7360 Intelligent Services Access Manager FX Release 5.6

DPoE Events Guide

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1 Preface

This preface provides general information about the DPoE Events Guide for the 7360 Intelligent Services Access Manager FX (7360 ISAM FX) for ANSI.

1.1 Scope

This user guide describes the DPoE Events supported by the 7360 ISAM FX. These events are used for troubleshooting purposes.

1.2 Audience

This DPoE Events Guide is intended for operators and maintenance personnel in North America involved in installing, upgrading, or maintaining the 7360 ISAM FX for DOCSIS provisioning.

1.3 Prerequired Knowledge

The reader must be familiar with general telecommunications principles.

1.4 Documents

See the *7360 ISAM FX Product Information Guide* document for a list of all the relevant customer documents and their part numbers for the current release.

1.5 Special Information

The following are examples of how special information is presented in the 7360 ISAM FX documentation set.

Danger — Danger indicates that the described activity or situation may result in serious personal injury or death; for example, high voltage or electric shock hazards.

Warning — Warning indicates that the described activity or situation may, or will, cause equipment damage or serious performance problems.

Caution — Caution indicates that the described activity or situation may, or will, cause service interruption.

Note — A note provides information that is, or may be, of special interest.

1.5.1 Release Notes

Be sure to see the release notes (such as the Customer Release Notes or Emergency Fix Release Note) issued for software loads of your product before you install or use the product. The release notes provide important information about the software load.

1.6 Multiple PDF Document Search

You can use Adobe Reader Release 6.0 and later to search multiple PDF files for a common term. Adobe Reader displays the results in a single display panel. The results are grouped by PDF file, and you can expand the entry for each file.

Note — The PDF files in which you search must be in the same folder.

Procedure 1 To Search Multiple PDF Files for a Common Term

1 Open Adobe Acrobat Reader.

2 Choose Edit→Search from the Acrobat Reader main menu. The Search PDF panel appears.

3 Enter the search criteria.

4 Click on the All PDF Documents In radio button.

5 Select the folder in which to search using the drop-down menu.

6 Click on the Search button.

Acrobat Reader displays the search results. You can expand the entries for each document by clicking on the + symbol.

2 Events definitions

2.1 IETF DPoE Specific Events

Table 1 Bi-directional encryption

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
2189250097	—	Notice	10G bi-directional encryption is misconfigured for PON <P1> P1 : Index of PON	Check encryption mode of the pon
2189250098	—	Notice	10G bi-directional encryption is misconfigured for 1G or 2G ONU <P1> P1 : ONU MAC	No action needed
2189250099	—	Critical	10G bi-directional encryption fails for ONU <P1> P1 : ONU MAC	Check ONU capability or DPoE alarm
2189250100	—	Notice	10G bi-directional encryption <P1> takes long time on key generation; P1 : eqptSlotId	No action needed

Table 2 Cops

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
2189250122	—	Inform	PacketCable cops server connected type=<P1> ip=<P2> port=<P3> P1 : device type P2 : ip address P3 : port	—
2189250123	—	Warning	PacketCable cops server disconnected type=<P1> ip=<P2> port=<P3> P1 : device type P2 : ip address P3 : port	—

Table 3 Custom External Alarms

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3226664961	—	Critical	<P1> Customizable External Alarm 1. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	--
3226664962	—	Critical	<P1> Customizable External Alarm 2. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	--
3226664963	—	Critical	<P1> Customizable External Alarm 3. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	--
3226664964	—	Critical	<P1> Customizable External Alarm 4. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	--
3226664965	—	Critical	<P1> Customizable External Alarm 5. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	--

Table 4 DHCP

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
2189250081	Error	—	IPv4 address conflict<TAGS>	—
2189250084	Critical	Critical	IPv4 and Gateway are not in the same subnetwork	—

Table 5 DHCPv6

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
2189250082	Error	—	IPv6 address conflict<TAGS>	—

Table 6 DPoE Management

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
2189232083	—	Notice	Reset sent to OLT	No action is required. The OLT is being reset by an operator or user.
2189236081	—	Informational	OLT Added<OLT Location Info>	The EPON LT is inserted and planned
2189236082	—	Informational	OLT Removed<OLT Location Info>	The EPON LT is removed or unplanned

Table 7 Database Management

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
2189250083	—	Critical	DPOE DB FAILED - migration not ready and system roll back-<P1> <P2> P1 : Failed CLI command P2 : Error hint	Do online migration (Remove L3 configuration) before upgrade system
2189250085	—	Error	CLI command restore failed-<P1> <P2> P1 : Failed CLI command P2 : Error hint	Check DPoE DB

Table 8 EOLT General

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3231580161	—	Error	<P1> <P2> Unprovisioned ONT MAC= , LOID= . Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON) P2 : points to a SNMP table entry that contain the ONT mac of the discovered ONT in eponPonDiscovOntTable	No repair is necessary. Indicates that further provisioning should commence for newly installed ONT/MDU on PON.
3231580162	—	Critical	<P1> PON Loss of Signal. OLT is not receiving any upstream transmissions. Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON)	Check the receive PON Fiber input at the OLT.Check if the ONT power on or off.

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3231580163	—	Critical	<P1> The error bit rate high at pon interface. Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON)	Check the fiber or pon interface.
3231580165	—	Critical	<P1> Idle power at OLT side is larger than the idle power threshold. Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON)	Check the idle power of the pon.
3231580166	—	Critical	<P1> A diagnostics test is currently active on the PON to look for misbehaving ONTs. Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON)	Check if a rogue onu test is ongoing.
3231580167	—	Critical	<P1> Rogue ONT MAC= , NUM= . Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON)	Check if a rogue onu exists or not.
3231580168	—	Critical	<P1> <P2> The optical module mismatched at pon interface. Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON) P2 : it points to a SNMP table entry that contain the rogue ONT in eponPonRogueTestTable	Check the actual optical module.

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Table 9 EOLT ONT Common

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3233284097	—	Error	<P1> ONU Equipment alarm: reset failure. Status=Occured/Cleared P1 : eponOntEquipIfIndex (Index of ONT)	Check why there is an ONU reset failure.
3233284098	—	Error	<P1> During ONU selftest, ONU switch failure is found. Status=Occured/Cleared P1 : eponOntEquipIfIndex (Index of ONT)	Check why there is an ONU switch selftest failure.
3233284099	—	Error	<P1> During ONU selftest, ONU VoIP HW failure is found. Status=Occured/Cleared P1 : eponOntEquipIfIndex (Index of ONT)	Check why there is an ONU VoIP hardware selftest failure.

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3233284100	—	Error	<P1> During ONU selftest, E1 HW failure is found. Status=Occured/Cleared P1 : eponOntEquipIfIndex (Index of ONT)	Check why there is an ONU E1 hardware selftest failure.
3233284101	—	Error	<P1> ONU Power broken. Status=Occured/Cleared P1 : eponOntEquipIfIndex (Index of ONT)	Check why the ONU power failed.
3233284102	—	Error	<P1> Onu Power too high. Status=Occured/Cleared P1 : eponOntEquipIfIndex (Index of ONT)	Check why the ONU power is too high.
3233284103	—	Error	<P1> Onu Power too low. Status=Occured/Cleared P1 : eponOntEquipIfIndex (Index of ONT)	Check why the ONU power is too low.
3233284104	—	Error	<P1> Battery is provisioned but missing. Status=Occured/Cleared P1 : eponOntEquipIfIndex (Index of ONT)	Check why the ONU Battery is provisioned but missing.
3233284105	—	Error	<P1> Battery is provisioned and present but cannot recharge. Status=Occured/Cleared P1 : eponOntEquipIfIndex (Index of ONT)	Check why the ONU Battery is provisioned and present, but can not recharge.
3233284106	—	Error	<P1> Battery is provisioned and present but its voltage is too low. Status=Occured/Cleared P1 : eponOntEquipIfIndex (Index of ONT)	Check why the ONU Battery is provisioned and present, but its voltage is too low.
3233284107	—	Warning	<P1> Applies if the ONT is supported with detection such as door or boxopen. Status=Occured/Cleared P1 : eponOntEquipIfIndex (Index of ONT)	Check if the ONT door or box is open.
3233284108	—	Error	<P1> Set when ONU internal temperature exceeds high alarm level. Status=Occured/Cleared P1 : eponOntEquipIfIndex (Index of ONT)	Check why the ONU internal temperature exceeds the high temperature alarm warning.
3233284109	—	Error	<P1> Set when ONU internal temperature is below low alarm level. Status=Occured/Cleared P1 : eponOntEquipIfIndex (Index of ONT)	Check why the ONU internal temperature is below the low temperature alarm warning.

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3233284110	—	Error	<P1> ONU detect PON link failure, or receive Active PON_IF Adminstate message. Status=Occured/Cleared P1 : eponOntEquipIfIndex (Index of ONT)	Check why the ONU detects a PON link failure, or receive Active PON_IF Adminstate message.
3233284111	—	Error	<P1> ONT rejected provisioning request. Status=Occured/Cleared P1 : eponOntEquipIfIndex (Index of ONT)	Check why the ONU rejected a provisioning request.

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Table 10 EOLT ONT Services VoIP

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3233153025	—	Error	<P1> Failure of Connection between inner IAD and SS platform. Status=Occured/Cleared P1 : eponOntEquipIfIndex (Index of ONT)	Check why a communication with softswitch is failing.
3233153026	—	Error	<P1> The voice DHCP server is unreachable by the Voice Client, or failed to obtain required IP . Status=Occured/Cleared P1 : eponOntEquipIfIndex (Index of ONT)	Check why the AG can not get the IP address from the DHCP server.

Table 11 EOLT ONT TCA

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3231711233	—	Critical	<P1> Receive power from ONT at OLT side is lower than the sensor sensitivity lower limit. Status=Occured/Cleared P1 : eponOntEquipIfIndex (Index of ONT)	Check why the TX power from the ONT on the OLT side is low.
3231711234	—	Critical	<P1> Receive power from ONT at OLT side is higher than the sensor sensitivity upper limit. Status=Occured/Cleared P1 : eponOntEquipIfIndex (Index of ONT)	Check why the TX power from the ONT on the OLT side is high.

Table 12 EONT General

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3231514625	—	Critical	<P1> Receive Optical signal level is too high. Status=Occured/Cleared P1 : eponOntIfIndex (Index of ONT)	Check the RX optical signal and decrease the signal level.
3231514626	—	Critical	<P1> Receive Optical signal level too low. Status=Occured/Cleared P1 : eponOntIfIndex (Index of ONT)	Check the RX optical signal and increase the signal level.
3231514627	—	Critical	<P1> TX Optical Signal too High alm. Status=Occured/Cleared P1 : eponOntIfIndex (Index of ONT)	Check the TX power and decrease the signal level.
3231514628	—	Critical	<P1> TX Optical Signal too Low alm. Status=Occured/Cleared P1 : eponOntIfIndex (Index of ONT)	Check the TX power and increase the signal level.
3231514629	—	Critical	<P1> TX Bias too High alm. Status=Occured/Cleared P1 : eponOntIfIndex (Index of ONT)	Check the TX bias and decrease the Bias.
3231514630	—	Critical	<P1> TX Bias too Low alm. Status=Occured/Cleared P1 : eponOntIfIndex (Index of ONT)	Check the TX bias and increase the Bias.
3231514631	—	Critical	<P1> Voltage too High alm. Status=Occured/Cleared P1 : eponOntIfIndex (Index of ONT)	Check the voltage and decrease the voltage.
3231514632	—	Critical	<P1> Voltage too Low alm. Status=Occured/Cleared P1 : eponOntIfIndex (Index of ONT)	Check the voltage and increase the voltage.
3231514633	—	Critical	<P1> Temperature too High alm. Status=Occured/Cleared P1 : eponOntIfIndex (Index of ONT)	Check the temperature and decrease the temperature.
3231514634	—	Critical	<P1> Temperature too Low alm. Status=Occured/Cleared P1 : eponOntIfIndex (Index of ONT)	Check the temperature and increase the temperature.
3231514635	—	Critical	<P1> receive Optical Signal Level too High warning. Status=Occured/Cleared P1 : eponOntIfIndex (Index of ONT)	Check the RX power and decrease the power.
3231514636	—	Warning	<P1> receive Optical Signal Level too Low warning. Status=Occured/Cleared P1 : eponOntIfIndex (Index of ONT)	Checkthe RX power and increase the power.
3231514637	—	Warning	<P1> TX Optical Signal too High warning. Status=Occured/Cleared P1 : eponOntIfIndex (Index of ONT)	Check the TX power and decrease the power.

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3231514638	—	Warning	<P1> TX Optical Signal too Low warning. Status=Occured/Cleared P1 : eponOntIfIndex (Index of ONT)	Check the TX power and increase the power.
3231514639	—	Warning	<P1> TX Bias too High warning. Status=Occured/Cleared P1 : eponOntIfIndex (Index of ONT)	Check the TX bias and decrease the Bias.
3231514640	—	Warning	<P1> TX Bias too Low warning. Status=Occured/Cleared P1 : eponOntIfIndex (Index of ONT)	Check the TX bias and increase the Bias.
3231514641	—	Warning	<P1> Voltage too High warning. Status=Occured/Cleared P1 : eponOntIfIndex (Index of ONT)	Check the voltage and decrease the voltage.
3231514642	—	Warning	<P1> Voltage too Low warning. Status=Occured/Cleared P1 : eponOntIfIndex (Index of ONT)	Check the voltage and increase the voltage.
3231514643	—	Warning	<P1> Temperature too high warning. Status=Occured/Cleared P1 : eponOntIfIndex (Index of ONT)	Check the temperature and decrease the temperature.
3231514644	—	Warning	<P1> Temperature too low warning. Status=Occured/Cleared P1 : eponOntIfIndex (Index of ONT)	Check the temperature and increase the temperature.

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Table 13 EONT PHYOAM

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3231449089	—	Critical	<P1> Link fault at ONT. Status=Occured/Cleared P1 : eponOntIfIndex (Index of ONT)	Check the link.
3231449090	—	Error	<P1> Received Dying Gasp indication from ONT. Status=Occured/Cleared P1 : eponOntIfIndex (Index of ONT)	Restore power to the ONT. Dying gasp indication is due to loss of power input to the ONT.
3231449091	—	Critical	<P1> Receive Critical event indication from ONT. Status=Occured/Cleared P1 : eponOntIfIndex (Index of ONT)	Check the ONT.
3231449092	—	Critical	<P1> ONT fails to respond to OAM message requests (Loss of communications). Status=Occured/Cleared P1 : eponOntIfIndex (Index of ONT)	Check the OAM version for the OLT and the ONT.

Table 14 EONT Services LAN

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3231645697	—	Critical	<P1> Port loop happen at ONT uniport. Status=Occured/Cleared P1 : eponOntEnetIndex (IfIndex of UNI)	Check why the port loop is at the uniport on the ONT side.
3231645698	—	Critical	<P1> Failure of auto negotiation for specific Ethenet port. Status=Occured/Cleared P1 : eponOntEnetIndex (IfIndex of UNI)	Check why a port auto-negotiation failure at the uniport at the ONT side, for example, ONT supports port mode mismatch with the peer side.
3231645699	—	Error	<P1> Loss of signal for specific Ethenet port. Status=Occured/Cleared P1 : eponOntEnetIndex (IfIndex of UNI)	Check why a port loss of signal at the uniport on the ONT side, for example, Ethernet cable is not connected.
3231645700	—	Critical	<P1> Failure of specific Ethernet port. Status=Occured/Cleared P1 : eponOntEnetIndex (IfIndex of UNI)	Check why a port failure at the uniport on the ONT side, for example, hardware failure for special port.
3231645701	—	Critical	<P1> Congestion of Ethernet port is detected. Status=Occured/Cleared P1 : eponOntEnetIndex (IfIndex of UNI)	Check why a port congestion at the uniport on the ONT side.

Table 15 EONT Services POTS

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3233218561	—	Error	<P1> POTS port failure: over temperature . Status=Occured/Cleared P1 : eponOntPotsIfIndex (Index of POTS)	Check why the ONU POTS port temperature is too high.
3233218562	—	Error	<P1> POTS port failure: over current. Status=Occured/Cleared P1 : eponOntPotsIfIndex (Index of POTS)	Check why there is an over current on the ONU POTS port.
3233218563	—	Error	<P1> POTS port failure: grounded. Status=Occured/Cleared P1 : eponOntPotsIfIndex (Index of POTS)	Check why the ONU POTS port is grounded.

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3233218564	—	Error	<P1> The Megaco subscriber exist in IAD but has not been configured in media gateway controller. Status=Occured/Cleared P1 : eponOntPotsIfIndex (Index of POTS)	Check why the subscriber has not been configured on softswitch.

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Table 16 EONT Software Download

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3233349633	—	Error	<P1> Software Version Mismatch . Status=Occured/Cleared P1 : eponOntEquipIfIndex (Index of ONT)	Check why the pre-configure ONU software type does not match the actual ONU.
3233349634	—	Error	<P1> Software Download Mode Mismatch. Status=Occured/Cleared P1 : eponOntEquipIfIndex (Index of ONT)	Check why the configured software download mode does not match the actual ONU supported download mode, for example, operator configures CTC 2.1 mode to a CTC 2.0 ONU.
3233349635	—	Error	<P1> Software Version Not Found. Status=Occured/Cleared P1 : eponOntEquipIfIndex (Index of ONT)	Check why a version match is not found in the ONU software mapping table.
3233349636	—	Error	<P1> Software Download File Missing--not find an usable file. Status=Occured/Cleared P1 : eponOntEquipIfIndex (Index of ONT)	Check why the system can not find the software version file in the NT flush.
3233349637	—	Error	<P1> Software Download In Progress . Status=Occured/Cleared P1 : eponOntEquipIfIndex (Index of ONT)	The software version download to the ONU is in progress. This is not an error. For information only.
3233349638	—	Error	<P1> Software Download Failure . Status=Occured/Cleared P1 : eponOntEquipIfIndex (Index of ONT)	Check why there is failure to download a software version to the ONU.
3233349639	—	Error	<P1> Software Download Active Failure. Status=Occured/Cleared P1 : eponOntEquipIfIndex (Index of ONT)	Check why there is failure to activate a software version which has been downloaded to the ONU.
3233349640	—	Error	<P1> Software Download Commit Failure. Status=Occured/Cleared P1 : eponOntEquipIfIndex (Index of ONT)	Check why there is failure to commit a software version which has been downloaded to the ONU.

Table 17 EPON Logical link

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3231318017	—	Critical	<P1> Key exchange failure during one churning time. Status=Occured/Cleared P1 : eponlogicallinkindex (index for logical link)	Check whether the ONT received a key exchange request or not.Check whether the ONT sent a key response or not.
3231318018	—	Critical	<P1> Key exchange failure during 3 churning time. Status=Occured/Cleared P1 : eponlogicallinkindex (index for logical link)	Check whether the ONT received a key exchange request or not.Check whether the ONT sent a key response or not.
3231318019	—	Emergency	<P1> Extend OAM discovery failure. Status=Occured/Cleared P1 : eponlogicallinkindex (index for logical link)	Check the OAM extension supported version between the OLT and the ONT.
3231318020	—	Emergency	<P1> Report Timeout Detecting. Status=Occured/Cleared P1 : eponlogicallinkindex (index for logical link)	Check whether the ONT received Gate or not.Check whether the ONT sent a report or not.

Table 18 EPON PON TCA

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3234004993	—	Critical	<P1> <P2> Olt txpwr high alarm. Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON) P2 : See Specific Alarm	Check the TX power and decrease the signal level.
3234004994	—	Critical	<P1> <P2> Olt txpwr low alarm. Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON) P2 : See Specific Alarm	Check the TX power and increase the signal level.
3234004995	—	Critical	<P1> <P2> Olt bias high alarm. Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON) P2 : See Specific Alarm	Check the TX bias and decrease the Bias.
3234004996	—	Critical	<P1> <P2> Olt bias low alarm. Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON) P2 : See Specific Alarm	Check the TX bias and increase the Bias.

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3234004997	—	Critical	<P1> <P2> Olt voltage high alarm. Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON) P2 : See Specific Alarm	Check the voltage and decrease the voltage.
3234004998	—	Critical	<P1> <P2> Olt voltage low alarm. Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON) P2 : See Specific Alarm	Check the voltage and increase the voltage.
3234004999	—	Critical	<P1> <P2> Olt temperature high alarm. Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON) P2 : See Specific Alarm	Check the temperature and decrease the temperature.
3234005000	—	Critical	<P1> <P2> Olt temperature low alarm. Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON) P2 : See Specific Alarm	Check the temperature and increase the temperature.
3234005001	—	Warning	<P1> <P2> Olt txpwr high warn. Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON) P2 : See Specific Alarm	Check the TX power and decrease the signal level.
3234005002	—	Warning	<P1> <P2> Olt txpwr low warn. Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON) P2 : See Specific Alarm	Check the TX power and increase the signal level.
3234005003	—	Warning	<P1> <P2> Olt bias high warn. Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON) P2 : See Specific Alarm	Check the TX bias and decrease the Bias.
3234005004	—	Warning	<P1> <P2> Olt bias low warn. Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON) P2 : See Specific Alarm	Check the TX bias and increase the Bias.
3234005005	—	Warning	<P1> <P2> Olt voltage high warn. Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON) P2 : See Specific Alarm	Check the voltage and decrease the voltage.

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3234005006	—	Warning	<P1> <P2> Olt voltage low warn. Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON) P2 : See Specific Alarm	Check the voltage and increase the voltage.
3234005007	—	Warning	<P1> <P2> Olt temperature high warn. Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON) P2 : See Specific Alarm	Check the temperature and decrease the temperature.
3234005008	—	Warning	<P1> <P2> Olt temperature low warn. Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON) P2 : See Specific Alarm	Check the temperature and increase the temperature.
3234005009	—	Critical	<P1> <P2> 10G Olt txpwr high alarm. Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON) P2 : See Specific Alarm	Check the 10G XFP TX power and decrease the signal level.
3234005010	—	Critical	<P1> <P2> 10G Olt txpwr low alarm. Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON) P2 : See Specific Alarm	Check the 10G XFP TX power and increase the signal level.
3234005011	—	Critical	<P1> <P2> 10G Olt bias high alarm. Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON) P2 : See Specific Alarm	Check the 10G XFP TX Bias and decrease the Bias.
3234005012	—	Critical	<P1> <P2> 10G Olt bias low alarm. Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON) P2 : See Specific Alarm	Check the 10G XFP TX Bias and increase the Bias.
3234005013	—	Warning	<P1> <P2> 10G Olt txpwr high warn. Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON) P2 : See Specific Alarm	Check the 10G XFP TX power and decrease the signal level.
3234005014	—	Warning	<P1> <P2> 10G Olt txpwr low warn. Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON) P2 : See Specific Alarm	Check the 10G XFP TX power and increase the signal level.

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3234005015	—	Warning	<P1> <P2> 10G Olt bias high warn. Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON) P2 : See Specific Alarm	Check the 10G XFP TX Bias and decrease the Bias.
3234005016	—	Warning	<P1> <P2> 10G Olt bias low warn. Status=Occured/Cleared P1 : eponPonConfigIfIndex (Index of PON) P2 : See Specific Alarm	Check the 10G XFP TX Bias and increase the Bias.

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Table 19 Equipment

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
2189250119	—	Inform	auto-discovered a node sn=<P1> mac=<P2> ip=<P3> device_type=<P4> state=<P5> P1 : serial number of remote olt P2 : mac address of remote olt P3 : ip address of remote olt P4 : device type of remote olt P5 : node discovery status	Configure the Node
2189250124	—	Warning	The node in slot <P1> is replaced with SN=<P2>, mac=<P3> ip=<P4> device_type=<P5> P1 : slot number of remote olt P2 : serial number of remote olt P3 : mac address of remote olt P4 : ip address of remote olt P5 : device type of remote olt	—
2189250125	—	Inform	Received node_reboot_reason notif on device <P1> SN=<P2>, mac=<P3> ip=<P4> device_type=<P5> reason=<P6> P1 : slot number of remote olt P2 : serial number of remote olt P3 : mac address of remote olt P4 : ip address of remote olt P5 : device type of remote olt P6 : reboot reason	—
3221291009	—	Emergency	<P1> System and backup memory reset. Status=Occured/Cleared P1 : eqptHolderId (Index in equipment holder Table)	Reconfigure the system.

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3221291010	—	Critical	<P1> Unable to communicate with SNTP server. Status=Occured/Cleared P1 : eqptHolderId (Index in equipment holder Table)	Check the SNTP server.
3221291012	—	Critical	<P1> <P2> Disk is 95 percent full. Status=Occured/Cleared P1 : eqptHolderId (Index in equipment holder Table) P2 : partition • 0 is ISAM SW • 1 is ONT SW	Clean up the disk space.
3221291013	—	Critical	<P1> No use of preferred timing mode. Status=Occured/Cleared P1 : eqptHolderId (Index in equipment holder Table)	Check the peer equipment and link between peer equipment and the ASAM for all the timing references that correspond to the preferred timing mode.
3221291014	—	Emergency	<P1> Timing Reference failed. Status=Occured/Cleared P1 : eqptHolderId (Index in equipment holder Table)	Check the peer equipment and link between the peer equipment and the ASAM for all timing references.
3221291033	—	Critical	<P1> BackPanel-type Invalid. Status=Occured/Cleared P1 : eqptHolderId (Index in equipment holder Table)	The system will startup wilth a default Back Panel type (NEP).Check the Back Panel type configuration when SYS is running.
3221291036	—	Emergency	<P1> SHub configuration loss. Status=Occured/Cleared P1 : eqptHolderId (Index in equipment holder Table)	Check the SHUB/IHUB configuration with respect to the database (last database changes may be lost).

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Table 20 Equipment Holder

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3221356545	—	Error	<P1> Fuse alarm - power fuse broken. Status=Occured/Cleared P1 : eqptHolderId (Index in equipment holder Table)	Check the power supply.
3221356546	—	Critical	<P1> Fan alarm for fan #1. Status=Occured/Cleared P1 : eqptHolderId (Index in equipment holder Table)	Check the fan.
3221356547	—	Critical	<P1> Fan alarm for fan #2. Status=Occured/Cleared P1 : eqptHolderId (Index in equipment holder Table)	Check the fan.

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3221356551	—	Error	<P1> Equipment holder configuration mismatch. Status=Occured/Cleared P1 : eqptHolderId (Index in equipment holder Table)	Check the equipment.Check the configuration.
3221356552	—	Emergency	<P1> Extension chain installation problem. Status=Occured/Cleared P1 : eqptHolderId (Index in equipment holder Table)	Check the cabling of the Extension Chain.
3221356553	—	Critical	<P1> Shelf is missing. Status=Occured/Cleared P1 : eqptHolderId (Index in equipment holder Table)	In case of extension via through the IQ bus: • Check presence of Extension board • Check cabling of the Extension chainIn case of extension/expansion through optical fibre and SFP: • Check presence of Shelf-Expander unit on Host she
3221356554	—	Error	<P1> Shelf planned but not installed. Status=Occured/Cleared P1 : eqptHolderId (Index in equipment holder Table)	Check the presence of the Extension board.Check the cabling of the Extension chain.
3221356559	—	Error	<P1> Open cabinet door. Status=Occured/Cleared BR> P1 : eqptHolderId (Index in equipment holder Table)	Close the door.
3221356561	—	Critical	<P1> Fuse alarm. Status=Occured/Cleared P1 : eqptHolderId (Index in equipment holder Table)	Check the fuse.Check the power supply.
3221356562	—	Critical	<P1> Single Fan Failure alarm. Status=Occured/Cleared P1 : eqptHolderId (Index in equipment holder Table)	Check the fan tray.The shelf with the failing fan will also be identified by the fan tray status LED. This LED will be lit red.
3221356563	—	Emergency	<P1> Double Fan Failure alarm. Status=Occured/Cleared P1 : eqptHolderId (Index in equipment holder Table)	Check the fan tray of the alarm raising shelf. The shelf will power-off within 2-3 minutes after the alarm is raised.
3221356564	—	Emergency	<P1> System AC Power Failure. Status=Occured/Cleared P1 : eqptHolderId (Index in equipment holder Table)	Check the power installation.
3221356565	—	Error	<P1> Test chain not configured. Status=Occured/Cleared P1 : eqptHolderId (Index in equipment holder Table)	Configure the test chain to support the test requested.
3221356566	—	Error	<P1> TAU not present or failed. Status=Occured/Cleared P1 : eqptHolderId (Index in equipment holder Table)	A TAU unit is faulty. Force Cold reset of the board and if this fails again, repair the board.

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3221356567	—	Error	<P1> ITSC not present or failed. Status=Occured/Cleared P1 : eqptHolderId (Index in equipment holder Table)	The ITSC module is faulty. Force Cold reset of the board and if this fails again, repair the board.
3221356568	—	Error	<P1> Test resources not present. Status=Occured/Cleared P1 : eqptHolderId (Index in equipment holder Table)	The test requested is not supported by the current configuration.
3221356569	—	Error	<P1> Hardware failed. Status=Occured/Cleared P1 : eqptHolderId (Index in equipment holder Table)	Other hardware failure caused the request to fail.
3221356570	—	Error	<P1> Test requests blocked during ITSC SW download. Status=Occured/Cleared P1 : eqptHolderId (Index in equipment holder Table)	Tests are temporarily blocked while the software download is in progress. Wait until the software download is completed before attempting a test.
3221356571	—	Critical	<P1> Test requests blocked due to ITSC SW download failure. Status=Occured/Cleared P1 : eqptHolderId (Index in equipment holder Table)	Tests are prevented because the software download failed. Reset the ITSC.

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Table 21 Equipment Holder 2

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3229745153	—	Critical	<P1> Shelf Controller Communication Failure. Status=Occured/Cleared P1 : eqptHolderId (Index in equipment holder Table to identify a shelf)	Check the shelf planned type.

Table 22 Equipment Supplemental

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3229155335	—	Error	<P1> Upload of System Log file to remote server failed. Status=Occured/Cleared P1 : eqptHolderId (Index in equipment holder Table)	Check the network connectivity to the system log server.Check the system log server configuration and provisioning.

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3229155342	—	Error	<P1> ONT Autodownloading of software in Progress. Status=Occured/Cleared P1 : eqptHolderId (Index in equipment holder Table)	This is a normal alarm indicating a download is in progess to one or more ONTs. (Wait for alarm to clear)This alarm is activated when the ONT VERCTL Table has been updated requiring one or more ONTs to have their software downloaded.The system shall clear the alarm when no further download/activation are pending. Contact Nokia customer service if the alarm fails to clear.

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Table 23 Ethernet TCA

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3228237825	—	Error	<P1> Loss Of Signal errors in the current 15 minutes interval. Status=Occured/Cleared P1 : ifIndex of Ethernet interface	Check the physical line: • is the optical link from the host to the remote unit too highly attenuated • is the SFP still OK in the host/remote • is the optical cable properly connectedCheck the modem equipment.

Table 24 File Transfer

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3228106753	—	Critical	<P1> File transfer Server unavailable or file transfer failed. Status=Occured/Cleared P1 : File Server ID (IP@)	Check whether the file transfer server has been correctly configured.Check the network to file transfer server. Check if the file to be transferred exists.

Table 25 IHUB BFD

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3234136065	—	Critical	<P1> <P2> BFD Session has gone down. Status=Occured/Cleared P1: VPRN Service Identifier (svcId in the svcBaseInfoTable) or Base Router (value 0 indicates Base Router) P2: unique identification for the alarm	Bring the BFD session UPDelete the BFD session by disabling bfd-enable on the routing protocol(s). Remove the session by disabling BFD on the interface using Shutdown the interface on which BFD is enabled. Remove all the associated protocols on which BFD is enabled corresponding to that interface Shutdown the protocol/s for which BFD is enabled
3234136066	—	Critical	BFD reached maximum resource limit. Status=Occured/Cleared	Deletes sessions so that the number of sessions go below 90% of the maximum supported sessions. Increases the receive / transmit interval in interface bfd configuration or deletes sessions so that the Tx / Rx rate goes below 90% of the maximum.

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation

3234136067	—	Critical	<P1> <P2> BFD Stale entry is present. Status=Occured/Cleared
			P1: VPRN Service Identifier (svcId in the svcBaseInfoTable) or Base Router (value 0 indicates Base Router)
			P2: unique identification for the alarm
				Removes the bfd-enable configuration from the session for which this alarm is raised. The raised alarm can also be cleared in the following ways:
				• For static route:
				  • when the operator succeeds in configuring the BFD Session by deleting few BFD Sessions or by manipulating tx / rx rates and then recreating the failed session
				  • when the static route is disabled
				  • when the interface is shutdown
				  • when the interface goes operationally down
				• For OSPF:
				  • when the OSPF Neighbor state becomes not FULL or 2way
				  • when VPRN service or the OSPF protocol or the OSPF interface or the IP interface is shutdown or when the OSPF configuration is deleted
				• For ISIS:
				  • when the ISIS state with the adjacency (isisISAdjState) becomes failed or down.
				  • when the ISIS protocol or the ISIS interface or the ISIS interface for a level or the IP interface is shutdown or when the ISIS configuration is deleted
				• For PIM:
				  • when the PIM Neighbor adjacency goes down
				  • PIM interface is made admin down
				  • PIM node is made admin down
				  • interface is removed
				• For BGP:
				  • when the BGP peer goes to an operational state other than U.
				  • when the VPRN service is shutdown or when the BGP protocol or BGP group or BGP peer is shutdown
				• For T-LDP:
				  • when the TCP session goes down
				  • when the explicit configured peer is removed
				  • when the LDP instance is stopped or when the LDP configuration is deleted
				  • when the operational state of the SDP goes down
				  • when the SDP is shutdown
				  • when the SDP binding is shutdown
				  • when the service is shutdown

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Table 26 IHUB BGP NG

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3232825345	—	Emergency	<P1> <P2> The BGP peer has an operational state other than Up. Status=Occured/Cleared P1 : VPRN Service Identifier (svcId in the svcBaseInfoTable) or Base Router (value 0 indicates Base Router) P2 : BGP neighbor index (non zero value, unique across all alarms within this type): it identifies a BGP neighbor; the neighbor is an IPv4 or IPv6 Peer and is identified through additional info (tBgpPeerNgAddress in the tBgpPeerNgTable)	Check the admin status of all BGP components, for example; interfaces, group and neighbor should be 'no shutdown'. Check operational status of any interfaces needed for peer connections. If admin and operational states are up, then BGP configuration commands must be reviewed for mis-configuration, for example; verify autonomous system IDs of the peers are correct. Check the BGP prefix limit and if the memory resources are available. If memory is not available, modify the policies to reduce BGP route importation.
3232825346	—	Critical	<P1> <P2> Nearing Max Peer Route Threshold. Status=Occured/Cleared P1 : VPRN Service Identifier (svcId in the svcBaseInfoTable) or Base Router (value 0 indicates Base Router) P2 : BGP neighbor index (non zero value, unique across all alarms within this type): it identifies a BGP neighbor; the neighbor is an IPv4 or IPv6 Peer and is identified through additional info (tBgpPeerNgAddress in the tBgpPeerNgTable)	Increase the prefix limit if memory resources are available. If memory is not available, modify the policies to reduce the BGP route importation.

Table 27 IHUB DHCP

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
2189250118	—	Warning	Exception in ONU offline notification, client items <P1> left over in I-HUB's DHCP lease database P1 : IP Address List	No action needed

Table 28 IHUB EPIPE

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3232563201	—	Emergency	<P1> EPIPE Down. Status=Occured/Cleared P1 : EPIPE Service Identifier (svcId in the svcBaseInfoTable)	Verify the following: • status of the attached SAP and the SDPbinding • the remote peer has been correctly configured or is still up

Table 29 IHUB ETHCFM

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3235119105	—	Error	<P1> <P2> DefRDICCM - Received CCM containing RDI bit. Status=Occured/Cleared P1 : MEPID P2 : Unique Identifier	Check for MEPS in MA of the CCIEnabled flag. Check the operational status of links needed for the CCM transmission towards the peer.
3235119106	—	Error	<P1> <P2> DefMACstatus - Remote MEP indicated an error via port status or interface status TLV. Status=Occured/Cleared P1 : MEPID P2 : Unique Identifier	Remote MEP is found in the dot1agCfmMepDbTable.Check the operational status of the physical links on that MEP.
3235119107	—	Critical	<P1> <P2> DefRemoteCCM - Not receiving CCMs from configured remote MEP(s). Status=Occured/Cleared P1 : MEPID P2 : Unique Identifier	Restore CCM misconfigurations (peer MEP list), device failures, link failures.Check for admin status of the ccm from peer MEP.
3235119108	—	Critical	<P1> <P2> DefErrorCCM - This MEP is receiving invalid CCMs. Status=Occured/Cleared P1 : MEPID P2 : Unique Identifier	Check MA configuration: peer MEP list, MEPIDs, CCM interval and so one can see if there is any mis-configuration or mis-match between MEP peers.
3235119109	—	Critical	<P1> <P2> DefXconCCM - Receiving CCMs with MAID or Level Mismatch.Status=Occured/Cleared P1 : MEPID P2 : Unique Identifier	Check the MAID configuration.Check the service configuration.

Table 30 IHUB Equipment

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3231121409	—	Critical	<P1> IHUB Peer-to-Peer Communication Failure. Status=Occured/Cleared P1 : eqptSlotId (Index in eqptBoardTable)	Check the status of both NTs for normal operation. Perform the board reboot or replace the board if failure persists.
3231121410	—	Critical	<P1> IHUB Software Failure. Status=Occured/Cleared P1 : eqptSlotId (Index in eqptBoardTable)	If failure persists, contact the Nokia Technical Assistance Center.

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3231121411	—	Critical	<P1> IHUB Hardware Failure Local. Status=Occured/Cleared P1 : eqptSlotId (Index in eqptBoardTable)	If failure persists, replace the NT board.
3231121414	—	Critical	<P1> IHUB Hi-Gig (XAUI) LINK Failure. Status=Occured/Cleared P1 : eqptSlotId (Index in eqptBoardTable)	Check the status of both NTs for normal operation: • Replace Peer NT • If fault persists, replace this NT
3231121416	—	Critical	<P1> Loss of Comm with IHUB. Status=Occured/Cleared P1 : eqptSlotId (Index in eqptBoardTable)	Attempt to reset the standby (peer) IHUB using the management interface. If this does not bring the standby (peer) NT into hot-standby state, replace the PEER (standby) NT board.
3231121417	—	Error	<P1> IHUB processor has exceeded its processing limits. Status=Occured/Cleared P1 : eqptSlotId (Index in eqptBoardTable)	Check for possible network, equipment and facility alarms and clear them. If problem persists, reset the NT card.Replace the NT card.
3231121418	—	Emergency	<P1> IHUB Processor Out of Memory. Status=Occured/Cleared P1 : eqptSlotId (Index in eqptBoardTable)	Try a reset of the NT to clean up the memory depletion. If fault persists, contact Nokia Technical Assistance Center.
3231121419	—	Critical	<P1> No response is received from NTP servers. Status=Occured/Cleared P1 : eqptSlotId (Index in eqptBoardTable)	Check if the NTP servers are operational and reachable.

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Table 31 IHUB Ethernet Port

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3231055873	—	Emergency	<P1> Ethernet Link Down alarm. Status=Occured/Cleared P1 : Ethernet Port (tmnxPortPortID in the tmnxPortTable)	Check the physical Ethernet link.
3231055874	—	Error	<P1> Failure to add a port to the Link Aggregation port. Status=Occured/Cleared P1 : Ethernet Port (tmnxPortPortID in the tmnxPortTable)	Retrieve the alarms additional information to see the failure reason string and correct it. Possible reasons are: • Adminkey-mismatch • Sysid-mismatch • Lacp-passive-both-ends • Link-down - Check links • Unknown - Contact Nokia Technical Assistance

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3231055875	—	Critical	<P1> SFP type don't match the planned speed and/or auto-negotiation. Status=Occured/Cleared P1 : Ethernet Port (tmnxPortPortID in the tmnxPortTable)	Indicates the SFP or SFP+ type does not match the planned speed and/or auto-negotiation for the port. Either reconfigure the planned speed and/or the auto-negotiation to match the current speed and auto-negotiation, or reconfigure the external device to match the current configured speed and auto-negotiation.

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Table 32 IHUB General

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3231252481	—	Critical	Number of ARP entries has reached the maximum threshold. Status=Occured/Cleared	Condition occurs when the number of ARP entries in the system's ARP cache has exceeded its resource limits. Possible Reasons: • Too many subscriber Host Devices are using L3 Services on the NT Possible Solutions: • Check and reduce the number of directly attached hosts to local subnets in the instance • Check Subscribers' Residential Gateway to see if in Bridge mode when it should be in Router mode • Check Subscriber's port to see if too many MACs are being learned, and if so, put a learning limit on that subscriber port and enable anti-spoofing (if feature is supported).

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation

3231253382	—	Critical	The hardware is out of resources. Status=Occured/Cleared	The alarm can be raised as a result of a recent configuration change. If this is the case, then check the most recent new configuration for:
				• IP Interface
				  • Check Alarm again. If alarm is present
				  • Make I/F Down and try back later
				  • Remove Static MAC addresses
				  • Reduce number of subnets
				  • Clear IPv6 Neighbor cache entries
				If no shutdown but operationally is Down, check for underlying failure. If none, then Make I/F Down, clear alarm, then I/F back UP.
				• Static-MAC
				  • Remove Static-MAC
				  • Manually Clear Alarm
				  • Add Static-MAC back
				  • Check for Alarm again. If present, then remove other Static MACs.
				• Static IP Multicast Group
				  • Remove Static-Group
				  • Manually Clear Alarm
				  • Add Static-Group back
				  • Check for Alarm again. If present then reduce size of various subnets.
				• SAP
				  • Remove SAP of VPLS
				  • Manually Clear Alarm
				  • Try using a SAP with different encapsulation value.
				If no recent configuration change was done, check the current network topology.

3231253383	—	Critical	Number of IPv6 neighbor cache entries reached upper threshold.Status=Occured/Cleared	Condition occurs when number of NC entries (IPv6) in the system's Neighbor Cache is about to exceed its resource limits. Possible Reasons: • Too many subscriber Host Devices are using L3 Services on the NT. Possible Solutions: • Check and reduce the number of directly attached hosts to local subnets in the instance, • Check Subscribers' Residential Gateway to see if in Bridge mode when it should be in Router mode, • Check Subscriber's port to see if too many MACs are being learned, and if so put learning limit on that subscriber port and enable anti-spoofing (if feature supported).
3231253384	—	Critical	DHCP session out of resources.Status=Occured/Cleared	System is almost used above it's capacity, it cannot store that many DHCP sessions in the system. Consider reducing DHCP lease time or reducing the allowed DHCP sessions for that ISAM in DHCP server

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3231253385	—	Critical	Number of MAC addresses for the node approaching the limit. Status=Occured/Cleared	The alarm informs about the fact that the amount of MAC addresses being learned for all layer 2 services is nearing the node limit. Possible Solutions: • Check the Subscriber's Gateway to see if it is in Bridge mode when it should be in router mode • Check the Subscriber's port to see if there are too many MACs that are being learned, and if so, put a learning limit on that subscriber port (if feature supported) • Check the Aggregation Network that connects multiple Access Nodes together is operating in split horizon L2 forwarding. If not, then the Access Node may also be learning subscriber MACs from another Access Node • If subtending off of a Hub Access node, make sure the Hub node's port is connected to the subtended Access Node and is configured as "Residential". If not, then the subtended Access Node may also be learning subscriber MACs from the Hub Access node.

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Table 33 IHUB IPv6 address

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3232890881	—	Critical	<P1> <P2> Duplicate Address detected for own IPv6 Address. Status=Occured/Cleared P1 : VPRN Service Identifier (svcId in the svcBaseInfoTable) or Base Router (value 0 indicates Base Router) P2 : Index 2 for this alarm: IPv6 Address Index, unique value across all alarms in the Alarm Type	In case the duplicate IPv6 address alarm occurs for the following: • the LL address: shutdown the interface in order to trigger the System to initiate the DAD procedure once more • a configured IPv6 address: operator can choose a different IPv6 address for the interface
3232890882	—	Error	<P1> <P2> Duplicate Address detected for user's IPv6 Address. Status=Occured/Cleared P1 : VPRN Service Identifier (svcId in the svcBaseInfoTable) or Base Router (value 0 indicates Base Router) P2 : Index 2 for this alarm: IPv6 Address Index, unique value across all alarms in the Alarm Type	In case the duplicate IPv6 address alarm occurs for the following: • If duplicate address is a link local address and also a duplicate MAC alarm is raised: same MAC is used at 2 ends • If duplicate address is is a global address assigned using DHCP address: verify the configuration at the DHCP Server • If duplicate address is an address configured by an operator and announced to the user using router advertisement: verify the configuration of the addresses for the node and the user • If duplicate address is an address that is already allocated to another user (case of local proxy ND), verify the configuration of the addresses for the users.

Table 34 IHUB ISIS

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3230466049	—	Error	<P1> <P2> State of the ISIS adjacency is failed or down. Status=Occured/Cleared P1 : VPRN Service Identifier (svcId in the svcBaseInfoTable) or Base Router (value 0 indicates Base Router) P2 : see specific alarm number	Check the operational status of any interfaces that are needed for peer connections. If the operational states are up, then the ISIS configuration commands must be reviewed for misconfiguration, for example, verify autonomous system IDs of peers are correct
3230466050	—	Error	<P1> <P2> Connection to peer router is rejected.Status=Occured/Cleared P1 : VPRN Service Identifier (svcId in the svcBaseInfoTable) or Base Router (value 0 indicates Base Router) P2 : ISIS Adjacency Index (non zero value in which the Virtual Index can not overlap between the Adjacency Down and the Adjacency Reject alarms; to be used as P2 when manually clearing the alarm)	Check the ISIS level-capability configuration.
3230466051	—	Emergency	<P1> <P2> ISIS Down. Status=Occured/Cleared P1 : VPRN Service Identifier (svcId in the svcBaseInfoTable) or Base Router (value 0 indicates Base Router) P2 : 0	Check the ISIS configuration.

Table 35 IHUB L2FWD

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3230531585	—	Critical	<P1> <P2> STP exception condition is present on a SAP. Status=Occured/Cleared P1 : Ethernet Port (tmnxPortPortID in the tmnxPortTable) P2 : M-VPLS Service Identifier (svcId in the svcBaseInfoTable)	A condition is detected by STP on a port. Possible reason: detection of a topology loopPossible solution: Check the STP Peer to see if it may be misconfigured to flood BPDUs, and if its Ethernet ports are cabled together.

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3230531586	—	Error	<P1> <P2> STP root-guard violation. Status=Occured/Cleared P1 : Ethernet Port (tmnxPortPortID in the tmnxPortTable) P2 : M-VPLS Service Identifier (svcId in the svcBaseInfoTable)	A condition whereby the system has detected a STP root-guard violation. When root guard is enabled for the access interface, this condition can occur when a port that has STP enabled is attempting to become root (has a better STP priority vector). Possible reasons: • STP Peers are indicating they have higher Bridge address or priority Possible Solutions: • Configure STP Peers to have a lower Bridge Priority • Check for possible spoofing by untrusted equipment that is attempting to become Root via the alarmed port

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Table 36 IHUB LAG

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3231186945	—	Critical	<P1> LAG Down. Status=Occured/Cleared P1 : LAG Identifier (tLagIndex in tLagConfigTable)	Check the physical Ethernet links are associated for LAG negotiation or timeout problems.
3231186946	—	Critical	<P1> <P2> Subgroup threshold reached in the LAG. Status=Occured/Cleared P1 : LAG Identifier (tLagIndex in tLagConfigTable) P2 : Subgroup identifier	Check the number of physical links that are up in the lag subgroup for which the alarm has occurred. It should be made greater than the configured threshold value for the subgroup.
3231186947	—	Critical	<P1> <P2> Subgroup switchover failed in the LAG. Status=Occured/Cleared P1 : LAG Identifier (tLagIndex in tLagConfigTable) P2 : Subgroup identifier	Check the number of physical links that are up in the lag subgroup to which switchover failed. It should be made greater than the configured threshold value for the subgroup. Once it is done, the switchover will happen and the alarm will be cleared.

Table 37 IHUB LDP

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3232366593	—	Emergency	<P1> <P2> LDP Down. Status=Occured/Cleared P1 : Base Router (value 0 indicates Base Router) P2 : 0	Verify the LDP status for the base router and restart LDP.

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3232366594	—	Emergency	<P1> <P2> LDP Session Down. Status=Occured/Cleared P1 : Base Router (value 0 indicates Base Router) P2 : IP-address	Verify the following: • peer router up • correct far end IP address configured • LDP interfaces up • system IP configured • configured authentication parameters

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Table 38 IHUB Lawful Intercept

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3232956417	—	Error	Lawful Interception of traffic disabled. Status=Occured/Cleared	Enable the traffic interception.
3232956418	—	Critical	Lawful Intercept reached bandwidth limit. Status=Occured/Cleared	Lower the number of targets to be intercepted.Decrement the number of sessions, and traffic to be intercepted by: • attaching a filter to the target • specifying a more specific target key (for example, use circuit-id iso remote-id, specify VRF,..)
3232956419	—	Critical	Lawful Intercept out of resources. Status=Occured/Cleared	Lower the number of targets to be intercepted.Decrement the number of used resources by: • removing/simplifying filters attached to a target • making the target key more specific (for example; use circuit-id , specify VRF) so less DHCP sessions (for example; IP addresses) to be intercepted

Table 39 IHUB MPLS

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3232432129	—	Emergency	<P1> <P2> MPLS Down. Status=Occured/Cleared P1 : Base Router (value 0 indicates Base Router) P2 : 0	Verify the MPLS status for the base router and restart.
3232432130	—	Emergency	<P1> <P2> LSP Down. Status=Occured/Cleared P1 : Base Router (value 0 indicates Base Router) P2 : LspIndex (type: TmnxVRtrMplsLspID: Unsigned32 (0..65535])	Verify the nextHop IP-address and ping it.

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3232432131	—	Error	<P1> <P2> LSP Path Down. Status=Occured/Cleared P1 = Base Router (value 0 indicates Base Router) P2 = lsp-path-Index(non zero value formed using the combination of tunnel-index & lsp-index and also this P2 can not overlap between alarms of same category)	Check if the corresponding LSP is up. If yes, check how the path is associated to the LSP, for example, primary path /secondary path in standby/secondary path in non-standby. (It is expected that the path is configured as secondary in non-standby mode to have operation down (while the LSP is up), until the LSP switches to that secondary path). Check if the HOPs in the path are reachable (using ping).

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Table 40 IHUB OSPF

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3230662657	—	Critical	<P1> <P2> No of received external LSAs exceeds the configured Number. Status=Occured/Cleared P1 : VPRN Service Identifier (svcId in the svcBaseInfoTable) or Base Router (value 0 indicates Base Router) P2 : 0	Re-dimensioning of the network is required.
3230662658	—	Error	<P1> <P2> No of received external LSAs approaches 90% of configured No. Status=Occured/Cleared P1 : VPRN Service Identifier (svcId in the svcBaseInfoTable) or Base Router (value 0 indicates Base Router) P2 : 0	Re-dimensioning of the network is required.
3230662659	—	Error	<P1> <P2> OSPF Neighbor state is one way or down. Status=Occured/Cleared P1 = VPRN Service Identifier (svcId in the svcBaseInfoTable) or Base Router (value 0 indicates Base Router) P2 = Neighbor Index (non zero value in which the Virtual Index can not overlap between alarms; to be used as P2 when manually clearing the alarm)	Check the status of the peer nodes, if they belong to the same operator domain. Then do corrective actions on the peer node. Change the network topology if the peer nodes can not be corrected. Check the OSPF configurations to see if there are any mismatches (e.g. area type, ID, link type, timer intervals, ...)
3230662660	—	Emergency	<P1> <P2> OSPF Down. Status=Occured/Cleared P1 : VPRN Service Identifier (svcId in the svcBaseInfoTable) or Base Router (value 0 indicates Base Router) P2 : 0	Check the OSPF configuration.

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3230662661	—	Critical	<P1> <P2> Number of received external OSPF3 LSAs exceeds configured limit. Status=Occured/Cleared P1 = VPRN Service Identifier (svcId in the svcBaseInfoTable) or Base Router (value 0 indicates Base Router) P2 = 0	Re-dimensioning of the network is required.
3230662662	—	Error	<P1> <P2> Number of rcvd external OSPF3 LSAs near to 90% of configured limit. Status=Occured/Cleared P1 : VPRN Service Identifier (svcId in the svcBaseInfoTable) or Base Router (value 0 indicates Base Router) P2 : 0	Re-dimensioning of the network is required.
3230662663	—	Error	<P1> <P2> OSPF3 Neighbor state is one way or down. Status=Occured/Cleared P1 : VPRN Service Identifier (svcId in the svcBaseInfoTable) or Base Router (value 0 indicates Base Router) P2 : Neighbor Index (non zero value in which the Virtual Index can not overlap between alarms; to be used as P2 when manually clearing the alarm)	Check the status of the peer nodes, if they belong to the same operator domain. Then do corrective actions on the peer node. Change the network topology if peer nodes can not be corrected. Check the OSPFv3 configurations to see if there are any mismatches (e.g. area type, ID, link type, timer intervals, ...)
3230662664	—	Emergency	<P1> <P2> OSPF3 Down. Status=Occured/Cleared P1 : VPRN Service Identifier (svcId in the svcBaseInfoTable) or Base Router (value 0 indicates Base Router) P2 : 0	Check the OSPFv3 configuration.

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Table 41 IHUB PIM

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3232759809	—	Error	<P1> <P2> PIM Neighbor Down. Status=Occured/Cleared P1 : VPRN Service Identifier (svcId in the svcBaseInfoTable) or Base Router (value 0 indicates Base Router) P2 : neighbor idx	Check the status of the peer nodes, if they belong to the same operator domain. Then do corrective actions on the peer node. Change the network topology if the peer nodes can not be corrected. Check the PIM configurations to see if there are any mismatches.

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3232759810	—	Critical	<P1> Maximum mulicast routes reached. Status=Occured/Cleared P1 : VPRN Service Identifier (svcId in the svcBaseInfoTable) or Base Router (value 0 indicates Base Router)	Check the number of (S,G),(*,G) joins received from the network & user side. Consider creating at network side and a join policy to restrict accepted joins. Consider restricting the allowed groups from the user. Increase the number of maximum routes, but take into account that replication resources are limited to 4K and shared with next L2 services: one per VPLS for flooding and one per (S,G)/(*,G) for VPLS/V-VPLS igmp snooping.

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Table 42 IHUB RIP

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3230728193	—	Emergency	<P1> <P2> RIP instance Down. Status=Occured/Cleared P1 : VPRN Service Identifier (svcId in the svcBaseInfoTable) or Base Router (value 0 indicates Base Router) P2 : 0	Check the following: • Verify RIP interface configurations • Check the memory consumed by the RIP protocol • Check the number of routes learned via RIP, i.e. RIP RIB Note: The RIP protocol instance will attempt to restart within 30 seconds.

Table 43 IHUB RSVP

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3235381249	—	Error	<P1> <P2> RSVP Neighbor state is down. Status=Occured/Cleared P1 : Base Router (value 0 indicates Base Router) P2 : Neighbor Index (non zero value in which the Virtual Index can not overlap between alarms; to be used as P2 when manually clearing the alarm)	Check the peer configuration and the operational status.Check if the peer is part of LSP path (which is active).
3235381250	—	Emergency	<P1> <P2> RSVP instance down. Status=Occured/Cleared P1 : Base Router (value 0 indicates Base Router) P2 : 0	Check the MPLS admin status.Check the RSVP/MPLS configuration. Check the memory usage for RSVP/MPLS.

Table 44 IHUB SDP

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3232497665	—	Emergency	<P1> <P2> SDP Down. Status=Occured/Cleared P1 : SDPid P2 : 0	Verify what the reason is to be operational down (use the given index to read sdpBindOperStatus of SDPbind table): • TLPD parameters mismatch: VC-TYPE, MTU • Associated service operational down • Associated SDP operational down No configuration at the peer for this VC-ID, so no egress label received
3232497666	—	Emergency	<P1> <P2> SDP Bind Down. Status=Occured/Cleared P1 : SDPid P2 : VCid (type:TmnxVcId Unsigned32 (1..4294967295)). Additional Info contains: svcId,SDPbindId	Verify the following: • whether configured far end router is alive, ping configured far end IP address • own status LDP • MPLS • LDP session/adjacency status • path towards far end IP accessible using network ports

Table 45 IHUB VPLS

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3230793729	—	Error	<P1> <P2> VPLS Multicast FIB Table reached high watermark. Status=Occured/Cleared P1 : VPLS Service Identifier (svcId in the svcBaseInfoTable) P2 : 0	Re-dimensioning of the node is required. In case of wholesale, administrative actions with the customer of the VPLS is required.
3230793730	—	Error	<P1> <P2> VPLS Duplicate MAC address. Status=Occured/Cleared P1 : VPLS Service Identifier (svcId in the svcBaseInfoTable) P2 : Duplicate MAC index (fadDupMacIndex: non zero value in which the index can not overlap between VPLS (Self) Dup Mac alarms)	Disable the responsible user-side ports involved in the Duplicate MAC alarm in this network element or in the surrounding network elements. Use IACM Forwarding Data Base of these network elements to identify the responsible user-side ports. Re-enable the port when the alarm is cleared after a timeout.Try to identify the source of the DOS attack, and remove it from the network.

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3230793731	—	Critical	<P1> <P2> Number of MAC addresses for the VPLS reaches limit. Status=Occured/Cleared P1 : VPLS Service Identifier (svcId in the svcBaseInfoTable) P2 : 0	A condition meaning the number of MAC addresses being learned for a vVPLS service instance is nearing or has exceeded a configured table size limit. Possible reasons: • Too many subscriber MACs for the configured service Possible Solutions: • Increase the v-VPLS FDB Table size • Check Subscriber's Gateway to see if in Bridge mode when it should be in router mode • Check Subscriber's port to see if too many MACs are being learned, and if so put learning limit on that subscriber port (if feature supported) • Check Aggregation Network that connects multiple Access Nodes together is operating in split horizon L2 forwarding. If not, then the Access Node may also be learning subscriber MACs from another Access Node • If subtending off of a Hub Access node, make sure the Hub node's port connected to the subtended Access Node is configured as "Residential". If not, then the subtended Access Node may also be learning subscriber MACs from the Hub Access node.
3230793732	—	Error	<P1> <P2> Self Duplicate MAC detection for VPLS service in a SAP. Status=Occured/Cleared P1 : VPLS Service Identifier (svcId in the svcBaseInfoTable) P2 : Duplicate MAC index (fadDupMacIndex: non zero value in which the index can not overlap between VPLS (Self) Dup Mac alarms)	Disable responsible user-side ports involved in the Duplicate MAC alarm in this network element or in the surrounding network elements. Use the IACM Forwarding Data Base of these network elements to identify the responsible user-side ports. Re-enable the port when the alarm is cleared after a timeout. Try to identify the source of the DOS attack, and remove it from the network.
3230793733	—	Error	<P1> <P2> Self Duplicate MAC detection for VPLS service in a SDP. Status=Occured/Cleared P1 : VPLS Service Identifier (svcId in the svcBaseInfoTable) P2 : Duplicate MAC index (fadDupMacIndex: non zero value in which the index can not overlap between VPLS (Self) Dup Mac alarms)	Disable the responsible user-side ports involved in the Duplicate MAC alarm in this network element or in the surrounding network elements. Use the IACM Forwarding Data Base of these network elements to identify responsible user-side ports. Re-enable the port when the alarm is cleared after a timeout. Try to identify the source of the DOS attack, and remove it from the network.

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Table 46 IHUB VPRN

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3230597121	—	Critical	<P1> <P2> Number of routes for virtual router reached high threshold. Status=Occured/Cleared P1 : VPRN Service Identifier (svcId in the svcBaseInfoTable) or Base Router (value 0 indicates Base Router) P2 : 0	Re-dimensioning of the network is required. In case of wholesale, administrative actions with the customer of the VPRN is required.
3230597122	—	Critical	<P1> <P2> Number of IPv6 routes for virtual router reached high threshold. Status=Occured/Cleared P1 : VPRN Service Identifier (svcId in the svcBaseInfoTable) or Base Router (value 0 indicates Base Router) P2 : 0	Redimensioning of the network is required. In case of wholesale, administrative actions with the customer of the VPRN is required.
3230597123	—	Critical	<P1> <P2> Number of DHCPv6 lease states reached high threshold. Status=Occured/Cleared P1 : VPRN Service Identifier (svcId in the svcBaseInfoTable) or Base Router (value 0 indicates Base Router) P2 : vRtrIfIndex	The operator can reduce the filling of the lease database in either way: • trigger clearing (specific entries or all) of the lease database for this interface • disable dhcpv6 on the interface • disable Ipv6 on the interface. Alternatively, increase the max number of leases such that the filling level drops below the fixed threshold. Note: Shutting down the VPRN service or the IP interface will leave the lease database untouched.
3230597124	—	Critical	<P1> <P2> Number of DHCPv4 lease states reached high threshold. Status=Occured/Cleared P1 : VPRN Service Identifier (svcId in the svcBaseInfoTable) or Base Router (value 0 indicates Base Router) P2 : vRtrIfIndex	The operator can reduce the filling of the lease database in either way: • trigger clearing (specific entries or all) of the lease database for this interface • disable dhcpv4 on the interface Note: Shutting down the VPRN/IES service or the IP interface will leave the lease database untouched.

Table 47 Interface

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
2189232085	—	Notice	Link up For CMTS only; NNI and DOCSIS/PON interfaces	No action is required
2189232086	—	Notice	Link down For CMTS only; NNI and DOCSIS/PON interfaces	In case of the backbone fiber disrupted. No action is required
2189233085	Notice	—	Link up For CM only; UNI ports only	No action is required
2189233086	Notice	—	Link down For CM only; UNI ports only	Check the UNI link connection

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
2189250080	—	Notice	Power Failure on CM (mac address of vCM)	Restore power to the ONT. Dying gasp indication is due to loss of power input to the ONT

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Table 48 LI trap ciscoTap2MIBActive

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
2189250114	—	Information	—	No action needed

Table 49 LI trap ciscoTap2MediationDebug

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
2189250116	—	Information	—	No action needed

Table 50 LI trap ciscoTap2MediationTimedOut

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
2189250115	—	Information	—	No action needed

Table 51 LI trap ciscoTap2StreamDebug

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
2189250117	—	Information	—	No action needed

Table 52 LI trap ciscoTap2Switchover

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
2189250109	—	Information	—	No action needed

Table 53 LI trap pktcESTapMediationDebug

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
2189250112	—	Information	—	No action needed

Table 54 LI trap pktcESTapMediationTimedOut

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
2189250111	—	Information	—	No action needed

Table 55 LI trap pktcESTapMibActive

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
2189250110	—	Information	—	No action needed

Table 56 LI trap pktcESTapStreamDebug

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
2189250113	—	Information	—	No action needed

Table 57 LI trap pktcESTapSwitchover

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
2189250108	—	Information	—	No action needed

Table 58 LSM Redundancy

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3229810689	—	Critical	<P1> LSM Loss of protection switching capability. Status=Occured/Cleared P1 : eqptSlotId	Check that both of the RFT-V power sources are sourcing power.

Table 59 Logical link TCA

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3231383553	—	Warning	<P1> Errored Symbol Period Event. Status=Occured/Cleared P1 : eponlogicallinkindex (index for logical link)	Check the physical line.
3231383554	—	Warning	<P1> Errored Frame Event. Status=Occured/Cleared P1 : eponlogicallinkindex (index for logical link)	Check the physical line.
3231383555	—	Warning	<P1> Errored Frame Period Event. Status=Occured/Cleared P1 : eponlogicallinkindex (index for logical link)	Check the physical line.
3231383556	—	Warning	<P1> Errored Frame Seconds Summary Event. Status=Occured/Cleared P1 : eponlogicallinkindex (index for logical link)	Check the physical line.

Table 60 MultiCast Source

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3229089793	—	Critical	<P1> <P2> Multicast Stream: lost at NT or LT. Status=Occured/Cleared P1 : multicastgroupAddr P2 : eqptSlotId	Check the receive signal at the NT and the connectivity to the video source. If the alarm is at the LT multicast source, verify the provisioning and the LT equipment operational state. If the Multicast Source is no longer in use, deprovision the MCAST service

Table 61 Multiple UNI

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
2189250090	Error	Error	1.Service flow (ref=<P1>), the referenced classifers(classifier <P2> and <P3>) have different CMIM instance. 2.Multiple Uni Iphsd service coexisting with MEF service on same UNI port MEF US SF ref =<P1>, IPHSD US sf ref=<P2> 3.Partly overlapped UNI port between IPHSD services.IPHSD US SF ref <P1> and <P2>	Check CMIM instances in classifiers in TLV file

Table 62 Non Nokia

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3228041217	—	Emergency	Environment Monitor does not exist or is not alive. Status=Occured/Cleared	Check the existence of an Environment Box.

Table 63 OAM keep alive timeout

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
2189250101	—	Notice	Link:<P1> on ONU:<P2>, OAM keep alive timeout. Interface:<P3> P1 : Link Mac P2 : ONU Mac P3 : Interface of PON	No action needed

Table 64 Plug In Unit

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3221422083	—	Error	<P1> Plug-in module and configuration mismatch. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	Check the configuration and correct the configuration or replace the board with a new board of the correct type.
3221422084	—	Critical	<P1> Failed to load or find requested software. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	Check the configuration.Download the software.Wait for the software download from the server to be completed.
3221422088	—	Critical	<P1> Module temperature exceeded limit. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	Check the fans and restart the board. In remote boxes, check the fan dust filter as well.
3221422092	—	Critical	<P1> Equipment shut-down due to high temperature. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	Check the ambient temperature.Check the operation of FANs.Check the board.
3221422093	—	Emergency	<P1> Equipment shut-down due to defense action. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	Replace the board.

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3221422094	—	Critical	<P1> Board planned / once detected / now missing. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	Check the board presence.
3221422095	—	Error	<P1> Board planned but not installed. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	Insert the board.
3221422096	—	Critical	<P1> Board initialization failure. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	Force Cold reset of the board and if this fails again, repair the board.
3221422108	—	Emergency	<P1> SEM external power failure. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	Check the power to the external power supply.
3221422109	—	Emergency	<P1> SEM external power supply failure. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	Check for an excessive voltage drop on the RFT-V power feed.
3221422110	—	Critical	<P1> Board reset or communication failure. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	Check the cabling if the alarm is persistent. If the alarm toggles frequently, the board will go in Board Reset Protection mode (alarm 3,17) and will be powered down.
3221422111	—	Emergency	<P1> Lanx uplink breakdown. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	Check the SHUB uplink cable for any removal or for any loose contacts.

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Table 65 Plug In Unit 2

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3226730497	—	Critical	<P1> REM fan Alarm .Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	Check the physical line: • is the optical link from the host to the remote unit too highly attenuated • is the SFP still OK in the host/remote • is the optical cable properly connected
3226730498	—	Critical	<P1> REM DC A Alarm .Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	Check the cabling and the fuse.

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3226730499	—	Critical	<P1> REM DC B Alarm .Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	Check the cabling and fuse.
3226730500	—	Emergency	<P1> Dying Gasp Alarm,going out of service due to power failure. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	Check the cabling, fuse, convertor, temperature, and the on/off-switch at the REM or cabinet level.
3226730501	—	Emergency	<P1> Applique Power Supply Failure.Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	Check the applique power supply.
3226730502	—	Critical	<P1> the NTR-A signal is not available.Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	Check the NTA NTR status.
3226730503	—	Critical	<P1> the NTR-B signal is not available.Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	Check the NTB NTR status.
3226730504	—	Error	<P1> LT not present or Failed. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	Check the LT unit. Verify compatibility with ITSC tests. Force Cold reset of the board and if this fails again, repair the board.
3226730505	—	Error	<P1> LT Applique not present, not compatible or failed. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	Check the applique board. Verify compatibility with the LT for test. Force Cold reset of the board and if this fails again, replace the board.
3226730508	—	Error	<P1> No free mac entry in the mac table on the lt board. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	No special repair action required. Only notification that there are no more free MAC entries in MAC table on the LT board.

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Table 66 RSSI NT/NTIO TCA

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3234725889	—	Critical	<P1> <P2> TX optical power is higher than the configured alarm threshold. Status=Occured/Cleared P1 : sfpDiagLogicalSlot P2 : sfpDiagSfpFaceplateNumber	Check the TX power and decrease the signal level.

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3234725890	—	Critical	<P1> <P2> TX optical power is lower than the configured alarm threshold. Status=Occured/Cleared P1 : sfpDiagLogical Slot P2 : sfpDiagSfpFaceplateNumber	Check the TX power and increase the signal level.
3234725891	—	Critical	<P1> <P2> RX optical power is higher than the configured alarm threshold P1 : sfpDiagLogicalSlot P2 : sfpDiagSfpFaceplateNumber	Check the RX optical signal power and decrease the signal level.
3234725892	—	Critical	<P1> <P2> RX optical power is lower than the configured alarm threshold. Status=Occured/Cleared P1 : sfpDiagLogicalSlot P2 : sfpDiagSfpFaceplateNumber	Check the RX optical signal power and increase the signal level.
3234725893	—	Critical	<P1> <P2> TX bias current is higher than the configured alarm threshold. Status=Occured/Cleared P1 : sfpDiagLogicalSlot P2 : sfpDiagSfpFaceplateNumber	Check the TX Bias and decrease the Bias.
3234725894	—	Critical	<P1> <P2> TX bias current is lower than the configured alarm threshold. Status=Occured/Cleared P1 : sfpDiagLogicalSlot P2 : sfpDiagSfpFaceplateNumber	Check the TX Bias and increase the Bias.
3234725895	—	Critical	<P1> <P2> Voltage is higher than the configured alarm threshold. Status=Occured/Cleared P1 : sfpDiagLogicalSlot P2 : sfpDiagSfpFaceplateNumber	Check the voltage and decrease the voltage.
3234725896	—	Critical	<P1> <P2> Voltage is lower than the configured alarm threshold. Status=Occured/Cleared P1 : sfpDiagLogicalSlot P2 : sfpDiagSfpFaceplateNumber	Check the voltage and increase the voltage.
3234725897	—	Critical	vTemperature is higher than the configured alarm threshold. Status=Occured/Cleared P1 : sfpDiagLogicalSlot P2 : sfpDiagSfpFaceplateNumber	Check the temperature and decrease the temperature.
3234725898	—	Critical	<P1> <P2> Temperature is lower than the configured alarm threshold. Status=Occured/Cleared P1 : sfpDiagLogicalSlot P2 : sfpDiagSfpFaceplateNumber	Check the temperature and increase the temperature.

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3234725899	—	Warning	<P1> <P2> TX optical power is higher than the configured warning threshold. Status=Occured/Cleared P1 : sfpDiagLogicalSlot P2 : sfpDiagSfpFaceplateNumber	Check the TX power and decrease the signal level.
3234725900	—	Warning	<P1> <P2> TX optical power is lower than the configured warning threshold. Status=Occured/Cleared P1 : sfpDiagLogicalSlot P2 : sfpDiagSfpFaceplateNumber	Check the TX power and decrease the signal level.
3234725901	—	Warning	<P1> <P2> RX optical power is higher than the configured warning threshold. Status=Occured/Cleared P1 : sfpDiagLogicalSlot P2 : sfpDiagSfpFaceplateNumber	Check the RX optical signal power and decrease the signal level.
3234725902	—	Warning	<P1> <P2> RX optical power is lower than the configured warning threshold. Status=Occured/Cleared P1 : sfpDiagLogicalSlot P2 : sfpDiagSfpFaceplateNumber	Check the RX optical signal power and increase the signal level.
3234725903	—	Warning	<P1> <P2> TX bias current is higher than the configured warning threshold. Status=Occured/Cleared P1 : sfpDiagLogicalSlot P2 : sfpDiagSfpFaceplateNumber	Check the TX Bias and decrease the Bias.
3234725904	—	Warning	<P1> <P2> TX bias current is lower than the configured warning threshold. Status=Occured/Cleared P1 : sfpDiagLogicalSlot P2 : sfpDiagSfpFaceplateNumber	Check the TX Bias and increase the Bias.
3234725905	—	Warning	<P1> <P2> Voltage is higher than the configured warning threshold. Status=Occured/Cleared P1 : sfpDiagLogicalSlot P2 : sfpDiagSfpFaceplateNumber	Check the voltage and decrease the voltage.
3234725906	—	Warning	<P1> <P2> Voltage is lower than the configured warning threshold. Status=Occured/Cleared P1 : sfpDiagLogicalSlot P2 : sfpDiagSfpFaceplateNumber	Check the voltage and increase the voltage.
3234725907	—	Warning	<P1> <P2> Temperature is higher than the configured warning threshold. Status=Occured/Cleared P1 : sfpDiagLogicalSlot P2 : sfpDiagSfpFaceplateNumber	Check the temperature and decrease the temperature.

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3234725908	—	Warning	<P1> <P2> Temperature is lower than the configured warning threshold. Status=Occured/Cleared P1 : sfpDiagLogicalSlot P2 : sfpDiagSfpFaceplateNumber	Check the temperature and increase the temperature.

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Table 67 Redundancy

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3222536193	—	Critical	Loss of protection switching capability. Status=Occured/Cleared	Check the link on the standby NT. Check the standby boards.Wait for Quench time-out.
3222536195	—	Critical	Ping Connectivity specific IP Failed. Status=Occured/Cleared	Check the TX fiber.Check the default Gateway configuration.Check if the configured IP address of ping is correct.

Table 68 Registration

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
2189250120	—	Inform	CM registered mac=<P1> IPv4=<P2> IPv6=<P3> MDIfindex=<P4> dsChnIfIndex=<P5> usChnIfIndex=<P6> P1 : mac address of remote olt P2 : ipv4 address of remote olt P3 : ipv6 address of remote olt P4 : docsIf3CmtsCmRegStatusMDIfIndex P5 : docsIfCmtsCmStatusDownChannelIfIndex P6 : docsIfCmtsCmStatusUpChannelIfIndex	—
2189250121	—	Inform	CM deregistered mac=<P1>(regId) MDIfindex=<P2> P1 : mac address of remote olt P2 : docsIf3CmtsCmRegStatusMDIfIndex	—

Table 69 Registration Request

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
2189232081	—	Error	Unable to obtain buffer for <P1>, <P2><TAGS> P1 : message type P2 : recovery message.	Contact with Nokia Techical Assistance
2189232087	—	Notice	Service unavailable — Permanent<TAGS> Duplicate L2VPN with same ID <P1> exists P1 : L2VPN ID	Check the configuration file.
2189233080	Notice	—	CM and ONU registration complete with network access control <P1><TAGS> If NACO==1, then P1=Enabled, else P1=Disable	No action is required. Information notice reports when network access control is set to enable.
2189233081	Error	—	Unable to obtain buffer for <P1>, <P2><TAGS> P1 : message type P2 : recovery message	—
2189233082	Notice	—	Reinitializing MAC due to reason code <P1> from state <P2><TAGS> P1 : reason code string P2 : state name	No action is required. Information notice reports due to reason code P1 during the ONU reset.
2189233083	Error	—	Reinitializing MAC due to unknown reason code <P1> from state <P2><TAGS> P1 : reason code ID P2 : state name	—
2189233084	Notice	Notice	REG RSP contains service flow or classifier parameters that ONU cannot support, CM sending REG-ACK reject in state <P1><TAGS> P1 : state name	Check for all service flow or classifier parameters that the ONU should support
2189233087	Critical	Critical	TLV-54 View name is not provisioned <TAGS>	Check the TLV-54 is in the configuration file

Table 70 Rogue ONU

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
2189250091	—	Critical	<P1> Idle power at OLT side is larger than the idle power threshold. Status=Occured/Cleared P1 : Index of PON	Check the idle power of the pon interface

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
2189250092	—	Notice	<P1> Idle power at OLT side is smaller than the idle power threshold P1 : Index of PON	No action needed
2189250093	—	Critical	<P1> Rogue ONU detection is currently active on the PON to look for misbehaving ONTs P1 : Index of PON	Check if a rogue onu test is ongoing
2189250094	—	Notice	<P1> Rogue ONU detection is currently inactive on the PON to look for misbehaving ONTs. P1 : Index of PON	No action needed
2189250095	—	Critical	Rogue ONU <P1> detected on PON <P2> P1 : ONU MAC P2 : Index of PON	Check if a rogue onu exists or not
2189250096	—	Critical	Rogue ONU <P1> cleared on PON <P2> P1 : ONU MAC P2 : Index of PON	No action needed

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Table 71 SFP

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3226206209	—	Emergency	<P1> <P2> Host downlink SFP Loss Of Signal. Status=Occured/Cleared P1 : hostSfpFaceplateNumber P2 : lanxPortNumber in case of SHUB, Ethernet Port in case of IHUB.	Check the physical line.
3226206210	—	Emergency	<P1> <P2> Host downlink SFP Tx failure. Status=Occured/Cleared P1 : hostSfpFaceplateNumber P2 : lanxPortNumber in case of SHUB, Ethernet Port in case of IHUB.	Check the Host-side of the SFP module.
3226206211	—	Emergency	<P1> <P2> Host downlink SFP is not detected. Status=Occured/Cleared P1 : hostSfpFaceplateNumber P2 : lanxPortNumber in case of SHUB, Ethernet Port in case of IHUB.	Check the Host-side SFP presence.
3226206212	—	Emergency	<P1> <P2> Host downlink SFP does not have valid Alcatel-Lucent ID. Status=Occured/Cleared P1 : hostSfpFaceplateNumber P2 : lanxPortNumber in case of SHUB, Ethernet Port in case of IHUB.	Check the Host-side SFP module ID.

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3226206213	—	Emergency	<P1> <P2> Host downlink SFP control failure. Status=Occured/Cleared P1 : hostSfpFaceplateNumber P2 : lanxPortNumber in case of SHUB, Ethernet Port in case of IHUB.	Check the Host-side SFP module or I2C bus. If control of all host-side SFPs fails, check the GENC board.
3226206214	—	Error	<P1> <P2> Host downlink SFP unexpected remote plug-in. Status=Occured/Cleared P1 : hostSfpFaceplateNumber P2 : lanxPortNumber in case of SHUB, Ethernet Port in case of IHUB.	Check for the missing Host-side SFP assignment configuration or whether the remote LT is cabled to the wrong Host-side SFP module.
3226206215	—	Critical	<P1> <P2> Host downlink SFP remote assignment mismatch. Status=Occured/Cleared P1 : hostSfpFaceplateNumber P2 : lanxPortNumber in case of SHUB, Ethernet Port in case of IHUB.	Check for a cabling error or a Host-side SFP assignment configuration error.
3226206216	—	Error	<P1> <P2> Host downlink SFP remote incompatible shelf. Status=Occured/Cleared P1 : hostSfpFaceplateNumber P2 : lanxPortNumber in case of SHUB, Ethernet Port in case of IHUB.	Check for a cabling error, a shelf-type planning error or assignment configuration error.
3226206219	—	Emergency	<P1> <P2> Expansion side SFP Loss Of Signal. Status=Occured/Cleared P1 : hostSfpFaceplateNumber P2 : lanxPortNumber in case of SHUB, Ethernet Port in case of IHUB.	Check the physical line: • is the optical link from the host to the remote unit too highly attenuated • is the SFP still OK in the host/remote • is the optical cable properly connected
3226206220	—	Emergency	<P1> <P2> Expansion shelf SPF Tx failure. Status=Occured/Cleared P1 : hostSfpFaceplateNumber P2 : lanxPortNumber in case of SHUB, Ethernet Port in case of IHUB.	Check the Expansion-side of the SFP module.
3226206221	—	Emergency	<P1> <P2> Expansion shelf SFP is not detected. Status=Occured/Cleared P1 : hostSfpFaceplateNumber P2 : lanxPortNumber in case of SHUB, Ethernet Port in case of IHUB.	Check the Expansion-side SFP presence.
3226206222	—	Emergency	<P1> <P2> Expansion shelf SFP does not have valid Alcatel-Lucent ID. Status=Occured/Cleared P1 : hostSfpFaceplateNumber P2 : lanxPortNumber in case of SHUB, Ethernet Port in case of IHUB.	Check the Expansion-side SFP module ID.

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3226206223	—	Emergency	<P1> <P2> Expansion shelf SFP control failure. Status=Occured/Cleared P1 : hostSfpFaceplateNumber P2 : lanxPortNumber in case of SHUB, Ethernet Port in case of IHUB.	Check the Expansion-side module or I2C bus.
3226206224	—	Emergency	<P1> <P2> Expansion side SFP1 Loss Of Signal. Status=Occured/Cleared P1 : hostSfpFaceplateNumber P2 : lanxPortNumber in case of SHUB, Ethernet Port in case of IHUB.	Check the physical line: • is the optical link from the host to the remote unit too highly attenuated • is the SFP still OK in the host/remote • is the optical cable properly connected
3226206225	—	Emergency	<P1> <P2> Expansion side SFP2 Loss Of Signal. Status=Occured/Cleared P1 : hostSfpFaceplateNumber P2 : lanxPortNumber in case of SHUB, Ethernet Port in case of IHUB.	Check the physical line: • is the optical link from the host to the remote unit too highly attenuated • is the SFP still OK in the host/remote • is the optical cable properly connected

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Table 72 SNMP

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
2189234081	Error	—	Authenticate failure for CM SNMP Request<TAGS>	—

Table 73 Software Management

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3223126017	—	Critical	<P1> OSWP rolled back. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	Remove the corrupted OSWP (ABORT operation).Download the desired OSWP again. Activate the downloaded OSWP.
3223126018	—	Critical	<P1> DB rolled back. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	Download the desired database again.
3223126020	—	Critical	<P1> invalid xVPS DBase. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	Download the desired database again.Restore the desired database.

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3223126021	—	Critical	<P1> invalid CDE file. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	Download the desired CDE file again.Activate the downloaded CDE file.
3223126022	—	Critical	<P1> Missing CDE profile. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	Download the desired CDE file again.Activate the downloaded CDE file.
3223126024	—	Critical	<P1> CDE profile hash error. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table)	Download a new CDE profile with valid hash key. Activate the downloaded CDE profile.

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Table 74 Subscriber Management

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
2189250086	—	Critical	obtain specific filter group <P1> failed P1 : Group ID	Check whether the filter group is configured
2189250087	—	Critical	UDC action conflict with filter group <P1> rule <P2> P1 : Group ID P2 : Rule ID	Check the action of filter rule specified by this event
2189250088	—	Critical	ACL profile exceeds 15 in <upstream/downstream> direction for filter group=<P1> P1 : group id	The total number of filter group attached by the ONUs in one FPXT-B should NOT exceed 30. Check configuration by CLI of show dpoe profile acl
2189250089	—	Critical	src-mac-addr in downstream direction or dst-mac-addr in upstream direction or flow-label is NOT supported	Check whether attached filter groups contain src-mac-addr in downstream direction or dst-mac-addr in upstream direction or flow-label as ACL filter
2189250102	—	Critical	ACL Hardware Resource exceeds constraint, fail to add filter group <P1> rule <P2> to slot <P3>, can be solved by deleting filter group or deleting filter group rule to release resource. P1 : Filter Group Id P2 : Rule Id P3 : Slot Number	No action needed

Table 75 Sync

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3230007297	—	Critical	<P1> <P2> BITS clock source failed, not available or not acceptable. Status=Occured/Cleared P1 =eqptSlotId P2 : portType [upper 16 bits: • BITS(0) • SFP(1) • XFP(2) • IEEE(3)] + faceplate Port number [lower 16 bits: • BITS-A(0) • BITS-B(1) • BITSOUT(2) • IEEEFAIL-A(3) • IEEEFAIL-B(4) • SFP (0..n) • XFP (1..n)]	Check the peer equipment and connection between the equipment and the ISAM for the corresponding BITS timing reference.
3230007298	—	Critical	<P1> <P2> SyncE clock source failed, not available or not acceptable. Status=Occured/Cleared P1 : eqptSlotId P2 : portType [upper 16 bits: • BITS(0) • SFP(1) • XFP(2) • IEEE(3)] + faceplate Port number [lower 16 bits: • BITS-A(0) • BITS-B(1) • BITSOUT(2) • IEEEFAIL-A(3) • IEEEFAIL-B(4) • SFP (0..n) • XFP (1..n)]	Check the peer equipment and connection between the equipment and the ISAM for the timing reference for the specified synchronous Ethernet port. This could be due to a Loss Of Signal, or the Frequency has deviated beyond the capture range of 4.7 ppm or the Received SSM-QL value is below the minimum value that has been configured by the operator for allowing this source.

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3230007299	—	Emergency	<P1> <P2> QL Threshold exceeded: BITS output is shutoff. Status=Occured/Cleared P1 : eqptSlotId P2 : portType [upper 16 bits: • BITS(0) • SFP(1) • XFP(2) • IEEE(3)] + faceplate Port number [lower 16 bits: • BITS-A(0) • BITS-B(1) • BITSOUT(2) • IEEEFAIL-A(3) • IEEEFAIL-B(4) • SFP (0..n) • XFP (1..n)]	The configuration implies that the BITS output has been shutoff because the overall System QL has become worse than the configured mimimum QL for BITS output.
3230007300	—	Critical	<P1> <P2> Failure or unavailability of the IEEE 1588 timing source. Status=Occured/Cleared P1 : eqptSlotId P2 : portType [upper 16 bits: • BITS(0) • SFP(1) • XFP(2) • IEEE(3)] + faceplate Port number [lower 16 bits: • BITS-A(0) • BITS-B(1) • BITSOUT(2) • IEEEFAIL-A(3) • IEEEFAIL-B(4) • SFP (0..n) • XFP (1..n)]	Check the peer equipment and connection between the equipment and the ISAM for the corresponding IEEE1588 timing reference.

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Table 76 Traffic Overflow

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3228172289	—	Error	<P1> LT load overflow. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table for the NT)	Check the LT Load.

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3228172290	—	Error	<P1> Upstream load overflow. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table for the NT)	Check the LT load in the upstream direction.
3228172291	—	Error	<P1> Upstream load to OBC overflow. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table for the NT)	Check the LT load to OBC in the upstream direction.
3228172292	—	Error	<P1> Downstream load to OBC overflow. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table for the NT)	Check the LT load to OBC in the upstream direction.
3228172293	—	Error	<P1> Downstream load overflow. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table for the NT)	Check the LT load in the downstream direction.
3228172294	—	Error	<P1> The number of BE and CL packets dropped exceed threshold. Status=Occured/Cleared P1 : eqptSlotId (Index in equipment Board Table for the NT)	Check the Voice and the Video load.

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Table 77 VLAN Port

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
3232694273	—	Error	<P1> OMCI Service Mismatch: ONT did not accept OMCI config request. Status=Occured/Cleared P1 : IfIndex of VLANPort	A condition meaning that the ONT did not accept the configuration requests for the provisioned VLAN port. Possible reasons are: • service is not supported by the ONT • setup problemPossible solutions are: restart the ONT or deprovision the service since it is not supported

2.2 DOCSIS Standard Events

Table 78 AUTH-FSM

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
66030102	Warning	Error	Auth Reject — No Information<TAGS>	Check the configuration and contact certificate provider

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
66030108	Error	Error	Auth Reject — Permanent Authorization Failure<TAGS>	Configure a valid certificate
66030111	Alert	Error	CM Certificate Error<TAGS>	Contact certificate provider
66040100	Inform	Inform	Authorized<TAGS>	Authentication Pass information

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Table 79 Certificate Revocation

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
66030400	—	Warning	Failed to retrieve CRL from <P1> P1 : CRL Server IP	Check the configuration and the path to CRL server
66030401	—	Warning	Failed to retrieve OCSP status	Check the configuration and the path to OCSP server
66030402	—	Warning	CRL data not available when validating CM certificate chain<TAGS>	Please Contact CRL owner

Table 80 DHCP

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
68000100	Critical	Critical	DHCP FAILED — Discover sent, no offer received<TAGS>	Check the DHCP server of the vCM
68000200	Critical	Critical	DHCP FAILED — Request sent, No response<TAGS>	Check the DHCP server of the vCM
68000300	Warning	Warning	DHCP WARNING — Noncritical field invalid in response <TAGS>	Check the DHCP server of the vCM
68000301	Critical	Critical	DHCP FAILED — Response doesn't contain ALL the valid options<TAGS>	Check the DHCP server of the vCM
68010100	Error	—	DHCP RENEW sent — No response for <P1><TAGS> P1 : IPv4 or IPv6	Check the DHCP server configuration
68010200	Error	—	DHCP REBIND sent — No response for <P1><TAGS> P1 : IPv4 or IPv6 address	Check the DHCP server configuration
68010300	Error	—	DHCP RENEW WARNING Field invalid in response <P1><TAGS> P1 : IPv4 address	Check the DHCP server/client and the connection
68010301	Critical	—	DHCP RENEW FAILED — Critical field invalid in response <TAGS>	Check the DHCP server/client and the connection
68010400	Error	—	DHCP REBIND WARNING — Field invalid in response <TAGS>	Check the DHCP server/client and the connection

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
68010401	Critical	—	DHCP REBIND FAILED — Critical field invalid in response <TAGS>	Check the DHCP server/client and the connection
68010500	Error	—	DHCP Reconfigure received<TAGS>	Check the DHCP server/client and the connection
68010600	Notice	—	DHCP Renew — lease parameters <P1> modified<TAGS> P1 : list of parameters that changed at renew	DHCP renew-lease parameter has changed. Notification only

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Table 81 DHCPv6

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
68001202	Critical	Critical	DHCP failed - DHCP Solicit sent, No DHCP Advertise received<TAGS>	Check the DHCPv6 server configuration
68001203	Critical	Critical	DHCP failed - DHCP Request sent, No DHCP REPLY received<TAGS>	Check the DHCPv6 server configuration
68001204	Error	—	Primary address acquired,secondary failed<TAGS>	Check the secondary DHCPv6 server configuration
68001205	Error	—	Primary address failed,secondary active<TAGS>	Check the Primary DHCPv6 server configuration

Table 82 Diagnostic Log

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
86000100	—	Warning	Diagnostic log size reached high threshold. Enabled detectors: <P1>;Log maximum size: <P2> P1 : ASCII hex representation of enabled diagnostic log detectors bit mask P2 : maximum size of the diagnostic log	Check the diagnostic log to see what happened
86000200	—	Notice	Diagnostic log size dropped to low threshold. Enabled detectors: <P1>;Log maximum size: <P2> P1 : ASCII hex representation of enabled diagnostic log detectors bit mask P2 : maximum size of the diagnostic log	No action needed

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
86000300	—	Warning	Diagnostic log size reached full threshold. Enabled detectors: <P1>;Log maximum size: <P2> P1 : ASCII hex representation of enabled diagnostic log detectors bit mask P2 : maximum size of the diagnostic log	Check the diagnostic log to see what happened.

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Table 83 Interface Status

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
80000101	Notice	Notice	Ethernet Interface link down<TAGS>	Check the Ethernet line of the cable modem
80000102	Notice	Notice	Ethernet Interface link up<TAGS>	No action needed.

Table 84 QoS

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
89010100	—	Warning	Aggregate Session Limit defined by GC,GQC entry (<P1>) exceeded by join for (<P2>)<TAGS> P1 : GC ID,GQC ID P2 : S,G of the join	No action needed

Table 85 Ranging

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
82000700	Critical	—	Unicast Ranging Received Abort Response — Reinitializing MAC<TAGS>	Not supported yet
82010400	—	Warning	Failed to receive Periodic RNG-REQ from modem (SID X), timing-out SID;<CM-MAC>	This warning reports when the ONU registration fails several times

Table 86 Registration ACK

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
73030200	—	Warning	REG ACK rejected unspecified reason<TAGS>	Check the register process to find more clues

Table 87 Registration Request

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
73011800	—	Warning	Configuration file contains parameter with the value outside of the range<TAGS>	Check the TLV configuration file
73020100	—	Warning	REG REQ received — Unspecified reason<TAGS>	Perform analysis and obtain more useful information
73020102	—	Warning	REG REQ rejected — temporary no resource<TAGS>	Check the CAC bandwidth for PON port
73020103	—	Warning	REG REQ rejected — Permanent administrative<TAGS>	Check if the ONU is included in the allow ONU list
73020104	—	Warning	REG REQ rejected — Required parameter not present <P1><TAGS> P1 : Rejection reason in detail	Check the required parameter in the TLV configuration file
73020107	—	Warning	REG REQ rejected — duplicate reference-ID or index in message<TAGS>	Check the required parameter in the TLV configuration file
73020108	—	Warning	REG REQ rejected — parameter invalid for context <P1><TAGS> P1 : Rejection reason in detail	Check the required parameter in the TLV configuration file
73020110	—	Warning	REG REQ rejected — Major service flow error<TAGS>	Check the required parameter in the TLV configuration file
73020111	—	Warning	REG REQ rejected — Major classifier error<TAGS>	Check the required parameter in the TLV configuration file
73020115	—	Warning	REG REQ rejected — Primary service flow error<P1><TAGS> P1 : Service Flow ID	Check the required parameter in the TLV configuration file
73021100	—	Warning	T9 Timeout — Never received REG-REQ or all REG-REQ-MP fragments<TAGS>	Not supported yet

Table 88 Registration Response

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
73025100	Critical	—	REG RSP contains service flow parameters that CM cannot support<P1><TAGS> P1 : Service Flow ID	Check if the service flow that the CM should support is correct in the configuration file
73025101	Critical	—	REG RSP contains classifier parameters that CM cannot support<P1><TAGS> P1 : Service Flow ID	Check if the classifier parameters that the CM should support is correct in the configuration file

Table 89 Software Upgrade

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
69010100	Notice	—	SW Download Init — Via NMS SW file:<P1>-SW server:<P2><TAGS> P1 : Software file name P2 : Software Download server IP address	Trigger a software download using NMS, no action required
69010200	Notice	—	SW Download Init — Via Config file SW file:<P1>-SW server:<P2><TAGS> P1 : Software file name P2 : Software Download server IP address	Trigger a software download using a configuration file, no action required
69010300	Error	—	SW Upgrade Failed during download — Max retry exceed (3) SW file:<P1>-SW server:<P2><TAGS> P1 : Software file name P2 : Software Download server IP address	Check the correct ONU software file and filename on the TFTP serverCheck if the vCM OAM channel and the TFTP server is reachable
69010400	Error	—	SW Upgrade Failed before download — Server not Present SW file:<P1>-SW server:<P2><TAGS> P1 : Software file name P2 : Software Download server IP address	Check if the TFTP server is reachable
69010500	Error	—	SW Upgrade Failed before download — File not Present SW file:<P1>-SW server:<P2><TAGS> P1 : Software file name P2 : Software Download server IP address	Check if the correct ONU software file and filename are on the TFTP server

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
69010600	Error	—	SW Upgrade Failed before download —TFTP Max Retry Exceeded SW file:<P1>-SW server:<P2><TAGS> P1 : Software file name P2 : Software Download server IP address	Check if the correct ONU software file and filename are on the TFTP server.Check the vCM OAM channel.Check if the TFTP server is reachable
69010700	Error	—	SW Upgrade Failed after download —Incompatible SW file SW file:<P1>-SW server:<P2><TAGS> P1 : Software file name P2 : Software Download server IP address	Check the ONU software file
69010800	Error	—	SW Upgrade Failed after download —SW file corruption SW file:<P1>-SW server:<P2><TAGS> P1 : Software file name P2 : Software Download server IP address	Check the ONU software file
69010900	Error	—	Disruption during SW download — Power Failure SW file:<P1>-SW server:<P2><TAGS> P1 : software file name P2 : software download server IP address	Check if the power is off on the ONU during software download.
69011000	Error	—	Disruption during SW download — RF removed SW file:<P1>-SW server:<P2><TAGS> P1 : software file name P2 : software download server IP address	Check if there is a disconnected fiber during software download
69011100	Notice	—	SW download Successful — Via NMS SW file:<P1>-SW server:<P2><TAGS> P1 : software file name P2 : software download server IP address	No action needed
69011200	Notice	—	SW download Successful — Via Config file SW file:<P1>- SW server:<P2><TAGS> P1 : software file name P2 : software download server IP address	No action needed
69020100	Error	—	Improper Code File Controls SW file:<P1>-SW server:<P2><TAGS> P1 : software file name P2 : software download server IP address	Check the CVC Access start time

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Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
69020200	Error	—	Code File Manufacturer CVC Validation Failure SW file:<P1>-SW server:<P2><TAGS> P1 : software file name P2 : software download server IP address	The TLV files used are too big for the TFTP server to download
69020300	Error	—	Code File Manufacturer CVS Validation Failure SW file:<P1>-SW server:<P2><TAGS> P1 : software file name P2 : software download server IP address	Check if the manufacturer CVS is consistent with the CA CVC
69020400	Error	—	Code File Co-Signer CVC Validation Failure SW file:<P1>-SW server:<P2><TAGS> P1 : software file name P2 : software download server IP address	Check if the manufacturer CVS is consistent with the CA CVC
69020500	Error	—	Code File Co-Signer CVS Validation Failure SW file:<P1>-SW server:<P2><TAGS> P1 : software file name P2 : software download server IP address	Check the Co-Signer CVS is consistent with the CA CVC
69020600	Error	—	Improper Configuration File CVC Format SW file:<P1>-SW server:<P2><TAGS> P1 : Configuration file name P2 : Configuration file server IP address	Check if the manufacturer CVC is consistent with the CA CVC
69020700	Error	—	Configuration File CVC Validation Failure SW file:<P1>-SW server:<P2><TAGS> P1 : Configuration file name P2 : Configuration file server IP address	Check if the manufacturer CVC is consistent with the CA CVC
69020800	Error	—	Improper SNMP CVC Format SW file:<P1>-SW server:<P2><TAGS> P1 : Configuration file name P2 : Configuration file server IP address	Check if the manufacturer CVC is consistent with the CA CVC
69020900	Error	—	SNMP CVC Validation Failure SW file:<P1>-SW server:<P2><TAGS> P1 : IP Address of SNMP Manager	Check if the manufacturer CVC is consistent with the CA CVC

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Table 90 **TFTP**

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
68000500	Critical	Critical	TFTP failed — Request sent — No Response<TAGS>	Check the TFTP server
68000600	Critical	Critical	TFTP failed — configuration file NOT FOUND<TAGS> For SYSLOG only:append: File name=<P1> P1 : requested file name	Check the configuration file of the TFTP server
68000700	Critical	Critical	TFTP Failed — OUT OF ORDER packets<TAGS>	Check your network
68000900	Critical	Critical	TFTP file complete — but missing mandatory TLV <TAGS>	Check the location of the TFTP server and if there is a required TLV file
68001000	Critical	Critical	TFTP Failed — file too big<TAGS>	The TLV files used are too big for the TFTP server to download
68001101	Critical	Critical	TFTP Request Retries exceeded, CM unable to register File name=<P1> <TAGS> P1 : file name of TFTP file	Check if the TFTP server is reachable or if the TLV file exists or not

Table 91 TLV-11 Parsing

Event ID	vCM Priority	CMTS Priority	Event Message and Format	Troubleshooting Recommendation
73040100	Notice	Notice	TLV-11 — unrecognized OID<TAGS>	Check the TLV-11 configuration
73040200	Critical	Critical	TLV-11 — Illegal Set operation failed<TAGS>	Check the TLV-11 configuration
73040300	Critical	Critical	TLV-11 — Failed to set duplicate elements<TAGS>	Check the TLV-11 configuration

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