Red Hat Enterprise Linux Release 9.2 Manual Pages on 'ipptoolfile.5' command

$ man ipptoolfile.5

ipptoolfile(5)   Apple Inc.   ipptoolfile(5)

NAME

    ipptoolfile - ipptool file format

DESCRIPTION

    The ipptool(1) program accepts free-form plain text files that describe

    one or more IPP requests. Comments start with the "#" character and

    continue to the end of the line. Each request is enclosed by curly

    braces, for example:

      # This is a comment

      {

        # The name of the test

        NAME "Print PDF File"

        # The request to send

        OPERATION Print-Job

        GROUP operation-attributes-tag

        ATTR charset attributes-charset utf-8

        ATTR language attributes-natural-language en

        ATTR uri printer-uri $uri

        ATTR name requesting-user-name $user

        ATTR mimeMediaType document-format application/pdf

        GROUP job-attributes-tag

        ATTR collection media-col {

          # US Letter plain paper from the "main" tray

```
    MEMBER collection media-size {

      MEMBER integer x-dimension 21590

      MEMBER integer y-dimension 27940

    }

    MEMBER integer media-top-margin 423

    MEMBER integer media-bottom-margin 423

    MEMBER integer media-left-margin 423

    MEMBER integer media-right-margin 423

    MEMBER keyword media-source "main"

    MEMBER keyword media-type "stationery"

  }

  FILE testfile.pdf

  # The response to expect

  STATUS successful-ok

  EXPECT job-id OF-TYPE integer WITH-VALUE >0

  EXPECT job-uri OF-TYPE uri

}

{

  # The name of the test

  NAME "Wait for Job to Complete"

  # The request to send

  OPERATION Get-Job-Attributes

  GROUP operation-attributes-tag

  ATTR charset attributes-charset utf-8

  ATTR language attributes-natural-language en

  ATTR uri printer-uri $uri

  ATTR integer job-id $job-id

  ATTR name requesting-user-name $user

  # The response to expect

  STATUS successful-ok

  EXPECT job-id OF-TYPE integer WITH-VALUE $job-id

  EXPECT job-uri OF-TYPE uri

  EXPECT job-state OF-TYPE enum WITH-VALUE >5 REPEAT-NO-MATCH
```

EXPECT job-originating-user-name OF-TYPE name WITH-VALUE "$user"

Show the job state until completed...

DISPLAY job-state

DISPLAY job-state-reasons

}

TOP-LEVEL DIRECTIVES

The following directives can be used outside of a test:

{ test }

Defines a test.

DEFINE variable-name value

Defines the named variable to the given value. This is equivalent

to specifying -d variable-name=value on the ipptool(8) command-

line.

DEFINE-DEFAULT variable-name value

Defines the named variable to the given value if it does not al?

ready have a value.

FILE-ID "identifier"

Specifies an identifier string for the current file.

IGNORE-ERRORS yes

IGNORE-ERRORS no

Specifies whether, by default, ipptool(8) will ignore errors and

continue with subsequent tests.

INCLUDE "filename"

INCLUDE <filename>

Includes another test file. The first form includes a file rela?

tive to the current test file, while the second form includes a

file from the ipptool(8) include directory.

INCLUDE-IF-DEFINED name "filename"

INCLUDE-IF-DEFINED name <filename>

Includes another test file if the named variable is defined. The

first form includes a file relative to the current test file,

while the second form includes a file from the ipptool(8) include

directory.

INCLUDE-IF-NOT-DEFINED name "filename"

INCLUDE-IF-NOT-DEFINED name <filename>

Includes another test file if the named variable is not defined.

The first form includes a file relative to the current test file,

while the second form includes a file from the ipptool(8) include

directory.

SKIP-IF-DEFINED variable-name

SKIP-IF-NOT-DEFINED variable-name

Specifies that the remainder of the test file should be skipped

when the variable is or is not defined.

STOP-AFTER-INCLUDE-ERROR no

STOP-AFTER-INCLUDE-ERROR yes

Specifies whether tests will be stopped after an error in an in?

cluded file.

TRANSFER auto

Specifies that tests will, by default, use "Transfer-Encoding:

chunked" for requests with attached files and "Content-Length:"

for requests without attached files.

TRANSFER chunked

Specifies that tests will, by default, use the HTTP/1.1 "Transfer-

Encoding: chunked" header. This is the default and is equivalent

to specifying -c on the ipptool(8) command-line. Support for chun?

ked requests is required for conformance with all versions of IPP.

TRANSFER length

Specifies that tests will, by default, use the HTTP/1.0 "Content-

Length:" header. This is equivalent to specifying -l on the ipp?

tool(8) command-line. Support for content length requests is re?

quired for conformance with all versions of IPP.

VERSION 1.0

VERSION 1.1

VERSION 2.0

VERSION 2.1

VERSION 2.2

Specifies the default IPP version number to use for the tests that follow.

TEST DIRECTIVES

The following directives are understood within a test:

ATTR out-of-band-tag attribute-name

ATTR tag attribute-name value(s)

Adds an attribute to the test request. Out-of-band tags (admin-define, delete-attribute, no-value, not-settable, unknown, unsup?ported) have no value. Values for other tags are delimited by the comma (",") character - escape commas using the "\" character. Common attributes and values are listed in the IANA IPP registry - see references below.

ATTR collection attribute-name { MEMBER tag member-name value(s) ... }
[... ,{ ... }]

Adds a collection attribute to the test request. Member at?tributes follow the same syntax as regular attributes and can themselves be nested collections. Multiple collection values can be supplied as needed, separated by commas.

COMPRESSION deflate

COMPRESSION gzip

COMPRESSION none

Uses the specified compression on the document data following the attributes in a Print-Job or Send-Document request.

DELAY seconds[,repeat-seconds]

Specifies a delay in seconds before this test will be run. If two values are specified, the second value is used as the delay be?tween repeated tests.

DISPLAY attribute-name

Specifies that value of the named attribute should be output as part of the test report.

EXPECT attribute-name [predicate(s)]

EXPECT ?attribute-name predicate(s)

EXPECT !attribute-name

Specifies that the response must/may/must not include the named
attribute. Additional requirements can be added as predicates -
see the "EXPECT PREDICATES" section for more information on predi?
cates. Attribute names can specify member attributes by separating
the attribute and member names with the forward slash, for example
"media-col/media-size/x-dimension".

EXPECT-ALL attribute-name [predicate(s)]

EXPECT-ALL ?attribute-name predicate(s)

Specifies that the response must/may include the named attribute
and that all occurrences of that attribute must match the given
predicates.

FILE filename

Specifies a file to include at the end of the request. This is
typically used when sending a test print file.

GROUP tag

Specifies the group tag for subsequent attributes in the request.

IGNORE-ERRORS yes

IGNORE-ERRORS no

Specifies whether ipptool(8) will ignore errors and continue with
subsequent tests.

NAME "literal string"

Specifies the human-readable name of the test.

OPERATION operation-code

Specifies the operation to be performed.

PAUSE "message"

Displays the provided message and waits for the user to press a
key to continue.

REQUEST-ID number

REQUEST-ID random

Specifies the request-id value to use in the request, either an
integer or the word "random" to use a randomly generated value
(the default).

RESOURCE path

Specifies an alternate resource path that is used for the HTTP

POST request. The default is the resource from the URI provided to

the ipptool(8) program.

SKIP-IF-DEFINED variable-name

SKIP-IF-NOT-DEFINED variable-name

Specifies that the current test should be skipped when the vari?

able is or is not defined.

SKIP-PREVIOUS-ERROR yes

SKIP-PREVIOUS-ERROR no

Specifies whether ipptool(8) will skip the current test if the

previous test resulted in an error/failure.

STATUS status-code [predicate]

Specifies an expected response status-code value. Additional re?

quirements can be added as predicates - see the "STATUS PREDI?

CATES" section for more information on predicates.

TEST-ID "identifier"

Specifies an identifier string for the current test.

TRANSFER auto

Specifies that this test will use "Transfer-Encoding: chunked" if

it has an attached file or "Content-Length:" otherwise.

TRANSFER chunked

Specifies that this test will use the HTTP/1.1 "Transfer-Encoding:

chunked" header.

TRANSFER length

Specifies that this test will use the HTTP/1.0 "Content-Length:"

header.

VERSION 1.0

VERSION 1.1

VERSION 2.0

VERSION 2.1

VERSION 2.2

Specifies the IPP version number to use for this test.

EXPECT PREDICATES

The following predicates are understood following the EXPECT test di?

rective:

COUNT number

Requires the EXPECT attribute to have the specified number of val?

ues.

DEFINE-MATCH variable-name

Defines the variable to "1" when the EXPECT condition matches. A

side-effect of this predicate is that this EXPECT will never fail

a test.

DEFINE-NO-MATCH variable-name

Defines the variable to "1" when the EXPECT condition does not

match. A side-effect of this predicate is that this EXPECT will

never fail a test.

DEFINE-VALUE variable-name

Defines the variable to the value of the attribute when the EXPECT

condition matches. A side-effect of this predicate is that this

EXPECT will never fail a test.

IF-DEFINED variable-name

Makes the EXPECT conditions apply only if the specified variable

is defined.

IF-NOT-DEFINED variable-name

Makes the EXPECT conditions apply only if the specified variable

is not defined.

IN-GROUP tag

Requires the EXPECT attribute to be in the specified group tag.

OF-TYPE tag[|tag,...]

Requires the EXPECT attribute to use one of the specified value

tag(s).

REPEAT-LIMIT number

Specifies the maximum number of times to repeat if the REPEAT-

MATCH or REPEAT-NO-MATCH predicate is specified. The default value

is 1000.

REPEAT-MATCH

REPEAT-NO-MATCH

    Specifies that the current test should be repeated when the EXPECT

    condition matches or does not match.

SAME-COUNT-AS attribute-name

    Requires the EXPECT attribute to have the same number of values as

    the specified parallel attribute.

WITH-ALL-HOSTNAMES "literal string"

WITH-ALL-HOSTNAMES "/regular expression/"

    Requires that all URI values contain a matching hostname.

WITH-ALL-RESOURCES "literal string"

WITH-ALL-RESOURCES "/regular expression/"

    Requires that all URI values contain a matching resource (includ?

    ing leading /).

WITH-ALL-SCHEMES "literal string"

WITH-ALL-SCHEMES "/regular expression/"

    Requires that all URI values contain a matching scheme.

WITH-ALL-VALUES "literal string"

    Requires that all values of the EXPECT attribute match the literal

    string. Comparisons are case-sensitive.

WITH-ALL-VALUES <number

WITH-ALL-VALUES =number

WITH-ALL-VALUES >number

WITH-ALL-VALUES number[,...,number]

    Requires that all values of the EXPECT attribute match the num?

    ber(s) or numeric comparison. When comparing rangeOfInteger val?

    ues, the "<" and ">" operators only check the upper bound of the

    range.

WITH-ALL-VALUES "false"

WITH-ALL-VALUES "true"

    Requires that all values of the EXPECT attribute match the boolean

    value given.

WITH-ALL-VALUES "/regular expression/"

    Requires that all values of the EXPECT attribute match the regular

expression, which must conform to the POSIX regular expression syntax. Comparisons are case-sensitive.

WITH-HOSTNAME "literal string"

WITH-HOSTNAME "/regular expression/"

Requires that at least one URI value contains a matching hostname.

WITH-RESOURCE "literal string"

WITH-RESOURCE "/regular expression/"

Requires that at least one URI value contains a matching resource (including leading /).

WITH-SCHEME "literal string"

WITH-SCHEME "/regular expression/"

Requires that at least one URI value contains a matching scheme.

WITH-VALUE "literal string"

Requires that at least one value of the EXPECT attribute matches the literal string. Comparisons are case-sensitive.

WITH-VALUE <number

WITH-VALUE =number

WITH-VALUE >number

WITH-VALUE number[,...,number]

Requires that at least one value of the EXPECT attribute matches the number(s) or numeric comparison. When comparing rangeOfInteger values, the "<" and ">" operators only check the upper bound of the range.

WITH-VALUE "false"

WITH-VALUE "true"

Requires that at least one value of the EXPECT attribute matches the boolean value given.

WITH-VALUE "/regular expression/"

Requires that at least one value of the EXPECT attribute matches the regular expression, which must conform to the POSIX regular expression syntax. Comparisons are case-sensitive.

WITH-VALUE-FROM attribute-name

Requires that the value(s) of the EXPECT attribute matches the

value(s) in the specified attribute. For example, "EXPECT job-sheets WITH-VALUE-FROM job-sheets-supported" requires that the "job-sheets" value is listed as a value of the "job-sheets-sup‐ported" attribute.

STATUS PREDICATES

The following predicates are understood following the STATUS test di‐rective:

DEFINE-MATCH variable-name

Defines the variable to "1" when the STATUS matches. A side-effect of this predicate is that this STATUS will never fail a test.

DEFINE-NO-MATCH variable-name

Defines the variable to "1" when the STATUS does not match. A side-effect of this predicate is that this STATUS will never fail a test.

IF-DEFINED variable-name

Makes the STATUS apply only if the specified variable is defined.

IF-NOT-DEFINED variable-name

Makes the STATUS apply only if the specified variable is not de‐fined.

REPEAT-LIMIT number

Specifies the maximum number of times to repeat. The default value is 1000.

REPEAT-MATCH

REPEAT-NO-MATCH

Specifies that the current test should be repeated when the re‐sponse status-code matches or does not match the value specified by the STATUS directive.

OPERATION CODES

Operation codes correspond to the hexadecimal numbers (0xHHHH) and names from RFC 8011 and other IPP extension specifications. Here is a complete list of names supported by ipptool(8):

Activate-Printer

CUPS-Accept-Jobs

CUPS-Add-Modify-Class

CUPS-Add-Modify-Printer

CUPS-Authenticate-Job

CUPS-Delete-Class

CUPS-Delete-Printer

CUPS-Get-Classes

CUPS-Get-Default

CUPS-Get-Devices

CUPS-Get-Document

CUPS-Get-PPD

CUPS-Get-PPDs

CUPS-Get-Printers

CUPS-Move-Job

CUPS-Reject-Jobs

CUPS-Set-Default

Cancel-Current-Job

Cancel-Job

Cancel-Jobs

Cancel-My-Jobs

Cancel-Subscription

Close-Job

Create-Job

Create-Job-Subscriptions

Create-Printer-Subscriptions

Deactivate-Printer

Disable-Printer

Enable-Printer

Get-Job-Attributes

Get-Jobs

Get-Notifications

Get-Printer-Attributes

Get-Printer-Support-Files

Get-Printer-Supported-Values

Get-Subscription-Attributes

Get-Subscriptions

Hold-Job

Hold-New-Jobs

Identify-Printer

Pause-Printer

Pause-Printer-After-Current-Job

Print-Job

Print-URI

Promote-Job

Purge-Jobs

Release-Held-New-Jobs

Release-Job

Renew-Subscription

Reprocess-Job

Restart-Job

Restart-Printer

Resubmit-Job

Resume-Job

Resume-Printer

Schedule-Job-After

Send-Document

Send-Hardcopy-Document

Send-Notifications

Send-URI

Set-Job-Attributes

Set-Printer-Attributes

Shutdown-Printer

Startup-Printer

Suspend-Current-Job

Validate-Document

Validate-Job

STATUS CODES

Status codes correspond to the hexadecimal numbers (0xHHHH) and names
from RFC 8011 and other IPP extension specifications. Here is a com‐
plete list of the names supported by ipptool(8):

client-error-account-authorization-failed

client-error-account-closed

client-error-account-info-needed

client-error-account-limit-reached

client-error-attributes-not-settable

client-error-attributes-or-values-not-supported

client-error-bad-request

client-error-charset-not-supported

client-error-compression-error

client-error-compression-not-supported

client-error-conflicting-attributes

client-error-document-access-error

client-error-document-format-error

client-error-document-format-not-supported

client-error-document-password-error

client-error-document-permission-error

client-error-document-security-error

client-error-document-unprintable-error

client-error-forbidden

client-error-gone

client-error-ignored-all-notifications

client-error-ignored-all-subscriptions

client-error-not-authenticated

client-error-not-authorized

client-error-not-found

client-error-not-possible

client-error-print-support-file-not-found

client-error-request-entity-too-large

client-error-request-value-too-long

client-error-timeout

client-error-too-many-subscriptions

client-error-uri-scheme-not-supported

cups-error-account-authorization-failed

cups-error-account-closed

cups-error-account-info-needed

cups-error-account-limit-reached

cups-see-other

redirection-other-site

server-error-busy

server-error-device-error

server-error-internal-error

server-error-job-canceled

server-error-multiple-document-jobs-not-supported

server-error-not-accepting-jobs

server-error-operation-not-supported

server-error-printer-is-deactivated

server-error-service-unavailable

server-error-temporary-error

server-error-version-not-supported

successful-ok

successful-ok-but-cancel-subscription

successful-ok-conflicting-attributes

successful-ok-events-complete

successful-ok-ignored-notifications

successful-ok-ignored-or-substituted-attributes

successful-ok-ignored-subscriptions

successful-ok-too-many-events

TAGS

Value and group tags correspond to the names from RFC 8011 and other

IPP extension specifications. Here are the group tags:

document-attributes-tag

event-notification-attributes-tag

job-attributes-tag

operation-attributes-tag

printer-attributes-tag

subscription-attributes-tag

unsupported-attributes-tag

Here are the value tags:

admin-define

boolean

charset

collection

dateTime

default

delete-attribute

enum

integer

keyword

mimeMediaType

nameWithLanguage

nameWithoutLanguage

naturalLanguage

no-value

not-settable

octetString

rangeOfInteger

resolution

textWithLanguage

textWithoutLanguage

unknown

unsupported

uri

uriScheme

VARIABLES

The ipptool(8) program maintains a list of variables that can be used

in any literal string or attribute value by specifying "$variable-

name". Aside from variables defined using the -d option or DEFINE di?

rective, the following pre-defined variables are available:

$$ Inserts a single "$" character.

$ENV[name]

   Inserts the value of the named environment variable, or an empty

   string if the environment variable is not defined.

$date-current

   Inserts the current date and time using the ISO-8601 format

   ("yyyy-mm-ddThh:mm:ssZ").

$date-start

   Inserts the starting date and time using the ISO-8601 format

   ("yyyy-mm-ddThh:mm:ssZ").

$filename

   Inserts the filename provided to ipptool(8) with the -f option.

$filetype

   Inserts the MIME media type for the filename provided to ipp?

   tool(8) with the -f option.

$hostname

   Inserts the hostname from the URI provided to ipptool(8).

$job-id

   Inserts the last "job-id" attribute value returned in a test re?

   sponse or 0 if no "job-id" attribute has been seen.

$job-uri

   Inserts the last "job-uri" attribute value returned in a test re?

   sponse or an empty string if no "job-uri" attribute has been seen.

$notify-subscription-id

   Inserts the last "notify-subscription-id" attribute value returned

   in a test response or 0 if no "notify-subscription-id" attribute

   has been seen.

$port

   Inserts the port number from the URI provided to ipptool(8).

$resource

   Inserts the resource path from the URI provided to ipptool(8).

$scheme

   Inserts the scheme from the URI provided to ipptool(8).

$uri Inserts the URI provided to ipptool(8).

$uriuser

   Inserts the username from the URI provided to ipptool(8), if any.

$user

   Inserts the current user's login name.

SEE ALSO

   ipptool(1), IANA IPP Registry (http://www.iana.org/assignments/ipp-reg?

   istrations),   PWG   Internet   Printing   Protocol   Workgroup

   (http://www.pwg.org/ipp), RFC 8011 (http://tools.ietf.org/html/rfc8011)

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