

**NAME**

wolpd – Wake-On-LAN proxy daemon

**SYNOPSIS**

**wolpd** [*OPTION*]...

**DESCRIPTION**

Wake-on-LAN (WOL) is an Ethernet computer networking standard that allows a computer to be turned on or woken up by a network message. The message is usually sent by a simple program executed on another computer on the local area network.

WOL packets are not forwarded by routers, which is where **wolpd** comes into play, by proxying WOL packets from one network to another.

WOL packets can be sent either over UDP transport or in a raw Ethernet frame. **wolpd** can listen to one or both kinds on an *input interface* and forward them to an *output interface* which must be specified respectively with **--input-interface** and **--output-interface** options.

By default, **wolpd** only listens for Ethernet frames with Ethertype *0x0842* which is the standard Ethertype for raw WOL packets. The Ethertype can be changed with the **--ethertype** option. Listening for raw Ethernet frames can also be disabled with the **--no-ether** option.

**wolpd** can also listen for UDP-encapsulated WOL packets if the **--udp** or **--port** options are used. Just using **--udp** will turn on listening to UDP packets on **any** UDP port. Using the **--port** option (with or without the **--udp** option) will turn on UDP listening only on the given UDP port.

**OPTIONS**

- C, --chroot=DIRECTORY**  
chroot(2) to DIRECTORY.
- e, --ethertype=ETHERTYPE**  
Listen for WOL packets with given ethernet type. (Default: 0x0842)
- E, --no-ether**  
Do not listen for raw ethernet WOL packets.
- f, --foreground**  
Don't fork to background.
- h, --help**  
Print this help, then exit.
- i, --input-interface=IFACE**  
Source network interface.
- o, --output-interface=IFACE**  
Destination network interface.
- p, --port=PORT**  
UDP port used for WOL packets. Implies **--udp**.
- P, --promiscuous**  
Put the input interface in promiscuous mode.
- s, --setuid=USER**  
Change the process user if to USER after initialization. (Default: keep running as root)
- u, --udp**  
Listens to UDP WOL packets. Unless a PORT is specified with **--port**, listens to **\*all\*** UDP ports.

**-U, --no-udp**  
Do not listen for WOL packets on UDP. (default)

**-v, --version**  
Print version number, then exit.

## PROMISCUOUS MODE

The **--promiscuous** option sets the input interface specified with **--input-interface** in promiscuous mode. This is only necessary:

- when listening for raw Ethernet WOL frames, if unicast WOL packets are used.
- when listening for UDP WOL packets, if the machine running **wolpd** is not the default router on the network.

If the WOL packets don't get forwarded by **wolpd**, you may want to try the **--promiscuous** option.

## SECURITY

For best security, run **wolpd** with both **--chroot** and **--setuid** options.

Create an empty directory (eg. `/var/empty/wolpd`), owned by root.

Create a dedicated **wolpd** user and group.

Then run **wolpd** with:

```
wolpd --chroot /var/empty/wolpd --setuid wolpd [other-options]
```

**wolpd** logs every packet it forwards to **syslog(3)** (or to standard error instead if running in the **--foreground**) and the messages look like:

```
wolpd[pid]: magic raw Ethernet packet from XX:XX:XX:XX:XX:XX to
YY:YY:YY:YY:YY:YY WOL ZZ:ZZ:ZZ:ZZ:ZZ:ZZ
```

```
wolpd[pid]: magic UDP packet from XX:XX:XX:XX:XX:XX/xx.xx.xx.xx port sport
to YY:YY:YY:YY:YY:YY/yy.yy.yy.yy port dport WOL ZZ:ZZ:ZZ:ZZ:ZZ:ZZ
```

where:

- `XX:XX:XX:XX:XX:XX` is the source Ethernet address of the received WOL frame,
- `YY:YY:YY:YY:YY:YY` is the destination Ethernet address of the received WOL frame,
- `xx.xx.xx.xx` and `sport` are the source IP address and UDP port of the received WOL frame,
- `yy.yy.yy.yy` and `dport` are the destination IP address and UDP port of the received WOL frame,
- `ZZ:ZZ:ZZ:ZZ:ZZ:ZZ` is Ethernet address of the host to be awoken (the WOL payload field).

Errors are also logged to **syslog(3)** (or to standard error instead if running in the **--foreground**).

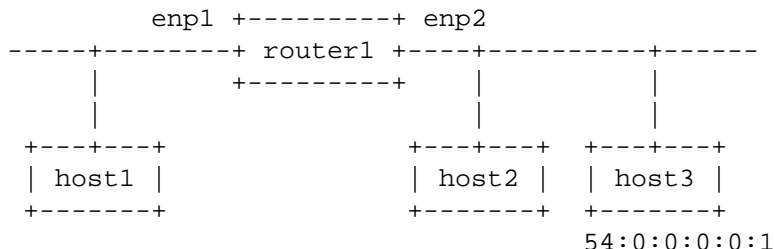
## PERFORMANCE

**wolpd** uses socket filters (BPF) on its input raw socket(s) to inspect the frames and validates the full WOL payload. Only valid WOL frames are returned to user-space, and the invalid ones are discarded in the kernel.

However note that using the **--promiscuous** option may negatively affect networking performance.

## EXAMPLES

Assuming the following network:



You do not need **wolpd** to send WOL packets from host2 to host3 since they are on the same network. But **wolpd** is needed if you want to sent WOL packets from host1 to host3:

**wolpd --input-interface enp1 --output-interface enp2**

will forward broadcast raw Ethernet WOL frames with the standard WOL Ethertype of *0x0842* from enp1 to enp2. You can then WOL host3 from host1 by running on host1:

**ether-wake -b 54:0:0:0:0:1**

Note that **-b** is required when invoking ether-wake since **wolpd** is not running in promiscuous mode.

**wolpd --input-interface enp1 --output-interface enp2 --promiscuous**

will forward any raw Ethernet WOL frames with the standard WOL Ethertype of *0x0842* from enp1 to enp2. You can then WOL host3 from host1 by running on host1:

**ether-wake 54:0:0:0:0:1**

**wolpd --input-interface enp1 --output-interface enp2 --ethertype 0x8088**

will forward any Ethernet WOL frames with the custom Ethertype of *0x8088* from enp1 to enp2.

**wolpd --input-interface enp1 --output-interface enp2 --no-ether --udp**

will forward any WOL UDP packet on *any* UDP port from enp1 to enp2.

**wolpd --input-interface enp1 --output-interface enp2 --no-ether --port 9**

will forward any WOL UDP packet on port *9* from enp1 to enp2.

**wolpd --input-interface enp1 --output-interface enp2 --port 9**

will forward both broadcast raw Ethernet WOL frames with the standard WOL Ethertype of *0x0842* and WOL UDP packets on port *9* from enp1 to enp2.

## REPORTING BUGS

Report bugs on the GitHub Issues page (<https://github.com/F-i-f/wolpd/issues>).

## COPYRIGHT

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## SEE ALSO

**ether-wake(8)**.