TOSHIBA

TOSHIBA Drive Common Tool (TSBDRV) Installation Guide (3.13)

Toshiba Electronic Devices & Storage Corporation (TDSC)

History

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0.4	May 2016	Bug fix release	
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0.9	June 2016	Bug fix release	
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	,	Section 1.2 Supported Operating system	
		Section 2.1 Generic system requisites	
		Section 2.2 Installation Files	
		Note in Section 2.4 Installation on Linux	
		Section 2.4.1 Linux Folder Tree	
3.2	June 2021	Updated Section 3 Open Source Software	
		Section 2.2 Installation Files	
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3.4	Jan 2022	Updated copyright information	
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		Updated section 2.4.3 with note	

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1 Introduction

This document describes the method for installing TOSHIBA Drive Common Tool (TSBDRV) which provides the mechanism to manage TOSHIBA drives.

1.1 Software configuration

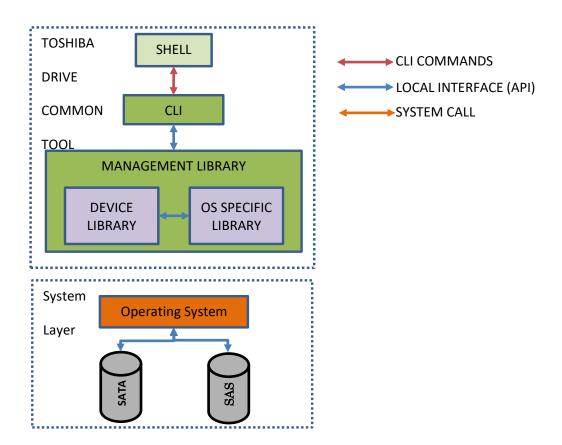


Figure 1: Host software for managing TOSHIBA drives

1.2 Supported Operating Systems

Operating Systems supported by the TOSHIBA TSBDRV tool are as follows:

CPU Architecture OS		Version/Flavors	
x64		Windows® Server 2008 R2	
	Windows® 64-bit	Windows® Server 2012 R2	
		Windows® Server 2016	
	Williadws 64 bit	Windows® 8.1	
		Windows® 10	
		Windows® 11	
		RHEL® 6.0 and above	
	Linux® 64-bit	SLES® 12 SP1 and above	
	Liliux 64-bit	Ubuntu® 14.04 and above	
		CentOS 7 and 8	
	FreeBSD 64-bit	FreeBSD 12.2	
	VMware ESXI 64-bit	VMware ESXI 7.0	
AArch64 Linux® 64-bit CentOS 7.0		CentOS 7.0	

2 TOSHIBA TSBDRV Software Setup

TSBDRV Software Setup can be created using following packages

- 1. Installation Files
- 2. Zip Files
- 3. Standalone Files

2.1 Generic system requisites

The following generic system requirements need to be met for installation of TOSHIBA drive common tool.

No.	requirements	Details
1	Operating System	See section <u>1.2</u>
2	CPU Architecture	x64/aarch64
3	RAM Size	4GB
4	User Privileges	Administrator/Super-user

Table 1: System requirements

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2.2 Installation Files

Installer files for supported platforms are named as follows

1. Linux 64-bit Installer: install-lin-toshiba-CC_rel-tsbdrv-MM.mm.bbbb.ARCH.bin

The file names are in the following format:

install-<platform>-toshiba-<CC>_rel-tsbdrv-<MM>.<mm>.<bbbb>.<ARCH>.<ext>

<platform> : 'lin' for Linux

<CC> : 2 digits Customization Code

<MM> : 2 digits Major Version

<mm> : 2 digits minor version

<bbbb> : 4 digits build number

<ARCH> : CPU architecture

x64: Intel 64-bit CPU Architecture

aarch64: ARM 64-bit CPU Architecture

<ext> : File extension i.e. bin for Linux platform

2.3 Installation on Linux

1. Start the Installation on a command prompt with Administrative privileges (Super User).

Command

#./install-lin-toshiba-01 rel-tsbdrv-13.05a.7850.x64.bin

Output

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(A) ccept / (D) ecline

- 2. Accept the license agreement by entering "A" and press 'Enter'.
- 3. During installation, installer will prompt for TSBDRV REST Service configuration confirmation for RHEL7, Ubuntu14.2 and SLES12SP1 onwards.

For older Linux distributions, TSBDRV REST service will not be configured and installer will automatically go to step 4.b.

Output

Do you want to install tsbdrv REST service [y/n] (default Y)?

a. If you don't want to configure service on the system, then type N and press 'Enter'.

Output

Do you want to install tsbdrv REST service [y/n] (default Y)? N

b. If you don't want to configure service on the system, then type N and press 'Enter'.

Output

Do you want to install tsbdrv REST service [y/n] (default Y)? Y

4. If TSBDRVD configuration is selected as 'Yes' then, installer will prompt for TSBDRV REST Service IP/Port/SSL Certificate configurations.

- 5. If TSBDRVD configuration is selected as 'Yes' then, installer will also prompt for firewall exception configuration if following firewalls are installed and running.
 - a. Firewalld

```
Output Do you want to add port '59999' to 'firewalld' firewall exception (y/n)?
```

b. UFW on Ubuntu

```
Output Do you want to add port '59999' to 'ufw' firewall exception (y/n)?
```

c. SuSEfirewall2

```
Output

Do you want to add port '59999' to 'SuSEfirewall2' firewall exception (y/n)?
```

Type **n** if you don't want to add port to firewall exception.

Type **y** if you want to add port to firewall exception.

If selected **y**, then port 59999 will be added firewall exception for firewalld and ufw by installer.

However, for SuSEfirewall2, installer cannot add firewall exception and hence following message will be displayed on console.

Output

Installer cannot configure port exception for SuSEfirewall2. Please add port '59999' to SuSEfirewall2 configuration file and restart the firewall.

Note: Configuration FW_SERVICES_EXT_TCP in file '/etc/sysconfig/SuSEfirewall2'.

e.g. FW_SERVICES_EXT_TCP="59999"

- 6. After successful installation, following message will be displayed on console
 - c. For RHEL7, Ubuntu14.2 and SLES12SP1 onwards (if TSBDRV REST service was configured).

Output

Service tsbdrvd started.

tsbdrv installed successfully.

d. For older Linux or for RHEL7, Ubuntu14.2 and SLES12SP1 onwards (if TSBDRV REST service was not configured).

Output

tsbdrv installed successfully.

Note

- 1. From TSBDRV 5.0 onwards, TSBDRV REST Service is installed and started during installation for RHEL7, Ubuntu14.2 and SLES12SP1 onwards.
- 2. TSBDRVD REST Service configuration/installation/start-up may fail in few cases (due to firewall restriction or network constraints).
- 3. If installation fails due to service failure on (standalone) systems then skip TSBDRV REST service installation. See point 2.a above in current section.
- 4. It is highly recommended to not change the port configuration during installation.
- 5. If you wish to change SSL certificates (and respective private key) then use working Key-Certificate pair only.
- 6. Installer can add firewall exception for firewalld, ufw and SuSEfirewall2 firewalls only.
- 7. TSBDRV REST Services are not supported for AArch64, hence step 3 onwards are not applicable.

2.3.1 Linux Folder Tree Structure

This folder tree structure post installation is shown below.

Folder Name	Description	
/opt/	Folder location where application is installed	
/opt/toshiba/	Root node of folder tree structure is named as "toshiba"	
/opt/toshiba/tsbdrv/	Application folder for tsbdrv specific files	
/opt/toshiba/tsbdrv/bin/	This folder contains the Linux Toshiba TSBDRV	
	executable binary	
/opt/toshiba/tsbdrv/lib64/	This folder contains the Linux Toshiba TSBDRV library	
/opt/toshiba/tsbdrv/scripts/	This folder contains python based wrapper scripts.	
/opt/toshiba/tsbdrv/etc/	This folder contains TSBDRVD REST service configuration	
	files.	
	This folder is not created for AArch64.	
/opt/toshiba/tsbdrv/etc/ssl/	This folder contains default SSL key/certificate pair for	
	TSBDRVD REST service HTTP communication.	
	This folder is not created for AArch64.	
/var/log/toshiba/tsbdrv/	Folder location where command logs will be placed.	
/var/lock/toshiba/tsbdrv/	Folder location where lock file will be created.	

2.4 Setup using Zip Files

Zip files for supported platforms are named as follows

- 1. Linux 64-bit tarball: lin-toshiba-CC rel-tsbdrv-MM.mm.bbbb.x64.tgz
- 2. Windows 64-bit zip file: win-toshiba-CC_rel-tsbdrv- MM.mm.bbbb.x64.zip
- 3. VMware ESXI 64-bit tarball: vmware_esxi7-toshiba-CC_rel-tsbdrv-MM.mm.bbbbb.x64.tgz

2.4.1 Untar and Execute on Linux

Steps to follow in command prompt with Administrative privileges (Super User)

- Step 1: Copy tarball to directory
- Step 2: Untar the file using 'tar' or suitable command.
 - E.g: \$ tar xvzf lin-toshiba-CC_rel-tsbdrv- MM.mm.bbbb.x64.tgz -touch
- Step 3: Change directory to 'tsbdrv'

\$cd tsbdrv

Step 4: Export dynamic library load path

\$export LD_LIBRARY_PATH=\$PWD

Step 5: Execute 'tsbdrv'

\$./tsbdrv version

2.4.1.1 Folder Structure

Folder Name	Description	
<extracted path="">/tsbdrv/</extracted>	Application folder for tsbdrv specific files	
<extracted path="">/tsbdrv/scripts/</extracted>	This folder contains python based wrapper scripts.	
/var/log/toshiba/tsbdrv/	Folder location where command logs will be placed.	
/var/lock/toshiba/tsbdrv/	Folder location where lock file will be created.	

2.4.2 Unzip and Execute on Windows

Steps to follow

Step 1: Copy Zip package to directory

Step 2: Unzip the file using any zip file software

Step 3: Open command prompt as administrator.

Step 4: Change directory to 'TSBDRV' in unzipped path.

\$cd TSBDRV

Step 5: Execute 'tsbdrv'.

\$.\tsbdrv.exe version

2.4.2.1 Folder Structure

Folder Name	Description	
<extracted path="">\TSBDRV</extracted>	Folder location where application and	
	libraries are installed	
<extracted path="">\TSBDRV</extracted>	Folder location where command logs	
	will be placed.	
%PROGRAMDATA%\TOSHIBA\TSBDRV\lock	Folder location where lock file will be	
	created.	

2.4.3 Untar and Execute on VMware ESXI (Linux)

Steps to follow in command prompt with Administrative privileges (Super User)

Step 1: Copy tarball to directory (Note: It is recommended to use the directory under mounted volume path.)

Step 2: Untar the file using 'tar' or suitable command.

E.g: \$ tar xvzf vmware_esxi7-toshiba-CC_rel-tsbdrv-MM.mm.bbbbb.x64.tgz -touch

Step 3: Change directory to 'tsbdrv'

\$cd tsbdrv

Step 4: Export dynamic library load path

\$export LD_LIBRARY_PATH=\$PWD

Step 5: Execute 'tsbdrv'

\$./tsbdrv version

2.4.3.1 Folder Structure

Folder Name	Description	
<extracted path="">/tsbdrv/</extracted>	Application folder for tsbdrv specific files.	
/var/log/toshiba/tsbdrv/	Folder location where command logs will be placed.	
/var/lock/toshiba/tsbdrv/	Folder location where lock file will be created.	

2.5 Setup using Standalone Files

Files for supported platforms are named as follows

- 1. Linux 64-bit tarball: lin-toshiba-standalone-CUSTOMER_rel-tsbdrv- MM.mm.bbbb.x64.tgz
- 2. FreeBSD 64-bit tarball: freebsd-toshiba-standalone-01_rel-tsbdrv- MM.mm.bbbb.x64.tgz

2.5.1 Untar and Execute

Steps to follow in command prompt with Administrative privileges (Super User)

Step 1: Copy tarball to directory

Step 2: Untar the file using 'tar' command or suitable command.

E.g: tar xvf lin-toshiba-standalone-CUSTOMER rel-tsbdrv- MM.mm.bbbb.x64.tgz

Step 3: Change directory to 'tsbdrv'.

\$cd tsbdrv

Step 4: Execute 'tsbdrv'.

\$./tsbdrv version

2.5.1.1 Folder Structure

Folder Name	Description
<extracted path="">/tsbdrv/</extracted>	Application folder for tsbdrv specific files
/var/log/toshiba/tsbdrv/	Folder location where command logs will be placed.
/var/lock/toshiba/tsbdrv/	Folder location where lock file will be created.

2.6 Updating Software

2.6.1 Updating Software on Linux

2.6.1.1 Updating from 5.X to 6.X

Upgrade from TSBDRV-5.X to TSBDRV-6.X will not prompt for TSBDRV REST service configuration.

1. Start the Installation on a command prompt with Administrative privileges (Super-User).

Command
#./install-lin-toshiba-01_rel-tsbdrv-13.05a.7850.x64.bin
Output

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(A) ccept / (D) ecline

- 2. Accept the license agreement by entering "A".
- 3. After successful installation, following message will be displayed on console
 - a. For RHEL7, Ubuntu14.2 and SLES12SP1 onwards.

Output

Installer requires all the instances of tsbdrvd stopped! Stopping...

Service tsbdrvd started.

tsbdrv updated successfully.

b. For older Linux.

Output

tsbdrv updated successfully.



Once this tool is installed, it won't be updated with same tool having different Customization Code (CC). You have to uninstall existing tool first and then install the tool with different Customization Code (CC).

2.6.1.2 Updating from 4.2 and earlier

Upgrade from TSBDRV-4.x to TSBDRV-6.0 will work same as new installation.

See <u>Installation on Linux</u> for details.

2.7 Uninstalling the TOSHIBA TSBDRV Tool

2.7.1 Uninstalling tool from Linux

The TOSHIBA TSBDRV tool can be uninstalled by running the uninstall script from /opt/toshiba/tsbdrv/bin directory.

Command

/opt/toshiba/tsbdrv/bin/uninstall.sh

1. Output for RHEL7, Ubuntu14.2 and SLES12SP1 onwards (if TSBDRV REST service was configured during installation)

Output

tsbdrv will be removed from the system.

Are you sure to remove tsbdrv? [y/n] Y

Stopping tsbdrvd server:

tsbdrv removed from the system successfully.

[OK]

2. Output on older Linux or for RHEL7, Ubuntu14.2 and SLES12SP1 onwards (if TSBDRV REST service was not configured during installation)

Output

tsbdrv will be removed from the system. Are you sure to remove tsbdrv? [y/n] Y tsbdrv removed successfully from the system.



If TSBDRV REST Service was configured during installation then, same is stopped and removed during uninstall. Configuration removal window will appear on screen during uninstall.

3. Troubleshoot steps

3.1 Ubuntu 22.04 Keyboard Issue

After logging to Ubuntu 22.04 setup as 'root' user, sometimes user input via keyboard becomes unresponsive. To fix it, execute below command from terminal.

ibus restart

4. Open Source Software

TSBDRV includes following open source code:

OSS Name	OSS Version	OSS Website	OSS License
rapidJson	1.0.2	https://rapidjson.org/	MIT License
libarchive	3.4.2	https://www.libarchive.org/	Copyright by Tim Kientzle
cpprest	2.9.0	https://github.com/microsoft/cpprestsdk	MIT License
openssl	1.0.2u	https://www.openssl.org/	OpenSSL License Original SSLeay License

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