Quantum



RAS Events and FRU Reference Guide

6-68318-02, Rev. A

StorNext RAS Events and FRU Reference Guide, 6-68318-02, March 2019, Product of USA.

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This document provides all possible relationships between RAS Event References and relevant components (for example, FC Switch, StorNext Storage manager, etc.).

The table on page 1 associates a RAS Event Reference with the component to which the RAS event corresponds and the severity of the issue. References (in the form of links) to additional information are also provided for each issue.

Each RAS Event Reference contains information on its numerical ID and a brief description of the event.



Note: This document applies to all versions of StorNext.

Audience

This manual is written for StorNext operators, system administrators, and field service engineers.

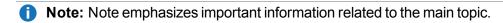
Notational Conventions

This manual uses the following conventions:

Convention	Example
User input is shown in bold monospace font.	./DARTinstall

Convention	Example
Computer output and command line examples are shown in monospace font.	./DARTinstall
User input variables are enclosed in angle brackets.	http:// <ip_address>/cgi-bin/stats</ip_address>
For UNIX and Linux commands, the command prompt is implied.	./DARTinstall
	is the same as
	# ./DARTinstall
File and directory names, menu commands, button names, and window names are shown in bold font.	/data/upload
Menu names separated by arrows indicate a sequence of menus to be navigated.	Utilities > Firmware

The following formats indicate important information:



Caution: Caution indicates potential hazards to equipment or data.

- **WARNING:** Warning indicates potential hazards to personal safety.
- Right side of the system Refers to the right side as you face the component being described.
- Left side of the system Refers to the left side as you face the component being described.
- Data sizes are reported in base 10 (decimal) rather than base 2¹⁰ (binary). For example:
 10,995, 116,277,769 Bytes are reported as 11.0 TB (decimal/1000). In binary, this value is 10 TiB (binary/1024).

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For the most up to date information on StorNext, see:

http://www.quantum.com/serviceandsupport/get-help/index.aspx#contact-support

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	+49 6131 324 185
Asia Pacific	+800-7826-8887 (toll free)
	+603-7953-3010

RAS Event Information

[ID] EVENT REFERENCE (Description)	COMPONENT	SEVERITY	MORE INFO
[0] SL_EVT_UNKNOWN_ERR (Unknown error)	Unknown	critical	Quantum Technical Assistance Center
[1] SL_EVT_TASK_DIED (Process/Task died (not restarted))	StorNext Storage Manager component	critical	Troubleshooting the StorNext Software
	StorNext File System component	critical	Troubleshooting the StorNext Software
	Virtual Library Interface component	critical	Troubleshooting the StorNext Software
	RAS component	critical	Troubleshooting the StorNext Software
	FC blade firmware	critical	Troubleshooting the StorNext Software
	UM firmware	critical	Troubleshooting the StorNext Software
	Database component	critical	Troubleshooting the StorNext Software
	I/O Server cluster	critical	Quantum Technical Assistance Center
[2] SL_EVT_SYS_RES_FAIL (System resource failure)	StorNext File System component	minor	System Resource Failure
	OS component	critical	Troubleshooting the StorNext Software
[3] SL_EVT_MEM_CORRUPT	I/O Server	major	Node Issues
(Memory corruption may occur)	FC blade firmware	critical	Quantum Technical Assistance Center
[5] SL_EVT_SYS_BACKUP_FAIL (System backup failed)	QUANTUM software	critical	Quantum Technical Assistance Center
	StorNext Storage Manager component	critical	Backup Errors
[6] SL_EVT_POST_FAIL (POST Failure)	I/O Server	critical	Node Issues
[7] SL_EVT_HW_FAULT	I/O Server	critical	Node Issues
(Hardware fault)	FC switch	critical	Fibre Channel Hardware Faults
	controller	critical	Quantum Technical Assistance Center
	storage subsystem chassis	critical	Storage Subsystem Chassis Conditions
	controller	critical	Quantum Technical Assistance Center
	JBOD chassis	critical	Quantum Technical Assistance Center
	Compression card	critical	Quantum Technical Assistance Center

[ID] EVENT REFERENCE (Description)	COMPONENT	SEVERITY	MORE INFO
	Control processor	critical	Fibre Channel Hardware Faults
	Switchblade	critical	Fibre Channel Hardware Faults
	Worldwide net	critical	Fibre Channel Hardware Faults
	Temperature sensor	critical	Fibre Channel Temperature Issues
	IPMI Controller	critical	IPMI Controller Failure
	storage subsystem tray	critical	Storage Subsystem Tray Hardware Faults
	Ethernet switch	critical	Port Failure
	Temperature sensor	critical	Network Temperature Issues
[8] SL_EVT_SW_FAULT (Software fault)	Compression card	critical	Quantum Technical Assistance Center
	StorNext Storage Manager component	critical	Troubleshooting the StorNext Software
	I/O Server	minor	Node Issues
[9] SL_EVT_NOT_PRESENT	I/O Server drive	critical	Boot Disk Absent
(Not present)	power supply	critical	System Board Power Supply Missing
	fan	critical	Quantum Technical Assistance Center
	power supply	critical	Fibre Channel Switch Power Supply Missing
	fan	critical	Fibre Channel Switch Fan
	SFP	critical	Fibre Channel Switch - SFP Not Present
	power supply	critical	Storage Subsystem Power Supply Conditions
	fan	critical	Storage Subsystem Fan Conditions
	power supply	critical	Quantum Technical Assistance Center
	fan	critical	Quantum Technical Assistance Center
	FC blade	critical	Quantum Technical Assistance Center
	UM	critical	Quantum Technical Assistance Center
	SFP	critical	Quantum Technical Assistance Center
	SFP	critical	0408-TP001.htm
	cleaning media with barcode	minor	Cleaning Media - No Cleaning Media Available

[ID] EVENT REFERENCE (Description)	COMPONENT	SEVERITY	MORE INFO
	Compression card	critical	Quantum Technical Assistance Center
	FC switch	critical	Fibre Channel Switch Issues
	Control processor	critical	Fibre Channel Switch Issues
	Switchblade	critical	Fibre Channel Switch Issues
	Worldwide net	critical	Fibre Channel Switch Issues
	Temperature sensor	critical	Fibre Channel Temperature Issues
	I/O Server Scsi device	critical	SAS/Fibre Channel HBA Issues
	IPMI Controller	critical	IPMI Controller Failure
	I/O Server	minor	Node Issues
	NIC ethernet port	critical	NIC Ethernet Issues
	Ethernet switch	critical	Network Link Failure
	Temperature sensor	critical	Network Temperature Issues
	fan	critical	Fan Not Found
	power supply	critical	Power Supply Not Found
[10] SL_EVT_OVERVOLTAGE	I/O Server	minor	Node Voltage Levels
(Over voltage)	power supply	critical	Fibre Channel Switch Supply Voltage
	power supply	critical	Power Supply Voltage Issues
[11] SL_EVT_UNDERVOLTAGE	I/O Server	minor	Node Voltage Levels
(Under voltage)	power supply	minor	Fibre Channel Switch Supply Voltage
	power supply	major	Power Supply Voltage Issues
[12] SL_EVT_FC_SYNC_FAIL (Sync failure)	FC switch	critical	Fibre Channel Switch Issues
[13] SL_EVT_FC_DIAG_FAIL (Diag failure)	FC switch	critical	Fibre Channel Switch Issues
[14] SL_EVT_LINK_FAIL (Link failure)	Ethernet port	critical	I/O Server Ethernet Issues
	FC switch	critical	Fibre Channel Switch Issues
	FC blade	critical	Quantum Technical Assistance Center
	generic storage subsystem	critical	Quantum Technical Assistance Center
	Physical Media Changer	critical	Quantum Technical Assistance Center
	tape drive	critical	Quantum Technical Assistance Center
	NIC ethernet port	critical	NIC Ethernet Issues

[ID] EVENT REFERENCE (Description)	COMPONENT	SEVERITY	MORE INFO
	IPS switch	critical	Quantum Technical Assistance Center
	I/O Server	minor	Node Issues
	Ethernet switch	critical	Network Link Failure
	storage subsystem fiber channel link	critical	Storage Subsystem Fibre Channel Link Conditions
[15] SL_EVT_PORT_FAIL (Port failure)	FC switch	critical	Fibre Channel Switch Issues
	Ethernet switch	critical	Port Failure
	StorNext File System component	critical	SNFS Port Failure
[16] SL_EVT_DEV_DISCONNECT (Device disconnected)	FC switch	critical	Fibre Channel Switch Issues
	FC blade	critical	Quantum Technical Assistance Center
[17] SL_EVT_PWR_FAIL (Power supply failure)	power supply	critical	System Board Power Supply Failure
	power supply	critical	Fibre Channel Switch Power Supply Failure
	power supply	critical	Storage Subsystem Power Supply Conditions
	power supply	critical	Quantum Technical Assistance Center
	power supply	critical	Power Supply Failure
[18] SL_EVT_FAN_LOW_SPEED	fan	major	Node Fan Speed
(Low speed (tach counts))	fan	major	Quantum Technical Assistance Center
	fan	minor	Fibre Channel Switch Fan Speed
	fan	major	Fan Speed Issues
[19] SL_EVT_FAN_FAIL (Fan failure)	fan	critical	Fibre Channel Switch Fan Failure
	fan	critical	Storage Subsystem Fan Conditions
	fan	critical	Quantum Technical Assistance Center
	fan	critical	<u>Fan Failure</u>
[20] SL_EVT_SWITCH_INVALID (Invalid switch type (non-QUANTUM))	FC switch	critical	Fibre Channel Switch Issues
	Ethernet switch	critical	Network Configuration Issues
[21] SL_EVT_RAID_INVALID (Invalid storage subsystem type (non-	controller	critical	Quantum Technical Assistance Center
QUANTUM))	controller	critical	Quantum Technical Assistance Center
[22] SL_EVT_DRV_FAIL (Drive failure)	drive	critical	Quantum Technical Assistance Center

[ID] EVENT REFERENCE (Description)	COMPONENT	SEVERITY	MORE INFO
	drive	critical	Quantum Technical Assistance Center
	I/O Server drive	critical	Boot Disk Failure Detected
[23] SL_EVT_DRV_REMOVED (Drive removed)	drive	critical	Quantum Technical Assistance Center
	drive	critical	Quantum Technical Assistance Center
	tape drive	critical	Tape Drive - Drive Removed
[24] SL_EVT_IO_ERR	I/O Server drive	minor	Boot Disk Absent
(IO Error)	StorNext File System component	minor	I/O Error
[25] SL_EVT_COMM_FAIL (Communication failure)	StorNext File System component	minor	Communication Failure
	Virtual Library Interface component	critical	Troubleshooting the StorNext Software
	controller	critical	Quantum Technical Assistance Center
	controller	critical	Quantum Technical Assistance Center
	SCSI Enclosure Services module	critical	Quantum Technical Assistance Center
	generic storage subsystem	critical	Quantum Technical Assistance Center
	Database component	critical	Troubleshooting the StorNext Software
	I/O Server	critical	Node Issues
	Ethernet switch	critical	Network Switch Communication Error
	FC switch	critical	Fibre Channel Switch Issues
[26] SL_EVT_COMM_ETHER_FAIL (Ethernet communication failure)	Ethernet port	critical	I/O Server Ethernet Issues
	FC switch	major	Quantum Technical Assistance Center
	FC blade	critical	Quantum Technical Assistance Center
	ИМ	critical	Quantum Technical Assistance Center
	generic storage subsystem	critical	Quantum Technical Assistance Center
	NIC ethernet port	critical	NIC Ethernet Issues
	IPS switch	critical	Quantum Technical Assistance Center
[27] SL_EVT_COMM_SERIAL_FAIL (Serial communication failure)	UM	critical	Quantum Technical Assistance Center
[29] SL_EVT_COMM_BUS_FAIL (Communication failure (internal bus))	Ethernet port	critical	I/O Server Ethernet Issues

[ID] EVENT REFERENCE (Description)	COMPONENT	SEVERITY	MORE INFO
	NIC ethernet port	critical	NIC Ethernet Issues
[30] SL_EVT_WRONG_FW_LEVEL (Wrong firmware level)	FC switch	critical	Quantum Technical Assistance Center
	controller	critical	Quantum Technical Assistance Center
	controller	critical	Quantum Technical Assistance Center
	FC blade firmware	critical	Quantum Technical Assistance Center
	UM firmware	critical	Quantum Technical Assistance Center
	Physical Media Changer	critical	Robotics - Wrong Firmware Level/Invalid Library Type/Configuration Failed
	tape drive	critical	Tape Drive - Wrong Firmware Level/Invalid Drive Type
	IPS switch	critical	Quantum Technical Assistance Center
	Ethernet switch	critical	Switch Firmware Version
[31] SL_EVT_LOWVOLTAGE (Low voltage)	I/O Server	critical	Node Voltage Levels
[32] SL_EVT_HIGHVOLTAGE (High voltage)	I/O Server	critical	Node Voltage Levels
[33] SL_EVT_LOWTEMP (Low temperature)	I/O Server	minor	Node Temperature
[34] SL_EVT_HIGHTEMP	I/O Server	critical	Node Temperature
(High temperature)	storage subsystem temperature sensor	critical	Quantum Technical Assistance Center
[35] SL_EVT_UNDERTEMP (Under temperature)	FC switch	minor	Fibre Channel Switch Temperature Errors
	controller	minor	Quantum Technical Assistance Center
	controller	minor	Quantum Technical Assistance Center
	Temperature sensor	minor	Fibre Channel Temperature Issues
	storage subsystem temperature sensor	minor	Quantum Technical Assistance Center
	I/O Server	minor	Node Temperature
	Temperature sensor	major	Network Temperature Issues
[36] SL_EVT_OVERTEMP	I/O Server	minor	Node Temperature
(Over temperature)	FC switch	minor	Fibre Channel Switch Temperature Errors
	controller	minor	Quantum Technical Assistance Center

[ID] EVENT REFERENCE (Description)	COMPONENT	SEVERITY	MORE INFO
	controller	minor	Quantum Technical Assistance Center
	FC blade	minor	Quantum Technical Assistance Center
	ИМ	minor	Quantum Technical Assistance Center
	Temperature sensor	major	Fibre Channel Temperature Issues
	storage subsystem temperature sensor	minor	Quantum Technical Assistance Center
	Temperature sensor	critical	Network Temperature Issues
[37] SL_EVT_PMC_INVALID (Invalid physical media changer)	Physical Media Changer	critical	Robotics - Wrong Firmware Level/Invalid Library Type/Configuration Failed
[38] SL_EVT_TAPEDRV_INVALID (Invalid physical tape drive)	tape drive	critical	Tape Drive - Wrong Firmware Level/Invalid Drive Type
[39] SL_EVT_DEV_INVALID (Invalid device detected)	FC switch	critical	Quantum Technical Assistance Center
[40] SL_EVT_CFG_NOT_REC (Configuration not recommended)	generic storage subsystem	minor	Quantum Technical Assistance Center
[41] SL_EVT_BADCFG_NOT_SUP (Configuration not supported)	QUANTUM software	minor	Quantum Technical Assistance Center
	StorNext Storage Manager component	critical	Affinity Configuration Violations
	StorNext File System component	critical	Configuration Not Supported
	FC switch	critical	Fibre Channel Switch Issues
	generic storage subsystem	critical	Quantum Technical Assistance Center
	IPS switch	critical	Quantum Technical Assistance Center
[42] SL_EVT_BADCFG_EVPS (Bad EVPS configuration)	FC blade firmware	critical	Quantum Technical Assistance Center
	Physical Media Changer	critical	Quantum Technical Assistance Center
[43] SL_EVT_BADCFG_FC_PORT (Bad FC port configuration)	FC blade	minor	Quantum Technical Assistance Center
	FC blade firmware	critical	Quantum Technical Assistance Center
	FC switch	critical	Fibre Channel Switch Issues
[44] SL_EVT_CABLE_FAIL (Cable failure)	FC cable	critical	Quantum Technical Assistance Center
	Ethernet cable	critical	Quantum Technical Assistance Center

[ID] EVENT REFERENCE (Description)	COMPONENT	SEVERITY	MORE INFO
	Ethernet cable	critical	Quantum Technical Assistance Center
	FC cable	critical	Quantum Technical Assistance Center
	FC cable	critical	Quantum Technical Assistance Center
	FC cable	critical	Quantum Technical Assistance Center
[45] SL_EVT_NO_GLOB_SPARE (Global spare not detected)	drive	major	Quantum Technical Assistance Center
	drive	major	Quantum Technical Assistance Center
	generic storage subsystem	major	Quantum Technical Assistance Center
[46] SL_EVT_DRV_RBLD_FAIL (Drive rebuild failure)	drive	critical	Quantum Technical Assistance Center
	drive	critical	Quantum Technical Assistance Center
	I/O Server drive	critical	Boot Disk Failure Detected
[47] SL_EVT_LOGDRV_FAIL (Logical drive failure (data loss))	drive	critical	Quantum Technical Assistance Center
	drive	critical	Quantum Technical Assistance Center
[48] SL_EVT_COMM_LUN_FAIL (LUN communication failure)	StorNext File System component	critical	I/O Error
	controller	critical	Quantum Technical Assistance Center
	generic storage subsystem	critical	Quantum Technical Assistance Center
	Physical Media Changer	critical	Robotics - Not Ready
	tape drive	critical	Tape Drive Alerts
[50] SL_EVT_PERF_DEGRADED (Performance degraded)	StorNext File System component	major	Troubleshooting the StorNext Software
	generic storage subsystem	major	Quantum Technical Assistance Center
	Database component	major	Quantum Technical Assistance Center
[51] SL_EVT_OP_FAIL (Operation failure)	StorNext Storage Manager component	critical	Software Resource Warning
	OS component	critical	Quantum Technical Assistance Center
	Database component	critical	Quantum Technical Assistance Center
	Blockpool	critical	Blockpool Errors
	General DXI Software	critical	Software Component Failure
	NAS services	critical	NAS Conditions

[52] SL_EVT_NO_RESPONSE (Not responding)	I/O Server StorNext File System component	critical	Node Issues
	Cystem component	critical	Troubleshooting the StorNext Software
	I/O Server cluster	critical	Quantum Technical Assistance Center
[53] SL_EVT_REPORT_ERR (Error reported)	generic storage subsystem	minor	Quantum Technical Assistance Center
	tape drive	critical	Tape Drive - Drive Reported Drive Error
	media with barcode	minor	Tape - Drive Reported Media Error
[54] SL_EVT_MOVE_FAIL (Move failure)	Physical Media Changer	major	Robotics - Move Failure
[55] SL_EVT_NOT_READY (Not ready)	Physical Media Changer	major	Robotics - Not Ready
	tape drive	major	Tape Drive Alerts
[56] SL_EVT_MAINT_FAIL (Maintenance operation failure)	tape drive	critical	Tape Drive - Cleaning of Drive Failed
[57] SL_EVT_MEDIA_EXPIRED (Expired media)	cleaning media with barcode	major	Cleaning Media - Expired
[58] SL_EVT_TAPE_ALERT	tape drive	minor	Tape Drive Alerts
(Tape alert)	media with barcode	minor	Tape - Drive Reported Media Error
[59] SL_EVT_DEV_CFG_FAIL (Failure to configure device)	Physical Media Changer	major	Robotics - Wrong Firmware Level/Invalid Library Type/Configuration Failed
	tape drive	major	Quantum Technical Assistance Center
[60] SL_EVT_VOLTAGE (Voltage outside specification)	power supply	minor	Quantum Technical Assistance Center
[61] SL_EVT_DB_CORRUPT (Database corruption)	Database component	critical	Quantum Technical Assistance Center
[62] SL_EVT_PMC_REMOVED (Physical media changer removed)	Physical Media Changer	critical	Robotics - Physical Tape Library Removed
[63] SL_EVT_MEDIA_DUPLICATE (Duplicate barcode)	StorNext Storage Manager component	critical	Duplicate Physical Media Found
	Replication	minor	Replication Conditions
[64] SL_EVT_MEDIA_UNKNOWN (Unknown media)	Physical Media Changer	minor	Possible Drive/Media Mount Discrepancy
[65] SL_EVT_SYS_RES_WARN (System resource warning)	StorNext Storage Manager component	minor	Software Resource Warning
	StorNext File System component	minor	Quota Limit or Fragmentation Warnings
	General DXI Software	minor	Resource Warning

[ID] EVENT REFERENCE (Description)	COMPONENT	SEVERITY	MORE INFO
	Space Manager daemon	minor	Disk Space Conditions
[66] SL_EVT_REPORT_WARN (Warning reported)	generic storage subsystem	minor	Quantum Technical Assistance Center
[67] SL_EVT_NOT_SUP (Not supported)	SFP	minor	Quantum Technical Assistance Center
	FC blade	minor	Quantum Technical Assistance Center
[68] SL_EVT_EMERG_TRUNCATION (Emergency truncation activated)	StorNext Storage Manager component	minor	Software Resource Warning
[69] SL_EVT_FILE_NOT_PRESENT (File not found)	QUANTUM software	minor	Quantum Technical Assistance Center
[70] SL_EVT_FILESYS_NOT_PRESENT (Filesystem not found)	QUANTUM software	minor	Quantum Technical Assistance Center
	StorNext File System component	critical	Quantum Technical Assistance Center
[71] SL_EVT_TAKEN_OFFLINE	tape drive	critical	Tape Drive Alerts
(taken offline)	Storage disk	critical	Storage Disk Taken Offline
	Object Storage	critical	Object Storage Component Taken Offline
[72] SL_EVT_LICENSE_FAIL (License failed)	StorNext Storage Manager component	critical	<u>License Failure</u>
	StorNext File System component	critical	SNFS License Failure
	Physical Media Changer	critical	<u>License Failure</u>
	tape drive	critical	<u>License Failure</u>
	FC switch	critical	Fibre Channel License Failure
	General DXI Software	critical	Exceeded License Capacity
[73] SL_EVT_FS_META_BAD (Filesystem metadata dump bad)	StorNext Storage Manager component	critical	Metadata Dump Failure
	StorNext File System component	minor	Bad File System Metadata Dump
[74] SL_EVT_VAULT_FAIL (Vaulting operation failure)	StorNext Storage Manager component	critical	Vault Failure
[75] SL_EVT_NO_MEDIA (No media found to satisfy request)	StorNext Storage Manager component	critical	Software Resource Warning
[76] SL_EVT_CKSUM_FAIL (A Checksum error has occurred)	StorNext Storage Manager component	critical	Checksum Error
[77] SL_EVT_CONFIGURATION_MISMATCH (Configuration mismatch)	I/O Server	critical	I/O Server - Configuration Mismatch

[ID] EVENT REFERENCE (Description)	COMPONENT	SEVERITY	MORE INFO
	I/O Server drive	critical	Quantum Technical Assistance Center
	StorNext Storage Manager component	critical	Invalid Configuration
	FC switch	critical	Fibre Channel Switch Issues
	IPS switch	critical	Quantum Technical Assistance Center
	NIC ethernet port	minor	NIC Ethernet Issues
[78] SL_EVT_INITIALIZATION_FAIL (Initialization failure)	StorNext File System component	critical	Initialization Failure
	General DXI Software	critical	Software Component Initialization Failure
[79] SL_EVT_FAILOVER_ERROR (Error during failover operation)	I/O Server cluster	critical	Quantum Technical Assistance Center
[80] SL_EVT_LICENCE_REQUIRED (Licence required)	StorNext File System component	minor	SNFS License Required
	FC switch	critical	Fibre Channel License Failure
	General DXI Software	critical	<u>License Failure</u>
[81] SL_EVT_MEDIA_NOT_FOUND (Media not found)	StorNext Storage Manager component	minor	Media Not Found
[82] SL_EVT_INVALID_LABEL (Label validation failure)	StorNext File System component	major	Label Validation Failure
	media with barcode	critical	Invalid Media Label Detected
[83] SL_EVT_ERROR_THRESHOLD (Error threshold exceeded)	media with barcode	critical	Media Suspect Threshold Count Exceeded
[84] SL_EVT_FORMAT_FAIL (Format Failure)	media with barcode	minor	Media Format Failure
[85] SL_EVT_FILE_ROLL_ERROR (An error occurred rolling the file)	StorNext Storage Manager component	minor	File Processing Failure
[86] SL_EVT_CORRUPT_FILE (A corrupt file was found)	StorNext Storage Manager component	minor	File Processing Failure
[87] SL_EVT_FAIL_OVER (Fail-over has occurred)	StorNext File System component	minor	File System Failover
[88] SL_EVT_LUN_CHANGE (LUN mapping changed)	StorNext File System component	minor	LUN Mapping Changed
[89] SL_EVT_DISK_ALLOC_FAIL (Failed to allocate disk space)	StorNext File System component	critical	Disk Space Allocation Failure
[90] SL_EVT_META_ERR (Metadata error)	StorNext File System component	minor	Metadata Inconsistency Detected
[91] SL_EVT_JOURNAL_ERR (Journaling error)	StorNext File System component	critical	Journaling Error Detected

[ID] EVENT REFERENCE (Description)	COMPONENT	SEVERITY	MORE INFO
[92] SL_EVT_SHUTDOWN_ERR (Error shutting down)	StorNext File System component	minor	Shutdown Error
[93] SL_EVT_CONNECTION_FAIL (Connection rejected)	StorNext File System component	major	Connection Rejected
[94] SL_EVT_LUN_NOT_FOUND (Missing LUNs)	StorNext File System component	critical	Missing LUNs
[95] SL_EVT_TEMP_DEGRADE (Nonrecoverable temperature)	I/O Server	critical	Node Temperature
[96] SL_EVT_VOLTAGE_DEGRADE (Nonrecoverable voltage)	I/O Server	critical	Node Voltage Levels
[97] SL_EVT_FAN_HIGH_SPEED (High speed (tach counts))	fan	critical	Fibre Channel Switch Fan Speed
	fan	minor	Node Fan Speed
	fan	critical	Fan Speed Issues
[98] SL_EVT_SPEED_CRITICAL (Critical speed)	fan	critical	Node Fan Speed
[99] SL_EVT_SPEED_DEGRADE (Nonrecoverable speed)	fan	critical	Node Fan Speed
[100] SL_EVT_INTRUSION (Intrusion)	I/O Server	minor	System Controller Accessed
[101] SL_EVT_STOPPED	I/O Server	critical	Node Issues
(Stopped)	I/O Server cluster	critical	Quantum Technical Assistance Center
[102] SL_EVT_CONFIG_FAIL (Configuration failure)	Ethernet switch	critical	Network Configuration Issues
[103] SL_EVT_AUTH_FAILED (Authentication failure)	Ethernet switch	critical	Network Authentication
[104] SL_EVT_EGP_FAIL (EGP failure)	Ethernet switch	critical	Network EGP Failure
[105] SL_EVT_MAC_CHANGED (MAC address variation)	Ethernet switch	critical	Network MAC Address Changed
[106] SL_EVT_REBOOT	Ethernet switch	minor	Network Reboot Issues
(Reboot)	FC switch	minor	Fibre Channel Reboot
	OS component	major	Operating System Delay
[107] SL_EVT_METADUMP_FAIL (Metadump failure)	Replication	critical	Replication Conditions
[108] SL_EVT_REPL_FAIL (Namespace replication failure)	Replication	critical	Replication Conditions
[109] SL_EVT_REPL_PAUSE (Replication paused)	Replication	critical	Replication Conditions
[110] SL_EVT_REPL_QBFS_FAIL (Replication QBFS failure)	Replication	critical	Replication Conditions
[111] SL_EVT_TRUNCATE (Truncation to free space started)	Space Manager daemon	minor	Disk Space Conditions
[112] SL_EVT_THROTTLE (I/O Write Low Threshold state)	Space Manager daemon	minor	Disk Space Conditions
[113] SL_EVT_NOSPACE (Stop IO due to no space)	Space Manager daemon	critical	Disk Space Conditions

[ID] EVENT REFERENCE (Description)	COMPONENT	SEVERITY	MORE INFO
	StorNext Storage Manager component	critical	Software Resource Warning
[114] SL_EVT_CTRL_PARITY (RPA Parity error)	controller	major	Storage Subsystem Controller Notifications
[115] SL_EVT_DEGRADED (Component is degraded)	storage subsystem volume	major	Storage Subsystem Volume Notifications
	I/O Server	minor	Node Issues
[116] SL_EVT_DISABLED (Component is disabled)	storage subsystem alarm	minor	Storage Subsystem Controller Alarm Conditions
[117] SL_EVT_DRV_BYPASSED (Drive is bypassed)	drive	minor	Storage Subsystem Drive Conditions
[118] SL_EVT_DRV_REPLACED (Drive is replaced)	drive	minor	Storage Subsystem Drive Conditions
[119] SL_EVT_DRV_UNRESPONSIVE (Drive is unresponsive)	drive	critical	Storage Subsystem Drive Conditions
[120] SL_EVT_FAILED (Component is failed)	controller	critical	Storage Subsystem Controller Notifications
	storage subsystem volume	critical	Storage Subsystem Volume Notifications
	storage subsystem ESM	critical	Storage Subsystem Enclosure Service Module (ESM) Conditions
	storage subsystem SFP	critical	Storage Subsystem Fibre Channel SFP Conditions
	storage subsystem battery	critical	Storage Subsystem Controller Battery Conditions
	storage subsystem GBIC	critical	Storage Subsystem Gigabit Interface Connector (GBIC) Conditions
	storage subsystem support CRU	critical	Storage Subsystem Customer Replaceable Unit (CRU) Conditions
[121] SL_EVT_IMPAIRED (Component is impaired)	storage subsystem volume	minor	Storage Subsystem Volume Notifications
[122] SL_EVT_LINK_DOWN (Link is down)	storage subsystem fiber channel link	critical	Storage Subsystem Fibre Channel Link Conditions
[123] SL_EVT_NEAR_EXPIRATION (Component is near expiration)	storage subsystem battery	minor	Storage Subsystem Controller Battery Conditions
[124] SL_EVT_NEEDS_ATTN (Needs attention)	controller	minor	Storage Subsystem Controller Notifications
	storage subsystem alarm	minor	Storage Subsystem Controller Alarm Conditions

[ID] EVENT REFERENCE (Description)	COMPONENT	SEVERITY	MORE INFO
[125] SL_EVT_NO_INPUT (Component is receiving no input)	storage subsystem support CRU	minor	Storage Subsystem Customer Replaceable Unit (CRU) Conditions
[126] SL_EVT_REMOVED (Component is removed)	controller	critical	Storage Subsystem Controller Notifications
	storage subsystem temperature sensor	minor	Storage Subsystem Sensor Conditions
	storage subsystem ESM	critical	Storage Subsystem Enclosure Service Module (ESM) Conditions
	storage subsystem SFP	critical	Storage Subsystem Fibre Channel SFP Conditions
	storage subsystem battery	critical	Storage Subsystem Controller Battery Conditions
	storage subsystem GBIC	critical	Storage Subsystem Gigabit Interface Connector (GBIC) Conditions
	storage subsystem alarm	critical	Storage Subsystem Controller Alarm Conditions
	storage subsystem support CRU	critical	Storage Subsystem Customer Replaceable Unit (CRU) Conditions
[127] SL_EVT_SERVICE_MODE (Component in service mode)	controller	major	Storage Subsystem Controller Notifications
[128] SL_EVT_SUSPENDED (Component is suspended)	controller	minor	Storage Subsystem Controller Notifications
[129] SL_EVT_SYS_RES_CRIT (System resource critical)	StorNext File System component	minor	File System or Metadata Capacity Warning
[130] SL_EVT_MUTED (Muted)	storage subsystem alarm	minor	Storage Subsystem Controller Alarm Conditions
[131] SL_EVT_DELAYED	NAS services	minor	NAS Conditions
(Delayed)	OS component	minor	Operating System Delay
[132] SL_EVT_REPL_TB_OST_FILE_ACTIVE (Trigger replication file was active so replication failed)	Replication	minor	Replication Conditions
[133] SL_EVT_REPL_TB_TD_FAILED (Trigger replication failed)	Replication	minor	Replication Conditions
[134] SL_EVT_REPL_TB_AUD_FAILED (Trigger replication recovery failed)	Replication	minor	Replication Conditions
[135] SL_EVT_REPL_TB_MSG_FAILED (Trigger replication message notification failed)	Replication	minor	Replication Conditions
[136] SL_EVT_LOW_SPACE (System is nearing full capacity)	Space Manager daemon	minor	Disk Space Conditions

[ID] EVENT REFERENCE (Description)	COMPONENT	SEVERITY	MORE INFO
[137] SL_EVT_HARESET_STATE_ERROR (HA Manager detected an unprotected mode)	StorNext File System component	minor	High Availability Administration Warnings
[138] SL_EVT_HARESET_UNEXPECTED_COMM (Unexpected or lost HA Manager communication between MDCs)	StorNext File System component	minor	High Availability: Communication Error
[139] SL_EVT_VIP_CONFIG (An error in ha_vip.txt file or vip_control)	StorNext File System component	minor	Virtual IP Configuration Warnings
[140] SL_EVT_REP_DEDUPE_COMM (Replication/Deduplication connectivity or comm. issue)	StorNext File System component	minor	Replication and Deduplication Communication Issues
[141] SL_EVT_REP_DEDUPE_SNPOLICY (Snpolicy reported error/warning)	StorNext File System component	minor	Snpolicy Issues
[142] SL_EVT_REP_DEDUPE_BFST (Interaction with blockpool error condition)	StorNext File System component	minor	Deduplication Blockpool Warnings
[143] SL_EVT_RVIO_CONFIG (An error in rvio config file(fsname_rvio.opt))	StorNext File System component	minor	Non-Rtio Bandwidth (RVIO) Central Configuration Warnings
[144] SL_EVT_WAS_CONFIG (An error in parsing OBJS config file (objs.conf))	StorNext File System component	critical	Object Storage (OBJS) Configuration Errors
[145] SL_EVT_WAS_COMM (Object Storage connectivity or communication issue)	StorNext File System component	critical	Object Storage (OBJS) Communication Errors
[146] SL_EVT_POLICY_TIMEOUT_CANCEL (Policy has timed out and is being cancelled)	StorNext Storage Manager component	minor	Policy Errors
[147] SL_EVT_DISK_CAP_FAIL (Disk usage exceeds capacity licenses)	StorNext File System component	major	Disk License Errors
[148] SL_EVT_BAD_DISK_CATALOG (Disk catalog missing or bad format)	StorNext File System component	major	Bad Disk Catalog Errors
[149] SL_EVT_NEED_NTP (Required time synchronization service is not running)	StorNext File System component	minor	Time Synchronization
[150] SL_EVT_LICENSE_CAPACITY_WARN (License capacity warning)	StorNext File System component	minor	SNFS License Failure

Affinity Configuration Violations

When a configuration violation occurs in the StorNext application, it must be repaired by stopping the system, editing the configuration, and then restarting the system. Below are specific configuration violations and recommended actions to repair each specific issue.

IF	THEN

There is more than one	You cannot have more than one affinity	on one stripe group.
affinity on one stripe group:	Examine all DSM configuration files (/usr/adic/DSM/config/*.cfgx). In any file that has the Storage Manager Flag set to true , and for every stripe group with more than one affinity, remove the extra affinities.	
The file system does not contain at least one non-	The file system has at least one affinity, one non-exclusive data stripe group.	and therefore must contain at least
exclusive data stripe group:	Examine all DSM configuration files (/usany file that has the Storage Manager Fl stripe group has the following configuration	ag set to true , make sure at least one
	Metadata No Journal No Exclusive No	
A file system contains both data stripe groups	A file system can contain data stripe groups without affinities, but it cannot co	•
with affinities and data stripe groups without affinities:	Examine all DSM configuration files (/usany file that has the Storage Manager Flevery stripe group has an affinity, or that affinity.	ag set to true , make sure that either
There are more than two	No more than two affinities across all managed file systems are allowed.	
affinities across all managed file systems:	Examine all DSM configuration files (/usr/adic/DSM/config/*.cfgx). For all of the configuration files that have the Storage Manager Flag set to true , change the stripe group Affinities so there are no more than a total of two.	
The number of affinities on managed file systems do not match for TSM and CVFS:	Examine all DSM configuration files (/usr/adic/DSM/config/*.cfgx). For all of the configuration files that have the Storage Manager Flag set to true , make sure the complete list of affinities matches the TSM affinity names found in the TIERDEF database table.	
TSM does not recognize the CVFS managed file system affinity name:	Examine all DSM configuration files (/usr/adic/DSM/config/*.cfgx). For all of the configuration files that have the Storage Manager Flag set to true , make sure the complete list of affinities matches the TIERNAME fields found in the TSM TIERDEF database table.	
An affinity in a policy class is not found in the TIERDEF table:	Make sure the non-zero elements in the TIERLIST field of the TSM CLASSDEF tables all match the TIERNUM fields in the TSM TIERDEF table.	
The problem IS resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has NOT been resolved:	Modify the ticket according to the troubleshooting steps taken.	
	Refer to <u>Analyzing Service Ticket</u> 2. Contact the Quantum Technical A	
	In the USA:	1+800-284-5101
	UK, France and Germany: EMEA:	00800 4 QUANTUM +44 1256 848 766
	On the Web:	http://www.quantum.com/support

Analyzing Service Tickets

Use this procedure to add information to a service ticket related to system troubleshooting, and to view the current status of a problem reported by StorNext. All modified entries are kept with the ticket number and ticket summary when the service ticket is closed.

1. Open and view a service ticket.

Refer to Viewing Service Tickets.

2. Click Analysis.

The **Ticket Analysis** screen appears.

3. Enter all relevant information regarding actions taken to resolve the issue, and then click Apply.

The Progress window appears, showing the status of the ticket being modified.

NOTE: Once the Progress window appears, you cannot cancel or stop this action. However, you can close the window by clicking the **X** in the upper-right corner of the window, but confirmation of success or failure is NOT shown.

IF	THEN
The Progress window shows Success :	The service ticket was successfully modified.
The Progress window shows Failure :	The ticket was NOT modified. To view the troubleshooting procedures, click View Recommended Actions . To view the error details, click Error Logs for information on why the ticket was not modified. To modify a service ticket, repeat Step 1 through Step 3.

BACK TO TABLE

Backup Errors

The backup status can be obtained on any currently running or last completed backup by running the snbackup -s command. The first line shows the overall status; the status line contains the same string viewed in the RAS message. The log file associated with that backup is shown beneath the status line, and shows any errors that have occurred. All errors in the log file are prefaced with ERR.

Below is a list of individual errors and recommended actions.

IF	THEN
Backup execution could not complete:	This is a generic failure message. Run the snbackup -s command and examine the failure.
There was an error connecting to database:	The database has not been started or is in a state that does not allow communication. Restart the database software.
There was an error opening the fs_sysparm file:	the /usr/adic/TSM/config/fs_sysparm file cannot be located. Contact the Quantum Technical Assistance Center for assistance.

TSM software is not running:	The StorNext TSM software is	s down. Restart the software.	
The backup staging directory could not be created:	 Verify that the file system used by the snbackup command is active and mounted. Make sure root user has permission to create new directories. 		
The system could not store exclude on <file system="">:</file>	Contact the Quantum Technical Assistance Center.		
The backup temporary directory could not be created:	 Verify that the file system used by the snbackup command is active and mounted. Make sure root user has permission to create new directories. 		
There were invalid arguments:	Check the usage by issuing the through the man page.	ne snbackup -h command, or	
Application of metadata journals failed:	The metadata for a file system Quantum Technical Assistance	n might be corrupt. Contact the ce Center.	
The file /usr/adic/DSM/config/fsmlist is missing:	A configuration file is missing from the file system software directory. Contact the Quantum Technical Assistance Center.		
The file /usr/adic/DSM/config/< file system>.cfg is missing:	A configuration file is missing from the file system software directory. Correct or provide a configuration file for this file system.		
The metadata dump file for <file system=""> is missing:</file>	A new file system metadata dump must be generated for the file system. Use the GUI to create the metadata dump file. (From the SNFS Home Page, choose Metadata Dump from the Admin menu.)		
All copies of files not stored:Store files to media failed:Store failed for backup files:	Run either the snbackup - s or the snbkpreport command, or through the GUI run a Backup Report to see which copy of the backups failed. Check all media and archives associated with that copy to determine the failure.		
	To run a Backup Report from the GUI:		
	 Access the SNFS home page. Choose Backups from the Reports menu. 		
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.		
The problem has <u>NOT</u> been resolved:	Modify the ticket according to the troubleshooting steps taken.		
	Refer to <u>Analyzing Service Tickets</u> . 2. Contact the Quantum Technical Assistance Center.		
	In the USA:	1+800-284-5101	
	UK, France and Germany:	00800 4 QUANTUM	
	EMEA:	+44 1256 848 766	
	On the Web:	http://www.quantum.com/support	

Backup Failed

Backup failure errors typically fall into one of three categories:

- Media Issues (for example, out of media, archive offline, no drives available, and so on)
- System Software Issues (for example, metadata could not be applied)
- File System Issues (for example, file system not mounted, fsm not running, and so on)

To determine the exact cause of the backup failure, see the error log included in the RAS notification, or the email notification. The error log contains the actual output of the snbackup command, and will help the Quantum Technical Assistance Center determine the exact cause of the backup failure.

The following table lists some common backup failure errors and the corresponding recommended actions. For errors not listed, contact the Quantum Technical Assistance Center.

IF	THEN
You receive one of the following media errors: "All copies of files not stored" "Store files to media failed" "Store failed for backup files"	Check all media, drives, and archives.
You receive one of the following system software errors: (1) "Error connecting to database" (2) "Error opening fs_sysparm file" (3) "TSM software not running" (4) "Cannot run backup on standby server"	Restart the StorNext software via the GUI. Before you can do a backup, the storage manager, the database, and the file system must be running. (1) This error indicates that the mysql database is not running. (2) This error indicates that SNFS was not installed correctly, or that the Configuration Wizard was terminated prematurely. (3) This error indicates that the storage manager is not running. (4) This error indicates an HA problem where a backup was run on the standby system.

You receive one of the following file system errors: "Could not set store exclude on \$stagingArea" "Backup staging directory could not be created" 1. Make sure the file system exists and is mounted, and that the file system manager "Backup temporary directory could not (FSM) is running. (This might require be created" restarting the file system to get FSM running and the file system mounted.) "Invalid arguments" (Caused during manual 2. Metadata issues might require re-dumping CLI invocation when incorrect syntax is used) metadata. This process involves unmounting "Application of metadata journals the file system, stopping the file system, failed" dumping metadata, restarting the file system, and remounting the file system. "Missing 3. If there is access loss to the file system (for \$ENV{'DSM_DIR'}/config/fsmlist file" example, you cannot create a directory,) (SNFS installation issue or corrupt filesystem) repeat step 1. "Missing \$ENV{'DSM DIR'}/config/\$fileSystem.cfg file" (Backup file system is missing or was deleted) "Missing or bad metadata dump file for You receive the error "backup execution 1. Make sure you have the email notification could not complete": you received after the backup failed. 2. Contact the Quantum Assistance Center and send them the email notification so they can determine the cause of the backup failure. The problem **IS** resolved: Close the service ticket. Refer to Closing Service Tickets. The problem has **NOT** been resolved: 1. Modify the ticket according to the troubleshooting steps taken. Refer to Analyzing Service Tickets. 2. Contact the Quantum Assistance Center. In the USA:1+800-284-5101 **UK, France** and 00800 4 QUANTUM Germany: EMEA: +44 1256 848 766 On the http://www.quantum.com/support Web:

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Recommended Actions

Bad Disk Catalog Errors

IF	THE	EN
The StorNext disk catalog, quantum_disk_catalog.dat, is missing or incorrectly formatted.	 Please contact the Quantum Technical Assistance Center to get a free correctly formatted disk catalog. 	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has <u>NOT</u> been resolved:	 Modify the ticket according to the troubleshooting steps taken. Refer to <u>Analyzing Service Tickets</u>. Contact the Quantum Technical Assistance Center. 	
	In the USA: UK, France and Germany: EMEA: On the Web:	1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support

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Bad File System Metadata Dump

IF	THEN	
The system has detected that a new metadata dump is required:	Run snmetadump for the affected file system as soon as possible. Note: This condition could occur if cvfsck or cvupdatefs was recently run, or if a Restore Journal error occured and the Restore Journal was shut down.	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has <u>NOT</u> been resolved:	 Modify the ticket according to the troubleshooting steps taken. Refer to <u>Analyzing Service Tickets</u>. Contact the Quantum Technical Assistance Center. 	
	In the USA: UK, France and Germany: EMEA: On the Web:	1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support

Blockpool Errors

IF	THEN	
BLOB or blocklet data is missing or corrupt	Contact the Quantum Technical Assistance Center.	
Cluster body (or file) is missing	Contact the Quantum Technical Assistance	e Center.
Cluster directory is missing	Contact the Quantum Technical Assistance	e Center.
Bulk file allocation failed	Contact the Quantum Technical Assistance	e Center.
Cluster reuse table reached cluster limit	Contact the Quantum Technical Assistance	e Center.
BLOB sub-tree repair failed	Contact the Quantum Technical Assistance Center.	
You receive a replication error message:	 Check the network connection between the source and the target machine. (An automatic attempt is made periodically to re-establish communication.) Check the status of the target machine. If the blockpool is down the target machine might be in degraded mode, so check for any RAS tickets related to degradation on the target. 	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem is NOT resolved:	Modify the ticket according to the troubleshooting steps taken. Refer to Analyzing Service Tickets.	
	2. Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

Boot Disk Absent

IF	THEN	
A boot disk is not present on the node:	Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

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Boot Disk Failure Detected

IF	THEN	
A boot disk has failed on the node:	Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
OR	UK, France and Germany:	00800 4 QUANTUM
A rebuild failed for the	EMEA:	+44 1256 848 766
boot disk:	On the Web:	http://www.quantum.com/support

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Capturing a System State

Use the Capture System State feature to obtain and preserve detailed information about the current StorNext state. The Capture State feature includes all viable logs for the hardware and software components. Use the Downloading a System State Capture feature to save the captured system state to a local or network drive for troubleshooting purposes.

- 1. Access the StorNext home page.
- 2. Choose Capture State from the Service menu.

The Service - Capture System State screen appears.

3. Click Capture.

The Progress window appears.



NOTE: Once the Progress window appears, you cannot cancel or stop this action. However, you can close the window by clicking the \mathbf{X} in the upper-right corner of the window, but confirmation of operation success or failure is NOT shown.

IF	THEN
The Progress window shows Success :	The system state was successfully captured.
The Progress window shows Failure :	The system state was NOT captured. To view the troubleshooting procedures, click View Recommended Actions . To view the error details, click Error Logs for information on why the system state was not captured. To capture an additional system state, repeat Steps 1 - 3.

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Recommended Actions

Checksum Error

When a checksum error occurs during a file retrieve operation, the error is generally due to a hardware failure in a tape drive, host bus adapter, or the cabling between them. The error can also be caused by damaged media. If the checksum error is due to a drive or media failure, there might be an associated "Tape Alert" service ticket.

IF	THEN
The drive or media is suspected:	 Close the ticket and retry the read/write operation on the original drive and media.
	2. Monitor operation for a reoccurrence of the ticket.
	Insert the suspect media into an alternate drive and retry the read/write operation.
	4. If the error follows the media, retire the media.
	If the error stays with the drive, contact the Quantum Technical Assistance Center to replace the drive.

The media is bad:	Copy the data to another piece of media.		
	2. Remove the original media from the library and discard.		
The host bus adapter is suspected:	Check the host's system log for	Check the host's system log for HBA-related errors.	
suspecteu.	2. Replace the HBA with a spare.		
	Close the ticket and retry the re and media.	ad/write operation on the original drive	
	4. Monitor operation for a reoccurre	ence of the ticket.	
	If the problem is unresolved, co Center.	ntact the Quantum Technical Assistance	
Cabling is suspected:	Check the cabling between the drive and the host bus adapter.		
	2. If the problem is unresolved, contact the Quantum Technical Assistance Center.		
There is an associated	Follow the instructions in the Tape Alert service ticket.		
"Tape Alert" service ticket:	If the problem is unresolved, co Center.	2. If the problem is unresolved, contact the Quantum Technical Assistance Center.	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.		
The problem has NOT been resolved:	Modify the ticket according to the troubleshooting steps taken.		
2001110001100	Refer to Analyzing Service Tickets.		
	Contact the Quantum Technical Assistance Center.		
	In the USA:	1+800-284-5101	
	UK, France and Germany:	00800 4 QUANTUM	
	EMEA:	+44 1256 848 766	
	On the Web:	http://www.quantum.com/support	

Cleaning Media - Expired

IF	THEN		
The service ticket indicates the cleaning media for the tape library has expired:	 If the tape library has exported the cleaning media to the entry port, remove the cleaning media. If the tape library has <u>NOT</u> exported the cleaning media to the entry port, export it. If no other cleaning media is available in the tape library, add a new one. 		
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.		
The problem has <u>NOT</u> been resolved:	Refer to Analyzing Service Ticke	 Modify the ticket according to the troubleshooting steps taken. Refer to Analyzing Service Tickets. Contact the Quantum Technical Assistance Center. In the USA: 1+800-284-5101 UK, France and Germany: 00800 4 QUANTUM EMEA: +44 1256 848 766 	

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Cleaning Media - No Cleaning Media Available

IF	THI	EN
The service ticket indicates the tape library does not have any available cleaning media:	Add new cleaning media to the tape library.	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has <u>NOT</u> been resolved:	Modify the ticket according to the troubleshooting steps taken.	
	Refer to Analyzing Service Tickets.	
	Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

Closing Service Tickets

Use this procedure to close a service ticket.

- NOTE: You can analyze a service ticket after it has been closed. For more information, refer to Analyzing Service Tickets.
- NOTE: Once the Progress window appears, you cannot cancel or stop this action. However, you can close the window by clicking on the **X** in the upper-right corner of the window, but confirmation of success or failure is NOT shown.

IF	THEN
The Progress window shows Success :	The service ticket was successfully closed.
1	The service ticket was NOT closed. To view the troubleshooting procedures, click View Recommended Actions . To view the error details, click Error Logs for information on why the ticket was not closed. To close a service ticket, repeat Step 1 through Step 3.

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Communication Failure

IF	THEN	
A client has	Check the health of the network used for metadata traffic.	
disconnected unexpectedly:	Also, inspect the FSM log and the syste controller to determine the root cause.	em logs on the clients and metadata
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has NOT been resolved:	Modify the ticket according to the troubleshooting steps taken.	
	Refer to Analyzing Service Tickets.	
	2. Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	ЕМЕА:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

Configuration Not Supported

IF	THEN		
The file system configuration file is corrupt, missing, or causes a syntax error to be reported:	Verify that a valid file system configuration file exists for the specified file system. Also, check the system logs for additional configuration file error details.		
The total number of FSMs running on metadata controllers under one fsnameservers domain exceeds the capacity limit of the heartbeat protocol.	Shorten file system names to seven characters or fewer to free up space for more FSMs, or reduce the number of FSMs.		
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.		
The problem has <u>NOT</u> been resolved:	 Modify the ticket according to the troubleshooting steps taken. Refer to <u>Analyzing Service Tickets</u>. Contact the Quantum Technical Assistance Center. 		
	In the USA:	1+800-284-5101	
	UK, France and Germany:	00800 4 QUANTUM	
	EMEA:	+44 1256 848 766	
	On the Web:	http://www.quantum.com/support	

Connection Rejected

IF	THEN		
A client connection has	Check the system logs to determine the root cause.		
been rejected unexpectedly:	If the problem is caused by exceeding the maximum number of connections, increase MaxConnections in the file system configuration file.		
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.		
The problem has <u>NOT</u> been resolved:	Modify the ticket according to the troubleshooting steps taken. Refer to Analyzing Service Tickets.		
	Contact the Quantum Technical Assistance Center.		
	In the USA:	1+800-284-5101	
	UK, France and Germany:	00800 4 QUANTUM	
	EMEA:	+44 1256 848 766	
	On the Web:	http://www.quantum.com/support	

Deduplication Blockpool Warnings

IF	THEN		
You receive notification of blockpool failed to start:	The specific failure is referenced in this message. Ensure that the filesystem of the blockpool is mounted, communication with host is established, and that blockpool is properly configured.		
	Consult the User's Guide for more information.		
You receive notification of blockpool link failure:	The specific replication error is referenced in this message. Verify the communication linkage with target is stable. Also verify that the blockpool software is running properly.		
	Consult the User's Guide for more information.		
You receive notification of VIP config while blockpool configured as localhost	In order for replication to function properly after a failover the blockpool must be configured to use the VIP address. For each managed file system's global policy, set "Address for Replication and Deduplication" to be the VIP address. This edit should be done whether deduplication is enabled or not.		
	Consult the User's Guide for more information.		
You receive notification concerning blockpool license capacity threshold:	Please contact Quantum for assistance.		
incense capacity threshold.	Consult the User's Guide for more information.		
The problem <u>IS</u> resolved:	lose the service ticket. Refer to Closing Service Tickets.		
The problem is NOT resolved:	Modify the ticket according to the troub	leshooting steps taken.	
	Refer to Analyzing Service Tickets. 2. Contact the Quantum Technical Assistance Center.		
	In the USA: UK, France and Germany: EMEA: On the Web:	1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support	

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Recommended Actions

Disk License Errors

IF	THI	EN
An MDC has exceeded the licensed disk storage capacity for the StorNext file systems. StorNext disk capacity licenses are required when using Quantum certified disks and for any disks not certified by Quantum. Quantum branded disks do not require a license. Please ensure that you have up to date licenses for the disk capacity managed by this MDC. This will help Quantum support understand your StorNext MDC configuration.	 Please visit http://www.quantum.com/StorNextDiskLicense to request updated disk capacity licenses. These disk capacity licenses will be provided free of charge. 	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to <u>Closing Service Tickets</u> .	
The problem has <u>NOT</u> been resolved:	1. Modify the ticket according to the Refer to Analyzing Service Ticker 2. Contact the Quantum Technical Analyzing Service Ticker 2. In the USA: UK, France and Germany: EMEA: On the Web:	<u>ts</u> .

Disk Space Allocation Failure

IF	THEN		
A disk space allocation has failed:	Free up disk space by removing unnecessary disk copies of files, or add disk capacity.		
	It is possible that the metadata or userdata LUNs are full and need to have capacity added. Use cvadmin to check LUN/Stripe Group capacity.		
	If the allocation failure is unexpected, contact the Quantum Technical Assistance Center.		
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.		
The problem has <u>NOT</u> been resolved:	Modify the ticket according to the troubleshooting steps taken. Refer to Analyzing Service Tickets.		
	Contact the Quantum Technical Assistance Center.		
	In the USA:	1+800-284-5101	
	UK, France and Germany:	00800 4 QUANTUM	
	EMEA:	+44 1256 848 766	
	On the Web:	http://www.quantum.com/support	

Disk Space Conditions

IF	THEN	
The device is approaching a low available disk space condition:	Increase storage capacity by freeing up disk space (deleting or moving files) or by adding additional disk capacity.	
The device is critically low on available disk space:	Increase storage capacity by freeing up disk space (deleting or moving files) or by adding additional disk capacity.	
The available disk space has crossed a soft or hard limit:	Increase storage capacity by freeing up disk space (by deleting or moving files) or by adding additional disk capacity.	
The problem is <u>NOT</u> resolved:	Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

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Downloading a System State Capture

Use the <u>Capturing a System State</u> feature to obtain and preserve detailed information about the current StorNext state. When the system state is captured, all viable logs for StorNext software components are saved and available for review and analysis. Use the Downloading a System State Capture feature to save the capture state to a local or network drive for system troubleshooting.

- 1. Access the StorNext home page.
- 2. Choose Capture State from the Service menu.

The **Service - Capture System State** screen appears.

- 3. Select a captured system state to download.
- 4. Click Download.

The **File Download** screen appears.

5. Click Save to save the zipped file to a local or network drive.

The Save As screen appears.

6. Click Save.

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Duplicate Physical Media Found

IF	THEN	
If the service ticket indicates that duplicate physical media has been found:	Remove the duplicate media using the library's operator panel. Refer to your library's reference manual for operator panel instructions.	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has NOT been resolved:	Modify the ticket according to the troubleshooting steps taken. Refer to Analyzing Service Tickets.	
	Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

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Exceeded License Capacity

IF	THEN	
A replication license violation is detected:	Contact the Quantum Technical Assistance Center to purchase additional licenses.	
OR A deduplication license violation is detected:	In the USA: UK, France and Germany: EMEA: On the Web:	1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support

Fan Failure

IF	THEN	
The fan fails:	Contact the Quantum Technical Assistance Center.	
	In the USA: 1+800-284-5101	
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

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Fan Not Found

IF	THEN	
The fan is not found:	Contact the Quantum Technical Assistance Center.	
	In the USA: 1+800-284-5101	
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

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Fan Speed Issues

IF	THEN	
The fan speed is low according to tach counts:	Contact the Quantum Technical Assistance C	enter. 1+800-284-5101
OR	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
The fan speed is high according to tach counts:	On the Web:	http://www.quantum.com/support

Fibre Channel Hardware Faults

IF	THEN	
Your system detects a hardware fault on a fibre channel switch blade:	Contact the Quantum Technical Assistance C	
	In the USA:	1+800-284-5101
OR	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
Your system detects a hardware fault on a fibre channel switch:	On the Web:	http://www.quantum.com/support

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Fibre Channel License Failure

IF	THEN	
The requested feature is not licensed on the fibre		
channel switch:	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

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Fibre Channel Reboot

IF	THEN	
A fibre channel switch is rebooting:	Wait a few minutes, and then retry the operation	on.
The problem is NOT resolved:	Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA: +44 1256 848 766	
	On the Web:	http://www.quantum.com/support

Fibre Channel Switch - SFP Not Present

IF	THEN	
The service ticket indicates that an SFP is not present in the Fibre Channel switch:	 Check the LED status of the Fibre Channel (FC) switch. Verify that the Fibre Channel cable is seated tightly. Try an available FC port. Try a different FC cable. Try an available SFP module: unplug the FC cable from the appropriate FC port. Remove the SFP module from the FC switch port. Position the SFP module so that it is oriented correctly, and then insert it into the appropriate port until the latching mechanism clicks. Plug the FC cable into the appropriate port. 	
The problem is NOT resolved:	Contact the Quantum Technical Assistance Contact the Quantum Technical Assista	enter. 1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support

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Fibre Channel Switch Fan Failure

IF	THEN	
A fibre channel switch fan fails:	Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

Fibre Channel Switch Fan Speed

IF	THEN	
A fibre channel switch fan speed has reached a critically low level:	Contact the Quantum Technical Assistance C	enter.
	In the USA:	1+800-284-5101
OR	UK, France and Germany:	00800 4 QUANTUM
A fibre channel switch fan	EMEA:	+44 1256 848 766
speed has reached a degraded state:	On the Web:	http://www.quantum.com/support

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Fibre Channel Switch Fan

IF	THEN	
A fibre channel switch fan is not present:	Contact the Quantum Technical Assistance Center.	
	In the USA: UK, France and Germany: EMEA: On the Web:	1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support

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Fibre Channel Switch Issues

IF	THEN	
The World Wide Name is missing on a fibre channel	Contact the Quantum Technical Assistance Center.	
switch:	In the USA:	1+800-284-5101
OR	UK, France and Germany: EMEA:	00800 4 QUANTUM +44 1256 848 766
A fibre channel switch blade is missing:	On the Web:	http://www.quantum.com/support

Fibre Channel Switch Power Supply Failure

IF	THEN	
A fibre channel switch power supply fails:	Contact the Quantum Technical Assistance Center.	
	In the USA: UK, France and Germany: EMEA: On the Web:	1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support

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Fibre Channel Switch Power Supply Missing

IF	THEN	
A power supply for the fiber channel switch is missing:	Contact the Quantum Technical Assistance C In the USA: UK, France and Germany: EMEA: On the Web:	enter. 1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support

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Fibre Channel Switch Supply Voltage

IF	THEN	
A fibre channel switch power supply voltage has reached a critically low level:	Contact the ©2019 Quantum Corporation – All Assistance Center.	rights reserved. Technical
OR	In the USA:	1+800-284-5101
Off	UK, France and Germany:	00800 4 QUANTUM
A fibre channel switch	EMEA:	+44 1256 848 766
power supply voltage has reached a critically high level:	On the Web:	http://www.quantum.com/support

Fibre Channel Switch Temperature Errors

IF	THEN	
A fibre channel switch temperature has reached a critically low level: OR A fibre channel switch temperature has reached a critically high level:	 Check the ambient temperature of the to ensure that it falls within the specifie When a component reports a temperature if any, spin freely and do not have except 	ed range. ure problem, verify that the fan(s),
The problem is NOT resolved:	Contact the Quantum Technical Assistance Contact the Quantum Technical Assista	enter. 1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support

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Fibre Channel Temperature Issues

IF	THEN	
A fibre channel temperature sensor is missing:		
OR		
A fibre channel switch temperature has reached a critcally low level:	Contact the Quantum Technical Assistance C	enter.
OR	In the USA: UK, France and Germany:	1+800-284-5101 00800 4 QUANTUM
A fibre channel switch temperature has reached a critically high level:	EMEA: On the Web:	+44 1256 848 766 http://www.quantum.com/support
OR		
The system detects a hardware fault on a fibre channel switch temperature sensor:		

File Processing Failure

IF	THEN	
A failure occurred while	See the error details for more complete information about the failure.	
trying to process an internal file.	Possible reasons for the failure:	
	 An attempt to roll the file (close the use) failed 	he current file and open a new one for
	A corruption in the file was detect	ted
	In general, the system can continue without intervention after one of these errors occurs. However, if you experience these failures on a regular basis it could be indicative of a more serious situation, and you should contact the Quantum Technical Assistance Center.	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has NOT been resolved:	Modify the ticket according to the troubleshooting steps taken.	
	Refer to Analyzing Service Tickets.	
	2. Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	ЕМЕА:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

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File System Failover

IF	THEN	
A file system failed over unexpectedly:	Inspect the system log and the FSM cvlog to determine the root cause.	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closin	g Service Tickets.
The problem has NOT been resolved:	 Modify the ticket according to the troubleshooting steps taken. Refer to <u>Analyzing Service Tickets</u>. Contact the Quantum Technical Assistance Center. 	
	In the USA: 1+800-284-5101 UK, France and Germany: 00800 4 QUANTUM EMEA: +44 1256 848 766 On the Web: http://www.quantum.com/support	

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File System or Metadata Capacity Warning

IF	THEN	
You receive a warning about your file system exceeding FsCapacityThreshold:	Add additional storage capacity or reduce file system usage.	
You receive a warning that the file system is running out of metadata capacity:	Add additional metadata storage capacity.	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem is <u>NOT</u> resolved:	 Modify the ticket according to the troubleshooting steps taken. Refer to <u>Analyzing Service Tickets</u>. Contact the Quantum Technical Assistance Center. 	
	In the USA: UK, France and Germany: EMEA: On the Web:	1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support

High Availability Administration Warnings

IF	THEN	
You receive a warning that HA reset timers are misconfigured:	For StorNext HA to function properly, the reset timer intervals must be equal on both HA peer machines. Reconfigure the incorrect value and restart Storage Manager. The HA Reset interval file is /usr/cvfs/config/ha_smith_interval.	
	Consult the User's Guide for more information	on.
You receive a warning that HA configuration has an invalid mode:	The StorNext HA manager, snhamgr, has detected an invalid mode. This can be caused by tampering or corruption of the mode file located on the system.	
	Consult the User's Guide for more information	on.
You receive a warning that HA configuration detected peer has peerdown set:	The StorNext HA manager, snhamgr, has detected a peer with peerdown set and has taken the action to lock the local node. The peerdown mode is stored locally but refers to the HA peer. If communication is received from the peer in this mode, both nodes take corrective action to transition out of config or single mode and to stop StorNext.	
	Consult the User's Guide for more information.	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem is <u>NOT</u> resolved:	 Modify the ticket according to the troub Refer to <u>Analyzing Service Tickets</u>. Contact the Quantum Technical Assistant In the USA: UK, France and Germany: 	ance Center. 1+800-284-5101 00800 4 QUANTUM
	EMEA: On the Web:	+44 1256 848 766 http://www.quantum.com/support

High Availability: Communication Error

IF	THEN	
You receive a warning that HA communication occurred in error:	The StorNext HA manager, snhamgr, has received communication from a peer machine in peerdown mode. To protect your data, the HA Reset action may have been triggered.	
	 Consult the User's Guide for more information 	on.
You receive a warning that HA communication did not occur as expected:	The StorNext HA manager, snhamgr, has failed to receive communication it expected to receive from its HA peer and the HA peer is in locked mode. When the secondary HA peer is in any mode other than peerdown, it will continue to communicate with the primary. To protect data, the local server must assume the peer to be in default mode and transitions out of config or single mode and stops StorNext.	
	Consult the User's Guide for more information.	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem is NOT resolved:	Modify the ticket according to the troubleshooting steps taken. Refer to Analyzing Service Tickets.	
	Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

I/O Error

Check LUN and disk path health, as well The cvfsdb "rpl" command can be used of file experiencing errors. For example, for snfs1, use the commmand: echo 'rpl 0x45d3909' cvfsdb snfs1	on the MDC to display the path to the
file experiencing errors. For example, for snfs1, use the commmand:	, , ,
echo 'rol 0x45d3909' cvfsdb snfs1	
Also, inspect the system logs for driver-l	evel I/O errors.
If the affected system is a Distributed Lan Client, also inspect the system logs on the Gateway systems.	
Note that RAS events for these errors are throttled so no further events from the specified system will be generated for one hour unless services are restarted. Therefore, system logs must be carefully monitored during this period for additional errors.	
Close the service ticket. Refer to Closing Service Tickets.	
 Modify the ticket according to the troubleshooting steps taken. Refer to <u>Analyzing Service Tickets</u>. Contact the Quantum Technical Assistance Center. 	
In the USA: UK, France and Germany: EMEA: On the Web:	1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support
If OI th re	the affected system is a Distributed Land the Gateway systems. Note that RAS events for these errors are specified system will be generated for estarted. Therefore, system logs must be additional errors. Close the service ticket. Refer to Closing 1. Modify the ticket according to the Refer to Analyzing Service Ticket 2. Contact the Quantum Technical A In the USA: UK, France and Germany: EMEA:

I/O Server - Configuration Mismatch

IF	THEN	
The service ticket indicates that there is an I/O server configuration mismatch:	One or more hardware components are either missing, inoperable or misconfigured. 1. Check all external Ethernet and Fibre Channel connections. 2. Ensure all external hardware devices are powered On and placed on-line.	
The service ticket indicates that there is an unsupported card in a slot:	 Shutdown the system Remove the unsupported card from the slot number shown in the ticket. If desired, install a supported card in that slot instead Reboot the system Consult your product documentation for a list of supported cards for your system model.	
The problem is <u>NOT</u> resolved:	Contact the Quantum Technical Assistance Contact the Quantum Technical Assista	enter. 1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support

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I/O Server Ethernet Issues

IF	THEN	
A node's Ethernet link is down:		
OR		
A communication error occurred on a node's Ethernet port:	 Check all Ethernet cables and make sure they are connected. Replace the cable. 	
OR		
You receive a message that an Ethernet port is not present:		
The problem is NOT	Contact the Quantum Technical Assistance Center.	
resolved:	In the USA: UK, France and Germany: EMEA: On the Web:	1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support

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IPMI Controller Failure

IF	THEN	
The IPMI controller fails:	Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

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Initialization Failure

IF	THEN	
An FSM or FSMPM process has failed to start: OR An attempt to mount an SNFS file sysem has failed:	Correct the system configuration as suggested by the event detail, or examine system logs to determine the root cause. If the detail text suggests a problem with starting the fsmpm process, run "cvlabel –l" to verify that disk scanning is working properly.	
All CVFS file systems are not mounted:	Mount the file systems that are not mounted.	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has <u>NOT</u> been resolved:	 Modify the ticket according to the troubleshooting steps taken. Refer to <u>Analyzing Service Tickets</u>. Contact the Quantum Technical Assistance Center. 	
	In the USA: UK, France and Germany: EMEA: On the Web:	1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support

Invalid Configuration

IF	THEN
The configuration file	Examine the configuration file to identify the missing entry.
containing the error is filesystems.config, and the error indicates that an entry is missing:	 If the entry should be included in the configuration file, add it to the file. If the entry should not be included in the configuration file, contact the Quantum Technical Assistance Center to clean up the database entries.
The list of managed file system names do not match for TSM and CVFS:	If the file system is supposed to be managed by TSM but is listed as not managed, do the following: 1. Stop StorNext. 2. Change the /usr/adic/DSM/config/ configuration file for that file system. Change the "storageManager" property from "false" to "true" Note: Verify with your system administrator that other settings in the configuration file are valid. 3. Restart StorNext. If the file system is not supposed to be managed by TSM but is listed as managed, contact the Quantum Technical Assistance Center for assistance locating and deleting all StorNext management data for all data on that file system.
Multiple tape drives have the same serial number and device path:	 Restart the StorNext software system, which will correct the internal records of the device path and serial number. If the problem persists, contact the Quantum Technical Assistance Center.
A configured tape drive has an invalid slot identifier:	Use the StorNext GUI to delete and then re-add the drive. OR Contact the Quantum Technical Assistance Center.
A configured tape drive has no detectable SCSI device path:	 Verify that the device is powered on. Verify that the device has not registered any errors. Verify that the device is physically connected by checking all cabling and connections. Verify that the device is correctly mapped to the host server. (Caution: If your system configuration allows you to logically remap all devices, verify that StorNext has been stopped prior to beginning the remapping. Restart StorNext after the remapping is complete.
A managed tape drive does not have a corresponding TSM CfgDir element:	 Use the StorNext GUI to delete and then re-add the drive. OR Contact the Quantum Technical Assistance Center.

You receive one of the following "Invalid Media Configuration" messages: • MSM does not have any Data media classes • A TSM Media type could not be converted to an MSM media type • MSM does not have any MediaCriteria for managed media	Contact the Quantum Technical Assistance Center for help further diagnosing the invalid media configuration.	
There are no archives, Object Storage namespaces or storage disks configured:	Use the StorNext GUI to add at least one physical archive, Object Storage namespace or storage disk to the system.	
A TSM Data Policy media type does not match any media existing in the system:	 If the data policy media type is correct, add that type of media to an archive that supports that media type. OR If the data policy media type is incorrect, change that policy's media type to the correct media type. 	
A media ID that exists in TSM does not exist in MSM:	 Visually locate the medium in a specific archive. Run the vsaudit command and verify that the medium now appears as a New Medium. Run the vsreclassify command, converting the medium from the ADDBLANK to the DATA media class. If the medium does not physically exist in any archive or if the above commands fail, contact the Quantum Technical Assistance Center. 	
The SNAPI configuration file is not valid:	Correct the errors in the configuration file /usr/adic/SNAPI/config/snapi.cfg.	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has <u>NOT</u> been resolved:	 Modify the ticket according to the troubleshooting steps taken. Refer to Analyzing Service Tickets. Contact the Quantum Technical Assistance Center. In the USA: 1+800-284-5101 UK, France and Germany:	
	On the Web:	http://www.quantum.com/support

Invalid Media Label Detected

IF	THEN	
A specific piece of media fails label validation:	Run fsCheckSlotMapping to ensure that all paths to tape drives are configured properly.	
	If fsCheckSlotMapping fails (indicating that tape drive paths are not configured properly):	
	 Reboot the server Change the media state to available using fschmedstate Try the failed operation again. 	
	If fsCheckSlotMapping runs success not the cause of the error:	sfully, determine whether the drive is
	 Use fschstate to place offline the tape drive for which the tape label verification failed. Use fschmedstate to change the media state to Available. Try the failed operation again. 	
	 If the operation succeeds: Use fschstate to place the original drive back online Contact the Quantum Technical Assistance Center about the suspected drive. If the operation fails again with a label validation failure: Use fschstate to place the original drive back online Contact the Quantum Technical Assistance Center about the failed media. 	
	If the problem persists:	
	 Use the <u>Capturing a System State</u> feature to create a system snapshot. Contact the Quantum Technical Assistance Center. 	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has NOT been resolved:	Modify the ticket according to the troubleshooting steps taken.	
	Refer to Analyzing Service Tickets.	
	Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

Journaling Error Detected

IF	THEN	
Journal recovery has failed:	Contact the Quantum Technical Assistance Center and open a service request.	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has <u>NOT</u> been resolved:	 Modify the ticket according to the troubleshooting steps taken. Refer to <u>Analyzing Service Tickets</u>. Contact the Quantum Technical Assistance Center. 	
	In the USA: UK, France and Germany: EMEA: On the Web:	1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support

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LUN Mapping Changed

IF	THEN	
A disk scan has detected a change in an existing LUN path:	If the LUN mapping change is unexpected, run the cvadmin "disks" and "paths" commands to confirm that all LUN paths are present. Also, check SAN integrity and inspect the system logs to determine the root cause.	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has <u>NOT</u> been resolved:	1. Modify the ticket according to the troubleshooting steps taken. Refer to Analyzing Service Tickets. 2. Contact the Quantum Technical Assistance Center. In the USA: UK, France and Germany: 00800 4 QUANTUM EMEA: +44 1256 848 766 On the Web: http://www.quantum.com/support	

Label Validation Failure

IF	THEN	
Disk label verification has failed:	Use the cvlabel command to check for corrupt, incorrect, or missing disk labels. Also inspect system logs for I/O errors, and check SAN integrity.	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has NOT been resolved:	 Modify the ticket according to the troubleshooting steps taken. Refer to <u>Analyzing Service Tickets</u>. Contact the Quantum Technical Assistance Center. 	
	In the USA: 1+800-284-5101 UK, France and Germany: 00800 4 QUANTUM EMEA: +44 1256 848 766 On the Web: http://www.quantum.com/support	

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License Failure

IF	THEN	
A replication license violation is detected:	Contact the Quantum Technical Assistance Center to purchase additional licenses.	
OR	In the USA:	1+800-284-5101
A deduction linears	UK, France and Germany:	00800 4 QUANTUM
A deduplication license violation is detected:	EMEA:	+44 1256 848 766
violation is detected.	On the Web:	http://www.quantum.com/support

Media Format Failure

IF	THEN	
The problem indicates that a particular piece of media failed to format because the volume ID (volid) was already in use:	Use the <u>Capturing a System State</u> Contact the Quantum Technical A	te feature to create a system snapshot. Assistance Center immediately.
The problem indicates that a particular piece of media failed to format:	 Validate that the problem was the media or the drive: Use fschmedstate to clean up the media's suspect and marked state. Use fschstate to take offline the drive in which the media failed to format. Attempt to reformat the media using fsformat. If the format fails again, the media is unusable and should be discarded. Otherwise the previous drive or connectivity might be problematic. Contact the Quantum Technical Assistance Center. 	
The problem persists:	 Use the <u>Capturing a System State</u> feature to create a system snapshot. Contact the Quantum Technical Assistance Center. 	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has <u>NOT</u> been resolved:	1. Modify the ticket according to the troubleshooting steps taken. Refer to Analyzing Service Tickets. 2. Contact the Quantum Technical Assistance Center. In the USA: UK, France and Germany: 00800 4 QUANTUM EMEA: +44 1256 848 766 On the Web: http://www.quantum.com/support	

Media Not Found

IF	THEN		
The system indicates that a particular piece of media is not found (unavailable):	 If the media is found in the library If the media is NOT found in the library's mailbox. StorNext home page, choose Relimenu.) If the problem persists: Use the <u>Capturing a System State</u> Restart StorNext. 	ne problem persists: 1. Use the Capturing a System State feature to create a system snapshot.	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.		
The problem has NOT been resolved:	1. Modify the ticket according to the Refer to Analyzing Service Ticker 2. Contact the Quantum Technical Analyzing Service Ticker In the USA: UK, France and Germany: EMEA: On the Web:	<u>ts</u> .	

Media Suspect Threshold Count Exceeded

StorNext allows media to be marked suspect a certain number of times before the threshold is met. (The default threshold is 3 times.) If the suspect threshold count is exceeded, media is treated as logically write protected.

IF	THEN	
If a particular piece of media was marked suspect and exceeded the suspect count threshold:	 Use the <u>Capturing a System State</u> feature to create a system snapshot. Contact the Quantum Technical Assistance Center. 	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has <u>NOT</u> been resolved:	Modify the ticket according to the troubleshooting steps taken.	
	Refer to Analyzing Service Tickets.	
	Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

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Metadata Dump Failure

IF	THEN

StorNext backup and restore operations (and also some file system scanning operations such as a rebuild policy,) require the existence of a current, valid metadata dump. Use the following procedure to perform a metadata dump. Unmount the system: 1. From the SNFS Home Page, choose Unmount from the Admin menu. 2. Select from the Mounted File Systems list the file system to unmount. 3. Click Unmount. Stop the file system: 1. From the SNFS Home Page, choose Start/Stop File System from the Admin menu. 2. Select from the Active File Systems list the file system you want to stop. 3. Click Stop. Perform the metadata dump: 1. From the SNFS Home Page, choose Metadata Dump from the Admin menu. 2. Select the file system on which to perform the metadata dump. 3. Click Apply.	
Close the service ticket. Refer to Closing Service Tickets.	
 Modify the ticket according to the troubleshooting steps taken. Refer to Analyzing Service Tickets. Contact the Quantum Technical Assistance Center. In the USA: 1+800-284-5101 UK, France and Germany:	
	operations such as a rebuild policy,) requested at a dump. Use the following proces. Unmount the system: 1. From the SNFS Home Page, chooled. Select from the Mounted File System. 2. Select from the SNFS Home Page, chooled Admin menu. 2. Select from the Active File Systemstop. 3. Click Stop. Perform the metadata dump: 1. From the SNFS Home Page, chooled menu. 2. Select the file system on which to select the file system on which to select the file system on which to select the dump is complete, restart and in the Use the service ticket. Refer to Closing to the Refer to Analyzing Service Ticket 2. Contact the Quantum Technical Assume In the USA: UK, France and Germany: EMEA:

Metadata Inconsistency Detected

IF	THEN	
The FSM has detected a	Check SAN integrity and inspect the system logs for I/O errors.	
metadata inconsistency:	If the SAN is healthy, run cvfsck on the affected file system at the earliest convenient opportunity.	
On a managed file	Check the state of the shared HA or local file system containing the event files.	
system, the FSM has a problem creating or rolling	Check that the components of the provided path are intact and accessible.	
an event file:	Check the system logs for other errors and more detailed information.	
	In general, the system can continue without intervention after one of these errors occurs. However, if you experience these failures on a regular basis it could be indicative of a more serious situation, and you should contact the Quantum Technical Assistance Center.	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has NOT been resolved:	Modify the ticket according to the troubleshooting steps taken.	
	Refer to Analyzing Service Ticket	<u>ts</u> .
	2. Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

Missing LUNs

IF	THEN	
A client fails to mount because a LUN is	Check the system logs to determine the root cause.	
missing:	Run the cvadmin "disks" and "paths" commands, and then check for missing LUNs.	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has <u>NOT</u> been resolved:	Modify the ticket according to the troubleshooting steps taken. Refer to Analyzing Service Tickets. Output the Output Tooksiss Assistance Center.	
	Contact the Quantum Technical Assistance Center. In the USA: 1+800-284-5101	
	UK, France and Germany: EMEA: On the Web:	00800 4 QUANTUM +44 1256 848 766 http://www.guantum.com/support
	On the Web.	mtp.//www.quantum.com/support

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NAS Conditions

IF	THEN	
A service was delayed:	The synchronization sevice failed, but will be retried automatically.	
The NAS software component indicates failure while trying to perform the indicated operation: OR The problem is NOT resolved:	Contact the Quantum Technical Assistance Contact the Quantum Technical Assista	enter. 1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support

NIC Ethernet Issues

IF	THEN	
A node's ethernet link is down:		
OR		
A communication error occurred on a node's ethernet port:	Check all ethernet cables.	
OR		
You receive a message that an ethernet port is not present:		
The service ticket indicates there is a bond having slaves with mismatching run-time	For all the slaves of the bond mentioned in the ticket, set the run-time speed of each slave port to the desired identical speed as all the other slaves in the bond. The run-time speed of a port of a NIC card that has support for multiple speeds is determined by one of the following:	
speeds:	 The speed of the SFP installed in the port The speed that is set for the cable, via the switch, connected to the port. 	
	Consult your product documentation for detailed information on how to properly set the run-time speed a NIC card port.	
The problem is <u>NOT</u> resolved:	Contact the Quantum Technical Assistance Center.	
resolved.	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

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Network Authentication

IF	THEN	
An authentication failure occurs after trying to log in	Contact the Quantum Technical Assistance C	enter.
to the network switch:	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

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Network Configuration Issues

IF	THEN	
Your system detects an Ethernet switch configuration mismatch:		
OR	Contact the Quantum Technical Assistance C	enter.
The network switch configuration has changed and is not set to the default factory settings: OR	In the USA: UK, France and Germany: EMEA: On the Web:	1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support
The network switch in an invalid (non-Quantum) type:		

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Network EGP Failure

IF	THEN	
Your system detects an EGP failure on a network	Contact the Quantum Technical Assistance Center. In the USA: 1+800-284-5101	
switch:	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

Network Link Failure

IF	THEN		
An Ethernet port link is down on the network switch:			
OR	Check all Ethernet cables.		
You receive a message that a port link is not present:			
The problem is NOT	Contact the Quantum Technical Assistance C	Contact the Quantum Technical Assistance Center.	
resolved:	In the USA:	1+800-284-5101	
	UK, France and Germany:	00800 4 QUANTUM	
	EMEA:	+44 1256 848 766	
	On the Web:	http://www.quantum.com/support	

BACK TO TABLE

Network MAC Address Changed

IF	THEN	
Your system detects that the MAC address of the	e	
switch has changed:	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

Network Reboot Issues

IF	THEN	
The network switch is rebooting:	Wait a few minutes, and then retry the operation.	
The problem is <u>NOT</u> resolved:	Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
	UK, France and Germany: 00800 4 QUANTUM	
	EMEA: +44 1256 848 766	
	On the Web:	http://www.quantum.com/support

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Network Switch Communication Error

IF	THEN	
A communication error was detected on the network switch:	Check all Ethernet cables and connections, and also make sure the switch is powered up.	
The problem is <u>NOT</u> resolved:	Contact the Quantum Technical Assistance Center.	
resolved.	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

Network Temperature Issues

IF	THEN	
There is no temperature reading:		
OR	Contact the Quantum Technical Assistance C	enter.
The temperature is too low:	In the USA: UK, France and Germany:	1+800-284-5101 00800 4 QUANTUM
OR	EMEA:	+44 1256 848 766
The temperature is too high:	On the Web:	http://www.quantum.com/support
OR		
There is a temperature- related hardware fault:		

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Node Fan Speed

IF	THEN	
A node's fan speed has reached a critcally high	Contact the Quantum Technical Assistance Center.	
level:	In the USA:	1+800-284-5101
OD	UK, France and Germany:	00800 4 QUANTUM
OR	EMEA:	+44 1256 848 766
A node's fan has reached a degraded state:	On the Web:	http://www.quantum.com/support

Node Issues

IF	THEN	
A node's Ethernet link is down:	Check all ethernet cables.	
A node is not present in the cluster:	Check network connections between the node and switch.	
A node is degraded:	Using the GUI, try to reset the node.	
A node has stopped or been shutdown:		
OR		
A node has a communication error:	Contact the Quantum Technical Assistance Center. In the USA: 1+800-284-5101	
OR	UK, France and Germany: EMEA:	00800 4 QUANTUM +44 1256 848 766
A node has a software fault:	On the Web:	http://www.quantum.com/support
OR		
The problem is <u>NOT</u> resolved:		

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Node Temperature

IF	THEN	
A node's temperature has reached a critically high	Contact the Quantum Technical Assistance Center.	
level:	In the USA:	1+800-284-5101
OD	UK, France and Germany:	00800 4 QUANTUM
OR	EMEA:	+44 1256 848 766
A node's temperature is in a degraded state:	On the Web:	http://www.quantum.com/support

Node Voltage Levels

IF	THEN	
A node's voltage level has reached a critically high level:		
OR	Contact the Quantum Technical Assistance C	enter.
A node's voltage level has reached a degraded state: OR	In the USA: UK, France and Germany: EMEA: On the Web:	1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support
A node's voltage level has reached a critically low level:		

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Non-Rtio Bandwidth (RVIO) Central Configuration Warnings

IF	THEN	
You receive a warning that Parse_ClientCfg failed:	Function Parse_ClientCfg parses the rvio central configuration file(fsname_rvio.opt), which is used to reserve bandwidth for non-rtio clients. A properly formatted line has client ip address, bw-type (qosios or qosmb) and a list of bandwidth reservation for stripe groups. Inspect /usr/cvfs/examples/rvio.example and correct errors. • Consult the User's Guide for more information.	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem is <u>NOT</u> resolved:	Modify the ticket according to the troubleshooting steps taken. Refer to Analyzing Service Tickets.	
	2. Contact the Quantum Technical Assistance Center.	
	In the USA: UK, France and Germany: EMEA: On the Web:	1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support

Object Storage (OBJS) Communication Errors

IF	THEN
You received an error indicating that the server couldn't be connected:	Check whether the controller's IP address and port number in objs.conf are correct. Check whether the server and the clientdaemon on the server are reachable.
	Consult the man page "objs.conf" for more information.
You received an error indicating that the hostname couldn't be resolved:	Check whether the access controller's hostname in the configuration file objs.conf is correct. • Consult the man page "objs.conf" for more information.
You received an error indicating that the access to a remote resource was denied:	Check to make sure the user configured in objs.conf has proper permission to the accessed namespace.
	Consult man page "objs.conf" for more information.
You received a send or receive error:	Check to make sure the network is working properly.
You received an error indicating that the operation was aborted by callback:	Check whether the server's clientdaemon process is running properly. If the server is too busy, increase the value of parameter objs_transfertimeout in objs.conf. Then run snpolicy command "/usr/cvfs/bin/snpolicy - reloadconfig=pathname -config=objs" to reload the configuration.
	Consult the man page "objs.conf" for more information.
You received a SSL connect error:	Check whether https is supported on the controller. If it is not supported, change the parameter use_https in objs.conf to false and change other related parameters. Once the configuration parameters are corrected, run snpolicy command "/usr/cvfs/bin/snpolicy -reloadconfig=pathname -config=objs" to reload the configuration.
	Consult the man page "objs.conf" for more information.
You received an error that indicated a certificate problem or verification failure:	Check to make sure the correct certificate is imported to local system and the certificate parameters cacert or cacertfile are properly configured. If the certificate doesn't have the ip or hostname configured in objs.conf in the common name or alternative subject name list, set parameter server_auth to 2 so only peer but not host is verified. Reload the configuration if parameters in objs.conf have been changed.
	Consult the man page "objs.conf" for more information.
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.

The problem is NOT resolved:	 Modify the ticket according to the troubleshooting steps taken. Refer to <u>Analyzing Service Tickets</u>. Contact the Quantum Technical Assistance Center. In the USA: 1+800-284-5101 	
i occivca.		
	UK, France and Germany:	00800 4 QUANTUM
	EMEA: On the Web:	+44 1256 848 766 http://www.quantum.com/support

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Object Storage (OBJS) Configuration Errors

IF	THEN
You received an error that OBJS config file open or read failed:	Check the config file /usr/cvfs/config/objs.conf. Ensure it is a regular text file that can be opened and read by the root user.
You received an error that OBJS config failed due to verification failure:	Function parse_objs_config_file parses the Object Storage configuration file(/usr/cvfs/config/objs.conf), which is used to define OBJS configuration information for StorNext Snpolicyd daemon to access. Check whether the Object Storage Provider is supported, access hosts and namespaces are properly configured. Once the configuration parameters are corrected, run snpolicy command "/usr/cvfs/bin/snpolicy -reloadconfig=pathname -config=objs" to reload the configuration. • Consult the man page "objs.conf" for more information.
You received an error that indicated unknown Object Storage provider:	Function parse_objs_config_file parses the Object Storage configuration file. Check whether there is any spelling error in the provider's name. Currently only "lattus" is supported. Once the configuration parameter is corrected, run snpolicy command "/usr/cvfs/bin/snpolicy -reloadconfig=pathname -config=objs" to reload the configuration.
	Consult man page "objs.conf" for more information.
You received an error that too many hosts specified in OBJS config:	Function parse_objs_config_file parses the Object Storage configuration file. Reduce the number of access hosts in the config file. Currently the number of access hosts can reach up to 64. Once the configuration parameter is corrected, run snpolicy command "/usr/cvfs/bin/snpolicy -reloadconfig=pathname -config=objs" to reload the configuration.
	Consult the man page "objs.conf" for more information.

You received an error that indicated incorrect ports specified:	Function parse_objs_config_file parses the Object Storage configuration file. Check any spelling errors for port number. You can specify a range of ports separated by "-", but the second port should not be less than the first one. Once the configuration parameter is corrected, run snpolicy command "/usr/cvfs/bin/snpolicy -reloadconfig=pathname -config=objs" to reload the configuration.	
	Consult the man page "objs.conf" for more ir	nformation.
You received an error that too many namespaces specified in OBJS config:	Function parse_objs_config_file parses the Object Storage configuration file. Reduce the number of namespaces in the config file. The max number of namespaces is 16. Once the configuration parameter is corrected, run snpolicy command "/usr/cvfs/bin/snpolicy -reloadconfig=pathname -config=objs" to reload the configuration.	
	Consult the man page "objs.conf" for more ir	nformation.
You received an error that indicated unknown authentication method:	Function parse_objs_config_file parses the Object Storage configuration file. Check whether there is any spelling error. Currently the supported authentication methods are none and digest. Once the configuration parameter is corrected, run snpolicy command "/usr/cvfs/bin/snpolicy -reloadconfig=pathname -config=objs" to reload the configuration.	
	Consult the man page "objs.conf" for more information.	
You received an error that OBJS ID should be defined first:	Function parse_objs_config_file parses the Object Storage configuration file. For every OBJS configuration in the config file, parameter "objs_id" should be configured first. Once the configuration parameter is corrected, run snpolicy command "/usr/cvfs/bin/snpolicy -reloadconfig=pathname -config=objs" to reload the configuration. • Consult the man page "objs.conf" for more information.	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem is NOT resolved:	Modify the ticket according to the troubleshooting steps taken. Refer to Analyzing Service Tickets. Contact the Quantum Technical Assistance Center.	
	In the USA: UK, France and Germany: EMEA: On the Web:	1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support

Object Storage Component Taken Offline

IF	THEN	
An Object Storage component exceeds its failure threshold and is taken offline:	 Attempt to bring the component back online. This will verify connectivity to the device. Verify the Object Storage components have been configured properly within Stornext. Verify the Object Storage appliance is still running. Make sure the connections to the Object Storage appliance are secure. 	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has <u>NOT</u> been resolved:	 Modify the ticket according to the troubleshooting steps taken. Refer to <u>Analyzing Service Tickets</u>. Contact the Quantum Technical Assistance Center. 	
	In the USA: UK, France and Germany: EMEA: On the Web:	1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support

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Operating System Delay

IF	THEN	
An unclean shutdown was detected.	The host has been restarted. Verify that all applications are running as expected.	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has <u>NOT</u> been resolved:	Close the service ticket. Refer to Closing Service Tickets. 1. Modify the ticket according to the troubleshooting steps taken. Refer to Analyzing Service Tickets. 2. Contact the Quantum Technical Assistance Center. In the USA: UK, France and Germany: 00800 4 QUANTUM EMEA: +44 1256 848 766 On the Web: http://www.quantum.com/support	

Operating System Delay

IF	THEN	
A long delay was observed when performing host resolution:	Ensure that name resolution services (DNS, NIS, etc.) are accessible and properly configured for looking up the IP address or hostname specified in the event detail.	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has <u>NOT</u> been resolved:	 Modify the ticket according to the troubleshooting steps taken. Refer to <u>Analyzing Service Tickets</u>. Contact the Quantum Technical Assistance Center. 	
	In the USA: UK, France and Germany: EMEA: On the Web: 1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support	

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Recommended Actions

Policy Errors

IF	THEN	
If the service ticket indicates that the policy has timed out and is being cancelled, and the system performance is temporarily degraded, which is causing slow I/O such that a mover is taking longer than expected to complete	 Identify and fix the cause of system performance degradation. OR For store policies (fspolicy -s), increase the POL_STORE_RESP_ABORT_TIME system parameter setting. Reference the /usr/adic/TSM/config/fs_sysparm.README file for instructions on changing the parameter. OR 	
	 For relocate policies (fspolicy -r), increase the POL_RELOC_RESP_ABORT_TIME system parameter setting. Reference the /usr/adic/TSM/config/fs_sysparm.README file for instructions on changing the parameter. 	

If the service ticket indicates that the policy has timed out and is being cancelled, and a file is too large, such that it will always take longer than policy waits for I/O operations to complete	 Decrease the MED_SEG_OVER_XXX system parameter where XXX is the media type that the file is being stored to. OR For store policies (fspolicy -s), increase the POL_STORE_RESP_ABORT_TIME system parameter setting. Reference the /usr/adic/TSM/config/fs_sysparm.README file for instructions on changing the parameter.
	 For relocate policies (fspolicy -r), increase the POL_RELOC_RESP_ABORT_TIME system parameter setting. Reference the /usr/adic/TSM/config/fs_sysparm.README file for instructions on changing the parameter.
If the service ticket indicates that the policy has timed out and is being cancelled, and a mover process is hung, such that it can no longer perform I/O	 Run the fs_fmoverc process manually, to kill and recover from the hung fs_fmover process. Reference the fs_fmoverc(1) man page for further information. OR Restart the TSM subsystem. All needed fs_fmoverc processes will automatically be launched at that time, to kill and recover from all hung fs_fmover processes.
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.
The problem has NOT been resolved:	 Modify the ticket according to the troubleshooting steps taken. Refer to <u>Analyzing Service Tickets</u>. Contact the Quantum Technical Assistance Center. In the USA: 1+800-284-5101
	UK, France and Germany: 00800 4 QUANTUM EMEA: +44 1256 848 766 On the Web: http://www.quantum.com/support

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Port Failure

IF	THEN	
Your system detects an Ethernet port failure on the	Contact the Quantum Technical Assistance Center.	
network switch:	In the USA:	1+800-284-5101
OD	UK, France and Germany:	00800 4 QUANTUM
OR	EMEA:	+44 1256 848 766
Your system detects a hardware fault:	On the Web:	http://www.quantum.com/support

Possible Drive/Media Mount Discrepancy

IF	THEN	
A service ticket indicates the drive is mounted and the media mounted in the drive cannot be verified:	This is a caution regarding drive and media mounts, and might require user intervention. In this situation, StorNext assigns to the unverified media the barcode (media ID) of the last tape mounted in the drive, and continues to operate.	
	If StorNext cannot dismount this drive a	t a later time, dismount it manually.
	 Check the drive to see if the media has been ejected. If the media has not been ejected, press Eject on the drive. Try to dismount the drive again using the GUI. (From the SNSM home page, choose Library > Dismount from the Media menu.) If the dismount fails using the GUI, dismount the drive using the operator panel on the physical library. Using the GUI, perform an audit to make sure that the Remap Audit checkbox is selected. (From the SNSM home page, choose Library > Audit Library from the Admin menu.) 	
A service ticket indicates the drive is NOT mounted and the media mounted in the drive cannot be verified:	 Dismount the drive via the operator panel on the physical library. Using the GUI, perform an audit to making sure that the Remap Audit checkbox is selected. (From the SNSM home page, choose Library > Audit Library from the Admin menu.) 	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has NOT been resolved:	1. Modify the ticket according to the troubleshooting steps taken. Refer to Analyzing Service Tickets. 2. Contact the Quantum Technical Assistance Center. In the USA: UK, France and Germany: 00800 4 QUANTUM EMEA: +44 1256 848 766 On the Web: http://www.quantum.com/support	

Power Supply Failure

IF	THEN	
The power supply fails:	Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

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Power Supply Not Found

IF	THEN	
A power supply is not found:	Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

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Power Supply Voltage Issues

IF	THEN	
The power supply voltage is too low:	Contact the Quantum Technical Assistance C	enter.
10 too low.	In the USA:	1+800-284-5101
OR	UK, France and Germany:	00800 4 QUANTUM
The newer supply veltage	EMEA:	+44 1256 848 766
The power supply voltage is too high:	On the Web:	http://www.quantum.com/support

Quota Limit or Fragmentation Warnings

IF	THEN	
You receive a warning that the quota hard limit is reached for a user:	Either increase the user's quota, or notify the user.	
You receive a warning that fragmentation has been detected in an inode:	 Consult the snfsdefrag man page for instructions on performing fragmentation analysis and defragmenting files. See ExtentCountThreshold in the cvfs_config documentation for information on adjusting this RAS event. 	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem is NOT resolved:	1. Modify the ticket according to the troubleshooting steps taken. Refer to Analyzing Service Tickets. 2. Contact the Quantum Technical Assistance Center. In the USA: 1+800-284-5101 UK, France and Germany: 00800 4 QUANTUM EMEA: +44 1256 848 766 On the Web: http://www.quantum.com/support	

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Quantum Technical Assistance Center

If you require product assistance beyond the recommendations provided, contact the Quantum Technical Assistance Center.

In the USA: 1+800-284-5101
UK, France and Germany: 00800 4 QUANTUM
EMEA: +44 1256 848 766

On the Web: http://www.quantum.com/support

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Replication Conditions

THEN
If there is additional information in this event to describe the reason for the failure, correct the problem and restart the replication.

Replication is paused: If the pause is initiated by the user, this should be expected. If this is a programmatic pause, check the replication target system to verify the following: the target system is reachable from the source system • the target system allows replication from the source system • the replication service is active on the target system • the target system is not in critical low disk space Replication failed due to a file system call: OR Restart the replication. A failure is detected during the file scan operation of replication: Replication detects that This alert informs you that media barcodes are not unique system wide. duplicate media are being Therefore, there is a chance during replication recovery that duplicate media will replicated to a target from be detected. (These media will not be recovered.) different partitions on the Remedy the situation by using unique barcodes on media throughout all source same or different host: systems that replicate to the same target system. The cartridge-based replication (for VTL) or directory/file-based Restart the cartridge-based or directory/file-based replication task. replication (for NAS shares) file was active, causing replication to fail: Cartridge-based replication Verify the share or partition is enabled as a directory/file-based or cartridgeor directory/file-based based replication source. replication fails: - If the failure was due to Linter database errors, verify the following: • The Linter database process is running • The version in /opt/DXi/redb schema/ReplicationDBSchemaVersion matches the output of the command /opt/DXi/redb_schema/ReplicationDBScript.sh version If there is a mismatch, it suggests there is an installation problem. If this occurs, contact the Quantum Technical Assistance Center. - If synchronization failed due to namespace replication error, verify the replication section of this document. - If cartridge-based replication or directory/file-based replication is not making progress, verify the following: The files are getting deduped on the system Replication is not paused on the system Cartridge-based replication Verify the following: or directory/file-based • The share or partition is enabled as a directory/file-based or cartridgereplication recovery fails: based replication target • The Sync ID of the share or partition matches the Sync ID on the source • There are no duplicate barcodes in the system • The host lock for the share or partition is available. (Verify this by checking the lock status in the GUI.)

Cartridge-based replication or directory/file-based replication message notification fails:	Verify the following: The webguid and replication processes The aud and vmm processes are runnin The target system is accessible	-
,	Verify the cartridge state. The tape cartridge must be in one of the following states before cartridge-based replication can complete successfully: Scratch State Scratch State, Physical Present Virtual State Virtual State, Physical Present Early Realize Pending State Identical State Note: If synchronization is enabled on your systems and you have physical cartridges associated with virtual cartridges on your Target system, you MUST export the physical cartridges and remove them from the physical library prior to performing the synchronization if virtual cartridges will be deleted on the Target system by the synchronization process.	
The problem is NOT resolved:	Contact the Quantum Technical Assistance Contact the Quantum Technical Assistance Contact the Quantum Technical Assistance Contact the USA: UK, France and Germany: EMEA: On the Web:	enter. 1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support

Replication and Deduplication Communication Issues

IF	THEN	
You received notification of failed parse of configuration file:	An error exists in the configuration file for snpolicyd Verify the contents of the snpolicyd.conf file in /usr/cvfs/config.	
	Consult the User's Guide for more information	on.
You received notification of an unparsable policy:	Verify the policy settings for the path and name specified. The message may specify the option or syntax in error. Verify the correctness of policy database and configuration files.	
	Consult the User's Guide for more information.	
You received notification of a policy validation error:	A policy failed validation. The message specifies the option or syntax in error. Correct the error and redo the action.	
	Consult the User's Guide for more informatic	on.
You received notification of a target connection error:	A replication event was attempted but was unable to connect with target. Verify the target status, connectivity, and system health.	
	Consult the User's Guide for more information	on.
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Serv	ice Tickets.
The problem is <u>NOT</u> resolved:	Modify the ticket according to the troubleshooting steps taken. Refer to Analyzing Service Tickets. Contact the Quantum Technical Assistance Center.	
	In the USA: UK, France and Germany: EMEA: On the Web:	1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support

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Resource Warning

IF		THEN
You receive a system resource warning:	Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

Robotics - Move Failure

IF	THEN		
The service ticket indicates that the tape library's robotics has experienced a move failure:	 Verify that the tape library is online and ready. Verify the state of the tape library component that failed. Verify the media is in the slot. Verify the drive/library is online using the StorNext GUI. 		
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.		
The problem has <u>NOT</u> been resolved:	, ,	 Note any codes displayed on the tape library's control panel. Modify the ticket according to the troubleshooting steps taken. 	
	Refer to Analyzing Service Ticke	Refer to Analyzing Service Tickets.	
	3. Contact the Quantum Technical	Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101	
	UK, France and Germany:	00800 4 QUANTUM	
	EMEA:	+44 1256 848 766	
	On the Web:	http://www.quantum.com/support	

Robotics - Not Ready

IF	THEN	
The service ticket indicates that the tape library's robotics is not ready:	 Verify that the tape library is online and ready. Verify that the tape library is online and ready through the StorNext GUI. Verify that the tape library is connected to the server. 	
No archives or storage disks exist:	Use the StorNext GUI to add at least one physical archive or storage disk to the system.	
An archive is off-line:	 Use vsarchivevary to change the archive state to online. Run fsstate and verify that all drives are listed correctly. In particular, no drive state should be listed as 'Unknown.' If running fsstate shows 'Unknown' for every drive state, do the following: Run tsmstop; tsmstart to reinitialize software communication pathways. Repeat step 2 above. 	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has <u>NOT</u> been resolved:	1. Note any codes displayed on the tape library's control panel. 2. Modify the ticket according to the troubleshooting steps taken. Refer to Analyzing Service Tickets. 3. Contact the Quantum Technical Assistance Center. In the USA: 1+800-284-5101 UK, France and Germany: 00800 4 QUANTUM EMEA: +44 1256 848 766 On the Web: http://www.quantum.com/support	

Robotics - Physical Tape Library Removed

IF	THEN	
The service ticket indicates that a physical tape library was removed:	 Make sure the connections (for example, fibre or SCSI) to the physical tape library are secure. Make sure the physical tape library is powered ON, placed Online, and is at Ready status. 	
The problem is <u>NOT</u> resolved:	Contact the Quantum Technical Assistance C In the USA: UK, France and Germany: EMEA: On the Web:	enter. 1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support

Robotics - Wrong Firmware Level/Invalid Library Type/Configuration Failed

IF	THE	EN
The service ticket indicates the tape library's firmware level is wrong:	Use the tape library's control panel to verify the firmware level for this release against the StorNext Release Notes . Contact your library vendor to obtain the proper firmware.	
The service ticket indicates the tape library type is invalid:	Disconnect the tape library and contact the Quantum Technical Assistance Center using the contact information below.	
The service ticket indicates an error configuring the tape library:	Contact the Quantum Technical Assistance Center using the contact information below.	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has <u>NOT</u> been resolved:	 Modify the ticket according to the troubleshooting steps taken. Refer to Analyzing Service Tickets. Contact the Quantum Technical Assistance Center. In the USA: 1+800-284-5101 UK, France and Germany: 00800 4 QUANTUM EMEA: +44 1256 848 766 	
	On the Web:	http://www.quantum.com/support

SAS/Fibre Channel HBA Issues

IF	THEN	
The hardware device attached to one or more of your SAS or Fibre Channel ports is not detected:	Make sure the device is powered on, and that you have a connection to that device.	
One or more SAS/FC HBA cards is missing:		
OR	Contact the Quantum Technical Assistance C	enter.
One or more SAS/FC HBA cards has a hardware fault:	In the USA: UK, France and Germany: EMEA: On the Web:	1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support
The problem is <u>NOT</u> resolved:		

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SNFS License Failure

IF	THEN
You receive a warning that your SNFS license will expire within 48 hours:	Contact the Quantum Technical Assistance Center to obtain a valid license.
OR	Contact the Quantum rechinical Assistance Genter to obtain a valid license.
Your SNFS license has expired:	

You receive a capacity failure or warning indicator for one of the	If you have user data on a file system configured as a storage disk, consider moving that data to an alternate location. <i>All data</i> on the storage disk file system counts against the Manager capacity, not just files copied to the disk	
following features:	by Storage Manager.	
Manager Flex_quantum_tape Flex_sdisk Flex_lattus Flex_private_cloud Flex_public_cloud	If you are unsure about the location of the Storage Manager data on a file system, run the fsdiskcfg command with no arguments. This command reports on the configured storage disks and the location of the managed data on each file system. The 'Path' column in the command output indicates the directory containing the managed data. If this is not the issue, contact Quantum Technical Assistance Center to obtain the needed license with increased capacity.	
Snsm_capacity		
You receive a capacity failure or warning indicator for the 'Deduplication' (Storage	If you have user data on a file system configured for Deduplication, consider moving some of that data to an alternate, non-Deduplication file system location.	
Manager) feature:	Additionally, contact Quantum Technical Deduplication license with increased cap	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has <u>NOT</u> been resolved:	Modify the ticket according to the troubleshooting steps taken.	
	Refer to <u>Analyzing Service Ticket</u> 2. Contact the Quantum Technical A	
	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

SNFS License Required

IF	THEN	
You receive a warning that your SNFS license will expire within 48 hours:	Contact the Quantum Technical Assistance Center to obtain a valid license.	
You receive a capacity failure or warning indicator for one of the following features:	If you have user data on a file system configured as a storage disk, consider moving that data to an alternate location. <i>All data</i> on the storage disk file system counts against the Manager capacity, not just files copied to the disk by Storage Manager.	
Manager Flex_quantum_tape Flex_sdisk Flex_lattus Flex_private_cloud	If you are unsure about the location of the Storage Manager data on a file system, run the fsdiskcfg command with no arguments. This command reports on the configured storage disks and the location of the managed data on each file system. The 'Path' column in the command output indicates the directory containing the managed data. If this is not the issue, contact Quantum Technical Assistance Center to obtain the needed license with increased capacity.	
Flex_public_cloud Snsm_capacity		
You receive a capacity failure or warning indicator for the	moving some of that data to an alternate, non-Deduplication file system location.	
'Deduplication' (Storage Manager) feature:		
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has NOT been resolved:	Modify the ticket according to the troubleshooting steps taken.	
	Refer to Analyzing Service Ticke	<u>ts</u> .
	2. Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

SNFS Port Failure

IF	THEN	
StorNext cannot resolve the IP address of the coordinator <name server> after 600 seconds:</name 	Check the name in the fsnameservers file.	
The name server <name server=""> (<ip address="">) heartbeat is lost for 600 seconds:</ip></name>	The name server may not be reachable. Verify that the name server machine is running, can be reached on the network, and that SNFS is running on it.	
The problem is <u>NOT</u> resolved:	Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

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Shutdown Error

IF	THEN	
SNFS shutdown errors have occurred:	Inspect the file system and system logs to determine the root cause.	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closin	g Service Tickets.
The problem has <u>NOT</u> been resolved:	1. Modify the ticket according to the troubleshooting steps taken. Refer to Analyzing Service Tickets. 2. Contact the Quantum Technical Assistance Center. In the USA: UK, France and Germany: 00800 4 QUANTUM EMEA: +44 1256 848 766 On the Web: http://www.quantum.com/support	

Snpolicy Issues

IF	THEN	
You received notification of a target connection error:	A replication event was attempted but was unable to connect to target. Verify the target status, connectivity, and system health.	
	Consult the User's Guide for more information	on.
You received notification that snpolicyd failed to start:	Snpolicyd is failed to start, verify that there isn't an existing snpolicyd . running on the system. This message may have been generated by a blockpool initialization failure. Check log at /usr/cvfs/debug/snpolicy.log for details.	
	Consult the User's Guide for more information	on.
You received notification of unserviced target events:	A replication request was not completely serviced. . Files affected reside on the specified path	
	Consult the User's Guide for more information.	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem is <u>NOT</u> resolved:	Modify the ticket according to the troubleshooting steps taken. Refer to Analyzing Service Tickets.	
	Contact the Quantum Technical Assistance Center.	
	In the USA: UK, France and Germany: EMEA: On the Web:	1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support

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Software Component Failure

IF	THEN	
The software component indicated failure while	The operation will be retried automatically. If the operation fails again, contact the Quantum Technical Assistance Center.	
trying to perform the indicated operation:	In the USA: UK, France and Germany: EMEA: On the Web:	1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support

Software Component Initialization Failure

IF	THEN	
The software component indicated failure while preparing to perform the	The operation will be retried automatically. If the operation fails again, contact the Quantum Technical Assistance Center.	
indicated operation:	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

Software Resource Warning

If the service ticket indicates to Stop IO due to no space:	Disk destination, run fsdiskcf capacity of the device. If this is	te versions of files. If this is a Storage g with the -r option to refresh the new a Lattus Object Storage destination, run	
	OP	efresh the new capacity of the media.	
	Un		
	 Remove files that are not managed destination, run fsdiskcfg with capacity of the device. 	ged by StorNext. If this is a Storage Disk in the -r option to refresh the new	
	OR		
	 If this is a StorageDisk destination fsdiskcfg with the -r option to 	on, add storage disk capacity. Run refresh the new capacity of the device.	
	OR		
		Run fsobjcfg with the -r option to refresh the new capacity of the	
	OR		
		possible that the metadata or userdata capacity added. Run cvadmin to check	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closin	Close the service ticket. Refer to Closing Service Tickets.	
The problem has NOT been resolved:	1. Modify the ticket according to th	Modify the ticket according to the troubleshooting steps taken.	
	Refer to Analyzing Service Ticke		
	2. Contact the Quantum Technical		
	In the USA: UK, France and Germany:	1+800-284-5101 00800 4 QUANTUM	
	EMEA:	+44 1256 848 766	
	On the Web:	http://www.quantum.com/support	

Storage Disk Taken Offline

IF	THEN	
A storage disk exceeds its failure threshold and is taken offline:	 Verify that the file system can be reached (NFS), and is still mounted and accessible. If the storage disk is located on a CVFS file system, check the File System Manager (FSM). 	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has <u>NOT</u> been resolved:	1. Modify the ticket according to the troubleshooting steps taken. Refer to Analyzing Service Tickets. 2. Contact the Quantum Technical Assistance Center. In the USA: 1+800-284-5101 UK, France and Germany: 00800 4 QUANTUM EMEA: +44 1256 848 766 On the Web: http://www.quantum.com/support	

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Storage Subsystem Chassis Conditions

IF	THEN	
The tray failed:	Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

Storage Subsystem Controller Alarm Conditions

IF		THEN
A storage subsystem controller alarm is muted:	Turn on the alarm so it will sound when a failure occurs.	
A storage subsystem controller alarm needs attention:	The alarm is sounding, so the storage subsystem should be examined for disk failures.	
A storage subsystem controller alarm is	Contact the Quantum Technical Assistance Center.	
disabled:	In the USA:	1+800-284-5101
OR	UK, France and Germany:	00800 4 QUANTUM
Oh	EMEA:	+44 1256 848 766
A storage subsystem controller alarm is missing or has been removed:	On the Web:	http://www.quantum.com/support
OR		
The problem is <u>NOT</u> resolved:		

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Storage Subsystem Controller Battery Conditions

IF		THEN
A controller battery fails:	Contact the Quantum Technical Assistance Center.	
OR A controller battery is missing or has been removed:	In the USA: UK, France and Germany: EMEA: On the Web:	1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support
OR		
A controller battery is near expiration:		

Storage Subsystem Controller Notifications

IF	THEN	
A communication error was detected:	Check all Ethernet cables and connections	
You receive one of the following notifications: A Premium Feature Key (PFK) is not installed. A storage subsystem controller failed. Invalid storage subsystem type. The controller is running the wrong firmware version. LUN communication failure. A storage subsystem controller failed. A storage subsystem controller is missing or has been removed. A storage subsystem controller has parity errors. A storage subsystem controller is operating in Service mode. A storage subsystem controller is operating in Service mode. A storage subsystem controller is operating in Service mode. A storage subsystem controller is operating in Service mode. A storage subsystem controller is suspended. A storage subsystem controller in seeds attention.	In the USA: UK, France and Germany: EMEA: On the Web:	Assistance Center. 1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support

Storage Subsystem Customer Replaceable Unit (CRU) Conditions

IF	THEN	
A support customer replaceable unit fails:	Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
OR	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
A support customer replaceable unit is missing or has been removed:	On the Web:	http://www.quantum.com/support
OR		
A support customer replaceable unit has no input:		

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Storage Subsystem Drive Conditions

IF	THEN	
A drive failed:	Contact the Quantum Technical Assistance Center.	
OR A drive was replaced, removed, bypassed, or unresponsive:	In the USA: UK, France and Germany: EMEA: On the Web:	1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support
OR		
A drive rebuild failed:		
OR		
A global spare drive was not detected:		
OR		
A logical drive failed:		

Storage Subsystem Enclosure Service Module (ESM) Conditions

IF	THEN	
An Enclosure Service Module fails:	Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
OR	UK, France and Germany:	00800 4 QUANTUM
An Enclosure Service Module supply is missing or has been removed:	EMEA: On the Web:	+44 1256 848 766 http://www.quantum.com/support

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Storage Subsystem Fan Conditions

IF	THEN	
A fan fails:	Contact the Quantum Technical Assistance Center.	
OR A fan is missing or has been removed:	In the USA: UK, France and Germany: EMEA: On the Web:	1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support

Storage Subsystem Fibre Channel Link Conditions

IF	THEN	
A fibre channel link fails:	Check your fibre channel cabling.	
OR		
A fibre channel link is down:		
The problem is <u>NOT</u> resolved:	Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

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Storage Subsystem Fibre Channel SFP Conditions

IF	THEN	
A fibre channel SFP fails:	Replace the failed SFP.	
A fibre channel SFP is missing or has been removed:	Replace the missing or removed SFP.	
The problem is <u>NOT</u> resolved:	Contact the Quantum Technical Assistance C In the USA: UK, France and Germany: EMEA: On the Web:	enter. 1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support

Storage Subsystem Gigabit Interface Connector (GBIC) Conditions

IF	THEN	
A fibre channel Gigabit Interface Connector fails:	Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
OR	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
A fibre channel Gigabit Interface Connector is missing or has been removed:	On the Web:	http://www.quantum.com/support

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Storage Subsystem Power Supply Conditions

IF	THEN	
A power supply fails:	Contact the Quantum Technical Assistance Center.	
OR A power supply is missing or has been removed:	In the USA: UK, France and Germany: EMEA: On the Web:	1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support

Storage Subsystem Sensor Conditions

IF		THEN
A storage subsystem array's temperature exceeds the nominal limit:	Check ventilation and fans to ensure adequate air flow.	
A storage subsystem array's temperature exceeds the max limit allowed:	Shut down the affected storage subsystem array and contact the Quantum Technical Assistance Center.	
One of more thermal	Contact the Quantum Technical Assistance Center.	
sensors is missing or has been removed:	In the USA: 1+800-284-5101	
	UK, France and Germany: 00800 4 QUANTUM	
	EMEA: +44 1256 848 766	
	On the Web: http://www.quantum.com/support	

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Storage Subsystem Tray Hardware Faults

IF	THEN	
Your system detects a hardware fault on a storage subsystem tray:	Contact the Quantum Technical Assistance C In the USA: UK, France and Germany: EMEA: On the Web:	enter. 1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support

Storage Subsystem Volume Notifications

IF	THEN	
One or more volumes is operating in degraded	Contact the Quantum Technical Assistance Center.	
mode due to one or more	In the USA:	1+800-284-5101
drive failures:	UK, France and Germany:	00800 4 QUANTUM
OR	EMEA:	+44 1256 848 766
One or more volumes failed due to excessive drive failures:	On the Web:	http://www.quantum.com/support
OR		
Inconsistent parity was detected on one or more volumes during a media scan:		

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Switch Firmware Version

IF	THEN	
Your system detects an Ethernet switch firmware version mismatch (an unsupported firmware version):	Contact the Quantum Technical Assistance Contact the Quantum Technical Assista	enter. 1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support

System Board Power Supply Failure

IF	THEN	
A power supply for the system board fails:	Verify that AC power is present and that the power cable is plugged in securely.	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has NOT resolved:	has NOT Contact the Quantum Technical Assistance Center. In the USA: 1+800-284-5101	
resolved.		
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

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System Board Power Supply Missing

IF	THEN	
A power supply for the system board is missing:	Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

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System Controller Accessed

THEN	
Reset the system intrusion sensor through the Web user interface.	
Contact the Quantum Technical Assistance C In the USA: UK, France and Germany: EMEA: On the Web:	enter. 1+800-284-5101 00800 4 QUANTUM +44 1256 848 766 http://www.quantum.com/support
	Reset the system intrusion sensor through the Contact the Quantum Technical Assistance C In the USA: UK, France and Germany: EMEA:

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System Resource Failure

IF	THEN	
SNFS has failed to allocate memory:	Determine the cause of memory depletion and correct the condition by adding memory or paging space to your system.	
	If SNFS is using excessive amounts of memory, adjusting the configuration parameters might resolve the problem. For information about adjusting parameters, refer to the Release Notes, the cvfs_config(4) and mount_cvfs(1) man pages, and the SNFS Tuning Guide.	
The FSM detects exhaustion of a resource controlled by an adjustable parameter:	Modify the file system configuration file as needed, and then restart the file system.	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has <u>NOT</u> been resolved:	 Modify the ticket according to the troubleshooting steps taken. Refer to <u>Analyzing Service Tickets</u>. Contact the Quantum Technical Assistance Center. In the USA: 1+800-284-5101 	
	UK, France and Germany:	00800 4 QUANTUM
	EMEA: On the Web:	+44 1256 848 766 http://www.guantum.com/support
	On the Web.	mtp.//www.quantum.com/support

System Resource Warning

IF	THEN	
If the number of mounted Virtual Tape Drives exceeds the mount limit:	Unload Virtual Tape Drives until the number of mounted Virtual Tape Drives is under the mount limit.	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem is <u>NOT</u> resolved:	 Modify the ticket according to the troubleshooting steps taken. Refer to <u>Analyzing Service Tickets</u>. Contact the Quantum Technical Assistance Center. 	
	In the USA: 1+800-284-5101	
	UK, Franc Germany:	UU8UU 4 CJUANTUM
	EMEA:	+44 1256 848 766
	On the Web: http://www.quantum.com/suppo	

Tape - Drive Reported Media Error

IF	THEN	
The drive reported a media error (sense data, tape alert):	 Check the tape library's control panel to determine if any other errors exist. If other errors exist, correct them before proceeding. Refer to the documentation for this type of tape library. If no other errors exist and the media is mounted, dismount the media. If the media is not dismounted, check the drive to see if it has been ejected. If the media has not been ejected: Press the Eject button on the drive to eject the media. Try to dismount the media again. 	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has NOT been resolved:	 Modify the ticket according to the troubleshooting steps taken. Refer to Analyzing Service Tickets. Contact the Quantum Technical Assistance Center. In the USA: 1+800-284-5101 UK, France and Germany: 00800 4 QUANTUM EMEA: +44 1256 848 766 On the Web: http://www.quantum.com/support 	

Tape Drive - Cleaning of Drive Failed

IF	THEN	
Drive cleaning failed:	The cleaning media might be defective or expired, or there is a problem with the drive.	
	 Replace exisiting cleaning media. Attempt to clean the drive using the StorNext GUI. (From the SNSM home page, choose Drive > Clean Drive from the Admin menu.) If the drive still indicates that cleaning is required, contact the Quantum Technical Assistance Center using the contact information below. 	
	rediffical Addistance defice define the deficact information below.	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to <u>Closing Service Tickets</u> .	
The problem has <u>NOT</u> been resolved:	Modify the ticket according to the troubleshooting steps taken. Defaults Applying Continue Tickets	
	Refer to Analyzing Service Tickets. 2. Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

Tape Drive - Configuration Failed

IF	TH	EN	
Drive configuration failed:	Capture the StorNext system state.		
	Refer to Capturing a System Stat	t <u>e</u> .	
	Contact Quantum Technical Assi below.	stance Center using the information	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closin	g Service Tickets.	
The problem has NOT been resolved:	Modify the ticket according to the troubleshooting steps taken.		
	7	Refer to Analyzing Service Tickets.	
	Contact Quantum Technical Assistance Center.		
	In the USA:	1+800-284-5101	
	UK, France and Germany:	00800 4 QUANTUM	
	EMEA:	+44 1256 848 766	
	On the Web:	http://www.quantum.com/support	

Tape Drive - Drive Removed

IF	TH	IEN
The service ticket indicates a tape drive was removed:	 Make sure the connections to th SCSI) are secure. 	e physical drive (for example, fibre,
was removed.	2. Make sure the physical (tape) lib	orary can see the drive.
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closin	ng Service Tickets.
The problem has NOT been resolved:	Modify the ticket according to th	e troubleshooting steps taken.
	Refer to Analyzing Service Tickets. 2. Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

Tape Drive - Drive Reported Drive Error

IF	THEN	
The service ticket indicates the tape drive reported a drive error:	 Check the tape library's control panel to determine if any other errors exist. If other errors exist, correct them before proceeding. Refer to the documentation for this type of tape library. If no other errors exist and the media is mounted, dismount the media. If the media is not dismounted, check the drive to see if it has been ejected. If the media has not been ejected: Press the Eject button on the drive to eject the media. Try to dismount the media again. 	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has <u>NOT</u> been resolved:	1. Modify the ticket according to the troubleshooting steps taken. Refer to Analyzing Service Tickets. 2. Contact the Quantum Technical Assistance Center. In the USA: UK, France and Germany: 00800 4 QUANTUM EMEA: +44 1256 848 766 On the Web: http://www.quantum.com/support	

Tape Drive - Wrong Firmware Level/Invalid Drive Type

IF	THI	EN
The service ticket indicates the tape drive's firmware level is wrong:	Contact the Quantum Technical Assistance Center using the contact information below.	
The service ticket indicates the drive type is invalid:	Disconnect the drive, and then contact t Center using the contact information below	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing	g Service Tickets.
The problem has NOT been resolved:	Modify the ticket according to the troubleshooting steps taken.	
	Refer to Analyzing Service Tickets.	
	2. Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

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Tape Drive Alerts

Follow the recommendations below after the tape drive has issued a tape alert. Some alerts are fatal and indicate that the drive is no longer useful. Other alerts indicate that user intervention (such as cleaning) will correct the problem. Note the flag number from the ticket for use in troubleshooting.

The host application should have received the same tape alert message. Not all host applications respond with the same behavior.

The recommendations below are based on best practices for a typical host application.

Flag 56 (38h) - Unrecoverable load failure

Flag 58 (3Ah) - Firmware failure

Flag 59 (3Bh) - WORM medium integrity check failed

Flag 60 (3Ch) - WORM medium overwrite attempted

Flag 1 (01h) - Read warning	Contact the Quantum Technical Assistance Center.	
Flag 2 (02h) - Write warning		
Flag 3 (03h) - Hard Error	Close the ticket and retry the read/write operation on the original drive and media.	
The problem could be the tape or the drive. The drive cannot isolate the	2. Monitor operation for a reoccurrence of the ticket.	
source.	Insert the suspect media into an alternate drive and retry the read/write operation.	
	4. If the error follows the media, retire the media.	
	 If the error stays with the drive, contact the Quantum Technical Assistance Center to replace the drive. 	
Flag 4 (04h) - Media	Copy the data to another piece of media.	
	2. Remove the original media from the library and discard.	
Flag 5 (05h) - Read Failure	Close the ticket and retry the read/write operation on the original drive and media.	
Flag 6 (06h) - Write Failure	2. Monitor operation for a reoccurrence of the ticket.	
The problem could be the	Insert the suspect media into an alternate drive and retry the read/write operation.	
tape or the drive. The drive cannot isolate the source.	4. If the error follows the media, retire the media.	
	If the error stays with the drive, contact the Quantum Technical Assistance Center to replace the drive.	
Flag 7 (07h) - Media life	Copy the data to another piece of media.	
	2. Remove the original media from the library and discard.	
Flag 9 (09h) - Write protect	If the media is used for writing data, adjust the write-protect tab on the media and clear the write-protect setting.	
Flag 10 (0Ah) - No removal	The prevent media removal flag is on, so it must be turned off.	
Flag 11 (0Bh) - Cleaning media	If cleaning media does not reside in the cleaning media pool, move it there.	
Flag 12 (0Ch) - Unsupported format	The media is not supported by the drive. If the media is blank, remove it. Otherwise, contact the Quantum Technical Assistance Center.	
Flag 13 (0Dh) - Recoverable snapped tape	Contact the Quantum Technical Assistance Center.	
Flag 14 (0Eh) - Unrecoverable snapped tape		

Flag 15 (0Fh) - Memory chip in cartridge failure	 Write protect the media. Copy the data to a new piece of media. Discard the old media. 	
Flag 16 (10h) - Forced eject	Investigate whether the StorNext administrator's actions might have initiated an eject operation.	
Flag 17 (11h) - Read-only format	The loaded cartridge is a read-only type in this drive. If the media contains data, write protect it.	
Flag 18 (12h) - Tape directory corrupted on load	The tape directory must be rebuilt. Contact the Quantum Technical Assistance Center.	
Flag 19 (13h) - Nearing media life	Copy the data to another piece of media.	
media ilie	2. Remove the original media from the library and discard.	
Flag 20 (14h) - Clean now		
Flag 21 (15h) - Clean periodic	Clean the drive.	
Flag 22 (16h) - Expired cleaning media	Remove the media.	
Flag 23 (17h) - Invalid cleaning media	2. Add new media.	
Flag 24 (18h) - Retension requested		
Flag 25 (19h) - Dual-port interface error		
Flag 26 (1Ah) - Cooling fan failure		
Flag 27 (1Bh) - Power supply failure	Contact the Quantum Technical Assistance Center.	
Flag 28 (1Ch) - Power consumption		
Flag 29 (1Dh) - Drive maintenance		
Flag 30 (1Eh) - Hardware A		
Flag 31 (1Fh) - Hardware B	Contact the Quantum Technical Assistance Center.	
A hardware error has occurred that should be captured and returned for failure analysis.	Contact the Quantum Technical Assistance Center.	

Flag 32 (20h) - Interface	Check the cabling between the library and the attached tape library.	
	If the problem is unresolved, contact the Quantum Technical Assistance Center.	
Flag 33 (21h) - Eject media The drive has experienced an issue that can be resolved by unloading and reloading media.	 Retry the operation. If the problem persists, contact the Quantum Technical Assistance Center. 	
Flag 34 (22h) - Firmware download via SCSI or FC has failed	StorNext does not support user firmware updates. Contact the Quantum Technical Assistance Center for upgrade information.	
Flag 35 (23h) - Drive Humidity		
Flag 36 (24h) - Drive Temperature		
Flag 37 (25h) - Drive Voltage		
Flag 38 (26h) - Predictive Failure		
Flag 39 (27h) - Diagnostics Required	Contact the Quantum Technical Assistance Center.	
Flag 40 (28h) - Loader hardware A		
Flag 41 (29h) - Loader stray tape		
Flag 42 (2Ah) - Loader Hardware B		
Flag 43 (2Bh) - Loader door		
Flag 44 (2Ch) - Loader hardware C		
Flag 45 (2Dh) - Loader magazine		
Flag 46 (2Eh) - Loader predictive failure		
Flag 51 (33h) - Tape	The tape directory must be rebuilt. Contact the Quantum Technical Assistance	

Flag 52 (34h) - Tape system area Flag 53 (35h) - Tape system area read failure Flag 54 (36h) - No start of data Flag 55 (37h) - Loading failure	Contact the Quantum Technical Assista	nce Center.
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.	
The problem has <u>NOT</u> been resolved:	1. Modify the ticket according to the Refer to Analyzing Service Ticke 2. Contact the Quantum Technical A In the USA: UK, France and Germany: EMEA: On the Web:	<u> </u>

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Time Synchronization

IF	THEN
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You receive messages saying that the time synchronization service is not running:	Quantum strongly recommends using an NTP server to keep the time synchronized between both nodes of the HA pair and the metadata on the shared file system, alleviating data mismatches due to incorrect time stamps. If date and time between the two MDC nodes becomes inconsistent, it will also cause HA to become unreliable.	
	StorNext with Quantum QCloud a sync system will produce errors s time and the current time is too la	ronization is also important when using and Quantum Lattus S3 products. An out-of-imilar to "The difference between the request rge". In order to avoid this situation, it is DC nodes operating in the same network are
	an public NTP server pool. If there internal NTP server on another no	ble, Quantum strongly recommends you use is no outside connection available, set up an de and use that server as the server for That way the time and date stamps will be
		on how to start and administer NTP. Some on programs by default (e.g. Chronyd). Those
		nchronization service and are willing to accept off this RAS message by running the n question.
	echo VERIFY_NTP=0 >> /usr/cvf /usr/cvfs/config/cvsetenv; chmod	s/config/cvsetenv; chown root:rootd 700 /usr/cvfs/config/cvsetenv
If you require further assistance:	Contact the Quantum Technical Assistance Center.	
	In the USA:	1+800-284-5101
	UK, France and Germany:	00800 4 QUANTUM
	EMEA:	+44 1256 848 766
	On the Web:	http://www.quantum.com/support

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Troubleshooting the StorNext Software

IF	THEN
A service ticket indicates software issues including	Capture the StorNext system state.
incorrect firmware levels:	Refer to Capturing a System State.
	2. Download the captured state.
	Refer to <u>Downloading a System State Capture</u> .
	3. Stop and restart the StorNext software.

An I/O error occurs on a path in a multipath environment (LUN communication failure):	Check the system and storage subsystem logs for SAN integrity.		
A process or task dies and does not restart:	Determine the Component of the failed process/task (the Component will be indicated in the Event Summary).		
	If the Component is a Storage Manager component:		
	 If the Event Details indicate a database problem then stop the Storage Manager software. (On the command line, run "adic_control stop".) Start any stopped Storage Manager components. (On the command line, run "adic_control start".) If the Component is NOT a Storage Manager component: 		
	 Check the FSM logs and system logs to determine the root cause. If possible, take corrective action. 		
	If the problem persists:		
	Contact the Quantum Technical Assistance Center.		
You receive a message that the FSM is delayed or the file system is not responding:	Verify that the FSM process for the specified file system is running on the metadata controller. Also check the health of the metadata network.		
A health check operation is launched with invalid command arguments:	Contact the Quantum Technical Assistance Center. To temporarily disable the invalid health check operation until a fix is delivered follow these steps: 1. Locate the 'filelist' file under /usr/adic that contains the health		
	check entry for the failed operation. 2. Place a "#" character at the front of that health check entry line.		
You receive an "Internal Software Error" message describing one of the following conditions: • Process initialization failed • A database operation failed • An unhandled software error has occurred • A CLI command failure has caused the process that invoked it to abort • A Blockpool Verify command failed to complete successfully	 If you suspect there might have been a temporary problem with system resources, rerun the health check operation via the StorNext GUI's Health Check Service. If the problem persists, contact the Quantum Technical Assistance Center. 		

You receive one of the following "TSM Control		Try rootarting the TSM coftware (Or th	so command line was "tempter.	
Error" messages:The TSM software	'.	1. Try restarting the TSM software. (On the command line, run "tsmstop; tsmstart".) If restarting succeeds, rerun the Health Check using the		
 The Tom software The TSM software could not be stopped 	2.	StorNext GUI. If restarting does not succeed, contact the Quantum Technical Assistance Center.		
You cannot connect to the		Restart the system software.		
SNAPI server process:		 Run the Health Check service using the StorNext GUI. If the problem persists, contact the Quantum Technical Assistance Center. 		
You receive a message about a timeout occuring	Confirm that the data path is working properly on the system specified in the event detail.			
when the FSM process forces a file flush:	2.	 If the problem persists, contact the Quantum Technical Assistance Center. 		
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.			
The problem is <u>NOT</u> resolved:				
	1.	Modify the ticket according to the troubleshooting steps taken.		
	2.	Refer to Analyzing Service Tickets. 2. Contact the Quantum Technical Assistance Center.		
		In the USA:	1+800-284-5101	
		UK, France and Germany: EMEA:	00800 4 QUANTUM +44 1256 848 766	
		On the Web:	http://www.quantum.com/support	

Vault Failure

IF	THEN		
The problem indicates that vaulting has failed:	 Capture the StorNext system state. Refer to <u>Capturing a System State</u>. Download the captured state to a local or network drive. 		
	Refer to Downloading a System State Capture.		
	Contact the Quantum Technical Assistance Center. In the USA: 1+800-284-5101		
	UK, France and Germany: 00800 4 QUANTUM		
	EMEA: +44 1256 848 766		
	On the Web: http://www.quantum.com/support		

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Viewing Service Tickets

View StorNext service tickets to view details of the System Status notification and a suggested resolution of the reported problem.

Do one of the following:

Click System Status at the bottom of the screen.

OR

Access the StorNext home page and choose System Status from the Service menu.

The **Tools - System Status** screen appears.

- **Ticket** View service ticket numbers, which can be listed in ascending or descending order by clicking the top of the column.
- State View the service ticket's current state. The state can be either Open or Closed.
- Last Updated This is the date when the service ticket was last accessed, either opened or closed depending on the selected sort order.
- **Summary** View a summary of the problem reported by the StorNext.
- 2. Scroll through the list of service tickets, select the ticket to be viewed, and click **Details**.

The **Ticket Details** screen appears. This screen details the service ticket number, date and time when the ticket was last accessed (either opened or closed), ticket status, and problem description.

- 3. Click Cancel to close the screen.
 - NOTE: For information on analyzing service tickets and obtaining additional information about a reported problem, refer to Analyzing Service Tickets.

Virtual IP Configuration Warnings

IF	THEN		
You receive a warning that your vip config file has invalid syntax:	A VIP configuration file is required on HA configurations with replication enabled. A properly formatted line has macaddr, IPv4 addr, netmask, IPv6 addr, prefix_len. Inspect /usr/cvfs/config/ha_vip.txt and correct errors.		
	Consult the User's Guide for more information	on.	
You receive a warning that your vip config file has an invalid line:	A VIP configuration file is required on HA configurations with replication enable This indicates that a line in the file is malformed in some fashion.		
	Check for missing values or illegal characters, formats, or values. • Consult the User's Guide for more information.		
You receive an activation or deactivation message:	The 'ifconfig' command was attempted to configure an ethernet port. Check the mentioned ethernet port to verify its configuration and health.		
	Consult the User's Guide for more information.		
You receive an unable to takeover IP message:	An attempt to send an arp packet to route a specific IP to the indicated ethernet port was made but failed.		
	Consult the User's Guide for more information	on.	
The problem <u>IS</u> resolved:	Close the service ticket. Refer to Closing Service Tickets.		
The problem is NOT resolved:	Modify the ticket according to the troubleshooting steps taken.		
	Refer to <u>Analyzing Service Tickets</u> . 2. Contact the Quantum Technical Assistance Center.		
	In the USA:	1+800-284-5101	
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