

**NAME**

ippfind – find internet printing protocol printers

**SYNOPSIS**

```
ippfind [ options ] regtype[,subtype][.domain.] ... [ expression
... ]
ippfind [ options ] name[.regtype[.domain.]] ... [ expression
... ]
ippfind --help
ippfind --version
```

**DESCRIPTION**

**ippfind** finds services registered with a DNS server or available through local devices. Its primary purpose is to find IPP printers and show their URIs, show their current status, or run commands.

**REGISTRATION TYPES**

**ippfind** supports the following registration types:

```
_http._tcp
    HyperText Transport Protocol (HTTP, RFC 2616)

_https._tcp
    Secure HyperText Transport Protocol (HTTPS, RFC 2818)

_ipp._tcp
    Internet Printing Protocol (IPP, RFC 2911)

_ipps._tcp
    Secure Internet Printing Protocol (IPPS, draft)

_printer._tcp
    Line Printer Daemon (LPD, RFC 1179)
```

**EXPRESSIONS**

**ippfind** supports expressions much like the **find**(1) utility. However, unlike **find**(1), **ippfind** uses POSIX regular expressions instead of shell filename matching patterns. If **--exec**, **-l**, **--ls**, **-p**, **--print**, **--print-name**, **-q**, **--quiet**, **-s**, or **-x** is not specified, **ippfind** adds **--print** to print the service URI of anything it finds. The following expressions are supported:

```
-d regex
--domain regex
    True if the domain matches the given regular expression.

--false
    Always false.

-h regex
--host regex
    True if the hostname matches the given regular expression.

-l
--ls
    Lists attributes returned by Get-Printer-Attributes for IPP printers and traditional find "-ls" output for HTTP URLs. The result is true if the URI is accessible, false otherwise.

--local
    True if the service is local to this computer.

-N name
--literal-name name
    True if the service instance name matches the given name.
```

**-n** *regex*  
**--name** *regex*  
     True if the service instance name matches the given regular expression.  
**--path** *regex*  
     True if the URI resource path matches the given regular expression.  
**-P** *number*[-*number*]  
**--port** *number*[-*number*]  
     True if the port matches the given number or range.  
**-p**  
**--print**  
     Prints the URI if the result of previous expressions is true. The result is always true.  
**-q**  
**--quiet**  
     Quiet mode – just returns the exit codes below.  
**-r**  
**--remote**  
     True if the service is not local to this computer.  
**-s**  
**--print-name**  
     Prints the service instance name if the result of previous expressions is true. The result is always true.  
**--true**  
     Always true.  
**-t** *key*  
**--txt** *key*  
     True if the TXT record contains the named key.  
**--txt-key** *regex*  
     True if the TXT record contains the named key and matches the given regular expression.  
**-u** *regex*  
**--uri** *regex*  
     True if the URI matches the given regular expression.  
**-x** *utility* [ *argument* ... ] ;  
**--exec** *utility* [ *argument* ... ] ;  
     Executes the specified program if the current result is true. "{foo}" arguments are replaced with the corresponding value – see SUBSTITUTIONS below.  
 Expressions may also contain modifiers:  
 ( *expression* )  
     Group the result of expressions.  
 ! *expression*  
**--not** *expression*  
     Unary NOT of the expression.  
*expression expression*

*expression* **--and** *expression*

Logical AND of expressions.

*expression* **--or** *expression*

Logical OR of expressions.

## SUBSTITUTIONS

The substitutions for "{foo}" in *-e* and *--exec* are:

**{service\_domain}**

Domain name, e.g., "example.com.", "local.", etc.

**{service\_hostname}**

Fully-qualified domain name, e.g., "printer.example.com.", "printer.local.", etc.

**{service\_name}**

Service instance name, e.g., "My Fine Printer".

**{service\_port}**

Port number for server, typically 631 for IPP and 80 for HTTP.

**{service\_regtype}**

DNS-SD registration type, e.g., "\_ipp.\_tcp", "\_http.\_tcp", etc.

**{service\_scheme}**

URI scheme for DNS-SD registration type, e.g., "ipp", "http", etc.

**{}**

**{service\_uri}**

URI for service, e.g., "ipp://printer.local.ipp/print", "http://printer.local./", etc.

**{txt\_key}**

Value of TXT record *key* (lowercase).

## OPTIONS

**ippfind** supports the following options:

**--help**

Show program help.

**--version**

Show program version.

**-4** Use IPv4 when listing.

**-6** Use IPv6 when listing.

**-T** *seconds*

Specify find timeout in seconds. If 1 or less, **ippfind** stops as soon as it thinks it has found everything. The default timeout is 1 second.

**-V** *version*

Specifies the IPP version when listing. Supported values are "1.1", "2.0", "2.1", and "2.2".

## EXIT STATUS

**ippfind** returns 0 if the result for all processed expressions is true, 1 if the result of any processed expression is false, 2 if browsing or any query or resolution failed, 3 if an undefined option or invalid expression was specified, and 4 if it ran out of memory.

## ENVIRONMENT

When executing a program, **ippfind** sets the following environment variables for the matching service registration:

**IPPFIND\_SERVICE\_DOMAIN**

Domain name, e.g., "example.com.", "local.", etc.

**IPPFIND\_SERVICE\_HOSTNAME**

Fully-qualified domain name, e.g., "printer.example.com.", "printer.local.", etc.

**IPPFIND\_SERVICE\_NAME**

Service instance name, e.g., "My Fine Printer".

**IPPFIND\_SERVICE\_PORT**

Port number for server, typically 631 for IPP and 80 for HTTP.

**IPPFIND\_SERVICE\_REGTYPE**

DNS-SD registration type, e.g., "\_ipp.\_tcp", "\_http.\_tcp", etc.

**IPPFIND\_SERVICE\_SCHEME**

URI scheme for DNS-SD registration type, e.g., "ipp", "http", etc.

**IPPFIND\_SERVICE\_URI**

URI for service, e.g., "ipp://printer.local/ipp/print", "http://printer.local./", etc.

**IPPFIND\_TXT\_KEY**

Values of TXT record *KEY* (uppercase).

**EXAMPLES**

To show the status of all registered IPP printers on your network, run:

```
ippfind --ls
```

Similarly, to send a PostScript test page to every PostScript printer, run:

```
ippfind --txt-pdl application/postscript --exec ipptool  
-f onepage-letter.ps '{}' print-job.test \;
```

**SEE ALSO**

**ipptool(1)**

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