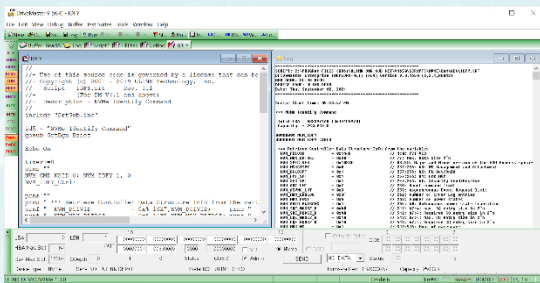


DriveMaster 9

NVMe/SATA/SAS Mass Storage Test Tool



DriveMaster 9
New Major Features

NVMe Features and NVMe Spec 1.4

- Get LBA Status, Verify, Copy
- Zoned Namespace Command Set
- Host Memory Buffer with Max Descriptor Entries and Min Entry Size
- Replay Protected Memory Block SHA-256 Authentication Key
- Read Physical Memory Entry in Host Memory Buffer and Boot Partition
- Larger Queue Entries in IO Queues
- Administrative Controller

User Friendly Interpretation

- Async Event, Zone State
- New Status Type/Code
- The data returned from:
 - Identify with new CNS
 - Get Log with new LID
 - Reservation Report
 - ZNS Receive
 - TCG Level 0 Discovery w/ new Feature set

New TCG Features

- TCG Level 0 Discovery –
 - Shadow MBR for Multiple Namespaces
 - SIIS Feature Descriptor
 - Configurable Namespace Locking Descriptor with Minor Version and SUM_C
- Block SID with Freeze Locking SP
- Assign with AssignToSUMRange

The diagram illustrates the new NVMe commands and their associated LBA ranges. A central circle labeled "New NVMe Commands" is connected to ten surrounding rectangular boxes, each representing a command and its LBA range:

- Zoned Namespace Commands
- GET LBA STATUS
- COPY
- IDFY w/CNS = 04h-06h, 16h, 17h
- Read Physical Memory Entry in HMB and BP
- Cmds updated w/NVMSetID, CmdSetID, UUID etc.
- GET/SET Feature w/FID = 12h-18h, 84h
- GETLOG w/LID = 09h-0Fh
- GET SHA256 KEY
- VERIFY

Persistent Event Entries

TP	: Event Type	REV	: Event Type Revision	EHL	: Event Header Length
CTRID	: Controller Identifier	VSIL	: Vendor Specific Info Length	EL	: Event Length
EV_TM_STMP	: Event Timestamp				
TM_STMP	: Timestamp	SYN	: Synch		
TSO	: Timestamp Origin (000b:by Controller Level Reset; 001b:by Set Features cmd; Others: Reserved)				

BYTE #	Entry	TP	REV	EHL	R	CTRID	EV	TM	STMP	(R	R	TSO	SYN	TM STMP)	Reserved	VSIL	EL	VS INFO	EVENT DATA
512	551	0	0b	01h	15h	00h	07a2h	0000000000000007d7h	(00h	0h	000b	0b	0000000007d7h)	00000000000000h	0000h	0010h	NA		Set Feature
552	619	1	04h	01h	15h	00h	07a2h	000000000000000011h	(00h	0h	000b	0b	00000000000011h)	00000000000000h	0000h	002Ch	NA		Power-on or Reset
620	659	2	04h	01h	15h	00h	07a2h	000000000000000003Ah	(00h	0h	000b	0b	0000000000003Ah)	00000000000000h	0000h	001Ch	NA		Set Feature
660	727	3	04h	01h	15h	00h	07a2h	000000000000000002h	(00h	0h	000b	0b	00000000000002h)	00000000000000h	0000h	002Ch	NA		Power-on or Reset
728	767	4	04h	01h	15h	00h	07a2h	0000000000000000719h	(00h	0h	000b	0b	0000000000719h)	00000000000000h	0000h	001Ch	NA		Set Feature
768	835	5	04h	01h	15h	00h	07a2h	000000000000000002h	(00h	0h	000b	0b	00000000000002h)	00000000000000h	0000h	002Ch	NA		Power-on or Reset
836	875	6	04h	01h	15h	00h	07a2h	000000000000000003Ah	(00h	0h	000b	0b	0000000000003Ah)	00000000000000h	0000h	001Ch	NA		Set Feature
876	943	7	04h	01h	15h	00h	07a2h	000000000000000002h	(00h	0h	000b	0b	00000000000002h)	00000000000000h	0000h	002Ch	NA		Power-on or Reset
944	983	8	04h	01h	15h	00h	07a2h	000000000000000001Ch	(00h	0h	000b	0b	0000000000001Ch)	00000000000000h	0000h	001Ch	NA		Set Feature
984	1051	9	04h	01h	15h	00h	07a2h	000000000000000002h	(00h	0h	000b	0b	00000000000002h)	00000000000000h	0000h	002Ch	NA		Power-on or Reset
1052	1091	10	04h	01h	15h	00h	07a2h	0000000000000000655Bh	(00h	0h	000b	0b	0000000000655Bh)	00000000000000h	0000h	001Ch	NA		Set Feature
1092	1159	11	04h	01h	15h	00h	07a2h	000000000000000041Ah	(00h	0h	000b	0b	000000000041Ah)	00000000000000h	0000h	002Ch	NA		Power-on or Reset
1160	1267	12	05h	01h	15h	00h	07a2h	0000000000000000041h	(00h	0h	000b	0b	00000000000041h)	00000000000000h	0000h	0054h	NA		NVM Subsys HW Err
1268	1375	13	05h	01h	15h	00h	07a2h	000000000000000024F91h	(00h	0h	000b	0b	0000000024F91h)	00000000000000h	0000h	0054h	NA		NVM Subsys HW Err

```
***** Event # 12 *****
*** Persistent Event - NVM Subsystem Hardware Error (NVM Express Rev 1.4) V1.0
    Copyright ©ULINK Technology
```

[illegible]