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1   Subj:  Synopsis of Issue Resolution at the JMP Meeting, 5/16/97
2   From:  Tom Hastings
3   Date:  5/16/97
4   File:  iss-list.doc
5
6   Summary of the major decisions:
7
8   1. No duplication between attributes and objects.
9
10
11  2. Any attributes that are mandatory will be in the Job Status table
12  (renamed back to Job table), except the mandatory jobOwner attribute,
13  which is a string and will remain as a mandatory attribute in the
14  Attribute table.  The Attribute table has a shorter lifetime than the
15  Job table.  Also the jobOwner is a STATIC attribute, so that a
16  monitoring application is unlikely to need to get it on each poll cycle,
17  only the first.  However, the value of keeping jmJobTable entries
18  without the jobOwner only works for systems that have the
19  jmJobSubmissionID that is known to the client.
20
21
22  The 7 mandatory objects in the jmJobTable are:
23
24     jmJobState
25     jmJobKOctetsRequested
26     jmJobKOctetsProcessed  (by the interpreter)
27                    [name change from xxxCompleted]
28     jmJobImpressionsRequested
29     jmJobImpressionsCompleted (stacked)
30     jmJobSheetsCompleted (stacked)
31     jmNumberOfInterveningJobs
32
33  The mandatory attributes are:
34
35     jobOwner  (63 octet string)
36
37  The deviceAlertCode and outputBinIndex attributes will remain
38  in the jmAttributeTable and will NOT be mandatory attributes.
39
40
41  3. The multiplexed object/attribute
42  jmJobStateAssociatedValue/jobStateAssociatedValue has been deleted
43  from both tables.
44
45
46  4. Any attribute that is implemented shall be instantiated when the
47  job is instantiated.  The agent shall not add attributes as the job
48  is processed.  If the agent doesn't know the value at submit time, the
49  agent shall fill in the "unknown" value.  This allows a management app
50  that has once discovered what attributes are implemented by an agent
51  to request multiple attributes in a single PDU and not have one of them
52  bomb out because the agent had not yet put it in the table.
53
54
55  5. We reviewed the comparison with IPP (ipp-jmp.doc) and made the
56  following decisions:
57
58  a. Don't add "number-up" as an attribute - number up usage can be better
59  determined from comparing the conditionally mandatory jobPagesCompleted
60  attribute with the jmImpressionsCompleted object.
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61
62
63   b. Add "printer-resolution" with keyword/enum values from IPP which are:
64   normal, 'res-100', 'res-200', 'res-240', 'res-300', 'res-600', 'res-
65   800', 'res-1200', 'res-1800', 'res-100x200', 'res-300x600', 'res-
66   600x300', 'res-400x800', 'res-800x400', 'res-600x1200', 'res-1200x600',
67   and 'res-1800x600'.
68
69   c. Add "job-originating-host" from IPP with the same meaning that it is
70   only the end-user host, not an intermediate server host.
71
72   d. We did not agree to add the IPP job-state-message, though the JMP
73   processingMessage(11) is pretty similar.
74
75   e. The remaining issue is that the jmJobState object and the
76   jobStateReason1
77   attribute don't align with IPP's job-state and job-state-reasons
78   attributes.
79
80   In JMP, jmJobState object is mandatory, but the jobStateReasons1
81   attribute is conditionally mandatory, while in IPP, both the job-state
82   and the job-state-reasons attributes are mandatory.
83
84   JMP jmJobState object values are: other, unknown, held, pending,
85   processing, [printing was dropped to agree with IPP], needsAttention,
86   canceled, and completed.
87
88   IPP job-state attribute valeus are: unknown, pending, processing,
89   terminating, retained, completed.
90
91   IPP represents the 'held' state with various "job-state-reasons"
92   attribute values while the job is in the 'pending' state.
93
94   IPP represents the 'needsAttention' state with the
95   "job-state-reasons"='printer-stopped attribute'
96
97   IPP 'terminating' is like JMP 'canceled's states, except that IPP
98   'terminating' transitions into 'retained' then 'completed', while JMP
99   'canceled' is a final state, as is the 'completed' state.
100
101   JMP represents IPP's 'retained' state using the
102   "jobStateReasons"='jobRetained' attribute.
103
104   We decided to put this issue on the IPP agenda for this coming
105   Wednesday, 1-3pm PDT.
106
107   **
108   Since most of the JMP participants were not present at the Wed IPP call,
109   I'll send out those agreements separately for approval of the JMP
110   participants.
111   **
112
113
114   6. We made a few changes to the paper entitled: "Property Table of JMP
115   attributes" (attr-tab.doc). Then we agreed that it would be kept a
116   separate document and referred to from the web page and the FAQ.
117
118   ACTION ITEM (Tom): Update and re-post. Get web page to cite.
119
120

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121
122   7.  Here are the resolutions to the specific issues.  Issues with ????
123   were not covered and are still issues.  If you want more description of
124   the issue, see the issues.doc and issues.pdf file in:
125   ftp://ftp.pwg.org/pub/pwg/jmp/contributions/
126
127
128   Issue 61 - Need to clarify the semantics of each object and attribute
129   with respect to Configuration 1, 2, and 3.
130   ????
131
132   ISSUE 67 - Delete the three objects in the Job State table that
133   duplicate attributes? jmJobStateKOctetsCompleted,
134   jmJobStateImpressionsCompleted, and jmJobStateAssociatedValue?
135   Closed:  Delete the duplicates from the Attributes Table instead.
136
137   ISSUE 68 - Delete the Job State Group/Table all together, since all
138   objects are also duplicated as attributes?
139   Closed:  No, the Job State Table is useful to scan for jobs using Get
140   Next and select the desired columns.
141
142   ISSUE 69- Does order of assignment of JmAttributeTypeTC enums make any
143   difference?
144   Closed:  No, can't use Get Next to step through jobs.  The requester can
145   specify which attributes using Get, since the agent is now required to
146   materialize each supported attribute when the job is accepted.  So the
147   application can supply a number of Gets in a single PDU without fear of
148   a error, once the application has learned which attributes the agent
149   implements.
150
151   ISSUE 70 - Add some simple general device alert TC, instead of using the
152   Printer MIB Alert Codes.
153   Closed:  No, use the alert codes.
154
155   ISSUE 71 - Are there any attributes that need to be clarified as to
156   which apply to servers and which apply to devices and which apply to
157   either?
158   ????
159
160   ISSUE 72 - What should happen to jmGeneralNewestActiveJobIndex when all
161   the active jobs complete?
162   Closed:  the agent shall reset it to 0 and keep an internal variable for
163   the next row to assign.  That internal variable shall be persistent
164   across power cycles.  Also the agent shall find the next newest active
165   job, when the newest is canceled or completes and there are still active
166   jobs in the tables.
167
168   ISSUE 74: Collapse pairs of attributes that use Integer vs Octets valus?
169   Closed:  Yes, and allow agents to implement one, the other, or both
170   values.  Making it easy for an agent to do both will make such an
171   application that doesn't want to depend on the Printer MIB being
172   implemented, i.e., the application wants to work with all three
173   configurations.
174
175   ISSUE 75 - Should the Attribute enum values be grouped so additions
176   could be added in the appropriate section?
177   Closed:  Yes.
178
179   Issue 76 - So should jobName, jobOwner, and one of deviceNameRequested
180   or queueNameRequested be made Mandatory?
```

181 Closed: Only jobOwner is made manadatory, but it will remain in the
182 Attribute table, rather than being moved to the Job table.
183
184 Issue 77 - Should jobCompletedDateAndTime/TimeStamp be canceled time
185 too, or add jobCanceledDateAndTime/TimeStamp?
186 ????
187
188 Issue 78 - Should the "multiplexor" jobStateAssociatedValue(4) attribute
189 be removed from the Job Attribute Table and the equivalent
190 jmJobStateAssociatedValue object be removed from the Job State table?
191 Closed: Yes. The application can request each object and/or attribute
192 directly and it will fit into a single PDU (20 objects or attributes).
193 Now that attributes are required to be instantiated as the same time as
194 the job is received, whether the value is known then or not, avoids the
195 problem that a PDU with multiple gets would get aborted because the
196 agent hadn't instantiated the attribute in the table.
197
198 Issue 79 - Should the 'printing' state be combined into the 'processing'
199 state, like IPP?
200 Closed: Yes, but the other differences between JMP and IPP need
201 discussion with IPP.
202
203 Issue 80 - How handle IPP "sides" attribute which has 3 enum values?
204 Closed: Don't inculde the IPP values; the agent can map them to 1 or
205 2.
206
207 Issue 81 - Add IPP "numberUp" attribute?
208 Closed: No. Can get whether number up is being used by comparing the
209 conditionally mandatory jobPagesCompleted attribute with the
210 jmImpressionsCompleted object.
211
212 ISSUE 82 - Change the OID assignment as Jeff Case suggests so no holes?
213 Closed: Yes, including reserving an OID for traps, in case we need them
214 in the future.
215
216 ISSUE 83 - Can some attributes be deleted before the
217 jmGeneralAttributePersistence expires?
218 Closed: No. All attributes shall be instantiated at the same time and
219 deleted at the same time. Then applications can requrest any number of
220 objects and attributes in a single PDU and not get an error back on one
221 that has been implemented but hasn't been put in the table. The values
222 may change at any time.
223
224 ISSUE 84 - Change Associated Value for 'printing' state to
225 impressionsCompletedCurrentCopy(56)?
226 Closed: Since the AssociatedValue object/attribute is being deleted,
227 this issue is moot.
228
229 ISSUE 85 - Break the MIB into a monitoring and an accounting MIB?
230 Closed: No. There are too many attributes that are used for both
231 monitoring and accounting.
232
233 ISSUE 86 - Clarify jobCopiesRequrested(44) vs.
234 documentCopiesRequested(46)
235 Closed: Use jobCopiesRequested for single document jobs for both
236 systems that support only one documen t per job and ones that support
237 mujltiple documents. Only use documentCopiesRequested, when a multiple
238 document job actually specifies that individual documents are to be made
239 copies.
240

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241
242
243    2. Closed Issues - not yet reflected in the current draft The following
244    issues have been closed and have been incorporated into the Internet
245    Draft 00 and version 0.71 or earlier:
246
247    Issue 12 - What is the SNMPv1 and SNMPv2 error that an agent shall
248    return if there is no instrumentation for an object?
249
250    Closed:  There is no such SNMP error.  ALL uninstrumented objects in
251    mandatory groups of any MIB should always correctly return 'read-only'
252    static values specified in 'DEFVAL' clauses.  'DEFVAL' is a perfectly
253    good SMIv2 feature intended to cover this situation.  Returning ANY SNMP
254    error for ANY object in a mandatory group with a legal instance
255    qualifier (i.e., set of indices) is NOT legal in a literal reading of
256    the SNMPv2 Protocol spec (RFC 1905, page 10, in 'Get-Request PDU'
257    handling).  That's what 'shall implement ALL the objects in this group'
258    means!  So add DEFVAL clauses to all objects.
259
260    Issue 64 - Need to fill out Appendix A on mapping from the job
261    submission protocols to the Job Monitoring MIB for each of the three
262    configurations.
263
264    Closed:  Put into a separate document.
265    ACTION ITEM (all):  Write up your job submission protocol mapping to the
266    Job Monitoring MIB.
267
268    Issue 65 - What Appendices should remain, which should be separate
269    Internet Drafts and/or informational RFCs and which should disappear?
270
271    Closed:  No appendices for the Job Monitoring MIB, except for
272    supplemental information about the semantics of job states.  Put any
273    other information into a separate informational RFC, such as mapping to
274    ISO DPA, mapping to IPP, mapping to other job submission protocols, etc.
275
276    Issue 73 - Is there a problem with outputBinIndex being made mandatory?
277    If outputBinIndex is made mandatory, but an implementation doesn't have
278    the Printer MIB, the agent has to put 0 as the value.  Should we add one
279    more attribute: outputBinNumber, which is just a number, not an index
280    into the Printer MIB?  If we do, which should be mandatory?  Just one
281    more reason to get rid of the jmStateTable, which is forcing us to pick
282    a particular outputBin implementation and make it mandatory.  If we got
283    rid of the JobState table, we could forget about making any of the 3
284    outputBinName, outputBinNumber, or outputBinIndex attribute mandatory.
285
286    Closed:  Don't add outputBinNumber. Also keep outputBinIndex as a
287    MULTI-ROW attribute, so don't need to add multi(-3) enum value Just add
288    other( 1),  unknown( 2), and multi( 3) values and keep outputBinIndex as
289    mandatory.    This does also mean that jmAttributeValueAsInteger needs a
290    lower bound of -3, not -2.
291
292
293
294
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