

Appendix A

Events and Messages

This appendix lists the MegaRAID Storage Manager events that may appear in the event log.

MegaRAID Storage Manager software monitors the activity and performance of all controllers in the workstation and the devices attached to them. When an event occurs, such as the start of an initialization, an event message appears in the log at the bottom of the MegaRAID Storage Manager window.

Each message that appears in the event log has an error level that indicates the severity of the event, as shown in [Table A.1](#).

Table A.1 Event Error Levels

Error Level	Meaning
Information	Informational message. No user action is necessary.
Warning	Some component may be close to a failure point.
Critical	A component has failed, but the system has not lost data.
Fatal	A component has failed, and data loss has occurred or will occur.

[Table A.2](#) lists all of the MegaRAID Storage Manager event messages. The event message descriptions include placeholders for specific values that are determined when the event is generated. For example, in message No. 1 in the Event Messages table, “%s” is replaced by the firmware version, which is read from the firmware when the event is generated.

Table A.2 Event Messages

Number	Type	Event Text
0x0000	Information	MegaRAID firmware initialization started (PCI ID %04x/%04x/%04x/%04x)
0x0001	Information	MegaRAID firmware version %s
0x0002	Fatal	Unable to recover cache data from TBBU
0x0003	Information	Cache data recovered from TBBU successfully
0x0004	Information	Configuration cleared
0x0005	Warning	Cluster down; communication with peer lost
0x0006	Information	Virtual drive %s ownership changed from %02x to %02x
0x0007	Information	Alarm disabled by user
0x0008	Information	Alarm enabled by user
0x0009	Information	Background initialization rate changed to %d%%
0x000a	Fatal	Controller cache discarded due to memory/battery problems
0x000b	Fatal	Unable to recover cache data due to configuration mismatch
0x000c	Information	Cache data recovered successfully
0x000d	Fatal	Controller cache discarded due to firmware version incompatibility
0x000e	Information	Consistency Check rate changed to %d%%
0x000f	Fatal	Fatal firmware error: %s
0x0010	Information	Factory defaults restored
0x0011	Information	Flash downloaded image corrupt
0x0012	Critical	Flash erase error
0x0013	Critical	Flash timeout during erase
0x0014	Critical	Flash error
0x0015	Information	Flashing image: %s
0x0016	Information	Flash of new firmware image(s) complete
0x0017	Critical	Flash programming error
0x0018	Critical	Flash timeout during programming
0x0019	Critical	Flash chip type unknown
0x001a	Critical	Flash command set unknown
0x001b	Critical	Flash verify failure
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Table A.2 Event Messages (Cont.)

Number	Type	Event Text
0x001c	Information	Flush rate changed to %d seconds
0x001d	Information	Hibernate command received from host
0x001e	Information	Event log cleared
0x001f	Information	Event log wrapped
0x0020	Fatal	Multi-bit ECC error: ECAR=%x, ELOG=%x, (%s)
0x0021	Warning	Single-bit ECC error: ECAR=%x, ELOG=%x, (%s)
0x0022	Fatal	Not enough controller memory
0x0023	Information	Patrol Read complete
0x0024	Information	Patrol Read paused
0x0025	Information	Patrol Read Rate changed to %d%%
0x0026	Information	Patrol Read resumed
0x0027	Information	Patrol Read started
0x0028	Information	Rebuild rate changed to %d%%
0x0029	Information	Drive group modification rate changed to %d%%
0x002a	Information	Shutdown command received from host
0x002b	Information	Test event: %s
0x002c	Information	Time established as %s; (%d seconds since power on)
0x002d	Information	User entered firmware debugger
0x002e	Warning	Background Initialization aborted on %s
0x002f	Warning	Background Initialization corrected medium error (%s at %lx
0x0030	Information	Background Initialization completed on %s
0x0031	Fatal	Background Initialization completed with uncorrectable errors on %s
0x0032	Fatal	Background Initialization detected uncorrectable double medium errors (%s at %lx on %s)
0x0033	Critical	Background Initialization failed on %s
0x0034	Progress	Background Initialization progress on %s is %s
0x0035	Information	Background Initialization started on %s
0x0036	Information	Policy change on %s from %s to %s
0x0038	Warning	Consistency Check aborted on %s
0x0039	Warning	Consistency Check corrected medium error (%s at %lx
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Table A.2 Event Messages (Cont.)

Number	Type	Event Text
0x003a	Information	Consistency Check done on %s
0x003b	Information	Consistency Check done with corrections on %s
0x003c	Fatal	Consistency Check detected uncorrectable double medium errors (%s at %lx on %s)
0x003d	Critical	Consistency Check failed on %s
0x003e	Fatal	Consistency Check completed with uncorrectable data on %s
0x003f	Warning	Consistency Check found inconsistent parity on %s at strip %lx
0x0040	Warning	Consistency Check inconsistency logging disabled on %s (too many inconsistencies)
0x0041	Progress	Consistency Check progress on %s is %s
0x0042	Information	Consistency Check started on %s
0x0043	Warning	Initialization aborted on %s
0x0044	Critical	Initialization failed on %s
0x0045	Progress	Initialization progress on %s is %s
0x0046	Information	Fast initialization started on %s
0x0047	Information	Full initialization started on %s
0x0048	Information	Initialization complete on %s
0x0049	Information	LD Properties updated to %s (from %s)
0x004a	Information	Drive group modification complete on %s
0x004b	Fatal	Drive group modification of %s stopped due to unrecoverable errors
0x004c	Fatal	Reconstruct detected uncorrectable double medium errors (%s at %lx on %s at %lx)
0x004d	Progress	Drive group modification progress on %s is %s
0x004e	Information	Drive group modification resumed on %s
0x004f	Fatal	Drive group modification resume of %s failed due to configuration mismatch
0x0050	Information	Modifying drive group started on %s
0x0051	Information	State change on %s from %s to %s
0x0052	Information	Drive Clear aborted on %s
0x0053	Critical	Drive Clear failed on %s (Error %02x)
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Table A.2 Event Messages (Cont.)

Number	Type	Event Text
0x0054	Progress	Drive Clear progress on %s is %s
0x0055	Information	Drive Clear started on %s
0x0056	Information	Drive Clear completed on %s
0x0057	Warning	Error on %s (Error %02x)
0x0058	Information	Format complete on %s
0x0059	Information	Format started on %s
0x005a	Critical	Hot Spare SMART polling failed on %s (Error %02x)
0x005b	Information	Drive inserted: %s
0x005c	Warning	Drive %s is not supported
0x005d	Warning	Patrol Read corrected medium error on %s at %lx
0x005e	Progress	Patrol Read progress on %s is %s
0x005f	Fatal	Patrol Read found an uncorrectable medium error on %s at %lx
0x0060	Critical	Predictive failure: CDB: %s
0x0061	Fatal	Patrol Read puncturing bad block on %s at %lx
0x0062	Information	Rebuild aborted by user on %s
0x0063	Information	Rebuild complete on %s
0x0064	Information	Rebuild complete on %s
0x0065	Critical	Rebuild failed on %s due to source drive error
0x0066	Critical	Rebuild failed on %s due to target drive error
0x0067	Progress	Rebuild progress on %s is %s
0x0068	Information	Rebuild resumed on %s
0x0069	Information	Rebuild started on %s
0x006a	Information	Rebuild automatically started on %s
0x006b	Critical	Rebuild stopped on %s due to loss of cluster ownership
0x006c	Fatal	Reassign write operation failed on %s at %lx
0x006d	Fatal	Unrecoverable medium error during rebuild on %s at %lx
0x006e	Information	Corrected medium error during recovery on %s at %lx
0x006f	Fatal	Unrecoverable medium error during recovery on %s at %lx
0x0070	Information	Drive removed: %s
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Table A.2 Event Messages (Cont.)

Number	Type	Event Text
0x0071	Warning	Unexpected sense: %s, CDB%s, Sense: %s
0x0072	Information	State change on %s from %s to %s
0x0073	Information	State change by user on %s from %s to %s
0x0074	Warning	Redundant path to %s broken
0x0075	Information	Redundant path to %s restored
0x0076	Information	Dedicated Hot Spare Drive %s no longer useful due to deleted drive group
0x0077	Critical	SAS topology error: Loop detected
0x0078	Critical	SAS topology error: Unaddressable device
0x0079	Critical	SAS topology error: Multiple ports to the same SAS address
0x007a	Critical	SAS topology error: Expander error
0x007b	Critical	SAS topology error: SMP timeout
0x007c	Critical	SAS topology error: Out of route entries
0x007d	Critical	SAS topology error: Index not found
0x007e	Critical	SAS topology error: SMP function failed
0x007f	Critical	SAS topology error: SMP CRC error
0x0080	Critical	SAS topology error: Multiple subtractive
0x0081	Critical	SAS topology error: Table to table
0x0082	Critical	SAS topology error: Multiple paths
0x0083	Fatal	Unable to access device %s
0x0084	Information	Dedicated Hot Spare created on %s (%s)
0x0085	Information	Dedicated Hot Spare %s disabled
0x0086	Critical	Dedicated Hot Spare %s no longer useful for all drive groups
0x0087	Information	Global Hot Spare created on %s (%s)
0x0088	Information	Global Hot Spare %s disabled
0x0089	Critical	Global Hot Spare does not cover all drive groups
0x008a	Information	Created %s}
0x008b	Information	Deleted %s}
0x008c	Information	Marking LD %s inconsistent due to active writes at shutdown
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Table A.2 Event Messages (Cont.)

Number	Type	Event Text
0x008d	Information	Battery Present
0x008e	Warning	Battery Not Present
0x008f	Information	New Battery Detected
0x0090	Information	Battery has been replaced
0x0091	Critical	Battery temperature is high
0x0092	Warning	Battery voltage low
0x0093	Information	Battery started charging
0x0094	Information	Battery is discharging
0x0095	Information	Battery temperature is normal
0x0096	Fatal	Battery needs to be replacement, SOH Bad
0x0097	Information	Battery relearn started
0x0098	Information	Battery relearn in progress
0x0099	Information	Battery relearn completed
0x009a	Critical	Battery relearn timed out
0x009b	Information	Battery relearn pending: Battery is under charge
0x009c	Information	Battery relearn postponed
0x009d	Information	Battery relearn will start in 4 days
0x009e	Information	Battery relearn will start in 2 day
0x009f	Information	Battery relearn will start in 1 day
0x00a0	Information	Battery relearn will start in 5 hours
0x00a1	Information	Battery removed
0x00a2	Information	Current capacity of the battery is below threshold
0x00a3	Information	Current capacity of the battery is above threshold
0x00a4	Information	Enclosure (SES) discovered on %s
0x00a5	Information	Enclosure (SAFTE) discovered on %s
0x00a6	Critical	Enclosure %s communication lost
0x00a7	Information	Enclosure %s communication restored
0x00a8	Critical	Enclosure %s fan %d failed
0x00a9	Information	Enclosure %s fan %d inserted
0x00aa	Critical	Enclosure %s fan %d removed
0x00ab	Critical	Enclosure %s power supply %d failed
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Table A.2 Event Messages (Cont.)

Number	Type	Event Text
0x00ac	Information	Enclosure %s power supply %d inserted
0x00ad	Critical	Enclosure %s power supply %d removed
0x00ae	Critical	Enclosure %s SIM %d failed
0x00af	Information	Enclosure %s SIM %d inserted
0x00b0	Critical	Enclosure %s SIM %d removed
0x00b1	Warning	Enclosure %s temperature sensor %d below warning threshold
0x00b2	Critical	Enclosure %s temperature sensor %d below error threshold
0x00b3	Warning	Enclosure %s temperature sensor %d above warning threshold
0x00b4	Critical	Enclosure %s temperature sensor %d above error threshold
0x00b5	Critical	Enclosure %s shutdown
0x00b6	Warning	Enclosure %s not supported; too many enclosures connected to port
0x00b7	Critical	Enclosure %s firmware mismatch
0x00b8	Warning	Enclosure %s sensor %d bad
0x00b9	Critical	Enclosure %s phy %d bad
0x00ba	Critical	Enclosure %s is unstable
0x00bb	Critical	Enclosure %s hardware error
0x00bc	Critical	Enclosure %s not responding
0x00bd	Information	SAS/SATA mixing not supported in enclosure; Drive %s disabled
0x00be	Information	Enclosure (SES) hotplug on %s was detected, but is not supported
0x00bf	Information	Clustering enabled
0x00c0	Information	Clustering disabled
0x00c1	Information	Drive too small to be used for auto-rebuild on %s
0x00c2	Information	BBU enabled; changing WT virtual drives to WB
0x00c3	Warning	BBU disabled; changing WB virtual drives to WT
0x00c4	Warning	Bad block table on drive %s is 80% full
0x00c5	Fatal	Bad block table on drive %s is full; unable to log block %lx
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Table A.2 Event Messages (Cont.)

Number	Type	Event Text
0x00c6	Information	Consistency Check Aborted due to ownership loss on %s
0x00c7	Information	Background Initialization (BGI) Aborted Due to Ownership Loss on %s
0x00c8	Critical	Battery/charger problems detected; SOH Bad
0x00c9	Warning	Single-bit ECC error: ECAR=%x, ELOG=%x, (%s); warning threshold exceeded
0x00ca	Critical	Single-bit ECC error: ECAR=%x, ELOG=%x, (%s); critical threshold exceeded
0x00cb	Critical	Single-bit ECC error: ECAR=%x, ELOG=%x, (%s); further reporting disabled
0x00cc	Critical	Enclosure %s Power supply %d switched off
0x00cd	Information	Enclosure %s Power supply %d switched on
0x00ce	Critical	Enclosure %s Power supply %d cable removed
0x00cf	Information	Enclosure %s Power supply %d cable inserted
0x00d0	Information	Enclosure %s Fan %d returned to normal
0x00d1	Information	BBU Retention test was initiated on previous boot
0x00d2	Information	BBU Retention test passed
0x00d3	Critical	BBU Retention test failed!
0x00d4	Information	NVRAM Retention test was initiated on previous boot
0x00d5	Information	NVRAM Retention test passed
0x00d6	Critical	NVRAM Retention test failed!
0x00d7	Information	%s test completed %d passes successfully
0x00d8	Critical	%s test FAILED on %d pass. Fail data: errorOffset=%x goodData=%x badData=%x
0x00d9	Information	Self check diagnostics completed
0x00da	Information	Foreign Configuration detected
0x00db	Information	Foreign Configuration imported
0x00dc	Information	Foreign Configuration cleared
0x00dd	Warning	NVRAM is corrupt; reinitializing
0x00de	Warning	NVRAM mismatch occurred
0x00df	Warning	SAS wide port %d lost link on PHY %d
0x00e0	Information	SAS wide port %d restored link on PHY %d
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Table A.2 Event Messages (Cont.)

Number	Type	Event Text
0x00e1	Warning	SAS port %d, PHY %d has exceeded the allowed error rate
0x00e2	Warning	Bad block reassigned on %s at %lx to %lx
0x00e3	Information	Controller Hot Plug detected
0x00e4	Warning	Enclosure %s temperature sensor %d differential detected
0x00e5	Information	Drive test cannot start. No qualifying drives found
0x00e6	Information	Time duration provided by host is not sufficient for self check
0x00e7	Information	Marked Missing for %s on drive group %d row %d
0x00e8	Information	Replaced Missing as %s on drive group %d row %d
0x00e9	Information	Enclosure %s Temperature %d returned to normal
0x00ea	Information	Enclosure %s Firmware download in progress
0x00eb	Warning	Enclosure %s Firmware download failed
0x00ec	Warning	%s is not a certified drive
0x00ed	Information	Dirty cache data discarded by user
0x00ee	Information	Drives missing from configuration at boot
0x00ef	Information	Virtual drives (VDs) missing drives and will go offline at boot: %s
0x00f0	Information	VDs missing at boot: %s
0x00f1	Information	Previous configuration completely missing at boot
0x00f2	Information	Battery charge complete
0x00f3	Information	Enclosure %s fan %d speed changed
0x00f4	Information	Dedicated spare %s imported as global due to missing arrays
0x00f5	Information	%s rebuild not possible as SAS/SATA is not supported in an array
0x00f6	Information	SEP %s has been rebooted as a part of enclosure firmware download. SEP will be unavailable until this process completes.
0x00f7	Information	Inserted PD: %s Info: %s
0x00f8	Information	Removed PD: %s Info: %s
0x00f9	Information	VD %s is now OPTIMAL
0x00fa	Warning	VD %s is now PARTIALLY DEGRADED
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Table A.2 Event Messages (Cont.)

Number	Type	Event Text
0x00fb	Critical	VD %s is now DEGRADED
0x00fc	Fatal	VD %s is now OFFLINE
0x00fd	Warning	Battery requires reconditioning; please initiate a LEARN cycle
0x00fe	Warning	VD %s disabled because RAID-5 is not supported by this RAID key
0x00ff	Warning	VD %s disabled because RAID-6 is not supported by this controller
0x0100	Warning	VD %s disabled because SAS drives are not supported by this RAID key
0x0101	Warning	PD missing: %s
0x0102	Warning	Puncturing of LBAs enabled
0x0103	Warning	Puncturing of LBAs disabled
0x0104	Critical	Enclosure %s EMM %d not installed
0x0105	Information	Package version %s
0x0106	Warning	Global affinity Hot Spare %s commissioned in a different enclosure
0x0107	Warning	Foreign configuration table overflow
0x0108	Warning	Partial foreign configuration imported, PDs not imported:%s
0x0109	Information	Connector %s is active
0x010a	Information	Board Revision %s
0x010b	Warning	Command timeout on PD %s, CDB:%s
0x010c	Warning	PD %s reset (Type %02x)
0x010d	Warning	VD bad block table on %s is 80% full
0x010e	Fatal	VD bad block table on %s is full; unable to log block %lx (on %s at %lx)
0x010f	Fatal	Uncorrectable medium error logged for %s at %lx (on %s at %lx)
0x0110	Information	VD medium error corrected on %s at %lx
0x0111	Warning	Bad block table on PD %s is 100% full
0x0112	Warning	VD bad block table on PD %s is 100% full
0x0113	Fatal	Controller needs replacement, IOP is faulty
0x0114	Information	CopyBack started on PD %s from PD %s
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Table A.2 Event Messages (Cont.)

Number	Type	Event Text
0x0115	Information	CopyBack aborted on PD %s and src is PD %s
0x0116	Information	CopyBack complete on PD %s from PD %s
0x0117	Progress	CopyBack progress on PD %s is %s
0x0118	Information	CopyBack resumed on PD %s from %s
0x0119	Information	CopyBack automatically started on PD %s from %s
0x011a	Critical	CopyBack failed on PD %s due to source %s error
0x011b	Warning	Early Power off warning was unsuccessful
0x011c	Information	BBU FRU is %s
0x011d	Information	%s FRU is %s
0x011e	Information	Controller hardware revision ID %s
0x011f	Warning	Foreign import shall result in a backward incompatible upgrade of configuration metadata
0x0120	Information	Redundant path restored for PD %s
0x0121	Warning	Redundant path broken for PD %s
0x0122	Information	Redundant enclosure EMM %s inserted for EMM %s
0x0123	Information	Redundant enclosure EMM %s removed for EMM %s
0x0124	Warning	Patrol Read can't be started, as PDs are either not ONLINE, or are in a VD with an active process, or are in an excluded VD
0x0125	Information	Copyback aborted by user on PD %s and src is PD %s
0x0126	Critical	Copyback aborted on hot spare %s from %s, as hot spare needed for rebuild
0x0127	Warning	Copyback aborted on PD %s from PD %s, as rebuild required in the array
0x0128	Fatal	Controller cache discarded for missing or offline VD %s When a VD with cached data goes offline or missing during runtime, the cache for the VD is discarded. Because the VD is offline, the cache cannot be saved.
0x0129	Information	Copyback cannot be started as PD %s is too small for src PD %s
0x012a	Information	Copyback cannot be started on PD %s from PD %s, as SAS/SATA is not supported in an array
0x012b	Information	Microcode update started on PD %s
0x012c	Information	Microcode update completed on PD %s
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Table A.2 Event Messages (Cont.)

Number	Type	Event Text
0x012d	Warning	Microcode update timeout on PD %s
0x012e	Warning	Microcode update failed on PD %s
0x012f	Information	Controller properties changed
0x0130	Information	Patrol Read properties changed
0x0131	Information	CC Schedule properties changed
0x0132	Information	Battery properties changed
0x0133	Warning	Periodic Battery Relearn is pending. Please initiate manual learn cycle as Automatic learn is not enabled
0x0134	Information	Drive security key created
0x0135	Information	Drive security key backed up
0x0136	Information	Drive security key from escrow, verified
0x0137	Information	Drive security key changed
0x0138	Warning	Drive security key, re-key operation failed
0x0139	Warning	Drive security key is invalid
0x013a	Information	Drive security key destroyed
0x013b	Warning	Drive security key from escrow is invalid
0x013c	Information	VD %s is now secured
0x013d	Warning	VD %s is partially secured
0x013e	Information	PD %s security activated
0x013f	Information	PD %s security disabled
0x0140	Information	PD %s is reprovisioned
0x0141	Information	PD %s security key changed
0x0142	Fatal	Security subsystem problems detected for PD %s
0x0143	Fatal	Controller cache pinned for missing or offline VD %s
0x0144	Fatal	Controller cache pinned for missing or offline VDs: %s
0x0145	Information	Controller cache discarded by user for VDs: %s
0x0146	Information	Controller cache destaged for VD %s
0x0147	Warning	Consistency Check started on an inconsistent VD %s
0x0148	Warning	Drive security key failure, cannot access secured configuration
0x0149	Warning	Drive security pass phrase from user is invalid
0x014a	Warning	Detected error with the remote battery connector cable
(Sheet 12 of 13)		

Table A.2 Event Messages (Cont.)

Number	Type	Event Text
0x014b	Information	Power state change on PD %s from %s to %s
0x014c	Information	Enclosure %s element (SES code 0x%x) status changed
0x014d	Information	PD %s rebuild not possible as HDD/SSD mix is not supported in a drive group
0x014e	Information	Copyback cannot be started on PD %s from %s, as HDD/SSD mix is not supported in a drive group
0x014f	Information	VD bad block table on %s is cleared
0x0150	Caution	SAS topology error: 0x%lx
0x0151	Information	A cluster of medium-level errors were corrected on the virtual drive
0x0152	Information	The controller requests a rescan of the host bus adapter
0x0153	Information	The controller repurposed and the factory defaults restored
0x0154	Information	Drive security key binding updated
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