



Tiger **BOX**

Tiger Box Firmware Version 2.5 Release Notes

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This document provides release information for Tiger Box firmware version 2.5. It discusses new features in this release as well as best practices, fixed and known issues.

What's New

Support for Linux Tiger Clients

Firmware version 2.5 adds support for Linux Tiger Clients. See full list of supported Linux distributions and kernels in “Tiger Box 2.5 Administration Guide”.

Data Replication and Tiering on Data Direct WOS

With version 2.5 you can enable Tiger Box's data replication and tiering on a Data Direct Web Object Scaler appliance.

Support for RAID 6 and RAID 0

When rebuilding a Tiger Box RAID or creating a new one, beside the default RAID 5, you can format the Tiger Box volume as RAID 6 (improved fault tolerance, allowing the RAID to operate with up to two failed drives) or RAID 0 (for maximum speed with decreased fault tolerance).

New Volume Options

Firmware version 2.5 introduces two options for volumes managed by Tiger Box - volumes can be shared to Tiger Clients or private for the appliance. The private state of volumes is introduced to allow performing some volume maintenance operations, while letting Tiger Clients access and work with the remaining shared volumes.

Additionally, the web interface introduces more storage views - in Shared Volumes page you can view the volumes that are shared to Tiger Clients, in Volumes page (accessed through Storage Management menu) you can view all volumes accessible to the appliance, and in Chassis page (accessed through Storage Management menu) you can view details about all chassis your Tiger Box manages.

Dropped Support for Tiger Clients Running Mac OS X Snow Leopard 32-bit

Version 2.5 drops the support for Tiger Clients running 32-bit Mac OS X Snow Leopard/Snow Leopard Server.

Fixed Known Issues in Version 2.5

Enabling projectStore Support on Smart Storage Pool

With version 2.5 you can enable support for projectStore/projectStore PRO when smart storage pooling is enabled on the appliance.

Viewing the Number of Connected Clients after Enabling Smart Storage Pooling

With version 2.5, you can view the correct number of Tiger Clients connected to the storage in the Volume tile of the pool.

Upgrading to Software Version 2.5

Software version 2.5 is compatible with Tiger Box hardware model 1.0 apart from connecting expansion chassis. To upgrade your Tiger Box network to software version 2.5 you must first install the update on the appliance and after that download and install the updated Tiger Client software on each Tiger Client computer.

To upgrade the software on the appliance you should request a remote desktop assistance from the Tiger Technology support team. Once the support team performs the upgrade using TeamViewer, the web interface of the appliance provides the updated list with Tiger Client software and you can upgrade all Tiger Client computers. On Mac OS X, you should first uninstall the previous version of the Tiger Client software and after that perform a clean installation. On Windows, you can upgrade the Tiger Client software without uninstalling the previous version, following the steps below.

To upgrade Tiger Client software to version 2.5 (Windows):

- 1.** In a web browser, type the IP address of the appliance.
- 2.** Press Enter.
The web interface of Tiger Box loads.
- 3.** Find the Tiger Client installation file for your operating system and click Download.
- 4.** When the installation file downloads to your computer, double-click it to start the installation.
- 5.** Follow the on-screen instructions and when prompted, restart your computer.
The Tiger Box icon appears in the Menu Bar/System Tray of your computer. The setup program preserves your list of Tiger Box appliances.

Best Practices

Granting Full Control to the System Account

In Windows, the built-in System account, used by the operating system and by services, by default has Full Control to all files on an NTFS volume. To provide for the normal operation of Tiger Box, it is advisable not to change the Full Control permissions of this account.

For details about displaying the System account when setting permissions and granting Full Control to it, refer to your Windows documentation.

Setting Up the SAN Policy on Windows Tiger Clients

By default, on computers running Windows Vista and above all shared disks visible to the computer are delivered as offline and read-only. You can bring these disks to online mode in Disk Management, still, there's a possibility on the next boot of the system the disks to be offline again. To change this behaviour, you should make sure that the SAN policy of the operating system is set to "Online All". To view and set the SAN policy of your computer you can use diskpart.exe command-line utility that is stored in the system drive of your computer.

To view and change the SAN policy of your computer:

1. Run command prompt as administrator.
2. In command prompt, start diskpart utility by typing:
diskpart
3. To view the current SAN policy, type this followed by return:
SAN
The utility displays one of the following:
 - Offline Shared - all newly discovered disks that do not reside on a shared bus are brought online and made read-write.
 - Offline - all newly discovered disks remain offline and read-only.
 - Online All - all newly discovered disks are brought online and made read-write.
4. Do one of the following:
 - If the SAN policy of your computer is "Online All", exit diskpart utility and command prompt.
 - If the SAN policy of your computer is not "Online All", proceed with the steps below.
5. Run command prompt as administrator.
6. In command prompt, start diskpart utility by typing:
diskpart

7. Execute the following:

```
san policy=OnlineAll
```

Using Identical Time and Date Settings

It is advisable to use identical settings for time and date on all computers on your Tiger Box network (the storage server and all client computers). Using different time and date settings may hamper communication with the storage server and the Traffic and Events reports may display incorrect information.

Migrating Replicated Files from One Replication Target to Another

While the Replication & Tiering mechanism of Tiger Box doesn't restrict you about changing the replication target, to avoid problems, you should set a new replication target with caution and after careful planning. If you need to set a new replication target to which files to be copied, you should keep in mind that all already replicated files will be inaccessible from the new replication target. Additionally, offline files (replicated files that have a copy only on the replication target) cannot be retrieved unless they have a counterpart on the new replication target.

When changing the replication target of your shared storage, it is recommended to migrate all already replicated data from the previous replication target to the new one. The safest workflow to do this is to let the Replication & Tiering mechanism replicate it again on the new replication target. For the purpose, you have to make sure that:

- all already replicated files are available on the shared storage (note that lack of free space on your shared storage may hamper the process).
- the status of all already replicated files is not “replicated” but “normal” as the Replication and Tiering mechanism will skip files on the shared storage that are with “replicated” status and will not copy them to the new replication target.

You can achieve this following these steps:

1. To ensure that each replicated file has an offline counterpart on the shared volume(s), in the drop-down box of the Tiger Browser, select a volume with enabled replication and then click Rescan Volume.
2. Repeat the above step for each volume on which replication is enabled.
3. In the left pane of the Tiger Browser, select the root of the volume and in the right pane select a folder and click Restore.

Note: *You have to manually select all offline files in the root of the volume and click Restore.*

4. Repeat the above step for each folder on each volume with enabled replication in order to restore all replicated files to their original locations.

5. In the Replication & Tiering page of the web UI, specify a new replication target.
6. In the Replication Options dialog, select “Do not replicate” and leave the Exceptions list empty.
7. In the left pane of the Tiger Browser, select the root of the volume and in the right pane select a folder and click Make Offline, to revert all files from “Replicated” status to “Normal” status.

Note: *You have to manually select all restored file in the root of the volume and click Make Offline to revert their status to "Normal".*

Important: *Clicking Make Offline transfers the status of replicated files to "normal" only if the Replication & Tiering mechanism detects that the selected files don't have copies on the replication target. If you issue the command for a file with "replicated" status, which actually has a copy on the replication target, the command will replace the file on the shared storage with a stub file pointing to its copy on the replication target.*

8. Repeat the above step for each folder on each volume with enabled replication.
9. Set replication policy parameters for the new replication target to let the Replication & Tiering mechanism to copy all files.

Disabling Mac OS X Time Machine for Shared Volumes

It is highly advisable to exclude all volumes shared by Tiger Box from the list of locations Time Machine is set to back up on your Mac OS X T-Client. Keeping this feature turned on for shared volumes may hamper performance.

To exclude a shared volume from Time Machine's backup:

1. In Time Machine preferences, click the Options button.
2. In the sheet with locations, select a shared Tiger Box volume and click the "-" button.
3. Repeat the above step for each shared Tiger Box volume.
4. Click Save.

Calculating Folder Size (Mac OS X)

Use the Calculate Sizes option, available in List view of the Finder, to calculate sizes per folder and per window. Activate this option only for folders on your local disks. Do not enable it for folders on the shared storage volumes, as this will temporarily slow down performance. If you enable this option on a shared volume, network workstations that see the volume will be unable to work on it.

For details about managing the “Calculate Sizes” option, refer to your Mac OS X® documentation.

File Systems Behaviour and Files Compatibility

The three operating systems (Windows, Mac OS X and Linux) on which you can install the Tiger Client software differ in the way they manage files. On Windows, files can have many streams, in

contrast to Mac OS X (only 2 streams - data fork and resource fork), and Linux (only data stream). In addition, files created by Mac OS X also have extended attributes (such as the Finder Info, for example) that are not available on the other two platforms.

These peculiarities of the file systems lead to partial loss of information when transferring a file created on one platform through a machine running on another platform.

For instance, when on Mac OS X you copy a file with 50 streams created by Windows, all file streams' information is lost, except the information of the data stream. The result will be the same when a Linux computer copies a 50-stream Windows file. A Mac OS X file copied by Linux will also lose its resource fork's info.

Streams' information is not lost when copying Mac OS X or Linux files by a Windows computer, but in this case a Mac OS X file will lose the extended attributes information.

There is another problem with files sharing common file format. For example, a movie file created with Final Cut Pro on Mac OS X is playable by QuickTime. If a Windows workstation copies this file, it will not recognize it as QuickTime-playable until adding the *.mov extension to it.

See also “Final Cut Pro Project Names on the Shared Volumes” on page 7.

Final Cut Pro Project Names on the Shared Volumes

It is advisable that the Final Cut Pro projects you create on the shared volumes have names that do not exceed 31 symbols.

New Known Issues

Delays When Copying/Moving Multitude of Files in the Finder

Attempting to simultaneously move/copy through the Finder of a Tiger Client running Mac OS X multitude of files (more than 1000) out of a folder with thousands of objects, may lead to a significant delay before the actual process starts.

A possible workaround to this problem is to perform the operation in Terminal or from a Tiger Client running other platform.

Mounting a Storage Pool on Tiger Client in Domain Environment

In case you have deployed your Tiger Box in Active Directory domain and smart storage pooling is enabled, Windows Tiger Clients may fail to mount the storage pool unless the Everyone group has Read access to the virtual volume.

Downloading projectStore PRO on Mac OS X Mavericks Tiger Client from the Web UI

Mac OS X Mavericks Tiger Clients may fail to download and run the installation of projectStore PRO from the web UI of Tiger Box. Contact Tiger Technology support for assistance.

Incorrect Connection Status on Tiger Clients Running Mac OS X

The Tiger Client software on Mac OS X may sometimes fail to correctly display the connection status to the Tiger Box appliance. For example, the Settings dialog of the Tiger Client menulet may display that the Tiger Box is online, when it is actually offline. Another example is when the Tiger Client loses its Fibre Channel connection to the appliance and mounts the volume(s) over the LAN, while the volume icons in the Finder and on the desktop are not of volumes mounted over the Ethernet. Additionally, in this case Tiger Clients running Mac OS X may fail to disconnect from the volume(s).

Allowing `tbx.app` and `vpd` During Tiger Client Installation on Mac OS X

During installation of Tiger Client on Mac OS X, even if you specify that `tbx.app` and the `vpd` daemon must be added as firewall exceptions, you should manually allow them in the firewall database of your computer. Note that as long as the firewall of your computer is turned on, you will have to add them to the firewall database after each reboot of the computer.

Newly Created Volumes Missing from Volumes Page

After creating a new volume in the web UI of Tiger Box, it may not appear in the list of volumes that Tiger Box manages. To display the newly created volume in the web UI and be able to share it or make it Private, and most of all to prevent data corruption on it, you should restart the appliance.

Disconnected Tiger Clients After Changing the Time and Date Settings

Changing the time and date settings of either Tiger Box or any of the Tiger Clients to a value that is different than the one used on other computers may hamper the communication on your Tiger Box network and cause unexpected disconnection from the storage server. If you set a Tiger Client to use different time and date settings, it may unexpectedly disconnect from the storage server. If you set your Tiger Box appliance to use different time and date settings, all Tiger Clients may unexpectedly disconnect from the storage server.

Connect to Tiger Box from Mac OS X Without DNS Server

If there isn't a DNS server on the network through which a Mac OS X Tiger Client communicates with Tiger Box, the Tiger Client computer will fail to connect to the storage server and mount its volumes.

A workaround to the problem is to add an entry about each storage server you want to connect to in the hosts file on the Mac OS X Tiger Client:

1. In Terminal, type:

```
sudo nano /etc/hosts
```
2. At the end of the hosts file, add a new line for each storage server you want to connect to, which contains the following:

```
[IP address of the storage server] [name of the storage server]
```

For example, if your Tiger Box has IP address 172.16.1.1 and the name in the web UI is Tbox1, in the hosts file enter the following line:

```
172.16.1.1 Tbox1
```
3. Press CTRL+X, then Y and then Enter to exit the nano editor and save the changes.
4. Restart the Tiger Client.

Applying New Network Environment Settings

It is possible, when changing the settings for network environment (domain or workgroup) of your appliance, after clicking the Apply button in the Settings page an error to be displayed, when in fact the changes have been applied. It is advisable to refresh the web UI of Tiger Box in order to verify whether the new settings have been applied.

Renaming the Appliance

Should you rename your Tiger Box appliance after it has been added to an Active Directory domain, Tiger Clients may fail to browse the volumes it shares even if they re-add it to their storage servers list. It is advisable before renaming the appliance, to set the network environment to workgroup and manually delete the records about the appliance from the domain controller. It is advisable to do this each time you switch the network environment of your Tiger Box from domain to workgroup.

Moving Replicated or Offline Files/Folders

If you move a replicated or offline file/folder from its original location to a folder that is not subject to replication on the shared storage, this folder will also appear on the replication volume, but will contain just the files/folders that are subject to replication. For example, if you move an offline file "Report" from its original folder "April" to folder "Drafts" that is not subject to replication and

contains other files as well, the replication and tiering mechanism of Tiger Box will create on the replication volume a folder “Drafts”, but containing just the file “Report”.

Errors When Entering/Exiting Maintenance Mode

When entering/exiting Maintenance mode, the web UI of Tiger Box may display errors, when in fact the operation has succeeded. To verify that you have entered/exited Maintenance mode, refresh the browser. If on exiting Maintenance mode the error persists, restart the storage server.

Unresolved Known Issues

Emptying the Trash of a Mac OS X Client

When Tiger Box is deployed in an Active Directory domain and a Mac OS X domain user moves a file from the Tiger Box storage to the Trash of the client computer, that user may fail to permanently delete the file.

You can permanently delete this file either in Terminal on the Mac OS X computer, or from a Windows client.

To permanently delete the file from Terminal on Mac OS X:

1. On the Mac OS X client computer, log on as a user with Full Control on the Tiger Box volume.
2. Start Terminal and navigate to the Tiger Box volume.

Important: *In the volume, navigate to the **.Trashes** folder and in it find the folder that has the same name as the ID of the Mac OS X user whose Trash you want to empty.*

3. Important: It is important to double check that you are in the correct directory. You can use the **pwd** command to view the full path and verify the correct directory.

4. In Terminal type this followed by return:

Important: *This command deletes the whole content of the directory you have navigated to in Terminal.*

```
rm -rf *
```

The whole contents of the Trash of the user is permanently deleted.

To permanently delete the file from Windows:

1. On a Windows client computer, log on as a user with Full Control on the Tiger Box volume.
2. On the Tiger Box volume, browse to the **.Trashes** folder.

Note: *You may have to unhide the hidden folders on the Tiger Box volume to display the “.Trashes” folder.*

3. In the **.Trashes** folder, find the folder that has the same name as the ID of the Mac OS X user whose Trash you want to empty.
4. Delete the file from the folder.

Executing Operation on the Tiger Box Volume from Terminal

When Tiger Box is deployed in an Active Directory domain, you won't be able to execute certain operations on the Tiger Box volume(s) from the Terminal of a Mac OS X client computer even if you have logged on as a user that has Full Control. These security mapping issues are not valid for operations performed in the file browser.

Restored Files Remain Gray on Mac OS X Mountain Lion

When on Mac OS X Mountain Lion you restore a file from the Replication volume on the Tiger Box volume, this file remains gray in the Finder until you relaunch it.

Detecting Newly Created Files in the Root of the Volume from Mac OS X Mountain Lion

A Mac OS X Mountain Lion computer may fail to detect a file or folder created by another client computer in the root of a Tiger Box volume. A workaround to this problem is to relaunch the Finder.

Disconnecting from a Shared Volume While Browsing it in Terminal on Mac OS X/Linux

On Mac OS X and Linux, if you attempt to disconnect from a Tiger Box appliance while browsing its volume(s) in the Terminal, the volume(s) might remain mounted on the Desktop and in the Finder. To be able to disconnect the Tiger Client, in Terminal change the currently browsed directory to one that is not on the shared storage.

No Authorization Required When Removing Tiger Box from the Domain

If you decide to switch your Tiger Box from domain to workgroup environment, the domain controller does not require that you authenticate yourself as a user authorized to remove computers from the domain.

