

IBM Tivoli License Manager



# Readme File for Interim Fix 1.1.1-TLM-0005

**Note**

Before using this information and the product it supports, read the information in "Notices" on page 25.

**First Edition (December 2003)**

This edition applies to interim fix 1.1.1-TLM-0005 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 interim fix 1.1.1–TLM–0005

This readme file provides important information about interim fix 1.1.1–TLM–0005 for IBM® Tivoli® License Manager version 1.1.1. This readme file is the most current information for the interim fix and takes precedence over all other documentation.

*Please review this readme thoroughly before installing or using this interim fix.*

**Note:** This readme uses the Windows® convention for variables and directory notation, unless the context is specifically a UNIX® one. See “Operating system-dependent notation” on page 23 for information about applying the instructions to UNIX environments.

This readme includes the following topics:

- “About this release”
- “Installation, migration, upgrade, and configuration information” on page 9
- “Other useful information” on page 19

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### About this release

This section includes the following topics:

- “Product fix history”
- “Problems fixed” on page 2
- “Backward compatibility” on page 8
- “Other changes as a result of this interim fix” on page 8

### Product fix history

This interim fix is the fifth interim fix to be issued for Tivoli License Manager, Version 1.1.1.

It fixes the following APARs:

IY46975  
IY47457  
IY48133  
IY49281  
IY49698  
IY50092  
IY50094  
IY50491

This fix also includes the following APARS from all previous fixes issued:

IY44786  
IY45495  
IY46294  
IY49454  
IY50187

## Problems fixed

The following problems have been fixed:

- “Agent “out-of-sync” monitoring”
- “For both the administration and the runtime servers” on page 3
- “For the administration server” on page 3
- “For the runtime server” on page 4
- “For the agent” on page 6

### Agent “out-of-sync” monitoring

After you have upgraded the agent code for any interim fix, it is possible for an agent to become “out-of-sync” with the available kernel extension on the runtime server, and to be forced to run without a kernel extension. This happens when an agent requests a new kernel extension and the version of the agent code on the agent does not match the version of the agent code on the runtime server.

This problem impacts the agent’s ability to perform license enforcement, and perform usage monitoring on AIX<sup>®</sup> platforms.

A full description of how this problem can occur, and the measures you can take to avoid it and to correct affected agents, is provided in *IBM Tivoli License Manager: Release Notes (revised December 2003)*, which will be available from mid-December from 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/>

An important aspect of recovering from this problem is discovering which agents are affected. After you have installed this fix, every time a runtime server is unable to supply an agent with a kernel extension file, a flag will be set in the agent database. This information will be propagated to the administration server, in the normal way. A value of zero in this flag indicates that the agent is running with the correct kernel extension; all other values indicate that the agent does not have a kernel extension, and give an indication of the reason.

If you issue the following SQL command from the DB2<sup>®</sup> command line on the administration server, you will list the agents that are running without a kernel extension:

```
select hostname,ip_address,os_version,storage as kernel_status
      from adm.agent where storage <> 0
```

This query displays a table showing the following data:

**hostname**

The hostname of the agent

**ip\_address**

The IP address of the agent

**os\_version**

The operating system name at the agent, and its version

**kernel\_status**

The values that indicate an error that you can fix are as follows:

-1 This can be one of two causes:

- The agent has not yet been upgraded with the contents of this interim fix. Ensure that you have upgraded the agent code on all

runtime servers; that you have also upgraded the agent code in any copies, zips, tars or distribution packages that you are using to upgrade the agent code; and that you have taken the appropriate steps to upgrade the agents, as described in the original product documentation and *IBM Tivoli License Manager: Release Notes (revised December 2003)*.

- The **tlmagent -v** command has been run on the identified agent. If you know or believe this to be the case, to get the true status of the agent kernel extension you should stop and start the agent, and wait the appropriate interval for the data to be propagated to the administration server (the maximum time to wait is determined by the `adminUploadPeriod` parameter in the `system.properties` file on the runtime server). Then rerun the query.
- 2 This indicates that the agent is running on an unsupported platform. You should uninstall the agent, as its behaviour on an unsupported platform cannot be guaranteed, and the functions that require the kernel extension will not work.

All other possible values (1, 3, 4, 5, 6) are internal errors that should be reported to IBM Software Support.

## For both the administration and the runtime servers

### APAR IY44786

When you created an account for a server, the GUI did not limit the length of the password you were asked to supply. However, if the password was longer than 8 characters, when you tried to log on the password was not accepted, and an error was given as if the password had been typed incorrectly.

After you have installed the fix, the GUI now prevents you from creating an account with a password longer than 20 characters, and a 20-character password is allowed when you log on.. Any characters can be used in the password.

### APAR IY48133

Tivoli License Manager servers cannot start if the default WebSphere® bootstrap port is changed (the default is 900).

After installing the fix, after any future installations of Tivoli License Manager servers, the servers will be able to start, even if the bootstrap port is not at the default setting.

For Tivoli License Manager servers you have already installed, the WebSphere Application Server must be manually configured, either before or after installing the fix (it makes no difference). If you have not already manually configured the WebSphere Application Server, refer to Chapter 9, paragraph "WebSphere Application Server configuration" of the *IBM Tivoli License Manager: System Administrator's Guide*, for details of how to do this.

## For the administration server

### APAR IY44786

During the creation of a license, in the Manage License Settings panel you are asked to identify the target type. If you chose **Nodes**, but no nodes had yet been created or registered, an error was displayed, telling you of this fact, and offering you only the option to go back and change the setting. However, the license was created anyway, despite the error message.

After you apply the fix, the GUI now tells you that a license has been successfully created without any targets. You can return to the license at a later time to assign the nodes and distribute the license.

#### **APAR IY47457**

In the panels "Manage License Settings" and "Schedule an Inventory Scan" of the Web GUI, dates greater than December 31, 2022 are saved incorrectly. For example, if you set the software entitlement expiration date to December 31, 9999, next time you open the entitlement panel for this license you will see the date set to December 31, 1999.

After installing the fix these dates will be saved correctly in the future. However, if you have already set dates on these panels that have been saved incorrectly, after the fix has been installed you should go into those panels and correct the dates.

#### **APAR IY49698**

If the administration server is installed on an AIX platform, and its DB2 database is on another computer, (which means that the AIX computer has only the DB2 client software installed on it), the administration server cannot start. The error shown in the stdout.txt file in the directory <INSTALL\_DIR>\<SERVER\_TYPE>\ was is the following:

```
Failed to load servlet:  
java.lang.NoClassDefFoundError:sqlj/runtime/ref/ConnectionContextImpl  
    the class ConnectionContextImpl is part of the runtime.zip archive.  
The classpath for runtime.zip is not correct.
```

After installing the fix, the problem is resolved and the server starts.

### **For the runtime server**

#### **APAR IY46975**

The values of the updateAgentEnabled parameter in the system.properties file are limited to "no" and "yes", but the documentation of those values in the Tivoli License Manager System Administration Guide reports them as "No" and "Yes". Supplying the incorrect values can mean that some product functions do not work correctly, as the parameter value is not recognized by the product. For example, a scheduled scan might not be performed on the agents belonging to that division. The following error messages are reported in the traceagt.log if you use "Yes" instead of "yes":

```
ERROR - Bad update enable string 'Yes'  
ERROR - No parameters downloaded
```

After installing the fix the parameter values can be written in any of the following ways: "YES", "Yes", "yes", "NO", "No", "no".

#### **APAR IY49281**

If an agent has an operating system name longer than 40 characters, the agent plugin fails. The runtime server log file shows the following error:

```
errors.com.ibm.it.rome.slm.runtime.data.AgentHandler  
ERROR COM.ibm.db2.jdbc.DB2Exception: IBM CLI Driver DB2/6000  
SQL0433N Value "Windows NT 5.0 - Service Pack 4, RC 4.66" is too long.  
SQLSTATE=22001
```

This is because in the runtime server database, the AGENT table field for the operating system was too small.

After applying the fix the database table field (AGENT.OS\_VERSION) is increased to 60 characters, and the problem does not occur.

### **Stopped runtime server or HTTP server**

Every thread that runs in the runtime server locks the resource it is processing. If another request arrives, the server thread waits for the resource to become available. If many requests arrive in a short space of time, or if a thread needs to keep the resource locked for a long time, either the runtime server or the HTTP server, or both, may stop, or go into an endless loop.

After you have installed the fix, the runtime server will allow a thread to wait for a maximum of 60 seconds for a requested resource to be made available. If the request cannot be satisfied within this period, an event of type "internal error" is sent to the agent. The agent has processes for handling such an event, and the load on the runtime server and HTTP server is lightened.

### **Java™ exception handling**

If an HTTP request arrives without a body, the Java exception is not correctly managed by the runtime server. This error is particularly evident when the server receives many requests from agents in a short space of time. In this case, the error log contains the following error:

```
10-03-10.55.29 {Communication#142} com.ibm.it.rome.slm.scp.ServiceHandler
[ERROR] java.lang.NumberFormatException: null
    at java.lang.Long.parseLong(Long.java(Compiled Code))
    at java.lang.Long.parseLong(Long.java(Compiled Code))
```

After installing the patch these Java exceptions are handled correctly.

### **Runtime service scheduling**

It is not possible to customize a start time for certain services which the runtime server runs to perform some internal activities, and certain services which make requests to the administration server. By default, these services are started at midnight, GMT, regardless of the timezone of the runtime server. The affected services all have customizable frequencies, but without a customizable start time you cannot ensure that the running of these services avoids times of the day when the runtime server is busy communicating with its agents.

After installing this fix you will be able to choose the time of day when all these services start. The installation of the fix will add a new parameter: `runtimeBaseTime` to the `system.properties` file on the runtime server. The default value of this parameter is 23:00 (11 pm), according to the clock of the runtime server. After you have installed the fix, the service requests will be made according to this parameter, and each will be satisfied in turn. The existing individual frequency parameters will then determine when the service is next run. Thus, for example, if the frequency interval of a service is 1440 minutes (24 hours), and you leave the `runtimeBaseTime` at its default value, the service will start at 23:00 (11 pm) every day. The server uses the `runtimeBaseTime` parameter only immediately after it has started; from that point on it will determine the next service start by adding the appropriate frequency to the time of the previous service start.

**Note:** There is no particular advantage in staggering the frequency interval of the services, as if they all have the same frequency they will be started in a pre-determined sequence, and each service request will be satisfied in turn. However, you should schedule them to take place at a time when the workload of the runtime server is low.

In conjunction with this, after installing the fix, the following parameters in the system.properties file on the runtime server have new default values, different from those documented in the *IBM Tivoli License Manager: System Administrator's Guide*:

```
# Time interval for internal inventory update (minutes)
inventoryUpdatePeriod=1440
# Time interval for internal cache update (minutes)
cacheUpdatePeriod=1440
# Time interval for data transfer (download) with admin server (minutes)
adminDownloadPeriod=1440
# Time interval for data transfer (upload) with admin server (minutes)
adminUploadPeriod=1440
# Time interval for license cleanup checking (minutes)
licenseCleanupPeriod=1440
# Time interval for usage data resynch with admin server (minutes)
usageSnapshotPeriod=1440
```

**Note:** During the fix installation, if you have modified any of these values from the original defaults, the changed values will not be changed to the new ones.

## For the agent

### APAR IY45495

A memory leak has been solved on agents running on Windows platforms, which, over a period of time, was causing excessive resource consumption.

### APAR IY49454

On certain Windows platforms detailed below, the agent contacts the domain server to determine information about the user of a Windows application too frequently. This is causing performance problems.

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

- 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)

After installing the fix, the agent will store the user information in its cache memory after the initial contact with the domain server.

### APAR IY50092

On SUN platforms some scripts are prevented from running by the agent's kernel extension. For example, if you run the following command:

```
export DISPLAY=`who -m | awk -F"(" {'print $2'} | awk -F")" {'print $1'}~:0
```

the following error is received:

```
awk can not be executed
```

After installing the fix, the kernel extension no longer prevents such scripts from running.

### APAR IY50094

On AIX platforms, the agent causes the operating system to loop if more than 15 different processes fail in less than 8 seconds. An operator cannot telnet or log in to the console.

After installing the fix, the agent correctly manages large numbers of failing processes in a short time.

#### **APAR IY50187**

On Windows, AIX and SUN platforms, under heavy system stress 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).

The 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 platforms are not affected by the problem that this fix resolves, and the fix should not be applied to agents running on them.

The fix requires the upgrading of the agent code on the runtime servers that serve agents running the above-listed operating systems. It then requires you to upgrade the agent code at each agent by first applying a utility provided with the fix, and then updating or re-installing the agent code. Full details are provided in "Install the interim fix on the servers" on page 10.

After installing the fix, the agent software can be unloaded without causing a kernel panic.

#### **APAR IY50491**

On Windows 9x platforms, after the agent is installed, some in-house programs, for example those developed using Power Builder version 4 or Sybase version 11.0.3, cannot run.

After installing the fix these programs can run.

#### **Inventory scan transmission algorithm**

On all platforms, if a large number of agents belong to the same division, the inventory scans cannot be handled by the runtime server because they are occurring in too short a time frame.

After receiving a request for a scan from the runtime server, the agent determines when to send the scan by using an algorithm that generates a random time for the transmission, based in part, on the number of agents, information supplied to it by the runtime server. This algorithm has a maximum timeframe of 9 hours. Thus, with many agents in the division, the runtime server is experiencing a severe backlog of requests from agents, which affects its capability to respond immediately to license requests.

After installing the fix, the algorithm no longer has this limitation, and correctly schedules the scan transmission so that the runtime server can handle all requests.

### Agent self-update on Windows NT®

On Windows NT platforms, the self-update of the agent did not work after installing the tlm-1.1.1-0002 interim fix (agent version 1.1.1.10). Agents attempting to self-upgrade terminated abnormally.

After installing this fix, the agent should self-update without problems.

### Agent self-update on Windows 98 and ME

Agents on Windows 98 and ME platforms can now use the self-update facility, which did not work prior to the fix.

### Deploying agents on unsupported platforms

It is possible to attempt the Web deployment of an agent on the unsupported Windows 2003 platform. The deployment appears to have worked, but as there is no kernel extension available to these agents, no license enforcement is possible..

After installing the fix, a Web deployment request for the Windows 2003 platform will be refused by the runtime server.

## Backward compatibility

The following interim fixes were superseded by this interim fix:

- 1.1.1-TLM-0001LA
- 1.1.1-TLM-0002
- 1.1.1-TLM-0003LA
- 1.1.1-TLM-0004LA

Dependencies:

- IBM Tivoli License Manager, Version 1.1.1

## Other changes as a result of this interim fix

This interim fix creates a file called `<INST_DIR>\product.xml` (where `<INST_DIR>` is the directory where Tivoli License Manager is installed), which keeps track of the current Tivoli License Manager version. After applying the fix, servers and agents, as indicated in this file, will have a new version number of 1.1.1.20. However, the displayed version in the GUI and CLI of the servers will remain at version 1.1.1. The individual agents' software will be updated only when you specifically re-install the agent software, or after you have used the agent self-update facility in the agent configuration file, as described in the *IBM Tivoli License Manager: System Administrator's Guide*.

**Note:** If you have already installed interim fix 1.1.1-TLM-0002, the `product.xml` file will already exist, and will be updated.

This interim fix installs a new kernel extension for the various agent platforms. The old agents are listed in the chapter on the agent in *IBM Tivoli License Manager: System Administrator's Guide*. The new agent files are as follows:

### Windows 9x

```
\slmruntime\agent\win9x\tlmkagent.dll
```

### Other Windows

```
\slmruntime\agent\win32\tlmkagent-1_1_1_2.sys
```

### SUN

```
/slmruntime/agent/sun/tlmkagent-1_1_1_2.conf  
/slmruntime/agent/sun/tlmkagent-1_1_1_2
```

## AIX

```
/slmruntime/agent/aix/Aix43/tlmkagent1.1.1A  
/slmruntime/agent/aix/Aix43/tlmkreg1.1.1A  
/slmruntime/agent/aix/Aix43/tlmkstub  
/slmruntime/agent/aix/Aix51/tlmkagent1.1.1A  
/slmruntime/agent/aix/Aix51/tlmkreg1.1.1A  
/slmruntime/agent/aix/Aix51/tlmkstub
```

**Note:** The tlmkstub file is refreshed.

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## Installation, migration, upgrade, and configuration information

This section includes the following topics:

- “Hardware and software requirements”
- “Install the interim fix on the servers” on page 10
- “Verify that the interim fix has been correctly applied” on page 11
- “Upgrading the agents” on page 11
- “Revert to the previous version” on page 13

### Hardware and software requirements

This section includes the following topics:

- “Supported platforms”
- “System requirements”

#### Supported platforms

Supported platforms at the time of the release are detailed in the *IBM Tivoli License Manager: Release Notes*. There are no known changes since the release. See “Accessing publications online” on page 21 for details of how to locate the latest version of this document.

The list of supported platforms could change outside the release cycle. For the most recent information, consult the supported platforms matrix on IBM software support Web site, as follows:

[http://www.ibm.com/software/sysmgmt/products/support/Tivoli\\_Supported\\_Platforms.html](http://www.ibm.com/software/sysmgmt/products/support/Tivoli_Supported_Platforms.html)

Click the **Tivoli Platform and Database Support Matrix** link. You will be asked for your IBM registration ID and password.

**Note:** If you use a proxy server for HTTP communications, ensure that you set the appropriate proxy server name and port also for secure communications before accessing this site. For example, on the Proxy Settings panel on Windows 2000 (**Start > Settings .> Control Panel > Internet Options > Connections > LAN Settings > Advanced**), provide a proxy server name and port for **Secure**, as well as for **HTTP**.

#### System requirements

Hardware and software prerequisites are detailed in the Installing Tivoli License Manager chapter of the *IBM Tivoli License Manager: System Administrator's Guide*. There are currently no changes to the information included in the guide.

## Install the interim fix on the servers

The following tells you how to install this interim fix. Once you have installed an interim fix, you cannot uninstall it automatically. For details of how to revert to the previous version see "Revert to the previous version" on page 13.

On every system where you have the administration server, the runtime server, or both, perform the following steps:

1. Log on to the computer using an account with administration authority.
2. Ensure that WebSphere Application Server is up and is running. If you apply the interim fix with the WebSphere Application Server not running, the interim fix might not be correctly installed.
3. Stop the Tivoli License Manager servers:
  - If the computer is running a Tivoli License Manager administration server, you are recommended to stop the server by issuing the command:  
`<INSTALL_DIR>\admin\cli\svrstop`
  - If the computer is running a Tivoli License Manager runtime server, you are recommended to stop the server by issuing the command:  
`<INSTALL_DIR>\runtime\cli\svrstop`

If either the administration or the runtime server, or both, are running while the interim fix is installed, the installation would take longer, as the interim fix installation process would stop the servers, and some errors will be logged. However the interim fix would be correctly applied.

4. If the computer is running a Tivoli License Manager runtime server, check that the Agent self update parameter is disabled, by taking the following steps:
  - a. Edit the file `<INST_DIR>\runtime\conf\system.properties`
  - b. Check that the following parameter is set to "no", modifying it, if necessary:  

```
# Agent self-update enablement
updateAgentEnabled=no
```
  - c. If you had to modify the self-update setting, and you have not already stopped the runtime server, do so now by issuing the command:  
`<INST_DIR>\runtime\cli\svrstop`.
5. To install the interim fix, run one of the following, depending on your platform:

<b>Windows</b>	<code>setupwin32.exe</code>
<b>AIX</b>	<code>setupaix.bin</code>

During the installation you will need to choose a valid directory where you want to back up the changed files. The default path is:  
`<INSTALL_DIR>\1.1.1-TLM-0005`, where `1.1.1-TLM-0005` is a directory created by the backup process. This directory will subsequently be referred to in this document as `<BACKUP_DIR>`.

In this directory you will find all the changed files in the same tree structure as they are in the product. To avoid any confusion with the product files, a tilde (~) has been suffixed to each file name in this directory.

The interim fix installation creates a file called `product.xml` in the `<INSTALL_DIR>` directory. This file contains information about product and interim fix versions. An `install.log` file is also created in the `<INSTALL_DIR>` directory if any error or warning is generated during the interim fix installation.

Any changes to the configuration files that you have made prior to installing this interim fix will be preserved by the install process.

6. After the interim fix is installed, the runtime server configuration parameter `parm.useproxy` is set to `n`. If you are using a proxy server between your runtime server and its agents, set this parameter to `y`. The parameter `parm.useproxy` is in the `agent_install.properties` file in the `<INSTALL_DIR>\runtime\conf` directory, and the only valid values are `y`, `Y`, `n` and `N`.
7. If the system has a Tivoli License Manager administration server installed, restart the server by issuing the command:  
`<INSTALL_DIR>\admin\cli\srvestart`
8. If the system has a Tivoli License Manager runtime server installed, restart the server by issuing the command:  
`<INSTALL_DIR>\runtime\cli\srvestart`

## Verify that the interim fix has been correctly applied

Verify that the interim fix has been installed correctly, as follows:

1. Verify that the file `product.xml` in the `<INSTALL_DIR>` directory specifies that the 'Ending Version' is '1.1.1.20'.
2. Verify that no errors have been logged in the `ITLM_install.log` file in the computer's `<TEMP>` directory.

## Upgrading the agents

The following details the steps required to upgrade the agents:

1. Run the `kfixer` utility (provided with the interim fix or obtainable from the IBM Support Web site) before the agent code is upgraded or uninstalled. This utility prevents the agent kernel extension from being unloaded while the interim fix is applied, and ensures that when the agent code is upgraded, the kernel extension will be safely upgraded, as well. The `kfixer` utility **MUST** be used before any agent's software is upgraded, by any method.  
This utility is only required to upgrade existing agents. After you have applied the interim fix to the runtime server, any new agents can be deployed, by any method, *WITHOUT* using the `kfixer` utility.  
The `kfixer` utility comes with a readme file telling you how to run it.
2. Update the agent software, *WITHOUT* uninstalling the agent first. This can be done by any of the methods available to you:
  - Use the Web registration facility at the agent, as described in "Deploying an agent on a node", in the section "Defining a monitoring structure for a customer" in the chapter "Managing a customer infrastructure" in *IBM Tivoli License Manager: License Administrator's Guide*. In this case you would leave the agent self-update facility disabled.
  - Run the `installagent` command at the agent, as described in "Deploying an agent manually", in the section "Agent deployment and upgrade", in Chapter 5: "The agent", in *IBM Tivoli License Manager: System Administrator's Guide* (page 49 in the English language pdf of the guide). In this case you would leave the agent self-update facility disabled.
  - Use the agent self-update facility at each runtime server. This facility can be used **ONLY** if you have run the `kfixer` utility at **ALL** the agents registered with the runtime server. To use this facility, perform the following steps:
    - a. Edit the file `<INST_DIR>\runtime\conf\system.properties`
    - b. Modify the following parameters to the shown values:

```
# Agent self-update enablement
updateAgentEnabled=yes
# Time interval for self-update checking (seconds)
updateAgentPeriod=43200
```

The period you have set is 12 hours.

**Note:** The `updateAgentPeriod` default setting is higher than that given in the readme files for some prior interim fixes.

- c. Stop the runtime server by issuing the command:  
`<INST_DIR>\runtime\cli\svrstop.`
- d. Restart the runtime server by issuing the command:  
`<INST_DIR>\runtime\cli\svrstart.`
- e. Verify that the version number of the agents becomes '1.1.1.20' within a reasonable period of time. The agents will be upgraded automatically as each is contacted by its runtime server, but depending on the number of agents and the `updateAgentPeriod` setting, this process could take several days. The `updateAgentPeriod` setting is defined in the `<INSTALL_DIR>\runtime\conf\system.properties` file.

To check the version, review the details of selected agents on the Web interface of the administration server. For details, see "Reviewing and deleting agents" in the section "Managing components" in *IBM Tivoli License Manager: License Administrator's Guide*. Alternatively, run the command `tlmagent -v` on the agent computer. The command is described fully in the section on agent commands in the *IBM Tivoli License Manager: System Administrator's Guide*.

**Note:** If you use the self-update facility, you should be aware that if an agent is rebooted between running the `kfixer` utility and enabling the agent self-update facility, the agent will not regain its full functionality until the self-update has taken place.

- f. When you are sure that all agents have been updated, perform these steps to disable the self-update function so that it does not degrade performance unnecessarily:
  - 1) Stop the runtime server by issuing the command:  
`<INST_DIR>\runtime\cli\svrstop.`
  - 2) Edit the file `<INST_DIR>\runtime\conf\system.properties`
  - 3) Modify the following parameter to the shown value:  
# Agent self-update enablement  
`updateAgentEnabled=no`
  - 4) Restart the runtime server by issuing the command:  
`<INST_DIR>\runtime\cli\svrstart.`

## Using a software distribution program for bulk updating

If you have a software program that allows you to install and run programs remotely, like the Software Distribution component of IBM Tivoli Configuration Manager, you can create a software package that runs the `kfixer` utility and distribute it to all your registered agents. When the software distribution program has reported that the utility has been successfully run on ALL agents, you can enable the agent self-update facility at the runtime server.

Alternatively, you can create a software package that runs the `kfixer` utility followed by the `installagent` command, and distribute it to all agents. The software distribution package should contain all of the files required by the `installagent`

command for the platform to which it is being distributed. In this case you would leave the agent self-update facility at the runtime server disabled.

## Revert to the previous version

You can revert to the previous version of the product (undo the interim fix) but if updates of the agent software have taken place you must also revert those updates. See "Reverting the agents to the previous version" on page 19 for instructions on reverting updated agents to the previous version.

The instructions for reverting to the previous version of the servers depend on which version of the WebSphere application server you are using, version 3.5 (see "Reverting to the previous version when WebSphere application server, version 3.5 is installed") or version 4.0.4/4.0.5 (see "Reverting to the previous version when WebSphere application server, version 4.0.4/4.0.5 is installed" on page 16).

### Reverting to the previous version when WebSphere application server, version 3.5 is installed

The steps must be performed on all systems where the administration server, a runtime server, or both are installed, and are as follows:

1. Log on to the system with administration authority.
2. Stop the Tivoli License Manager servers from the WebSphere Application Console.
3. Copy the backed-up original files from the backup directories to their original locations. The files are listed below, and you must copy them from the backup directory (that you defined in step 5 on page 10 of the install procedure) to the product's install directory, maintaining the same subdirectory structure, and removing the final tilde (~). For example, copy  
<BACKUP\_DIR>\admin\conf\agent\_install.properties~ to  
<INSTALL\_DIR>\admin\conf\agent\_install.properties.

The files to be copied depend on the components installed on the system where you want to revert to the previous version.

#### Administration server on Windows

```
<BACKUP_DIR>\admin\cli\  
    srvstart.bat~  
    srvstop.bat~  
    tlmcli.bat~  
  
<BACKUP_DIR>\admin\conf\  
    agent_install.properties~  
  
<BACKUP_DIR>\admin\db\db2\  
    create_tbl.sql~  
    dump_db.sql~~  
  
<BACKUP_DIR>\admin\setup\  
    deleteAdmin.bat~  
    setupAdmin.bat~  
    slm_admin.ear~  
    uninstallAdmin.bat~
```

If you have already installed interim fix "1.1.1-TLM-0002", the following files will have also been backed up, and should now be restored:

```
installAdmin.bat~  
stopAdmin.bat~
```

## Runtime server on Windows

```
<BACKUP_DIR>\runtime\cli\  
  srvstart.bat~  
  srvstop.bat~  
  tlmcli.bat~  
  
<BACKUP_DIR>\runtime\conf\  
  agent_install.properties~  
  system.properties~  
  
<BACKUP_DIR>\runtime\db\db2\  
  create_tbl.sql~  
  dump_db.sql~~  
  
<BACKUP_DIR>\runtime\setup\  
  deleteAdmin.bat~  
  setupAdmin.bat~  
  slm_admin.ear~  
  uninstallAdmin.bat~
```

If you have already installed interim fix "1.1.1-TLM-0002", the following files will have also been backed up, and should now be restored:

```
  installAdmin.bat~  
  stopAdmin.bat~
```

## Administration server on AIX

```
<BACKUP_DIR>/admin/cli/  
  srvstart~  
  srvstop~  
  tlmcli~  
  
<BACKUP_DIR>/admin/conf/  
  agent_install.properties~  
  
<BACKUP_DIR>/admin/db/db2/  
  create_tbl.sql~  
  dump_db.sql~~  
  
<BACKUP_DIR>/admin/setup/  
  deleteAdmin.sh~  
  setupAdmin.sh~  
  slm_admin.ear~  
  uninstallAdmin.sh~
```

If you have already installed interim fix "1.1.1-TLM-0002", the following files will have also been backed up, and should now be restored:

```
  installAdmin.sh~  
  stopAdmin.sh~
```

## Runtime server on AIX

```
<BACKUP_DIR>/runtime/cli/  
  srvstart~  
  srvstop~  
  tlmcli~  
  
<BACKUP_DIR>/runtime/conf/  
  agent_install.properties~  
  system.properties~
```

```
<BACKUP_DIR>/runtime/db/db2/  
create_tbl.sql~  
dump_db.sql~
```

```
<BACKUP_DIR>/runtime/setup/  
deleteAdmin.sh~  
setupAdmin.sh~  
slm_admin.ear~  
uninstallAdmin.sh~
```

If you have already installed interim fix "1.1.1-TLM-0002", the following files will have also been backed up, and should now be restored:

```
installAdmin.sh~  
stopAdmin.sh~
```

4. Remove all the files in the following directories.

Administration server:

```
<INSTALL_DIR>\admin\installedApp.ear
```

Runtime server:

```
<INSTALL_DIR>\runtime\installedApp.ear
```

5. Uncompress the following files (use **WinZip** on Windows platforms and **jar -xvf** on AIX):

Administration server:

```
<INSTALL_DIR>\admin\setup\slm_admin.ear
```

Runtime server:

```
<INSTALL_DIR>\runtime\setup\slm_runtime.ear
```

This step extracts a number of files to a number of different directories.

6. Create the following new temporary directories:

Administration server:

```
<INSTALL_DIR>\admin\installedApp.ear\temp
```

Runtime server:

```
<INSTALL_DIR>\runtime\installedApp.ear\temp
```

7. Uncompress the following files into the corresponding temporary directories or folders created in step 6 (use **WinZip** on Windows platforms and **jar -xvf** on AIX):

Administration server:

```
<INSTALL_DIR>\admin\installedApp.ear\slm_admin.war
```

Runtime server:

```
<INSTALL_DIR>\runtime\installedApp.ear\slm_runtime.war
```

This step extracts a number of files into the temporary directory. The file that you are uncompressing was placed in this directory during step 5.

8. Remove the files that you have just uncompresses:

Administration server:

```
<INSTALL_DIR>\admin\installedApp.ear\slm_admin.war
```

Runtime server:

```
<INSTALL_DIR>\runtime\installedApp.ear\slm_runtime.war
```

9. Rename the temporary directories or folders created in step 6, giving them the names of the files you have just deleted in step 8:

Administration server:

Rename the following file:

<INSTALL\_DIR>\admin\installedApp.ear\temp

giving it the following name:

<INSTALL\_DIR>\admin\installedApp.ear\slm\_admin.war

Runtime server:

Rename the following file:

<INSTALL\_DIR>\runtime\installedApp.ear\temp

giving it the following name:

<INSTALL\_DIR>\runtime\installedApp.ear\slm\_runtime.war

10. Remove the two, now empty, temporary directories or folders.
11. Start the Tivoli License Manager servers from the WebSphere Application Console.

### Reverting to the previous version when WebSphere application server, version 4.0.4/4.0.5 is installed

The steps must be performed on all systems where the administration server, the runtime server, or both are installed, and are as follows:

1. Log on to the system with administration authority.
2. Stop the Tivoli License Manager servers from the WebSphere Application Console.
3. Copy the backed-up original files from the backup directories to their original locations. The files are listed below, and they must be copied from the backup directory (that you defined in step 5 on page 10 of the install procedure) to the product's install directory, maintaining the same subdirectory structure, and removing the final tilde (~). For example, copy <BACKUP\_DIR>\admin\conf\agent\_install.properties~ to <INSTALL\_DIR>\admin\conf\agent\_install.properties.

The files to be copied depend on the components installed on the system where you want to revert to the previous version.

#### Administration server on Windows

```
<BACKUP_DIR>\admin\cli\  
    srvstart.bat~  
    srvstop.bat~  
    tlmcli.bat~
```

```
<BACKUP_DIR>\admin\conf\  
    agent_install.properties~
```

```
<BACKUP_DIR>\admin\db\db2\  
    create_tbl.sql~  
    dump_db.sql~~
```

```
<BACKUP_DIR>\admin\setup\  
    deleteAdmin.bat~  
    setupAdmin.bat~  
    slm_admin.ear~  
    uninstallAdmin.bat~
```

If you have already installed interim fix "1.1.1-TLM-0002", the following files will have also been backed up, and should now be restored:

```
installAdmin.bat~  
stopAdmin.bat~
```

### Runtime server on Windows

```
<BACKUP_DIR>\runtime\cli\  
  srvstart.bat~  
  srvstop.bat~  
  tlmcli.bat~  
  
<BACKUP_DIR>\runtime\conf\  
  agent_install.properties~  
  system.properties~  
  
<BACKUP_DIR>\runtime\db\db2\  
  create_tbl.sql~  
  dump_db.sql~  
  
<BACKUP_DIR>\runtime\setup\  
  deleteAdmin.bat~  
  setupAdmin.bat~  
  slm_admin.ear~  
  uninstallAdmin.bat~
```

If you have already installed interim fix "1.1.1-TLM-0002", the following files will have also been backed up, and should now be restored:

```
  installAdmin.bat~  
  stopAdmin.bat~
```

### Administration server on AIX

```
<BACKUP_DIR>/admin/cli/  
  srvstart~  
  srvstop~  
  tlmcli~  
  
<BACKUP_DIR>/admin/conf/  
  agent_install.properties~  
  
<BACKUP_DIR>/admin/db/db2/  
  create_tbl.sql~  
  dump_db.sql~  
  
<BACKUP_DIR>/admin/setup/  
  deleteAdmin.sh~  
  setupAdmin.sh~  
  slm_admin.ear~  
  uninstallAdmin.sh~
```

If you have already installed interim fix "1.1.1-TLM-0002", the following files will have also been backed up, and should now be restored:

```
  installAdmin.sh~  
  stopAdmin.sh~
```

### Runtime server on AIX

```
<BACKUP_DIR>/runtime/cli/  
  srvstart~  
  srvstop~  
  tlmcli~  
  
<BACKUP_DIR>/runtime/conf/  
  agent_install.properties~  
  system.properties~
```

```
<BACKUP_DIR>/runtime/db/db2/  
    create_tbl.sql~  
    dump_db.sql~
```

```
<BACKUP_DIR>/runtime/setup/  
    deleteAdmin.sh~  
    setupAdmin.sh~  
    slm_admin.ear~  
    uninstallAdmin.sh~
```

If you have already installed interim fix "1.1.1-TLM-0002", the following files will have also been backed up, and should now be restored:

```
    installAdmin.sh~  
    stopAdmin.sh~
```

4. Run the following scripts to remove the directories containing the uncompressed .ear files. The script names depend on your operating system:

#### **Windows**

From a command prompt, run the following scripts:

Administration server:

```
<INSTALL_DIR>\admin\setup\uninstallAdmin.bat
```

Runtime server:

```
<INSTALL_DIR>\runtime\setup\uninstallRuntime.bat
```

#### **AIX**

From any directory, run the following scripts:

Administration server:

```
<INSTALL_DIR>/admin/setup/uninstallAdmin.sh
```

Runtime server:

```
<INSTALL_DIR>/runtime/setup/uninstallRuntime.sh
```

5. Run the following scripts to uncompress the backed-up .ear files in the backup directories and move them into the live directories. The script names depend on your operating system:

#### Windows

From a command prompt, run the following scripts:

Administration server:

```
<INSTALL_DIR>\admin\setup\installAdmin.bat
```

Runtime server:

```
<INSTALL_DIR>\runtime\setup\installRuntime.bat
```

#### AIX

From any directory, run the following scripts:

Administration server:

```
<INSTALL_DIR>/admin/setup/installAdmin.sh
```

Runtime server:

```
<INSTALL_DIR>/runtime/setup/installRuntime.sh
```

6. Start the Tivoli License Manager servers from the WebSphere Application Console.

### Reverting the agents to the previous version

To revert any updated agents, the same process applies, regardless of the version of the WebSphere Application Server in use.

You need to follow these steps:

1. Revert the administration server and all runtime servers, as described above.
2. Identify the agents that have been updated by viewing the agent details in the GUI. Upgraded agents will have a version of 1.1.1.20.
3. Manually uninstall the new agent software from the systems to which it has been distributed, following the instructions for uninstalling the agent given in the installation chapter of the *IBM Tivoli License Manager: System Administrator's Guide*.
4. Register the agents again with their runtime servers, either using the Web registration described in the *IBM Tivoli License Manager: License Administrator's Guide*, or by issuing the **installagent** command from the agent system's command line, as documented in the agent chapter of the *IBM Tivoli License Manager: System Administrator's Guide*.

---

## 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 22
- "Contacting software support" on page 22
- "Conventions used in this readme file" on page 22

## 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.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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