Subject: Re: Extreme Pro 64GB Frozen Giving False Write OK [Incident: 230920-000546]
From: "John L. Poole" <jlpoole56@gmail.com>
Date: 9/19/2023, 5:10 PM
To: WD Customer Support <westerndigital@mailac.custhelp.com>

RRR

Dear Ellie B.,

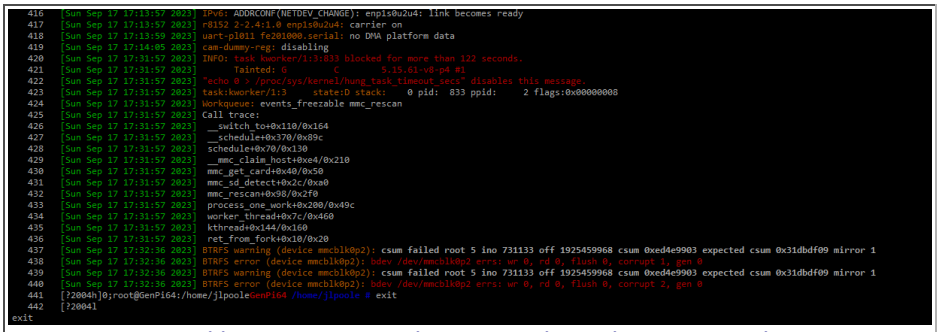
You have requested the following items which I have placed in a table in the first column. In the second column I have placed links and the information requested with additional information your engineers may find helpful.

Requested Item	Response/URL
• Clear and zoomed in pictures of the card (front and rear side)	I took photos and below are links to the JPEG photos: • **front**: https://salemdata.us/GenPi64/logs/20230917/wd/photos/micro_front_DSC_3297.jpg • **back**: https://salemdata.us/GenPi64/logs/20230917/wd/photos/micro_back_DSC_3296.jpg • **package front**: https://salemdata.us/GenPi64/logs/20230917/wd/photos/package_front_DSC_3298.jpg • **package back**: https://salemdata.us/GenPi64/logs/20230917/wd/photos/package_back_DSC_3299.jpg I have a Nikon 60mm Macro and could take better shots if needed. I understand you need to rule out counterfeit.

• Operating system of computer	The operating system was created from the GenPi64 Project at https://github.com/GenPi64 using the Build.Dist sub project. The GenPi64 project builds Gentoo Linux images compatible for Raspberry Pi units. The current image has a file system of **btrfs**. The image was built by the principal developer, Michael Jones, in Chicago and the build completed August 17, 2023.
	
	`jlpoole@Rpi4B3 ~ $ date; uname -a`
	`Tue Sep 19 04:24:10 PM PDT 2023`
	`Linux Rpi4B3 5.15.61-v8-p4 #1 SMP PREEMPT Thu Aug 17 19:31:53 CDT 2023 aarch64 GNU/Linux`
	`jlpoole@Rpi4B3 ~ $`
	The **Gentoo** operating system for the Raspberry Pi 4B in zip format may be downloaded:
	
	• https://salemdata.us/GenPi64/logs/20230917/wd/img/GenPi64OpenRC_Jones_20230913.img.zst [610 MBs]
	• https://salemdata.us/GenPi64/logs/20230917/wd/img/GenPi64OpenRC_Jones_20230913.img.zst.sum [162 bytes]
	
	To replicate the problem, load micro onto a Raspberry 4B and perform (root passwd "GenPi64@"):
	
	• determine IP, create a local user account, ssh as local user and su to root and execute "dmesg -w" to monitor system errors
	• In main console, or another ssh console, as root `eix-sync` to pull in packages,
	• In session other than above "dmesg -w", execute as root: emerge sys-kernel/raspberrypi-sources. The errors will occur after the posting of "Installing....". Example of a later attempt is here - see lines 420-436.

• Proof of purchase	Proof of Purchase at https://salemdata.us/GenPi64/logs/20230917/wd/photos/Poole_Amazon.com%20-%20Order%20113-1228016-1850638.pdf
• Exact make and model of the host device	Raspberry Pi 4B

- Screenshot of error message you get on computer

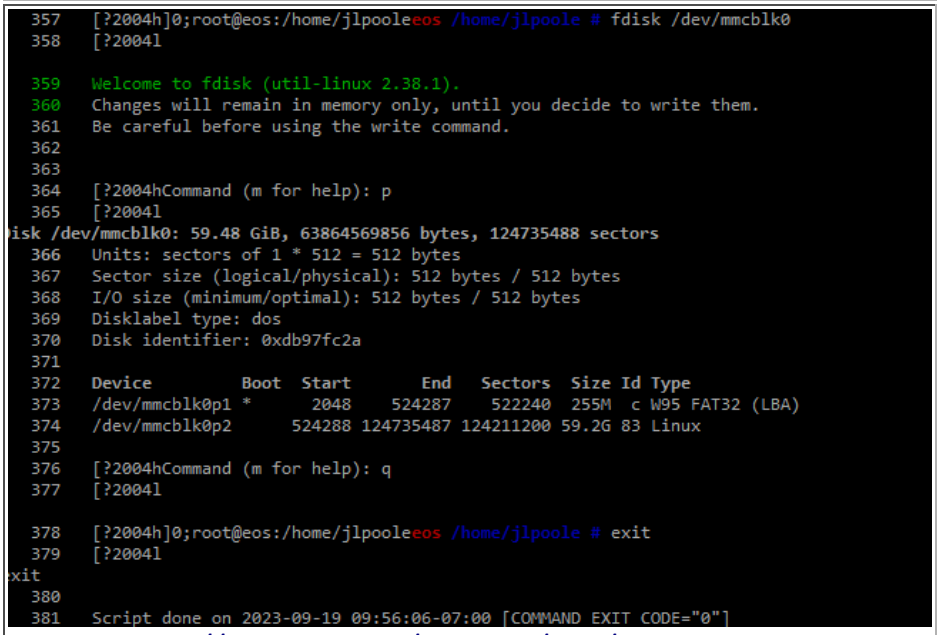


Source: https://salemdata.us/GenPi64/logs/20230917/test_rpi_src/dmesg_after_card1_btrfs_failure.script.html

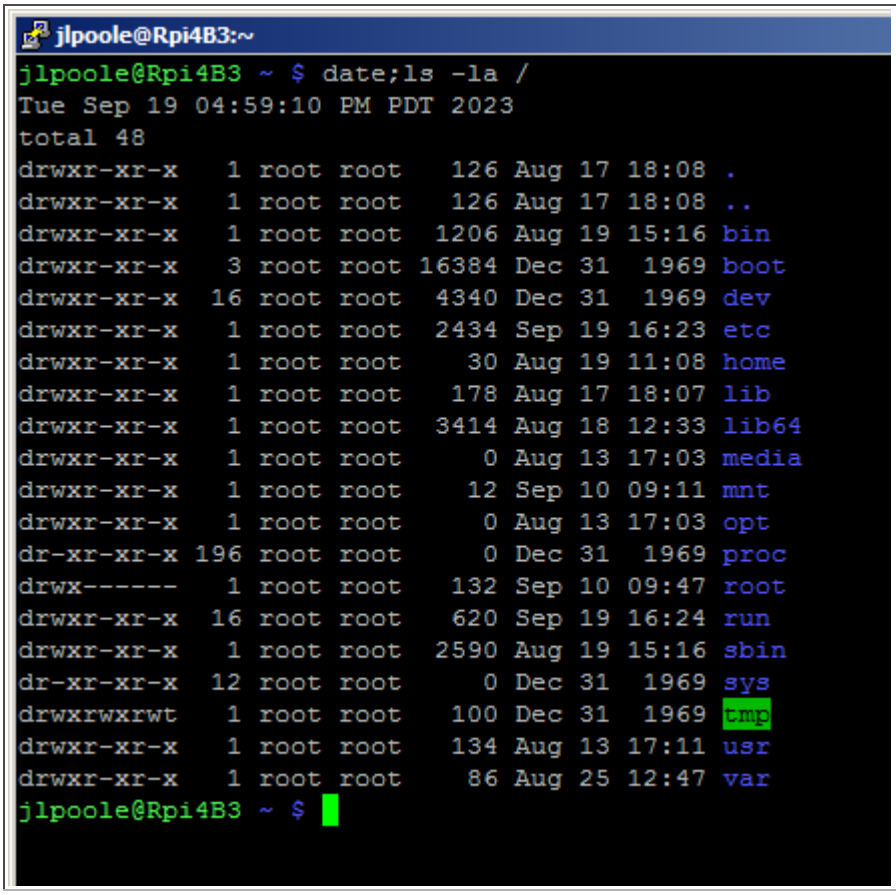
Note: I've mounted the disk onto a System 76 Pangolin laptop running Gentoo Linux and I have tried to:

Command	Result
fdisk, -d all partitions then write.	Partitions are not erased
add files to both FAT and btrfs partitions	All indications during the mount are that the files were written. However, when the disk is remounted, they're one.

- Screenshot of disk management



Source: https://salemdata.us/GenPi64/logs/20230917/fdisk_session_card2_20230919_0948.script.html

Screenshot of root directory of the card	

Please note I have 5 disks I purchased. 4 of them have Gentoo Linux systems from the GenPi64 project on them, at least 2 have problem, possibly 4. I have a fifth disk which was only subjected to an F3 test, the results of which are at: https://salemdata.us/GenPi64/logs/20230917/f3/20230916/

I can take my 5th disk which does not exhibit problems and burn an GenPi64 image onto it and then try the event of installing the 1.1 GB source files. It is my belief that the file transfer of 1.1 GBs is overwhelming the Raspberry Pi's card slot port which on the Raspberry Pi people are concluding has a 50 MBs limit and that the btrfs file system with its "Copy On Write" ("COW") system is creating 2.2 GBs and detects the SanDisk Extreme Pros ability to have faster I/O and is flooding the port resulting in loss on the disk. Then btrfs detects an error and freezes. But, what is disconcerting is that the disk, itself, seems frozen outside of the context of a btrfs system. For instance I tried delete the partitions and fdisk concluded success, but, in fact, it failted -- the partitions persisted.

Please do not hesitate to let me know if there is anything more Western Digital requires. I have tried several builds, including on built in September and have encountered the same problem. My records may suffer from some confusion over builds, I did not realize this problem would become a major effort to documents and try to get to the bottom of what is causing the problem: Western Digital's disk or btrfs or both.

Thank you,

John Poole

On 9/19/2023 3:28 PM, WD Customer Support wrote:

Western Digital.

Incident Update

Reference #: 230920-000546

Incident Details

Reference #: 230920-000546

Subject: Extreme Pro 64GB Frozen Giving False Write OK

Product: 64GB

Response by Email Ellie B
(09/19/2023 03:28 PM)

Dear John Poole,

Thank you for contacting Western Digital Customer Service and Support. My name is Ellie B.

We understand that you are facing issue with the card. We sincerely apologize for the inconvenience caused to you. Rest assured, we are here to help. We need to escalate the case to Level 3 technician. Please provide the below details so that we can escalate the case:

- Clear and zoomed in pictures of the card (front and rear side)
- Operating system of computer
- Proof of purchase
- Exact make and model of the host device
- Screenshot of error message you get on computer
- Screenshot of disk management
- Screenshot of root directory of the card

We will be waiting for your response. If you have any further questions or your issue is still unresolved, please reply to this email and we will be happy to assist you further. Alternatively, you can start a live chat or a phone call with one of our support specialists by clicking on the following link:

Chat: https://support-en.wd.com/app/chat/chat_launch
Phone: https://support.wdc.com/contact_phone.aspx?lang=en)

Sincerely,
Ellie B
Western Digital Service and Support
https://www.westerndigital.com/support

Note: If you have not visited our community forums, please make sure to do so. You may also find answer(s) to your question(s) there. Link to WD

community forums at: https://community.wd.com.

In order to process your email, please do not remove this reference #: 230920-000546

Product Specific Help

Contact Western Digital support

Update Incident

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John Laurence Poole

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