

Storage Automated Diagnostic Environment Event Advisor Dictionary

Event Count: 506

Event: a3500fc.AlarmEvent-

Component: battery

EventCode: 2.5.5

Severity: Warning

Actionable: Yes

Sample Description:

The state of 'device_info.battery.status' on crash7_001 is 'Failed'

Info:

Cause:

A battery can fail either because it is bad or has exceeded its life span. Batteries have a 2 year life span and will report errors when they are about to exceed that life span.

Action:

Use raidutil -c <ctd#> -B to verify battery age.

2. Use Recovery Guru to walk through the steps to replace the battery.

3. After replacing the battery, reset the battery age using
raidutil -c <ctd#> -R against each controller.

* You must have a LUN on the controller when you execute the command for
the battery age to be retained.

4. Use raidutil -c <ctd#> -B to verify age.

Event: a3500fc.AuditEvent

Component:

EventCode: 2.10.16

Severity: Info

Actionable: No

Sample Description:

Auditing a new a3500fc with ID:a3500fc.[Array_Name]

Info:

Audits occur every week.

Cause:

Action:

Event: a3500fc.CommunicationEstablishedEvent

Component: ib

EventCode: 2.11.21

Severity: Info

Actionable: No

Sample Description:

Communication regained with A3500fc called a3500fc.[Array_Name]

Info:

Cause:

Action:

Event: a3500fc.CommunicationLostEvent

Component: ib

EventCode: 2.12.21

Severity: Err/Critical**Actionable: Yes****Sample Description:**

Lost communication with A3500FC called a3500fc.[Array_Name]

Info:

This event is always done inband using rm6 commands (lad, raidutil, rdacutil,drivutil)

Cause:**Action:**

1. Check SAN Topology to identify failing segment of data path
2. Verify cables, GBICs and HBAs and Power Cables.
- * If problem FRU is on A3500 continue on to step 3 for A3500 specific procedures.
3. Run '/usr/sbin/osa/healthck -a' from command line to see status
4. Run Healthcheck and Recovery Guru from Raid Manager GUI. Follow service procedures given

Event: a3500fc.DiagnosticTest-

Component: a3500fctest

EventCode: 2.13.302

Severity: Error

Actionable: No

Sample Description:

a3500fctest ([Host_Name]) on a3500fc.[Array_Name] failed

Info:

Cause:

Action:

Event: a3500fc.DiscoveryEvent

Component:

EventCode: 2.14.16

Severity: Info

Actionable: No

Sample Description:

Discovered a new a3500fc with ID:a3500fc.[Array_Name]

Info:

Discovery events occur the very first time the agent probes a storage device.

Cause:

Action:

Event: a3500fc.LocationChangeEvent

Component:

EventCode: 2.19.16

Severity: Info

Actionable: No

Sample Description:

Location of a3500fc called [Array_Name] was changed

Info:

Cause:

Action:

Event: a3500fc.StateChangeEvent+

Component: disk

EventCode: 2.25.13

Severity: Info

Actionable: No

Sample Description:

disk.0 (SEAGATE.LT04183900) in A3500FC 'Array_Name' a3500fc.[Array_Name] is now Available
(status-state changed from 'Degraded' to 'Optimal')

Info:

Cause:

Action:

Event: a3500fc.StateChangeEvent-

Component: disk

EventCode: 2.26.13

Severity: Error**Actionable: Yes****Sample Description:**

disk.0 (SEAGATE.LT04183900) in A3500FC 'Array_Name' a3500fc.[Array_Name] is now Not-Available (status-state changed from 'Optimal' to 'Degraded')

Info:

A disk in the A3500 enclosure is reporting a failing condition.

Cause:**Action:**

1. Check HealthCheck and Recovery Guru in Raid Manager GUI. Follow service procedures given

Event: a3500fc.StateChangeEvent-

Component: controller

EventCode: 2.26.12

Severity: Error**Actionable: Yes****Sample Description:**

controller.a (Symbios.1T93200466) in A3500FC 'Array_Name' a3500fc.[Array_Name] is now Not-Available (status-state changed from 'Active' to 'Error')

Info:

This state of a controller in the a3500fc enclosure changed (rm6)

Cause:**Action:**

1. Check the Raid Manager GUI message log for any errors.
* /usr/lib/osa/rmlog.log can be sent to Sun Support for decoding.
2. Run '/usr/sbin/osa/lad' to obtain list of controllers
3. Run '/usr/sbin/osa/healthck -a' from command line to see status
4. Run Healthcheck and Recovery Guru from Raid Manager GUI. Follow service procedures given
5. Replace controller if necessary

Event: a3500fc.DeviceLostEvent

Component: aggregate

EventCode: 2.34.71

Severity: Err/Critical

Actionable: Yes

Sample Description:

Device ([Host_Name]) on a3500fc.[Array_Name] is not available anymore, confirmed by the following 5 subevents

Info:

Aggregated Events that confirms that a device is not available.

Cause:

Action:

Event: a3500fc.ComponentInsertEvent

Component: controller

EventCode: 2.40.12

Severity: Info

Actionable: No

Sample Description:

Component 'controller.b:XX' was added to [Array_Name] 'a3500fc.[Array_Name]

Info:

A new Controller, as identified by it's serial#, has been installed on the device.

Cause:

Action:

Event: a3500fc.ComponentInsertEvent

Component: disk

EventCode: 2.40.13

Severity: Info

Actionable: No

Sample Description:

Component 'disk.1:SEAGATE.LT02926900' was added to Array_Name 'a3500fc.[Array_Name]

Info:

A new Disk, as identified by it's serial#, has been installed on the A3500fc.

Cause:

Action:

Event: a3500fc.ComponentRemoveEvent

Component: disk

EventCode: 2.41.13

Severity: Error**Actionable: Yes****Sample Description:**

Component 'disk.1:SEAGATE.LT02926900' was removed from Array_Name 'a3500fc.[Array_Name]

Info:

The A3500 is reporting a disk has been removed. This could be due to failure or service replacement action

Cause:**Action:**

1. Replace disk

Event: a3500fc.ComponentRemoveEvent

Component: controller

EventCode: 2.41.12

Severity: Error**Actionable: Yes****Sample Description:**

Component 'controller.b:XX' was removed from Array_Name 'a3500fc.[Array_Name]

Info:

The A3500 is reporting a controller has been removed. This could be due to failure or service replacement actions

Cause:**Action:**

1. Replace controller using Recovery Guru from Raid Manager GUI

Event: a5k.AlarmEvent-
Component: backplane.fan
EventCode: 3.5.4

Severity: Error
Actionable: Yes

Sample Description:

Fan 0 status changed from OK to [undefined] on [Array_Name] (wwn=[WWN])

Info:

The command luxadm has reported a non-optimal condition on the A5k Fan

Cause:

Action:

1. Check Front Panel Module of A5k for any errors
2. Replace Fan if necessary

Event: a5k.AlarmEvent-

Component: interface.iboard

EventCode: 3.5.23

Severity: Error

Actionable: Yes

Sample Description:

The state of interface_board.A.mpx.state on [Array_Name] (wwn=[WWN]) is 'Not OK'

Info:

Cause:

Action:

Event: a5k.AlarmEvent-

Component: backplane

EventCode: 3.5.3

Severity: Warning

Actionable: Yes

Sample Description:

backplane.rear status changed from '[undefined]' to OK on [Array_Name] (wwn=[WWN])

Info:

The command luxadm has reported a non-optimal condition for a A5k Backplane or Midplane

Cause:

Action:

1. Check Front Panel Module for errors or alerts
2. Power Cycle Enclosure
3. Replace Affected FRU (front backplane, rear backplane, midplane)

Event: a5k.AlarmEvent-

Component: disk

EventCode: 3.5.13

Severity: Warning

Actionable: Yes

Sample Description:

'disk_front.10' in A5K [Array_Name] (wwn=[WWN]) is now Not-Available (status- state changed from 'unknown' to 'No_path_found-On')

Info:

Cause:

Action:

Event: a5k.AlarmEvent-
Component: interface.gbic
EventCode: 3.5.22

Severity: Error
Actionable: Yes

Sample Description:

The state of interface_board.A.mpx.state on [Array_Name] (wwn=[WWN]) is 'Not OK'

Info:

Cause:

Action:

Event: a5k.AuditEvent

Component:

EventCode: 3.10.16

Severity: Info

Actionable: No

Sample Description:

Auditing a new A5K called [Array_Name] (wwn=[WWN])

Info:

Audits occur every week.

Cause:

Action:

Event: a5k.CommunicationEstablishedEvent

Component: ib

EventCode: 3.11.21

Severity: Info

Actionable: No

Sample Description:

Communication regained with A5K called [Array_Name]

Info:

Cause:

Action:

Event: a5k.CommunicationLostEvent

Component: ib

EventCode: 3.12.21

Severity: Err/Critical

Actionable: Yes

Sample Description:

Lost communication with A5K called [Array_Name]

Info:

This event is always done inband using luxadm

Cause:

Action:

1. Verify cables, GBICs and connections along data path.
2. Check Power Cables on A5k.
3. Check SAN Topology GUI to identify failing segment of the data path

Event: a5k.DiagnosticTest-

Component: a5ktest

EventCode: 3.13.304

Severity: Error

Actionable: No

Sample Description:

a5ktest ([Host_Name]) on [Array_Name] wwn=[WWN] failed

Info:

Cause:

Action:

Event: a5k.DiagnosticTest-

Component: a5ksestest

EventCode: 3.13.303

Severity: Error

Actionable: No

Sample Description:

a5ksestest ([Host_Name]) on [Array_Name] (wwn=[WWN]) failed

Info:

Cause:

Action:

Event: a5k.DiscoveryEvent

Component:

EventCode: 3.14.16

Severity: Info

Actionable: No

Sample Description:

Discovered a new A5K called [Array_Name] (wwn=[WWN])

Info:

Discovery events occur the very first time the agent probes a storage device.

Cause:

Action:

Event: a5k.LocationChangeEvent

Component:

EventCode: 3.19.16

Severity: Info

Actionable: No

Sample Description:

Location of a5k called [Array_Name] was changed

Info:

Cause:

Action:

Event: a5k.StateChangeEvent+

Component: power

EventCode: 3.25.37

Severity: Info

Actionable: No

Sample Description:

'power.2' in A5K [Array_Name] (wwn=[WWN]) is now Available, status-state changed from [undefined] to 'OK'

Info:

Cause:

Action:

Event: a5k.StateChangeEvent+

Component: disk

EventCode: 3.25.13

Severity: Info

Actionable: No

Sample Description:

'disk_front.0'(200000203718ac0) in A5K [Array_Name] (wwn=[WWN]) is now Available,
status-state changed from 'Bypassed-On' to 'Ok-On'

Info:

Cause:

Action:

Event: a5k.StateChangeEvent+

Component: interface.iboard

EventCode: 3.25.23

Severity: Info

Actionable: No

Sample Description:

'interface_board.B' in A5K [Array_Name] (wwn=[WWN]) is now Available, status-state changed from [undefined] to OK

Info:

Cause:

Action:

Event: a5k.StateChangeEvent-

Component: power

EventCode: 3.26.37

Severity: Error**Actionable: Yes****Sample Description:**

'power.2' in A5K [Array_Name] (wwn=[WWN]) is now Not-Available, status-state changed from 'OK' to 'undefined'

Info:

The command luxadm has reported a non-optimal condition on the A5k power supply

Cause:**Action:**

1. Check Front Panel Module of A5k for any errors
2. Reseat Power Supply
3. Replace Power Supply if necessary

Event: a5k.StateChangeEvent-

Component: disk

EventCode: 3.26.13

Severity: Error
Actionable: Yes**Sample Description:**

'disk_front.0'(200000203718ac0) in A5K [Array_Name] (wwn=[WWN]) is now Not-Available, status-state changed from 'OK-On' to 'Bypassed_BP:_A-On'

Info:

This state of a disk in the a5k enclosure changed (luxadm)

Cause:**Action:**

1. Check /var/adm/messages for any reasons for this event
2. Enable disk via the Front Panel Module (FPM) on the A5200
 - * CLI Usage: luxadm -e enable (-F) -(a | b) (encl_name,disk)
3. Replace disk if necessary

Event: a5k.StateChangeEvent-

Component: interface.iboard

EventCode: 3.26.23

Severity: Error**Actionable: Yes****Sample Description:**

'interface_board.B' in A5K [Array_Name] (wwn=[WWN]) is now Not-Available, status-state changed from 'OK' to 'Unavailable'

Info:

The command luxadm has reported a non-optimal condition on the A5k Interface Board

Cause:**Action:**

1. Check Front Panel Module of A5k for any errors
2. Reseat Interface Board
3. Replace Interface Board if necessary

Event: a5k.logEvent

Component: driver

EventCode: 3.32.15

Severity: Warning

Actionable: No

Sample Description:

Found 5 'driver.SSD_WARN' warnings(s) in logfile: /var/adm/messages on
a5k:508002000001e618

Info:

Cause:

Action:

Event: a5k.DeviceLostEvent

Component: aggregate

EventCode: 3.34.71

Severity: Err/Critical

Actionable: Yes

Sample Description:

Device a5k [Array_Name] is not available anymore, confirmed by the following 5 subevents

Info:

Aggregated Events that confirms that a device is not available.

Cause:

Action:

Event: a5k.ComponentInsertEvent

Component: disk

EventCode: 3.40.13

Severity: Info

Actionable: No

Sample Description:

'disk_front.0'(200000203718ac0) was added to A5K [Array_Name]

Info:

Cause:

Action:

Event: a5k.ComponentRemoveEvent

Component: disk

EventCode: 3.41.13

Severity: Error**Actionable: Yes****Sample Description:**

'disk_front.0'(200000203718ac0) was removed from A5K [Array_Name]

Info:

Luxadm cannot see the wwn of a disk, it may have been removed.

Cause:**Action:**

1. Check Front Panel Module of A5k and /var/adm/messages for any errors
2. Check for minimum disk configuration
 - * A5000 (Front: 3,6 Back: 0,3,6)
 - * A5100 (Front: 3,6 Back:0,3,6)
 - * A5200 (Front: 0,5,10 Back: 0,3,6,10)
3. Reseat disk in enclosure
4. Replace Disk if necessary

Event: agent.AgentDeinstallEvent

Component:

EventCode: 4.1.16

Severity: Info

Actionable: No

Sample Description:

Agent on host '[Host_Name]' was deleted from the Config File

Info:

This event is generated when an administrator at a customer site decides to delete a host from the agent configuration, thereby ending the monitoring that was done from that host.

Cause:

Action:

Event: agent.AgentInstallEvent

Component:

EventCode: 4.2.16

Severity: Info**Actionable: No****Sample Description:**

Agent on host '[Host_Name]' was Added to the Config File

Info:

This event is generated when the agent is installed and activated by running ras_install.
In the case of a slave host, ras_install will register that host with the master agent.

Cause:**Action:**

1. Verify with the administrator that this was intended.
2. Check the StorADE GUI to be sure the new agent is operating as expected.
Admin -> General Maintenance -> Maintain Hosts

Event: agent.AlarmEvent

Component: system_errors

EventCode: 4.3.99

Severity: Warning

Actionable: Yes

Sample Description:

system errors

Info:

Errors were encountered when the agent daemon was attempting to run

Cause:

Action:

1. Check Monitor -> Log -> Agent Errors for any messages
2. Run /opt/SUNWstade/bin/rasagent -d2 or -d3 from command line to see where the failure occurs

Event: agent.AlternateMaster+

Component:

EventCode: 4.8.16

Severity: Warning

Actionable: No

Sample Description:

Master on '[Host_Name]' is back, Alternate-master '[Host_Name]' releasing

Info:

When the host configured as the Alternate Master fails to ping the current host configured as the Master, it will take over the duties of a master and redirect all slaves to forward their information to it.

The Alternate Master turned master continues to monitor the Original Master and will release its role once communications are re-established.

Cause:

Action:

Event: agent.AlternateMaster-

Component:

EventCode: 4.9.16

Severity: Warning

Actionable: Yes

Sample Description:

Master on '[Host_Name]' is down, Alternate-master on '[Host_Name]' taking over

Info:

When the alternate master fails to ping the current master, it will try to take over by turning himself into a master and by telling all slaves to forward their information to him. The Alternate master turned master will still monitor the real master and give-up it's role as soon as possible.

Cause:

Action:

1. Check Ethernet connectivity between Master and Slave hosts.
2. Verify host is powered on and booted correctly.

Event: agent.CommunicationEstablishedEvent

Component: oob

EventCode: 4.11.31

Severity: Info

Actionable: No

Sample Description:

Access to '[Host_Name]' at [IP_Address] regained

Info:

Cause:

Action:

Event: agent.CommunicationLostEvent

Component: oob

EventCode: 4.12.31

Severity: Err/Critical
Actionable: Yes**Sample Description:**

Cannot access '[Host_Name]' at [IP_Address] (using udp ping)

Info:

The master agent lost communication with one or more of the slaves.

Cause:

On each run of the master agent, it will try to ping every slave and reports this event when ping fails.

Action:

1. Check Ethernet connectivity between Master and Slave hosts.
2. Verify host is powered on and booted correctly.
3. Where a hub/router is used, check the power and connectivity to the unit.

Event: agent.CommunicationLostEvent

Component: ntc

EventCode: 4.12.30

Severity: Error

Actionable: Yes

Sample Description:

Lost Communication(oob) with Terminal concentrator

Info:

The terminal concentrator (SE-solution) cannot be reach using ping.

Cause:

Action:

Event: agent.HeartbeatEvent

Component:

EventCode: 4.15.16

Severity: Info

Actionable: No

Sample Description:

Heartbeat

Info:

'Heartbeat events are generated every day unless there was already a transmission from this agent.'

Cause:

Action:

Event: brocade.AlarmEvent

Component: sensor.temperature

EventCode: 5.3.45

Severity: Warning

Actionable: Yes

Sample Description:

The state of 'sensor.temperature.5.status' on [Switch_Name] ([IP_Address]) is 'absent'

Info:

The switch is reporting a temperature alarm problem.

Cause:

- 1 FAN may have stopped functioning.
2. Physical placement of switch may be impeding heat dissipation.

Action:

If necessary, replace entire switch as a FRU.

Event: brocade.AlarmEvent

Component: system_reboot

EventCode: 5.3.47

Severity: Warning

Actionable: No

Sample Description:

Switch reboot date changed on [Switch_Name] ([IP_Address]) from Thu Feb 6

Info:

The Date and Time stamp of the switch recorded by StorADE was less than than the previous Date and Time stamp recorded by StorADE.

Cause:

This could indicate that the switch has been reset either by a user or loss of power.

Action:

1. Check StorADE GUI event logs for additional information supporting the event.
2. Verify with the onsite administrator if in fact the switch has been reset.
3. Check the power going to the switch.
4. If persistent, replace the switch.

Event: brocade.AlarmEvent

Component: sensor.power

EventCode: 5.3.97

Severity: Warning

Actionable: Yes

Sample Description:

The state of 'sensor.power-supply.5.status' on [Switch_Name] ([IP_Address]) is 'absent'

Info:

The switch is reporting a problem with the Power Supply.

Cause:

Action:

Check switch Power Supply and replace switch as an entire FRU if necessary.

Event: brocade.AlarmEvent

Component: sensor.fan

EventCode: 5.3.43

Severity: Warning

Actionable: Yes

Sample Description:

The state of 'sensor.fan.5.status' on [Switch_Name] ([IP_Address]) is 'absent'

Info:

The switch is reporting a problem with the cooling fans.

Cause:

Action:

Replace the entire switch as a FRU.

Event: brocade.AuditEvent

Component:

EventCode: 5.10.16

Severity: Info

Actionable: No

Sample Description:

Auditing a new switch called [Switch_Name] ([IP_Address]) WWN

Info:

The attributes of all monitored switches are collected once a week.

Cause:

Action:

Event: brocade.CommunicationEstablishedEvent

Component: oob

EventCode: 5.11.31

Severity: Info**Actionable: No****Sample Description:**

Communication regained with [Switch_Name] ([IP_Address])

Info:

oob means OutOfBand. This is specific to describing the Ethernet access to the device.

Cause:

A previous CommunicationLostEvent (OOB) must have occurred and now the Ethernet problem has been corrected or the device has been repaired.

Action:

Event: brocade.CommunicationLostEvent

Component: oob

EventCode: 5.12.31

Severity: Err/Critical**Actionable: Yes****Sample Description:**

Lost communication with [Switch_Name] ([IP_Address])

Info:

oob means OutOfBand.

This is specific to describing the Ethernet access to the device.

Cause:**Action:**

1. Check Power on switch
2. Check Ethernet connectivity to switch
3. Verify switch is booted correctly with no POST errors.
4. Verify switch Test Mode is set for normal operations
5. Verify TCP/IP settings on switch via Forced Prom Mode access
6. Replace switch if needed

Event: brocade.DiagnosticTest-

Component: switchtest

EventCode: 5.13.339

Severity: Error

Actionable: No

Sample Description:

switchtest (switch) on [Switch_Name] ([IP_Address]) WWN

Info:

Cause:

Action:

Event: brocade.DiscoveryEvent

Component:

EventCode: 5.14.16

Severity: Info

Actionable: No

Sample Description:

Discovered a new switch called [Switch_Name] ([IP_Address]) WWN

Info:

Discovery events occur the very first time the agent probes a storage device.

Cause:

Action:

Event: brocade.LocationChangeEvent

Component:

EventCode: 5.19.16

Severity: Info

Actionable: No

Sample Description:

Location of switch [Switch_Name] ([IP_Address]) was changed

Info:

Cause:

Action:

Event: brocade.LogEvent

Component: PhysState

EventCode: 5.20.2

Severity: Warning

Actionable: Yes

Sample Description:

PhysicalState of port 4 changed from 'on to 'off

Info:

Monitors the PhysicalState attribute of the switch

Cause:

Action:

Event: brocade.LogEvent

Component: port.statistics

EventCode: 5.20.36

Severity: Warning

Actionable: Yes

Sample Description:

Change in Port Statistics on switch [Switch_Name] ([IP_Address]):

Info:

The switch has reported a change in an error counter. This could indicate a failing component in the link.

Cause:

Action:

1. Check the Topology GUI for any link errors.
2. Run linktest on the link to isolate the failing FRU. Quiesce IO on the link 'before running linktest.

Event: brocade.StateChangeEvent+

Component: port

EventCode: 5.25.35

Severity: Info

Actionable: No

Sample Description:

'port.1' in switch [Switch_Name] ([IP_Address]) is now Available (status-state changed from 'Offline' to 'Online')

Info:

Port on switch is now available

Cause:

Action:

Port is online.

Event: brocade.StateChangeEvent-

Component: port

EventCode: 5.26.35

Severity: Error**Actionable: Yes****Sample Description:**

'port.1' in switch [Switch_Name] ([IP_Address]) is now Not-Available (status-state changed from 'Online' to 'Offline')

Info:

A port on the switch has logged out of the fabric and gone offline

Cause:**Action:**

1. Verify cables, GBICs and connections along Fibre Channel path
2. Check SAN Topology GUI to identify failing segment of the data path
3. Verify correct FC switch configuration
4. Verify port is enabled

Event: brocade.Statistics

Component:

EventCode: 5.27.16

Severity: Info

Actionable: No

Sample Description:

Statistics about switch [Switch_Name] ([IP_Address]) WWN

Info:

Port Statistics

Cause:

Action:

Event: brocade.DeviceLostEvent

Component: aggregate

EventCode: 5.34.71

Severity: Err/Critical

Actionable: Yes

Sample Description:

brocade device 172.20.67.164 is not available anymore, confirmed by the following 5 subevents

Info:

Aggregated Events that confirms that a device is not available.

Cause:

Action:

Event: brocade.ConnectivityLostEvent

Component: aggregate

EventCode: 5.36.71

Severity: Error**Actionable: Yes****Sample Description:**

Lost connectivity between brocade [Switch_Name] port-2 and t3 [Array_Name] ctrl-1

Info:

This event is generated when switch-ports go offline and other events are confirming it. This can be a link host <-> switch, switch <-> switch or switch <-> device.

Cause:**Action:**

Event: d2.AlarmEvent

Component: temperature

EventCode: 6.3.51

Severity: Warning

Actionable: No

Sample Description:

'temperature' on D2 0130030860 with serial:/dev/es/ses1 changed from '[undefined]' to Normal

Info:

Cause:

Action:

Event: d2.AlarmEvent

Component: midplane.revision

EventCode: 6.3.96

Severity: Warning**Actionable: No****Sample Description:**

The revisionDate of midplane changed from 06/2001 to 07/2001

Info:**Cause:****Action:**

Event: d2.AlarmEvent

Component: slot_count

EventCode: 6.3.46

Severity: Warning

Actionable: No

Sample Description:

The number of slots changed from 12 to 6

Info:

Cause:

Action:

Event: d2.AlarmEvent

Component: esm.revision

EventCode: 6.3.95

Severity: Warning

Actionable: No

Sample Description:

The revisionDate of esm.0 changed from 06/2001 to 07/2001

Info:

Cause:

Action:

Event: d2.AlarmEvent-

Component: power

EventCode: 6.5.37

Severity: Error

Actionable: Yes

Sample Description:

The state of 'power.0.status' on 9999001000 with serial:/dev/es/ses0 changed from 'malfunctioning_and_commanded_on' to 'operational_and_on'

Info:

Cause:

Action:

Event: d2.AlarmEvent-

Component: fan

EventCode: 6.5.19

Severity: Warning

Actionable: Yes

Sample Description:

The state of 'fan.0.status' on 0130030860 with serial:/dev/es/ses1 changed from 'operational' to '[Undefined]'

Info:

A problem with the fan has been noted

Cause:

Action:

1. Check Fan Canister LEDs
2. Replace Fan Canister if needed.

Fan LED Status

State Description

Green The fan is operating properly

Amber The fan has failed

Off The fan canister is not inserted or power is not supplied to system

Event: d2.AuditEvent

Component:

EventCode: 6.10.16

Severity: Info

Actionable: No

Sample Description:

Auditing a new d2 with ID:d2.da106_004

Info:

Audits occur every week.

Cause:

Action:

Event: d2.CommunicationEstablishedEvent

Component: ib

EventCode: 6.11.21

Severity: Info

Actionable: No

Sample Description:

Communication regained with D2fc called [Array_Name]

Info:

Communications was established to a D2 unit.

Cause:

Action:

Event: d2.CommunicationLostEvent

Component: ib

EventCode: 6.12.21

Severity: Err/Critical**Actionable: Yes****Sample Description:**

Lost communication (InBand([Host_Name])) with d2 4999001000 (/dev/es/ses1) (last reboot was 2002-04-23 18:37:00): No such device or address - /dev/es/ses1.

Info:

InBand communication is done via utilities on the host.

Cause:**Action:**

1. Verify cables and HBAs along data path.
2. Check for proper SCSI Termination LED on back of D2.

Event: d2.DiagnosticTest-

Component: d2test

EventCode: 6.13.305

Severity: Error**Actionable: No****Sample Description:**

d2test ([Host-Name]) on d2.da106_004 failed

Info:**Cause:****Action:**

1. Check Test Manager for details on why test failed.

Event: d2.DiscoveryEvent

Component:

EventCode: 6.14.16

Severity: Info

Actionable: No

Sample Description:

Discovered a new d2 with ID:d2.da106_004

Info:

Discovery events occur the very first time the agent probes a storage device.

Cause:

Action:

Event: d2.LocationChangeEvent

Component:

EventCode: 6.19.16

Severity: Info

Actionable: No

Sample Description:

Location of d2 called [Array_Name] was changed

Info:

Cause:

Action:

Event: d2.StateChangeEvent+

Component: disk

EventCode: 6.25.13

Severity: Info

Actionable: No

Sample Description:

disk.0 (SEAGATE.LT04183900) in D2 'da106_004' (d2.da106_004) is now Available
(status-state changed from 'Degraded' to 'Optimal')

Info:

Cause:

Action:

Event: d2.StateChangeEvent-

Component: disk

EventCode: 6.26.13

Severity: Error**Actionable: Yes****Sample Description:**

controller.a (Symbios.1T93200466) in D2 'da106_004' (d2.da106_004) is now Not-Available
(status-state changed from 'Active' to 'Error')

Info:

A disk in the D2 array has been placed in an Error State

Cause:**Action:**

1. Check /var/adm/messages for hardware indicators.
2. Check for drive status LED on D2 enclosure

Drive LED Status

State Description

Unlit No disk drive is in the slot

Green A disk drive is present but not active

Flashing Green A disk drive in the slot is active

Amber An application running on the host identified an error and used
the SAF-TE commands to display this LED solid amber.

Blinking amber/green An application running on the host used SAF-TE commands to
instruct this LED to identify the disk drive.

Event: d2.DeviceLostEvent

Component: aggregate

EventCode: 6.34.71

Severity: Err/Critical

Actionable: Yes

Sample Description:

Device 4999001000 is not available anymore, confirmed by the following 5 subevents

Info:

Aggregated Events that confirms that a device is not available.

Cause:

Action:

Event: d2.ComponentRemoveEvent

Component: esm

EventCode: 6.41.18

Severity: Warning**Actionable: Yes****Sample Description:**

esm.0(1T11824264) was removed from 4999001000 (/dev/es/ses1)

Info:

The D2 is reporting a controller has been removed.

Cause:

This could be due to failure or service replacement actions

Action:

1. Check LED status on D2 unit.

Event: d2.ComponentRemoveEvent

Component: midplane

EventCode: 6.41.29

Severity: Warning

Actionable: Yes

Sample Description:

midplane(9999001000) was removed from 4999001000 (/dev/es/ses1)

Info:

Cause:

Action:

Event: host.AlarmEvent

Component: disk_capacity_okay

EventCode: 7.3.61

Severity: Info

Actionable: No

Sample Description:

Detected SUNWstade back to 82% capacity

Info:

Detected that /var/opt/SUNWstade is now below 98% capacity by doing:
/usr/sbin/df -k /var/opt/SUNWstade

Cause:

Action:

1. No action is required.

Event: host.AlarmEvent

Component: disk_capacity

EventCode: 7.3.6

Severity: Warning

Actionable: Yes

Sample Description:

Detected SUNWstade at 100% capacity

Info:

Detected that /var/opt/SUNWstade is at or above 98% capacity by doing:
/usr/sbin/df -k /var/opt/SUNWstade

Cause:

Action:

1. Remove unused files/directories to free up space
2. Use a larger disk for /var/opt/SUNWstade

Event: host.AlarmEvent+

Component: lun.T4

EventCode: 7.4.121

Severity: Error
Actionable: Yes**Sample Description:**

The state of 'lun.T4.c18t60020F2000000AD83BD90309000AC1FE0s2.statusA' on [array] changed from 'ONLINE' to 'STANDBY'

Info:

StorADE executes 'luxadm display [WWN]' on the host in search of anomalies in the output. StorADE then tries to find which enclosure this path corresponds to by reviewing it's database of 6120's and VE's.

Cause:

StorADE found a change in the port-status of one of the paths of this device.

Action:

1. Check the LED indicators on the ports to ensure proper light indications.
2. Check the StorADE FRU status on this device for possible partner pair controller failover.
3. Replace the component at point of origin for the light source.
4. Replace the controller in the Array and/or GBIC in VE.

Event: host.AlarmEvent+

Component: lun.T300

EventCode: 7.4.27

Severity: Error
Actionable: Yes**Sample Description:**

The state of 'lun.T300.c18t60020F2000000AD83BD90309000AC1FE0s2.statusA' on [array] changed from 'ONLINE' to 'STANDBY'

Info:

StorADE executes 'luxadm display [WWN]' on the host in search of anomalies in the output. StorADE then tries to find which enclosure this path corresponds to by reviewing it's database of T3's and VE's.

Cause:

StorADE found a change in the port-status of one of the paths of this device.

Action:

1. Check the LED indicators on the ports to ensure proper light indications.
2. Check the StorADE FRU status on this device for possible partner pair controller failover.
3. Replace the component at point of origin for the light source.
4. Replace the controller in the Array and/or GBIC in VE.

Event: host.AlarmEvent+

Component: hba

EventCode: 7.4.20

Severity: Warning

Actionable: No

Sample Description:

status of hba /devices/sbus@9,0/SUNW,qlc@0,30000/fp@0,0:devctl on [Host_Name] changed from NOT CONNECTED to CONNECTED

Info:

StorADE uses the luxadm command to monitor the status of the HBA in the host being monitored.

Cause:

The command `luxadm -e port' returned a change in the status of an HBA port(s) previously recorded by StorADE.

Action:

Verify with the administrator onsite that this was the expected results of whatever previous action was done, and that it is now working to their satisfaction.

Event: host.AlarmEvent-

Component: hba

EventCode: 7.5.20

Severity: Error**Actionable: Yes****Sample Description:**

status of hba /devices/sbus@9,0/SUNW,qlc@0,30000/fp@0,0:devctl on [Host_Name] changed from CONNECTED to NOT CONNECTED

Info:

monitors changes in the output of luxadm -e port

Found path to 20 HBA ports

/devices/sbus@2,0/SUNW,socal@d,10000:0 NOT CONNECTED

.....

Cause:

The command `luxadm -e port' returned a change in the status of an HBA port(s) previously recorded by StorADE.

Action:

1. Use 'luxadm -e port' to confirm HBA status and verify if all paths are working.
2. Check the StorADE GUI for event information about the host and specifics about the HBA.
3. Check the StorADE GUI Topology for attached devices to the HBA.
4. Run a link test diagnostic between the devices found in the topology.
5. Replace the component most likely to have caused this message.
 1. GBIC
 2. HBA
 3. Controller (if applicable)
 4. Cable

Event: host.AlarmEvent-

Component: lun.T4

EventCode: 7.5.121

Severity: Error**Actionable: Yes****Sample Description:**

The state of lun.T4.c7t2B00006022004188d0s2.statusA on [Host_Name] changed from 'O.K.' to 'ERROR' (target=[Array_Name] ([IP_Address]))

Info:

StorADE executes 'luxadm display [WWN]' on the host in search of anomalies in the output.
StorADE then tries to find which enclosure this path corresponds to
by reviewing it's database of 6120's and VE's.

Cause:

StorADE found a change in the port-status of one of the paths of this device.

Action:

1. Check the LED indicators on the ports to ensure proper light indications.
2. Check the StorADE FRU status on this device for possible partner pair controller failover.
3. Replace the component at point of origin for the light source.
4. Replace the controller in the Array and/or GBIC in VE.

Event: host.AlarmEvent-

Component: lun.VE

EventCode: 7.5.28

Severity: Error

Actionable: Yes

Sample Description:

The state of lun.VE.c14t50020F2300003EE5d0s2.statusA on [Host_Name] changed from 'O.K.' to 'ERROR' (target=ve:[Array_Name] ([IP_Address])

Info:

luxadm display reported a change in the port-status of one of it's paths. The agent then tries to find which enclosure this path corresponds to by reviewing it's database of T3's and VE's.

Cause:

Action:

Event: host.AlarmEvent-

Component: lun.T300

EventCode: 7.5.27

Severity: Error**Actionable: Yes****Sample Description:**

The state of lun.T300.c7t2B00006022004188d0s2.statusA on [Host_Name] changed from 'O.K.' to 'ERROR' (target=t3:[Array_Name] ([IP_Address])

Info:

StorADE executes 'luxadm display [WWN]' on the host in search of anomalies in the output. StorADE then tries to find which enclosure this path corresponds to by reviewing it's database of T3's and VE's.

Cause:

StorADE found a change in the port-status of one of the paths of this device.

Action:

1. Check the LED indicators on the ports to ensure proper light indications.
2. Check the StorADE FRU status on this device for possible partner pair controller failover.
3. Replace the component at point of origin for the light source.
4. Replace the controller in the Array and/or GBIC in VE.

Event: host.DiagnosticTest-

Component: qlctest

EventCode: 7.13.336

Severity: Error

Actionable: No

Sample Description:

qlctest ([Host_Name] on host failed

Info:

Cause:

Action:

Event: host.DiagnosticTest-

Component: socaltest

EventCode: 7.13.337

Severity: Error

Actionable: No

Sample Description:

socaltest ([Host_Name] on host failed

Info:

Cause:

Action:

Event: host.DiagnosticTest-

Component: ifptest

EventCode: 7.13.335

Severity: Error

Actionable: No

Sample Description:

ifptest ([Host_Name] on host failed

Info:

Cause:

Action:

Event: host.LogEvent

Component: driver.MPXIO

EventCode: 7.20.312

Severity: Warning

Actionable: No

Sample Description:

Found 1 'driver.MPXIO' warnings(s) in logfile: /var/adm/messages on [Host_Name]

Info:

Cause:

Action:

Event: host.LogEvent

Component: driver.MPXIO_offline

EventCode: 7.20.313

Severity: Warning**Actionable: Yes****Sample Description:**

Found 2 'driver.MPXIO_offline' warning(s) in logfile: /var/adm/messages on [Host_Name]

Info:

The MPxIO multipathing software has noted the path to a storage device has gone offline.

Cause:**Action:**

1. Check the Topology View to see what device(s) are affected.
2. Check all cables and connections.
3. Check for other alerts that may indicate an underlying problem. (ex. Switch Ports offline)
4. The outputs of 'cfgadm -al' and 'luxadm -e port' may uncover other fabric problems.

Event: host.LogEvent

Component: driver.LINK_DOWN

EventCode: 7.20.350

Severity: Warning**Actionable: No****Sample Description:**

Found 1 'driver.LINK_DOWN' errors(s) in logfile: /var/adm/messages on [Host_Name]
(id=80aaa75a)

Info:

Found Link Down message.
This could indicate that a fiber channel cable has been removed.
This could indicate troubles with a fiber channel loop.

Cause:**Action:**

1. Check to see if a fiber channel cable has been removed.
2. Check for fiber channel errors.

Event: host.LogEvent

Component: driver.PFA

EventCode: 7.20.314

Severity: Warning

Actionable: No

Sample Description:

failure prediction threshold exceeded

Info:

Predictive failure analysis entry

Cause:

Action:

Event: host.LogEvent

Component: driver.LINK_UP

EventCode: 7.20.351

Severity: Info**Actionable: No****Sample Description:**

Found 1 'driver.LINK_UP' errors(s) in logfile: /var/adm/messages on [Host_Name]

Info:

Found Link Up message.

This could indicate that a new fiber channel loop has been added.

This could indicate troubles with a fiber channel loop.

Cause:**Action:**

1. Check for fiber channel errors.

Event: host.LogEvent

Component: driver.QLC_LOOP_OFFLINE

EventCode: 7.20.315

Severity: Warning**Actionable: No****Sample Description:**

Found 1 'driver.LOOP_OFFLINE' errors(s) in logfile: /var/adm/messages on [Host_Name]
(id=80aaa75a)

Info:

Found Loop OFFLINE message.
This could indicate that a fiber channel cable has been removed.
This could indicate troubles with a fiber channel loop.
This could also be caused by running the qlctest.

Cause:**Action:**

1. Check to see if a fiber channel cable has been removed.
2. Check for fiber channel errors.
3. Check to see if the qlctest was running at time of the failure.

Event: host.LogEvent

Component: driver.QLC_LOOP_ONLINE

EventCode: 7.20.316

Severity: Info**Actionable: No****Sample Description:**

Found 1 'driver.LOOP_ONLINE' errors(s) in logfile: /var/adm/messages on [Host_Name]

Info:

Found Loop ONLINE message.

This could indicate that a new fiber channel loop has been added.

This could indicate troubles with a fiber channel loop.

This could also be caused by running the qlctest.

Cause:**Action:**

1. Check for fiber channel errors.
2. Check to see if the qlctest was running at time of the failure.

Event: host.LogEvent

Component: driver.SCSI_ASC

EventCode: 7.20.317

Severity: Warning

Actionable: No

Sample Description:

Found 1 'driver.SCSI_ASC' warnings(s) in logfile: /var/adm/messages on [Host_Name]
(id=[host_id]):

Info:

Cause:

Action:

Event: host.LogEvent

Component: driver.SCSI_TRAN_FAILED

EventCode: 7.20.318

Severity: Warning

Actionable: No

Sample Description:

Found 1 'driver.SCSI_TRAN_FAILED' warning(s) in logfile: /var/adm/messages on [Host_Name]

Info:

Cause:

Action:

Event: host.LogEvent

Component: driver.SCSI_TR_READ

EventCode: 7.20.319

Severity: Error**Actionable: Yes****Sample Description:**

Found 1 'driver.SCSI_TR_READ' warning(s) in logfile: /var/adm/messages on [Host_Name]

Info:

Error on SCSI read.

Cause:**Action:**

Event: host.LogEvent

Component: driver.SCSI_TR_WRITE

EventCode: 7.20.320

Severity: Error**Actionable: Yes****Sample Description:**

Found 1 'driver.SCSI_TR_WRITE' warning(s) in logfile: /var/adm/messages on [Host_Name]

Info:

Error on SCSI write.

Cause:**Action:**

Event: host.LogEvent

Component: disk.log

EventCode: 7.20.104

Severity: Warning

Actionable: Yes

Sample Description:

4 array_warning(s) found in logfile [Array_Message_Logfile] (indicating problem with array [Array_Name]/[IP_Address]): Feb 05 18:45:28 t400 sh50[1]: N: u2d01 ioctl disk failed err=1:

Info:

The StorADE agent monitoring the array log file reports on the following:

Errors and Warnings (depicted by "E:" and "W:") found in the logfile

Notice and Information (depicted by "N:" and "I:") lines about disks.

Notices about the battery.

Notices about the PCU hold time.

Cause:

StorADE detected a pattern described above in the array log file.

Action:

1. Use the StorADE GUI log viewing functions to check messages before and after this one.
2. Check volume integrity associated with the disk in question.
3. Replace this disk.
4. Monitor disk.

Event: host.LogEvent

Component: driver.SFOFFTOWARN

EventCode: 7.20.321

Severity: Warning

Actionable: Yes

Sample Description:

Found 1 'driver.SFOFFTOWARN' error(s) in logfile: /var/adm/messages on [Host_Name]

Info:

Offline Timeout

Cause:

Action:

Event: host.LogEvent

Component: driver.SF_CRC_ALERT

EventCode: 7.20.322

Severity: Error**Actionable: Yes****Sample Description:**

Found 1 'driver.SF_CRC_ALERT' error(s) in logfile: /var/adm/messages on [Host_Name]

Info:

Loop CRC, DMA and Timeout Warnings

Cause:**Action:**

Event: host.LogEvent

Component: driver.SF_CRC_WARN

EventCode: 7.20.323

Severity: Warning

Actionable: Yes

Sample Description:

Found 1 'driver.SF_CRC_WARN' error(s) in logfile: /var/adm/messages on [Host_Name]

Info:

Loop CRC, DMA and Timeout Warnings

Cause:

Action:

Event: host.LogEvent

Component: driver.SF_DMA_WARN

EventCode: 7.20.324

Severity: Warning

Actionable: Yes

Sample Description:

Found 1 'driver.SF_DMA_WARN' error(s) in logfile: /var/adm/messages on [Host_Name]

Info:

Incomplete DMA Transfer.

Cause:

Action:

Event: host.LogEvent

Component: power.battery.refresh

EventCode: 7.20.108

Severity: Warning**Actionable: No****Sample Description:**

2003-02-13 14:33:02 1 array_warning(s) found in logfile [Array_Message_Logfile]

(indicating problem with t3 [Array_Name]/[IP_Address]): Feb 13 15:29:26 [Array_Name] LPCT[1]: N: u1pcu1

Info:

The T3 Array has a BATD process that executes according to /etc/schd.conf file on the T3. The process monitors the Battery portion of the PCU.

Cause:

A refresh message was posted to the log file indicating that the batteries are recharging.

Action:

1. Monitor the cycle and ensure proper completion.
2. Check the StorADE GUI for current state and status of the PCU's in the array.
3. Check the StorADE GUI for warranty dates and battery usage calculations and follow proper PFA strategies for replacing the unit.

Event: host.LogEvent

Component: power.battery.replace

EventCode: 7.20.109

Severity: Warning**Actionable: Yes****Sample Description:**

2 warning(s) found in logfile [Array_Message_Logfile] (indicating problem with 't3
Array_Name/IP_Address)': Sep 24 16:20:39 [Array_Name] SCHD[1]: W: u1pcu1 37 days 'battery life left, Re

Info:

A message was found in the T3 Message Log file indicating a status of the Battery that warrants notification.

Cause:

1. The battery warranty period is about to expire.
2. The battery hold time may be low or can no longer hold a charge.

Action:

1. Check StorADE status of the PCU batteries for this array.
2. Telnet to the ARRAY and run 'refresh -s' to verify battery state.
3. Replace battery.

Event: host.LogEvent

Component: driver.ELS_RETRY

EventCode: 7.20.307

Severity: Warning

Actionable: Yes

Sample Description:

Found 2 'driver.ELS_RETRY' warning(s) in logfile: /var/adm/messages on [Host_Name]

Info:

Target and Loop Extended Link Service Retry

Cause:

Action:

Event: host.LogEvent

Component: driver.SF_OFFLALERT

EventCode: 7.20.325

Severity: Error**Actionable: Yes****Sample Description:**

Found 1 'driver.SF_OFFLALERT' error(s) in logfile: /var/adm/messages on [Host_Name]

Info:

Error: socal/ifp Offline.

Cause:

The host systems' message log has recorded an error resulting from a problem with the Fibre Channel.

Action:

1. Check the StorADE GUI for information about the host and specifics about the HBA.
2. Check the StorADE GUI Topology for attached devices to the HBA.
3. Run a link test diagnostic between the devices found in the topology.
4. Replace the component most likely to have caused this message.
 1. GBIC
 2. HBA
 3. Controller (if applicable)
 4. Cable

Event: host.LogEvent

Component: driver.Fabric_Warning

EventCode: 7.20.308

Severity: Warning

Actionable: No

Sample Description:

Found 1 'driver.Fabric_Warning' warning(s) in logfile: /var/adm/messages on [Host_Name]
(id=80c99e3e)

Info:

Fabric warning

Cause:

Action:

Event: host.LogEvent

Component: driver.SF_OFFLINE

EventCode: 7.20.326

Severity: Warning

Actionable: Yes

Sample Description:

Found 1 'driver.SF_OFFLINE' error(s) in logfile: /var/adm/messages on [Host_Name]

Info:

Warning: socal/ifp Offline.

Cause:

Action:

Event: host.LogEvent

Component: driver.Firmware_Change

EventCode: 7.20.309

Severity: Warning

Actionable: Yes

Sample Description:

The recommended firmware version for this application is ...

Info:

Cause:

Action:

Event: host.LogEvent

Component: driver.SF_RESET

EventCode: 7.20.327

Severity: Warning

Actionable: Yes

Sample Description:

WARNING.*\((sfd+)\) next = /(sfd+):.*sf_reset/

Info:

SF Reset

Cause:

Action:

Event: host.LogEvent

Component: power.battery

EventCode: 7.20.38

Severity: Error**Actionable: Yes****Sample Description:**

1 error(s) found in logfile [Array_Message_Logfile] (indicating problem with t3 [Array_Name]/[IP_Address]):

Info:

This event is generated for battery messages found in the array log file that are not specific to any other type of battery event.

Cause:

1. The battery warranty period may have expired.
2. The battery's ability to hold a charge has diminished to a point where it can no longer be recharged.
3. The last refresh cycle failed changing the status of the battery.

Action:

1. Check the StorADE GUI for current state and status of the PCU's in the array.
2. Replace the suspect Battery or the whole PCU in the array.

Event: host.LogEvent

Component: driver.SF_RETRY

EventCode: 7.20.328

Severity: Warning

Actionable: Yes

Sample Description:

(sfd+):s+ELSs+.*(targets+0x[0-9a-f]+)s+retrying

Info:

Target and Loop ELS Retry

Cause:

Action:

Event: host.LogEvent

Component: driver.LOOP_OFFLINE

EventCode: 7.20.310

Severity: Warning**Actionable: No****Sample Description:**

Found 1 'driver.LOOP_OFFLINE' errors(s) in logfile: /var/adm/messages on [Host_Name]
(id=80aaa75a)

Info:

Found Loop OFFLINE message.
This could indicate that a fiber channel cable has been removed.
This could indicate troubles with a fiber channel loop.
This could also be caused by running the qlctest.

Cause:**Action:**

1. Check to see if a fiber channel cable has been removed.
2. Check for fiber channel errors.

Event: host.LogEvent

Component: driver.SSD_ALERT

EventCode: 7.20.329

Severity: Error
Actionable: Yes**Sample Description:**

Found 2 'driver.SSD_ALERT' errors(s) in logfile /var/adm/messages on [Host_Name] :

Info:

StorADE scrubs the system log file for patterns that match known failure signatures. These warnings could indicate a
Actual pattern match "WARNING.*\\((ssdd+)|\\)"

Cause:

StorADE found enough WARNING messages in the system log file that called out an SSD device and exceeded the threshold.

Action:

1. Check StorADE for other error type events for any of the devices being monitored.
2. Check with the System Administrator for activity on the ssd device.
3. Run link test to isolate a possible bad GBIC, cable, switch, etc.

Event: host.LogEvent

Component: driver.LOOP_ONLINE

EventCode: 7.20.311

Severity: Info**Actionable: No****Sample Description:**

Found 1 'driver.LOOP_ONLINE' errors(s) in logfile: /var/adm/messages on [Host_Name]

Info:

Found Loop ONLINE message.

This could indicate that a new fiber channel loop has been added.

This could indicate troubles with a fiber channel loop.

This could also be caused by running the qlctest.

Cause:**Action:**

1. Check for fiber channel errors.

Event: host.LogEvent

Component: driver.SSD_WARN

EventCode: 7.20.330

Severity: Warning

Actionable: Yes

Sample Description:

Found 2 'driver.SSD_WARN' errors(s) in logfile /var/adm/messages on [Host_Name] :

Info:

StorADE scrubs the system log file for patterns that match known failure signatures. These warnings could indicate a
Actual pattern match "WARNING.*\\((ssdd+\\)"

Cause:

StorADE found enough WARNING messages in the system log file that called out an SSD device and exceeded the threshold.

Action:

1. Check StorADE for other error type events for any of the devices being monitored.
2. Check with the System Administrator for activity on the ssd device.
3. Run link test to isolate a possible bad GBIC, cable, switch, etc.

Event: host.LogEvent

Component: error

EventCode: 7.20.17

Severity: Error

Actionable: Yes

Sample Description:

Errors(s) found in logfile: /var/adm/messages

Info:

Errors found.

Cause:

Action:

Event: host.LogEvent

Component: array_error

EventCode: 7.20.90

Severity: Warning

Actionable: Yes

Sample Description:

warning(s) found in logfile: [Array_Log_File] on [Host_Name] (id=[HostID]):

Info:

The StorADE agent monitoring the array log file reports on the following:

- Errors and Warnings (depicted by "E:" and "W:") found in the logfile
- Notice and Information (depicted by "N:" and "I:") lines about disks errors.
- Notices about the battery.
- Notices about the PCU hold time.

Cause:

StorADE detected a pattern described above in the array log file. It was generated as a HOST event because the message was about an array that StorADE is not monitoring.

Action:

1. Use the StorADE GUI log viewing functions to check messages before and after this one.
2. Check volume integrity associated with the disk in question.
3. Replace this disk.

Event: host.LogEvent

Component: warning

EventCode: 7.20.54

Severity: Warning

Actionable: No

Sample Description:

Warnings(s) found in logfile: /var/adm/messages

Info:

Warnings found in /var/adm/messages

Cause:

Action:

Event: host.LogEvent

Component: array_warning

EventCode: 7.20.91

Severity: Warning**Actionable: Yes****Sample Description:**

warning(s) found in logfile: [Array_Log_File] on [Host_Name] (id=[HostID]):

Info:

The StorADE agent monitoring the array log file reports on the following:

- Errors and Warnings (depicted by "E:" and "W:") found in the logfile
- Notice and Information (depicted by "N:" and "I:") lines about disks errors.
- Notices about the battery.
- Notices about the PCU hold time.

Cause:

StorADE detected a pattern described above in the array log file. It was generated as a HOST event because the message was about an array that StorADE is not monitoring.

Action:

1. Use the StorADE GUI log viewing functions to check messages before and after this one.
2. Check volume integrity associated with the disk in question.
3. Replace this disk.

Event: host.PatchInfo

Component:

EventCode: 7.21.16

Severity: Info

Actionable: No

Sample Description:

New Patch and Package Information generated

Info:

sending Patch and Package information to Providers

Cause:

Action:

Event: host.backup

Component:

EventCode: 7.31.16

Severity: Info

Actionable: No

Sample Description:

Agent Backup

Info:

Backup of the configuration file of the agent.

Cause:

Action:

Event: host.patchInfo

Component:

EventCode: 7.38.16

Severity: Info

Actionable: No

Sample Description:

Patch and/or Package Information has changed:

Info:

Cause:

Action:

Event: internal.AuditEvent

Component:

EventCode: 8.10.16

Severity: Info

Actionable: No

Sample Description:

Auditing internal disk

Info:

Cause:

Action:

Event: internal.CommunicationEstablishedEvent

Component: ib

EventCode: 8.11.21

Severity: Info

Actionable: No

Sample Description:

Communication Established with internal disks

Info:

Cause:

Action:

Event: internal.CommunicationLostEvent

Component: ib

EventCode: 8.12.21

Severity: Err/Critical

Actionable: Yes

Sample Description:

Lost communication with dak-cte (wwn=508002000011d710)

Info:

Cause:

Action:

1. Check the power cables on host

Event: internal.DiagnosticTest-

Component: fcdisktest

EventCode: 8.13.331

Severity: Error

Actionable: No

Sample Description:

fctest on internal disk failed

Info:

Cause:

Action:

Check Test Manager for details on failure.

Event: internal.DiscoveryEvent

Component:

EventCode: 8.14.16

Severity: Info

Actionable: No

Sample Description:

Discovered a new internal disk

Info:

Discovery events occur the very first time the agent probes a storage device.

Cause:

Action:

Event: internal.ComponentInsertEvent

Component: disk

EventCode: 8.40.13

Severity: Info

Actionable: No

Sample Description:

an internal disk was added

Info:

A new disk was added in internal disk enclosure

Cause:

Action:

Event: internal.ComponentRemoveEvent

Component: disk

EventCode: 8.41.13

Severity: Error**Actionable: Yes****Sample Description:**

internal disk was removed

Info:

Luxadm cannot see the wwn of a disk, it may have been removed or damaged.

Cause:**Action:**

1. Check /var/adm/messages for any errors

Event: san.LinkEvent_CRC

Component: host|storage

EventCode: 10.43.333

Severity: Warning

Actionable: Yes

Sample Description:

12-14 06:35:25 CRC-ERROR (33288 in 1 mins): Origin: hba-1 on 'host '[Host_Name]'.
Destination: IB-A on 'a5k '[Array_Name]'

Info:

CRC went up on port of Storage, source of error was a host.

Cause:

Likely Causes are: HBA, GBIC, FC Cable and Storage optical connection.

Action:

To isolate further please run the link, HBA, and storage tests.

Event: san.LinkEvent_CRC

Component: switch|t3

EventCode: 10.43.344

Severity: Warning

Actionable: Yes

Sample Description:

12-14 06:35:25 CRC-ERROR (1309488 in 1 mins): Origin: port 1 on switch
'[Array_Name]/[IP_Address]'. Destination: ctrl-2 on 't3 '[Array_Name]'.

Info:

A link error (CRC) was detected between the switch and storage.

Cause:

Likely Causes are: GBIC, FC Cable and storage optical interface.

Action:

To isolate further please run the link, switch and storage tests.

Event: san.LinkEvent_CRC

Component: switch|a3500fc

EventCode: 10.43.340

Severity: Warning

Actionable: Yes

Sample Description:

12-14 06:35:25 CRC-ERROR (1309488 in 1 mins): Origin: port 1 on switch
'[Array_Name]/[IP_Address]': Destination: controller-1 on 'a3500fc '[Array_Name]'.

Info:

CRC went up on port of Storage, source is the switch.

Cause:

Likely Cause: Switch, Switch GBIC, FC Cable, storage optical port.

Action:

To isolate further please run the link, switch and storage tests.

Event: san.LinkEvent_CRC

Component: host|switch

EventCode: 10.43.334

Severity: Warning

Actionable: Yes

Sample Description:

12-14 06:35:25 CRC-ERROR (33288 in 1 mins): Origin: hba-1 on 'host '[Host_Name]'.

Destination: port 2 on switch '[Array_Name]/[IP_Address]':

Info:

A CRC counter was detected on a switch port. Source was a host.

This may indicate a potential problem on this link segment.

Cause:

Likely Causes are: Host HBA/GBIC, FC cable and Switch GBIC.

Action:

To isolate further please run the link, switch and host tests.

Event: san.LinkEvent_CRC

Component: ve|switch

EventCode: 10.43.347

Severity: Warning

Actionable: Yes

Sample Description:

08 13:26:16 CRC-ERROR (680 in 1 mins): Origin: port 1 on 've 'msp0-v1a/29000060220041f4'.

Destination: port 1 on switch '192.168.0.30':

Info:

A link error threshold (CRC) was reached between the switch and Virtualization Engine.

Cause:

Likely Causes are: VE GBIC, FC Cable or switch GBIC.

Action:

To isolate further please run the link, VE and switch tests.

Event: san.LinkEvent_CRC

Component: switch|a5k

EventCode: 10.43.341

Severity: Warning

Actionable: Yes

Sample Description:

12-14 06:35:25 CRC-ERROR (1309488 in 1 mins): Origin: port 1 on switch
'[Array_Name]/[IP_Address]': Destination: IB-A on 'a5k '[Array_Name]'

Info:

A link error threshold (CRC) was reached between the switch and storage.

Cause:

Likely Causes are: Switch, Switch GBIC, FC Cable or IB GBIC.

Action:

To isolate further please run the link, switch and storage tests.

Event: san.LinkEvent_CRC

Component: switch|switch

EventCode: 10.43.343

Severity: Warning

Actionable: Yes

Sample Description:

12-12 09:36:08 CRC-ERROR (1885 in 1 mins): Origin: port 7 on 'switch '172.20.67.154'.

Destination: port 15 on switch 'switch197/172.20.67.197':

Info:

A CRC counter on a switch port went up by a certain threshold, The problem is in the link between the 2 switch ports.

Cause:

Likely Causes are: GBICs, FC Cable and switch ports.

Action:

To isolate further please run the link and switch tests.

Event: san.LinkEvent_CRC

Component: Any|Any

EventCode: 10.43.301

Severity: Warning**Actionable: Yes****Sample Description:**

12-14 06:35:25 CRC-ERROR (33288 in 1 mins): Origin: port 2 on switch
'[Device]/[IP_Address]', Destination: IB-A on 'a5k '[Array_Name]'

Info:

StorADE monitors Fibre Channel counters of components on a SAN.

CRC - Cyclic Reduncy Checks

ITW - Invalid Transmit Words

SIG - Signal Errors

An increase of the CRC counter on a Fibre Channel device was detected by StorADE and has generated an event based on predetermined thresholds.

Cause:

1. An intermittent/bad GBIC in the FC device specified in the event.
2. An intermittent/bad cable connection or a poorly routed cable.
3. Someone removed an unused GBIC.

Action:

1. Check StorADE status of device for events about the component named in the event.
2. Run link test to isolate the GBIC, cable, component, etc.
3. Check StorADE topology for direction of counter activity and replace appropri
4. Reroute/replace cable as needed.

Event: san.LinkEvent_CRC

Component: switch|storage

EventCode: 10.43.342

Severity: Warning

Actionable: Yes

Sample Description:

12-14 06:35:25 CRC-ERROR (33288 in 1 mins): Origin: port 2 on switch
'[Array_Name]/[IP_Address]': Destination: IB-A on 'a5k '[Array_Name]'

Info:

A link error (CRC) was detected between the switch and storage.

Cause:

Likely Causes are: Switch, Switch GBIC, FC Cable and storage optical interface.

Action:

To isolate further please run the link, switch and storage tests.

Event: san.LinkEvent_ITW

Component: switch|switch

EventCode: 10.44.343

Severity: Warning

Actionable: Yes

Sample Description:

12-12 09:36:08 ITW-ERROR (1885 in 1 mins): Origin: port 7 on 'switch '172.20.67.154'.

Destination: port 15 on switch 'switch197/172.20.67.197':

Info:

A CRC counter on a switch port went up by a certain threshold, The problem is in the link between the 2 switch ports.

Cause:

Likely Causes are: GBICs, FC Cable and switch ports.

Action:

To isolate further please run the link and switch tests.

Event: san.LinkEvent_ITW

Component: switch|t3

EventCode: 10.44.344

Severity: Warning

Actionable: Yes

Sample Description:

12-14 06:35:25 ITW-ERROR (1309488 in 1 mins): Origin: port 1 on switch
'[Array_Name]/[IP_Address]': Destination: ctrl-2 on 't3 '[Array_Name]'.

Info:

A link error (CRC) was detected between the switch and storage.

Cause:

Likely Causes are: GBIC, FC Cable and storage optical interface.

Action:

To isolate further please run the link, switch and storage tests.

Event: san.LinkEvent_ITW

Component: ve|switch

EventCode: 10.44.347

Severity: Warning

Actionable: Yes

Sample Description:

08 13:26:16 ITW-ERROR (680 in 1 mins): Origin: port 1 on 've 'msp0-v1a/29000060220041f4'.
Destination: port 1 on switch '192.168.0.30':

Info:

A link error threshold (CRC) was reached between the switch and Virtualization Engine.

Cause:

Likely Causes are: VE GBIC, FC Cable or switch GBIC.

Action:

To isolate further please run the link, VE and switch tests.

Event: san.LinkEvent_ITW

Component: Any|Any

EventCode: 10.44.301

Severity: Warning

Actionable: Yes

Sample Description:

12-14 06:35:25 ITW-ERROR (33288 in 1 mins): Origin: port 2 on switch
'[Array_Name]/[IP_Address]'. Destination: IB-A on 'a5k '[Array_Name]'

Info:

An invalid transmission word (ITW) was detected between two components.

Cause:

Likely Causes are: GBIC, FC Cable and device optical connections.

Action:

Run the link test associated with this link segment to isolate further.

Event: san.LinkEvent_ITW

Component: switch|a3500fc

EventCode: 10.44.340

Severity: Warning

Actionable: Yes

Sample Description:

12-14 06:35:25 ITW-ERROR (1309488 in 1 mins): Origin: port 1 on switch
'[Array_Name]/[IP_Address]'. Destination: controller-1 on 'a3500fc '[Array_Name]'].

Info:

CRC went up on port of Storage, source is the switch.

Cause:

Likely Cause: Switch, Switch GBIC, FC Cable, storage optical port.

Action:

To isolate further please run the link, switch and storage tests.

Event: san.LinkEvent_ITW

Component: switch|a5k

EventCode: 10.44.341

Severity: Warning

Actionable: Yes

Sample Description:

12-14 06:35:25 ITW-ERROR (1309488 in 1 mins): Origin: port 1 on switch
'[Array_Name]/[IP_Address]': Destination: IB-A on 'a5k '[Array_Name]'

Info:

A link error threshold (CRC) was reached between the switch and storage.

Cause:

Likely Causes are: Switch, Switch GBIC, FC Cable or IB GBIC.

Action:

To isolate further please run the link, switch and storage tests.

Event: san.LinkEvent_ITW

Component: host|storage

EventCode: 10.44.333

Severity: Warning

Actionable: Yes

Sample Description:

12-14 06:35:25 ITW-ERROR (33288 in 1 mins): Origin: hba-1 on 'host '[Host_Name]'.
Destination: IB-A on 'a5k '[Array_Name]'

Info:

CRC went up on port of Storage, source of error was a host.

Cause:

Likely Causes are: HBA, GBIC, FC Cable and Storage optical connection.

Action:

Run the link test associated with this link segment to isolate further.

Event: san.LinkEvent_ITW

Component: switch|storage

EventCode: 10.44.342

Severity: Warning

Actionable: Yes

Sample Description:

12-14 06:35:25 ITW-ERROR (33288 in 1 mins): Origin: port 2 on switch
'[Array_Name]/[IP_Address]': Destination: IB-A on 'a5k '[Array_Name]'

Info:

A link error (CRC) was detected between the switch and storage.

Cause:

Likely Causes are: Switch, Switch GBIC, FC Cable and storage optical interface.

Action:

To isolate further please run the link, switch and storage tests.

Event: san.LinkEvent_ITW

Component: host|switch

EventCode: 10.44.334

Severity: Warning

Actionable: Yes

Sample Description:

12-14 06:35:25 ITW-ERROR (33288 in 1 mins): Origin: hba-1 on 'host '[Host_Name]'.

Destination: port 2 on switch '[Array_Name]/[IP_Address]'.

Info:

A CRC counter was detected on a switch port. Source was a host.

This may indicate a potential problem on this link segment.

Cause:

Likely Causes are: Host HBA/GBIC, FC cable and Switch GBIC.

Action:

To isolate further please run the link, switch and host tests.

Event: san.LinkEvent_SIG

Component: switch|switch

EventCode: 10.45.343

Severity: Warning

Actionable: Yes

Sample Description:

12-12 09:36:08 SIG-ERROR (1885 in 1 mins): Origin: port 7 on 'switch '172.20.67.154'.

Destination: port 15 on switch 'switch197/172.20.67.197':

Info:

A CRC counter on a switch port went up by a certain threshold, The problem is in the link between the 2 switch ports.

Cause:

Likely Causes are: GBICs, FC Cable and switch ports.

Action:

To isolate further please run the link and switch tests.

Event: san.LinkEvent_SIG

Component: switch|t3

EventCode: 10.45.344

Severity: Warning

Actionable: Yes

Sample Description:

12-14 06:35:25 SIG-ERROR (1309488 in 1 mins): Origin: port 1 on switch
'[Array_Name]/[IP_Address]': Destination: ctrl-2 on 't3 '[Array_Name]'.

Info:

A link error (CRC) was detected between the switch and storage.

Cause:

Likely Causes are: GBIC, FC Cable and storage optical interface.

Action:

To isolate further please run the link, switch and storage tests.

Event: san.LinkEvent_SIG

Component: Any|Any

EventCode: 10.45.301

Severity: Warning

Actionable: Yes

Sample Description:

12-14 06:35:25 SIG-ERROR (33288 in 1 mins): Origin: port 2 on switch
'[Array_Name]/[IP_Address]': Destination: IB-A on 'a5k '[Array_Name]'

Info:

An invalid transmission word (SIG) was detected between two components. This could indicate a potential problem.

Cause:

Likely Causes are: GBIC, FC Cable and device optical connections.

Action:

To isolate further please run the tests associated with this link segment.

Event: san.LinkEvent_SIG

Component: switch|a3500fc

EventCode: 10.45.340

Severity: Warning

Actionable: Yes

Sample Description:

12-14 06:35:25 SIG-ERROR (1309488 in 1 mins): Origin: port 1 on switch
'[Array_Name]/[IP_Address]': Destination: controller-1 on 'a3500fc '[Array_Name]'

Info:

CRC went up on port of Storage, source is the switch.

Cause:

Likely Cause: Switch, Switch GBIC, FC Cable, storage optical port.

Action:

To isolate further please run the link, switch and storage tests.

Event: san.LinkEvent_SIG

Component: switch|storage

EventCode: 10.45.342

Severity: Warning

Actionable: Yes

Sample Description:

12-14 06:35:25 SIG-ERROR (33288 in 1 mins): Origin: port 2 on switch
'[Array_Name]/[IP_Address]': Destination: IB-A on 'a5k '[Array_Name]'

Info:

A link error (CRC) was detected between the switch and storage.

Cause:

Likely Causes are: Switch, Switch GBIC, FC Cable and storage optical interface.

Action:

To isolate further please run the link, switch and storage tests.

Event: san.LinkEvent_SIG

Component: host|storage

EventCode: 10.45.333

Severity: Warning

Actionable: Yes

Sample Description:

12-14 06:35:25 SIG-ERROR (33288 in 1 mins): Origin: hba-1 on 'host '[Host_Name]'.
Destination: IB-A on 'a5k '[Array_Name]'

Info:

CRC went up on port of Storage, source of error was a host.

Cause:

Likely Causes are: HBA, GBIC, FC Cable and Storage optical connection.

Action:

To isolate further please run the link, HBA, and storage tests.

Event: san.LinkEvent_SIG

Component: host|switch

EventCode: 10.45.334

Severity: Warning

Actionable: Yes

Sample Description:

12-14 06:35:25 SIG-ERROR (33288 in 1 mins): Origin: hba-1 on 'host '[Host_Name]'.
Destination: port 2 on switch '[Array_Name]/[IP_Address]':

Info:

A CRC counter was detected on a switch port. Source was a host.
This may indicate a potential problem on this link segment.

Cause:

Likely Causes are: Host HBA/GBIC, FC cable and Switch GBIC.

Action:

To isolate further please run the link, switch and host tests.

Event: san.LinkEvent_SIG

Component: switch|a5k

EventCode: 10.45.341

Severity: Warning

Actionable: Yes

Sample Description:

12-14 06:35:25 SIG-ERROR (1309488 in 1 mins): Origin: port 1 on switch
'[Array_Name]/[IP_Address]': Destination: IB-A on 'a5k '[Array_Name]'

Info:

A link error threshold (CRC) was reached between the switch and storage.

Cause:

Likely Causes are: Switch, Switch GBIC, FC Cable or IB GBIC.

Action:

To isolate further please run the link, switch and storage tests.

Event: san.LinkEvent_SIG

Component: ve|switch

EventCode: 10.45.347

Severity: Warning

Actionable: Yes

Sample Description:

08 13:26:16 SIG-ERROR (680 in 1 mins): Origin: port 1 on 've 'msp0-v1a/290000060220041f4'.
Destination: port 1 on switch '192.168.0.30':

Info:

A link error threshold (CRC) was reached between the switch and Virtualization Engine.

Cause:

Likely Causes are: VE GBIC, FC Cable or switch GBIC.

Action:

To isolate further please run the link, VE and switch tests.

Event: switch.AlarmEvent

Component: port.statistics

EventCode: 11.3.36

Severity: Warning

Actionable: No

Sample Description:

Switch [Switch_Name] ([IP_Address]), port-7: Received 64516890 'InvalidTxWds' in 10 mins
(value=3193037062)

Info:

The Fibre Channel counter values retrieved from the switch exceeded a threshold value warranting notification.

Cause:

1. An intermittent/bad GBIC in the port of the switch specified in the event.
2. An intermittent/bad cable connection or a poorly routed cable.

Action:

1. Check StorADE status of device for events about the switch named in the event.
2. Run the link test to isolate the GBIC, cable, switch, etc.
3. Check StorADE topology for direction of counter activity and replace appropriate GBIC.
4. Reroute/replace cable as needed.

Event: switch.AlarmEvent

Component: system_reboot

EventCode: 11.3.47

Severity: Warning

Actionable: No

Sample Description:

Switch uptime decreased on [Switch_Name] ([IP_Address]), from 774396s to 524848s

Info:

StorADE checks the uptime information coming from the switch and found it to be less than the previous uptime of the switch. The uptime information is the number of seconds since the last reset or power cycle.

Cause:

This could be an indication that the switch has been reset either by a user or loss of power.

Action:

1. Check to see if the switch has been reset by anyone.
2. Check the power going to the switch.
3. Check other devices that may be common to this switch's power grid.

Event: switch.AlarmEvent

Component: chassis.temperature

EventCode: 11.3.92

Severity: Warning**Actionable: Yes****Sample Description:**

chassis.temp.1 status changed from OK to Invalid

Info:

This event monitors changes in the status of the chassis's temperature supply as reported by sanbox chassis_status <ipno>.

Cause:**Action:**

1. If necessary replace entire switch as a FRU.

Event: switch.AlarmEvent

Component: chassis.fan

EventCode: 11.3.8

Severity: Warning

Actionable: Yes

Sample Description:

chassis.fan.1 status changed from OK to Invalid

Info:

StorADE checks the fan status and detected a change from OK to Invalid.

Cause:

This is an indication that the fan is no longer functional.

Action:

1. Replace switch

Event: switch.AlarmEvent

Component: chassis.power

EventCode: 11.3.9

Severity: Warning

Actionable: Yes

Sample Description:

The state of 'chassi.power-supply.1.status' on [Switch_Name] ([IP_Address])

Info:

This event monitors changes in the status of the chassis's power supply as reported by sanbox chassis_status <ipno>.

Cause:

StorADE detected a state change in the power supply.

Action:

1. Check the power switch
2. Check power going to switch
3. Replace power supply if needed

Event: switch.AlarmEvent

Component: zone_change

EventCode: 11.3.80

Severity: Warning

Actionable: No

Sample Description:

Switch [Switch_Name] was rezoned: [new zones ...]

Info:

StorADE reports changes in the zoning of a switch.

Cause:

The admin has reconfigured the zoning of the switch.

Action:

Verify with customer that the zoning is functioning as expected.

Event: switch.AuditEvent

Component:

EventCode: 11.10.16

Severity: Info

Actionable: No

Sample Description:

Auditing a new switch called [Switch_Name] ([IP_Address]) WWN

Info:

Cause:

Action:

Event: switch.CommunicationEstablishedEvent

Component: oob

EventCode: 11.11.31

Severity: Info

Actionable: No

Sample Description:

Communication regained with [Switch_Name] ([IP_Address])

Info:

oob means OutOfBand. This is specific to describing the Ethernet access to

Cause:

A previous CommunicationLostEvent (OOB) must have occurred and now the Ethernet problem has been corrected or the device has been repaired.

Action:

Event: switch.CommunicationLostEvent

Component: oob

EventCode: 11.12.31

Severity: Err/Critical
Actionable: Yes**Sample Description:**

Lost communication with [Switch_Name] ([IP_Address])

Info:

oob means OutOfBand.

This is specific to describing the Ethernet access to the device.

Cause:

StorADE did not receive a response to a ping from the device.

Action:

1. Check Power on switch
2. Check Ethernet connectivity to switch
3. Verify switch is booted correctly with no POST errors.
4. Verify switch Test Mode is set for normal operations
5. Verify TCP/IP settings on switch via Forced Prom Mode access
6. Replace switch if needed

Event: switch.DiagnosticTest-

Component: switchtest

EventCode: 11.13.339

Severity: Error

Actionable: No

Sample Description:

switchtest (switch) on [Switch_Name] ([IP_Address]) WWN

Info:

Cause:

Action:

Check Test Manager for details on failure.

Event: switch.DiscoveryEvent

Component:

EventCode: 11.14.16

Severity: Info

Actionable: No

Sample Description:

Discovered a new switch called [Switch_Name] ([IP_Address]) WWN

Info:

Discovery events occur the very first time the agent probes a storage device.

Cause:

StorADE requires a starting point for monitoring the device.

Action:

Check StorADE device status for any anomalies that may have been detected during the discovery.

Event: switch.LocationChangeEvent

Component:

EventCode: 11.19.16

Severity: Info

Actionable: No

Sample Description:

Location of switch [Switch_Name] ([IP_Address]) was changed

Info:

Cause:

Action:

Event: switch.LogEvent

Component: port.statistics

EventCode: 11.20.36

Severity: Warning

Actionable: Yes

Sample Description:

Change in Port Statistics on switch [Switch_Name] ([IP_Address]):

Info:

The switch has reported a change in an error counter. This could indicate a failing component in the link.

Cause:

Action:

1. Check the Topology GUI for any link errors.
2. Run linktest on the link to isolate the failing FRU. Quiesce IO on the link 'before running linktest.

Event: switch.StateChangeEvent+

Component: port

EventCode: 11.25.35

Severity: Info

Actionable: No

Sample Description:

'port.1' in SWITCH [Switch_Name] ([IP_Address]) is now Available (status-state changed from 'Offline' to 'Online')

Info:

Port on switch is now available

Cause:

Action:

Event: switch.StateChangeEvent-

Component: port

EventCode: 11.26.35

Severity: Error**Actionable: Yes****Sample Description:**

'port.1' in SWITCH [Switch_Name] ([IP_Address]) is now Not-Available (status-state changed from 'Online' to 'Offline')

Info:

A port on the switch has logged out of the fabric and gone offline.

Cause:**Action:**

1. Check StorADE status of device for additional events about the switch
2. Verify cables, GBICs and connections along Fibre Channel path.
3. Check StorADE SAN Topology GUI to identify failing segment of the data path.
4. Verify with the customer about reconfigurations that may been done.
5. Verify correct FC switch configuration using the SECFG tools provided in the
SA 2.2 -> Manage -> Configuration -> Configuration 3900/6900 -> Verify
SA 2.1 -> Manage -> Configuration -> Configuration 3900/6900 -> Verify
SA2.0 -> Utilities -> Scripts -> Configuration 3900/6900 -> Verify

Event: switch.Statistics

Component:

EventCode: 11.27.16

Severity: Info**Actionable: No****Sample Description:**

Statistics about switch [Switch_Name] ([IP_Address]) WWN

Info:

StorADE periodically gathers all the port traffic information from a switch.

Cause:

This information can be used to generate a report possibling detecting a trend (good or bad).

Action:

Look through the output to ensure a proper understanding of the load on the switch.

Event: switch.DeviceLostEvent

Component: aggregate

EventCode: 11.34.71

Severity: Err/Critical

Actionable: Yes

Sample Description:

Device [Switch_Name] is not available anymore, confirmed by the following 5 subevents

Info:

Aggregated Events that confirms that a device is not available.

Cause:

Action:

Event: switch.DeviceLostEvent

Component: ib

EventCode: 11.34.21

Severity: Err/Critical**Actionable: Yes****Sample Description:**

Device [Switch_Name] is not available anymore, this was confirmed by other inband/outofband events

Info:**Cause:****Action:**

1. Check Power on switch
2. Check Ethernet connectivity to switch
3. Verify switch is booted correctly with no POST errors.
4. Verify switch Test Mode is set for normal operations
5. Verify TCP/IP settings on switch via Forced Prom Mode access
6. Replace switch if needed

Event: switch.ConnectivityLostEvent

Component: aggregate

EventCode: 11.36.71

Severity: Error**Actionable: Yes****Sample Description:**

Lost connectivity between switch [Switch_Name] port-2 and t3 [ARRAY] ctrl-1

Info:

This event is generated when switch-ports go offline and other events are confirming it.

This can be a link host <-> switch, switch <-> switch or switch <-> device that is no longer passing I/O.

Cause:

StorADE used luxadm to request information and can no longer confirm I/O traffic on this datapath.

Action:

1. Check the StorADE topology to verify link status and counter information.
2. Ensure proper connectivity of all datapath cables.

Event: switch2.AlarmEvent

Component: port.statistics

EventCode: 12.3.36

Severity: Warning**Actionable: No****Sample Description:**

Switch [Switch_Name] ([IP_Address]), port-7: Received 64516890 'InvalidTxWds' in 10 mins
(value=3193037062)

Info:

The Fibre Channel counter values retrieved from the switch exceeded a threshold value warranting notification.

Cause:

1. An intermittent/bad GBIC in the port of the switch specified in the event.
2. An intermittent/bad cable connection or a poorly routed cable.

Action:

1. Check StorADE status of device for events about the switch named in the event.
2. Run the link test to isolate the GBIC, cable, switch, etc.
3. Check StorADE topology for direction of counter activity and replace appropriate GBIC.
4. Reroute/replace cable as needed.

Event: switch2.AlarmEvent

Component: chassis.power

EventCode: 12.3.9

Severity: Warning

Actionable: Yes

Sample Description:

The state of 'sensor.power-supply.1.status' on [Switch_Name] ([IP_Address]) is 'invalid'

Info:

Detected a state change in the power supply

Cause:

Action:

1. Check the power switch
2. Check power going to switch
3. Replace power supply if needed

Event: switch2.AlarmEvent

Component: system_reboot

EventCode: 12.3.47

Severity: Warning**Actionable: No****Sample Description:**

Switch uptime decreased on [Switch_Name] ([IP_Address]) from 774396s to 524848s

Info:

StorADE checks the uptime information coming from the switch and found it to be less than the previous uptime of the switch. The uptime information is the number of seconds since the last reset or power cycle.

Cause:

This could be an indication that the switch has been reset either by a user or loss of power.

Action:

1. Check to see if the switch has been reset by anyone.
2. Check the power going to the switch.
3. Check other devices that may be common to this switch's power grid.

Event: switch2.AlarmEvent-

Component: chassis.fan

EventCode: 12.5.8

Severity: Warning

Actionable: Yes

Sample Description:

The state of 'sensor.board.1.status' on [Switch_Name] ([IP_Address]) changed from 'ok' to 'invalid'

Info:

Cause:

Action:

Event: switch2.AlarmEvent-

Component: chassis.board

EventCode: 12.5.7

Severity: Warning

Actionable: Yes

Sample Description:

chassis.fan.1 status changed from OK to Invalid

Info:

StorADE checks the fan status and detected a change from OK to Invalid.

Cause:

This is an indication that the fan is no longer functional.

Action:

1. Replace switch

Event: switch2.AuditEvent

Component:

EventCode: 12.10.16

Severity: Info

Actionable: No

Sample Description:

Auditing a new switch2 called [Switch_Name] ([IP_Address]) WWN

Info:

Cause:

Action:

Event: switch2.CommunicationEstablishedEvent

Component: oob

EventCode: 12.11.31

Severity: Info

Actionable: No

Sample Description:

Communication regained with [Switch_Name] ([IP_Address])

Info:

Cause:

Action:

Event: switch2.CommunicationLostEvent

Component: oob

EventCode: 12.12.31

Severity: Err/Critical**Actionable: Yes****Sample Description:**

Lost communication with [Switch_Name] ([IP_Address])

Info:

Ethernet connectivity to the switch2 has been lost

Cause:**Action:**

1. Check Power on switch2
2. Check Ethernet connectivity to switch2
3. Verify switch2 is booted correctly with no POST errors.
4. Verify switch2 Test Mode is set for normal operations
5. Verify TCP/IP settings on switch2 via Forced Prom Mode access
6. Replace switch2 if needed

Event: switch2.CommunicationLostEvent

Component: fsa

EventCode: 12.12.63

Severity: Err/Critical

Actionable: Yes

Sample Description:

Node switch2:[Switch_Name] is not available anymore, this was confirmed inband/outOfBand by 5 sub-events.

Info:

This switch is not available anymore. This problem was found outOfBand and confirmed by other inBand events.

Cause:

Action:

Event: switch2.DiagnosticTest-

Component: switch2test

EventCode: 12.13.338

Severity: Error

Actionable: No

Sample Description:

switch2test (switch2) on [Switch_Name] ([IP_Address]) WWN

Info:

Cause:

Action:

Event: switch2.DiscoveryEvent

Component:

EventCode: 12.14.16

Severity: Info

Actionable: No

Sample Description:

Discovered a new switch2 called [Switch_Name] ([IP_Address]) WWN

Info:

Discovery events occur the very first time the agent probes a storage device.

Cause:

Action:

Event: switch2.LocationChangeEvent

Component:

EventCode: 12.19.16

Severity: Info

Actionable: No

Sample Description:

Location of switch2 [Switch_Name] ([IP_Address]) was changed

Info:

Cause:

Action:

Event: switch2.StateChangeEvent+

Component: port

EventCode: 12.25.35

Severity: Info

Actionable: No

Sample Description:

'port.1' in SWITCH [Switch_Name] ([IP_Address]) is now Available (status-state changed from 'Offline' to 'Online')

Info:

Port on switch2 is now available

Cause:

Action:

Port is online.

Event: switch2.StateChangeEvent-

Component: port

EventCode: 12.26.35

Severity: Error
Actionable: Yes**Sample Description:**

'port.1' in SWITCH [Switch_Name] ([IP_Address]) is now Not-Available (status-state changed from 'Online' to 'Offline')

Info:

A port on the switch2 has logged out of the fabric and gone offline.

Cause:**Action:**

1. Check StorADE status of device for additional events about the switch named in the event.
2. Verify cables, GBICs and connections along Fibre Channel path.
3. Check StorADE SAN Topology GUI to identify failing segment of the data path.
4. Verify with the customer about reconfigurations that may been done.
5. Verify correct FC switch configuration using the SECFG tools provided in the StorADE GUI.
 - SA 2.2 -> Manage -> Configuration -> Configuration 3900/6900 -> Verify
 - SA 2.1 -> Manage -> Configuration -> Configuration 3900/6900 -> Verify
 - SA2.0 -> Utilities -> Scripts -> Configuration 3900/6900 -> Verify

Event: switch2.Statistics

Component:

EventCode: 12.27.16

Severity: Info**Actionable: No****Sample Description:**

Statistics about switch2 [Switch_Name] ([IP_Address]) WWN

Info:

StorADE periodically gathers all the port traffic information from a switch

Cause:

This information can be used to generate a report possibling detecting a t

Action:

Look through the output to ensure a proper understanding of the load on t

Event: switch2.DeviceLostEvent

Component: aggregate

EventCode: 12.34.71

Severity: Err/Critical

Actionable: Yes

Sample Description:

Device [Switch_Name] is not available anymore, confirmed by the following 5 sube vents

Info:

This aggregated event is generated when a CommunicationLost event is confirmed by other related events. Confidential

Cause:

Action:

Event: switch2.ConnectivityLostEvent

Component: aggregate

EventCode: 12.36.71

Severity: Error

Actionable: Yes

Sample Description:

Lost connectivity between switch2 [Switch_Name] port-2 and t3 [ARRAY] ctrl-1

Info:

This event is generated when switch-ports go offline and other events are confirming it. This can be a link host <-> sw

Cause:

Action:

Event: t3.AlarmEvent

Component: revision

EventCode: 13.3.42

Severity: Warning

Actionable: No

Sample Description:

Revision on controller.u1ctr1 in t3 [Array_Name] changed from R01 to R02

Info:

Cause:

Action:

Event: t3.AlarmEvent

Component: volOwner

EventCode: 13.3.76

Severity: Warning

Actionable: Yes

Sample Description:

Volume owner for u1vol1 changed from 'u1' to 'u2'

Info:

StorADE verifies the tokens 'attachVolOwner' and 'attachVolID'

Cause:

Volume or controller failover has occurred.

Action:

Event: t3.AlarmEvent

Component: cacheMode

EventCode: 13.3.77

Severity: Warning**Actionable: No****Sample Description:**

CacheMode on [Array_Name] ([IP_Address]) change from writeBehind to writeThrough

Info:

StorADE has detected that the arrays' cacheing mode has been disabled.

Cause:

The array will stop cacheing data in the event of a fru failure effecting

Action:

1. Check the StorADE GUI for events and alerts pertaining to the Array_Na detailed in the actual event.
2. Replace the FRU as deemed necessary.

Event: t3.AlarmEvent

Component: device_path

EventCode: 13.3.112

Severity: Error**Actionable: Yes****Sample Description:**

Path 50020f230000dde to t3 [Array_Name]/[IP_Address] disappeared from the host

Info:

StorADE will generate this event when a device disappears from the luxadm probe list.

Cause:

A LUN presented to the host is no longer available to Solaris.

Action:

1. Check the StorADE GUI for events relating to the device in the message.
2. Check the StorADE topology view for link errors associated with the device connections.
3. Check StorADE for events associated with the components connected to the device in the message as per the topology.

Event: t3.AlarmEvent

Component: initiators

EventCode: 13.3.78

Severity: Warning

Actionable: No

Sample Description:

initiator changed from old_value to new_value

Info:

Cause:

Action:

Event: t3.AlarmEvent

Component: system_reboot

EventCode: 13.3.47

Severity: Warning**Actionable: No****Sample Description:**

System reboot for T3 [Array_Name] (ip=[IP_Address]) changed from '2003-2-13 17:32:43' to '2002-9-16 17:32:43'

Info:

This event is generated when the reboot date/time of a t3 changed by at least 5 minutes.

Cause:

The T3 could have experienced a power hit or may have been rebooted.
Someone could have simply executed the date command too.

Action:

1. Verify with administrator that if a reboot did in fact occur, it was successful.
2. Verify with administrator that the reboot was done on purpose.
3. Use the StorADE GUI Log viewer to check the devices mirrored syslog for the date command.
4. Check StorADE for current status of other monitored devices with similar events.
5. Check the cabinets power source to ensure solid connections throughout the distribution.

Event: t3.AlarmEvent

Component: lunPermission

EventCode: 13.3.79

Severity: Warning

Actionable: No

Sample Description:

The access permission has changed for LUN 01 from old_access to new_access.

Info:

Cause:

Action:

Event: t3.AlarmEvent

Component: time_diff

EventCode: 13.3.56

Severity: Info**Actionable: No****Sample Description:**

[current_date_time] Time of t3 [Array_Name] ([IP_Address]) is different from host: t3
time='2003-2-13 09:30:35' Host time='2003-02-13 08:38:23'

Info:

It is important for interpreting logs that the date and time should between
the T3 and the Host be the same.

Cause:**Action:**

1. Fix the date/time on the T3 using the date command.

Event: t3.AlarmEvent

Component: backend_loop

EventCode: 13.3.111

Severity: Error**Actionable: Yes****Sample Description:**

The state of 'loop.u1lp1.loopStatus' on [Array_Name] changed from 'available' to 'unavailable'

Info:

StorADE probes the Array and gathers its tokens to check for anomalies in the state/status of the device.

Cause:

StorADE detected a change in the loopStatus token element of loopInf.htm.

Action:

1. Check the StorADE GUI for current state/status of the Array.
2. Replace loop card.

Event: t3.AlarmEvent

Component: log

EventCode: 13.3.55

Severity: Error**Actionable: Yes****Sample Description:**

Errors(s) found in logfile: [Array_Message_Logfile]

Info:

This event includes all important errors found.

Cause:**Action:**

1. Check the messages file for appropriate action

Event: t3.AlarmEvent

Component: add_initiators

EventCode: 13.3.113

Severity: Warning

Actionable: No

Sample Description:

Added 10 initiators to [Array_Name]

Info:

Cause:

Action:

Event: t3.AlarmEvent

Component: remove_initiators

EventCode: 13.3.114

Severity: Warning

Actionable: No

Sample Description:

Removed 10 initiators to [Array_Name]

Info:

Cause:

Action:

Event: t3.AlarmEvent

Component: loop.statistics

EventCode: 13.3.115

Severity: Warning

Actionable: No

Sample Description:

Internal Loop statistics changed on [Array_Name]

Info:

Cause:

Action:

Event: t3.AlarmEvent

Component: sysvolslice

EventCode: 13.3.48

Severity: Warning**Actionable: Yes****Sample Description:**

Volume Slicing is now off!

Info:

The vol slice feature is possible in T3+ firmware 2.1 and above.

This option enables volume slicing, up to 16 LUN's per single T3 or partner pair. This also enables lun masking (HBA Zoning) features.

Cause:**Action:**

The option enable_volslice is disabled by default. To activate

the feature type 'sys enable_volslice on' from the T3 command line.

Notification regarding slice and LUN changes will occur when changes are made to volume slices and lun masks. Volume slice or LUN mask changes which were not initiated by a user could indicate a potential problem. Please connect to the storage device or the appropriate management software to validate the system status.

Event: t3.AlarmEvent

Component: volCount

EventCode: 13.3.87

Severity: Warning**Actionable: No****Sample Description:**

Number of LUN(s) on t3 [Array_Name] changed from 10 to 12

Info:

StorADE has detected a change in the number of LUNs based on token information from the Array.

Cause:

This is most typically done on purpose (especially if the number increases) by an administrator, but could be a result a fault condition with other hardware that has since been corrected.

Action:

1. Verify with administrator that the LUN change was done on purpose.
2. Verify with administrator that the LUN change was successfully recognized by the host.

Event: t3.AlarmEvent

Component: cacheMirror

EventCode: 13.3.123

Severity: Warning

Actionable: No

Sample Description:

CacheMirror on [Array_Name] ([IP_Address]) change from on to off

Info:

Cause:

Action:

Event: t3.AlarmEvent+

Component: power.temp

EventCode: 13.4.41

Severity: Info

Actionable: No

Sample Description:

The state of power.u1pcu1.PowTemp on [Array_Name] ([IP_Address]) is Normal

Info:

The status taken from the array tokens indicate a change in temperature of the PCU.

Cause:

A previous abnormal status for the temperature of the PCU existed.

Action:

Confirm StorADE fru status for the array.

Event: t3.AlarmEvent-

Component: interface.loopcard.cable

EventCode: 13.5.25

Severity: Warning**Actionable: Yes****Sample Description:**

The state of loopcable.u1l1.CableState changed from 'OK' to 'failed'

Info:

The T3 has reported that a loopcard is in a failed state

Cause:**Action:**

1. Telnet to affected T3
2. Verify loopcard state with 'fru stat'
3. Verify matching firmware with other loopcard
4. Re-enable loopcard if possible (enable u(encid)l[1|2])
5. Replace loopcard if necessary
6. Verify the connections of the Loop Card interconnect cables

Event: t3.AlarmEvent-

Component: disk.pathstat

EventCode: 13.5.93

Severity: Error**Actionable: Yes****Sample Description:**

The state of [Array_Name] ([IP_Address]) pathstat has changed

Info:**Cause:****Action:**

Event: t3.AlarmEvent-

Component: disk.temperature

EventCode: 13.5.94

Severity: Info**Actionable: No****Sample Description:**

The temperature of disk.u1d1 went over 40.

Info:

The temperature threshold for one of the disks in the array has been exceeded.

Cause:

1. PCU fan(s) may not be functioning.
2. Physical placement of unit may be impeding heat dissipation.
3. Disk may be going bad.

Action:

1. Check the physical environment to ensure proper air flow around array.
2. Check StorADE status of the PCU fans for this array.
3. Check StorADE status of the other disk drives temperature in the unit and compare.

Event: t3.AlarmEvent-

Component: disk.port

EventCode: 13.5.14

Severity: Error**Actionable: Yes****Sample Description:**

The state of disk.u1d1.Port1State on T3 [Array_Name] ([IP_Address]) changed from 'OK' to 'failed'

Info:

The array has reported that one port of a dual-ported disk has failed

Cause:**Action:**

1. Check StorADE status of the array
2. Telnet to the array and verify disk state in 'fru stat', 'fru list' and 'vol stat'

Drive Status Messages:**Value Description**

- | | |
|---|--|
| 0 | Drive mounted |
| 2 | Drive present |
| 3 | Drive is spun up |
| 4 | Drive is disable |
| 5 | Drive has been replaced |
| 7 | Invalid system area on drive |
| 9 | Drive Not Present |
| D | Drive disabled; drive is being reconstructed |
| S | Drive Drive Substituted |
3. Replace disk if necessary

Event: t3.AlarmEvent-
Component: cacheMirror
EventCode: 13.5.123

Severity: Warning
Actionable: No

Sample Description:

CacheMirror on [Array_Name] ([IP_Address]) change from on to off

Info:

Cause:

Action:

Event: t3.AlarmEvent-

Component: power.temp

EventCode: 13.5.41

Severity: Error**Actionable: Yes****Sample Description:**

The state of power.u1pcu1.PowTemp on [Array_Name] ([IP_Address]) is Fault

Info:

The state of the temperature in the T3 Power Cooling Unit is either too high or is unknown.

Cause:**Action:**

1. Telnet to affected T3
2. Verify Power Cooling Unit state in 'fru stat'
3. Replace PCU if necessary

Event: t3.AlarmEvent-

Component: power.output

EventCode: 13.5.40

Severity: Error
Actionable: Yes**Sample Description:**

The state of power.u1pcu1.PowOutput on [Array_Name] ([IP_Address]) is Fault

Info:

The state of the power in the T3 Power Cooling Unit is not optimal.

Cause:

1. Voltage Level on Power Supply and Battery have moved out of acceptable thresholds.
2. The internal PCU temp has exceeded acceptable thresholds. 3. A PCU fan has failed.

Action:

1. Telnet to affected T3
2. Verify Power Cooling Unit State in 'fru stat'
3. Replace PCU if necessary

Event: t3.AlarmEvent-
Component: cacheMode
EventCode: 13.5.77

Severity: Warning
Actionable: No

Sample Description:

CacheMode on [Array_Name] ([IP_Address]) change from writeBehind to writeThrough

Info:

StorADE has detected that the arrays' cacheing mode has been disabled.

Cause:

The array will stop cacheing data in the event of a fru failure effecting

Action:

1. Check the StorADE GUI for events and alerts pertaining to the Array_Na detailed in the actual event.
2. Replace the FRU as deemed necessary.

Event: t3.AlarmEvent-

Component: power.fan

EventCode: 13.5.39

Severity: Error**Actionable: Yes****Sample Description:**

The state of power.u1pcu1.Fan1State on [Array_Name] ([IP_Address]) is Fault

Info:

The state of a fan on the T3 is not optimal

Cause:

Problem with the Power Cooling Unit called out in the event.

Action:

1. Telnet to affected T3
2. Verify fan state with 'fru stat'
3. Replace Power Cooling Unit if necessary

Event: t3.AlarmEvent-

Component: power.battery

EventCode: 13.5.38

Severity: Error**Actionable: Yes****Sample Description:**

The state of power.u1pcu1.BatState on [Array_Name] ([IP_Address]) is Fault

Info:

The state of the batteries in the T3 is not optimal

Cause:**Action:**

1. Telnet to affected T3
2. Run 'refresh -s' to verify battery state
3. Replace battery if necessary
4. Check airflow of device.

Event: t3.AuditEvent

Component:

EventCode: 13.10.16

Severity: Info**Actionable: No****Sample Description:**

Auditing a new T3 called ras [Array_Name] ([IP_Address]) slr-mi.370-3990-01-e-e1.003239

Info:

StorADE periodically gathers all the information about a device to ensure sanity in the health monitoring. An AuditEvent occurs weekly on every monitored device.

Cause:**Action:**

Review the current state/status of each monitored device. Any anomalies, that may be present, will have been detected and an event would be generated.

Event: t3.CommunicationEstablishedEvent

Component: oob

EventCode: 13.11.31

Severity: Info**Actionable: No****Sample Description:**

Communication regained (OutOfBand(Host_Name)) with [Array_Name] ([IP_Address])

Info:

oob means OutOfBand. This is specific to describing the Ethernet access to the device.

Cause:

A previous CommunicationLostEvent (OOB) must have occurred and now the Ethernet problem has been corrected or the device has been repaired.

Action:

Event: t3.CommunicationEstablishedEvent

Component: ib

EventCode: 13.11.21

Severity: Info**Actionable: No****Sample Description:**

Communication regained (InBand(Host_Name)) with [Array_Name] ([IP_Address]) (last reboot was 2001-09-27 15:22:00)

Info:

ib means InBand. InBand is the datapath connection. This monitoring may not be activated for all Arrays.

Cause:

A previous CommunicationLostEvent (IB) must have occurred and now the Fibre Channel problem has been corrected or the device has been repaired.

Action:

1. Verify with the administrator that the connection has been successfully re-established.
2. Verify luxadm via command line (luxadm probe, luxadm display </dev/rdisk/c#t#d#s2>)
3. Verify cables, GBICs, Power, and connections along data path.
4. Check SAN Topology GUI to identify failing segment of the data path
5. Verify correct FC switch configuration (If applicable)

Event: t3.CommunicationLostEvent

Component: oob

EventCode: 13.12.31

Severity: Err/Critical**Actionable: Yes****Sample Description:**

Lost communication (OutOfBand(Host_Name)) with [Array_Name] ([IP_Address])

Info:

OutOfBand. This means that the t3 failed to answer to ping or failed to return it's tokens.

Cause:

This problem can also be caused by:

- A very slow network,
- The ethernet connection to this T3 was lost or is very slow.
- A bad controller.

Action:

1. Check Power on array
2. Check Ethernet connectivity to the affected T3.
3. Verify T3 is booted correctly using the `fru stat` command.
4. Verify correct TCP/IP settings on T3 using the `set` command.
5. Telnet to the array and make sure the `fru stat` command is responding normal.
6. Increase the http and/or ping timeout in Utilities -> System -> System-Timeouts. The current default timeouts are 10 secs for ping, 60 secs for http (tokens).

Event: t3.CommunicationLostEvent

Component: ib

EventCode: 13.12.21

Severity: Err/Critical**Actionable: Yes****Sample Description:**

Lost communication (InBand(Host_Name)) with [Array_Name] ([IP_Address]) (last reboot was 2001-09-27 15:22:00)

Info:

ib means InBand. InBand is the datapath connection. This monitoring may not be activated for a particular T3.

Cause:

This event is established using luxadm.

Action:

1. Verify luxadm via command line (luxadm probe, luxadm display </dev/rdisk/c#t#d#s2>)
2. Verify cables, GBICs, Power, and connections along data path.
3. Check SAN Topology GUI to identify failing segment of the data path
4. Verify correct FC switch configuration (If applicable)

Event: t3.DiagnosticTest-

Component: t3volverify

EventCode: 13.13.50

Severity: Error**Actionable: No****Sample Description:**

t3volverify (HOST) on [Array_Name] ([IP_Address]) failed

Info:

The vol verify command compares the constructed parity with the stored parity.

This implementation assumes that the integrity of the data drives is correct.

The 'fix' option will update the parity drive only.

Cause:**Action:**

Event: t3.DiagnosticTest-

Component: vverify

EventCode: 13.13.140

Severity: Error**Actionable: No****Sample Description:**

t3vverify (HOST) on [Array_Name] ([IP_Address]) failed

Info:

The vol verify command compares the constructed parity with the stored parity.

This implementation assumes that the integrity of the data drives is correct.

The 'fix' option will update the parity drive only.

Cause:**Action:**

Event: t3.DiagnosticTest-

Component: t3test

EventCode: 13.13.345

Severity: Error

Actionable: No

Sample Description:

t3test (HOST) on [Array_Name] ([IP_Address]) failed

Info:

Cause:

Action:

Event: t3.DiagnosticTest-

Component: t3ofdg

EventCode: 13.13.49

Severity: Error**Actionable: No****Sample Description:**

t3ofdg (HOST) on [Array_Name] ([IP_Address]) failed

Info:

Ofdg is an offline diagnostic utility. The failed state is a result of a healthcheck failure.

Cause:

The results of ofdg testing on a T3 unit resulted in a failed status.

Action:

1. Check Test Manager for details on why test failed.
2. Review the T3 syslog from unit where ofdg was run.
 - * The complete ofdg results will be written to the unit's syslog facility

Event: t3.DiscoveryEvent

Component:

EventCode: 13.14.16

Severity: Info

Actionable: No

Sample Description:

Discovered a new T3 called [Array_Name] ([IP_Address]) slr-mi.370-3990-01-e-e1.003239

Info:

Discovery events occur the very first time the agent probes a storage device.

Cause:

Action:

Event: t3.LocationChangeEvent

Component:

EventCode: 13.19.16

Severity: Info

Actionable: No

Sample Description:

Location of t3 [Array_Name] ([IP_Address]) was changed

Info:

StorADE checks the WWN/Key of the device against the host monitoring the device to see if it's different.

Cause:

StorADE detected either a new host or a new sitename that is now monitoring a device it already new about.

Action:

Event: t3.LogEvent

Component: disk

EventCode: 13.20.13

Severity: Error**Actionable: Yes****Sample Description:**

1 warning(s) found in logfile [Array_Message_Logfile] (indicating problem with t3
Array_Name/IP_Address): Nov 30 14:50:00 [Array_Name] ISR1[2]: N: u1d5 SVD_DONE: Command Error =

Info:

StorADE has detected a possible problem contained in a message of the T3 Message Log.

Cause:

StorADE looks for all "SVD" and "Command Error" messages as an indication of possible disk failure.

Action:

1. Use the StorADE log viewing mechanism to check messages before and after this one.
2. Replace this disk.

Event: t3.LogEvent

Component: array_error

EventCode: 13.20.90

Severity: Warning**Actionable: Yes****Sample Description:**

warning(s) found in logfile: [Array_Log_File] on [Host_Name] (id=[HostID]):

Info:

The StorADE agent monitoring the array log file reports on the following:

Errors and Warnings (depicted by "E:" and "W:") found in the logfile
Notice and Information (depicted by "N:" and "I:") lines about disks errors.
Notices about the battery.
Notices about the PCU hold time.

Cause:

StorADE detected a pattern described above in the array log file. It was generated as a HOST event because the message was about an array that StorADE is not monitoring.

Action:

1. Use the StorADE GUI log viewing functions to check messages before and after this one.
2. Check volume integrity associated with the disk in question.
3. Replace this disk.

Event: t3.LogEvent

Component: array_warning

EventCode: 13.20.91

Severity: Warning**Actionable: Yes****Sample Description:**

warning(s) found in logfile: [Array_Log_File] on [Host_Name] (id=[HostID]):

Info:

The StorADE agent monitoring the array log file reports on the following:

- Errors and Warnings (depicted by "E:" and "W:") found in the logfile
- Notice and Information (depicted by "N:" and "I:") lines about disks errors.
- Notices about the battery.
- Notices about the PCU hold time.

Cause:

StorADE detected a pattern described above in the array log file. It was generated as a HOST event because the message was about an array that StorADE is not monitoring.

Action:

1. Use the StorADE GUI log viewing functions to check messages before and after this one.
2. Check volume integrity associated with the disk in question.
3. Replace this disk.

Event: t3.LogEvent

Component: power.battery.replace

EventCode: 13.20.109

Severity: Warning**Actionable: Yes****Sample Description:**

2 warning(s) found in logfile [Array_Message_Logfile] (indicating problem with 't3
Array_Name/IP_Address)': Sep 24 16:20:39 [Array_Name] SCHD[1]: W: u1pcu1 37 days 'battery life left, Re

Info:

A message was found in the T3 Message Log file indicating a status of the Battery that warrants notification.

Cause:

1. The battery warranty period is about to expire.
2. The battery hold time may be low or can no longer hold a charge.

Action:

1. Check StorADE status of the PCU batteries for this array.
2. Telnet to the ARRAY and run 'refresh -s' to verify battery state.
3. Replace battery.

Event: t3.LogEvent

Component: temp_threshold

EventCode: 13.20.74

Severity: Error**Actionable: Yes****Sample Description:**

1 warning(s) found in logfile [Array_Message_Logfile] (indicating problem with t3
Array_Name/IP_Address):

Info:

A message was found in the T3 Message Log file indicating a threshold for a temperature setting is exceeded.

Cause:

1. PCU fan(s) may not be functioning.
2. Physical placement of unit may be impeding heat dissipation.
3. Component may be going bad.

Action:

1. Check the physical environment to ensure proper air flow around array.
2. Check StorADE status of the PCU fans for this array.
3. Check StorADE status of the other component temperatures in the unit and compare.

Event: t3.LogEvent

Component: power.battery

EventCode: 13.20.38

Severity: Error**Actionable: Yes****Sample Description:**

1 error(s) found in logfile [Array_Message_Logfile] (indicating problem with t3 [Array_Name]/[IP_Address]):

Info:

This event is generated for battery messages found in the array log file that are not specific to any other type of battery event.

Cause:

1. The battery warranty period may have expired.
2. The battery's ability to hold a charge has diminished to a point where it can no longer be recharged.
3. The last refresh cycle failed changing the status of the battery.

Action:

1. Check the StorADE GUI for current state and status of the PCU's in the array.
2. Replace the suspect Battery or the whole PCU in the array.

Event: t3.LogEvent

Component: power.battery.refresh

EventCode: 13.20.108

Severity: Warning**Actionable: No****Sample Description:**

2003-02-13 14:33:02 1 array_warning(s) found in logfile [Array_Message_Logfile]

(indicating problem with t3 [Array_Name]/[IP_Address]): Feb 13 15:29:26 [Array_Name] LPCT[1]: N: u1pcu1

Info:

The T3 Array has a BATD process that executes according to /etc/schd.conf file on the T3. The process monitors the Battery portion of the PCU.

Cause:

A refresh message was posted to the log file indicating that the batteries are recharging.

Action:

1. Monitor the cycle and ensure proper completion.
2. Check the StorADE GUI for current state and status of the PCU's in the array.
3. Check the StorADE GUI for warranty dates and battery usage calculations and proper PFA strategies for replacing the unit.

Event: t3.LogEvent
Component: disk.error
EventCode: 13.20.107

Severity: Warning
Actionable: Yes

Sample Description:

1 array_error(s) found in logfile [Array_Message_Logfile] (indicating problem with t3
Array_Name/IP_Address): Jan 30 16:28:05 ARRAY_NAME ISR1[1]: N: u1d1 sid 75034 stype 2024 disk error

Info:

The messages logged as NOTICE with a pattern of "disk error" in the mirrored log file of the array are deemed important enough by StorADE to alert someone to check on the status.

Cause:

StorADE is checking for these "disk error" messages as they have been deemed important enough to alert someone to their existence.

Action:

1. Use the StorADE GUI log viewing functions to check messages before to and after this one.
2. Check volume integrity associated with the disk in question.
3. Replace this disk.

Event: t3.LogEvent
Component: disk.log
EventCode: 13.20.104

Severity: Warning
Actionable: Yes

Sample Description:

4 array_warning(s) found in logfile [Array_Message_Logfile] (indicating pr

Info:

The StorADE agent monitoring the array log file reports on the following:

Errors and Warnings (depicted by "E:" and "W:") found in the logfile

Notice and Information (depicted by "N:" and "I:") lines about disks.

Notices about the battery.

Notices about the PCU hold time.

Cause:

StorADE detected a pattern described above in the array log file.

Action:

1. Use the StorADE GUI log viewing functions to check messages before and after this one.
2. Check volume integrity associated with the disk in question.
3. Replace this disk.
4. Monitor disk.

Event: t3.LogEvent

Component: controller.port

EventCode: 13.20.103

Severity: Error**Actionable: Yes****Sample Description:**

1 warning(s) found in logfile [Array_Message_Logfile] (indicating problem with t3
Array_Name/IP_Address):

Info:

A message was found in the T3 Message Log file indicating a message about the CPU logging an event.

Cause:**Action:**

1. Check the StorADE status of the FRUs in the array.
2. Check the Fibre Channel connections to ensure continuity.

Event: t3.LogEvent

Component: disk.senseKey

EventCode: 13.20.100

Severity: Warning**Actionable: Yes****Sample Description:**

1 warning(s) found in logfile [Array_Message_Logfile] (indicating problem with t3
Array_Name/IP_Address):

Info:

StorADE has detected a possible problem contained in a message of the T3 Message Log on the monitoring host.

Cause:

PFA Sense Key information reported from a disk indicating a problem with the disk.

Action:

1. Use the StorADE log viewing mechanism to check messages before and after this one.
2. Replace this disk.

Event: t3.LogEvent

Component: disk.senseKeyE

EventCode: 13.20.136

Severity: Error
Actionable: Yes**Sample Description:**

1 warning(s) found in logfile [Array_Message_Logfile] (indicating problem with t3
Array_Name/IP_Address):

Info:

StorADE has detected a possible problem contained in a message of the T3 Message Log on the monitoring host.

Cause:

PFA Sense Key information reported from a disk indicating a problem with the disk.

Action:

1. Use the StorADE log viewing mechanism to check messages before and after this one.
2. Replace this disk.

Event: t3.LogEvent

Component: disk.senseKeyN

EventCode: 13.20.137

Severity: Info**Actionable: No****Sample Description:**

1 warning(s) found in logfile [Array_Message_Logfile] (indicating problem with t3
Array_Name/IP_Address):

Info:

StorADE has detected a possible problem contained in a message of the T3 Message Log on the monitoring host.

Cause:

PFA Sense Key information reported from a disk indicating a problem with the disk.

Action:

1. Use the StorADE log viewing mechanism to check messages before and after this one.
2. Replace this disk.

Event: t3.LogEvent

Component: disk.senseKeyW

EventCode: 13.20.138

Severity: Warning**Actionable: No****Sample Description:**

1 warning(s) found in logfile [Array_Message_Logfile] (indicating problem with t3
Array_Name/IP_Address):

Info:

StorADE has detected a possible problem contained in a message of the T3 Message Log on the monitoring host.

Cause:

PFA Sense Key information reported from a disk indicating a problem with the disk.

Action:

1. Use the StorADE log viewing mechanism to check messages before and after this one.
2. Replace this disk.

Event: t3.LogEvent

Component: controller.XOR

EventCode: 13.20.139

Severity: Error
Actionable: Yes**Sample Description:**

3 array_error(s) found in logfile /var/adm/messages.t300 (indicating problem with array
[array_name]): Feb 24 09:53:56 [ip] ISR1[1]: W: u1ctr XOR: Flags=B-S---- Cntr=0xAE Synd=0x10 Addr=0x9

Info:

Data cache ECC errors,

Cause:

ECC errors in controller.

Action:

Replace the Controller

Event: t3.QuiesceEndEvent

Component:

EventCode: 13.22.16

Severity: Info**Actionable: No****Sample Description:**

Quiesce End on t3 [Array_Name] ([IP_Address])

Info:

Quiescing a device is done using the GUI and means that the monitoring has been temporarily stopped.

Cause:

An administrator has changed the monitoring status of the device called out in the event message.

Action:

1. Verify with the administrator that this is an expected action.
any additional events that may have occurred.

Event: t3.QuiesceStartEvent

Component:

EventCode: 13.23.16

Severity: Info**Actionable: No****Sample Description:**

Quiesce Start on t3 [Array_Name] ([IP_Address])

Info:

Quiescing a device is done using the GUI and means that the monitoring has been temporarily stopped.

Cause:

An administrator has changed the monitoring status of the device called out in the event message.

Action:

1. Verify with the administrator that this is an expected action.
any additional events that may have occurred.

Event: t3.StateChangeEvent+

Component: interface.loopcard

EventCode: 13.25.24

Severity: Info

Actionable: No

Sample Description:

'loopcard.u1l1'(SLR-MI.375-0085-01-G-G4.070924) in T3 [Array_Name] (ip=[IP_Address]):

Info:

'The T3 has reported that a Loop Card has been replaced or brought back online

Cause:

Action:

Event: t3.StateChangeEvent+

Component: power

EventCode: 13.25.37

Severity: Info

Actionable: No

Sample Description:

'power.u1pcu2'(TECTROL-CAN.300-1454-01(50).008275) in T3 [Array_Name] ([IP_Address]) is now Available (status-state changed from 'ready-disable' to 'ready-enable'):

Info:

Cause:

Action:

Event: t3.StateChangeEvent+

Component: disk

EventCode: 13.25.13

Severity: Info

Actionable: No

Sample Description:

'disk.u1d5' in T3 [Array_Name] ([IP_Address]) is now Available (status-state changed from 'fault-disabled' to 'ready-enabled'):

Info:

Cause:

Action:

Event: t3.StateChangeEvent+

Component: volume

EventCode: 13.25.53

Severity: Info

Actionable: No

Sample Description:

'volume.u1vol1'(slr-mi.370-3990-01-e-f0.022542.u1vol1) in T3 [Array_Name]
(ip=[IP_Address]) is now Available (status-state changed from 'unmounted' to 'mounted')

Info:

'The T3 has reported that a LUN has changed state

Cause:

Action:

Event: t3.StateChangeEvent+

Component: controller

EventCode: 13.25.12

Severity: Info

Actionable: No

Sample Description:

'controller.u1ctr' in T3 [Array_Name] ([IP_Address]) is now Available (status-state changed from 'disabled' to 'ready-enabled')

Info:

Cause:

Action:

Event: t3.StateChangeEvent-

Component: interface.loopcard

EventCode: 13.26.24

Severity: Error

Actionable: Yes

Sample Description:

Info:

The T3 has indicated that the loopcard is no longer in an optimal state

Cause:

Action:

1. Telnet to affected T3
2. Verify loopcard state with 'fru stat'
3. Verify matching firmware with other loopcard
4. Re-enable loopcard if possible (enable u(encid)l[1|2])
5. Replace loopcard if necessary

Event: t3.StateChangeEvent-

Component: controller

EventCode: 13.26.12

Severity: Error**Actionable: Yes****Sample Description:**

'controller.u1ctr' in T3 [Array_Name] ([IP_Address]) is now Not-Available (status-state changed from 'unknown' to 'ready-disabled')

Info:

The T3 controller has been disabled

Cause:**Action:**

1. Telnet to affected T3
2. Verify controller state with 'fru stat' and 'sys stat'
3. Re-enable controller if possible (enable u<encid>)
4. Run 'logger -dmpstlog' from a serial port session on affected controller
 - * The output from logger will only go to the syslog facility.
Review syslog on Master
5. Replace controller as indicated by the NVRAM failure code.

Event: t3.StateChangeEvent-

Component: disk

EventCode: 13.26.13

Severity: Error
Actionable: Yes**Sample Description:**

'disk.u1d5' in T3 [Array_Name] ([IP_Address]) is now Not-Available (status-state changed from 'unknown' to 'fault-disabled'):

Info:

The T3 has reported that a disk has failed

Cause:**Action:**

1. Telnet to affected T3
2. Verify disk state with 'vol stat', 'fru stat' and 'fru list'

Drive Status Messages:

Value/ Description

0 Drive mounted

2 Drive present

3 Drive is spun up

4 Drive is disable

5 Drive has been replaced

7 Invalid system area on drive

9 Drive Not Present

D Drive disabled; drive is being reconstructed

S Drive Drive Substituted

3. Replace disk if necessary

Event: t3.StateChangeEvent-

Component: volume

EventCode: 13.26.53

Severity: Error**Actionable: Yes**

Sample Description:**Info:**

The T3 has reported that a LUN has changed state

Cause:**Action:**

1. Telnet to affected T3
2. Check status of LUNs via 'vol mode' or 'vol stat' from T3
3. Check disk status with 'fru stat' and 'vol stat'

Drive Status Messages:

Value/ Description

0 Drive mounted

2 Drive present

3 Drive is spun up

4 Drive is disable

5 Drive has been replaced

7 Invalid system area on drive

9 Drive Not Present

D Drive disabled; drive is being reconstructed

S Drive Drive Substituted

Event: t3.StateChangeEvent-

Component: power

EventCode: 13.26.37

Severity: Error**Actionable: Yes****Sample Description:**

'power.u1pcu2'(TECTROL-CAN.300-1454-01(50).008275) in T3 [Array_Name] ([IP_Address]) is now Not-Available (status-state changed from 'ready-enabled' to 'ready-disable'):

Info:

The T3 has reported that a Power Cooling Unit has been disabled

Cause:

A PCU failure can happen due to the following reasons.

1. Internal/External Power loss
2. Power switch has been turned off
3. PCU failures
4. Battery failures

Action:

1. Check Power Supply and Cables
2. Check with onsite administration/service for expected occurrence
3. Replace PCU
4. Replace Battery

Event: t3.Statistics

Component:

EventCode: 13.27.16

Severity: Info
Actionable: No

Sample Description:

Statistics about T3 [Array_Name] ([IP_Address])

Info:

Cause:

Action:

Event: t3.DeviceLostEvent

Component: aggregate

EventCode: 13.34.71

Severity: Err/Critical

Actionable: Yes

Sample Description:

Device t3b0 is not available anymore, confirmed by the following 5 subevents

Info:

Aggregated Events that confirms that a device is not available.

Cause:

Action:

Event: t3.ComponentInsertEvent

Component: controller

EventCode: 13.40.12

Severity: Info**Actionable: No****Sample Description:**

'controller.u1ctr'(id) was added to T3 [Array_Name] ([IP_Address])

Info:

A new Controller, as identified by it's serial#, has been installed on the T3.

Cause:**Action:**

Event: t3.ComponentInsertEvent

Component: disk

EventCode: 13.40.13

Severity: Info**Actionable: No****Sample Description:**

disk.u2d3(SEAGATE.ST318203FSUN18G.LRG07139) was added to [Array_Name] ([IP_Address])

Info:

A new Disk, as identified by it's serial#, has been installed on the T3.

Cause:**Action:**

Event: t3.ComponentInsertEvent

Component: power

EventCode: 13.40.37

Severity: Info

Actionable: No

Sample Description:

'power.u1pcu2'(TECTROL-CAN.300-1454-01(50).008275) was added to T3 [Array_Name]
([IP_Address])

Info:

A new Power Supply, as identified by it's serial#, has been installed on the T3.

Cause:

Action:

Event: t3.ComponentInsertEvent

Component: interface.loopcard

EventCode: 13.40.24

Severity: Info

Actionable: No

Sample Description:

Info:

A new LoopCard, as identified by it's serial#, has been installed on the T3.

Cause:

Action:

Event: t3.ComponentRemoveEvent

Component: power

EventCode: 13.41.37

Severity: Error**Actionable: Yes****Sample Description:**

'power.u1pcu2'(TECTROL-CAN.300-1454-01(50).008275) was removed from T3 [Array_Name]
([IP_Address])

Info:

The T3 has reported that a Power Cooling Unit has been removed from the chassis

Cause:**Action:**

1. Replace PCU within 30 minute shutdown window

Event: t3.ComponentRemoveEvent

Component: interface.loopcard

EventCode: 13.41.24

Severity: Error**Actionable: Yes**

Sample Description:**Info:**

The T3 has reported that a loopcard has been removed from the chassis

Cause:**Action:**

1. Replace loopcard within 30 minute power shutdown window

Event: t3.ComponentRemoveEvent

Component: controller

EventCode: 13.41.12

Severity: Error**Actionable: Yes****Sample Description:**

'controller.u1ctr'(id) was removed from T3 [Array_Name] ([IP_Address])

Info:

The T3 has reported that a controller was removed from the chassis

Cause:**Action:**

1. Replace controller within 30 minute power shutdown window

Event: t3.ComponentRemoveEvent

Component: disk

EventCode: 13.41.13

Severity: Error**Actionable: Yes****Sample Description:**

disk.u2d3(SEAGATE.ST318203FSUN18G.LRG07139) was removed from [Array_Name] ([IP_Address])

Info:

The T3 has reported a disk has been removed from the chassis

Cause:**Action:**

1. Replace Disk within 30 minute power shutdown window

Event: t3.RemovalEvent

Component:

EventCode: 13.42.16

Severity: Info

Actionable: No

Sample Description:

Info:

Cause:

Action:

Event: tape.AuditEvent

Component:

EventCode: 14.10.16

Severity: Info

Actionable: No

Sample Description:

Auditing a tape '[Device_Name]' 10002000007a609

Info:

Audits occur every week.

Cause:

Action:

Event: tape.CommunicationEstablishedEvent

Component: ib

EventCode: 14.11.21

Severity: Info

Actionable: No

Sample Description:

Communication regained with tape '[Device_Name]'

Info:

Cause:

Action:

Event: tape.CommunicationLostEvent

Component: ib

EventCode: 14.12.21

Severity: Err/Critical**Actionable: Yes****Sample Description:**

Lost communication with tape '[Device_Name]'

Info:

In-Band communication to a Fibre Channel tape drive has been lost

Cause:**Action:**

1. Verify cables, GBICs, Power and connections along data path.
2. Check SAN Topology GUI to identify failing segment of the data path
3. Verify correct FC switch configuration (if present)

Event: tape.DiagnosticTest-

Component: fctapetest

EventCode: 14.13.332

Severity: Error

Actionable: No

Sample Description:

fctapetest ([Host_Name]) on [Device_Name] (IP_Address) failed

Info:

Cause:

Action:

Event: tape.DiscoveryEvent

Component:

EventCode: 14.14.16

Severity: Info

Actionable: No

Sample Description:

Discovered a new tape called [Device_Name] 10002000007a609

Info:

Discovery events occur the very first time the agent probes a storage device.

Cause:

Action:

Event: tape.LocationChangeEvent

Component:

EventCode: 14.19.16

Severity: Info

Actionable: No

Sample Description:

Location of tape '[Device_Name]' changed

Info:

Cause:

Action:

Event: tape.StateChangeEvent+

Component: port

EventCode: 14.25.35

Severity: Info

Actionable: No

Sample Description:

'port.A' in TAPE '[Device_Name]' is now Available (status-state changed from 'Offline' to 'Online')

Info:

Cause:

Action:

Event: tape.StateChangeEvent-

Component: port

EventCode: 14.26.35

Severity: Error**Actionable: Yes****Sample Description:**

'port.A' in TAPE '[Device_Name]' is now Not-Available (status-state changed from 'Online' to 'Offline')

Info:

In-Band communication to one port of a dual-ported tape drive has been lost

Cause:**Action:**

1. Verify cables, GBICs and connections along data path.
2. Check SAN Topology GUI to identify failing segment of the data path
3. Verify correct FC switch configuration (if present)

Event: tape.DeviceLostEvent

Component: aggregate

EventCode: 14.34.71

Severity: Err/Critical

Actionable: Yes

Sample Description:

Device [Device_Name] is not available anymore, confirmed by the following 5 subevents

Info:

Aggregated Events that confirms that a device is not available.

Cause:

Action:

Event: v880disk.AlarmEvent-

Component: temperature

EventCode: 15.5.51

Severity: Warning

Actionable: No

Sample Description:

The state of 'temperature.expansion.status' on [Device_Name] (wwn=[WWN]) is 'Not Installed'

Info:

Cause:

Action:

Event: v880disk.AlarmEvent-

Component: backplane

EventCode: 15.5.3

Severity: Warning

Actionable: No

Sample Description:

The state of 'SSC.exp_backplane.status' on [Device_Name] (wwn=[WWN]) is 'NotInstalled'

Info:

Cause:

Action:

Event: v880disk.AlarmEvent-

Component: loop

EventCode: 15.5.26

Severity: Warning

Actionable: No

Sample Description:

The state of 'SSC.base_loopB.status' on [Device_Name] (wwn=[WWN]) is 'NotInstalled'

Info:

Cause:

The internal "B" loop for V880 internal drives is not installed. The "B" loop is only created with the addition of a dual port Fiber Channel card to a pci port on the back of the V880.

Action:

Event: v880disk.AuditEvent

Component:

EventCode: 15.10.16

Severity: Info**Actionable: No****Sample Description:**

Auditing a v880disk called [Device_Name] (wwn=[WWN])

Info:

Use luxadm to verify the integrity of the enclosure

Cause:**Action:**

1. luxadm probe should identify the internal enclosure name (FCloop is default)
2. Use luxadm display [enclosure name] to verify members
3. check /dev/es to see ses devices are configured and linked.

Event: v880disk.CommunicationEstablishedEvent

Component: ib

EventCode: 15.11.21

Severity: Info

Actionable: No

Sample Description:

Communication Established with [Device_Name] (wwn=[WWN])

Info:

The internal enclosure has been discovered by the system

Cause:

Action:

Event: v880disk.CommunicationLostEvent

Component: ib

EventCode: 15.12.21

Severity: Err/Critical

Actionable: Yes

Sample Description:

Lost communication (InBand([Host_Name])) with [Device_Name] (wwn=[WWN])

Info:

Cause:

Action:

1. Check the power cables on V880
2. Run qlc test on v880 to check whether the mother board ISP controller is broken
3. Check the internal cable connection between ISP and backplane

Event: v880disk.DiagnosticTest-

Component: daktest

EventCode: 15.13.306

Severity: Error

Actionable: No

Sample Description:

v880daktest ([Host_Name])) on [Device_Name] failed

Info:

Cause:

Action:

Check Test Manager for details on test failure.

Event: v880disk.DiscoveryEvent

Component:

EventCode: 15.14.16

Severity: Info

Actionable: No

Sample Description:

Discovered a new V880 called [Device_Name]

Info:

Discovery events occur the very first time the agent probes a storage device.

Cause:

Action:

Event: v880disk.LocationChangeEvent

Component:

EventCode: 15.19.16

Severity: Info
Actionable: Yes**Sample Description:**

Location of V880disk called [Device_Name] was changed

Info:

The disks position may be swapped

Cause:**Action:**

1. Check /var/adm/messages for more information
2. Run luxadm display wwn to check current disk status
3. Run topology snapshot to get the latest update

Event: v880disk.DeviceLostEvent

Component: aggregate

EventCode: 15.34.71

Severity: Err/Critical

Actionable: Yes

Sample Description:

Device [Device_Name] is not available anymore, confirmed by the following 5 subevents

Info:

Aggregated Events that confirms that a device is not available.

Cause:

Action:

Event: v880disk.ComponentInsertEvent

Component: disk

EventCode: 15.40.13

Severity: Info**Actionable: No****Sample Description:**

disk.4(20000020375b251a) was added to [Device_Name] (wwn=[WWN]) ([IP_Address])

Info:

A new disk was added in V880 disk enclosure

Cause:**Action:**

1. Run a devfsadm -C or allow picl daemon to create devices.
2. Run luxadm display [enclosure] to verify disk is present.
3. Look in /dev/dsk and /dev/rdisk to see addition of drive.
4. Verify the disk shows up in format.

Event: v880disk.ComponentRemoveEvent

Component: disk

EventCode: 15.41.13

Severity: Error**Actionable: Yes****Sample Description:**

disk.4(20000020375b251a) was removed from [Device_Name] (wwn=[WWN]) ([IP_Address])

Info:

Luxadm cannot see the wwn of a disk, it may have been removed.

Cause:**Action:**

1. Check /var/adm/messages for any errors
2. Reseat disk in enclosure
3. Replace disk if necessary

Sample Description:
Change in Port Statistics on VE '[Device_Name]'

Info:

Cause:

Action:

Event: ve.AlarmEvent

Component: volume_add

EventCode: 16.3.57

Severity: Warning

Actionable: No

Sample Description:

VLUN T16431/62573361-30304769 on [Device_Name] was added

Info:

The discovery a new VLUN was detected by StorADE.

Cause:

A new VLUN was created using the SECFG tools.

Action:

Use the StorADE GUI to query the configuration tools to verify configuration.

Event: ve.AlarmEvent

Component: volume_delete

EventCode: 16.3.58

Severity: Warning**Actionable: No****Sample Description:**

VLUN T16431/62573361-30304769 on [Device_Name] was deleted

Info:

The removal a VLUN was detected by StorADE.

Cause:

A VLUN was deleted using the SECFG tools.

Action:

Use the StorADE GUI to query the configuration tools to verify configuration.

Event: ve.AlarmEvent

Component: volume

EventCode: 16.3.53

Severity: Warning

Actionable: Yes

Sample Description:

VLUN T16431/62573361-30304769 on [Device_Name] was changed

Info:

This event occurs when the VE has detected a change in status for a Multipath Drive or VLUN.

Cause:

Usually indicating a pathing problem to a storage array controller

Action:

1. Check the StorADE GUI for changes in Active/Passive paths.
2. Check storage array for current LUN ownership. (`port listmap`)
3. Use `mpdrive failback` if needed to fail LUNs back to correct controller if needed.

Event: ve.AuditEvent

Component:

EventCode: 16.10.16

Severity: Info

Actionable: No

Sample Description:

Auditing a Virtualization Engine called '[Device_Name]'

Info:

Audits occur once per week

Cause:

This is a resyncing the cache to ensure accuracy of the StorADE telemetry information.

Action:

No additional actions are required.

Event: ve.CommunicationEstablishedEvent

Component: oob

EventCode: 16.11.31

Severity: Info

Actionable: No

Sample Description:

Communication regained with VE '[Device_Name]'

Info:

"oob" (OutOfBand) refers to the Ethernet connection. The "Source" field in the email message is the hostname of the system that has regained ethernet communication with the device.

Cause:

Action:

Event: ve.CommunicationLostEvent

Component: oob.ping

EventCode: 16.12.33

Severity: Err/Critical**Actionable: Yes****Sample Description:**

Lost communication with VE '[Device_Name]'

Info:

"oob" (OutOfBand) refers to an Ethernet connection. The "Source" field in the email message is the hostname of the system that has lost ethernet communication with the device.

Cause:

VE and/or ethernet connectivity problem

Action:

1. Check Power to VE unit
2. Check Ethernet connectivity to VE
3. Check the status of the 'slicd' daemon
4. Make sure VE is booted correctly
5. Verify correct TCP/IP settings on VE
6. Replace VE if necessary
7. Run ipcs(1) and ipcrm(1) to clean-up any old semaphore.

Event: ve.CommunicationLostEvent

Component: oob.slicd

EventCode: 16.12.34

Severity: Err/Critical**Actionable: Yes****Sample Description:**

Lost communication with VE/slicd '[Device_Name]'

Info:

Failed to execute slicd command

Cause:

The slicd daemon has failed to respond to a StorADE query.

Action:

1. Check the status of the 'slicd' daemon
2. Use the StorADE GUI configuration tools to verify proper configuration.
3. Check Power on VE
4. Make sure VE is booted correctly
5. Verify correct TCP/IP settings on VE
6. Check for T3 failover conditions in T3 message log
7. Replace VE if necessary

Event: ve.CommunicationLostEvent

Component: oob.command

EventCode: 16.12.32

Severity: Err/Critical**Actionable: Yes****Sample Description:**

Lost communication with VE/slicd '[Device_Name]'

Info:

"oob" (OutOfBand) refers to an Ethernet connection. The "Source" field in the email message is the hostname of the system that has lost slicd communication with the device.

Cause:

Invalid command or slicd daemon problem.

Action:

1. Check the status of the 'slicd' daemon
2. Check Power on VE
3. Make sure VE is booted correctly
4. Use the STorADE GUI configuration tools to verify proper VE configuration.
5. Check for T3 failover conditions in T3 message log
6. Replace VE if necessary

Event: ve.DiagnosticTest-

Component: veluntest

EventCode: 16.13.346

Severity: Error

Actionable: No

Sample Description:

veluntest ([Host_Name]) on [Device_Name] ([IP_Address]) failed

Info:

Cause:

Action:

Event: ve.DiagnosticTest-

Component: ve_diag

EventCode: 16.13.52

Severity: Error

Actionable: No

Sample Description:

ve_diag ([Host_Name]) on [Device_Name] ([IP_Address]) failed

Info:

Cause:

Action:

Event: ve.DiscoveryEvent

Component:

EventCode: 16.14.16

Severity: Info

Actionable: No

Sample Description:

Discovered a new Virtualization Engine called '[Device_Name]'

Info:

Discovery events occur the very first time the agent probes a storage device.

Cause:

StorADE compares the configuration file to its cache and queries devices for entire FRU information when there is no

Action:

1. Check the StorADE GUI for proper information and for any outstanding events that may have occurred.
2. Ensure the StorADE GUI shows the proper topology for the new device.

Event: ve.LocationChangeEvent

Component:

EventCode: 16.19.16

Severity: Info

Actionable: No

Sample Description:

Location of VE '[Device_Name]' changed

Info:

Cause:

Action:

Event: ve.DeviceLostEvent

Component: aggregate

EventCode: 16.34.71

Severity: Err/Critical

Actionable: Yes

Sample Description:

Device [Device_Name] is not available anymore, confirmed by the following 5 subevents

Info:

Aggregated Events that confirms that a device is not available.

Cause:

Action:

Event: mcddata.AlarmEvent

Component: system_reboot

EventCode: 17.3.47

Severity: Warning

Actionable: No

Sample Description:

Switch uptime decreased on [Switch_Name] ([IP_Address]) from 774396s to 524848s

Info:

The uptime of the switch was less than than the previous uptime of the switch.

This could indicate that the switch has been reset either by a user or loss of power

Cause:

Action:

1. Check to see if the switch has been reset.
2. Check the power going to the switch.

Event: mcddata.AlarmEvent

Component: power

EventCode: 17.3.37

Severity: Warning

Actionable: Yes

Sample Description:

The state of 'sensor.power-supply.5.status' on [Switch_Name] ([IP_Address]) is 'absent'

Info:

The switch is reporting a problem with the Power Supply.

Cause:

Action:

Check switch Power Supply and replace switch as an entire FRU if necessary.

Event: mcddata.AlarmEvent

Component: fan

EventCode: 17.3.19

Severity: Warning

Actionable: Yes

Sample Description:

The state of 'sensor.fan.5.status' on [Switch_Name] ([IP_Address]) is 'absent'

Info:

The switch is reporting a problem with the cooling fans.

Cause:

Action:

Replace the entire switch as a FRU.

Event: mcddata.AuditEvent

Component:

EventCode: 17.10.16

Severity: Info

Actionable: No

Sample Description:

Auditing a new switch called ras [Array_Name] ([IP_Address]): 10002000007a609

Info:

Cause:

Action:

Event: mcddata.CommunicationEstablishedEvent

Component: oob

EventCode: 17.11.31

Severity: Info

Actionable: No

Sample Description:

Communication regained with [Array_Name] ([IP_Address])

Info:

Cause:

Action:

Event: mcddata.CommunicationLostEvent

Component: oob

EventCode: 17.12.31

Severity: Err/Critical

Actionable: Yes

Sample Description:

Lost communication with [Array_Name] ([IP_Address])

Info:

Ethernet connectivity to the switch has been lost

Cause:

Action:

1. Check Power on switch
2. Check Ethernet connectivity to switch
3. Verify switch is booted correctly with no POST errors.
4. Verify switch Test Mode is set for normal operations
5. Verify TCP/IP settings on switch via Forced Prom Mode access
6. Replace switch if needed

Event: mcddata.DiscoveryEvent

Component:

EventCode: 17.14.16

Severity: Info

Actionable: No

Sample Description:

Discovered a new switch called ras [Array_Name] ([IP_Address]): 10002000007a609

Info:

Discovery events occur the very first time the agent probes a storage device.

Cause:

Action:

Event: mcddata.LocationChangeEvent

Component:

EventCode: 17.19.16

Severity: Info

Actionable: No

Sample Description:

Location of switch [Array_Name] ([IP_Address]) was changed

Info:

Cause:

Action:

Event: mcdatalogevent

Component: PhysState

EventCode: 17.20.2

Severity: Warning

Actionable: Yes

Sample Description:

PhysicalState of port 4 changed from 'on' to 'off'

Info:

Monitors the PhysicalState attribute of the switch

Cause:

Action:

Event: mcdatalogevent

Component: port.statistics

EventCode: 17.20.36

Severity: Warning

Actionable: Yes

Sample Description:

Change in Port Statistics on switch [Array_Name] ([IP_Address])

Info:

The switch has reported a change in an error counter. This could indicate a failing component in the link.

Cause:

Action:

1. Check the Topology GUI for any link errors.
2. Run linktest on the link to isolate the failing FRU. Quiesce IO on the link 'before running linktest.

Event: mcddata.StateChangeEvent+

Component: port

EventCode: 17.25.35

Severity: Info

Actionable: No

Sample Description:

'port.1' in SWITCH [Array_Name] ([IP_Address]) is now Available (status-state changed from 'Offline' to 'Online')

Info:

Port on switch is now available

Cause:

Action:

Port is online.

Event: mcddata.StateChangeEvent-

Component: port

EventCode: 17.26.35

Severity: Error**Actionable: Yes****Sample Description:**

'port.1' in MCDATA switch_name is now Not-Available (state changed from 'Online' to 'Offline')(Admin Status is 'online')

Info:

A port on the switch has logged out of the fabric and gone offline

Cause:**Action:**

1. Verify cables, GBICs and connections along Fibre Channel path
2. Check SAN Topology GUI to identify failing segment of the data path
3. Verify correct FC switch configuration
4. Verify port is enabled

Event: mcddata.Statistics

Severity: Info
Actionable: No

Component:

EventCode: 17.27.16

Sample Description:

Statistics about switch [Array_Name] ([IP_Address]): 10002000007a609

Info:

Port Statistics

Cause:

Action:

Event: mcddata.DeviceLostEvent

Component: aggregate

EventCode: 17.34.71

Severity: Err/Critical

Actionable: Yes

Sample Description:

Mcddata Device sw1a is not available anymore, confirmed by the following 5 subevents

Info:

Aggregated Events that confirms that a device is not available.

Cause:

Action:

Event: mcddata.ConnectivityLostEvent

Component: aggregate

EventCode: 17.36.71

Severity: Error**Actionable: Yes****Sample Description:**

Lost connectivity between mcddata [Device_Name] port-2 and t3 [Array_Name] ctrl-1

Info:

This event is generated when switch-ports go offline and other events are confirming it. This can be a link host <-> sw

Cause:**Action:**

Event: 3310.AlarmEvent

Component: volume

EventCode: 18.3.53

Severity: Warning

Actionable: No

Sample Description:

Total Partitions in logical drive has been changed

Info:

Logical drive total partitions has been changed.

Cause:

Action:

Event: 3310.AlarmEvent

Component: part

EventCode: 18.3.72

Severity: Warning

Actionable: No

Sample Description:

Total Partitions in logical drive has been changed

Info:

Logical drive total partitions has been changed.

Cause:

Action:

Event: 3310.AlarmEvent

Component: Revision

EventCode: 18.3.117

Severity: Warning

Actionable: Yes

Sample Description:

Revision changed from [Old_Version] to [New_Version]

Info:

Cause:

Action:

Event: 3310.AlarmEvent

Component: power

EventCode: 18.3.37

Severity: Warning

Actionable: Yes

Sample Description:

Power status has been changed

Info:

Power status has been changed.

Cause:

Action:

1. Please check the power

Event: 3310.AlarmEvent

Component: fan

EventCode: 18.3.19

Severity: Warning

Actionable: Yes

Sample Description:

Fan status has been changed

Info:

Fan status on emu has been changed.

Cause:

Action:

1. Please check the fan.

Event: 3310.AlarmEvent

Component: raid_level

EventCode: 18.3.69

Severity: Warning

Actionable: No

Sample Description:

Raid level has been changed on logical.0 from 5 to 0

Info:

Logical drive raid level has been changed.

Cause:

Action:

Event: 3310.AlarmEvent

Component: temperature

EventCode: 18.3.51

Severity: Warning

Actionable: Yes

Sample Description:

Temperature status has been changed

Info:

Temperature status on emu has been changed.

Cause:

Action:

1.Please check fan or air-condition

Event: 3310.AlarmEvent

Component: size

EventCode: 18.3.70

Severity: Warning

Actionable: No

Sample Description:

Effective size has been changed on part.1 from 38952MB to 68952MB

Info:

Partition effective size has been changed.

Cause:

Action:

Event: 3310.AlarmEvent

Component: enclosure

EventCode: 18.3.16

Severity: Warning

Actionable: Yes

Sample Description:

The state of 'info.status' on [enclosure] changed from 'Online' to 'Offline'

Info:

Cause:

Action:

Event: 3310.AlarmEvent

Component: channel

EventCode: 18.3.120

Severity: Warning

Actionable: Yes

Sample Description:

[enclosure] (wwn=204000c0ff000003): Channel 0 is missing

Info:

Cause:

Action:

Event: 3310.AlarmEvent

Component: firmware_version

EventCode: 18.3.119

Severity: Warning

Actionable: Yes

Sample Description:

Firmware_version changed from [Old_Version] to [New_Version]

Info:

Cause:

Action:

Event: 3310.CommunicationEstablishedEvent

Component: oob

EventCode: 18.11.31

Severity: Info

Actionable: No

Sample Description:

Communication regained (OutOfBand([Host_Name])) with [Array_Name] ([IP_Address])

Info:

OutOfBand communications

Cause:

Action:

Event: 3310.CommunicationEstablishedEvent

Component: ib

EventCode: 18.11.21

Severity: Info

Actionable: No

Sample Description:

Communication regained (InBand([Host_Name])) with [Array_Name] ([IP_Address]) (last
reboot was 2001-09-27 15:22:00)

Info:

InBand Communication

Cause:

Action:

Event: 3310.CommunicationLostEvent

Component: e

EventCode: 18.12.118

Severity: Err/Critical

Actionable: Yes

Sample Description:

Lost communication (InBand([Host_Name])) with [Array_Name] ([IP_Address]) (last reboot was 2001-09-27 15:22:00)

Info:

Cause:

Action:

Event: 3310.CommunicationLostEvent

Component: ib

EventCode: 18.12.21

Severity: Err/Critical**Actionable: Yes****Sample Description:**

Lost communication (InBand([Host_Name])) with [Array_Name] ([IP_Address]) (last reboot was 2001-09-27 15:22:00)

Info:

InBand. This event is established using sccli. This monitoring may not be activated for a particular 3310.

Cause:**Action:**

1. Verify sccli access via command line (sccli show).
2. Verify cables, GBICs, Power, and connections along data path.
3. Check SAN Topology GUI to identify failing segment of the data path.
4. Verify correct FC switch configuration (If applicable).

Event: 3310.CommunicationLostEvent

Component: ethernet

EventCode: 18.12.122

Severity: Error**Actionable: Yes****Sample Description:**

'The state of 'info.ethernet_errs' on [Array_Name] changed from 'ok' to 'ping_failed'

Info:**Cause:****Action:**

Event: 3310.CommunicationLostEvent

Component: oob

EventCode: 18.12.31

Severity: Err/Critical**Actionable: Yes****Sample Description:**

Lost communication (OutOfBand(Host_Name)) with [Array_Name] ([IP_Address])

Info:**Cause:**

This problem can also be caused by:

- A very slow network,
- The ethernet connection to this array was lost or is very slow.
- A bad controller.

Action:

1. Check Power on array
2. Check Ethernet connectivity to the affected array

Event: 3310.DiscoveryEvent

Component:

EventCode: 18.14.16

Severity: Info**Actionable: No****Sample Description:**

Discovered a new 3310 called ras [Array_Name] ([IP_Address])
slr-mi.370-3990-01-e-e1.003239

Info:

Discovery events occur the very first time the agent probes a
storage device.

Cause:**Action:**

Event: 3310.LocationChangeEvent

Component:

EventCode: 18.19.16

Severity: Info

Actionable: No

Sample Description:

Location of 3310 [Array_Name] ([IP_Address]) was changed

Info:

Cause:

Action:

Event: 3310.LogEvent

Component: array_error

EventCode: 18.20.90

Severity: Warning

Actionable: Yes

Sample Description:

Error(s) found in logfile: /var/adm/messages.3310 on msp0 (id=830bfa3f):

Info:

Generic array error message

Cause:

Action:

Event: 3310.LogEvent

Component: cpu

EventCode: 18.20.116

Severity: Error

Actionable: Yes

Sample Description:

Info:

Cause:

Action:

Event: 3310.QuiesceEndEvent

Component:

EventCode: 18.22.16

Severity: Info**Actionable: No****Sample Description:**

Quiesce End on 3310 [Array_Name] ([IP_Address])

Info:

Quiescing a device is done using the GUI and means that the monitoring has been temporarily stopped.

Cause:

An administrator has changed the monitoring status of the device called out in the event message.

Action:

1. Verify with the administrator that this is an expected action.
any additional events that may have occurred.

Event: 3310.QuiesceStartEvent

Component:

EventCode: 18.23.16

Severity: Info**Actionable: No****Sample Description:**

Quiesce Start on 3310 [Array_Name] ([IP_Address])

Info:

Quiescing a device is done using the GUI and means that the monitoring has been temporarily stopped.

Cause:

An administrator has changed the monitoring status of the device called out in the event message.

Action:

1. Verify with the administrator that this is an expected action.
any additional events that may have occurred.

Event: 3310.StateChangeEvent+

Component: volume

EventCode: 18.25.53

Severity: Info

Actionable: No

Sample Description:

'volume.u1vol1'(slr-mi.370-3990-01-e-f0.022542.u1vol1) in 3310 [Array_Name]
([IP_Address]) is now Available (status-state changed from 'unmounted' to 'mounted')

Info:

'The 3310 has reported that a LUN has changed state

Cause:

Action:

Event: 3310.StateChangeEvent+

Component: disk

EventCode: 18.25.13

Severity: Info

Actionable: No

Sample Description:

'disk.u1d5' in 3310 [Array_Name] ([IP_Address]) is now Available (status-state changed from 'fault-disabled' to 'ready-enabled'):

Info:

Cause:

Action:

Event: 3310.StateChangeEvent-

Component: volume

EventCode: 18.26.53

Severity: Error

Actionable: Yes

Sample Description:

Info:

The 3310 has reported that a LUN has changed state

Cause:

Action:

1. Telnet to affected 3310

Event: 3310.StateChangeEvent-

Component: lun

EventCode: 18.26.66

Severity: Warning

Actionable: No

Sample Description:

'logical_drive.1'(204000c0ff000003.logical.1) in 3310 [Device] (wwn=204000c0ff000003) is now Not-Available (state changed from 'unknown' to 'Degraded')

Info:

Cause:

Action:

Event: 3310.StateChangeEvent-

Component: disk

EventCode: 18.26.13

Severity: Error**Actionable: Yes****Sample Description:**

'components.disk.12'(3EK1STTQ00007251) in 3310 [Array_Name] (wwn=WWN) is now Not-Available (state changed from 'Online' to 'Bad drive')

Info:

The 3310 detected a change in the status of the disk detailed in the event.

Cause:

The drive may have spun down or faulted in a way to indicate this status.

Action:

1. Check the StorADE GUI for current health status on the device as well as any additional events that may have occurred.
2. Establish a connection to the array and check the health of the device.

Event: 3310.DeviceLostEvent

Component: aggregate

EventCode: 18.34.71

Severity: Err/Critical

Actionable: Yes

Sample Description:

Device [Array_Name] ([IP_Address]) is not available anymore, confirmed by the following 5 subevents

Info:

Aggregated Events that confirms that a device is not available.

Cause:

Action:

Event: 3310.ComponentInsertEvent

Component: power

EventCode: 18.40.37

Severity: Info**Actionable: No****Sample Description:**

'power.u1pcu2'(TECTROL-CAN.300-1454-01(50).008275) was added to 3310 [Array_Name]
([IP_Address])

Info:

A new Power Supply, as identified by it's serial#, has been installed
on the 3310.

Cause:**Action:**

Event: 3310.ComponentInsertEvent

Component: disk

EventCode: 18.40.13

Severity: Info**Actionable: No****Sample Description:**

disk.u2d3(SEAGATE.ST318203FSUN18G.LRG07139) was added to [Array_Name] ([IP_Address])

Info:

A new Disk, as identified by it's serial#, has been installed on the 3310.

Cause:**Action:**

Event: 3310.ComponentRemoveEvent

Component: disk

EventCode: 18.41.13

Severity: Error**Actionable: Yes****Sample Description:**

disk.u2d3(SEAGATE.ST318203FSUN18G.LRG07139) was removed from [Array_Name] ([IP_Address])

Info:

The 3310 has reported a disk has been removed from the chassis

Cause:**Action:**

1. Replace Disk within 30 minute power shutdown window

Event: se.AlarmEvent-

Component: lun

EventCode: 19.5.66

Severity: Error

Actionable: Yes

Sample Description:

The state of 'lun.2.lunStatus' on 3910 [Host_Name] changed from 'mounted' to 'Offline'
([Array_Name]-vol1)

Info:

Cause:

Action:

Event: se.AlarmEvent-
Component: remove_lun
EventCode: 19.5.85

Severity: Warning
Actionable: No

Sample Description:

Lun [Device_Name]-vol66/6257335830303667 removed

Info:

Cause:

Action:

Event: se.CommunicationLostEvent

Component: oob

EventCode: 19.12.31

Severity: Err/Critical

Actionable: Yes

Sample Description:

Lost communication (OutOfBand([Host_Name])) with se [Array_Name] ([IP_Address]) :

Info:

Cause:

Action:

Event: se.AggregatedEvent

Component: POWERSEQ1

EventCode: 19.33.64

Severity: Warning

Actionable: Yes

Sample Description:

Aggregated event related to POWERSEQ1

Info:

The PowerSequencer #1 is connected to sw1a, sw2a, sw3a,sw4a, and to the pcu1 of each t3, events against these nodes will be aggregated under this event.

Cause:

Action:

Event: se.DeviceLostEvent

Component: aggregate

EventCode: 19.34.71

Severity: Err/Critical

Actionable: Yes

Sample Description:

Device se-3900 is not available anymore, confirmed by the following 5 subevents

Info:

Aggregated Events that confirms that a device is not available.

Cause:

Action:

Event: se.StateChangeEvent

Component: port

EventCode: 19.37.35

Severity: Error

Actionable: No

Sample Description:

External Port of [Device_Name] on SE-[Host_Name] ([IP_Address): 'port.2' in SWITCH
[Device_Name] ([IP_Address]) is now Not-Available (state changed from 'Online' to 'Offline'):

Info:

Cause:

Action:

Event: se.StateChangeEvent

Component: links

EventCode: 19.37.83

Severity: Warning

Actionable: No

Sample Description:

'links' in SE 6910 [Host_Name]: 06-19 13:01:39 ITW-ERROR (185 in 54 mins): Origin: port 2
on 've '[Device_Name]/[WWN]': Destination: port 1 on switch '[Device_Name]/[IP_Address]':

Info:

Cause:

Action:

Event: se.StateChangeEvent

Component: slot

EventCode: 19.37.84

Severity: Error

Actionable: Yes

Sample Description:

[Array_Name] in SE- [Host_Name]: 'disk.u1d9' in T3 [Array_Name] ([IP_Address]) is now
Not-Available (state changed from 'unknown' to 'fault-enabled'):

Info:

Cause:

Action:

Event: se.StateChangeEvent

Component: sp

EventCode: 19.37.98

Severity: Error

Actionable: Yes

Sample Description:

[Array_Name] in SE- [Host_Name]: 'disk.u1d9' in T3 [Array_Name] ([IP_Address]) is now
Not-Available (state changed from 'unknown' to 'fault-enabled'):

Info:

Cause:

Action:

Event: se.ComponentInsertEvent

Component: lun

EventCode: 19.40.66

Severity: Info

Actionable: No

Sample Description:

lun.2(0103001060020F200000580E3D32BE17000389D8) was added to 3910 [Host_Name]

Info:

Cause:

Action:

Event: se.ComponentRemoveEvent

Component: slot

EventCode: 19.41.84

Severity: Error

Actionable: Yes

Sample Description:

slot.1(slr-mi.370-3990-01-e-f0.027582) was removed from [Host_Name]

Info:

Cause:

Action:

Event: se.ComponentRemoveEvent

Component: lun

EventCode: 19.41.66

Severity: Error

Actionable: Yes

Sample Description:

lun.2(0103001060020F200000580E3D32BE17000389D8) was removed from 3910 [Host_Name]

Info:

Cause:

Action:

Event: se2.AlarmEvent-

Component: power_sequencer

EventCode: 20.5.110

Severity: Error

Actionable: No

Sample Description:

The The state of 'power_sequencer' on 6120 [Array_Name] changed from 'ON' to 'OFF'

Info:

The Power Sequencer controls the PDU's in the cabinet.

Cause:

The command to switch OFF the PDU in the cabinet has been initiated.

Action:

Work with onsite administration to ensure this is an expected occurrence.

Event: se2.AlarmEvent-

Component: lun

EventCode: 20.5.66

Severity: Error

Actionable: Yes

Sample Description:

The state of 'lun.2.lunStatus' on 3910 [Host_Name] changed from 'mounted' to 'Offline'
([Array_Name]-vol1)

Info:

Cause:

Action:

Event: se2.AgregatedEvent

Component: POWERSEQ1

EventCode: 20.33.64

Severity: Warning

Actionable: Yes

Sample Description:

Aggregated event related to POWERSEQ1

Info:

The PowerSequencer #1 is connected to sw1a, sw2a, sw3a,sw4a, and to the pcu1 of each t3, events against these nodes will be aggregated under this event.

Cause:

Action:

Event: se2.DeviceLostEvent

Component: aggregate

EventCode: 20.34.71

Severity: Err/Critical

Actionable: Yes

Sample Description:

Device se2-3900 is not available anymore, confirmed by the following 5 subevents

Info:

Aggregated Events that confirms that a device is not available.

Cause:

Action:

Event: se2.ComponentInsertEvent

Component: lun

EventCode: 20.40.66

Severity: Info

Actionable: No

Sample Description:

lun.2(0103001060020F200000580E3D32BE17000389D8) was added to 3910 [Host_Name]

Info:

Cause:

Action:

Event: se2.ComponentRemoveEvent

Component: lun

EventCode: 20.41.66

Severity: Error

Actionable: Yes

Sample Description:

lun.2(0103001060020F200000580E3D32BE17000389D8) was removed from 3910 [Host_Name]

Info:

Cause:

Action:

Event: 6120.AlarmEvent

Component: cacheMode

EventCode: 21.3.77

Severity: Warning

Actionable: No

Sample Description:

CacheMode on [Array_Name] ([IP_Address]) change from writeBehind to writeThrough

Info:

StorADE has detected that the arrays' cacheing mode has been disabled.

Cause:

The array will stop cacheing data in the event of a fru failure effecting cache.

Action:

1. Check the StorADE GUI for events and alerts pertaining to the Array_Name detailed in the actual event.
2. Replace the FRU as deemed necessary.

Event: 6120.AlarmEvent

Component: volOwner

EventCode: 21.3.76

Severity: Warning

Actionable: Yes

Sample Description:

Volume owner for u1vol1 changed from 'u1' to 'u2'

Info:

Volume or controller failover has occurred.

Cause:

Action:

Event: 6120.AlarmEvent

Component: initiators

EventCode: 21.3.78

Severity: Warning

Actionable: No

Sample Description:

initiator changed from old_value to new_value

Info:

Cause:

Action:

Event: 6120.AlarmEvent

Component: system_reboot

EventCode: 21.3.47

Severity: Warning**Actionable: No****Sample Description:**

System reboot for 6120 [Array_Name] (ip=[IP_Address]) changed from '2003-2-13 17:32:43' to '2002-9-16 17:32:43'

Info:

This event is generated when the reboot date/time of a t3 changed by at least 5 minutes.

Cause:

The 6120 could have experienced a power hit or may have been rebooted.
Someone could have simply executed the date command too.

Action:

1. Verify with administrator that if a reboot did in fact occur, it was successful.
2. Verify with administrator that the reboot was done on purpose.
3. Use the StorADE GUI Log viewer to check the devices mirrored syslog for the date command.
4. Check StorADE for current status of other monitored devices with similar events.
5. Check the cabinets power source to ensure solid connections throughout the distribution.

Event: 6120.AlarmEvent
Component: lunPermission
EventCode: 21.3.79

Severity: Warning
Actionable: No

Sample Description:

The access permission has changed for LUN 01 from old_access to new_access.

Info:

Cause:

Action:

Event: 6120.AlarmEvent

Component: sysvolslice

EventCode: 21.3.48

Severity: Warning

Actionable: Yes

Sample Description:

Volume Slicing is now off!

Info:

The vol slice feature is possible in 6120+ firmware 2.1 and above.

This option enables volume slicing, up to 16 LUN's per single 6120 or partner pair. This also enables lun masking (HBA Zoning) features.

Cause:

Action:

The option enable_volslice is disabled by default. To activate

the feature type 'sys enable_volslice on' from the 6120 command line.

Notification regarding slice and LUN changes will occur when changes are made to volume slices and lun masks. Volume slice or LUN mask changes which were not initiated by a user could indicate a potential problem. Please connect to the storage device or the appropriate management software to validate the system status.

Event: 6120.AlarmEvent

Component: cacheMirror

EventCode: 21.3.123

Severity: Warning

Actionable: No

Sample Description:

CacheMirror on [Array_Name] ([IP_Address]) change from on to off

Info:

Cause:

Action:

Event: 6120.AlarmEvent

Component: volCount

EventCode: 21.3.87

Severity: Warning

Actionable: No

Sample Description:

Number of LUN(s) on 6120 [Array_Name] ([IP_Address]) from 10 to 12

Info:

Cause:

Action:

Event: 6120.AlarmEvent

Component: log

EventCode: 21.3.55

Severity: Error**Actionable: Yes****Sample Description:**

Errors(s) found in logfile: [Array_Messages_Logfile]

Info:

This event includes all important errors found.

Cause:**Action:**

1. Check the messages file for appropriate action

Event: 6120.AlarmEvent

Component: loop.statistics

EventCode: 21.3.115

Severity: Warning

Actionable: No

Sample Description:

Internal Loop statistics changed on [Array_Name]

Info:

Cause:

Action:

Event: 6120.AlarmEvent

Component: time_diff

EventCode: 21.3.56

Severity: Info

Actionable: No

Sample Description:

Time of 6120 [Array_Name] ([IP_Address]) is different from host: 6120=Fri Oct 26 10:16:17
200, Host=2001-10-26 12:21:04

Info:

Cause:

Action:

1) Fix the date/time on the 6120 using the date command. Date and time should be the same as the monitoring host.

Event: 6120.AlarmEvent

Component: device_path

EventCode: 21.3.112

Severity: Error**Actionable: Yes****Sample Description:**

Path 50020f230000dde to 6120 [Array_Name]/[IP_Address] disappeared from the host

Info:

StorADE will generate this event when a device disappears from the luxadm probe list.

Cause:

A LUN presented to the host is no longer available to Solaris.

Action:

1. Check the StorADE GUI for events relating to the device in the message.
2. Check the StorADE topology view for link errors associated with the device connections.
3. Check StorADE for events associated with the components connected to the device in the message as per the topology.

Event: 6120.AlarmEvent

Component: revision

EventCode: 21.3.42

Severity: Warning

Actionable: No

Sample Description:

Revision on controller.u1ctr1 in 6120 [Array_Name] ([IP_Address]) from R01 to R02

Info:

Cause:

Action:

Event: 6120.AlarmEvent+

Component: power.temp

EventCode: 21.4.41

Severity: Info

Actionable: No

Sample Description:

The state of power.u1pcu1.PowTemp on [Array_Name] ([IP_Address]) is Normal

Info:

Cause:

Action:

Event: 6120.AlarmEvent-

Component: disk.pathstat

EventCode: 21.5.93

Severity: Error**Actionable: Yes****Sample Description:**

The state of disk pathstat changed

Info:

StorADE monitors the tokens that are equivalent to the ".disk pathstat uXdNN" command.

Cause:

A disk drive has experienced a failover of one of its loops.

Action:

1. Check the StorADE GUI for events relating to the array called out in the message.
2. Check the StorADE GUI for the current status of the disk drive called out in the message.
3. Replace disk

Event: 6120.AlarmEvent-
Component: disk.temperature
EventCode: 21.5.94

Severity: Info
Actionable: No

Sample Description:

Info:

StorADE monitors the temperature of the disks in the enclosure.

Cause:

StorADE detected a discrepancy in the token information about the disk temperature returned by the array.

Action:

Check StorADE for additional event information pertaining to the disk called out in the event.

Event: 6120.AlarmEvent-

Component: power.fan

EventCode: 21.5.39

Severity: Error**Actionable: Yes****Sample Description:**

The state of power.u1pcu1.Fan1State on [Array_Name] ([IP_Address]) is Fault

Info:

The state of a fan on the 6120 is not optimal

Cause:

Problem with the Power Cooling Unit called out in the event.

Action:

1. Telnet to affected 6120
2. Verify fan state with 'fru stat'
3. Replace Power Cooling Unit if necessary

Event: 6120.AlarmEvent-

Component: cacheMode

EventCode: 21.5.77

Severity: Warning

Actionable: No

Sample Description:

CacheMode on [Array_Name] ([IP_Address]) change from writeBehind to writeThrough

Info:

StorADE has detected that the arrays' cacheing mode has been disabled.

Cause:

The array will stop cacheing data in the event of a fru failure effecting cache.

Action:

1. Check the StorADE GUI for events and alerts pertaining to the Array_Name detailed in the actual event.
2. Replace the FRU as deemed necessary.

Event: 6120.AlarmEvent-

Component: cacheMirror

EventCode: 21.5.123

Severity: Warning

Actionable: No

Sample Description:

CacheMirror on [Array_Name] ([IP_Address]) change from on to off

Info:

Cause:

Action:

Event: 6120.AlarmEvent-

Component: power.output

EventCode: 21.5.40

Severity: Error**Actionable: Yes****Sample Description:**

The state of power.u1pcu1.PowOutput on [Array_Name] ([IP_Address]) is Fault

Info:

The state of the power in the 6120 Power Cooling Unit is not optimal.

Cause:

1. Voltage Level on Power Supply and Battery have moved out of acceptable thresholds.
2. The internal PCU temp has exceeded acceptable thresholds. 3. A PCU fan has failed.

Action:

1. Telnet to affected 6120
2. Verify Power Cooling Unit State in 'fru stat'
3. Replace PCU if necessary

Event: 6120.AlarmEvent-

Component: power.temp

EventCode: 21.5.41

Severity: Error**Actionable: Yes****Sample Description:**

The state of power.u1pcu1.PowTemp on [Array_Name] ([IP_Address]) is Fault

Info:

The state of the temperature in the 6120 Power Cooling Unit is either too high or is unknown.

Cause:**Action:**

1. Telnet to affected 6120
2. Verify Power Cooling Unit state in 'fru stat'
3. Replace PCU if necessary

Event: 6120.AlarmEvent-

Component: disk.port

EventCode: 21.5.14

Severity: Error**Actionable: Yes****Sample Description:**

The state of disk.u1d1.Port1State on 6120 [Array_Name] ([IP_Address]) changed from 'OK' to 'failed'

Info:

The array has reported that one port of a dual-ported disk has failed

Cause:**Action:**

1. Check StorADE status of the array
2. Telnet to the array and verify disk state in 'fru stat', 'fru list' and 'vol stat'
3. Replace disk if necessary

Event: 6120.AlarmEvent-

Component: power.battery

EventCode: 21.5.38

Severity: Error**Actionable: Yes****Sample Description:**

1 error(s) found in logfile [Array_Messages_Logfile] (indicating problem with t3 [Array_Name]/[IP_Address]):

Info:

This event is generated for battery messages found in the array log file that are not specific to any other type of battery event.

Cause:

1. The battery warranty period may have expired.
2. The battery's ability to hold a charge has diminished to a point where it can no longer be recharged.
3. The last refresh cycle failed changing the status of the battery.

Action:

1. Check the StorADE GUI for current state and status of the PCU's in the array.
2. Replace the suspect Battery or the whole PCU in the array.
3. Check airflow.

Event: 6120.AlarmEvent-

Component: interface.loopcard.cable

EventCode: 21.5.25

Severity: Warning**Actionable: Yes****Sample Description:**

The state of loopcable.u1l1.CableState changed from 'OK' to 'failed'

Info:

The 6120 has reported that a loopcard is in a failed state

Cause:**Action:**

1. Telnet to affected 6120
2. Verify loopcard state with 'fru stat'
3. Verify matching firmware with other loopcard
4. Re-enable loopcard if possible (enable u(encid)l[1|2])
5. Replace loopcard if necessary
6. Verify the connections of the Loop Card interconnect cables

Event: 6120.AuditEvent

Component:

EventCode: 21.10.16

Severity: Info

Actionable: No

Sample Description:

Auditing a new 6120 called ras [Array_Name] ([IP_Address]) slr-mi.370-3990-01-e-e1.003239

Info:

Audits occur every week

Cause:

Action:

Event: 6120.CommunicationEstablishedEvent

Component: oob

EventCode: 21.11.31

Severity: Info

Actionable: No

Sample Description:

Communication regained (OutOfBand([Host_Name])) with [Array_Name] ([IP_Address])

Info:

OutOfBand communications

Cause:

Action:

Event: 6120.CommunicationEstablishedEvent

Component: ib

EventCode: 21.11.21

Severity: Info

Actionable: No

Sample Description:

Communication regained (InBand([Host_Name])) with [Array_Name] ([IP_Address]) (last
reboot was 2001-09-27 15:22:00)

Info:

InBand Communication

Cause:

Action:

Event: 6120.CommunicationLostEvent

Component: ib

EventCode: 21.12.21

Severity: Err/Critical**Actionable: Yes****Sample Description:**

Lost communication (InBand([Host_Name])) with [Array_Name] ([IP_Address]) (last reboot was 2001-09-27 15:22:00)

Info:

InBand. This event is established using luxadm. This monitoring may not be activated for a particular 6120.

Cause:**Action:**

1. Verify luxadm via command line (luxadm probe, luxadm display </dev/rdisk/c#t#d#s2>)
2. Verify cables, GBICs, Power, and connections along data path.
3. Check SAN Topology GUI to identify failing segment of the data path
4. Verify correct FC switch configuration (If applicable)

Event: 6120.CommunicationLostEvent

Component: oob

EventCode: 21.12.31

Severity: Err/Critical**Actionable: Yes****Sample Description:**

Lost communication (OutOfBand([Host_Name])) with [Array_Name] ([IP_Address])

Info:

OutOfBand. This means that the 6120 failed to answer to ping or failed to return it's tokens.

Cause:

This problem can also be caused by a very slow network, or because the ethernet connection to this 6120 was lost.

Action:

1. Check Power on array
2. Check Ethernet connectivity to the affected 6120
3. Verify 6120 is booted correctly
4. Verify correct TCP/IP settings on 6120
5. Increase the http and/or ping timeout in Utilities -> System -> System-Timeouts. The current default timeouts are 10 secs for ping, 60 secs for http (tokens).

Event: 6120.DiagnosticTest-

Component: 6120volverify

EventCode: 21.13.106

Severity: Error

Actionable: No

Sample Description:

6120volverify ([Host_Name] on [Array_Name] ([IP_Address]) failed

Info:

The vol verify command compares the constructed parity with the stored parity. This implementation assumes that the integrity of the data drives is correct. The 'fix' option will update the parity drive only.

Cause:

Action:

Event: 6120.DiagnosticTest-

Component: 6120test

EventCode: 21.13.349

Severity: Error

Actionable: No

Sample Description:

6120test ([Host_Name] on [Array_Name] ([IP_Address]) failed

Info:

Cause:

Action:

Event: 6120.DiagnosticTest-

Component: 6120ofdg

EventCode: 21.13.105

Severity: Error**Actionable: No****Sample Description:**

6120ofdg ([Host_Name]) on [Array_Name] ([IP_Address]) failed

Info:**Cause:**

The results of ofdg testing on a 6120 unit resulted in a failed status.

Ofdg is an offline diagnostic utility. The failed stated is a result of a healthcheck failure.

Action:

1. Check Test Manager for details on why test failed.

2. Review the 6120 syslog from unit where ofdg was run.

* The complete ofdg results will be written to the unit's syslog facility

Event: 6120.DiscoveryEvent

Component:

EventCode: 21.14.16

Severity: Info

Actionable: No

Sample Description:

Discovered a new 6120 called ras [Array_Name] ([IP_Address])
slr-mi.370-3990-01-e-e1.003239

Info:

Discovery events occur the very first time the agent probes a storage device.

Cause:

Action:

Event: 6120.LocationChangeEvent

Component:

EventCode: 21.19.16

Severity: Info

Actionable: No

Sample Description:

Location of 6120 [Array_Name] ([IP_Address]) was changed

Info:

Cause:

Action:

Event: 6120.LogEvent

Component: disk.error

EventCode: 21.20.107

Severity: Warning**Actionable: Yes****Sample Description:**

Oct 22 18:30:45 ARRAY ISR1[1]: N: u1d4 SCSI Disk Error Occurred (path = 0x0):

Info:

StorADE has detected a possible problem contained in a message of the 6120 Message Log.

Cause:

The 6120 Array has detected a status error for a disk.

Action:

1. Use the StorADE log viewing mechanism to check messages before and after this one.
2. Replace this disk.

Event: 6120.LogEvent

Component: power.battery.refresh

EventCode: 21.20.108

Severity: Warning**Actionable: No****Sample Description:**

2003-02-13 14:33:02 1 array_warning(s) found in logfile [Array_Message_Logfile]

(indicating problem with t3 [Array_Name]/[IP_Address]): Feb 13 15:29:26 [Array_Name] LPCT[1]: N: u1pcu1

Info:

The Storage Array has a BATD process that executes according to /etc/schd.conf file on the T3. The process monitors the Battery portion of the PCU.

Cause:

A refresh message was posted to the log file indicating that the batteries are recharging.

Action:

1. Monitor the cycle and ensure proper completion.
2. Check the StorADE GUI for current state and status of the PCU's in the array.
3. Check the StorADE GUI for warranty dates and battery usage calculations and follow proper PFA strategies for replacing the unit.

Event: 6120.LogEvent

Component: power.battery.replace

EventCode: 21.20.109

Severity: Warning**Actionable: Yes****Sample Description:**

2 warning(s) found in logfile [Array_Message_Logfile] (indicating problem with 't3
Array_Name/IP_Address)': Sep 24 16:20:39 [Array_Name] SCHD[1]: W: u1pcu1 37 days 'battery life left, Re

Info:

A message was found in the T3 Message Log file indicating a status of the Battery that warrants notification.

Cause:

1. The battery warranty period is about to expire.
2. The battery hold time may be low or can no longer hold a charge.

Action:

1. Check StorADE status of the PCU batteries for this array.
2. Telnet to the ARRAY and run 'refresh -s' to verify battery state.
3. Replace battery.

Event: 6120.LogEvent

Component: disk

EventCode: 21.20.13

Severity: Error**Actionable: Yes****Sample Description:**

1 warning(s) found in logfile [Array_Messages_Logfile] (indicating problem with 6120

[Array_Name]/[IP_Address]): Nov 30 14:50:00 [Array_Name] ISR1[2]: N: u1d5 SVD_DONE: Command Error

Info:

Cause:

Action:

Event: 6120.LogEvent

Component: controller.XOR

EventCode: 21.20.139

Severity: Error**Actionable: Yes****Sample Description:**

3 array_error(s) found in logfile /var/adm/messages.t300 (indicating problem with array
[array_name]): Feb 24 09:53:56 [ip] ISR1[1]: W: u1ctr XOR: Flags=B-S---- Cntr=0xAE Synd=0x10 Addr=0x9

Info:

Data cache ECC errors,

Cause:

ECC errors in controller.

Action:

Replace the Controller

Event: 6120.LogEvent

Component: disk.senseKeyW

EventCode: 21.20.138

Severity: Warning**Actionable: No****Sample Description:**

1 warning(s) found in logfile [Array_Message_Logfile] (indicating problem with t3
Array_Name/IP_Address):

Info:

StorADE has detected a possible problem contained in a message of the T3 Message Log on the monitoring host.

Cause:

PFA Sense Key information reported from a disk indicating a problem with the disk.

Action:

1. Use the StorADE log viewing mechanism to check messages before and after this one.
2. Replace this disk.

Event: 6120.LogEvent

Component: array_error

EventCode: 21.20.90

Severity: Warning**Actionable: Yes****Sample Description:**

warning(s) found in logfile: [Array_Log_File] on [Host_Name] (id=[HostID]):

Info:

The StorADE agent monitoring the array log file reports on the following:

- Errors and Warnings (depicted by "E:" and "W:") found in the logfile
- Notice and Information (depicted by "N:" and "I:") lines about disks errors.
- Notices about the battery.
- Notices about the PCU hold time.

Cause:

StorADE detected a pattern described above in the array log file. It was generated as a HOST event because the message was about an array that StorADE is not monitoring.

Action:

1. Use the StorADE GUI log viewing functions to check messages before and after this one.
2. Check volume integrity associated with the disk in question.
3. Replace this disk.

Event: 6120.LogEvent

Component: array_warning

EventCode: 21.20.91

Severity: Warning**Actionable: Yes****Sample Description:**

warning(s) found in logfile: [Array_Log_File] on [Host_Name] (id=[HostID]):

Info:

The StorADE agent monitoring the array log file reports on the following:

Errors and Warnings (depicted by "E:" and "W:") found in the logfile
Notice and Information (depicted by "N:" and "I:") lines about disks errors.
Notices about the battery.
Notices about the PCU hold time.

Cause:

StorADE detected a pattern described above in the array log file. It was generated as a HOST event because the message was about an array that StorADE is not monitoring.

Action:

1. Use the StorADE GUI log viewing functions to check messages before and after this one.
2. Check volume integrity associated with the disk in question.
3. Replace this disk.

Event: 6120.LogEvent

Component: power

EventCode: 21.20.37

Severity: Error**Actionable: Yes****Sample Description:**

2 warning(s) found in logfile [Array_Messages_Logfile] (indicating problem with 6120

[Array_Name]/[IP_Address]): Sep 24 16:20:39 [Array_Name] SCHD[1]: W: u1pcu1 37 days battery life left, F

Info:

refresh battery

Cause:**Action:**

Event: 6120.LogEvent

Component: temp_threshold

EventCode: 21.20.74

Severity: Error**Actionable: Yes****Sample Description:**

1 warning(s) found in logfile [Array_Messages_Logfile] (indicating problem with 6120

[Array_Name]/[IP_Address]): Sep 26 14:17:03 [Array_Name] TMON[1]: W: u1d4 TMON warning temperatur

Info:**Cause:****Action:**

Event: 6120.LogEvent

Component: disk.senseKeyN

EventCode: 21.20.137

Severity: Info**Actionable: No****Sample Description:**

1 warning(s) found in logfile [Array_Message_Logfile] (indicating problem with t3
Array_Name/IP_Address):

Info:

StorADE has detected a possible problem contained in a message of the T3 Message Log on the monitoring host.

Cause:

PFA Sense Key information reported from a disk indicating a problem with the disk.

Action:

1. Use the StorADE log viewing mechanism to check messages before and after this one.
2. Replace this disk.

Event: 6120.LogEvent

Component: disk.senseKeyE

EventCode: 21.20.136

Severity: Error
Actionable: Yes**Sample Description:**

1 warning(s) found in logfile [Array_Message_Logfile] (indicating problem with t3
Array_Name/IP_Address):

Info:

StorADE has detected a possible problem contained in a message of the T3 Message Log on the monitoring host.

Cause:

PFA Sense Key information reported from a disk indicating a problem with the disk.

Action:

1. Use the StorADE log viewing mechanism to check messages before and after this one.
2. Replace this disk.

Event: 6120.LogEvent

Component: driver.SSD_WARN

EventCode: 21.20.330

Severity: Warning**Actionable: No****Sample Description:**

Found in logfile /var/adm/messages on [Host_Name] (indicating problem with 6120

[Array_Name]/[IP_Address]): Jan 8 08:52:00 WWN:wwn Received 8 'SSD Warning' message(s) on 'SWITCH'

Info:**Cause:**

This could be related to the following:

- The MPxIO support is set differently between 6120 and host.

Action:

Check MPxIO settings.

Event: 6120.LogEvent

Component: disk.senseKey

EventCode: 21.20.100

Severity: Warning**Actionable: Yes****Sample Description:**

1 warning(s) found in logfile [Array_Messages_Logfile] (indicating problem with 6120
[Array_Name]/[IP_Address]): Oct 22 18:30:45 [Array_Name] ISR1[1]: N: u1d4 SCSI Disk Error Occurred (pa

Info:

PFA Sense Key information reported from a disk indicating a problem with the disk

Cause:**Action:**

Replace this disk

Event: 6120.LogEvent

Component: power.refreshBattery

EventCode: 21.20.101

Severity: Warning**Actionable: No****Sample Description:**

2 warning(s) found in logfile [Array_Messages_Logfile] (indicating problem with 6120

[Array_Name]/[IP_Address]): Sep 24 16:20:39 [Array_Name] SCHD[1]: W: u1pcu1 37 days battery life left, F

Info:

refresh battery

Cause:**Action:**

Event: 6120.LogEvent

Component: power.replaceBattery

EventCode: 21.20.102

Severity: Warning**Actionable: No****Sample Description:**

2 warning(s) found in logfile [Array_Messages_Logfile] (indicating problem with 6120
[Array_Name]/[IP_Address]): Sep 24 16:20:39 [Array_Name] SCHD[1]: W: u1pcu1 37 days battery life left, F

Info:

The state of the batteries in the 6120 is not optimal

Cause:**Action:**

1. Telnet to affected 6120
2. Run 'refresh -s' to verify battery state
3. Replace battery if necessary

Event: 6120.LogEvent

Component: controller.port

EventCode: 21.20.103

Severity: Error
Actionable: Yes**Sample Description:**

found LOOP DOWN in logfile

Info:

StorADE searches for LOOP DOWN patterns in the array log file.

Cause:

The array has detected an internal loop failure and logged it.

Action:

Check StorADE for additional events related to the device called out in the log file.

Event: 6120.LogEvent

Component: disk.log

EventCode: 21.20.104

Severity: Warning**Actionable: Yes****Sample Description:**

4 array_warning(s) found in logfile [Array_Messages_Logfile] (indicating problem with 6120 [Array_Name]/[IP_Address]): Feb 05 18:45:28 t400 sh50[1]: N: u2d01 ioctl disk failed err=1:

Info:

The StorADE agent monitoring the array log file reports on the following:

Errors and Warnings (depicted by "E:" and "W:") found in the logfile

Notice and Information (depicted by "N:" and "I:") lines about disks.

Notices about the battery.

Notices about the PCU hold time.

Cause:

StorADE detected a pattern described above in the array log file.

Action:

1. Use the StorADE GUI log viewing functions to check messages before and after this one.
2. Check volume integrity associated with the disk in question.
3. Replace this disk.
4. Monitor disk.

Event: 6120.QuiesceEndEvent

Component:

EventCode: 21.22.16

Severity: Info**Actionable: No****Sample Description:**

Quiesce End on 6120 [Array_Name] ([IP_Address])

Info:

Quiescing a device is done using the GUI and means that the monitoring has been temporarily stopped.

Cause:

An administrator has changed the monitoring status of the device called out in the event message.

Action:

1. Verify with the administrator that this is an expected action.
any additional events that may have occurred.

Event: 6120.QuiesceStartEvent

Component:

EventCode: 21.23.16

Severity: Info**Actionable: No****Sample Description:**

Quiesce Start on 6120 [Array_Name] ([IP_Address])

Info:

Quiescing a device is done using the GUI and means that the monitoring has been temporarily stopped.

Cause:

An administrator has changed the monitoring status of the device called out in the event message.

Action:

1. Verify with the administrator that this is an expected action.
any additional events that may have occurred.

Event: 6120.StateChangeEvent+

Component: disk

EventCode: 21.25.13

Severity: Info

Actionable: No

Sample Description:

'disk.u1d5' in 6120 [Array_Name] ([IP_Address]) is now Available (status-state changed from 'fault-disabled' to 'ready-enabled'):

Info:

Cause:

Action:

Event: 6120.StateChangeEvent+

Component: volume

EventCode: 21.25.53

Severity: Info

Actionable: No

Sample Description:

'volume.u1vol1'(slr-mi.370-3990-01-e-f0.022542.u1vol1) in 6120 dvt2-6120b0
(ip=192.168.0.40) is now Available (status-state changed from 'unmounted' to 'mounted')

Info:

'The 6120 has reported that a LUN has changed state

Cause:

Action:

Event: 6120.StateChangeEvent+

Component: power

EventCode: 21.25.37

Severity: Info

Actionable: No

Sample Description:

'power.u1pcu2'(TECTROL-CAN.300-1454-01(50).008275) in 6120 [Array_Name] ([IP_Address]) is now Available (status-state changed from 'ready-disable' to 'ready-enable'):

Info:

Cause:

Action:

Event: 6120.StateChangeEvent+

Component: interface.loopcard

EventCode: 21.25.24

Severity: Info

Actionable: No

Sample Description:

'loopcard.u1l1'(SLR-MI.375-0085-01-G-G4.070924) in 6120 [Array_Name] ([IP_Address])

Info:

'The 6120 has reported that a Loop Card has been replaced or brought back online

Cause:

Action:

Event: 6120.StateChangeEvent+

Component: controller

EventCode: 21.25.12

Severity: Info

Actionable: No

Sample Description:

'controller.u1ctr' in 6120 [Array_Name] ([IP_Address]) is now Available (status-state changed from 'disabled' to 'ready-enabled')

Info:

Cause:

Action:

Event: 6120.StateChangeEvent-

Component: disk

EventCode: 21.26.13

Severity: Error**Actionable: Yes****Sample Description:**

'disk.u1d5' in 6120 [Array_Name] ([IP_Address]) is now Not-Available (status-state changed from 'unknown' to 'fault-disabled'):

Info:

The 6120 has reported that a disk has failed

Cause:**Action:**

1. Telnet to affected 6120
2. Verify disk state with 'vol stat', 'fru stat' and 'fru list'
3. Replace disk if necessary

Event: 6120.StateChangeEvent-

Component: volume

EventCode: 21.26.53

Severity: Error**Actionable: Yes**

Sample Description:**Info:**

The 6120 has reported that a LUN has changed state

Cause:**Action:**

1. Telnet to affected 6120
2. Check status of LUNs via 'vol mode' or 'vol stat' from 6120
3. Check disk status with 'fru stat' and 'vol stat'

Event: 6120.StateChangeEvent-

Component: interface.loopcard

EventCode: 21.26.24

Severity: Error**Actionable: Yes****Sample Description:**

'loopcard.u2l2'(0x301.5405384.000978) in 6120 [Array_Name] ([IP_Address]) is now Not-Available (state changed from 'ready-enabled' to 'ready-disabled')

Info:

The 6120 has indicated that the loopcard is no longer in an optimal state

Cause:**Action:**

1. Telnet to affected 6120
2. Verify loopcard state with 'fru stat'
3. Verify matching firmware with other loopcard
4. Re-enable loopcard if possible (enable u(encid)l[1|2])
5. Replace loopcard if necessary

Event: 6120.StateChangeEvent-

Component: power

EventCode: 21.26.37

Severity: Error**Actionable: Yes****Sample Description:**

'power.u1pcu2'(TECTROL-CAN.300-1454-01(50).008275) in 6120 [Array_Name] ([IP_Address]) is now Not-Available (status-state changed from 'ready-enabled' to 'ready-disable'):

Info:

The 6120 has reported that a Power Cooling Unit has been disabled

Cause:

A PCU failure can happen due to the following reasons.

1. Internal/External Power loss
2. Power switch has been turned off
3. PCU failures
4. Battery failures

Action:

1. Check Power Supply and Cables
2. Check with onsite administration/service for expected occurrence
3. Replace PCU
4. Replace Battery

Event: 6120.StateChangeEvent-

Component: controller

EventCode: 21.26.12

Severity: Error**Actionable: Yes****Sample Description:**

'controller.u1ctr' in 6120 [Array_Name] ([IP_Address]) is now Not-Available (status-state changed from 'unknown' to 'ready-disabled')

Info:

The 6120 controller has been disabled

Cause:**Action:**

1. Telnet to affected 6120
 2. Verify controller state with 'fru stat' and 'sys stat'
 3. Re-enable controller if possible (enable u<encid>)
 4. Run 'logger -dmprstlog' from a serial port session on affected controller
- * The output from logger will only go to the syslog facility. Review syslog on Master Controller to determine cause of failure.
5. Replace controller as indicated by the NVRAM failure code.

Event: 6120.Statistics

Component:

EventCode: 21.27.16

Severity: Info

Actionable: No

Sample Description:

Statistics about 6120 [Array_Name] ([IP_Address])

Info:

Cause:

Action:

Event: 6120.DeviceLostEvent

Component: aggregate

EventCode: 21.34.71

Severity: Err/Critical

Actionable: Yes

Sample Description:

Device 6120b0 is not available anymore, confirmed by the following 5 subevents

Info:

Aggregated Events that confirms that a device is not available.

Cause:

Action:

Event: 6120.ComponentInsertEvent

Component: interface.loopcard

EventCode: 21.40.24

Severity: Info

Actionable: No

Sample Description:

Info:

A new LoopCard, as identified by it's serial#, has been installed on the 6120.

Cause:

Action:

Event: 6120.ComponentInsertEvent

Component: power

EventCode: 21.40.37

Severity: Info**Actionable: No****Sample Description:**

'power.u1pcu2'(TECTROL-CAN.300-1454-01(50).008275) was added to 6120 [Array_Name]
([IP_Address])

Info:

A new Power Supply, as identified by it's serial#, has been installed on the 6120.

Cause:**Action:**

Event: 6120.ComponentInsertEvent

Component: disk

EventCode: 21.40.13

Severity: Info**Actionable: No****Sample Description:**

disk.u2d3(SEAGATE.S612018203FSUN18G.LRG07139) was added to [Array_Name] ([IP_Address])

Info:

A new Disk, as identified by it's serial#, has been installed on the 6120.

Cause:**Action:**

Event: 6120.ComponentInsertEvent

Component: controller

EventCode: 21.40.12

Severity: Info**Actionable: No****Sample Description:**

'controller.u1ctr'(id) was added to 6120 [Array_Name] ([IP_Address])

Info:

A new Controller, as identified by it's serial#, has been installed on the 6120.

Cause:**Action:**

Event: 6120.ComponentRemoveEvent

Component: power

EventCode: 21.41.37

Severity: Error
Actionable: Yes**Sample Description:**

'power.u1pcu2'(TECTROL-CAN.300-1454-01(50).008275) was removed from 6120 [Array_Name]
([IP_Address])

Info:

The 6120 has reported that a Power Cooling Unit has been removed from the chassis

Cause:**Action:**

1. Replace PCU within 30 minute shutdown window

Event: 6120.ComponentRemoveEvent

Component: disk

EventCode: 21.41.13

Severity: Error**Actionable: Yes****Sample Description:**

disk.u2d3(SEAGATE.S612018203FSUN18G.LRG07139) was removed from [Array_Name] ([IP_Address])

Info:

The 6120 has reported a disk has been removed from the chassis

Cause:

An administrator has changed the monitoring status of the device called out in the event message.

Action:

1. Verify with the administrator that this is an expected action.
2. Check the StorADE GUI for current health status on the device as well as any additional events that may have occurred.
3. Replace Disk

Event: 6120.ComponentRemoveEvent

Component: controller

EventCode: 21.41.12

Severity: Error**Actionable: Yes****Sample Description:**

'controller.u1ctr'(id) was removed from 6120 [Array_Name] ([IP_Address])

Info:

The 6120 has reported that a controller was removed from the chassis

Cause:**Action:**

1. Replace controller within 30 minute power shutdown window

Event: 6120.ComponentRemoveEvent

Component: interface.loopcard

EventCode: 21.41.24

Severity: Error**Actionable: Yes**

Sample Description:**Info:**

The 6120 has reported that a loopcard has been removed from the chassis

Cause:**Action:**

1. Replace loopcard within 30 minute power shutdown window

Event: 3510.AlarmEvent

Component: part

EventCode: 26.3.72

Severity: Warning

Actionable: No

Sample Description:

Total Partitions in logical drive has been changed

Info:

Logical drive total partitions has been changed.

Cause:

Action:

Event: 3510.AlarmEvent

Component: temperature

EventCode: 26.3.51

Severity: Warning

Actionable: Yes

Sample Description:

Temperature status has been changed

Info:

Temperature status on emu has been changed.

Cause:

Action:

1.Please check fan or air-condition

Event: 3510.AlarmEvent

Component: power

EventCode: 26.3.37

Severity: Warning

Actionable: Yes

Sample Description:

Power status has been changed

Info:

Power status has been changed.

Cause:

Action:

1. Please check the power

Event: 3510.AlarmEvent

Component: fan

EventCode: 26.3.19

Severity: Warning

Actionable: Yes

Sample Description:

Fan status has been changed

Info:

Fan status on emu has been changed.

Cause:

Action:

1. Please check the fan.

Event: 3510.AlarmEvent

Component: raid_level

EventCode: 26.3.69

Severity: Warning

Actionable: No

Sample Description:

Raid level has been changed on logical.0 from 5 to 0

Info:

Logical drive raid level has been changed.

Cause:

Action:

Event: 3510.AlarmEvent

Component: size

EventCode: 26.3.70

Severity: Warning

Actionable: No

Sample Description:

Effective size has been changed on part.1 from 38952MB to 68952MB

Info:

Partition effective size has been changed.

Cause:

Action:

Event: 3510.AlarmEvent

Component: enclosure

EventCode: 26.3.16

Severity: Warning

Actionable: Yes

Sample Description:

The state of 'info.status' on [enclosure] changed from 'Online' to 'Offline'

Info:

Cause:

Action:

Event: 3510.AlarmEvent

Component: volume

EventCode: 26.3.53

Severity: Warning

Actionable: No

Sample Description:

Total Partitions in logical drive has been changed

Info:

Logical drive total partitions has been changed.

Cause:

Action:

Event: 3510.AlarmEvent

Component: channel

EventCode: 26.3.120

Severity: Warning

Actionable: Yes

Sample Description:

[enclosure] (wwn=204000c0ff000003): Channel 0 is missing

Info:

Cause:

Action:

Event: 3510.AlarmEvent

Component: Revision

EventCode: 26.3.117

Severity: Warning

Actionable: Yes

Sample Description:

Revision changed from [Old_Version] to [New_Version]

Info:

Cause:

Action:

Event: 3510.AlarmEvent

Component: firmware_version

EventCode: 26.3.119

Severity: Warning

Actionable: Yes

Sample Description:

Firmware_version changed from [Old_Version] to [New_Version]

Info:

Cause:

Action:

Event: 3510.CommunicationEstablishedEvent

Severity: Info

Component: oob

Actionable: No

EventCode: 26.11.31

Sample Description:

Communication regained (OutOfBand([Host_Name])) with [Array_Name] ([IP_Address])

Info:

OutOfBand communications

Cause:

Action:

Event: 3510.CommunicationEstablishedEvent

Component: ib

EventCode: 26.11.21

Severity: Info

Actionable: No

Sample Description:

Communication regained (InBand([Host_Name])) with [Array_Name] ([IP_Address]) (last
reboot was 2001-09-27 15:22:00)

Info:

InBand Communication

Cause:

Action:

Event: 3510.CommunicationLostEvent

Component: e

EventCode: 26.12.118

Severity: Err/Critical

Actionable: Yes

Sample Description:

Lost communication (InBand([Host_Name])) with [Array_Name] ([IP_Address]) (last reboot was 2001-09-27 15:22:00)

Info:

Cause:

Action:

Event: 3510.CommunicationLostEvent

Component: ib

EventCode: 26.12.21

Severity: Err/Critical**Actionable: Yes****Sample Description:**

Lost communication (InBand([Host_Name])) with [Array_Name] ([IP_Address]) (last reboot was 2001-09-27 15:22:00) activated for a particular 3510.

Info:**Cause:****Action:**

1. Verify sccli access via command line (sccli show).
2. Verify cables, GBICs, Power, and connections along data path.
3. Check SAN Topology GUI to identify failing segment of the data path.
4. Verify correct FC switch configuration (If applicable).

Event: 3510.CommunicationLostEvent

Component: oob

EventCode: 26.12.31

Severity: Err/Critical**Actionable: Yes****Sample Description:**

Lost communication (OutOfBand(Host_Name)) with [Array_Name] ([IP_Address])

Info:**Cause:**

This problem can also be caused by:

- A very slow network,
- The ethernet connection to this array was lost or is very slow.
- A bad controller.

Action:

1. Check Power on array
2. Check Ethernet connectivity to the affected array.

Event: 3510.CommunicationLostEvent

Component: ethernet

EventCode: 26.12.122

Severity: Error**Actionable: Yes****Sample Description:**

'The state of 'info.ethernet_errs' on [Array_Name] changed from 'ok' to 'ping_failed'

Info:**Cause:****Action:**

Event: 3510.DiscoveryEvent

Component:

EventCode: 26.14.16

Severity: Info

Actionable: No

Sample Description:

Discovered a new 3510 called ras [Array_Name] ([IP_Address])
slr-mi.370-3990-01-e-e1.003239

Info:

Discovery events occur the very first time the agent probes a
storage device.

Cause:

Action:

Event: 3510.LocationChangeEvent

Severity: Info
Actionable: No

Component:
EventCode: 26.19.16

Sample Description:
Location of 3510 [Array_Name] ([IP_Address]) was changed

Info:

Cause:

Action:

Event: 3510.LogEvent

Component: cpu

EventCode: 26.20.116

Severity: Error

Actionable: Yes

Sample Description:

Info:

Cause:

Action:

Event: 3510.LogEvent

Component: array_error

EventCode: 26.20.90

Severity: Warning

Actionable: Yes

Sample Description:

Error(s) found in logfile: /var/adm/messages.3310 on msp0 (id=830bfa3f):

Info:

Cause:

Action:

Event: 3510.QuiesceEndEvent

Component:

EventCode: 26.22.16

Severity: Info**Actionable: No****Sample Description:**

Quiesce End on 3510 [Array_Name] ([IP_Address])

Info:

Quiescing a device is done using the GUI and means that the monitoring has been temporarily stopped.

Cause:

An administrator has changed the monitoring status of the device called out in the event message.

Action:

1. Verify with the administrator that this is an expected action.
any additional events that may have occurred.

Event: 3510.QuiesceStartEvent

Component:

EventCode: 26.23.16

Severity: Info**Actionable: No****Sample Description:**

Quiesce Start on 3510 [Array_Name] ([IP_Address])

Info:

Quiescing a device is done using the GUI and means that the monitoring has been temporarily stopped.

Cause:

An administrator has changed the monitoring status of the device called out in the event message.

Action:

1. Verify with the administrator that this is an expected action.
any additional events that may have occurred.

Event: 3510.StateChangeEvent+

Component: disk

EventCode: 26.25.13

Severity: Info

Actionable: No

Sample Description:

'disk.u1d5' in 3510 [Array_Name] ([IP_Address]) is now Available (status-state changed from 'fault-disabled' to 'ready-enabled'):

Info:

Cause:

Action:

Event: 3510.StateChangeEvent+

Component: volume

EventCode: 26.25.53

Severity: Info

Actionable: No

Sample Description:

'volume.u1vol1'(slr-mi.370-3990-01-e-f0.022542.u1vol1) in 3510 [Array_Name]
([IP_Address]) is now Available (status-state changed from 'unmounted' to 'mounted')

Info:

'The 3510 has reported that a LUN has changed state

Cause:

Action:

Event: 3510.StateChangeEvent-

Component: volume

EventCode: 26.26.53

Severity: Error

Actionable: Yes

Sample Description:

Info:

The 3510 has reported that a LUN has changed state

Cause:

Action:

1. Telnet to affected 3510

Event: 3510.StateChangeEvent-

Component: disk

EventCode: 26.26.13

Severity: Error**Actionable: Yes****Sample Description:**

'components.disk.12'(3EK1STTQ00007251) in 3310 [Array_Name] (wwn=WWN) is now Not-Available (state changed from 'Online' to 'Bad drive')

Info:

The 3310 detected a change in the status of the disk detailed in the event.

Cause:

The drive may have spun down or faulted in a way to indicate this status.

Action:

1. Check the StorADE GUI for current health status on the device as well as any additional events that may have occurred.
2. Establish a connection to the array and check the health of the device.

Event: 3510.StateChangeEvent-

Component: lun

EventCode: 26.26.66

Severity: Warning

Actionable: No

Sample Description:

'logical_drive.1'(204000c0ff000003.logical.1) in 3510 [Device] (wwn=204000c0ff000003

Info:

Cause:

Action:

Event: 3510.DeviceLostEvent

Component: aggregate

EventCode: 26.34.71

Severity: Err/Critical

Actionable: Yes

Sample Description:

Device [Array_Name] ([IP_Address]) is not available anymore, confirmed by the following 5 subevents

Info:

Aggregated Events that confirms that a device is not available.

Cause:

Action:

Event: 3510.ComponentInsertEvent

Component: power

EventCode: 26.40.37

Severity: Info**Actionable: No****Sample Description:**

'power.u1pcu2'(TECTROL-CAN.300-1454-01(50).008275) was added to 3510 [Array_Name]
([IP_Address])

Info:

A new Power Supply, as identified by it's serial#, has been installed
on the 3510.

Cause:**Action:**

Event: 3510.ComponentInsertEvent

Component: disk

EventCode: 26.40.13

Severity: Info**Actionable: No****Sample Description:**

disk.u2d3(SEAGATE.ST318203FSUN18G.LRG07139) was added to [Array_Name] ([IP_Address])

Info:

A new Disk, as identified by it's serial#, has been installed on the 3510.

Cause:**Action:**

Event: 3510.ComponentRemoveEvent

Component: disk

EventCode: 26.41.13

Severity: Error**Actionable: Yes****Sample Description:**

disk.u2d3(SEAGATE.ST318203FSUN18G.LRG07139) was removed from [Array_Name] ([IP_Address])

Info:

The 3510 has reported a disk has been removed from the chassis

Cause:**Action:**

1. Replace Disk within 30 minute power shutdown window

Event: 9900.AlarmEvent-

Component: disk.Drive

EventCode: 27.5.132

Severity: Error

Actionable: Yes

Sample Description:

The state of 'disk.Disk' on hds-65/172.20.104.65 changed from 'noError' to 'acute'

Info:

Cause:

Action:

Event: 9900.AlarmEvent-
Component: disk.Environment
EventCode: 27.5.133

Severity: Error
Actionable: Yes

Sample Description:

The state of 'disk.Environment' on hds-65/172.20.104.65 changed from 'noError' to 'acute'

Info:

Cause:

Action:

Event: 9900.AlarmEvent-

Component: controller.Battery

EventCode: 27.5.124

Severity: Error

Actionable: Yes

Sample Description:

The state of 'controller.Battery' on hds-65/172.20.104.65 changed from 'noError' to 'acute'

Info:

Cause:

Action:

Event: 9900.AlarmEvent-

Component: disk.Fan

EventCode: 27.5.134

Severity: Error

Actionable: Yes

Sample Description:

The state of 'disk.Fan' on hds-65/172.20.104.65 changed from 'noError' to 'acute'

Info:

Cause:

Action:

Event: 9900.AlarmEvent-
Component: controller.CSW
EventCode: 27.5.125

Severity: Error
Actionable: Yes

Sample Description:

The state of 'controller.CSW' on hds-65/172.20.104.65 changed from 'noError' to 'acute'

Info:

Internal Bus

Cause:

Action:

Event: 9900.AlarmEvent-

Component: disk.PS

EventCode: 27.5.135

Severity: Error

Actionable: Yes

Sample Description:

The state of 'disk.PS' on hds-65/172.20.104.65 changed from 'noError' to 'acute'

Info:

Cause:

Action:

Event: 9900.AlarmEvent-
Component: controller.Cache
EventCode: 27.5.126

Severity: Error
Actionable: Yes

Sample Description:

The state of 'controller.Cache' on hds-65/172.20.104.65 changed from 'noError' to 'acute'

Info:

Cause:

Action:

Event: 9900.AlarmEvent-

Component: controller.Environment

EventCode: 27.5.127

Severity: Error

Actionable: Yes

Sample Description:

The state of 'controller.Environment' on hds-65/172.20.104.65 changed from 'noError' to 'acute'

Info:

Cause:

Action:

Event: 9900.AlarmEvent-
Component: controller.Fan
EventCode: 27.5.128

Severity: Error
Actionable: Yes

Sample Description:

The state of 'controller.Fan' on hds-65/172.20.104.65 changed from 'noError' to 'acute'

Info:

Cause:

Action:

Event: 9900.AlarmEvent-

Component: controller.PS

EventCode: 27.5.129

Severity: Error

Actionable: Yes

Sample Description:

The state of 'controller.Processor' on hds-65/172.20.104.65 changed from 'noError' to 'acute'

Info:

Power Supply

Cause:

Action:

Event: 9900.AlarmEvent-

Component: controller.Processor

EventCode: 27.5.130

Severity: Error

Actionable: Yes

Sample Description:

The state of 'controller.Processor' on hds-65/172.20.104.65 changed from 'noError' to 'acute'

Info:

Cause:

Action:

Event: 9900.AlarmEvent-

Component: controller.SM

EventCode: 27.5.131

Severity: Error

Actionable: Yes

Sample Description:

The state of 'controller.Processor' on hds-65/172.20.104.65 changed from 'noError' to 'acute'

Info:

Shared Memory

Cause:

Action:

Event: sve2.AlarmEvent

Component: volume_delete

EventCode: 28.3.58

Severity: Warning**Actionable: No****Sample Description:**

VLUN T16431/62573361-30304769 on [Device_Name] was deleted

Info:

The removal a VLUN was detected by StorADE.

Cause:

A VLUN was deleted using the SECFG tools.

Action:

Use the StorADE GUI to query the configuration tools to verify configuration.

Event: sve2.AlarmEvent

Component: volume

EventCode: 28.3.53

Severity: Warning**Actionable: Yes****Sample Description:**

VLUN T16431/62573361-30304769 on [Device_Name] was changed

Info:

This event occurs when the Virtualization Device has detected a change in status for a Multipath Drive or VLUN.

Cause:

Usually indicating a pathing problem to a storage array controller

Action:

1. Check the StorADE GUI for changes in Active/Passive paths.
2. Check storage array for current LUN ownership. (`port listmap`)
3. Use `mpdrive failback` if needed to fail LUNs back to correct controller if needed.

Event: sve2.AlarmEvent

Component: volume_add

EventCode: 28.3.57

Severity: Warning

Actionable: No

Sample Description:

VLUN T16431/62573361-30304769 on [Device_Name] was added

Info:

The discovery a new VLUN was detected by StorADE.

Cause:

A new VLUN was created using the SECFG tools.

Action:

Use the StorADE GUI to query the configuration tools to verify configuration.

Event: sve2.AlarmEvent

Component: log

EventCode: 28.3.55

Severity: Warning

Actionable: No

Sample Description:

Change in Port Statistics on Virtualization Device '[Device_Name]'

Info:

Cause:

Action:

Event: sve2.AuditEvent

Component:

EventCode: 28.10.16

Severity: Info

Actionable: No

Sample Description:

Auditing a Virtualization Engine called '[Device_Name]'

Info:

Audits occur once per week

Cause:

This is a resyncing the cache to ensure accuracy of the StorADE telemetry information.

Action:

No additional actions are required.

Event: sve2.CommunicationEstablishedEvent

Component: oob

EventCode: 28.11.31

Severity: Info

Actionable: No

Sample Description:

Communication regained with Virtualization Device '[Device_Name]'

Info:

"oob" (OutOfBand) refers to the Ethernet connection. The "Source" field in the email message is the hostname of the system that has regained ethernet communication with the device.

Cause:

Action:

Event: sve2.CommunicationLostEvent

Component: oob.command

EventCode: 28.12.32

Severity: Err/Critical**Actionable: Yes****Sample Description:**

Lost communication with VE '[Device_Name]'

Info:

"oob" (OutOfBand) refers to an Ethernet connection. The "Source" field in the email message is the hostname of the system that has lost communication with the device.

Cause:

Invalid command.

Action:

1. Check the status
2. Check Power on VE
3. Make sure Virtualization Device is booted correctly
4. Use the STorADE GUI configuration tools to verify proper Virtualization Device configuration.
5. Check for T3 failover conditions in T3 message log
6. Replace Virtualization Device if necessary

Event: sve2.CommunicationLostEvent

Component: oob.ping

EventCode: 28.12.33

Severity: Err/Critical**Actionable: Yes****Sample Description:**

Lost communication with Virtualization Device '[Device_Name]'

Info:

"oob" (OutOfBand) refers to an Ethernet connection. The "Source" field in the email message is the hostname of the system that has lost ethernet communication with the device.

Cause:

VE and/or ethernet connectivity problem

Action:

1. Check Power to Virtualization Device unit
2. Check Ethernet connectivity to VE
3. Check the status
4. Make sure Virtualization Device is booted correctly
5. Verify correct TCP/IP settings on VE
6. Replace Virtualization Device if necessary
7. Run ipcs(1) and ipcrm(1) to clean-up any old semaphore.

Event: sve2.DiagnosticTest-

Component: veluntest

EventCode: 28.13.346

Severity: Error

Actionable: No

Sample Description:

veluntest ([Host_Name]) on [Device_Name] ([IP_Address]) failed

Info:

Cause:

Action:

Event: sve2.DiagnosticTest-

Component: ve_diag

EventCode: 28.13.52

Severity: Error

Actionable: No

Sample Description:

ve_diag ([Host_Name]) on [Device_Name] ([IP_Address]) failed

Info:

Cause:

Action:

Event: sve2.DiscoveryEvent

Component:

EventCode: 28.14.16

Severity: Info

Actionable: No

Sample Description:

Discovered a new Virtualization Engine called '[Device_Name]'

Info:

Discovery events occur the very first time the agent probes a storage device.

Cause:

StorADE compares the configuration file to its cache and queries devices for entire FRU information when there is no

Action:

1. Check the StorADE GUI for proper information and for any outstanding events that may have occurred.
2. Ensure the StorADE GUI shows the proper topology for the new device.

Event: sve2.LocationChangeEvent

Component:

EventCode: 28.19.16

Severity: Info

Actionable: No

Sample Description:

Location of Virtualization Device '[Device_Name]' changed

Info:

Cause:

Action:

Event: sve2.DeviceLostEvent

Component: aggregate

EventCode: 28.34.71

Severity: Err/Critical

Actionable: Yes

Sample Description:

Device [Device_Name] is not available anymore, confirmed by the following 5 subevents

Info:

Aggregated Events that confirms that a device is not available.

Cause:

Action: