Definition of lpr: URLs for use with Service Location
draft-ietf-svrloc-lpr-scheme-00.txt

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Abstract

This document defined the service:lpr scheme and attributes associated with it. This template is designed to be used in conjunction with the Service Location Protocol [1], but may be used with any directory service supporting attribute/value pair registration.
1. lpr service: URL Scheme

Service Type templates are used to describe in a standard way those services which use the service: URL. The template described in this document is for the printing protocol defined in RFC 1179 [2], "Line Printer Daemon Protocol". The service type for this service: URL is lpr.

2. urlpath Definition

The URL has service specific information that specifies protocol used to access the printer, and the name of the print queue. The syntax for the urlpath for specifying this is:

\[ qname \quad = \quad 1*[ \text{DIGIT} / \text{ALPHA} ] \\
urlpath \quad = \quad "/" \ qname \]

A null value the qname assumes the default value, as defined by the print server.
3. Printer Scheme Background

The printer scheme provides for consistent registration of printer services. The attributes described within this draft are a combination of previous works conducted by the IETF Printer MIB WG, the IETF IPP WG and the Salutation Consortium.

The attributes specified are intended to facilitate both automatic as well as manual selection of services not to provide service statistics or notification. In short, the target audience of service attributes are users, either programatic or end users, where the audience of MIB statistics are network managers.
4. lpr Service Template

The lpr template, as defined below, conforms to the grammar described in “Service Templates and service: Schemes”. Please refer to [2] for detailed explanation of the syntax.

```
type = lpr
version = 0.0
language = en
description =
The lpr service template describes the attributes supported by network printing devices that support RFC 1179. These devices may be either directly connected to a network, or connected to a printer spooler that understands the protocol described in RFC 1179.

url-syntax =
  qname = 1*[ DIGIT / ALPHA ]
  urlpath = "/" qname
description = STRING
  # This attribute is a free form string that can contain any site-specific descriptive information about this printer.
make-model = STRING L
  # This attribute is a simple text string defined by the manufacturer that contains some reference to the make and model of the entity being represented to the end-user by this Printer object. The syntax shall be:
  # vendor-name "/" model-name
  # where the vendor-name is the same as that registered with IANA for use in domain names.
  # For example: "vendor-x/super-duper-printer".
location-description = STRING
  # A free form description of this printer’s physical location
  # For example: "2nd floor, near the fire escape"
location-address = STRING O
  # Physical/Postal address for this device. Useful for nailing down a group of printers in a very large corporate network. For example: 960 Main Street, San Jose, CA 95130
```
operator = STRING L M
    # A person, or persons responsible for maintaining a
    # printer on a day-to-day basis, including such tasks
    # as filling empty media trays, emptying full output trays,
    # replacing toner cartridges, clearing simple paper jams, etc.

duplex-mode = STRING M
    simplex
    # The Duplex Mode attribute indicates what duplex
    # capabilities a printer is capable of handling.
    simplex, duplex, left-binding-duplex, right-binding-duplex,
    top-binding-duplex, other

priority-queue = BOOLEAN O
    FALSE
    # TRUE indicates this printer or print queue is a priority
    # queuing device.

fonts-supported = STRING L M
    # This attribute takes on a list of fonts that are
    # supported by the printer.

media-size = STRING L M
    na-letter
    # The standard values defined for media sizes follow
    # the ISO standards.
    iso-a0, iso-a1, iso-a2, iso-a3, iso-a4, iso-a5, iso-a6,
    iso-a7, iso-a8, iso-a9, iso-a10, iso-b0, iso-b1, iso-b2,
    iso-b3, iso-b4, iso-b5, iso-b6, iso-b7, iso-b8, iso-b9,
    iso-b10, na-letter, na-legal, executive, folio, invoice,
    ledger, quarto, iso-c3, iso-c4, iso-c5, iso-c6,
    iso-designated-long, na-10x13-envelope, na-9x12-envelope,
    na-number-10-envelope, na-7x9-envelope, na-7x9-envelope,
    na-9x11-envelope, na-10x14-envelope, na-number-9-envelope,
    na-6x9-envelope, na-number-9-envelope,
    media-color = STRING M O
    unknown
    # The Media color describes the color of what is printed
    # upon. The value from the default prtInputEntry should be
    # used.
    other, unknown, white, pink, yellow, buff, goldenrod, blue,
    green, transparent

color-supported = STRING L M O
    none
max-speed = INTEGER O
# The maximum speed of the printer expressed in Speed units.
speed-units = STRING O
sheetsPerHour
# This value determines unit of speed for the Max speed.
tenThousandthsOfInchesPerHour, micrometersPerHour,
charactersPerHour, linesPerHour, impressionsPerHour,
sheetsPerHour, dotRowPerHour, feetPerHour, metersPerHour

interpreter-language = STRING M L
PSPrinter, SimpleText
# The Interpreter Language determines what forms of
# input the printer can accept and interpret.
other, PCL, HPGL, PJL, PS, IPDS, PPDS, EscapeP, Epson,
DIFF, Interpress, ISO6429, LineData, MODCA, REGIS, SCS,
SPDL, TEK4014, PDS, IGP, CodeV, DSCDSE, WPS, LN03, CCITT,
QUIC, CPAP, DecPPL, SimpleText, NPAP, DOC, imPress,
Pinwriter, NPDL, NEC201PL, Automatic, Pages, LIPS, TIFF, 
Diagnostic, PSPrinter, CaPSL, EXCL, LCDS, XES, PCLXL, ART,
TIPSI, Prescribe, LinePrinter, IDP, XJCL

paper-output = STRING M L O
standard
# This attribute describes the mode in which pages output
# are arranged.
standard, noncollated sort, collated sort, stack, unknown

media-direction = STRING O
portrait
# The orientation of the media as it is feed to the
# printer.
portrait, landscape, unknown

print-quality = STRING O
normal
# This attribute indicates a somewhat subjective evaluation
# of the overall printing quality.
draft, normal, high

resolution = STRING L M O
unknown
# Resolution defines the output quality of the printer.
# In general, this will be in dots per inch.
other, res-100, res-200, res-240, res-300, res-600, res-800, res-1200, res-1800, res-100x200, res-300x600, res-600x300, res-400x800, res-800x400, res-600x1200, res-1200x600, res-1800x600, unknown

copy-count = INTEGER 0
   -1
   # Copy count is the maximum number of copies of a document
   # that will be printed as a single job. A value of -1
   # indicates there is no limit.

max-job-size = INTEGER 0
   -1
   # Max job size is the maximum size, in Kilobytes(KB)of a
   # print job that the print queue will accept." A value of
   # -1 indicates there is no limit.

device-ID = STRING L 0
   # This attribute can be used for automatic driver download,
   # database access, or other automatic configuration tasks.
   # It might be used to generate a platform specific id such
   # as the Windows Plug-and-Play id. It could be the URI for
   # a Java class file.

finishing = STRING M 0
   none
   # This attribute identifies the finishing operations
   # supported by the printer.
   none, staple, staple-top-left, staple-bottom-left,
   staple-top-right, staple-bottom-right, saddle-stitch,
   edge-stitch, punch, cover

stacking-order = STRING 0
   unknown
   # The current state of the stacking order for the associated
   # output sub-unit. ‘firstToLast’ means that as pages are
   # output, the front of the next page is placed against the back
   # of the previous page. ‘lastToFirst’ means that as pages are
   # output, the back of the next page is placed against the front
   # of the previous page.
   unknown, First to Last, Last to First

delivery-orientation = STRING 0
   unknown
   # Orientation of#pagemostashtheeareprintedandjeketednfromter.
   unknown, face up, face down

protocol = STRING L 0 M
LPDServer
# The network protocol used to access this printer.
other, SerialPort, ParallelPort, IEEE1284Port, SCSPort,
AppleTalkPAP, LPDServer, NetwareRPrinter, NetwarePServer,
Port9100, AppSocket, FTP, TFTP, DLCLLCPort, IBM3270,
IBM5250, Fax, IEEE1394, Transport1, CPAP, PCPrint,
ServerMessageBlock, PSM, SystemObjectManager, DECLAT,
NPAP, USB, IRDA, PrintXChange, PortTCP, BidirPortTCP, UNPP,
AppleTalkADSP, PortSPX, PortHTTP, NDPS, PortIPP

service-person = STRING O M
# This attribute is a list of contact names for this printer.
# It is intended to provide information over and above that
# of the person responsible for maintaining the printer
# supplies (operator) above.

media-type = STRING O M
stationery
# The generalization of the media type available to
# be printed upon.
stationery, transparency, envelope, envelope-plain,
envelope-window, continuous-long, continuous-short,
tab-stock, multi-part-form, labels, multi-layer, unknown

media-length = INTEGER O
-1
# This value indicates the length (in the direction of the
# printer feed) of the media. The value -2 indicates that
# the length is unknown -1 means there is no limit.

media-thickness = INTEGER O
# Media size is the thickness of one piece of media. That
# media may be any of the valid media types.

media-thickness-units = STRING O
-1
# Units of measurement that describes the thickness of the media
# -1 indicates the units are unknown.
-1, .0001 inches, micrometers

media-capacity = INTEGER O
# The total amount of media that may be contained in a
# media tray. Used with the media size, the maximum size of
# a print job may be calculated. This assumes the media
# tray is full.

media-capacity-units = STRING O
-1
# The type unit used to express the media capacity.
# -1 indicates the units are unknown.
#-1, .0001 inches, micrometers, sheets, feet, meters

marker-color = STRING O L M
black
# The name of the color(s) of this colorant(ink).
other, unknown, white, red, green, blue, cyan, magenta, yellow, black
5. Attribute Origins

The following table summarizes the attributes included in the printer scheme and their origins. This table does not include attributes required in the "Service Templates and URLs" Draft.

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6. References


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draft-ietf-svrloc-service-scheme-02.txt

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in progress, March 1997.


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