Why does my SSD/NVMe drive not allow for erasure or fails the erasure?

Created date	Updated date	Affects version	Fix version
18 Oct 2019	28 Feb 2020	Drive Eraser - All versions	N/A

Description

1	Scenario	Reason	Workaround
1	The drive does not support the firmware commands. The software shows "Not Supported".	In this instance you may have turned on a system and have found that the "Blancco SSD Erasure" and "NIST-Purge" methods are not supported and will not allow for erasure,	Check for firmware updates on the SSD/NVMe manufacturer's website, once updated, please try the erasure process again, if it fails, the manufacturer's may have not added the firmware based erasure commands to the drive's firmware. If the manufacturer has chosen not to implement these commands on their firmware there is nothing that can be done on it, on a software level. If there are no firmware updates or the firmware update did not fix the issue, it would be best to erase the drive to a "Clear" level* if your security policy allows for that, this can be achieved either by using the "Aperiodic Random Overwrite" erasure method or the "NIST 800-88 - Clear" erasure method.
2	The software allows you to erase the drive however the erasure fails with information about a specific command failing .	For some specific SSD/NVMe drives, even though the drive informs the software that it supports a specific command, the manufacturers have decided not to implement them into the drives firmware. This means that if the software tries to run such a command on the drive, it is not possible to do that in anyway. The only way the command could be run is if it is added to the firmware by a manufacturer in a future firmware update. Following on from this, it does not matter in regards to the age of the SSD /NVMe, it can be any SSD/NVMe that has not had the firmware implemented with proper commands to allow the firmware based erasure.	
3	Suspend to RAM is not supported by the machine.	This scenario can have two outcomes, we have seen specific devices not allow the software to boot and hang on a black screen when the "*FLR during Startup*" option is chosen or at the point when the erase button is pressed when either the Blancco SSD Erasure or NIST 800-88 Purge standards are selected. With some other systems, we have seen the software boot without issue and start an erasure using the Blancco SSD Erasure or NIST 800-88 Purge standards however again, the outcome is that the erasure fails with a specific command failing for example - "FORMAT UNIT command failed. Device is NVMe, see manual for more information." being shown in the information part of the failed erasure report. With this issue being similar to others it can hard to determine that this scenario relates to your issue however the issue has been seen mainly with Dell systems. The main cause for both is due to the device itself not supporting the suspend to RAM command within the BIOS. This is required for SSD erasure and allows firmware based erasure commands to be used.	Updating the systems BIOS can in some instances help with this issue, please check the manufacture's website using your system's make or model to find the latest BIOS version, this is explained in more detail here: Freeze Lock Removal: what it is and how to remediate possible issues For the systems that fail the erasure with the specific failed erasure command, either updating the BIOS, or downgrading the BIOS may help in this instance, however in most instances moving the drive to another system that is known to work with SSD/NVMe erasures would be the best thing to do to achieve a purge level erasure.
4	Suspend to RAM command is blocked by computer manufacturer.	In most instances the root cause of this issue is a security feature enabled within the manufacturer's firmware/BIOS which prevents executing required erasure commands successfully. With this being the case, the issue typically occurs in all versions of Blancco Drive Eraser and any erasure tools using the Purge Level Erasure Standard.	As this issue prevents Blancco from running the firmware erasure commands, Purge-level erasure cannot be achieved when erasing the drive in its original host machine. A Clear-level erasure can be achieved with traditional overwriting (aperiodic random overwrite for example). If a Purge-level erasure is required, the NVMe/SSD drive should be erased by connecting it to another host machine which allows the Blancco software to execute needed firmware based erasure commands. An example of this workaround is shown here: Erasure failing with Lenovo machines with NVMe drives
5	Freeze lock is not removed during startup. Applicable for NVMe drives.	It is possible that the Blancco SSD Erasure - NVMe or NIST 800-88 Purge erasure fails with the following message: "FORMAT UNIT command failed. Device is NVMe, see manual for more information". In this case the drive does not respond to the 'format unit' firmware erasure command properly. A possible cause for this message or others of a similar nature, is the way the manufacturers have set up their BIOS, with the Freeze lock not being removed with the standard command appearing to work during the boot up process of the Blancco software. The fix for this issue would be using a command to force the Freeze Lock Removal process in Blancco Drive Eraser, by using a customized startup option. Using this startup option will allow Blancco in most instances to run the required erasure command and erase the drive successfully.	Using the Blancco Drive Eraser Configuration tool, you will be able to set up a customized startup option, ticking the "FLR" option and then choosing "Forced" in the drop down menu, Alternatively the startup option can be configured during the boot time as described here: Samsung PM951/PM981 NVMe SSD erasure fails with error: “FORMAT UNIT command failed."

*NIST Guidelines in for levels of security on SSDs -

- Clear (an erasure process that protects against non-invasive data recovery methods)

- Purge (for higher security, to protect against laboratory data recovery)

More information can be found within the Blancco Drive Eraser Manual.

Please note if your erasure report does not show any form of firmware based erasure commands failing, please raise a ticket with the technical support team by "reporting an incident" from the Blancco Support Portal. Add an issue report generated after the failed erasure to the ticket to help investigating your specific SSD/NVMe erasure issue, for information on how to generate an issue report, please see the related articles below.