Tivoli Storage Manager

IBM

Version 5.3.2

Readme

Tivoli® Storage Manager

IBM

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Readme

Contents

About this Readme v

Installation Information 1
AIX Installation 1
Migrating from Tivoli Storage Manager Version 5.2 1
AIX Installation Instructions 1
HP-UX Installation 3
Linux Installation. 4
Supported Linux Environments 4
RPM Packages Included 5
Server Installation Instructions 6
Storage Agent Installation Instructions. 7
SLES9/pSeries Linux Information 7
RHEL4 on x86/EM64T/AMD64 Information. . . 8
Sun Solaris Installation 8
Updates for Fixpack 5.3.2 8
Version 5.3.0 Installation 9
Windows Installation 9
Installing the Administration Center - New Interface 10

Licensing 11
REGISTER LICENSE on UNIX, Linux and Windows 11
REGISTER LICENSE on z/OS 12

Migration Information 13
Changes for Fixpack 5.3.1. 13
Migration and Password Length Considerations 13
Changes for Version 5.3.0. 13
Migrating to Tivoli Storage Manager Version 5.3 from Previous Versions 13
Migration and LAN-free Considerations 14

Updates for Fixpack 5.3.2. 15
ACSLS Library Support for HP-UX and Linux. . . 15
Automatic Volume Labeling Support for Non-SCSI Libraries 15
Formatting Volumes for z/OS LAN-free Operations 16
LFVOLUMEFORMATCOUNT Server Option . . 16
FORMAT LFVOLUME Command 17
IBM LTO WORM Support 18
Multiple Server Entries in the Windows Management Console 18
If This Issue Applies to You:. 19
Prompt for Reboot After Installation of the Server Module. 20
Removing Tivoli Storage Manager from your Windows System 20
SANergy Support Page for Access to the Latest SANergy Levels 22
The Tivoli Storage Manager Device Driver (TSMSCSI) and Windows Logo Certification . . . 22
Time-out on Formatting Large Disk Volumes on FAT32 Partitions. 22
Tivoli Storage Manager for Data Retention Name Change. 23
TSMDLST Update for Windows 23
Syntax 23
Options. 23
Examples 25
Notes 25

Updates for Fixpack 5.3.1. 27
General LTO3 Support. 27
SANFS Support 28
SUN Storage Agent Documentation for addtoinit (APAR IC43928) 28
Tivoli Storage Manager 5.3.1 Server Modified to use Centera Version 2.3 29

Updates for Version 5.3.0. 31
Applying Tivoli Storage Manager Updates for AIX 31
Before Applying Maintenance Updates 31
Using SMIT to Install Maintenance Updates on AIX 31
DATEFORMAT, TIMEFORMAT, and NUMBERFORMAT Server Options 32
Default Option and Command Parameter Changes 33
Options File (dsmserv.opt) Default Changes . . 33
Command Parameter Changes 33
Device Driver Installation Fix for HP-UX 34
Claiming a Device 34
ENABLE and DISABLE SESSIONS Command Enhancements 34
Enhanced Performance of Incremental Export . . . 35
New Server Option SANDISCOVERY 35
SET WEBAUTHTIMEOUT Command 36
Storage Agent Use of Client Option LANFREETCPSERVERADDR 36
Support for the QUERY SAN Command and SAN Discovery 36
AIX 36
Windows 2003 with Emulex Fibre Channel HBA 37
Windows 2003 with Qlogic Fibre Channel HBA 37
Windows 2000 with IBM LTO Tape Devices . . 37
Windows 2000 with Unsupported SAN Data Gateway 37
Linux with IBM Tape Devices 37
Sun Solaris with IBM Tape Devices 38
Linux for pSeries 38
JNI Fibre Channel HBA on Solaris. 38
ANY Fibre Channel HBA on Linux for zSeries or HP-UX 38
Using Shared Memory Communications on Linux 38
Windows: Performing a Silent Installation 39
Installing the Server 39
Installing the Licenses 40
Installing the Backup-Archive Client 40
Installing the Device Driver 41

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Installing the Language Packs 41
Installing the Storage Agent 41
Feature Tables 41
Including a Custom Client dsm.opt File 43
Installation Troubleshooting 44
Performing a Silent Uninstall 44
z/OS Device Class Attribute Clarification 44

Known Limitations 47
Updates for Fixpack 5.3.2. 47
Automatically Restarting a Restore on the Tivoli Storage Manager Client 47
Issues Related to Configuring a Tivoli Storage Manager Server in a Windows Cluster 47
Using a Disaster Recovery Plan Created on a SUSE Linux Platform 48
Updates for Fixpack 5.3.1. 49
QUERY NODE Limitation 49
Updates for Fixpack 5.3.0. 49
LAN-free Shared Files in a Root Directory for Version 5.3. 49
Slow Performance Establishing a Connection when Using GB Routers on Linux 49

Product Fix History 51
APARs Fixed in Level 5.3.2 51
APARs Fixed in Level 5.3.1 61
APARs Fixed in Level 5.3.0 66

Notices and Trademarks 89
Where to Find Documentation 89
Getting Help 89
Anonymous FTP Server 90
Trademarks 90

About this Readme

Note!
Before using this information and the product it supports, be sure to read the general information under Trademarks and Notices.

This readme file describes changes for Tivoli Storage Manager Version 5.3.2.

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For the latest updates to Fixpack 5.3.2, please see Technote: Updates to TSM Server V5.3.2 README. Use the search term 1217794.

Installation Information

The following sections include installation information for operating systems supported on Tivoli Storage Manager Fixpack 5.3.2.

AIX Installation

Installation requisites for Tivoli Storage Manager Version 5.3 are:

- **Operating System:** AIX 5.1 (or later)
- C++ Runtime for AIX version 6 (xlC.rte.6.0.0.0) or later. The latest PTF for this package has the xlC.rte.6.0.0.0 fileset plus any release-specific updates. It can be obtained from

  `http://www-1.ibm.com/support/docview.wss?rs=0&q1=C%2b%2b+Runtime&uid=swg2008374&loc=en_US&cs=iso-8859-1&cc=us&lang=en`
- **Estimated Space Requirements:**
  - At least 88 MB of disk space temporarily available for extracting the installation filesets from the tar.gz file.
  - At least 200 MB of free disk storage and 1 GB of memory.
  - The storage agent will require at least 40MB of temporary disk space.

Migrating from Tivoli Storage Manager Version 5.2

If you are running the 32-bit version of Tivoli Storage Manager Version 5.2 in a 64-bit AIX kernel environment, you must uninstall your current version of Tivoli Storage Manager and then install the appropriate Tivoli Storage Manager version 5.3 packages for the 64-bit kernel environment.

If you are running the 64-bit version of Tivoli Storage Manager Version 5.2 in a 32-bit AIX kernel environment, you must uninstall your current version of Tivoli Storage Manager and then install the appropriate Tivoli Storage Manager version 5.3 packages for the 32-bit kernel environment.

AIX Installation Instructions

The following instructions apply to the Tivoli Storage Manager server for AIX service level 5.3.2.0.

THIS SERVICE LEVEL IS INTENDED AS A COMPLETE SERVICE UPGRADE FOR YOUR VERSION 5.3.0.0 AIX SERVER.

Even though you already accepted the license agreement when you installed level 5.3.0.0, installation of this level will fail unless you (re) accept the license agreement. The license agreement files are saved in the directory /usr/swlag/$LANG/ if you wish to browse the license agreement at a later time.

All packages are new/migrate install packages. This means:

- You can install without needing a prior release installed (a new install). If you have a prior version, a migrate installation will occur and your prior version will disappear.
- Tivoli Storage Manager device definitions might not be preserved. After the installation you will have to redefine Tivoli Storage Manager devices. Record

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your current device definitions before you begin the installation. The following commands can be used to record current definitions:

```
ls_dev -Cs ftp > definitions.fcp
ls_dev -Cs scsi > definitions.scsi
```

Note: You do not have to record definitions for IBM(R) 3494, 3570, 3575 or 3590. These devices use drivers supplied with the hardware.

- You cannot reject a fileset (you will have to uninstall it).

To "install" as root user, complete the following steps:

1. Halt your server.
2. Load the CD into the selected drive, or get the (bin) TSMSRVAIX5320.tar.gz and unzip/untar the file to extract all the installation packages.
3. Start SMIT and select the following options:
   - Software Install and Maintenance
   - Install and Update Software
   - Install and Update from ALL Available Software
   - Specify INPUT device/directory
   - List SOFTWARE to Install - Select the appropriate filesets to install for your configuration (see Table 1 below)
   - Set "COMMIT software updates?" to Yes
   - Set "SAVE replaced files?" to No

   You will be required to (re) ACCEPT new license agreements to install this level of the server. To view the license agreement, set "Preview new LICENSE agreements?" to Yes. To accept the license agreement, set "Accept new LICENSE agreements?" to Yes.
4. Redefine your Tivoli Storage Manager devices.
5. Restart the server.

Table 1. Software to Install for Different Environments

Environment	Software Packages to Install
32-bit kernel environment	• tivoli.tsm.devices.acsls STK Silo Support (optional) • tivoli.tsm.devices.aix5.rte Device Support - AIX 5.1 or 5.2, 32 and 64-bit • tivoli.tsm.server.com Server samples and diagnostic utilities • tivoli.tsm.server.rte Server runtime - 32-bit • tivoli.tsm.msg.en_US.server Message Library and help • tivoli.tsm.msg.en_US.devices SMIT menu catalogs • tivoli.tsm.license.rte License enablement module - 32-bit kernel • tivoli.tsm.license.cert License certificates • tivoli.tsm.server.webcon Administration Center

Table 1. Software to Install for Different Environments (continued)

Environment	Software Packages to Install
64-bit kernel environment	• tivoli.tsm.devices.acsls STK Silo Support (optional) • tivoli.tsm.devices.aix5.rte Device Support - AIX 5.1 or 5.2, 32 and 64-bit • tivoli.tsm.server.com Server samples and diagnostic utilities • tivoli.tsm.server.aix5.rte64 Server runtime - AIX 5.1 or 5.2, 64-bit • tivoli.tsm.msg.en_US.server Message Library and help • tivoli.tsm.msg.en_US.devices SMIT menu catalogs • tivoli.tsm.license.aix5.rte64 License enablement module - 64-bit kernel • tivoli.tsm.license.cert License certificates • tivoli.tsm.server.webcon Administration Center
If you are running in a language other than US English, you must also install your specific "language pack" in addition to the required US English "language pack."	• tivoli.tsm.msg.<your-language>.server Message Library and help • tivoli.tsm.msg.<your-language>.devices SMIT menu catalogs
Install the following packages for the storage agent:	• tivoli.tsm.devices.aix5.rte Device Support - AIX 5.1 or 5.2, 32 and 64-bit • tivoli.tsm.msg.en_US.server Message Library and help • tivoli.tsm.msg.en_US.devices SMIT menu catalogs • tivoli.tsm.Storage_Agent.rte Storage Agent run time

HP-UX Installation

To install a new package, uninstall the old package and install the new one in the same directory. The installation process is similar for Tivoli Storage Manager server, storage agent, and device driver packages.

Use the HP-UX utility *swremove* to remove old Tivoli Storage Manager packages and then install the updates. If you are upgrading to a major release of Tivoli Storage Manager, you will need to remove the existing license package and install the new one. For example, if you're upgrading from Version 5.2.x to Version 5.3.x, remove the 5.2.x license and install the 5.3.x license. For example:

```
swremove TIVsmS64.server
swermove TIVsmS64.license
swremove TIVsmHsta
```

You can obtain a list of installed Tivoli Storage Manager packages by issuing

```
swlist | grep TIV
```

Ignore any client installations that are produced in the list. If a distribution file is supplied with the extension of .img.gz it must be uncompressed for an installable package. Uncompress with gzip. For example:

```
gzip -d <file name>
```

If a distribution is supplied with the extension of .tar.gz it must be extracted for an installable package. Create a temporary directory and extract the package. For example:

```
mkdir /tmp/TSM
cd /tmp/TSM
gzip -dc <file name> | tar xvf -
```

If the installable package is supplied on a CD-ROM or extracted from a .tar.gz file use swinstall with the source argument (-s) pointing to the package directory. On any package containing the Tivoli Storage Manager server it is required that you accept license agreement terms. Because the license terms must be accepted on some packages, always use swinstall in non-interactive mode (no GUI). To enable the license agreement display you must add the switch ″ask=as_needed″ (-x ask=as_needed). For example:

```
swinstall -s /cdrom -x ask=as_needed TIVsmS64 (64bit server)
swinstall -s /tmp/TSM -x ask=as_needed TIVsmHsta (storage agent)
```

A list of packages can be obtained with swlist -d -s <package dir>.

For more information about the HP-UX package tools or their settings, see HP documentation in the Software Distributor Administration Guide for HP-UX (available from HP's support web site) or see main pages.

Linux Installation

See the following sections for information on installing Tivoli Storage Manager in a Linux environment. The following features are not supported:

- Generic tape
- Raw logical volumes

Supported Linux Environments

Tivoli Storage Manager 5.3.2.0 and above supports AMD64 and EM64T processor types (x86_64). This support covers native 64-bit server and storage agent for the 64-bit environment as well as the 32-bit Tivoli Storage Manager server and storage agent in compatibility mode in a 64-bit environment.

Notes:

1. If you are running Tivoli Storage Manager on these processors in compatibility mode (e.g the x86 TSM packages installed on the 64-bit operating environment) and wish to migrate to the native 64-bit Tivoli Storage Manager packages, the install_server script that comes with the installation packages will uninstall all the x86 packages and then install the native 64-bit packages. The native 64-bit license enabler package will also need to be installed. This package is available by requesting a CD of Tivoli Storage Manager Fixpack 5.3.2.0.
2. To acquire the license module for x86_64, obtain a CD or electronic iso image from your regular software order system. This could be Passport Advantage if you obtain your IBM software electronically. You must have an authorized user ID and password to receive your software from Passport Advantage. If you placed an order and CDs were shipped via the Advanced Administrative System (AAS), you may request an MES update (miscellaneous equipment update). For AAS information, see your SE if you have questions.
3. It is highly recommended that you migrate to native 64-bit packages on the x86_64 processors instead of running Tivoli Storage Manager in compatibility mode. This is because the 64-bit device drivers that you may need for devices

used by the Tivoli Storage Manager server and storage agent may not run with Tivoli Storage Manager in compatibility mode.

4. The install_server script no longer supports automatic installation of Tivoli Storage Manager in compatibility mode. To install Tivoli Storage Manager in compatibility mode, obtain the i686 packages and install them manually using the rpm utility.

For a complete list of supported Linux environments, please visit http://www-1.ibm.com/support/docview.wss?rs=0&uid=swg21107360

RPM Packages Included

See Table 2 for included RPM packages. One directory contains the RPM packages for each architecture supported by Tivoli Storage Manager on Linux. The directory content is as follows:

- **i686/** - Contains rpm packages to be installed on 32-bit RHEL3, RHEL4, SLES8, and SLES9.
- **x86_64** - Contains 64-bit rpm packages to be installed on RHEL4 and SLES9.
- **ppc64/glibc-2.2/** - Contains 64-bit rpm packages to be installed on 64-bit SLES8.
- **ppc64/glibc-2.3/** - Contains 64-bit rpm packages to be installed on 64-bit RHEL3, RHEL4 and SLES9.
- **noarch/** - Contains packages for support on various languages other than English. They are to be installed on any Tivoli Storage Manager supported Linux environment.

Table 2. Software to Install for Different Environments

Environment	Software Packages to Install
x86	• TIVsm-server-5.3.2-0.i386.rpm - Tivoli Storage Manager server • TIVsm-tsmscsi-5.3.2-0.i386.rpm - Tivoli Storage Manager non-IBM devices support • TIVsm-license-5.3.2-0.i386.rpm - Tivoli Storage Manager license enabler • TIVsm-stagent-5.3.2-0.i386.rpm - Tivoli Storage Manager storage agent
x86_64(64bit)	• TIVsm-server-5.3.2-0.x86_64.rpm - Tivoli Storage Manager server • TIVsm-tsmscsi-5.3.2-0.x86_64.rpm - Tivoli Storage Manager non-IBM devices support • TIVsm-license-5.3.2-0.x86_64.rpm - Tivoli Storage Manager license enabler • TIVsm-stagent-5.3.2-0.x86_64.rpm - Tivoli Storage Manager storage agent
s390x(64bit zSeries)	• TIVsm-server-5.3.2-0.s390x.rpm - Tivoli Storage Manager server • TIVsm-tsmscsi-5.3.2-0.s390x.rpm - Tivoli Storage Manager non-IBM devices support • TIVsm-license-5.3.2-0.s390x.rpm - Tivoli Storage Manager license enabler • TIVsm-stagent-5.3.2-0.s390x.rpm - Tivoli Storage Manager storage agent
s390 storage agent (31bit zSeries):	• TIVsm-tsmscsi-5.3.2-0.s390.rpm - Tivoli Storage Manager non-IBM devices support • TIVsm-stagent-5.3.2-0.s390.rpm - Tivoli Storage Manager storage agent

Table 2. Software to Install for Different Environments (continued)

Environment	Software Packages to Install
ppc64(64bit pSeries)	• TIVsm-server-5.3.2-0.ppc64.rpm - Tivoli Storage Manager server • TIVsm-tsmscsi-5.3.2-0.ppc64.rpm - Tivoli Storage Manager non-IBM devices support • TIVsm-license-5.3.2-0.ppc64.rpm - Tivoli Storage Manager license enabler • TIVsm-stagent-5.3.2-0.ppc64.rpm - Tivoli Storage Manager storage agent

Server Installation Instructions

You must accept the license terms in order to proceed with the server installation. The server package will not install unless the license terms are accepted.

Note: License terms are shipped with major product releases only. Thus, if you are installing fix pack 5.3.1.0, you need to install major release 5.3.0.0 first, and then perform a 5.3.2.0 upgrade.

1.
   - If you are installing from a CD media, insert the CD into your CD-ROM drive and change your directory to the CD-ROM drive. For example:

     ```
     cd /mnt/cdrom
     ```

   - If you obtained the package from the service ftp site, use the commands bunzip2 and tar to extract the rpm packages. For example:

     ```
     bunzip2 TIVsm-server-5.3.2-0.Linux.tar.bz2
     mkdir tsm
     cd tsm
     tar xvf ../TIVsm-server-5.3.2-0.Linux.tar
     ```

2.
   - If you are installing a major release (i.e. 5.3.0.0) or a fixpack (i.e. 5.3.1.0), execute the script install_server. For example:

     ```
     ./install_server [prefix]
     ```

     where *prefix* is optional and denotes the file system where you would like Tivoli Storage Manager to be installed. If no prefix is given, the default installation location is /opt.

   - If you are installing an interim fix (i.e. 5.3.2.0), go to the directory for the target architecture and install the rpm files manually. For example:

     ```
     cd i686/
     rpm -Uvh TIVsm-server-5.3.2-0.i386.rpm TIVsm-tsmscsi-5.3.2-0.i386.rpm
     ```

     Skip the rest of the installation steps.

3. If you are installing a major release, the installation step will display the license agreement and ask for it to be read and accepted. To read the license agreement, select a number for the language in which you prefer to display the license agreement from the following menu. Then press Enter.
   - 1. Czech
   - 2. English
   - 3. French
   - 4. German
   - 5. Italian

- 6. Polish
- 7. Portuguese
- 8. Spanish
- 9. Turkish

4. The install_server script will display the license agreement in the language specified, and ask for you to accept the terms. To accept the license agreement, press 1, followed by the Enter key.
5. Once you have accepted the license agreement, a menu will be displayed with all the available RPM packages for the corresponding platforms. At this point, you can either quit the install_server script by pressing 'q' followed by the Enter key, or select packages from the menu to be installed. If you exit the menu, you can install any of the RPM packages that correspond to your platform manually.

   Note: For AMD64/EM64T 64-bit migration: If you are migrating the Tivoli Storage Manager server for AMD64/EM64T from compatibility mode to 64-bit mode, it is recommended that you let the install_server script perform the installation for you. The install_server script will remove the 32-bit server, tsmscsi, and license packages and install the 64-bit packages. It will ask you for confirmation before it removes any packages. Check for driver availability of all necessary hardware before migrating Tivoli Storage Manager to 64-bit. For IBMtape driver availability please visit ftp://ftp.software.ibm.com/storage/devdrvr/Linux/.

   The default installation location for Tivoli Storage Manager packages is /opt. To install to a different location, use the --prefix option in rpm. Refer to Red Hat Package Manager documentation, included with RPM, for details on its use. For example, if you are upgrading your i686 Tivoli Storage Manager server from TSM 5.2.4.0 to TSM 5.3.2.0, and TSM 5.2.4.0 is installed under the /usr file system, you would issue:

   ```
   rpm -Uvh TIVsm-server-5.3.2-0.i386.rpm --prefix /usr
   ```

Storage Agent Installation Instructions

If you are installing the storage agent for the first time on your machine, use the command rpm -ivh <pkgname>, where *pkgname* is the storage agent rpm file. For example:

```
rpm -ivh TIVsm-stagent-5.3.2-0.i386.rpm
```

If you are upgrading to a later version of the storage agent, use the command rpm -Uvh <pkgname>, where *pkgname* is the storage agent rpm file name. Note that if the older version of the storage agent is installed under a non-default file system, use the --prefix rpm option so that the new version gets installed in the correct file system. For example, to upgrade from version 5.2.6.0 to version 5.3.2.0, you would issue:

```
rpm -Uvh TIVsm-stagent-5.3.2-0.i386.rpm --prefix /usr
```

For pSeries, packages in the glibc-2.2 directory support SLES8, and packages in the glibc-2.3 directory support SLES9 and RHEL3.

SLES9/pSeries Linux Information

If you are running the Tivoli Storage Manager server on Linux on SLES9/pSeries systems must have the system library level listed below or newer in order for code page conversion to work properly. You will most likely have code page conversion

errors on the Tivoli Storage Manager server when trying to use the IBM Tivoli Storage Manager Administration Center unless the *glibc-locale-64bit-9-200407271122* system library level is installed.

To determine whether you have this library, issue the following command from the command prompt on your operating system:

```
rpm -qa | grep glibc-locale
```

You should see output similar to the following:

```
glibc-locale-2.3.3-98.28
glibc-locale-64bit-9-200407271122
```

RHEL4 on x86/EM64T/AMD64 Information

If you are installing the Tivoli Storage Manager server or storage agent on RHEL4, ensure that the C++ compatibility libraries are installed before attempting to install Tivoli Storage Manager. If these libraries are not installed, Tivoli Storage Manager installation will fail due to missing dependencies.

The package that needs to be installed is compat-libstdc++ for x86. If RHEL4 is running on AMD64 or Intel EM64T, the compatibility libraries that are installed by default support only native x86_64 applications. Since Tivoli Storage Manager will be running in compatibility mode, the compat-libstdc++ for x86 will also need to be installed. The package can be obtained from the RHEL4 insllation CDs, or from the Red Hat Network web site at rhn.redhat.com.

Sun Solaris Installation

Updates for Fixpack 5.3.2

Notes for Solaris 9: IC46073 Installation of the TSM Server 5.2. and Higher Fails on Solaris 9 ″Core System Support″

At Version 5.2.2 and higher, the Tivoli Storage Manager server and storage agent installations require presentation and acknowledgement of the Electronic Licensing Agreement. This change requires packages that are not automatically installed by the Core System Support option. If the packages are not present, the installation will fail with messages similar to:

```
Exception in thread "main" java.lang.UnsatisfiedLinkError: exception
occurred in JNI_OnLoad
```

```
JRE error attempting to evoke the license acceptance tool.
   Error code 1.
   Please call customer support.
```

The required packages have been empirically determined to be:

- SUNWlibC
- SUNWxwice
- SUNWctpls
- SUNWlibCx
- SUNWcpp
- SUNWmfrun
- SUNWzlib
- SUNWj3rt
- SUNWxwfnt

- SUNWxwplt

Please note that this list can change without notice at IBM's sole discretion.

In order for the Core System Support option install to complete successfully, the required packages must also be installed on the system.

Version 5.3.0 Installation

To install a new package on a Sun Solaris system, uninstall the old package and install the new one in the same directory. The installation process is similar for all of the Tivoli Storage Manager server, storage agent, and device driver packages.

- Use the Sun Solaris utility *pkgrm* to remove old Tivoli Storage Manager packages before making any updates. For example:
  - To remove the server package, issue the following command:
    ```
    pkgrm TIVsmS
    ```
  - To remove a device driver package, issue the following command:
    ```
    pkgrm TIVsmSdev
    ```
  - To remove a storage agent package, issue the following command:
    ```
    pkgrm TIVsmSsta
    ```
- You can obtain a list of currently installed Tivoli Storage Manager packages by issuing the following command:
  ```
  pkginfo | grep TIVsmS
  ```
- If a distribution file is supplied with the extension of .pkg.Z it must be uncompressed for an installable package. For example:
  ```
  uncompress <file name>
  ```
- If a distribution is supplied with the extension of .tar.Z it must be extracted for an installable package. Create a temporary directory and extract the package. For example:
  ```
  mkdir /tmp/TSM
  cd /tmp/TSM
  uncompress -dc <file name> | tar xvf -
  ```

On any package containing the Tivoli Storage Manager server it is required that you accept license agreement terms. You will be prompted to read the license agreement and agree to it before installation succeeds. If the installable package is supplied on a CDROM or extracted from a .tar.Z file, use *pkgadd* with the directory argument (-d) pointing to the package directory to list the packages. For example:

```
pkgadd -d /cdrom
```

OR

```
cd <package directory>; pkgadd -d .
```

The list of packages will be displayed as part of the installation and can be selected interactively. For more information about the package tools or their settings, see the Sun Solaris documentation available at SUN's support web site or see man pages.

Windows Installation

This is a Microsoft Windows Installer (MSI) installable package.

To install a package, download the appropriate file to your local machine in binary. To unpack, simply execute the file. Each file, when executed will unpack to a directory that you specify. Once unpacked to your local machine, the installation will automatically begin. The Tivoli Storage Manager Server default installation will include the Tivoli Storage Manager Server and the Management Console.

If there is a need to reinstall, setup.exe can be run from the directory specified when first unpacking.

Installing the Administration Center - New Interface

Tivoli Storage Manager Version 5.3 has replaced the administrator Web interface, which used the HTTPPORT, with a new interface. The new interface, called the Administration Center, runs under the Integrated Solutions Console (ISC).

The Administration Center and the Integrated Solutions Console are separate installations from the Tivoli Storage Manager server installation. The instructions for the installation of the Administration Center and the Integrated Solutions Console are located on their respective CDs or image files.

You must install one of the following for the Integrated Solutions Console:

- IBM Integrated Solutions Console Version 5.1 or 6.0.1 AIX for use with Tivoli Storage Manager Administration Center
- IBM Integrated Solutions Console Version 5.1 or 6.0.1 Linux pSeries for use with Tivoli Storage Manager Administration Center
- IBM Integrated Solutions Console Version 5.1 or 6.0.1 Linux xSeries for use with Tivoli Storage Manager Administration Center
- IBM Integrated Solutions Console Version 5.1 or 6.0.1 Linux zSeries for use with Tivoli Storage Manager Administration Center
- IBM Integrated Solutions Console Version 5.1 or 6.0.1 Sun Solaris for use with Tivoli Storage Manager Administration Center
- IBM Integrated Solutions Console Version 5.1 or 6.0.1 Windows for use with Tivoli Storage Manager Administration Center

You must then deploy the Tivoli Storage Manager Administration Center into the Integrated Solutions Console. This is a separate CD or Image. For additional information about the new Administration Center, please see the Frequently Asked Questions located here: http://www.ibm.com/software/sysmgmt/products/support/IBMTivoliStorageManagerVersionRelease.html

Licensing

Licensing in the Tivoli Storage Manager Version 5.3.0 server has changed from previous versions. Before upgrading from a previous version, delete or rename the nodelock file (for all operating systems except z/OS) or remove existing LICENSE options from the server's option file (for z/OS). After installing the Version 5.3.0 server, you must register new licenses. The REGISTER LICENSE command has changed with this version, and its function is currently limited. You can register licenses for server components. This includes Tivoli Storage Manager (base), Tivoli Storage Manager Extended Edition, and Tivoli Data Retention Protection.

You cannot register licenses for components that are licensed on the basis of processors (for example, Tivoli Storage Manager for Mail, Tivoli Storage Manager for Databases, Tivoli Storage Manager for ERP, Tivoli Storage Manager for Hardware, Tivoli Storage Manager for Space Management).

Your license agreement determines what you are licensed to use, even if you cannot use the REGISTER LICENSE command to register all components. You are expected to comply with the license agreement and use only what you have purchased. Use of the REGISTER LICENSE command implies that you agree to and accept the license terms specified in your license agreement.

REGISTER LICENSE on UNIX, Linux and Windows

Command syntax:

```
REGister LICense FILE=<license_file>
```

FILE

Specifies the name of the enrollment certificate file containing the license to be registered. The specification can contain a wildcard (*). Enter the complete file name or a wildcard in place of the file name. The file names are case-sensitive.

To register additional clients, specify the names of the following enrollment certificate files:

- tsmbasic.lic - To license base IBM Tivoli Storage Manager.
- tsmee.lic - To license base IBM Tivoli Storage Manager Extended Edition. This includes the Disaster Recovery Manager, large libraries, and NDMP.
- dataret.lic - To license IBM Tivoli Storage Manager for Data Retention. This is required to enable Data Retention Protection as well as Expiration and Deletion Suspension (Deletion Hold).

Examples:

To register Tivoli Storage Manager Extended Edition, enter the following command:

```
register license file=tsmee.lic
```

To register all license files using a wildcard, enter the following command:

```
register license file=*.lic
```

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REGISTER LICENSE on z/OS

Command syntax:

```
REGister LICense=<license_keyword>
```

Note: The REGISTER LICENSE command adds a LICENSE statement to the end of the server options file if it completes successfully. To use this command, ensure that the options file as specified in the server startup JCL (OPT DD statement) is coded with a DISP=MOD parameter, and not DISP=SHR.

BASICEDITION
To license base IBM Tivoli Storage Manager.

EXTENDEDEDITION
To license base IBM Tivoli Storage Manager Extended Edition. This includes the Disaster Recovery Manager and large libraries.

DATARETENTION
To license IBM Tivoli Storage Manager for Data Retention for z/OS. This is required to enable Data Retention Protection as well as Expiration and Deletion Suspension (Deletion Hold).

Examples:

To register Tivoli Storage Manager Extended Edition, enter the following command:

```
register license EXTENDEDEDITION
```

License registration on z/OS can also be done by editing the server options file. See the *Administrator's Reference* for information on how to edit the options file. The only values allowed with the LICENSE parameter for Tivoli Storage Manager 5.3.0 are BASICEDITION, EXTENDEDEDITION and DATARETENTION.

Migration Information

Changes for Fixpack 5.3.1

Migration and Password Length Considerations

When the server database is upgraded to version 5.3.0, the encryption level of stored passwords is converted from DES 56-bit to AES 128-bit. During the conversion, decrypted passwords are checked against the server minimum password length setting. If a password is shorter than the minimum length, an invalid password error message is issued and the database upgrade fails.

Passwords shorter than the minimum length can exist if the server's minimum password length setting has been changed. Changing the setting does not affect existing passwords. The new password length is only enforced when passwords are first registered or updated. Any previously created or expired passwords that do not meet the current length requirement are considered invalid during the database upgrade.

If there is any possibility that shorter passwords are stored in the server database, use the following upgrade procedure:

1. Temporarily set the minimum password length to zero (0). To change the minimum password length, you can use either the Administration Center or the SET MINPWLENGTH command.
2. Back up the current server database.
3. Install the new version of Tivoli Storage Manager.

If you have already attempted to upgrade to Version 5.3.0, and are unable to roll back to the previous version, contact customer support for further assistance. See APAR IC44367 for more information.

Changes for Version 5.3.0

Migrating to Tivoli Storage Manager Version 5.3 from Previous Versions

You can migrate directly to Tivoli Storage Manager Version 5.3 from any previous version of Tivoli Storage Manager. The amount of time to migrate from version 5.2 to 5.3 is negligible. The change in database size between version 5.2 and 5.3 is also negligible. Versions prior to 5.2 will take longer to migrate. The older the version, the longer this process will take. If migrating to Tivoli Storage Manager from any previous release, you should take actions to clean up system objects.

Before migrating, back up your database with type=full and save your Tivoli Storage Manager executables. If you need to revert to a previous release, you will have to restore from that database backup.

If installing Tivoli Storage Manager Version 5.3 on AIX Version 5.1, you must first upgrade the C++ Runtime for AIX to Version 6. This is fileset xlC.rte.6.0.0.0, which is installed by default on AIX 5.2 and higher. The latest PTF for this package has the xlC.rte.6.0.0.0 fileset plus any release-specific updates. It can be obtained from:

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http://www-1.ibm.com/support/docview.wss?rs=0&q1=C%2b%2b+Runtime&uid=swg2008374&loc=en_US&cs=iso-8859-1&cc=us&lang=en

When the 5.3 server starts existing FILE volumes in FILLING state are marked as full. In Version 5.2.x and prior servers, the server accepted a PATH definition for a local FILE Library and FILE drives, although it was not used in any way. Such definitions are not accepted by a Version 5.3 server and are rejected. This could be problematic if these definitions are contained in a devconfig file, and must be removed manually.

For more information regarding migrating to Version 5.3, refer to the Installation Guide. For more information regarding cleaning up system objects refer to the following Tivoli Storage Manager flashes: FLASH10201, FLASH10258, and 1078582.

Migration and LAN-free Considerations

Only storage agents Versions 5.2.3, 5.2.4, and 5.3 are supported by Tivoli Storage Manager Version 5.3. Before moving to version 5.3, you must ensure your storage agents are upgraded to one of these levels.

Please note that storage agents at the Version 5.2.x level can not access shared FILE volumes (using SANergy) on 5.3.x servers using LAN-free protocols. Requests by 5.2.x storage agents are automatically re-directed to the server and handled using LAN protocols.

Updates for Fixpack 5.3.2

ACSLS Library Support for HP-UX and Linux

The ACSLS library type is now supported on the Linux and HP-UX platforms. The Tivoli Storage Manager server supports StorageTek (STK) libraries managed by ACSLS or Library Station for library sharing and LANfree configurations.

As a result of this support, usage for the commands listed below has changed. Please refer to the online version of the Administrator's Guide and Reference books for usage documentation on these commands at http://publib.boulder.ibm.com/infocenter/tivihelp/v1r1/index.jsp

- AUDIT LIBRARY
- CHECKIN LIBVOL
- CHECKOUT LIBVOL
- DEFINE DRIVE
- DEFINE LIBRARY
- DEFINE PATH
- LABEL LIBVOLUME
- MOVE DRMEDIA
- MOVE MEDIA
- QUERY DRIVE
- QUERY LIBRARY
- UPDATE DRIVE
- UPDATE LIBRARY
- UPDATE PATH

Automatic Volume Labeling Support for Non-SCSI Libraries

Automatic volume labeling support has been enhanced to enable the use of the AUTOLABEL parameter in place of DSMLABEL or LABEL LIBVOLUME for non-SCSI libraries. Using the AUTOLABEL parameter allows volumes to be labeled as they are needed for backup operations and eliminates having to label all volumes before they are checked in to Tivoli Storage Manager inventory.

The DEFINE and UPDATE LIBRARY commands will be enabled for the following library types: 349X, ACSLS, EXTERNAL, MANUAL. The syntax changes are as follows:

```
                                .-AUTOLabel--=--Yes-----------.
>>-DEFine LIBRary--library_name--+-----------------------------+-><
                                '-AUTOLabel--=--+-No--------+-'
                                                +-Yes-------+
                                                '-OVERWRITE-'
>>-UPDate LIBRary--library_name--+-----------------------------+-><
                                '-AUTOLabel--=--+-No--------+-'
                                                +-Yes-------+
                                                '-OVERWRITE-'
```

The AUTOLABEL parameter will default to YES for all Non-SCSI libraries and to NO for SCSI libraries.

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In a shared library environment, the library manager is responsible for labeling volumes, so there is no need to specify the AUTOLABEL parameter for a library type of SHARED.

Formatting Volumes for z/OS LAN-free Operations

Prior to Version 5.3.2, Tivoli Storage Manager required you to use an operation such as MOVE DATA or a LAN-based backup to write data to a tape so that it could be used from open systems for LAN-free operations. However, Tivoli Storage Manager can now quickly and easily format LAN-free-capable volumes dynamically when they are requested by the storage agent. You can still use the old method, as long as the new server option LFVOLUMEFORMATCOUNT is set to 0. The default for 5.3.2 is to allow automatic formatting. Another method is to use the new command FORMAT LFVOLUME to format one or more volumes and have them available in a storage pool and ready for LAN-free volume requests.

LFVOLUMEFORMATCOUNT Server Option

The LFVOLUMEFORMATCOUNT server option specifies the number of volumes that the Tivoli Storage Manager server will format automatically for LAN-free operations if the storage pool does not contain any formatted volumes. The value you specify is also the default value for the number of volumes to be formatted when using the FORMAT LFVOLUME command.

During the formatting process, the server checks the storage pool for empty, unformatted volumes. Empty defined volumes are formatted first, if any are available. If none are available, the server formats scratch volumes. To ensure the success of automatic formatting, you need to verify that sufficient scratch volumes are available. The formatting process stops when the requested number of volumes have been formatted or when scratch volumes are no longer available.

If you specify a value greater than one for LFVOLUMEFORMATCOUNT, the server will format a single volume to satisfy the request of a storage agent. The server will start a background process to format the additional volumes only if a formatting process is not currently running for the specified storage pool.

To reduce competition for drives during busy client backup periods, consider formatting volumes using the FORMAT LFVOLUME command and having them available in the storage pool before the storage agent makes a request. To change the value for this option while the server is running, use the SETOPT command.

Option Syntax

```
LFVOLUMEFORMATCOUNT number
```

Parameters

NUMBER

Specifies the number of volumes the Tivoli Storage Manager server will format automatically for LAN-free operations if the storage pool does not contain any formatted volumes. The number is also the default value for the number of volumes to be formatted when using the FORMAT LFVOLUME command.

Enter a number 0 - 255. A value of zero means that no volumes will be formatted automatically and that LAN-free sessions will fail if the storage pool does not contain any formatted volumes. The default value of LFVOLUMEFORMATCOUNT is 1.

Examples

```
lfvolumeformatcount 12
```

FORMAT LFVOLUME Command

The FORMAT LFVOLUME command can be used to format one or more volumes for LAN-free operations. The formatted volumes will be available in the storage pool when a backup/archive client contacts a storage agent for a backup, and the storage agent contacts the z/OS server for volumes.

LAN-free operations on a z/OS server require formatted volumes. LAN-free sessions will fail if a storage pool does not contain any formatted volumes and does not allow automatic formatting. Automatic formatting is controlled by the server option LFVOLUMEFORMATCOUNT. For details, see the information on the LFVOLUMEFORMATCOUNT server option, above. For additional details about LAN-free operations on z/OS, refer to the Administrator's Guide.

During the formatting process, the server checks the storage pool for empty, unformatted volumes. Empty defined volumes are formatted first, if any are available. If none are available, then scratch volumes are formatted. The formatting process stops when the requested number of volumes have been formatted or when scratch volumes are no longer available. To ensure that the server formats the specified number of volumes, verify that the allowable supply of scratch volumes in the storage pool is sufficient.

Note: Automatic formatting will not start a formatting process if one is already running for the storage pool. However, you can start multiple simultaneous formatting processes by manually issuing the FORMAT LFVOLUME command multiple times. The number of processes started should not exceed the number of tape drives available for the device class.

Privilege Class

To issue this command you must have system privilege, unrestricted storage privilege, or restricted storage privilege.

Command Syntax

```
FORMat LFVolume pool_name NUMber = number Wait = No/Yes
```

Parameters

pool_name

This is a required parameter that specifies an existing primary sequential-assess storage pool defined on a LAN-free-capable device class (3590, 3592 or ECARTRIDGE).

number

This is an optional parameter that specifies the number of volumes to format. You can specify a value from 1 to 255. If you do not specify a value, the default is the value of the LFVOLUMEFORMATCOUNT option. If the value of LFVOLUMEFORMATCOUNT is zero, you must specify a number.

Wait This is an optional parameter that specifies whether to wait for the server to complete processing this command in the foreground. The default is NO. Possible values are:

No

Specifies that the server processes this command in the background. You can continue with other tasks while the command is being processed. Messages created from the

background process are displayed on an MVS system console and in the Tivoli Storage Manager server's Job Log. To cancel a background process, use the CANCEL PROCESS command.

Yes
Specifies that the server processes this command in the foreground. Wait for the command to complete before continuing with other tasks. The server then displays the output messages to the administrative client when the command completes.

Note: You cannot specify WAIT=YES from the server console when you issue this command with the MVS MODIFY command.

Examples

Task

Nightly backups must complete without requiring additional volumes to be formatted during the backup. A total of 15 LAN-free-capable volumes must be available in the storage pool to complete the backup. Currently, the LAN-free storage pool has only five empty formatted volumes. Format 10 additional volumes. You want the command to complete before continuing with other tasks:

Command

```
format lfvolume lanfreepool number=10 wait=yes
```

IBM LTO WORM Support

The Tivoli Storage Manager server now supports IBM LTO WORM devices and media in version 5.3.1.2. IBM LTO WORM devices are only available with Generation 3 devices and media. In order to utilize LTO WORM, there needs to be an LTO WORM device class defined:

```
DEFINE DEVCLASS <class name> LIBRARY=<library name> DEVTYPE=LTO WORM=YES
```

Tivoli Storage Manager can only distinguish WORM media from rewritable media when the media is mounted. Therefore, all WORM media needs to either be checked in with CHECKLabel=Yes or labeled with the CHECKIN parameter specified. Any media that is checked in without mounting in the drive is considered rewritable.

Multiple Server Entries in the Windows Management Console

The Tivoli Storage Manager Management Console for Windows displays multiple entries for same machine name under TSM Computers. To determine if this issue applies to you, look at the Management Console tree view and see if there are duplicate entries for your local computer. One will display *machine(Windows - Local)* and one or more others will display *machine(Windows)*. For example, if your machine name is THINK, you would normally see the following:

```
[-] Tivoli Storage Manager
        [+] THINK(Windows - Local)
```

If there are multiple entries, you would see this instead:

```
[-] Tivoli Storage Manager
        [+] THINK(Windows - Local)
        [+] THINK(Windows)
```

Note that this is only an issue for duplicates of the local machine name. It is not an issue if you have additional tree items for other machines. For example, there is no problem with the following:

```
[-] Tivoli Storage Manager
        [+] THINK(Windows - Local)
        [+] NYSERVER(Windows)
              [+] AZSERVER(UNIX)
```

If This Issue Applies to You:

Complete the following steps.

1. Install the fixpack.
2. Export the Tivoli Storage Manager console key to a file named *tsm_console.reg* using reg.exe on Windows XP or 2003:

   ```
   reg export "HKEY_LOCAL_MACHINE\SOFTWARE\IBM\ADSM\CurrentVersion\Console"
   tsm_console.reg
   ```

   Use regedit.exe on Windows 2000:

   ```
   regedit
   navigate and right click on
   "HKEY_LOCAL_MACHINE\SOFTWARE\IBM\ADSM\CurrentVersion\Console"
   choose File | Export... and save to file tsm_console.reg
   ```
3. Examine the exported registry file and see if anything is included below the console key entry. If there is no text below this line:

   ```
   [HKEY_LOCAL_MACHINE\SOFTWARE\IBM\ADSM\CurrentVersion\Console]
   ```

   then proceed to Step 9. Otherwise, continue to Step 4.
4. Start the Tivoli Storage Manager Management Console.
5. Right-click on each *localmachine (Windows)* and choose **Remove Computer** to remove the entry from the Management Console.
6. Shut down the Tivoli Storage Manager management console.
7. Import the saved Console registry key. For Windows 2003 or XP:

   ```
   reg import tsm_console.reg
   ```

   For Windows 2000:

   ```
   regedit
   choose File | Import... and select file tsm_console.reg
   ```
8. Done.
9. Under the *machinename (Windows - Local)*, expand the server instance. For example

   ```
   TSM Server1
   ```
10. Expand Reports and then right click on **Operational Reports**.
11. Choose **New** and then click OK twice. If prompted, enter your Tivoli Storage Manager administrator account information and click OK. This should create a report as well as recreating the registry keys for the server instance under the Console registry key. You can remove the report at this point since the registry has been corrected.
12. Repeat Step 11 for any additional server instances that appear under *machinename(Windows-Local)*.
13. Done.

Prompt for Reboot After Installation of the Server Module

The Tivoli Storage Manager server may prompt you to reboot after installation. This will happen if one of the system DLLs that Tivoli Storage Manager is installing is newer than one of the DLLs on your system at the time of install. This is normal behavior and will only happen once. That is, if you were to uninstall and then re-install the Tivoli Storage Manager server, you should not see this message because the system DLL will have been updated as part of the first install.

The set of system DLLs that Tivoli Storage Manager may update as part of installation includes the following: atl71.dll, mfc71.dll, mfc71u.dll, msvcp71.dll, msvcr71.dll, msxml4.dll, msxml4a.dll, msxml4r.dll.

Removing Tivoli Storage Manager from your Windows System

Uninstalling the Tivoli Storage Manager server using Add/Remove programs in the Windows Control Panel will not completely remove Tivoli Storage Manager artifacts such as file system and registry entries from your system. This is by design and is intended to ensure that people do not accidentally delete information that may be costly or impossible to recreate.

If your goal is to completely remove Tivoli Storage Manager from your system, you can do so using the following procedure. Note that a number of steps must be performed prior to using Add/Remove programs.

1. Remove the Tivoli Storage Manager client Windows services using the backup-archive client setup wizard. To start the backup-archive client click through the following: **Start** --> **All Programs** --> **Tivoli Storage Manager** --> **Backup-Archive GUI**.
2. From the main menu, choose **Utilities** --> **Setup Wizard**. You will see six check boxes on the dialog that appears. For this procedure, you will ignore the first and only use the last five. For each of the last five boxes, do the following:
   a. Select the check box and click **Next**.
   b. If the remove option is not greyed out, select it and click **Next** until you complete the wizard. If the remove option is greyed out, click **Cancel**.
   c. Select the next check box and repeat from Step b.

   Exit from the backup-archive GUI.
3. Remove the Tivoli Storage Manager server Windows services using the Tivoli Storage Manager Management Console. To start the Tivoli Storage Manager Management Console, click through the following: **Start** --> **All Programs** --> **Tivoli Storage Manager** --> **Management Console**.
   a. In the tree view under Tivoli Storage Manager, find the entry that ends with the string (Windows - Local) and expand it.
   b. Right-click on the entry titled *TSM Server1* and if it is not greyed out, choose **Delete Server Instance**.
   c. Click on **Select-All**.
   d. Click **Delete**.
   e. Click **Yes**.
   f. Click **Done**.
   g. Repeat for any additional Tivoli Storage Manager server instances shown.
   h. Exit from the Management Console.
4. Ensure that no Tivoli Storage Manager components are running. Tivoli Storage Manager includes a number of GUIs and command line interfaces in addition

to Windows services. Before uninstalling Tivoli Storage Manager, you should ensure that no applications are running. To uninstall the components, complete the following steps:

a. Click through **Start** --> **Control Panel** --> **Add or Remove Programs**.
b. Select each installed Tivoli Storage Manager component and click **Remove**. Typical components include the following:
   - IBM Tivoli Storage Manager Client
   - IBM Tivoli Storage Manager Device Driver
   - IBM Tivoli Storage Manager License
   - IBM Tivoli Storage Manager Server

   If you see any messages suggesting a reboot you can ignore them until all Tivoli Storage Manager components have been removed.

5. If you installed an IIS Virtual Directory for use with the Tivoli Storage Manager Operational Reporting web summary feature you should remove it. Right click on **My Computer** and choose **Manage**. **My Computer** should be located on your desktop or after clicking the Windows Start menu. Expand the tree and look for tsmreptweb. For example:

```
Services and Applications
     Internet Information Services
          Web Sites
               Default Web Site
                    tsmreptweb
```

   When you find it, right click on it and choose **Delete**.

6. Remove Tivoli Storage Manager artifacts from the file system.
   - By default Tivoli Storage Manager is installed to *c:\program files\tivoli\tsm* but you may have installed it somewhere else. Examine the contents of the Tivoli Storage Manager directory and ensure that you do not want to keep any of the files that may be left. If not, you can delete*c:\program files\tivoli\tsm* (or wherever you installed Tivoli Storage Manager) along with all subdirectories.
   - By default, when you install Tivoli Storage Manager, it will unpack temporary files into a directory named *c:\tsm_images*. Look for this directory. When you find it, you should ensure that you no longer want to keep any of the files under it. If not, you can delete it along with any subdirectories.
   - The Tivoli Storage Manager server may also create a directory named *tsmdata* at the root of various drives in order to store disk volumes. You should look for these directories and if found ensure that you do not want to keep any of their contents. You can then delete the directories.

7. Remove Tivoli Storage Manager artifacts from the registry.

   Note: This procedure modifies the Windows registry and you should exercise great care anytime you edit the registry because accidentally changing the wrong value in the registry can cause your computer to fail to boot and data may be lost.

   a. Click **Start** --> **Run**.
   b. Type "regedit" and click **OK**.
   c. Navigate to HKEY_LOCAL_MACHINE\SOFTWARE\IBM\ADSM.
   d. Right-click ADSM and choose **Delete**.

If you were prompted to reboot the computer at any point in the procedure you should do it now. Once the computer restarts, Tivoli Storage Manager should be completely removed from your system.

SANergy Support Page for Access to the Latest SANergy Levels

Updates to the version of SANergy included with Tivoli Storage Manager Enterprise Edition can be found at the Tivoli SANergy support page, http://www-306.ibm.com/software/sysmgmt/products/support/TivoliSANergy.html

Please access this page to obtain the latest level of Tivoli SANergy.

The Tivoli Storage Manager Device Driver (TSMSCSI) and Windows Logo Certification

The Tivoli Storage Manager device driver (tsmscsi) is a WDM device driver that runs on Windows 2003. tsmscsi is a plug and play function driver for storage devices including tape drives, optical drives and medium changers. It supports Tivoli Storage Manager-defined IOCTLs but not the Windows standard IOCTLs for storage devices. If installed, it is loaded when a device which has been configured for the Tivoli Storage Manager device driver is detected by the Plug and Play manager.

IBM has done extensive testing with the tsmscsi device driver and is confident in its stability and function. It is fully supported by IBM. IBM is actively working with Microsoft on a driver signing process but the driver is currently not signed. Since tsmscsi is not signed, it was not tested as part of the Windows certification process.

The tsmscsi device driver is included with the Tivoli Storage Manager server as a separate installation package and is not installed by default. Its use is optional for disk-only configurations or for configurations where device drivers are provided separately. This is the case, for example, with the IBM LTO devices which use a different IBM device driver not included with Tivoli Storage Manager.

Time-out on Formatting Large Disk Volumes on FAT32 Partitions

The Tivoli Storage Manager initial configuration wizard provides an option to create a disk storage pool. In some cases, usually with multi-gigabyte volumes on FAT32 file systems, it has been observed that the operation may not complete. Instead, you may see an error message similar to the following:

```
ANRU10008E Timed out attempt to issue a command to the server. You
can adjust the time-out value under the Settings menu item.
```

It is no longer possible to update the time-out value and the message text will be updated to reflect this. Instead, the recommended procedure to correct this problem is to issue the DEFINE VOLUME command at an administrative command prompt. For example, to create and define a 3GB disk storage pool volume to Tivoli Storage Manager, you can issue the following command:

```
define volume backuppool e:\tsmdata\server1\disk2.dsm formatsize=3000
```

Issue "help define volume" at an administrative command prompt or refer to the Tivoli Storage Manager *Administrator's Reference* for more information. You can also issue the QUERY VOLUME command to see a list of existing volumes along with

their locations. Note that the recommended file system to use for disk volumes on Windows is NTFS and the use of FAT32 volumes is discouraged.

Tivoli Storage Manager for Data Retention Name Change

The name for IBM Tivoli Storage Manager for Data Retention has changed to **IBM System Storage Archive Manager**. This product provides data retention policies that help meet regulatory requirements. The name change applies to all operating systems except z/OS.

TSMDLST Update for Windows

TSMDLST is a utility that can be used to display information for devices attached to a Windows based computer. It is especially useful when configuring devices for use with the Tivoli Storage Manager server and storage agents as it will display the Tivoli Storage Manager name and type needed for Tivoli Storage Manager commands. TSMDLST displays the SCSI ID, LUN, Bus, Port and device identifier information which typically includes microcode level information. In SAN environments, TSMDLST will list any host bus adapters (HBAs) along with any corresponding device driver information. For SAN devices the Serial number (SSN) and World Wide Name (WWN) are also displayed if they can be detected.

Starting with Fixpack 5.3.2, the TSMDLST utility can also help keep Tivoli Storage Manager path statements up-to-date for IBM tape devices. This can be especially useful when working with versions of the server that do not include the Accurate SAN Mapping feature. For example, if a pre-Version 5.3 Tivoli Storage Manager server is installed on AIX and path statements need to be set up for a Windows based storage agent, TSMDLST can be used to display the required information and also generate a macro that can be used to update the paths.

All previous functionality of TSMDLST is still available and the command syntax is backwards compatible to help ensure that any customer written scripts that use TSMDLST will continue to run without change. Previously, the only options supported were /? and /all. See the following sections for a complete list of options that are now available along with some example commands.

Syntax

The utility syntax is as follows:

```
tsmdlst [option]
```

Options

[/computer=computername]
Specifies the name of the computer that devices will be listed for. The default is the local machine.

[/detail]
Displays a long list instead of just a summary.

[/all] Includes all devices when the TSMDLST utility is run. The default is to only include tape drives and libraries.

[/nogenerictapecheck]
Skips the step for opening detected drives to see if they are supported for Tivoli Storage Manager generictape.

[/nohbacheck]
Skips the step for HBA API detection (may speed up processing). This option is useful when debugging is needed.

[/trace]
Stores diagnostic output in tsmdlst_trace.txt.

[/?] Displays usage information.

[/xinquiry]
Provides an alternate way to obtain serial number and world wide name information. This option is used only for devices supported by the IBM tape device driver. The following options are specific to the /xinquiry option:

[/processAll]
Indicates that the process should loop until all devices are processed.

[/maxRetries=#]
(This option requires /processAll) Indicates the maximum number of attempts to open each drive.

[/genpathfile]
Use this option to generate a list of devices and serial numbers. The tsmdlst_pathfile.txt file is written with information for /genmacropathsync and /genmacropathoffline.

[/includelib]
If specified the list will include libraries as well as drives.

[/genmacropathsync]
Generates a macro to synchronize Tivoli Storage Manager paths for the storage agent based on serial number. A drive must have a serial number defined to Tivoli Storage Manager for this option to work.

[/genmacropathoffline]
Generates a macro to update Tivoli Storage Manager paths for the storage agent to online or offline status based on drive accessibility. A drive is accessible if an operating system open call results in: ERROR_SUCCESS, ERROR_BUSY or ERROR_ACCESS_DENIED. This option only works for devices using the IBM device driver. A symbolic name, for example \\.\tape0, is required to open a device.

[/execmacropathoffline]
Executes the macro produced by the /genmacropathoffline option. This option will only work if /genmacropathoffline is also specified.

[/execmacropathsync]
Executes the macro produced by the /genmacropathsync option. This option will only work if /genmacropathsync is also specified.

The following options are specific to /genmacropathoffline and /genmacropathsync

[/server=servername]
Specifies the server name the storage agent is using.

[/stagent=stagentname]
Specifies the storage agent's name.

[/tcps=address]
Specifies the Tivoli Storage Manager server address.

[/tcpp=port]
Specifies the Tivoli Storage Manager server port. The default is 1500.

[/id=id]
Specifies the Tivoli Storage Manager administrative ID.

[/pass=password]
Specifies the Tivoli Storage Manager administrative password.

[/devicetype=drivetype]
This option is case sensitive and optional. If specified, filters on the drive's device type. For example, LTO.

[/libraryname=libname]
This option is case sensitive and optional. If specified, filters on the drive's library name. For example, LTO3584.

[/addpaths]
This option is used with the /genmacropathsync option. If specified and if needed, it adds define and update path statements.

[/verbose]
Provides path and drive information returned from the Tivoli Storage Manager server and machine information from the file generated by the /genpathfile option.

[/encodednames]
This option is used with the /genmacropathoffline option. If the macro produced by the /genmacropathoffline option changes the path to be offline, the /encodednames option causes the device name to be changed in the same macro. To allow centralized tracking on the server, the new device name consists of the date and time of the update, the reason why the path is marked offline (for example, PATH-NOT-FOUND), and the original device name. The format of the name is: yyyymmddhhss_REASON-MESSAGE_mtx.x.x.x

Examples

```
tsmdlst
tsmdlst /xinquiry /genpathfile /processall /maxretries=100
tsmdlst /genmacropathsync /execmacropathsync /id=admin /pass=admin /tcps=io
/server=io_server1 /stagent=nova_sta
tsmdlst -genmacropathoffline -execmacropathoffline -id=admin -pass=admin -tcps=io
-server=io_server1 -stagent=nova_sta
```

Notes

- If HBAs are detected, the type and firmware information will be displayed unless the /nohbacheck option is used.
- If the /xinquiry option is used, the hbaapi.dll load will not take place and instead the serial number information will be obtained using ibmtape xinquiry ioctl.
- For related information, please refer to APAR IC47192.

Updates for Fixpack 5.3.1

General LTO3 Support

LTO Generation 3 drives are supported with automated libraries such as SCSI and ACSLS. This support is available for Tivoli Storage Manager Version 5.2.4.0 and above, including 5.3.0.0.

Capacity:
The new LTO3 drives and media have a capacity of 400GB per cartridge of uncompressed data and a capacity of 800GB per cartridge for compressed data.

Device Class Information:
In order to utilize this new hardware through Tivoli Storage Manager, use the following when defining a device class that uses LTO3 drives:

- devtype=LTO
- format=<DRIVE, ULTRIUM3, ULTRIUM3C>

Command Syntax:

```
>>-DEFine DEVclass--device_class_name---------------------------->

>--LIBRary--=--library_name--DEVType--=--LTO-------------------->

   .-FORMAT--=--DRIVE---------.
>--+--------------------------+--+----------------------+------->
   '-FORMAT--=--+-DRIVE-----+-'  '-ESTCAPacity--=--size-'
                +-ULTRIUM---+
                +-ULTRIUMC--+
                +-ULTRIUM2--+
                +-ULTRIUM2C-+
                +-ULTRIUM3--+
                '-ULTRIUM3C-'

   .-PREFIX--=--ADSM-------------------.
>--+-----------------------------------+------------------------>
   '-PREFIX--=--+-ADSM---------------+-'
        '-tape_volume_prefix-'

   .-MOUNTRetention--=--60------.  .-MOUNTWait--=--60------.
>--+----------------------------+--+-----------------------+---->
   '-MOUNTRetention--=--minutes-'  '-MOUNTWait--=--minutes-'

   .-MOUNTLimit--=--DRIVES-----.
>--+---------------------------+------------------------------><
   '-MOUNTLimit--=--+-DRIVES-+-'
            +-number-+
            '-0------'
```

Generational Compatibility:
LTO3 drives are backwards read and write compatible with LTO Generation 2 media, but they are only backwards read compatible with LTO Generation 1 media. Thus, LTO3 drives can read and write to existing LTO2 media, but LTO3 drives need LTO1 media to be updated to READONLY. LTO1 volumes can be updated to READONLY by issuing the following command:

```
UPDATE VOLUME <volName> ACCESS=READONLY
```

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This restriction does not apply to LTO2 media, because LTO3 drives can both read and write to LTO2 media.

SANFS Support

Beginning at level 5.3.1, SAN File System (SANFS) storage may be used to house the Tivoli Storage Manager Server database, log, and storage pool volumes. The use of SANFS storage for LAN-free data movement is supported for this purpose as well. In using SANFS storage with Tivoli Storage Manager, it is recommended that SANFS be configured and working across multiple systems before bringing Tivoli Storage Manager online.

It is important to consult the SANFS documentation on configuring heterogeneous file system sharing, particularly with respect to userid mapping. If a storage agent has insufficient permissions to access files created by a server, there will be volume mounting and/or access failures.

Permissions can be checked by using command line facilities such as echo and ls to create and view files and their permissions on each system. Use the system userid that the server will be using and then check the permissions from storage agent systems, with the system userid that the storage agent will be using. If each system can read and write files created by the other, the permission and userid mappings should be in order. It is especially important to note that a Windows storage agent will not be able to share files with a UNIX server in a SANFS environment without setting up userid mapping.

SUN Storage Agent Documentation for addtoinit (APAR IC43928)

The storage agent is configured to start automatically at the time of installation. An entry is made to the inittab that enables this automatic startup. The following scripts (located in the storage agent installation directory) allow you to modify the inittab.

addtoinit (or addtoinit console)
: Adds an entry to the inittab that redirects output to /dev/console and enables automatic startup. For example:

```
aa:234:once:/opt/tivoli/tsm/StorageAgent/bin/dsmsta.rc >/dev/console
2<>/dev/console
```

addtoinit null
: Adds an entry to the inittab that redirects output to /dev/null and enables text based login to the console. For example:

```
aa:234:once:/opt/tivoli/tsm/StorageAgent/bin/dsmsta.rc >/dev/null
```

addtoinit saved
: Restores the inittab entry from <storage agent home directory>/oldinit to /etc/inittab. If more than one entry exists in the /etc/inittab file, addtoinit saved restores the first entry only.

removefrominit
: Removes any entry that refers to <storage agent home directory>/dsmsta.rc and records these entries in a file called <storage agent home directory>/oldinit. If more than one entry exists in the /etc/inittab file, removefrominit stores all entries in the oldinit file.

Tivoli Storage Manager 5.3.1 Server Modified to use Centera Version 2.3

To use Centera Version 2.3, ensure that a shared library environment variable is available during system startup. Work with your UNIX System Administrator to ensure this variable is set. Perform this step prior to starting the Tivoli Storage Manager 5.3.1 server. For example:

```
AIX : LIBPATH
Sun : LD_LIBRARY_PATH_64
HP  : SHLIB_PATH
```

Updates for Version 5.3.0

Applying Tivoli Storage Manager Updates for AIX

This section describes how to use Tivoli Storage Manager maintenance updates with AIX. These updates, also referred to as fixpacks, bring your server up to the current maintenance level. Use the System Management Interface Tools (SMIT) to apply the updates. To view a list of the latest maintenance and download fixes, visit www.ibm.com/software/sysmgmt/products/support/IBMTivoliStorageManager.html. Note that The Tivoli Storage Manager server must **not** be running during maintenance updates.

Before Applying Maintenance Updates

Maintenance updates may contain README files that provide a summary of changes for the fixpack. Review this information before you apply the update. If required, a DSMSERV UPGRADEDB operation is automatically performed when maintenance is applied.

1. Mount the CD-ROM by entering from the root directory:

```
crfs -v cdrfs -d /dev/cd0 -m /cdrom -pro

mount /cdrom
```

2. Change to a directory where you have write permission. For example, to change to the */home/temp* directory, enter:

```
cd /home/temp
```

3. List the contents of the PTF using the RESTORE command. For example:

```
restore -Tvf /cdrom/u452223.bff
```

4. Note the relative location of any README files. For example:

```
./usr/tivoli/tsm/server/bin/README.SRV
./usr/tivoli/tsm/devices/bin/README.DEV
```

5. Restore the README file. For example:

```
restore -xvf /cdrom/u452223.bff ./usr/tivoli/tsm/server/bin/README.SRV
```

6. Change to the directory containing the README and use your favorite browser to view the contents.

Using SMIT to Install Maintenance Updates on AIX®

Installation will be stopped and an error message displayed if an active server or storage agent process is detected. All active server or storage agent processes must be halted before installation can proceed.

Complete the following procedure to apply maintenance updates on the AIX system by using SMIT.

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Note: To use SMIT to apply maintenance updates on AIX, you must be root user and have disk space available. SMIT can be run from the AIX command line or from the command line of an xterm or desktop window. The server must be halted before you begin this procedure. **It is strongly recommended that you do not commit the update until you are confident that the server is operating properly.**

1. Log in as the root user.

   Note: To access the X Windows environment, enter: **xinit**.

2. Enter:

   ```
   smit
   ```

3. To see a list of authorized program analysis reports (APAR)s to select, choose the following selections from within SMIT:

   ```
   Software Installation and Maintenance
      Install and Update Software
         Install and Update from All Available Software
   ```

4. On the next window, select the device that you are using for the installation. You can enter the drive name in the window or click on **List** to access the device list. If you click on **List**, select the device that you are using (for example, */dev/cd0*).

   Note: The status of the drive that you select must be *Available*. Do not use */dev/mtx* for SMIT installations.

5. Click **Do**.
6. Place the cursor in "Software to Install" and press the F4 function key to list the available updates.
7. Select the updates you wish to install.
8. Check the default settings for the options on this window. Note that **committing the software prevents removal of Tivoli Storage Manager from the system, and prevents you from rejecting the Fixpack and returning to the previous level.**
9. Check the default settings for all of the options.
10. Click **OK** to continue.

    This installation may take several minutes.

11. After the installation is complete, click on **Done**, remove the CD-ROM, and exit from SMIT.

DATEFORMAT, TIMEFORMAT, and NUMBERFORMAT Server Options

The server options DATEFORMAT, TIMEFORMAT, and NUMBERFORMAT are described in the IBM Tivoli Storage Manager Reference publication and appear in the output of the QUERY OPTIONS server command. However, these options are available and supported only on servers running on MVS. Date format, time format, and number format for other platforms are retrieved from the operating system and cannot be user specified in the server options.

Default Option and Command Parameter Changes

This release contains changes to defaults for some option file entries and parameters for some commands. The changes are listed below. Consult the Tivoli Storage Manager *Administrator's Reference* for your platform for information on effects of these options and parameters.

Options File (dsmserv.opt) Default Changes

The following option file defaults were changed. If you do not have these options specified in your options file, you will automatically pick up the new options and no action is required on your part. If you have these options specified, then you should check them, and determine if any changes should be made.

Table 3. Changed Defaults

Option	Previous Default	New Default
BUFPOOLSIZE	2048 (KB)	32768 (KB)
MOVEBATCHSIZE	40 (objects)	1000 (objects)
MOVESIZETHRESH	500 (MB)	500 (MB)
TCPADMINPORT	1500	value of TCPPORT
TCPBUFSIZE (AIX Only)	16 (KB)	32 (KB)
TCPNODELAY	NO (YES for storage agent)	YES
TCPWINDOWSIZE		63 (KB)
TXNGROUPMAX	40 (objects)	256 (objects)
ADMINONLIENTPORT	new option	YES

The options SELFTUNETXNSIZE, USELARGEBUFFERS, AIXDIRECTIO were removed. If you have them specified in your options file, they will no longer have an effect, but no error messages will be issued. They should be removed from your options file.

Command Parameter Changes

The default for parameters for the following commands were changed. Any scripts or scheduled commands using these commands should be reviewed to see if any changes are required. See the Tivoli Storage Manager *Administrator's Reference* for your platform for more information on these commands and parameters.

For the DEFINE DEVCLASS xxxxxxx DEVTYPE=FILE command, the MAXCAPACITY and MOUNTLIMIT parameter defaults were changed. This only affects the FILE device type. The new MAXCAPACITY default is 2GB for all platforms. The previous MAXCAPACITY default ranged from 1MB to 4MB depending on the platform. The new MOUNTLIMIT default is 20 for all platforms. The previous MOUNTLIMIT default was 1 or 2 depending on the platform.

For the DEFINE STGPOOL xxxxxx <sequentialDevtype> POOLTYPE=PRIMARY command, the COLLOCATE parameter default has changed. This change does not affect DISK or sequential access COPY storage pools. The new default for COLLOCATE is GROUP, the old default was NO.

For the MOVE DATA and MOVE NODEDATA commands, the default for the RECONSTRUCT parameter has changed for moves involving only sequential

storage pools. This change does not affect MOVE commands when either the source or target storage pool is DISK. The new default for RECONSTRUCT is YES. The previous default was NO.

Device Driver Installation Fix for HP-UX

In Version 5.2.2, the Tivoli Storage Manager device driver became a dynamically loadable kernel module (DLKM). Since then, there have been reports that in some installations, following a reboot, HP-UX does not assign the Tivoli Storage Manager tape driver to devices that it had been assigned to before the reboot. Until a permanent fix for this is available from HP, Tivoli Storage Manager will install a startup execution script, tsmscsi. This script is installed into /sbin/init.d and symlinked to /sbin/rc3.d/S501tsmscsi, which causes /sbin/init.d/tsmscsi to run when the system boots into run-level 3.

The use of this script is optional and might not be necessary for every installation. As it is shipped, the script simply returns without doing any work. However, if devices are no longer claimed by the Tivoli Storage Manager device driver following a reboot of the machine, this script can be used to reclaim them. The /sbin/init.d/tsmscsi script is meant to be edited to add the commands to claim devices with the Tivoli Storage Manager device drivers.

Claiming a Device

Add a specific device claim here. For example:

```
/opt/tivoli/tsm/devices/bin/tsmddcfg 0/3/0/0.5.1
/opt/tivoli/tsm/devices/bin/tsmddcfg 0/6/0/0.1.30.255.0.0.1
```

If no lines are uncommented, this script simply returns. Follow the example (uncommented) to invoke:

```
/opt/tivoli/tsm/devices/bin/tsmddcfg
```

This line is followed by the hardware path of a single device to be claimed by the Tivoli Storage Manager device driver. Each device requires its own line.

ENABLE and DISABLE SESSIONS Command Enhancements

The commands ENABLE SESSIONS and DISABLE SESSIONS have been enhanced to allow greater flexibility in which session types are affected. The syntax enhancements to the commands are:

```
                     .-CLIent----.
>>-ENable SESSions----+-----------+-><
                     +-CLIent----+
                     +-ALL-------+
                     +-SERVer----+
                     '-ADMin-----'
```

The default behavior is to enable sessions for clients. This parameter is optional. The default value is CLIent. Possible values are:

CLIent
Enables only backed-up and archived client sessions.

ALL
Enables all session types.

SERVer
Enables only server-to-server sessions.

ADMin
Enables only administrative sessions.

```
                    .-CLIent----.
>>-DISAble SESSions----+-----------+-><
                    +-CLIent----+
                    +-ALL-------+
                    +-SERVer----+
                    '-ADMin-----'
```

The default behavior is to disable sessions for clients. This parameter is optional. The default value is CLIent. Possible values are:

CLIent
Disables only backed-up and archived client sessions.

ALL
Disables all session types.

SERVer
Disables only server-to-server sessions.

ADMin
Disables only administrative sessions.

Enhanced Performance of Incremental Export

Beginning with Tivoli Storage Manager Version 5.3, an incremental export operation (export with a FROMDATE) will no longer export files that were inserted prior to the FROM Date only to be discarded during the import operation on the target server. These files were exported to ensure that their corresponding versions on the target server were deactivated. The export function has been modified to only send to the target server the necessary information needed to deactivate files which have become inactive on the source.

New Server Option SANDISCOVERY

A new server option, SANDISCOVERY, is now available. This option is used to enable and disable the Tivoli Storage Manager server SAN discovery function. If the SANDISCOVERY option is enabled, the Tivoli Storage Manager server will perform SAN discovery during server initialization and when the device path has been changed. Using this SAN discovery function, the Tivoli Storage Manager server can automatically correct the device's special file name if it has been changed.

The Tivoli Storage Manager server does not require persistent binding with the SAN discovery function enabled. Users can also issue the server command, QUERY SAN, to display all the devices seen by the Tivoli Storage Manager server.

Syntax:

```
>>-SANDISCOVERY----+-ON---+-><
                   '-OFF--'
```

Parameters

ON
With this option specified, the server will perform SAN discovery during server initialization, when the device path has been changed, or when the QUERY SAN command is issued.

OFF
With this option specified, the server will not perform SAN discovery during the server initialization, when the device path has been changed, or when the QUERY SAN command is issued.

For example:

```
sandiscovery on
```

The default value is:

- ON for Windows systems
- OFF for all other platforms (AIX, LINUX, HP-UX, Solaris)

SET WEBAUTHTIMEOUT Command

The server still accepts the SET WEBAUTHTIMEOUT command, and the QUERY STATUS command still displays a value for "WEB Admin Authentication Time-out" even though the web administrator interface is no longer supported. Both will be removed in future server maintenance.

Storage Agent Use of Client Option LANFREETCPSERVERADDR

When the storage agent uses a network to talk to the server that is different than the network the client uses to talk to the server, the LANFREETCPSERVERADDR function will not work. The issue is that the server address as reported by the client to the storage agent is not appropriate for the client to use to communicate with the server.

A work around to allow using multiple networks for the server and storage agent is to manipulate the operating system hosts files. For a UNIX client, the /etc/hosts file would be altered. For a Windows client, the file would be \WinNT\system32\drivers\etc\hosts. Define a host name on each machine pointing to the Tivoli Storage Manager server. Define each with an IP address that can be used to point to the Tivoli Storage Manager server on the proper network. The Tivoli Storage Manager client can then find that server if that name is used on the storage agent high level communication address definition.

Support for the QUERY SAN Command and SAN Discovery

AIX

The ability to accurately define SAN devices on the server and storage agent relies upon functionality provided by AIX. In particular, fileset devices.common.IBM.fc.hba-api provides a 32-bit and 64-bit API for use by Tivoli Storage Manager. During product testing, an error was found in the 64-bit version of the library (/usr/lib/libHBAAPI.a) shipped with this AIX fileset. As a result, the server and storage agent for AIX will check the level of the fileset to determine whether to load the library.

For AIX 5.2, this fileset must be AT or LATER than 5.2.0.30 for 32-bit, and LATER than 5.2.0.30 for 64-bit. (5.2.0.30 64-bit HAS the error). For AIX 5.3, the base level (5.3.0.0) is sufficient for 32-bit but not for 64-bit. You must have a fileset LATER than the base fileset for 64-bit. The EXPECTED level of this fileset that corrects the problems is 5.2.0.50 for AIX 5.2 and 5.3.0.10 for AIX 5.3.

If the server or storage agent cannot load the library or the library is missing, it will issue message ANR8226E. If the library is not at the minimum required level, it will issue message ANR8227E. With any of these messages, the QUERY SAN command will show no information and SAN discovery will not be performed. For the list of supported HBAs and required driver levels by operating system go to http://www.ibm.com/support and search on keyword TSMHBA.

After the fileset has been updated to the desired level, please perform the following set option command to enable SAN discovery:

```
setopt SANDISCOVERY ON
```

Windows 2003 with Emulex Fibre Channel HBA

There is no support for SAN discovery for Emulex Fibre Channel HBA on Windows 2003 until the problem with the Emulex device driver is resolved. The Windows 2003 platform is not supported for now, although the SANDISCOVERY option defaults to YES.

A message will be issued when the SAN discovery is invoked:

```
ANR1793W TSM SAN discovery is not supported on this platform or this version of OS.
```

For the list of supported HBAs and required driver levels by operating system go to http://www.ibm.com/support and search on keyword TSMHBA.

Windows 2003 with Qlogic Fibre Channel HBA

There is no support for SAN discovery for Qlogic Fibre Channel HBA on Windows 2003 until a problem with Microsoft is resolved. The Windows 2003 platform is not supported for now although the SANDISCOVERY option defaults to YES. For the list of supported HBAs and required driver levels by operating system go to http://www.ibm.com/support and search on keyword TSMHBA.

Windows 2000 with IBM LTO Tape Devices

A problem in some levels of the IBM LTO Gen-2 tape firmware can cause the SAN discovery to fail. Please use the LTO Gen-2 tape firmware level 4772 or beyond from IBM support web site at http://www.ibm.com/support to avoid this problem.

Windows 2000 with Unsupported SAN Data Gateway

There have been problems with obsolete SAN Data Gateways, for example: SDG 2108. The gateway may respond "QUEUE FULL" status to the SCSI command during SAN discovery and cause it to fail. The only way to resolve this is to replace these devices with an IBM supported gateway. For the list of supported HBAs and required driver levels by operating system go to http://www.ibm.com/support and search on keyword TSMHBA.

Linux with IBM Tape Devices

Due to a problem in the IBM tape device driver for Linux, Tivoli Storage Manager will not be able to discover some of the IBM device's path. This affects the Tivoli Storage Manager QUERY SAN and SAN discovery function. The problem has been fixed by IBM tape device driver for Linux.

- For kernel 2.4, the fix is in IBM Tape device driver level 1.5.6
- For kernel 2.6, the fix is in IBM Tape device driver level 2.0.1

The IBM device driver for Linux 2.4.x kernel supports a maximum of 64 tape drives and 64 medium changers. The QUERY SAN command will not be able to display the special file names for those devices beyond the IBM device driver's range. The special file names for those devices in the QUERY SAN command output will be left blank. Upgrade the Linux kernel to 2.6.x to resolve this problem.

Sun Solaris with IBM Tape Devices

Due to a change made in the IBM tape device driver for Solaris, the older version of the device driver will keep 10 bytes of the library serial number. But, the new version of the IBM tape device driver will keep all 16 bytes provided by the IBM tape library. The result is that Tivoli Storage Manager SAN discovery will keep 16-byte serial numbers since they are obtained by the HBA via the HBAAPI function. This will cause a serial number mismatch between current library operations and the Tivoli Storage Manager database (10 bytes only). The Tivoli Storage Manager SAN discovery operation will not be able to discover and find tape libraries with 10-byte serial numbers. As a result, the library operation will fail.

To correct this problem:

1. Install the IBM tape device driver for Sun Solaris 4.1.0.2 or beyond. This will take all 16 bytes of the tape library serial number.
2. Issue the following Tivoli Storage Manager command to replace the old 10-byte serial number with the new 16-byte serial number in the Tivoli Storage Manager database:

   ```
   update library libraryName serial=autodetect
   ```

Linux for pSeries

To find the Emulex HBA driver, go to http://www.emulex.com and click on "drivers, software, and manuals", under HBAs installed on OEM equipment, select vendor IBM. Then, select the HBA model.

JNI Fibre Channel HBA on Solaris

There is no support for SAN discovery for JNI Fibre Channel HBA on Solaris until the problem with JNI is resolved. The option SANDISCOVERY defaults to NO for this platform. If you change SANDISCOVERY to YES, the QUERY SAN and SAN discovery will not obtain correct data. For the list of supported HBAs and required driver levels by operating system, go to http://www.ibm.com/support and search on keyword TSMHBA.

ANY Fibre Channel HBA on Linux for zSeries or HP-UX

There is no support for SAN discovery on Linux for zSeries or the HP-UX platform. A message will be issued when the SAN discovery is invoked:

```
ANR1793W TSM SAN discovery is not supported on this platform or this version of OS.
```

Using Shared Memory Communications on Linux

Shared memory communications on all UNIX platforms require the use of IPC message queues. Four message queues are used for each concurrent session. In some Linux environments, the system-wide limit on the number of message queues may be very small, thus limiting the number of concurrent shared memory sessions.

To determine the current system-wide limit, you can:

1. Issue the following command and look for the maximum number of queues system wide:

   ```
   ipcs -l
   ```

   OR issue:

   ```
   /sbin/sysctl kernel.msgmni
   ```

If this number is less than 256, you might want to increase it to at least 256. To increase the maximum number of system-wide message queues, you can change the current kernel with the echo command as follows:

```
# echo "256" >/proc/sys/kernel/msgmni
```

OR

```
# /sbin/sysctl -w kernel.msgmni="256"
```

To make the change permanent, add the following 3 lines to the /etc/sysctl.conf file:

```
# Sets maximum number of message queues to 256
# Set this to 1024 or higher on production systems
kernel.msgmni = 256
```

Windows: Performing a Silent Installation

This section describes how to perform a silent IBM Tivoli Storage Manager installation. A silent installation runs unattended, requiring no monitoring or dialog box input. No installation wizards appear. Silent installation is run by using the MSIEXEC command from the command line interface, or by incorporating the MSIEXEC command into a command file. The command file can also be used to combine a silent installation of the server with a configuration of the server.

You can use the silent installation method to ensure consistent configuration if you are installing IBM Tivoli Storage Manager on multiple computers with identical hardware. For example, if you have multiple servers in different locations, you can produce and distribute a CD containing the same silent installation package for each server. You can also place a silent installation package on a file server for distribution over a network.

Because Tivoli Storage Manager is based on the Microsoft Windows Installer technology, all of the components can be deployed using Active Directory and Group Policy. For more information on deploying Tivoli Storage Manager using Group Policy, refer to the Windows 2000 online help.

Installing the Server

The MSIEXEC command is used to silently install the Tivoli Storage Manager server, licenses, client, and device driver from the command line. Each of these components should be installed separately by specifying its respective feature information from the feature tables.

The source file of each component can be identified by its .msi extension. These files are located on the product CD.

For more information about the MSIEXEC command, refer to Microsoft documentation.

The following is an example of installing the Tivoli Storage Manager server using the MSIEXEC command for a silent installation. Explanations of the parameters follow the example.

Command

```
msiexec /i "c:\tsm_images\TSMSRV52_WIN\TSM32\server\IBM Tivoli
Storage Manager Server 5.3.0.0.msi" RebootYesNo="No"
REBOOT="Suppress" ALLUSERS=1 INSTALLDIR="e:\program
files\tivoli\tsm" ADDLOCAL="Server32,Console32"
 TRANSFORMS=1033.mst /qn /l*v "c:\server_log.txt"
```

/i Specifies an installation.

″c:\tsm_imagesTSMSRV52_WIN\TSM32\server\IBM Tivoli Storage Manager Server 5.3.0.0.msi″
Specifies the complete path to the server source package. Look for the actual source package on the product CD. It will have an .msi extension.

RebootYesNo=″No″ REBOOT=″Suppress″
Specifies that a reboot should not be performed. Except for the Tivoli Storage Manager device driver, it is recommended that you not allow a reboot of your machine when using silent installation.

ALLUSERS=1
Specifies that the package is for all users. This parameter is required.

INSTALLDIR=″c:\program files\tivoli\tsm″
Specifies the destination path. If Tivoli Storage Manager is already installed on the system and you are upgrading your server, the existing path will be used as the destination path.

ADDLOCAL=″Online_Main,Online_Server_Readmes,Online_Server, Server_Base″
Specifies the list of features to install. Feature list should be ″Server32,Console32″ for example. See Table 4 on page 41 for a complete list.

TRANSFORMS=1033.mst
Specifies the language transform to use. See Table 11 on page 43 for a complete list.

/qn Specifies that this is a silent install.

/l*v ″c:\install_log.txt″
Specifies verbose logging and the name and location of the Tivoli Storage Manager installation log file.

Installing the Licenses

The following is an example of installing the Tivoli Storage Manager licenses using the MSIEXEC command for a silent installation. Note that only the source package name and the ADDLOCAL parameter are different from the server install example.

Command

```
msiexec /i "c:\tsm_images\TSMSRV52_WIN\TSM32\server\IBM Tivoli
Storage Manager Server 5.3.0.0.msi" RebootYesNo="No"
REBOOT="Suppress" ALLUSERS=1
INSTALLDIR="e:\program files\tivoli\tsm" ADDLOCAL="License32,License64"
TRANSFORMS=1033.mst /qn /l*v "c:\license_log.txt"
```

Installing the Backup-Archive Client

The following is an example of installing the Tivoli Storage Manager backup-archive client using the MSIEXEC command for a silent installation. Note

that only the source package name and the ADDLOCAL parameter are different from the server install example. Also note that this example should be modified when installing a Tivoli Storage Manager Backup-Archive Client Language Pack.

Command

```
msiexec /i "Z:\tsm_images\TSM_BA_Client\baclient\Tivoli Storage Manager
Client.msi" RebootYesNo="No"
REBOOT="Suppress" ALLUSERS=1 INSTALLDIR=
"e:\program files\tivoli\tsm" ADDLOCAL="BackupArchiveGUI,BackupArchiveWeb
,ApiRuntime,AdministrativeCmd,Image,OFS,Online_Client_Readmes"
TRANSFORMS=1033.mst /qn /l*v "c:\client_log.txt"
```

Installing the Device Driver

The following is an example of installing the Tivoli Storage Manager device driver using the MSIEXEC command for a silent installation. Note that only the source package name and the ADDLOCAL parameter are different from the server install example.

Command

```
msiexec /i "c:\tsm_images\TSMSRV52_WIN\TSM32\server\IBM Tivoli
Storage Manager Server 5.3.0.0.msi" RebootYesNo="No"
 REBOOT="Suppress" ALLUSERS=1
INSTALLDIR="e:\program files\tivoli\tsm"
ADDLOCAL="DeviceWin2k,DeviceNet32,DeviceNet64"
TRANSFORMS=1033.mst /qn /l*v "c:\driver_log.txt"
```

Installing the Language Packs

The following is an example of installing the Tivoli Storage Manager language packs using the MSIEXEC command for a silent installation. Note that only the source package name and the ADDLOCAL parameter are different from the server install example.

Command

```
msiexec /i "C:\tsm_images\TSM52_WIN\Common\langpack\lang_fra\
IBM Tivoli Storage Manager 5.3.0.0 - French.msi"
RebootYesNo="No" REBOOT="Suppress" ALLUSERS=1
INSTALLDIR="e:\program files\tivoli\tsm"
ADDLOCAL="fra_console,fra_server"
TRANSFORMS=1033.mst /qn /l*v "c:\driver_log.txt"
```

Installing the Storage Agent

The following is an example of installing the Tivoli Storage Manager storage agent using the MSIEXEC command for a silent installation. Note that only the source package name and the ADDLOCAL parameter are different from the server install example.

Command

```
msiexec /i "C:\tsm_images\TSM52_WIN\TSM32\Stagent\
IBM Tivoli Storage Manager Storage Agent 5.3.0.0.msi"
RebootYesNo="No" REBOOT="Suppress" ALLUSERS=1
INSTALLDIR="e:\program files\tivoli\tsm"
ADDLOCAL="Console32,StorageAgent32"
TRANSFORMS=1033.mst /qn /l*v "c:\driver_log.txt"
```

Feature Tables

Table 4. Server Features and Feature Descriptions

Server Feature	Description
Server32	32–bit package

Table 4. Server Features and Feature Descriptions (continued)

Server Feature	Description
Server64	This feature only available on 64-bit package
Console32	

Table 5. Server License Feature and Feature Description

Server License Feature	Description
License32	Server License
License64	Server License. This feature is only available in the 64-bit license package.

Table 6. Backup Archive Client Features and Feature Descriptions

Client Feature	Description
BackupArchiveGUI	BA Graphical User Interface
BackupArchiveWeb	BA Web Client
ApiRuntime	API Runtimes
ApiSdk	API SDK
AdministrativeCmd	Administrative Command Line
Readmes	Client Readmes and HTMLHelp Book
BooksPdf	PDF Book

Table 7. Client Language Pack Features and Feature Descriptions

Client Language Pack Features	Feature Description
LanguageFiles	Language-specific files

Table 8. Device Driver Features and Feature Descriptions

Device Driver Feature	Description
DeviceWin2k	Only available on 32-bit package
DeviceNet32	Only available on 32-bit package
DeviceNet64	Only available on 64-bit package

Table 9. Storage Agent Features and Feature Descriptions

Storage Agent Feature	Description
Console32	Only available on 32-bit package
StorageAgent64	Only available on 64-bit package

Table 10. Language Pack Features and Feature Descriptions

Language Pack Feature	Description
chs_server	Simplified Chinese language support
chs_console	Simplified Chinese language support
cht_server	Traditional Chinese language support
cht_console	Traditional Chinese language support
deu_server	German language support

Table 10. Language Pack Features and Feature Descriptions (continued)

Language Pack Feature	Description
deu_console	German language support
esp_server	Spanish language support
esp_console	Spanish language support
fra_server	French language support
fra_console	French language support
itn_server	Italian language support
itn_console	Italian language support
jpn_server	Japanese language support
jpn_console	Japanese language support
kor_server	Korean language support
kor_console	Korean language support
ptb_server	Portuguese language support
ptb_console	Portuguese language support

Table 11. Transform and Language

Transform	Language
1028.mst	CHT Traditional Chinese
1031.mst	DEU German
1033.mst	ENG English
1034.mst	ESP Spanish
1036.mst	FRA French
1040.mst	ITA Italian
1041.mst	JPN Japanese
1042.mst	KOR Korean
1046.mst	PTB Portuguese
2052.mst	CHS Simplified Chinese

Including a Custom Client dsm.opt File

Users who would like to install a predefined DSM.OPT file should place a copy of the DSM.OPT file in the CONFIG directory located within the install image.

```
tsm_images\TSM_BA_Client\baclient\Program Files\Tivoli\TSM\config.
```

The file must be named DSM.OPT.

The installation program will copy the predefined DSM.OPT file to the ..\BACLIENT directory when both of the following conditions are met:

- DSM.OPT does NOT exist in the ..\BACLIENT directory on the target computer. The installation program will not copy over an existing DSM.OPT file.
- DSM.OPT exists in the install image's CONFIG directory, as described above.

Installation Troubleshooting

Table 12. Symptoms and Resolutions

Symptom	Resolution
You receive a message during setup indicating that you do not have enough free space to install on a drive that does have free space.	Try updating an entry in the setup.ini file that is included with the package. If your package is on CD, you'll have to copy the entire package to a hard drive so that you can edit setup.ini. Once setup.ini is available on your hard drive you can edit it and change the line DiskSpace=8000 to DiskSpace=0000.
You do not see any Tivoli Storage Manager icons on the desktop after an installation.	Click on an empty area of the desktop and press F5 to refresh the desktop display.
Near the end of the installation process, a warning message box titled 'HTML 1.31 Update' displays with the text, "This computer already has a newer version of HTML Help."	Click on the OK button and continue.
Silent Installation doesn't appear to work.	Remove the /qn parameter and re-execute your msiexec command. Any errors should be displayed. After you fix the problem add the /qn parameter again.

Performing a Silent Uninstall

You should stop any running Tivoli Storage Manager services before performing an uninstallation. To see which services are running, you can type **net start** in a Windows command prompt. Look for any services that have Tivoli Storage Manager in them. If you have installed any Tivoli Storage Manager services using your own names, look for those as well. Each service you plan to remove should be stopped. To stop a service, type **net stop** "**service name.**" For example, to stop the first server instance you can type **net stop** "**tsm server1.**"

You can silently uninstall the Tivoli Storage Manager server, licenses, and device driver by using the /x parameter instead of the /i parameter for each command. All other parameters remain the same.

The following is an example of silently uninstalling the Tivoli Storage Manager server using the MSIEXEC command.

Command

```
msiexec /x "c:\tsm_images\TSM51_Complete\server\Tivoli Storage
Manager Server 5.0.msi" RebootYesNo="No" REBOOT="Suppress"
ALLUSERS=1 INSTALLDIR="c:\program files\tivoli\tsm"
ADDLOCAL="Online_Main,Online_Server_Readmes,Online_Server,
Server_Base" TRANSFORMS=1033.mst /qn /l*v c:\install_log.txt
```

z/OS Device Class Attribute Clarification

On z/OS systems, the COMPRESSION parameter for ECARTRIDGE and 3592 device types is ignored and does not generate an error message when specified. This fix pack level of code continues to ignore the COMPRESSION parameter. The defining or updating of the device class for these device types is successful when COMPRESSION is specified.

The ECARTRIDGE and 3592 device types specify compression using the FORMAT parameter. See the *Administrator's Reference*, or use the online help to determine the format values that will enable compression.

Definitions and updates for ECARTRDIGE device types will accept T9840CC or T9840C-C on the FORMAT paramter when requesting T9840C with compression. This fix pack allows the T9840CC value to be processed is if T9840C-C was specified.

Known Limitations

Updates for Fixpack 5.3.2

Automatically Restarting a Restore on the Tivoli Storage Manager Client

The Tivoli Storage Manager client will automatically restart backup and restore operations in the event it loses a session with the TSM server. This can happen for any number of reasons including a cluster failover.

The amount of time it takes the client to re-establish the session depends in part on the way the connection is broken. If a Tivoli Storage Manager client backup or restore is in progress and the server is halted and then restarted, as would be the case in a cluster failover, then the client will quickly re-establish the session and continue from where it left off. If, however, the ethernet cable is disconnected from the server, a restore session will take approximately two hours to re-establish the connection after the ethernet cable has been reconnected. The reason for this is because the Tivoli Storage Manager client uses the SO_KEEPALIVE socket option, which enables periodic transmissions on a connected socket, when no other data is being exchanged. The default value for SO_KEEPALIVE option is two hours.

Normally this will not be a problem as unattended restores are not typical with Tivoli Storage Manager and it is even less likely that this type of network error would occur during an unattended restore. However, if the two hour default is too long in your environment you can use the procedure below to change the default value for SO_KEEPALIVE on Windows 2000, 2003, and XP.

Note: This procedure modifies the Windows registry. You should exercise great caution anytime you edit the registry because accidentally changing the wrong value in the registry can cause your computer to fail to boot and data may be lost.

To change the default value for SO_KEEPALIVE on Windows 2000, 2003, and XP, complete the following steps.

1. Start regedit and add a DWORD *KeepAliveTime* to the HKLM\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters key.
2. Enter the number of milliseconds to use for the *KeepAliveTime* parameter. If you would like to change the value to five minutes you can set the value to 300000 (decimal).
3. After you have made the change you will need to reboot your system in order for the change to take effect.

Once this change is made, the Tivoli Storage Manager client will re-establish the session after the amount of time you have specified elapses.

Issues Related to Configuring a Tivoli Storage Manager Server in a Windows Cluster

Some issues related to configuring a Tivoli Storage Manager server in a Windows cluster have be discovered. Here are some tips on what to do if you encounter problems configuring the server in a cluster. Fixes will be made available in an upcoming version of the Tivoli Storage Manager server on Windows.

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1. Cluster Wizard: Failure to Register the Tivoli Storage Manager Resource Type

The Tivoli Storage Manager server resource type may fail to register because of two missing DLLs in the server installation package. The error may be displayed as the following error message:

```
ANRU1178E Unable to register TSM Cluster DLLs with the MSCS
  cluster. Reason: The specified module could not be found.
```

The two DLLs are:

- MFC71U.DLL
- MSVCR71.DLL

These DLLs may already exist on your system. To find out, you can open a windows command prompt and issue the following:

```
dir %systemroot%\system32\mfc71u.dll
dir %systemroot%\system32\msvcr71.dll
```

If they do not exist, the easiest and recommended way to obtain them is to install the Tivoli Storage Manager Version 5.3 Backup-Archive client on the same cluster nodes as the server. Or, you can issue the following commands (update the source path in the following statements if needed):

```
copy "c:\program files\tivoli\tsm\console\mfc71u.dll" %systemroot%\cluster
copy "c:\program files\tivoli\tsm\console\msvcr71.dll" %systemroot%\cluster
```

When all nodes have been updated, start the Tivoli Storage Manager server from the cluster administrator.

2. User Account Error When Performing Cluster Configuration

The Tivoli Storage Manager server initial configuration wizard may suggest that you use a name with a space in it. For example, the suggested server name may be *tsm server1_server1*.

Server names may not contain spaces. If a server name with a space in it is used it will cause the server initialization to fail. However, the only indication of the failure will be that subsequent operations fail. To avoid this, ensure that no spaces are included in server names. To fix the name shown above you could change it to *tsm_server1*.

See "Appendix A, Configuring and Managing Clusters," in the *Tivoli Storage Manager for Windows Administrator's Guide* for more information.

Using a Disaster Recovery Plan Created on a SUSE Linux Platform

If you are preparing to run a disaster recovery plan file and the server that generated the plan file runs on the SUSE Linux platform, it is recommended that you create this file from the same machine that has the server to be recovered.

Use the Q RPFC command from the admin client or copy and paste from the Administration Center display to create the file. Do this from the same SUSE Linux machine on which you will be running the disaster recovery plan file. If this recommendation is not followed, it is possible that errors could occur during the plan file explode process due to garbage characters that may appear after the file transfer from another platform.

Updates for Fixpack 5.3.1

QUERY NODE Limitation

When using the FORMAT=DETAILED parameter for the QUERY NODE command, some invalid information is displayed when the last operation for the node uses multiple sessions. The values displayed as percentages for Idle Wait, Comm. Wait, and Media Wait are not valid; they are the sum of the total time for each wait on all sessions, as a percentage of the duration. The duration displayed is for the last master session.

If multiple master sessions occurred because the original master session ended after exceeding the idle wait time, being cancelled, or ending for some other reason, the duration will only be for the time of the last session. The QUERY NODE duration, and Idle, Comm., and Media Wait percentages will not be accurate unless RESOURCEUTILIZATION 1 is used in the client options.

To obtain accurate statistical information, use other sources such as accounting records, records logged by client sessions, or the contents of the summary table, which are available through SQL queries.

This problem occurs on all platforms and all levels of the server.

Updates for Fixpack 5.3.0

LAN-free Shared Files in a Root Directory for Version 5.3

For 5.3.0 storage agents, there is a problem sharing FILE volumes that are located in the root directory of a partition. The DIRECTORY parameter of the DEFINE DEVCLASS and DEFINE PATH commands should only reference directories below the root level. This problem will be addressed in a future fix level. For example, the following configuration will cause a problem:

```
DEFINE DEVCLASS FILE DEVTYPE+FILE SHARED=YES DIRECTORY=K:\
DEFINE PATH FILE FILE1 SRCTYPE=SERVER DESTTYPE=DRIVE LIBRARY=FILE
DIR=\\server\K$ DEVICE=FILE
```

where the storage agent is accessing the root directory of the server (shown as K:\ ). The following is preferable:

```
DEFINE DEVCLASS FILE DEVTYPE+FILE SHARED=YES DIRECTORY=K:\DIR1
DEFINE PATH FILE FILE1 SRCTYPE=SERVER DESTTYPE=DRIVE LIBRARY=FILE
DIR=\\server\DIR1 DEVICE=FILE
```

Slow Performance Establishing a Connection when Using GB Routers on Linux

When using an internal GB Router on the Linux operating system where the Tivoli Storage Manager server is installed, it has been noticed that it takes the client 20 seconds longer than normal to establish a connection with the server. Tivoli Storage Manager does not have control over any type of router that may be used to access a server and therefore cannot remediate the performance problem.

Product Fix History

APARs Fixed in Level 5.3.2

IC41032
MISSING CLIENT LEVEL INFORMATION WITH ″QUERY NODE″ AND SQL (IC41032 5698ISMSV 52W)

IC43227
ARCHIVE OBJECTS MISSING EXPIRING.OBJECTS ENTRY IN ITSM DB (IC43227 5698ISMSV 51A) (PK02949 5698ISMVS 520) (PK02952 5698ISMVS 530)

IC43594
ANR0104E ERRORS WHEN RUNNING EXPIRATION ON ARCHIVED OBJECTS (PK02934 5698ISMVS 520) (IC43594 5698ISMSV 52W)

IC44350
TSM SERVER CAN CORE DUMP IF AN UPDATE DRIVE IS PERFORMED ON A (IC44350 5698ISMSV 52A)

IC44351
TSM SERVER CAN CORE DUMP WHEN A CANCEL SESSION IS PERFORMED FOR (IC44351 5698ISMSV 52A) (PK01284 5698ISMVS 520) (PK01290 5698ISMVS 530)

IC44550
TSM SERVER MEMORY LEAK WHEN RUNNING OFFSITE RECLAMATION (IC44550 5698ISMSV 52A) (PK02384 5698ISMVS 520)

IC44559
TSM AIX SERVER NOT RELEASING SHARED MEMORY SEGMENT WHEN HALTING (IC44559 5698ISMSV 52A)

IC44574
TSM SERVER IS ERRONEOUSLY DENYING SCHEDULED SESSIONS FROM (IC44574 5698ISMSV 52W)

IC44594
CENTERA CLIPWRITE PARAMATER ERROR ARCHIVE COPYGROUP RETVER VALU (IC44923 5698ISMSV 53A) (IC44594 5698ISMSV 52A) (PK02017 5698ISMVS 530)

IC44597
Pre-Defined FILE volumes have an estimated capacity of zero. (IC44597 5698ISMSV 53W)

IC44610
DSMSERV FORMAT FAILURE ISSUES INCORRECTLY FORMATTED MESSAGE (IC44610 5698ISMSV 52A)

IC44618
Libray manager did not reset the drive reserved by Storage (IC44618 5698ISMSV 53A)

IC44737
HP Itanuim 64 Bit Storage Agent fails to start with ’ICC load (IC44737 5698ISMSV 53H)

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IC44748
ANR9999D BFCLONE.C(221) ...ERROR 87....DURING LANFREE BACKUP OF (IC44748 5698ISMSV 52A)

IC44765
DOC.UPDATE FOR MSG ANR1171W AND CMD MOVE DATA: RESTORE OPERATIO (IC44765 5698ISMSV 52A)

IC44780
5.3 STORAGE AGENT SERVICE WILL NOT START (IC44780 5698ISMSV 53Z)

IC44818
TSM SERVER MAY CRASH OR INVALIDLY ISSUE DATA INTEGRITY (PK00949 5698ISMVS 530) (IC44818 5698ISMSV 52A) (PK00853 5698ISMVS 510) (PK00871 5698ISMVS 520)

IC44820
FILE TYPE VOLUMES ARE NOT BEING DELETED AFTER REUSEDELAY (IC44820 5698ISMSV 53A)

IC44833
TSM SERVER DISPLAYS VALUES FOR IDLEWAIT COMMWAIT MEDIAWAIT (IC44833 5698ISMSV 52A)

IC44854
TSM SERVER CORE AFTER RECLAMATION SKIPS STORAGE POOL WITH (PK04876 5698ISMVS 520) (IC44854 5698ISMSV 53S) (IC45628 5698ISMSV 52A)

IC44883
HELP COMMAND DOES NOT DISPLAY JAPANESE CHARACTER ON TSM SERVER (IC44883 5698ISMSV 52A)

IC44890
EXPORT NODE DOES NOT INITIALIZE FROMTIME WITH DEFAULT VALUE OF (PK02324 5698ISMVS 510) (PK02363 5698ISMVS 520) (IC44890 5698ISMSV 52A) (PK02437 5698ISMVS 530)

IC44891
THE SQL SELECT OUTPUT FROM THE BACKUPS TABLE SHOWS TYPE (PK01084 5698ISMVS 520) (IC44891 5698ISMSV 52A)

IC44901
TSM SERVER HANG WHEN ATTEMPTING TO VIEW NODE PROPERTIES VIA ISC (IC44901 5698ISMSV 53A)

IC44921
DSMADMC HANGS ON A SELECT STATEMENT THAT USES CAST WITH CHAR(N) (PK04408 5698ISMVS 530) (IC44921 5698ISMSV 53W)

IC44946
DSMC QUERY BACKUP -PITDATE MAY SHOW WRONG FILE BACKUP VERSION (PK03425 5698ISMVS 530) (IC44946 5698ISMSV 52A) (PK03319 5698ISMVS 520)

IC44992
TSM SERVER MAY CRASH DURING A FULL AUDITDB. (IC44992 5698ISMSV 52W) (PK02370 5698ISMVS 520) (PK02372 5698ISMVS 530)

IC44995
AUDITDB MAY TERMINATE PREMATURELY DURING AUDIT OF BITFILE (IC44995 5698ISMSV 52W) (PK02373 5698ISMVS 520) (PK02374 5698ISMVS 530)

IC45005
ANR2027E AUDITDB: COMMAND FAILED - SUFFICIENT SERVER RECOVERY (PK01547 5698ISMVS 520) (IC45005 5698ISMSV 52A)

IC45034
TSM SERVER MAY CRASH WITH A DBTXN063 ASSERTION FAILURE DURING A (IC45034 5698ISMSV 52W) (PK02376 5698ISMVS 520) (PK02377 5698ISMVS 530)

IC45095
ANR9999D SMADMIN.C(3310): THREADID<XX> UNRECOGNIZED GROUP (IC45095 5698ISMSV 53W) (PK01704 5698ISMVS 530)

IC45146
TSM Server AUDITDB FIX=YES deleting objects in disk pools is (IC45146 5698ISMSV 51A) (PK02828 5698ISMVS 510)

IC45154
SERVER CAN CRASH DURING AUDITDB IT THERE IS CORRUPTED BASEDATE (PK02442 5698ISMVS 530) (IC45154 5698ISMSV 52A)

IC45167
DP MYSAP CLIENTS ON SOLARIS DO NOT INCREASE ″IN USE″ LICENSES O (PK04034 5698ISMVS 520) (IC45167 5698ISMSV 52S)

IC45168
Database space trigger can create a mirror volume in the wrong (IC45168 5698ISMSV 53A)

IC45175
ANR9999D TSM SERVER MAY CRASH DUE TO INVALID ATTEMPT TO FREE (IC45175 5698ISMSV 53A)

IC45184
ON OS400 V5R3, CHECKIN LIBV FAILS WHEN CATEGORY PARAMETER IS (IC45184 5698ISMSV 52P)

IC45206
Failed to install TSM 5.3.0 device driver into IBM 36232LX Libr (IC45206 5698ISMSV 53W)

IC45285
DEFINE PATH FAILS ON ADIC SCALAR WITH SDLT 600 DRIVES (IC45285 5698ISMSV 52W)

IC45288
Command line Administrative client may receive a non-zero retur (PK03288 5698ISMVS 520) (IC45288 5698ISMSV 52A)

IC45289
Private tapevols in shared libs not returned to private (IC45289 5698ISMSV 52A)

IC45304
ANR4947E ERROR ON NAS BACKUP (PK02449 5698ISMVS 520) (IC45304 5698ISMSV 52A)

IC45432
TSM SERVER HANGS OR MAY CRASH WHEN BACKUP STGPOOL AND MIGRATION (PK03066 5698ISMVS 530) (IC45432 5698ISMSV 53W)

IC45459
DATABASE, LOG, OR STGPOOL VOLUMES WITH FORMATSIZE GREATER (IC45459 5698ISMSV 53L)

IC45461
TSM NAS FILESPACE CAPACITY IS NOT BEING UPDATE (IC45461 5698ISMSV 52A) (IC46108 5698ISMCL 53A)

IC45503
FILES MISSING IN BACKUPSETS (PK03921 5698ISMVS 520) (IC45503 5698ISMSV 52A)

IC45514
TSM SERVER MAY CRASH DURING RECLAMATION AFTER AN OUTPUT VOLUME (IC45514 5698ISMSV 53A)

IC45519
CRASH WHEN LIBRARY MANAGER DISMOUNTS A VOLUME WITHOUT THE (IC45519 5698ISMSV 52S)

IC45538
TSM ADMIN CENTER CAN DISPLAY THE INCORRECT TIME FOR THE SCHEDUL (IC45538 5698ISMSV 53W)

IC45552
HP LTO2 FW requires a longer time to execute commands (IC45552 5698ISMSV 53L)

IC45593
TSM STORAGE AGENT COMMMETHODS ENABLED DURING STARTUP MAY NOT BE (IC45593 5698ISMSV 53W)

IC45602
TSM server and agent in LAN-FREE config can hang during (IC45602 5698ISMSV 52A)

IC45606
TWO SIDED RW OPTICAL PLATTER CORRUPTION POSSIBLE IF TSM STORAGE (IC45606 5698ISMSV 51A)

IC45617
TSM SERVER CRASH IN ASACQUIREEMPTIESTVOL (PK05341 5698ISMVS 520) (PK05464 5698ISMVS 530) (IC45617 5698ISMSV 52W)

IC45644
The TSM server may hang when recovery log (PK05789 5698ISMVS 510) (IC45644 5698ISMSV 52A) (PK05790 5698ISMVS 520) (PK05791 5698ISMVS 530)

IC45647
Cannot mount volumes belonging to REMOVABLEFILE device classes (IC45647 5698ISMSV 52L)

IC45672
TSM STORAGE AGENT INSTALL PROBLEM (IC45672 5698ISMSV 52W)

IC45689
TSM SERVER CRASHES DURING EXPIRATION PROCESSING DUE (PK04023 5698ISMVS 523) (IC45689 5698ISMSV 52W)

IC45703
ACSLS LIBRARIES UNABLE TO MOUNT SCRATCH VOLUMES (IC45703 5698ISMSV 53A)

IC45725
DEFINE PATH FOR QUALSTAR 68240 FAILS WITH ANR8972E STATING THE (IC45725 5698ISMSV 53A)

IC45726
THE TSM SERVER AND STORAGE AGENT SERVICES ARE NOT PROPERLY (IC45726 5698ISMSV 53W)

IC45764
RECOVERY.DEVICES.REQUIRED STANZA OF THE DRM PLAN ONLY SHOWS ONE (IC45764 5698ISMSV 53A)

IC45832
ENHANCED SCHEDULE NOT WORKING PROPERLY WHEN A SPECIFIC (IC45832 5698ISMSV 53W) (PK04228 5698ISMVS 530)

IC45833
ANR8300E WHEN ISSUING DEFINE PATH TO IBM 7212-312 LIBRARY (IC45833 5698ISMSV 52A)

IC45845
ERRONEOUS ANR8214E SERVER PROMPTED SCHEDULE ACTIONS (IC45845 5698ISMSV 52L)

IC45865
TSM LANFREE BACKUP / ARCHIVE FAILS WITH ANS1329S SERVER OUT OF (IC45865 5698ISMSV 52A) (PK04436 5698ISMVS 520)

IC45870
MIGRATION FROM DISK STG POOL TO A COLLOCATED SEQUENTIAL STG POO (PK09135 5698ISMVS 530) (IC45870 5698ISMSV 53A)

IC45872
memory leak during san discovery and discover data mover (IC45872 5698ISMSV 53W)

IC45883
MOVE DRMEDIA MAY NOT GENERATE ANY MESSAGE IF A VOLUME CANNOT (IC45883 5698ISMSV 53S) (PK06537 5698ISMVS 520) (PK06538 5698ISMVS 530)

IC45895
TSM SERVER 5.3X CAN CORE DUMP IN ROUTINE HASHFIND () (PK05134 5698ISMVS 530) (PK04935 5698ISMVS 510) (IC45895 5698ISMSV 53L) (PK05051 5698ISMVS 520)

IC45902
ANR9999D INVALID GROUP TYPE 3 ENCOUNTERED DURING EXPIRATION OF (IC45902 5698ISMSV 53W)

IC45911
TSM SERVER CRASHES WHEN ISSUING AN IMPROPERLY FORMATTED (IC45911 5698ISMSV 52S)

IC45925
ERROR DURING TAPE MOUNT ANR9999D PVRNTP.C(1028): THREADID<50> (IC45925 5698ISMSV 53W)

IC45931
BACKUP STGPOOL COMMAND MAY NOT BACKUP ALL DATA TO COPY POOL (IC45931 5698ISMSV 52A)

IC45931
BACKUP STGPOOL COMMAND MAY NOT BACKUP ALL DATA TO COPY POOL (PK12139 5698ISMVS 510) (PK12140 5698ISMVS 530) (IC45931 5698ISMSV 52A) (PK12090 5698ISMVS 520)

IC45933
KERNEL PANIC ON SUN SOLARIS WITH TSM 5.3 DEVICE DRIVER (IC45933 5698ISMSV 53S)

IC45935
ANR8302E I/O ERROR WITH CC=201 CAN BE CAUSED BY ERROR IN TSM (IC45935 5698ISMSV 51A)

IC45936
TSM 5.3 LINUX SERVER FAILS TO BRING LIBRARY LIBT=SCSI ONLINE (IC45936 5698ISMSV 53L)

IC45950
TSM SERVER CRASHES WHEN PROCESSING CLIENT EVENT THAT CONTAIN (IC45950 5698ISMSV 53L)

IC45967
TSM LIBRARY MANAGER MAY CRASH WHILE ATTEMPTING TO MOUNT (IC45967 5698ISMSV 52A)

IC45975
TSM SERVER CAN HANG, LOCK UP, OR CRASH AT 5.3.1.0 (PK05788 5698ISMVS 530) (IC45975 5698ISMSV 53A)

IC45985
TSM SERVER CRASHES DURING A SELECT COMMAND ON ACTLOG TABLE WHEN (IC45985 5698ISMSV 53L)

IC45985
TSM SERVER CRASHES DURING A SELECT COMMAND ON ACTLOG TABLE WHEN (IC45985 5698ISMSV 53L) (PK06705 5698ISMVS 530)

IC45990
TSM SERVER CRASHES WHEN PROCESSING AN ERROR PATH RELATED TO A (IC45990 5698ISMSV 52A)

IC46008
TSM SERVER MANAGEMENT CONSOLE DISPLAYS MULTIPLE ENTRIES FOR (IC46008 5698ISMSV 52W)

IC46019
QUERY LICENSE does not show Extended Edition features being use (IC46019 5698ISMSV 53A) (PK06924 5698ISMVS 530)

IC46041
TSM DEVICE DRIVER NEEDS TO BE RESTARTED AFTER HARDWARE CHANGES (IC46041 5698ISMSV 52S)

IC46073
INSTALL OF TSM SERVER 5.2.2. AND HIGHER FAILS ON SOLARIS 9 ″COR (IC46073 5698ISMSV 53S)

IC46121
ISSUING DEFINE CLIENTACTION COMMAND CAN CAUSE A BUFFEROVERUN (PK07762 5698ISMVS 520) (PK07795 5698ISMVS 530) (IC46121 5698ISMSV 52A)

IC46127
Tivoli Storage Manager 5.3 on HP has very poor TCIPIP (IC46127 5698ISMSV 53H)

IC46129
ANR3605E AND ANR0482W MESSAGES SEEN AT THE TSM SERVER (IC46129 5698ISMSV 53W) (PK11008 5698ISMVS 530) (PK10995 5698ISMVS 520)

IC46163
missing check drive reservation for ACSLS and 3494 library on (IC46163 5698ISMSV 53W)

IC46183
THE MIGRATE STGPOOL COMMAND WITH WAIT=YES MAY CAUSE A (IC46183 5698ISMSV 53A)

IC46183
THE MIGRATE STGPOOL COMMAND WITH WAIT=YES MAY CAUSE A (PK06989 5698ISMVS 530) (IC46183 5698ISMSV 53A)

IC46211
RECLAMATION FINISHES WITH NO ERRORS BUT VOLUME IS NOT RECLAIMED (IC46211 5698ISMSV 53A) (PK08848 5698ISMVS 522) (IC46812 5698ISMSV 52A)

IC46215
TSM SERVER MAY CRASH DURING MIGRATION WHEN 'MIGDELAY>0' (IC45879 5698ISMSV 53A) (PK05728 5698ISMVS 530) (IC46215 5698ISMSV 52A)

IC46257
TSM SERVER CRASH IN TMREGISTERVVOLTXN RECLAIMING VIRTUAL (IC46257 5698ISMSV 52A) (PK09039 5698ISMVS 520) (PK09042 5698ISMVS 530)

IC46305
UNABLE TO CONFIRM DRIVE USAGE AFTER TSM LIBRARY MANAGER SERVER (IC46305 5698ISMSV 53A)

IC46347
BACKUP STGPOOL IS RETURNING EITHER RC=0 OR RC=11 FOR THE SAME (IC46347 5698ISMSV 52A)

IC46349
PERFORMANCE PROBLEMS SEEN WITH MOVE DATA TO A COLLOCATED STORAG (IC46349 5698ISMSV 53A)

IC46349
PERFORMANCE PROBLEMS SEEN WITH MOVE DATA TO A COLLOCATED STORAG (PK08797 5698ISMVS 530) (IC46349 5698ISMSV 53A)

IC46402
5.3.X TSM SERVER FAILS TO INITIALIZE 3570B AUTOLOADER (IC46402 5698ISMSV 53A)

IC46411
CHECKIN LIBV WITH SWAP=YES DOES NOT FIND THE LEAST FREQUENTLY (IC46411 5698ISMSV 52A)

IC46417
TSM SERVER CRASH IN PKFINDPROCNAME WHEN ISSUING (IC46417 5698ISMSV 53A)

IC46488
SCRIPT FOR MIGRATE STGPOOL USING PARALLEL COMMAND IS NOT CONSID (IC46488 5698ISMSV 53A) (PK06910 5698ISMVS 530)

IC46506
ANR2020E WHEN SPECIFYING ULTRIUMC OR ULTRIUM2C FORMAT ON PASE (IC46506 5698ISMSV 52P)

IC46522
TSM SERVER FOR Z SERIES LINUX FAILS TO START AFTER (IC46522 5698ISMSV 52L)

IC46523
DELETE VOLUME DISCARDDATA=YES FAILING ANR9999D IMUTIL.C(6360) (IC46523 5698ISMSV 53W) (PK08808 5698ISMVS 520)

IC46525
ANR8972E WHEN DEFINING DRIVE PATHS IN TSM SERVER 5.2.2.0 OR (IC46525 5698ISMSV 53W)

IC46544
DEFINE VOLUME FAILS WITH ANR7820W INSUFFICIENT SPACE AVAILABLE (IC46544 5698ISMSV 53W)

IC46577
TAPE STGP VOLUME NOT SET TO READONLY AFTER I/O ERROR (IC46577 5698ISMSV 52W)

IC46645
NO-QUERY-RESTORE OF AN IMPORTED LINK MAY BE INCORRECT (IC46645 5698ISMSV 52S)

IC46645
NO-QUERY-RESTORE OF AN IMPORTED LINK MAY BE INCORRECT (PK07982 5698ISMVS 530) (PK07900 5698ISMVS 520) (IC46645 5698ISMSV 52S)

IC46647
LIBRARY CLIENT SERVER CRASHES ON DEFINE OF SHARED LIBRARY (IC46647 5698ISMSV 52W)

IC46651
"DISPLAYLFINFO YES" OPTION DOES NOT REPORT LANFREE INFORMATION (IC46651 5698ISMSV 53S)

IC46657
SERVER ROUTING COMMAND FAILES WITH "ANR9999D BUFFER OVERRUN (IC46657 5698ISMSV 53W)

IC46676
ANR8447E NO DRIVES ARE CURRENTLY AVAILABLE IN LIBRARY <LIBNAME> (IC46676 5698ISMSV 53A)

IC46687
TSM SERVER DOES NOT DETECT WHEN TSM CLIENT SCHEDULER (PK08356 5698ISMVS 530) (IC46687 5698ISMSV 52A) (PK08331 5698ISMVS 520)

IC46710
TSM SERVER AUDITDB MAY NOT CORRECT ALL DATABASE INCONSISTENCIES (IC46710 5698ISMSV 52A) (PK08809 5698ISMVS 520)

IC46716
UNABLE TO LOG EVENTS TO THE FILEEXIT ON HP-UX (IC46716 5698ISMSV 53H)

IC46732
CLEANING CARTRIDGE IS NOT AUTOMATICALLY UNLOADED AFTER CLEAN (IC46732 5698ISMSV 53L)

IC46734
AE IC41032 - TSM SERVER 5.2.5.0 CRASH WHEN USING LAN-FREE (IC46734 5698ISMSV 52A)

IC46734
AE IC41032 - TSM SERVER 5.2.5.0 CRASH WHEN USING LAN-FREE (IC46734 5698ISMSV 52A) (PK08799 5698ISMVS 520)

IC46735
ANR9999D - SMNODE.C(22838): THREADID<52> ERROR 6 OBTAINING CGID (PK07868 5698ISMVS 520) (IC46735 5698ISMSV 52A)

IC46738
TSM SERVER MAY CRASH WHEN UPDATING STORAGE POOL MIGRATION (IC46738 5698ISMSV 53A)

IC46738
TSM SERVER MAY CRASH WHEN UPDATING STORAGE POOL MIGRATION (PK09206 5698ISMVS 530) (IC46738 5698ISMSV 53A)

IC46739
TSM DEVICE DRIVER CAUSES SOLARIS SYSTEM CRASH (IC46739 5698ISMSV 52S)

IC46744
TSM ADMIN COMMAND LINE VULNERABILITY (IC46744 5698ISMSV 53A)

IC46784
ANR2337W MESSAGE MISSING FROM TSM MESSAGES MANUAL AND ONLINE (IC46784 5698ISMSV 53A) (PK09215 5698ISMVS 530)

IC46822
TSM SERVER MAY CRASH WHEN BACKUP DB AND EXPIRE INVENTORY RUN AT (IC46822 5698ISMSV 52A) (PK10955 5698ISMVS 520) (PK10956 5698ISMVS 530)

IC46891
ANR9999D ERROR REPORTED AGAINST IBM LTO TAPE DRIVES (IC46891 5698ISMSV 53W)

IC46921
TSM 5.3 UNIX ADMIN REFERENCES INCORRECTLY INDICATE A ″-″ (DASH) (IC46921 5698ISMSV 53A)

IC46948
CLIENT SCHEDULES FAILING WITH ANR2571W AND ANR9999D (IC46948 5698ISMSV 53W)

IC46948
CLIENT SCHEDULES FAILING WITH ANR2571W AND ANR9999D (PK09656 5698ISMVS 530) (IC46948 5698ISMSV 53W)

IC46951
ENHANCED SCHEDULES CAN CAUSE INCORRECT CALCULATIONS (IC46951 5698ISMSV 53W)

IC46951
ENHANCED SCHEDULES CAN CAUSE INCORRECT CALCULATIONS (PK09780 5698ISMVS 530) (IC46951 5698ISMSV 53W)

IC47012
QUERY CLOPTSER AND DEFINE CLIENTOPT HAVE BEEN CHANGED TO AVOID (IC47012 5698ISMSV 53W)

IC47026
TSM SERVER MAY TERMINATE WITH ″RUN-TIME ASSERTION FAILED″ AFTER (IC47026 5698ISMSV 53W)

IC47026
TSM SERVER MAY TERMINATE WITH ″RUN-TIME ASSERTION FAILED″ AFTER (IC47026 5698ISMSV 53W) (PK10392 5698ISMVS 530)

IC47057
TSM STORAGE AGENT 5.3.0 MAY CRASH DURING RESTORE OPERATIONS WHE (PK10870 5698ISMVS 530) (IC47057 5698ISMSV 53H)

IC47155
17 TB BOUNDARY LIMIT RESULTING FROM INCORRECT CALCULATIONS IN (IC47155 5698ISMSV 52A) (PK10784 5698ISMVS 520) (PK10789 5698ISMVS 530)

IC47195
Need to add support to show WWN for IBM Gen3 drives on Windows (IC47195 5698ISMSV 53W)

PK01876
MVS SERVER ABENDS WITH 0C4 WHEN WEB ADMIN REQUESTS (PK02044 5698ISMVS 520) (PK02067 5698ISMVS 530) (PK01876 5698ISMVS 510)

PK03612
STORAGE IS BEING ALLOCATED FOR SEVERAL CONTEXT STRUCTURES (IC45878 5698ISMSV 52A) (PK05576 5698ISMVS 530) (PK03612 5698ISMVS 520)

PK03704
ERROR ANR5354E READING CARTRIDGE DEVCLASS ON MVS (PK03704 5698ISMVS 530)

PK05280
MEMORY LEAK ATTEMPTING TCPPORT FROM WEB ADIMIN (PK05280 5698ISMVS 520) (IC45729 5698ISMSV 52A)

PK05709
AFTER IMPORT WITH MERGE ONLY INACTIVE VERSION MAY NOT EXPIRE (PK06536 5698ISMVS 510) (PK05709 5698ISMVS 520)

PK09504
TSM Z/OS SERVER MAY ABEND WITH 0C4 WHEN DEFINE CLIENTACTION (IC46262 5698ISMSV 52A) (PK09504 5698ISMVS 520) (PK09348 5698ISMVS 530)

PQ99172
EXPORT SERVER FAILURE MESSAGE DOES NOT PROVIDE ENOUGH (PQ99172 5698ISMVS 510) (IC44728 5698ISMSV 53A)

APARs Fixed in Level 5.3.1

IC38363
TSM SERVER ALLOWS SAME DEVICE NAME TO BE DEFINED IN DIFFERENT (IC38363 5698ISMSV 51A)

IC42112
ITSM SERVER CRASHES AFTER PASSING CORRUPT FILEHANDLE (PQ98992 5698ISMVS 520) (PQ99046 5698ISMVS 530) (IC42112 5698ISMSV 52A)

IC42488
ANR9999D BFCREATE.C ″INCONSISTENT CONTENT FOR ALIAS AGGREGATES″ (IC42488 5698ISMSV 52A) (PQ99546 5698ISMVS 530) (IC43965 5698ISMSV 53A) (IC43941 5698ISMSV 51A) (PQ99476 5698ISMVS 510)

IC42633
ANR8972E ON DEFINE / UPDATE PATH AFTER PHYSICALLY REPLACING TAP (IC42633 5698ISMSV 52A)

IC42777
SERVER CRASHES, CORE DUMPS WHEN INVALID SQL SYNTAX WAS ENTERED (PK01309 5698ISMVS 520) (PK01310 5698ISMVS 530) (IC42777 5698ISMSV 51A)

IC42827
TSM Server coredumps in iconv_open on AIX (IC42827 5698ISMSV 52A)

IC42930
MESSAGE ″ANR2032E UPDATE DRIVE: COMMAND FAILED - INTERNAL SERVE (IC42930 5698ISMSV 52A)

IC42942
TSM HP server crashes when it fails to open the message file (IC42942 5698ISMSV 52H)

IC42996
ITSM CORE DUMP AFTER MOUNTMODE CONSOLE SESSIONS ARE CANCELLED (PQ99079 5698ISMVS 510) (IC43469 5698ISMSV 52A) (IC42996 5698ISMSV 51A)

IC43019
ANR9771E: Volume <volName> has incorrect barcode label... seen (IC43019 5698ISMSV 52A)

IC43029
ANR9999D COLUMN COUNT MISMATCH FOR TABLE AF.AUDIT.CLUSTERS (IC43029 5698ISMSV 51A) (PK00792 5698ISMVS 530) (PK00733 5698ISMVS 510) (PK00737 5698ISMVS 520)

IC43061
ANR1793W should not be generated if SANDISCOVERY is OFF. This (IC43061 5698ISMSV 52A)

IC43063
ANR2023E DEFINE SERVER: EXTRANEOUS PARAMETER - DESCRIPTION (IC43063 5698ISMSV 52A)

IC43086
MULTIPLE TAPES IN FILLING STATUS FOR COLLOCATED STORAGE POOLS (PQ99292 5698ISMVS 520) (IC43086 5698ISMSV 51A)

IC43118
ANR8972E UPDATE PATH: Unable to find the element number for (IC43118 5698ISMSV 52A)

IC43127
ANR0646I AND ANR0729E DURING IMPORT OF CLIENTS WITH ASSOCIATED (PQ96912 5698ISMVS 510) (PQ96990 5698ISMVS 520) (IC43127 5698ISMSV 52W)

IC43202
UNABLE TO RUN TSM DRIVE CLEANING PROPERLY (IC43202 5698ISMSV 52W)

IC43226
ANR0106E UNEXPECTED ERROR 2 FETCHING ROW ″AS.VOLUME.STATUS″ (PQ97457 5698ISMVS 520) (IC43226 5698ISMSV 52A)

IC43228
ITSM SERVER CRASH IN PMCLOSEDOMAIN - INVALID ATTEMPT (IC43228 5698ISMSV 52S)

IC43257
ANR9999D ASVOL.C(XXX): THREADID<XX> NUMEMPTYVOLS WENT NEGATIVE (IC43257 5698ISMSV 52A)

IC43287
Long commands (exceeding 1400 characters) can cause the server (PQ98659 5698ISMVS 530) (IC43287 5698ISMSV 53A) (PQ98666 5698ISMVS 520) (PK02077 5698ISMVS 510) (IC44947 5698ISMSV 51A)

IC43301
ANR9999D MOUNT POINT DEADLOCK MESSAGE FOLLOWING SERVER TO SERVE (PQ97956 5698ISMVS 520) (IC43301 5698ISMSV 52A)

IC43374
ANR1663E WITH TSM LANFREE OPERATION USING EXTERNAL LIBRARY (IC43374 5698ISMSV 52A)

IC43381
UTILITY TO CLEAN UP ORPHANS (PK01546 5698ISMVS 530) (IC43381 5698ISMSV 52A) (IC44620 5698ISMSV 51A) (IC44622 5698ISMSV 53A) (PK01528 5698ISMVS 510)

IC43410
Hardcoded limitation - 256 devices in console (IC43410 5698ISMSV 52W)

IC43449
MOVE DRMEDIA MAY FAIL WITH ANR9999D INVALID VOLUME TYPE (IC43449 5698ISMSV 52A)

IC43527
THE 5.2.3 VERSION OF MMCTRACE UPDATES THE WRONG REGISTRY (IC43527 5698ISMSV 52W)

IC43528
MOVE DRMEDIA REPORTS SUCCESSFUL CHECKOUT OF SHARED LIBRARY (IC43528 5698ISMSV 52A)

IC43529
SERIAL NUMBER MISSING IN SQL DRIVES TABLE (IC43529 5698ISMSV 52L)

IC43534
EXPORT NODE OF NODE WITH LARGE NUMBER OF OBJECTS RUNS VERY (PK00676 5698ISMVS 520) (IC43534 5698ISMSV 52A)

IC43535
HLA ADDRESS FIELD IN CENTERA DEVICE CLASS IS NOT CASE SENSITIVE (IC43535 5698ISMSV 52S)

IC43600
TSM REGISTER LICENSE COMMAND FAILS TO REGISTER ANY LICENSES, (IC43600 5698ISMSV 52A)

IC43648
TSM SERVER ABENDS DURING QUERY TOC IF NAS FILER HAS INVALID (IC43648 5698ISMSV 52W)

IC43729
The TSM Linux Pass-through Driver failed leot case on 64bit (IC43729 5698ISMSV 53L)

IC43738
DEFINING A DRIVE PATH FAILS WITH: ANR8972E UNABLE TO FIND THE (IC43738 5698ISMSV 52W)

IC43796
TSM SERVER MANAGES LAST INACTIVE VERSION BY ″RETEXTRA″ AFTER (PQ98755 5698ISMVS 520) (PK00198 5698ISMVS 530) (IC43796 5698ISMSV 52A)

IC43808
AUDIT VOLUME FAILING WITH INTERNAL SERVER ERROR (IC43808 5698ISMSV 51W)

IC43909
MESSAGES ANR0407I AND ANR0406I ARE NOT SHOWING CORRECT HOSTNAME (IC43909 5698ISMSV 52A)

IC43928
AE IC37071 FIX COMPLETION - DOCUMENTATION FOR ADDTOINIT (IC43928 5698ISMSV 52S)

IC43929
AE IC37209 FIX COMPLETION - TSM MANUALS NEED TO INCLUDE (IC43929 5698ISMSV 52S)

IC43930
″QUERY BACKUP″ USING ″PITTIME″ AND ″PITDATE″ DOES NOT DISPLAY (PK00951 5698ISMVS 520) (IC43930 5698ISMSV 52A) (PK00988 5698ISMVS 530)

IC43954
ANR8447E CAUSED BY INCORRECT LTO BARCODE LABEL HANDLING (IC43954 5698ISMSV 52A)

IC43996
ANR9999D DFMIGR.C 2907 MIGRATION TERMINATED UNEXPECTED RESULT (PQ98637 5698ISMVS 520) (IC43996 5698ISMSV 51A) (IC43419 5698ISMSV 52A)

IC44034
IBM TSM MESSAGE ANR1772E MAY INCLUDE INCORRECT INFORMATION (IC44034 5698ISMSV 52W)

IC44048
DEFINING A SECOND TSM SERVER INSTANCE (MINIMAL CONFIGURATION) (IC44048 5698ISMSV 52W)

IC44110
ANR0102E ERROR 1 INSERTING ROW IN TABLE DS.SEGMENTS WITH (PK00076 5698ISMVS 520) (PK00078 5698ISMVS 530) (PK00014 5698ISMVS 510) (IC44110 5698ISMSV 52W)

IC44117
VOLUMES OVERWRITTEN BEFORE CREATING PROCESS COMPLETES (IC44117 5698ISMSV 51A) (PQ99286 5698ISMVS 510)

IC44148
DB/LOG Copy vols not added by spacetrigger (IC44148 5698ISMSV 53W)

IC44159
QUERY STGPOOL REPORTS INVALID ESTIMATED CAPACITY AND (PK00006 5698ISMVS 520) (PK00007 5698ISMVS 530) (PK00008 5698ISMVS 520) (IC44159 5698ISMSV 52A)

IC44164
Crash is seen after an INTERNAL SERVER ERROR. (IC44164 5698ISMSV 53S)

IC44367
TSM 5.3 UPGRADE FAILS WITH ANR9999D ADMINIT.C(3628): (IC44367 5698ISMSV 53A)

IC44453
TSM SERVER OFFSITE RECLAMATION FAILS WITH ANR1173E (IC44568 5698ISMSV 53W) (PK00595 5698ISMVS 510) (PK00598 5698ISMVS 530) (IC44453 5698ISMSV 52W) (IC44522 5698ISMSV 51W)

IC44502
QUERY STATUS STILL SHOWS WEBAUTHTIMEOUT AND SERVERURL (IC44502 5698ISMSV 53A)

IC44512
DELETE FILESPACE LOCK FAILURE RESULTS IN ORPHANED TRANSACTION (PK00194 5698ISMVS 510) (PK00196 5698ISMVS 520) (PK00197 5698ISMVS 530) (IC44512 5698ISMSV 52A)

IC44559
TSM AIX SERVER NOT RELEASING SHARED MEMORY SEGMENT WHEN HALTING (IC44559 5698ISMSV 52A)

IC44574
TSM SERVER IS ERRONEOUSLY DENYING SCHEDULED SESSIONS FROM (IC44574 5698ISMSV 52W)

IC44594
CENTERA CLIPWRITE PARAMATER ERROR ARCHIVE COPYGROUP RETVER VALU (IC44923 5698ISMSV 53A) (IC44594 5698ISMSV 52A) (PK02017 5698ISMVS 530)

IC44596
During TSM server startup, there is a remote possibility (IC44596 5698ISMSV 53A)

IC44597
Pre-Defined FILE volumes have an estimated capacity of zero. (IC44597 5698ISMSV 53W)

IC44610
DSMSERV FORMAT FAILURE ISSUES INCORRECTLY FORMATTED MESSAGE (IC44610 5698ISMSV 52A)

IC44618
Libray manager did not reset the drive reserved by Storage (IC44618 5698ISMSV 53A)

IC44619
AIT-3 DRIVES GO OFFLINE AFTER RECEIVING REPOSITION ERROR (IC44619 5698ISMSV 52W)

IC44737
HP Itanuim 64 Bit Storage Agent fails to start with 'ICC load (IC44737 5698ISMSV 53H)

IC44765
DOC.UPDATE FOR MSG ANR1171W AND CMD MOVE DATA: RESTORE OPERATIO (IC44765 5698ISMSV 52A)

IC44780
5.3 STORAGE AGENT SERVICE WILL NOT START (IC44780 5698ISMSV 53Z)

IC44818
TSM SERVER MAY CRASH OR INVALIDLY ISSUE DATA INTEGRITY (PK00949 5698ISMVS 530) (IC44818 5698ISMSV 52A) (PK00853 5698ISMVS 510) (PK00871 5698ISMVS 520)

IC44820
FILE TYPE VOLUMES ARE NOT BEING DELETED AFTER REUSEDELAY (IC44820 5698ISMSV 53A)

IC44833
TSM SERVER DISPLAYS VALUES FOR IDLEWAIT COMMWAIT MEDIAWAIT (IC44833 5698ISMSV 52A)

IC44883
HELP COMMAND DOES NOT DISPLAY JAPANESE CHARACTER ON TSM SERVER (IC44883 5698ISMSV 52A)

IC44890
EXPORT NODE DOES NOT INITIALIZE FROMTIME WITH DEFAULT VALUE OF (PK02324 5698ISMVS 510) (PK02363 5698ISMVS 520) (IC44890 5698ISMSV 52A) (PK02437 5698ISMVS 530)

IC44891
THE SQL SELECT OUTPUT FROM THE BACKUPS TABLE SHOWS TYPE (PK01084 5698ISMVS 520) (IC44891 5698ISMSV 52A)

IC44901
TSM SERVER HANG WHEN ATTEMPTING TO VIEW NODE PROPERTIES VIA ISC (IC44901 5698ISMSV 53A)

IC45005
ANR2027E AUDITDB: COMMAND FAILED - SUFFICIENT SERVER RECOVERY (PK01547 5698ISMVS 520) (IC45005 5698ISMSV 52A)

IC45095
ANR9999D SMADMIN.C(3310): THREADID<XX> UNRECOGNIZED GROUP (IC45095 5698ISMSV 53W) (PK01704 5698ISMVS 530)

IC45168
Database space trigger can create a mirror volume in the wrong (IC45168 5698ISMSV 53A)

IC45175
ANR9999D TSM SERVER MAY CRASH DUE TO INVALID ATTEMPT TO FREE (IC45175 5698ISMSV 53A)

IC45459
DATABASE, LOG, OR STGPOOL VOLUMES WITH FORMATSIZE GREATER (IC45459 5698ISMSV 53L)

PK01876
MVS SERVER ABENDS WITH 0C4 WHEN WEB ADMIN REQUESTS (PK02044 5698ISMVS 520) (PK02067 5698ISMVS 530) PK01876 5698ISMVS 510)

PQ95292
QUERY DB F=D MAY SHOW NEGATIVE VALUES FOR ″″TOTAL BUFFER REQUES (PQ95292 5698ISMVS 520)

PQ95855
MVS SERVER ABENDED WITH 0C4 DURING A CLIENT BACKUP WHEN (PQ97453 5698ISMVS 510) (PQ95855 5698ISMVS 520) (IC42910 5698ISMSV 52A)

APARs Fixed in Level 5.3.0

IC34918
ANR0796E can be issued during import under misleading (IC34918 5698TSMAX 420)

IC35579
CHECKOUT LIBVOL timeout failure ACSLS returns junk data (IC35579 5698ISMSV 51A)

IC36279
64 BIT TSM DEVICE DRIVER'S FAILING ON 32 BIT AIX KERNEL (IC36279 5698ISMSV 51A)

IC36328
MOUNT REQUEST FOR VOLUME FAILS SILENTLY (IC36328 5698ISMSV 51A)

IC36347
IBM TSM Server crashes when using SET ARCHIVERETENTIONPROTECTION (IC36347 5698ISMSV 51A) (PQ88579 5698ISMVS 520)

IC36439
ANR8442E MESSAGE GENERATED ERRONEOUSLY DURING CHECKIN LIBVOL (IC36439 5698ISMSV 51S)

IC36499
MOVE NODEDATA REPORTS SUCCESS WITH O BYTES TRANSFERRED (PQ77326 5698ISMVS 510) (IC36499 5698ISMSV 51A)

IC36560
TSM Server core dumps when the ACSLS is being traced with pvr m (IC36560 5698ISMSV 51S)

IC36561
TSM Server not utilizing the CAP properly during volume checkou (IC36561 5698ISMSV 51S)

IC36575
QUERY PROCESS BEHAVIOR AFTER APAR IC34754 WAS FULLY (IC36575 5698ISMSV 51W)

IC36590
EXPORT NODE FAILS RESOURCE TIMEOUT ORPHANED TRANSACTIONS (IC36590 5698ISMSV 51A) (PQ77415 5698ISMVS 510)

IC36594
AUDITDB WITH DETAIL=YES, CHANGES ALL 'ONETIME' SCHEDULES TO (IC36594 5698ISMSV 51W)

IC36597
TSM SERVER IS COREDUMPING DURING UNLOAD DB PROCESS (PQ77742 5698ISMVS 510) (PQ77743 5698ISMVS 520) (IC36597 5698ISMSV 51S)

IC36609
TSM SERVER CRASHES DURING AUDIT VOLUME IF THERE IS AN AGGREGATE (IC36609 5698ISMSV 51W) (PQ77610 5698ISMVS 510) (PQ77612 5698ISMVS 520)

IC36613
QUERY SCRIPT COMMAND WITH FORMAT=RAW CORES TSM SERVER ON SOLARI (IC36613 5698ISMSV 51S)

IC36619
AUDITDB Process Terminates with Error (IC36619 5698ISMSV 51W)

IC36662
ANR2056E TSM WHEN ATTEMPTING TO DELETE AN INVALID CLIENTOPT (IC36662 5698ISMSV 51A)

IC36706
Out of space in DISK storage pool with CACHE=YES even though (PQ76572 5698ISMVS 510) (PQ76573 5698ISMVS 520) (IC36706 5698ISMSV 52A)

IC36730
TSM SERVER CRASH WHEN "DELETE STGPOOL" COMMAND IS ISSUED AND (IC36730 5698ISMSV 51A) (PQ78991 5698ISMVS 520)

IC36747
UNABLE TO DEFINE A DELL POWERVAULT 128T LIBRARY TO TSM (IC36747 5698ISMSV 51W)

IC36763
TSM SERVER CREATING TAPE VOLUMES WITH WRONG BLOCKSIZE VALUE IN (IC36763 5698ISMSV 51A)

IC36766
TSM SERVER MAY CRASH DURING CLIENT BACKUP/ARCHIVE OPERATIONS (PQ77609 5698ISMVS 520) (PQ77103 5698ISMVS 510) IC36766 5698ISMSV 51A)

IC36767
TSM EXCESSIVE ANR2997W MESSAGES LOGGED IN THE TSM ACTIVITY LOG (IC36767 5698ISMSV 51A) (PQ78095 5698ISMVS 510) (PQ78098 5698ISMVS 520)

IC36790
TSM VIRTUAL VOLUMES DO NOT EXPIRE AFTER IMPORT SERVER. SERVER (PQ77094 5698ISMVS 510) (PQ77095 5698ISMVS 520) (IC36790 5698ISMSV 51A)

IC36814
SERVER CRASH WITH Q PROC AND LARGE EXPORT JOBS (SYMPTOM AS (PQ77111 5698ISMVS 520) (IC36814 5698ISMSV 51A)

IC36819
GENERATE BACKUPSET WITH WAIT=YES PREVENTS TSM CLIENT FROM (PQ77686 5698ISMVS 522) (PQ77697 5698ISMVS 520) (PQ77754 5698ISMVS 522) (IC36819 5698ISMSV 51A)

IC36820
ANR3605E AND ANR0479W SERVER MESSAGES FOR STA SESSIONS CANCELED (IC36820 5698ISMSV 51A)

IC36826
ANR MSGANR2032E OCCURS WHEN ATTEMPTING TO DELETE A DRIVE (IC36826 5698ISMSV 51P)

IC36827
ANR8366E UPDATE FILE DEVCLASS LIBRARY PARAMETER (IC36827 5698ISMSV 51S)

IC36946
TSM SERVER HANGS ON ″DEFINE/UPDATE PATH″ COMMAND WHEN OTHER (IC36946 5698ISMSV 51S)

IC36963
Storage agent aborts when no scratch volumes are available. (IC36963 5698ISMSV 51Z)

IC36975
SIMULTANEOUS WRITE OPERATIONS FAIL WITH ANR0102E , DS.SEGMENTS. (IC36975 5698ISMSV 51S) (PQ79263 5698ISMVS 510) (PQ79264 5698ISMVS 520)

IC36981
TSM SERVER MAY ABEND WHEN NO-QUERY RESTORE FINISHES (IC36981 5698ISMSV 51A) (PQ78096 5698ISMVS 510)

IC37042
TSM GRESHAM ELM ANR9999D MMSEXT.C ERROR READING FROM EXIT RC = (IC37042 5698ISMSV 51A)

IC37071
STORAGE AGENT /ETC/INITTAB ENTRY PREVENTS LOGIN TO CONSOLE - (IC37071 5698ISMSV 51S)

IC37074
ANR1859W GENERATED ON TSM STORAGE AGENT WHEN VALIDATEPROTOCOL= (IC37074 5698ISMSV 51A)

IC37080
TSM SERVER CAN CORE DUMP WHEN LONG RUNNING TSM ADMIN SESSION IS (PQ77744 5698ISMVS 510) (PQ77745 5698ISMVS 520) (IC37080 5698ISMSV 51A)

IC37083
'RESTORE STGPOOL PREVIEW=YES' OUTPUT INCORRECT AS COMPARED TO (IC37083 5698ISMSV 51A) (PQ79851 5698ISMVS 520)

IC37093
CLEAN DRIVE COMMAND FAILS ON HP 4MM LIBRARIES WITH ANR8943E (IC37093 5698ISMSV 51S)

IC37166
Upgradedb fails from V5.1.7.0 to V5.2.0.1 (IC37166 5698ISMSV 51A)

IC37171
The COPYCONTINUE=YES may not be honored during (IC37171 5698ISMSV 51A) (PQ77813 5698ISMVS 510)

IC37172
TSM SERVER CRASH EXPORT SERVER WITH MANY OR LARGE (IC37172 5698ISMSV 51A) (PQ78239 5698ISMVS 510) (PQ78240 5698ISMVS 520)

IC37209
DOCUMENTATION ON HOW TO CONFIGURE NATIVE SUN FC HBAS IS MISSING (IC37209 5698ISMSV 51S)

IC37249
RESTORE DB FAILS WITH: MUTEX ACQUISITION FAILURE, ERRNO=22: (IC37249 5698ISMSV 52A)

IC37254
SPECTRA LOGIC GATOR LIBRARIES PERFORM SERIALIZED DISMOUNT AND (IC37254 5698ISMSV 51S)

IC37275
CLEANUP UTILITY TO REMOVE ORPHANED ENTRIES INTODUCED BY IC36975 (IC37275 5698ISMSV 51A)

IC37279
TSM Summary table START_TIME values may be incorrect (PQ78952 5698ISMVS 510) (IC37279 5698ISMSV 51S)

IC37286
"TAPEALERT MESSAGES" ICON IS MISSING IN THE WEB ADMIN GUI OF TS (IC37286 5698ISMSV 52A)

IC37289
INTERNAL SERVER ERROR DETECTED RESERVED MOUNT POINT LIBTYPE (IC37289 5698ISMSV 52S)

IC37312
DEFAULT VALUES FOR 'COMPRESSION' AND 'VALIDATEPROTOCOL' MUST BE (PQ81220 5698ISMVS 520) (IC37312 5698ISMSV 52A)

IC37346
MEMORY LEAK ON TSM SERVER RESULTING FROM NO-QUERY RESTORES (PQ78732 5698ISMVS 510) (PQ78733 5698ISMVS 520) (IC37346 5698ISMSV 51A)

IC37350
RECONCILE VOLUMES COMMAND RESETS OBJECTS TO BE DELETED DURING (IC37350 5698ISMSV 51A) (PQ78928 5698ISMVS 510) (PQ78929 5698ISMVS 520)

IC37420
ISSUING MOVE DRMEDIA <VOLNAME> WHERESTATE=MOUNT TOSTATE=VAULT (PQ80965 5698ISMVS 510) (PQ80968 5698ISMVS 520) (IC37420 5698ISMSV 51A)

IC37437
THIS IS IN REFERENCE TO DEFECT 11278 (PQ79713 5698ISMVS 520) (PQ79714 5698ISMVS 510) (IC37437 5698ISMSV 51A)

IC37438
REFERENCE 11279 DEFECT (IC37438 5698ISMSV 51A)

IC37446
ANR1552W MESSAGE TEXT AND EXPLANATION IS UNCLEAR (IC37446 5698ISMSV 52A)

IC37455
COUNTING OF DATABASE PAGES BACKED UP FOR A DB SNAPSHOT IS (IC37455 5698ISMSV 51Z) (PQ78999 5698ISMVS 520)

IC37499
UPDATE PATH ONLINE=NO NOT HONORED FOR EXTERNAL LIBRARIES (IC37499 5698ISMSV 51A)

IC37554
TSM SERVER MAY ALLOW UNAUTHORIZED ACCESS TO SERVER VIA A CONSOL (PQ79590 5698ISMVS 520) (PQ79835 5698TSMVS 421) (IC37554 5698ISMSV 52A)

IC37571
SSI.51 DOES NOT USE THE VALUE SET FOR SSI_HOSTNAME VARIABLE (IC37571 5698ISMSV 51A)

IC37588
ANR2571W SCHEDULED SESSION DENIED (IC37588 5698ISMSV 51A) (PQ83106 5698ISMVS 510) (PQ83107 5698ISMVS 520)

IC37589
ANR9999D ERROR DELETING OBJECT UPGRADEDB (IC37589 5698ISMSV 52S) (PQ80082 5698ISMVS 520)

IC37642
ELEMENT=AUTODETECT IS NOT SUPPORTED IN DEFINE DRIVE/ DEFINE PAT (IC37642 5698ISMSV 52H)

IC37651
TSM SERVER MAY RECEIVE ANR4571E MESSAGE WHEN 3494 LIBRARY IS (IC37651 5698ISMSV 51A)

IC37662
TSM SERVER CAN NOT WRITE TO DLT SCRATCH TAPE CONTAINING (IC37662 5698ISMSV 52A)

IC37668
TSM MOVE DATA COMMAND OF SEQUENTIAL VOLUME DOES NOT PRODUCE (IC37668 5698ISMSV 52A)

IC37677
THE MEDIA WAIT VALUE IN THE SUMMARY TABLE AND ACCOUNTING LOG IS (IC37677 5698ISMSV 51A)

IC37694
TSM 5.2 SOLARIS SERVER CORE DUMPS IF INCORRECT ″RESET PASSEXP″ (IC37694 5698ISMSV 51A)

IC37709
THE SSI EXECUTABLE SUPPLIED WITH TSM CAN COREDUMP WHEN UNLIMITE (IC37709 5698ISMSV 51A)

IC37733
ANR9999D AFMOVE.C(5399): THREADID<55> UNEXPECTED MOVETYPE 4. (PQ81719 5698ISMVS 510) (IC37733 5698ISMSV 51W)

IC37738
TSM CLIENT UNABLE TO RESTORE DATA FROM TSM 5.1.7.0 SERVER. (IC38316 5698ISMSV 52A) (PQ80581 5698ISMVS 510) (PQ80582 5698ISMVS 520) (IC37738 5698ISMSV 51A)

IC37749
TSM 5.2 Storage Agents terminate Signal 11 with drive cleaning (IC37749 5698ISMSV 52S)

IC37758
ANR8779E UNABLE TO OPEN DRIVE X, ERROR NUMBER=5 FROM STORAGE (IC37758 5698ISMSV 51Z)

IC37770
ANR0542W MESSAGE INDICATING MEDIA INACCESSIBLE DOES NOT (PQ83546 5698ISMVS 520) (IC37770 5698ISMSV 51A)

IC37779
TOC does not load the info for a Expired Image (IC37779 5698ISMSV 52S)

IC37792
ITSM 5.2.x: Trailing blank after SESSIONINITIATION parameters ″ (IC37792 5698ISMSV 52A)

IC37816
TSM SERVER MEMORY LEAK WITH DRM PREPARE & MOVE DRMEDIA COMMANDS (IC37816 5698ISMSV 51A)

IC37821
IMPORT NODE merge=yes cmd in TSM 5.2 sets DEACTIVATE_DATE wrong (IC37821 5698ISMSV 52S)

IC37862
TSM PROMPTED SCHEDULE START CAN CAUSE ANR8214E SESSION <#> (IC37862 5698ISMSV 52S)

IC37866
MOUNTLIMIT NOT HONORED IN NON PARTITIONED MIXED MEDIA IBM3584 (IC37866 5698ISMSV 52A)

IC37877
TSM SERVER MEMORY USE CONTINUALLY INCREASING AND MAY CRASH TSM (IC37877 5698ISMSV 52W)

IC37894
DSMSERV_ACCOUNTING_DIR at ITSM Linux 5.2.1.x Server is not hono (IC37894 5698ISMSV 52L)

IC37911
ANR9999D PKTHREAD.C(636): THREADID<13> THREAD CREATION (IC37911 5698ISMSV 52L)

IC37985
Tilde (~) characters in object field of Win command sched get i (IC37985 5698ISMSV 51A)

IC37993
TSM LANFREE PATH IS NOT USED BY CLIENT BACKUPS, DESPITE (PQ80380 5698ISMVS 520) (IC37993 5698ISMSV 52W)

IC38011
DEVTYPE=VOLSAFE DOES NOT WORK WHEN USING AN EXTERNAL LIBRARY (IC38011 5698ISMSV 52A)

IC38012
TSM SERVER MAY WITNESS A MEMORY LEAK IF A NAMED PIPES SESSION (IC38012 5698ISMSV 51W)

IC38016
NOQUERY restore does not restore drive permissions. (IC38016 5698ISMSV 51A)

IC38060
ORPHANED TRANSACTION AND MEMORY LEAK WITH ITSM SERVER WHEN (IC38060 5698ISMSV 51A) (PQ80908 5698ISMVS 510) (PQ80909 5698ISMVS 520)

IC38063
MSGANR1092W CAN OCCUR IF ALL DRIVES DEFINED TO LIB MANAGER (IC38063 5698ISMSV 52A)

IC38087
SERVER ABORTS TXN WITH SYSTEM ERROR WHEN NODE IS NOT AUTHORIZED (IC38087 5698ISMSV 51A)

IC38090
TSM SERVER CORE DUMP/ABEND - ANR9999D MUTEX ACQUISITION FAILURE (PQ84431 5698ISMVS 520) (PQ84432 5698ISMVS 510) (IC38090 5698ISMSV 51A)

IC38101
ANR8311E AN I/O ERROR OCCURRED WHILE ACCESSING DRIVE XXX (IC38101 5698ISMSV 51A)

IC38105
INACTIVE OBJECT EXPIRING WITH RETO VALUE WHEN IT IS NOT THE ONL (PQ82384 5698ISMVS 510) (PQ82385 5698ISMVS 520) (IC38105 5698ISMSV 51A)

IC38172
CHECKOUT LIBVOLUME and immediate(!) CHECKIN LIBVOLUME reports A (IC38172 5698ISMSV 52A)

IC38177
SERVER MAY COREDUMP WHILE RUNNING RECLAMATION AND EXPIRATION AT (PQ80926 5698ISMVS 510) (IC38177 5698ISMSV 51A)

IC38342
EXPORT FROM AIX, IMPORT TO W2K GIVING MISLEADING/INSUFFICIENT (IC38342 5698ISMSV 51W)

IC38347
THE TSM SERVER 5.2.X CAN CORE DUMP IF THE RESOURCE WAITER TRIES (PQ82957 5698ISMVS 510) (PQ82959 5698ISMVS 520) IC38347 5698ISMSV 52S)

IC38352
MEANINGLESS ERRORMESSAGE IS ISSUED, WHEN DSMSERV EXPAND LOG (IC38352 5698ISMSV 51A) (PQ83789 5698ISMVS 520)

IC38360
ANR2327W/ANR1156W ″INTERNAL SERVER ERROR DETECTED″ ON OPTICAL (IC38360 5698ISMSV 51A)

IC38375
′LABEL LIBV′ FAILS FOR DEVICE CLASS WITH DEVT=GENERICTAPE WITH (IC38375 5698ISMSV 52A)

IC38376
RUNASSERVICE is no longer a supported TSM client client option (IC38376 5698ISMSV 52W)

IC38440
ADDITIONAL DRIVES OF D/T3582 LIBRARY CAN NOT BE DEFINED TO TSM (IC38440 5698ISMSV 52W)

IC38449
A define backupset command may fail with message ANR2405E (IC38449 5698ISMSV 52A)

IC38496
ITSM SERVER ON PASE FAILS DURING DRIVE ALLOCATION USING USRDFN (IC38496 5698ISMSV 52P)

IC38521
TSM Server on Windows Crashes when the TCPINFO traceflag is use (IC38521 5698ISMSV 52W)

IC38531
MOVE MEDIA GETS ERROR ANR9999D TMLOCK.C(840): THREADID<77> (IC38531 5698ISMSV 51A)

IC38533
TSM 5.2 Storage Agent crashes restoring tape data created by a (IC38533 5698ISMSV 52W)

IC38561
EXCESSIVE READ ERRORS INCORRECT VOLUME PROVIDED FOR MANLIB (IC38561 5698ISMSV 51P)

IC38588
TSM SERVER DISMOUNT FAILURE MAY LEAVE DRIVE PATH IN USE (IC38588 5698ISMSV 51S)

IC38634
WHEN USING AIO, THE TSM SERVER MAY ABEND IF A WRITE REQUEST (IC38634 5698ISMSV 51A)

IC38650
TSM EXPIRATION AND DELETE FILESPACE APPEAR TO HANG. PROCESSING (IC38650 5698ISMSV 52A) (PQ82153 5698ISMVS 522)

IC38687
Multipe Archives for the same nodename can fail with ANR0530W T (IC38687 5698ISMSV 52A)

IC38690
OFFSITE VOLUMES NOT COLLOCATED AFTER RECLAMATION OCCURS (PQ85696 5698ISMVS 510) (PQ85697 5698ISMVS 520) (IC38690 5698ISMSV 51A)

IC38712
USER EXIT DETAILS DO NOT DISPLAY CORRECTLY FROM WEB ADMIN (IC38712 5698ISMSV 52P)

IC38752
Tapes in NAS storage pools may be prematurely marked full durin (IC38752 5698ISMSV 52W)

IC38781
IMPORT NODE MERGE=YES FAILS TO MERGE AUTHORIZATION RULES (PQ86407 5698ISMVS 510) (IC38781 5698ISMSV 51A)

IC38819
TSM SERVER MEMORY LEAK WITH STORAGE AGENT TRANSACTION CACHE (IC38819 5698ISMSV 51A) (PQ84434 5698ISMVS 520)

IC38828
Add the barcode support for Dell PV122T due to the firmware (IC38828 5698ISMSV 52W)

IC38836
TSM DEFINE PATH FILE DEVCLASS STA ALLOWS GARBAGE FOR DEVICE PAR (IC38836 5698ISMSV 52W)

IC38864
TSM server crashes randomly with core dump and diag ANR9999D In (IC38864 5698ISMSV 52A)

IC38868
ERROR IN DSMSERV.IDL AT 5.2.2 LEVEL (PQ84355 5698ISMVS 520) (IC38868 5698ISMSV 52A)

IC38911
TSM Server is reporting Actual Start date/time for a missed cli (IC38911 5698ISMSV 52W)

IC38957
LANFREE RESTORE FAILS WHEN -FROMNODE USED (IC38957 5698ISMSV 52A)

IC38961
IN A LIBRARY SHARING ENVIRONMENT, MANUALLY DEFINING TAPE VOLUME (IC38961 5698ISMSV 52A) (PQ87585 5698ISMVS 520)

IC38985
WEB ADMIN CLIENT ACTIVITY TO TSM SERVER CAN CAUSE SERVER CRASH (PQ84789 5698ISMVS 520) (IC38985 5698ISMSV 52W)

IC38994
UTILITY FOR IC38940 ADDITIONAL CORRECTIVE ACTION (IC38994 5698ISMSV 51A) (PQ84700 5698ISMVS 510) (PQ84701 5698ISMVS 520)

IC39032
WRITE PROTECTION CONDITION NOT REPORTED WHITH LABEL LIBVOLUME (IC39032 5698ISMSV 51S)

IC39102
ANR9999D MUTEX NOT HELD ON CONDITION WAIT, TIMING PROBLEM DELET (IC39102 5698ISMSV 51A)

IC39109
TSM Server 5.2.X can core dump when a 'quey Status' is issued (IC39109 5698ISMSV 52A)

IC39121
IBM TSM SERVER MAY OUTPUT WRONG PLATFORM IN ANR0408I & ANR0409I (PQ84343 5698ISMVS 520) (IC39121 5698ISMSV 52W)

IC39123
DEFINE OR UPDATE DRIVE PATH IN SPECTRALOGIC LIBR HANGS SERVER (IC39123 5698ISMSV 52S)

IC39132
ANR0106E UNEXPECTED ERROR 2 FETCHING ROW FROM (IC39132 5698ISMSV 52A) (PQ85264 5698ISMVS 520)

IC39141
Generate Backupset is missing active file entries if the disk s (IC39141 5698ISMSV 51W)

IC39147
UNDO ARCHCONVERSION - ANR9999D ATTEMPT TO DETACH THREAD NOT (IC39147 5698ISMSV 52A) (PQ86905 5698ISMVS 520)

IC39252
The error is that the dbLogReserve->CheckLogPinned (IC39252 5698ISMSV 51A) (PQ86752 5698ISMVS 510) (PQ86753 5698ISMVS 520)

IC39254
The TSM server AUDITDB process may terminate prematurely (IC39254 5698ISMSV 51A) (PQ85623 5698ISMVS 510) (PQ85624 5698ISMVS 520)

IC39262
ITSM DEVICE DRIVER FAILS TO READ DATA LOCATED AFTER 1TB BOUNDAR (IC39262 5698ISMSV 51A) (IC39295 5698ISMSV 52A)

IC39263
ITSM DB "MAXIMUM REDUCTION" IS ZERO AFTER ISSUING (PQ84558 5698ISMVS 520) (IC39263 5698ISMSV 52W)

IC39266
THE TSM SERVER COULD CRASH IF THE DISTINCT KEYWORD IS USED IN (IC39266 5698ISMSV 52W) (PQ84639 5698ISMVS 510) (PQ84646 5698ISMVS 520)

IC39278
ITSM SERVER ISSUES ANR0530W MESSAGE WHEN ENCOUNTERING A (IC39278 5698ISMSV 51A) (PQ85028 5698ISMVS 520)

IC39287
During backup processing, an incorrect attribute is passed when (IC39287 5698ISMSV 51A) (PQ84698 5698ISMVS 510) (PQ84699 5698ISMVS 520)

IC39306
DELETE FILESPACE COMMAND DOES NOT PROPERLY SHOW HOW MANY (IC39306 5698ISMSV 52W) (PQ86772 5698ISMVS 520)

IC39314
TSM Server core dump:ANR7837S Internal error DBOBJ028 detected. (IC39314 5698ISMSV 51P)

IC39361
LANFREE BACKUP TO S390 SERVER CAN FAIL WITH ANR9999D FAILURE 2 (IC39361 5698ISMSV 52Z)

IC39368
CANCEL PROCESS MAY RESULT IN CORE/ABEND OF ITSM SERVER IF THE (IC39368 5698ISMSV 52A) (PQ87504 5698ISMVS 520)

IC39380
ANR8770W UNABLE TO LOAD EXTERNAL LIBRARY MANAGER WITH MULTIPLE (IC39380 5698ISMSV 52W)

IC39395
PORT SCANNER HANGS OR CRASHES TSM SERVER (IC39395 5698ISMSV 52A) (PQ87849 5698ISMVS 510) (PQ87852 5698TSMVS 421)

IC39418
LANGUAGE NOT SET BY ITSM SERVER HACMP STARTSERVER SCRIPT CAUSIN (IC39418 5698ISMSV 51A)

IC39424
DISCREPANCY IN REPORTED VOLUME STATE: MOUNTABLEINLIB VS. (IC39424 5698ISMSV 52A) (PQ86993 5698ISMVS 520)

IC39506
Errors during expiration caused by self referencing objects (IC39506 5698ISMSV 52W)

IC39524
SERVER RESTORE DB FAILS FOR FC ATTACHED DRIVES IN 3494 (IC39524 5698ISMSV 52A)

IC39525
″CURRENT VOLUME LIST″ OF Q PROC ERRONEOUSLY GROWING WHILE (IC39525 5698ISMSV 52A)

IC39542
QUERY STGPOOL REPORTS NEGATIVE/INCORRECT ESTIMATED CAPACITY ON (IC39542 5698ISMSV 51A) (PQ87686 5698ISMVS 510)

IC39585
REGISTER LICENSE IS RELYING ON THE OS SYSTEM DATE / TIME (IC39585 5698ISMSV 52A)

IC39593
ANR0102E asalloc.c(7539): Error 1 inserting row in table ″AS.Se (IC39593 5698ISMSV 52W)

IC39596
AUDITDB MAY DELETE THE EXPIRING OBJECT ENTRIES FOR BACKUPSETS I (PQ85617 5698ISMVS 510) (PQ85618 5698ISMVS 520) IC39596 5698ISMSV 51A)

IC39640
When TSM discovers a serial number mismatch the drive is put of (IC39640 5698ISMSV 52L)

IC39654
ANR9999D IMEXP.C: BACKUP ENTRY FOR OBJECT <OBJECTID> COULD NOT (IC39654 5698ISMSV 52A) (PQ86173 5698ISMVS 520)

IC39668
SEVERE DECREASE IN OVERALL PERFORMANCE OF ITSM 5.1.8 OR (IC39668 5698ISMSV 52H)

IC39681
TSM STOPSERVER: 0403-057 SYNTAX ERROR AT LINE 44 : `<' IS (IC39681 5698ISMSV 52A)

IC39689
(5.2.3)DRMPLANPREFIX IS DISPLAY INCORRECTLY WHEN THE PREPARE (IC39689 5698ISMSV 52W)

IC39744
AUDIT VOLUME COMMAND PRODUCES A ANR9999D MESSAGE WHEN THE USER (IC39744 5698ISMSV 52W)

IC39782
DELETE BACKUPSET FAILS WITH ANR2428E ERROR 2 (IC39782 5698ISMSV 52A) (PQ86336 5698ISMVS 520)

IC39827
Memory Leak in TSM Server 5.2.X during archive/retrieve and qu (IC39827 5698ISMSV 52A)

IC39830
TSM SERVER SESSION ACTIVITY HANG DURING BACKUP OPERATION (IC39830 5698ISMSV 51S) (PQ87066 5698ISMVS 510) (PQ87067 5698ISMVS 520)

IC39839
Set Access command can cause TSM server to crash. (IC39839 5698ISMSV 52W) (PQ86939 5698ISMVS 520)

IC39841
ANR9999D ERROR 7 OBTAINING FILESPACE ID FOR NODEID DURING (IC39841 5698ISMSV 52W) (PQ86320 5698ISMVS 520)

IC39849
ANR8447E CHECKIN OF GENERICTAPE VOLUMES MISTAKENLY (IC39849 5698ISMSV 52A)

IC39877
IMPORT OF NODE FILEDATA RESULTS IN ANR9999D BACKUP OBJECT (PQ88811 5698ISMVS 520) (IC39877 5698ISMSV 52S)

IC39881
ANR9999D ATTEMPT TO RECOVER VOLUME HANDLE FOR OPEN VOLUME (IC39881 5698ISMSV 52W)

IC39931
ANR0525W ON TSM 5.2 IMPORT FROM TSM 5.1 EXPORTED DATA (PQ86968 5698ISMVS 510) (IC39931 5698ISMSV 52A)

IC39957
DELETE FILESPACE RETURNS SUCCESS BUT FILESPACE STILL (IC39957 5698ISMSV 52A) (PQ87176 5698ISMVS 520)

IC39966
ANR9999D ASVOLACQ.C INVALID STATE CHANGE FOR VOLUMES USED BY (IC39966 5698ISMSV 52A)

IC39990
ANR9999D DSVOL.C ERROR 2 CREATING BIT VECTOR DSK0000000032 FOR (PQ87642 5698ISMVS 523) (IC39990 5698ISMSV 52A)

IC40022
ITSM WEB ADMIN SLOW AFTER UPGRADE TO 5.2.X.X SERVER LEVEL (IC40022 5698ISMSV 52L)

IC40049
UPDATE ARCHIVE OPERATION HANGS AND FINALLY FAILS WITH ANR0538I (IC40049 5698ISMSV 52A) (PQ87566 5698ISMVS 520)

IC40051
ANR0454E VERIFICATION FAILURE,ANR8779E ERRNO=16, RETRY DISMOUNT (IC40051 5698ISMSV 52A) (PQ87068 5698ISMVS 520)

IC40107
RETRIEVING OBJECTS FROM CENTERA (DEVTYPE=CENTERA) MAY FAIL (IC40107 5698ISMSV 52S)

IC40127
ANR8938E Initialization failed for Shared library SCLIB01; will (IC40127 5698ISMSV 51A)

IC40142
SELECT COMMAND INCLUDING THE ESCAPE SEQUENCE % AND SOME SPECIFI (IC40142 5698ISMSV 52W) (PQ87511 5698ISMVS 523)

IC40165
TSM not recognizing Unlabeled tapes in 3494 library after TSM r (IC40165 5698ISMSV 51A)

IC40193
TSM 5.2.X server can core dump during LANfree backups (IC40193 5698ISMSV 52A)

IC40195
ITSM ADMIN PROXY FAILS WHEN FILESPACE OBJECT NAMES INCLUDE WHIT (IC40195 5698ISMWP 510)

IC40214
LAN-FREE SESSIONS INCORRECTLY TERMINATED DUE TO THROUGHPUT (IC40214 5698ISMSV 52A) (PQ87603 5698ISMVS 523)

IC40236
Core dump with library operation after update path for IBM tape lib (IC40236 5698ISMSV 52S)

IC40237
Update path to the IBM tape drive will get the same element numbers (IC40237 5698ISMSV 52W)

IC40244

WEB Admin pull down menu wrongly removes the 'label libv' command for (IC40244 5698ISMSV 52A)

IC40252

RESTARTABLE RESTORE SESSION EXISTS AFTER SUCCESSFUL LAN-FREE NO-QUERY (IC40252 5698ISMSV 52A) (PQ88810 5698ISMVS 520)

IC40299

OUTPUT FROM VARIOUS QUERY COMMANDS, THE LAST LETTER OF A LINE ISADDED (IC40299 5698ISMSV 52S)

IC40302

TSM DEVICE DRIVER PERFORMANCE DEGRADATION ON SUN (IC40302 5698ISMSV 52S)

IC40330

ITSM CLIENT BACKUP FAILS ANR0104E IMBKINS.C ERROR 2 DELETING ROW FROM (IC40330 5698ISMSV 52A) (PQ87485 5698ISMVS 520)

IC40331

DELETE FILESPACE PROCESS APPEARS TO HANG DUE TO INCORRECT REPORTING OF (IC40331 5698ISMSV 52A)

IC40363

SOLARIS 5222/5223 STORAGE AGENT INSTALL/REMOVE FAILS (IC40363 5698ISMSV 52S)

IC40384

RESTORE DB USING DEVT OPTICAL / WORM FAILS WITH ANR8362E (PQ87670 5698ISMVS 523) (IC40384 5698ISMSV 52A)

IC40483

ANR8873E MESSAGE REPEATED EVERY 30 SECONDS WHILE POLLING DRIVE (IC40483 5698ISMSV 52W)

IC40528

ANR0488W SESSIONS INCORRECTLY CANCELLED PRIOR TO REACHING THROUGHPUTD (PQ87944 5698ISMVS 520) (IC40528 5698ISMSV 51A) (PQ87799 5698ISMVS 510)

IC40616

DELETE VOLUME DISCARDDATA=YES will fail on a TSM 5.2.2.x server orphan bitfiles are exist (IC40616 5698ISMSV 52W) (PQ88049 5698ISMVS 520)

IC40628

DURING AUDITDB ERROR OCCURED AND AUDIT FAILS: ANR9999D IMAUDIT.C(769): THREADID<0> AUDIT OF ONE OR MORE SECONDARY TABLES FAILED (IC40628 5698ISMSV 52W) (PQ88044 5698ISMVS 520)

IC40645

NORETRIEVEDATE OPTION IS NOT DISPLAYED IN QUERY OPTION OUTPUT (IC40645 5698ISMSV 52A) (PQ88451 5698ISMVS 523)

IC40665

ANR0104E and Error 2 from imgroup.c when deleting table from "Group.M (PQ88291 5698ISMVS 520) (IC40665 5698ISMSV 52W)

IC40678
ANR0985I BACKUP STORAGE POOL PROCESS COMPLETES SUCCESSFULLY DESPITE MOUNT (IC40678 5698ISMSV 52A)

IC40684
UPGRADE OF STORAGE AGENT ON WINDOWS OVERWRITES DSMSTA.OPT (IC40684 5698ISMSV 52W)

IC40685
AE IC37275 FIX COMPLETION - ANR4759E RUNNING ″REPAIR STGVOLS″ COMMAND AGAINST (IC40685 5698ISMSV 51A) (IC40962 5698ISMSV 52A)

IC40705
IMPORT NODE CAUSES TSM SERVER TO CRASH WITH FREE MEMORY ERRORS (PQ88843 5698ISMVS 520) (IC40705 5698ISMSV 52A)

IC40708
TSM BACKUP DB COMMAND FAILS WITH ANR4571E WHEN DTF DEVCLASS IS USED W (IC40708 5698ISMSV 52S)

IC40757
Define Profassoc is not working correctly when Server=* (PQ89205 5698ISMVS 510) (PQ89172 5698ISMVS 520) (IC40757 5698ISMSV 52W)

IC40788
INCORRECTLY ISSUED ANR4073I AUDITDB: INVALID FILE AGGREGATION INFORMA (PQ88661 5698ISMVS 520) (IC40788 5698ISMSV 52A)

IC40795
ANR9999D <.> UNABLE TO OPEN DRIVE /DEV/SMC0: ATTEMPTED TO ASSIGNSTDIN (IC40795 5698ISMSV 52A)

IC40865
ANR2400E DURING DELETE VOLHIST WHEN VOLUME TYPE REMOTE (IC40865 5698ISMSV 52A)

IC40867
REGISTER LIC. ON WINDOWS DOES NOT WORK PROPERLY IF THE LICENSE FILE IS (IC40867 5698ISMSV 52W)

IC40876
AUDIT LIBRARY DOES NOT SYNCHRONISE LIBRARY MANAGER AND LIBRARY CLIENT (IC40876 5698ISMSV 51A)

IC40949
ANR0444W PROTOCOL VIOLATION DURING SERVER-SERVER (PQ90436 5698ISMVS 520) (IC40949 5698ISMSV 52A)

IC40959
CHECKIN LIBVOLUME FAILS WITH ANR8314E - LIBRARY FULL (IC40959 5698ISMSV 52S)

IC41015
EXPIRATION FAILING FOR WINDOWS NODES ON TSM SERVER (IC41015 5698ISMSV 52A) (PQ90443 5698ISMVS 520)

IC41045
WEB CLIENT GUI BASED NAS NDMP FILE LEVEL RESTORE OF FOLDER (IC41045 5698ISMSV 52W)

IC41064
Update of node or admin password can result in password being p (IC41064 5698ISMSV 52W)

IC41080
ITSM STORAGE AGENT INTERRUPTING VOLUME MOUNT BY ITSM SERVER (IC41080 5698ISMSV 52W) (PQ89308 5698ISMVS 520)

IC41161
ITSM SERVER ″RESTORE DB″ TERMINATES AFTER ANR8366E MESSAGE (IC41161 5698ISMSV 52W)

IC41173
ANR2020E ANR0901W ITSM SERVER FAILS ″RESTORE DB″ DUE TO PATH (IC41173 5698ISMSV 51H)

IC41174
ITSM SERVER ″RESTORE DB″ FAILS WITH ANR9999D ADMDBBK.C(4466): (IC41174 5698ISMSV 52W)

IC41191
DATABASE CORRUPTION REQUIRES TWO AUDITDB RUNS TO COMPLETELY (PQ92444 5698ISMVS 520) (IC41191 5698ISMSV 51A) (PQ92333 5698ISMVS 510)

IC41212
DSMSERV CAN CORE DURING ANY DUEL TAPE OPERATION (INPUT/OUTPUT (IC41212 5698ISMSV 52S)

IC41235
ANR0546W - internal server error on a restore when mount wait t (IC41235 5698ISMSV 52A) (PQ90565 5698ISMVS 520)

IC41240
TSM DEVICE SUPPORT FOR STK SN6000 EMULATING STK 9840 TAPE DRIVE (IC41240 5698ISMSV 52H)

IC41291
ANR8855E ITSM SERVER FAILS CHECKIN FOR ACSLS VOLUME STATING (IC41291 5698ISMSV 52S)

IC41306
TSM server V5190 or 5230 may not rebind all versions of a backu (PQ92674 5698ISMVS 510) (IC41306 5698ISMSV 51A) (PQ92706 5698ISMVS 520)

IC41312
SERVER ABENDS WITH ANR8213E (SOLARIS) SESSION <SESSION_ID> ABOR (PQ89973 5698ISMVS 510) (IC41312 5698ISMSV 51S)

IC41352
TSM Server expiration prematurely deletes last backup version (IC41352 5698ISMSV 51A) (PQ91265 5698ISMVS 510)

IC41393
ANR2715E AFTER UPDATE NODE WITH (PQ90188 5698ISMVS 520) (IC41393 5698ISMSV 52S)

IC41422
The UPDATE STGPOOL command fails to do parameter checking (IC41422 5698ISMSV 52A)

IC41460
SOLARIS ITSM 5.1: KERNAL PANIC, MULTI-CPU ENVIRONMENT, CAUSED B (IC41460 5698ISMSV 51S)

IC41462
Mount/Dismount hang on TSM SERVER using External Library suppor (IC41462 5698ISMSV 52H)

IC41537
Cancel session during session terminate could cause storage age (IC41537 5698ISMSV 51A) (PQ92949 5698ISMVS 520)

IC41558
Under certain situations TSM 5.2 Server does not populate Sessi (PQ93127 5698ISMVS 520) (IC41558 5698ISMSV 52A)

IC41571
LANFREE BACKUP HANGS WHEN ITSM CLIENT SENDS VERB TO STORAGE (PQ90837 5698ISMVS 520) (IC41571 5698ISMSV 52W)

IC41580
IMMAP02 INCORRECT COLUMN TYPE - ITSM SERVER ABORTS IN (IC41580 5698ISMSV 52A) (PQ93111 5698ISMVS 520)

IC41652
LABEL LIBVOLUME FAILS WITH ANR9999D COULD NOT OBTAIN MEDIA TYPE (IC41652 5698ISMSV 52S)

IC41656
Define path fails for 3490 devices if AIX 5.X is 32-bit or 64-b (IC41656 5698ISMSV 52A)

IC41725
ANR8302E I/O ERROR (OP=RSR) ON NON DLT AND LTO TAPE DRIVES (IC41725 5698ISMSV 52W)

IC41745
DSMSERV RESTORE DB FAILS WITH ANR8417E FOR ACSLS LIBRARY (IC41745 5698ISMSV 52S)

IC41806
STANDALONE ITSM MANAGEMENT CONSOLE CAN NOT BE UNINSTALLED, IF (IC41806 5698ISMSV 52W)

IC41845
ANR8402E WITH ″DEFINE PATH″ COMMAND FOR QIC DRIVES ON LINUX TSM (IC41845 5698ISMSV 52L)

IC41868
AUDITDB MAY ABEND BEFORE COMPLETION DUE TO PINNED RECOVERY LOG (IC41868 5698ISMSV 52A) (PQ92235 5698ISMVS 523)

IC41991
TSM SERVER RANDOMLY GENERATES ANR2032E QUERY: COMMAND FAILED - (PQ95247 5698ISMVS 520) (IC41991 5698ISMSV 51S) (PQ95223 5698ISMVS 510)

IC42004
ADSMSERV.MIB FILE IS MISSING FROM 5.2.X.X VERSIONS OF TSM (IC42004 5698ISMSV 52W)

IC42006
TSM Server V5.2.X.X or higher does not work with SessionInitiat (PQ91183 5698ISMVS 520) (IC42006 5698ISMSV 52W)

IC42050
AUDIT VOLUME HANGS WHEN A NEGATIVE VALUE IS READ FROM VOLUME (PQ91208 5698ISMVS 522) (IC42050 5698ISMSV 52A)

IC42082
DOCUMENTATION CLARIFICATION FOR ITSM MESSAGES MANUAL FOR MESSAG (IC42082 5698ISMSV 52S)

IC42097
TXNLOCK15 INTERNAL ERROR DETECTED RESULTS IN ITSM SERVER ABEND (IC42097 5698ISMSV 51A) (PQ93702 5698ISMVS 510) (PQ93797 5698ISMVS 520)

IC42202
TSM server receives incorrect affinity id from client and may c (IC42202 5698ISMSV 52A) (PQ92231 5698ISMVS 520)

IC42208
AMR0595W DURING IMPORT NODE WITH FILEDATA=BACKUPACTIVE (PQ95157 5698ISMVS 520) (IC42208 5698ISMSV 52A)

IC42214
STORAGE VOLUME DEADLOCK INVOLVING SIMULTANEOUS WRITE (PQ92509 5698ISMVS 520) (IC42214 5698ISMSV 51W)

IC42228
ENHANCED VOLUME DECISION TRACEPOINTS NEEDED FOR RESTORE PROBLEM (IC42228 5698ISMSV 52A)

IC42249
ITSM SNMP SUBAGENT (DSMSNMP) MAY STOP COMMUNICATING (IC42249 5698ISMSV 52A)

IC42270
INVALID SERIAL NUMBER OBTAINED FROM DRIVE (IC42270 5698ISMSV 52W)

IC42272
ITSM SERVER CORES IN FUNCTION ″TMEND″ WHEN ″DEFINE CURSOR″ (IC42272 5698ISMSV 52S) (IC41714 5698ISMSV 51A) (PQ92806 5698ISMVS 510)

IC42334
VOLLIST CAUSES STACK OVERLAY DURING CHECKOUT/CHECKIN ANR8409E (IC42334 5698ISMSV 51A)

IC42469
SERIAL NUMBER FOR TAPE DRIVE NOT UPDATED IN DRIVE DEFINITION (IC42469 5698ISMSV 52W)

IC42490
ITSM SERVER CORE TEC SERVER CONNECT OR DISCONNECT (IC42490 5698ISMSV 52A) (PQ95329 5698ISMVS 520)

IC42505
EMPTY PRIVATE VOLUME WILL RETURN TO SCRATCH AFTER AUDIT (IC42505 5698ISMSV 52W)

IC42565
CRYPTIC MESSAGE ″ANR4383E ... ITEM NOT AVAILABLE″ MEANS MAXNUMM (PQ93642 5698ISMVS 510) (IC42565 5698ISMSV 51A) (PQ93677 5698ISMVS 520)

IC42596
hang on HP server when External Library path incorrect (IC42596 5698ISMSV 52H)

IC42603
DELETE VOLUME DISCARDDATA=YES MAY LEAVE ORPHANED ENTRIES IN (PQ95198 5698ISMVS 510) (IC42603 5698ISMSV 52A) (IC42588 5698ISMSV 51A)

IC42661
ANR8301E I/O error on TSM library 349x (IC42661 5698ISMSV 52A)

IC42680
SERVER CORE DUMPS AFTER DSMSERV DISPLAY DBV (PQ95364 5698ISMVS 520) (IC42680 5698ISMSV 52A)

IC42727
ANR2032E MOVE MEDIA COMMAND FAILS WITH MESSAGE: ANR9999D (IC42727 5698ISMSV 51A)

IC42736
TSM SERVER 5.2.3 EXPIRATION SHOWS ANR0538I AND ANR0871E (PQ96226 5698ISMVS 520) (IC42736 5698ISMSV 52A)

IC42803
DEADLOCK WHEN TRYING TO IMPORT HSM (SPACE MANAGED) FILES (PQ96212 5698ISMVS 520) (IC42803 5698ISMSV 52A)

IC42806
ITSM SERVER INITIALIZATION OF 3494 LIBRARY IS SLOW (IC42806 5698ISMSV 52A)

IC42812
INSTALL_SERVER SCRIPT NOT HONORING THE PREFIX VALUE DURING A (IC42812 5698ISMSV 52L)

IC42813
TSM SERVER CRASHES DURING CANCEL SESSION IF COMMTIMEOUT AND (PQ95450 5698ISMVS 520) (IC42813 5698ISMSV 52W)

IC42866
GENERATE BACKUPSET MAY COPY MORE FILESPACES (PQ94360 5698ISMVS 520) (IC42866 5698ISMSV 51P)

IC42890
ITSM SERVER MEMORY LEAK IN IMGROUP.C WHEN ISSUING ″GENERATE (IC42890 5698ISMSV 52A) (PQ95811 5698ISMVS 520)

IC42909
ITSM WINDOWS CLIENTS BACKING UP SYSTEM OBJECTS CAN SUFFER (PQ96732 5698ISMVS 520) (IC42909 5698ISMSV 52S)

IC42911
UNLOADDB FAILS WITH ANR9999D INDICATING THAT THE (IC42911 5698ISMSV 52A) (PQ96420 5698ISMVS 510) (PQ96494 5698ISMVS 520)

IC42968
SELECT FROM OCCUPANCY WILL DISPLAY NULL VALUE FOR (IC42968 5698ISMSV 52A)

IC43020
TSM SERVER CRASH DUE TO INVALID ATTEMPT TO FREE MEMORY AFTXN.C (IC43020 5698ISMSV 52A)

IC43051
ITSM SERVER CORE DUMPS DUE TO NO QUERY RESTORE (NQR) (IC43051 5698ISMSV 52A) (PQ96369 5698ISMVS 520)

IC43055
MOVE DATA OFFSITE VOLUME RESTORE MSGANR1171W MSGANR1156W (PQ95261 5698ISMVS 510) (IC43055 5698ISMSV 52A) (IC42589 5698ISMSV 51A)

IC43172
LAN FREE RESTORE FAILS DUE TO COPY STORAGE POOL TAPE REQUEST (IC43172 5698ISMSV 52A) (PQ95626 5698ISMVS 520)

IC43246
AE IC42006 FIX COMPLETION. THE PROMPTED SCHEDULER FAILS, IF (PQ95843 5698ISMVS 520) (IC43246 5698ISMSV 52W)

IC43370
MSGANR1763E ISSUED WHEN NO ADDITIONAL INFORMATION IS AVAILABLE (PQ96618 5698ISMVS 520) (IC43370 5698ISMSV 52A)

IC43445
TSM SERVER ABENDS WITH ANR7837S INTERNAL ERROR LOCKCYCLE02 (IC43445 5698ISMSV 52A) (PQ96745 5698ISMVS 520)

IC43539
TSM server crash during backup of NAS filesystem (TOC=YES) whic (IC43539 5698ISMSV 52S)

IC43544
NAS Restore operation may fail to restore all files, but report (IC43544 5698ISMSV 52S)

PQ74605
(5.1.9, 5.2.2)MSGDM0001S TBUTIL INTERNAL ERROR TBINS068 (IC37542 5698ISMSV 51A) (PQ78943 5698ISMVS 520) (PQ74605 5698ISMVS 510)

PQ74682
TSM WEB ADMINISTRATOR DISPLAYS INCREMENTAL BACKUP WHEN (PQ74682 5698ISMVS 510)

PQ74849
UPGRADEDB FROM 4.2.X TO 5.1.X INVALID NODEID FSID SYSTEM OBJECT (IC37079 5698ISMSV 51A) (PQ74849 5698ISMVS 511)

PQ76908
GARBAGE CHARACTERS IN WEB ADMIN SCREENS FOR SOME TITLE AND (PQ76908 5698ISMVS 510)

PQ77017
ABEND 0C4 AFMOVEOFFSITEVOLUME MOVE DATA WAIT=YES (PQ77017 5698ISMVS 510)

PQ77841
ANRALLOC SPIN LOCK LOOP ACQUIRING MEMORY LOCK (PQ77841 5698ISMVS 510)

PQ80211
SEVERE PERFORMANCE DEGRADATION UPGRADING TO 5.2 FROM 4.2 OR 5.1 (IC38013 5698ISMSV 52A) (PQ80211 5698ISMVS 520)

PQ83450
ANR4759E REPAIR STGVOL UTILITY LOOP (PQ83450 5698ISMVS 520) (IC39402 5698ISMSV 51A) (PQ84702 5698ISMVS 510)

PQ84418
EXPORT/IMPORT ADMIN SESSIONS CANNOT BE CANCELLED (IC41429 5698ISMSV 52A) (PQ84418 5698ISMVS 520)

PQ84954
MEMORY LEAK ON VOLLIST ENTRIES RUNNING RECLAMATION (PQ84954 5698ISMVS 510) (IC40005 5698ISMSV 51A) (PQ86540 5698ISMVS 520)

PQ85002
ANE MESSAGES CREATED BY NETVIEW RECEIVER DO NOT INCLUDE (PQ85002 5698ISMVS 510)

PQ85040
″ANR9999D PVROPDEL(282): ... DevClass 11 (driver 8) not support (PQ85040 5698ISMVS 520)

PQ85063
MVS SERVER ABEND0C4 WHEN USING GUI CLIENT TO REQUEST (PQ85063 5698ISMVS 520)

PQ85160
DELETE ARCHIVE CAUSES POOR PERFORMANCE/HIGH CPU UTIL (IC39651 5698ISMSV 52A) (PQ85160 5698ISMVS 520)

PQ85357
MULTIPLE ANR1173E DURING OFF-SITE RECLAMATION (IC36348 5698ISMSV 51A) (PQ85357 5698ISMVS 510) (PQ88108 5698ISMVS 523)

PQ85665
UNABLE TO RESTORE TDP FOR ORACLE LANFREE FROM Z/OS (PQ85665 5698ISMVS 520)

PQ86959
ABEND0C4 RESTARTING 5.1.9.0 SERVER AFTER RUNNING REPAIR STGVOL (PQ87962 5698ISMVS 520) (PQ86959 5698ISMVS 510) (IC40498 5698ISMSV 51A)

PQ87629
ANR0512I - ITSM SERVER ASSOCIATES INCORRECT PROCESS ID ON VOLUME ACTIV (IC40489 5698ISMSV 52A) (PQ87629 5698ISMVS 520)

PQ89285
WHEN USING CURSORS, A FETCH NEXT MAY RETURN A ROW OF DATA THAT (PQ89285 5698ISMVS 520)

PQ90370
ALLOWING TCPADMINPORT OPTION TO DEFAULT TO PORT 1500 MAY (PQ90370 5698ISMVS 520)

PQ91745
THE MVS SERVER ABENDED WITH 0C4 WHEN A NUMBER OF CLIENT (PQ91140 5698ISMVS 520) (PQ91745 5698ISMVS 510)

PQ91843
RECEIVE MSG ANR2020E WHEN FORMAT=3590E-B, 3590E-C, 3590H-B (PQ91843 5698ISMVS 520)

PQ93480
MSG ANR2753I RESULTS IN BLANK LINE FOLLOWING LAST LINE (IC42826 5698ISMSV 52A) (PQ93480 5698ISMVS 510)

PQ93686
AE IC34375 FIX COMPLETION - ITSM Server 5.2.x.x CLEANUP BACKUPG (PQ93686 5698ISMVS 520) (IC42159 5698ISMSV 52A)

PQ94503
MVS SERVER ABENDS WITH ABENDU301 AS THE RESULT OF RUNTIME (IC42251 5698ISMSV 52A) (PQ94503 5698ISMVS 520)

PQ96049
PERFORMANCE DEGRADES WITH MULTIPLE SELECT COMMANDS ON SESSIONS (PQ96049 5698ISMVS 510)

Notices and Trademarks

Where to Find Documentation

The publications CD (SK3T-8176) is a searchable information center that contains the publications for Version 5.3 of the IBM Tivoli Storage Manager product. The publications are available in PDF or HTML formats, or in most cases both.

You can also visit the Tivoli Storage Manager technical support Web site at www.ibm.com/software/sysmgmt/products/support/IBMTivoliStorageManager.html for flashes (alerts from technical support), client requirements, server requirements, supported devices, manuals, and downloads. Search problem reports and other service information for topics of interest. Register at the site to use My Software Support to create a customized support page for your use.

From the left pane, under Related Links, select Library to access the IBM Tivoli Information Center.

The books can also be obtained at http://publib.boulder.ibm.com/tividd/td/tdmktlist.html

To use the PDF format, you can obtain the Adobe Acrobat Reader from http://www.adobe.com/prodindex/acrobat/readstep.html. To install the Adobe Acrobat Reader on your platform, run the appropriate installation file, and follow the on-line installation instructions.

Getting Help

To receive technical support for IBM Tivoli Storage Manager, contact your administrator. This should be your first step when having problems with IBM Tivoli Storage Manager. Your administrator will know how to contact IBM for Technical Support on your behalf.

Use the Problem Determination Guide to look for a solution to the problem, or for recommended documentation to collect for use when talking with support. For the latest information about IBM Tivoli Storage Manager, visit www.ibm.com/software/sysmgmt/products/support/IBMTivoliStorageManager.html.

To participate in user discussions of IBM Tivoli Storage Manager, subscribe to an Internet listserv forum. This is not officially supported by IBM, but IBM support people do participate in the discussions, along with other users. You can subscribe by sending a note to listserv@vm.marist.edu that contains the following command in the message body:

```
SUBSCRIBE ADSM-L yourfirstname yourlastname
```

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Password protected server for z/OS & OS/390 Tivoli Storage Manager PTF (fixpacks) and patch (Interim fix) deliverables.

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IBM also supports a password protected server where you can find fixpacks, interim fixes and other related materials: This server is:

- Server: service2.boulder.ibm.com
- Userid: tsm4mvs
- Password: xxxxxxx

Where xxxxxxx is password obtained from IBM service.

FTP syntax for most Web Browsers:
ftp://tsm4mvs:xxxxxxx@service2.boulder.ibm.com

The following directory contains Tivoli Storage Manager for z/OS & OS/390 fixpacks: /storage/tivoli-storage-management/maintenance/server

The following directory contains Tivoli Storage Manager for z/OS & OS/390 patches: /storage/tivoli-storage-management/patches/server/MVS-OS390

Anonymous FTP Server

IBM also supports an anonymous FTP server where you can find IBM Tivoli Storage Management fixpacks, interim fixes and other related materials. The server is: service.boulder.ibm.com.

Three other anonymous servers are unofficially maintained by non-IBM volunteers. These servers are:

- ftp.rz.uni-karlsruhe.de (mirror - Germany)
- ftp.wu-wien.ac.at (mirror - Austria)
- ftp.aset.psu.edu (mirror - Pennsylvania)

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