

# NGSPICE Installation

## Installation in Ubuntu or WSL:

Open your terminal and enter the following commands:

1. **Update the package list:**

```
sudo apt update
```

2. **Install ngspice:**

```
sudo apt install ngspice
```

These commands will update your package list and install ngspice on your Ubuntu system or WSL environment. After the installation, you can verify it by running:

```
ngspice
```

`ngspice -v` can be used to check the installed version

## Installation in Windows:

1. **Go to the ngspice website:**

- Visit [ngspice official website](#) - You can visit this to install any further updated versions later.

2. **Download ngspice:**

- Navigate to the Download section.
- Find the MS Windows part and click on [ngspice-43\\_64.7z](#) to download the file.

3. **Extract the .7z file:**

- You will need software like 7-Zip to extract .7z files. If you don't have it, you can download and install 7-Zip from [here](#).
- Use 7-Zip or any other extraction tool to extract the downloaded ngspice-43\_64.7z file.

#### 4. Install ngspice:

- Navigate to the extracted folder.
- Inside the folder, you will find a `bin` folder. Open it.

#### 5. Start ngspice:

- In the `bin` folder, find and open the `ngspice` application to start its terminal environment.

#### 6. Using ngspice terminal:

- Terminal commands like `cd` and `ls` work here, allowing you to navigate into the folder of the files you want to execute.

### Reference:

For a step-by-step visual guide, you can refer to this [YouTube video](#).

## Installation in Mac:

#### 1. Install Homebrew (if you haven't already) by running the following command in your Terminal:

```
/bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"
```

#### 2. Install ngspice:

Once Homebrew is installed, you can install ngspice by running:

```
brew install ngspice
```

#### 3. Verify the Installation:

After the installation is complete, you can verify it by running:

```
ngspice
```

This should start the ngspice interactive shell, indicating that the installation was successful.

## Optional: Install XQuartz (if needed for graphical interface)

### 1. Download XQuartz:

- Go to the [XQuartz official website](#).
- Download the latest version of XQuartz.

### 2. Install XQuartz:

- Open the downloaded `.dmg` file.
- Follow the instructions to install XQuartz.

### 3. Restart your computer (recommended):

- To ensure all the changes take effect, it's a good idea to restart your computer after installing XQuartz.

**Note:** It is better to use Linux-based systems than a Windows-based system for NGSPICE.