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**Extensions for Financial Services (XFS) interface specification -
Release 3.03 - Part 30: XFS MIB Device Specific Definitions -
Printer Device Class MIB 1.1**

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Foreword

This CWA is revision 3.03 of the XFS interface specification.

The CEN/ISSS XFS Workshop gathers suppliers as well as banks and other financial service companies. A list of companies participating in this Workshop and in support of this CWA is available from the CEN/ISSS Secretariat.

This CWA was formally approved by the XFS Workshop meeting on 2004-09-24. 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 3.03.

This document supersedes CWA 14050-30:2004.

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 Classes Definition; Programmer's Reference

Part 3: Printer 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

Part 9: Text Terminal Unit Device Class Interface - Programmer's Reference

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

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

Part 12: Camera Device Class Interface - Programmer's Reference

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: Application Programming Interface (API) - Service Provider Interface (SPI) - Migration from Version 2.0 (see CWA 13449) to Version 3.0 (this CWA) - Programmer's Reference

Part 17: Printer Device Class Interface - Migration from Version 2.0 (see CWA 13449) to Version 3.0 (this CWA) - Programmer's Reference

Part 18: Identification Card Device Class Interface - Migration from Version 2.0 (see CWA 13449) to Version 3.00 (see CWA 14050-4:2000; superseded) - Programmer's Reference

Part 19: Cash Dispenser Device Class Interface - Migration from Version 2.0 (see CWA 13449) to Version 3.0 (this CWA) - Programmer's Reference

Part 20: PIN Keypad Device Class Interface - Migration from Version 2.0 (see CWA 13449) to Version 3.00 (see CWA 14050-6:2000; superseded) - Programmer's Reference

Part 21: Depository Device Class Interface - Migration from Version 2.0 (see CWA 13449) to Version 3.0 (this CWA) - Programmer's Reference

Part 22: Text Terminal Unit Device Class Interface - Migration from Version 2.0 (see CWA 13449) to Version 3.0 (this CWA) - Programmer's Reference

Part 23: Sensors and Indicators Unit Device Class Interface - Migration from Version 2.0 (see CWA 13449) to Version 3.01 (this CWA) - Programmer's Reference

Part 24: Camera Device Class Interface - Migration from Version 2.0 (see CWA 13449) to Version 3.0 (this CWA) - Programmer's Reference

Part 25: Identification Card Device Class Interface - PC/SC Integration Guidelines

Part 26: Identification Card Device Class Interface - Migration from Version 3.0 (see CWA 14050-4:2000; superseded) to Version 3.02 (this CWA) - Programmer's Reference

Part 27: PIN Keypad Device Class Interface - Migration from Version 3.0 (see CWA 14050-6:2000; superseded) to Version 3.02 (this CWA) - Programmer's Reference

Part 28: Cash In Module Device Class Interface - Migration from Version 3.0 (see CWA 14050-15:2000; superseded) to Version 3.02 (this CWA) - Programmer's Reference

Part 42: PIN Keypad Device Class Interface - Migration from Version 3.02 (see CWA 14050-6:2003; superseded) to Version 3.03 (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.cenorm.be/iss/Workshop/XFS>.

The following parts 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 – Programmer's Reference

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

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

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

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

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

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

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

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

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

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

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

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

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

Part 44: XFS MIB Application Management

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.

Revision History:

| | | |
|-----|-----------------|--|
| 1.0 | 20 January 2004 | Initial release of XFS MIB specification |
| 1,1 | 15 April 2007 | Update of the MIB to add support for a Detailed Status Trap, a Device Reset capability and the support of SMIV2. |

This CEN Workshop Agreement is publicly available as a reference document from the National Members of CEN : AENOR, AFNOR, ASRO, BDS, BSI, CSNI, CYS, DIN, DS, ELOT, EVS, IBN, IPQ, IST, LVS, LST, MSA, MSZT, NEN, NSAI, ON, PKN, SEE, SIS, SIST, SFS, SN, SNV, SUTN and UNI

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

1. Introduction

This document provides the device specific MIB definition (Management Information Base) variables for the xfsPTR sub-tree version one, as foreseen by the *XFS MIB Architecture and SNMP Extensions Programmer's Reference* document.

The xfsPTR version one sub-tree is identified by:

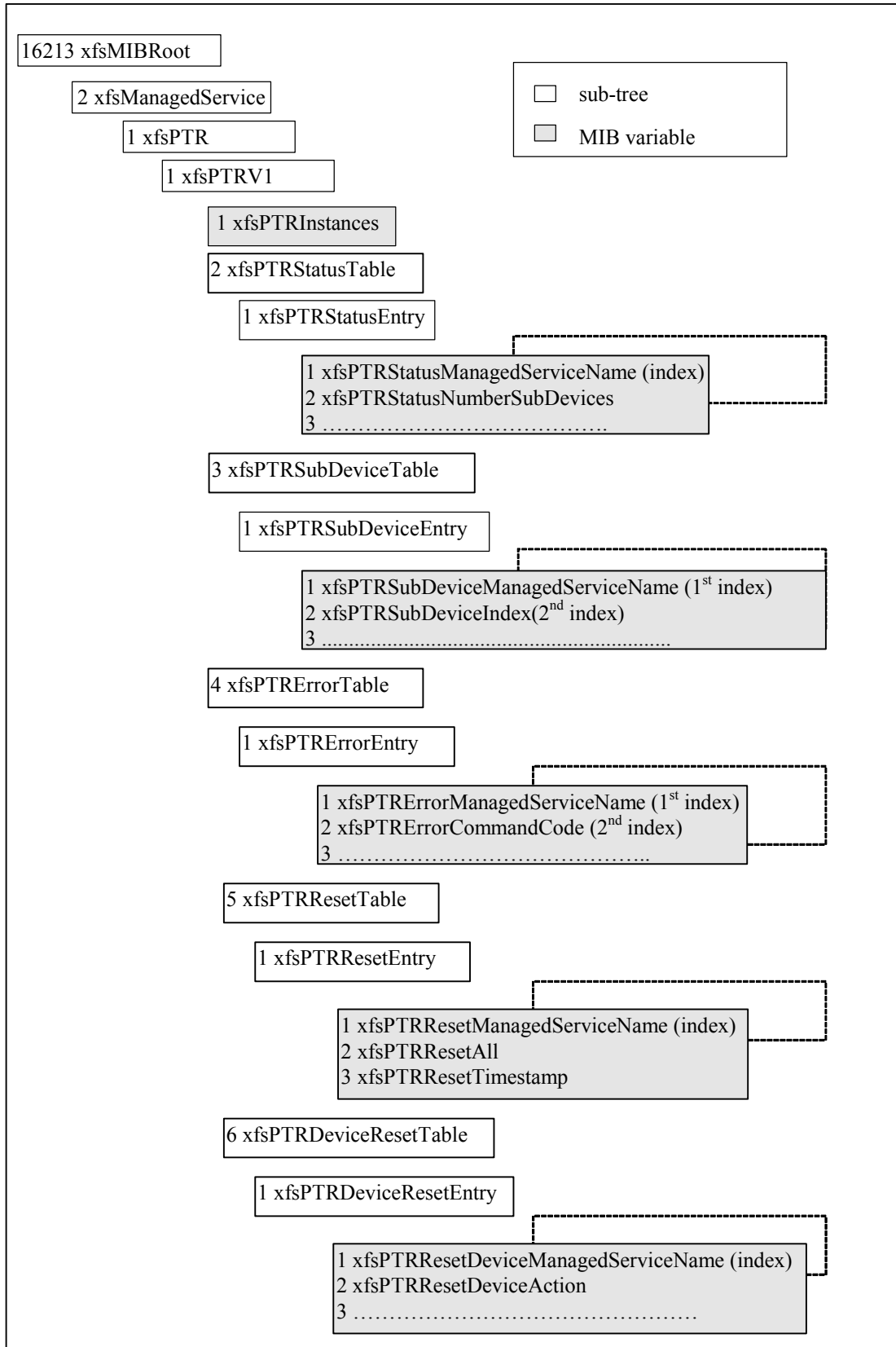
xfsMIBRoot

- xfsManagedService (2)
 - xfsPTR (1)
 - xfsPTRV1 (1)

The xfsPTRV1 sub-tree contains the following variables:

- *xfsPTRInstances(1)* is the number of managed services for the PTR class installed on the XFS subsystem. It is a 32 bit numerical field.
- *xfsPTRStatusTable(2)* identifies the table for the PTR variables.
- *xfsPTRSubDeviceTable(3)* identifies the table for the PTR device.
- *xfsPTRErrorTable(4)* identifies the table for the PTR error counters.
- *xfsPTRResetTable(5)* identifies the table for the PTR reset variable.
- *xfsPTRResetDeviceTable(6)* identifies the table for the PTR reset device 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 *xfsPTRV1* sub-tree.



Section 2 describes how the Status, Sub-Device, Error and Reset tables apply to the PTR device class.

2. XFS PTR MIB variables

This section describes the MIB variables for the tables of the PTR Class. The description of the variables listed below includes, where it is meaningful, a reference to relevant data structures and commands defined inside the *Printers 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_PTR_RESET command to be executed from the management station.

2.1 XFS PTR Status Table

The *xfSPTRStatusTable(2)* groups the variables identifying device status information, statistics and additional variables. It is indexed through a single parameter, *xfSPTRStatusManagedServiceName*. 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.

xfSPTRStatusManagedServiceName is the instance identifier of the managed service and uniquely identifies one instance of the PTR class.

As an example, the identifier for the device status value of *xfSPTRStatusMedia(4)* for a device with managed service name equal to "Printer1" is as follows:

| Character | P | r | i | n | t | e | r | 1 |
|-----------|----|-----|-----|-----|-----|-----|-----|----|
| ASCII Hex | 50 | 72 | 69 | 6E | 74 | 65 | 72 | 31 |
| ASCII Dec | 80 | 114 | 105 | 110 | 116 | 101 | 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.2.1.1.2.1.4.8.80.114.105.110.116.101.114.49

2.1.1 xfSPTRStatusTable: States

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

xfSPTRStatusManagedServiceName (1)

Uniquely identifies the managed service

xfSPTRStatusNumberSubDevices (2)

Defines how many sub-devices the service has. This is the number of retract bins the device supports.

xfSPTRStatusDevice (3)

It contains the device state. It is a numeric type field. Allowed values are:

| Value | Meaning |
|---------------------------|--|
| <i>xfSDevOnline</i> (1) | The device is present, powered on and online (i.e., operational, not busy processing a request and not in an error state). |
| <i>xfSDevOffline</i> (2) | The device is offline (e.g., the operator has taken the device offline by turning a switch or pulling out the device). |
| <i>xfSDevPowerOff</i> (3) | The device is powered off or physically not connected. |

| | |
|--------------------|---|
| xfsDevNoDevice(4) | There is no device 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 present but inoperable due to a hardware fault that prevents it from being used. |
| xfsDevUserError(6) | The device is present but a person is preventing proper device operation. The application should suspend the device operation or remove the device from service until the service provider generates a device state change event indicating the condition of the device has changed e.g. the error is removed (WFS_PTR_DEVONLINE) or a permanent error condition has occurred (WFS_PTR_DEVHWERROR). |
| xfsDevBusy(7) | The device is busy and unable to process an Execute command at this time. |

xfsPTRStatusMedia (4)

It contains the media state. It is a numeric type field. Allowed values as follows

| Value | Meaning |
|----------------------------|--|
| xfsPTRMediaPresent(1) | Media is present in the device, not in the entering position and not jammed. |
| xfsPTRMediaNotPresent(2) | Media is not present in the device and not at the entering position. |
| xfsPTRMediaJammed(3) | Media is jammed in the device; operator intervention is required. |
| xfsPTRMediaNotSupported(4) | Capability to report media position is not supported by the device (e.g., a typical swipe reader). |
| xfsPTRMediaUnknown(5) | The media state cannot be determined with the device in its current state (e.g., the value of <i>fwDevice</i> is WFS_PTR_DEVNODEVICE, WFS_PTR_DEVPOWEROFF, WFS_PTR_DEVOFFLINE, or WFS_PTR_DEVHWERROR). |
| xfsPTRMediaEntering(6) | Media is at the entry/exit slot of a motorized device. |
| xfsPTRMediaRetracted(7) | Media was retracted during the reset operation. |

xfsPTRStatusPaperSupplyUpper (5)

It contains the state of the upper paper supply. It is a numeric type field. Allowed values are:

| Value | Meaning |
|----------------------------|---|
| xfsPTRPaperFull(1) | The paper supply is full. |
| xfsPTRPaperLow(2) | The paper supply is low. |
| xfsPTRPaperOut(3) | The paper supply is empty. |
| xfsPTRPaperNotSupported(4) | Capability not supported by device. |
| xfsPTRPaperUnknown(5) | Capability cannot be determined with device in its current state. |
| xfsPTRPaperJammed(6) | The paper supply is jammed. |

xfsPTRStatusPaperSupplyLower (6)

It contains the state of the lower paper supply. It is a numeric type field. Allowed values are:

| Value | Meaning |
|----------------------------|---|
| xfsPTRPaperFull(1) | The paper supply is full. |
| xfsPTRPaperLow(2) | The paper supply is low. |
| xfsPTRPaperOut(3) | The paper supply is empty. |
| xfsPTRPaperNotSupported(4) | Capability not supported by device. |
| xfsPTRPaperUnknown(5) | Capability cannot be determined with device in its current state. |
| xfsPTRPaperJammed (6) | The paper supply is jammed. |

xfsPTRStatusPaperSupplyExternal (7)

It contains the state of the external paper supply. It is a numeric type field. Allowed values are:

| Value | Meaning |
|----------------------------|---|
| xfsPTRPaperFull(1) | The paper supply is full. |
| xfsPTRPaperLow(2) | The paper supply is low. |
| xfsPTRPaperOut(3) | The paper supply is empty. |
| xfsPTRPaperNotSupported(4) | Capability not supported by device. |
| xfsPTRPaperUnknown(5) | Capability cannot be determined with device in its current state. |

xfsPTRPaperJammed (6) The paper supply is jammed.

xfsPTRStatusPaperSupplyAux (8)

It contains the state of the auxiliary paper supply. It is a numeric type field. Allowed values are:

| Value | Meaning |
|----------------------------|---|
| xfsPTRPaperFull(1) | The paper supply is full. |
| xfsPTRPaperLow(2) | The paper supply is low. |
| xfsPTRPaperOut(3) | The paper supply is empty. |
| xfsPTRPaperNotSupported(4) | Capability not supported by device. |
| xfsPTRPaperUnknown(5) | Capability cannot be determined with device in its current state. |
| xfsPTRPaperJammed (6) | The paper supply is jammed. |

xfsPTRStatusPaperSupplyAux2 (9)

It contains the state of the second auxiliary paper supply. It is a numeric type field. Allowed values are:

| Value | Meaning |
|----------------------------|---|
| xfsPTRPaperFull(1) | The paper supply is full. |
| xfsPTRPaperLow(2) | The paper supply is low. |
| xfsPTRPaperOut(3) | The paper supply is empty. |
| xfsPTRPaperNotSupported(4) | Capability not supported by device. |
| xfsPTRPaperUnknown(5) | Capability cannot be determined with device in its current state. |
| xfsPTRPaperJammed (6) | The paper supply is jammed. |

xfsPTRStatusPaperSupplyPark (10)

It contains the state of the parking station. It is a numeric type field. Allowed values are:

| Value | Meaning |
|----------------------------|---|
| xfsPTRPaperFull(1) | The parking station is busy. |
| xfsPTRPaperOut(3) | The parking station is free. |
| xfsPTRPaperNotSupported(4) | Capability not supported by device. |
| xfsPTRPaperUnknown(5) | Capability cannot be determined with device in its current state. |
| xfsPTRPaperJammed (6) | The paper station is jammed. |

xfsPTRStatusToner (11)

It contains the toner supply state. It is a numeric type field. Allowed values are:

| Value | Meaning |
|----------------------------|--|
| xfsPTRTonerFull(1) | The toner or ink supply is full or the ribbon is OK. |
| xfsPTRTonerLow(2) | The toner or ink supply is low or the print contrast with a ribbon is weak. |
| xfsPTRTonerOut(3) | The toner or ink supply is empty or the print contrast with a ribbon is not sufficient any more. |
| xfsPTRTonerNotSupported(4) | Capability not supported by device. |
| xfsPTRTonerUnknown(5) | Status of toner or ink supply or the ribbon cannot be determined with device in its current state. |

xfsPTRStatusInk (12)

It contains the ink supply state. It is a numeric type field. Allowed values are:

| Value | Meaning |
|--------------------------|--|
| xfsPTRInkFull(1) | Ink supply in device is full. |
| xfsPTRInkLow(2) | Ink supply in device is low. |
| xfsPTRInkOut(3) | Ink supply in device is empty. |
| xfsPTRInkNotSupported(4) | Capability not supported by device. |
| xfsPTRInkUnknown(5) | Status of the stamping ink supply cannot be determined with device in its current state. |

xfsPTRStatusLamp (13)

It contains the imaging lamp state. It is a numeric type field. Allowed values are:

| Value | Meaning |
|----------------------|-----------------------------|
| xfsPPTRLampOK(1) | The lamp is OK. |
| xfsPPTRLampFading(2) | The lamp should be changed. |
| xfsPPTRLampInOp(3) | The lamp is inoperative. |

xfSPTRLampNotSupported(4) Capability not supported by device.
xfSPTRLampUnknown(5) Status of the imaging lamp cannot be determined with device in its current state.

xfSPTRStatusMediaOnStacker (14)

It contains the number of media on stacker. It is a numeric type field. See *WFSPTRSTATUS.usMediaOnStacker*.

xfSPTRStatusExtraStatus (100)

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.

2.2 XFS PTR Sub Device Table

The *xfSPTRSubDeviceTable*(3) groups the variables identifying information for the retract bins. It is indexed through two parameters, *xfSPTRSubDeviceManagedServiceName* and *xfSPTRSubDeviceIndex*. All sub-device status variables are read-only and, if maintained by the SP, persist across re-boots.

xfSPTRSubDeviceManagedServiceName is the instance identifier of the managed service and uniquely identifies one instance of the PTR class. In XFS this information comes from the *WFS_INF_PTR_STATUS* command.

As an example, the identifier for the device status value of *xfSPTRSubDeviceRetractBin*(3) for a sub-device index 1 with managed service name equal to "Printer1" is as follows:

| | | | | | | | | |
|-----------|----|-----|-----|-----|-----|-----|-----|----|
| Character | P | r | i | n | t | e | r | l |
| ASCII Hex | 50 | 72 | 69 | 6E | 74 | 65 | 72 | 31 |
| ASCII Dec | 80 | 114 | 105 | 110 | 116 | 101 | 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 followed by the sub-device . Therefore the OID of the above example is:

xfMIBRoot.2.1.1.3.1.3.8.80.114.105.110.116.101.114.49.1

2.2.1 *xfSPTRSubDeviceTable*: States

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

xfSPTRSubDeviceManagedServiceName (1)

Uniquely identifies the managed service

xfSPTRSubDeviceIndex (2)

Index into the table of sub-device supported. This is an index (starting from 1) into the PTR Sub-Device table.

xfSPTRSubDeviceRetractBin (3)

It contains the retract bin state. It is a numeric type field. Allowed values are:

| Value | Meaning |
|------------------------------------|---|
| <i>xfSPTRRetractBinOK</i> (1) | The retract bin of the printer is in a healthy state. |
| <i>xfSPTRRetractBinFull</i> (2) | The retract bin of the printer is full. |
| <i>xfSPTRLampNotSupported</i> (3) | Capability not supported by device. |
| <i>xfSPTRRetractBinUnknown</i> (4) | Status cannot be determined with device in its current state. |
| <i>xfSPTRRetractBinHigh</i> (5) | The retract bin of the printer is nearly full. |

xfSPTRSubDeviceRetractCount(4)

The number of media retracted to this bin. It is a numeric type field.

2.3 XFS PTR Error Table

The *xfsPTRErrorTable(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

xfsPTRErrorManagedServiceName
xfsPTRErrorCommandCode
xfsPTRErrorResponseCode

The *xfsPTRErrorTable(4)* is defined as:

- *xfsPTRErrorManagedServiceName(1)* which provides the primary index to the service in question. It is Display String field. The *xfsPTRErrorManagedServiceName* parameter corresponds to the value of *xfsMIBRoot.xfsGeneral.xfsMIBV1.xfsManagedServiceTable.xfsManagedServiceEntry.xfsManagedServiceName* in the general table. e.g. "Printer1".
- *xfsPTRErrorCommandCode(2)* is an index which identifies the command code that that response code related to, e.g. WFS_CMD_PTR_CONTROL_MEDIA (101).It is a 32 bit numerical field.
- *xfsPTRErrorResponseCode(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_PTR_MEDIAJAMMED (-119) is represented by 119.It is a 32 bit numerical field
- *xfsPTRErrorCount(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 WFS_ERR_PTR_MEDIAJAMMED (-119) error returned from the WFS_CMD_PTR_CONTROL_MEDIA (101) command for a device with managed service name equal to "Printer1" is as follows:

xfsMIBRoot.2.1.1.4.1.4.8.80.114.105.110.116.101.114.49.101.119.

2.4 XFS PTR Reset Table

The *xfsPTRResetTable(5)* contains the *xfsPTRResetAll* and *xfsPTRResetTimestamp* variables and is indexed by the single variable, *xfsPTRResetManagedServiceName*. When the *xfsPTRResetAll* 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 *xfsPTRResetTable(5)* is defined as:

- *xfsPTRResetManagedServiceName(1)* which provides the primary index to the service in question. It is Display String field. The *xfsPTRResetManagedServiceName* parameter corresponds to the value of *xfsMIBRoot.xfsGeneral.xfsMIBV1.xfsManagedServiceTable.xfsManagedServiceEntry.xfsManagedServiceName* in the general table. E.g. "Printer1".
- *xfsPTRResetAll(2)* is a read-write variable. Issue of a Set command on the *xfsPTRResetAll* 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 *xfsPTRResetAll* variable will return 0 (zero).
- *xfsPTRResetTimestamp(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 Coordinated 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 "Printer1" by setting the value zero in the *xfsPTRResetAll* variable represented by:

xfsmIBRoot.2.1.1.5.1.2. 8.80.114.105.110.116.101.114.49

2.5 XFS PTR Reset Device Table

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

The *xfspTRResetDeviceAction* 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_PTR_RESET command will be issued
4. Exclusive access to the device will be relinquished when the WFS_CMD_PTR_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 *xfspTRResetDeviceCompleteTrap* trap will be generated to report the result of the Device Reset request

The *xfspTRResetDeviceMediaControl* variable is used to report how any media found within the device is handled.

The *xfspTRResetDeviceTable(6)* is defined as:

- *xfspTRResetDeviceManagedServiceName(1)* which provides the index to the service in question. It is a Display String field. The *xfspTRResetDeviceManagedServiceName* parameter corresponds to the value of *xfsmIBRoot.xfsGeneral.xfsMIBV1.xfsManagedServiceTable.xfsManagedServiceEntry.xfsManagedServiceName* in the general table. E.g. "Printer1".
- *xfspTRResetDeviceAction(2)* is a read-write variable. Issue of a Set command on the *xfspTRResetDeviceAction* variable with value *executeReset(1)* will result in the device being reset as described above.
- *xfspTRResetDeviceMediaControl(3)* is a read-only variable. This variable reports how any media found within the device is handled. The value of the *xfsidCResetDeviceMediaControl* 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. PTR bin to retract media to) is configured through local SNMP Agent configuration.
- *xfspTRResetDeviceStatus(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 "Printer1" is reset by setting the *xfspTRResetDeviceAction* variable represented by:

xfsmIBRoot.2.1.1.6.1.2. 8.80.114.105.110.116.101.114.49

3. PTR Traps

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

3.1 PTR 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 PTR 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 PTR reflect the PTR Status 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_PTR_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 101 defines the trap as a PTR Detailed Device Status Change trap.

3.1.1 PTR Detailed Device Status Change Trap Format

The following defines the variable bindings included in the PTR 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\<ManagedServiceName>\class. This ID matches the class OID branch number i.e. PTR=1, IDC=2, CDM=3, 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_PTR_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 PTR MIB class is represented by .1.3.6.1.4.1.16213.2.1

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. E.g. "ABC Printer Engine, ABC Transport".

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.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.

xfsPTRStatusDevice.xfsPTRStatusManagedServiceName (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.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.**xfsPTRStatusNumberSubDevices.xfsPTRStatusManagedServiceName** (14)

Defines how many sub-devices the service has. This is the number of retract bins the device supports.

xfsMIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.**xfsPTRStatusMedia.xfsPTRStatusManagedServiceName** (15)

It contains the media state. It is a numeric type field..

xfsMIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.**xfsPTRStatusPaperSupplyUpper.xfsPTRStatusManagedServiceName** (16)

It contains the state of the upper paper supply. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.**xfsPTRStatusPaperSupplyLower.xfsPTRStatusManagedServiceName** (17)

It contains the state of the lower paper supply. It is a numeric type field.

xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusPaperSupplyExternal.xfsPTRStatusManagedServiceName (18)

It contains the state of the external paper supply. It is a numeric type field.

xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusPaperSupplyAux.xfsPTRStatusManagedServiceName (19)

It contains the state of the auxiliary paper supply. It is a numeric type field.

xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusPaperSupplyAux2.xfsPTRStatusManagedServiceName (20)

It contains the state of the second auxiliary paper supply. It is a numeric type field.

xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusPaperSupplyPark.xfsPTRStatusManagedServiceName (21)

It contains the state of the parking station. It is a numeric type field.

xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusToner.xfsPTRStatusManagedServiceName (22)

It contains the state of the toner supply. It is a numeric type field.

xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusInk.xfsPTRStatusManagedServiceName (23)

It contains the state of the ink supply. It is a numeric type field.

xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusLamp.xfsPTRStatusManagedServiceName (24)

It contains the state of the lamp. It is a numeric type field.

xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusMediaOnStacker.xfsPTRStatusManagedServiceName (25)

It contains the state of the stacker. It is a numeric type field.

xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusExtraStatus.xfsPTRStatusManagedServiceName (26)

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.

3.1.2 PTR Detailed Device Status Change Trap: an example

As an example, the following variable binding list represents a detailed device status change trap (6, 101) that is generated for a PTR with a managed service name of "Printer1". It reports that the device is OFFLINE because the media is jammed.

| | |
|--------------------|---|
| xfsmIBRoot.3.1.3.1 | (xfsmIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapSysName) |
| | "SST System 1" |
| xfsmIBRoot.3.1.3.2 | (xfsmIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceName) |
| | "Printer1" |
| xfsmIBRoot.3.1.3.3 | (xfsmIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceClass) |
| | 1 (WFS_SERVICE_CLASS_PTR) |
| xfsmIBRoot.3.1.3.4 | (xfsmIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceClassName) |
| | "PTR" |

| | |
|-------------------------------|---|
| xfsmIBRoot.3.1.3.5 | (xfsmIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceType) |
| | 1 (WFS_PTR_TYPERECEIPT) |
| xfsmIBRoot.3.1.3.6 | (xfsmIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceOid) |
| | “.1.3.6.1.4.1.16213.2.1” |
| xfsmIBRoot.3.1.3.7 | (xfsmIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapPhysicalDeviceName) |
| | “ABC Corp Receipt Printer” |
| xfsmIBRoot.3.1.3.8 | (xfsmIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapDeviceVendor) |
| | “Best Printers Incorporated” |
| xfsmIBRoot.3.1.3.9 | (xfsmIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapMIBVersion) |
| | “1.10” |
| 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) |
| | “20/03/2003 15:40:53 -300” |
| xfsmIBRoot.3.1.3.12 | (xfsmIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapSPVersion) |
| | “1.23” |
| xfsmIBRoot.2.1.1.2.1.3.Index | (xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusDevice.xfsPTRStatusManagedServiceName) |
| | 2 (WFS_STAT_DEVOFFLINE) |
| xfsmIBRoot.2.1.1.2.1.2.Index | (xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusNumberSubDevices.xfsPTRStatusManagedServiceName) |
| | 1 (One sub device) |
| xfsmIBRoot.2.1.1.2.1.4.Index | (xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusMedia.xfsPTRStatusManagedServiceName) |
| | 3 (xfsPTRMediaJammed) |
| xfsmIBRoot.2.1.1.2.1.5.Index | (xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusPaperSupplyUpper.xfsPTRStatusManagedServiceName) |
| | 1 (xfsPTRPaperFull) |
| xfsmIBRoot.2.1.1.2.1.6.Index | (xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusPaperSupplyLower.xfsPTRStatusManagedServiceName) |
| | 4 (xfsPTRPaperNotSupported) |
| xfsmIBRoot.2.1.1.2.1.7.Index | (xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusPaperSupplyExternal.xfsPTRStatusManagedServiceName) |
| | 4 (xfsPTRPaperNotSupported) |
| xfsmIBRoot.2.1.1.2.1.8.Index | (xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusPaperSupplyAux.xfsPTRStatusManagedServiceName) |
| | 4 (xfsPTRPaperNotSupported) |
| xfsmIBRoot.2.1.1.2.1.9.Index | (xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusPaperSupplyAux2.xfsPTRStatusManagedServiceName) |
| | 4 (xfsPTRPaperNotSupported) |
| xfsmIBRoot.2.1.1.2.1.10.Index | (xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusPaperSupplyPark.xfsPTRStatusManagedServiceName) |
| | 4 (xfsPTRPaperNotSupported) |
| xfsmIBRoot.2.1.1.2.1. | (xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry. |

| | |
|---|---|
| 11.Index | xfsPTRStatusToner.xfsPTRStatusManagedServiceName) |
| | 1 (xfsPTRTonerFull) |
| xfsMIBRoot.2.1.1.2.1. 12.Index | (xfsMIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry. xfsPTRStatusInk.xfsPTRStatusManagedServiceName) |
| | 4 (xfsPTRInkNotSupported) |
| xfsMIBRoot.2.1.1.2.1. 13.Index | (xfsMIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry. xfsPTRStatusLamp.xfsPTRStatusManagedServiceName) |
| | 4 (xfsPTRLampNotSupported) |
| xfsMIBRoot.2.1.1.2.1. 14.Index | (xfsMIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry. xfsPTRStatusMediaOnStacker.xfsPTRStatusManagedServiceName) |
| | 0 |
| xfsMIBRoot.2.1.1.2.1. 100.Index | (xfsMIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry. xfsPTRStatusExtraStatus.xfsPTRStatusManagedServiceName) |
| | "\0"\0" (No extra data) |
| | |
| | |

3.2 PTR Sub-Device Status Change Trap

On the PTR device class the Sub Device Status change traps are sent when a Retain Bin threshold 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 12-14) is defined in section 2.2.

The SNMP Specific trap value 201 defines the trap as a PTR Sub-Device Status Change trap.

3.2.1 PTR Sub-Device Status Change Trap Format

The following defines the variable bindings included in the PTR 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\<ManagedServiceName>\class. This ID matches the class OID branch number i.e. PTR=1, IDC=2, CDM=3, 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_PTR_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 PTR MIB class is represented by .1.3.6.1.4.1.16213.2.1

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. E.g. "ABC Printer Engine, ABC Transport".

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 PTR this corresponds to the WFS_USRE_PTR_RETRACTBINTHRESHOLD 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.xfsPTR.xfsPTRV1.xfsPTRSubDeviceTable.xfsPTRSubDeviceEntry.xfsPTRSubDeviceIndex.xfsPTRStatusManagedServiceName.xfsPTRSubDeviceTrapIndex (12)

Index identifying the sub-device.

xfsMIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRSubDeviceTable.xfsPTRSubDeviceEntry.xfsPTRSubDeviceRetractBin.xfsPTRStatusManagedServiceName.xfsPTRSubDeviceTrapIndex (13)

The retract bin state.

xfsMIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRSubDeviceTable.xfsPTRSubDeviceEntry.xfsPTRSubDeviceRetractCount.xfsPTRStatusManagedServiceName.xfsPTRSubDeviceTrapIndex (14)

Number of media items retracted to this bin.

3.2.2 PTR Sub-Device Status Change Trap: an example

As an example, the following variable binding list represents a PTR sub-device status change trap (6, 201) generated from a generic XFS SST system. This trap sends an alarm to the SNMP Manager when a Retract Bin changes status from OK to HIGH on a PTR of type receipt and managed service name "Printer1".

| | |
|--------------------|---|
| xfsMIBRoot.3.1.3.2 | (xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceName) |
| | "Printer1" |
| xfsMIBRoot.3.1.3.3 | (xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceClass) |
| | 1 (WFS_SERVICE_CLASS_PTR) |
| xfsMIBRoot.3.1.3.4 | (xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceClassName) |
| | "PTR" |
| xfsMIBRoot.3.1.3.5 | (xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceType) |
| | 1 (WFS_PTR_TYPERECEIPT) |
| xfsMIBRoot.3.1.3.6 | (xfsMIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceOid) |
| | ".1.3.6.1.4.1.16213.2.1" |

| | |
|---|--|
| xfMIBRoot.3.1.3.7 | (xfMIBRoot.xfsTrap. xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapPhysicalDeviceName) |
| | "ABC Corp Receipt Printer" |
| xfMIBRoot.3.1.3.8 | (xfMIBRoot.xfsTrap. xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapDeviceVendor) |
| | "Best Printers Incorporated" |
| xfMIBRoot.3.1.3.9 | (xfMIBRoot.xfsTrap. xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapMIBVersion) |
| | "1.10" |
| xfMIBRoot.3.1.3.10 | (xfMIBRoot.xfsTrap. xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapEvent) |
| | 105 (WFS_USRE_PTR_RETRACTBINTHRESHOLD) |
| xfMIBRoot.3.1.3.11 | (xfMIBRoot.xfsTrap. xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapDate) |
| | "20/03/2003 15:40:53 -300" |
| xfMIBRoot.3.1.3.12 | (xfMIBRoot.xfsTrap. xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapSPVersion) |
| | "1.23" |
| xfMIBRoot.2.1.1.3.1. 2.Index1.Index2 | (xfMIBRoot. xfsManagedService. xfsPTR.xfsPTRV1.xfsPTRSubDeviceTable.xfsPTRSubDeviceEntry.xfsPTRSubDeviceIndex .xfsPTRStatusManagedServiceName.xfsPTRSubDeviceIndex) |
| | 1 (Index to first sub device) |
| xfMIBRoot.2.1.1.3.1. 3.Index1.Index2 | (xfMIBRoot.xfsManagedService.xfsPTR.xfsPTRV1. xfsPTRSubDeviceTable.xfsPTRSubDeviceEntry.xfsPTRSubDeviceRetractBin.xfsPTRStatu sManagedServiceName.xfsPTRSubDeviceIndex) |
| | 5 (xfsPTRRetractBinHigh) |
| xfMIBRoot.2.1.1.3.1. 4.Index1.Index2 | (xfMIBRoot.xfsManagedService.xfsPTR.xfsPTRV1. xfsPTRSubDeviceTable.xfsPTRSubDeviceEntry.xfsPTRSubDeviceRetractCount.xfsPTRSt atusManagedServiceName. xfsPTRSubDeviceIndex) |
| | 30 (30 receipts captured) |

3.3 PTR Reset Device Complete Trap

On the PTR 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 301 defines the trap as a PTR Reset Device Complete trap.

3.3.1 PTR Reset Device Complete Trap Format

The following defines the variable bindings included in the PTR 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 **xfsxfsPTRStatusDevice** 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*<ManagedServiceName>*\class. This ID matches the class OID branch number i.e. PTR=1, IDC=2, CDM=3, 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_PTR_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 PTR MIB class is represented by .1.3.6.1.4.1.16213.2.1

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. E.g. "ABC Printer Engine, ABC Transport".

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.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.

xfsxfsPTRStatusDevice.xfsPTRStatusManagedServiceName(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.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusNumberSubDevices.xfsPTRStatusManagedServiceName (13)

Defines how many sub-devices the service has. This is the number of retract bins the device supports.

xfsMIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusMedia.xfsPTRStatusManagedServiceName (14)

It contains the media state. It is a numeric type field..

xfsMIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusPaperSupplyUpper.xfsPTRStatusManagedServiceName (15)

It contains the state of the upper paper supply. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusPaperSupplyLower.xfsPTRStatusManagedServiceName (16)

It contains the state of the lower paper supply. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusPaperSupplyExternal.xfsPTRStatusManagedServiceName (17)

It contains the state of the external paper supply. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusPaperSupplyAux.xfsPTRStatusManagedServiceName (18)

It contains the state of the auxiliary paper supply. It is a numeric type field.

xfsMIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusPaperSupplyAux2.xfsPTRStatusManagedServiceName (19)

It contains the state of the second auxiliary paper supply. It is a numeric type field.

xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusPaperSupplyPark.xfsPTRStatusManagedServiceName (20)

It contains the state of the parking station. It is a numeric type field.

xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusToner.xfsPTRStatusManagedServiceName (21)

It contains the state of the toner supply. It is a numeric type field.

xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusInk.xfsPTRStatusManagedServiceName (22)

It contains the state of the ink supply. It is a numeric type field.

xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusLamp.xfsPTRStatusManagedServiceName (23)

It contains the state of the lamp. It is a numeric type field.

xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusMediaOnStacker.xfsPTRStatusManagedServiceName (24)

It contains the state of the stacker. It is a numeric type field.

xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry.xfsPTRStatusExtraStatus.xfsPTRStatusManagedServiceName (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.

3.3.2 PTR Reset Device Complete: an example

As an example, the following variable binding list represents a Reset Device Complete trap (6, 301) generated as a result of a request to reset the device from the remote management station. The device in question has a managed service name "Printer1".

| | |
|---------------------|---|
| xfsmIBRoot.3.1.3.13 | (xfsmIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapResetDeviceResult) |
| | 0 (resetExecuted) |
| xfsmIBRoot.3.1.3.2 | (xfsmIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceName) |
| | "Printer1" |
| xfsmIBRoot.3.1.3.3 | (xfsmIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceClass) |
| | 1 (WFS_SERVICE_CLASS_PTR) |
| xfsmIBRoot.3.1.3.4 | (xfsmIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceClassName) |
| | "PTR" |
| xfsmIBRoot.3.1.3.5 | (xfsmIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceType) |
| | 1 (WFS_PTR_TYPERECEIPT) |
| xfsmIBRoot.3.1.3.6 | (xfsmIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapManagedServiceOid) |
| | ".1.3.6.1.4.1.16213.2.1" |
| xfsmIBRoot.3.1.3.7 | (xfsmIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapPhysicalDeviceName) |
| | "ABC Corp Receipt Printer" |

| | |
|-----------------------------------|--|
| xfsmIBRoot.3.1.3.8 | (xfsmIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapDeviceVendor) "Best Printers Incorporated" |
| xfsmIBRoot.3.1.3.9 | (xfsmIBRoot.xfsTrap.xfsTrapV1.xfsCommonTrapVars.xfsCommonTrapMIBVersion) "1.10" |
| 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) "1.23" |
| xfsmIBRoot.2.1.1.2.1. 3.Index | (xfsmIBRoot.xfsManagedService. xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry. xfsPTRStatusDevice .xfsPTRStat usManagedServiceName) 1 (WFS_STAT_DEVONLINE) |
| xfsmIBRoot.2.1.1.2.1. 2.Index | (xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry. xfsPTRStatusNumberSubDevices .xfsPTRStatusManagedServiceName) 1 (One sub device) |
| xfsmIBRoot.2.1.1.2.1. 4.Index | (xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry. xfsPTRStatusMedia .xfsPTRStatusManagedServiceName) 2 (xfsPTRMediaNotPresent) |
| xfsmIBRoot.2.1.1.2.1. 5.Index | (xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry. xfsPTRStatusPaperSupplyUpper .xfsPTRStatusManagedServiceName) 1 (xfsPTRPaperFull) |
| xfsmIBRoot.2.1.1.2.1. 6.Index | (xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry. xfsPTRStatusPaperSupplyLower .xfsPTRStatusManagedServiceName) 4 (xfsPTRPaperNotSupported) |
| xfsmIBRoot.2.1.1.2.1. 7.Index | (xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry. xfsPTRStatusPaperSupplyExternal .xfsPTRStatusManagedServiceName) 4 (xfsPTRPaperNotSupported) |
| xfsmIBRoot.2.1.1.2.1. 8.Index | (xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry. xfsPTRStatusPaperSupplyAux .xfsPTRStatusManagedServiceName) 4 (xfsPTRPaperNotSupported) |
| xfsmIBRoot.2.1.1.2.1. 9.Index | (xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry. xfsPTRStatusPaperSupplyAux2 .xfsPTRStatusManagedServiceName) 4 (xfsPTRPaperNotSupported) |
| xfsmIBRoot.2.1.1.2.1. 10.Index | (xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry. xfsPTRStatusPaperSupplyPark .xfsPTRStatusManagedServiceName) 4 (xfsPTRPaperNotSupported) |
| xfsmIBRoot.2.1.1.2.1. 11.Index | (xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry. xfsPTRStatusToner .xfsPTRStatusManagedServiceName) 1 (xfsPTRTonerFull) |
| xfsmIBRoot.2.1.1.2.1. 12.Index | (xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry. xfsPTRStatusInk .xfsPTRStatusManagedServiceName) 4 (xfsPTRInkNotSupported) |
| xfsmIBRoot.2.1.1.2.1. 13.Index | (xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry. xfsPTRStatusLamp .xfsPTRStatusManagedServiceName) 4 (xfsPTRLampNotSupported) |
| xfsmIBRoot.2.1.1.2.1. 14.Index | (xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry. xfsPTRStatusMediaOnStacker .xfsPTRStatusManagedServiceName) 0 |

| | |
|--|---|
| | |
| xfsmIBRoot.2.1.1.2.1. 100 .Index | (xfsmIBRoot.xfsManagedService.xfsPTR.xfsPTRV1.xfsPTRStatusTable.xfsPTRStatusEntry. xfsPTRStatusExtraStatus.xfsPTRStatusManagedServiceName) |
| | "0" (No extra data) |
| | |
| | |

4. Appendix A - PTR MIB sub-tree

In the following paragraph contains the definition of the XFS PTR MIB sub-tree in ASN-V1 format.

4.1 PTR MIB in SMIV2 and SMIV1 format

The following object contains the xfsPTR.MIB file in SMIV2 format.



SMIV2\xfsPTR.mib

The following object contains the xfsPTR.MIB file in SMIV1 format.



SMIV1\xfsPTR.mib

The following text is the content of xfsPTR.MIB in SMIV2 format.

```
--*****
-- XFS MIB for PTR
-- Management Information Base for XFS PTR Device
--
-- The PTR Number is 1
-- The ASN.1 prefix to, and including the PTR is: 1.3.6.1.4.1.16213.2.1
--
--*****

XFS-PTR-MIB DEFINITIONS ::= BEGIN

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

--
-- Type definitions
--
-- *****
-- PTR #defines
-- *****
    IxfsPTRMediaStatus ::= INTEGER
    {
        xfsPTRMediaPresent(1),
        xfsPTRMediaNotPresent(2),
        xfsPTRMediaJammed(3),
        xfsPTRMediaNotSupported(4),
        xfsPTRMediaUnknown(5),
        xfsPTRMediaEntering(6),
        xfsPTRMediaRetracted(7)
    }

    IxfsPTRPaperStatus ::= INTEGER
    {
        xfsPTRPaperFull(1),
        xfsPTRPaperLow(2),
        xfsPTRPaperOut(3),
        xfsPTRPaperNotSupported(4),
        xfsPTRPaperUnknown(5),
        xfsPtrPaperJammed(6)
    }

    IxfsPTRParkPaperStatus ::= INTEGER
    {
        xfsPTRParkPaperFull(1),
```

```

    xfsPTRParkPaperOut(3),
    xfsPTRParkPaperNotSupported(4),
    xfsPTRParkPaperUnknown(5),
    xfsPTRParkPaperJammed(6)
}

IxfSPTRTonerStatus ::= INTEGER
{
    xfsPTRTonerFull(1),
    xfsPTRTonerLow(2),
    xfsPTRTonerOut(3),
    xfsPTRTonerNotSupported(4),
    xfsPTRTonerUnknown(5)
}

IxfSPTRInkStatus ::= INTEGER
{
    xfsPTRInkFull(1),
    xfsPTRInkLow(2),
    xfsPTRInkOut(3),
    xfsPTRInkNotSupported(4),
    xfsPTRInkUnknown(5)
}

IxfSPTRLampStatus ::= INTEGER
{
    xfsPTRLampOK(1),
    xfsPTRLampFading(2),
    xfsPTRLampInOp(3),
    xfsPTRLampNotSupported(4),
    xfsPTRLampUnknown(5)
}

IxfSPTRRetractBinStatus ::= INTEGER
{
    xfsPTRRetractBinOK(1),
    xfsPTRRetractBinFull(2),
    xfsPTRRetractBinNotSupported(3),
    xfsPTRRetractBinUnknown(4),
    xfsPTRRetractBinHigh(5)
}

--
-- Node definitions
--
-- *****
-- Version 1 of PTR MIB
--
-- The ASN.1 prefix to, and including the Version 1 of PTR is:
1.3.6.1.4.1.16213.2.1.1
--
-- *****
xfsPTRV1 OBJECT IDENTIFIER ::= { xfsPTR 1 }

xfsPTRInstances OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "Number that represents the number of PTR managed services."
    ::= { xfsPTRV1 1 }

-- *****
-- PTR Device Status Table
-- *****
xfsPTRStatusTable OBJECT-TYPE
    SYNTAX SEQUENCE OF XfsPTRStatusEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Define the set of MIB Variables for the PTR status table."

```

```

 ::= { xfsPTRV1 2 }

xfsPTRStatusEntry OBJECT-TYPE
  SYNTAX XfsPTRStatusEntry
  MAX-ACCESS not-accessible
  STATUS current
  DESCRIPTION
    "PTR Device Status Table Entry."
  INDEX { xfsPTRStatusManagedServiceName }
  ::= { xfsPTRStatusTable 1 }

XfsPTRStatusEntry ::=
  SEQUENCE {
    xfsPTRStatusManagedServiceName
      DisplayString,
    xfsPTRStatusNumberSubDevices
      Integer32,
    xfsPTRStatusDevice
      IxfsMIBDeviceStatus,
    xfsPTRStatusMedia
      IxfsPTRMediaStatus,
    xfsPTRStatusPaperSupplyUpper
      IxfsPTRPaperStatus,
    xfsPTRStatusPaperSupplyLower
      IxfsPTRPaperStatus,
    xfsPTRStatusPaperSupplyExternal
      IxfsPTRPaperStatus,
    xfsPTRStatusPaperSupplyAux
      IxfsPTRPaperStatus,
    xfsPTRStatusPaperSupplyAux2
      IxfsPTRPaperStatus,
    xfsPTRStatusPaperSupplyPark
      IxfsPTRParkPaperStatus,
    xfsPTRStatusToner
      IxfsPRTonerStatus,
    xfsPTRStatusInk
      IxfsPTRInkStatus,
    xfsPTRStatusLamp
      IxfsPTRLampStatus,
    xfsPTRStatusMediaOnStacker
      Integer32,
    xfsPTRStatusExtraStatus
      OCTET STRING
  }

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

xfsPTRStatusNumberSubDevices OBJECT-TYPE
  SYNTAX Integer32
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Number of sub devices supported by the PTR device."
  ::= { xfsPTRStatusEntry 2 }

xfsPTRStatusDevice OBJECT-TYPE
  SYNTAX IxfsMIBDeviceStatus
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "Device status."
  ::= { xfsPTRStatusEntry 3 }

xfsPTRStatusMedia OBJECT-TYPE

```

```

SYNTAX IxfsPTRMediaStatus
MAX-ACCESS read-only
STATUS current
DESCRIPTION
    "Media Status.
    xfsPTRMediaPresent(1),
    xfsPTRMediaNotPresent(2),
    xfsPTRMediaJammed(3),
    xfsPTRMediaNotSupported(4),
    xfsPTRMediaUnknown(5),
    xfsPTRMediaEntering(6),
    xfsPTRMediaRetracted(7)."
 ::= { xfsPTRStatusEntry 4 }

xfsPTRStatusPaperSupplyUpper OBJECT-TYPE
SYNTAX IxfsPTRPaperStatus
MAX-ACCESS read-only
STATUS current
DESCRIPTION
    "Paper Supply Upper Status.
    xfsPTRPaperFull(1),
    xfsPTRPaperLow(2),
    xfsPTRPaperOut(3),
    xfsPTRPaperNotSupported(4),
    xfsPTRPaperUnknown(5),
    xfsPtrPaperJammed(6)."
 ::= { xfsPTRStatusEntry 5 }

xfsPTRStatusPaperSupplyLower OBJECT-TYPE
SYNTAX IxfsPTRPaperStatus
MAX-ACCESS read-only
STATUS current
DESCRIPTION
    "Paper Supply Lower Status.
    xfsPTRPaperFull(1),
    xfsPTRPaperLow(2),
    xfsPTRPaperOut(3),
    xfsPTRPaperNotSupported(4),
    xfsPTRPaperUnknown(5)
    xfsPtrPaperJammed(6)."
 ::= { xfsPTRStatusEntry 6 }

xfsPTRStatusPaperSupplyExternal OBJECT-TYPE
SYNTAX IxfsPTRPaperStatus
MAX-ACCESS read-only
STATUS current
DESCRIPTION
    "Paper Supply External Status.
    xfsPTRPaperFull(1),
    xfsPTRPaperLow(2),
    xfsPTRPaperOut(3),
    xfsPTRPaperNotSupported(4),
    xfsPTRPaperUnknown(5)
    xfsPtrPaperJammed(6)."
 ::= { xfsPTRStatusEntry 7 }

xfsPTRStatusPaperSupplyAux OBJECT-TYPE
SYNTAX IxfsPTRPaperStatus
MAX-ACCESS read-only
STATUS current
DESCRIPTION
    "Paper Supply Auxiliary Status.
    xfsPTRPaperFull(1),
    xfsPTRPaperLow(2),
    xfsPTRPaperOut(3),
    xfsPTRPaperNotSupported(4),
    xfsPTRPaperUnknown(5)
    xfsPtrPaperJammed(6)."
 ::= { xfsPTRStatusEntry 8 }

```

```

xfsPTRStatusPaperSupplyAux2 OBJECT-TYPE
SYNTAX IxfsPTRPaperStatus
MAX-ACCESS read-only
STATUS current
DESCRIPTION
    "Paper Supply Auxiliary Second Status.
    xfsPTRPaperFull(1),
    xfsPTRPaperLow(2),
    xfsPTRPaperOut(3),
    xfsPTRPaperNotSupported(4),
    xfsPTRPaperUnknown(5)
    xfsPtrPaperJammed(6)."
```

```
 ::= { xfsPTRStatusEntry 9 }
```

```

xfsPTRStatusPaperSupplyPark OBJECT-TYPE
SYNTAX IxfsPTRParkPaperStatus
MAX-ACCESS read-only
STATUS current
DESCRIPTION
    "Paper Park Supply Status.
    xfsPTRParkPaperFull(1),
    xfsPTRParkPaperOut(3),
    xfsPTRParkPaperNotSupported(4),
    xfsPTRParkPaperUnknown(5),
    xfsPTRParkPaperJammed(6)."
```

```
 ::= { xfsPTRStatusEntry 10 }
```

```

xfsPTRStatusToner OBJECT-TYPE
SYNTAX IxfsPTRTonerStatus
MAX-ACCESS read-only
STATUS current
DESCRIPTION
    "Toner Status.
    xfsPTRTonerFull(1),
    xfsPTRTonerLow(2),
    xfsPTRTonerOut(3),
    xfsPTRTonerNotSupported(4),
    xfsPTRTonerUnknown(5)."
```

```
 ::= { xfsPTRStatusEntry 11 }
```

```

xfsPTRStatusInk OBJECT-TYPE
SYNTAX IxfsPTRInkStatus
MAX-ACCESS read-only
STATUS current
DESCRIPTION
    "Ink Status.
    xfsPTRInkFull(1),
    xfsPTRInkrLow(2),
    xfsPTRInkOut(3),
    xfsPTRInkNotSupported(4),
    xfsPTRInkUnknown(5)."
```

```
 ::= { xfsPTRStatusEntry 12 }
```

```

xfsPTRStatusLamp OBJECT-TYPE
SYNTAX IxfsPTRLampStatus
MAX-ACCESS read-only
STATUS current
DESCRIPTION
    "Lamp Status.
    xfsPTRLampOK(1),
    xfsPTRLampFading(2),
    xfsPTRLampInOp(3),
    xfsPTRLampNotSupported(4),
    xfsPTRLampUnknown(5)."
```

```
 ::= { xfsPTRStatusEntry 13 }
```

```

xfsPTRStatusMediaOnStacker OBJECT-TYPE
SYNTAX Integer32
MAX-ACCESS read-only
STATUS current
```

```

DESCRIPTION
    "Number of media on stacker; applicable only to printers with stacking
    capability."
    ::= { xfsPTRStatusEntry 14 }

xfsPTRStatusExtraStatus OBJECT-TYPE
    SYNTAX OCTET STRING
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "Vendor dependent additional device status information."
    ::= { xfsPTRStatusEntry 100 }

-- *****
-- PTR Sub Device Status Table
--
-- Note that the PTR device does not currently have sub-devices. The
-- sub-device table is not required for this device and is shown as an
-- example for those devices that do support sub-devices.
--
-- Note, to ensure consistency across all MIB extensions OID 16213.2.1.1.3
-- must be reserved for the sub-device table.
-- *****
xfsPTRSubDeviceTable OBJECT-TYPE
    SYNTAX SEQUENCE OF XfsPTRSubDeviceEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Define the set of MIB Variables for the PTR status table."
    ::= { xfsPTRV1 3 }

xfsPTRSubDeviceEntry OBJECT-TYPE
    SYNTAX XfsPTRSubDeviceEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "PTR Sub-Device Status Table Entry."
    INDEX { xfsPTRSubDeviceManagedServiceName, xfsPTRSubDeviceIndex }
    ::= { xfsPTRSubDeviceTable 1 }

XfsPTRSubDeviceEntry ::=
    SEQUENCE {
        xfsPTRSubDeviceManagedServiceName
            DisplayString,
        xfsPTRSubDeviceIndex
            INTEGER,
        xfsPTRSubDeviceRetractBin
            IxfsPTRRetractBinStatus,
        xfsPTRSubDeviceRetractCount
            Integer32
    }

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

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

```

```

xfsPTRSubDeviceRetractBin OBJECT-TYPE
    SYNTAX IxfsPTRRetractBinStatus
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "Status of the printer retract bin.
        xfsPTRRetractBinOK(1),
        xfsPTRRetractBinFull(2),
        xfsPTRRetractBinNotSupported(3),
        xfsPTRRetractBinUnknown(4),
        xfsPTRRetractBinHigh(5) "
    ::= { xfsPTRSubDeviceEntry 3 }

xfsPTRSubDeviceRetractCount OBJECT-TYPE
    SYNTAX Integer32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "Number of media retracted to the retract bin."
    ::= { xfsPTRSubDeviceEntry 4 }

-- *****
-- PTR Error Table
-- *****
xfsPTRErrorTable OBJECT-TYPE
    SYNTAX SEQUENCE OF XfsPTRErrorEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Define the set of MIB Variables for the PTR Error Table."
    ::= { xfsPTRV1 4 }

xfsPTRErrorEntry OBJECT-TYPE
    SYNTAX XfsPTRErrorEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "PTR Error Table Entry."
    INDEX { xfsPTRErrorManagedServiceName, xfsPTRErrorCommandCode,
xfsPTRErrorResponseCode }
    ::= { xfsPTRErrorTable 1 }

XfsPTRErrorEntry ::=
    SEQUENCE {
        xfsPTRErrorManagedServiceName
            DisplayString,
        xfsPTRErrorCommandCode
            INTEGER,
        xfsPTRErrorResponseCode
            INTEGER,
        xfsPTRErrorCount
            Integer32
    }

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

xfsPTRErrorCommandCode OBJECT-TYPE
    SYNTAX INTEGER (101..200)
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The executable command code supported by the service
        provider associated with the error count of interest."
    ::= { xfsPTRErrorEntry 2 }

```



```

xfsPTRErrorResponseCode OBJECT-TYPE
    SYNTAX INTEGER (0..99 | 100..199)
    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."
    ::= { xfsPTRErrorEntry 3 }

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

-- *****
-- PTR Reset Table
-- *****
xfsPTRResetTable OBJECT-TYPE
    SYNTAX SEQUENCE OF XfsPTRResetEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Defines the set of MIB Variables for the PTR Reset Table."
    ::= { xfsPTRV1 5 }

xfsPTRResetEntry OBJECT-TYPE
    SYNTAX XfsPTRResetEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "PTR Reset Table Entry."
    INDEX { xfsPTRResetManagedServiceName }
    ::= { xfsPTRResetTable 1 }

XfsPTRResetEntry ::=
    SEQUENCE {
        xfsPTRResetManagedServiceName
            DisplayString,
        xfsPTRResetAll
            Integer32,
        xfsPTRResetTimestamp
            DisplayString
    }

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

xfsPTRResetAll 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."
    ::= { xfsPTRResetEntry 2 }

xfsPTRResetTimestamp OBJECT-TYPE

```

```

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

-- *****
-- PTR Reset Device Table
-- *****
xfsPTRResetDeviceTable OBJECT-TYPE
    SYNTAX SEQUENCE OF XfsPTRResetDeviceEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Define the set of MIB Variables for the PTR Reset Device Table."
    ::= { xfsPTRV1 6 }

xfsPTRResetDeviceEntry OBJECT-TYPE
    SYNTAX XfsPTRResetDeviceEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "PTR Reset Device Table Entry."
    INDEX { xfsPTRResetDeviceManagedServiceName }
    ::= { xfsPTRResetDeviceTable 1 }

XfsPTRResetDeviceEntry ::=
    SEQUENCE {
        xfsPTRResetDeviceManagedServiceName
            DisplayString,
        xfsPTRResetDeviceAction
            INTEGER,
        xfsPTRResetDeviceMediaControl
            INTEGER,
        xfsPTRResetDeviceStatus
            INTEGER
    }

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

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

xfsPTRResetDeviceMediaControl 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."
    ::= { xfsPTRResetDeviceEntry 3 }

```

```

xfsPTRResetDeviceStatus OBJECT-TYPE
    SYNTAX INTEGER
    {
        resetIdle(1),
        resetInProgress(2)
    }
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "Variable that reports the progress of the device reset."
    ::= { xfsPTRResetDeviceEntry 4 }

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

-- *****
-- Trap definitions
-- *****
xfsPTRDetailedDSCTrap NOTIFICATION-TYPE
    OBJECTS { xfsCommonTrapSysName, xfsCommonTrapManagedServiceName,
              xfsCommonTrapManagedServiceClass,
              xfsCommonTrapManagedServiceClassName,
              xfsCommonTrapManagedServiceType,
              xfsCommonTrapManagedServiceOid, xfsCommonTrapPhysicalDeviceName,
              xfsCommonTrapDeviceVendor, xfsCommonTrapMIBVersion,
              xfsCommonTrapEvent,
              xfsCommonTrapDate, xfsCommonTrapSPVersion, xfsPTRStatusDevice,
              xfsPTRStatusNumberSubDevices, xfsPTRStatusMedia,
              xfsPTRStatusPaperSupplyUpper, xfsPTRStatusPaperSupplyLower,
              xfsPTRStatusPaperSupplyExternal, xfsPTRStatusPaperSupplyAux,
              xfsPTRStatusPaperSupplyAux2,
              xfsPTRStatusPaperSupplyPark, xfsPTRStatusToner, xfsPTRStatusInk,
              xfsPTRStatusLamp, xfsPTRStatusMediaOnStacker,
              xfsPTRStatusExtraStatus }
    STATUS current
    DESCRIPTION
        "This trap indicates a change in the status of a managed
        service."
    ::= { xfsTrapV2 101 }

xfsPTRSubDeviceTrap NOTIFICATION-TYPE
    OBJECTS { xfsCommonTrapManagedServiceName,
              xfsCommonTrapManagedServiceClass,
              xfsCommonTrapManagedServiceClassName,
              xfsCommonTrapManagedServiceType, xfsCommonTrapManagedServiceOid,
              xfsCommonTrapPhysicalDeviceName, xfsCommonTrapDeviceVendor,
              xfsCommonTrapMIBVersion, xfsCommonTrapEvent, xfsCommonTrapDate,
              xfsCommonTrapSPVersion, xfsPTRSubDeviceIndex,
              xfsPTRSubDeviceRetractBin, xfsPTRSubDeviceRetractCount }
    STATUS current
    DESCRIPTION
        "This trap indicates a change in the status of sub-device within
        a managed service."
    ::= { xfsTrapV2 201 }

xfsPTRResetDeviceCompleteTrap NOTIFICATION-TYPE
    OBJECTS { xfsCommonTrapResetDeviceResult, xfsCommonTrapManagedServiceName,
              xfsCommonTrapManagedServiceClass,
              xfsCommonTrapManagedServiceClassName,
              xfsCommonTrapManagedServiceType,
              xfsCommonTrapManagedServiceOid, xfsCommonTrapPhysicalDeviceName,
              xfsCommonTrapDeviceVendor, xfsCommonTrapMIBVersion,
              xfsCommonTrapDate,
              xfsCommonTrapSPVersion, xfsPTRStatusDevice,
              xfsPTRStatusNumberSubDevices, xfsPTRStatusMedia,
              xfsPTRStatusPaperSupplyUpper,

```

```
        xfsPTRStatusPaperSupplyLower, xfsPTRStatusPaperSupplyExternal,  
        xfsPTRStatusPaperSupplyAux, xfsPTRStatusPaperSupplyAux2,  
        xfsPTRStatusPaperSupplyPark,  
        xfsPTRStatusToner, xfsPTRStatusInk, xfsPTRStatusLamp,  
        xfsPTRStatusMediaOnStacker, xfsPTRStatusExtraStatus  
    }  
STATUS current  
DESCRIPTION  
    "This trap indicates the Reset action has complete and reports the  
    state of the device after the reset."  
 ::= { xfsTrapV2 301 }
```

END

5. Appendix B - C-Header files

5.1 XFSMIBPTR.H



xfsMIBPTR.h

```

/*****
*
* xfsmibptr.h      WOSA/XFS - MIB PTR counters
*
*                  Version 1.00  --  Jan 20, 2004
*
*****/
#ifndef __inc_xfsmibptr__h
#define __inc_xfsmibptr__h

#ifdef __cplusplus
extern "C" {
#endif

enum IxfsPTRMediaStatus
{
    xfsPTRMediaPresent          = 1,
    xfsPTRMediaNotPresent,
    xfsPTRMediaJammed,
    xfsPTRMediaNotSupported,
    xfsPTRMediaUnknown,
    xfsPTRMediaEntering,
    xfsPTRMediaRetracted
} xfsPTRMediaStatus;

enum IxfsPTRPaperStatus
{
    xfsPTRPaperFull              =1,
    xfsPTRPaperLow,
    xfsPTRPaperOut,
    xfsPTRPaperNotSupported,
    xfsPTRPaperUnknown,
    xfsPTRPaperJammed
} xfsPTRPaperStatus;

enum IxfsPTRParkPaperStatus
{
    xfsPTRParkPaperFull          =1,
    xfsPTRParkPaperOut           =3,
    xfsPTRParkPaperNotSupported  =4,
    xfsPTRParkPaperUnknown       =5,
    xfsPTRParkPaperJammed        =6
} xfsPTRPaperParkStatus;

enum IxfsPTRTonerStatus
{
    xfsPTRTonerFull              =1,
    xfsPTRTonerLow,
    xfsPTRTonerOut,
    xfsPTRTonerNotSupported,
    xfsPTRTonerUnknown
} xfsPTRTonerStatus;

enum IxfsPTRInkStatus
{
    xfsPTRInkFull                =1,
    xfsPTRInkrLow,
    xfsPTRInkOut,
    xfsPTRInkNotSupported,

```

```

        xfsPTRInkUnknown
    } xfsPTRInkStatus;

enum IxfsPTRLampStatus
{
    xfsPTRLampOK                =1,
    xfsPTRLampFading,
    xfsPTRLampInOp,
    xfsPTRLampNotSupported,
    xfsPTRLampUnknown
} xfsPTRLampStatus;

enum IxfsPTRRetractBinStatus
{
    xfsPTRRetractBinOK          =1,
    xfsPTRRetractBinFull,
    xfsPTRRetractBinNotSupported,
    xfsPTRRetractBinUnknown,
    xfsPTRRetractBinHigh
} xfsPTRRetractBinStatus;

/*****
*
*      MIB Variables for the Status Table
*
*****/
#define xfsPTRStatusManagedServiceName      (1)
#define xfsPTRStatusNumberSubDevices        (2)
#define xfsPTRStatusDevice                  (3)
#define xfsPTRStatusMedia                   (4)
#define xfsPTRStatusPaperSupplyUpper       (5)
#define xfsPTRStatusPaperSupplyLower       (6)
#define xfsPTRStatusPaperSupplyExternal    (7)
#define xfsPTRStatusPaperSupplyAux         (8)
#define xfsPTRStatusPaperSupplyAux2       (9)
#define xfsPTRStatusPaperSupplyPark        (10)
#define xfsPTRStatusToner                   (11)
#define xfsPTRStatusInk                     (12)
#define xfsPTRStatusLamp                    (13)
#define xfsPTRStatusMediaOnStacker         (14)
#define xfsPTRStatusExtraStatus            (100)

/*****
*
*      MIB Variables for the SubDevice Table
*
*****/
#define xfsPTRSubDeviceManagedServiceName   (1)
#define xfsPTRSubDeviceIndex                (2)
#define xfsPTRSubDeviceRetractBin           (3)
#define xfsPTRSubDeviceRetractCount         (4)

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

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

#endif /* __inc_xfsmibptr_h */

```