

Merit LILIN Application Note

NAV OS SSD Might Cause NAV Recorder Instable

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Subject: LILIN Nav Server. Possible instabilities discovered relating to usage of certain make/model SSD's when being used for the operating system drive. How to identify and fix any issues.

This fix is not critical; however, it is strongly recommended to update the SSD software driver during any routine maintenance visits. However, if a NAV server experiences system freezes or has any blue screen issues, update the SSD software driver immediately.

LILIN NAV Recorders:

NAV3025, NAV1036, NAV1072, NAV1108, NAV08036, NAV08072, NAV08108, NCS3600

Which problems may be experienced

Intel SSD 520, 530, 535, 540S and Kingston SSD SHSS37A, SHFS37A, UV400 are used for LILIN NAV server operating systems drives, it has been discovered that they have a small chance to cause the server operating system to freeze or blue screen.

How to resolve it?

Intel and Kingston have provided a firmware to address some bugs discovered. Please follow the instruction below to upgrade the SSD's firmware.

1. Upgrade the SSD firmware

First, confirm what model of SSD is installed, and then choose a related update method from the choices below.





- 1-1.For Intel SSD 520 and 540S
 - Step1. Download the Intel® Solid State Drive Toolbox from the web site: <u>https://downloadcenter.intel.com/download/27330/Intel-Solid-State-Drive-Toolbox?pr</u> <u>oduct=35125</u>
 - Step2. Install Intel® Solid State Drive Toolbox.
 - Step3. Make sure that an internet connection is available.
 - Step4. Execute Intel® Solid State Drive Toolbox from Start>All Programs> Intel® Solid State Drive Toolbox.

Step5. Click to see if the values of E8 & E9 are higher than 30%. If not, please RMA the SSD with the SSD manufacturer for repair.

Intel® Solid-State	Dri	ve Toolbox				Ċ	ntel
Tel Skal 2.4.2		SMART Details					3
Intel® SSD Optimizer			Intel® SSD 54	Os Series 120	GR		
ast Run: Never run before chedule: None		C:\111.69 GB	mere 550 54	os senes 120	35		
	ID	Description	Raw	Normalized	Threshold	Action	
Quick Diagnostic Scan	0	CRC Error Count	54	100	0	Ready for use.	
	E1	Host Writes	508.81 GB	100	0	Ready for use.	
Full Diagnostic Scan	E2	Timed Workload - Media Wear	0	100	0	Ready for use.	
Secure Erase	B	Timed Workload - Host Read/Write Ratio	0	100	0	Ready for use.	
Firmware Update	E4	Timed Workload Timer	0	100	0	Ready for use.	
	E8	Available Reserved Space	0	100	10	Ready for use.	
System Tuner	E9	Media Wearout Indicator	0	100	0	Ready for use.	
	F1	Total LBAs Written	508.81 GB	100	0	Ready for use.	
System Information	F2	Total LBAs Read	1463.47 GB	100	0	Ready for use.	
	F 9	Total NAND Writes	469	100	0	Ready for use.	
	EC.	Vendor Specific	5	100	0	Ready for use	

Step6. Click the Update button to update the SSD firmware.





Step7. Reboot the PC once the firmware has updated successfully.

NOTE: If the NAV server is still unstable after the SSD firmware has been upgraded the firmware, please return the NAV recorder to your local LILIN branch for inspection.

1-2. For Intel SSD 530 and 535

- Step1. Download the Intel® SSD Non-Searchable Fixes and Misc Tools from the web site: <u>https://downloadcenter.intel.com/download/26452/Write-Amp-Firmware-for-Intel-SSD-53</u> <u>0-535-Series</u>
- Step2. Copy/Unzip files to the root directory (for example, C:\). This creates an "iRMFUU" directory.
- Step3. Make sure an internet connection is available.
- Step4. Open Command Prompt as Admin.

Click Start > All Programs, and then click Accessories.

Right-click Command prompt, and then click Run as Administrator.



Step5. Change the directory to :\\iRMFUU (for example, cd c:\iRMFUU)



Step6. Run the tool executable irmfuu_7.0.1.exe.



```
C:\iRMFUU>irmfuu_7.0.1.exe
  Intel SSD -
ModelNumber : MR9260-8i
DevicePath : \\\\.\\PHYSICALDRIVE0
ProductFamily : Property not found
Firmware : 2.13
SerialNumber :
FirmwareUpdateAvailable : The selected Intel SSD contains current firmware as of
this tool release.
Index : 0
Bootloader : Property not found
DeviceStatus : Healthy
Updating firmware...
Status : Drive is not an Intel SSD.
 Intel SSD 535 Series CVTR53300106120AGN -
ModelNumber : INTEL SSDSC2BW120H6
DevicePath : \\\\.\\PHYSICALDRIVE1
ProductFamily : Intel SSD 535 Series
Firmware : RG21
SerialNumber : CVTR53300106120AGN
Firmwarelydat:9-aflabls : RG2U
Index : 1
Bootloader : Property not found
DeviceStatus : Healthy
Updating firmware...
Status : Firmware Updated Successfully. Please reboot the system.
```

Step7. Reboot the PC after firmware has successfully updated.

NOTE: If the NAV server is still unstable after the SSD firmware has been upgraded the firmware, please return the NAV recorder to your local LILIN branch for inspection.

1-3. For Kingston SSD SHSS37A, SHFS37A and UV400

Step1. Download the Kingston SSD Manager from the web site:

https://www.kingston.com/us/support/technical/ssdmanager

- Step2. Install Kingston SSD Manager.
- Step3. Make sure an internet connection is available.

Step4. Execute Kingston SSD Manager from Start>All Programs>Kingston SSD Manager. Step5. Click Firmware Update Available button for SSD upgrades the new firmware.

CARASOVARIES CONTRACTOR OF CON	Finware SMART Security Events Device Path: W.VHYSICALDRIYEG Yolume Info: C:3 (111.196) Yendor/Model: KINGSTON SA400S37120G Secial Number: 50026B7679016C89 Firmware: SBFK71E0 No Firmware Update Available	
Partitioning CA 111.2G (71.50% free) 0.6G Unknown Warnings: None Overall: Healt	SSD Health SSD Life Remaining 99% SSD Space Blocks Huy 100% Power On Hours = 117	

Step6. Reboot the PC after firmware updated successfully.

NOTE: If the NAV server is still unstable after the SSD firmware has been upgraded the firmware, please return the NAV recorder to your local LILIN branch for inspection.

Contact Contact <u>lilin.zendesk.com</u> for technical support.