to the <TEMP_DIR>/kfixer/sun directory.
5. Run the following file:

```
tlmfixer
```
6. Check that the utility has worked successfully by viewing the kfixer.log file in the <TEMP_DIR> directory. The expected contents should be as follows, depending on the status of the agent when the utility was run:
 - The agent was installed

- The agent was installed but the utility had already been run (no harm will come from running the utility more than once)
- The agent was not installed

Note: If the agent is installed but not running at the moment of running the utility, a slight variation in these messages may be noted, but the substance will be the same.

Agent installed

Fixer successful

Agent installed but utility already run

Fixer successful

Agent not installed

KE not loaded in memory
Fixer successful

Note: If you are using a shell or a software distribution program to run the utility you can monitor the program return code: 0 indicates that the utility was successful and 1 indicates that an error occurred.

IF THE LOG FILE CONTAINS ANYTHING OTHER THAN THE ABOVE, OR IF A SHELL OR SOFTWARE DISTRIBUTION PROGRAM DETECTS AN ERROR CODE OF 1, CONTACT IBM SOFTWARE SUPPORT, AND DO NOT ATTEMPT TO UPGRADE THE AGENT SOFTWARE.

Running kfixer on Windows agents

Perform the following steps:

1. Log on to the agent as root.
2. Copy the kfixer utility tar (kfixer.tar) to the node.
3. Unpack the utility tar file into a temporary directory (hereafter referred to as <TEMP_DIR>). The following structure will be created in <TEMP_DIR>:

\kfixer

\aix

kfixer.sh
ucfgtlnkagent_kfix

\sun

tlmkfixer

\win

tlmkfixer.exe
tlmkfilter.sys

4. Change to the <TEMP_DIR>\kfixer\win directory.
5. Run the following file:
tlmkfixer
6. Check that the utility has worked successfully by viewing the tlmkfixer.log file in the <TEMP_DIR> directory. The expected contents should be as follows, depending on the status of the agent when the utility was run:
 - The agent was installed
 - The agent was installed but the utility had already been run (no harm will come from running the utility more than once)
 - The agent was not installed

Note: If the agent is installed but not running at the moment of running the utility, a slight variation in these messages may be noted, but the substance will be the same.

Agent installed

Agent stopped
TlmKfixer now running
TlmKAgent now harmless
Agent restarted
Fixing completed

Agent installed but utility already run

Agent stopped
TlmKAgent is not installed; fixer not needed
Fixing completed

Agent not installed

Agent not installed
Unable to copy tlmkfilter from .\tlmkfilter.sys to
C:\WINNT\itlm\tlmkfilter.sys (3)

Note: If you are using a shell or a software distribution program to run the utility you can monitor the program return code: 0 indicates that the utility was successful and 1 indicates that an error occurred.

IF THE LOG FILE CONTAINS ANYTHING OTHER THAN THE ABOVE, OR IF A SHELL OR SOFTWARE DISTRIBUTION PROGRAM DETECTS AN ERROR CODE OF 1, CONTACT IBM SOFTWARE SUPPORT, AND DO NOT ATTEMPT TO UPGRADE THE AGENT SOFTWARE.

Other useful information

This section contains the following general information that might have changed since Tivoli License Manager was made available:

- “Publications”
- “Accessibility” on page 9
- “Contacting software support” on page 9
- “Conventions used in this readme file” on page 9

Publications

This section lists publications in the Tivoli License Manager library and related documents. It also describes how to access Tivoli publications online and how to order Tivoli publications.

Tivoli License Manager library

The Tivoli License Manager library comprises the following books:

- *IBM Tivoli License Manager: License Administrator's Guide*, GC23-4833
Provides support for using the Tivoli License Manager Web interfaces.
- *IBM Tivoli License Manager: System Administrator's Guide*, GC23-4834
Provides information about planning, installing, and managing Tivoli License Manager.
- *IBM Tivoli License Manager: Data Dictionary*, GC23-4835
Provides information about the Tivoli License Manager database.
- *IBM Tivoli License Manager: Warehouse Enablement Pack Implementation Guide*, SC32-1244

Provides instructions and other information related to enabling the use of the Tivoli Enterprise™ Data Warehouse with Tivoli License Manager.

- *IBM Tivoli License Manager: Release Notes*, SC23-4848

Provides a summary of changes made in the latest release of Tivoli License Manager, documents known errors and workarounds, and includes information about any product changes that could not be included in the main documentation.

Related publications

The following document also provides useful information:

- *IBM Tivoli Enterprise Data Warehouse: Release Notes*, GI11-0857

Provides a summary of changes made in the latest release of Tivoli Enterprise Data Warehouse, documents known errors and workarounds, and includes information about any product changes that could not be included in the main documentation.

The *Tivoli Software Glossary* includes definitions for many of the technical terms related to Tivoli software. The *Tivoli Software Glossary* is available, in English only, at the following Web site:

<http://www.ibm.com/software/tivoli/library/>

Access the glossary by clicking the **Glossary** link on the left pane of the Tivoli software library window.

Accessing publications online

The Tivoli License Manager documentation CD that was issued with version 1.1.1 of the product contains the publications that are in the product library, other than the *IBM Tivoli License Manager: Release Notes*. The format of the publications is PDF, HTML, or both. Since the creation of that CD, the *IBM Tivoli License Manager: Release Notes* has been placed on the Tivoli Software Information Center Web site. The Tivoli Software Information Center is located by using the following Web address:

<http://www.ibm.com/software/tivoli/library/>

Scroll down and click the **Product manuals** link on the left pane of the Tivoli software library window. In the Tivoli Technical Product Documents Alphabetical Listing window, click the IBM Tivoli License Manager link to access the product library at the Tivoli Information Center.

IBM posts publications for this and all other Tivoli products, as they become available and whenever they are updated, to this site.

Note: If you print PDF documents on other than letter-sized paper, select the option in Adobe Reader that ensures that the full dimensions of a letter-sized page print on the paper that you are using. Each version of Adobe Reader has different ways of selecting this option, so consult the documentation with your version.

Ordering publications

You can order many Tivoli publications online at the following Web site:

<http://www.elink.ibm.link.ibm.com/public/applications/publications/cgibin/pbi.cgi>

You can also order by telephone by calling one of these numbers:

- In the United States: 800-879-2755
- In Canada: 800-426-4968

In other countries, see the following Web site for a list of telephone numbers:

<http://www.ibm.com/software/tivoli/order-lit/>

Accessibility

Accessibility features help users with a physical disability, such as restricted mobility or limited vision, to use software products successfully. With this product, you can use assistive technologies to hear and navigate the interface. You can also use the keyboard instead of the mouse to operate all features of the graphical user interface.

This product is operated using a Web browser, which has certain built-in accessibility features, and has been provided with specific shortcut keys for navigating the Web interface, starting tasks, and performing toolbar actions.

For additional information, see the Accessibility appendix in the *IBM Tivoli License Manager: License Administrator's Guide*.

Contacting software support

If you have a problem with any Tivoli product, refer to the following IBM Software Support Web site:

<http://www.ibm.com/software/sysmgmt/products/support/>

If you want to contact software support, see the *IBM Software Support Guide* at the following Web site:

<http://techsupport.services.ibm.com/guides/handbook.html>

The guide provides information about how to contact IBM Software Support, depending on the severity of your problem, and the following information:

- Registration and eligibility
- Telephone numbers and e-mail addresses, depending on the country in which you are located
- Information you must have before contacting IBM Software Support.

Conventions used in this readme file

This readme file uses the following typeface conventions:

Bold

- Lowercase commands and mixed case commands that are otherwise difficult to distinguish from surrounding text
- Interface controls (check boxes, push buttons, radio buttons, spin buttons, fields, folders, icons, list boxes, items inside list boxes, multicolumn lists, containers, menu choices, menu names, tabs, property sheets), labels (such as **Tip:**, and **Operating system considerations:**)
- Column headings in a table
- Keywords and parameters in text

Italic

- Citations (titles of books, diskettes, and CDs)
- Words defined in text
- Variables and values you must provide

Monospace

- Examples and code examples
- File names, programming keywords, and other elements that are difficult to distinguish from surrounding text
- Message text and prompts addressed to the user
- Text that the user must type
- Values for arguments or command options

`<text>`

- Indicates a variable in a path name. For example in the path `<INST_DIR>\admin\conf`, `<INST_DIR>` depends on the location where you have installed the component, while `\admin\conf` is constant.

Operating system-dependent notation

This book uses the Windows convention for environment variables and directory notation.

When using the UNIX[®] command line you should do the following:

Environment variables

First verify the correct value for the UNIX variable name, as many Windows and UNIX variables that perform the same task have different names (for example, `%TEMP%` in Windows is equivalent to `$tmp` in UNIX). Then replace `%Windows_variable%` with `$UNIX_variable`

File and directory paths

Replace each backslash (\) with a forward slash (/).

Note: If you are using the bash shell on a Windows computer, you can use the UNIX conventions.

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