

**Date: 2001-04-26**

**Patch: 1.1.1-TKS-0003**

## **Component: Tivoli Kernel Services**

### **General Description:**

This readme file contains information about the fixes included in this patch and instructions on how to apply the patch to your Tivoli Kernel Services installation. The information in this document supersedes the information provided in the product documentation included on the Installation Depot and Bootprint CD-ROMs.

This patch should be installed and used only in conjunction with the Tivoli management software that you have purchased. Be sure to read the documentation included with that Tivoli management software before installing this patch to Tivoli Kernel Services. Any planning, prerequisite, and installation information provided with that software supersedes similar information included with this patch or with Tivoli Kernel Services.

### **Architecture(s):**

solaris2, w32-ix86, aix4-r3, win2000

### **Patches Superseded by this Patch:**

1.1.1-TKS-0001 and 1.1.1-TKS-0002

### **Dependencies:**

Tivoli Kernel Services 1.1.1

### **Files Replaced or Added by this patch:**

The list below contains files altered by this patch. The list below shows the location of the files as they are extracted from the patch file. The default behavior is to unpack the patch files to a directory named 1.1.1-TKS-0003, which is known as the patch directory. Under the patch directory, you will find subdirectories for: readme, components, and sql.

The readme1st file for this patch is in the 1.1.1-TKS-0003 directory. The readme directory contains the product readme (readmebdy.htm) file. The components directory contains the jar files for all updated components. The sql directory contain updates to SQL files.

```
1.1.1-TKS-0003:readme1st.htm
1.1.1-TKS-0003:tksllogo.gif
1.1.1-TKS-0003:mmstyle.css
1.1.1-TKS-0003:milllogo.jpg
1.1.1-TKS-0003:tksl10_installing.pdf
readme:bullet.gif
readme:closed.gif
readme:Image12.gif
readme:Image13.gif
readme:milllogo.gif
```

readme:milllogo.jpg  
readme:mmstyle.css  
readme:mmtoc.css  
readme:open.gif  
readme:readme.htm  
readme:readmebody.htm  
readme:readmetoc.htm  
readme:secswit.gif  
readme:spacer.gif  
readme:timage1.gif  
readme:timage2.gif  
readme:timage4.gif  
readme:timage5.gif  
readme:timage6.gif  
readme:timage7.gif  
readme:timage8.gif  
readme:tksllogo.gif  
sql:update\_schematables.sql  
components:ActionObjects@5.1.3.jar  
components:aix-jre@5.1.5.jar  
components:AZNEngine@5.1.3.jar  
components:CliService@5.1.2.jar  
components:cm@5.1.5.jar  
components:ComponentDistributionService@5.1.4.jar  
components:ComponentDistributionServiceInterface@5.1.4.jar  
components:com.tivoli.pfdk.ful.if@1.1.4.jar  
components:com.tivoli.pfdk.ful.impl@1.1.4.jar  
components:com.tivoli.pfdk.ful.nls@1.1.4.jar  
components:com.tivoli.pfdk.ful.util@1.1.4.jar  
components:com.tivoli.pf.nls\_en.nls@1.1.4.jar  
components:com.tivoli.pf.ns.implementation.impl@1.1.4.jar  
components:com.tivoli.pf.pfconsole.impl@1.1.4.jar  
components:DepotComponentInstaller@5.1.3.jar  
components:dsinterface@5.1.3.jar  
components:GatewaySNMPService@5.1.4.jar  
components:Icmp@5.1.2.jar  
components:JRE@5.1.5.jar  
components:LocalComponentInstaller@5.1.3.jar  
components:lsm@5.1.3.jar  
components:MACImpl@5.1.1.jar  
components:MessagingService@5.1.2.jar  
components:MibInterface@5.1.2.jar  
components:MibService@5.1.2.jar  
components:MSManager@5.1.3.jar  
components:NelInterface@5.1.2.jar  
components:NelService@5.1.2.jar  
components:OrbImpl@5.1.4.jar  
components:OrbNls@5.1.1.jar  
components:PndOrbsAndComponents@5.1.4.jar  
components:PsCommonInt@1.1.4.jar  
components:PsJcImpl@1.1.4.jar  
components:PsJcLauncherService@1.1.4.jar  
components:PsMcrImpl@1.1.4.jar  
components:PsNsImpl@1.1.4.jar  
components:SDSRemoteServiceInterface@5.1.1.jar  
components:SnmpData@5.1.2.jar  
components:SnmpInterface@5.1.2.jar  
components:SnmpService@5.1.3.jar  
components:TivoliKernelServicesCommon@5.1.5.jar  
components:TivoliKernelServicesConsole@5.1.4.jar  
components:TivoliKernelServicesInstallationDepot@5.1.5.jar  
components:TKSInstallerImpl@5.1.5.jar  
components:TKSInstallerInt@5.1.5.jar  
components:TKSOrbRecyclerImpl@5.1.5.jar  
components:TKSOrbRecyclerInt@5.1.5.jar

components:util@5.1.3.jar  
components:zurich-correlator@1.0.1.jar

## Patch Contents:

This readme and files listed above.

## Before You Install the Patch

1. Read the documentation provided with the Tivoli management software that you have purchased, including the Planning for Disaster Recovery chapter in *Planning for Tivoli Kernel Services*. That chapter provides information about backing up critical aspects of your currently-installed Tivoli Kernel Services software. This patch cannot be rolled back. To remove this patch, you will need to use your disaster recovery procedure to restore your system to the environment that existed before installing this patch.

2. Only install this patch if requested to do so.

This patch can be applied on systems running the following versions of Tivoli Kernel Services:

- Tivoli Kernel Services 1.1.1 with no patches applied
- Patch 1.1.1-TKS-0001 applied to the above.

See [Determining the Version of Tivoli Kernel Services Installed](#) later in this readme file for more information.

3. Read this *entire* readme file to acquaint yourself with the Tivoli Kernel Services patch process in general and with the specifics for this patch.

4. You need access to a tool that can unpack ZIP, JAR, and TAR files. If your system has a JDK installed, you have the tool needed to extract JAR files. There are many places on the Internet where you can obtain a ZIP, JAR, or TAR extractor. On Windows platforms, utilities similar to WinZip can extract compressed data from all three types of files. Most UNIX systems ship with a version of a "tar" (tape archive) utility that can be used to extract information from JAR and TAR archives. Similarly, utilities such as PKUNZIP are available for UNIX systems. If you do not have a versatile extraction utility already installed, you must obtain one before installing this patch. The only utilities used during Tivoli System Verification Test were tar and WinZip. Consult the documentation for the package you choose for a list of extraction commands and optional flags.

**Note:** The installation of this patch requires you to issue commands to Tivoli Kernel Services using the command line interface, or CLI. The wcmd commands provided in this readme file assume that the person issuing the commands is implicitly identified in Tivoli Kernel Services by the appropriate account and user information. If this is *not* the case, you must use the **-u** option on each wcmd and explicitly specify a Tivoli Kernel Services user ID that is authorized to perform the command.

For example, to issue the **wcmd info getOrbs** command using the default user ID of **superadmin**:

```
wcmd -u superadmin info getOrbs
```

When prompted for a password, enter **password** if you have not changed the default.

Commands in this readme are shown on one line when possible. If printing this document, use landscape format to ensure you see the entire command.

Additional information on command authorization can be found in the *Tivoli Kernel Services Command Reference* in the section entitled *Security Implications for wcmd Commands*.

## Understanding the Patch Process

Tivoli Kernel Services is designed around a modular architecture called the *component model*. The component model encapsulates the functions of Tivoli Kernel Services into a set of distinct components. These components are packaged as a series of Java Archive (JAR) files that contain the software necessary to implement each component as well as other important data, such as versioning information and a list of prerequisites.

This modular architecture allows a Tivoli Kernel Services application, or Tivoli Kernel Services itself, to be modified, or patched, by installing updated JAR files on the installation depot and subsequently deploying the components these updated JAR files represent to the other systems in the installation. There is no need to physically install any updated software on the bootstrap servers.

Installing a new or upgraded component involves copying the appropriate files to the installation depot machine and then entering a **wcmd cds install** command. This makes the software for the new component (the updated JAR file) available on the installation depot for subsequent deployment in the installation.

After the software for the new or upgraded component is available on the installation depot, the **wcmd cds upgrade** command is used to deploy the component to the appropriate ORBs in the installation. After the **wcmd cds upgrade** command is issued, the following occurs:

- If an affected ORB is running, in some cases the patched software will be updated immediately. In other cases, the ORB will have to be recycled to complete the update. ([See Recycling ORBs](#))
- If an affected ORB is not running, the patched software is updated when the ORB subsequently starts at some future time. In the case of some patches, the ORB will have to be recycled again to complete the update.
- If a new bootstrap ORB is installed later, the patched software is updated when the ORB starts.

The **wcmd tksinstaller** command performs both the install and upgrade of the affected components in a patch automatically when run.

Review the [ORB message log](#) on the installation depot after running a **wcmd tksinstaller** or **wcmd cds upgrade** command. If you see any exceptions related to components other than PsJcLauncherService or cm, recycle the affected ORB.

## Recycling ORBs

Installing this patch will require **all ORBs** to be recycled, including any ORBs added to an installation after this patch is applied. ORBs added to an installation after this patch has been applied might initially come up with software that was updated by this patch. Recycling a newly-added ORB will trigger the upgrade process and install the patched software on the newly added ORB.

The current phase of the patch processing must be completed before you recycle the ORB. When directed to recycle an ORB, you should determine if the current patch processing phase has completed by using the **wcmd lci showQueue** command. If this command does not return a message stating "The queue is empty", the patch has not been fully applied. Wait until the **wcmd lci showQueue** command shows an empty queue before recycling an ORB.

There is currently a problem where the **wcmd lci showQueue** command might return messages indicating any of the following:

```
Retract queued for component OrbNls5@1.1.0
Retract queued for component ib5projs@1.1.1
Retract queued for component NelInterface@5.1.1
Retract queued for component tmd@1.0.1
Retract queued for component DistributionUtilities@5.1.2
Retract queued for component PndOrbsAndComponents@5.1.2
Retract queued for component PsCommonInt@1.1.0
Retract queued for component ComponentDistributionServiceInterface@5.1.2
```

If these are the only messages returned, ignore them and assume the patch process has completed.

There are two known problems affecting ORB recycles:

1. On a Windows system, an ORB might fail to restart automatically after being recycled using the `wcmd orb recycle` command. If the ORB does not restart automatically, restart the ORB as you normally would using the **Services** panel as outlined in the *Installing Tivoli Kernel Services* document.
2. An ORB might fail to restart automatically after being repeatedly recycled using the `wcmd orb recycle` command. This problem usually manifests itself after the fourth recycle. After this problem is encountered, you can still start the ORB as you normally would. To delay the onset of this problem on Windows systems, you can add this line to the `LOCKCfg.properties` file associated with the ORB:

```
LOCK_MAX_RESTARTS=100
```

**Note:** Information contained in the Local ORB Creator and Killer (LOCK) output and error logs, **stdout** and **stderr**, is lost when the ORB is restarted. To preserve the contents of these log files for troubleshooting, either make a copy of them or rename them before restarting an ORB. See [Logs](#) for more information about the names and locations of these log files on Windows and UNIX systems.

## Determining the Version of Tivoli Kernel Services Installed

To determine the version of Tivoli Kernel Services installed, perform the following steps.

1. Open a command window on the Installation Depot machine.
2. Change to the directory where the Installation Depot software is installed.
3. Go to the **orb.1** directory.
4. Set up the environment for issuing commands by running the appropriate script or batch file.

### Windows

```
setupenv
```

### UNIX

```
./setupEnv.sh
```

5. Enter the following command:

```
wcmd cds listComponentVersions TivoliKernelServicesInstallationDepot
```

If the latest version number returned is 5.1.2, you have a Tivoli Kernel Services 1.1.1 installation. If the latest version number returned is 5.1.3, you have applied patch 1.1.1-TKS-0001 to your Tivoli Kernel Services installation. In either case, you can install this patch.

## Unpacking the Patch

This patch is provided in a ZIP file. The patch files must be extracted from the ZIP file before the patch can be applied.

1. Copy the 1.1.1-TKS-0003.zip file to a directory accessible to the installation depot machine.
2. Unpack the patch files on the installation depot machine.

**On Windows systems:**

1. Unzip the patch file to a temporary directory on a drive that is local to the installation depot machine (for example, C:\temp). You cannot install this patch from a shared (or mounted) network-accessible drive. If using WinZip, be sure to specify the "use folder names" option.

2. If the local drive you use is partitioned into logical drives, the directory to which the patch file is unzipped must be on the same logical drive as the installation depot ORB.

**On UNIX systems:**

Unpack the patch file to a temporary directory. Caution should be used when using the /tmp directory, as some versions of UNIX clear this directory when the server is rebooted. The installation instructions that follow use the /tmp directory as a placeholder to represent the directory where the contents of the unpacked patch file are stored.

When the patch file is unpacked, a directory called **1.1.1-TKS-0003** is created. This directory is referred to throughout this document as the "patch directory". Updates to the individual components are stored in subdirectories under the patch directory. The instructions in this readme file assume that you have unpacked the patch file into the /temp directory on Windows systems or the \tmp file system on UNIX systems. Note that on some UNIX systems, the files in the /tmp directory might be deleted when the system is rebooted, therefore you might want to choose a different directory.

3. The product readme file for Tivoli Kernel Services 1.1 has been updated with additional information in this patch. To make this information available on the installation depot machine, copy all the files from the **readme** subdirectory of the patch directory to the readme subdirectory of your Tivoli Kernel Services installation. The files are:

```
readme.htm  
readmetoc.htm  
readmebdy.htm  
millllogo.jpg  
timage1.gif  
timage2.gif  
timage4.gif  
timage5.gif  
timage6.gif  
timage7.gif  
timage8.gif  
Image12.gif  
Image13.gif
```

Point your Web browser at the readme.htm file to view the updated product README file.

4. The *Installing Tivoli Kernel Services* document has been updated with additional information in this patch. To view this information, use [Adobe Acrobat Reader](#) to view the tks110\_installing.pdf file in the patch directory. You can optionally copy this file to a more permanent location in your installation. The updated HTML version of the document is not included as part of the patch.

## Installing the Patch

Starting with this patch, a new component upgrader is installed and used to apply the components upgraded as a result of the patch process.

1. Open a command window on the installation depot machine.
2. Change to the directory where Tivoli Kernel Services is installed.
3. Go to the orb.1 directory.
4. Set up the environment for issuing commands by running the appropriate script or batch file.

**Windows**

```
setupenv
```

**UNIX**

```
./setupEnv.sh
```

5. Install the Tivoli Kernel Services upgrader.

**Windows**

```
wcmd cds install TKSInstallerImpl@5.1.5 file:///C:/temp/1.1.1-TKS-0003/components
```

**UNIX**

```
wcmd cds install TKSInstallerImpl@5.1.5 file:///tmp/1.1.1-TKS-0003/components
```

6. Deploy the Tivoli Kernel Services upgrader on the installation depot ORB.

```
wcmd cds deploy TKSInstallerImpl@5.1.5  
Orbset/installationDepotOrbset
```

\*\*\*\* **WAIT** \*\*\*\* until the following command lists the tksinstaller bundle before continuing.

```
wcmd list
```

7. Start the Tivoli Kernel Services upgrader.

```
wcmd tksinstaller upgrade true
```

The upgrader shows progress in the command window during its processing. At the end of this phase of processing, the upgrader terminates with a message stating that the ORBs need to be shut down.

8. Shut down the Tivoli Presentation Services ORB (orb.2) on the installation depot machine.

9. Shut down the installation depot ORB (orb.1).

10. Update the security registry. A script is provided to update the security registry with a new configuration key. Running the script on your DB2 server installs the updated schema.

Install this update before any other updates by performing the following steps:

1. On the DB2 server machine, copy the update\_schematables.sql file to a location that can be accessed by the DB2 command window.
2. Log into the DB2 database server machine using your DB2\_user\_ID and password.
3. On Windows machines, either open a DB2 Command Window or open a Windows command prompt and use the **db2cmd** command to set the DB2 environment variables.
4. Change to the directory to which the update\_schematables.sql file was copied.
5. Enter the following commands in the DB2 command window, specifying the name of the database to be updated (default name is TMD), and your account information where shown:

```
db2 connect to <tmd_database_name> user <DB2_user_ID> using
<password>
db2 -tvf update_schematables.sql
db2 disconnect current
```

11. Restart the installation depot ORB (orb.1).

\*\*\*\* WAIT \*\*\*\* until the installation depot ORB (orb.1) reaches state 17. This can be verified by viewing the [LOCK output log](#). After the ORB reaches state 17, wait until the disk activity and CPU utilization drop to normal levels and then verify that the Web server installed by Tivoli Kernel Services is operational. This can be done by pointing your Web browser to `http://hostname/Repository`, substituting the fully qualified name of the installation depot machine for *hostname*. If a list of JAR files is displayed, the Web server is operational. Be patient. Do not proceed to the next step until all of the above conditions are met.

12. Restart the Tivoli Presentation Services ORB (orb.2) on the installation depot machine.

13. \*\*\*\* WAIT\*\*\*\* until the Tivoli Presentation Services ORB (orb.2) reaches state 17. This can be verified by viewing the [LOCK output log](#).

14. Recycle the Tivoli Presentation Services ORB (orb.2) again.

Other ORBs in the installation must be recycled after this.

15. Restart the Tivoli Kernel Services upgrader to complete the upgrade.

```
wcmd tksinstaller upgrade true
```

The upgrader generally exits prematurely at least once in the later phases of patch processing, usually after completing task 18 of 30. When the upgrader stops prematurely on AIX systems, you should verify that the Java runtime environment on the AIX system was upgraded properly. See [Ensuring the Upgrade of the JRE on AIX was Successful](#) section of this readme file before continuing the patch install.

When the Tivoli Kernel Services upgrader ends unexpectedly or returns immediately to the command prompt when started, enter a **wcmd tksinstaller listenstatus** command to check on the status of the upgrader. If no output is displayed, the upgrader is not running. In that case, restart the upgrader to complete the patch install. If the upgrader again fails, recycle the ORB and retry the command. If the upgrader continues to end unexpectedly, contact Tivoli Customer Support personnel.



After one or more restarts of the upgrader, the Tivoli Kernel Services upgrader completes the patch install. After the upgrader completes successfully, the [LOCK output log](#) will contain a message indicating that the **Upgrade has completed successfully**. Alternately, you can issue a **wcmd tksinstaller getstate** command to check on the status of the upgrader. A response of **ALL\_DONE** indicates that the upgrader has completed its processing.

16. The Tivoli Kernel Services upgrader handles the update of all the components listed in the [Updating Components Deployed by Applications](#) section of the readme except for the SnmpService component. Follow the steps in [that section](#) to upgrade the SnmpService component, if necessary.

17. Recycle any ORBs that are not automatically recycled after running the upgrader in the previous step.

## Known Problems When Applying the Patch

You might encounter one or more of the following problems when applying this patch.

### TivoliKernelServicesConsole Component Might Not Be Upgraded

The TivoliKernelServicesConsole component might not successfully upgrade if connectivity is lost to the database server or if the ORBs are recycled before the upgrader is complete. You might see an exception similar to the following in the [ORB output log](#).

```
FWP1710E The component package file com.tivoli.pf.pfconsole.impl@1.1.4 failed to import.
```

To recover from this problem, issue the following commands, substituting the component shown in the FWP1710E message for `com.tivoli.pfconsole.impl@1.1.4` in the **wcmd psmcr mcremove** command.

```
wcmd psmcr mcremove com.tivoli.pf.pfconsole.impl@1.1.4
wcmd tksinstaller upgrade true
```

There is no need to recycle the ORBs at this point.

### PsNsImpl Component Might Fail to Install

The PsNsImpl component might fail with the following message.

```
FWP1710E The component package file
com.tivoli.pf.ns.implementation.impl@1.1.4 failed to import.
```

To recover from this problem, issue the following commands, substituting the component shown in the FWP1710E message for `com.tivoli.pf.ns.implementation.impl@1.1.4` in the **wcmd psmcr mcremove** command.

```
wcmd psmcr mcremove com.tivoli.pf.ns.implementation.impl@1.1.4
wcmd tksinstaller upgrade true
```

There is no need to recycle the ORBs at this point.

### tksinstaller Immediately Returns

The Tivoli Kernel Services upgrader might return immediately to the command prompt after being started. This generally means that a previous instance of the upgrader is still processing a request. To determine if this is the case, issue the following command.

```
wcmd tksinstaller listenstatus
```

This command returns the current status of the upgrader. When this command produces no output, the upgrader has completed its prior phase of processing. At this point, you can restart the upgrader to resume the upgrade.

```
wcmd tksinstaller upgrade true
```

## Recycle of orb.1 Might Fail with Security Exceptions

The recycle of orb.1 during the patch install might result in security exceptions. This problem is generally caused by a timing problem encountered during the upgrade. To permit the ORB to start, add the following to the orb.1/boot/java.policy file.

```
grant {  
    permission java.security.AllPermission;  
};
```

and then restart orb.1.

## Upgrade of JRE on AIX Systems Might Fail

The Tivoli Kernel Services upgrader might fail after completing Task 18 of 30 (updating the TivoliKernelServicesCommon component). At this point, check that the Java runtime environment was successfully updated. To verify this is the case, locate the LOCKCfg.properties file located in the orb.1 directory (/usr/Tivoli/orb.1 by default) of each ORB running on an AIX system. Verify that the file contains the following line.

```
LOCK_JAVADIR=$TKS_BASEDIR/jre/AIX_JRE_ca122-20010218/jre/sh
```

If this line does not appear, enter the following commands to force an update of the Java runtime environment on this AIX system.

```
wcmd cfg remove /com/tivoli/core/mgcd/inventory/usableComponents  
JRE@5.1.5  
wcmd lci rebuild  
wcmd lci processqueue
```

After this processing completes, shut down the ORB and then restart it to pick up the changes. You must do a shut down and a restart, not an ORB recycle, to pick up this change. Then continue with [Step 14](#) of the patch instructions.

## Icon for Tivoli Console Might Not Appear On New Consoles After Installing Patch

If you install a new Tivoli Console footprint on a Windows system after applying this patch, you might not get an icon for the Tivoli Console on your Desktop. If the Tivoli Console icon does not appear after waiting a reasonable amount of time, and the procedure given in the product README does not correct the problem, issue the following command, all on one line.

```
wcmd cfg remove Orbset/consolesInDefaultRegion  
/com/tivoli/core/mgcd/inventory/upgrades PsJcLauncherService@1.1.0
```

Then enter the following two commands to force a restart of the PsJcLauncherService on the affected Tivoli Console ORB:

```
wcmd cfg remove /com/tivoli/core/mcmd/inventory/usableComponents
PsJcLauncherService@1.1.4
wcmd lci rebuild
```

## No Local Service Matched the Request Exceptions After Installation

During the patch installation process, the lsm component is upgraded. While the lsm component is being upgraded, requests to use this component to find a service might fail, even if the service is available and running. Depending on what component initiated the request, the ORB might retry and continue without error, or the ORB might take one or more security exceptions and recover, or the ORB might simply continue to take security exceptions, rendering the ORB useless.

If an ORB stops functioning during the patch installation process, either on the installation depot machine or on a bootprint server, review the [ORB message log](#) for the failing ORB. If you see any of the following exceptions or messages, then the ORB has encountered this problem and must be recycled to correct the problem.

```
2001.05.03 15:17:29.562 FNGCP0036I Component lsm version 5.1.2 was shut
down.
2001.05.03 15:17:30.109 FNGCP0027I Starting component lsm version 5.1.3.
2001.05.03 15:17:30.187 FNGCP0031I Started component lsm version 5.1.3.
```

```
com.tivoli.core.service.NoServiceAvailableException: FNGSM0033E No local
service matched the request
type = AuthenticationService
version = null
```

```
2001.05.03 15:22:12.595 FNGSC2041E Unable to obtain security context.
com.tivoli.core.security.acn.client.LoginException:
FNGSC2041E Unable to obtain security context. : FNGSM0033E No local
service matched the request
type = AuthenticationService
version = null
```

## Null Security Context on ORB During Upgrade

During the patch installation process, an ORB might fail to create a security context, resulting in the ORB taking repeated security exceptions that render the ORB useless. Look in the [ORB message log](#) for a message similar to the following.

```
2001.05.11 14:16:28.562 FNGSC0001E Error: NULL SECURITY CONTEXT for the
thread:
```

If this message appears in the log, stop the ORBs, then restart them. Continue the upgrade with the **wcmd tksinstaller upgrade true** command.

## Erroneous Presentation Services Messages in Log (mc, mc: null)

You might see messages similar to the following in the [LOCK output log](#).

```
mc
mc: null
```

These messages are caused by debugging statements inadvertently left in Tivoli Presentation Services. They do not represent a problem and can be ignored.

## Add root to MQSeries mqm Group on UNIX Systems

On UNIX systems, the installation of an MQSeries server fails to add the user ID root to the mqm group that is created. This causes problems in environments using multiple MQSeries servers to handle message traffic between large numbers of ORBs because the MQSeries servers are not able to communicate with each other. After installing an MQSeries server on a UNIX system, add the user ID root to the mqm group before configuring the MQSeries server for use with Tivoli Kernel Services.

To correct the problem once it has been encountered, you must uninstall all the MQSeries servers, add the root user ID to the mqm group on the affected systems, and then reinstall the MQSeries servers.

# After You Install the Patch

After installing this patch, all ORBs in the installation will be running the updated Tivoli Kernel Services software. If you subsequently install another bootprint server using the Tivoli Kernel Services 1.1.1 Bootprint CD-ROM, the bootprint ORB will automatically receive the updated software.

If you re-install the Tivoli Kernel Services installation depot using the Tivoli Kernel Services 1.1.1 Installation CD-ROM, you must re-apply this patch.

## Updating Components Deployed by Applications

There are a number of Tivoli Kernel Services components that might be deployed by the Tivoli management software you have purchased. **You must manually upgrade these components whenever you do any of the following.**

1. You install the Tivoli management software you purchased after installing this patch.
2. You install additional Tivoli management software in your Tivoli Kernel Services installation.
3. You make a configuration change that deploys one or more of these components to a new ORB or ORB set.

For each component listed in this table, you need to determine if the component is currently in use in your installation and if so, upgrade it to the level provided in this patch.

Component Name	New Component Version
MibService	5.1.2
Icmp	5.1.2
GatewaySNMPService	5.1.4
ActionObjects	5.1.3
SnmpInterface	5.1.2
SnmpData	5.1.2
SnmpService	5.1.3
NelService	5.1.2
NelInterface	5.1.2
dsinterface	5.1.3

The following set of instructions needs to be done for *each* entry in the table. In addition, consult the documentation provided with the Tivoli management software you purchased to determine if there are any additional components that need to be handled in this way.

1. Determine what versions of the component are currently installed by entering this command, substituting the name of the component for *componentname*.

```
wcmd cds listComponentVersions componentname
```

If no versions are listed, the component is not installed and does not need to be updated at this time.

2. If one or more component versions were displayed, you need to determine the ORB sets that must be updated. Enter the following command, once for each component version displayed. Substitute the name of the component for *componentname* and the appropriate component version number for *n.n.n*.

```
wcmd cds listDeploymentTargetOrbNames componentname@n.n.n
```

If the output of these commands reveals any ORB sets, you need to upgrade this component. If the output from these commands do not reveal any ORB sets, you do not need to upgrade this component.

3. Enter the following command, once for each ORB set and component listed by the previous command, substituting the name of the component for *compname* and the existing version of the component for *n.n.n*, the new version of the component for *x.x.x* and the name of the appropriate ORB set for *ORBset*:

```
wcmd cds upgrade compname@n.n.n compname@x.x.x Orbset/ORBset
```

Review the [ORB message log](#) on the installation depot after running each **wcmd cds upgrade** command. If you see any exceptions related to components other than PsJcLauncherService or cm, recycle the affected ORB.

**Example:** Let's say you are asked to upgrade the foo component to version 5.1.9. First, you need to determine what versions of the foo component are available by issuing the following command.

```
wcmd cds listComponentVersions foo
```

If this command indicates that foo@5.1.8 is currently installed, issue this next command to determine what ORB sets the component is deployed to.

```
wcmd cds listDeploymentTargetOrbNames foo@5.1.8
```

If this command indicates that the component is deployed to the consolesInDefaultRegion ORB set, issue the following command to upgrade the foo component to version 5.1.9:

```
wcmd cds upgrade foo@5.1.8 foo@5.1.9 Orbset/consolesInDefaultRegion
```

## Importing Configuration Data from XML Files

Beginning with this patch, a new `wcmd cfg importXML` command is available to import configuration data from XML files. Do not import configuration data into the `.orbdefaults` ORB set.

### **wcmd cfg importXML**

Imports configuration data from an XML file.

#### **Syntax**

```
wcmd cfg importXML [resource] xml_url [xml_url...]
```

#### **Description**

The `wcmd cfg importXML` command imports configuration data from one or more XML files.

#### **Options**

### *resource*

Identifies an ORB or ORB set with which the imported configuration data will be associated. If resource is omitted, the current ORB is assumed.

### *xml\_url*

Specifies the URL at which the XML is located. The XML must contain only configuration data that conforms to the Tivoli Kernel Services configuration data DTD. The URL can be of type file (file:///C:/tk/xml/myConfigurationData.xml) or type http (http://w3.tivoli.com/tks/xml/myConfigurationData.xml). Separate multiple URLs with spaces.

## **Authorization**

Requires write access to the system/services/config subtree to perform this operation.

## **Notes**

This command imports configuration data from the specified URL. The imported data is associated with the specified ORB or ORB set, or the ORB to which this command is issued if no ORB or ORB set is specified. This command should not be used to import configuration data into .orbdefaults.

## **Examples**

The following command imports configuration data from a local file and associates it with an ORB named myorb.

```
wcmd cfg importXML Orb/myorb file:///c:/work/configdata.xml
```

Do not use this command to import configuration data into the ORB set that defines installation-wide default configuration data (.orbdefaults). For example, do not use this command to perform the following:

```
wcmd cfg importXML .orbdefaults file:///c:/work/configdata.xml
```

## **Updated Components**

After applying this patch, the following components are updated.

<b>Component</b>	<b>1.1.1-TKS-0003</b>
ActionObjects	5.1.3
aix-jre	5.1.5
AZNEngine	5.1.3
CliService	5.1.2
cm	5.1.5
ComponentDistributionService	5.1.4
ComponentDistributionServiceInterface	5.1.4
com.tivoli.pfdk.ful.if@1.1.4	1.1.4
com.tivoli.pfdk.ful.impl@1.1.4	1.1.4
com.tivoli.pfdk.ful.nls@1.1.4	1.1.4
com.tivoli.pfdk.ful.util@1.1.4	1.1.4
com.tivoli.pf.nls_en.nls	1.1.4
com.tivoli.pf.ns.implementation.impl@1.1.4	1.1.4

com.tivoli.pf.pfconsole.impl@1.1.4	1.1.4
DepotComponentInstaller	5.1.3
dsinterface	5.1.3
GatewaySNMPService	5.1.4
Icmp	5.1.2
JRE	5.1.5
LocalComponentInstaller	5.1.3
lsm	5.1.3
MACImpl	5.1.1
MessagingService	5.1.2
MibInterface	5.1.2
MibService	5.1.2
MSManager	5.1.3
NelInterface	5.1.2
NelService	5.1.2
OrbImpl	5.1.4
OrbNls	5.1.1
PndOrbsAndComponents	5.1.4
PsCommonInt	1.1.4
PsJcImpl	1.1.4
PsJcLauncherService	1.1.4
PsMcrImpl	1.1.4
PsNsImpl	1.1.4
SDSRemoteServiceInterface	5.1.1
SnmpData	5.1.2
SnmpInterface	5.1.2
SnmpService	5.1.3
TivoliKernelServicesCommon	5.1.5
TivoliKernelServicesConsole	5.1.4
TivoliKernelServicesInstallationDepot	5.1.5
TKSInstallerImpl	5.1.5
TKSInstallerInt	5.1.5
TKSORBRecyclerImpl	5.1.5
TKSORBRecyclerInt	5.1.5
util	5.1.3
zurich-correlator	1.0.1

## Problems Fixed:

The following defects have been fixed in this patch:

### Defect # Abstract

521	ORB hang on 1102f build on AIX
523	Core dump on Orb.2 with 1102f
1256	Upgrade doesn't work on solaris
1396	Update the Componentization tool source to reflect the
1514	Correlator TMS File
1529	Pre-install/deploy dummy services because of CM change.
1541	Stop ability to get proxy before calling shutdown method
1702	Memory leak - com.tivoli.tes.metates.impl.StatisticsImpl

1710 Overnight running interrupted (unable to connect to MQS server)  
 1875 After MQ recovers from problem, NEV doesn't resubscribe  
 1876 Covering defect for Patch 5 (1.1.1-TKS-0003)  
 1884 SNMPObserver start: ClassCastException on SNMPTrapHandler  
 1940 Autodeploy fails when installing PsJcImpl@1.1.4  
 2030 Don't create DAS, SQL directory if no DAS,SQL tags  
 2184 Change the Format of the Resource in Class.forName()  
 2187 Can't configure NelService - VCL class not found (SDM)  
 2191 Add changes from defect 970 to the tks\_1.1.0 release.  
 2195 Initial patchfile-list for Patch 1.1.1-TKS-0003  
 2234 Update patchfile-list for defect 523  
 2242 Work in support of defect 523 (JRE fix)  
 2275 Fix restart of ORB after ID ORB restart  
 2321 Work In support of PndOrbsAndComponents  
 2326 Check in ps defects for Patch 5  
 2330 Significant memory leak on SDM Server  
 2353 Sync up prereqs between DepotComponentInstaller and ComponentDistributionService  
 2387 Don't do a deployment check for the source component during an  
 2425 Incorrect PSWcImpl and dsinterface Versions in MAC  
 69417 Modal dialogs can get buried in Z-order, get lost  
 69562 PS update preferences is not working fine.  
 70901 Policy Config status fields sometimes appear with number values  
 71248 Java Console login screen remains with JC up after ID reboot  
 70330 Implement package level replacement  
 71943 Memory leak, long run can't run > 4 hours

This patch also includes fixes to the following defects from the previous patch, 1.1.1-TKS-0002.

#### **Defect # Abstract**

1002 OctetString in SnmpData.jar uses EbcDic in SnmpInterface.jar  
 1100 UnauthorizedException has missing message file  
 1168 DYASybaseJDBCjConnect52Util/1.0.1 has been removed -26th Build  
 1174 MSManager stops monitoring  
 1180 ORB shutdown doesn't come to command prompt on AIX  
 1472 Add "supersededBy" attribute to Roles.  
 1517 invalidate local timestamp when dir events lost  
 1552 Unable to "Define Customer"  
 1587 links to azn security test files need to be restored  
 1631 No graph display(RuntimeRemoteException for NHMDBStoreAgent)  
 1712 Exceptions thrown in RTM BP when connected to QMR+Patch3  
 1737 solution for the "install prereq" situation  
 1744 Covering Defect for Patch 1.1.1-TKS-0002  
 1777 includes initial update to patch readme  
 1778 Patchfile-list update for defect 118  
 1793 Patchfile-list and readme1st.htm updates  
 1813 miscellaneous cleanup of HTML  
 1814 3/7 Updates for patchfile-list  
 1823 Remove redundant entry from patchfile-list  
 1833 Update patchfile-list for defects 1737 1552  
 1835 Update readme for new CDS and DCI versions  
 1841 Update patchfile-list to add MSManager@5.1.3.jar



1845 wcmd cds upgrade does not work in simple cases.  
1849 Added MSManager@5.1.3 to jar file list in readme  
1899 Updated readme1st.htm to include install steps for installing  
1923 Java Console not launched after repatch  
1926 update command in the backing out the schema not working  
2008 for UNIX the usage of "tk" should be taken care off  
2010 clarify when/how to review logs as cds upgrades are run  
2016 ReadMe - SubDirectory updates in the 2001-03-14 Patch4  
2029 ComponentDistributionService@5.1.3 still not loaded  
2051 Recycling orb.2 generates null pointers on running FUs  
2056 Few more readme1st changes  
2099 Update tks 1.1.1 readme and 1.1.1-tks-0002 readme  
2129 Step needs to be added to rollback of patch 4  
2163 GatewayIPService-related step in Product Readme & defect list

As well as fixes to the defects in patch 1.1.1-TKS-0001.

#### **Defect # Abstract**

527 MibService does not prereq SnmpData@5.1.1.jar  
783 Problem with Gateway ActionObjectIP  
942 ConnectException when sending traps to snmp gateway  
962 Differentiate mmGBE CONFIG\_DIR directories for tks\_1.1.0 and tk  
968 SNMP Gateway forwarding traps event after the gateway is stopped  
975 SNMP observer is not aware of SNMP gateway failures  
1047 handle timestamp in local files but not directory  
1091 New tks cli bundle needed to allows applications to import data  
1242 Additional info needed for Namespace  
1246 Installer ID needed for Bootprint not clear  
1309 Rollback of Patch gives exception in RTM  
1344 MIMIC SNMP trap sent to Gateway Bootprint causing Exception  
1346 README text needed for defect 1256  
1371 Covering defect for Patch 1.1.1-TKS-0001  
1381 Defect 1309 code updates for patch 3  
1394 PS Defect 71091 & TKS integration code  
1435 update to patch readme  
1438 MSManager exception and ConvertSeriallog in readme  
1460 relativePath needs to be fixedfor zurich-correlator component  
1463 Updated patchfile-list for installing TKS book  
1491 Remove extra spaces in patchfile-list  
1495 KS: Patch 3 - Incompatable upgrade target found  
1515 Updates to Installing doc for patch 3  
1518 Prereq zurich-correlator v1.0.1 in GatewaySNMPService.xml  
1521 Update date in product patch README  
1523 Check Patch 3 readme1st.htm into cmvc  
1532 Removed dead link from readme1st.htm  
1535 updated date at bottom of readmebdy.htm  
1544 Update installing doc HTML files to synch up with PDF  
1570 Update version number of SNMP in R1 to allow trap change to tak  
1573 Add entry to patchfile-list due to defect 1570  
1584 Readme updated to include snmpservice  
1591 Work in support of SnmpService (defect 1570)

1597 Exceptions thrown in the Post BootPrint Installations  
1630 Getting a null pointer exception  
1648 posted readme1st.htm for patch 3  
1692 Product Readme updates  
1562 Readme Instructions incorrect in Patch 1.1.1-TKS-001  
1682 QMR + patch 3 uses incorrect orbImpl  
1703 Updated patchfile-list  
1726 Cleaned up HTML to eliminate font tags and other miscellany  
1731 Clarified note regarding wcmd cds install and local drive  
71091 PsJcImpl Not Shutting Down

## Logs

Check the following logs for exceptions or unexpected messages:

File	Microsoft Windows	UNIX
ORB message log	%TKS_BASEDIR%\orb.1\log\message1.log	\$TKS_BASEDIR/orb.1/log/message1.log
Local ORB Creator and Killer (LOCK) output log	%TKS_BASEDIR%\orb.1\log\stdout.txt	\$TKS_BASEDIR/orb.1/log/stdout
Local ORB Creator and Killer (LOCK) error log	%TKS_BASEDIR%\orb.1\log\stderr.txt	\$TKS_BASEDIR/orb.1/log/stderr

**Note: Information contained in stdout and stderr files will be lost if the ORB is restarted. To preserve the contents for troubleshooting, make a copy of (or rename) the files before restarting an ORB.**

On UNIX systems, you can monitor these files during system operation and patch installation by using **tail**. For example, to track changes to the **Local ORB Creator and Killer (LOCK) output log** during a patch install:

```
tail -f stdout
```

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### **Summary of Changes Since Patch 5 Release:**

(5/23) Added text after step 11 to ensure that the upgrade on the installation depot ORB is complete before starting the second ORB.

(5/21) Indicated that the patch only needs to be installed on the installation depot machine and that no software needs to be installed on the bootprints. Also indicated that the instructions assume that the patch file was extracted into the \temp directory on Windows and /tmp on UNIX systems.

(5/18) Changed heading from "Null Security Context on ORB Recycle" to "Null Security Context During Upgrade"

(5/16) Fixed some spelling and grammar errors

(5/16) Added text for defect 3084 (need to add "root" to mqm group on UNIX systems)

(5/15) Revised steps involved with recycling the ORBs (steps 12-14). We now have you wait until state 17 and then recycle orb.2 again.

(5/15) Added mc and mc: null messages to the "Known Problems" section.

(5/14) Added text for the "null security context" problem

(5/11) Made instructions for running commands from a "DB2 command window" clearer

**End of Patch Readme File**