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// ==================================================================
//  CIM_PrintServiceCapabilities
// ==================================================================
   [Experimental, Version ( "2.29.0" ),
    UMLPackagePath ( "CIM::Device::Printing" ),
    Description (
        "A single instance of Capabilities for any PrintService which "
        "corresponds to xxx-supported attributes of an IPP Printer. \n"
        "See: Section 2.1 Printer Object in IPP/1.1 (RFC 2911). \n"
        "See: Section 4.2 Job Template Attributes in IPP/1.1. \n"
        "See: Section 4.4 Printer Description Attributes in IPP/1.1. \n"
        "Note: An instance of PrintServiceCapabilities shall be "
        "associated with exactly one instance of PrintService via an "
        "instance of the CIM_ElementCapabilities association." )]

class CIM_PrintServiceCapabilities : CIM_Capabilities {

       [Description (
            "The supported charsets for human-readable text output "
            "from this instance of PrintService to network clients. \n"
            "Values shall conform to section 4.1.2 Charset Parameter "
            "in RFC 2046 and be contained in IANA Charset Registry, "
            "e.g., 'utf-8' and 'us-ascii'." ),
        MappingStrings {
            "RFC2911.IETF|Section 4.4.18 charset-supported" },
        ModelCorrespondence {
            "CIM_PrintService.Charset" }]
    string Charset[];

       [Description (
            "Specifies whether color printing is supported for the "
            "associated PrintService." ),
        MappingStrings {
            "RFC2911.IETF|Section 4.4.26 color-supported" },
        ModelCorrespondence {
            "CIM_PrintServiceCapabilities.PagesPerMinuteColor" }]
    boolean ColorSupported;

       [Description (
            "The supported compression for document data (but not "
            "operations themselves) for the associated PrintService. \n"
            "Complete standard values are in the IANA IPP Registry. \n"
            "Additional vendor or site values may also be used. \n"
            "Standard values defined in IPP/1.1 (RFC 2911) include: \n"
            "Value 'none' means no compression is supported. \n"
            "Value 'deflate' means RFC 1951 (ZIP) is supported. \n"
            "Value 'gzip' means RFC 1952 (GNU zip) is supported. \n"
            "Value 'compress' means RFC 1977 (UNIX) is supported." ),
        MappingStrings {
            "RFC2911.IETF|Section 4.4.32 compression-supported" }]
    string Compression[];

       [Description (
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55              "The supported range of copies values for any PrintJob "
56              "processed by the associated PrintService (X:Y), "
57              "e.g., '1:100' or '2:2' (double copies only)." ),
58          MappingStrings {
59              "RFC2911.IETF|Section 4.2.5 copies" },
60          ModelCorrespondence {
61              "CIM_PrintServiceSettings.Copies",
62              "CIM_PrintJob.Copies" }]
63      string Copies;
64
65         [Description (
66              "The supported named finishings values for any PrintJob "
67              "processed by the associated PrintService. \n"
68              "Complete standard values are in the IANA IPP Registry. \n"
69              "Standard values defined in IPP/1.1 (RFC 2911) include: \n"
70              "Value 'punch' means drill hole(s) in each Job copy. \n"
71              "Value 'staple' means put staple(s) in each Job copy." ),
72          MappingStrings {
73              "RFC2911.IETF|Section 4.2.6 finishings" },
74          ModelCorrespondence {
75              "CIM_PrintServiceSettings.Finishings",
76              "CIM_PrintJob.Finishings" }]
77      string Finishings[];
78
79         [Description (
80              "The supported set of IPP protocol named operations "
81              "for the associated PrintService (if any). \n"
82              "Complete standard values are in the IANA IPP Registry. \n"
83              "Standard values defined in IPP/1.1 (RFC 2911) include: \n"
84              "Value 'Print-Job' means submit a new PrintJob. \n"
85              "Value 'Cancel-Job' means cancel an existing PrintJob." ),
86          MappingStrings {
87              "RFC2911.IETF|Section 4.4.15 operations-supported" },
88          ModelCorrespondence {
89              "CIM_AccountManagementCapabilities.OperationsSupported" }]
90      string IPPOperations[];
91
92         [Description (
93              "The supported set of IPP protocol major/minor versions "
94              "for the associated PrintService (if any). \n"
95              "Complete standard values are in the IANA IPP Registry. \n"
96              "Standard values currently defined include: \n"
97              "Value '1.0' means IPP/1.0 (RFC 2566). \n"
98              "Value '1.1' means IPP/1.1 (RFC 2911). \n"
99              "Value '2.0' means IPP/2.0 (PWG 5100.12). \n"
100             "Value '2.1' means IPP/2.1 (PWG 5100.12). \n"
101             "Value '2.2' means IPP/2.2 (PWG 5100.12)." ),
102         MappingStrings {
103             "RFC2911.IETF|Section 4.4.14 ipp-versions-supported" },
104         ModelCorrespondence {
105             "CIM_SoftwareElement.Version" }]
106     string IPPVersions[];
107
108        [Description (
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109             "The supported named job hold until values for any "
110             "PrintJob processed by the associated PrintService. "
111             "That is, the named time periods when the PrintJob may be "
112             "scheduled. \n"
113             "Complete standard values are in the IANA IPP Registry. \n"
114             "Additional vendor or site values may also be used. \n"
115             "Standard values defined in IPP/1.1 (RFC 2911) include: \n"
116             "Value 'night' means local night (site-specific). \n"
117             "Value 'weekend' means local weekend (site-specific). \n"
118             "Value 'no-hold' means schedule PrintJob immediately." ),
119         MappingStrings {
120             "RFC2911.IETF|Section 4.2.2 job-hold-until" },
121         ModelCorrespondence {
122             "CIM_PrintServiceSettings.JobHoldUntil",
123             "CIM_PrintJob.JobHoldUntil" }]
124     string JobHoldUntil[];
125
126        [Description (
127             "The supported range of priority values for any PrintJob "
128             "processed by the associated PrintService (X:Y), "
129             "e.g., '1:100' or '50:50' (single medium priority only). \n"
130             "Note: Weighted scale is *opposite* to Job.Priority. \n"
131             "The value 1 indicates the lowest possible priority. \n"
132             "The value 100 indicates the highest possible priority." ),
133         MappingStrings {
134             "RFC2911.IETF|Section 4.2.1 job-priority" },
135         ModelCorrespondence {
136             "CIM_Job.Priority"
137             "CIM_PrintServiceSettings.JobPriority",
138             "CIM_PrintJob.JobPriority" }]
139     string JobPriority;
140
141        [Description (
142             "The supported named start/end sheets for any PrintJob "
143             "processed by the associated PrintService. \n"
144             "Complete standard values are in the IANA IPP Registry. \n"
145             "Additional vendor or site values may also be used. \n"
146             "Standard values defined in IPP/1.1 (RFC 2911) include: \n"
147             "Value 'none' indicates no job start/end sheets. \n"
148             "Value 'standard' indicates one or more site-specific "
149             "standard job sheets." ),
150         MappingStrings {
151             "RFC2911.IETF|Section 4.2.3 job-sheets" },
152         ModelCorrespondence {
153             "CIM_PrintServiceSettings.JobSheets",
154             "CIM_PrintJob.RequiredJobSheets" }]
155     string JobSheets[];
156
157        [Description (
158             "The supported maximum output impressions for any PrintJob "
159             "processed by the associated PrintService." ),
160         MappingStrings {
161             "RFC2911.IETF|Section 4.4.34 job-impressions-supported" },
162         ModelCorrespondence {
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            "CIM_PrintJob.ImpressionsCompleted" }]
      uint32 MaxImpressions;

         [Description (
              "The supported maximum document data size for any PrintJob "
              "processed by the associated PrintService, in "
              "units of KBytes." ),
          Units ( "KiloBytes" ),
          MappingStrings {
              "RFC2911.IETF|Section 4.4.33 job-k-octets-supported" },
          ModelCorrespondence {
              "CIM_PrintQueue.MaxJobSize"
              "CIM_PrintJob.JobSize" },
          PUnit ( "byte * 10^3" )]
      uint32 MaxJobSize;

         [Description (
              "The supported maximum output sheets for any PrintJob "
              "processed by the associated PrintService." ),
          MappingStrings {
              "RFC2911.IETF|Section 4.4.35 job-media-sheets-supported" },
          ModelCorrespondence {
              "CIM_PrintJob.SheetsCompleted" }]
      uint32 MaxSheets;

         [Description (
              "The supported multiple document handling for any PrintJob "
              "processed by the associated PrintService. \n"
              "That is, the named policy for the handling of finishing, "
              "the placement of one or more input logical pages onto "
              "output impressions, and multiple copies in a PrintJob "
              "with two or more documents. \n"
              "Complete standard values are in the IANA IPP Registry. \n"
              "Standard values defined in IPP/1.1 (RFC 2911) include: \n"
              "Value 'single-document' means apply finishing to multiple "
              "document sets (i.e., each copy of the PrintJob). \n"
              "Value 'single-document-new-sheet' means the same behavior "
              "as 'single-document' plus each document must start on a "
              "new sheet (i.e., a front side in duplex)." ),
          MappingStrings {
              "RFC2911.IETF|Section 4.2.4 multiple-document-handling" },
          ModelCorrespondence {
              "CIM_PrintServiceCapabilities.MultipleDocumentJobs",
              "CIM_PrintServiceSettings.MultipleDocumentHandling",
              "CIM_PrintJob.MultipleDocumentHandling" }]
      string MultipleDocumentHandling[];

         [Description (
              "Specifies whether multiple documents in a single Job "
              "are supported for the associated PrintService (e.g., "
              "using IPP Send-Document operations)." ),
          MappingStrings {
              "RFC2911.IETF|Section 4.4.16" },
          ModelCorrespondence {
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217             "CIM_PrintServiceCapabilities.MultipleDocumentHandling",
218             "CIM_PrintServiceSettings.MultipleDocumentHandling",
219             "CIM_PrintJob.MultipleDocumentHandling" }]
220     boolean MultipleDocumentJobs;
221
222        [Description (
223             "The supported natural languages for human-readable text "
224             "output from this instance of PrintService to network "
225             "clients. \n"
226             "Values shall conform to IETF Tags for Identifying "
227             "Languages (RFC 5646) or successor and shall be contained "
228             "in the IANA Language Subtag Registry (RFC 5645), "
229             "e.g., 'en-us' (US English) and 'fr' (French)." ),
230         MappingStrings {
231             "RFC2911.IETF|Section 4.4.20" },
232         ModelCorrespondence {
233             "CIM_PrintService.NaturalLanguage" }]
234     string NaturalLanguage[];
235
236        [Description (
237             "The supported range of input logical pages per impression "
238             "for a PrintJob processed by the associated PrintService "
239             "(X:Y), e.g., '1:9' or '1:1' (one page per impression). \n"
240             "Note: The translation, rotation, and scaling required for "
241             "values of '2' or more are implementation dependent." ),
242         MappingStrings {
243             "RFC2911.IETF|Section 4.2.9 number-up" },
244         ModelCorrespondence {
245             "CIM_PrintServiceSettings.NumberUp",
246             "CIM_PrintJob.NumberUp" }]
247     string NumberUp;
248
249        [Description (
250             "The supported orientation requested values for any "
251             "PrintJob processed by the associated PrintService. \n"
252             "Complete standard values are in the IANA IPP Registry. \n"
253             "Standard values defined in IPP/1.1 (RFC 2911) include: \n"
254             "Value 'portrait' means imaged across the short edge, "
255             "with no content rotation. \n"
256             "Value 'landscape' means imaged across the long edge, "
257             "with content rotated 90 degrees anticlockwise "
258             "from 'portrait'. \n"
259             "Value 'reverse-landscape' means imaged across the long "
260             "edge, with content rotated 90 degrees clockwise "
261             "from 'portrait'. \n"
262             "Value 'reverse-portrait' means imaged across the short "
263             "edge, with content rotated 180 degrees (opposite) "
264             "from 'portrait'." ),
265         MappingStrings {
266             "RFC2911.IETF|Section 4.2.10 orientation-requested" },
267         ModelCorrespondence {
268             "CIM_PrintServiceSettings.OrientationRequested",
269             "CIM_PrintJob.OrientationRequested" }]
270     string OrientationRequested[];
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271
272         [Description (
273              "The supported named output bins for any PrintJob "
274              "processed by the associated PrintService. \n"
275              "Complete standard values are in the IANA IPP Registry. \n"
276              "Additional vendor or site values may also be used. \n"
277              "Standard values defined in PWG 5100.2 include: \n"
278              "Value 'top' means the output bin that, when facing the "
279              "device, is best identified as the top bin. \n"
280              "Value 'side' means the output bin that, when facing the "
281              "device, is best identified as the side bin." ),
282          MappingStrings {
283              "PWG5100-2.PWG|Section 2.1 output-bin" },
284          ModelCorrespondence {
285              "CIM_PrintServiceSettings.OutputBin",
286              "CIM_PrintJob.OutputBin" }]
287      string OutputBin[];
288
289         [Description (
290              "The supported output device name(s) for any Print Job "
291              "processed by the associated PrintService." ),
292          MappingStrings {
293              "PWG5100-7.PWG|Section 4.2.1.2 output-device-supported" },
294          ModelCorrespondence {
295              "CIM_Printer.ElementName",
296              "CIM_PrintJob.OutputDevice" }]
297      string OutputDevice[];
298
299         [Description (
300              "The supported pages per minute color for any PrintJob "
301              "processed by the associated PrintService. \n"
302              "Value of zero indicates that the PrintService takes 2 or "
303              "more minutes to process a single page." ),
304          MappingStrings {
305              "RFC2911.IETF|Section 4.4.36 pages-per-minute" }]
306      uint32 PagesPerMinute;
307
308         [Description (
309              "The supported color pages per minute for any PrintJob "
310              "processed by the associated PrintService. \n"
311              "Value of zero indicates that the PrintService takes 2 or "
312              "more minutes to process a single color page." ),
313          MappingStrings {
314              "RFC2911.IETF|Section 4.4.37 pages-per-minute-color" },
315          ModelCorrespondence {
316              "CIM_PrintServiceCapabilities.ColorSupported" }]
317      uint32 PagesPerMinuteColor;
318
319         [Description (
320              "Support for input logical page ranges for any PrintJob "
321              "processed by the associated PrintService. \n"
322              "That is, support for the set of input logical pages to be "
323              "included in the output." ),
324          MappingStrings {
```

```
            "RFC2911.IETF|Section 4.2.7 page-ranges" },
         ModelCorrespondence {
            "CIM_PrintJob.PageRanges" }]
      boolean PageRanges;

         [Description (
            "Specifies whether PDL override is attempted for the "
            "associated PrintService. \n"
            "See section 15.2 of IPP/1.1 (RFC 2911) for details." ),
         MappingStrings {
            "RFC2911.IETF|Section 4.4.28 pdl-override-supported" }]
      boolean PDLOverrideAttempted;

         [Description (
            "The supported print quality values for impressions for "
            "any PrintJob processed by the associated PrintService. \n"
            "Complete standard values are in the IANA IPP Registry. \n"
            "Standard values defined in IPP/1.1 (RFC 2911) include: \n"
            "Value 'draft' means lowest print quality. \n"
            "Value 'normal' means normal print quality. \n"
            "Value 'high' means highest print quality." ),
         MappingStrings {
            "RFC2911.IETF|Section 4.2.13 print-quality" },
         ModelCorrespondence {
            "CIM_PrintServiceSettings.PrintQuality",
            "CIM_PrintJob.PrintQuality" }]
      string PrintQuality[];

         [Description (
            "The supported document reference URI schemes for Jobs "
            "submitted to this instance of PrintService, e.g., 'ftp' "
            "in an IPP Print-URI operation). \n"
            "Values shall include 'ftp' if this capabilities property "
            "is implemented by the associated PrintService." ),
         MappingStrings {
            "RFC2911.IETF|Section 4.4.27" }]
      string ReferenceURISchemes[];

         [Description (
            "The supported print resolutions for impressions for any "
            "PrintJob processed by the associated PrintService. \n"
            "That is, the horizontal by vertical resolution in pixels "
            "per inch for output impressions (sides of selected media) "
            "separated by a lowercase 'x', e.g., print resolutions "
            "of '300x300' and '600x1200'. \n"
            "Horizontal resolution is defined as resolution in the "
            "cross-feed direction, short-edge in portrait feed mode. \n"
            "Vertical resolution is defined as resolution in the feed "
            "direction, long-edge in portrait feed mode." ),
         MappingStrings {
            "RFC2911.IETF|Section 4.2.12 printer-resolution" },
         ModelCorrespondence {
            "CIM_PrintServiceSettings.Resolution",
            "CIM_PrintJob.HorizontalResolution",
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379                 "CIM_PrintJob.VerticalResolution" }]
380         string Resolution[];
381
382            [Description (
383                 "The supported imposition modes for impressions for any "
384                 "PrintJob processed by the associated PrintService. \n"
385                 "That is, the policy for imposing input logical pages "
386                 "onto output impressions (sides of selected media). \n"
387                 "Complete standard values are in the IANA IPP Registry. \n"
388                 "Standard values defined in IPP/1.1 (RFC 2911) include: \n"
389                 "Value 'one-sided' means each successive input logical "
390                 "page onto the same side of consecutive sheets of media. \n"
391                 "Value 'two-sided-long-edge' means each consecutive pair "
392                 "of input logical pages onto front and back sides of "
393                 "consecutive sheets of media, with orientation for long "
394                 "edge binding \n"
395                 "Value 'two-sided-short-edge' means each consecutive pair "
396                 "of input logical pages onto front and back sides of "
397                 "consecutive sheets of media, with orientation for short "
398                 "edge binding." ),
399             MappingStrings {
400                 "RFC2911.IETF|Section 4.2.8 sides" },
401             ModelCorrespondence {
402                 "CIM_PrintServiceSettings.Sides",
403                 "CIM_PrintJob.Sides" }]
404         string Sides[];
405
406
407   };
408
```