Minutes of PMP for July 1996 (Portland)

Status of the Printer MIB.

The PWG is not currently active according to the IETF. We need a letter from the Chair stating our goal to reactivate for the purpose of moving the Printer MIB from proposed to draft. As chair of the PMP, Lloyd Young will solicit the IETF, including a brief overview of our implementation experience (as demonstrated at the Portland bakeoff). Randy Turner will put the latest revision on the server and the PWG will review. If considered active by mid-August, the PWG will submit the draft, otherwise, to expedite, Randy may initiate a private submission. (There was no vote or unanimous decision regarding the private submission).
We will probably be asked for further testimony documenting our implementation experience. The Internet Draft will have a 6 month life. RFC1759 has 2 year lifetime from March 1995. Only one plenary between now and March 1997.

There have been some grand changes proposed which imply modification of indices and conformance statements which could delay submission.

List of issues:

1. Channels Group (NSM MIB)
2. MIB editing
3. Which interfaces group to use
4. Conformance Statements
5. Serial Number object
6. Administrative name object
7. Multiple engines per Interpreter
8. Change optional to conditional mandatory or delete optional groups.
9. Min access for every group.

Describing problems with management via status and alerts.

Maintaining state for EVERY printer is a traffic burden. The fact that each vendor does trap registration differently and there is, ultimately, a limited number of trap hosts such that not every NMS can be sure they will get traps, forces polling as the natural notification mechanism. Hypothetically, one NMS polling at 1 poll per minute to 60 printers would generate 1 poll per second plus the response traffic. At 6 packets (minimum) per printer to respond with basic status, this is 360 response packets every minute.

To keep up with alert table changes, polling is once again required, including repeated acquisition of the entire alert table. While hrDeviceStatus, hrPrinterStatus and hrPrtDetectedErrorState will, theoretically, signal changes in printer status, if there are multiple, back-to-back critical alerts the NMS will never see a state change using this method. This results in a lot of repeated polling of the alert table just to find out NOTHING HAS CHANGED!

One solution is a trap “concentrator” such as provided by the SENSE proposal. Another approach is to propose an object prtAlertTableChange (counter) which can be polled rather than the whole alert table. With this approach there are questions like whether or not to have a counter for Critical and another for Warning. A formal proposal will be submitted. Some alternatives discussed

1. One counter for any alert and another for Critical. NMS then has the option to manage off just the overall counter, just the critical or make use of both.

2. A counter that tracks creation and deletion of alert table entries. Just making the alert index readable doesn't inform you when entries are deleted.

Some side discussion and clarification. Critical means stopped AND external intervention required so things like warming up or wire cleaning are not critical.

LUNCH

Serial Number and Administrative Name (request for objects)

During creation of the Printer MIB, we went to great lengths to include detailed information such as Serial Number and "Name" in subobjects such as Input Trays and Output bins. In retrospect, it seems strange that we did not include the same type of information for the printer itself in prtGeneral. The explanation is found in our understanding (or lack of it) that MIB-II and hrMIB would provide this level of identification, hence, the printer MIB itself could not at risk of being redundant. While there is hrDeviceID, this is treated as a local ID which could change depending on configuration, thus, hrDeviceID cannot be used as an administratively assigned name ("Payroll", "HiSpeed" etc.). Also, without placing conventions on description strings, there is really no place for printer Serial Number in MIB-II or hrMIB.

Both the Administrative name and the S/N need to be read-write. S/N is more controversial in this sense, because some people just tend to think of S/N as something that is "burned-in" at manufacturing and can never change. But, what if a printer needs a new controller (for instance). How do the S/N's get re-synched? R/W S/N's definitely pose a security issue.

Back to the Printer MIB

Randy is not going to worry about RFC1902 except for Optional Groups (conditional mandatory)...

Channel Group.

NSM

NSM MIB won't allow itself to be assumed by the Application MIB. The APPL MIB is in disarray and can't reach consensus. NSM is a smaller, faster group. Do we need the whole NSM? There is not much difference between Partial vs Full. For example, if you don't have a file system, you can just use a generic application name for the Path name object. We lean toward the full NSM.

Will NSM really solve our problem, which is an object that defines the Channel, the network, the queue name etc. such that an application can determine if it can print given it's present environment. It seems like the answer is, yes. What can you put in the NSM objects? Print server name, queue name. However, are we pushing the NSM definitions too much? Having NSM may allow you to expand beyond printing to

MFP. A bit fat in some areas but lot's of capability for later sophisticated stuff. We need examples and illustrations of how NSM can be used in printer context.

Advantage to NSM is adaptability to future printing in MFP. Disadvantage 20-30% of the objects will not be used initially. Action.

Alternative to NSM

Maybe we should just "fix" Channel Group and not reference NSM. If every printer would support Virtual serial stream over LPD the channel table would just need the IP port number.

Wrap-up of Channel table discussion

Should we just quit trying to fix the channel table? Move to mailing list? Should NSM be used, should we add other objects instead? Extra objects?

Straw vote regarding NSM.

1. Implement NSM

2. Keep NSM OID (port number suffix to OID) also leaves channel type in.

3. Neither 1 or 2 (RFC1759)
4. Same as 3 plus add
    - Octet string for port number
    - Create a field that applies to every Channel Type and specify (per channel type) what goes into this (port, queue name etc.).

(Can we use octet strings as a suffix for queue names for example?)

1. No votes
2. 3 votes
3. 2 votes
4. 7 votes
5. Undecided 6

Someone needs to write up proposal 4 - Bill or David K. Looks like David K.

We really need closure on this so pay attention to David's findings and vote etc.

Multiple engine issue.

EFI described one PS RIP feeding 2 "copiers" (markers). Each has console (interpreter, and each copier). How does the printer MIB address Console and how will we address Job Monitoring under these circumstances? One option is to treat them as virtual printers. Can the console on the rip be treated as a hrDevice or as a printer w/o marker?

MISC.

Tom is PMP FAQ and Issues editor. (Unanimous - Tom not in room).