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Porady i recenzje.

How to fix bricked WD My Book World Edition White Light or install brand new disk?

2011-04-20

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Wersja w języku polskim jest [tutaj](#).

Problem

I bought brand new *WD Caviar Green* hard disks and put them into *My Book World Edition II White Light* case but... surprisingly it doesn't work or even start! Only top LED is blinking/flashing and MBWE doesn't appear in my network environment! Similar situation is with *WD My Book World Edition I White Light* or with my previous HDD that has stopped working.

How to recover or rebuild firmware of bricked *WD My Book World Edition White Light* or install/replace brand new hard disk(s)?

Also following questions will find here their answers:

- Which disk to buy for *WD My Book World Edition White Light*?
- How to increase/upgrade *WD My Book World Edition White Light* capacity to 3TB/4TB (**MBWE I**) or 6TB/8TB (**MBWE II**)?
- How to downgrade *WD My Book World Edition White Light* firmware version?
- How to clean personal data (completely erase to the factory defaults) *WD My Book World Edition White Light* in purpose of sale?

MBWE Blue Rings Note

This tutorial does not work with MBWE Blue Rings! It has different firmware which needs to be reverse-engineered to create similar solution. This solution can only serve as a clue how to do it.

Healthy NAS Upgrade Note

If you just want to upgrade your healthy MBWE II to 2x3TB HDDs or more, try this simplest community.wd.com solution. I haven't tested it but it sounds like you can also preserve your data.

What's going on?

If suddenly your MBWE has stopped working, firstly decode your MBWE situation by LEDs state/action and refer to the [My Book World Edition User Manual](#) on page 10 (LED Indicators). Maybe nothing serious has happened there but only something unusual.

Anyway, MBWE boots from NAS OS written on disk, so you can't start MBWE:

- with brand new clean disk(s) or
- when your current disk(s) has broken boot partition or broken master boot record (MBR).

There is no user procedure provided by Western Digital to repair MBWE or start brand new disks. You can only return complete MBWE (with disk(s)) to Western Digital to get a new one, if you have void warranty (for warranty conditions see: support.wdc.com).

I couldn't agree with this, so I decided to make it on my own and here it is...

What's this?

This is linux bash script solution to restore MBWE White Light (install firmware once again) with a **FACTORY STATE** and **CLEAN DISK**:

- **Works with both MBWE White Light (I and II) with any size of disk (even 4TB or 2x4TB)!** It fully supports only *WD Caviar* disks! It means that you can use other vendor disk like *Samsung* or *Maxtor* (this solution is prepared for this) but forget then about: updating firmware, replacing disk, reformatting or changing RAID mode. Full support of other vendors requires wide firmware hack against this operations except firmware update which cannot be hacked (new firmware can simply overwrite these hacks). If you are interested in hacked firmware, ask in comment – I can do this but for a fee. Anyway, I strongly recommend to use WD disks only – it's free and safe.
Be aware also that not all WD Caviar Green drives seem to be MBWE compatible! (see WARNING below for details).



- **Designed to auto download & install always the latest MBWE firmware directly from wdc.com** ([manually available here](#) and [fw revision info is here](#)). But you can also install any firmware since & including [ver. 01.02.06](#), that I've tested on 2011-04-20. If you encounter any problem with the latest version, just pick [ver. 01.02.06](#) ([mirror](#)) and use it in step 3 of procedure below, then upgrade to the latest firmware using native MBWE management interface any time you want.
- **Full install takes less than 1 minute!** excluding firmware download.
- **In MBWE II only 1 disk needs to be prepared!** – the second one (clean) will be adopted by MBWE itself.
- **Config with only 4 lines to adjust:** disk label, serial number, model type, MAC address.
- **1 script to fire!** and little wizard will guide you.

1st WARNING !!!

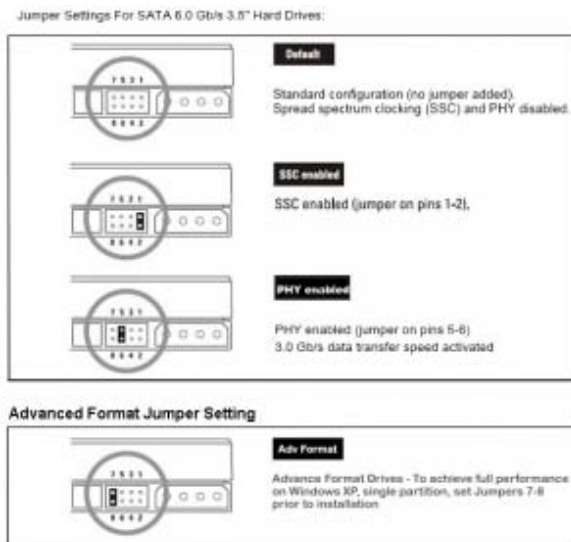
This solution **WILL ERASE ALL YOUR DISK DATA**, if you connect your old disk!

If you want to rescue data on bricked MBWE, contact Western Digital on wdc.custhelp.com or go to [data recovery guide](#) to make your data copy before this operation (4th partition is *DataVolume* partition) and move them back to your „new” MBWE. This should be possible if you've got MBWE I or MBWE II with RAID 1 (Mirrored) or JBOD array mode. In other case, you shouldn't do anything but call Western Digital if you care your data and you don't know what to do.

Don't buy new WD Caviar Green disk without being sure this model works with your MBWE!

As Western Digital online customer support [says](#), **Advanced Format Drives are not compatible with MBWE** but they don't say which one particularly is advanced/incompatible (more about [Advanced Format Technology](#)). Particular [WD Caviar Green disk models](#) with MBWE compatibility statuses are (for specs go to wdc.com or [Specs Sheet](#)):

- **EADS, EAVS, EACS** (SATA II 3Gb/s) are definitely compatible as WD says.
- **EARS** (SATA II 3Gb/s) are compatible as tested on my own and by the community.



- **EARX** (SATA III 6Gb/s) compatibility varies as community report success (3 cases) as well as failures (2 cases). WD support says it may or may not work due to relatively older MBWE SATA II interface. If you've encountered any issues, try different jumper settings as a last resort (see pic).
- **EZRX** (SATA III 6Gb/s) compatibility varies – some users succeeded ([here is the proof of 2x3TB WD30EZRX](#) and [2x4TB WD40EZRX](#)) and some report failure. There is a suspicion that revision **R/N B3D** (labeled on the bottom, right under WD logo) is not compatible with EZRX ([report](#)) but results also varies.
- **EADX**, **EZRSDL** (SATA III 6Gb/s) compatibility unknown yet.
- **AACS** (SATA II 3Gb/s) are compatible as reported by community.

Sometimes connecting HDD directly to the computer SATA controller instead of using external SATA adapters can help (see Troubleshooting below).

Even though some of the users report success with **WD Caviar Black** or **Red**, I don't recommend them due to higher work temperature than **WD Caviar Green**. Bear in mind, that MBWE is passively cooled and excessive temp. can shorten HDD life or even damage MBWE electronics.

NOTICE: If you buy new disks to your MBWE II, it would be better (if possible) to take both disks of the same type and the same part (production series) due to RAID performance and conformance. Therefore, you should buy both disks from the same retailer at once (at the same time).

Quick How-To

2nd WARNING !!!

You should never ever run this script on a production environment!

I strongly recommend to unplug any attached hard disks from the computer you are going to use to run this script, except the HDD you want to install firmware to. This way you're avoiding any mistakes that can **unrecoverably destroy your data**.

1. Prerequisites

If your HDD contains any data or structure (isn't brand new), **you must wipe it out beforehand** (unallocated space = no partitions, unformatted – just raw). This can be done using *Computer Manager > Disk Management* under Windows or using *Disk Utility* under Ubuntu, but some people reported they had finally succeeded by wiping HDD with *GParted (Gnome Partition Editor)*.

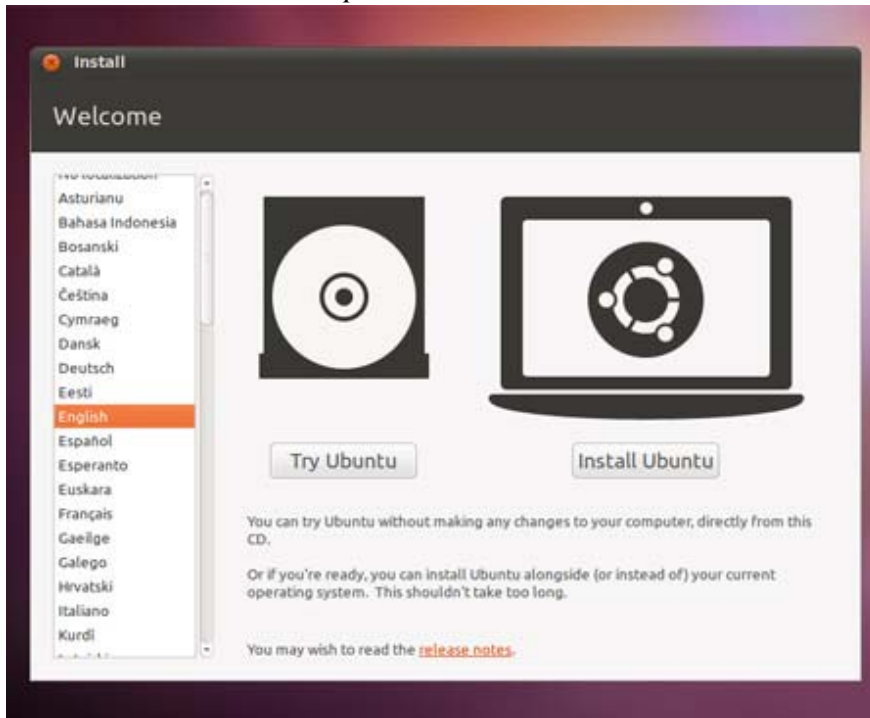
You should also check your HDD against bad sectors because MBWE firmware is based on some absolute blocks and thus they cannot be bad or mapped as bad.

2. 1 Boot the latest **Ubuntu**

from optical drive or flash/pen/USB drive (USB is far faster than optical), or direct HDD. How-To on ubuntu.com in [Download Ubuntu](#) section. Choose **Try Ubuntu** (it will boot directly without any changes on your system drive). **NOTICE:**

*If you have problems with other linux distributions/versions simply use **Ubuntu 12.04.3 LTS**, because I tested it (screenshots below were taken long time ago on Ubuntu 10.10).*

DO NOT USE ANY VIRTUAL MACHINE – it can cause many additional issues and mostly does not work in this low level operation.



3. 2 Wire your computer

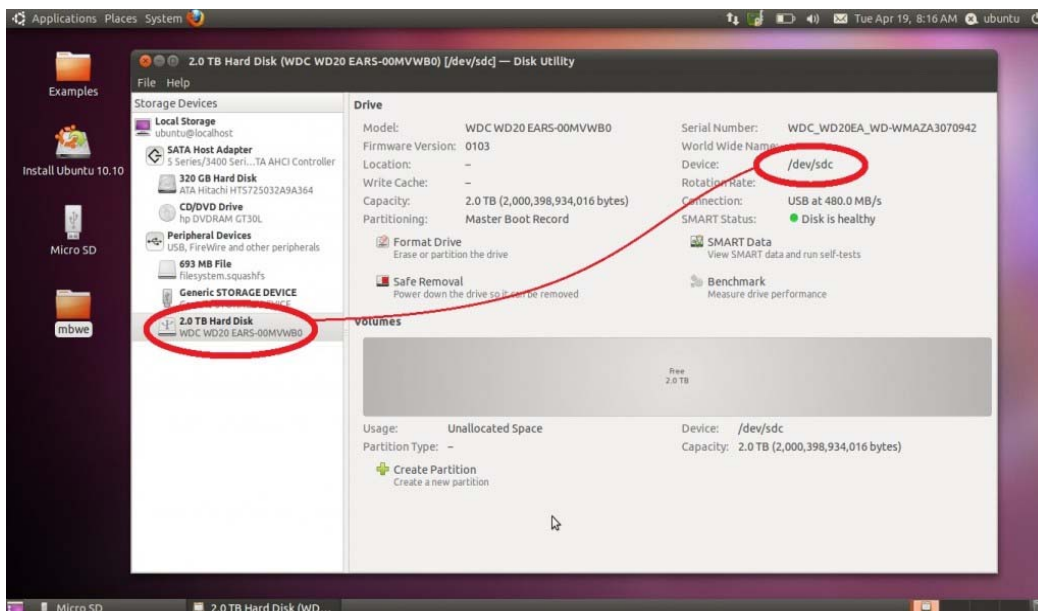
to the Internet (wireless connection is often not possible due to lack of many Ubuntu CD WiFi drivers and it's not our goal to play with it here).

4. 3 Extract [mbwe.tar.gz](#)

(right click and choose *Extract Here*) on the **Desktop** (and all files should be placed in folder **mbwe** – if not, correct this). If you predownloaded firmware image manually (on [wdc.com](#) or [mirror](#)), place it in **mbwe** folder and rename it to **fw.img**

5. 4 Connect your hard disk

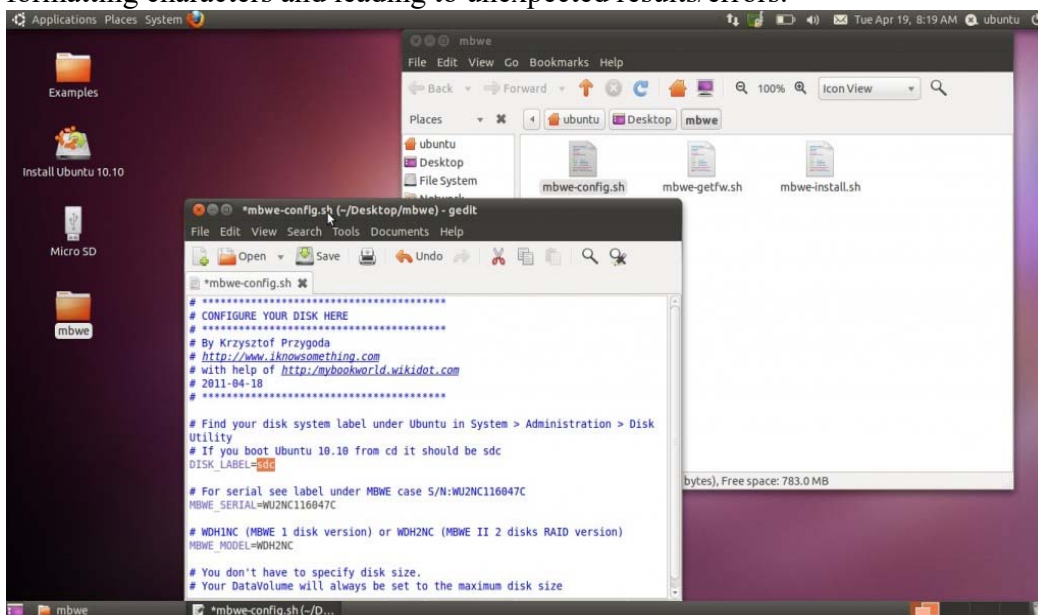
directly to the computer [SATA controller](#) (if possible) or alternatively using [SATA-to-USB](#) adapter (or any other hotplug way, e.g. [FireWire](#), [eSATA](#)). Find your disk label using *Disk Utility* (go to the top bar menu *System > Administration > Disk Utility*) as shown on the picture below (here it is **sdc** but yours can be different).



6. 5 Edit *mbwe-config.sh* file

in folder *mbwe* (right click on the file, choose *Open in another application* and select *gedit* editor) and type your HDD and MBWE parameters (*DISK_LABEL*, *MBWE_TYPE*, *MBWE_SERIAL* and *MAC_ADDRS*) according to comments. Save file (CTRL+S) and close *gedit*.

NOTICE: If you really want to do this step on your own (some people are stubborn) then **DO NOT EVER USE word processor** like *Word* nor *Wordpad* to edit *.sh files – it must be a plain text (txt file) *Notepad* like editor (here *Gedit*). Otherwise, you might break these files leaving hidden formatting characters and leading to unexpected results/errors.

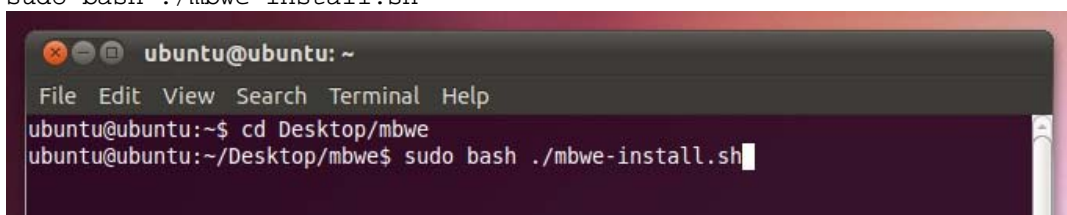


7. 6 Open *Terminal*

(CTRL+ALT+T) and type:

```
cd Desktop/mbwe
```

```
sudo bash ./mbwe-install.sh
```



8. 7 Listen carefully

what is *Terminal* asking you and obey its commands.


```

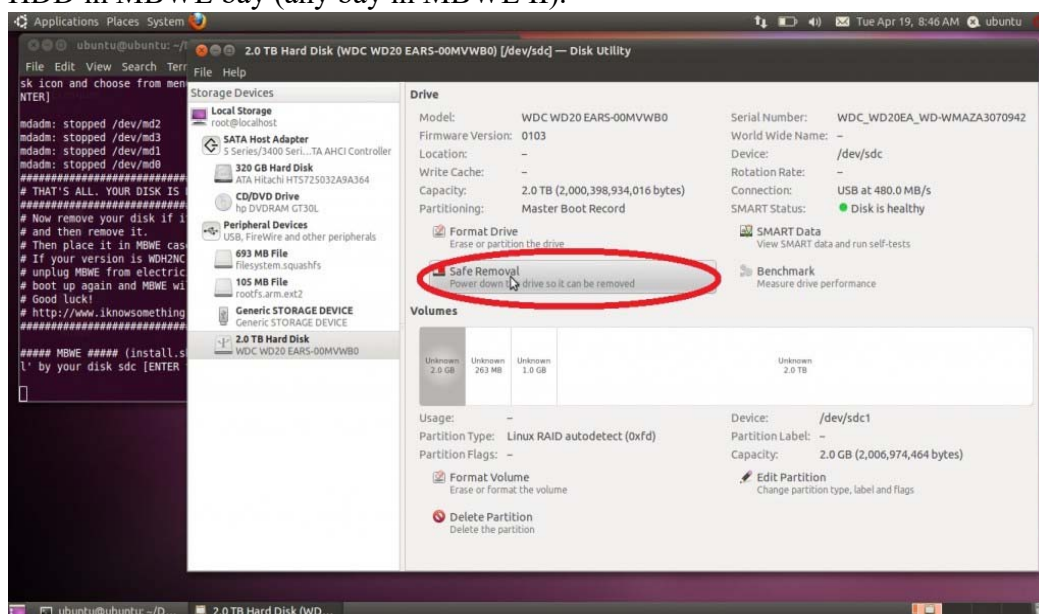
ubuntu@ubuntu: ~/Desktop/mbwe
File Edit View Search Terminal Help

#####
# WARNING!!! READ CAREFULLY!!! DATA LOSS POSSIBLITY!!!
#####
# This script will ### ERASE ALL DATA ### on disk ### sdc ###
# specified by you in mbwe-config.sh file and install FRESH MBWE firmware !!!
# Your current disk config is:
#
# DISK_LABEL=sdc
# MBWE_MODEL=WDH2NC
# MBWE_SERIAL=WU2NC115038C
#
# To be shure it is your disk go to System > Administration > Disk Utility
# identify it and edit DISK_LABEL=sdc in mbwe-config.sh.
# !!! ALWAYS REMEMBER 2 IMPÖRTANT POINTS !!!
# 1) If you misidentify your disk, you will destroy some other connected to PC!
# 2) Disk label may change each disk connect/disconnect operation!!!
#####
# Is it CORRECT? Do you UNDERSTAND and ACCEPT IT? [type 'yes'+ENTER to proceed]
# Operation will take about 1 minute and 30 seconds (excluding fw download)
#
# To CANCEL and start 'Disk Utility' and edit mbwe-config.sh [hit any key]
#####
Your answer is:

```

9. 8 After Safe Removed disk

using *Disk Utility* (click *Safe Removal* button), **unplug MBWE from the power supply** and place HDD in MBWE bay (any bay in MBWE II).



10. 9 Plug MBWE to the power supply back

and wait at least 30 seconds (up to several minutes) until MBWE initializes and shuts down itself (all LEDs go off). Then hold **Power** button (approx. for 3 seconds) until bottom LED goes on and wait at least 3 minutes for MBWE to boot up. Then go through the first start procedure in MBWE web GUI (provide MBWE IP address in your web browser and log in as **admin/admin**).

11. 10 For MBWE I that's all.

For MBWE II go further:

1. 11 Shutdown MBWE

by holding **Power button** for up to 3 seconds (no longer than 4 seconds, which forces device to power off immediately) and wait untill all LEDs are off, then **unplug from the power supply** and **put your second clean disk** in an empty bay. If your second disk contains any data or structure (isn't brand new), **you must wipe it out beforehand** (unallocated space = no partitions, unformatted) – see

Prerequisites.

2. 12 **Power up MBWE** again as described in step 9 and voilà.

That's all folks

If this saved your life, you can express your happiness by your little donation (click *Donate* button).

Thanks in advance!



Regardless you had issues or not, please leave your feedback:

- *Your MBWE version?:* **MBWE I** or **MBWE II**.
- *Your MBWE revision?:* **R\N B3D** or other (labeled on the bottom, right under WD logo).
- *Your hard disk description?:* **WD Caviar Green WD20EARS** or other.
- *Your linux distro/version?:* **Ubuntu 12.x** Live CD or other.
- *Your firmware?:* installed **automatically** by script or downloaded manually ver.**01.02.06-010411**.

This will help maintain script validity and help people to resolve their issues.

Troubleshooting

For any issues occurred during FW installation refer to generated `mbwe/mbwe-status.log` file, which you should backup before *Ubuntu* shutdown.

1. MBWE still does not boot

Instead of using USB-to-SATA adapter (or any other external hotplug way) try to connect HDD directly to the SATA controller in your PC before starting the procedure. This can help as [reported by user Jack](#).

As you power MBWE first time, it should go off after a couple of seconds. Then power it on again, holding power button for 3 seconds.

Make also sure that HDD SATA connector sits closely in SATA MBWE socket. I know it's hard to check, but it's a lousy construction and can fail. I would even disassemble the case to see better that connection and to be 100% sure before the final give up.

If above steps failed, the last thing you can do is to check your HDD against bad sectors (once again, even if you've taken that action at prerequisites step). MBWE firmware is based on some absolute blocks (especially boot sectors) and thus they cannot be bad or mapped as bad (that's why you have to start with clean/raw HDD instead of formatted).

2. Second disk failed

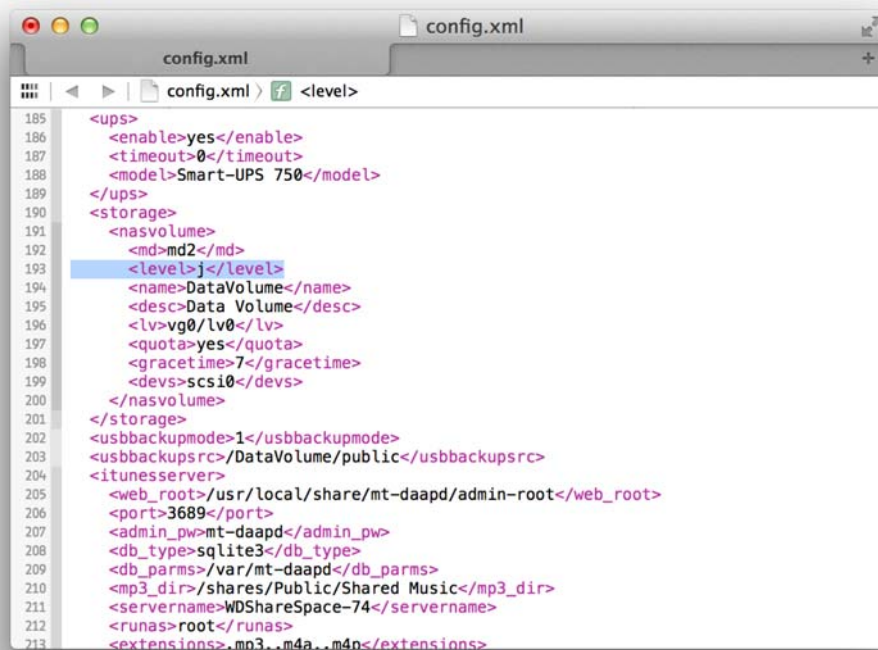
If you've encountered *Failed to create volume or missing* after second disk was installed (only SPAN is available), here is what you can do:

1. Clean second disk before installation.

or

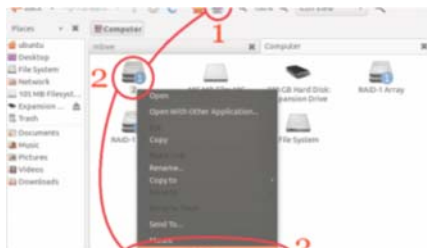
2. Change manually RAID type in file `/proto/SxM_webui/admin/config.xml`, editing at `md2 (DataVolume)` tag `<level>s</level>` to `<level>1</level>` (explanation: 0 is for RAID 0, 1 for RAID 1, j for JBOT, s for SPAN). You can access this file during FW installation procedure (there is pause point after

NAS OS is installed) or any time later, mounting disk under Ubuntu in a manner described [here](#) but finding icon called ,1' (OS partition).



3. After a few minutes MBWE gets unresponsive

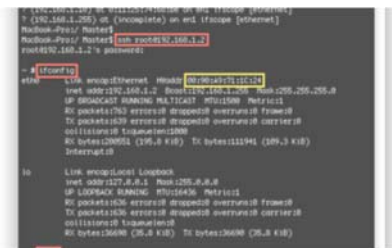
If your MBWE freezes (hangs) after some time of fully operational state it means that the processor has got overheated (probably you've used different disks than WD Greens that have caused temperature arise inside MBWE to 60 Celsius degrees or more). The solution is: a) to add MBWE processor radiator, glued with thermal paste and/or b) to stick to WD Green HDDs.



How to recover data from bricked
WD My Book World Edition White
Light hard disk?

2012-05-31

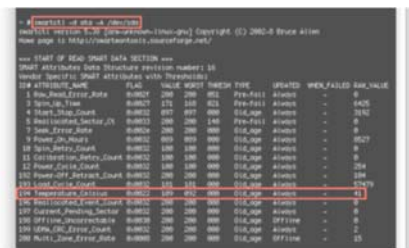
W "How-to"



How to change WD My Book World
Edition MAC address?

2011-10-26

W "How-to"



How to check WD My Book World
Edition disk temperature?

2012-06-03

W "How-to"

Discussion 607 komentarzy

1. LL

[2018-02-08, 07:51](#)

The ONLY issue I have is that the script cannot automatically download & install mdadm.

It said some ip not found or something along that line.

I ended up running this manually and re-running the script to make it work:

```
> sudo apt-get update
```

It ended up working, and my MBWE2 is back in service!

THANK YOU SO MUCH!

[Reply](#)

2. *George K*

[2018-02-12, 00:28](#)

Once again i did it using a WD AV-GP WD20EVDS hard disk. I bought only the case as the original disk had failed.

It is the third time i do the procedure with success, the first two times i used WD RE4 Enterprise disks, they still work like a charm.

One thing to mention only. I bought the disk used and it was blank, unallocated space. I did the procedure twice without success and i succeeded only when i used gparted first to make the disk unallocated space, when i did it using windows i failed.

For reliability issues i changed the intellipark time to 5 minutes (from 8 seconds) using wdidle3.

[Reply](#)

◦ [Krzysztof Przygoda](#)

[2018-02-14, 22:31](#)

Thanks George for your feedback. I've added your findings as a hint to the prerequisites.

[Reply](#)

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