

Rules for Values Allowed in Set-XXX-Attributes

Robert Herriot

The following table shows what values a Printer accepts as values for each attribute. However, a Printer MAY make a value read-only, especially if it supports only one possible value. For example, “color-supported” is “false” and read-only for a monochrome printer.

There are only a few basic themes that appear in the table:

1. Always read-only
2. Any value allowed by Printer’s *xxx*-supported according to the rules of IPP/1.1
3. Any value allowed by Reset-Printer’s *xxx*-supported according to the rules of IPP/1.1 (see Get-Reset-Printer-Attributes below)
4. Any value of the proper syntax type:
 - a. Any text(127)
 - b. Any name(127)
 - c. Any naturalLanguage
 - d. Any uri
 - e. Any boolean
 - f. Any positive integer
 - g. Any datetime
 - h. 1setOf any uri
5. Combination of #3 or #4b.

There needs to be an attribute which specifies those attributes which can have name values added to the *xxx*-supported attributes, e.g. “attributes-with-names” and its value would contain a subset of the three attributes names: “media”, “job-hold-until” and “job-sheets”.
6. A new attribute that specifies the allowed values for “job-priority-supported”, e.g. “job-priority-supported-values(1setOf (integer(1:MAX) | rangeOfInteger(1:MAX))). **ISSUE: do we mandate that all implementation support either a single read-only value or any value between 1 and 100.**

There is an operation Get-Reset-Printer-Attributes (or some other name) which returns the value that an attribute has after the Reset operation. It behaves like Get-Printer-Attributes except that the value for each attribute is the value that Get-Printer-Attributes would return after a “Reset” operation. The value of an attribute returned by Get-Printer-Attributes and Get-Reset-Printer-Attributes may differ if a client has performed a Set-Printer-Attributes operation. The Get-Reset-Printer-Attributes operation returns any Printer attribute defined in IPP/1.1 except for the following attributes which are unaffected by a “Reset” operation.

7. printer-uri-supported (1setOf uri)
8. printer-name (name(127))
9. printer-location (text(127))
10. printer-info (text(127))
11. printer-state (type1 enum)
12. printer-state-reasons (1setOf type2 keyword)
13. printer-state-message (text(MAX))
14. printer-is-accepting-jobs (boolean) (if Reset always sets this attribute to true, this attribute doesn’t belong in this list)
15. printer-up-time (integer(1:MAX)) (if Reset sets this attribute to 0, then this attribute doesn’t belong in this list)
16. printer-current-time (dateTime)
17. queued-job-count (integer(0:MAX))

Issue: Is this right list of attributes?

Issue: What do we by reset? Is it a soft reset, hard reset or something else.

JobTemplate Attributes	Values allowed for Set
job-priority (integer(1:100))	Any value allowed by Printer's xxx-supported
job-hold-until (type3 keyword name (MAX))	Any value allowed by Printer's xxx-supported
job-sheets (type3 keyword name(MAX))	Any value allowed by Printer's xxx-supported
multiple-document-handling (type2 keyword)	Any value allowed by Printer's xxx-supported
copies (integer(1:MAX))	Any value allowed by Printer's xxx-supported
finishings (1setOf type2 enum)	Any value allowed by Printer's xxx-supported
page-ranges (1setOf rangeOfInteger (1:MAX))	Any value allowed by Printer's xxx-supported
sides (type2 keyword)	Any value allowed by Printer's xxx-supported
number-up (integer(1:MAX))	Any value allowed by Printer's xxx-supported
orientation-requested (type2 enum)	Any value allowed by Printer's xxx-supported
media (type3 keyword name(MAX))	Any value allowed by Printer's xxx-supported
printer-resolution (resolution)	Any value allowed by Printer's xxx-supported
print-quality (type2 enum)	Any value allowed by Printer's xxx-supported

Job Description Attributes	Values allowed for Set
job-uri (uri)	<i>read-only</i>
job-id (integer(1:MAX))	<i>read-only</i>
job-printer-uri (uri)	<i>read-only</i>
job-more-info (uri)	<i>read-only</i>
job-name (name(MAX))	<i>read-only</i>
job-originating-user-name (name(MAX))	<i>read-only</i>
job-state (type1 enum)	<i>read-only</i>
Forwarding Servers	<i>read-only</i>
job-state-reasons (1setOf type2 keyword)	<i>read-only</i>
job-state-message (text(MAX))	<i>read-only</i>
job-detailed-status-messages (1setOf text(MAX))	<i>read-only</i>
job-document-access-errors (1setOf text(MAX))	<i>read-only</i>
number-of-documents (integer(0:MAX))	<i>read-only</i>
output-device-assigned (name(127))	<i>read-only</i>
time-at-creation (integer(MIN:MAX))	<i>read-only</i>
time-at-processing (integer(MIN:MAX))	<i>read-only</i>
time-at-completed (integer(MIN:MAX))	<i>read-only</i>
job-printer-up-time (integer(1:MAX))	<i>read-only</i>
date-time-at-creation (dateTime)	<i>read-only</i>
date-time-at-processing (dateTime)	<i>read-only</i>
date-time-at-completed (dateTime)	<i>read-only</i>
number-of-intervening-jobs (integer(0:MAX))	<i>read-only</i>
job-message-from-operator (text(127))	<i>Any text(127)</i>
job-k-octets (integer(0:MAX))	<i>read-only</i>
job-impressions (integer(0:MAX))	<i>read-only</i>
job-media-sheets (integer(0:MAX))	
job-k-octets-processed (integer(0:MAX))	<i>read-only</i>
job-impressions-completed (integer(0:MAX))	<i>read-only</i>
job-media-sheets-completed (integer(0:MAX))	<i>read-only</i>
attributes-charset (charset)	<i>read-only</i>
attributes-natural-language (naturalLanguage)	<i>Any naturalLanguage</i>

Printer JobTemplate Attributes	Values allowed for Set
job-priority-default (integer(1:100))	Any value allowed by Printer's xxx-supported
job-hold-until-default (type3 keyword name (MAX))	Any value allowed by Printer's xxx-supported
job-sheets-default (type3 keyword name(MAX))	Any value allowed by Printer's xxx-supported
multiple-document-handling-default (type2 keyword)	Any value allowed by Printer's xxx-supported
copies-default (integer(1:MAX))	Any value allowed by Printer's xxx-supported
finishings-default (1setOf type2 enum)	Any value allowed by Printer's xxx-supported
sides-default (type2 keyword)	Any value allowed by Printer's xxx-supported
number-up-default (integer(1:MAX))	Any value allowed by Printer's xxx-supported
orientation-requested-default (type2 enum)	Any value allowed by Printer's xxx-supported
media-default (type3 keyword name(MAX))	Any value allowed by Printer's xxx-supported
printer-resolution-default (resolution)	Any value allowed by Printer's xxx-supported
print-quality-default (type2 enum)	Any value allowed by Printer's xxx-supported
job-priority-supported (integer(1:100))	Need new attribute that specifies allowed values or any integer(1:100)
job-hold-until-supported (1setOf(type3 keyword name (MAX)))	Any value allowed by Reset-Printer's xxx-supported or any name
job-sheets-supported (1setOf(type3 keyword name(MAX)))	Any value allowed by Reset-Printer's xxx-supported or any name
multiple-document-handling-supported (1setOf type2 keyword)	Any value allowed by Reset-Printer's xxx-supported
copies-supported (rangeOfInteger(1:MAX))	Any value allowed by Reset-Printer's xxx-supported
finishings-supported (1setOf type2 enum)	Any value allowed by Reset-Printer's xxx-supported
page-ranges-supported (boolean)	Any boolean
sides-supported (1setOf type2 keyword)	Any value allowed by Reset-Printer's xxx-supported
number-up-supported (1setOf (integer(1:MAX) rangeOfInteger(1:MAX)))	Any value allowed by Reset-Printer's xxx-supported
orientation-requested-supported (1setOf type2 enum)	Any value allowed by Reset-Printer's xxx-supported
media-supported (1setOf (type3 keyword name(MAX)))	Any value allowed by Reset-Printer's xxx-supported
printer-resolution-supported (1setOf resolution)	Any value allowed by Reset-Printer's xxx-supported
print-quality-supported (1setOf type2 enum)	Any value allowed by Reset-Printer's xxx-supported

Printer Description Attributes	Values allowed for Set
printer-uri-supported (1setOf uri)	1setOf Any uri
uri-authentication-supported (1setOf type2 keyword)	Any value allowed by Reset-Printer's xxx-supported
uri-security-supported (1setOf type2 keyword)	Any value allowed by Reset-Printer's xxx-supported
printer-name (name(127))	Any name(127)
printer-location (text(127))	Any text(127)
printer-info (text(127))	Any text(127)
printer-more-info (uri)	Any uri
printer-driver-installer (uri)	Any uri
printer-make-and-model (text(127))	Any text(127)
printer-more-info-manufacturer (uri)	Any uri
printer-state (type1 enum)	<i>Read-only</i>
printer-state-reasons (1setOf type2 keyword)	<i>Read-only</i>
printer-state-message (text(MAX))	<i>Read-only</i>
ipp-versions-supported (1setOf type2 keyword)	<i>Read-only</i>
operations-supported (1setOf type2 enum)	Any value allowed by Reset-Printer's xxx-supported
multiple-document-jobs-supported (boolean)	Any value allowed by Reset-Printer's xxx-supported

Printer Description Attributes	Values allowed for Set
charset-configured (charset)	Any value allowed by Printer's xxx-supported
charset-supported (1setOf charset)	Any value allowed by Reset-Printer's xxx-supported
natural-language-configured (naturalLanguage)	Any value allowed by Printer's xxx-supported, i.e. xxx-supported is generated-natural-language-supported
generated-natural-language-supported (1setOf naturalLanguage)	Any value allowed by Reset-Printer's xxx-supported
document-format-default (mimeMediaType)	Any value allowed by Printer's xxx-supported
document-format-supported (1setOf mimeMediaType)	Any value allowed by Reset-Printer's xxx-supported
printer-is-accepting-jobs (boolean)	<i>Read-only</i>
queued-job-count (integer(0:MAX))	<i>Read-only</i>
printer-message-from-operator (text(127))	Any text(127)
color-supported (boolean)	Any boolean; false and read-only for B&W
reference-uri-schemes-supported (1setOf uriScheme)	Any value allowed by Reset-Printer's xxx-supported
pdl-override-supported (type2 keyword)	Any value allowed by Reset-Printer's xxx-supported
printer-up-time (integer(1:MAX))	<i>Read-only</i> or any positive integer
printer-current-time (dateTime)	Any dateTime
multiple-operation-time-out (integer(1:MAX))	any positive integer
compression-supported (1setOf type3 keyword)	Any value allowed by Reset-Printer's xxx-supported
job-k-octets-supported (rangeOfInteger(0:MAX))	Any value allowed by Reset-Printer's xxx-supported
job-impressions-supported (rangeOfInteger(0:MAX))	Any value allowed by Reset-Printer's xxx-supported
job-media-sheets-supported (rangeOfInteger(0:MAX))	Any value allowed by Reset-Printer's xxx-supported
pages-per-minute (integer(0:MAX))	<i>Read-only</i>
pages-per-minute-color (integer(0:MAX))	<i>Read-only</i>