CEN

WORKSHOP

AGREEMENT

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Extensions for Financial Services (XFS) interface specification - Release 3.20 - Part 47: XFS MIB Device Specific Definitions - Item Processing Module Device Class MIB Version 3.20

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This CWA is revision 3.20 of the XFS interface specification.

This CEN Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties on 2011-06-29, the constitution of which was supported by CEN following the public call for participation made on 1998-06-24. The specification is continuously reviewed and commented in the CEN/ISSS Workshop on XFS. It is therefore expected that an update of the specification will be published in due time as a CWA, superseding this revision 3.20.

A list of the individuals and organizations which supported the technical consensus represented by the CEN Workshop Agreement is available to purchasers from the CEN-CENELEC Management Centre. These organizations were drawn from the banking sector. The CEN/ISSS XFS Workshop gathered suppliers as well as banks and other financial service companies.

The CWA is published as a multi-part document, consisting of:

Part 1: Application Programming Interface (API) - Service Provider Interface (SPI) - Programmer's Reference

Part 2: Service Class Definition - Programmer's Reference

Part 3: Printer and Scanning Device Class Interface - Programmer's Reference

Part 4: Identification Card Device Class Interface - Programmer's Reference

Part 5: Cash Dispenser Device Class Interface - Programmer's Reference

Part 6: PIN Keypad Device Class Interface - Programmer's Reference

Part 7: Check Reader/Scanner Device Class Interface - Programmer's Reference

Part 8: Depository Device Class Interface - Programmer's Reference

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Part 10: Sensors and Indicators Unit Device Class Interface - Programmer's Reference

Part 11: Vendor Dependent Mode Device Class Interface - Programmer's Reference

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Part 13: Alarm Device Class Interface - Programmer's Reference

Part 14: Card Embossing Unit Class Interface - Programmer's Reference

Part 15: Cash-In Module Device Class Interface - Programmer's Reference

Part 16: Card Dispenser Device Class Interface - Programmer's Reference

Part 17: Barcode Reader Device Class Interface - Programmer's Reference

Part 18: Item Processing Module Device Class Interface- Programmer's Reference

Parts 19 - 28: Reserved for future use.

Parts 29 through 47 constitute an optional addendum to this CWA. They define the integration between the SNMP standard and the set of status and statistical information exported by the Service Providers.

Part 29: XFS MIB Architecture and SNMP Extensions MIB 3.20

Part 30: XFS MIB Device Specific Definitions - Printer Device Class MIB 3.20

Part 31: XFS MIB Device Specific Definitions - Identification Card Device Class MIB 3.20

Part 32: XFS MIB Device Specific Definitions - Cash Dispenser Device Class MIB 3.20

Part 33: XFS MIB Device Specific Definitions - PIN Keypad Device Class MIB 3.20

Part 34: XFS MIB Device Specific Definitions - Check Reader/Scanner Device Class MIB 3.20

Part 35: XFS MIB Device Specific Definitions - Depository Device Class MIB 3.20

Part 36: XFS MIB Device Specific Definitions - Text Terminal Unit Device Class MIB 3.20

Part 37: XFS MIB Device Specific Definitions - Sensors and Indicators Unit Device Class MIB 3.20

Part 38: XFS MIB Device Specific Definitions - Camera Device Class MIB 3.20

Part 39: XFS MIB Device Specific Definitions - Alarm Device Class MIB 3.20

Part 40: XFS MIB Device Specific Definitions - Card Embossing Unit Class MIB 3.20

Part 41: XFS MIB Device Specific Definitions - Cash-In Module Device Class MIB 3.20

Part 42: Reserved for future use.

Part 43: XFS MIB Device Specific Definitions - Vendor Dependent Mode Class MIB 3.20

Part 44: XFS MIB Application Management MIB 3.20

Part 45: XFS MIB Device Specific Definitions - Card Dispenser Device Class MIB 3.20

Part 46: XFS MIB Device Specific Definitions - Barcode Reader Device Class MIB 3.20

Part 47: XFS MIB Device Specific Definitions - Item Processing Module Device Class MIB 3.20

Parts 48 - 60 are reserved for future use.

Part 61: Application Programming Interface (API) - Service Provider Interface (SPI) - Migration from Version 3.10 (CWA 15748) to Version 3.20 (this CWA) - Programmer's Reference

Part 62: Printer and Scanning Device Class Interface Migration from Version 3.10 (CWA 15748) to Version 3.20 (this CWA) - Programmer's Reference

Part 63: Identification Card Device Class Interface - Migration from Version 3.10 (CWA 15748) to Version 3.20 (this CWA) - Programmer's Reference

Part 64: Cash Dispenser Device Class Interface - Migration from Version 3.10 (CWA 15748) to Version 3.20 (this CWA) - Programmer's Reference

Part 65: PIN Keypad Device Class Interface - Migration from Version 3.10 (CWA 15748) to Version 3.20 (this CWA) - Programmer's Reference

Part 66: Check Reader/Scanner Device Class Interface - Migration from Version 3.10 (CWA 15748) to Version 3.20 (this CWA) - Programmer's Reference

Part 67: Depository Device Class Interface - Migration from Version 3.10 (CWA 15748) to Version 3.20 (this CWA) - Programmer's Reference

Part 68: Text Terminal Unit Device Class Interface - Migration from Version 3.10 (CWA 15748) to Version 3.20 (this CWA) - Programmer's Reference

Part 69: Sensors and Indicators Unit Device Class Interface - Migration from Version 3.10 (CWA 15748) to Version 3.20 (this CWA) - Programmer's Reference

Part 70: Vendor Dependent Mode Device Class Interface - Migration from Version 3.10 (CWA 15748) to Version 3.20 (this CWA) - Programmer's Reference

Part 71: Camera Device Class Interface - Migration from Version 3.10 (CWA 15748) to Version 3.20 (this CWA) - Programmer's Reference

Part 72: Alarm Device Class Interface - Migration from Version 3.10 (CWA 15748) to Version 3.20 (this CWA) - Programmer's Reference

Part 73: Card Embossing Unit Device Class Interface - Migration from Version 3.10 (CWA 15748) to Version 3.20 (this CWA) - Programmer's Reference

Part 74: Cash-In Module Device Class Interface - Migration from Version 3.10 (CWA 15748) to Version 3.20 (this CWA) - Programmer's Reference

Part 75: Card Dispenser Device Class Interface - Migration from Version 3.10 (CWA 15748) to Version 3.20 (this CWA) - Programmer's Reference

Part 76: Barcode Reader Device Class Interface - Migration from Version 3.10 (CWA 15748) to Version 3.20 (this CWA) - Programmer's Reference

Part 77: Item Processing Module Device Class Interface - Migration from Version 3.10 (CWA 15748) to Version 3.20 (this CWA) - Programmer's Reference

In addition to these Programmer's Reference specifications, the reader of this CWA is also referred to a complementary document, called Release Notes. The Release Notes contain clarifications and explanations on the CWA specifications, which are not requiring functional changes. The current version of the Release Notes is available online from http://www.cen.eu/cen/Sectors/Sectors/ISSS/Activity/Pages/WSXFS.aspx.

The information in this document represents the Workshop's current views on the issues discussed as of the date of publication. It is furnished for informational purposes only and is subject to change without notice. CEN/ISSS makes no warranty, express or implied, with respect to this document.

The final review/endorsement round for parts 29-47 of this CWA was started on 2014-06-23 and was successfully closed on 2014-07-23. The final text for parts 29-47 of this CWA was submitted to CEN for publication on 2014-08-22.

This CEN Workshop Agreement is publicly available as a reference document from the National Members of The following countries: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Comments or suggestions from the users of the CEN Workshop Agreement are welcome and should be addressed to the CEN-CENELEC Management Centre.

Revision History:

3.10	December 14, 2010	Initial revision supporting the IPM specification in CEN XFS. 3.10
3.20	March 28, 2014	Update release to align the MIB with XFS 3.20.

1 Introduction

This document provides the device specific MIB definition (Management Information Base) variables for the xfsIPM sub-tree version one, as foreseen by the *XFS MIB Architecture and SNMP Extensions Programmer's Reference* document. All the attributes in all the MIBs are Mandatory. In the case where a vendor's device does not support an attribute then a request for this unsupported attribute should return NULL.

The xfsIPM version one sub-tree is identified by:

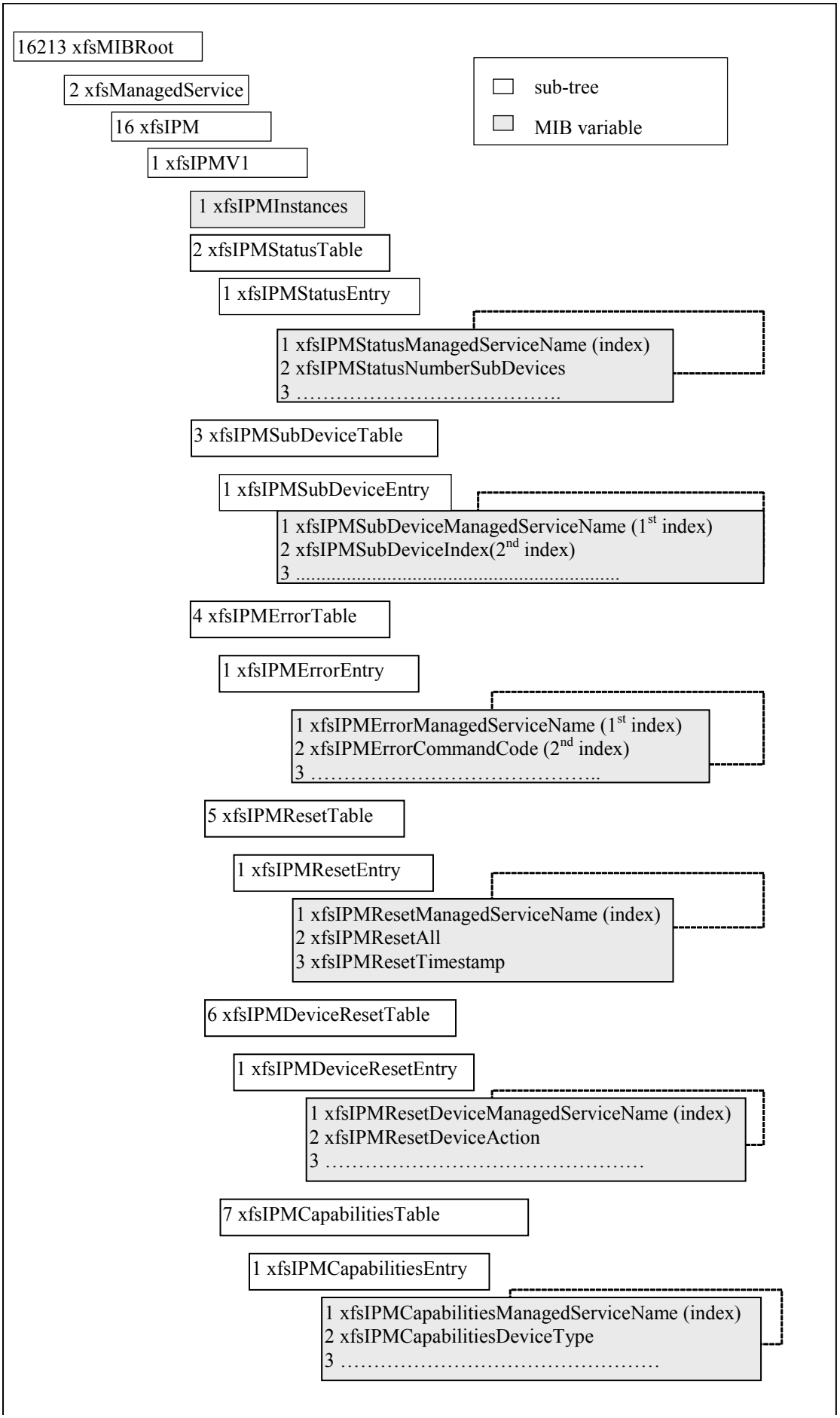
xfsMIBRoot

- xfsManagedService (2)
  - xfsIPM (16)
    - xfsIPMV1 (1)

The xfsIPMV1 sub-tree contains the following variables:

* *xfsIPMInstances(1)* is the number of managed services for the IPM class installed on the XFS subsystem. It is a 32 bit numerical field.
* *xfsIPMStatusTable(2)* identifies the table for the IPM variables.
* *xfsIPMSubDeviceTable(3)* this table contains the sub-device table for the IPM device.
* *xfsIPMErrorTable(4)* identifies the table for the IPM error counter variables.
* *xfsIPMResetTable(5)* identifies the table for the IPM reset variable.
* *xfsIPMResetDeviceTable(6)* identifies the table for the IPM reset device variables.
* *xfsIPMCapabilitiesTable(7)* identifies the table for IPM capabilities variables.

The *XFS MIB Architecture and SNMP Extensions Programmer's Reference* document provides an overview of the MIB structure. The following picture shows the structure of the *xfsIPMV1* sub-tree.


16213 xfsMIBRoot
2 xfsManagedService
16 xfsIPM
1 xfsIPMV1
1 xfsIPMInstances
2 xfsIPMStatusTable
1 xfsIPMStatusEntry
1 xfsIPMStatusManagedServiceName (index)
2 xfsIPMStatusNumberSubDevices
3 …….
3 xfsIPMSubDeviceTable
1 xfsIPMSubDeviceEntry
1 xfsIPMSubDeviceManagedServiceName (1st index)
2 xfsIPMSubDeviceIndex(2nd index)
3 .....
4 xfsIPMErrorTable
1 xfsIPMErrorEntry
1 xfsIPMErrorManagedServiceName (1st index)
2 xfsIPMErrorCommandCode (2nd index)
3 ……..
5 xfsIPMResetTable
1 xfsIPMResetEntry
1 xfsIPMResetManagedServiceName (index)
2 xfsIPMResetAll
3 xfsIPMResetTimestamp
6 xfsIPMDeviceResetTable
1 xfsIPMDeviceResetEntry
1 xfsIPMResetDeviceManagedServiceName (index)
2 xfsIPMResetDeviceAction
3 ……
7 xfsIPMCapabilitiesTable
1 xfsIPMCapabilitiesEntry
1 xfsIPMCapabilitiesManagedServiceName (index)
2 xfsIPMCapabilitiesDeviceType
3 ……
sub-tree
MIB variable

Section 3 describes how the Status, Sub-Device, Error, Reset, Reset Device, and Capabilities tables apply to the IPM device class.

2 XFS IPM MIB variables

This section describes the MIB variables for the tables of the IPM Class. The description of the variables listed below includes, where it is meaningful, a reference to relevant data structures and commands defined inside the *Item Processing Module Device Class Interface Programmer's Reference.* The following are some general notes pertaining to the MIB variables:

- All command response counters maintained by the Service Provider are persistent across re-boots.
- One application command may trigger only one command-related counter to be updated.
- One application command may trigger one or multiple status variables to be updated.
- All command response counters are read-writable unless otherwise specified.
- Each managed service has a Reset table that allows all the response counters to be reset.
- Each managed service has a Reset Device table that allows the WFS_CMD_IPM_RESET command to be executed from the management station.

2.1 XFS IPM Status Table

The *xfsIPMStatusTable(2)* groups the variables identifying device status information, statistics and auxiliary variables. It is indexed through a single parameter, *xfsIPMStatusManagedServiceName*. All device status variables are read-only.

Additional variables can be used to contain vendor-dependent variables. These variables do not start immediately after the standard variables in order to allow for expansion of the standard variables, the first additional variable can be added at position 1000.

xfsIPMManagedServiceName is the instance identifier of the managed service and uniquely identifies one instance of the IPM class.
As an example, the identifier for the device status value of *xfsIPMStatusStacker(11)* for a device with managed service name equal to "ItemProcessor1" is as follows:

Character	I	t	e	m	P	r	o	c	e	s	s	o	r	1
ASCII Hex	49	74	65	6D	50	72	6F	63	65	73	73	6F	72	31
ASCII Dec	73	116	101	109	80	114	111	99	101	115	115	111	114	49

NOTE: SNMP OID representation of strings consists of a length field specifying the number of characters in the string followed by the ASCII code in decimal for each character in the string. Therefore the OID of the above example is:

xfsMIBRoot.2.16.1.2.1.11.14.73.116.101.109.80.114.111.99.101.115.115.111.114.49

2.1.1 xfsIPMStatusTable: States

The first three status variables are common across all device classes, the other variables are device class specific.

xfsIPMStatusManagedServiceName (1)
Uniquely identifies the managed service.

xfsIPMStatusNumberSubDevices (2)
Defines how many sub-devices the service has.

xfsIPMStatusDevice (3)
It contains the state of the IPM. However, an *xfsIPMStatusDevice* (3) status of xfsDevOnline does not necessarily imply that accepting can take place: the value of *xfsIPMStatusAcceptor* (4) field must be taken into account. Allowed values are:

Value	Meaning
xfsDevOnline(1)	The device is online (i.e. powered on and operable)
xfsDevOffline(2)	The device is offline (e.g. the operator has taken the device offline by turning a switch or pulling out the device).
xfsDevPowerOff(3)	The device is powered off or physically not connected
xfsDevNoDevice(4)	The device is not intended to be there, e.g. this type of self-service machine does not contain such a device or it is internally not configured.
xfsDevHWError(5)	The device is inoperable due to a hardware error
xfsDevUserError(6)	The device is present but a person is preventing proper device operation.
xfsDevBusy(7)	The device is busy and unable to process an execute command at this time.
xfsDevFraudAttempt(8)	The device is present but is inoperable because it has detected a fraud attempt.
xfsDevPotentialFraud(9)	The device is present but has detected a potential fraud attempt and is capable of remaining in service.

xfsIPMStatusAcceptor (4)
It contains the state of the overall acceptor media bins. Allowed values are:

Value	Meaning
xfsIPMAccBinOK(1)	All media bins present are in a good state
xfsIPMAccBinState (2)	One or more of the media bins is in a high, full or inoperative condition. Items can still be accepted into at least one of the media bins.
xfsIPMAccBinStop(3)	Due to a media bin problem accepting is impossible. No items can be accepted because all of the media bins are in a full or in an inoperative condition.
xfsIPMAccBinUnknown(4)	Due to a hardware error or other condition, the state of the media bins cannot be determined.

xfsIPMStatusMedia (5)
It contains the state of the media. Allowed values are:

Value	Meaning
xfsIPMMediaPresent(1)	Media is present in the device.
xfsIPMMediaNotPresent(2)	Media is not present in the device.
xfsIPMMediaJammed(3)	Media is jammed in the device.
xfsIPMMediaNotSupported(4)	The capability to report the state of the media is not supported by the device.
xfsIPMMediaUnknown(5)	The state of the media cannot be determined with the device in its current state.
xfsIPMMediaPosition(6)	Media is at one or more of the input, output or refused positions.

xfsIPMStatusToner (6)
It contains the state of the toner or ink supply or the state of the ribbon of the endorser. Allowed values are:

Value	Meaning
xfsIPMTonerFull(1)	The toner or ink supply is full or the ribbon is OK.
xfsIPMTonerLow(2)	The toner or ink supply is low or the print contrast with a ribbon is weak.
xfsIPMTonerOut(3)	The toner or ink supply is empty or the print contrast with a ribbon is not sufficient any more.
xfsIPMTonerNotSupp(4)	The physical device does not support endorsing or the capability to report the status of the toner/ink is not supported by the device.
xfsIPMTonerUnknown(5)	Status of toner or ink supply or the ribbon cannot be determined with the device in its current state.

xfsIPMStatusInk (7)
It contains the state of the stamping ink. Allowed values are:

Value	Meaning
xfsIPMInkFull(1)	Ink supply in the device is full.
xfsIPMInkLow(2)	Ink supply in the device is low.
xfsIPMInkOut(3)	Ink supply in the device is empty.
xfsIPMInkNotSupported(4)	The physical device does not support stamping or the capability to report the status of the stamp ink supply is not supported by the device.
xfsIPMInkUnknown(5)	Status of the stamping ink supply cannot be determined with the device in its current state.

xfsIPMStatusFrontImageScanner (8)
It contains the state of the front image scanner that captures images of the front of the media items. Allowed values are:

Value	Meaning
xfsIPMScannerOk(1)	The front scanner is OK.
xfsIPMScannerFading(2)	The front scanner performance is degraded.
xfsIPMScannerInop(3)	The front scanner is inoperable.
xfsIPMScannerNotSupported(4)	The physical device has no front scanner or the capability to report the status of the front scanner is not supported by the device.
xfsIPMScannerUnknown(5)	Status of the front scanner cannot be determined with the device in its current state.

xfsIPMStatusBackImageScanner (9)
It contains the state of the back image scanner that captures images of the back of the media items. Allowed values are:

Value	Meaning
xfsIPMScannerOk(1)	The back scanner is OK.
xfsIPMScannerFading(2)	The back scanner performance is degraded.
xfsIPMScannerInop(3)	The back scanner is inoperable.
xfsIPMScannerNotSupported(4)	The physical device has no back scanner or the capability to report the status of the back scanner is not supported by the device.

xfsIPMScannerUnknown(5)	Status of the back scanner cannot be determined with the device in its current state.

xfsIPMStatusMICRReader (10)
It contains the state of the MICR code line reader. Allowed values are:

Value	Meaning
xfsIPMMICROk(1)	The MICR code line reader is OK.
xfsIPMMICRFading(2)	The MICR code line reader performance is degraded.
xfsIPMMICRInop(3)	The MICR code line reader is inoperative.
xfsIPMMICRNotSupported(4)	The physical device has no MICR code line reader or the capability to report the status of the MICR code line reader is not supported by the device.
xfsIPMMICRUnknown(5)	Status of the MICR code line reader cannot be determined with the device in its current state.

xfsIPMStatusStacker (11)
It contains the state of the stacker (also known as an escrow). The stacker is where the media items are held while the application decides what to do with them. Allowed values are:

Value	Meaning
xfsIPMStackerEmpty(1)	The stacker is empty.
xfsIPMStackerNotEmpty(2)	The stacker is not empty.
xfsIPMStackerFull(3)	The stacker is full. This state is set if the number of media items on the stacker has reached *usMaxMediaOnStacker* or some physical limit has been reached.
xfsIPMStackerInop(4)	The stacker is inoperative.
xfsIPMStackerUnknown(5)	Due to a hardware error or other condition, the state of the stacker cannot be determined.
xfsIPMStackerNotSupported(6)	The physical device has no stacker or the capability to report the status of the stacker is not supported by the device.

xfsIPMStatusRebuncher (12)
It contains the state of the rebuncher (return stacker). The rebuncher is where media items are re-bunched ready for return to the customer. Allowed values are:

Value	Meaning
xfsIPMRebuncherEmpty(1)	The rebuncher is empty.
xfsIPMRebuncherNotEmpty(2)	The rebuncher is not empty.
xfsIPMRebuncherFull(3)	The rebuncher is full. This state is set if the number of media items on the rebuncher has reached its physical limit.
xfsIPMRebuncherInop(4)	The rebuncher is inoperative.
xfsIPMRebuncherUnknown(5)	Due to a hardware error or other condition, the state of the rebuncher cannot be determined.
xfsIPMRebuncherNotSupported(6)	The physical device has no rebuncher or the capability to report the status of the rebuncher is not supported by the device.

xfsIPMStatusMediaFeeder (13)
It contains the state of the media feeder. Allowed values are:

Value	Meaning
xfsIPMMediaFeederEmpty(1)	The media feeder is empty.
xfsIPMMediaFeederNotEmpty(2)	The media feeder is not empty.
xfsIPMMediaFeederInop(3)	The media feeder is inoperative.
xfsIPMMediaFeederUnknown(4)	Due to a hardware error or other condition, the state of the media feeder cannot be determined.
xfsIPMMediaFeederNotSupported(5)	The physical device has no media feeder or the capability to report the status of the media feeder is not supported by the device.

xfsIPMStatusShutterInput (14)
It contains the state of the shutter at the input position. Allowed values are:

Value	Meaning
xfsIPMShutterClosed(1)	The shutter is closed.
xfsIPMShutterOpen(2)	The shutter is open.
xfsIPMShutterJammed(3)	The shutter is jammed.
xfsIPMShutterUnknown(4)	Due to a hardware error or other condition, the state of the shutter cannot be determined.
xfsIPMShutterNotSupported(5)	The physical device has no shutter or shutter state reporting is not supported.

xfsIPMStatusPositionInput (15)
It contains the state of the input position. Allowed values are:

Value	Meaning
xfsIPMPSEmpty(1)	The position is empty.
xfsIPMPSNotEmpty(2)	The position is not empty.
xfsIPMPSUnknown(3)	Due to a hardware error or other condition, the state of the position cannot be determined.
xfsIPMPSNotSupported(4)	The device is not capable of reporting whether or not items are at the position.

xfsIPMStatusTransportInput (16)
It contains the state of the transport mechanism at the input position. Allowed values are:

Value	Meaning
xfsIPMTPOK(1)	The transport is in good state.
xfsIPMTPInop(2)	The transport is inoperative due to a hardware failure or media jam.
xfsIPMTPUnknown(3)	Due to a hardware error or other condition, the state of the transport cannot be determined.
xfsIPMTPNotSupported(4)	The device either has no transport or the transport status reporting is not supported.

xfsIPMStatusTransportMediaInput (17)
It contains information regarding items which may be present on the transport at the input position. Allowed values are:

Value	Meaning
xfsIPMTPMediaEmpty(1)	The transport is empty.
xfsIPMTPMediaNotEmpty(2)	The transport is not empty.
xfsIPMTPMediaUnknown(3)	Due to a hardware error or other condition it is not known whether there are items on the transport.
xfsIPMTPMediaNotSupported(4)	The device is not capable of reporting whether or not items are on the transport.

xfsIPMStatusShutterOutput (18)
It contains the state of the shutter at the output position. Allowed values are:

Value	Meaning
xfsIPMShutterClosed(1)	The shutter is closed.
xfsIPMShutterOpen(2)	The shutter is open.
xfsIPMShutterJammed(3)	The shutter is jammed.
xfsIPMShutterUnknown(4)	Due to a hardware error or other condition, the state of the shutter cannot be determined.
xfsIPMShutterNotSupported(5)	The physical device has no shutter or shutter state reporting is not supported.

xfsIPMStatusPositionOutput (19)
It contains the state of the output position. Allowed values are:

Value	Meaning
xfsIPMPSEmpty(1)	The position is empty.
xfsIPMPSNotEmpty(2)	The position is not empty.
xfsIPMPSUnknown(3)	Due to a hardware error or other condition, the state of the position cannot be determined.
xfsIPMPSNotSupported(4)	The device is not capable of reporting whether or not items are at the position.

xfsIPMStatusTransportOutput (20)
It contains the state of the transport mechanism at the output position. Allowed values are:

Value	Meaning
xfsIPMTPOK(1)	The transport is in good state.
xfsIPMTPInop(2)	The transport is inoperative due to a hardware failure or media jam.
xfsIPMTPUnknown(3)	Due to a hardware error or other condition, the state of the transport cannot be determined.
xfsIPMTPNotSupported(4)	The device either has no transport or the transport status reporting is not supported.

xfsIPMStatusTransportMediaOutput (21)
It contains information regarding items which may be present on the transport at the output position. Allowed values are:

Value	Meaning
xfsIPMTPMediaEmpty(1)	The transport is empty.

xfsIPMTPMediaNotEmpty(2)	The transport is not empty.
xfsIPMTPMediaUnknown(3)	Due to a hardware error or other condition it is not known whether there are items on the transport.
xfsIPMTPMediaNotSupported(4)	The device is not capable of reporting whether or not items are on the transport.

xfsIPMStatusShutterRefused (22)
It contains the state of the shutter at the refused position. Allowed values are:

Value	Meaning
xfsIPMShutterClosed(1)	The shutter is closed.
xfsIPMShutterOpen(2)	The shutter is open.
xfsIPMShutterJammed(3)	The shutter is jammed.
xfsIPMShutterUnknown(4)	Due to a hardware error or other condition, the state of the shutter cannot be determined.
xfsIPMShutterNotSupported(5)	The physical device has no shutter or shutter state reporting is not supported.

xfsIPMStatusPositionRefused (23)
It contains the state of the refused position. Allowed values are:

Value	Meaning
xfsIPMPSEmpty(1)	The position is empty.
xfsIPMPSNotEmpty(2)	The position is not empty.
xfsIPMPSUnknown(3)	Due to a hardware error or other condition, the state of the position cannot be determined.
xfsIPMPSNotSupported(4)	The device is not capable of reporting whether or not items are at the position.

xfsIPMStatusTransportRefused (24)
It contains the state of the transport mechanism at the refused position. Allowed values are:

Value	Meaning
xfsIPMTPOK(1)	The transport is in good state.
xfsIPMTPInop(2)	The transport is inoperative due to a hardware failure or media jam.
xfsIPMTPUnknown(3)	Due to a hardware error or other condition, the state of the transport cannot be determined.
xfsIPMTPNotSupported(4)	The device either has no transport or the transport status reporting is not supported.

xfsIPMStatusTransportMediaRefused (25)
It contains information regarding items which may be present on the transport at the refused position. Allowed values are:

Value	Meaning
xfsIPMTPMediaEmpty(1)	The transport is empty.
xfsIPMTPMediaNotEmpty(2)	The transport is not empty.

xfsIPMTPMediaUnknown(3)	Due to a hardware error or other condition it is not known whether there are items on the transport.
xfsIPMTPMediaNotSupported(4)	The device is not capable of reporting whether or not items are on the transport.

xfsIPMStatusGuidanceMediaInput (26)
It contains the state of the guidance light at the input position.

Value	XFS Name	Meaning
0x00000000	WFS_IPM_GUIDANCE_NOT_AVAILABLE	The status is not available.
0x00000001	WFS_IPM_GUIDANCE_OFF	The light is turned off.
0x00000004	WFS_IPM_GUIDANCE_SLOW_FLASH	The light is blinking slowly.
0x00000008	WFS_IPM_GUIDANCE_MEDIUM_FLASH	The light is blinking medium frequency.
0x00000010	WFS_IPM_GUIDANCE_QUICK_FLASH	The light is blinking quickly.
0x00000080	WFS_IPM_GUIDANCE_CONTINUOUS	The light is turned on continuous (steady).
0x00000100	WFS_IPM_GUIDANCE_RED	The light is red.
0x00000200	WFS_IPM_GUIDANCE_GREEN	The light is green.
0x00000400	WFS_IPM_GUIDANCE_YELLOW	The light is yellow.
0x00000800	WFS_IPM_GUIDANCE_BLUE	The light is blue.
0x00001000	WFS_IPM_GUIDANCE_CYAN	The light is cyan.
0x00002000	WFS_IPM_GUIDANCE_MAGENTA	The light is magenta.
0x00004000	WFS_IPM_GUIDANCE_WHITE	The light is white.

xfsIPMStatusGuidanceMediaOutput (27)
It contains the state of the guidance light at the output position. Allowed values are the same as variable *xfsIPMStatusGuidanceMediaInput* (26).

xfsIPMStatusGuidanceMediaRefused (28)
It contains the state of the guidance light at the refused position. Allowed values are the same as variable *xfsIPMStatusGuidanceMediaInput* (26).

xfsIPMStatusDevicePosition (29)
It contains the device position information. It is a numeric type field. Allowed values are:

Value	Meaning
xfsIPMDeviceInPosition(1)	The device is in its normal operating position, or is fixed in place and cannot be moved.
xfsIPMDeviceNotInPosition(2)	The device has been removed from its normal operating position.
xfsIPMDevicePosUnknown(3)	The device position cannot be determined.
xfsIPMDevicePosNotSupp(4)	The physical device does not have the capability of detecting the position.

xfsIPMStatusPowerSaveRecoveryTime (30)
It contains the actual number of seconds required by the device to resume its normal operational state from the current power saving mode. This value is zero if either the power saving mode has not been activated or no power save control is supported. It is a numeric type field.

xfsIPMStatusMixedMode (31)
It contains whether Mixed Media mode is active. Allowed values are as follows:

Value	Meaning
xfsIPMMixedMediaNotActive(1)	Mixed Media transactions are not supported by the device or Mixed Media mode is not activated.
xfsIPMCIMMiedMedia(2)	Mixed Media mode using the CIM and IPM interfaces is activated.

xfsIPMStatusAntiFraudModule (32)
It contains the state of the anti-fraud module. Allowed values are as follows:

Value	Meaning
xfsIPMAFMNotSupported (1)	No anti-fraud module is available.
xfsIPMAFMOK(2)	Anti-fraud module is in a good state and no foreign device is detected.
xfsIPM AFMInop (3)	Anti-fraud module is inoperable.
xfsIPMAFMDeviceDetected(4)	Anti-fraud module detected the presence of a foreign device.
xfsIPMAFMUnknown(5)	The state of the anti-fraud module cannot be determined.

xfsIPMStatusExtraStatus (100)
It contains vendor dependent additional device status information. It is an OCTET STRING. The information is returned as a series of "*key=value*" strings. Each string is null-terminated, with the final string terminating with two null characters. An empty list is indicated by two consecutive null characters.

2.2 XFS IPM Sub Device Table

The *xfsIPMSubDeviceTable(3)* groups the variables identifying information for the media bins. It is indexed through two values, *xfsIPMSubDeviceManagedServiceName* and *xfsIPMSubDeviceIndex*. All sub-device table variables are read-only.
xfsIPMSubDeviceManagedServiceName is the instance identifier of the managed service and uniquely identifies one instance of the IPM class. As an example, the identifier for the sub-device status value of *xfsIPMSubDeviceMBPositionName*(4) for sub-device index 1 on a device with managed service name equal to "ItemProcessor1" is as follows:

Character	I	t	e	m	P	r	o	c	e	s	s	o	r	1
ASCII Hex	49	74	65	6D	50	72	6F	63	65	73	73	6F	72	31
ASCII Dec	73	116	101	109	80	114	111	99	101	115	115	111	114	49

NOTE: SNMP OID representation of strings consists of a length field specifying the number of characters in the string followed by the ASCII code in decimal for each character in the string. Therefore the OID of the above example is:

xfsMIBRoot.2.16.1.3.1.4.14.73.116.101.109.80.114.111.99.101.115.115.111.114.49

2.2.1 xfsIPMSubDeviceTable:

The first two variables are common across all devices, the other variables are sub-device specific.

It should be noted that in XFS the IPM specification uses a model of physical media bin only. The information for the IPM MIB Sub Device Table comes from the XFS IPM command WFS_INF_IPM_MEDIA_BIN_INFO.

xfsIPMSubDeviceManagedServiceName (1)
Uniquely identifies the managed service

xfsIPMSubDeviceIndex (2)
Index to the sub-device table only. This variable has no relationship to the media bin. This is an index (starting from 1) into the IPM Sub-device table.

xfsIPMSubDeviceMBBinNumber (3)
It contains the media bin number. Each structure has a unique number starting with a value of one (1) for the first structure, and incrementing by one for each subsequent structure. It is a numeric type field.

xfsIPMSubDeviceMBPositionName (4)
It contains the physical bin position name where the bin is inserted. This is an OCTET_STRING value.

xfsIPMSubDeviceMBType (5)
It contains the media bin type. It is a numeric type field and will be set to a combination of hex values according to the values in the following table:

Value	XFS Name	Meaning
0x00000001	WFS_IPM_TYPEMEDIAIN	Media bin. This type of bin can be specified as a destination for media items.
0x00000002	WFS_IPM_TYPERETRACT	Retract bin. This type of bin can be specified as a destination for the WFS_CMD_IPM_RETRACT_MEDIA command.

xfsIPMSubDeviceMBMediaType (6)
It contains the type of media this bin takes. It is a numeric type field. Allowed values are as follows:

Value	Meaning
xfsIPMMediaTypeIPM(2)	The media bin takes media through IPM device class only.
xfsIPMMediaTypeCompound(3)	The media bin takes media from IPM device class and from other device class (i.e. CIM).

xfsIPMSubDeviceMBBinID (7)
It contains the application defined media bin identifier. This is an OCTET STRING.

xfsIPMSubDeviceMBMediaInCount (8)
It contains the count of media that have entered the media bin as a result of operations on the IPM interface. This counter is incremented whenever media enters the media bin for any reason as a result of an operation initiated through the IPM interface. This value is persistent. On a retract-only bin, if the device cannot count media during a retract operation this value will be zero. It is a numeric type field.

xfsIPMSubDeviceMBCount (9)
It contains the total number of media in the media bin including the ones that entered via the compound device interface. If the bin is a shared bin with a compound device interface then this value may not be the same as the value of *xfsIPMSubDeviceMBMediaInCount* (8). On a retract-only bin, if the device cannot count media during a retract operation this value will be zero. It is a numeric type field.

xfsIPMSubDeviceMBRetractOperations (10)
It contains the total number of retract operations via WFS_CMD_IPM_RETRACT_MEDIA, WFS_CMD_IPM_RESET and error recovery where media is moved to the bin. This value is persistent. It is a numeric type field.

xfsIPMSubDeviceMBHardwareSensor (11)

It contains whether or not the threshold event, WFS_USRE_IPM_MEDIABINTHRESHOLD (WFS_IPM_STATMBHIGH), can be generated based on hardware sensors in the device. It is a TruthValue type field. Allowed values are:

Value	Meaning
True(1)	The threshold events may be generated based on hardware sensors. The threshold events will be based on the h/w sensors if the *xfsIPMSubDeviceMBMaximumItems* (12) and *xfsIPMSubDeviceMBMaximumRetractOperations* (13) are set to zero; if they are not set to zero, then the h/w sensors are ignored.
False(2)	The threshold events may not be generated based on hardware sensors.

xfsIPMSubDeviceMBMaximumItems (12)
It contains the value that controls when the threshold event WFS_USRE_IPM_MEDIABINTHRESHOLD (WFS_IPM_STATMBHIGH) will be generated; the *xfsIPMSubDeviceMBCount* (9) field must reach this value in order for the event to be generated. It is a numeric type field.

xfsIPMSubDeviceMBMaximumRetractOperations (13)
It contains the value that controls when the threshold event WFS_USRE_IPM_MEDIABINTHRESHOLD (WFS_IPM_STATMBHIGH) will be generated; the *xfsIPMSubDeviceMBRetractOperations* (10) field must reach this value in order for the event to be generated. This value is zero if the bin is not a retract bin (i.e. does not contain the WFS_IPM_TYPERETRACT value in the *xfsIPMSubDeviceMBType* (5) field). It is a numeric type field.

xfsIPMSubDeviceMBStatus (14)
It contains the status of the media bin. Allowed values are as follows:

Value	Meaning
xfsIPMMBStatOK(2)	The media bin is in good state.
xfsIPMMBStatFull(3)	The media bin is full.
xfsIPMMBStatHigh(4)	The media bin is almost full (threshold)
xfsIPMMBStatInop(5)	The media bin is inoperative.
xfsIPMMBStatMissing(6)	The media bin is missing.
xfsIPMMBStatUnknown(7)	The media bin is unknown.

xfsIPMSubDeviceMBExtraStatus (100)
It contains vendor dependent additional cash unit status information. It is an OCTET STRING. The information is returned as a series of "*key=value*" strings. Each string is null-terminated, with the final string terminating with two null characters.

2.3 XFS IPM Error Table

The *xfsIPMErrorTable(4)* provides access to all command response counters supported by a device class. The error table contains the set of counters for every combination of executable command and associated response that the Service Provider supports. The counters report the number of times that a response has been returned from a particular command since the counts were last reset. Selection of the required counter is made by specifying the managed service name, command code and response code through the following parameters

xsfIPMErrorManagedServiceName
xfsIPMErrorCommandCode
xfsIPMErrorResponseCode

The *xfsIPMErrorTable* is defined as:

- *xfsIPMErrorManagedServiceName(1*) which provides the primary index to the service in question. It is Display String field. The *xfsIPMErrorManagedServiceName* parameter corresponds to the value of *xfsMIBRoot.xfsGeneral.x*fsMIBV1*.xfsManagedServiceTable.xfsManagedServiceEntry.xfsManagedServiceName* in the general table. E.g. "ItemProcessor1".
- *xfsIPMErrorCommandCode(2)* is an index which identifies the command code that that response code is related to, e.g. WFS_CMD_IPM_MEDIA_IN (1601). It is a 32 bit numerical field.
- *xfsIPMErrorResponseCode(3*) is an index which identifies the response code that the count is required for. It is the absolute value of the error code e.g. WFS_ERR_IPM_STACKERFULL (-1603) is represented by 1603. It is a 32 bit numerical field
- *xfsIPMErrorCount(4*) is the count of the number of times that a particular response code has been generated while executing a specific command, since they were last reset. It is a 32 bit numerical field.

All counter variables are read-write. Issue of a Set command on a specific counter with value *x* will result in the individual counter being set to value *x*.

As an example, the identifier for the error count value for the WFS_ERR_IPM_STACKERFULL (-1603) error returned from the WFS_CMD_IPM_MEDIA_IN (1601) command for a device with managed service name equal to "ItemProcessor1" is as follows:

xfsMIBRoot.2.16.1.4.1.4.14.73.116.101.109.80.114.111.99.101.115.115.111.114.49.1601.1603

2.4 XFS IPM Reset Table

The *xfsIPMResetTable(5)* contains the *xfsIPMResetAll* and *xfsIPMResetTimestamp* variables and is indexed by the single variable, *xfsIPMResetManagedServiceName*. When the *xfsIPMResetAll* variable is set to 0 (zero), all the counters in the error table for the managed service are reset to 0 (zero), all other values are ignored.

The *xfsIPMResetTable* is defined as:

- *xfsIPMResetManagedServiceName(1)* which provides the primary index to the service in question. It is Display String field. The *xfsIPMResetManagedServiceName* parameter corresponds to the value of *xfsMIBRoot.xfsGeneral.xfsMIBV1.xfsManagedServiceTable.xfsManagedServiceEntry.xfsManagedServiceName* in the general table. E.g. "ItemProcessor1".
- *xfsIPMResetAll(2)* is a read-write variable. Issue of a Set command on the xfsIPMResetAll variable with value 0 (zero) will result in all counters for the managed service being reset to value 0 (zero). Any other value will be ignored. A query of the *xfsIPMResetAll* variable will return 0 (zero).
- *xfsIPMResetTimestamp(3)* is a read-only variable which represents the UTC date and time when the counters in the error table was reset, it is a Display String field. The data is formatted in the following way: "DD/MM/YYYY HH:MM:SS +ZZZ" where DD/MM/YYYY HH:MM:SS is the local date and time. ZZZ is the bias, which is the difference, in minutes, between Co-ordinated Universal Time (UTC) and local time.

As an example, all the error counts can be reset for a device with managed service name equal to "ItemProcessor1" by setting the value zero in the *xfsIPMResetAll* variable represented by:

xfsMIBRoot.2.16.1.5.1.2.14.73.116.101.109.80.114.111.99.101.115.115.111.114.49

2.5 XFS IPM Reset Device Table

The *xfsIPMResetDeviceTable(6)* is indexed by the single variable, *xfsIPMResetDeviceManagedServiceName*. This table contains variables which monitor and control the execution of the reset request.

The *xfsIPMResetDeviceAction* variable is used to initiate a reset. Setting this variable will cause the following to happen:

1. The SNMP agent will determine if a Device Reset is allowed by checking the *RemoteDeviceResetAllowed* configuration flag (see XFS Common Management Configuration section,

within the *XFS MIB Architecture and SNMP Extensions Programmer's Reference* document). If it is not allowed then the flow continues with step 5, otherwise the flow continues with step 2.

2. Exclusive access to the device will be obtained.
3. A WFS_CMD_IPM_RESET command will be issued.
4. Exclusive access to the device will be relinquished when the WFS_CMD_IPM_RESET command completes. Note: Exclusive access must be relinquished as soon as possible and implemented in such a way that deadlocks are avoided.
5. A *xfsIPMResetDeviceCompleteTrap* trap will be generated to report the result of the Device Reset request.

The *xfsIPMResetDeviceTable* is defined as:

- *xfsIPMResetDeviceManagedServiceName(1)* which provides the index to the service in question. It is a Display String field. The *xfsIPMResetDeviceManagedServiceName* parameter corresponds to the value of *xfsMIBRoot.xfsGeneral.xfsMIBV1.xfsManagedServiceTable.xfsManagedServiceEntry.xfsManagedServiceName* in the general table. E.g. "ItemProcessor1".
- *xfsIPMResetDeviceAction(2)* is a read-write variable. Issue of a Set command on the *xfsIPMResetDeviceAction* variable with value *executeReset(1)* will result in the device being reset as described above.
- *xfsIPMResetDeviceMediaControl(3)* is a read only variable. This variable reports how any media found within the device is handled. The value of the *xfsIPMResetDeviceMediaControl* variable is configured through the *ResetDeviceMediaControl* configuration setting (see Managed Service Configuration section, within the XFS MIB Architecture and SNMP Extensions Programmer's Reference document). If this value is not configured then the variable defaults to the mediaDefault value that indicates that the Service Provider is responsible for media control. The detailed device specific media control information (e.g. IPM retract area to retract media to) is configured through local SNMP Agent configuration.
- *xfsIPMResetDeviceStatus(4)* is a read only variable This variable can be used to check if a reset operation is still in progress. It is set when the reset is initiated and cleared when the reset command completes.

As an example, the device with managed service name equal to "ItemProcessor1" is reset by setting the *xfsIPMResetDeviceAction* variable represented by:

xfsMIBRoot.2.16.1.6.1.2.14.73.116.101.109.80.114.111.99.101.115.115.111.114.49

2.6 XFS IPM Capabilities Table

The *xfsIPMCapabilitiesTable(7)* groups the variables identifying device capabilities information, statistics and auxiliary variables. It is indexed through a single parameter, *xfsIPMCapabilitiesManagedServiceName*. All device capabilities variables are read-only.

Additional variables can be used to contain vendor-dependent variables. These variables do not start immediately after the standard variables in order to allow for expansion of the standard variables, the first additional variable can be added at position 1000.

xfsIPMCapabilitiesManagedServiceName is the instance identifier of the managed service and uniquely identifies one instance of the IPM class.
As an example, the identifier for the device status value of *xfsIPMCapabilitiesDeviceType(2)* for a device with managed service name equal to "ItemProcessor1" is as follows:

Character	I	t	e	m	P	r	o	c	e	s	s	o	r	1
ASCII Hex	49	74	65	6D	50	72	6F	63	65	73	73	6F	72	31
ASCII Dec	73	116	101	109	80	114	111	99	101	115	115	111	114	49

NOTE: SNMP OID representation of strings consists of a length field specifying the number of characters in the string followed by the ASCII code in decimal for each character in the string. Therefore the OID of the above example is:

xfsMIBRoot.2.16.1.7.1.2.14.73.116.101.109.80.114.111.99.101.115.115.111.114.49

2.6.1 xfsIPMCapabilitiesTable: Capabilities

The first capabilities variable is common across all device classes, the other variables are device class specific.

xfsIPMCapabilitiesManagedServiceName (1)
Uniquely identifies the managed service.

xfsIPMCapabilitiesDeviceType (2)
It specifies the type(s) of the physical device driven by the logical service. It is a numeric type field. Allowed values are:

Value	Meaning
xfsIPMSingleMediaInput(2)	Device accepts a single media item from customer.
xfsIPMBunchedMediaInput(3)	Device accepts a bunch of media items from customer.

xfsIPMCapabilitiesCompoundDevice (3)
It specifies whether the logical device is part of a compound physical device. It is a TruthValue type field. Allowed values are:

Value	Meaning
True(1)	The logical device is a part of compound physical device.
False(2)	The logical device is not a part of compound physical device.

xfsIPMCapabilitiesMaxMediaOnStacker (4)
It specifies the maximum number of media items that the stacker can hold (zero if the device does not have a stacker). If the device has a bunch media input capability and the stacker is not present or has a capacity of one then the application must process each item inserted sequentially as described in section 2.2.1 of CWA 15748-18 (the Item Processing Module Device Class Interface Programmer's Reference). It is a numeric type field.

xfsIPMCapabilitiesPrintSize (5)
It specifies the size of the print area. If the media item is inserted in one of the orientations specified in *xfsIPMCapabilitiesOrientation* (22), the Service Provider will print on the back side of the media. If the media item is inserted in a different orientation to those specified in *xfsIPMCapabilitiesOrientation* (22) then printing may occur on the front side, upside down or both. It is a string type field. Allowed values are:

Value	Meaning
“”	The device has no printing capabilities.
“<rows>,<cols>”	The text <rows> and <cols> are replaced with numeric values that are defined as follows: <rows> - the maximum number of rows of text that can be printed on a media item. This value is one for single line printers. <cols> - the maximum number of characters that can be printed on a row.

xfsIPMCapabilitiesStamping (6)
It specifies whether the device has stamping capability. If the media item is inserted in one of the orientations specified in *xfsIPMCapabilitiesOrientation* (22), the Service Provider will stamp on the front side of the media. If the media item is inserted in a different orientation to those specified in *xfsIPMCapabilitiesOrientation* (22) then stamping may occur on the back, upside down or both. It is a TruthValue type field. Allowed values are:

Value	Meaning
True(1)	The capability is present.
False(2)	The capability is absent.

xfsIPMCapabilitiesRescan (7)

It specifies whether the device has the capability to either physically rescan media items after they have been inserted into the device or is able to generate any image supported by the device during the WFS_CMD_IPM_READ_IMAGE command (regardless of the images requested during the WFS_CMD_IPM_MEDIA_IN command). It is a TruthValue type field. Allowed values are:

Value	Meaning
True(1)	The item can be re-scanned or the images can be generated using the parameters passed in the WFS_CMD_IPM_READ_IMAGE command.
False(2)	The item cannot be re-scanned and all images required (various color, file format, bit depth) must be gathered during execution of the WFS_CMD_IPM_MEDIA_IN command.

xfsIPMCapabilitiesPresentControl (8)

It specifies how the presenting of media items is controlled during the WFS_CMD_IPM_MEDIA_IN_END and WFS_CMD_IPM_MEDIA_IN_ROLLBACK commands. This field is always set to TRUE if the device has no shutter. This field applies to all positions. It is a TruthValue type field. Allowed values are:

Value	Meaning
True(1)	The presenting is controlled implicitly by the Service Provider.
False(2)	The presenting must be controlled explicitly by the application using the WFS_CMD_IPM_PRESENT_MEDIA command.

xfsIPMCapabilitiesApplicationRefuse (9)

It specifies if the Service Provider supports the WFS_CMD_IPM_MEDIA_IN mode where the application decides to accept or refuse each media item that has successfully been accepted by the device. It is a TruthValue type field. Allowed values are:

Value	Meaning
True(1)	The Service Provider supports this mode.
False(2)	The Service Provider does not support this mode (or the device does not have a stacker).

xfsIPMCapabilitiesRetractLocations (10)

It specifies the locations to which the media can be retracted using the WFS_CMD_IPM_RETRACT_MEDIA command. It is a numeric type field and will be set to a combination of hex values according to the values in the following table (zero if none of the choices is supported):

Value	XFS Name	Meaning
0x00000001	WFS_IPM_CTRLRETRACTTOBIN	Retract the media to a retract bin.
0x00000002	WFS_IPM_CTRLRETRACTTOTRANSPORT	Retract the media to the transport.
0x00000004	WFS_IPM_CTRLRETRACTTOSTACKER	Retract the media to the stacker.
0x00000008	WFS_IPM_CTRLRETRACTTOREBUNCHER	Retract the media to the rebuncher.

xfsIPMCapabilitiesResetControl (11)

It specifies the manner in which the media can be handled on WFS_CMD_IPM_RESET. It is a numeric type field and will be set to a combination of hex values according to the values in the following table (zero if none of the choices is supported):

Value	XFS Name	Meaning
0x00000001	WFS_IPM_RESETEJECT	Eject the media.
0x00000002	WFS_IPM_RESETRETRACTTOBIN	Retract the media to retract bin.
0x00000004	WFS_IPM_RESETRETRACTTOTRANSPORT	Retract the media to the transport.
0x00000008	WFS_IPM_RESETRETRACTTOREBUNCHER	Retract the media to the rebuncher.

xfsIPMCapabilitiesRetractCountsItems (12)

This field only applies to retract media bins. It specifies whether the bin reports the number of items retracted into the bin or just the number of retract operations. It is a TruthValue type field. Allowed values are:

Value	Meaning
True(1)	The *ulCount* and *ulMediaInCount* include the number of media items retracted and the *ulMaximumItems* value defines when the threshold event is generated.
False(2)	The *ulCount* and *ulMediaInCount* do not contain the number of media items retracted but *ulRetractOperations* reports the number of retract operations. In this case the *ulMaximumRetractOperations* defines when the threshold event will be generated.

xfsIPMCapabilitiesImageType (13)

It specifies the image format supported by this device. It is a numeric type field and will be set to a combination of hex values according to the values in the following table (zero if none of the choices is supported):

Value	XFS Name	Meaning
0x00000001	WFS_IPM_IMAGETIF	The device can return scanned images in TIFF 6.0 format.
0x00000002	WFS_IPM_IMAGEWMF	The device can return scanned images in WMF (Windows Metafile) format.
0x00000004	WFS_IPM_IMAGEBMP	The device can return scanned images in windows BMP format.
0x00000008	WFS_IPM_IMAGEJPG	The device can return scanned images in JPG format.

xfsIPMCapabilitiesFrontImageColorFormat (14)

It specifies the front image color formats supported by this device. It is a numeric type field and will be set to a combination of hex values according to the values in the following table (zero if none of the choices is supported):

Value	XFS Name	Meaning
0x00000001	WFS_IPM_IMAGECOLORBINARY	The device can return scanned images in binary.
0x00000002	WFS_IPM_IMAGECOLORGRAYSCALE	The device can return scanned images in gray scale.

Value	XFS Name	Meaning
0x00000004	WFS_IPM_IMAGECOLORFULL	The device can return scanned images in full color.

xfsIPMCapabilitiesBackImageColorFormat (15)

It specifies the back image color formats supported by this device. It is a numeric type field and will be set to a combination of hex values according to the values in the following table (zero if none of the choices is supported):

Value	XFS Name	Meaning
0x00000001	WFS_IPM_IMAGECOLORBINARY	The device can return scanned images in binary.
0x00000002	WFS_IPM_IMAGECOLORGRAYSCALE	The device can return scanned images in gray scale.
0x00000004	WFS_IPM_IMAGECOLORFULL	The device can return scanned images in full color.

xfsIPMCapabilitiesFrontScanColor (16)

It specifies the front image scan colors supported by this device and individually controllable by the application. Scan colors are used to enhance the scanning results on colored scan media. It is a numeric type field and will be set to a combination of hex values according to the values in the following table (zero if none of the choices is supported):

Value	XFS Name	Meaning
0x00000001	WFS_IPM_SCANCOLORRED	The device can return images scanned with red light.
0x00000002	WFS_IPM_SCANCOLORGREEN	The device can return images scanned with green light.
0x00000004	WFS_IPM_SCANCOLORBLUE	The device can return images scanned with blue light.
0x00000008	WFS_IPM_SCANCOLORYELLOW	The device can return images scanned with yellow light.
0x00000010	WFS_IPM_SCANCOLORWHITE	The device can return images scanned with white light.

xfsIPMCapabilitiesDefaultFrontScanColor (17)

It specifies the default front scan color format used by this device (i.e. when not explicitly set). It is a numeric type field. Allowed values are:

Value	Meaning
xfsIPMScanColorRed(2)	The default color is red light.
xfsIPMScanColorBlue(3)	The default color is blue light.
xfsIPMScanColorGreen(5)	The default color is green light.
xfsIPMScanColorYellow(9)	The default color is yellow light.
xfsIPMScanColorWhite(17)	The default color is white light.

xfsIPMCapabilitiesBackScanColor (18)

It specifies the back image scan colors supported by this device and individually controllable by the application. Scan colors are used to enhance the scanning results on colored scan media. It is a numeric type field and will be set to a combination of hex values according to the values in the following table (zero if none of the choices is supported):

Value	XFS Name	Meaning
0x00000001	WFS_IPM_SCANCOLORRED	The device can return images scanned with red light.
0x00000002	WFS_IPM_SCANCOLORGREEN	The device can return images scanned with green light.
0x00000004	WFS_IPM_SCANCOLORBLUE	The device can return images scanned with blue light.
0x00000008	WFS_IPM_SCANCOLORYELLOW	The device can return images scanned with yellow light.
0x00000010	WFS_IPM_SCANCOLORWHITE	The device can return images scanned with white light.

xfsIPMCapabilitiesDefaultBackScanColor (19)

It specifies the default back scan color format used by this device (i.e. when not explicitly set). It is a numeric type field. Allowed values are the same as variable *xfsIPMCapabilitiesDefaultFrontScanColor (17)*.

xfsIPMCapabilitiesCodelineFormat (20)

It specifies the code line formats supported by this device. It is a numeric type field and will be set to a combination of hex values according to the values in the following table (zero if none of the choices is supported):

Value	XFS Name	Meaning
0x00000001	WFS_IPM_CODELINECMC7	The device can read MICR CMC7 code lines.
0x00000002	WFS_IPM_CODELINEE13B	The device can read MICR E13B code lines.
0x00000004	WFS_IPM_CODELINEOCR	The device can read code lines using Optical Character Recognition.

xfsIPMCapabilitiesDataSource (21)

It specifies the reading/imaging capabilities supported by this device. It is a numeric type field and will be set to a combination of hex values according to the values in the following table (zero if none of the choices is supported):

Value	XFS Name	Meaning
0x00000001	WFS_IPM_IMAGEFRONT	The device can scan the front image of the document.
0x00000002	WFS_IPM_IMAGEBACK	The device can scan the back image of the document.
0x00000004	WFS_IPM_CODELINE	The device can recognize the code line.

xfsIPMCapabilitiesOrientation (22)

It specifies the media item insertion orientations supported by the Service Provider such that hardware features such as MICR reading, endorsing and stamping will be aligned with the correct edges and sides of the media item. Devices may still return code lines and images even if one of these orientations is not used during media insertion. If the media items are inserted in one of the orientations defined in this capability then any printing or stamping will be on the correct side of the media item. If the media is inserted in a different orientation then any printing or stamping may be on the wrong side, upside down or both. This value is reported based on the customer's perspective. It is a numeric type field and will be set to a combination of hex values according to the values in the following table (zero if none of the choices is supported):

Value	XFS Name	Meaning
0x00000001	WFS_IPM_INSCODELINERIGHT	The media item should be inserted short edge first with the code line to the right.

Value	XFS Name	Meaning
0x00000002	WFS_IPM_INSCODELINELEFT	The media item should be inserted short edge first with the code line to the left.
0x00000004	WFS_IPM_INSCODELINEBOTTOM	The media item should be inserted long edge first with the code line to the bottom.
0x00000008	WFS_IPM_INSCODELINETOP	The media item should be inserted long edge first with the code line to the top.
0x00000010	WFS_IPM_INSFACEUP	The media item should be inserted with the front of the media item facing up.
0x00000020	WFS_IPM_INSFACEDOWN	The media item should be inserted with the front of the media item facing down.

xfsIPMCapabilitiesItemsTakenSensorInput (23)

It specifies whether the input position can detect when items at the exit position are taken by the user. This field relates to output and refused positions, so will always be set to FALSE for input positions. It is a TruthValue type field. Allowed values are:

Value	Meaning
False(2)	The Service Provider does not generate an accompanying WFS_SRVE_IPM_MEDIATAKEN event when items at the exit position are taken by the user.

xfsIPMCapabilitiesItemsInsertedSensorInput (24)

It specifies whether the input position has the ability to detect when items have been inserted by the user. This field relates to all input positions, so will always be set to FALSE for output and refused positions. It is a TruthValue type field. Allowed values are:

Value	Meaning
True(1)	The Service Provider generates an accompanying WFS_SRVE_IPM_MEDIAINSERTED event when items have been inserted by the user.
False(2)	The Service Provider does not generate an accompanying WFS_SRVE_IPM_MEDIAINSERTED event when items have been inserted by the user.

xfsIPMCapabilitiesRetractAreasInput (25)

It specifies the areas to which items may be retracted from the input position. It is a numeric type field and will be set to a combination of hex values according to the values in the following table (zero if none of the choices is supported):

Value	XFS Name	Meaning
0x00000001	WFS_IPM_CTRLRETRACTTOBIN	Can retract items in this position to a retract bin.
0x00000002	WFS_IPM_CTRLRETRACTTOTRANSPORT	Can retract items in this position to the transport.
0x00000004	WFS_IPM_CTRLRETRACTTOSTACKER	Can retract items in this position to the stacker.
0x00000008	WFS_IPM_CTRLRETRACTTOREBUNCHER	Can retract items in this position to the rebuncher.

xfsIPMCapabilitiesItemsTakenSensorOutput (26)

It specifies whether the output position can detect when items at the exit position are taken by the user. This field relates to output and refused positions, so will always be set to FALSE for input positions. It is a TruthValue type field. Allowed values are:

Value	Meaning
True(1)	The Service Provider generates an accompanying WFS_SRVE_IPM_MEDIATAKEN event when items at the exit position are taken by the user.
False(2)	The Service Provider does not generate an accompanying WFS_SRVE_IPM_MEDIATAKEN event when items at the exit position are taken by the user.

xfsIPMCapabilitiesItemsInsertedSensorOutput (27)

It specifies whether the output position has the ability to detect when items have been inserted by the user. This field relates to all input positions, so will always be set to FALSE for output and refused positions. It is a TruthValue type field. Allowed values are:

Value	Meaning
False(2)	The Service Provider does not generate an accompanying WFS_SRVE_IPM_MEDIAINSERTED event when items have been inserted by the user.

xfsIPMCapabilitiesRetractAreasOutput (28)

It specifies the areas to which items may be retracted from the output position. It is a numeric type field and will be set to a combination of hex values according to the values in the following table (zero if none of the choices is supported):

Value	XFS Name	Meaning
0x00000001	WFS_IPM_CTRLRETRACTTOBIN	Can retract items in this position to a retract bin.
0x00000002	WFS_IPM_CTRLRETRACTTOTRANSPORT	Can retract items in this position to the transport.
0x00000004	WFS_IPM_CTRLRETRACTTOSTACKER	Can retract items in this position to the stacker.
0x00000008	WFS_IPM_CTRLRETRACTTOREBUNCHER	Can retract items in this position to the rebuncher.

xfsIPMCapabilitiesItemsTakenSensorRefused (29)

It specifies whether the refused position can detect when items at the exit position are taken by the user. This field relates to output and refused positions, so will always be set to FALSE for input positions. It is a TruthValue type field. Allowed values are:

Value	Meaning
True(1)	The Service Provider generates an accompanying WFS_SRVE_IPM_MEDIATAKEN event when items at the exit position are taken by the user.
False(2)	The Service Provider does not generate an accompanying WFS_SRVE_IPM_MEDIATAKEN event when items at the exit position are taken by the user.

xfsIPMCapabilitiesItemsInsertedSensorRefused (30)

It specifies whether the refused position has the ability to detect when items have been inserted by the user. This field relates to all input positions, so will always be set to FALSE for output and refuse positions. It is a TruthValue type field. Allowed values are:

Value	Meaning
False(2)	The Service Provider does not generate an accompanying WFS_SRVE_IPM_MEDIAINSERTED event when items have been inserted by the user.

xfsIPMCapabilitiesRetractAreasRefused (31)

It specifies the areas to which items may be retracted from the refused position. It is a numeric type field and will be set to a combination of hex values according to the values in the following table (zero if none of the choices is supported):

Value	XFS Name	Meaning
0x00000001	WFS_IPM_CTRLRETRACTTOBIN	Can retract items in this position to a retract bin.
0x00000002	WFS_IPM_CTRLRETRACTTOTRANSPORT	Can retract items in this position to the transport.
0x00000004	WFS_IPM_CTRLRETRACTTOSTACKER	Can retract items in this position to the stacker.
0x00000008	WFS_IPM_CTRLRETRACTTOREBUNCHER	Can retract items in this position to the rebuncher.

xfsIPMCapabilitiesGuidanceMediaIn (32)

It specifies the capability of the media input guidance light. Possible states are reported as a combination of hex values according to the values in the following table:

Value	XFS Name	Meaning
0x00000000	WFS_IPM_GUIDANCE_NOT_AVAILABLE	There is no guidance control available at this position.
0x00000001	WFS_IPM_GUIDANCE_OFF	The light can be off.
0x00000004	WFS_IPM_GUIDANCE_SLOW_FLASH	The light can blink slowly.
0x00000008	WFS_IPM_GUIDANCE_MEDIUM_FLASH	The light can blink medium frequency.
0x00000010	WFS_IPM_GUIDANCE_QUICK_FLASH	The light can blink quickly.
0x00000080	WFS_IPM_GUIDANCE_CONTINUOUS	The light can be continuous (steady).
0x00000100	WFS_IPM_GUIDANCE_RED	The light can be red.
0x00000200	WFS_IPM_GUIDANCE_GREEN	The light can be green.
0x00000400	WFS_IPM_GUIDANCE_YELLOW	The light can be yellow.
0x00000800	WFS_IPM_GUIDANCE_BLUE	The light can be blue.
0x00001000	WFS_IPM_GUIDANCE_CYAN	The light can be cyan.
0x00002000	WFS_IPM_GUIDANCE_MAGENTA	The light can be magenta.
0x00004000	WFS_IPM_GUIDANCE_WHITE	The light can be white.

xfsIPMCapabilitiesGuidanceMediaOut (33)

It specifies the capability of the media output guidelight. Allowed values are the same as variable *xfsIPMCapabilitiesGuidanceMediaIn (32)*.

xfsIPMCapabilitiesGuidanceMediaRefused (34)

It specifies the capability of the media refused guidelight. Allowed values are the same as variable *xfsIPMCapabilitiesGuidanceMediaIn (32)*.

xfsIPMCapabilitiesPowerSaveControl (35)

It contains the capability of the power saving control. It is a TruthValue type field. Allowed values are:

Value	Meaning
True(1)	Power saving is supported.
False(2)	Power saving is not supported.

xfsIPMCapabilitiesImageAfterEndorse (36)

It specifies whether the device can generate an image after text is printed on the media item. If TRUE then the generation of the image can be specified using the WFS_CMD_IPM_GET_IMAGE_AFTER_PRINT command. If FALSE, this functionality is not available. This capability applies to media items whose destination is a media bin; the *fwReturnedItemsProcessing* capability indicates whether this functionality is supported for media items that are to be returned to the customer. It is a TruthValue type field. Allowed values are:

Value	Meaning
True(1)	Generating an image after text is printed on the media is supported.
False(2)	Generating an image after text is printed on the media is not supported.

xfsIPMCapabilitiesReturnedItemsProcessing (37)

It specifies the processing that this device supports for media items that are identified to be returned to the customer using the WFS_CMD_IPM_SET_DESTINATION command. It is a numeric type field and will be set to a combination of hex values according to the values in the following table (zero if none of the choices is supported):

Value	XFS Name	Meaning
0x00000001	WFS_IPM_RETITEMENDORSE	This device can endorse a media item to be returned to the customer; the endorsement is specified using theWFS_CMD_IPM_PRINT_TEXT command.
0x00000002	WFS_IPM_RETITEMENDORSEIMAGE	This device can generate an image of amedia item to be returned to the customerafter it has been endorsed; the image isgenerated using theWFS_CMD_IPM_GET_IMAGE_AFTER_PRINT command.

xfsIPMCapabilitiesMixedMode (38)

It specifies whether the device supports accepting and processing items other than the types defined in the IPM specification. Allowed values are:

Value	Meaning
xfsIPMMixedMediaNotSupp (1)	Mixed Media processing is not supported.
xfsIPMCIMMixedMedia (2)	Mixed Media transactions are supported using the CIM and IPM interfaces.

xfsIPMCapabilitiesMixedDepositAndRollback (39)

It specifies whether the device can deposit one type of media and rollback the other in the same Mixed Media transaction. It is a TruthValue type field. Allowed values are:

Value	Meaning
True(1)	The device can accept WFS_CMD_CIM_CASH_IN_END and WFS_CMD_IPM_MEDIA_IN_ROLLBACK or

	WFS_CMD_CIM_CASH_IN_ROLLBACK and WFS_CMD_IPM_MEDIA_IN_END to complete the current transaction. This value can only be True where xfsIPMCapabilitiesMixedMode is xfsIPMCIMMixedMedia.
False(2)	When this value is False, applications must either deposit or return ALL items to complete a transaction. Where Mixed Media transactions are not supported this value is False.

xfsIPMCapabilitiesAntiFraudModule (40)

It specifies the capability of the anti-fraud module. It is a TruthValue type field. Allowed values are:

Value	Meaning
True(1)	The device has an anti-fraud module.
False(2)	The device does not have an anti-fraud module.

xfsIPMCapabilitiesExtraCapability (100)

It contains the vendor dependent additional device capability information as an OCTET STRING. The information is returned as a series of "*key=value*" strings. Each string is null-terminated, with the final string terminating with two null characters.

3 IPM Traps

The following sections define XFS Traps that are specific to the IPM device class.

3.1 IPM Detailed Device Status Change Trap

Status changes within managed services are reported as system events to the XFS Agent. The following section explicitly defines the format of the IPM Detailed Device Status Change trap. However, the format is split into two sections; the fields that are common to all device specific traps and the fields that are specific to each device class. The common fields are defined in the *XFS MIB Architecture and SNMP Extensions Programmer's Reference* document. The fields that are specific to the IPM reflect the IPMStatus Table as defined in section 2.1.

The detailed device status change event is only generated when the top level status changes within a managed service, i.e. the trap is generated when the *fwDevice* value in the WFS_INF_IPM_STATUS response has changed. In addition, this trap is only generated on version 1.1 of the MIB and higher and is sent in addition to the summary device status change trap.

The SNMP Specific trap value 116 defines the trap as an IPM Detailed Device Status Change trap. In the following section, the numbers in parenthesis at the end of each binding just indicate the sequence of the variable bindings within the trap, they do not represent an OID value.

3.1.1 IPM Detailed Device Status Change Trap Format

The following defines the variable bindings included in the IPM Detailed Device Status Change Trap.

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapSysName (1)
This variable binding contains the system generating the alarm; it is a Display String field. It corresponds to *lpszWorkstationName* in the device status change event data from the Service Provider.

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceName (2)
This variable binding represents the managed service name generating the alarm; it is a Display String field. The agent derives this field from the device status change event.

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceClass (3)
This variable binding represents the XFS service class identifier generating the alarm; it is a 32-bit integer (INT32). It corresponds to the class identifier for the class name. The class name is identified from the registry value HKEY_LOCAL_MACHINE\SOFTWARE\XFS\MANAGEMENT_PROVIDERS\<Managed*ServiceName*>\class. This ID matches the class OID branch number i.e. PTR=1, IDC=2, CIM=13, IPM=16, etc. See the *XFS MIB Architecture and SNMP Extensions Programmer's Reference* document for a complete list of these values.

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceClassName (4)
This variable binding represents the XFS service class name generating the alarm; it is a Display String field. It corresponds to the three character representation of the XFS device class name, and it is useful for human interpretation of a trap. The class name is identified from the registry value HKEY_LOCAL_MACHINE\SOFTWARE\XFS\MANAGEMENT_PROVIDERS\<*ManagedServiceName*>\class.

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceType (5)
This variable binding represents the XFS type identifier generating the alarm; it is a 32-bit integer (INT32). It corresponds to the type identifier as defined in the WFS_INF_IPM_CAPABILITIES.*fwType* field.

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceOid (6)
This variable binding represents the OID of the sub-tree within *xfsManagedService* defining the management information for this class of managed service. This variable, along with the managed service name as an index, prevents the need for additional querying to find the service specific MIB branch. The IPM MIB class is represented by .1.3.6.1.4.1.16213.2.16

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapPhysicalDeviceName (7)
This variable binding represents the physical device name or names associated with the managed service generating the alarm, it is a Display String field. It corresponds to the physical device name or names identified by the managed service. The managed service name is used to identify the physical device name or

names, from registry value HKEY_LOCAL_MACHINE\SOFTWARE\XFS\MANAGEMENT_PROVIDERS\<*ManagedServiceName*>\PhysicalDeviceName. Multiple physical device names are comma separated.

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapDeviceVendor (8)
This variable binding represents the XFS device vendor name of the device generating the alarm, it is a Display String field. It corresponds to the vendor name for the Service Provider. The Service Provider is identified from the managed service name and the registry value HKEY_LOCAL_MACHINE\SOFTWARE\XFS\MANAGEMENT_PROVIDERS\<*ManagedServiceName*>\ServiceProvider.
The Service Provider name is then used to identify the vendor, from the registry value HKEY_LOCAL_MACHINE\SOFTWARE\XFS\SERVICE_PROVIDERS\<*ServiceProviderName*>\vendor_name.

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapMIBVersion (9)
This variable binding represents the XFS MIB version of the device generating the alarm, it is a Display String field. It corresponds to the XFS MIB version for the managed service. The managed service name is used to identify the XFS MIB version, from registry value HKEY_LOCAL_MACHINE\SOFTWARE\XFS\MANAGEMENT_PROVIDERS\<*ManagedServiceName*>\MibVersion.

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapEvent (10)
In case of XFS this variable binding represents the XFS event generating the alarm, it is a 32-bit integer (INT32). It corresponds to u.dwEventID in the event data from the Service Provider. See the Application Programming Interface (API) - Service Provider Interface (SPI); Programmer's Reference for a complete description of the event structure.

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapDate (11)
This variable represents the UTC and bias for local translation of the date and time when the event was generated. It is a Display String field. The data is formatted in the following way: "DD/MM/YYYY HH:MM:SS +ZZZ" where DD/MM/YYYY HH:MM:SS is the local date and time. ZZZ is the bias, which is the difference, in minutes, between Co-ordinated Universal Time (UTC) and local time.

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapSPVersion (12)
This variable represents the vendor-defined version of the Service Provider generating the alarm, it is a Display String field. The Service Provider is identified from the managed service name and the registry value HKEY_LOCAL_MACHINE\SOFTWARE\XFS\MANAGEMENT_PROVIDERS\<*ManagedServiceName*>\ServiceProvider.
The Service Provider name is then used to identify the version, from the registry value HKEY_LOCAL_MACHINE\SOFTWARE\XFS\SERVICE_PROVIDERS\<*ServiceProviderName*>\version.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusDevice**.xfsIPMStatusManagedServiceName (13)
This variable binding represents the current state of the physical device managed by the service. It is a 32 bit integer (INT32).

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusNumberSubDevices.**xfsIPMStatusManagedServiceName (14)
Defines how many sub-devices the service has. This is the number of media bins the device supports.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusAcceptor.**xfsIPMStatusManagedServiceName (15)
It contains the state of the overall acceptor media bins. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusMedia.**xfsIPMStatusManagedServiceName (16)
It contains the state of the media. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusToner.**xfsIPMStatusManagedServiceName (17)
It contains the state of the toner or ink supply or the state of the ribbon of the endorser. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusInk.**xfsIPMStatusManagedServiceName (18)
It contains the state of the stamping ink. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusFrontImageScanner.**xfsIPMStatusManagedServiceName (19)
It contains the state of the front image scanner that captures images of the front of the media items. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusBackImageScanner.**xfsIPMStatusManagedServiceName (20)
It contains the state of the back image scanner that captures images of the back of the media items. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusMICRReader.**xfsIPMStatusManagedServiceName (21)
It contains the state of the MICR code line reader. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusStacker.**xfsIPMStatusManagedServiceName (22)
It contains the state of the stacker (also known as an escrow). The stacker is where the media items are held while the application decides what to do with them. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusRebuncher.**xfsIPMStatusManagedServiceName (23)
It contains the state of the rebuncher (return stacker). The rebuncher is where media items are re-bunched ready for return to the customer. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusMediaFeeder.**xfsIPMStatusManagedServiceName (24)
It contains the state of the media feeder. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusShutterInput.**xfsIPMStatusManagedServiceName (25)
It contains the state of the shutter at the input position. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusPositionInput.**xfsIPMStatusManagedServiceName (26)
It contains the state of the input position. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusTransportInput.**xfsIPMStatusManagedServiceName (27)
It contains the state of the transport mechanism at the input position. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusTransportMediaInput.**xfsIPMStatusManagedServiceName (28)
It contains information regarding items which may be present on the transport at the input position. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusShutterOutput.**xfsIPMStatusManagedServiceName (29)
It contains the state of the shutter at the output position. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusPositionOutput.**xfsIPMStatusManagedServiceName (30)
It contains the state of the output position. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusTransportOutput.**xfsIPMStatusManagedServiceName (31)
It contains the state of the transport mechanism at the output position. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusTransportMediaOutput.**xfsIPMStatusManagedServiceName (32)
It contains information regarding items which may be present on the transport at the output position. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusShutterRefused.**xfsIPMStatusManagedServiceName (33)
It contains the state of the shutter at the refused position. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusPositionRefused.**xfsIPMStatusManagedServiceName (34)

It contains the state of the refused position. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusTransportRefused.**xfsIPMStatusManagedServiceName (35)
It contains the state of the transport at the refused position. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusTransportMediaRefused.**xfsIPMStatusManagedServiceName (36)
It contains information regarding items which may be present on the transport at the refused position. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusGuidanceMediaInput.**xfsIPMStatusManagedServiceName (37)
It contains the state of the guidance light indicator at the input position. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusGuidanceMediaOutput.**xfsIPMStatusManagedServiceName (38)
It contains the state of the guidance light indicator at the output position. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusGuidanceMediaRefused.**xfsIPMStatusManagedServiceName (39)
It contains the state of the guidance light indicator at the refused position. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusExtraStatus.**xfsIPMStatusManagedServiceName (40)
It contains the vendor dependent additional device status information as an OCTET STRING. The information is returned as a series of "*key=value*" strings. Each string is null-terminated, with the final string terminating with two null characters.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusDevicePosition.**xfsIPMStatusManagedServiceName (41)
It contains the device position information. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusPowerSaveRecoveryTime.**xfsIPMStatusManagedServiceName (42)
It contains the actual number of seconds required by the device to resume its normal operational state from the current power saving mode. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusMixedMode.**xfsIPMStatusManagedServiceName (43)
It contains whether if Mixed Media mode is active. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusAntiFraudModule.**xfsIPMStatusManagedServiceName (44)
It contains the state of the anti-fraud module. It is a numeric type field.

3.1.2 IPM Detailed Device Status Change Trap: an example

As an example, the following variable binding list represents a detailed device status change trap (6, 116) that is generated for an IPM with a managed service name of “ItemProcessor1”. It reports that the device is OFFLINE because the Acceptor is stopped.

xfsMIBRoot.3.1.3.1	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapSysName)
	“SST System 1”
xfsMIBRoot.3.1.3.2	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceName)
	“ItemProcessor1”
xfsMIBRoot.3.1.3.3	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceClass)
	16 (WFS_SERVICE_CLASS_IPM)
xfsMIBRoot.3.1.3.4	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceCla

	ssName)
	“IPM”
xfsMIBRoot.3.1.3.5	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceType)
	2 (WFS_IPM_TYPEBUNCHMEDIAINPUT)
xfsMIBRoot.3.1.3.6	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceOid)
	” 1.3.6.1.4.1.16213.2.16”
xfsMIBRoot.3.1.3.7	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapPhysicalDeviceName)
	“ABC Corp Item Processor”
xfsMIBRoot.3.1.3.8	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapDeviceVendor)
	“Best Device Incorporated”
xfsMIBRoot.3.1.3.9	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapMIBVersion)
	“1.20”
xfsMIBRoot.3.1.3.10	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapEvent)
	4 (WFS_SYSE_DEVICE_STATUS)
xfsMIBRoot.3.1.3.11	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapDate)
	“15/05/2007 15:40:53 -300”
xfsMIBRoot.3.1.3.12	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapSPVersion)
	“3.81”
xfsMIBRoot.2.16.1.2.1.**3**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusDevice**.xfsIPMStatusManagedServiceName)
	2 (xfsDevOffline)
xfsMIBRoot.2.16.1.2.1.**2**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusNumberSubDevices**.xfsIPMStatusManagedServiceName)
	1 (One sub device)
xfsMIBRoot.2.16.1.2.1.**4**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusAcceptor**.xfsIPMStatusManagedServiceName)
	3 (xfsIPMAccBinStop)
xfsMIBRoot.2.16.1.2.1.**5**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusMedia**.xfsIPMStatusManagedServiceName)
	3 (xfsIPMMediaJammed)
xfsMIBRoot.2.16.1.2.1.**6**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusToner**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMTonerFull)
xfsMIBRoot.2.16.1.2.1.**7**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusInk**.xfsIPMStatusManagedServiceName)
	3 (xfsIPMInkOut)
xfsMIBRoot.2.16.1.2.1.**8**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusFrontImageScanner**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMScannerOK)
xfsMIBRoot.2.16.1.2.1.**9**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusBackImageScanner**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMScannerOK)
xfsMIBRoot.2.16.1.2.	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.

1.**10**.Index	**xfsIPMStatusMICRReader**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMMICROk)
xfsMIBRoot.2.16.1.2.1.**11**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusStacker**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMStackerEmpty)
xfsMIBRoot.2.16.1.2.1.**12**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusRebuncher**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMRebuncherEmpty)
xfsMIBRoot.2.16.1.2.1.**13**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusMediaFeeder**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMMediaFeederEmpty)
xfsMIBRoot.2.16.1.2.1.**14**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusShutterInput**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMShutterClosed)
xfsMIBRoot.2.16.1.2.1.**15**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusPositionInput**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMPSEmpty)
xfsMIBRoot.2.16.1.2.1.**16**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusTransportInput**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMTPOK)
xfsMIBRoot.2.16.1.2.1.**17**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusTransportMediaInput**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMTPMediaEmpty)
xfsMIBRoot.2.16.1.2.1.**18**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusShutterOutput**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMShutterClosed)
xfsMIBRoot.2.16.1.2.1.**19**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusPositionOutput**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMPSEmpty)
xfsMIBRoot.2.16.1.2.1.**20**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusTransportOutput**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMTPOK)
xfsMIBRoot.2.16.1.2.1.**21**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusTransportMediaOutput**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMTPMediaEmpty)
xfsMIBRoot.2.16.1.2.1.**22**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusShutterRefused**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMShutterClosed)
xfsMIBRoot.2.16.1.2.1.**23**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusPositionRefused**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMPSEmpty)
xfsMIBRoot.2.16.1.2.1.**24**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusTransportRefused**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMTPOK)
xfsMIBRoot.2.16.1.2.1.**25**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusTransportMediaRefused**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMTPMediaEmpty)
xfsMIBRoot.2.16.1.2.	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.

1.**26**.Index	**xfsIPMStatusGuidanceMediaInput**.xfsIPMStatusManagedServiceName)
	1 (value corresponding to WFS_IPM_GUIDANCE_OFF)
xfsMIBRoot.2.16.1.2.1.**27**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusGuidanceMediaOutput**.xfsIPMStatusManagedServiceName)
	1 (value corresponding to WFS_IPM_GUIDANCE_OFF)
xfsMIBRoot.2.16.1.2.1.**28**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusGuidanceMediaRefused**.xfsIPMStatusManagedServiceName)
	1 (value corresponding to WFS_IPM_GUIDANCE_OFF)
xfsMIBRoot.2.16.1.2.1.**100**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusExtraStatus**.xfsIPMStatusManagedServiceName)
	'\0"'\0' (No extra data)
xfsMIBRoot.2.16.1.2.1.**29**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusDevicePosition**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMDeviceInPosition)
xfsMIBRoot.2.16.1.2.1.**30**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusPowerSaveRecoveryTime**.xfsIPMStatusManagedServiceName)
	0 (0 seconds to return to normal operating mode)
xfsMIBRoot.2.16.1.2.1.**31**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusMixedMode**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMMixedMediaNotActive)
xfsMIBRoot.2.16.1.2.1.**32**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusAntiFraudModule**.xfsIPMStatusManagedServiceName)
	2 (xfsIPMAFMOK)

3.2 IPM Sub-Device Status Change Trap

On the IPM device class the Sub Device Status change traps are sent when a WFS_SRVE_IPM_MEDIABININFOCHANGED event is generated. This trap is sent in addition to the threshold event defined in the architecture specification.

The definition of the content of the device specific fields within the Sub-Device Status trap (fields 12-25) is defined in section 2.2.

The SNMP Specific trap value 216 defines the trap as an IPM Sub-Device Status Change trap.

3.2.1 IPM Sub-Device Status Change Trap Format

The following defines the variable bindings included in the IPM Sub-Device Status Change Trap.

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceName (1)
This variable binding represents the managed service name generating the alarm, it is a Display String field. The agent derives this field from the device status change event.

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceClass (2)
This variable binding represents the XFS service class identifier generating the alarm, it is a 32-bit integer (INT32). It corresponds to the class identifier for the class name. The class name is identified from the registry value HKEY_LOCAL_MACHINE\SOFTWARE\XFS\MANAGEMENT_PROVIDERS\<Managed*ServiceName*>\class. This ID matches the class OID branch number i.e. PTR=1, IDC=2, CIM=13, IPM=16 etc.

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceClassName (3)
This variable binding represents the XFS service class name generating the alarm, it is a Display String field. It corresponds to the three character representation of the XFS device class name, and it is useful for human interpretation of a trap. The class name is identified from the registry value

HKEY_LOCAL_MACHINE\SOFTWARE\XFS\MANAGEMENT_PROVIDERS\<*ManagedServiceName*>\class.

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceType (4)
This variable binding represents the XFS type identifier generating the alarm, it is a 32-bit integer (INT32). It corresponds to the type identifier as defined in the WFS_INF_IPM_CAPABILITIES.*fwType* field.

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceOid (5)
This variable binding represents the OID of the sub-tree within *xfsManagedService* defining the management information for this class of managed service. This variable, along with the managed service name as an index, prevents the need for additional querying to find the service specific MIB branch. The IPM MIB class is represented by .1.3.6.1.4.1.16213.2.16

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapPhysicalDeviceName (6)
This variable binding represents the physical device name or names associated with the managed service generating the alarm, it is a Display String field. It corresponds to the physical device name or names identified by the managed service. The managed service name is used to identify the physical device name or names, from registry value HKEY_LOCAL_MACHINE\SOFTWARE\XFS\MANAGEMENT_PROVIDERS\<*ManagedServiceName*>\PhysicalDeviceName. Multiple physical device names are comma separated.

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapDeviceVendor (7)
This variable binding represents the XFS device vendor name of the device generating the alarm, it is a Display String field. It corresponds to the vendor name for the Service Provider. The Service Provider is identified from the managed service name and the registry value HKEY_LOCAL_MACHINE\SOFTWARE\XFS\MANAGEMENT_PROVIDERS\<*ManagedServiceName*>\ServiceProvider.
The Service Provider name is then used to identify the vendor, from the registry value HKEY_LOCAL_MACHINE\SOFTWARE\XFS\SERVICE_PROVIDERS\<*ServiceProviderName*>\vendor_name.

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapMIBVersion (8)
This variable binding represents the XFS MIB version of the device generating the alarm. It is a Display String field. It corresponds to the XFS MIB version for the managed service. The managed service name is used to identify the XFS MIB version, from registry value HKEY_LOCAL_MACHINE\SOFTWARE\XFS\MANAGEMENT_PROVIDERS\<*ManagedServiceName*>\MibVersion.

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapEvent (9)
The XFS event generating the alarm, it is a 32-bit integer (INT32). It corresponds to the message identifier associated with the XFS event generated by the Service Provider. For the IPM this corresponds to the WFS_SRVE_IPM_MEDIABININFOCHANGED event.

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapDate (10)
This variable represents the UTC and bias for local translation of the date and time when the event was generated. It is a Display String field. The data is formatted in the following way: "DD/MM/YYYY HH:MM:SS +ZZZ" where DD/MM/YYYY HH:MM:SS is the local date and time. ZZZ is the bias, which is the difference, in minutes, between Co-ordinated Universal Time (UTC) and local time.

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapSPVersion (11)
This variable represents the vendor-defined version of the Service Provider generating the alarm, it is a Display String field. The Service Provider is identified from the managed service name and the registry value HKEY_LOCAL_MACHINE\SOFTWARE\XFS\MANAGEMENT_PROVIDERS\<*ManagedServiceName*>\ServiceProvider.
The Service Provider name is then used to identify the version, from the registry value HKEY_LOCAL_MACHINE\SOFTWARE\XFS\SERVICE_PROVIDERS\<*ServiceProviderName*>\version.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMSubDeviceTable.xfsIPMSubDeviceEntry.**xfsIPMSubDeviceIndex**.xfsIPMStatusManagedServiceName.xfsIPMSubDeviceIndex (12)
Index identifying the sub-device.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMSubDeviceTable.xfsIPMSubDeviceEntry.**xfsIPMSubDeviceMBBinNumber**.xfsIPMStatusManagedServiceName.xfsIPMSubDeviceIndex (13)
The identity of the bin, it is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMSubDeviceTable.xfsIPMSubDeviceEntry.**xfsIPMSubDeviceMBPositionName.**xfsIPMStatusManagedServiceName.xfsIPMSubDeviceIndex (14)
The physical bin name, it is an OCTET_STRING.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMSubDeviceTable.xfsIPMSubDeviceEntry.**xfsIPMSubDeviceMBType.**xfsIPMStatusManagedServiceName.xfsIPMSubDeviceIndex (15)
It contains the media bin type. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMSubDeviceTable.xfsIPMSubDeviceEntry.**xfsIPMSubDeviceMBMediaType**.xfsIPMStatusManagedServiceName.xfsIPMSubDeviceIndex (16)
It contains media type that the bin accepts. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMSubDeviceTable.xfsIPMSubDeviceEntry.**xfsIPMSubDeviceMBBinID**.xfsIPMStatusManagedServiceName.xfsIPMSubDeviceIndex (17)
It contains an application defined media bin identifier. It is an OCTET_STRING field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMSubDeviceTable.xfsIPMSubDeviceEntry.**xfsIPMSubDeviceMBMediaInCount.x**fsIPMStatusManagedServiceName.xfsIPMSubDeviceIndex (18)
It contains the number of media that have entered the media bin as a result of operations on the IPM interface. This counter is incremented whenever media enters the media bin for any reason as a result of an operation initiated through the IPM interface. This value is persistent. On a retract-only bin, if the device cannot count media during a retract operation this value will be zero. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMSubDeviceTable.xfsIPMSubDeviceEntry.**xfsIPMSubDeviceMBCount**.xfsIPMStatusManagedServiceName.xfsIPMSubDeviceIndex (19)
It contains the total number of media in the media bin including the ones that entered through the compound device interface. If the bin is a shared bin with a compound device interface then this value may not be the same as the value of *xfsIPMSubDeviceMBMediaInCount* (8). On a retract-only bin, if the device cannot count media during a retract operation this value will be zero. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMSubDeviceTable.xfsIPMSubDeviceEntry.**xfsIPMSubDeviceMBRetractOperations**.xfsIPMStatusManagedServiceName.xfsIPMSubDeviceIndex (20)
It contains the total number of retract operations performed via WFS_CMD_IPM_RETRACT_MEDIA, WFS_CMD_IPM_RESET and error recovery where media is moved to the bin. This value is persistent. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMSubDeviceTable.xfsIPMSubDeviceEntry.**xfsIPMSubDeviceMBHardwareSensor**.xfsIPMStatusManagedServiceName.xfsIPMSubDeviceIndex (21)
It contains whether or not the threshold event, WFS_USRE_IPM_MEDIABINTHRESHOLD (WFS_IPM_STATMBHIGH), can be generated based on hardware sensors in the device. It is a TruthValue type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMSubDeviceTable.xfsIPMSubDeviceEntry.**xfsIPMSubDeviceMBMaximumItems**.xfsIPMStatusManagedServiceName.xfsIPMSubDeviceIndex (22)
It contains the value that controls when the threshold event WFS_USRE_IPM_MEDIABINTHRESHOLD (WFS_IPM_STATMBHIGH) will be generated; the *xfsIPMSubDeviceMBCount* (9) field must reach this value in order for the event to be generated. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMSubDeviceTable.xfsIPMSubDeviceEntry.**xfsIPMSubDeviceMBMaximumRetractOperations**.xfsIPMStatusManagedServiceName.xfsIPMSubDeviceIndex (23)
It contains the value that controls when the threshold event WFS_USRE_IPM_MEDIABINTHRESHOLD (WFS_IPM_STATMBHIGH) will be generated; the *xfsIPMSubDeviceMBRetractOperations* (10) field must reach this value in order for the event to be generated. This value is zero if the bin is not a retract bin (i.e. does not contain the WFS_IPM_TYPERETRACT value in the *xfsIPMSubDeviceMBType* (5) field). It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMSubDeviceTable.xfsIPMSubDeviceEntry.**xfsIPMSubDeviceMBStatus**.xfsIPMStatusManagedServiceName.xfsIPMSubDeviceIndex (24)
It contains the status of the media bin. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMSubDeviceTable.xfsIPMSubDeviceEntry.**xfsIPMSubDeviceMBExtraStatus.**xfsIPMStatusManagedServiceName (25)
It contains the vendor dependent additional device status information as an OCTET STRING. The information is returned as a series of "*key=value*" strings. Each string is null-terminated, with the final string terminating with two null characters.

3.2.2 IPM Sub-Device Status Change Trap: an example

As an example, the following variable binding list represents an IPM sub-device status change trap (6, 216) generated from a generic XFS SST system. This trap sends an alarm to the SNMP Manager when a WFS_SRVE_IPM_MEDIABININFOCHANGED event is generated.

xfsMIBRoot.3.1.3.2	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceName)
	"ItemProcessor1"
xfsMIBRoot.3.1.3.3	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceClass)
	16 (WFS_SERVICE_CLASS_IPM)
xfsMIBRoot.3.1.3.4	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceClassName)
	"IPM"
xfsMIBRoot.3.1.3.5	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceType)
	1 (WFS_IPM_TYPESINGLEMEDIAINPUT)
xfsMIBRoot.3.1.3.6	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceOid)
	".1.3.6.1.4.1.16213.2.16"
xfsMIBRoot.3.1.3.7	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapPhysicalDeviceName)
	"ABC Corp Item Processor
xfsMIBRoot.3.1.3.8	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapDeviceVendor)
	"Best Device Incorporated"
xfsMIBRoot.3.1.3.9	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapMIBVersion)
	"1.20"
xfsMIBRoot.3.1.3.10	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapEvent)
	1604 (WFS_SRVE_IPM_MEDIABININFOCHANGED)
xfsMIBRoot.3.1.3.11	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapDate)
	"20/03/2003 15:40:53 -300"
xfsMIBRoot.3.1.3.12	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapSPVersion)
	"3.81"
xfsMIBRoot.2.16.1.3.1.**2**.Index1.Index2	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMSubDeviceTable.xfsIPMSubDeviceEntry.**xfsIPMSubDeviceIndex**.xfsIPMStatusManagedServiceName.xfsIPMSubDeviceIndex)
	1 (Index to first sub device)
xfsMIBRoot.2.16.1.3.1.**3**.Index1.Index2	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMSubDeviceTable.xfsIPMSubDeviceEntry.**xfsIPMSubDeviceMBBinNumber**.xfsIPMStatusManagedServiceName.xfsIPMSubDeviceIndex)
	1
xfsMIBRoot.2.16.1.3.1.**4**.Index1.Index2	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMSubDeviceTable.xfsIPMSubDeviceEntry.**xfsIPMSubDeviceMBPositionName**.xfsIPMStatusManagedServiceName.xfsIPMSubDeviceIndex)
	"Retract Bin Position"
xfsMIBRoot.2.16.1.3.	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMSubDeviceTable.xfsIPMSubDev

1.**5**.Index1.Index2	iceEntry.**xfsIPMSubDeviceMBType**.xfsIPMStatusManagedServiceName.xfsIPMSubDevice Index)
	1 (WFS_IPM_TYPEMEDIAIN)
xfsMIBRoot.2.16.1.3. 1.**6**.Index1.Index2	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMSubDeviceTable.xfsIPMSubDev iceEntry.**xfsIPMSubDeviceMBMediaType**.xfsIPMStatusManagedServiceName.xfsIPMSub DeviceIndex)
	2 (xfsIPMMediaTypeIPM)
xfsMIBRoot.2.16.1.3. 1.**7**.Index1.Index2	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMSubDeviceTable.xfsIPMSubDev iceEntry.**xfsIPMSubDeviceMBBinID**.xfsIPMStatusManagedServiceName.xfsIPMSubDevic eIndex)
	"Retract Bin 1"
xfsMIBRoot.2.16.1.3. 1.**8**.Index1.Index2	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMSubDeviceTable.xfsIPMSubDev iceEntry.**xfsIPMSubDeviceMBMediaInCount**.xfsIPMStatusManagedServiceName.xfsIPM SubDeviceIndex)
	10000 (10000 media)
xfsMIBRoot.2.16.1.3. 1.**9**.Index1.Index2	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMSubDeviceTable.xfsIPMSubDev iceEntry.**xfsIPMSubDeviceMBCount**.xfsIPMStatusManagedServiceName.xfsIPMSubDevic eIndex)
	100 (100 media)
xfsMIBRoot.2.16.1.3. 1.**10**.Index1.Index2	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMSubDeviceTable.xfsIPMSubDev iceEntry.**xfsIPMSubDeviceMBRetractOperations**.xfsIPMStatusManagedServiceName.xfsI PMSubDeviceIndex)
	30 (30 Operations)
xfsMIBRoot.2.16.1.3. 1.**11**.Index1.Index2	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMSubDeviceTable.xfsIPMSubDev iceEntry.**xfsIPMSubDeviceMBHardwareSensor**.xfsIPMStatusManagedServiceName.xfsIP MSubDeviceIndex)
	1 (TRUE)
xfsMIBRoot.2.16.1.3. 1.**12**.Index1.Index2	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMSubDeviceTable.xfsIPMSubDev iceEntry.**xfsIPMSubDeviceMBMaximumItems**.xfsIPMStatusManagedServiceName.xfsIPM SubDeviceIndex)
	0 (trigger is the hardware sensor)
xfsMIBRoot.2.16.1.3. 1.**13**.Index1.Index2	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMSubDeviceTable.xfsIPMSubDev iceEntry.**xfsIPMSubDeviceMBmaximumRetractOperations**.xfsIPMStatusManagedService Name.xfsIPMSubDeviceIndex)
	100 (100 operations)
xfsMIBRoot.2.16.1.3. 1.**14**.Index1.Index2	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMSubDeviceTable.xfsIPMSubDev iceEntry.**xfsIPMSubDeviceMBStatus**.xfsIPMStatusManagedServiceName.xfsIPMSubDevic eIndex)
	1 (xfsIPMMBStatOK)
xfsMIBRoot.2.16.1.3. 1.**100**.Index1.Index2	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMSubDeviceTable.xfsIPMSubDev iceEntry.**xfsIPMSubDeviceMBExtraStatus**.xfsIPMStatusManagedServiceName.xfsIPM SubDeviceIndex)
	'\0"'\0' (No extra data)

3.3 IPM Reset Device Complete Trap

On the IPM device class this trap reports the completion of the reset device request and includes the status of the device at that point. If the reset has changed the status of the device then the Device Status Change and a Detail Device Status traps will also be generated.

The SNMP Specific trap value 316 defines the trap as an IPM Reset Device Complete trap.

3.3.1 IPM Reset Device Complete Trap Format

The following defines the variable bindings included in the IPM Reset Device Complete Trap. In the following section, the numbers in parenthesis at the end of each binding just indicate the sequence of the variable bindings within the trap, they do not represent an OID value.

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapResetDeviceResult (1)
This variable binding contains a value indicating if the reset was executed, and if not provides a reason. It does not report the status of the device (i.e. the result of the reset), the current status of the device is reported within the **xfsIPMStatusDevice** binding (var bind 12 below).

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceName (2)
This variable binding represents the managed service name generating the alarm, it is a Display String field. The agent derives this field from the device status change event.

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceClass (3)
This variable binding represents the XFS service class identifier generating the alarm, it is a 32-bit integer (INT32). It corresponds to the class identifier for the class name. The class name is identified from the registry value HKEY_LOCAL_MACHINE\SOFTWARE\XFS\MANAGEMENT_PROVIDERS\<Managed*ServiceName*>\class. This ID matches the class OID branch number i.e. PTR=1, IDC=2, CDM=3, IPM=16, etc. See the *XFS MIB Architecture and SNMP Extensions Programmer's Reference* document for a complete list of these values.

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceClassName (4)
This variable binding represents the XFS service class name generating the alarm, it is a Display String field. It corresponds to the three character representation of the XFS device class name, and it is useful for human interpretation of a trap. The class name is identified from the registry value HKEY_LOCAL_MACHINE\SOFTWARE\XFS\MANAGEMENT_PROVIDERS\<*ManagedServiceName*>\class.

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceType (5)
This variable binding represents the XFS type identifier generating the alarm, it is a 32-bit integer (INT32). It corresponds to the type identifier as defined in the WFS_INF_IPM_CAPABILITIES.*fwType* field.

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceOid (6)
This variable binding represents the OID of the sub-tree within *xfsManagedService* defining the management information for this class of managed service. The item processing module MIB class is represented by .1.3.6.1.4.1.16213.2.16

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapPhysicalDeviceName (7)
This variable binding represents the physical device name or names associated with the managed service generating the alarm, it is a Display String field. It corresponds to the physical device name or names identified by the managed service. The managed service name is used to identify the physical device name or names, from registry value HKEY_LOCAL_MACHINE\SOFTWARE\XFS\MANAGEMENT_PROVIDERS\<*ManagedServiceName*>\PhysicalDeviceName. Multiple physical device names are comma separated.

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapDeviceVendor (8)
This variable binding represents the XFS device vendor name of the device generating the alarm, it is a Display String field. It corresponds to the vendor name for the Service Provider. The Service Provider is identified from the managed service name and the registry value HKEY_LOCAL_MACHINE\SOFTWARE\XFS\MANAGEMENT_PROVIDERS\<*ManagedServiceName*>\ServiceProvider.
The Service Provider name is then used to identify the vendor, from the registry value HKEY_LOCAL_MACHINE\SOFTWARE\XFS\SERVICE_PROVIDERS\<*ServiceProviderName*>\vendor_name.

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapMIBVersion (9)
This variable binding represents the XFS MIB version of the device generating the alarm, it is a Display String field. It corresponds to the XFS MIB version for the managed service. The managed service name is used to identify the XFS MIB version, from registry value HKEY_LOCAL_MACHINE\SOFTWARE\XFS\MANAGEMENT_PROVIDERS\<*ManagedServiceName*>\MibVersion.

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapDate (10)
This variable represents the UTC and bias for local translation of the date and time when the event was generated. It is a Display String field. The data is formatted in the following way: "DD/MM/YYYY HH:MM:SS +ZZZ" where DD/MM/YYYY HH:MM:SS is the local date and time. ZZZ is the bias, which is the difference, in minutes, between Co-ordinated Universal Time (UTC) and local time.

xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapSPVersion (11)
This variable represents the vendor-defined version of the Service Provider generating the alarm, it is a Display String field. The Service Provider is identified from the managed service name and the registry value HKEY_LOCAL_MACHINE\SOFTWARE\XFS\MANAGEMENT_PROVIDERS\<*ManagedServiceName*>\ServiceProvider.
The Service Provider name is then used to identify the version, from the registry value HKEY_LOCAL_MACHINE\SOFTWARE\XFS\SERVICE_PROVIDERS\<*ServiceProviderName*>\version.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusDevice**.xfsIPMStatusManagedServiceName (12)
This variable binding represents the current state of the physical device managed by the service. It is a 32 bit integer (INT32).

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusNumberSubDevices.**xfsIPMStatusManagedServiceName (13)
Defines how many sub-devices the service has. This is the number of cash in units the device supports.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusAcceptor.**xfsIPMStatusManagedServiceName (14)
It contains the state of the overall acceptor media bins. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusMedia.**xfsIPMStatusManagedServiceName (15)
It contains the state of the media. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusToner.**xfsIPMStatusManagedServiceName (16)
It contains the state of the toner or ink supply or the state of the ribbon of the endorser. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusInk.**xfsIPMStatusManagedServiceName (17)
It contains the state of the stamping ink. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusFrontImageScanner.**xfsIPMStatusManagedServiceName (18)
It contains the state of the front image scanner that captures images of the front of the media items. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusBackImageScanner.**xfsIPMStatusManagedServiceName (19)
It contains the state of the back image scanner that captures images of the back of the media items. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusMICRReader.**xfsIPMStatusManagedServiceName (20)
It contains the state of the MICR code line reader. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusStacker.**xfsIPMStatusManagedServiceName (21)
It contains the state of the stacker (also known as an escrow). The stacker is where the media items are held while the application decides what to do with them. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusRebuncher.**xfsIPMStatusManagedServiceName (22)
It contains the state of the rebuncher (return stacker). The rebuncher is where media items are re-bunched ready for return to the customer. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusMediaFeeder.**xfsIPMStatusManagedServiceName (23)
It contains the state of the media feeder. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusShutterInput.**xfsIPMStatusManagedServiceName (24)
It contains the state of the shutter at the input position. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusPositionInput.**xfsIPMStatusManagedServiceName (25)
It contains the state of the input position. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusTransportInput.**xfsIPMStatusManagedServiceName (26)
It contains the state of the transport mechanism at the input position. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusTransportMediaInput.**xfsIPMStatusManagedServiceName (27)
It contains information regarding items which may be present on the transport at the input position. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusShutterOutput.**xfsIPMStatusManagedServiceName (28)
It contains the state of the shutter at the output position. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusPositionOutput.**xfsIPMStatusManagedServiceName (29)
It contains the state of the output position. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusTransportOutput.**xfsIPMStatusManagedServiceName (30)
It contains the state of the transport mechanism at the output position. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusTransportMediaOutput.**xfsIPMStatusManagedServiceName (31)
It contains information regarding items which may be present on the transport at the output position. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusShutterRefused.**xfsIPMStatusManagedServiceName (32)
It contains the state of the shutter at the refused position. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusPositionRefused.**xfsIPMStatusManagedServiceName (33)
It contains the state of the refused position. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusTransportRefused.**xfsIPMStatusManagedServiceName (34)
It contains the state of the transport mechanism at the refused position. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusTransportMediaRefused.**xfsIPMStatusManagedServiceName (35)
It contains information regarding items which may be present on the transport at the refused position. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusGuidanceMediaInput.**xfsIPMStatusManagedServiceName (36)
It contains the state of the guidance light indicator at the input position. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusGuidanceMediaOutput.**xfsIPMStatusManagedServiceName (37)
It contains the state of the guidance light indicator at the output position. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusGuidanceMediaRefused.**xfsIPMStatusManagedServiceName (38)
It contains the state of the guidance light indicator at the refused position. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusExtraStatus.**xfsIPMStatusManagedServiceName (39)
It contains the vendor dependent additional device status information as an OCTET STRING. The information is returned as a series of "*key=value*" strings. Each string is null-terminated, with the final string terminating with two null characters.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusDevicePosition.**xfsIPMStatusManagedServiceName (40)

It contains the device position information. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusPowerSaveRecoveryTime.**xfsIPMStatusManagedServiceName (41)

It contains the actual number of seconds required by the device to resume its normal operational state from the current power saving mode. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusMixedMode.**xfsIPMStatusManagedServiceName (42)

It contains whether if Mixed Media mode is active. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusAntiFraudModule.**xfsIPMStatusManagedServiceName (43)

It contains the state of the anti-fraud module. It is a numeric type field.

3.3.2 IPM Reset Device Complete: an example

As an example, the following variable binding list represents a Reset Device Complete trap (6, 316) generated as a result of a request to reset the device from the remote management station. The device in question is of type single media input with a managed service name “ItemProcessor1”.

xfsMIBRoot.3.1.3.13	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapResetDeviceResult)
	0 (resetExecuted)
xfsMIBRoot.3.1.3.2	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceName)
	“ItemProcessor1”
xfsMIBRoot.3.1.3.3	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceClass)
	16 (WFS_SERVICE_CLASS_IPM)
xfsMIBRoot.3.1.3.4	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceClassName)
	“IPM”
xfsMIBRoot.3.1.3.5	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceType)
	1 (WFS_IPM_TYPESINGLEMEDIAINPUT)
xfsMIBRoot.3.1.3.6	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceOid)
	” 1.3.6.1.4.1.16213.2.16”
xfsMIBRoot.3.1.3.7	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapPhysicalDeviceName)
	“ABC Corp Item processor”
xfsMIBRoot.3.1.3.8	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapDeviceVendor)
	“Best Device Incorporated”
xfsMIBRoot.3.1.3.9	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapMIBVersion)
	“1.20”
xfsMIBRoot.3.1.3.11	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapDate)
	“15/05/2007 15:40:53 -300”
xfsMIBRoot.3.1.3.12	(xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapSPVersion)
	“3.81”

xfsMIBRoot.2.16.1.2.1.**3**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusDevice**.xfsIPMStatusManagedServiceName)
	1 (xfsDevOnline)
xfsMIBRoot.2.16.1.2.1.**2**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusNumberSubDevices**.xfsIPMStatusManagedServiceName)
	1 (One sub device)
xfsMIBRoot.2.16.1.2.1.**4**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusAcceptor**.xfsIPMStatusManagedServiceName)
	3 (xfsIPMAccBinStop)
xfsMIBRoot.2.16.1.2.1.**5**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusMedia**.xfsIPMStatusManagedServiceName)
	3 (xfsIPMMediaJammed)
xfsMIBRoot.2.16.1.2.1.**6**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusToner**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMTonerFull)
xfsMIBRoot.2.16.1.2.1.**7**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusInk**.xfsIPMStatusManagedServiceName)
	3 (xfsIPMInkOut)
xfsMIBRoot.2.16.1.2.1.**8**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusFrontImageScanner**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMScannerOK)
xfsMIBRoot.2.16.1.2.1.**9**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusBackImageScanner**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMScannerOK)
xfsMIBRoot.2.16.1.2.1.**10**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusMICRReader**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMMICROk)
xfsMIBRoot.2.16.1.2.1.**11**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusStacker**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMStackerEmpty)
xfsMIBRoot.2.16.1.2.1.**12**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusRebuncher**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMRebuncherEmpty)
xfsMIBRoot.2.16.1.2.1.**13**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusMediaFeeder**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMMediaFeederEmpty)
xfsMIBRoot.2.16.1.2.1.**14**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusShutterInput**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMShutterClosed)
xfsMIBRoot.2.16.1.2.1.**15**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusPositionInput**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMPSEmpty)
xfsMIBRoot.2.16.1.2.1.**16**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusTransportInput**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMTPOK)
xfsMIBRoot.2.16.1.2.1.**17**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusTransportMediaInput**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMTPMediaEmpty)

xfsMIBRoot.2.16.1.2.1.**18**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusShutterOutput**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMShutterClosed)
xfsMIBRoot.2.16.1.2.1.**19**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusPositionOutput**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMPSEmpty)
xfsMIBRoot.2.16.1.2.1.**20**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusTransportOutput**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMTPOK)
xfsMIBRoot.2.16.1.2.1.**21**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusTransportMediaOutput**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMTPMediaEmpty)
xfsMIBRoot.2.16.1.2.1.**22**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusShutterRefused**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMShutterClosed)
xfsMIBRoot.2.16.1.2.1.**23**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusPositionRefused**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMPSEmpty)
xfsMIBRoot.2.16.1.2.1.**24**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusTransportRefused**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMTPOK)
xfsMIBRoot.2.16.1.2.1.**25**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusTransportMediaRefused**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMTPMediaEmpty)
xfsMIBRoot.2.16.1.2.1.**26**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusGuidanceMediaInput**.xfsIPMStatusManagedServiceName)
	1 (value corresponding to WFS_IPM_GUIDANCE_OFF)
xfsMIBRoot.2.16.1.2.1.**27**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusGuidanceMediaOutput**.xfsIPMStatusManagedServiceName)
	1 (value corresponding to WFS_IPM_GUIDANCE_OFF)
xfsMIBRoot.2.16.1.2.1.**28**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusGuidanceMediaRefused**.xfsIPMStatusManagedServiceName)
	1 (value corresponding to WFS_IPM_GUIDANCE_OFF)
xfsMIBRoot.2.16.1.2.1.**100**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusExtraStatus**.xfsIPMStatusManagedServiceName)
	'\0'\0' (No extra data)
xfsMIBRoot.2.16.1.2.1.**29**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusDevicePosition**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMDeviceInPosition)
xfsMIBRoot.2.16.1.2.1.**30**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusPowerSaveRecoveryTime**.xfsIPMStatusManagedServiceName)
	0 (0 seconds to return to normal operating mode)
xfsMIBRoot.2.16.1.2.1.**31**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusMixedMode**.xfsIPMStatusManagedServiceName)
	1 (xfsIPMMixedMediaNotActive)
xfsMIBRoot.2.16.1.2.1.**32**.Index	(xfsMIBRoot.xfsManagedService.xfsIPM.xfsIPMV1.xfsIPMStatusTable.xfsIPMStatusEntry.**xfsIPMStatusAntiFraudModule**.xfsIPMStatusManagedServiceName)
	2 (xfsIPMAFMOK)

4 Appendix A - IPM MIB sub-tree

The following paragraph contains the definition of the XFS IPM MIB sub-tree in ASN-1 format.

4.1 IPM MIB in SMIv2 and SMIv1 ASN-1 format

The following text is the content of xfsIPM.MIB in SMIv2 format.

```
-- ************************************************************************
-- XFS 3.20 MIB for IPM
-- Management Information Base for XFS IPM Device
--
-- The IPM Number is 16
-- The ASN.1 prefix to, and including the IPM is: 1.3.6.1.4.1.16213.2.16
--
-- ************************************************************************
--

  XFS-IPM-MIB DEFINITIONS ::= BEGIN

    IMPORTS
      Integer32, OBJECT-TYPE, OBJECT-IDENTITY, NOTIFICATION-TYPE
        FROM SNMPv2-SMI
      DisplayString, TruthValue
        FROM SNMPv2-TC
      xfsIPM, xfsTrap, IxfsMIBDeviceStatus
        FROM XFSMIB;


--
-- Type definitions
--

--  Type definitions
--
-- ************************************************************************
-- IPM Status #defines
-- ************************************************************************
    IxfsIPMStatusAcceptor ::= INTEGER
      {
      xfsIPMAccBinOK(1),
      xfsIPMAccBinState(2),
      xfsIPMAccBinStop(3),
      xfsIPMAccBinUnknown(4)
      }

    IxfsIPMStatusMedia ::= INTEGER
      {
      xfsIPMMediaPresent(1),
      xfsIPMMediaNotPresent(2),
      xfsIPMMediaJammed(3),
      xfsIPMMediaNotSupported(4),
      xfsIPMMediaUnknown(5),
      xfsIPMMediaPosition(6)
      }

    IxfsIPMStatusToner ::= INTEGER
      {
      xfsIPMTonerFull(1),
      xfsIPMTonerLow(2),
```

```
  xfsIPMTonerOut(3),
  xfsIPMTonerNotSupp(4),
  xfsIPMTonerUnknown(5)
  }

IxfsIPMStatusInk ::= INTEGER
  {
  xfsIPMInkFull(1),
  xfsIPMInkLow(2),
  xfsIPMInkOut(3),
  xfsIPMInkNotSupported(4),
  xfsIPMInkUnknown(5)
  }

IxfsIPMStatusScanner ::= INTEGER
  {
  xfsIPMScannerOk(1),
  xfsIPMScannerFading(2),
  xfsIPMScannerInop(3),
  xfsIPMScannerNotSupported(4),
  xfsIPMScannerUnknown(5)
  }

IxfsIPMStatusMICRReader ::= INTEGER
  {
  xfsIPMMICROk(1),
  xfsIPMMICRFading(2),
  xfsIPMMICRInop(3),
  xfsIPMMICRNotSupported(4),
  xfsIPMMICRUnknown(5)
  }

IxfsIPMStatusStacker ::= INTEGER
  {
  xfsIPMStackerEmpty(1),
  xfsIPMStackerNotEmpty(2),
  xfsIPMStackerFull(3),
  xfsIPMStackerInop(4),
  xfsIPMStackerUnknown(5),
  xfsIPMStackerNotSupported(6)
  }

IxfsIPMStatusRebuncher ::= INTEGER
  {
  xfsIPMRebuncherEmpty(1),
  xfsIPMRebuncherNotEmpty(2),
  xfsIPMRebuncherFull(3),
  xfsIPMRebuncherInop(4),
  xfsIPMRebuncherUnknown(5),
  xfsIPMRebuncherNotSupported(6)
  }

IxfsIPMStatusMediaFeeder ::= INTEGER
  {
  xfsIPMMediaFeederEmpty(1),
  xfsIPMMediaFeederNotEmpty(2),
  xfsIPMMediaFeederInop(3),
  xfsIPMMediaFeederUnknown(4),
  xfsIPMMediaFeederNotSupported(5)
  }

IxfsIPMStatusShutter ::= INTEGER
  {
  xfsIPMShutterClosed(1),
  xfsIPMShutterOpen(2),
  xfsIPMShutterJammed(3),
  xfsIPMShutterUnknown(4),
  xfsIPMShutterNotSupported(5)
```

```
      }

    IxfsIPMStatusPosition ::= INTEGER
      {
      xfsIPMPSEmpty(1),
      xfsIPMPSNotEmpty(2),
      xfsIPMPSUnknown(3),
      xfsIPMPSNotSupported(4)
      }

    IxfsIPMStatusTransport ::= INTEGER
      {
      xfsIPMTPOK(1),
      xfsIPMTPInop(2),
      xfsIPMTPUnknown(3),
      xfsIPMTPNotSupported(4)
      }

    IxfsIPMStatusTransportMedia ::= INTEGER
      {
      xfsIPMTPMediaEmpty(1),
      xfsIPMTPMediaNotEmpty(2),
      xfsIPMTPMediaUnknown(3),
      xfsIPMTPMediaNotSupported(4)
      }

    IxfsIPMStatusDevicePosition ::= INTEGER
      {
      xfsIPMDeviceInPosition(1),
      xfsIPMDeviceNotInPosition(2),
      xfsIPMDevicePosUnknown(3),
      xfsIPMDevicePosNotSupported(4)
      }

    IxfsIPMStatusMixedMode ::= INTEGER
      {
      xfsIPMMixedMediaNotActive(1),
      xfsIPMCIMMixedMedia(2)
      }

    IxfsIPMStatusAntiFraudModule ::= INTEGER
      {
      xfsIPMAFMNotSupported(1),
      xfsIPMAFMOK(2),
      xfsIPMAFMInop(3),
      xfsIPMAFMDeviceDetected(4),
      xfsIPMAFMUnknown(5)
      }


--  ********************************************************************
-- IPM SubDevice #defines
-- ********************************************************************
    IxfsIPMSubDeviceMBMediaType ::= INTEGER
      {
      xfsIPMMediaTypeIPM(2),
      xfsIPMMediaTypeCompound(3)
      }

    IxfsIPMSubDeviceMBStatus ::= INTEGER
      {
      xfsIPMMBStatOK(2),
      xfsIPMMBStatFull(3),
      xfsIPMMBStatHigh(4),
      xfsIPMMBStatInop(5),
      xfsIPMMBStatMissing(6),
      xfsIPMMBStatUnknown(7)
      }
```

```
--  ********************************************************************
-- IPM Capabilities #defines
-- ********************************************************************
    IxfsIPMCapabilitiesDeviceType ::= INTEGER
      {
      xfsIPMSingleMediaInput(2),
      xfsIPMBunchedMediaInput(3)
      }

    IxfsIPMCapabilitiesDefaultScanColor ::= INTEGER
      {
      xfsIPMScanColorRed(2),
      xfsIPMScanColorBlue(3),
      xfsIPMScanColorGreen(5),
      xfsIPMScanColorYellow(9),
      xfsIPMScanColorWhite(17)
      }

    IxfsIPMCapabilitiesMixedMode ::= INTEGER
      {
      xfsIPMMixedMediaNotSupp(1),
      xfsIPMCIMMixedMedia(2)
      }


--
-- Node definitions
--

--  Node definitions
--
-- ********************************************************************
-- Version 1 of IPM MIB
--
-- The ASN.1 prefix to, and including the Version 1 of IPM is:
1.3.6.1.4.1.16213.2.16.1
--
-- ********************************************************************
    -- 1.3.6.1.4.1.16213.2.16.1
    xfsIPMV1 OBJECT IDENTIFIER ::= { xfsIPM 1 }


    -- 1.3.6.1.4.1.16213.2.16.1.1
    xfsIPMInstances OBJECT-TYPE
      SYNTAX Integer32
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
        "Number that represents the number of IPM managed services."
      ::= { xfsIPMV1 1 }


--  ********************************************************************
-- IPM Device Status Table
-- ********************************************************************
    -- 1.3.6.1.4.1.16213.2.16.1.2
    xfsIPMStatusTable OBJECT-TYPE
      SYNTAX SEQUENCE OF XfsIPMStatusEntry
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
        "Define the set of MIB Variables for the IPM status table."
      ::= { xfsIPMV1 2 }


    -- 1.3.6.1.4.1.16213.2.16.1.2.1
    xfsIPMStatusEntry OBJECT-TYPE
```

```
  SYNTAX XfsIPMStatusEntry
  MAX-ACCESS not-accessible
  STATUS current
  DESCRIPTION
    "IPM Device Status Table Entry."
  INDEX { xfsIPMStatusManagedServiceName }
  ::= { xfsIPMStatusTable 1 }


XfsIPMStatusEntry ::=
  SEQUENCE {
    xfsIPMStatusManagedServiceName
      DisplayString,
    xfsIPMStatusNumberSubDevices
      Integer32,
    xfsIPMStatusDevice
      IxfsMIBDeviceStatus,
    xfsIPMStatusAcceptor
      IxfsIPMStatusAcceptor,
    xfsIPMStatusMedia
      IxfsIPMStatusMedia,
    xfsIPMStatusToner
      IxfsIPMStatusToner,
    xfsIPMStatusInk
      IxfsIPMStatusInk,
    xfsIPMStatusFrontImageScanner
      IxfsIPMStatusScanner,
    xfsIPMStatusBackImageScanner
      IxfsIPMStatusScanner,
    xfsIPMStatusMICRReader
      IxfsIPMStatusMICRReader,
    xfsIPMStatusStacker
      IxfsIPMStatusStacker,
    xfsIPMStatusRebuncher
      IxfsIPMStatusRebuncher,
    xfsIPMStatusMediaFeeder
      IxfsIPMStatusMediaFeeder,
    xfsIPMStatusShutterInput
      IxfsIPMStatusShutter,
    xfsIPMStatusPositionInput
      IxfsIPMStatusPosition,
    xfsIPMStatusTransportInput
      IxfsIPMStatusTransport,
    xfsIPMStatusTransportMediaInput
      IxfsIPMStatusTransportMedia,
    xfsIPMStatusShutterOutput
      IxfsIPMStatusShutter,
    xfsIPMStatusPositionOutput
      IxfsIPMStatusPosition,
    xfsIPMStatusTransportOutput
      IxfsIPMStatusTransport,
    xfsIPMStatusTransportMediaOutput
      IxfsIPMStatusTransportMedia,
    xfsIPMStatusShutterRefused
      IxfsIPMStatusShutter,
    xfsIPMStatusPositionRefused
      IxfsIPMStatusPosition,
    xfsIPMStatusTransportRefused
      IxfsIPMStatusTransport,
    xfsIPMStatusTransportMediaRefused
      IxfsIPMStatusTransportMedia,
    xfsIPMStatusGuidanceMediaInput
      Integer32,
    xfsIPMStatusGuidanceMediaOutput
      Integer32,
    xfsIPMStatusGuidanceMediaRefused
      Integer32,
    xfsIPMStatusDevicePosition
```

```
      IxfsIPMStatusDevicePosition,
    xfsIPMStatusPowerSaveRecoveryTime
      Integer32,
    xfsIPMStatusMixedMode
      IxfsIPMStatusMixedMode,
    xfsIPMStatusAntiFraudModule
      IxfsIPMStatusAntiFraudModule,
    xfsIPMStatusExtraStatus
      OCTET STRING
   }

-- 1.3.6.1.4.1.16213.2.16.1.2.1.1
xfsIPMStatusManagedServiceName OBJECT-TYPE
  SYNTAX DisplayString
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Instance identifier of the managed service."
  ::= { xfsIPMStatusEntry 1 }


-- 1.3.6.1.4.1.16213.2.16.1.2.1.2
xfsIPMStatusNumberSubDevices OBJECT-TYPE
  SYNTAX Integer32
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Number of sub devices supported by the IPM device."
  ::= { xfsIPMStatusEntry 2 }


-- 1.3.6.1.4.1.16213.2.16.1.2.1.3
xfsIPMStatusDevice OBJECT-TYPE
  SYNTAX IxfsMIBDeviceStatus
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains the state of the IPM. However, an xfsIPMStatusDevice (3)
    status of xfsDevOnline does not necessarily imply that accepting can
    take place: the value of xfsIPMStatusAcceptor (4) field must be taken
    into account."
  ::= { xfsIPMStatusEntry 3 }


-- 1.3.6.1.4.1.16213.2.16.1.2.1.4
xfsIPMStatusAcceptor OBJECT-TYPE
  SYNTAX IxfsIPMStatusAcceptor
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains the state of the overall acceptor media bins.
    Allowed values are:
    xfsIPMAccBinOK(1),
    xfsIPMAccBinState(2),
    xfsIPMAccBinStop(3),
    xfsIPMAccBinUnknown(4)"
  ::= { xfsIPMStatusEntry 4 }


-- 1.3.6.1.4.1.16213.2.16.1.2.1.5
xfsIPMStatusMedia OBJECT-TYPE
  SYNTAX IxfsIPMStatusMedia
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains the state of the media. Allowed values are:
    xfsIPMMediaPresent(1),
    xfsIPMMediaNotPresent(2),
```

```
    xfsIPMMediaJammed(3),
    xfsIPMMediaNotSupported(4),
    xfsIPMMediaUnknown(5),
    xfsIPMMediaPosition(6)"
  ::= { xfsIPMStatusEntry 5 }


-- 1.3.6.1.4.1.16213.2.16.1.2.1.6
xfsIPMStatusToner OBJECT-TYPE
  SYNTAX IxfsIPMStatusToner
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains the state of the toner or ink supply or the state of the
    ribbon of the endorser. Allowed values are:
    xfsIPMTonerFull(1),
    xfsIPMTonerLow(2),
    xfsIPMTonerOut(3),
    xfsIPMTonerNotSupp(4),
    xfsIPMTonerUnknown(5)"
  ::= { xfsIPMStatusEntry 6 }


-- 1.3.6.1.4.1.16213.2.16.1.2.1.7
xfsIPMStatusInk OBJECT-TYPE
  SYNTAX IxfsIPMStatusInk
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains the state of the stamping ink. Allowed values are:
    xfsIPMInkFull(1),
    xfsIPMInkLow(2),
    xfsIPMInkOut(3),
    xfsIPMInkNotSupported(4),
    xfsIPMInkUnknown(5)"
  ::= { xfsIPMStatusEntry 7 }


-- 1.3.6.1.4.1.16213.2.16.1.2.1.8
xfsIPMStatusFrontImageScanner OBJECT-TYPE
  SYNTAX IxfsIPMStatusScanner
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains the state of the front image scanner that captures images of the
    front of the media items. Allowed values are:
    xfsIPMScannerOk(1),
    xfsIPMScannerFading(2),
    xfsIPMScannerInop(3),
    xfsIPMScannerNotSupported(4),
    xfsIPMScannerUnknown(5)"
  ::= { xfsIPMStatusEntry 8 }


-- 1.3.6.1.4.1.16213.2.16.1.2.1.9
xfsIPMStatusBackImageScanner OBJECT-TYPE
  SYNTAX IxfsIPMStatusScanner
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains the state of the back image scanner that captures images of the
    back of the media items. Allowed values are:
    xfsIPMScannerOk(1),
    xfsIPMScannerFading(2),
    xfsIPMScannerInop(3),
    xfsIPMScannerNotSupported(4),
    xfsIPMScannerUnknown(5)"
  ::= { xfsIPMStatusEntry 9 }
```

```
-- 1.3.6.1.4.1.16213.2.16.1.2.1.10
xfsIPMStatusMICRReader OBJECT-TYPE
  SYNTAX IxfsIPMStatusMICRReader
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains the state of the MICR code line reader. Allowed values are:
    xfsIPMMICROk(1),
    xfsIPMMICRFading(2),
    xfsIPMMICRInop(3),
    xfsIPMMICRNotSupported(4),
    xfsIPMMICRUnknown(5)"
  ::= { xfsIPMStatusEntry 10 }


-- 1.3.6.1.4.1.16213.2.16.1.2.1.11
xfsIPMStatusStacker OBJECT-TYPE
  SYNTAX IxfsIPMStatusStacker
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains the state of the stacker (also known as an escrow). The stacker
    is where the media items are held while the application decides what to
    do with them. Allowed values are:
    xfsIPMStackerEmpty(1),
    xfsIPMStackerNotEmpty(2),
    xfsIPMStackerFull(3),
    xfsIPMStackerInop(4),
    xfsIPMStackerUnknown(5),
    xfsIPMStackerNotSupported(6)"
  ::= { xfsIPMStatusEntry 11 }


-- 1.3.6.1.4.1.16213.2.16.1.2.1.12
xfsIPMStatusRebuncher OBJECT-TYPE
  SYNTAX IxfsIPMStatusRebuncher
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains the state of the rebuncher (return stacker). The rebuncher is
    where media items are re-bunched ready for return to the customer.
    Allowed values are:
    xfsIPMRebuncherEmpty(1),
    xfsIPMRebuncherNotEmpty(2),
    xfsIPMRebuncherFull(3),
    xfsIPMRebuncherInop(4),
    xfsIPMRebuncherUnknown(5),
    xfsIPMRebuncherNotSupported(6)"
  ::= { xfsIPMStatusEntry 12 }


-- 1.3.6.1.4.1.16213.2.16.1.2.1.13
xfsIPMStatusMediaFeeder OBJECT-TYPE
  SYNTAX IxfsIPMStatusMediaFeeder
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains the state of the media feeder. Allowed values are:
    xfsIPMMediaFeederEmpty(1),
    xfsIPMMediaFeederNotEmpty(2),
    xfsIPMMediaFeederInop(3),
    xfsIPMMediaFeederUnknown(4),
    xfsIPMMediaFeederNotSupported(5)"
  ::= { xfsIPMStatusEntry 13 }
```

```
-- 1.3.6.1.4.1.16213.2.16.1.2.1.14
xfsIPMStatusShutterInput OBJECT-TYPE
  SYNTAX IxfsIPMStatusShutter
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains the state of the shutter at the input position.
    Allowed values are:
    xfsIPMShutterClosed(1),
    xfsIPMShutterOpen(2),
    xfsIPMShutterJammed(3),
    xfsIPMShutterUnknown(4),
    xfsIPMShutterNotSupported(5)"
  ::= { xfsIPMStatusEntry 14 }


-- 1.3.6.1.4.1.16213.2.16.1.2.1.15
xfsIPMStatusPositionInput OBJECT-TYPE
  SYNTAX IxfsIPMStatusPosition
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains the state of the input position. Allowed values are:
    xfsIPMPSEmpty(1),
    xfsIPMPSNotEmpty(2),
    xfsIPMPSUnknown(3),
    xfsIPMPSNotSupported(4)"
  ::= { xfsIPMStatusEntry 15 }


-- 1.3.6.1.4.1.16213.2.16.1.2.1.16
xfsIPMStatusTransportInput OBJECT-TYPE
  SYNTAX IxfsIPMStatusTransport
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains the state of the transport mechanism at the input position.
    Allowed values are:
    xfsIPMTPOK(1),
    xfsIPMTPInop(2),
    xfsIPMTPUnknown(3),
    xfsIPMTPNotSupported(4)"
  ::= { xfsIPMStatusEntry 16 }


-- 1.3.6.1.4.1.16213.2.16.1.2.1.17
xfsIPMStatusTransportMediaInput OBJECT-TYPE
  SYNTAX IxfsIPMStatusTransportMedia
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains information regarding items which may be present on the
    transport at the input position. Allowed values are:
    xfsIPMTPMediaEmpty(1),
    xfsIPMTPMediaNotEmpty(2),
    xfsIPMTPMediaUnknown(3),
    xfsIPMTPMediaNotSupported(4)"
  ::= { xfsIPMStatusEntry 17 }


-- 1.3.6.1.4.1.16213.2.16.1.2.1.18
xfsIPMStatusShutterOutput OBJECT-TYPE
  SYNTAX IxfsIPMStatusShutter
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains the state of the shutter at the output position.
    Allowed values are:
```

```
    xfsIPMShutterClosed(1),
    xfsIPMShutterOpen(2),
    xfsIPMShutterJammed(3),
    xfsIPMShutterUnknown(4),
    xfsIPMShutterNotSupported(5)"
  ::= { xfsIPMStatusEntry 18 }


-- 1.3.6.1.4.1.16213.2.16.1.2.1.19
xfsIPMStatusPositionOutput OBJECT-TYPE
  SYNTAX IxfsIPMStatusPosition
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains the state of the output position. Allowed values are:
    xfsIPMPSEmpty(1),
    xfsIPMPSNotEmpty(2),
    xfsIPMPSUnknown(3),
    xfsIPMPSNotSupported(4)"
  ::= { xfsIPMStatusEntry 19 }


-- 1.3.6.1.4.1.16213.2.16.1.2.1.20
xfsIPMStatusTransportOutput OBJECT-TYPE
  SYNTAX IxfsIPMStatusTransport
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains the state of the transport mechanism at the output position.
    Allowed values are:
    xfsIPMTPOK(1),
    xfsIPMTPInop(2),
    xfsIPMTPUnknown(3),
    xfsIPMTPNotSupported(4)"
  ::= { xfsIPMStatusEntry 20 }


-- 1.3.6.1.4.1.16213.2.16.1.2.1.21
xfsIPMStatusTransportMediaOutput OBJECT-TYPE
  SYNTAX IxfsIPMStatusTransportMedia
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains information regarding items which may be present on the
    transport at the output position. Allowed values are:
    xfsIPMTPMediaEmpty(1),
    xfsIPMTPMediaNotEmpty(2),
    xfsIPMTPMediaUnknown(3),
    xfsIPMTPMediaNotSupported(4)"
  ::= { xfsIPMStatusEntry 21 }


-- 1.3.6.1.4.1.16213.2.16.1.2.1.22
xfsIPMStatusShutterRefused OBJECT-TYPE
  SYNTAX IxfsIPMStatusShutter
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains the state of the shutter at the refused position.
    Allowed values are:
    xfsIPMShutterClosed(1),
    xfsIPMShutterOpen(2),
    xfsIPMShutterJammed(3),
    xfsIPMShutterUnknown(4),
    xfsIPMShutterNotSupported(5)"
  ::= { xfsIPMStatusEntry 22 }
```

```
-- 1.3.6.1.4.1.16213.2.16.1.2.1.23
xfsIPMStatusPositionRefused OBJECT-TYPE
  SYNTAX IxfsIPMStatusPosition
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains the state of the refused position. Allowed values are:
    xfsIPMPSEmpty(1),
    xfsIPMPSNotEmpty(2),
    xfsIPMPSUnknown(3),
    xfsIPMPSNotSupported(4)"
  ::= { xfsIPMStatusEntry 23 }


-- 1.3.6.1.4.1.16213.2.16.1.2.1.24
xfsIPMStatusTransportRefused OBJECT-TYPE
  SYNTAX IxfsIPMStatusTransport
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains the state of the transport mechanism at the refused position.
    Allowed values are:
    xfsIPMTPOK(1),
    xfsIPMTPInop(2),
    xfsIPMTPUnknown(3),
    xfsIPMTPNotSupported(4)"
  ::= { xfsIPMStatusEntry 24 }


-- 1.3.6.1.4.1.16213.2.16.1.2.1.25
xfsIPMStatusTransportMediaRefused OBJECT-TYPE
  SYNTAX IxfsIPMStatusTransportMedia
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains information regarding items which may be present on the
    transport media at the refused position. Allowed values are:
    xfsIPMTPMediaEmpty(1),
    xfsIPMTPMediaNotEmpty(2),
    xfsIPMTPMediaUnknown(3),
    xfsIPMTPMediaNotSupported(4)"
  ::= { xfsIPMStatusEntry 25 }


-- 1.3.6.1.4.1.16213.2.16.1.2.1.26
xfsIPMStatusGuidanceMediaInput OBJECT-TYPE
  SYNTAX Integer32
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains the state of the guidance light indicator at the input
    position."
  ::= { xfsIPMStatusEntry 26 }


-- 1.3.6.1.4.1.16213.2.16.1.2.1.27
xfsIPMStatusGuidanceMediaOutput OBJECT-TYPE
  SYNTAX Integer32
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains the state of the guidance light indicator at the output
    position."
  ::= { xfsIPMStatusEntry 27 }


-- 1.3.6.1.4.1.16213.2.16.1.2.1.28
xfsIPMStatusGuidanceMediaRefused OBJECT-TYPE
```

```
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
      "Contains the state of the guidance light indicator at the refused
      position."
    ::= { xfsIPMStatusEntry 28 }


  -- 1.3.6.1.4.1.16213.2.16.1.2.1.29
  xfsIPMStatusDevicePosition OBJECT-TYPE
    SYNTAX IxfsIPMStatusDevicePosition
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
      "Contains the device position information. Allowed values are:
      xfsIPMDeviceInPosition(1),
      xfsIPMDeviceNotInPosition(2),
      xfsIPMDevicePosUnknown(3),
      xfsIPMDevicePosNotSupported(4)."
    ::= { xfsIPMStatusEntry 29 }


  -- 1.3.6.1.4.1.16213.2.16.1.2.1.30
  xfsIPMStatusPowerSaveRecoveryTime OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
      "Contains the actual number of seconds required by the device to resume
      its normal operational state from the current power saving mode."
    ::= { xfsIPMStatusEntry 30 }


  -- 1.3.6.1.4.1.16213.2.16.1.2.1.31
  xfsIPMStatusMixedMode OBJECT-TYPE
    SYNTAX IxfsIPMStatusMixedMode
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
      "Specifies the mixed mode status.
      xfsIPMMixedMediaNotActive(1),
      xfsIPMCIMMixedMedia(2)."
    ::= { xfsIPMStatusEntry 31 }


  -- 1.3.6.1.4.1.16213.2.16.1.2.1.32
  xfsIPMStatusAntiFraudModule OBJECT-TYPE
    SYNTAX IxfsIPMStatusAntiFraudModule
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
      "Specifies the anti-fraud module
      status.
      xfsIPMAFMNotSupported(1),
      xfsIPMAFMOK(2),
      xfsIPMAFMInop(3),
      xfsIPMAFMDeviceDetected(4),
      xfsIPMAFMUnknown(5)."
    ::= { xfsIPMStatusEntry 32 }


  -- 1.3.6.1.4.1.16213.2.16.1.2.1.100
  xfsIPMStatusExtraStatus OBJECT-TYPE
    SYNTAX OCTET STRING
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
```

```
        "Contains vendor dependent additional device status information.
        It is an OCTET STRING. The information is returned as a series of
        key=value strings. Each string is null-terminated, with the final
        string terminating with two null characters."
      ::= { xfsIPMStatusEntry 100 }


--  ************************************************************************
-- IPM Sub Device Status Table
--
-- The ASN.1 prefix for Version 1 of IPM is: 1.3.6.1.4.1.16213.2.16.1.3
-- ************************************************************************
    -- 1.3.6.1.4.1.16213.2.16.1.3
    xfsIPMSubDeviceTable OBJECT-TYPE
      SYNTAX SEQUENCE OF XfsIPMSubDeviceEntry
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
        "Define the set of MIB Variables for the IPM status table."
      ::= { xfsIPMV1 3 }


    -- 1.3.6.1.4.1.16213.2.16.1.3.1
    xfsIPMSubDeviceEntry OBJECT-TYPE
      SYNTAX XfsIPMSubDeviceEntry
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
        "IPM Sub-Device Status Table Entry."
      INDEX { xfsIPMSubDeviceManagedServiceName, xfsIPMSubDeviceIndex }
      ::= { xfsIPMSubDeviceTable 1 }


    XfsIPMSubDeviceEntry ::=
      SEQUENCE {
        xfsIPMSubDeviceManagedServiceName
          DisplayString,
        xfsIPMSubDeviceIndex
          INTEGER,
        xfsIPMSubDeviceMBBinNumber
          Integer32,
        xfsIPMSubDeviceMBPositionName
          OCTET STRING,
        xfsIPMSubDeviceMBType
          Integer32,
        xfsIPMSubDeviceMBMediaType
          IxfsIPMSubDeviceMBMediaType,
        xfsIPMSubDeviceMBBinID
          OCTET STRING,
        xfsIPMSubDeviceMBMediaInCount
          Integer32,
        xfsIPMSubDeviceMBCount
          Integer32,
        xfsIPMSubDeviceMBRetractOperations
          Integer32,
        xfsIPMSubDeviceMBHardwareSensor
          TruthValue,
        xfsIPMSubDeviceMBMaximumItems
          Integer32,
        xfsIPMSubDeviceMBMaximumRetractOperations
          Integer32,
        xfsIPMSubDeviceMBStatus
          IxfsIPMSubDeviceMBStatus,
        xfsIPMSubDeviceMBExtraStatus
          OCTET STRING
       }

    -- 1.3.6.1.4.1.16213.2.16.1.3.1.1
```

```
xfsIPMSubDeviceManagedServiceName OBJECT-TYPE
  SYNTAX DisplayString
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Instance identifier of the managed service."
  ::= { xfsIPMSubDeviceEntry 1 }


-- 1.3.6.1.4.1.16213.2.16.1.3.1.2
xfsIPMSubDeviceIndex OBJECT-TYPE
  SYNTAX INTEGER (1..65535)
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Index into the array of sub devices supported."
  ::= { xfsIPMSubDeviceEntry 2 }


-- 1.3.6.1.4.1.16213.2.16.1.3.1.3
xfsIPMSubDeviceMBBinNumber OBJECT-TYPE
  SYNTAX Integer32
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains the media bin number. Each structure has a unique number
    starting with a value of one (1) for the first structure, and
    incrementing by one for each subsequent structure."
  ::= { xfsIPMSubDeviceEntry 3 }


-- 1.3.6.1.4.1.16213.2.16.1.3.1.4
xfsIPMSubDeviceMBPositionName OBJECT-TYPE
  SYNTAX OCTET STRING
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains the physical bin position name where the bin is inserted."
  ::= { xfsIPMSubDeviceEntry 4 }


-- 1.3.6.1.4.1.16213.2.16.1.3.1.5
xfsIPMSubDeviceMBType OBJECT-TYPE
  SYNTAX Integer32
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains the media bin type."
  ::= { xfsIPMSubDeviceEntry 5 }


-- 1.3.6.1.4.1.16213.2.16.1.3.1.6
xfsIPMSubDeviceMBMediaType OBJECT-TYPE
  SYNTAX IxfsIPMSubDeviceMBMediaType
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains the type of media this bin takes. Allowed values are:
    xfsIPMMediaTypeIPM(2),
    xfsIPMMediaTypeCompound(3)"
  ::= { xfsIPMSubDeviceEntry 6 }


-- 1.3.6.1.4.1.16213.2.16.1.3.1.7
xfsIPMSubDeviceMBBinID OBJECT-TYPE
  SYNTAX OCTET STRING
  MAX-ACCESS read-only
  STATUS current
```

```
  DESCRIPTION
    "Contains the application defined media bin identifier."
  ::= { xfsIPMSubDeviceEntry 7 }


-- 1.3.6.1.4.1.16213.2.16.1.3.1.8
xfsIPMSubDeviceMBMediaInCount OBJECT-TYPE
  SYNTAX Integer32
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains the count of media that have entered the media bin
    as a result of operations on the IPM interface. This counter is
    incremented whenever media enters the media bin for any reason as a
    result of an operation initiated through the IPM interface. This value is
    persistent. On a retract-only bin, if the device cannot count media
    during a retract operation this value will be zero."
  ::= { xfsIPMSubDeviceEntry 8 }


-- 1.3.6.1.4.1.16213.2.16.1.3.1.9
xfsIPMSubDeviceMBCount OBJECT-TYPE
  SYNTAX Integer32
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains the total number of media in the media bin including the ones
    that entered via the compound device interface. If the bin is a shared
    bin with a compound device interface then this value may not be the same
    as the value of xfsIPMSubDeviceMBMediaInCount (8). On a retract-only bin,
    if the device cannot count media during a retract operation this value
    will be zero."
  ::= { xfsIPMSubDeviceEntry 9 }


-- 1.3.6.1.4.1.16213.2.16.1.3.1.10
xfsIPMSubDeviceMBRetractOperations OBJECT-TYPE
  SYNTAX Integer32
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains the total number of retract operations performed via
    WFS_CMD_IPM_RETRACT_MEDIA, WFS_CMD_IPM_RESET and error recovery where
    media is moved to the bin. This value is persistent."
  ::= { xfsIPMSubDeviceEntry 10 }


-- 1.3.6.1.4.1.16213.2.16.1.3.1.11
xfsIPMSubDeviceMBHardwareSensor OBJECT-TYPE
  SYNTAX TruthValue
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    " Contains whether or not the threshold event,
    WFS_USRE_IPM_MEDIABINTHRESHOLD (WFS_IPM_STATMBHIGH), can be generated
    based on hardware sensors in the device."
  ::= { xfsIPMSubDeviceEntry 11 }


-- 1.3.6.1.4.1.16213.2.16.1.3.1.12
xfsIPMSubDeviceMBMaximumItems OBJECT-TYPE
  SYNTAX Integer32
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Contains the value that controls when the threshold event
    WFS_USRE_IPM_MEDIABINTHRESHOLD (WFS_IPM_STATMBHIGH) will be generated;
    the xfsIPMSubDeviceMBCount (9) field must reach this value in order for
```

```
        the event to be generated."
      ::= { xfsIPMSubDeviceEntry 12 }


    -- 1.3.6.1.4.1.16213.2.16.1.3.1.13
    xfsIPMSubDeviceMBMaximumRetractOperations OBJECT-TYPE
      SYNTAX Integer32
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
        "Contains the value that controls when the threshold event
        WFS_USRE_IPM_MEDIABINTHRESHOLD (WFS_IPM_STATMBHIGH) will be generated;
        the xfsIPMSubDeviceMBRetractOperations (10) field must reach this value
        in order for the event to be generated. This value is zero if the bin is
        not a retract bin (i.e. does not contain the WFS_IPM_TYPERETRACT value in
        the xfsIPMSubDeviceMBType (5) field)."
      ::= { xfsIPMSubDeviceEntry 13 }


    -- 1.3.6.1.4.1.16213.2.16.1.3.1.14
    xfsIPMSubDeviceMBStatus OBJECT-TYPE
      SYNTAX IxfsIPMSubDeviceMBStatus
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
        "Contains the status of the media bin. Allowed values are:
        xfsIPMMBStatOK(1),
        xfsIPMMBStatFull(2),
        xfsIPMMBStatHigh(3),
        xfsIPMMBStatInop(4),
        xfsIPMMBStatMissing(5),
        xfsIPMMBStatUnknown(6)"
      ::= { xfsIPMSubDeviceEntry 14 }


    -- 1.3.6.1.4.1.16213.2.16.1.3.1.100
    xfsIPMSubDeviceMBExtraStatus OBJECT-TYPE
      SYNTAX OCTET STRING
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
        "Contains vendor dependent additional cash unit status information.
        The information is returned as a series of key=value strings.
        Each string is null-terminated, with the final string terminating
        with two null characters."
      ::= { xfsIPMSubDeviceEntry 100 }


--  ********************************************************************
-- IPM Error Table
-- ********************************************************************
    -- 1.3.6.1.4.1.16213.2.16.1.4
    xfsIPMErrorTable OBJECT-TYPE
      SYNTAX SEQUENCE OF XfsIPMErrorEntry
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
        "Define the set of MIB Variables for the IPM Error Table."
      ::= { xfsIPMV1 4 }


    -- 1.3.6.1.4.1.16213.2.16.1.4.1
    xfsIPMErrorEntry OBJECT-TYPE
      SYNTAX XfsIPMErrorEntry
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
        "IPM Error Table Entry."
```

```
      INDEX { xfsIPMErrorManagedServiceName, xfsIPMErrorCommandCode,
xfsIPMErrorResponseCode }
      ::= { xfsIPMErrorTable 1 }


    XfsIPMErrorEntry ::=
      SEQUENCE {
        xfsIPMErrorManagedServiceName
          DisplayString,
        xfsIPMErrorCommandCode
          INTEGER,
        xfsIPMErrorResponseCode
          INTEGER,
        xfsIPMErrorCount
          Integer32
       }

    -- 1.3.6.1.4.1.16213.2.16.1.4.1.1
    xfsIPMErrorManagedServiceName OBJECT-TYPE
      SYNTAX DisplayString
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
        "Instance identifier of the managed service."
      ::= { xfsIPMErrorEntry 1 }


    -- 1.3.6.1.4.1.16213.2.16.1.4.1.2
    xfsIPMErrorCommandCode OBJECT-TYPE
      SYNTAX INTEGER (1601..1700)
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
        "The executable command code supported by the Service
        Provider associated with the error count of interest."
      ::= { xfsIPMErrorEntry 2 }


    -- 1.3.6.1.4.1.16213.2.16.1.4.1.3
    xfsIPMErrorResponseCode OBJECT-TYPE
      SYNTAX INTEGER (0..99 | 1600..1699)
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
        "The response code supported by Service Provider for the
        corresponding command code associated with the error count
        of interest."
      ::= { xfsIPMErrorEntry 3 }


    -- 1.3.6.1.4.1.16213.2.16.1.4.1.4
    xfsIPMErrorCount OBJECT-TYPE
      SYNTAX Integer32
      MAX-ACCESS read-write
      STATUS current
      DESCRIPTION
        "The counter value corresponding to the managed service,
        command code and response code."
      ::= { xfsIPMErrorEntry 4 }


--  ************************************************************************
-- IPM Reset Table
-- ************************************************************************
    -- 1.3.6.1.4.1.16213.2.16.1.5
    xfsIPMResetTable OBJECT-TYPE
      SYNTAX SEQUENCE OF XfsIPMResetEntry
      MAX-ACCESS not-accessible
```

```
      STATUS current
      DESCRIPTION
        "Defines the set of MIB Variables for the IPM Reset Table."
      ::= { xfsIPMV1 5 }


    -- 1.3.6.1.4.1.16213.2.16.1.5.1
    xfsIPMResetEntry OBJECT-TYPE
      SYNTAX XfsIPMResetEntry
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
        "IPM Reset Table Entry."
      INDEX { xfsIPMResetManagedServiceName }
      ::= { xfsIPMResetTable 1 }


    XfsIPMResetEntry ::=
      SEQUENCE {
        xfsIPMResetManagedServiceName
          DisplayString,
        xfsIPMResetAll
          Integer32,
        xfsIPMResetTimestamp
          DisplayString
       }

    -- 1.3.6.1.4.1.16213.2.16.1.5.1.1
    xfsIPMResetManagedServiceName OBJECT-TYPE
      SYNTAX DisplayString
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
        "Instance identifier of the managed service."
      ::= { xfsIPMResetEntry 1 }


    -- 1.3.6.1.4.1.16213.2.16.1.5.1.2
    xfsIPMResetAll OBJECT-TYPE
      SYNTAX Integer32
      MAX-ACCESS read-write
      STATUS current
      DESCRIPTION
        "Returns all counter values for this managed service to
        zero when set to zero and returns zero when read."
      ::= { xfsIPMResetEntry 2 }


    -- 1.3.6.1.4.1.16213.2.16.1.5.1.3
    xfsIPMResetTimestamp OBJECT-TYPE
      SYNTAX DisplayString
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
        "Date and time the last reset of the counters was
        performed."
      ::= { xfsIPMResetEntry 3 }


--    ************************************************************************
-- IPM Reset Device Table
-- ************************************************************************
    -- 1.3.6.1.4.1.16213.2.16.1.6
    xfsIPMResetDeviceTable OBJECT-TYPE
      SYNTAX SEQUENCE OF XfsIPMResetDeviceEntry
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
```

```
    "Define the set of MIB Variables for the IPM Reset Device Table."
  ::= { xfsIPMV1 6 }


-- 1.3.6.1.4.1.16213.2.16.1.6.1
xfsIPMResetDeviceEntry OBJECT-TYPE
  SYNTAX XfsIPMResetDeviceEntry
  MAX-ACCESS not-accessible
  STATUS current
  DESCRIPTION
    "IPM Reset Device Table Entry"
  INDEX { xfsIPMResetDeviceManagedServiceName }
  ::= { xfsIPMResetDeviceTable 1 }


XfsIPMResetDeviceEntry ::=
  SEQUENCE {
    xfsIPMResetDeviceManagedServiceName
      DisplayString,
    xfsIPMResetDeviceAction
      INTEGER,
    xfsIPMResetDeviceMediaControl
      INTEGER,
    xfsIPMResetDeviceStatus
      INTEGER
   }

-- 1.3.6.1.4.1.16213.2.16.1.6.1.1
xfsIPMResetDeviceManagedServiceName OBJECT-TYPE
  SYNTAX DisplayString
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Instance identifier of the managed service."
  ::= { xfsIPMResetDeviceEntry 1 }


-- 1.3.6.1.4.1.16213.2.16.1.6.1.2
xfsIPMResetDeviceAction OBJECT-TYPE
  SYNTAX INTEGER { executeReset(1) }
  MAX-ACCESS read-write
  STATUS current
  DESCRIPTION
    "Variable that initiates the device reset"
  ::= { xfsIPMResetDeviceEntry 2 }


-- 1.3.6.1.4.1.16213.2.16.1.6.1.3
xfsIPMResetDeviceMediaControl OBJECT-TYPE
  SYNTAX INTEGER
    {
    mediaDefault(1),
    mediaIn(2),
    mediaOut(3)
    }
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Variable that reports the media handling during the device reset"
  ::= { xfsIPMResetDeviceEntry 3 }


-- 1.3.6.1.4.1.16213.2.16.1.6.1.4
xfsIPMResetDeviceStatus OBJECT-TYPE
  SYNTAX INTEGER
    {
    resetIdle(1),
    resetInProgress(2)
```

```
        }
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
        "Variable that reports the progress of the device reset"
      ::= { xfsIPMResetDeviceEntry 4 }


--  ********************************************************************
-- IPM Device Capabilities Table
-- ********************************************************************
    -- 1.3.6.1.4.1.16213.2.16.1.7
    xfsIPMCapabilitiesTable OBJECT-TYPE
      SYNTAX SEQUENCE OF XfsIPMCapabilitiesEntry
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
        "Define the set of MIB Variables for the IPM capabilities table."
      ::= { xfsIPMV1 7 }


    -- 1.3.6.1.4.1.16213.2.16.1.7.1
    xfsIPMCapabilitiesEntry OBJECT-TYPE
      SYNTAX XfsIPMCapabilitiesEntry
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
        "IPM Device Capabilities Table Entry."
      INDEX { xfsIPMCapabilitiesManagedServiceName }
      ::= { xfsIPMCapabilitiesTable 1 }


    XfsIPMCapabilitiesEntry ::=
      SEQUENCE {
        xfsIPMCapabilitiesManagedServiceName
          DisplayString,
        xfsIPMCapabilitiesDeviceType
          IxfsIPMCapabilitiesDeviceType,
        xfsIPMCapabilitiesCompoundDevice
          TruthValue,
        xfsIPMCapabilitiesMaxMediaOnStacker
          Integer32,
        xfsIPMCapabilitiesPrintSize
          OCTET STRING,
        xfsIPMCapabilitiesStamping
          TruthValue,
        xfsIPMCapabilitiesRescan
          TruthValue,
        xfsIPMCapabilitiesPresentControl
          TruthValue,
        xfsIPMCapabilitiesApplicationRefuse
          TruthValue,
        xfsIPMCapabilitiesRetractLocations
          Integer32,
        xfsIPMCapabilitiesResetControl
          Integer32,
        xfsIPMCapabilitiesRetractCountsItems
          TruthValue,
        xfsIPMCapabilitiesImageType
          Integer32,
        xfsIPMCapabilitiesFrontImageColorFormat
          Integer32,
        xfsIPMCapabilitiesBackImageColorFormat
          Integer32,
        xfsIPMCapabilitiesFrontScanColor
          Integer32,
        xfsIPMCapabilitiesDefaultFrontScanColor
          IxfsIPMCapabilitiesDefaultScanColor,
```

```
    xfsIPMCapabilitiesBackScanColor
      Integer32,
    xfsIPMCapabilitiesDefaultBackScanColor
      IxfsIPMCapabilitiesDefaultScanColor,
    xfsIPMCapabilitiesCodelineFormat
      Integer32,
    xfsIPMCapabilitiesDataSource
      Integer32,
    xfsIPMCapabilitiesOrientation
      Integer32,
    xfsIPMCapabilitiesItemsTakenSensorInput
      TruthValue,
    xfsIPMCapabilitiesItemsInsertedSensorInput
      TruthValue,
    xfsIPMCapabilitiesRetractAreasInput
      Integer32,
    xfsIPMCapabilitiesItemsTakenSensorOutput
      TruthValue,
    xfsIPMCapabilitiesItemsInsertedSensorOutput
      TruthValue,
    xfsIPMCapabilitiesRetractAreasOutput
      Integer32,
    xfsIPMCapabilitiesItemsTakenSensorRefused
      TruthValue,
    xfsIPMCapabilitiesItemsInsertedSensorRefused
      TruthValue,
    xfsIPMCapabilitiesRetractAreasRefused
      Integer32,
    xfsIPMCapabilitiesGuidanceMediaIn
      Integer32,
    xfsIPMCapabilitiesGuidanceMediaOut
      Integer32,
    xfsIPMCapabilitiesGuidanceMediaRefused
      Integer32,
    xfsIPMCapabilitiesPowerSaveControl
      TruthValue,
    xfsIPMCapabilitiesImageAfterEndorse
      TruthValue,
    xfsIPMCapabilitiesReturnedItemsProcessing
      Integer32,
    xfsIPMCapabilitiesMixedMode
      IxfsIPMCapabilitiesMixedMode,
    xfsIPMCapabilitiesMixedDepositAndRollback
      TruthValue,
    xfsIPMCapabilitiesAntiFraudModule
      TruthValue,
    xfsIPMCapabilitiesExtraCapability
      OCTET STRING
   }

-- 1.3.6.1.4.1.16213.2.16.1.7.1.1
xfsIPMCapabilitiesManagedServiceName OBJECT-TYPE
  SYNTAX DisplayString
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Instance identifier of the managed service."
  ::= { xfsIPMCapabilitiesEntry 1 }


-- 1.3.6.1.4.1.16213.2.16.1.7.1.2
xfsIPMCapabilitiesDeviceType OBJECT-TYPE
  SYNTAX IxfsIPMCapabilitiesDeviceType
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Defines the type of device of this class. Allowed values are:
    xfsIPMSingleMediaInput(2),
```

```
      xfsIPMBunchedMediaInput(3)."
    ::= { xfsIPMCapabilitiesEntry 2 }


-- 1.3.6.1.4.1.16213.2.16.1.7.1.3
xfsIPMCapabilitiesCompoundDevice OBJECT-TYPE
  SYNTAX TruthValue
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "It specifies whether the logical device is part of a compound physical
    device."
  ::= { xfsIPMCapabilitiesEntry 3 }


-- 1.3.6.1.4.1.16213.2.16.1.7.1.4
xfsIPMCapabilitiesMaxMediaOnStacker OBJECT-TYPE
  SYNTAX Integer32
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "It specifies the maximum number of media items that the stacker can
    hold (zero if the device does not have a stacker). If the device has a
    bunch media input capability and the stacker is not present or has a
    capacity of one then the application must process each item inserted
    sequentially as described in section 2.2.1 of CWA 15748-18 (the Item
    Processing Module Device Class Interface Programmer's Reference)."
  ::= { xfsIPMCapabilitiesEntry 4 }


-- 1.3.6.1.4.1.16213.2.16.1.7.1.5
xfsIPMCapabilitiesPrintSize OBJECT-TYPE
  SYNTAX OCTET STRING
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "It specifies the size of the print area. If the media item is inserted
    in one of the orientations specified in
    xfsIPMCapabilitiesOrientation (22), the Service Provider will print on
    the back side of the media. If the media item is inserted in a different
    orientation to those specified in xfsIPMCapabilitiesOrientation (22) then
    printing may occur on the front side, upside down or both."
  ::= { xfsIPMCapabilitiesEntry 5 }


-- 1.3.6.1.4.1.16213.2.16.1.7.1.6
xfsIPMCapabilitiesStamping OBJECT-TYPE
  SYNTAX TruthValue
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "It specifies whether the device has stamping capability. If the media
    item is inserted in one of the orientations specified in
    xfsIPMCapabilitiesOrientation (22), the Service Provider will stamp on
    the front side of the media. If the media item is inserted in a different
    orientation to those specified in xfsIPMCapabilitiesOrientation (22) then
    stamping may occur on the back, upside down or both."
  ::= { xfsIPMCapabilitiesEntry 6 }


-- 1.3.6.1.4.1.16213.2.16.1.7.1.7
xfsIPMCapabilitiesRescan OBJECT-TYPE
  SYNTAX TruthValue
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "It specifies whether the device has the capability to either physically
    rescan media items after they have been inserted into the device or is
```

```
    able to generate any image supported by the device during the
    WFS_CMD_IPM_READ_IMAGE command (regardless of the images requested during
    the WFS_CMD_IPM_MEDIA_IN command)."
  ::= { xfsIPMCapabilitiesEntry 7 }


-- 1.3.6.1.4.1.16213.2.16.1.7.1.8
xfsIPMCapabilitiesPresentControl OBJECT-TYPE
  SYNTAX TruthValue
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "It specifies how the presenting of media items is controlled during the
    WFS_CMD_IPM_MEDIA_IN_END and WFS_CMD_IPM_MEDIA_IN_ROLLBACK commands. This
    field is always set to TRUE if the device has no shutter. This field
    applies to all output positions."
  ::= { xfsIPMCapabilitiesEntry 8 }


-- 1.3.6.1.4.1.16213.2.16.1.7.1.9
xfsIPMCapabilitiesApplicationRefuse OBJECT-TYPE
  SYNTAX TruthValue
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "It specifies if the Service Provider supports the WFS_CMD_IPM_MEDIA_IN
    mode where the application decides to accept or refuse each media item
    that has successfully been accepted by the device."
  ::= { xfsIPMCapabilitiesEntry 9 }


-- 1.3.6.1.4.1.16213.2.16.1.7.1.10
xfsIPMCapabilitiesRetractLocations OBJECT-TYPE
  SYNTAX Integer32
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "It specifies the locations to which the media can be retracted using the
    WFS_CMD_IPM_RETRACT_MEDIA command."
  ::= { xfsIPMCapabilitiesEntry 10 }


-- 1.3.6.1.4.1.16213.2.16.1.7.1.11
xfsIPMCapabilitiesResetControl OBJECT-TYPE
  SYNTAX Integer32
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "It specifies the manner in which the media can be handled on
    WFS_CMD_IPM_RESET."
  ::= { xfsIPMCapabilitiesEntry 11 }


-- 1.3.6.1.4.1.16213.2.16.1.7.1.12
xfsIPMCapabilitiesRetractCountsItems OBJECT-TYPE
  SYNTAX TruthValue
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "This field only applies to retract media bins. It specifies whether the
    bin reports the number of items retracted into the bin or just the number
    of retract operations."
  ::= { xfsIPMCapabilitiesEntry 12 }


-- 1.3.6.1.4.1.16213.2.16.1.7.1.13
xfsIPMCapabilitiesImageType OBJECT-TYPE
  SYNTAX Integer32
```

```
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
      "It specifies the image format supported by this device."
    ::= { xfsIPMCapabilitiesEntry 13 }


  -- 1.3.6.1.4.1.16213.2.16.1.7.1.14
  xfsIPMCapabilitiesFrontImageColorFormat OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
      "It specifies the front image color formats supported by this device."
    ::= { xfsIPMCapabilitiesEntry 14 }


  -- 1.3.6.1.4.1.16213.2.16.1.7.1.15
  xfsIPMCapabilitiesBackImageColorFormat OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
      "It specifies the back image color formats supported by this device."
    ::= { xfsIPMCapabilitiesEntry 15 }


  -- 1.3.6.1.4.1.16213.2.16.1.7.1.16
  xfsIPMCapabilitiesFrontScanColor OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
      "It specifies the front image scan colors supported by this device and
      individually controllable by the application. Scan colors are used to
      enhance the scanning results on colored scan media."
    ::= { xfsIPMCapabilitiesEntry 16 }


  -- 1.3.6.1.4.1.16213.2.16.1.7.1.17
  xfsIPMCapabilitiesDefaultFrontScanColor OBJECT-TYPE
    SYNTAX IxfsIPMCapabilitiesDefaultScanColor
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
      "It specifies the default front scan color format used by this device
      (i.e. when not explicitly set)."
    ::= { xfsIPMCapabilitiesEntry 17 }


  -- 1.3.6.1.4.1.16213.2.16.1.7.1.18
  xfsIPMCapabilitiesBackScanColor OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
      "It specifies the back image scan colors supported by this device and
      individually controllable by the application. Scan colors are used to
      enhance the scanning results on colored scan media."
    ::= { xfsIPMCapabilitiesEntry 18 }


  -- 1.3.6.1.4.1.16213.2.16.1.7.1.19
  xfsIPMCapabilitiesDefaultBackScanColor OBJECT-TYPE
    SYNTAX IxfsIPMCapabilitiesDefaultScanColor
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
```

```
    "It specifies the default back scan color format used by this device
    (i.e. when not explicitly set)."
  ::= { xfsIPMCapabilitiesEntry 19 }


-- 1.3.6.1.4.1.16213.2.16.1.7.1.20
xfsIPMCapabilitiesCodelineFormat OBJECT-TYPE
  SYNTAX Integer32
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "It specifies the code line formats supported by this device."
  ::= { xfsIPMCapabilitiesEntry 20 }


-- 1.3.6.1.4.1.16213.2.16.1.7.1.21
xfsIPMCapabilitiesDataSource OBJECT-TYPE
  SYNTAX Integer32
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "It specifies the reading/imaging capabilities supported by this device."
  ::= { xfsIPMCapabilitiesEntry 21 }


-- 1.3.6.1.4.1.16213.2.16.1.7.1.22
xfsIPMCapabilitiesOrientation OBJECT-TYPE
  SYNTAX Integer32
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "It specifies the media item insertion orientations supported by the
    Service Provider such that  hardware  features such as MICR reading,
    endorsing and stamping will be aligned with the correct edges  and sides
    of the media item. Devices may still return code lines and images even if
    one of these orientations is not used during media insertion. If the
    media items are inserted in one of the orientations defined in this
    capability then any printing or stamping will be on the correct side of
    the media item. If the media is inserted in a different orientation then
    any printing or stamping may be on the wrong side, upside down or both.
    This value is reported based on the customer’s perspective."
  ::= { xfsIPMCapabilitiesEntry 22 }


-- 1.3.6.1.4.1.16213.2.16.1.7.1.23
xfsIPMCapabilitiesItemsTakenSensorInput OBJECT-TYPE
  SYNTAX TruthValue
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "It specifies whether the input position can detect when items at the
    exit position are taken by the user. This field relates to output and
    refused positions, so will always be set to FALSE for input positions."
  ::= { xfsIPMCapabilitiesEntry 23 }


-- 1.3.6.1.4.1.16213.2.16.1.7.1.24
xfsIPMCapabilitiesItemsInsertedSensorInput OBJECT-TYPE
  SYNTAX TruthValue
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "It specifies whether the input position has the ability to detect when
    items have been inserted by the user. This field relates to all input
    positions, so will always be set to FALSE for output and refused
    positions."
  ::= { xfsIPMCapabilitiesEntry 24 }
```

```
-- 1.3.6.1.4.1.16213.2.16.1.7.1.25
xfsIPMCapabilitiesRetractAreasInput OBJECT-TYPE
  SYNTAX Integer32
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "It specifies the areas to which items may be retracted from the input
    position."
  ::= { xfsIPMCapabilitiesEntry 25 }


-- 1.3.6.1.4.1.16213.2.16.1.7.1.26
xfsIPMCapabilitiesItemsTakenSensorOutput OBJECT-TYPE
  SYNTAX TruthValue
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "It specifies whether the output position can detect when items at the
    exit position are taken by the user. This field relates to output and
    refused positions, so will always be set to FALSE for input positions."
  ::= { xfsIPMCapabilitiesEntry 26 }


-- 1.3.6.1.4.1.16213.2.16.1.7.1.27
xfsIPMCapabilitiesItemsInsertedSensorOutput OBJECT-TYPE
  SYNTAX TruthValue
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "It specifies whether the output position has the ability to detect when
    items have been inserted by the user. This field relates to all input
    positions, so will always be set to FALSE for output and refused
    positions."
  ::= { xfsIPMCapabilitiesEntry 27 }


-- 1.3.6.1.4.1.16213.2.16.1.7.1.28
xfsIPMCapabilitiesRetractAreasOutput OBJECT-TYPE
  SYNTAX Integer32
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "It specifies the areas to which items may be retracted from the output
    position."
  ::= { xfsIPMCapabilitiesEntry 28 }


-- 1.3.6.1.4.1.16213.2.16.1.7.1.29
xfsIPMCapabilitiesItemsTakenSensorRefused OBJECT-TYPE
  SYNTAX TruthValue
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "It specifies whether the refused position can detect when items at the
    exit position are taken by the user. This field relates to output and
    refused positions, so will always be set to FALSE for input positions."
  ::= { xfsIPMCapabilitiesEntry 29 }


-- 1.3.6.1.4.1.16213.2.16.1.7.1.30
xfsIPMCapabilitiesItemsInsertedSensorRefused OBJECT-TYPE
  SYNTAX TruthValue
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "It specifies whether the refused position has the ability to detect when
    items have been inserted by the user. This field relates to all input
```

```
        positions, so will always be set to FALSE for output and refused
        positions."
      ::= { xfsIPMCapabilitiesEntry 30 }


    -- 1.3.6.1.4.1.16213.2.16.1.7.1.31
    xfsIPMCapabilitiesRetractAreasRefused OBJECT-TYPE
      SYNTAX Integer32
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
        "It specifies the areas to which items may be retracted from the refused
        position."
      ::= { xfsIPMCapabilitiesEntry 31 }


    -- 1.3.6.1.4.1.16213.2.16.1.7.1.32
    xfsIPMCapabilitiesGuidanceMediaIn OBJECT-TYPE
      SYNTAX Integer32
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
        "It specifies the capability of the media input guidelight."
      ::= { xfsIPMCapabilitiesEntry 32 }


    -- 1.3.6.1.4.1.16213.2.16.1.7.1.33
    xfsIPMCapabilitiesGuidanceMediaOut OBJECT-TYPE
      SYNTAX Integer32
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
        "It specifies the capability of the media output guidelight."
      ::= { xfsIPMCapabilitiesEntry 33 }


    -- 1.3.6.1.4.1.16213.2.16.1.7.1.34
    xfsIPMCapabilitiesGuidanceMediaRefused OBJECT-TYPE
      SYNTAX Integer32
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
        "It specifies the capability of the media refused guidelight."
      ::= { xfsIPMCapabilitiesEntry 34 }


    -- 1.3.6.1.4.1.16213.2.16.1.7.1.35
    xfsIPMCapabilitiesPowerSaveControl OBJECT-TYPE
      SYNTAX TruthValue
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
        "It specifies whether or not power saving control is available."
      ::= { xfsIPMCapabilitiesEntry 35 }


    -- 1.3.6.1.4.1.16213.2.16.1.7.1.36
    xfsIPMCapabilitiesImageAfterEndorse OBJECT-TYPE
      SYNTAX TruthValue
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
        "Specifies whether the device can generate an image after text is printed on
the media item. If TRUE then the generation of the image can be specified using the
WFS_CMD_IPM_GET_IMAGE_AFTER_PRINT command. If FALSE, this functionality is not
available. This capability applies to media items whose destination is a media bin;
the fwReturnedItemsProcessing capability indicates whether this functionality is
supported for media items that are to be returned to the customer."
```

```
      ::= { xfsIPMCapabilitiesEntry 36 }


    -- 1.3.6.1.4.1.16213.2.16.1.7.1.37
    xfsIPMCapabilitiesReturnedItemsProcessing OBJECT-TYPE
      SYNTAX Integer32
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
        "It specifies the processing that this device supports for media items that
are identified to be returned to the customer using the WFS_CMD_IPM_SET_DESTINATION
command."
      ::= { xfsIPMCapabilitiesEntry 37 }


    -- 1.3.6.1.4.1.16213.2.16.1.7.1.38
    xfsIPMCapabilitiesMixedMode OBJECT-TYPE
      SYNTAX IxfsIPMCapabilitiesMixedMode
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
        "This integer variable specifies whether or not the device supports
accepting and processing items other than the types defined in the IPM
specification."
      ::= { xfsIPMCapabilitiesEntry 38 }


    -- 1.3.6.1.4.1.16213.2.16.1.7.1.39
    xfsIPMCapabilitiesMixedDepositAndRollback OBJECT-TYPE
      SYNTAX TruthValue
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
        "This TruthValue variable specifies whether the device can deposit one type
of media and rollback the other in the same Mixed Media transaction."
      ::= { xfsIPMCapabilitiesEntry 39 }


    -- 1.3.6.1.4.1.16213.2.16.1.7.1.40
    xfsIPMCapabilitiesAntiFraudModule OBJECT-TYPE
      SYNTAX TruthValue
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
        "This TruthValue variable specifies whether or not an anti-fraud module is
available."
      ::= { xfsIPMCapabilitiesEntry 40 }


    -- 1.3.6.1.4.1.16213.2.16.1.7.1.100
    xfsIPMCapabilitiesExtraCapability OBJECT-TYPE
      SYNTAX OCTET STRING
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
        "It contains the vendor dependent additional device capability
        information as an OCTET STRING. The information is returned as a series
        of 'key=value' strings. Each string is null-terminated, with the final
        string terminating with two null characters."
      ::= { xfsIPMCapabilitiesEntry 100 }


    -- 1.3.6.1.4.1.16213.3.0
    xfsTrapV2 OBJECT-IDENTITY
      STATUS current
      DESCRIPTION
        "Root node for the converted TRAP-TYPEs."
      ::= { xfsTrap 0 }
```

```
--     ************************************************************************
-- Trap definitions
-- ************************************************************************
    -- 1.3.6.1.4.1.16213.3.0.116
    xfsIPMDetailedDSCTrap NOTIFICATION-TYPE
      OBJECTS { xfsCommonTrapSysName, xfsCommonTrapManagedServiceName,
xfsCommonTrapManagedServiceClass, xfsCommonTrapManagedServiceClassName,
xfsCommonTrapManagedServiceType,
        xfsCommonTrapManagedServiceOid, xfsCommonTrapPhysicalDeviceName,
xfsCommonTrapDeviceVendor, xfsCommonTrapMIBVersion, xfsCommonTrapEvent,
        xfsCommonTrapDate, xfsCommonTrapSPVersion, xfsIPMStatusDevice,
xfsIPMStatusNumberSubDevices, xfsIPMStatusAcceptor,
        xfsIPMStatusMedia, xfsIPMStatusToner, xfsIPMStatusInk,
xfsIPMStatusFrontImageScanner, xfsIPMStatusBackImageScanner,
        xfsIPMStatusMICRReader, xfsIPMStatusStacker, xfsIPMStatusRebuncher,
xfsIPMStatusMediaFeeder, xfsIPMStatusShutterInput,
        xfsIPMStatusPositionInput, xfsIPMStatusTransportInput,
xfsIPMStatusTransportMediaInput, xfsIPMStatusShutterOutput,
xfsIPMStatusPositionOutput,
        xfsIPMStatusTransportOutput, xfsIPMStatusTransportMediaOutput,
xfsIPMStatusShutterRefused, xfsIPMStatusPositionRefused,
xfsIPMStatusTransportRefused,
        xfsIPMStatusTransportMediaRefused, xfsIPMStatusGuidanceMediaInput,
xfsIPMStatusGuidanceMediaOutput, xfsIPMStatusGuidanceMediaRefused,
xfsIPMStatusExtraStatus,
        xfsIPMStatusDevicePosition, xfsIPMStatusPowerSaveRecoveryTime,
xfsIPMStatusMixedMode, xfsIPMStatusAntiFraudModule }
      STATUS current
      DESCRIPTION
        "This trap indicates a change in the status of a managed
        service."
      ::= { xfsTrapV2 116 }


    -- 1.3.6.1.4.1.16213.3.0.216
    xfsIPMSubDeviceTrap NOTIFICATION-TYPE
      OBJECTS { xfsCommonTrapManagedServiceName, xfsCommonTrapManagedServiceClass,
xfsCommonTrapManagedServiceClassName, xfsCommonTrapManagedServiceType,
xfsCommonTrapManagedServiceOid,
        xfsCommonTrapPhysicalDeviceName, xfsCommonTrapDeviceVendor,
xfsCommonTrapMIBVersion, xfsCommonTrapEvent, xfsCommonTrapDate,
        xfsCommonTrapSPVersion, xfsIPMSubDeviceIndex, xfsIPMSubDeviceMBBinNumber,
xfsIPMSubDeviceMBPositionName, xfsIPMSubDeviceMBType,
        xfsIPMSubDeviceMBMediaType, xfsIPMSubDeviceMBBinID,
xfsIPMSubDeviceMBMediaInCount, xfsIPMSubDeviceMBCount,
xfsIPMSubDeviceMBRetractOperations,
        xfsIPMSubDeviceMBHardwareSensor, xfsIPMSubDeviceMBMaximumItems,
xfsIPMSubDeviceMBMaximumRetractOperations, xfsIPMSubDeviceMBStatus,
xfsIPMSubDeviceMBExtraStatus
         }
      STATUS current
      DESCRIPTION
        "This trap indicates a change in the status of sub-device within
        a managed service."
      ::= { xfsTrapV2 216 }


    -- 1.3.6.1.4.1.16213.3.0.316
    xfsIPMResetDeviceCompleteTrap NOTIFICATION-TYPE
      OBJECTS { xfsCommonTrapResetDeviceResult, xfsCommonTrapManagedServiceName,
xfsCommonTrapManagedServiceClass, xfsCommonTrapManagedServiceClassName,
xfsCommonTrapManagedServiceType,
        xfsCommonTrapManagedServiceOid, xfsCommonTrapPhysicalDeviceName,
xfsCommonTrapDeviceVendor, xfsCommonTrapMIBVersion, xfsCommonTrapDate,
        xfsCommonTrapSPVersion, xfsIPMStatusDevice, xfsIPMStatusNumberSubDevices,
xfsIPMStatusAcceptor, xfsIPMStatusMedia,
```

```
        xfsIPMStatusToner, xfsIPMStatusInk, xfsIPMStatusFrontImageScanner,
xfsIPMStatusBackImageScanner, xfsIPMStatusMICRReader,
        xfsIPMStatusStacker, xfsIPMStatusRebuncher, xfsIPMStatusMediaFeeder,
xfsIPMStatusShutterInput, xfsIPMStatusPositionInput,
        xfsIPMStatusTransportInput, xfsIPMStatusTransportMediaInput,
xfsIPMStatusShutterOutput, xfsIPMStatusPositionOutput, xfsIPMStatusTransportOutput,
        xfsIPMStatusTransportMediaOutput, xfsIPMStatusShutterRefused,
xfsIPMStatusPositionRefused, xfsIPMStatusTransportRefused,
xfsIPMStatusTransportMediaRefused,
        xfsIPMStatusGuidanceMediaInput, xfsIPMStatusGuidanceMediaOutput,
xfsIPMStatusGuidanceMediaRefused, xfsIPMStatusExtraStatus,
xfsIPMStatusDevicePosition,
        xfsIPMStatusPowerSaveRecoveryTime, xfsIPMStatusMixedMode,
xfsIPMStatusAntiFraudModule }
      STATUS current
      DESCRIPTION
        "This trap indicates the Reset action has complete and reports the
        state of the device after the reset."
      ::= { xfsTrapV2 316 }



  END
--
--

--
-- SMIv2_xfsIPM.mib
--
```

5 Appendix B - C-Header files

The following paragraph contains the header file that can be used to implement the IPM SNMP support. Following the header file is the content of the header file.

5.1 XFSIPM.H

```
/******************************************************************
*                                                                 *
* xfsmibipm.h      CEN/XFS - MIB IPM                              *
*                                                                 *
*               Version 3.20  --  Mar 28, 2014                    *
*                                                                 *
******************************************************************/

#ifndef __inc_xfsmibipm__h
#define __inc_xfsmibipm__h

#ifdef __cplusplus
extern "C" {
#endif

/*****************************************************************
  IPM Status #defines
*****************************************************************/
enum IxfsIPMStatusAcceptor
{
    xfsIPMAccBinOK = 1,
    xfsIPMAccBinState,
    xfsIPMAccBinStop,
    xfsIPMAccBinUnknown

} xfsIPMStatusAcceptor;

enum IxfsIPMStatusMedia
{
```

```
    xfsIPMMediaPresent = 1,
    xfsIPMMediaNotPresent,
    xfsIPMMediaJammed,
    xfsIPMMediaNotSupported,
    xfsIPMMediaUnknown,
    xfsIPMMediaPosition

} xfsIPMStatusMedia;

enum IxfsIPMStatusToner
{
    xfsIPMTonerFull = 1,
    xfsIPMTonerLow,
    xfsIPMTonerOut,
    xfsIPMTonerNotSupp,
    xfsIPMTonerUnknown

} xfsIPMStatusToner;

enum IxfsIPMStatusInk
{
    xfsIPMInkFull = 1,
    xfsIPMInkLow,
    xfsIPMInkOut,
    xfsIPMInkNotSupported,
    xfsIPMInkUnknown

} xfsIPMStatusInk;

enum IxfsIPMStatusScanner
{
    xfsIPMScannerOk = 1,
    xfsIPMScannerFading,
    xfsIPMScannerInop,
    xfsIPMScannerNotSupported,
    xfsIPMScannerUnknown

} xfsIPMStatusScanner;

enum IxfsIPMStatusMICRReader
{
    xfsIPMMICROk = 1,
    xfsIPMMICRFading,
    xfsIPMMICRInop,
    xfsIPMMICRNotSupported,
    xfsIPMMICRUnknown

} xfsIPMStatusMICRReader;

enum IxfsIPMStatusStacker
{
    xfsIPMStackerEmpty = 1,
    xfsIPMStackerNotEmpty,
    xfsIPMStackerFull,
    xfsIPMStackerInop,
    xfsIPMStackerUnknown,
    xfsIPMStackerNotSupported

} xfsIPMStatusStacker;

enum IxfsIPMStatusReBuncher
{
    xfsIPMRebuncherEmpty = 1,
    xfsIPMRebuncherNotEmpty,
    xfsIPMRebuncherFull,
    xfsIPMRebuncherInop,
    xfsIPMRebuncherUnknown,
    xfsIPMRebuncherNotSupported
```

```
} xfsIPMStatusReBuncher;

enum IxfsIPMStatusMediaFeeder
{
    xfsIPMMediaFeederEmpty = 1,
    xfsIPMMediaFeederNotEmpty,
    xfsIPMMediaFeederInop,
    xfsIPMMediaFeederUnknown,
    xfsIPMMediaFeederNotSupported

} xfsIPMStatusMediaFeeder;

enum IxfsIPMStatusShutter
{
    xfsIPMShutterClosed = 1,
    xfsIPMShutterOpen,
    xfsIPMShutterJammed,
    xfsIPMShutterUnknown,
    xfsIPMShutterNotSupported

} xfsIPMStatusShutter;

enum IxfsIPMStatusPosition
{
    xfsIPMPSEmpty = 1,
    xfsIPMPSNotEmpty,
    xfsIPMPSUnknown,
    xfsIPMPSNotSupported

} xfsIPMStatusPosition;

enum IxfsIPMStatusTransport
{
    xfsIPMTPOK = 1,
    xfsIPMTPInop,
    xfsIPMTPUnknown,
    xfsIPMTPNotSupported

} xfsIPMStatusTransport;

enum IxfsIPMStatusTransportMedia
{
    xfsIPMTPMediaEmpty = 1,
    xfsIPMTPMediaNotEmpty,
    xfsIPMTPMediaUnknown,
    xfsIPMTPMediaNotSupported

} xfsIPMStatusTransportMedia;

enum IxfsIPMStatusDevicePosition
{
    xfsIPMDeviceInPosition = 1,
    xfsIPMDeviceNotInPosition,
    xfsIPMDevicePosUnknown,
    xfsIPMDevicePosNotSupported

} xfsIPMStatusDevicePosition;

enum IxfsIPMMixedModeStatus
{
    xfsIPMMixedMediaNotActive   = 1,
    xfsIPMCIMMixedMedia
} xfsIPMMixedModeStatus;

enum IxfsIPMAntiFraudModuleStatus
{
    xfsIPMAFMNotSupported       = 1,
```

```
    xfsIPMAFMOK,
    xfsIPMAFMInop,
    xfsIPMAFMDeviceDetected,
    xfsIPMAFMUnknown
} xfsIPMAntiFraudModuleStatus;

/*****************************************************************
  IPM SubDevice #defines
*****************************************************************/

enum IxfsIPMSubDeviceMBMediaType
{
    xfsIPMMediaTypeIPM = 2,
    xfsIPMMediaTypeCompound

} xfsIPMSubDeviceMBMediaType;

enum IxfsIPMSubDeviceMBStatus
{
    xfsIPMMBStatOK = 1,
    xfsIPMMBStatFull,
    xfsIPMMBStatHigh,
    xfsIPMMBStatInop,
    xfsIPMMBStatMissing,
    xfsIPMMBStatUnknown

} xfsIPMSubDeviceMBStatus;

/*****************************************************************
  IPM Capabilities #defines
*****************************************************************/

enum IxfsIPMCapabilitiesDeviceType
{
    xfsIPMSingleMediaInput = 2,
    xfsIPMBunchedMediaInput

} xfsIPMCapabilitiesDeviceType;

enum IxfsIPMCapabilitiesDefaultScanColor
{
    xfsIPMScanColorRed      = 2,
    xfsIPMScanColorBlue     = 3,
    xfsIPMScanColorGreen    = 5,
    xfsIPMScanColorYellow   = 9,
    xfsIPMScanColorWhite    = 17

} xfsIPMCapabilitiesDefaultScanColor;

enum IxfsIPMCapabilitiesMixedMode
{
    xfsIPMCapMixedMediaNotSupp     = 1,
    xfsIPMCapCIMMixedMedia

} xfIPMItemInfoTypes;

/*****************************************************************
*                                                                *
*     MIB Variables for the Status Table                         *
*                                                                *
*****************************************************************/
#define xfsIPMStatusManagedServiceName                (1)
#define xfsIPMStatusNumberSubDevices                  (2)
#define xfsIPMStatusDevice                            (3)
#define xfsIPMStatusAcceptor                          (4)
#define xfsIPMStatusMedia                             (5)
#define xfsIPMStatusToner                             (6)
#define xfsIPMStatusInk                               (7)
```

```
#define xfsIPMStatusFrontImageScanner                  (8)
#define xfsIPMStatusBackImageScanner                   (9)
#define xfsIPMStatusMICRReader                         (10)
#define xfsIPMStatusStacker                            (11)
#define xfsIPMStatusReBuncher                          (12)
#define xfsIPMStatusMediaFeeder                        (13)
#define xfsIPMStatusShutterInput                       (14)
#define xfsIPMStatusPositionInput                      (15)
#define xfsIPMStatusTransportInput                     (16)
#define xfsIPMStatusTransportMediaInput                (17)
#define xfsIPMStatusShutterOutput                      (18)
#define xfsIPMStatusPositionOutput                     (19)
#define xfsIPMStatusTransportOutput                    (20)
#define xfsIPMStatusTransportMediaOutput               (21)
#define xfsIPMStatusShutterRefused                     (22)
#define xfsIPMStatusPositionRefused                    (23)
#define xfsIPMStatusTransportRefused                   (24)
#define xfsIPMStatusTransportMediaRefused              (25)
#define xfsIPMStatusGuidanceMediaInput                 (26)
#define xfsIPMStatusGuidanceMediaOutput                (27)
#define xfsIPMStatusGuidanceMediaRefused               (28)
#define xfsIPMStatusDevicePosition                     (29)
#define xfsIPMStatusPowerSaveRecoveryTime              (30)
#define xfsIPMStatusMixedMode                          (31)
#define xfsIPMStatusAntiFraudModule                    (32)
#define xfsIPMStatusExtraStatus                        (100)

/*****************************************************************************
*                                                                            *
*     MIB Variables for the SubDevice Table                                  *
*                                                                            *
*****************************************************************************/
#define xfsIPMSubDeviceManagedServiceName              (1)
#define xfsIPMSubDeviceIndex                           (2)
#define xfsIPMSubDeviceMBNumber                        (3)
#define xfsIPMSubDeviceMBPositionName                  (4)
#define xfsIPMSubDeviceMBType                          (5)
#define xfsIPMSubDeviceMBMediaType                     (6)
#define xfsIPMSubDeviceMBID                            (7)
#define xfsIPMSubDeviceMBMediaInCount                  (8)
#define xfsIPMSubDeviceMBCount                         (9)
#define xfsIPMSubDeviceMBRetractOperations             (10)
#define xfsIPMSubDeviceMBHardwareSensor                (11)
#define xfsIPMSubDeviceMBMaximumItems                  (12)
#define xfsIPMSubDeviceMBMaximumRetractOperations      (13)
#define xfsIPMSubDeviceMBStatus                        (14)
#define xfsIPMSubDeviceMBExtraStatus                   (100)

/*****************************************************************************
*                                                                            *
*     MIB Variables for the Error Table                                      *
*                                                                            *
*****************************************************************************/
// Command codes and error codes correspond to the Service Provider definitions.

/*****************************************************************************
*                                                                            *
*     MIB Variables for the Capabilities Table                               *
*                                                                            *
*****************************************************************************/
#define xfsIPMCapabilitiesManagedServiceName           (1)
#define xfsIPMCapabilitiesDeviceType                   (2)
#define xfsIPMCapabilitiesCompoundDevice               (3)
#define xfsIPMCapabilitiesMaxMediaOnStacker            (4)
#define xfsIPMCapabilitiesPrintSize                    (5)
#define xfsIPMCapabilitiesStamping                     (6)
#define xfsIPMCapabilitiesRescan                       (7)
#define xfsIPMCapabilitiesPresentControl               (8)
```

```
#define xfsIPMCapabilitiesApplicationRefuse           (9)
#define xfsIPMCapabilitiesRetractLocations            (10)
#define xfsIPMCapabilitiesResetControl                (11)
#define xfsIPMCapabilitiesRetractCountsItems          (12)
#define xfsIPMCapabilitiesImageType                   (13)
#define xfsIPMCapabilitiesFrontImageColorFormat       (14)
#define xfsIPMCapabilitiesBackImageColorFormat        (15)
#define xfsIPMCapabilitiesFrontScanColor              (16)
#define xfsIPMCapabilitiesDefaultFrontScanColor       (17)
#define xfsIPMCapabilitiesBackScanColor               (18)
#define xfsIPMCapabilitiesDefaultBackScanColor        (19)
#define xfsIPMCapabilitiesCodelineFormat              (20)
#define xfsIPMCapabilitiesDataSource                  (21)
#define xfsIPMCapabilitiesOrientation                 (22)
#define xfsIPMCapabilitiesItemSensorInput             (23)
#define xfsIPMCapabilitiesItemInsertedSensorInput     (24)
#define xfsIPMCapabilitiesInputRetractAreas           (25)
#define xfsIPMCapabilitiesItemSensorOutput            (26)
#define xfsIPMCapabilitiesItemInsertedSensorOutpu     (27)
#define xfsIPMCapabilitiesOutputRetractAreas          (28)
#define xfsIPMCapabilitiesItemSensorRefused           (29)
#define xfsIPMCapabilitiesItemInsertedSensorRefused   (30)
#define xfsIPMCapabilitiesRefusedRetractAreas         (31)
#define xfsIPMCapabilitiesMediaInGuideLights          (32)
#define xfsIPMCapabilitiesMediaOutGuideLights         (33)
#define xfsIPMCapabilitiesMediaRefusedGuideLights     (34)
#define xfsIPMCapabilitiesPowerSaveControl            (35)
#define xfsIPMCapabilitiesImageAfterEndorse           (36)
#define xfsIPMCapabilitiesReturnedItemsProcessing     (37)
#define xfsIPMCapabilitiesMixedMode                   (38)
#define xfsIPMCapabilitiesMixedDepositAndRollback     (39)
#define xfsIPMCapabilitiesAntiFraudModule             (40)
#define xfsIPMCapabilitiesExtraCapability             (100)

#ifdef __cplusplus
}       /*extern "C"*/
#endif
#endif  /* __inc_xfsmibipm__h */
```