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IBM Director 4.1 SNMP Support

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Executive Summary

SNMP is one of the oldest and most popular systems management protocols in existence. It is also one of the most ubiquitous. Many leading enterprise systems management framework products are built around this standard and almost any device intended for use in a network provides an SNMP-manageable agent.

The IBM Director Management Servers provides the tools you need to manage SNMP-capable devices such as routers and printers and the IBM Director Agent provides support for managing xSeries servers with an SNMP-based management server such as HP OpenView. In particular, the following components ship as standard features to the Director product:

- **Agent** — Instruments MIB for xSeries servers. Supports get/set/trap operations.
- **Trap Listener** — Listens for SNMP traps and publishes the traps in the Event Filter Builder
- **MIB Compiler** — Compiles standard-compliant SNMP v1 and SNMP v2 MIBs
- **MIB Browser** — Used to browse the MIB of SNMP devices
- **Trap Forwarder --** Director events can be converted to SNMP traps at the management server level and forwarded to upstream SNMP listeners within the context of an Event Action Plan.
- **Trap Mapper --** Raw SNMP traps can be mapped to more user-friendly Director events using a properties file-based mapping facility.

This paper focuses on the SNMP support provided by the IBM Director product, both from the agent and the server. It's intended to help you understand the MIB provided by the agent in order to integrate it with enterprise management frameworks. It's also intended to provide detailed information about the Director server's SNMP support so that it can be used to provide simple management of SNMP-capable devices. Finally, the SNMP support provided by the IBM xSeries Remote Supervisor Adapter and BladeCenter Chassis Management Module is briefly discussed.

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Introducing SNMP

"SNMP, The Simple Network Management Protocol, is a protocol used to remotely manage the nodes on a TCP/IP network. The Internet Engineering Task Force (IETF) recommends that all nodes residing on a TCP/IP network have the capability of being managed remotely over the network. The Internet-standard Networking Management Framework is used to manage TCP/IP networks, and SNMP version 1 is the recommended standard network management protocol for this framework."[1] SNMP is a component of the Internet Protocol suite, just like TCP and IP. Because SNMP is defined as an Internet standard, all SNMP managed devices support the same type of management interface, and SNMP is supported by all major vendors of IP and IPX network devices.

SNMP is a request-response protocol. A management system sends a request to an agent in the form a Get, GetNext or Set operation. The agent responds to the call with a response that indicates if the operation was performed successfully or if an error occurred.

Terminology

Management node – A workstation or server on a network that is running one or more network management processes. Examples would be HP OpenView Network Node Manager, Tivoli Netview, or IBM Director's management server.

Managed node – Any network device that is capable of being managed. A node is "managed" when it is being actively monitored by an SNMP agent.

Management community – A human readable text string that is encoded into SNMP messages passed between managed nodes and their management node and allows for policy provision.

Agent – Software or firmware that runs as one or more processes on a node. The agent collects and returns management information that is requested by a management node. The agent may also send unrequested notifications as an indication that specific events have occurred. An example of an agent is IBM Director Agent.

SNMP Protocol – Specifies the behavior the Get, GetNext, Set, and Trap operations supported by SNMP and defines the format of the SNMP messages exchanged by management systems and agents.

MIB – Management Information Base. This is a logical schema of the management data supplied by a particular SNMP agent. The map is published in a text file called a MIB file.

Director Server

Introduction

SNMP is not the native protocol of the Director product, although it is a supported one. Director uses its own native protocol to implement its tasks and events. Because IBM recognizes the importance of SNMP as a management standard, the Director server has been enhanced with the ability to manage SNMP devices and the Director agent has been enhanced with the ability to respond to SNMP operations and send SNMP-formatted traps. In the Director 4.1 product, all MIBs are in the

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[1] Windows NT SNMP, James D. Murray, O'Reilly

proddata\snmp directory. The paragraphs below describe the support in the Director server for managing SNMP devices.

Discovery

The Director Server has the ability to discovery SNMP Devices. The device can be a PC host, a printer, a router, or any other device with a listening SNMP agent. The method for discovery of SNMP devices in Director parallels the method for discovery of native Director Agents. It is NOT a “ping spray” of IP devices in the local subnet to find agents listening on port 161. Instead, it uses the IP addresses configured in the Discovery Preferences for SNMP devices as seed addresses and uses the values in the ipNetToMediaNetAddress column of the ipNetToMediaTable variable of the seed addresses’ MIB as the candidate devices to discover. The default seed address is the local Director Server host system. However, the best practice is to configure a more practical device as the seed address such as a router or a heavily used server such as an http server that is likely to have a lot of values in its ipNetToMediaTable variable. If the Director Server is newly installed, it’s likely that there will be few addresses in its ipNetToMediaTable variable, and hence selecting Discovery->SNMP Devices will discover few devices out of the box. To see the values of the ipNetToMediaTable variable, drag and drop the SNMP Browser task on the Director Server host and drill down to iso.org.dod.internet.mgmt.mib-2.ip.ipNetToMediaTable.ipNetToMediaEntry.ipNetToMediaNetAddress. In this case, either configure a more practical seed address, or perform a discovery of Director Agents which will broadcast to the local subnet. IP addresses that it reaches will be added to the IpNetToMediaTable variable.

In addition to performing a manual discovery, by default Director provides the ability to add SNMP devices as managed objects on demand. The SNMP Discovery Preferences contain an option that, by default, adds any SNMP devices that send it a trap to its list of managed objects. This can be turned off if desired by simply unchecking the box.

Browser

The SNMP Browser task applies to managed objects in the SNMP Devices group. It provides the ability to compile MIBs by right clicking on the task and selecting ‘Compile MIB’ and it provides a tree-based browser for browsing the device’s MIB.

Trap Listener

The Director Server can be used as an SNMP trap listener by configuring the Director Server host PC as a Trap Destination for SNMP devices. This configuration can be done locally through the OS’s SNMP service dialog or remotely using the Director task ‘SNMP Configuration’. This task supports the mass configuration of trap destination parameters and community names for use against groups of agents. Simply right click on the task and select ‘Create Profile’ to begin this process.

When the Director Server is running, it assumes control of the Microsoft SNMP Trap Service on the local host by default. This means that no other trap listeners running on the system can receive traps.

To turn off this behavior, open the file TWGServer.prop and add the line:

twg.snmp.trap.listener=false

then recycle the Director Server application by typing ‘net stop twgipc’ followed by ‘net start twgipc’.

Third-party SNMP trap definitions are published to the Director Server by compiling the MIBs containing the trap definitions. Trap definitions can be recognized by the TRAP-TYPE qualifier in SNMP v1 MIBs or the newer NOTIFICATION-TYPE qualifier in SNMP v2 MIBs. Director 3.x supports SNMP v1 MIBs, Director 4.x supports both SNMP v1 and SNMP v2 MIBs. Alternatively, like other Director events, the trap will be published automatically the first time it is received by the Director event server if the MIB has never been compiled. The trap types will appear in the Event Filter Builder's Event Type tab. Follow the SNMP.iso.org.dod.internet qualifiers to the desired trap type.

Monitors

The Resource Monitors task in Director can be applied to managed objects in the SNMP Devices group. By default, only variables under the MIB II branch of the MIB are visible. To change the root OID to some other value, open the file classes\com\tivoli\twg\monitors\RmonSubSys.properties, comment out the existing line:

Root = 1.3.6.1.2.1 and replace with some other root OID, for example Root = 1.3.6.1. Then recycle the Director server by typing 'net stop twgipc' follwed by 'net start twgipc'. Setting the root OID to 1.3.6.1 will allow MIBs under the 'private' branch of the standard MIB to be visible by the Resouce Monitors task. Both individual and group thresholds can be configured against variables in an agent's MIB. Recordings of MIB variable values can also be created.

Inventory

The Inventory task can be applied to managed objects in the SNMP Devices group. The following table documents the inventory data scanned from SNMP devices according to the version of Director Server:

	Director 3.x	Director 4.x
Inventory Tables		
MIB2	x	x
IP Address	x	x
IPX Address	x	x
Network Adapter	x	x
Chassis Membership		x
Installed Memory		x
Installed Packages		x
Parallel Port		x
Serial Port		x
Software		x

The Software table is particular useful for creating Dynamic Groups containing systems with a particular 3rd-party management agent running on them. You must check the 'Collect Software Data' checkbox in the Inventory Collection Preferences tab of the Server Preferences dialog.

Trap Forwarder

The Director Server provides the ability to format Director events that come into the Director server as SNMP traps and forward them to NetView or other upstream SNMP managers via Event Actions.The procedure to use is as follows:

1. Launch the Event Action Plan Builder from the Director console
2. Create an Event Action Plan using the instructions in the *IBM Director 4.1 Systems Management Guide*

3. From the middle pane of the Event Action Plan Builder, right-click and select 'New->Simple Event Filter. This will launch the Event Filter Builder task.
4. From the Event Type tab of the Event Filter Builder, select the Director event types of interest and configure any additional filter parameters. Save the filter.
5. From the Event Action Plan builder, drag and drop the filter to the Event Action Plan
6. From the right-hand pane of the Event Action Plan Builder, configure either the 'Send an SNMP Trap to a NetView Host' if the upstream SNMP manager is Tivoli NetView, or the 'Send an SNMP Trap to an IP Host' if it is some other SNMP manager.
7. Apply the configured action to the filter object in the event action
8. Close the Event Action Plan Builder
9. From the Director console's right-hand pane, drop down the Event Actions task and drag and drop the new event action on the systems or groups whose Director events are to be forwarded as SNMP traps.

The Director events being operated on by the 'Send an SNMP Trap to a NetView Host' and 'Send an SNMP Trap to an IP Host' event actions are formatted according to the TRAP-TYPE definition provided in the IBM-Director-Alert-MIB.mib file. This file can be found in the 'proddata\snmp' subdirectory on the Director server system. This MIB is also listed for convenience in **Appendix C.** The MIB contains a single TRAP-TYPE definition which can accomodate any Director event that a customer might choose:

```
ibm                OBJECT IDENTIFIER ::= { enterprises 2 }

ibmProd              OBJECT IDENTIFIER ::= { ibm 6 }

director             OBJECT IDENTIFIER ::= { ibmProd 146 }

directorTraps        OBJECT IDENTIFIER ::= { director 200 }

details              OBJECT IDENTIFIER ::= { director 9696 }

--
--  IBM Director SNMP trap
--

trapText1            TRAP-TYPE
                  ENTERPRISE     directorTraps
                  VARIABLES      {
                                 trapType,
                                 trapSeverity,
                                 trapSenderName,
                                 trapManagedObjectName,
                                 trapText,
                                 trapCategory
                                 }
                  DESCRIPTION
                        "Converted IBM Director Event"
                  ::= 1
```

The standard Director event attributes of Event Type, Severity, Sender Name, Managed Object Name, Event Text and Category are mapped to the following OIDs:

```
trapType             OBJECT-TYPE
                  SYNTAX OBJECT IDENTIFIER
                  ACCESS read-only
                  STATUS mandatory
                  DESCRIPTION
```

```
                    "The type of the event"
                ::= { director 1 }

trapSeverity        OBJECT-TYPE
                SYNTAX OCTET STRING
                ACCESS read-only
                STATUS mandatory
                DESCRIPTION
                    "The severity of the event"
                ::= { director 2 }

trapSenderName      OBJECT-TYPE
                SYNTAX OCTET STRING
                ACCESS read-only
                STATUS mandatory
                DESCRIPTION
                    "The system name from which the event was sent"
                ::= { director 3 }

trapManagedObjectName   OBJECT-TYPE
                SYNTAX OCTET STRING
                ACCESS read-only
                STATUS mandatory
                DESCRIPTION
                    "The system name for which the event was generated"
                ::= { director 4 }

trapText            OBJECT-TYPE
                SYNTAX OCTET STRING
                ACCESS read-only
                STATUS mandatory
                DESCRIPTION
                    "Text associated with the event"
                ::= { director 5 }

trapCategory        OBJECT-TYPE
                SYNTAX OCTET STRING
                ACCESS read-only
                STATUS mandatory
                DESCRIPTION
                    "The category of the event"
                ::= { director 6 }
```

Event Details are accomodated by appending an OID specific to the data type of the varbind followed by an OID that corresponds to different values of a particular type:

```
char            OBJECT-TYPE
                SYNTAX OCTET STRING
                ACCESS read-only
                STATUS mandatory
                DESCRIPTION
                    "Eight bit unsigned event detail."
                ::= { details 1 }

short           OBJECT-TYPE
                SYNTAX INTEGER
                ACCESS read-only
```

```
                    STATUS  mandatory
                    DESCRIPTION
                        "Sixteen bit signed event detail."
                    ::= { details 2 }

int                  OBJECT-TYPE
                    SYNTAX INTEGER
                    ACCESS read-only
                    STATUS mandatory
                    DESCRIPTION
                        "Thirty-two bit signed event detail."
                    ::= { details 3 }

long                  OBJECT-TYPE
                    SYNTAX Counter    -- Counter64, but we're complying with SNMPv1
                    ACCESS read-only
                    STATUS mandatory
                    DESCRIPTION
                        "Sixty-four bit signed event detail."
                    ::= { details 4 }

float                 OBJECT-TYPE
                    SYNTAX OCTET STRING
                    ACCESS read-only
                    STATUS mandatory
                    DESCRIPTION
                        "Thirty-two bit decimal pointed event detail."
                    ::= { details 6 }

double                OBJECT-TYPE
                    SYNTAX OCTET STRING
                    ACCESS read-only
                    STATUS mandatory
                    DESCRIPTION
                        "Sixty-four bit decimal pointed event detail."
                    ::= { details 7 }

octet                 OBJECT-TYPE
                    SYNTAX OCTET STRING -- Opaque, but we're complying with SNMPv1
                    ACCESS read-only
                    STATUS mandatory
                    DESCRIPTION
                        "A string of bytes holding an event detail."
                    ::= { details 8 }

string                OBJECT-TYPE
                    SYNTAX OCTET STRING
                    ACCESS read-only
                    STATUS mandatory
                    DESCRIPTION
                        "A string of unicode chars (normal text) holding
                         an event detail."
                    ::= { details 9 }

dateTime              OBJECT-TYPE
                    SYNTAX INTEGER
                    ACCESS read-only
                    STATUS mandatory
```

```
        DESCRIPTION
            "Date and time since 1/1970 as an event
             detail."
        ::= { details 10 }
```

An example will explain the format best. The results below show an SNMP trap sent by a Resouce Monitor that has reported that CPU Utilization is below 90%:

```
snmputil: trap generic=6 specific=1
  from -> 9.44.141.230
Variable = .iso.org.dod.internet.private.enterprises.2.6.146.1                  Event Type
Value    = String Director.Director Agent.CPU Monitors.CPU Utilization.Low Error
Variable = .iso.org.dod.internet.private.enterprises.2.6.146.2                  Severity
Value    = String Critical
Variable = .iso.org.dod.internet.private.enterprises.2.6.146.3                  SenderName
Value    = String heatmiser
Variable = .iso.org.dod.internet.private.enterprises.2.6.146.4                  Managed Object Name
Value    = String heatmiser
Variable = .iso.org.dod.internet.private.enterprises.2.6.146.5                  Event Text
Value    = String Monitor 'CPU Utilization below 90%'  Low Error 'CPU Utilization' has been below or
equal to 90 for 0:07:12.  Value reported is 21.12
Variable = .iso.org.dod.internet.private.enterprises.2.6.146.6                  Category
Value    = String Alert
Variable = .iso.org.dod.internet.private.enterprises.2.6.146.9696.9.1   Detail 1: Threshold Name
Value    = String CPU Utilization below 90%                             Type = String #1

Variable = .iso.org.dod.internet.private.enterprises.2.6.146.9696.9.2   Detail 2: Monitor Resource.
Value    = String CPU Utilization                                       Type = String #2

Variable = .iso.org.dod.internet.private.enterprises.2.6.146.9696.7.1   Detail 3: Threshold Value.
Value    = String 90.0                                                  Type = Double #1

Variable = .iso.org.dod.internet.private.enterprises.2.6.146.9696.4.1   Detail 4: Duration.
Value    = Counter32 432                                                Type = Long #1

Variable = .iso.org.dod.internet.private.enterprises.2.6.146.9696.7.2   Detail 5: Actual Value.
Value    = String 21.118012422360245                                    Type = Double #2
```

Trap Mapper New in 4.1!

Because raw SNMP traps coming into the Director event log or other event actions can be hard to read and because the SNMP.iso.org... tree of the Event Filter Builder can make it hard to find event types, an extensible mapping facility was developed to allow users to map SNMP trap types and their varbinds to corresponding Director event types and details. An example of a mapping file can be found in the data\snmp directory on the Director server and is named TrapFilter.map.sample. In addition, there are some built-in mapped events from IBM manufacturered SNMP devices and 3rd party tape backup software. These events are published under the SNMP.Hardware and SNMP.Software nodes of the Event Filter Builder respectively.

Command Line Interface New in 4.1!

See the *IBM Director 4.1 Systems Management Guide* for more information.

Director Agent

Architecture

The Director Agent's instrumentation technology is based on the Common Information Model (CIM). This means that the software at the lowest level of the management stack exports its data in terms of standard CIM Schema 2.6 objects in the context of a CIM server. Any management software that is a CIM client can query the Director Agent's data and listen for its alerts. To support SNMP, the Director Agent provides a CIM client that translates the data into SNMP format and exports it to SNMP clients in terms of MIBs that are installed on the Director agent system:

Figure 1

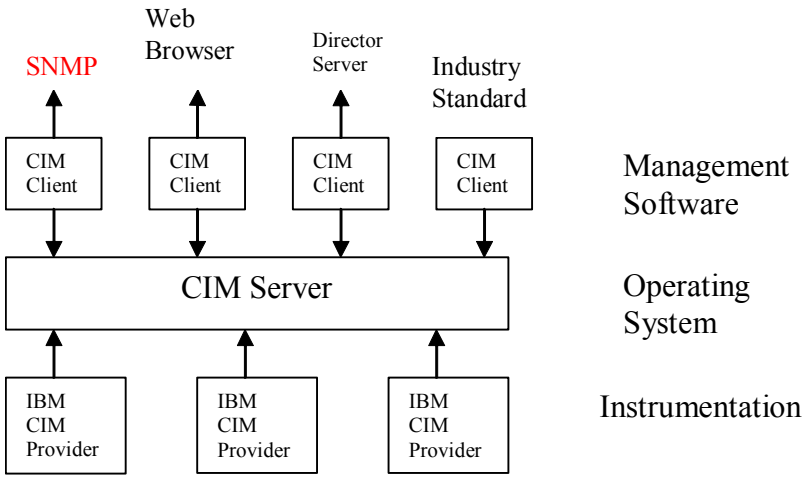


Figure 1 shows the general architecture of the Director Agent.

The Management Software layer shows the different CIM clients that manage the Director Agent's data, including the SNMP subagent that ships standard with the product. The other clients include Director Agent's web-based interface, the Director server, and any industry standard CIM client that complies with the CIM Operations standard. These CIM clients are packaged with the Director Agent install program as options. To install the SNMP CIM client, select the 'SNMP Access and Trap Forwarding' option in the Agent Components dialog of the install, or indicate it as an option in the silent install script, setup.iss.

Figure 2 shows the architecture of the SNMP CIM client in particular. The SNMP CIM client for Director Agent manifests itself in a file named umssnmp.dll. This dll, hereafter called the Director Agent SNMP subagent, complies with the Microsoft Windows SNMP extension APIs. This means that the Windows operating system will register this subagent with its SNMP stack by creating an entry for the dll in HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\SNMP\Parameters\Extensions

and forward any queries against the Director Agent enterprise OID to this dll for processing. Typically, when an SNMP subagent receives a 'Get' request from an SNMP manager, it queries the monitored entity directly and responds back. The Director Agent SNMP subagent is a proxy for the CIM server on the target system. It works by translating SNMP requests from an SNMP manager to CIM client requests, resolving the SNMP variable that's the subject of the request to a CIM instance and property, and then translating the CIM response back to an SNMP response for return to the SNMP manager.

To resolve SNMP constructs to CIM constructs, the Director Agent ships with a set of files with *.map extensions. These "map files", assign the Director Agent's CIM classes and properties to the SNMP OIDs of the corresponding SNMP table and table entry OBJECT TYPEs respectively. As an optimization, when the SNMP subagent is initialized, it caches the information in the map files so that when SNMP requests come, it can quickly resolve the SNMP variable to a corresponding CIM instance and property. Note: These map files are NOT the same as the ones described above for the Director server.

After compiling in the MIB files shipped with the Director Agent, given the IP address and enterprise OID of the Director Agent, an SNMP Manager can perform Walk, Get, GetNext, and Set operations against a remote Director Agent as Figure 2 below shows:

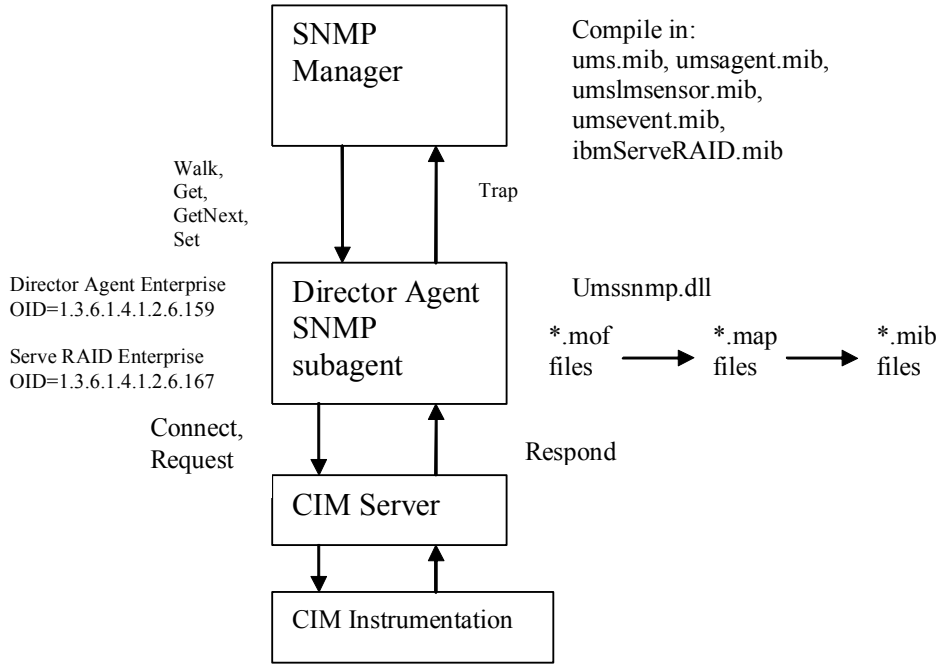


Figure 2

Traps

Design Philosophy

When designing a trap schema, there's always a trade-off between implementing one trap per event versus one trap that can be used to indicate the occurrence of many different events. If you implement one trap per event per state, you generate a lot of network traffic and have no need for any variable bindings in the trap. If you generate one event that has many variable bindings so that all state information is included, there's much less network traffic, but the trap must always be inspected for details and it can take a while for the agent to gather all the information needed to construct the trap. The Director Agent trap design philosophy is midway between these two extremes. In general, there is one trap type definition for each event source, with the state information carried in the variable bindings. In other words, we do not provide separate trap types based on severities of alerts and we do not provide separate trap types to indicate that an alert from a memory DIMM was a PFA versus a hot-spare condition. Those specifics are spelled out in the trap severity and Description attributes respectively. There are two exceptions to this design. The first is the redundant NIC alerts, in which there are separate trap types to indicate the state of 'failover' versus 'recovery'. The second is the traps defined in ibmServeRAID.mib. Because the RAID traps pre-dated the Director Agent, the design philosophy is somewhat different. Rather than embedding the severity in the trap definition, there is a separate trap for each severity of a particular RAID subsystem element's state.

Because some popular SNMP managers such as CA Unicenter perform a Get operation upon receiving an event from an event source, the sourceobjectpath and targetobjectpath attributes are included in the trap as "pointers" back to the monitored entity. This pointer, in conjunction with the status property provided by the monitoring software (i.e. CIM providers), allows applications such as CA's Distributed State Machine to turn a node red or green depending on its current status.

Specifics

The Director Agent has the ability to send a variety of SNMP traps. As shown in Figure 1 and Figure 2, these traps are originally CIM Notifications that get translated into SNMP traps by the Director Agent SNMP subagent according to the schemas defined in umsevent.mib and ibmServeRAID.mib. The trap syntax is compliant with the SNMP version 1 standard. All of the traps defined in umsevent.mib include the following variable bindings:

1. identifier – A label used by the instrumentation

2. source object path – The CIM Object Path of the event source formatted as a string

3. target object path – The CIM Object Path of the monitored entity whose state change triggered an event. For example, in the case of a fan event, the tachometer would be the event source but the fan would be the monitored entity. Otherwise, this value is often the same as the source object path.

4. severity – An integer value ranging from 0 to 2 where 0 is Normal, 1 is Warning, and 2 is Critical

5. description – A human readable description of the alert

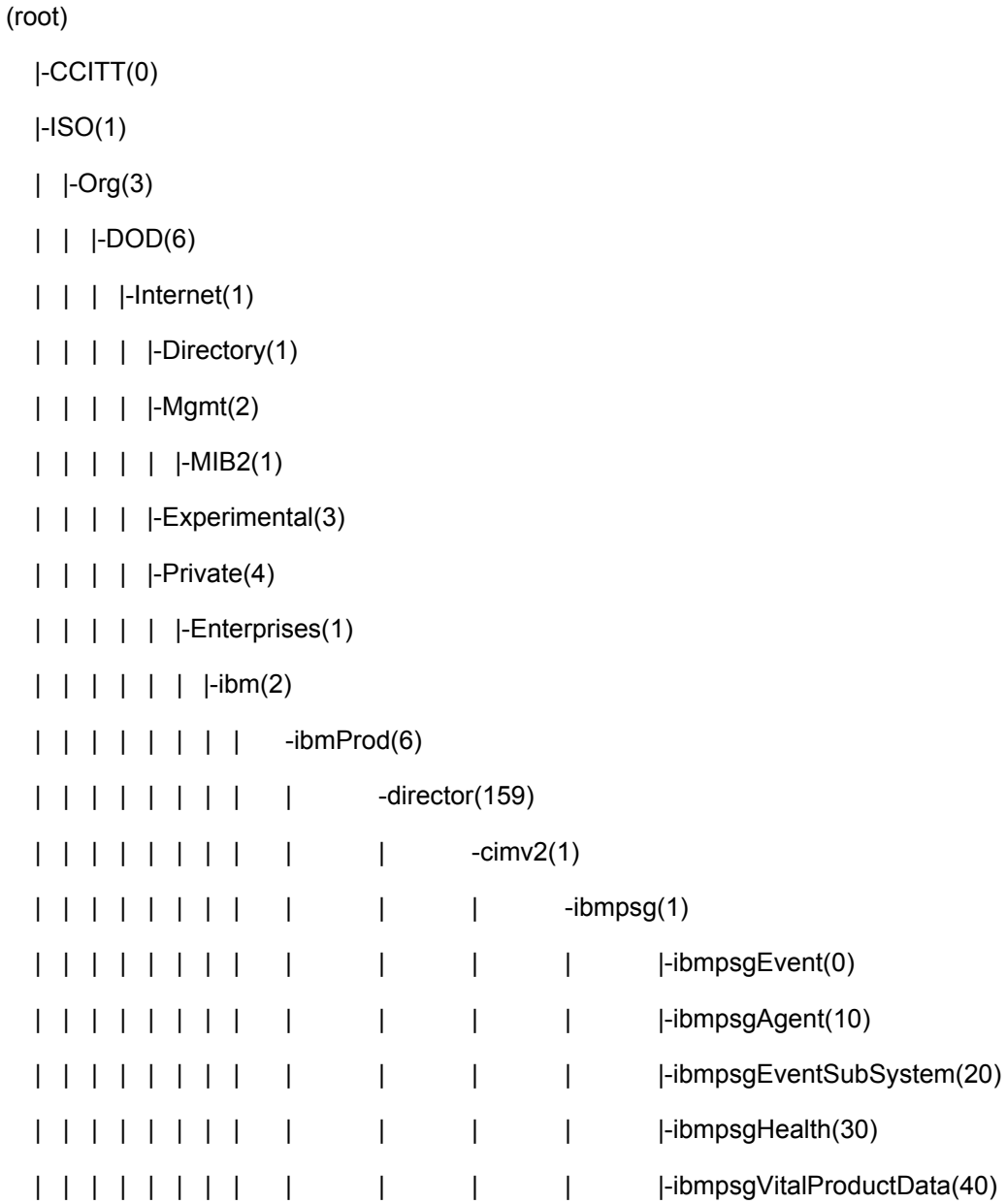
6. timestamp – The time at which the event occurred at the event source

Traps defined in the ibmServeRAID MIB contain different variable bindings, depending on the trap. Note that the ServeRAID MIB that ships with the Director Agent supports the same schema as the MIB that ships with the standalone ServeRAID management tool.

As long as the Director Agent SNMP subagent is installed and registered, it creates and forwards traps to any configured alert destinations. The forwarding versus not forwarding of the traps is not a configurable behavior. It is expected that unwanted traps will be filtered out at the listening event server.

MIBs

Users that wish to walk the Director Agent MIB or have management software that's designed to query system state after a trap occurs can make use of the data published in the rest of Director Agent's MIB files. The Director Agent's MIB files get installed in the proddata\snmp subdirectory of the agent's file tree. The MIB itself is organized as follows:



```
| | | | | | | | |       |       |       |       |-ibmpsgSMART(50)
| | | | | | | | |       |       |       |       |-ibmpsgAssetID(60)
| | | | | | | | |       |       |       |       |-ibmpsgAlertOnLAN(70)
| | | | | | | | |       |       |       |       |-ibmpsgLMSensor(80)
| | | | | | | | |       |       |       |       |-ibmpsgITDirector(90)
| | | | | | | | |       |       |       |       |-ibmpsgSmbios(100)
| | | | | | | | |       |       |       |       |-ibmpsgNIC(110)
| | | | | | | | |       |       |       |       |-ibmpsgMemory(120)
| | | | | | | | |       |       |       |       |-ibmpsgPower(130)
| | | | | | | | |       |       |       |       |-ibmpsgProcessor(140)
| | | | | | | | |       |       |       -win32(2)
| | | | | | | | |       |       |       |       |-win32Event(0)
| | | | | | | | |       |       |       |       |-win32WMI(10)
| | | | | | | | |       |       |       |       |-win32SMBIOS(30)
| | | | | | | | |       |       -dmiMibs(200)
| | | | | | | | |       |       |       |-directorSystemsMIB(1)
| | | | | | | | |       |       |       |-directorAgentMIB(2)
| | | | | | | | |       |       |       |-directorServerMIB(3)
```

Ums.mib – The header MIB. Publishes the OID of the Director Agent product as well as the OIDs of Director Agent components. Always compile this MIB before the others.

Umsagent.mib – Publishes the OIDs for Director Agent configuration data. Specifically, its http port.

Umsasf.mib – Publishes the OIDs the ASF traps sent by xSeries servers with ASF support such as the x235, x345, and x255. See http://www.dmtf.org for more information on the ASF specification.

Cimwin32.mib – Publishes the OIDs for select WMI instrumentation from Microsoft. These are OIDs for management data surfaced by the Director Agent but not provided by IBM.

Umslmsensor.mib – Publishes the OIDs for Director Agent's environmental sensor objects.

Umshealth.mib – Publishes the OIDs for Director Agent's health subsystem. Specifically, data about all the entries in the System Health GUI.

Asf.mib – Publishes PET trap definitions for NICs that implement the Alert Standard Format.

Umsassetid.mib – Publishes OIDs for data surfaced from the AssetID facility. This facility can be the EEPROM on planar or the hard drive.

Umsevent.mib – Publishes TRAP-TYPE definitions for hardware alerts surfaced by Director Agent hardware monitors and OIDs for trap variable bindings. These TRAP-TYPEs are published in **Appendix A** of this whitepaper for convenience.

umsnic.mib - Publishes OIDs for data surfaced by physical NICs in a system

Umspower.mib - Publishes OIDs for data surfaced by server power supplies

Umsprocessor.mib - Publishes OIDs for data surfaced by processors in the system

IbmServeRAID.mib – Publishes TRAP-TYPE definitions for alerts surfaced by ServeRAID monitors and OIDs for trap variable bindings.

Querying Director Agent SNMP Data

In order to query for Director Agent's data, you must construct the correct OID for the desired variable. The format of an SNMP variable looks like the following:

<OBJECT IDENTIFIER>.<INSTANCE IDENTIFIER>

"A scalar variable may have only one instance in a MIB. Columnar variables have zero or more instances and are always arranged in the form of a one-dimensional list or two-dimensional table. An instance identifier is a non-negative INTEGER, OCTET STRING, or OBJECT IDENTIFIER value and is appended to the end of an OID. A scalar variable is specified by appending a '.0' to its OID."[2]

An example of a scalar variable in Director Agent's MIB can be found in the ums.mib file:

```
ibmpsgAgentVersion OBJECT-TYPE
    SYNTAX String
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION "IBM Director Agent Version"
    { director  0 }
```

Using the information in the MIBs section, the OBJECT IDENTIFIER for this variable is constructed as:

1.3.6.1.4.1.2.6.159.0

Because this is a scalar variable, the INSTANCE IDENTIFER is 0. So to query the value of the ibmpsgAgentVersion using a utility such as snmputil, you would use the following command line:

snmputil get 9.37.108.80 public .1.3.6.1.4.1.2.6.159.0.0

which returns this response:

Variable = .iso.org.dod.internet.private.enterprises.2.6.159.0

---

[2] Windows NT SNMP, James D. Murray, O'Reilly

Value = String v4.1

Most of Director Agent's SNMP data is not scalar but tabular. Tables are used to store more than one row of data. Table objects in the MIB are declared using the ASN.1 SEQUENCE OF type. An example of a table can be found in the umshealth.mib:

```
iBMPSGUMSComponentHealthTable OBJECT-TYPE
  SYNTAX       SEQUENCE OF IBMPSGUMSComponentHealthEntry
  ACCESS       not-accessible
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE     "IBMPSG_UMSComponentHealth"
::= { ibmpsgHealth 3 }
```

Besides the table definition, a placeholder object is required to indicate the rows of the table and point out which column will be the index variable in the row:

```
iBMPSGUMSComponentHealthEntry OBJECT-TYPE
  SYNTAX       IBMPSGUMSComponentHealthEntry
  ACCESS       not-accessible
  STATUS       mandatory
  DESCRIPTION   ""
  INDEX        { iBMPSGUMSComponentHealthKeyIndex }
::= { iBMPSGUMSComponentHealthTable 1 }
```

The definition of the columns in the rows is provided by:

```
IBMPSGUMSComponentHealthEntry ::= SEQUENCE
{
  iBMPSGUMSComponentHealthKeyIndex String,
  iBMPSGUMSComponentHealthCurrentState Uint16,
  iBMPSGUMSComponentHealthLastState Uint16,
  iBMPSGUMSComponentHealthDateTime Datetime,
  iBMPSGUMSComponentHealthLastUpdate Datetime,
  iBMPSGUMSComponentHealthDescription String,
  iBMPSGUMSComponentHealthEventCategory String,
  iBMPSGUMSComponentHealthResolution String,
```

iBMPSGUMSComponentHealthSourceObjectPath String,

iBMPSGUMSComponentHealthTargetObjectPath String,

iBMPSGUMSComponentHealthStatus String

}

Finally, individual OBJECT-TYPE definitions for each column listed above round out this branch of the MIB. For example:

iBMPSGUMSComponentHealthKeyIndex OBJECT-TYPE

SYNTAX String

ACCESS read-only

STATUS mandatory

DESCRIPTION "Uniquely identifies this row in the table."

REFERENCE "IBMPSG_UMSComponentHealth.KeyIndex"

::= { iBMPSGUMSComponentHealthEntry 1 }

iBMPSGUMSComponentHealthCurrentState OBJECT-TYPE

SYNTAX Uint16

ACCESS read-only

STATUS mandatory

DESCRIPTION "The current state of the object referenced by iBMPSGUMSComponentHealthTargetObjectPath. This variable uses the same schema as the event severity:

0 = Normal

1 = Warning

2 = Critical"

REFERENCE "IBMPSG_UMSComponentHealth.CurrentState"

::= { iBMPSGUMSComponentHealthEntry 2 }

.

.

.

As noted above, there is always one “special” column in the row that is the index. The value of this column in a row uniquely defines the row in the table. In the case of iBMPSGUMSComponentHealthTable, that variable is iBMPSGUMSComponentHealthKeyIndex

Each individual value in a table is referenced using the table index variable's value for the appropriate row as the INSTANCE IDENTIFIER. To address a specific variable instance, you must append the index of the row to its OID.

Here's an example using the health table. Say there are nine entries in the iBMUMSComponentHealthTable where the iBMPSGUMSComponentHealthKeyIndex variable has values of (remember that indexes can have String values):

c:

fan 0

voltage 0

voltage 1

voltage 2

voltage 3

temperature 0

temperature 1

.\physicaldrive 0

Say that you want to know the value of the iBMPSGUMSComponentHealthCurrentState variable for the fan 0 row. The description of this variable in the MIB says that this variable will contain a value of '0', '1', or '2' which stands for a severity of Normal, Warning, or Critical against the given component. To reference this variable, you must construct an OID that conforms to this format:

<OBJECT IDENTIFIER>.<ROW INDEX>

The OBJECT IDENTIFIER can be constructed using the information in ums.mib:

ibmpsgHealth: 1.3.6.1.4.1.2.6.159.1.1.30

iBMPSGUMSComponentHealthCurrentState: 1.3.6.1.4.1.2.6.159.1.1.30.3.1.2

The ROW INDEX is a little more interesting. The convention used by the Director Agent SNMP subagent is to convert the String value of the index variable to a length-preceded, non-terminated string encoded in UTF-8 format. Taking fan 0 as the example, to create the ROW INDEX, do the following:

f a n 0 (note that there are 2 spaces between 'n' and '0')

6 102 97 110 32 32 48

Putting it all together, the OID for the current state of fan 0 is:

1.3.6.1.4.1.2.6.159.1.1.30.3.1.2.6.102.97.110.32.32.48

Running snmputil yields:

C:\>snmputil get 9.37.108.80 public .1.3.6.1.4.1.2.6.159.1.1.30.3.1.2.6.102.97.1

10.32.32.48

Variable = .iso.org.dod.internet.private.enterprises.2.6.159.1.1.30.3.1.2.6.102.

97.110.32.32.48

Value = Integer32 0

Hence, the state of fan 0 is '0', meaning Normal.

Remote Supervisor Adapter SNMP support

Traps

The xSeries Remote Supervisor Adapter has the ability to send SNMP v1 traps to upstream SNMP trap listeners. The trap support is not enabled by default, but can be turned on through any of the supported user interfaces into the Remote Supervisor adapter including telnet, the Director Management Processor Assistant's Configuration task, and the RSA's own web-based interface. In addition, an Alert Profile must be created for each trap destination, up to 12. See the documentation in the Remote Supervisor Adapter User Guide included on the Remote Supervisor Adapter option CD for details on enabling the the SNMP trap support and creating Alert Profiles.

The trap definitions for the RSA can be found in the MIBs directory of the RSA option CD and are listed in **Appendix B** for convenience.

Data

The Remote Supervisor Adapter contains an embedded SNMP agent that responds to Get, Set, and Walk operations. The MIB that describes the data can be downloaded from the IBM support site and is called ibmrsaag.mib. The SNMP agent support must be manually enabled using one of the RSA's supported user interfaces.

BladeCenter Chassis Management Module SNMP support

Traps

The IBM BladeCenter management module has the ability to send SNMP v1 traps to upstream SNMP trap listeners. The trap support is not enabled by default, but can be turned on through any of the supported user interfaces into the Management Module including the Director 4.1 Management Processor Assistant task, and the Management Module's own web-based interface. In addition, an Alert Profile must be created for each trap destination, up to 12. See the documentation in the Management Module User Guide included on the Management Module installation diskette for details on enabling the the SNMP trap support and creating Alert Profiles.

The trap definitions for the Management Module can be found in the file named mmalert.mib on the Management Module's installation diskette. They can also be found in the proddata\snmp subdirectory of the Director 4.1 management server with the name BLADESPPALT-MIB.mib. They are also listed in **Appendix D** of this whitepaper for convenience.

Data

The Management Module contains an embedded SNMP agent that responds to Get, Set, and Walk operations. The MIB that describes the data can be downloaded from the IBM support site in the 4/03 timeframeand is called mmblade.mib. It can also be found in the proddata\snmp directory on the Director 4.1 server with the name BLADE-MIB.mib.

Troubleshooting Tips

- Ensure that the Windows SNMP service is started on the Director Agent system
- Ensure that the Director Agent SNMP subagent is registered by the Windows SNMP stack by opening the registry and navigating to HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\SNMP\Parameters\Extensions and checking for the 'umssnmp'entry
- If you are not receiving Director Agent's SNMP traps, ensure that you installed with the System Health Monitoring option checked and the 'SNMP Access and Trap Forwarding' box checked
- Run a utility such as snmputil.exe on the local system to see if it can walk the Director Agent MIB tree:snmputil walk 127.0.0.1 public .1.3.6.1.4.1.2.6.159
- Check the log entitled winnt\system32\umssnmp.log to see if the SNMP MIB repository was properly initialized
- In Director Agent 3.1.1 and earlier, trap variable bindings for the events in umsevent.mib are sent in the order:

  Description

  Identifier

  Severity

  SourceObjectPath

  TargetObjectPath

  Timestamp

  rather than the way they are published in umsevent.mib. This will be rectified in the Director 4.1 release.

References

- Windows NT SNMP by James D. Murray. O'Reilly, 1998
- Platform Event Trap Standard, http://developer.intel.com/design/servers/ipmi/spec.htm
- Alert Standard Format, http://www.dmtf.org/spec/asf.html
- Common Information Model, http://www.dmtf.org/standards/standard_cim.php

Appendix A - Director Agent 4.1 SNMP Trap Definitions

```
-- You must compile ums.mib BEFORE you compile this MIB.
UMSEVENT-MIB DEFINITIONS ::= BEGIN
IMPORTS
  OBJECT-TYPE
    FROM RFC-1212
  TRAP-TYPE
    FROM RFC-1215
  director, ibmpsgEvent,
  Boolean, Uint8, Sint8, Uint16, Sint16, Uint32,
  Sint32, Uint64, Sint64, Real32, Real64, String, Datetime
    FROM UMS-MIB;

iBMPSGGenericEvent TRAP-TYPE
  ENTERPRISE    director  VARIABLES   {
    iBMPSGGenericEventIdentifier,
    iBMPSGGenericEventSourceObjectPath,
    iBMPSGGenericEventTargetObjectPath,
    iBMPSGGenericEventdescription,
    iBMPSGGenericEventSeverity,
    iBMPSGGenericEventTimeStamp
  }
  DESCRIPTION    "Placeholder event"
  REFERENCE     "IBMPSG_GenericEvent"
::= 1

iBMPSGGenericEventBindings OBJECT IDENTIFIER ::= { ibmpsgEvent 1 }
```

```
iBMPSGGenericEventIdentifier OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE     "IBMPSG_GenericEvent.Identifier"
::= { iBMPSGGenericEventBindings 1 }

iBMPSGGenericEventSourceObjectPath OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE     "IBMPSG_GenericEvent.SourceObjectPath"
::= { iBMPSGGenericEventBindings 2 }

iBMPSGGenericEventTargetObjectPath OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE     "IBMPSG_GenericEvent.TargetObjectPath"
::= { iBMPSGGenericEventBindings 3 }

iBMPSGGenericEventdescription OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
```

```
    STATUS        mandatory
    DESCRIPTION   ""
    REFERENCE     "IBMPSG_GenericEvent.description"
  ::= { iBMPSGGenericEventBindings 4 }

  iBMPSGGenericEventSeverity OBJECT-TYPE
    SYNTAX        Uint16
    ACCESS        read-write
    STATUS        mandatory
    DESCRIPTION   ""
    REFERENCE     "IBMPSG_GenericEvent.Severity"
  ::= { iBMPSGGenericEventBindings 5 }

  iBMPSGGenericEventTimeStamp OBJECT-TYPE
    SYNTAX        Datetime
    ACCESS        read-write
    STATUS        mandatory
    DESCRIPTION   ""
    REFERENCE     "IBMPSG_GenericEvent.TimeStamp"
  ::= { iBMPSGGenericEventBindings 6 }

  iBMPSGTemperatureEvent TRAP-TYPE
    ENTERPRISE    director
    VARIABLES     {
      iBMPSGTemperatureEventIdentifier,
      iBMPSGTemperatureEventSourceObjectPath,
      iBMPSGTemperatureEventTargetObjectPath,
```

```
      iBMPSGTemperatureEventSeverity,
      iBMPSGTemperatureEventdescription,
      iBMPSGTemperatureEventTimeStamp
    }
    DESCRIPTION    "This event is sent when the state of a system's temperature sensor changes
                with respect to a manufacturer-defined and/or user-defined threshold."
    REFERENCE      "IBMPSG_TemperatureEvent"
  ::= 2

  iBMPSGTemperatureEventBindings OBJECT IDENTIFIER ::= { ibmpsgEvent 2 }

  iBMPSGTemperatureEventIdentifier OBJECT-TYPE
    SYNTAX         String
    ACCESS         read-write
    STATUS         mandatory
    DESCRIPTION    ""
    REFERENCE      "IBMPSG_TemperatureEvent.Identifier"
  ::= { iBMPSGTemperatureEventBindings 1 }

  iBMPSGTemperatureEventSourceObjectPath OBJECT-TYPE
    SYNTAX         String
    ACCESS         read-write
    STATUS         mandatory
    DESCRIPTION    ""
    REFERENCE      "IBMPSG_TemperatureEvent.SourceObjectPath"
  ::= { iBMPSGTemperatureEventBindings 2 }
```

iBMPSGTemperatureEventTargetObjectPath OBJECT-TYPE

SYNTAX String

ACCESS read-write

STATUS mandatory

DESCRIPTION ""

REFERENCE "IBMPSG_TemperatureEvent.TargetObjectPath"

::= { iBMPSGTemperatureEventBindings 3 }

iBMPSGTemperatureEventSeverity OBJECT-TYPE

SYNTAX Uint16

ACCESS read-write

STATUS mandatory

DESCRIPTION "1=Warning -- The temperature has exceeded a user-defined or manufacturer-defined warning level thresold

2=Critical -- The temperature has exceeded a user-defined or manufacturer-defined critical threshold"

REFERENCE "IBMPSG_TemperatureEvent.Severity"

::= { iBMPSGTemperatureEventBindings 4 }

iBMPSGTemperatureEventdescription OBJECT-TYPE

SYNTAX String

ACCESS read-write

STATUS mandatory

DESCRIPTION ""

REFERENCE "IBMPSG_TemperatureEvent.description"

::= { iBMPSGTemperatureEventBindings 5 }

```
iBMPSGTemperatureEventTimeStamp OBJECT-TYPE
  SYNTAX        Datetime
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION    ""
  REFERENCE     "IBMPSG_TemperatureEvent.TimeStamp"
::= { iBMPSGTemperatureEventBindings 6 }

iBMPSGVoltageEvent TRAP-TYPE
  ENTERPRISE     director
  VARIABLES    {
    iBMPSGVoltageEventIdentifier,
    iBMPSGVoltageEventSourceObjectPath,
    iBMPSGVoltageEventTargetObjectPath,
    iBMPSGVoltageEventSeverity,
    iBMPSGVoltageEventdescription,
    iBMPSGVoltageEventTimeStamp
  }
  DESCRIPTION    "This event is sent when the state of a system's voltage sensor changes
                 with respect to a manufacturer-defined threshold."
  REFERENCE     "IBMPSG_VoltageEvent"
::= 3

iBMPSGVoltageEventBindings OBJECT IDENTIFIER ::= { ibmpsgEvent 3 }

iBMPSGVoltageEventIdentifier OBJECT-TYPE
  SYNTAX        String
```

```
    ACCESS        read-write
    STATUS        mandatory
    DESCRIPTION   ""
    REFERENCE     "IBMPSG_VoltageEvent.Identifier"
  ::= { iBMPSGVoltageEventBindings 1 }

  iBMPSGVoltageEventSourceObjectPath OBJECT-TYPE
    SYNTAX        String
    ACCESS        read-write
    STATUS        mandatory
    DESCRIPTION   ""
    REFERENCE     "IBMPSG_VoltageEvent.SourceObjectPath"
  ::= { iBMPSGVoltageEventBindings 2 }

  iBMPSGVoltageEventTargetObjectPath OBJECT-TYPE
    SYNTAX        String
    ACCESS        read-write
    STATUS        mandatory
    DESCRIPTION   ""
    REFERENCE     "IBMPSG_VoltageEvent.TargetObjectPath"
  ::= { iBMPSGVoltageEventBindings 3 }

  iBMPSGVoltageEventSeverity OBJECT-TYPE
    SYNTAX        Uint16
    ACCESS        read-write
    STATUS        mandatory
```

```
  DESCRIPTION    "1=Warning -- The temperature has exceeded a manufacturer-defined
warning level thresold
                2=Critical -- The temperature has exceeded a manufacturer-defined critical
threshold"
  REFERENCE      "IBMPSG_VoltageEvent.Severity"
::= { iBMPSGVoltageEventBindings 4 }

iBMPSGVoltageEventdescription OBJECT-TYPE
  SYNTAX         String
  ACCESS         read-write
  STATUS         mandatory
  DESCRIPTION    ""
  REFERENCE      "IBMPSG_VoltageEvent.description"
::= { iBMPSGVoltageEventBindings 5 }

iBMPSGVoltageEventTimeStamp OBJECT-TYPE
  SYNTAX         Datetime
  ACCESS         read-write
  STATUS         mandatory
  DESCRIPTION    ""
  REFERENCE      "IBMPSG_VoltageEvent.TimeStamp"
::= { iBMPSGVoltageEventBindings 6 }

iBMPSGChassisEvent TRAP-TYPE
  ENTERPRISE     director
  VARIABLES    {
    iBMPSGChassisEventIdentifier,
```

```
      iBMPSGChassisEventSourceObjectPath,
      iBMPSGChassisEventTargetObjectPath,
      iBMPSGChassisEventSeverity,
      iBMPSGChassisEventdescription,
      iBMPSGChassisEventTimeStamp
    }
  DESCRIPTION    "This event is sent when the state of a system's chassis has changed."
    REFERENCE      "IBMPSG_ChassisEvent"
  ::= 4

  iBMPSGChassisEventBindings OBJECT IDENTIFIER ::= { ibmpsgEvent 4 }

  iBMPSGChassisEventIdentifier OBJECT-TYPE
    SYNTAX         String
    ACCESS         read-write
    STATUS         mandatory
    DESCRIPTION    ""
    REFERENCE      "IBMPSG_ChassisEvent.Identifier"
  ::= { iBMPSGChassisEventBindings 1 }

  iBMPSGChassisEventSourceObjectPath OBJECT-TYPE
    SYNTAX         String
    ACCESS         read-write
    STATUS         mandatory
    DESCRIPTION    ""
    REFERENCE      "IBMPSG_ChassisEvent.SourceObjectPath"
  ::= { iBMPSGChassisEventBindings 2 }
```

```
iBMPSGChassisEventTargetObjectPath OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE     "IBMPSG_ChassisEvent.TargetObjectPath"
::= { iBMPSGChassisEventBindings 3 }

iBMPSGChassisEventSeverity OBJECT-TYPE
  SYNTAX       Uint16
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   "2=Critical -- The system's cover has been removed"
  REFERENCE     "IBMPSG_ChassisEvent.Severity"
::= { iBMPSGChassisEventBindings 4 }

iBMPSGChassisEventdescription OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE     "IBMPSG_ChassisEvent.description"
::= { iBMPSGChassisEventBindings 5 }

iBMPSGChassisEventTimeStamp OBJECT-TYPE
  SYNTAX       Datetime
```

```
    ACCESS        read-write
    STATUS        mandatory
    DESCRIPTION   ""
    REFERENCE     "IBMPSG_ChassisEvent.TimeStamp"
  ::= { iBMPSGChassisEventBindings 6 }

  iBMPSGFanEvent TRAP-TYPE
    ENTERPRISE    director
    VARIABLES   {
      iBMPSGFanEventIdentifier,
      iBMPSGFanEventSourceObjectPath,
      iBMPSGFanEventTargetObjectPath,
      iBMPSGFanEventSeverity,
      iBMPSGFanEventdescription,
      iBMPSGFanEventTimeStamp
    }
    DESCRIPTION   "This event is sent when state of a system's fan has changed with respect to
                   manufacturer-defined rpm values."
    REFERENCE     "IBMPSG_FanEvent"
  ::= 5

  iBMPSGFanEventBindings OBJECT IDENTIFIER ::= { ibmpsgEvent 5 }

  iBMPSGFanEventIdentifier OBJECT-TYPE
    SYNTAX        String
    ACCESS        read-write
    STATUS        mandatory
```

```
    DESCRIPTION    ""
    REFERENCE      "IBMPSG_FanEvent.Identifier"
  ::= { iBMPSGFanEventBindings 1 }

  iBMPSGFanEventSourceObjectPath OBJECT-TYPE
    SYNTAX         String
    ACCESS         read-write
    STATUS         mandatory
    DESCRIPTION    ""
    REFERENCE      "IBMPSG_FanEvent.SourceObjectPath"
  ::= { iBMPSGFanEventBindings 2 }

  iBMPSGFanEventTargetObjectPath OBJECT-TYPE
    SYNTAX         String
    ACCESS         read-write
    STATUS         mandatory
    DESCRIPTION    ""
    REFERENCE      "IBMPSG_FanEvent.TargetObjectPath"
  ::= { iBMPSGFanEventBindings 3 }

  iBMPSGFanEventSeverity OBJECT-TYPE
    SYNTAX         Uint16
    ACCESS         read-write
    STATUS         mandatory
    DESCRIPTION    "2=Critical -- The fan has stopped."
    REFERENCE      "IBMPSG_FanEvent.Severity"
  ::= { iBMPSGFanEventBindings 4 }
```

```
iBMPSGFanEventdescription OBJECT-TYPE
  SYNTAX        String
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION    ""
  REFERENCE     "IBMPSG_FanEvent.description"
::= { iBMPSGFanEventBindings 5 }

iBMPSGFanEventTimeStamp OBJECT-TYPE
  SYNTAX        Datetime
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION    ""
  REFERENCE     "IBMPSG_FanEvent.TimeStamp"
::= { iBMPSGFanEventBindings 6 }

iBMPSGProcessorEvent TRAP-TYPE
  ENTERPRISE     director
  VARIABLES    {
    iBMPSGProcessorEventIdentifier,
    iBMPSGProcessorEventSourceObjectPath,
    iBMPSGProcessorEventTargetObjectPath,
    iBMPSGProcessorEventSeverity,
    iBMPSGProcessorEventdescription,
    iBMPSGProcessorEventTimeStamp
  }
```

```
    DESCRIPTION    "Unused."
    REFERENCE      "IBMPSG_ProcessorEvent"
  ::= 6

  iBMPSGProcessorEventBindings OBJECT IDENTIFIER ::= { ibmpsgEvent 6 }

  iBMPSGProcessorEventIdentifier OBJECT-TYPE
    SYNTAX         String
    ACCESS         read-write
    STATUS         mandatory
    DESCRIPTION    ""
    REFERENCE      "IBMPSG_ProcessorEvent.Identifier"
  ::= { iBMPSGProcessorEventBindings 1 }

  iBMPSGProcessorEventSourceObjectPath OBJECT-TYPE
    SYNTAX         String
    ACCESS         read-write
    STATUS         mandatory
    DESCRIPTION    ""
    REFERENCE      "IBMPSG_ProcessorEvent.SourceObjectPath"
  ::= { iBMPSGProcessorEventBindings 2 }

  iBMPSGProcessorEventTargetObjectPath OBJECT-TYPE
    SYNTAX         String
    ACCESS         read-write
    STATUS         mandatory
    DESCRIPTION    ""
```

```
    REFERENCE      "IBMPSG_ProcessorEvent.TargetObjectPath"
  ::= { iBMPSGProcessorEventBindings 3 }

  iBMPSGProcessorEventSeverity OBJECT-TYPE
    SYNTAX         Uint16
    ACCESS         read-write
    STATUS         mandatory
    DESCRIPTION    ""
    REFERENCE      "IBMPSG_ProcessorEvent.Severity"
  ::= { iBMPSGProcessorEventBindings 4 }

  iBMPSGProcessorEventdescription OBJECT-TYPE
    SYNTAX         String
    ACCESS         read-write
    STATUS         mandatory
    DESCRIPTION    ""
    REFERENCE      "IBMPSG_ProcessorEvent.description"
  ::= { iBMPSGProcessorEventBindings 5 }

  iBMPSGProcessorEventTimeStamp OBJECT-TYPE
    SYNTAX         Datetime
    ACCESS         read-write
    STATUS         mandatory
    DESCRIPTION    ""
    REFERENCE      "IBMPSG_ProcessorEvent.TimeStamp"
  ::= { iBMPSGProcessorEventBindings 6 }
```

```
iBMPSGStorageEvent TRAP-TYPE
  ENTERPRISE    director
  VARIABLES   {
    iBMPSGStorageEventIdentifier,
    iBMPSGStorageEventSourceObjectPath,
    iBMPSGStorageEventTargetObjectPath,
    iBMPSGStorageEventSeverity,
    iBMPSGStorageEventdescription,
    iBMPSGStorageEventTimeStamp
  }
  DESCRIPTION   "On systems with no Remote Supervisor Adapter, this event is sent when
the
              state of a system's hard file space has changed with respect to user-defined
              levels of percentage hard file space remaining.
              On systems with a Remote Supervisor Adapter, this event is sent when the
              system has experienced a DASD controller failure."
  REFERENCE     "IBMPSG_StorageEvent"
::= 7

iBMPSGStorageEventBindings OBJECT IDENTIFIER ::= { ibmpsgEvent 7 }

iBMPSGStorageEventIdentifier OBJECT-TYPE
  SYNTAX        String
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION   ""
  REFERENCE     "IBMPSG_StorageEvent.Identifier"
```

::= { iBMPSGStorageEventBindings 1 }

iBMPSGStorageEventSourceObjectPath OBJECT-TYPE

SYNTAX String

ACCESS read-write

STATUS mandatory

DESCRIPTION ""

REFERENCE "IBMPSG_StorageEvent.SourceObjectPath"

::= { iBMPSGStorageEventBindings 2 }

iBMPSGStorageEventTargetObjectPath OBJECT-TYPE

SYNTAX String

ACCESS read-write

STATUS mandatory

DESCRIPTION ""

REFERENCE "IBMPSG_StorageEvent.TargetObjectPath"

::= { iBMPSGStorageEventBindings 3 }

iBMPSGStorageEventSeverity OBJECT-TYPE

SYNTAX Uint16

ACCESS read-write

STATUS mandatory

DESCRIPTION "1=Warning -- Percentage hard file space remaining has fallen below user-defined Warning level threshold.

2=Critical -- Percentage hard file space remaining has fallen below user-defined Critical level threshold."

REFERENCE "IBMPSG_StorageEvent.Severity"

```
::= { iBMPSGStorageEventBindings 4 }

iBMPSGStorageEventdescription OBJECT-TYPE
  SYNTAX        String
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION   ""
  REFERENCE     "IBMPSG_StorageEvent.description"
::= { iBMPSGStorageEventBindings 5 }

iBMPSGStorageEventTimeStamp OBJECT-TYPE
  SYNTAX        Datetime
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION   ""
  REFERENCE     "IBMPSG_StorageEvent.TimeStamp"
::= { iBMPSGStorageEventBindings 6 }

iBMPSGAssetEvent TRAP-TYPE
  ENTERPRISE    director
  VARIABLES   {
    iBMPSGAssetEventIdentifier,
    iBMPSGAssetEventSourceObjectPath,
    iBMPSGAssetEventTargetObjectPath,
    iBMPSGAssetEventSeverity,
    iBMPSGAssetEventdescription,
    iBMPSGAssetEventTimeStamp
```

```
    }
    DESCRIPTION    "Unused."
    REFERENCE      "IBMPSG_AssetEvent"
  ::= 8

  iBMPSGAssetEventBindings OBJECT IDENTIFIER ::= { ibmpsgEvent 8 }

  iBMPSGAssetEventIdentifier OBJECT-TYPE
    SYNTAX         String
    ACCESS         read-write
    STATUS         mandatory
    DESCRIPTION    ""
    REFERENCE      "IBMPSG_AssetEvent.Identifier"
  ::= { iBMPSGAssetEventBindings 1 }

  iBMPSGAssetEventSourceObjectPath OBJECT-TYPE
    SYNTAX         String
    ACCESS         read-write
    STATUS         mandatory
    DESCRIPTION    ""
    REFERENCE      "IBMPSG_AssetEvent.SourceObjectPath"
  ::= { iBMPSGAssetEventBindings 2 }

  iBMPSGAssetEventTargetObjectPath OBJECT-TYPE
    SYNTAX         String
    ACCESS         read-write
    STATUS         mandatory
```

```
    DESCRIPTION    ""
    REFERENCE      "IBMPSG_AssetEvent.TargetObjectPath"
  ::= { iBMPSGAssetEventBindings 3 }

  iBMPSGAssetEventSeverity OBJECT-TYPE
    SYNTAX         Uint16
    ACCESS         read-write
    STATUS         mandatory
    DESCRIPTION    ""
    REFERENCE      "IBMPSG_AssetEvent.Severity"
  ::= { iBMPSGAssetEventBindings 4 }

  iBMPSGAssetEventdescription OBJECT-TYPE
    SYNTAX         String
    ACCESS         read-write
    STATUS         mandatory
    DESCRIPTION    ""
    REFERENCE      "IBMPSG_AssetEvent.description"
  ::= { iBMPSGAssetEventBindings 5 }

  iBMPSGAssetEventTimeStamp OBJECT-TYPE
    SYNTAX         Datetime
    ACCESS         read-write
    STATUS         mandatory
    DESCRIPTION    ""
    REFERENCE      "IBMPSG_AssetEvent.TimeStamp"
  ::= { iBMPSGAssetEventBindings 6 }
```

```
iBMPSGSMARTEvent TRAP-TYPE
  ENTERPRISE    director
  VARIABLES   {
    iBMPSGSMARTEventIdentifier,
    iBMPSGSMARTEventSourceObjectPath,
    iBMPSGSMARTEventTargetObjectPath,
    iBMPSGSMARTEventSeverity,
    iBMPSGSMARTEventdescription,
    iBMPSGSMARTEventTimeStamp
  }
  DESCRIPTION   "This event is sent when the state of an IDE or SCSI hard drive that
complies with the
          Self-Monitoring, Analysis, and Reporting Technology changes with respect to
          its availability."
  REFERENCE     "IBMPSG_SMARTEvent"
::= 9

iBMPSGSMARTEventBindings OBJECT IDENTIFIER ::= { ibmpsgEvent 9 }

iBMPSGSMARTEventIdentifier OBJECT-TYPE
  SYNTAX        String
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION   ""
  REFERENCE     "IBMPSG_SMARTEvent.Identifier"
::= { iBMPSGSMARTEventBindings 1 }
```

```
iBMPSGSMARTEventSourceObjectPath OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION    ""
  REFERENCE     "IBMPSG_SMARTEvent.SourceObjectPath"
::= { iBMPSGSMARTEventBindings 2 }

iBMPSGSMARTEventTargetObjectPath OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION    ""
  REFERENCE     "IBMPSG_SMARTEvent.TargetObjectPath"
::= { iBMPSGSMARTEventBindings 3 }

iBMPSGSMARTEventSeverity OBJECT-TYPE
  SYNTAX       Uint16
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION    "2=Critical - The hard drive is experiencing an imminent failure."
  REFERENCE     "IBMPSG_SMARTEvent.Severity"
::= { iBMPSGSMARTEventBindings 4 }

iBMPSGSMARTEventdescription OBJECT-TYPE
  SYNTAX       String
```

```
    ACCESS        read-write
    STATUS        mandatory
    DESCRIPTION   ""
    REFERENCE     "IBMPSG_SMARTEvent.description"
  ::= { iBMPSGSMARTEventBindings 5 }

  iBMPSGSMARTEventTimeStamp OBJECT-TYPE
    SYNTAX        Datetime
    ACCESS        read-write
    STATUS        mandatory
    DESCRIPTION   ""
    REFERENCE     "IBMPSG_SMARTEvent.TimeStamp"
  ::= { iBMPSGSMARTEventBindings 6 }

  iBMPSGPOSTEvent TRAP-TYPE
    ENTERPRISE    director
    VARIABLES   {
      iBMPSGPOSTEventIdentifier,
      iBMPSGPOSTEventSourceObjectPath,
      iBMPSGPOSTEventTargetObjectPath,
      iBMPSGPOSTEventSeverity,
      iBMPSGPOSTEventdescription,
      iBMPSGPOSTEventTimeStamp
    }
    DESCRIPTION   "Unused."
    REFERENCE     "IBMPSG_POSTEvent"
  ::= 10
```

```
iBMPSGPOSTEventBindings OBJECT IDENTIFIER ::= { ibmpsgEvent 10 }

iBMPSGPOSTEventIdentifier OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE     "IBMPSG_POSTEvent.Identifier"
::= { iBMPSGPOSTEventBindings 1 }

iBMPSGPOSTEventSourceObjectPath OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE     "IBMPSG_POSTEvent.SourceObjectPath"
::= { iBMPSGPOSTEventBindings 2 }

iBMPSGPOSTEventTargetObjectPath OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE     "IBMPSG_POSTEvent.TargetObjectPath"
::= { iBMPSGPOSTEventBindings 3 }
```

```
iBMPSGPOSTEventSeverity OBJECT-TYPE
  SYNTAX       Uint16
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE     "IBMPSG_POSTEvent.Severity"
::= { iBMPSGPOSTEventBindings 4 }

iBMPSGPOSTEventdescription OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE     "IBMPSG_POSTEvent.description"
::= { iBMPSGPOSTEventBindings 5 }

iBMPSGPOSTEventTimeStamp OBJECT-TYPE
  SYNTAX       Datetime
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE     "IBMPSG_POSTEvent.TimeStamp"
::= { iBMPSGPOSTEventBindings 6 }

iBMPSGConfigurationChangeEvent TRAP-TYPE
  ENTERPRISE    director
  VARIABLES   {
```

```
      iBMPSGConfigurationChangeEventIdentifier,
      iBMPSGConfigurationChangeEventSourceObjectPath,
      iBMPSGConfigurationChangeEventTargetObjectPath,
      iBMPSGConfigurationChangeEventSeverity,
      iBMPSGConfigurationChangeEventdescription,
      iBMPSGConfigurationChangeEventTimeStamp
    }
    DESCRIPTION    "Unused."
    REFERENCE      "IBMPSG_ConfigurationChangeEvent"
  ::= 11

  iBMPSGConfigurationChangeEventBindings OBJECT IDENTIFIER ::= { ibmpsgEvent 11 }

  iBMPSGConfigurationChangeEventIdentifier OBJECT-TYPE
    SYNTAX         String
    ACCESS         read-write
    STATUS         mandatory
    DESCRIPTION    ""
    REFERENCE      "IBMPSG_ConfigurationChangeEvent.Identifier"
  ::= { iBMPSGConfigurationChangeEventBindings 1 }

  iBMPSGConfigurationChangeEventSourceObjectPath OBJECT-TYPE
    SYNTAX         String
    ACCESS         read-write
    STATUS         mandatory
    DESCRIPTION    ""
    REFERENCE      "IBMPSG_ConfigurationChangeEvent.SourceObjectPath"
```

```
::= { iBMPSGConfigurationChangeEventBindings 2 }

iBMPSGConfigurationChangeEventTargetObjectPath OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE     "IBMPSG_ConfigurationChangeEvent.TargetObjectPath"
::= { iBMPSGConfigurationChangeEventBindings 3 }

iBMPSGConfigurationChangeEventSeverity OBJECT-TYPE
  SYNTAX       Uint16
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE     "IBMPSG_ConfigurationChangeEvent.Severity"
::= { iBMPSGConfigurationChangeEventBindings 4 }

iBMPSGConfigurationChangeEventdescription OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE     "IBMPSG_ConfigurationChangeEvent.description"
::= { iBMPSGConfigurationChangeEventBindings 5 }

iBMPSGConfigurationChangeEventTimeStamp OBJECT-TYPE
```

```
  SYNTAX        Datetime
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION    ""
  REFERENCE     "IBMPSG_ConfigurationChangeEvent.TimeStamp"
::= { iBMPSGConfigurationChangeEventBindings 6 }


iBMPSGLANLeashEvent TRAP-TYPE
  ENTERPRISE     director
  VARIABLES    {
    iBMPSGLANLeashEventIdentifier,
    iBMPSGLANLeashEventSourceObjectPath,
    iBMPSGLANLeashEventTargetObjectPath,
    iBMPSGLANLeashEventSeverity,
    iBMPSGLANLeashEventdescription,
    iBMPSGLANLeashEventTimeStamp
  }
  DESCRIPTION    "This event is sent when the state of a system's LAN connectivity changes
with
              respect to the physical connection between its AlertOnLAN-capable NIC and the
LAN."
  REFERENCE     "IBMPSG_LANLeashEvent"
::= 12


iBMPSGLANLeashEventBindings OBJECT IDENTIFIER ::= { ibmpsgEvent 12 }


iBMPSGLANLeashEventIdentifier OBJECT-TYPE
```

```
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE    "IBMPSG_LANLeashEvent.Identifier"
::= { iBMPSGLANLeashEventBindings 1 }

iBMPSGLANLeashEventSourceObjectPath OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE    "IBMPSG_LANLeashEvent.SourceObjectPath"
::= { iBMPSGLANLeashEventBindings 2 }

iBMPSGLANLeashEventTargetObjectPath OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE    "IBMPSG_LANLeashEvent.TargetObjectPath"
::= { iBMPSGLANLeashEventBindings 3 }

iBMPSGLANLeashEventSeverity OBJECT-TYPE
  SYNTAX       Uint16
  ACCESS       read-write
  STATUS       mandatory
```

```
    DESCRIPTION    "1=Warning -- The system has been disconnected from the network."
    REFERENCE      "IBMPSG_LANLeashEvent.Severity"
  ::= { iBMPSGLANLeashEventBindings 4 }

  iBMPSGLANLeashEventdescription OBJECT-TYPE
    SYNTAX         String
    ACCESS         read-write
    STATUS         mandatory
    DESCRIPTION    ""
    REFERENCE      "IBMPSG_LANLeashEvent.description"
  ::= { iBMPSGLANLeashEventBindings 5 }

  iBMPSGLANLeashEventTimeStamp OBJECT-TYPE
    SYNTAX         Datetime
    ACCESS         read-write
    STATUS         mandatory
    DESCRIPTION    ""
    REFERENCE      "IBMPSG_LANLeashEvent.TimeStamp"
  ::= { iBMPSGLANLeashEventBindings 6 }

  iBMPSGLeaseExpirationEvent TRAP-TYPE
    ENTERPRISE     director
    VARIABLES    {
      iBMPSGLeaseExpirationEventIdentifier,
      iBMPSGLeaseExpirationEventSourceObjectPath,
      iBMPSGLeaseExpirationEventTargetObjectPath,
      iBMPSGLeaseExpirationEventSeverity,
```

```
    iBMPSGLeaseExpirationEventdescription,
    iBMPSGLeaseExpirationEventTimeStamp
  }
  DESCRIPTION   "This event is sent when a system's Lease Expiration date has been reached
              with respect to the value configured for the date in the Asset ID tool."
  REFERENCE     "IBMPSG_LeaseExpirationEvent"
::= 13

iBMPSGLeaseExpirationEventBindings OBJECT IDENTIFIER ::= { ibmpsgEvent 13 }

iBMPSGLeaseExpirationEventIdentifier OBJECT-TYPE
  SYNTAX        String
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION   ""
  REFERENCE     "IBMPSG_LeaseExpirationEvent.Identifier"
::= { iBMPSGLeaseExpirationEventBindings 1 }

iBMPSGLeaseExpirationEventSourceObjectPath OBJECT-TYPE
  SYNTAX        String
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION   ""
  REFERENCE     "IBMPSG_LeaseExpirationEvent.SourceObjectPath"
::= { iBMPSGLeaseExpirationEventBindings 2 }

iBMPSGLeaseExpirationEventTargetObjectPath OBJECT-TYPE
```

```
    SYNTAX        String
    ACCESS        read-write
    STATUS        mandatory
    DESCRIPTION   ""
    REFERENCE     "IBMPSG_LeaseExpirationEvent.TargetObjectPath"
  ::= { iBMPSGLeaseExpirationEventBindings 3 }

  iBMPSGLeaseExpirationEventSeverity OBJECT-TYPE
    SYNTAX        Uint16
    ACCESS        read-write
    STATUS        mandatory
    DESCRIPTION   "1=Warning -- The system's lease has expired."
    REFERENCE     "IBMPSG_LeaseExpirationEvent.Severity"
  ::= { iBMPSGLeaseExpirationEventBindings 4 }

  iBMPSGLeaseExpirationEventdescription OBJECT-TYPE
    SYNTAX        String
    ACCESS        read-write
    STATUS        mandatory
    DESCRIPTION   ""
    REFERENCE     "IBMPSG_LeaseExpirationEvent.description"
  ::= { iBMPSGLeaseExpirationEventBindings 5 }
  iBMPSGLeaseExpirationEventTimeStamp OBJECT-TYPE
    SYNTAX        Datetime
    ACCESS        read-write
    STATUS        mandatory
    DESCRIPTION   ""
```

```
  REFERENCE     "IBMPSG_LeaseExpirationEvent.TimeStamp"
::= { iBMPSGLeaseExpirationEventBindings 6 }


iBMPSGWarrantyExpirationEvent TRAP-TYPE
  ENTERPRISE    director  VARIABLES   {
    iBMPSGWarrantyExpirationEventIdentifier,
    iBMPSGWarrantyExpirationEventSourceObjectPath,
    iBMPSGWarrantyExpirationEventTargetObjectPath,
    iBMPSGWarrantyExpirationEventSeverity,
    iBMPSGWarrantyExpirationEventdescription,
    iBMPSGWarrantyExpirationEventTimeStamp
  }
  DESCRIPTION   "This event is sent when a system's Warranty Expiration date has been
reached
              with respect to the value configured for the date in the Asset ID tool."
  REFERENCE     "IBMPSG_WarrantyExpirationEvent"
::= 14


iBMPSGWarrantyExpirationEventBindings OBJECT IDENTIFIER ::= { ibmpsgEvent 14 }


iBMPSGWarrantyExpirationEventIdentifier OBJECT-TYPE
  SYNTAX        String
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION   ""
  REFERENCE     "IBMPSG_WarrantyExpirationEvent.Identifier"
::= { iBMPSGWarrantyExpirationEventBindings 1 }
```

```
iBMPSGWarrantyExpirationEventSourceObjectPath OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE     "IBMPSG_WarrantyExpirationEvent.SourceObjectPath"
::= { iBMPSGWarrantyExpirationEventBindings 2 }

iBMPSGWarrantyExpirationEventTargetObjectPath OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE     "IBMPSG_WarrantyExpirationEvent.TargetObjectPath"
::= { iBMPSGWarrantyExpirationEventBindings 3 }

iBMPSGWarrantyExpirationEventSeverity OBJECT-TYPE
  SYNTAX       Uint16
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   "1=Warning -- The system's warranty has expired."
  REFERENCE     "IBMPSG_WarrantyExpirationEvent.Severity"
::= { iBMPSGWarrantyExpirationEventBindings 4 }

iBMPSGWarrantyExpirationEventdescription OBJECT-TYPE
  SYNTAX       String
```

```
    ACCESS        read-write
    STATUS        mandatory
    DESCRIPTION    ""
    REFERENCE     "IBMPSG_WarrantyExpirationEvent.description"
  ::= { iBMPSGWarrantyExpirationEventBindings 5 }

  iBMPSGWarrantyExpirationEventTimeStamp OBJECT-TYPE
    SYNTAX        Datetime
    ACCESS        read-write
    STATUS        mandatory
    DESCRIPTION    ""
    REFERENCE     "IBMPSG_WarrantyExpirationEvent.TimeStamp"
  ::= { iBMPSGWarrantyExpirationEventBindings 6 }

  iBMPSGRedundantNetworkAdapterEvent TRAP-TYPE
    ENTERPRISE     director
   VARIABLES    {
      iBMPSGRedundantNetworkAdapterEventIdentifier,
      iBMPSGRedundantNetworkAdapterEventSourceObjectPath,
      iBMPSGRedundantNetworkAdapterEventTargetObjectPath,
      iBMPSGRedundantNetworkAdapterEventSeverity,
      iBMPSGRedundantNetworkAdapterEventdescription,
      iBMPSGRedundantNetworkAdapterEventTimeStamp
    }
    DESCRIPTION       "This event is sent when the state of a system's NIC changes state with
                       respect to redundancy, but due to a limitation of the capabilities of
                       the NIC, a determination could not be made between a switchover and
```

```
                a switchback."
  REFERENCE         "IBMPSG_RedundantNetworkAdapterEvent"
::= 15

iBMPSGRedundantNetworkAdapterEventBindings OBJECT IDENTIFIER ::= { ibmpsgEvent
15 }

iBMPSGRedundantNetworkAdapterEventIdentifier OBJECT-TYPE
  SYNTAX        String
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION   ""
  REFERENCE          "IBMPSG_RedundantNetworkAdapterEvent.identifier"
::= { iBMPSGRedundantNetworkAdapterEventBindings 1 }

iBMPSGRedundantNetworkAdapterEventSourceObjectPath OBJECT-TYPE
  SYNTAX        String
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION   ""
  REFERENCE          "IBMPSG_RedundantNetworkAdapterEvent.SourceObjectPath"
::= { iBMPSGRedundantNetworkAdapterEventBindings 2 }

iBMPSGRedundantNetworkAdapterEventTargetObjectPath OBJECT-TYPE
  SYNTAX        String
  ACCESS        read-write
  STATUS        mandatory
```

```
  DESCRIPTION    ""
  REFERENCE          "IBMPSG_RedundantNetworkAdapterEvent.TargetObjectPath"
::= { iBMPSGRedundantNetworkAdapterEventBindings 3 }

iBMPSGRedundantNetworkAdapterEventdescription OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION    ""
  REFERENCE          "IBMPSG_RedundantNetworkAdapterEvent.description"
::= { iBMPSGRedundantNetworkAdapterEventBindings 4 }

iBMPSGRedundantNetworkAdapterEventSeverity OBJECT-TYPE
  SYNTAX       Uint16
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION    "1=Warning -- A redundant NIC event occurred."
  REFERENCE          "IBMPSG_RedundantNetworkAdapterEvent.severity"
::= { iBMPSGRedundantNetworkAdapterEventBindings 5 }

iBMPSGRedundantNetworkAdapterEventTimeStamp OBJECT-TYPE
  SYNTAX       Datetime
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION    ""
  REFERENCE          "IBMPSG_RedundantNetworkAdapterEvent.timestamp"
::= { iBMPSGRedundantNetworkAdapterEventBindings 6 }
```

```
iBMPSGRedundantNetworkAdapterSwitchoverEvent TRAP-TYPE
  ENTERPRISE    director
  VARIABLES   {
    iBMPSGRedundantNetworkAdapterSwitchoverEventIdentifier,
    iBMPSGRedundantNetworkAdapterSwitchoverEventSourceObjectPath,
    iBMPSGRedundantNetworkAdapterSwitchoverEventTargetObjectPath,
    iBMPSGRedundantNetworkAdapterSwitchoverEventSeverity,
    iBMPSGRedundantNetworkAdapterSwitchoverEventdescription,
    iBMPSGRedundantNetworkAdapterSwitchoverEventTimeStamp
  }
  DESCRIPTION      "This event is sent when the active NIC in a system changes by failing
over
            to a redundant NIC."
  REFERENCE        "IBMPSG_RedundantNetworkAdapterSwitchoverEvent"
::= 16

iBMPSGRedundantNetworkAdapterSwitchoverEventBindings OBJECT IDENTIFIER ::= {
ibmpsgEvent 16 }

iBMPSGRedundantNetworkAdapterSwitchoverEventIdentifier OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE          "IBMPSG_RedundantNetworkAdapterEvent.identifier"
::= { iBMPSGRedundantNetworkAdapterSwitchoverEventBindings 1 }
```

iBMPSGRedundantNetworkAdapterSwitchoverEventSourceObjectPath OBJECT-TYPE

SYNTAX String

ACCESS read-write

STATUS mandatory

DESCRIPTION ""

REFERENCE
"IBMPSG_RedundantNetworkAdapterSwitchoverEvent.SourceObjectPath"

::= { iBMPSGRedundantNetworkAdapterSwitchoverEventBindings 2 }

iBMPSGRedundantNetworkAdapterSwitchoverEventTargetObjectPath OBJECT-TYPE

SYNTAX String

ACCESS read-write

STATUS mandatory

DESCRIPTION ""

REFERENCE
"IBMPSG_RedundantNetworkAdapterSwitchoverEvent.TargetObjectPath"

::= { iBMPSGRedundantNetworkAdapterSwitchoverEventBindings 3 }

iBMPSGRedundantNetworkAdapterSwitchoverEventdescription OBJECT-TYPE

SYNTAX String

ACCESS read-write

STATUS mandatory

DESCRIPTION ""

REFERENCE "IBMPSG_RedundantNetworkAdapterSwitchoverEvent.description"

::= { iBMPSGRedundantNetworkAdapterSwitchoverEventBindings 4 }

```
iBMPSGRedundantNetworkAdapterSwitchoverEventSeverity OBJECT-TYPE
  SYNTAX       Uint16
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   "1=Warning -- A failing NIC switched over to a redundant NIC."
  REFERENCE          "IBMPSG_RedundantNetworkAdapterSwitchoverEvent.severity"
::= { iBMPSGRedundantNetworkAdapterSwitchoverEventBindings 5 }

iBMPSGRedundantNetworkAdapterSwitchoverEventTimeStamp OBJECT-TYPE
  SYNTAX       Datetime
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE          "IBMPSG_RedundantNetworkAdapterSwitchoverEvent.timestamp"
::= { iBMPSGRedundantNetworkAdapterSwitchoverEventBindings 6 }

iBMPSGRedundantNetworkAdapterSwitchbackEvent TRAP-TYPE
  ENTERPRISE    director
  VARIABLES   {
    iBMPSGRedundantNetworkAdapterSwitchbackEventIdentifier,
    iBMPSGRedundantNetworkAdapterSwitchbackEventSourceObjectPath,
    iBMPSGRedundantNetworkAdapterSwitchbackEventTargetObjectPath,
    iBMPSGRedundantNetworkAdapterSwitchbackEventSeverity,
    iBMPSGRedundantNetworkAdapterSwitchbackEventdescription,
    iBMPSGRedundantNetworkAdapterSwitchbackEventTimeStamp
  }
  DESCRIPTION      "This event is sent when the active NIC in a system changes due
```

to a recovery from a redundant NIC."

REFERENCE "IBMPSG_RedundantNetworkAdapterSwitchbackEvent"

::= 17

iBMPSGRedundantNetworkAdapterSwitchbackEventBindings OBJECT IDENTIFIER ::= { ibmpsgEvent 17 }

iBMPSGRedundantNetworkAdapterSwitchbackEventIdentifier OBJECT-TYPE

SYNTAX String

ACCESS read-write

STATUS mandatory

DESCRIPTION ""

REFERENCE "IBMPSG_RedundantNetworkAdapterSwitchbackEvent.identifier"

::= { iBMPSGRedundantNetworkAdapterSwitchbackEventBindings 1 }

iBMPSGRedundantNetworkAdapterSwitchbackEventSourceObjectPath OBJECT-TYPE

SYNTAX String

ACCESS read-write

STATUS mandatory

DESCRIPTION ""

REFERENCE "IBMPSG_RedundantNetworkAdapterSwitchbackEvent.SourceObjectPath"

::= { iBMPSGRedundantNetworkAdapterSwitchbackEventBindings 2 }

iBMPSGRedundantNetworkAdapterSwitchbackEventTargetObjectPath OBJECT-TYPE

SYNTAX String

ACCESS read-write

STATUS mandatory

DESCRIPTION ""

REFERENCE
"IBMPSG_RedundantNetworkAdapterSwitchbackEvent.TargetObjectPath"

::= { iBMPSGRedundantNetworkAdapterSwitchbackEventBindings 3 }

iBMPSGRedundantNetworkAdapterSwitchbackEventdescription OBJECT-TYPE

SYNTAX String

ACCESS read-write

STATUS mandatory

DESCRIPTION ""

REFERENCE "IBMPSG_RedundantNetworkAdapterSwitchbackEvent.description"

::= { iBMPSGRedundantNetworkAdapterSwitchbackEventBindings 4 }

iBMPSGRedundantNetworkAdapterSwitchbackEventSeverity OBJECT-TYPE

SYNTAX Uint16

ACCESS read-write

STATUS mandatory

DESCRIPTION "1=Warning -- The system's NIC has recovered and switched back,
re-instating redundancy."

REFERENCE "IBMPSG_RedundantNetworkAdapterSwitchbackEvent.severity"

::= { iBMPSGRedundantNetworkAdapterSwitchbackEventBindings 5 }

iBMPSGRedundantNetworkAdapterSwitchbackEventTimeStamp OBJECT-TYPE

SYNTAX Datetime

ACCESS read-write

STATUS mandatory

```
  DESCRIPTION    ""
  REFERENCE          "IBMPSG_RedundantNetworkAdapterSwitchbackEvent.timestamp"
::= { iBMPSGRedundantNetworkAdapterSwitchbackEventBindings 6 }


iBMPSGProcessorPFEvent TRAP-TYPE
  ENTERPRISE    director
  VARIABLES    {
    iBMPSGProcessorPFEventIdentifier,
    iBMPSGProcessorPFEventSourceObjectPath,
    iBMPSGProcessorPFEventTargetObjectPath,
    iBMPSGProcessorPFEventSeverity,
    iBMPSGProcessorPFEventdescription,
    iBMPSGProcessorPFEventTimeStamp
  }
  DESCRIPTION      "This event is sent when a system's processor changes state with respect to
availability."
  REFERENCE        "IBMPSG_ProcessorPFEvent"
::= 18


iBMPSGProcessorPFEventBindings OBJECT IDENTIFIER ::= { ibmpsgEvent 18 }


iBMPSGProcessorPFEventIdentifier OBJECT-TYPE
  SYNTAX        String
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION    ""
  REFERENCE          "IBMPSG_ProcessorPFEvent.identifier"
```

```
::= { iBMPSGProcessorPFEventBindings 1 }

iBMPSGProcessorPFEventSourceObjectPath OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE          "IBMPSG_ProcessorPFEvent.sourceobjectpath"
::= { iBMPSGProcessorPFEventBindings 2 }

iBMPSGProcessorPFEventTargetObjectPath OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE          "IBMPSG_ProcessorPFEvent.targetobjectpath"
::= { iBMPSGProcessorPFEventBindings 3 }

iBMPSGProcessorPFEventSeverity OBJECT-TYPE
  SYNTAX       Uint16
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   "2=Critical -- The system's processor is experiencing an imminent failure."
  REFERENCE          "IBMPSG_ProcessorPFEvent.severity"
::= { iBMPSGProcessorPFEventBindings 4 }

iBMPSGProcessorPFEventdescription OBJECT-TYPE
```

```
  SYNTAX        String
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION    ""
  REFERENCE          "IBMPSG_ProcessorPFEvent.description"
::= { iBMPSGProcessorPFEventBindings 5 }

iBMPSGProcessorPFEventTimeStamp OBJECT-TYPE
  SYNTAX        Datetime
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION    ""
  REFERENCE          "IBMPSG_ProcessorPFEvent.timestamp"
::= { iBMPSGProcessorPFEventBindings 6 }

iBMPSGMemoryPFEvent TRAP-TYPE
  ENTERPRISE     director
  VARIABLES    {
    iBMPSGMemoryPFEventIdentifier,
    iBMPSGMemoryPFEventSourceObjectPath,
    iBMPSGMemoryPFEventTargetObjectPath,
    iBMPSGMemoryPFEventSeverity,
    iBMPSGMemoryPFEventdescription,
    iBMPSGMemoryPFEventTimeStamp
  }
  DESCRIPTION       "This event is sent when a system's DIMM changes state with respect to
availability."
```

```
    REFERENCE        "IBMPSG_MemoryPFEvent"
  ::= 19

  iBMPSGMemoryPFEventBindings OBJECT IDENTIFIER ::= { ibmpsgEvent 19 }

  iBMPSGMemoryPFEventIdentifier OBJECT-TYPE
    SYNTAX       String
    ACCESS       read-write
    STATUS       mandatory
    DESCRIPTION   ""
    REFERENCE         "IBMPSG_MemoryPFEvent.identifier"
  ::= { iBMPSGMemoryPFEventBindings 1 }

  iBMPSGMemoryPFEventSourceObjectPath OBJECT-TYPE
    SYNTAX       String
    ACCESS       read-write
    STATUS       mandatory
    DESCRIPTION   ""
    REFERENCE         "IBMPSG_MemoryPFEvent.sourceobjectpath"
  ::= { iBMPSGMemoryPFEventBindings 2 }

  iBMPSGMemoryPFEventTargetObjectPath OBJECT-TYPE
    SYNTAX       String
    ACCESS       read-write
    STATUS       mandatory
    DESCRIPTION   ""
    REFERENCE         "IBMPSG_MemoryPFEvent.targetobjectpath"
```

```
::= { iBMPSGMemoryPFEventBindings 3 }

iBMPSGMemoryPFEventSeverity OBJECT-TYPE
  SYNTAX       Uint16
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   "2=Critical -- A DIMM in the system is experiencing an imminent failure."
  REFERENCE          "IBMPSG_MemoryPFEvent.severity"
::= { iBMPSGMemoryPFEventBindings 4 }

iBMPSGMemoryPFEventdescription OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE          "IBMPSG_MemoryPFEvent.description"
::= { iBMPSGMemoryPFEventBindings 5 }

iBMPSGMemoryPFEventTimeStamp OBJECT-TYPE
  SYNTAX       Datetime
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE          "IBMPSG_MemoryPFEvent.timestamp"
::= { iBMPSGMemoryPFEventBindings 6 }

iBMPSGPFAEvent TRAP-TYPE
```

```
    ENTERPRISE     director
    VARIABLES    {
      iBMPSGPFAEventIdentifier,
      iBMPSGPFAEventSourceObjectPath,
      iBMPSGPFAEventTargetObjectPath,
      iBMPSGPFAEventSeverity,
      iBMPSGPFAEventdescription,
      iBMPSGPFAEventTimeStamp
    }
    DESCRIPTION       "This event is sent when the Remote Supervisor Adapter detects that
                a system resource is about to fail. It is sent in-band by the Director Agent."
    REFERENCE         "IBMPSG_PFAEvent"
  ::= 22

  iBMPSGPFAEventBindings OBJECT IDENTIFIER ::= { ibmpsgEvent 22 }

  iBMPSGPFAEventIdentifier OBJECT-TYPE
    SYNTAX        String
    ACCESS        read-write
    STATUS        mandatory
    DESCRIPTION    ""
    REFERENCE          "IBMPSG_PFAEvent.identifier"
  ::= { iBMPSGPFAEventBindings 1 }

  iBMPSGPFAEventSourceObjectPath OBJECT-TYPE
    SYNTAX        String
    ACCESS        read-write
```

```
    STATUS        mandatory
    DESCRIPTION   ""
    REFERENCE         "IBMPSG_PFAEvent.sourceobjectpath"
  ::= { iBMPSGPFAEventBindings 2 }

  iBMPSGPFAEventTargetObjectPath OBJECT-TYPE
    SYNTAX        String
    ACCESS        read-write
    STATUS        mandatory
    DESCRIPTION   ""
    REFERENCE         "IBMPSG_PFAEvent.targetobjectpath"
  ::= { iBMPSGPFAEventBindings 3 }

  iBMPSGPFAEventSeverity OBJECT-TYPE
    SYNTAX        Uint16
    ACCESS        read-write
    STATUS        mandatory
    DESCRIPTION   "2=Critical -- The system is experiencing an imminent failure."
    REFERENCE         "IBMPSG_PFAEvent.severity"
  ::= { iBMPSGPFAEventBindings 4 }

  iBMPSGPFAEventdescription OBJECT-TYPE
    SYNTAX        String
    ACCESS        read-write
    STATUS        mandatory
    DESCRIPTION   ""
    REFERENCE         "IBMPSG_PFAEvent.description"
```

```
::= { iBMPSGPFAEventBindings 5 }

iBMPSGPFAEventTimeStamp OBJECT-TYPE
  SYNTAX        Datetime
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION    ""
  REFERENCE          "IBMPSG_PFAEvent.timestamp"
::= { iBMPSGPFAEventBindings 6 }

iBMPSGPowerSupplyEvent TRAP-TYPE
  ENTERPRISE     director
  VARIABLES    {
    iBMPSGPowerSupplyEventIdentifier,
    iBMPSGPowerSupplyEventSourceObjectPath,
    iBMPSGPowerSupplyEventTargetObjectPath,
    iBMPSGPowerSupplyEventSeverity,
    iBMPSGPowerSupplyEventdescription,
    iBMPSGPowerSupplyEventTimeStamp
  }
  DESCRIPTION       "This event is sent when the Director Agent detects that the
              state of a system's power supply changes with respect to availability."
  REFERENCE         "IBMPSG_PowerSupplyEvent"
::= 23

iBMPSGPowerSupplyEventBindings OBJECT IDENTIFIER ::= { ibmpsgEvent 23 }
```

```
iBMPSGPowerSupplyEventIdentifier OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE          "IBMPSG_PowerSupplyEvent.identifier"
::= { iBMPSGPowerSupplyEventBindings 1 }

iBMPSGPowerSupplyEventSourceObjectPath OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE          "IBMPSG_PowerSupplyEvent.sourceobjectpath"
::= { iBMPSGPowerSupplyEventBindings 2 }

iBMPSGPowerSupplyEventTargetObjectPath OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE          "IBMPSG_PowerSupplyEvent.targetobjectpath"
::= { iBMPSGPowerSupplyEventBindings 3 }

iBMPSGPowerSupplyEventSeverity OBJECT-TYPE
  SYNTAX       Uint16
  ACCESS       read-write
```

```
    STATUS        mandatory
    DESCRIPTION   "0=Normal -- A power supply has been recovered."
                  2=Critical -- A power supply in a system has failed."
    REFERENCE         "IBMPSG_PowerSupplyEvent.severity"
  ::= { iBMPSGPowerSupplyEventBindings 4 }

  iBMPSGPowerSupplyEventdescription OBJECT-TYPE
    SYNTAX        String
    ACCESS        read-write
    STATUS        mandatory
    DESCRIPTION   ""
    REFERENCE         "IBMPSG_PowerSupplyEvent.description"
  ::= { iBMPSGPowerSupplyEventBindings 5 }

  iBMPSGPowerSupplyTimeStamp OBJECT-TYPE
    SYNTAX        Datetime
    ACCESS        read-write
    STATUS        mandatory
    DESCRIPTION   ""
    REFERENCE         "IBMPSG_PowerSupplyEvent.timestamp"
  ::= { iBMPSGPowerSupplyEventBindings 6 }

  iBMPSGErrorLogEvent TRAP-TYPE
    ENTERPRISE    director
    VARIABLES   {
      iBMPSGErrorLogEventIdentifier,
      iBMPSGErrorLogEventSourceObjectPath,
```

```
    iBMPSGErrorLogEventTargetObjectPath,
    iBMPSGErrorLogEventSeverity,
    iBMPSGErrorLogEventdescription,
    iBMPSGErrorLogEventTimeStamp
  }
  DESCRIPTION      "This event is sent when the Remote Supervisor Adapter detects that its
error
            log is 75% full and/or 100% full."
  REFERENCE        "IBMPSG_ErrorLogEvent"
::= 24

iBMPSGErrorLogEventBindings OBJECT IDENTIFIER ::= { ibmpsgEvent 24 }

iBMPSGErrorLogEventIdentifier OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE         "IBMPSG_ErrorLogEvent.identifier"
::= { iBMPSGErrorLogEventBindings 1 }

iBMPSGErrorLogEventSourceObjectPath OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE         "IBMPSG_ErrorLogEvent.sourceobjectpath"
```

```
::= { iBMPSGErrorLogEventBindings 2 }

iBMPSGErrorLogEventTargetObjectPath OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE          "IBMPSG_ErrorLogEvent.targetobjectpath"
::= { iBMPSGErrorLogEventBindings 3 }

iBMPSGErrorLogEventSeverity OBJECT-TYPE
  SYNTAX       Uint16
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   "1=Warning -- The Remote Supervisor Adapter's error log is 75% full.
            2=Critical -- The Remote Supervisor Adapter's error log is 100% full."
  REFERENCE          "IBMPSG_ErrorLogEvent.severity"
::= { iBMPSGErrorLogEventBindings 4 }

iBMPSGErrorLogdescription OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE          "IBMPSG_ErrorLogEvent.description"
::= { iBMPSGErrorLogEventBindings 5 }
```

```
iBMPSGErrorLogTimeStamp OBJECT-TYPE
  SYNTAX        Datetime
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION    ""
  REFERENCE          "IBMPSG_ErrorLogEvent.timestamp"
::= { iBMPSGErrorLogEventBindings 6 }

iBMPSGRemoteLoginEvent TRAP-TYPE
  ENTERPRISE     director
  VARIABLES    {
    iBMPSGRemoteLoginEventIdentifier,
    iBMPSGRemoteLoginEventSourceObjectPath,
    iBMPSGRemoteLoginEventTargetObjectPath,
    iBMPSGRemoteLoginEventSeverity,
    iBMPSGRemoteLoginEventdescription,
    iBMPSGRemoteLoginEventTimeStamp
  }
  DESCRIPTION       "This event is sent when the state of the Remote Supervisor Adapter
changes
            with respect to security because a user has logged into it. Disabled by default."
  REFERENCE         "IBMPSG_RemoteLoginEvent"
::= 25

iBMPSGRemoteLoginEventBindings OBJECT IDENTIFIER ::= { ibmpsgEvent 25 }

iBMPSGRemoteLoginEventIdentifier OBJECT-TYPE
```

```
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE          "IBMPSG_RemoteLoginEvent.identifier"
::= { iBMPSGRemoteLoginEventBindings 1 }

iBMPSGRemoteLoginEventSourceObjectPath OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE          "IBMPSG_RemoteLoginEvent.sourceobjectpath"
::= { iBMPSGRemoteLoginEventBindings 2 }

iBMPSGRemoteLoginEventTargetObjectPath OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE          "IBMPSG_RemoteLoginEvent.targetobjectpath"
::= { iBMPSGRemoteLoginEventBindings 3 }

iBMPSGRemoteLoginEventSeverity OBJECT-TYPE
  SYNTAX       Uint16
  ACCESS       read-write
  STATUS       mandatory
```

```
  DESCRIPTION    "1=Warning -- Someone has logged in remotely to the Remote Supervisor
Adapter."
  REFERENCE          "IBMPSG_RemoteLoginEvent.severity"
::= { iBMPSGRemoteLoginEventBindings 4 }

iBMPSGRemoteLoginEventdescription OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION    ""
  REFERENCE          "IBMPSG_RemoteLoginEvent.description"
::= { iBMPSGRemoteLoginEventBindings 5 }

iBMPSGRemoteLoginTimeStamp OBJECT-TYPE
  SYNTAX       Datetime
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION    ""
  REFERENCE          "IBMPSG_RemoteLoginEvent.timestamp"
::= { iBMPSGRemoteLoginEventBindings 6 }

        iBMPSGNetworkAdapterFailedEvent TRAP-TYPE
          ENTERPRISE     director
          VARIABLES    {
            iBMPSGNetworkAdapterFailedEventIdentifier,
            iBMPSGNetworkAdapterFailedEventSourceObjectPath,
            iBMPSGNetworkAdapterFailedEventTargetObjectPath,
            iBMPSGNetworkAdapterFailedEventSeverity,
            iBMPSGNetworkAdapterFailedEventdescription,
            iBMPSGNetworkAdapterFailedEventTimeStamp,
            iBMPSGNetworkAdaperFailedEventComponentID
          }
```

```
  DESCRIPTION      "This event is sent when the state of a system's NIC fails."
  REFERENCE        "IBMPSG_NetworkAdapterFailedEvent"
::= 26

iBMPSGNetworkAdapterFailedEventBindings OBJECT IDENTIFIER ::= {
ibmpsgEvent 26 }

iBMPSGNetworkAdapterFailedEventIdentifier OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION    ""
  REFERENCE          "IBMPSG_NetworkAdapterFailedEvent.identifier"
::= { iBMPSGNetworkAdapterFailedEventBindings 1 }

iBMPSGNetworkAdapterFailedEventSourceObjectPath OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION    ""
  REFERENCE          "IBMPSG_NetworkAdapterFailedEvent.sourceobjectpath"
::= { iBMPSGNetworkAdapterFailedEventBindings 2 }

iBMPSGNetworkAdapterFailedEventTargetObjectPath OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION    "The CIM ObjectPath of the physical network adapter instance that
has experienced
          a change in state."
  REFERENCE          "IBMPSG_NetworkAdapterFailedEvent.targetobjectpath"
::= { iBMPSGNetworkAdapterFailedEventBindings 3 }

iBMPSGNetworkAdapterFailedEventSeverity OBJECT-TYPE
  SYNTAX       Uint16
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION    "2=Critical -- The network adapter referenced in the target object
path has failed.
          0=Normal -- The network adapter referenced in the target object path has been
recovered."
  REFERENCE          "IBMPSG_NetworkAdapterFailedEvent.severity"
::= { iBMPSGNetworkAdapterFailedEventBindings 4 }

iBMPSGNetworkAdapterFailedEventdescription OBJECT-TYPE
  SYNTAX       String
```

```
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION    "The network adapter in the specified slot or port has failed."
  REFERENCE          "IBMPSG_NetworkAdapterFailedEvent.description"
::= { iBMPSGNetworkAdapterFailedEventBindings 5 }

iBMPSGNetworkAdapterFailedTimeStamp OBJECT-TYPE
  SYNTAX        Datetime
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION    "The date and time of the adapter failure on the managed system."
  REFERENCE          "IBMPSG_NetworkAdapterFailedEvent.timestamp"
::= { iBMPSGNetworkAdapterFailedEventBindings 6 }

iBMPSGNetworkAdaperFailedEventComponentID OBJECT-TYPE
  SYNTAX    Uint16
  ACCESS    read-only
  STATUS    mandatory
  DESCRIPTION  "The physical PCI Slot number or the onboard Port number of the
NIC."
  REFERENCE        "IBMPSG_NetworkAdapterFailedEvent.ComponentID"
::= { iBMPSGNetworkAdapterFailedEventBindings 7 }

iBMPSGNetworkAdapterOfflineEvent TRAP-TYPE
  ENTERPRISE    director
  VARIABLES    {
    iBMPSGNetworkAdapterOfflineEventIdentifier,
    iBMPSGNetworkAdapterOfflineEventSourceObjectPath,
    iBMPSGNetworkAdapterOfflineEventTargetObjectPath,
    iBMPSGNetworkAdapterOfflineEventSeverity,
    iBMPSGNetworkAdapterOfflineEventdescription,
    iBMPSGNetworkAdapterOfflineEventTimeStamp,
    iBMPSGNetworkAdapterOfflineEventComponentID
  }
  DESCRIPTION      "This event is sent when the state of a system's NIC goes offline."
  REFERENCE        "IBMPSG_NetworkAdapterOfflineEvent"
::= 27

iBMPSGNetworkAdapterOfflineEventBindings OBJECT IDENTIFIER ::= {
ibmpsgEvent 27 }

iBMPSGNetworkAdapterOfflineEventIdentifier OBJECT-TYPE
  SYNTAX        String
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION    ""
```

```
  REFERENCE          "IBMPSG_NetworkAdapterOfflineEvent.identifier"
::= { iBMPSGNetworkAdapterOfflineEventBindings 1 }

iBMPSGNetworkAdapterOfflineEventSourceObjectPath OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION    ""
  REFERENCE          "IBMPSG_NetworkAdapterOfflineEvent.sourceobjectpath"
::= { iBMPSGNetworkAdapterOfflineEventBindings 2 }

iBMPSGNetworkAdapterOfflineEventTargetObjectPath OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION    "The CIM ObjectPath of the physical network adapter instance that
has experienced
          a change in state."
  REFERENCE          "IBMPSG_NetworkAdapterOfflineEvent.targetobjectpath"
::= { iBMPSGNetworkAdapterOfflineEventBindings 3 }

iBMPSGNetworkAdapterOfflineEventSeverity OBJECT-TYPE
  SYNTAX       Uint16
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION    "1=Warning -- The network adapter referenced in the target object
path has gone offline."
  REFERENCE          "IBMPSG_NetworkAdapterOfflineEvent.severity"
::= { iBMPSGNetworkAdapterOfflineEventBindings 4 }

iBMPSGNetworkAdapterOfflineEventdescription OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION    "The network adapter in the specified slot or port has gone offline."
  REFERENCE          "IBMPSG_NetworkAdapterOfflineEvent.description"
::= { iBMPSGNetworkAdapterOfflineEventBindings 5 }

iBMPSGNetworkAdapterOfflineTimeStamp OBJECT-TYPE
  SYNTAX       Datetime
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION    "The date and time that the network adapter went offline on the
managed system."
  REFERENCE          "IBMPSG_NetworkAdapterOfflineEvent.timestamp"
::= { iBMPSGNetworkAdapterOfflineEventBindings 6 }
```

```
iBMPSGNetworkAdaperOfflineEventComponentID OBJECT-TYPE
  SYNTAX    Uint16
  ACCESS    read-only
  STATUS    mandatory
  DESCRIPTION  "The physical PCI Slot number or the onboard Port number of the
NIC."
  REFERENCE        "IBMPSG_NetworkAdapterOfflineEvent.ComponentID"
::= { iBMPSGNetworkAdapterFailedEventBindings 7 }

iBMPSGNetworkAdapterOnlineEvent TRAP-TYPE
  ENTERPRISE    director
  VARIABLES   {
    iBMPSGNetworkAdapterOnlineEventIdentifier,
    iBMPSGNetworkAdapterOnlineEventSourceObjectPath,
    iBMPSGNetworkAdapterOnlineEventTargetObjectPath,
    iBMPSGNetworkAdapterOnlineEventSeverity,
    iBMPSGNetworkAdapterOnlineEventdescription,
    iBMPSGNetworkAdapterOnlineEventTimeStamp,
    iBMPSGNetworkAdapterOnlineEventComponentID
  }
  DESCRIPTION      "This event is sent when the state of a system's NIC goes online."
  REFERENCE        "IBMPSG_NetworkAdapterOnlineEvent"
::= 28

iBMPSGNetworkAdapterOnlineEventBindings OBJECT IDENTIFIER ::= {
ibmpsgEvent 28 }

iBMPSGNetworkAdapterOnlineEventIdentifier OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE         "IBMPSG_NetworkAdapterOnlineEvent.identifier"
::= { iBMPSGNetworkAdapterOnlineEventBindings 1 }

iBMPSGNetworkAdapterOnlineEventSourceObjectPath OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE         "IBMPSG_NetworkAdapterOnlineEvent.sourceobjectpath"
::= { iBMPSGNetworkAdapterOnlineEventBindings 2 }

iBMPSGNetworkAdapterOnlineEventTargetObjectPath OBJECT-TYPE
  SYNTAX       String
```

```
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION    "The CIM ObjectPath of the physical network adapter instance that
has experienced
            a change in state."
  REFERENCE          "IBMPSG_NetworkAdapterOnlineEvent.targetobjectpath"
::= { iBMPSGNetworkAdapterOnlineEventBindings 3 }

iBMPSGNetworkAdapterOnlineEventSeverity OBJECT-TYPE
  SYNTAX        Uint16
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION    "0=Normal -- The network adapter referenced in the target object
path has come online."
  REFERENCE          "IBMPSG_NetworkAdapterOnlineEvent.severity"
::= { iBMPSGNetworkAdapterOfflineEventBindings 4 }

iBMPSGNetworkAdapterOnlineEventdescription OBJECT-TYPE
  SYNTAX        String
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION    "The network adapter in the specified slot or port has come online."
  REFERENCE          "IBMPSG_NetworkAdapterOnlineEvent.description"
::= { iBMPSGNetworkAdapterOnlineEventBindings 5 }

iBMPSGNetworkAdapterOnlineTimeStamp OBJECT-TYPE
  SYNTAX        Datetime
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION    "The date and time that the network adapter came online on the
managed system."
  REFERENCE          "IBMPSG_NetworkAdapterOnlineEvent.timestamp"
::= { iBMPSGNetworkAdapterOnlineEventBindings 6 }

iBMPSGNetworkAdaperOnlineEventComponentID OBJECT-TYPE
  SYNTAX    Uint16
  ACCESS    read-only
  STATUS    mandatory
  DESCRIPTION  "The physical PCI Slot number or the onboard Port number of the
NIC."
  REFERENCE        "IBMPSG_NetworkAdapterFailedEvent.ComponentID"
::= { iBMPSGNetworkAdapterOnlineEventBindings 7 }

iBMPSGSPPowerSupplyEvent TRAP-TYPE
  ENTERPRISE    director
  VARIABLES    {
```

```
    iBMPSGSPPowerSupplyEventIdentifier,
    iBMPSGSPPowerSupplyEventSourceObjectPath,
    iBMPSGSPPowerSupplyEventTargetObjectPath,
    iBMPSGSPPowerSupplyEventSeverity,
    iBMPSGSPPowerSupplyEventdescription,
    iBMPSGSPPowerSupplyEventTimeStamp
  }
  DESCRIPTION      "This event is sent when the Remote Supervisor Adapter detects
that the
            state of a system's power supply changes with respect to availability."
  REFERENCE        "IBMPSG_SP_PowerSupplyEvent"
::= 29

iBMPSGSPPowerSupplyEventBindings OBJECT IDENTIFIER ::= { ibmpsgEvent 29 }

iBMPSGSPPowerSupplyEventIdentifier OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE         "IBMPSG_SP_PowerSupplyEvent.identifier"
::= { iBMPSGSPPowerSupplyEventBindings 1 }

iBMPSGSPPowerSupplyEventSourceObjectPath OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE         "IBMPSG_SP_PowerSupplyEvent.sourceobjectpath"
::= { iBMPSGSPPowerSupplyEventBindings 2 }

iBMPSGSPPowerSupplyEventTargetObjectPath OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   ""
  REFERENCE         "IBMPSG_SP_PowerSupplyEvent.targetobjectpath"
::= { iBMPSGSPPowerSupplyEventBindings 3 }

iBMPSGSPPowerSupplyEventSeverity OBJECT-TYPE
  SYNTAX       Uint16
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION   "2=Critical -- A power supply in a system has failed."
  REFERENCE         "IBMPSG_SP_PowerSupplyEvent.severity"
::= { iBMPSGSPPowerSupplyEventBindings 4 }
```

```
iBMPSGSPPowerSupplyEventdescription OBJECT-TYPE
  SYNTAX        String
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION    ""
  REFERENCE          "IBMPSG_SP_PowerSupplyEvent.description"
::= { iBMPSGSPPowerSupplyEventBindings 5 }

iBMPSGSPPowerSupplyTimeStamp OBJECT-TYPE
  SYNTAX        Datetime
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION    ""
  REFERENCE          "IBMPSG_SP_PowerSupplyEvent.timestamp"
::= { iBMPSGSPPowerSupplyEventBindings 6 }

iBMPSGDASDBackplaneEvent TRAP-TYPE
  ENTERPRISE     director
  VARIABLES    {
    iBMPSGDASDBackplaneEventIdentifier,
    iBMPSGDASDBackplaneEventSourceObjectPath,
    iBMPSGDASDBackplaneEventTargetObjectPath,
    iBMPSGDASDBackplaneEventSeverity,
    iBMPSGDASDBackplaneEventdescription,
    iBMPSGDASDBackplaneEventTimeStamp
  }
  DESCRIPTION       "This event is sent when the Remote Supervisor Adapter detects
that a system's hard drive backplane has experienced a critical error."
  REFERENCE          "IBMPSG_DASDBackplaneEvent"
::= 30

iBMPSGDASDBackplaneEventBindings OBJECT IDENTIFIER ::= { ibmpsgEvent 30 }

iBMPSGDASDBackplaneEventIdentifier OBJECT-TYPE
  SYNTAX        String
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION    ""
  REFERENCE          "IBMPSG_DASDBackplaneEvent.identifier"
::= { iBMPSGDASDBackplaneEventBindings 1 }

iBMPSGDASDBackplaneEventSourceObjectPath OBJECT-TYPE
  SYNTAX        String
  ACCESS        read-write
  STATUS        mandatory
```

```
  DESCRIPTION    ""
  REFERENCE          "IBMPSG_DASDBackplaneEvent.sourceobjectpath"
::= { iBMPSGDASDBackplaneEventBindings 2 }

iBMPSGDASDBackplaneEventTargetObjectPath OBJECT-TYPE
  SYNTAX        String
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION    ""
  REFERENCE          "IBMPSG_DASDBackplaneEvent.targetobjectpath"
::= { iBMPSGDASDBackplaneEventBindings 3 }

iBMPSGDASDBackplaneEventSeverity OBJECT-TYPE
  SYNTAX        Uint16
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION    "2=Critical -- A hard drive failure has occured."
  REFERENCE          "IBMPSG_DASDBackplaneEvent.severity"
::= { iBMPSGDASDBackplaneEventBindings 4 }

iBMPSGDASDBackplaneEventdescription OBJECT-TYPE
  SYNTAX        String
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION    ""
  REFERENCE          "IBMPSG_DASDBackplaneEvent.description"
::= { iBMPSGDASDBackplaneEventBindings 5 }

iBMPSGDASDBackplaneTimeStamp OBJECT-TYPE
  SYNTAX        Datetime
  ACCESS        read-write
  STATUS        mandatory
  DESCRIPTION    ""
  REFERENCE          "IBMPSG_DASDBackplaneEvent.timestamp"
::= { iBMPSGDASDBackplaneEventBindings 6 }

iBMPSGGenericFanEvent TRAP-TYPE
  ENTERPRISE     director
  VARIABLES    {
    iBMPSGGenericFanEventIdentifier,
    iBMPSGGenericFanEventSourceObjectPath,
    iBMPSGGenericFanEventTargetObjectPath,
    iBMPSGGenericFanEventSeverity,
    iBMPSGGenericFanEventdescription,
    iBMPSGGenericFanEventTimeStamp
  }
```

```
  DESCRIPTION      "This event is sent when the Remote Supervisor Adapter detects
that the
                   state of a system's fan has changed with respect to
                   manufacturer-defined rpm values, but the RSA was unable to detect the exact
fan instance."
  REFERENCE        "IBMPSG_GenericFanEvent"
::= 31

iBMPSGGenericFanEventBindings OBJECT IDENTIFIER ::= { ibmpsgEvent 31 }

iBMPSGGenericFanEventIdentifier OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION    ""
  REFERENCE          "IBMPSG_GenericFanEvent.identifier"
::= { iBMPSGGenericFanEventBindings 1 }

iBMPSGGenericFanEventSourceObjectPath OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION    ""
  REFERENCE          "IBMPSG_GenericFanEvent.sourceobjectpath"
::= { iBMPSGGenericFanEventBindings 2 }

iBMPSGGenericFanEventTargetObjectPath OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION    ""
  REFERENCE          "IBMPSG_GenericFanEvent.targetobjectpath"
::= { iBMPSGGenericFanEventBindings 3 }

iBMPSGGenericFanEventSeverity OBJECT-TYPE
  SYNTAX       Uint16
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION    "2=Critical -- The fan has stopped."
  REFERENCE          "IBMPSG_GenericFanEvent.severity"
::= { iBMPSGGenericFanEventBindings 4 }

iBMPSGGenericFanEventdescription OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
```

```
  DESCRIPTION    ""
  REFERENCE          "IBMPSG_GenericFanEvent.description"
::= { iBMPSGGenericFanEventBindings 5 }

iBMPSGGenericFanTimeStamp OBJECT-TYPE
  SYNTAX       Datetime
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION    ""
  REFERENCE          "IBMPSG_GenericFanEvent.timestamp"
::= { iBMPSGGenericFanEventBindings 6 }

iBMPSGGenericVoltageEvent TRAP-TYPE
  ENTERPRISE     director
  VARIABLES    {
    iBMPSGGenericVoltageEventIdentifier,
    iBMPSGGenericVoltageEventSourceObjectPath,
    iBMPSGGenericVoltageEventTargetObjectPath,
    iBMPSGGenericVoltageEventSeverity,
    iBMPSGGenericVoltageEventdescription,
    iBMPSGGenericVoltageEventTimeStamp
  }
  DESCRIPTION      "This event is sent when the Remote Supervisor Adapter detects
that the
              state of a system's voltage sensor changes with respect to a
              manufacturer-defined threshold, but the RSA is unable to detect exactly
which voltage sensor was affected."
  REFERENCE        "IBMPSG_GenericVoltageEvent"
::= 32

iBMPSGGenericVoltageEventBindings OBJECT IDENTIFIER ::= { ibmpsgEvent 32 }

iBMPSGGenericVoltageEventIdentifier OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION    ""
  REFERENCE          "IBMPSG_GenericVoltageEvent.identifier"
::= { iBMPSGGenericVoltageEventBindings 1 }

iBMPSGGenericVoltageEventSourceObjectPath OBJECT-TYPE
  SYNTAX       String
  ACCESS       read-write
  STATUS       mandatory
  DESCRIPTION    ""
  REFERENCE          "IBMPSG_GenericVoltageEvent.sourceobjectpath"
```

```
        ::= { iBMPSGGenericVoltageEventBindings 2 }

        iBMPSGGenericVoltageEventTargetObjectPath OBJECT-TYPE
          SYNTAX        String
          ACCESS        read-write
          STATUS        mandatory
          DESCRIPTION    ""
          REFERENCE          "IBMPSG_GenericVoltageEvent.targetobjectpath"
        ::= { iBMPSGGenericVoltageEventBindings 3 }

        iBMPSGGenericVoltageEventSeverity OBJECT-TYPE
          SYNTAX        Uint16
          ACCESS        read-write
          STATUS        mandatory
          DESCRIPTION    "1=Warning -- The voltage has exceeded a manufacturer-defined
        warning level thresold
                    2=Critical -- The voltage has exceeded a manufacturer-defined critical
        threshold"
          REFERENCE          "IBMPSG_GenericVoltageEvent.severity"
        ::= { iBMPSGGenericVoltageEventBindings 4 }

        iBMPSGGenericVoltageEventdescription OBJECT-TYPE
          SYNTAX        String
          ACCESS        read-write
          STATUS        mandatory
          DESCRIPTION    ""
          REFERENCE          "IBMPSG_GenericVoltageEvent.description"
        ::= { iBMPSGGenericVoltageEventBindings 5 }

        iBMPSGGenericVoltageTimeStamp OBJECT-TYPE
          SYNTAX        Datetime
          ACCESS        read-write
          STATUS        mandatory
          DESCRIPTION    ""
          REFERENCE          "IBMPSG_GenericVoltageEvent.timestamp"
        ::= { iBMPSGGenericVoltageEventBindings 6 }
        END

    END
```

Appendix B - IBM xSeries Remote Supervisor Adapter SNMP Trap Definitions

The following definitions define TRAP-TYPEs for the IBM xSeries Remote Supervisor Adapter. The MIB file, ibmnfsp.mib, can be found on the Option CD for the RSA in the MIBS directory.

```
--------------------------------------------------------------------------------

--------------------------------------------------------------------------------

--
-- File         : ibmnfsp.mib
-- Description  : IBM Netfinity Service Processor Enterprise MIB for Alerts
-- By           : Joe Bolan, IBM
-- Version      : 1.0
-- Date         : August 18, 2000
--
--
-- Copyright (c) 2000 IBM  All Rights Reserved.
--
--
-- Contains trap descriptions for:
--  (1) Advanced System Management Adapter
--  (2) Remote Supervisor Adapter
--
--------------------------------------------------------------------------------
-- This MIB is used by the Netfinity Service Processor(SP) to generate traps
--  for Alert conditions detected by the SP.
--------------------------------------------------------------------------------

--------------------------------------------------------------------------------

      IBMRSSPPALT-MIB DEFINITIONS ::= BEGIN

      IMPORTS
```

```
        OBJECT-TYPE                 FROM RFC-1212
        enterprises                 FROM RFC1155-SMI
        DisplayString               FROM RFC1213-MIB
        TRAP-TYPE                   FROM RFC-1215;
    ibm         OBJECT IDENTIFIER ::=   { enterprises 2 }

    -- IBM products group
    ibmProd     OBJECT IDENTIFIER ::=   { ibm 6 }
    -- IBM Netfinity SP
    netfinitySupportProcessor OBJECT IDENTIFIER ::= { ibmProd 158 }
    -- IBM Netfinity SP Alert
    ibmRemoteSupMIB     OBJECT IDENTIFIER ::= { netfinitySupportProcessor 2 }
-----------------------------------------------------------------
-- Start: IBM Remote Supervisor Adapter SP Alerts
-----------------------------------------------------------------
    -- the rsspalt generic trap generator group
    ibmRemoteSupMibObjects OBJECT IDENTIFIER ::= { ibmRemoteSupMIB 1 }
    ibmRemoteSupTrapInfo OBJECT IDENTIFIER ::= { ibmRemoteSupMibObjects 1 }
    ibmRsTrapDateTime  OBJECT-TYPE
            SYNTAX  DisplayString
            ACCESS  read-only
            STATUS  mandatory
            DESCRIPTION
            "Timestamp of Local Date and Time when alert was generated"
            ::= { ibmRemoteSupTrapInfo 1 }

ibmRsTrapAppId     OBJECT-TYPE
```

```
            SYNTAX  DisplayString
            ACCESS  read-only
            STATUS  mandatory
            DESCRIPTION
            "Application ID, always 'IBM Remote Supervisor Adapter Service Processor'"
            ::= { ibmRemoteSupTrapInfo 2 }

    ibmRsTrapSpTxtId       OBJECT-TYPE
            SYNTAX  DisplayString
            ACCESS  read-only
            STATUS  mandatory
            DESCRIPTION
            "SP System Identification - Text Identification"
            ::= { ibmRemoteSupTrapInfo 3 }

    ibmRsTrapSpNumId    OBJECT-TYPE
            SYNTAX  DisplayString
            ACCESS  read-only
            STATUS  mandatory
            DESCRIPTION
            "SP System Identification - Numeric Identification"
            ::= { ibmRemoteSupTrapInfo 4 }

    ibmRsTrapSysUuid    OBJECT-TYPE
            SYNTAX  DisplayString
            ACCESS  read-only
            STATUS  mandatory
```

```
            DESCRIPTION
            "Host System UUID(Universal Unique ID)"
            ::= { ibmRemoteSupTrapInfo 5 }

ibmRsTrapSysSern     OBJECT-TYPE
            SYNTAX  DisplayString
            ACCESS  read-only
            STATUS  mandatory
            DESCRIPTION
            "Host System Serial Number"
            ::= { ibmRemoteSupTrapInfo 6 }

ibmRsTrapAppType     OBJECT-TYPE
            SYNTAX  INTEGER (1..65535)
            ACCESS  read-only
            STATUS  mandatory
            DESCRIPTION
            "Application Alert Type - Event Number ID"
            ::= { ibmRemoteSupTrapInfo 7 }

ibmRsTrapPrority     OBJECT-TYPE
            SYNTAX  INTEGER (1..65535)
            ACCESS  read-only
            STATUS  mandatory
            DESCRIPTION
            "Alert Severity Value
              - Critical Alert(0)
```

```
                - Non-Critical Alert(2)
                - System Alert(4)
                - Informational Only Alert(255)"
               ::= { ibmRemoteSupTrapInfo 8 }

    ibmRsTrapMsgText     OBJECT-TYPE
               SYNTAX  DisplayString
               ACCESS  read-only
               STATUS  mandatory
               DESCRIPTION
               "Alert Message Text"
               ::= { ibmRemoteSupTrapInfo 9 }

-------------------------------------------
-- Critical Traps
-------------------------------------------
    ibmRemoteSupTrapTempC       TRAP-TYPE
                    ENTERPRISE  ibmRemoteSupMIB
                    VARIABLES
                     {
                     ibmRsTrapDateTime,
                     ibmRsTrapAppId,
                     ibmRsTrapSpTxtId,
                     ibmRsTrapSpNumId,
                     ibmRsTrapSysUuid,
                     ibmRsTrapSysSern,
                     ibmRsTrapAppType,
```

```
                    ibmRsTrapPriority,
                    ibmRsTrapMsgText
                    }
                    DESCRIPTION
                      "Critical Alert: Temperature threshold exceeded."
                    ::= 00

ibmRemoteSupTrapVoltC       TRAP-TYPE
                    ENTERPRISE  ibmRemoteSupMIB
                    VARIABLES
                    {
                    ibmRsTrapDateTime,
                    ibmRsTrapAppId,
                    ibmRsTrapSpTxtId,
                    ibmRsTrapSpNumId,
                    ibmRsTrapSysUuid,
                    ibmRsTrapSysSern,
                    ibmRsTrapAppType,
                    ibmRsTrapPriority,
                    ibmRsTrapMsgText
                    }
                    DESCRIPTION
                      "Critical Alert: Voltage threshold exceeded."
                    ::= 01

ibmRemoteSupTrapTampC       TRAP-TYPE
                    ENTERPRISE  ibmRemoteSupMIB
```

```
                    VARIABLES
                     {
                     ibmRsTrapDateTime,
                     ibmRsTrapAppId,
                     ibmRsTrapSpTxtId,
                     ibmRsTrapSpNumId,
                     ibmRsTrapSysUuid,
                     ibmRsTrapSysSern,
                     ibmRsTrapAppType,
                     ibmRsTrapPriority,
                     ibmRsTrapMsgText
                     }
                     DESCRIPTION
                       "Critical Alert: Physical intrusion of system has occurred."
                     ::= 02

ibmRemoteSupTrapMffC        TRAP-TYPE
                    ENTERPRISE  ibmRemoteSupMIB
                    VARIABLES
                     {
                     ibmRsTrapDateTime,
                     ibmRsTrapAppId,
                     ibmRsTrapSpTxtId,
                     ibmRsTrapSpNumId,
                     ibmRsTrapSysUuid,
                     ibmRsTrapSysSern,
                     ibmRsTrapAppType,
```

```
                    ibmRsTrapPriority,
                    ibmRsTrapMsgText
                    }
                    DESCRIPTION
                      "Critical Alert: Mutiple fan failure."
                    ::= 03

ibmRemoteSupTrapPsC         TRAP-TYPE
                    ENTERPRISE  ibmRemoteSupMIB
                    VARIABLES
                    {
                    ibmRsTrapDateTime,
                    ibmRsTrapAppId,
                    ibmRsTrapSpTxtId,
                    ibmRsTrapSpNumId,
                    ibmRsTrapSysUuid,
                    ibmRsTrapSysSern,
                    ibmRsTrapAppType,
                    ibmRsTrapPriority,
                    ibmRsTrapMsgText
                    }
                    DESCRIPTION
                      "Critical Alert: Power supply failure."
                    ::= 04

ibmRemoteSupTrapHdC         TRAP-TYPE
                    ENTERPRISE  ibmRemoteSupMIB
```

```
                    VARIABLES
                     {
                     ibmRsTrapDateTime,
                     ibmRsTrapAppId,
                     ibmRsTrapSpTxtId,
                     ibmRsTrapSpNumId,
                     ibmRsTrapSysUuid,
                     ibmRsTrapSysSern,
                     ibmRsTrapAppType,
                     ibmRsTrapPriority,
                     ibmRsTrapMsgText
                     }
                     DESCRIPTION
                       "Critical Alert: Hard disk drive failure."
                     ::= 05

ibmRemoteSupTrapVrmC        TRAP-TYPE
                    ENTERPRISE  ibmRemoteSupMIB
                    VARIABLES
                     {
                     ibmRsTrapDateTime,
                     ibmRsTrapAppId,
                     ibmRsTrapSpTxtId,
                     ibmRsTrapSpNumId,
                     ibmRsTrapSysUuid,
                     ibmRsTrapSysSern,
                     ibmRsTrapAppType,
```

```
                    ibmRsTrapPriority,
                    ibmRsTrapMsgText
                    }
                    DESCRIPTION
                      "Critical Alert: Voltage Regulator Module(VRM) failure."
                    ::= 06


-------------------------------------------
-- Non-Critical Traps
-------------------------------------------


    ibmRemoteSupTrapRdpsN       TRAP-TYPE
                        ENTERPRISE  ibmRemoteSupMIB
                        VARIABLES
                         {
                         ibmRsTrapDateTime,
                         ibmRsTrapAppId,
                         ibmRsTrapSpTxtId,
                         ibmRsTrapSpNumId,
                         ibmRsTrapSysUuid,
                         ibmRsTrapSysSern,
                         ibmRsTrapAppType,
                         ibmRsTrapPriority,
                         ibmRsTrapMsgText
                         }
                         DESCRIPTION
                           "Non-Critical Alert: Redundant Power Supply failure."
```

```
                    ::= 10

ibmRemoteSupTrapSffN        TRAP-TYPE
                    ENTERPRISE  ibmRemoteSupMIB
                    VARIABLES
                     {
                     ibmRsTrapDateTime,
                     ibmRsTrapAppId,
                     ibmRsTrapSpTxtId,
                     ibmRsTrapSpNumId,
                     ibmRsTrapSysUuid,
                     ibmRsTrapSysSern,
                     ibmRsTrapAppType,
                     ibmRsTrapPriority,
                     ibmRsTrapMsgText
                     }
                     DESCRIPTION
                       "Non-Critical Alert: Single Fan failure."
                     ::= 11

ibmRemoteSupTrapTempN       TRAP-TYPE
                    ENTERPRISE  ibmRemoteSupMIB
                    VARIABLES
                     {
                     ibmRsTrapDateTime,
                     ibmRsTrapAppId,
                     ibmRsTrapSpTxtId,
```

```
                    ibmRsTrapSpNumId,
                    ibmRsTrapSysUuid,
                    ibmRsTrapSysSern,
                    ibmRsTrapAppType,
                    ibmRsTrapPriority,
                    ibmRsTrapMsgText
                    }
                    DESCRIPTION
                      "Non-Critical Alert: Temperature threshold exceeded."
                    ::= 12

ibmRemoteSupTrapVoltN       TRAP-TYPE
                    ENTERPRISE  ibmRemoteSupMIB
                    VARIABLES
                     {
                     ibmRsTrapDateTime,
                     ibmRsTrapAppId,
                     ibmRsTrapSpTxtId,
                     ibmRsTrapSpNumId,
                     ibmRsTrapSysUuid,
                     ibmRsTrapSysSern,
                     ibmRsTrapAppType,
                     ibmRsTrapPriority,
                     ibmRsTrapMsgText
                     }
                     DESCRIPTION
                       "Non-Critical Alert: Voltage threshold exceeded."
```

```
                        ::= 13


-------------------------------------------
-- System Traps
-------------------------------------------
    ibmRemoteSupTrapSecDvS      TRAP-TYPE
                        ENTERPRISE  ibmRemoteSupMIB
                        VARIABLES
                         {
                         ibmRsTrapDateTime,
                         ibmRsTrapAppId,
                         ibmRsTrapSpTxtId,
                         ibmRsTrapSpNumId,
                         ibmRsTrapSysUuid,
                         ibmRsTrapSysSern,
                         ibmRsTrapAppType,
                         ibmRsTrapPriority,
                         ibmRsTrapMsgText
                         }
                         DESCRIPTION
                           "System Alert: Secondary Device warning."
                         ::= 15

    ibmRemoteSupTrapPostToS     TRAP-TYPE
                        ENTERPRISE  ibmRemoteSupMIB
                        VARIABLES
                         {
```

```
                    ibmRsTrapDateTime,
                    ibmRsTrapAppId,
                    ibmRsTrapSpTxtId,
                    ibmRsTrapSpNumId,
                    ibmRsTrapSysUuid,
                    ibmRsTrapSysSern,
                    ibmRsTrapAppType,
                    ibmRsTrapPriority,
                    ibmRsTrapMsgText
                    }
                    DESCRIPTION
                      "System Alert: Post Timeout value exceeded."
                    ::= 20

ibmRemoteSupTrapOsToS       TRAP-TYPE
                    ENTERPRISE  ibmRemoteSupMIB
                    VARIABLES
                     {
                     ibmRsTrapDateTime,
                     ibmRsTrapAppId,
                     ibmRsTrapSpTxtId,
                     ibmRsTrapSpNumId,
                     ibmRsTrapSysUuid,
                     ibmRsTrapSysSern,
                     ibmRsTrapAppType,
                     ibmRsTrapPriority,
                     ibmRsTrapMsgText
```

```
                    }
                    DESCRIPTION
                      "System Alert: OS Timeout value exceeded."
                    ::= 21

ibmRemoteSupTrapAppS        TRAP-TYPE
                    ENTERPRISE  ibmRemoteSupMIB
                    VARIABLES
                     {
                     ibmRsTrapDateTime,
                     ibmRsTrapAppId,
                     ibmRsTrapSpTxtId,
                     ibmRsTrapSpNumId,
                     ibmRsTrapSysUuid,
                     ibmRsTrapSysSern,
                     ibmRsTrapAppType,
                     IbmRsTrapPriority,
                     ibmRsTrapMsgText
                     }
                     DESCRIPTION
                       "System Alert: Application Alert."
                     ::= 22

ibmRemoteSupTrapPoffS       TRAP-TYPE
                    ENTERPRISE  ibmRemoteSupMIB
                    VARIABLES
                     {
```

```
                    ibmRsTrapDateTime,
                    ibmRsTrapAppId,
                    ibmRsTrapSpTxtId,
                    ibmRsTrapSpNumId,
                    ibmRsTrapSysUuid,
                    ibmRsTrapSysSern,
                    ibmRsTrapAppType,
                    ibmRsTrapPriority,
                    ibmRsTrapMsgText
                    }
                    DESCRIPTION
                      "System Alert: Power Off."
                    ::= 23

ibmRemoteSupTrapPonS        TRAP-TYPE
                    ENTERPRISE  ibmRemoteSupMIB
                    VARIABLES
                     {
                     ibmRsTrapDateTime,
                     ibmRsTrapAppId,
                     ibmRsTrapSpTxtId,
                     ibmRsTrapSpNumId,
                     ibmRsTrapSysUuid,
                     ibmRsTrapSysSern,
                     ibmRsTrapAppType,
                     ibmRsTrapPriority,
                     ibmRsTrapMsgText
```

```
                    }
                    DESCRIPTION
                      "System Alert: Power On."
                    ::= 24

ibmRemoteSupTrapBootS       TRAP-TYPE
                    ENTERPRISE  ibmRemoteSupMIB
                    VARIABLES
                     {
                     ibmRsTrapDateTime,
                     ibmRsTrapAppId,
                     ibmRsTrapSpTxtId,
                     ibmRsTrapSpNumId,
                     ibmRsTrapSysUuid,
                     ibmRsTrapSysSern,
                     ibmRsTrapAppType,
                     ibmRsTrapPriority,
                     ibmRsTrapMsgText
                     }
                     DESCRIPTION
                       "System Alert: System Boot Failure."
                     ::= 25

ibmRemoteSupTrapLdrToS      TRAP-TYPE
                    ENTERPRISE  ibmRemoteSupMIB
                    VARIABLES
                     {
```

```
                    ibmRsTrapDateTime,
                    ibmRsTrapAppId,
                    ibmRsTrapSpTxtId,
                    ibmRsTrapSpNumId,
                    ibmRsTrapSysUuid,
                    ibmRsTrapSysSern,
                    ibmRsTrapAppType,
                    ibmRsTrapPriority,
                    ibmRsTrapMsgText
                    }
                    DESCRIPTION
                      "System Alert: OS Loader Timeout."
                    ::= 26

ibmRemoteSupTrapPFAS        TRAP-TYPE
                    ENTERPRISE  ibmRemoteSupMIB
                    VARIABLES
                     {
                     ibmRsTrapDateTime,
                     ibmRsTrapAppId,
                     ibmRsTrapSpTxtId,
                     ibmRsTrapSpNumId,
                     ibmRsTrapSysUuid,
                     ibmRsTrapSysSern,
                     ibmRsTrapAppType,
                     ibmRsTrapPriority,
                     ibmRsTrapMsgText
```

```
                    }
                    DESCRIPTION
                      "System Alert: Predictive Failure Analysis(PFA) information."
                    ::= 27

END
```

Appendix C - The Director Server trap definition

This trap type is strictly for mapping any Director event type to an single SNMP trap type, with accomodations made for Event Details

```
IBM-Director-Alert-MIB DEFINITIONS ::= BEGIN

      IMPORTS
            enterprises, Counter
                  FROM RFC1155-SMI
            TRAP-TYPE
                  FROM RFC1215
            OBJECT-TYPE
                  FROM RFC1212;

ibm                OBJECT IDENTIFIER ::= { enterprises 2 }

ibmProd              OBJECT IDENTIFIER ::= { ibm 6 }

director             OBJECT IDENTIFIER ::= { ibmProd 146 }

directorTraps         OBJECT IDENTIFIER ::= { director 200 }

details              OBJECT IDENTIFIER ::= { director 9696 }

--
--
-- the trap description objects
--
--

trapType              OBJECT-TYPE
                  SYNTAX OBJECT IDENTIFIER
                  ACCESS read-only
                  STATUS mandatory
                  DESCRIPTION
                      "The type of the event"
                  ::= { director 1 }

trapSeverity          OBJECT-TYPE
                  SYNTAX OCTET STRING
                  ACCESS read-only
                  STATUS mandatory
                  DESCRIPTION
                      "The severity of the event"
                  ::= { director 2 }

trapSenderName        OBJECT-TYPE
                  SYNTAX OCTET STRING
                  ACCESS read-only
                  STATUS mandatory
                  DESCRIPTION
                      "The system name from which the event was sent"
                  ::= { director 3 }

trapManagedObjectName   OBJECT-TYPE
                  SYNTAX OCTET STRING
                  ACCESS read-only
```

```
                    STATUS mandatory
                    DESCRIPTION
                        "The system name for which the event was generated"
                    ::= { director 4 }

trapText            OBJECT-TYPE
                    SYNTAX OCTET STRING
                    ACCESS read-only
                    STATUS mandatory
                    DESCRIPTION
                        "Text associated with the event"
                    ::= { director 5 }

trapCategory        OBJECT-TYPE
                    SYNTAX OCTET STRING
                    ACCESS read-only
                    STATUS mandatory
                    DESCRIPTION
                        "The category of the event"
                    ::= { director 6 }

--
-- Trap detail types
--
-- NOTE:
--
--  When viewing a trap holding an event detail type, the number following these
--  OIDs refer to different values of this type.  They increment according to
--  each trap, ergo, you should never see a { char 2 } without a { char 1 }.
--

char                OBJECT-TYPE
                    SYNTAX OCTET STRING
                    ACCESS read-only
                    STATUS mandatory
                    DESCRIPTION
                        "Eight bit unsigned event detail."
                    ::= { details 1 }

short               OBJECT-TYPE
                    SYNTAX INTEGER
                    ACCESS read-only
                    STATUS  mandatory
                    DESCRIPTION
                        "Sixteen bit signed event detail."
                    ::= { details 2 }

int                 OBJECT-TYPE
                    SYNTAX INTEGER
                    ACCESS read-only
                    STATUS mandatory
                    DESCRIPTION
                        "Thirty-two bit signed event detail."
                    ::= { details 3 }

long                OBJECT-TYPE
                    SYNTAX Counter    -- Counter64, but we're complying with SNMPv1
                    ACCESS read-only
```

```
                    STATUS mandatory
                    DESCRIPTION
                        "Sixty-four bit signed event detail."
                    ::= { details 4 }

float               OBJECT-TYPE
                    SYNTAX OCTET STRING
                    ACCESS read-only
                    STATUS mandatory
                    DESCRIPTION
                        "Thirty-two bit decimal pointed event detail."
                    ::= { details 6 }

double              OBJECT-TYPE
                    SYNTAX OCTET STRING
                    ACCESS read-only
                    STATUS mandatory
                    DESCRIPTION
                        "Sixty-four bit decimal pointed event detail."
                    ::= { details 7 }

octet               OBJECT-TYPE
                    SYNTAX OCTET STRING -- Opaque, but we're complying with SNMPv1
                    ACCESS read-only
                    STATUS mandatory
                    DESCRIPTION
                        "A string of bytes holding an event detail."
                    ::= { details 8 }

string              OBJECT-TYPE
                    SYNTAX OCTET STRING
                    ACCESS read-only
                    STATUS mandatory
                    DESCRIPTION
                        "A string of unicode chars (normal text) holding
                         an event detail."
                    ::= { details 9 }

dateTime            OBJECT-TYPE
                    SYNTAX INTEGER
                    ACCESS read-only
                    STATUS mandatory
                    DESCRIPTION
                         "Date and time since 1/1970 as an event
                          detail."
                    ::= { details 10 }


--
--  IBM Director SNMP trap
--

trapText1           TRAP-TYPE
                   ENTERPRISE      directorTraps
                   VARIABLES       {
                                   trapType,
                                   trapSeverity,
                                   trapSenderName,
```

```
                    trapManagedObjectName,
                    trapText,
                    trapCategory
                    }
            DESCRIPTION
                "Converted Tivoli Director Event"
            ::= 1

END
```

Appendix D - The IBM BladeCenter Chassis Management Module SNMP Trap Definitions

The following definitions define TRAP-TYPEs for the IBM BladeCenter Chassis Management Module. The MIB file containing these definitions is called mmalert.mib and can be found on the installation diskette for the Management Module.

```
-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
--
-- File         : mmalert.mib
-- Description  : IBM Management Module traps
--                MIB for traps(Alerts)
-- By           : Joe Bolan, IBM
-- Version      : 1.2
-- Date         : December 20, 2002
--
--
-- Copyright (c) 2002/2003 IBM  All Rights Reserved.
--
--
-- Contains trap descriptions for:
--  (1) Bladecenter Management Module
--
--
-- Changes History
--
-- Date       Reason
--------------------
-- 4/08/02    Lorrie - Created
-- 12/20/02   jeb - Fix priority to include recovery, move SFF to critical, text on KVM/CD
--
-------------------------------------------------------------------------------
-- This MIB is used by the Management Module to describe
-- traps for alert conditions detected by the MM/Blades on Bladecenter hardware.
-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
      BLADESPPALT-MIB DEFINITIONS ::= BEGIN


      IMPORTS
         OBJECT-TYPE                 FROM RFC-1212
         enterprises                 FROM RFC1155-SMI
         DisplayString               FROM RFC1213-MIB
         TRAP-TYPE                   FROM RFC-1215;


      ibm          OBJECT IDENTIFIER ::=   { enterprises 2 }

      -- IBM products group

      ibmProd       OBJECT IDENTIFIER ::=   { ibm 6 }

      -- IBM Netfinity SP

      supportProcessor OBJECT IDENTIFIER ::= { ibmProd 158 }

      -- IBM Netfinity SP Alert
```

```
        ibmRemoteSupTrapMIB     OBJECT IDENTIFIER ::= { supportProcessor 2 }

    ---------------------------------------------------------------
    -- Start: Management Module Adapter SP Alerts
    ---------------------------------------------------------------

        -- the rsspalt generic trap generator group

        ibmRemoteSupTrapMibObjects OBJECT IDENTIFIER ::= { ibmRemoteSupTrapMIB 1 }


        ibmSpTrapInfo OBJECT IDENTIFIER ::= { ibmRemoteSupTrapMibObjects 2 }

        ibmSpTrapDateTime  OBJECT-TYPE
                    SYNTAX  DisplayString
                    ACCESS  read-only
                    STATUS  mandatory
                    DESCRIPTION
                    "Timestamp of Local Date and Time when alert was generated"
                    ::= { ibmSpTrapInfo 1 }

        ibmSpTrapAppId    OBJECT-TYPE
                    SYNTAX  DisplayString
                    ACCESS  read-only
                    STATUS  mandatory
                    DESCRIPTION
                    "Application ID, always 'BladeCenter Management Module'"
                    ::= { ibmSpTrapInfo 2 }

        ibmSpTrapSpTxtId  OBJECT-TYPE
                    SYNTAX  DisplayString
                    ACCESS  read-only
                    STATUS  mandatory
                    DESCRIPTION
                    "SP System Identification - Text Identification"
                    ::= { ibmSpTrapInfo 3 }

        ibmSpTrapSysUuid  OBJECT-TYPE
                    SYNTAX  DisplayString
                    ACCESS  read-only
                    STATUS  mandatory
                    DESCRIPTION
                    "Host System UUID(Universal Unique ID)"
                    ::= { ibmSpTrapInfo 4 }

        ibmSpTrapSysSern  OBJECT-TYPE
                    SYNTAX  DisplayString
                    ACCESS  read-only
                    STATUS  mandatory
                    DESCRIPTION
                    "Host System Serial Number"
                    ::= { ibmSpTrapInfo 5 }

        ibmSpTrapAppType  OBJECT-TYPE
                    SYNTAX  INTEGER (1..65535)
                    ACCESS  read-only
                    STATUS  mandatory
```

```
            DESCRIPTION
            "Application Alert Type - Event Number ID"
            ::= { ibmSpTrapInfo 6 }

        ibmSpTrapPriority  OBJECT-TYPE
            SYNTAX  INTEGER (1..65535)
            ACCESS  read-only
            STATUS  mandatory
            DESCRIPTION
            "Alert Severity Value
              - Critical Alert(0)
              - Non-Critical Alert(2)
              - System Alert(4)
              - Recovery Alert(8)
              - Informational Only Alert(255)"
            ::= { ibmSpTrapInfo 7 }

        ibmSpTrapMsgText  OBJECT-TYPE
            SYNTAX  DisplayString
            ACCESS  read-only
            STATUS  mandatory
            DESCRIPTION
            "Alert Message Text"
            ::= { ibmSpTrapInfo 8 }

        ibmSpTrapHostContact  OBJECT-TYPE
            SYNTAX  DisplayString
            ACCESS  read-only
            STATUS  mandatory
            DESCRIPTION
            "Host Contact"
            ::= { ibmSpTrapInfo 9 }

        ibmSpTrapHostLocation  OBJECT-TYPE
            SYNTAX  DisplayString
            ACCESS  read-only
            STATUS  mandatory
            DESCRIPTION
            "Host Location"
            ::= { ibmSpTrapInfo 10 }

        ibmSpTrapBladeName  OBJECT-TYPE
            SYNTAX  DisplayString
            ACCESS  read-only
            STATUS  mandatory
            DESCRIPTION
            "Blade Name"
            ::= { ibmSpTrapInfo 11 }

        ibmSpTrapBladeSern  OBJECT-TYPE
            SYNTAX  DisplayString
            ACCESS  read-only
            STATUS  mandatory
            DESCRIPTION
            "Blade Serial Number"
            ::= { ibmSpTrapInfo 12 }

        ibmSpTrapBladeUuid  OBJECT-TYPE
```

```
                SYNTAX  DisplayString
                ACCESS  read-only
                STATUS  mandatory
                DESCRIPTION
                "Blade UUID(Universal Unique ID)"
                ::= { ibmSpTrapInfo 13 }

-----------------------------------------------
-- Critical Traps
-----------------------------------------------
    -- 4.2.1.1
    ibmSpTrapTempC         TRAP-TYPE
                    ENTERPRISE  ibmRemoteSupTrapMIB
                    VARIABLES
                     {
                     ibmSpTrapDateTime,
                     ibmSpTrapAppId,
                     ibmSpTrapSpTxtId,
                     ibmSpTrapSysUuid,
                     ibmSpTrapSysSern,
                     ibmSpTrapAppType,
                     ibmSpTrapPriority,
                     ibmSpTrapMsgText,
                     ibmSpTrapHostContact,
                     ibmSpTrapHostLocation,
                     ibmSpTrapBladeName,
                     ibmSpTrapBladeSern,
                     ibmSpTrapBladeUuid
                     }
                     DESCRIPTION
                       "Critical Alert: Temperature threshold exceeded."
                     ::= 00

    -- 4.2.1.2
    ibmSpTrapVoltC       TRAP-TYPE
                   ENTERPRISE  ibmRemoteSupTrapMIB
                   VARIABLES
                    {
                    ibmSpTrapDateTime,
                    ibmSpTrapAppId,
                    ibmSpTrapSpTxtId,
                    ibmSpTrapSysUuid,
                    ibmSpTrapSysSern,
                    ibmSpTrapAppType,
                    ibmSpTrapPriority,
                    ibmSpTrapMsgText,
                    ibmSpTrapHostContact,
                    ibmSpTrapHostLocation,
                    ibmSpTrapBladeName,
                    ibmSpTrapBladeSern,
                    ibmSpTrapBladeUuid
                    }
                    DESCRIPTION
                      "Critical Alert: Voltage threshold exceeded."
                    ::= 01

    -- 4.2.1.3 -- is this not supported on blades?
    ibmSpTrapTampC       TRAP-TYPE
```

```
                    ENTERPRISE  ibmRemoteSupTrapMIB
                    VARIABLES
                     {
                     ibmSpTrapDateTime,
                     ibmSpTrapAppId,
                     ibmSpTrapSpTxtId,
                     ibmSpTrapSysUuid,
                     ibmSpTrapSysSern,
                     ibmSpTrapAppType,
                     ibmSpTrapPriority,
                     ibmSpTrapMsgText,
                     ibmSpTrapHostContact,
                     ibmSpTrapHostLocation,
                     ibmSpTrapBladeName,
                     ibmSpTrapBladeSern,
                     ibmSpTrapBladeUuid
                     }
                     DESCRIPTION
                       "Critical Alert: Physical intrusion of system has occurred."
                     ::= 02

-- 4.2.1.4
ibmSpTrapMffC        TRAP-TYPE
                    ENTERPRISE  ibmRemoteSupTrapMIB
                    VARIABLES
                     {
                     ibmSpTrapDateTime,
                     ibmSpTrapAppId,
                     ibmSpTrapSpTxtId,
                     ibmSpTrapSysUuid,
                     ibmSpTrapSysSern,
                     ibmSpTrapAppType,
                     ibmSpTrapPriority,
                     ibmSpTrapMsgText,
                     ibmSpTrapHostContact,
                     ibmSpTrapHostLocation,
                     ibmSpTrapBladeName,
                     ibmSpTrapBladeSern,
                     ibmSpTrapBladeUuid
                     }
                     DESCRIPTION
                       "Critical Alert: Multiple fan failure."
                     ::= 03

-- 4.2.1.5
ibmSpTrapPsC         TRAP-TYPE
                    ENTERPRISE  ibmRemoteSupTrapMIB
                    VARIABLES
                     {
                     ibmSpTrapDateTime,
                     ibmSpTrapAppId,
                     ibmSpTrapSpTxtId,
                     ibmSpTrapSysUuid,
                     ibmSpTrapSysSern,
                     ibmSpTrapAppType,
                     ibmSpTrapPriority,
                     ibmSpTrapMsgText,
                     ibmSpTrapHostContact,
```

```
                    ibmSpTrapHostLocation,
                    ibmSpTrapBladeName,
                    ibmSpTrapBladeSern,
                    ibmSpTrapBladeUuid
                    }
                    DESCRIPTION
                      "Critical Alert: Power supply failure."
                    ::= 04

-- 4.2.1.6
ibmSpTrapHdC        TRAP-TYPE
                  ENTERPRISE  ibmRemoteSupTrapMIB
                  VARIABLES
                    {
                    ibmSpTrapDateTime,
                    ibmSpTrapAppId,
                    ibmSpTrapSpTxtId,
                    ibmSpTrapSysUuid,
                    ibmSpTrapSysSern,
                    ibmSpTrapAppType,
                    ibmSpTrapPriority,
                    ibmSpTrapMsgText,
                    ibmSpTrapHostContact,
                    ibmSpTrapHostLocation,
                    ibmSpTrapBladeName,
                    ibmSpTrapBladeSern,
                    ibmSpTrapBladeUuid
                    }
                    DESCRIPTION
                      "Critical Alert: Hard disk drive failure."
                    ::= 05

-- 4.2.1.7
ibmSpTrapVrmC       TRAP-TYPE
                  ENTERPRISE  ibmRemoteSupTrapMIB
                  VARIABLES
                    {
                    ibmSpTrapDateTime,
                    ibmSpTrapAppId,
                    ibmSpTrapSpTxtId,
                    ibmSpTrapSysUuid,
                    ibmSpTrapSysSern,
                    ibmSpTrapAppType,
                    ibmSpTrapPriority,
                    ibmSpTrapMsgText,
                    ibmSpTrapHostContact,
                    ibmSpTrapHostLocation,
                    ibmSpTrapBladeName,
                    ibmSpTrapBladeSern,
                    ibmSpTrapBladeUuid
                    }
                    DESCRIPTION
                      "Critical Alert: Voltage Regulator Module(VRM) failure."
                    ::= 06

-- 4.2.2.2
ibmSpTrapSffC       TRAP-TYPE
                  ENTERPRISE  ibmRemoteSupTrapMIB
```

```
                    VARIABLES
                     {
                     ibmSpTrapDateTime,
                     ibmSpTrapAppId,
                     ibmSpTrapSpTxtId,
                     ibmSpTrapSysUuid,
                     ibmSpTrapSysSern,
                     ibmSpTrapAppType,
                     ibmSpTrapPriority,
                     ibmSpTrapMsgText,
                     ibmSpTrapHostContact,
                     ibmSpTrapHostLocation,
                     ibmSpTrapBladeName,
                     ibmSpTrapBladeSern,
                     ibmSpTrapBladeUuid
                     }
                     DESCRIPTION
                       "Critical Alert: Single Fan failure."
                     ::= 11


-- 4.2.1.8
ibmSpTrapMsC         TRAP-TYPE
                    ENTERPRISE  ibmRemoteSupTrapMIB
                    VARIABLES
                     {
                     ibmSpTrapDateTime,
                     ibmSpTrapAppId,
                     ibmSpTrapSpTxtId,
                     ibmSpTrapSysUuid,
                     ibmSpTrapSysSern,
                     ibmSpTrapAppType,
                     ibmSpTrapPriority,
                     ibmSpTrapMsgText,
                     ibmSpTrapHostContact,
                     ibmSpTrapHostLocation,
                     ibmSpTrapBladeName,
                     ibmSpTrapBladeSern,
                     ibmSpTrapBladeUuid
                     }
                     DESCRIPTION
                       "Critical Alert: Multiple switch module failure."
                     ::= 31

-- 4.2.1.9
ibmSpTrapIhcC        TRAP-TYPE
                    ENTERPRISE  ibmRemoteSupTrapMIB
                    VARIABLES
                     {
                     ibmSpTrapDateTime,
                     ibmSpTrapAppId,
                     ibmSpTrapSpTxtId,
                     ibmSpTrapSysUuid,
                     ibmSpTrapSysSern,
                     ibmSpTrapAppType,
                     ibmSpTrapPriority,
                     ibmSpTrapMsgText,
                     ibmSpTrapHostContact,
```

```
                        ibmSpTrapHostLocation,
                        ibmSpTrapBladeName,
                        ibmSpTrapBladeSern,
                        ibmSpTrapBladeUuid
                        }
                        DESCRIPTION
                          "Critical Alert: Incompatible hardware configuration."
                        ::= 36

-------------------------------------------
-- Non-Critical Traps
-------------------------------------------

      -- 4.2.2.1
      ibmSpTrapRdpsN         TRAP-TYPE
                        ENTERPRISE  ibmRemoteSupTrapMIB
                        VARIABLES
                          {
                          ibmSpTrapDateTime,
                          ibmSpTrapAppId,
                          ibmSpTrapSpTxtId,
                          ibmSpTrapSysUuid,
                          ibmSpTrapSysSern,
                          ibmSpTrapAppType,
                          ibmSpTrapPriority,
                          ibmSpTrapMsgText,
                          ibmSpTrapHostContact,
                          ibmSpTrapHostLocation,
                          ibmSpTrapBladeName,
                          ibmSpTrapBladeSern,
                          ibmSpTrapBladeUuid
                          }
                          DESCRIPTION
                            "Non-Critical Alert: Redundant Power Supply failure."
                          ::= 10

      -- 4.2.2.3
      ibmSpTrapTempN       TRAP-TYPE
                      ENTERPRISE  ibmRemoteSupTrapMIB
                      VARIABLES
                        {
                        ibmSpTrapDateTime,
                        ibmSpTrapAppId,
                        ibmSpTrapSpTxtId,
                        ibmSpTrapSysUuid,
                        ibmSpTrapSysSern,
                        ibmSpTrapAppType,
                        ibmSpTrapPriority,
                        ibmSpTrapMsgText,
                        ibmSpTrapHostContact,
                        ibmSpTrapHostLocation,
                        ibmSpTrapBladeName,
                        ibmSpTrapBladeSern,
                        ibmSpTrapBladeUuid
                        }
                        DESCRIPTION
                          "Non-Critical Alert: Temperature threshold exceeded."
                        ::= 12
```

```
        -- 4.2.2.4
        ibmSpTrapVoltN       TRAP-TYPE
                        ENTERPRISE  ibmRemoteSupTrapMIB
                        VARIABLES
                         {
                         ibmSpTrapDateTime,
                         ibmSpTrapAppId,
                         ibmSpTrapSpTxtId,
                         ibmSpTrapSysUuid,
                         ibmSpTrapSysSern,
                         ibmSpTrapAppType,
                         ibmSpTrapPriority,
                         ibmSpTrapMsgText,
                         ibmSpTrapHostContact,
                         ibmSpTrapHostLocation,
                         ibmSpTrapBladeName,
                         ibmSpTrapBladeSern,
                         ibmSpTrapBladeUuid
                         }
                         DESCRIPTION
                           "Non-Critical Alert: Voltage threshold exceeded."
                         ::= 13

        -- 4.2.2.6
        ibmSpTrapRmN         TRAP-TYPE
                        ENTERPRISE  ibmRemoteSupTrapMIB
                        VARIABLES
                         {
                         ibmSpTrapDateTime,
                         ibmSpTrapAppId,
                         ibmSpTrapSpTxtId,
                         ibmSpTrapSysUuid,
                         ibmSpTrapSysSern,
                         ibmSpTrapAppType,
                         ibmSpTrapPriority,
                         ibmSpTrapMsgText,
                         ibmSpTrapHostContact,
                         ibmSpTrapHostLocation,
                         ibmSpTrapBladeName,
                         ibmSpTrapBladeSern,
                         ibmSpTrapBladeUuid
                         }
                         DESCRIPTION
                           "Non-Critical Alert: Redundant module."
                         ::= 32

-------------------------------------------
-- System Traps
-------------------------------------------

        -- 5.2.14
        ibmSpTrapSecDvS      TRAP-TYPE
                        ENTERPRISE  ibmRemoteSupTrapMIB
                        VARIABLES
                         {
                         ibmSpTrapDateTime,
                         ibmSpTrapAppId,
```

```
                    ibmSpTrapSpTxtId,
                    ibmSpTrapSysUuid,
                    ibmSpTrapSysSern,
                    ibmSpTrapAppType,
                    ibmSpTrapPriority,
                    ibmSpTrapMsgText,
                    ibmSpTrapHostContact,
                    ibmSpTrapHostLocation,
                    ibmSpTrapBladeName,
                    ibmSpTrapBladeSern,
                    ibmSpTrapBladeUuid
                    }
                    DESCRIPTION
                      "System Alert: Secondary Device warning."
                    ::= 15

-- 4.2.3.1
ibmSpTrapPostToS      TRAP-TYPE
                ENTERPRISE  ibmRemoteSupTrapMIB
                VARIABLES
                 {
                 ibmSpTrapDateTime,
                 ibmSpTrapAppId,
                 ibmSpTrapSpTxtId,
                 ibmSpTrapSysUuid,
                 ibmSpTrapSysSern,
                 ibmSpTrapAppType,
                 ibmSpTrapPriority,
                 ibmSpTrapMsgText,
                 ibmSpTrapHostContact,
                 ibmSpTrapHostLocation,
                 ibmSpTrapBladeName,
                 ibmSpTrapBladeSern,
                 ibmSpTrapBladeUuid
                 }
                 DESCRIPTION
                   "System Alert: Post Timeout value exceeded."
                 ::= 20

-- 4.2.3.2
ibmSpTrapOsToS       TRAP-TYPE
                ENTERPRISE  ibmRemoteSupTrapMIB
                VARIABLES
                 {
                 ibmSpTrapDateTime,
                 ibmSpTrapAppId,
                 ibmSpTrapSpTxtId,
                 ibmSpTrapSysUuid,
                 ibmSpTrapSysSern,
                 ibmSpTrapAppType,
                 ibmSpTrapPriority,
                 ibmSpTrapMsgText,
                 ibmSpTrapHostContact,
                 ibmSpTrapHostLocation,
                 ibmSpTrapBladeName,
                 ibmSpTrapBladeSern,
                 ibmSpTrapBladeUuid
                 }
```

```
                    DESCRIPTION
                      "System Alert: OS Timeout value exceeded."
                    ::= 21

-- 4.2.3.3
ibmSpTrapAppS       TRAP-TYPE
                    ENTERPRISE  ibmRemoteSupTrapMIB
                    VARIABLES
                     {
                     ibmSpTrapDateTime,
                     ibmSpTrapAppId,
                     ibmSpTrapSpTxtId,
                     ibmSpTrapSysUuid,
                     ibmSpTrapSysSern,
                     ibmSpTrapAppType,
                     ibmSpTrapPriority,
                     ibmSpTrapMsgText,
                     ibmSpTrapHostContact,
                     ibmSpTrapHostLocation,
                     ibmSpTrapBladeName,
                     ibmSpTrapBladeSern,
                     ibmSpTrapBladeUuid
                     }
                     DESCRIPTION
                       "System Alert: Application Alert."
                     ::= 22

-- 4.2.3.4
ibmSpTrapPoffS      TRAP-TYPE
                    ENTERPRISE  ibmRemoteSupTrapMIB
                    VARIABLES
                     {
                     ibmSpTrapDateTime,
                     ibmSpTrapAppId,
                     ibmSpTrapSpTxtId,
                     ibmSpTrapSysUuid,
                     ibmSpTrapSysSern,
                     ibmSpTrapAppType,
                     ibmSpTrapPriority,
                     ibmSpTrapMsgText,
                     ibmSpTrapHostContact,
                     ibmSpTrapHostLocation,
                     ibmSpTrapBladeName,
                     ibmSpTrapBladeSern,
                     ibmSpTrapBladeUuid
                     }
                     DESCRIPTION
                       "System Alert: Power Off."
                     ::= 23

-- 4.2.3.5
ibmSpTrapPonS       TRAP-TYPE
                    ENTERPRISE  ibmRemoteSupTrapMIB
                    VARIABLES
                     {
                     ibmSpTrapDateTime,
                     ibmSpTrapAppId,
                     ibmSpTrapSpTxtId,
```

```
                    ibmSpTrapSysUuid,
                    ibmSpTrapSysSern,
                    ibmSpTrapAppType,
                    ibmSpTrapPriority,
                    ibmSpTrapMsgText,
                    ibmSpTrapHostContact,
                    ibmSpTrapHostLocation,
                    ibmSpTrapBladeName,
                    ibmSpTrapBladeSern,
                    ibmSpTrapBladeUuid
                    }
                    DESCRIPTION
                      "System Alert: Power On."
                    ::= 24

-- 4.2.3.6
ibmSpTrapBootS       TRAP-TYPE
                  ENTERPRISE  ibmRemoteSupTrapMIB
                  VARIABLES
                    {
                    ibmSpTrapDateTime,
                    ibmSpTrapAppId,
                    ibmSpTrapSpTxtId,
                    ibmSpTrapSysUuid,
                    ibmSpTrapSysSern,
                    ibmSpTrapAppType,
                    ibmSpTrapPriority,
                    ibmSpTrapMsgText,
                    ibmSpTrapHostContact,
                    ibmSpTrapHostLocation,
                    ibmSpTrapBladeName,
                    ibmSpTrapBladeSern,
                    ibmSpTrapBladeUuid
                    }
                    DESCRIPTION
                      "System Alert: System Boot Failure."
                    ::= 25

-- 4.2.3.7
ibmSpTrapLdrToS      TRAP-TYPE
                  ENTERPRISE  ibmRemoteSupTrapMIB
                  VARIABLES
                    {
                    ibmSpTrapDateTime,
                    ibmSpTrapAppId,
                    ibmSpTrapSpTxtId,
                    ibmSpTrapSysUuid,
                    ibmSpTrapSysSern,
                    ibmSpTrapAppType,
                    ibmSpTrapPriority,
                    ibmSpTrapMsgText,
                    ibmSpTrapHostContact,
                    ibmSpTrapHostLocation,
                    ibmSpTrapBladeName,
                    ibmSpTrapBladeSern,
                    ibmSpTrapBladeUuid
                    }
                    DESCRIPTION
```

```
                    "System Alert: OS Loader Timeout."
                   ::= 26

    -- 4.2.3.8
    ibmSpTrapPFAS       TRAP-TYPE
                   ENTERPRISE  ibmRemoteSupTrapMIB
                   VARIABLES
                    {
                    ibmSpTrapDateTime,
                    ibmSpTrapAppId,
                    ibmSpTrapSpTxtId,
                    ibmSpTrapSysUuid,
                    ibmSpTrapSysSern,
                    ibmSpTrapAppType,
                    ibmSpTrapPriority,
                    ibmSpTrapMsgText,
                    ibmSpTrapHostContact,
                    ibmSpTrapHostLocation,
                    ibmSpTrapBladeName,
                    ibmSpTrapBladeSern,
                    ibmSpTrapBladeUuid
                    }
                    DESCRIPTION
                     "System Alert: Predictive Failure Analysis(PFA) information."
                    ::= 27

    -- 4.2.3.9
    ibmSpTrapKVMSwitchS   TRAP-TYPE
                   ENTERPRISE  ibmRemoteSupTrapMIB
                   VARIABLES
                    {
                    ibmSpTrapDateTime,
                    ibmSpTrapAppId,
                    ibmSpTrapSpTxtId,
                    ibmSpTrapSysUuid,
                    ibmSpTrapSysSern,
                    ibmSpTrapAppType,
                    ibmSpTrapPriority,
                    ibmSpTrapMsgText,
                    ibmSpTrapHostContact,
                    ibmSpTrapHostLocation,
                    ibmSpTrapBladeName,
                    ibmSpTrapBladeSern,
                    ibmSpTrapBladeUuid
                    }
                    DESCRIPTION
                     "System Alert: Keyboard/Video/Mouse(KVM) or Medial Tray(MT) switching
failure."
                    ::= 33

    -- 4.2.3.10
    ibmSpTrapSysInvS     TRAP-TYPE
                   ENTERPRISE  ibmRemoteSupTrapMIB
                   VARIABLES
                    {
                    ibmSpTrapDateTime,
                    ibmSpTrapAppId,
                    ibmSpTrapSpTxtId,
```

```
                    ibmSpTrapSysUuid,
                    ibmSpTrapSysSern,
                    ibmSpTrapAppType,
                    ibmSpTrapPriority,
                    ibmSpTrapMsgText,
                    ibmSpTrapHostContact,
                    ibmSpTrapHostLocation,
                    ibmSpTrapBladeName,
                    ibmSpTrapBladeSern,
                    ibmSpTrapBladeUuid
                    }
                    DESCRIPTION
                      "System Alert: Inventory."
                    ::= 34

-- 4.2.3.11
ibmSpTrapSysLogS      TRAP-TYPE
                  ENTERPRISE  ibmRemoteSupTrapMIB
                  VARIABLES
                    {
                    ibmSpTrapDateTime,
                    ibmSpTrapAppId,
                    ibmSpTrapSpTxtId,
                    ibmSpTrapSysUuid,
                    ibmSpTrapSysSern,
                    ibmSpTrapAppType,
                    ibmSpTrapPriority,
                    ibmSpTrapMsgText,
                    ibmSpTrapHostContact,
                    ibmSpTrapHostLocation,
                    ibmSpTrapBladeName,
                    ibmSpTrapBladeSern,
                    ibmSpTrapBladeUuid
                    }
                    DESCRIPTION
                      "System Alert: System Log 75% full."
                    ::= 35

-- 4.2.3.12
ibmSpTrapNwChangeS    TRAP-TYPE
                  ENTERPRISE  ibmRemoteSupTrapMIB
                  VARIABLES
                    {
                    ibmSpTrapDateTime,
                    ibmSpTrapAppId,
                    ibmSpTrapSpTxtId,
                    ibmSpTrapSysUuid,
                    ibmSpTrapSysSern,
                    ibmSpTrapAppType,
                    ibmSpTrapPriority,
                    ibmSpTrapMsgText,
                    ibmSpTrapHostContact,
                    ibmSpTrapHostLocation,
                    ibmSpTrapBladeName,
                    ibmSpTrapBladeSern,
                    ibmSpTrapBladeUuid
                    }
                    DESCRIPTION
```

```
                    "System Alert: Network change notification."
                  ::= 37
END
```

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