

# How To Enable Wake On LAN

- Operation confirmed with
  - **Ubuntu 18.10 with 4.18 kernel.**
  - **Manjaro 18.0 with 4.19 kernel.**
- Confirmed version of Realtek LAN Driver is **8.046.00.**

You can make WOL enabled on both two LAN port.

This guide helps you to set WOL on your system.

## Update Your System

It is recommended to update your system before following the guides.

### Ubuntu or Debian Based Linux DISTRO

```
# Upgrade system packages
$ sudo apt update && sudo apt full-upgrade

# Install packages for build a module and working with WOL
$ sudo apt install build-essential libelf-dev ethtool
```

### Manjaro or Arch Linux Based Linux DISTRO

```
# Upgrade system packages
$ sudo pacman -Syu

# Install packages for build a module and working with WOL
# Press "Enter" to install all the packages when it prompts
$ sudo pacman -S base-devel linux419-headers ethtool
```

Especially in Arch Linux distros, you should check TLP options and have to set **WOL\_DISABLE** option to **N**.

```
$ sudo vi /etc/default/tlp
```

```
...
WOL_DISABLE=N
...
```

Then reboot your system.

```
$ reboot
```

## Download The Latest Realtek RTL8111G LAN Driver

[Download the latest Realtek LAN driver.](#)

Download **LINUX driver for kernel up to 4.15**. It isn't downloaded directly on that page, you should enter your email address to get a temporary download page.

The driver described as "for kernel up to 4.15", but this works on 4.18 or 4.19. Maybe works on the future kernels as well.

Then extract that.

**Kernel 5.0 has the bug fix. So you don't need to adopt the Realtek's driver anymore.**

## Build And Install The Driver

Open a Terminal and go to the extracted directory.

Then enter the commands below.

```
$ sudo ./autorun.sh
```

Provided script file unloads the current module and build, install, load the new module automatically.

---

## Manjaro or Arch Linux Based Linux DISTRO

If you use Arch Linux based system, you should uninstall currently exist old module to apply the new r8168 driver.

```
# Remove exist old r8168 module  
$ sudo pacman -R linux419-r8168
```

Then reboot your system.

```
$ reboot
```

## Set To WOL Enabled

Enable WOL on both network interface.

Generally in H2, the network interfaces are named as **enp2s0** and **enp3s0**.  
Check ethernet interfaces of the system.

```
$ ip link

# results
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN mode
DEFAULT group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
2: enp2s0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state
UP mode DEFAULT group default qlen 1000
    link/ether c4:82:4e:55:73:13 brd ff:ff:ff:ff:ff:ff
3: enp3s0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state
UP mode DEFAULT group default qlen 1000
    link/ether c4:82:4e:55:73:14 brd ff:ff:ff:ff:ff:ff
```

If it isn't **enp**, change to yours properly of the commands below.

```
$ sudo ethtool -s enp2s0 wol g
$ sudo ethtool -s enp3s0 wol g
```

Check it's been enabled.

```
$ sudo ethtool enp2s0 | grep Wake

# results
Supports Wake-on: pumbg
Wake-on: g
```

Check that **g** character exists which means it wakes up by the **magic packet**.

## Opt. Make It Persistent

Create the file **/etc/systemd/system/wol@.service** as root with the following content.

```
$ sudo vi /etc/systemd/system/wol@.service
```

```
[Unit]
Description=Wake-on-LAN for %i
Requires=network.target
After=network.target

[Service]
```

```
ExecStart=/bin/sh -c "ethtool -s %i wol g"  
Type=oneshot
```

[Install]

```
WantedBy=multi-user.target
```

Enable that for the two network interfaces.

```
$ sudo systemctl enable wol@enp2s0  
$ sudo systemctl enable wol@enp3s0
```

Start the services.

```
$ sudo systemctl start wol@enp2s0  
$ sudo systemctl start wol@enp3s0
```

## References

- [https://en.wikipedia.org/wiki/Advanced\\_Configuration\\_and\\_Power\\_Interface](https://en.wikipedia.org/wiki/Advanced_Configuration_and_Power_Interface)
- <https://help.ubuntu.com/community/WakeOnLan>
- <https://wiki.archlinux.org/index.php/Wake-on-LAN>
- <https://wiki.archlinux.org/index.php/TLP>

From:

<http://wiki.odroid.com/> - **ODROID Wiki**

Permanent link:

[http://wiki.odroid.com/odroid-h2/application\\_note/wake\\_on\\_lan](http://wiki.odroid.com/odroid-h2/application_note/wake_on_lan)

Last update: **2019/07/30 09:58**

