



Traps and Alarms

Traps and alarms are sent by the PXM45 card on various actions. Examples of these actions are adding, deleting, or modifying resources and line failures.

Contents of this chapter include

- PXM Traps and Alarms Supported
- Mandatory Trap Varbinds

PXM Traps and Alarms Supported

Table 9-1 describes the various PXM45 traps and alarms.



Note

All mandatory trap varbinds are described in Table 9-2. For a description of each miscellaneous trap varbind, see Table 9-3.

Table 9-1 PXM45 Traps and Alarms

Trap Name	Trap No.	Specific-Varbinds	Description
cwChassisIntegratedAlarm	60001	shelfIntegratedAlarm	Sent when the integrated alarm for the shelf is changed.
cwUserLogin	60002	userName	Sent when a user logs in.
cwUserLogout	60003	userName	Sent when a user logs out.
cwShelfRestart	60004	cefcModuleResetReason	Sent when the shelf is rebooted.
cwNodeNameChange	60006	none	Sent when the node name is modified.
cwIpAddressChange	60007	ipAdEntAddr, ifType	Sent when the IP Address (Ethernet IP, ATM IP) is modified.
cwControllerAdd	60008	cwTrapIndex, cvcConfControllerType, cvcConfControllerLocation	Sent when a VSI Controller is added.
cwControllerDelete	60009	cwTrapIndex, cvcConfControllerType, cvcConfControllerLocation	Sent when a VSI Controller is deleted.
cwChassisTemperature Normal	60026	cwTrapIndex, entSensorThresholdSeverity	Sent when the temperature is back to normal.
cwChassisTemperatureAbove Normal	60027	entSensorThresholdSeverity, cwTrapIndex	Sent when the temperature is above the threshold.
cwChassisDclevelNormal	60028	entSensorThresholdSeverity, cwTrapIndex	Sent when the DC Level is back to normal.
cwChassisDclevelBelow Normal	60029	entSensorThresholdSeverity, cwTrapIndex	Sent when the DC level is below the normal range.
cwChassisPowersupply Normal	60030	entSensorThresholdSeverity, cwTrapIndex	Sent when the power supply is back to normal voltage.
cwChassisPowersupply Failed	60031	entSensorThresholdSeverity, cwTrapIndex	Sent when the power supply is failed.
cwChassisFanrpmNormal	60032	entSensorThresholdSeverity, cwTrapIndex	Sent when the fan rpm is back to normal.
cwChassisFanrpmBelow Normal	60033	entSensorThresholdSeverity, cwTrapIndex	Sent when the fan rpm is below the normal value.
cwModuleInserted	60051	cwTrapIndex	Sent when the Front Module is plugged into a slot. This trap is sent for Processor Module as well as Service Modules.
cwModuleRemoved	60052	cwTrapIndex	Sent when the Front Module is removed from the slot. This trap is sent for Processor Module and service modules.
cwModuleMismatch	60053	cefcModuleOperStatus, cwTrapPhysicalVendorType, cwTrapIndex	Sent when the Front Module is plugged into a slot which was configured with some other module earlier.
cwModuleActive	60055	cwTrapIndex	Sent when a module becomes active. This may be a due to switch over or a failed card becomes active.

Table 9-1 PXM45 Traps and Alarms (continued)

Trap Name	Trap No.	Specific-Varbinds	Description
cwModuleStandby	60056	cwTrapIndex	Sent when a module becomes standby due to switch over.
cwModuleFailed	60057	cefcModuleOperStatus, cwTrapIndex	Sent when a module goes to a failed state.
cwLineModuleInserted	60058	cwTrapPhysicalVendorType, cwTrapLineModuleNumber, cwTrapIndex	Sent when a line module (back card) is inserted.
cwLineModuleRemoved	60059	cwTrapPhysicalVendorType, cwTrapIndex	Sent when a line module (back card) is removed.
cwLineModuleMismatch	60060	cefcModuleOperStatus, cwTrapPhysicalVendorType, cwTrapLineModuleNumber, cwTrapIndex	Sent when a incompatible line module (back card) is inserted into the front module or inserted line module is not same as the one configured earlier.
cwCoreCardSwitch	60078	cwTrapSlotNumber, cwTrapIndex	Sent when there is a switch over for core card set.
cwRedundancyAdd	60079	cwTrapSlotNumber	Sent when a redundancy is added for a module pair
cwRedundancyDelete	60080	cwTrapSlotNumber	Sent when a module pair is deleted from the redundancy configuration.
cwRedundancyActivate	60081	cwTrapSlotNumber	Sent when a secondary module becomes active. This is due to switch over.
cwRedundancyRevert	60082	cwTrapSlotNumber	Sent when a primary module becomes active. This is due to switch over.
cwTrapsLost¹	60900	none	This trap is sent when some traps could not be sent to the network management stations due to following reasons: <ul style="list-style-type: none"> • Trap could not be sent from the service module to the processor module. • Trap buffer is overflowed.
cwBulkFileCreationStarted	60901	cbfDefineMaxFiles	Sent when the bulk file creation is started.
cwBulkFileCreationDone	60902	cbfDefineMaxFiles, cbfDefineFileName , cbfStatusFileCompletionTime	Sent when the bulk file creation is done.
cwBulkFileCreationAborted	60903	cbfDefineMaxFiles, cbfStatusFileState	Sent when the bulk file creation is aborted.
cwBulkNoTaskAvailable	60904	cbfDefineMaxFiles	Sent when the bulk file creation failed due to non availability of task.
cwBulkFileCreationFailed	60905	cbfDefineMaxFiles	Sent when the bulk file creation is failed for reasons other than the non-availability of the task.

Table 9-1 PXM45 Traps and Alarms (continued)

Trap Name	Trap No.	Specific-Varbinds	Description
cwStatScmIpAddressChange	60920	cwTrapIndex, cwsConfIpAddress	<p>This trap is sent for the following conditions:</p> <ul style="list-style-type: none"> • SCM IP address is added. • SCM IP address is deleted. • SCM IP address is modified. <p><code>cwTrapIndex</code> contains the value of the <code>cwsConfIndex</code>, which contains the IP address entry added, deleted, or modified.</p> <p>When the IP address is added or modified, the <code>cwConfIpAddress</code> contains the value of the IP address.</p> <p>When the IP address is deleted, the <code>cwConfIpAddress</code> contains the value of zero for the IP address.</p>
cwStatFileInfo	60921	cwsStatsFileInfo	<p>This trap is sent for the following conditions:</p> <ul style="list-style-type: none"> • One or more statistics files are created. • In a certain time, one or more statistics files are not uploaded by SCM since it was created.

1. This trap is also applicable to PXM1.

Mandatory Trap Varbinds

Table 9-2 lists the trap variables (varbinds) in each trap generated by the switch. Each of these varbinds, in the order given, is available for each trap generated.

Table 9-2 Mandatory Trap Varbinds

Varbind	Data Type	Description
lastSequenceNumber	INTEGER	Contains the sequence number assigned to the trap. This can be used by Network Management System (NMS) applications to implement a Robust Trap Mechanism.
sysName	OctetString	Contains the node name of the switch.
entPhysicalContainedIn	INTEGER(0..2147483647)	Contains the chassis number into which the module is connected.
entPhysicalParentRelPos	INTEGER(-1..2147483647)	Contains the physical slot number to into which the module is connected.
entPhysicalVendorType	ObjectID	Contains the type of module for which the trap is generated.
moduleTrapAlarm Severity	INTEGER (enumeration)	Contains the alarm severity of the trap.
genericTimeStamp	OctetString(1..30)	Contains the time when the trap is generated.

Trap-Specific Varbinds

Table 9-3 lists the other trap varbinds.



Note

These trap varbinds are not available for all the traps.

Table 9-3 Miscellaneous Trap Varbinds

Varbind	Data Type	Description
ifIndex	Integer32(1..2147483647)	Specifies a unique value, greater than zero, for each interface. It is recommended that values are assigned starting with one.
ifName	OctetString(0..255)	Specifies the textual name of the interface.
shelfIntegratedAlarm	INTEGER	Displays the alarm status of the shelf.
userName	OctetString(1..20)	Displays the username of the person logging in or logging out.
cefcModuleResetReason	INTEGER	Identifies the reason for the last reset performed on the module.
ipAdEntAddr	IpAddress	Specifies the IP address to which this entry's addressing information pertains.
ifType	INTEGER	Indicates the type of interface.
cwTrapIndex	Integer32(0..2147483647)	Contains the value that is indexed to any table

Table 9-3 Miscellaneous Trap Varbinds (continued)


Varbind	Data Type	Description
<code>cvcConfControllerType</code>	INTEGER	Identifies the controller type.
<code>cvcConfControllerLocation</code>	Integer32(1..2147483647)	Identifies the location of the controller.
<code>entSensorThresholdSeverity</code>	INTEGER	Indicates the severity of the sensor threshold.
<code>cefcModuleOperStatus</code>	INTEGER	Shows the operational state of the module.
<code>cwTrapPhysicalVendorType</code>	ObjectID	Contains the <code>entPhysicalVendorType</code> value for the physical entity.
<code>cwTrapLineModuleNumber</code>	Integer32(1..4)	Contains the value for the <code>entPhysicalParentRelPos</code> object for line modules.
<code>cwTrapSlotNumber</code>	Integer32(1..64)	Contains the slot number of the module
<code>cbfDefineMaxFiles</code>	Gauge32	<p>Determines the maximum number of file definitions this system can hold in the <code>cbfDefineFile</code> table. A value of zero indicates no configured limit.</p> <p> Note This object can be read-only on some systems.</p> <p>If the number is changed, it does not disturb existing entries.</p>
<code>cbfDefineFileName</code>	OctetString(1..255)	Creates the filename. Explicit device or path choices in the value of this object can override <code>cbfDefineFileStorage</code> .

Table 9-3 Miscellaneous Trap Varbinds (continued)


Varbind	Data Type	Description
cbfStatusFileState	INTEGER	<p>Defines the following file states:</p> <ul style="list-style-type: none"> • <code>running</code>—Writes the data to the file. • <code>ready</code>—Specifies the file is ready to be read. • <code>emptied</code>—Specifies an ephemeral file is successfully consumed. • <code>noSpace</code>—Specifies no data is evident due to insufficient file space. • <code>badNam</code>—Specifies no data is evident due to a name or path problem. • <code>writeErr</code>—Specifies no data is evident due to a fatal file write error. • <code>noMem</code>—Specifies no data is evident due to insufficient dynamic memory. • <code>buffErr</code>—Specifies the implementation buffer is too small. • <code>aborted</code>—Specifies the file state is short and is terminated by operator command. <p> Note Only the ready state implies that the file is available for transfer.</p> <p>The disposition of files after an error is implemented are specific to the file state.</p>
cbfStatusFileCompletionTime	TimeTicks	<p>Determines the value of <code>sysUpTime</code> when the creation attempt completed. A value of zero indicates not complete. For ephemeral files, this is the time when <code>cbfStatusFileState</code> states <code>emptied</code>. For others, this is the time when the state leaves <code>running</code>.</p>
cwsConfIpAddress	IpAddress	Specifies the IP address of the SCM.

Table 9-3 Miscellaneous Trap Varbinds (continued)

Varbind	Data Type	Description
cwsStatsFileInfo	OCTET STRING (SIZE(0..512))	<p>Contains information on statistics related files.</p> <p>The statistics files are uploaded and downloaded using a file transfer mechanism FTP, TFTP, and so forth. The downloaded and uploaded files are available from a nonvolatile storage, for example, hard disk, flash disk, and so forth.</p> <p>The following categories are used for the statistics file:</p> <ul style="list-style-type: none"> • <code>stats upload</code> file—Contains statistics data. These files can be uploaded only from the switch. • <code>stats enable</code> file—Contains the statistics that have to be enabled or disabled in one or more modules. These files can be downloaded as well as uploaded to or from the switch. <p>This object can contain one or more records of files that were created, not uploaded in time, or uploaded and downloaded.</p> <p>Along with the filename, each record contains type of operation (created, uploaded, downloaded major trap, or critical trap) and number of applicable failed attempts.</p> <p>The values for each of the fields in the OCTET STRING depends upon the file categories <code>stats upload</code>, <code>stats enable</code>, and so forth.</p> <p>The following is the object layout:</p> <pre> NumOfRecords (SIZE(1)) RECORD (SIZE(23)) Filename STRING (SIZE(21)) Reason INT (SIZE(1)) NumOfFailUpload (SIZE(1)) </pre> <p>The following are the definitions for the fields:</p> <ul style="list-style-type: none"> • <code>NumOfRecords</code>—Designates the number of records. These records can all be the same type and can contain file uploaded information, or <code>stat enable</code> information, <code>stat file trap</code> information, or <code>stat enable trap</code> information. • <code>Reason</code>—Specifies the following fields: <ul style="list-style-type: none"> – 1—Indicates the file is created or uploaded. – 2—Indicates a MAJOR warning for the file not being uploaded. – 3—Indicates a CRITICAL warning for the file not being uploaded.

Table 9-3 Miscellaneous Trap Varbinds (continued)

Varbind	Data Type	Description
cwsStatsFileInfo (continued)		<ul style="list-style-type: none"> <li data-bbox="922 317 1511 373">– 4—Indicates that the SNMP manager has downloaded the <code>stats enable</code> file. <li data-bbox="922 394 1511 577">– 5—Indicates that the module, for example, Processor Module or Service Module, accepted the <code>stats enable</code> file without any error. The modules store the statistics information to enable or disable a dependent mechanism. This value cannot be set from the SNMP Manager. <li data-bbox="922 598 1511 688">– 6—Indicates that the module did not accept the <code>stats enable</code> file due to some error. This value cannot be set from the SNMP manager. <li data-bbox="873 709 1511 825">• <code>NumOfFailUpload</code>—Specifies the value is set to 0 except or for the cases when the <code>Reason</code> field is either 1 (created), 2, 3 (<code>stat file trap</code>). The parameter can have a value greater than 0.

