

IBM Tivoli License Compliance Manager



# Readme File for Fix Pack 2.2.0-TIV-TLCM-FP0002

*Version 2.2*



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**Note**

Before using this information and the product it supports, read the information in "Notices" on page 29.

**First Edition (December 2006)**

This edition applies to the fix pack 2.2.0-TIV-TLCM-FP0002 for version 2, release 2 of IBM Tivoli License Manager (program number 5724-D33).

IBM welcomes your comments.

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## Readme File for fix pack 2.2.0–TIV-TLCM–FP0002

This readme provides important information about the fix pack 2.2.0-TIV-TLCM-FP0002 for IBM® Tivoli License Compliance Manager, version 2.2. This readme is the most current information for the fix pack and takes precedence over all other documentation.

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

This readme includes the following topics:

- “About this fix pack”
- “Installation, migration, upgrade, and configuration information” on page 18
- “General information” on page 21

**Note:** To install the fix pack, you must be logged on as Administrator (on Windows®) or root (on UNIX®) to the computer where Tivoli License Compliance Manager is installed .

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### About this fix pack

Fix pack 2.2.0-TIV-TLCM-FP0002 includes support for additional agent platforms and includes fixes for reported APARs and defects. APARs and defects fixed in previous limited availability fixes for Tivoli License Compliance Manager, version 2.2 are also included in this fix pack.

This section includes the following topics:

- “New in fix pack 2.2.0–TIV-TLCM–FP0002”
- New functionality. See “New features and enhancements” on page 2
- “Agent platforms” on page 8
- “Product fixes” on page 9
- “Documentation fix history” on page 11
- “Backward compatibility” on page 17
- “Troubleshooting information” on page 17
- “Other changes as a result of this fix pack” on page 17

### New in fix pack 2.2.0–TIV-TLCM–FP0002

Fix packs are cumulative, so this fix pack includes functionality, APARs and defects fixed in the previous fix packs and in interim fixes for Tivoli® License Manager, version 2.2. This subsection provides a summary of the functionality and fixes that have been added for fix pack 2.2.0–TIV-TLCM–FP0002. It aims to help users who have installed the previous fix pack, 2.2.0–TIV-TLCM–FP0001 to understand what changes they can expect from this fix pack.

The following items are introduced in this fix pack:

- Fixes for APARs IY92833, IY92083, IY90654, IY90148, IY90080, IY89737, IY89193, IY89184, IY88968, IY88953, IY88938, IY88932, IY88224, IY87182, IY87086, IY86548, IY86273, IY86199. See “Product fixes” on page 9.
- Fixes for documentation APARs IY90170, IY89834, IY87561, IY86966. See “Documentation fix history” on page 11.

- A new **ibmreport** command is available. See “New features and enhancements.”
- IBM Use reports can be generated for test purposes. See “New features and enhancements.”
- A new option is available with the **backupconf** and **restoreconf** commands. See “New features and enhancements.”
- Capability to monitor J2EE applications running in WebSphere® Portal 6.0 on iSeries™. See “New features and enhancements.”
- Capability to disable the agent installation rollback. See “New features and enhancements.”
- Capability to control which agent components must be traced. See “New features and enhancements.”
- Updates in the way the catalog manager tool manages product information. See “New features and enhancements.”
- A sample script is documented to create a report of software installed but not used. See “New features and enhancements.”
- Two documentation problems (see “Documentation fix history” on page 11):
  - About restricting the collection of potential signatures
  - Documentation error on wizard installation panel

## New features and enhancements

### Configuring component filtering of the agent trace

Settings in the `tlmlog.properties` file allow you to control which agent components must be traced. By editing this file you can limit the trace to one or more of the following components:

- Third party, for example GSKit
- Network
- Agent services
- Starting and stopping of the agent
- The agent catalog
- Licensing
- Inventory
- The system agent
- The agent core
- Agent messaging
- The agent CLI
- Agent installation

By default, tracing of all components is enabled and the level of tracing is controlled by the setting in the `tlmagent.ini` file. The Component Filtering section of the `tlmlog.properties` file contains a set of parameters for each component, all of which are commented in the default configuration. By activating these parameters for one or more components, you can define different levels of trace according to the component you are interested in. Possible trace levels are:

- `DEBUG_MAX`
- `DEBUG_MID`
- `DEBUG_MIN`
- `DEBUG_NULL` (no tracing)



Do not change any other settings.

Figure 1 shows an example of the use of component filtering in which tracing is set to maximum for a single component and turned off completely for all others.

```
#Component Filtering
agentLogger.agentTraceLogger.3RDPARTY.description=logger for 3RDPARTY component
agentLogger.agentTraceLogger.3RDPARTY.isInherited=true
agentLogger.agentTraceLogger.3RDPARTY.level=DEBUG_NULL

agentLogger.agentTraceLogger.NETWORK.description=logger for NETWORK agent component
agentLogger.agentTraceLogger.NETWORK.isInherited=true
agentLogger.agentTraceLogger.NETWORK.level=DEBUG_NULL

agentLogger.agentTraceLogger.SERVICES.description=logger for SERVICES agent component
agentLogger.agentTraceLogger.SERVICES.isInherited=true
agentLogger.agentTraceLogger.SERVICES.level=DEBUG_NULL

agentLogger.agentTraceLogger.START_STOP.description=logger for START_STOP agent component
agentLogger.agentTraceLogger.START_STOP.isInherited=true
agentLogger.agentTraceLogger.START_STOP.level=DEBUG_NULL

agentLogger.agentTraceLogger.CATALOG.description=logger for CATALOG agent component
agentLogger.agentTraceLogger.CATALOG.isInherited=true
agentLogger.agentTraceLogger.CATALOG.level=DEBUG_MAX

agentLogger.agentTraceLogger.LICENSE.description=logger for LICENSE agent component
agentLogger.agentTraceLogger.LICENSE.isInherited=true
agentLogger.agentTraceLogger.LICENSE.level=DEBUG_NULL

agentLogger.agentTraceLogger.INVENTORY.description=logger for INVENTORY agent component
agentLogger.agentTraceLogger.INVENTORY.isInherited=true
agentLogger.agentTraceLogger.INVENTORY.level=DEBUG_NULL

agentLogger.agentTraceLogger.SYSTEM.description=logger for SYSTEM agent component
agentLogger.agentTraceLogger.SYSTEM.isInherited=true
agentLogger.agentTraceLogger.SYSTEM.level=DEBUG_NULL

agentLogger.agentTraceLogger.CORE.description=logger for CORE agent component
agentLogger.agentTraceLogger.CORE.isInherited=true
agentLogger.agentTraceLogger.CORE.level=DEBUG_NULL

agentLogger.agentTraceLogger.MESSAGE.description=logger for MESSAGE agent component
agentLogger.agentTraceLogger.MESSAGE.isInherited=true
agentLogger.agentTraceLogger.MESSAGE.level=DEBUG_NULL

agentLogger.agentTraceLogger.AGENT_CLI.description=logger for AGENT_CLI agent component
agentLogger.agentTraceLogger.AGENT_CLI.isInherited=true
agentLogger.agentTraceLogger.AGENT_CLI.level=DEBUG_NULL

agentLogger.agentTraceLogger.INSTALL.description=logger for INSTALL agent component
agentLogger.agentTraceLogger.INSTALL.isInherited=true
agentLogger.agentTraceLogger.INSTALL.level=DEBUG_NULL
```

*Figure 1. Component filtering settings in the tlmlog.properties file*

In the example shown in Figure 1, a problem has occurred that is probably related to the agent catalog. To investigate further, all entries in the component filtering section of the `tlmlog.properties` file are activated. The maximum trace level (`DEBUG_MAX`) is set for the catalog component. The trace levels for all other components are set to `DEBUG_NULL`, so that only the catalog component is traced.

### **Updates in the way the catalog manager tool manages product information.**

You use the catalog manager tool to make changes to the product information that is stored in the administration server database, expanding it with new information, or removing products and signatures that you do not want to monitor.

The types of changes to the product information that are permitted depend on whether you are changing user-defined product information or product information that comes from the IBM catalog.

In addition, the portion of the IBM catalog, called IBM private catalog, which includes products from Lotus®, Tivoli, Rational®, and IBM, supports a very limited set of changes compared to the remaining portion of the IBM catalog that can instead be altered as if it were user-defined product information.

You can perform the following tasks:

- Import the updated version of the IBM catalog.
- Create new products, versions, and releases.
- Delete or change existing user-defined product, versions, and releases.
- Delete or change existing products, versions, and releases that do not belong to the IBM private catalog.
- Add a user-defined version to a product that belongs to the IBM private catalog.
- Add a user-defined release to a product that belongs to the IBM private catalog.
- Create, change, or remove user-defined components.
- Create, change, or remove components that do not belong to the IBM private catalog.
- Define one or more components that comprise a product.
- Create, change, or remove user-defined signatures.
- Create, change, or remove signatures that do not belong to the IBM private catalog.
- Link and unlink user-defined signatures to user-defined components.
- Register potential signatures and link them to new or existing user-defined components.
- Link a user-defined signature to a component that belongs to the IBM private catalog.
- Link a potential signature to a component that belongs to the IBM private catalog.
- Unlink a user-defined signature from a component that belongs to the IBM private catalog.
- Unlink an IBM signature from a component that belongs to the IBM private catalog.
- Link an IBM signature to a component (that belongs to the IBM private catalog) only if the signature was previously linked to the same component and you subsequently unlinked it.

### **Monitoring of J2EE applications running in WebSphere Portal 6.0 on iSeries**

This fix pack includes a new version of the WebSphere Application Server agent for all supported platforms. The new version adds monitoring of J2EE applications running inside the WebSphere Portal 6.0 on iSeries.

If you have installed WebSphere Portal 6.0 on a monitored computer, or are planning to do so, you must redeploy the agent or use the agent self-update facility after installing this fix pack to enable monitoring of the J2EE applications.

### Capability to disable the agent installation rollback

You can now disable the agent installation rollback by setting the "disableRollBack=yes" environment variable before installing the agent. This capability should only be used for problem determination.

### New command: **ibmreport**

This command creates an IBM Use report and stores it in a user-defined directory. If you use the test option, the report is created only for test purposes; you cannot send this type of report to IBM.

#### Syntax

```
ibmreport -t <time-frame> -e <end_date> -o <organization> -d <output_directory> [-c <comment>] [-test]
```

#### Options

**-t** <time\_frame>

Required. Identifies the number of months the report must cover. Possible values: 1, 2, or 3.

**-e** <end\_date>

Required. Identifies the end date of the reporting period. The format of the date is YYYY-MM. If you want to generate a report that can be submitted to IBM, this must be a date in the past. If you use the **-test** option, the report is created only for test purposes and the end date can be any date.

**-o** <organization>

Required. Identifies the organization to which the report refers.

**-d** <output\_directory>

Required. Specifies the full path of the directory where the report is saved.

**-c** <comment>

Optional. Specifies a comment to be added to the report. You can type a free text paragraph for a maximum of 2000 characters to capture your comment.

**-test** Optional. If this option is used, the report is created only for test purposes and it cannot be sent to IBM.

### IBM Use reports can be generated for test purposes

It is now possible to generate an incomplete IBM Use report that can be used for test purposes: this type of report cannot be sent to IBM. There are no time constraints for generating a test report, it can be created at any time. The panel for the Export IBM Use task on the Web UI includes a **Generate an incomplete test report** check box and the **ibmreport** command provides a **-test** option

### New option for the **backupconf** and **restoreconf** commands

You have the option to specify a directory where the configuration files are backed up to (using **backupconf**) or read from (using **restoreconf**).

#### Syntax

```
backupconf [-d <directory_name> ]
```

**restoreconf [-d <directory\_name> ]**

### **Sample script that tells you which products are installed but not used in your environment**

If you want to know which products are installed but not used in your environment, you can write a script that provides a list of the agents on which a certain product ('ProductName') is installed but not used during a specific period of time.

You might use the following script:

```
db2 "with P (id,name,version) AS (select distinct id,name,version from
adm.swproduct where name like 'ProductName') select A.hostname,P.name as
PRODUCT_NAME,P.version from P,adm.agent as A, adm.prod_hinv as R where
A.id=R.agent_id and P.id=R.product_id and
R.end_time='9999-12-31-00.00.00.000000' and
NOT EXISTS (select * from adm.usage_comp as U where U.agent_id=A.id and
U.component_id=R.component_id and
((U.scope_id is null and R.scope_id is null)
or (U.scope_id=R.scope_id)) and ((date(U.start_time)<='T2') and
(date(U.end_time) >= 'T1')))"
```

where the input fields are:

#### **ProductName**

The name of the product (for example, 'Microsoft Office%').

**T1** The start date of the period of time you want the report to cover (for example, '08/30/2006').

**T2** The end date of the period of time you want the report to cover (for example, '08/31/2006').

### **License management facilities for IBM Tivoli Configuration Manager users.**

The License Management Extension feature integrates many of the license management facilities available with a full implementation of Tivoli License Compliance Manager into the Tivoli Configuration Manager environment. The application of this fix pack to the administration server and administration server database is part of the procedure required to activate this feature. For information and instructions on installing and using the license management extension, see *IBM Tivoli Configuration Manager: License Management Extension*

**Note:** To use this feature on AIX®, the administration server database needs AIX APAR IY73932 in addition to this fix pack.

**Note:** This feature is available starting from 2.2.0-TIV-TLCM-FP0001 and 4.2.3-TIV-TCM-FP0002. However, to use this feature with 2.2.0-TIV-TLCM-FP0002, you need to install 4.2.3-TIV-TCM-FP0003 in addition to this fix pack.

### **Increased password complexity**

Security is enhanced by changes to the rules for the definition of passwords for users of the Web UI and for the communication passwords used for authentication of communications from runtime servers. Parameters in the main configuration file for the administration and runtime servers, `system.properties` define the rules to be used to determine the validity of a password. The lower limit of the existing parameter `minimumPasswordLength` is increased to 8 characters and two new parameters are introduced:

- `maxNumberCharsRepeated`: the maximum number of permitted consecutive occurrences of a given character. The default is 2.

- `minimumNumberNonAlphaChars`: the minimum number of non-alpha characters to be included in passwords. The default is 2.

Any passwords that are defined after this fix pack has been applied must be valid according to these rules. Existing passwords will be accepted even if they do not comply with the new rules. To take advantage of the enhanced security, you should change all Web UI and runtime server passwords to be compliant with the new rules.

#### **Extension of agent command line functionality**

The GA level agent command line restricted options for registering and deregistering agents as services to agents on Windows platforms. The fix pack extends this facility to all supported agent platforms except i5/OS®. The syntax of the command is:

**Register agent as a service**  
`tlmagent -i`

**Deregister agent as a service**  
`tlmagent -r`

#### **Capability to change the installation directory of an agent**

With this fix pack it is possible to modify the directory where an agent is going to be installed. This option is available using one of the following deployment methods:

- Individual local installation (manual deployment)
- Remote bulk distribution using IBM Tivoli Configuration Manager
- Remote bulk distribution using SSH or RSH

#### **Capability to exclude agent directories from being scanned**

The fix pack introduces the possibility to exclude some directories from being scanned on an agent.

This option is enabled by including a configuration parameter in the file `tlmagent.ini`.

To enable the option do the following:

1. Stop the agent by using the command `tlmagent -e`.
2. Edit the file `tlmagent.ini` to include the parameter `scan_exclude_dirs`. As parameter value, write the path of the directory that you want to exclude from the scan. The format of the path must be UTF 8. If you want to exclude more than one directory, include their paths separated by semicolon (;). Wildcard is supported, but only when used as a delimiter (for example, `*/folder/`).
3. Restart the agent by using the command `tlmagent -g`.

Alternatively, you can enable the option by updating `tlmagent.ini` through software package blocks (SPBs) using the IBM Tivoli Configuration Manager (as indicated hereafter).

**Note:** Once you have enabled this option by editing the `tlmagent.ini` file, if you want to undo the change you must do what follows:

1. Stop the agent
2. Edit again `tlmagent.ini` and leave `scan_exclude_dirs =` with no path specified
3. Restart the agent

## Capability to change the configuration parameters of an agent using IBM Tivoli Configuration Manager to distribute SPBs

Using this facility you can change the configuration parameters of an agent from the administration server.

The parameters that can be modified are: **server**, **port**, **use\_proxy**, **proxy**, **proxy\_port**, **secure\_port**, **security\_level**, **division**, **scan\_exclude\_dirs**, **max\_cache\_size**, **communication\_type**, and **was\_registry\_users**.

Be aware that a change to the **server** or the **division** parameters causes the cache memory to be scratched.

The file 2.2.0-TIV-TLCM-FP0002-T00LS-SPB.zip contains the following SPBs (named after their respective platform) that you can use to define the new settings and distribute to the endpoints where you want to apply the changed agent configuration:

- change\_agt\_configuration\_win32.spb
- change\_agt\_configuration\_aix.spb
- change\_agt\_configuration\_hpux.spb
- change\_agt\_configuration\_linux.spb
- change\_agt\_configuration\_linux390.spb
- change\_agt\_configuration\_linuxppc.spb
- change\_agt\_configuration\_sun32.spb
- change\_agt\_configuration\_sun64.spb

**Note:** To use this facility successfully, make sure you use it with Tivoli Configuration Manager version 4.2.2 Fix Pack 1.

### Option to export a license without its distribution

A new parameter **-nodistribution** is available with the command **dataexp** to export licenses without their distributions. This parameter can only be used for a procuredLicense type of entity.

## Agent platforms

The fix pack introduces support for agents on the following new versions of currently supported platforms:

- i5/OS V5R4
- Sun Solaris 10 on 64-bit Xeon™ and Opteron processors
- Red Hat Enterprise Linux®, version 3.0 Update 1 for xSeries®
- Red Hat Enterprise Linux, version 3.0 Update 1,2 for pSeries® and iSeries

**Note:** On i5/OS V5R4, the agent code must be installed as follows:

1. on the agent, install the Tivoli License Compliance Manager, version 2.2 agent code using option **-W ptfsV5R3.active=False**
2. install 2.2.0-TIV-TLCM-FP0002 on the agent

The new agents are supported on all hardware that was supported at GA level for the earlier versions of the same platforms.

### Supported partitioning technologies

The fix pack extends support for deploying agents in partitioned environments to include support for VMware on dual core systems.

Specifically, GSX 3.2 is supported on Linux and Windows hosting environments. However, there are some known limitations for dual core hardware especially on Linux 64 bit. Refer to the VMware official Web site for additional information.

This fix pack does not support ESX 2.5.\* on dual core systems.

The supported VMware partitioning technologies are the same supported by the GA level of Tivoli License Compliance Manager.

### **Supported environments for J2EE monitoring**

The fix pack extends monitoring of J2EE application on all supported agent platform to J2EE applications running in the following containers:

- WebSphere Application Server, version 6.1 Base and ND
- WebSphere Application Server Commerce, version 6.0
- WebSphere Portal Server

## **Product fixes**

This fix pack fixes the following APARs:

### **APAR IY92833**

The inventory data on the agent is not updated with the latest software scan information due to a problem on the administration server.

The fix pack resolves the problem.

### **APAR IY92083**

The administration server does not update the database tables even though the runtime server is working fine.

The administration server gets an SQL exception (SQLCODE: -803, SQLSTATE: 23505, SQLERRMC: 2;ADM.NODE).

The fix pack resolves the problem.

### **APAR IY90654**

The agent deployment through inventory dependency is not supported by 2.2.0.1-TIV-TLCM-LA0003.

The fix pack resolves the problem.

### **APAR IY90148**

The deployment of agents using a Windows logon script does not work on Dell workstations.

The fix pack resolves the problem.

### **APAR IY90080**

The following message is displayed when an agent command that reloads the agent configuration file is executed:

CODAG027W The configuration file is corrupt. Default values are being used.

The fix pack resolves the problem and the message is no longer displayed.

### **APAR IY89737**

An error is shown in an agent trace when the agent functions normally.

The fix pack resolves the problem.

**APAR IY89193**

Misleading trace on OS/400®. The conversion to UTF-8 fails because of a ping error.

The fix pack resolves the problem.

**APAR IY89184**

On OS/400, the WebSphere Application Server agent is not downloaded correctly.

The fix pack resolves the problem.

**APAR IY88968**

The install snapshot does not show all data for a given product.

The fix pack resolves the problem.

**APAR IY88953**

A file space check is not performed by the agent and CIT installation packages.

The fix pack resolves the problem, when an agent is deployed through remote distribution using IBM Tivoli Configuration Manager, by ensuring that a space check is performed before the installation starts. To enable the space check, you must set the configuration parameter **checkDiskSpace** to **y** in the software package block. The default value is **n** and no space check is performed.

**APAR IY88938**

The migration of the Tivoli License Compliance Manager agent from version 2.1 to version 2.2 fails.

The failure is caused by a hang of the tlmagent process during the cache migration.

The fix pack resolves the problem.

**APAR IY88932**

The wastmp directory is not always created in the right path during the deployment of the agent.

The fix pack resolves the problem.

**APAR IY88224**

A Windows registry signature is created using the Catalog Manager but a subsequent software scan does not find the new signature.

The fix pack resolves the problem.

**APAR IY87182**

The agents are not registered in the database according to their plugin time. This is a problem when multiple agents are installed on the same system.

The fix pack resolves the problem.

**APAR IY87086**

The installation of the server does not complete successfully because the JVM memory settings are not sufficient.

The fix pack resolves the problem by increasing the memory settings.

**APAR IY86548**

The WebSphere Application Server agent discovery process searches all the home directories of the defined users.



The fix pack resolves the problem searching only in those home directories specified in the **was\_registry\_users** agent configuration parameter.

#### **APAR IY86273**

The agent cannot be deployed on hardware from Dell because the machine manufacturer and type are not recognized.

The fix pack resolves the problem.

#### **APAR IY86199**

On AIX and HP-UX systems, the installagent executable requires that some system libraries are installed, even though those libraries are not needed.

The fix pack eliminates the requirement for those libraries.

#### **APAR IY84970**

On Sun Solaris systems where the product Sun Sneep is installed, the system administrator can specify a serial number for the computer, which is then stored in the EEPROM. The Tivoli License Compliance Manager agent must be able to retrieve this serial number to identify the host where it is installed.

### **Problems fixed**

The following problems were found since the general availability of Tivoli License Compliance Manager, version 2.2 and fixed with this fix pack:

#### **For the administration server:**

##### **An out of memory error occurs on the administration server when processing the notification for inactive agents**

When many agents are inactive, production of the inactive agent notification causes problems.

The fix pack introduces a less detailed inactive agent notification. Instead of listing the agent IDs of all inactive agents, the notification shows the number of inactive agents for each division. The inactive agents can then be identified using the Agent task on the Web UI, filtering by division and status.

##### **At GA level for Tivoli License Compliance Manager, version 2.2, active agents cannot be deleted on the Web UI.**

This problem was reported for Tivoli License Manager 2.1 and fixed as APAR IY79891.

After applying this fix pack it is possible to delete active agents. The recommended procedure for deleting active agents is the following:

1. Uninstall the agent
2. Wait long enough to ensure that all data sent by the agent has arrived at the administration server.
3. Delete the agent using the Web UI

### **Documentation fix history**

This fix pack documents solutions for the following problems or errors in the product documentation:

#### **About restricting the collection of potential signatures**

Problem: This information is missing from the Performance chapter of *IBM Tivoli License Compliance Manager: Problem Determination*.

Solution: The software use monitoring function of the agent includes the capability to collect information about software use signatures that are not included in the catalog. When the agent detects the starting of an executable file it attempts to match it to a product in the catalog. If the executable file does not match a catalog entry, the agent adds it to the list of potential signatures to be sent to the runtime server and subsequently to the administration server, where they are stored in the administration server database and can be processed using the catalog manager tool.

This feature can cause performance problems when the agent is installed on a system where an application that generates a large number of transient executable files is running. In such a case, the agent and the runtime server are forced to store and process very large numbers of potential signatures. In addition to the storage and performance problems this causes to the agent and runtime server, it also populates the list of potential signatures that are unlikely to be added to the catalog. This reduces the usefulness of the potential signatures list.

You can use the `unknownFiles.properties` file to define directories for which potential signature information is not of interest. The runtime server rejects any signatures that were detected in any of the paths specified in this file and they are not included when potential signatures are sent to the administration server.

The file is stored in the following location:

```
<INSTALL_DIR>\runtime\SLM_Runtime_Application.ear\slm_runtime.war\WEB-INF\conf
```

It includes the following properties:

**windowsPathToSkip**

The relative paths that are to be excluded from unknown module monitoring on Windows systems.

**Note:** Each backslash in the path must be doubled.

**unixPathToSkip**

The relative paths that are to be excluded from unknown module monitoring on UNIX systems. UNIX paths are case-sensitive.

For each property , you can define one or more relative paths that are to be excluded. You can list multiple paths by forming a concatenated string in which paths are separated by the ";" character. Multiple paths can also be included by using the "\*" character as a wildcard. For example, to exclude the following locations on a Windows system:

- C:\appdir30112006
- C:\appdir01122006
- C:\appdir02122006
- \\.\GLOBALROOT\DEVICE\HARDDISKVOLUME1\TMP

Include the following entry in the `unknownFiles.properties` file:

```
windowsPathToSkip=C:\\appdir*;\\.\GLOBALROOT\DEVICE\HARDDISKVOLUME1\TMP:
```

**Notes:**

1. Each property can include one or more paths. Each path can be a directory or a drive.
2. To specify multiple paths, form a concatenated string within which the relative paths are separated by the character ";". For example;

3. The wildcard character "\*" can be used in the definition of paths to be skipped, as follows:

The server must be stopped and restarted before the changes take effect.

#### **Documentation error on wizard installation panel**

**Problem:** If you are installing the fix pack on the administration server database and select to install the Configuration Manager license management extension, a documentation error exists in the help section of the License Manager configuration parameters panel.

**Solution:** The help text related to the License Manager Extension name should read:

"This is the name specified when you installed the Configuration Manager Extension for License Manager component included in the Configuration Manager version 4.2.3 fix pack. This component allows the Administration server to recognize the Tivoli management region server as a License Manager runtime server."

#### **CIT enabler (wenvmw.exe) needs VMware VmPerl Scripting API (APAR IY90170)**

**Problem** (found in *IBM Tivoli License Compliance Manager: Planning, Installation, and Configuration*): It is not documented that, to use the CIT enabler script on VMware, the VmPerl Scripting API must be installed.

**Solution:** On VMware, the CIT enabler script (wenvmw.exe) runs properly only if the VmPerl Scripting API option was selected when VMware was installed. If this API was selected during the installation of VMware, you can find it in: C:\Program Files\VMware\VMware VmPerl Scripting API. Otherwise install the API from: C:\Program Files\VMware\VMware Management Interface\htdocs\vmware\bin\VMware-VmPerlAPI-3.2.1-19281.exe.

#### **Clarification about CIT enabler (wenvmw.exe) (APAR IY89834)**

**Problem** (found in *IBM Tivoli License Compliance Manager: Planning, Installation, and Configuration*, page 20, agent's prerequisites): The paragraph

"You must copy the appropriate files to the appropriate directory on the host system. When you have installed a runtime server, you can find the necessary files under webdoc\enabler."

is misleading and must be replaced with

"When you have installed a runtime server, you can find the necessary files under webdoc\enabler. Copy the files that are relevant to your partitioning technology and platform to any directory on the host virtual server system (for example, VMware ESX Server). You must run the enabler script for the first time before deploying an agent. All guest operating systems must be active when the script runs. You must also schedule the script to run at regular intervals to detect any changes in the configuration of partitions."

#### **Only full distinguished names are supported when LDAP authentication is used (APAR IY86966)**

**Problem** (found in : *IBM Tivoli License Compliance Manager: Security Management*): When authentication is done using the LDAP method, the LDAP user ID used to log on to the server must be a full distinguished name (for example, john.white@us.ibm.com).

### Wrong name for Perl script (APAR IY87561) and clarification in the procedure for deploying an agent using IBM Tivoli Configuration Manager

Problem (found in *IBM Tivoli License Compliance Manager: Planning, Installation, and Configuration*): The procedure for deploying an agent using SPBs (at page 77) refers to a script file whose name is misspelled.

Solution: The name of the script in step 3 of the procedure is `agt_install.pl` instead of `agtinstall.pl`. In addition, the procedure is revised as follows:

To deploy agents using the SPBs, do the following:

1. Copy the SPBs from the CD to a directory on the TMR server or a managed node.

2. Ensure that the Tivoli Environment is configured.

3. From a policy region, launch the Perl script:

```
agt_install.pl -p <PATH>
```

where *PATH* is the full path of the directory where the SPBs are located.

If the SPBs are on a remote managed node, supply the additional parameter `-h <HOST NAME>` to identify the node.

The script performs the following actions:

- Creates a profile manager for each platform with the name `ITLM_Agt_Deploy_<PLATFORM>`
  - Creates a profile for each SPB
  - Imports the SPBs
4. Create the `CIT_Preinstall` profile manager and the `CIT_Preinstall.CIT` profile, then import `CIT_Preinstall.spb`.
  5. Create the `CIT` profile manager and the `CIT.2.3` profile, then import `CIT.spb`.
  6. Distribute `CIT_Preinstall.spb` in **force** mode to all computers to which you intend to distribute an agent SPB, setting the parameter **CIT\_ExploiterID** to **5724-D33**.
  7. Distribute the `CIT` SPB to all computers to which you intend to distribute an agent SPB.

This distribution must be made in **transactional** mode and must be committed after the installation has finished.

8. Perform distributions to deploy the appropriate platform-specific agent SPB on each target computer.

Distributions must be performed in **undoable** mode, using the **force** option.

You must provide values for the configuration parameters during the distribution. See Appendix C in *IBM Tivoli License Compliance Manager: Planning, Installation, and Configuration* for a complete definition of the software package block and the possible values that can be assigned to each parameter.

9. Following the installation, accept the SPB.

**Note:** To uninstall all objects launch:

```
agt_install.pl -uninst
```

### Wrong value for HP-UX used in Data Dictionary guide

Problem (found in the *IBM Tivoli License Compliance Manager: Data Dictionary*): Replace every occurrence of HP-UX with HPUX.

Solution:

- The value of OS\_NAME must be changed from HP-UX to HPUX in the following tables: AGENT, AGENT\_DELETED, UNKNOWN.
- The value of NAME must be changed from HP-UX to HPUX in the PLATFORM table.
- The values of AGENT\_PLATFORM must be changed from HP-UX to HPUX in the PLATFORM\_MAPPING table.

#### **Missing step in agent installation scenarios**

Problem (found in the *IBM Tivoli License Compliance Manager: Planning, Installation, and Configuration*): The documentation of an agent deployment using any of the following methods:

- individual local installation using a wizard
- remote bulk distribution using SSH or RSH

is missing the instruction about how the wizard should be started.

Solution:

On Windows platforms, you should start the wizard using the Add/Remove Program function that is available from the control panel. If Windows Terminal Server is installed on the computer where you want to run the setup file, or you are accessing another computer using Windows Terminal Services, you must ensure that the computer is in *install* mode when the setup file is launched.

To change into *install* mode manually, issue the command **change user /install** from a Windows command line. Then issue the command to run the setup file. After the uninstallation has completed, you must issue the command **change user /execute** to return to *execute* mode.

#### **Wrong consideration in changing runtime server task (APAR IY86066)**

Problem (found in the *IBM Tivoli License Compliance Manager: Administration*): The documentation for reviewing and changing runtime servers at page 40 (step 4) contains a consideration which is no longer applicable because, with Tivoli License Compliance Manager, version 2.2, the runtime server cannot be accessed using the Web UI.

Solution:

The following bullet is removed:

- If you change the port number to anything other than the default (80), and you configure WebSphere Application Server to receive incoming requests on a different port, you must include the port number in the Web page address when accessing the runtime server. For example, `http://alpha:8080/slmruntime/login`.

#### **Clarification about the statusinfo command (APAR IY85801)**

Problem (found in the *IBM Tivoli License Compliance Manager: Problem Determination*): The description of the **statusinfo** command at page 51 wrongly states that the command provides a way of collecting database debug tables.

Solution:

At page 51 of the *IBM Tivoli License Compliance Manager: Problem Determination* the description of **statusinfo** must be rewritten in the following way:

"The **statusinfo** command provides a way of collecting the trace files and configuration files that can help IBM Software Support to resolve problems with the Tivoli License Manager server and catalog manager infrastructure elements. Use the DB2<sup>®</sup> utilities to collect database information."

#### **Agent installation in silent mode (APAR IY86057)**

Problem (found in the *IBM Tivoli License Compliance Manager: Planning, Installation, and Configuration*): The local installation of an agent in silent mode is not documented.

Solution:

When the install wizard runs in background or silent mode, it takes the parameters it requires from an InstallShield response file.

A template response file, `ITLM_22_agentInstall_response.txt`, is provided on the local agent deployment CD. You can edit this file to provide the values for parameters that the wizard must set. See Appendix B in *IBM Tivoli License Compliance Manager: Planning, Installation, and Configuration* for a full description of the parameters.

An option exists to create a response file containing the values you specify when you run the wizard in interactive mode. To create a response file as part of an interactive installation, run the setup file with the following arguments:

```
-options <response_file.txt>
```

Where `response_file.txt` is the path where the response file is to be saved.

To run the install wizard in silent mode, do the following:

1. Update the response file with the parameters for the installation you want to perform.
2. Log on to the computer where you want to install the agent as a user with administrative rights (**Administrator** on Windows platforms or **root** on UNIX platforms).
3. Copy the response file to a temporary directory on a hard disk.  
The response file can either be a file you have created during interactive installation on a different computer that has the same platform as the computer on which you are installing or a copy of the `ITLM_22_agentInstall_response.txt` file provided on the Agent CD that you have updated.
4. Launch the wizard's setup command, with the following arguments:

#### **Background mode**

```
-options<response_file.txt>
```

#### **Silent mode**

```
-options<response_file.txt> -silent
```

Where `<response_file.txt>` is either the full or relative path to the response file you are using.

**Note:** On AIX 5.2 and Solaris 9, background mode is not available. To perform an installation using a response file on these platforms, use the syntax described for silent mode.

## Backward compatibility

All previous fix packs and interim fixes are superseded by this fix pack.

Dependencies:

Tivoli License Compliance Manager, version 2.2

## Troubleshooting information

This section provides information to help you diagnose problems that have an impact on Tivoli License Compliance Manager infrastructure elements.

### Agent operation

**Symptom: The agent does not start on Windows if gskit version 7 .dll files are installed in the wrong location.**

When this happens, the agent trace shows an error indicating that the ikeyman key db file was not created.

#### Causes and solutions:

On 32 bit applications, Windows looks for .dll files at the following locations:

- The directory of the application's executable file.
- The current directory.
- The %SystemRoot%\SYSTEM32 directory.
- The %SystemRoot% directory.
- The directories in your path environment variable.

The gskit version 7 .dll files are normally installed in the following standard path: %ProgramFiles%\ibm\gsk7\lib.

If gskit version 7 .dll files with a different modification level than the gskit actually installed (for example, .dll files of version 7.0.3.7, while gskit 7.0.3.25 is installed) are found in at least one of the directories that Windows uses for the search, then it can happen that the agent does not start due to a .dll loading failure.

When this happens, to resolve the problem you must find all gskit .dll files stored in any of the directories that Windows uses for the search and remove or rename them.

## Other changes as a result of this fix pack

This fix pack creates or updates a file called <INST\_DIR>\product.xml (where <INST\_DIR> is the directory where Tivoli License Compliance Manager is installed), which keeps track of the current Tivoli License Compliance Manager version.

Agents deployed after this fix pack has been applied to the runtime server will have a new version number of 2.2.0.20. The individual agents' software will be updated only when you specifically reinstall the agent software, or after you have used the agent self-update facility in the agent configuration file, as described in *IBM Tivoli License Compliance Manager: Planning, Installation, and Configuration*.

---

## Installation, migration, upgrade, and configuration information

This section includes the following topics:

- “Hardware and software requirements”
- “Installing the fix pack”
- “Upgrading agents” on page 20
- “Reverting to the previous version” on page 20

### Hardware and software requirements

This section includes the following topics:

- “Supported platforms”
- “System requirements”

#### Supported platforms

Information about supported platforms at GA is detailed in *IBM Tivoli License Compliance Manager: Planning, Installation, and Configuration*.

The fix pack introduces support for the following new versions of currently supported agent platforms:

- i5/OS V5R4
- Sun Solaris 10 on 64-bit Xeon Opteron processors
- Red Hat Enterprise Linux, version 3.0 Update 1 for xSeries
- Red Hat Enterprise Linux, version 3.0 Update 1,2 for pSeries and iSeries

**Note:** On i5/OS V5R4, the agent code must be installed as follows:

1. install the Tivoli License Compliance Manager, version 2.2 agent code with option **-W ptfsV5R3.active=False**
2. install this fix pack

#### System requirements

Hardware and software prerequisites are detailed in *IBM Tivoli License Compliance Manager: Planning, Installation, and Configuration*.

### Installing the fix pack

This section contains the instructions for installing the fix pack. Once you have installed the fix pack, you cannot uninstall it automatically. For details of how to revert to the previous version see “Reverting to the previous version” on page 20.

#### 2.2.0–TIV-TLCM-FP0002-servers-<platform>.zip

For each supported platform, the compressed file contains the files for installing the fix pack on computers where an administration server, a runtime server, or an administration server database or runtime server database is installed.

#### 2.2.0–TIV-TLCM-FP0002-SPB.zip

This file contains the software package blocks for each supported agent platform, to be used when deploying agents using IBM Tivoli Configuration Manager. It also contains the CIT enabler component.

**Note:** To deploy agents, use the `agt_install.pl` script from this zip file, as its performances have been largely improved compared to the previous version.



### 2.2.0-TIV-TLCM-FP0002-RSH-SSH-<platform>.zip

This contains the files needed to deploy agents on UNIX platforms using the RSH/SSH deployment wizard.

### 2.2.0-TIV-TLCM-FP0002-agentOS400.zip

This contains the files needed to deploy agents on i5/OS platforms.

### 2.2.0-TIV-TLCM-FP0002-ManualDeploy-<platform>.zip

This contains the files needed to install agents using a local wizard.

### 2.2.0-TIV-TLCM-FP0002-catman-<platform>.zip

This contains the files needed for the Catalog Manager component.

### 2.2.0-TIV-TLCM-FP0002-TOOLS-SPB.zip

This file contains the software package blocks that must be installed to enable the fix for APAR IY82440.

The fix pack must be applied to all server and database components of Tivoli License Compliance Manager and to the catalog manager.

#### Notes:

1. Before starting the installation, back up the administration and runtime server databases and the installation directories of administration server, runtime servers, and the catalog manager.
2. During the installation of the fix on the administration server or a runtime server, the wizard stops and starts the server. If the server is running in a WebSphere Application Server secure cell, you will be asked to provide the user ID and password for the secure cell. Ensure that you have this information before you start.

The procedure for installing the fix pack is essentially the same for servers, databases, and the catalog manager. Therefore only one set of instructions is provided. However, when installing the fix pack on the administration server or database an additional prompt is included and you are asked to specify whether installation of the fix pack should include enablement of license management facilities for Tivoli Configuration Manager. No information about this option is provided in this readme, for complete information about enabling and using license management facilities for Configuration Manager, see *IBM Tivoli Configuration Manager: License Management Extension*.

To install the fix pack, complete the following steps on each computer where a component is installed:

1. Log on to the computer where one or more of the Tivoli License Compliance Manager components is installed as Administrator (Windows) or root (UNIX).
2. Unpack the servers or catalog manager compressed file into a temporary directory.
3. Launch the setup file for the platform on which you are installing the fix pack. The installation wizard starts.

**Note:** No license agreement panel is displayed. The fix pack is subject to the same terms and conditions under which Tivoli License Compliance Manager, version 2.2 is licensed.

4. Specify a directory where the wizard can create a backup of your server configuration and other files that are affected by the fix pack and click **Next**.

If the wizard is unable to create the backup, the installation cannot continue. Ensure that you have the correct permissions to write to the specified directory and that there is sufficient space to create the backup.

**Note:** The wizard calculates the space required to create the backup based on the initial size of a server when it is installed. Under normal circumstances, the space occupied by the server directories should not increase very much. However, if other directories, for example directories required for manual agent deployment, have been created within the server file structure, the space required for the backup could be considerably more than anticipated. Under these circumstances, it is possible that the installation could fail because of lack of space. If this occurs, a message will be displayed informing you that the installation has failed, possibly because of insufficient permissions. You must then make more space available for the installation.

5. Select the option to install the fix pack only or to install the fix pack and enable license management for Configuration Manager.

If you select the license management for Configuration Manager option, you are prompted for further information. See *IBM Tivoli Configuration Manager: License Management Extension*.

6. Check the summary panel for the installation and click **Next** to confirm that you want to install the fix pack.

If you are applying the fix pack to a server that is running in a WebSphere Application Server secure cell, you will be prompted to supply a valid user ID and password when the wizard stops and starts the runtime server.

7. When the installation is complete, click **Finish**.

## Upgrading agents

To apply the fixes to agents that are already deployed, you must redeploy or update the agent. For information about how to do this see the sections **Redeploying an agent** and **Agent self-update** in *IBM Tivoli License Compliance Manager: Planning, Installation, and Configuration*.

**Note:** On UNIX systems, the agent self-update from 2.2.0-TIV-TLCM-FP0001 to 2.2.0-TIV-TLCM-FP0002 works correctly only if the FP0001 agent was installed in the default path (/var/itlm/). To update the agent, you must uninstall the old version and then install the new version.

**Note:** On Linux on zSeries and S/390 systems, the agent self-update from 2.2.0-TIV-TLCM-FP0001 to 2.2.0-TIV-TLCM-FP0002 does not work correctly. To update the agent, you must uninstall the old version and then install the new version.

Agents are supported only when they are registered to a runtime server with the same, or a higher, Tivoli License Compliance Manager maintenance level.

## Reverting to the previous version

There is no automatic method for uninstalling this fix pack.

You must rollback the changes on each computer where the fix pack has been installed, as follows:

1. Stop the server.

2. Manually replace the files that were changed by the installation of the fix pack with the backup copies taken during the installation.

The backup directory specified during the installation of the fix pack contains a subdirectory 2.2.0-TIV-TLCM-FP0002 which contains a subset file structure for the Tivoli License Compliance Manager components to which the fix pack has been applied. You must copy the files manually from each subdirectory of the backup to the corresponding directory of the server or catalog manager installation.

3. If this is the first fix applied to the GA version of the code, delete the file `<INSTALL_DIR>\product.xml`.

If previous fixes have been applied, the `product.xml` file is one of the files that you have restored from the backup directory.

4. Restart the server.

---

## General information

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

- “Publications”
- “Accessibility” on page 24
- “Tivoli technical training” on page 24
- “Contacting IBM software support” on page 24
- “Conventions used in this readme file” on page 28

## Publications

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

### Tivoli License Compliance Manager

The Tivoli License Compliance Manager library consists of the following books:

- *IBM Tivoli License Compliance Manager: Overview*, SC32-1503  
Provides general information about Tivoli License Compliance Manager.
- *IBM Tivoli License Compliance Manager: Administration*, SC32-1430  
Provides information about how to use Tivoli License Compliance Manager to set up a monitoring infrastructure, define licensing conditions, and produce reports.
- *IBM Tivoli License Compliance Manager: Planning, Installation, and Configuration*, SC32-1431  
Provides information about planning, installing, and configuring the Tivoli License Compliance Manager product.
- *IBM Tivoli License Compliance Manager: Commands*, SC32-1501  
Provides descriptions of all Tivoli License Compliance Manager commands.
- *IBM Tivoli License Compliance Manager: Data Dictionary*, SC32-1432  
Provides descriptions of the database tables and indexes maintained in the Tivoli License Compliance Manager administration server database.
- *IBM Tivoli License Compliance Manager: Problem Determination*, SC32-9102  
Provides Tivoli License Compliance Manager diagnostic information, including messages, traces, and event logs, and information about tools and techniques for diagnosing problems.

- *IBM Tivoli License Compliance Manager: Catalog Management*, SC32-1434  
Describes how to use the software catalog management tool to maintain an up-to-date catalog of software products and the signatures that are used to detect their presence and use on monitored computers.
- *IBM Tivoli License Compliance Manager: Security Management*, SC32-1502  
Provides information about the security features of Tivoli License Compliance Manager.
- *IBM Tivoli License Compliance Manager: Release Notes*, SC32-1429  
Provides a summary of changes made in the release, lists the supported platforms for each component, documents known errors and workarounds, and includes the latest information about the product that could not be included in the main documentation. This document is not delivered on the documentation CD, but is available from the Tivoli Software Information Center. Updated versions of the document may be placed on the Tivoli Software Information Center at any time.  
How to access the Tivoli Software Information Center is described in “Accessing publications online” on page 23.

## Related publications

The following document also provides useful information:

- *IBM DB2 Universal Database™: Quick Beginnings for DB2 Servers*, GC09-4836
- *IBM DB2 Universal Database: Quick Beginnings for DB2 Clients*, GC09-4832  
These *Quick Beginnings* guides provide an introduction to installing and configuring DB2 products.
- [www.ibm.com/software/webservers/appserv/infocenter.html](http://www.ibm.com/software/webservers/appserv/infocenter.html) provides access to WebSphere Application Server product information.
- *Redbook: DB2/UDB/WebSphere Performance Tuning Guide*, SG24-6417  
This Redbook contains useful information about tuning DB2 and WebSphere Application Server for performance. In particular, see Sections 2.7–2.10, Chapter 3, Sections 3.3-3.5; and Chapters 4 and, 5.
- *Redbook: IBM WebSphere V5.0 Performance, Scalability, and High Availability: WebSphere Handbook Series*, SG24-6198  
This Redbook contains information about tuning WebSphere Application Server for performance. In particular, see chapter 18.
- *IBM WebSphere Application Server, version 5.0.2: Monitoring and Tuning Performance*,  
This is the tuning guide for WebSphere Application Server, version 5.
- *Redbook: IBM WebSphere Application Server, version 5.0 System Management and Configuration*, SG24-6195  
This Redbook contains information about configuring WebSphere Application Server, version 5.

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:

[www.ibm.com/software/tivoli/library](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 Compliance Manager documentation CD contains an information center that includes the publications of the product library, other than the *IBM Tivoli License Compliance Manager: Release Notes*. The format of the publications is PDF and HTML, and they are available in all supported languages. See the `readme.txt` file to access the information center using a Web browser. The file is in the root directory on the documentation CD.

IBM posts publications for this and all other Tivoli products, as they become available and whenever they are updated, to the Tivoli software information center Web site. Access the Tivoli software information center by first going to the Tivoli software library at the following Web address:

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

Click **Tivoli product manuals**. In the Tivoli Technical Product Documents Alphabetical Listing window, click IBM Tivoli License Manager to access the product library at the Tivoli software information center.

**Note:** If you print PDF documents on other than letter-sized paper, set the option in the **File** → **Print** window that allows Adobe Reader to print letter-sized pages on your local paper.

## Ordering publications

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

[www.elink.ibm.com/public/applications/publications/cgibin/pbi.cgi](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, contact your software account representative to order Tivoli publications.

## 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 Compliance Manager: Administration*.

## Tivoli technical training

For Tivoli technical training information, refer to the following IBM Tivoli Education Web site:

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

## Contacting IBM software support

IBM Software Support provides assistance with product defects.

Before contacting IBM Software Support, your company must have an active IBM software maintenance contract, and you must be authorized to submit problems to IBM. The type of software maintenance contract that you need depends on the type of product you have:

- For IBM distributed software products (including, but not limited to, Tivoli, Lotus, and Rational products, as well as DB2 and WebSphere products that run on Windows or UNIX operating systems), enroll in Passport Advantage® in one of the following ways:
  - **Online:** Go to the Passport Advantage Web site at [www.lotus.com/services/passport.nsf/WebDocs/Passport\\_Advantage\\_Home](http://www.lotus.com/services/passport.nsf/WebDocs/Passport_Advantage_Home) and click **How to Enroll**.
  - **By phone:** For the phone number to call in your country, go to the IBM Software Support Web site at [techsupport.services.ibm.com/guides/contacts.html](http://techsupport.services.ibm.com/guides/contacts.html) and click the name of your geographic region.
- For customers with Subscription and Support (S & S) contracts, go to the Software Service Request Web site at <https://techsupport.services.ibm.com/ssr/login>
- For customers with IBMLink™, CATIA, Linux, OS/390®, iSeries, pSeries, zSeries®, and other support agreements, go to the IBM Support Line Web site at <http://www.ibm.com/services/us/index.wss/so/its/a1000030/dt006>
- For IBM eServer™ software products (including, but not limited to, DB2 and WebSphere products that run in zSeries, pSeries, and iSeries environments), you can purchase a software maintenance agreement by working directly with an IBM sales representative or an IBM Business Partner. For more information about support for eServer software products, go to the IBM Technical Support Advantage Web page at [www.ibm.com/servers/eserver/techsupport.html](http://www.ibm.com/servers/eserver/techsupport.html).

If you are not sure what type of software maintenance contract you need, call 1-800-IBMSERV (1-800-426-7378) in the United States or, from other countries, go to the contacts page of the IBM Software Support Handbook on the Web ([techsupport.services.ibm.com/guides/contacts.html](http://techsupport.services.ibm.com/guides/contacts.html)) and click the name of your geographic region for phone numbers of people who provide support for your location.

Follow the steps in this topic to contact IBM Software Support:

1. "Determine the business impact of your problem"
2. "Describe your problem and gather background information"
3. "Submitting problems" on page 26

### **Determine the business impact of your problem**

When you report a problem to IBM, you are asked to supply a severity level. Therefore, you need to understand and assess the business impact of the problem you are reporting. Use the following criteria:

<b>Severity 1</b>	<b>Critical</b> business impact: You are unable to use the program, resulting in a critical impact on operations. This condition requires an immediate solution.
<b>Severity 2</b>	<b>Significant</b> business impact: The program is usable but is severely limited.
<b>Severity 3</b>	<b>Some</b> business impact: The program is usable with less significant features (not critical to operations) unavailable.
<b>Severity 4</b>	<b>Minimal</b> business impact: The problem causes little impact on operations, or a reasonable circumvention to the problem has been implemented.

### **Describe your problem and gather background information**

When explaining a problem to IBM, be as specific as possible. Include all relevant background information so that IBM Software Support specialists can help you solve the problem efficiently. To save time, know the answers to these questions:

- What software versions were you running when the problem occurred?
- Do you have logs, traces, and messages that are related to the problem symptoms? IBM Software Support is likely to ask for this information.
- Can you re-create the problem? If so, what steps were performed to re-create the problem?
- Did you make any changes to the system? For example, did you make changes to the hardware, operating system, networking software, and so on?
- Are you currently using a workaround for the problem? If so, be prepared to explain the workaround when you report the problem.

The problem determination toolkit includes commands for assembling problem determination information for all product components. For more information see *IBM Tivoli License Compliance Manager: Problem Determination*.

## Submitting problems

You can submit your problem to IBM Software Support in one of two ways:

### Online

Click **Submit and track problems** on the IBM Software Support site at <http://www.ibm.com/software/support/probsub.html>. Type your information into the appropriate problem submission form.

### By phone

For the phone number to call in your country, go to the contacts page of the *IBM Software Support Handbook* at [techsupport.services.ibm.com/guides/contacts.html](http://techsupport.services.ibm.com/guides/contacts.html) and click the name of your geographic region.

If the problem you submit is for a software defect or for missing or inaccurate documentation, IBM Software Support creates an Authorized Program Analysis Report (APAR). The APAR describes the problem in detail. Whenever possible, IBM Software Support provides a workaround for you to implement until the APAR is resolved and a fix is delivered. IBM publishes resolved APARs on the IBM product support Web pages daily, so that other users who experience the same problem can benefit from the same resolutions.

For more information about problem resolution, see “Searching knowledge bases” and “Obtaining fixes” on page 27.

## Searching knowledge bases

If you have a problem with your IBM software, you want it resolved quickly. Begin by searching the available knowledge bases to determine whether the resolution to your problem is already documented.

**Search the information center on your local system or network:** IBM provides extensive documentation that can be installed on your local machine or on an intranet server. You can use the search function of this information center to query conceptual information, instructions for completing tasks, reference information, and support documents.

**Search the Internet:** If you cannot find an answer to your question in the information center, search the Internet for the latest, most complete information that might help you resolve your problem. To search multiple Internet resources for your product, expand the product folder in the navigation frame to the left and select **Support on the Web**. From this topic, you can search a variety of resources including:

- IBM technotes
- IBM downloads
- IBM Redbooks™
- IBM DeveloperWorks
- Forums and newsgroups
- Google



## Obtaining fixes

A product fix might be available to resolve your problem. You can determine what fixes are available for your IBM software product by checking the product support Web site:

1. Go to the IBM Software Support Web site ([www.ibm.com/software/support](http://www.ibm.com/software/support)).
2. Under **Products A - Z**, select your product name. This opens a product-specific support site.
3. Under **Self help**, follow the link to **Search all Downloads**, where you will find a list of fixes, fix packs, and other service updates for your product. For tips on refining your search, click **Search tips**.
4. Click the name of a fix to read the description and optionally download the fix.

To receive weekly e-mail notifications about fixes and other news about IBM products, follow these steps:

1. From the support page for any IBM product, click **My support** in the upper-right corner of the page.
2. If you have already registered, skip to the next step. If you have not registered, click register in the upper-right corner of the support page to establish your user ID and password.
3. Sign in to **My support**.
4. On the My support page, click **Edit profiles** in the left navigation pane, and scroll to **Select Mail Preferences**. Select a product family and check the appropriate boxes for the type of information you want.
5. Click **Submit**.
6. For e-mail notification for other products, repeat Steps 4 and 5.

For more information about types of fixes, see the *Software Support Handbook* ([techsupport.services.ibm.com/guides/handbook.html](http://techsupport.services.ibm.com/guides/handbook.html)).

## Updating support information

Information centers typically include one or more *support information plug-ins*. These plug-ins add IBM technotes and other support documents to the information center. The following steps describe how to update your support information plug-ins:

1. Go to the IBM Software Support Web site ([www.ibm.com/software/support](http://www.ibm.com/software/support)).
2. Under **Products A - Z**, select your product name. This opens a product-specific support site.
3. Under **Search support for this product**, type the keyword phrase: `com.ibm.support`. Click the **Download** check box, and click **Submit**.
4. Check the search results for updates to support information plug-ins. All support information plug-ins follow the naming convention, "`com.ibm.support.product.doc`." If an update is available, select it from the list and view the download instructions.
5. Save the attached zip file to a temporary location on your hard drive.
6. Unzip the downloaded file, making sure that you retain the subfolders.
7. From the location where you unzipped the file, copy the support information plug-in folder to your Eclipse plug-ins folder. For example, if your IBM software product is installed at `c:\IBM\WebSphere\`, copy the updated plug-in folder (`com.ibm.support.product.doc`) to `c:\IBM\WebSphere\eclipse\plugins`.
8. To see the updated support information, start the information center (or shut it down and restart it), and expand the **Support information** node in the navigation tree.

## 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 `<INSTALL_DIR>/admin/conf`, `INSTALL_DIR` depends on the location where you have installed the component, while `/admin/conf` is constant.

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Program Number: 5724-D33