

Tandberg Data Service FAQ

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A. Tandberg Data Products Questions

Q1: Why does my 1U LTO3 StorageLoader front panel display AT3200-1R LTO2?

A1:

This is the name of this device; Tandberg Data StorageLoader has three names, including AT1280-1R VS160, AT3200-1R LTO2, and StorageLoader. The default name for the equipment is StorageLoader. When you found backup software cannot control the robotic, you can change the name as AT1280-1R VS160 or AT3200-1R LTO2. Which usually occurs in the backup software you use is older version of circumstances. Different name does not mean that the equipment storage capacity or performances are not the same; the name which changes the apparatus will not have any influence on the result of use on your apparatus.

Q2: Why I download the driver of 840 LTO3 in Windows 2003 64bit and install in traditional way, the system always unable to use 840 LTO3 normally?

A2:

First please confirm your system and your downloaded files is i64 or x64, after confirmation accurate when you download and decompress, if you using the traditional way "Browse and choose" to installing drivers, but has been unable to capture and normal using 840 LTO3, suggest that you can try "install way" to drivers installed. Go to your download and decompress folder, then find the "install.exe", finally double-click "install.exe" that will help you done the 840 LTO3 driver installations.

Q3: Does EMC's storage support Tandberg Data products?

A3:

EMC supports Tandberg Data StorageLibrary T40

Please refer to the following information:

<http://www.emc.com/interoperability/matrices/EMCSupportMatrix.zip>

Q4: I using the fiber channel interface LTO tape drive to connect to my fiber switch, but why it looks have not any response?

A4:

Some fiber cable has not installed anti-fault design additional when making, so please make reference to the following steps fault detection:

1. Power on your fiber channel tape drive.
2. Please make sure fiber channel LTO drives the rear fiber line slot (there are two fiber channel hole) whether one side of a red light.

Have a red light, to the next step.

No any red lights, please contact your vender.

3. Please using one side of the fiber cable directly connects to the fiber channel LTO tape drive's fiber port.
4. After cable and drive connected, please confirm the other end of fiber cable even see the red light. (other side of cable's one hole will emit red light)

Have a red light, to the next step.

No any red lights please check or change your fiber cable.

5. Please confirm your fiber switch's SFP connector, make sure the SFP connector's one hole have a red light.

Have a red light, to the next step.

No any red lights, please change anther SFP or using other fiber switch port.

6. Using the cable that emit red light to connect no red light's SFP hole, then connect the no red light's cable to have red light's SFP hole.

(Red light's cable connect to no light's hole, no light's cable connect to red light's hole)

7. Please check your fiber switch, connecting with the above steps, your fiber switch can be detected fiber LTO tape drive at this time.
8. If still not connect or use, please contact your vender or Tandberg Data Support.

Q5: Why do I use LSI 7104XP fiber card to connect T24 LTO3 FC tape library, after each reboot, I always need to rescan device that can find and reconnect to my T24 library?

A5:

Experience in the actual application environment, LSI 7104XP fiber card at the default shipments firmware may cause the server does not automatically detect the tape library after reboot, but the firmware 1.03.05 version has been solved this problem, and the server can be normally and automatically detect and connect the fiber tape device after reboot.

If you need this firmware file or more detail, please see [LSI 7104XP Support & Download](#).

Q6: What meaning does the barcode on LTO tape?

A6:

The barcode used on the tape can only use capital letters A - Z and / or digital 0-9.

The LTO media barcode, it is six letters of the barcode number and two letters media type identification code.

Example: tape cartridges barcode format: (Code 39 Singles)

LTO-1 — XXXXXXL1

LTO-2 — XXXXXXL2

LTO-3 — XXXXXXL3

LTO-3 WORM — XXXXXXLT

Other attentive matters:

1. The middle area can't present the black mark
2. Can't present the white area or stain on the stripe of barcode

Q7: What functions does LED indicator lamp on Tape drive have?

A7:

LED indicator lamp on tape drive has explained the operation state of tape drive. Please refer to your product manual to understand the LED indicator lamp meaning.

Q8: Why can't eject the left magazine on StorageLoader or StorageLibrary T40 used for the first time?

A8:

In order to prevent the delivery of the equipment because of the movement or impact damage to library robotic or other component, so will fix library and internal device while transporting the goods.

When you used tape library or autoloader for the first time, you need to unload the screw of fixed robotic, at this time library could begin to work normally.

Please refer annex manual to operation. When the equipment needs repair, we need you to lock and re-fixed robotic again before packing too.

Q9: How should tape barcode be pasted?

A9:

Please refer to the document with the delivery of goods.

Q10: How can I determine whether the problem is hardware failure?

A10:

1. Review the records of backup software. Backup software usually have backup failure of the relevant records, you can find the error code meaning through the backup software manual and understand the reasons for the failure.
2. Check the hardware:
 - I. Please check whether the SCSI cable and terminator impairment fault, if fault, try to replace SCSI cable and terminator
 - II. Please check whether the clean lights flashing.
 - III. Please check LED state indicator lamp on tape drive, you can refer to the product manual for indicator of the meaning of the message
 - IV. Please check tape drive or tape library LCD panel, if the error code appears, you can refer to product manuals, access "h" error code meaning of the message.
 - V. Download Tdkit software to test tape drive. This operation will do detailed detection test for tape drive hardware. While testing and operating, please use the new tape or confirm the tape that can be read and written normally.
 - VI. If you are still unable to determine the cause of the malfunction, please contact your vendor or Tandberg data.

Q11: Why my 1U StorageLoader unable to install under NBU6.x?

A11:

1U StorageLoader has 3 loader personality can choose:

1. AT1280-1R VS160
2. AT3200-1R LTO2
3. StorageLoader

While installing, please choose third of loader personality "StorageLoader". If you choosing other two items, will cause NBU unable to discern robotic.

Q12: When I use tape library apparatus for the first time, what do I need attention and setup step?

A12:

Take StorageLibrary T24 as an example:

1. Please remove plastic kits.



2. Please confirm that has not opened the power yet, and tape library state is as follows.



3. Please use screwdrivers to be insert into the left side of the emergency removal magazine slot as the following picture.



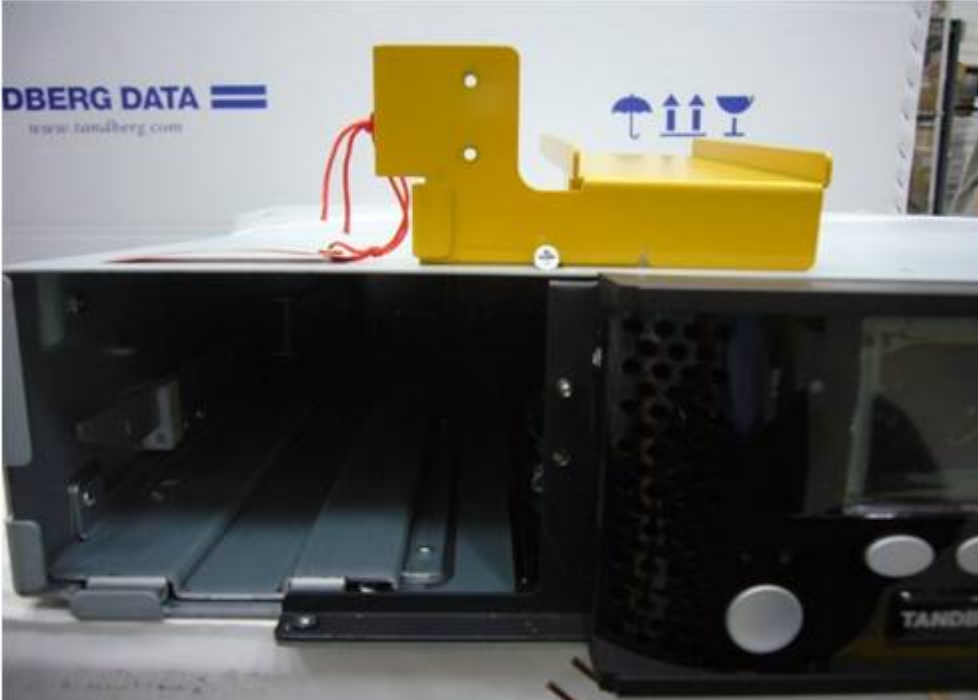
4. The following picture is the state of left magazine ejected.



5. Please turn loose and take out robotic fixed parts with the screwdriver.



6. The below picture is a state after robotic fixed parts removed. After taking out robotic fixed parts please reload left magazine and turn on the power.



Please refer to the above steps for all new tape library equipment protection devices removal operations.

B. Tape Devices Conceptual Issues

Q1: I found after data writes into the tape, but the actual store capacity inadequate, how to improve?

A1:

The data write into tape capacity has a lot of variables; the possible reasons are as follows:

1. Data compression rate:

In general, tape manufacturers will indicate the capacity that tape compress and not compress, For example, 20 GB / 40GB, namely, uncompressed 20 GB, and 40 GB compressed twice. However, file compression ratio cannot achieve the desirable value, based on actual experience, the general file system compression rate between 1.6 to 1.8 times. This is irresistible factors.

2. Tape quality factor:

If the tape is old or poor quality, is likely to write a bad block, and cause tape drive writing retry action, not only influence backup speed, capacity will also be smaller. Use the new tape to improve this phenomenon.

3. Tape drive heads factors:

If the tape drive heads have been worn or dirty, when data is writing, the retry ratio will increased, relative tape available capacity will also be smaller. The former can be used to replace tape drives, which can be regularly cleaned drive head to improve.

4. Environmental factors:

If too much dust in backup environment (particularly suspension of the fallout from smoke, such as smoking, because invisible and can't touch so be ignored), It tends to drive head and tape impaired, thereby affecting the capacity of backup. Improve environment can help to increase tape capacity and extended tape drives and tape life. In addition, tape drive / tape library placed high can reduce the influence of the dust also.

5. Backup speed

Most vendors don't know that backup speed will affect the tape capacity, for example: 8mm tape drive speed can be as high as 12MB/sec, so when backup speed was too slow (Data output too slowly), the tape drive cannot be stopped or deceleration, but tape still continues to move forward, such a situation will affect backup capacity. It can only use other tape drive instead to solve this problem (such as LTO3).

Q3: I would like to know the compatibility of the tape; after upgrade backup devices can still read and write the original tape?

A3:

Tandberg Data offers 4 kinds of tape record format products, including SLR, VXA, LTO and RDX at present.

Q4: Tape storage devices can be connected in the RAID card?

A4:

Please do not connecting the device in a RAID card, otherwise this will lead tape drive/tape library present the unusual state. According to the different types of data, such as general files, database files, video and audio files, combined down, the tape drive compression ratio at 2:1. Therefore, the actual tape drive storage capacity equivalent to more than the original storage capacity, and not just non-compressed storage capacity.

Q5: Tape device capacity and transmission speed are different with theoretical values?

A5:

1. Capacity:

Tape device has hardware compression capability, each tape drive compression algorithm different, Therefore, the actual tape drive storage capacity equivalent to more than the original storage capacity, and not just non-compressed storage capacity.

2. Transmission speed:

You can use backup software to check the data transmission speed. If not theoretical transmission speed, check SCSI connection equipment, Hard disk data transfer rate, to identify bottlenecks and resolve them.

Q6: Useful life and Recycle of the tape?

A6:

Must emphasize at first, the tape is for the consumptive material, loss extent as head wear and the quality and cleanliness of the environment to decide. So specification only as a reference, in particular those data (a lot of ten thousand "pass") is not corresponding to the expectations of users, For example: "Please tell me one tape can be use how many times?" if we must answer this difficult issue, let us consider the few prerequisites first:

1. The tape is the consumptive material.
2. Tape backup is designed to restore data, should not loss to “Barely available” situation, in order to avoid restore failure.
3. User environment (loss degree of drive head and environmental cleanliness).
4. Backup data amount and rotation times.

Q7: What's different between Autoloader and Tape Library?

A7:

1. Autoloader□Usually refers to only one tape drive but can be automatically loaded tape (usually 8 to 16 slots).
2. Tape Library□Equipment containing the entire row of tape (from 20 to several hundred), support for multiple tape drive installed, inside the tape was regarded as continuous, consistent and complete storage space. And even some products can be stacked, which will link more than one tape library into a large-scale tape storage device.

C. Tape Device Cleaning Questions

Q1: When automatic backup system operation, how to clean tape drive head?

A1:

DLT / Super DLT, LTO tape drives have special-purpose cleaning tape, as long as the correct specifications cleaning tape inserted in the drive then wait for it to eject from itself.

As for how long it will need to head cleaning operations? In fact as long as the tape drive clean light lights that required cleaning action. But how long the clean lights will turn on? Still depend on backup of data amount; tape is good or bad and the working environment.

But in the tape library automatic backup system operation, cleaning tape drive head became a vexing problem:
When cleaning and how clean?

1. When clean?

Because we do not know the exact frequency of cleaning, please subject to the actual situation. For example: If the backup began after two weeks, which happened error because of need to clean (as head clean resume normal), the cleaning frequency can be set for two weeks.

2. How to clean?

Most backup software provides automatic cleaning functions, need only set cleaning slots and cleaning mode. But still consider the following two points:

3. Still need to pay attention to the frequency of use of cleaning (need to regularly review)

Q2: How long should I clean tape drives?

A2:

When the tape drive cleaning lights flashing, or a cleaning message notice from backup software, please clean your tape drive immediately.

Q3: I have already cleaning tape driver by clean tape, but the clean indicator lamp is still flashing, why?

A3:

Different cleaning tape applied different life. DLT, SDLT clean tape will be valid for 20, SLR and LTO clean tape will be valid for 50. When using more than life, clean tape will be ineffective, please change a new clean tape at this moment.

Q4: One argument is LTO tape drives do not need cleaning, is this kind of statement correct?

A4:

Although the types of LTO or DLT tape, anti scratch technical is better than DDS tape, but the tape and tape drive head have a chance to contact, tape drive still need cleaning (to avoid scratches tape).

D. Tape Device Firmware Questions

Q1: How to upgrade firmware?

A1:

Tandberg Data offers specific Firmware file and software for different products; you can use flashit or Tdkit to upgrade your product's firmware.

Q2: Why do I need to upgrade the firmware?

A2:

Firmware update will enhance the product's performance and early resolution of potential problems, compliance with the document to upgrade firmware will reduce the damage of the equipment.

E. Tape Device Software Relate Questions

Q1: I use Tandberg Data T24 tape counters with VERITAS Backup Exec 10D, why Backup Exec 10D only detect my tape drive but cannot detect robotic?

A1:

Because T24 production time is later than Backup Exec 10D, So Backup Exec 10D default is impossible to identify the T24's robotic, you can solved this problem in two ways:

1. Download the device driver update patch form [Symantec](http://www.symantec.com).
2. Using T24 unique built-in emulation functions, after T24 emulation to other device, Backup Exec 10D can indentify immediate , step as below:
 - I. In the LCD panel menu, select "Lib".
 - II. In "Lib" menu, select "Library Settings".
 - III. In "Library Settings" menu, select "Operation Mode".
 - IV. In "Operation Mode" menu, select "Emulation Mode".
 - V. In "Emulation Mode" menu, select Modify.
 - VI. In "Modify" menu, select to "Exabyte 221L" than choose "Select"
 - VII. After the completion of choice, LCD panel will display "(Emulation Mode) Good" message, click "OK" to return main screen.

At this time, you need to reboot your backup server, after reboot you need to re-configure Backup Exec 10D's "Device", then tape drives and robotic should be normal use.

Q2: How do I get Tandberg Data presented the VERITAS Backup Exec Quick Start Edition for windows Servers software serial numbers?

A2:

1. Please visit the following web site: <http://www.backupexec.com/tandberg>
2. Input "12245" in reference code field.
3. Click "Register Now", then enter activation code (please refer to the CD package), and complete the relevant registration information
4. VERITAS will send the serial number to email address that you filled in.
5. Use the serial number to install backup software

Q3: In the Linux operating system, I did not use backup software, how do I use my tape drive for backups?

A3:

1. First of all, you can use the command "mt", mt is a directly tape device control commands, such as: rewind, offline.

Example:

```
mt -f /dev/st0 rewind      --> Rewind the tape
mt -f /dev/st0 offline    --> Rewind the tape and, if applicable, unload the tape.
mt -f /dev/st0 erase      --> Erase the tape
```

2. Using "tar" command, the original tar is used by the file and directory backup to tape.

Example:

```
tar -cvf /dev/st0 /var/*   --> Backup data from directory to tape
tar -tvf /dev/st0         --> Reading data from tape
tar -xvf /dev/st0 /tmp/restore_test --> Restore data form tape
```

Not "z" parameter reason is that most of the existing tape drive support hardware compression.