dat-stream-deck setup guide

version 0.1.0
released January 12th 2021

Required downloads

OBS Studio

- obs-websocket
  https://obsproject.com/forum/resources/obs-websocket-remote-control-obs-studio-from-websockets.466/

Windows

- Node.js
  https://nodejs.org/en/download/

Raspberry Pi

- Raspberry Pi OS
  https://www.raspberrypi.org/software/operating-systems/

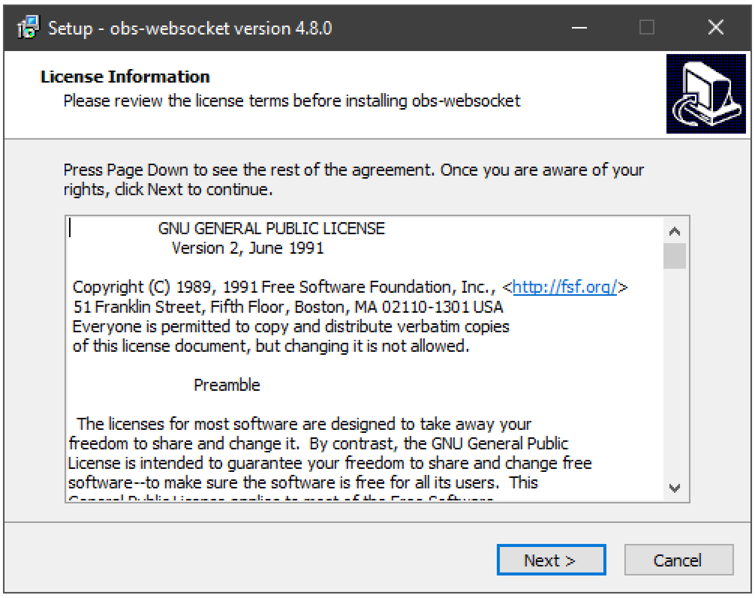
- balenaEtcher
  https://www.balena.io/etcher/

- PuTTY
  https://www.putty.org

Preparing OBS

OBS Studio

Download obs-websocket Windows Installer, and run it. Follow these installation steps.



License Information

Please review the license terms before installing obs-websocket

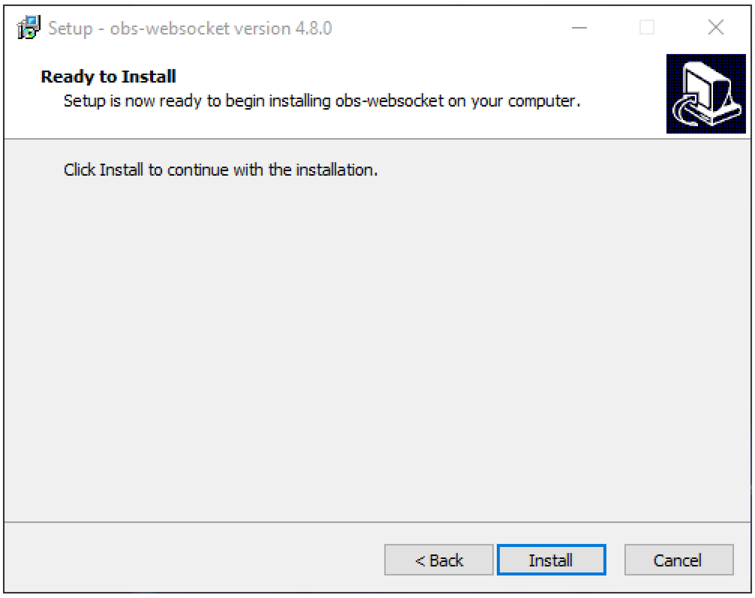
Press Page Down to see the rest of the agreement. Once you are aware of your rights, click Next to continue.

```
            GNU GENERAL PUBLIC LICENSE
               Version 2, June 1991

 Copyright (C) 1989, 1991 Free Software Foundation, Inc., <http://fsf.org/>
 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
 Everyone is permitted to copy and distribute verbatim copies
 of this license document, but changing it is not allowed.

                    Preamble

  The licenses for most software are designed to take away your
freedom to share and change it.  By contrast, the GNU General Public
License is intended to guarantee your freedom to share and change free
software--to make sure the software is free for all its users.  This
```

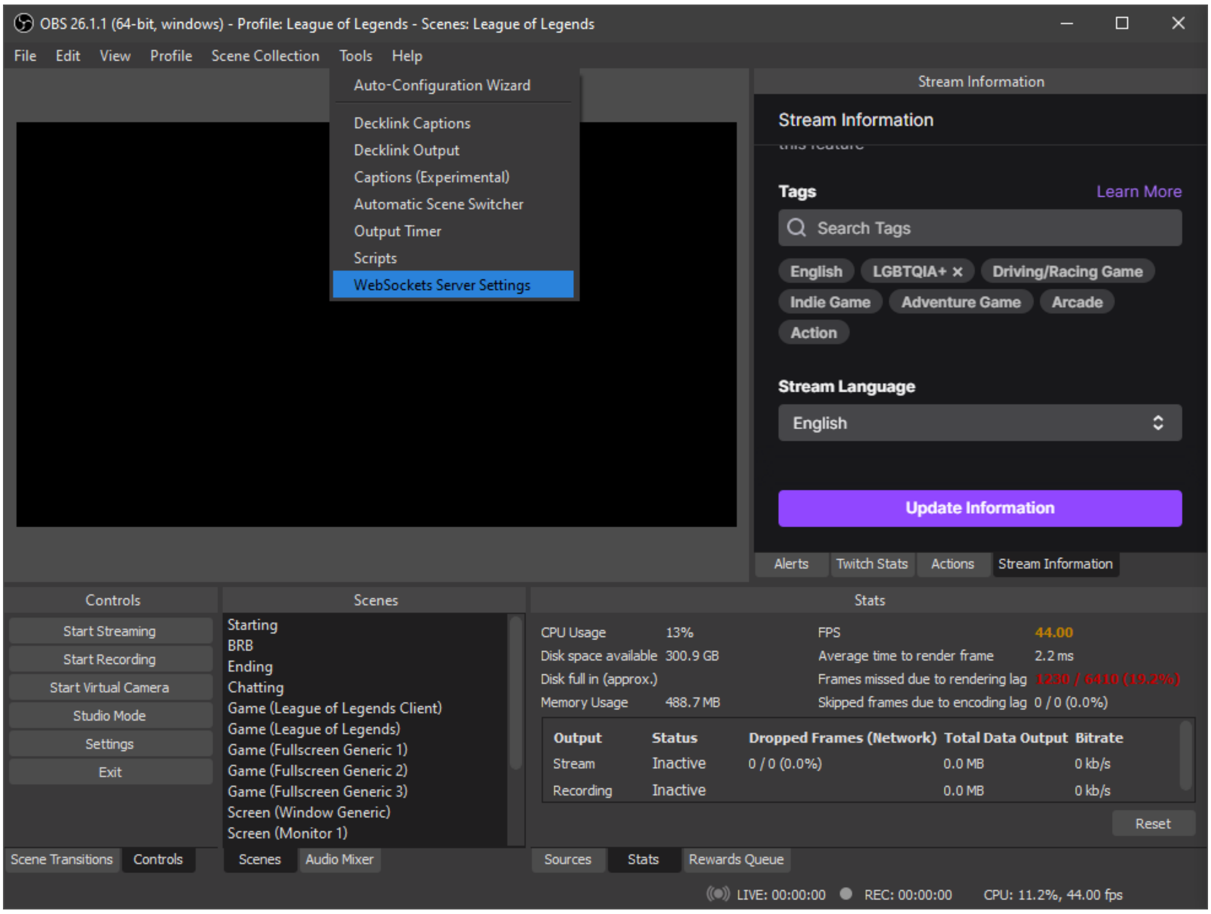


Ready to Install

Setup is now ready to begin installing obs-websocket on your computer.

Click Install to continue with the installation.

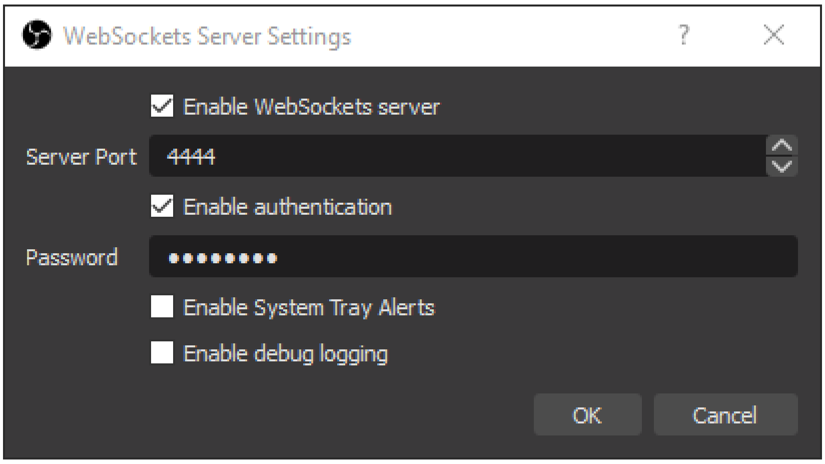
After installing obs-websocket, open OBS Studio and open the `Tools` menu from the menu bar. `Select WebSockets Server Settings`. In the modal window that will open, insert a password of your choice, and enable authentication. Save the `Server Port` for later.



```
CPU Usage              13%        FPS                                   44.00
Disk space available   300.9 GB   Average time to render frame          2.2 ms
Disk full in (approx.)            Frames missed due to rendering lag    1230 / 6410 (19.2%)
Memory Usage           488.7 MB   Skipped frames due to encoding lag    0 / 0 (0.0%)

Output      Status     Dropped Frames (Network)  Total Data Output  Bitrate
Stream      Inactive   0 / 0 (0.0%)              0.0 MB             0 kb/s
Recording   Inactive                             0.0 MB             0 kb/s

LIVE: 00:00:00   REC: 00:00:00   CPU: 11.2%, 44.00 fps
```



☑ Enable WebSockets server

Server Port 4444

☑ Enable authentication

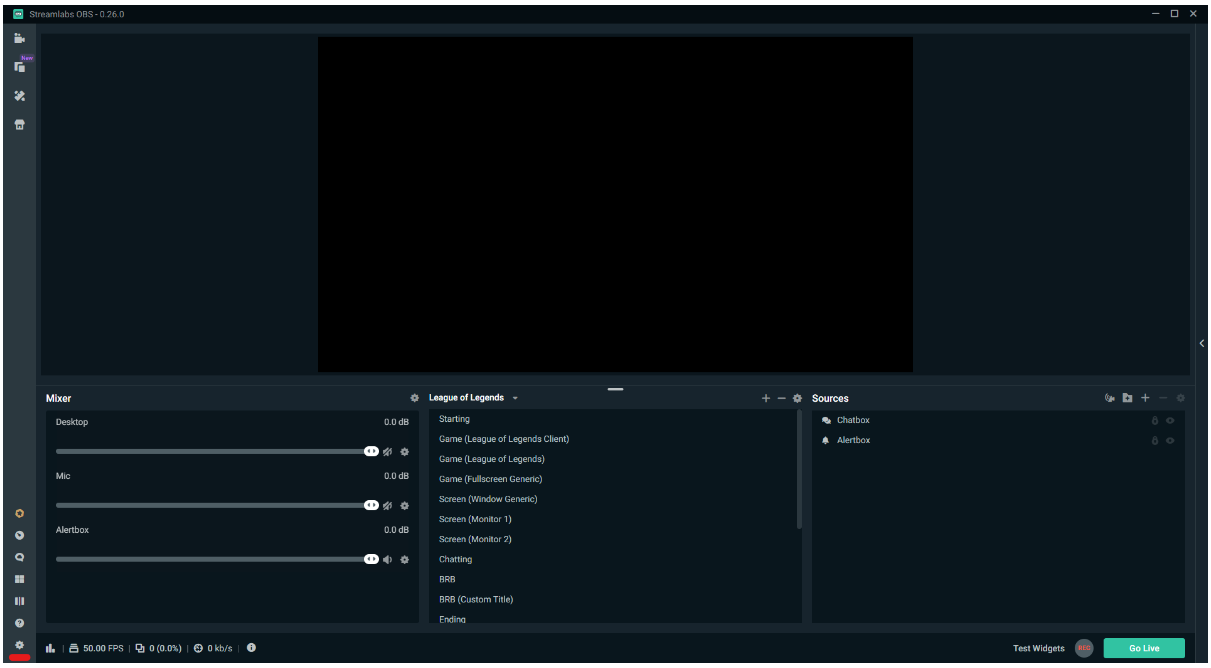
Password ●●●●●●●●

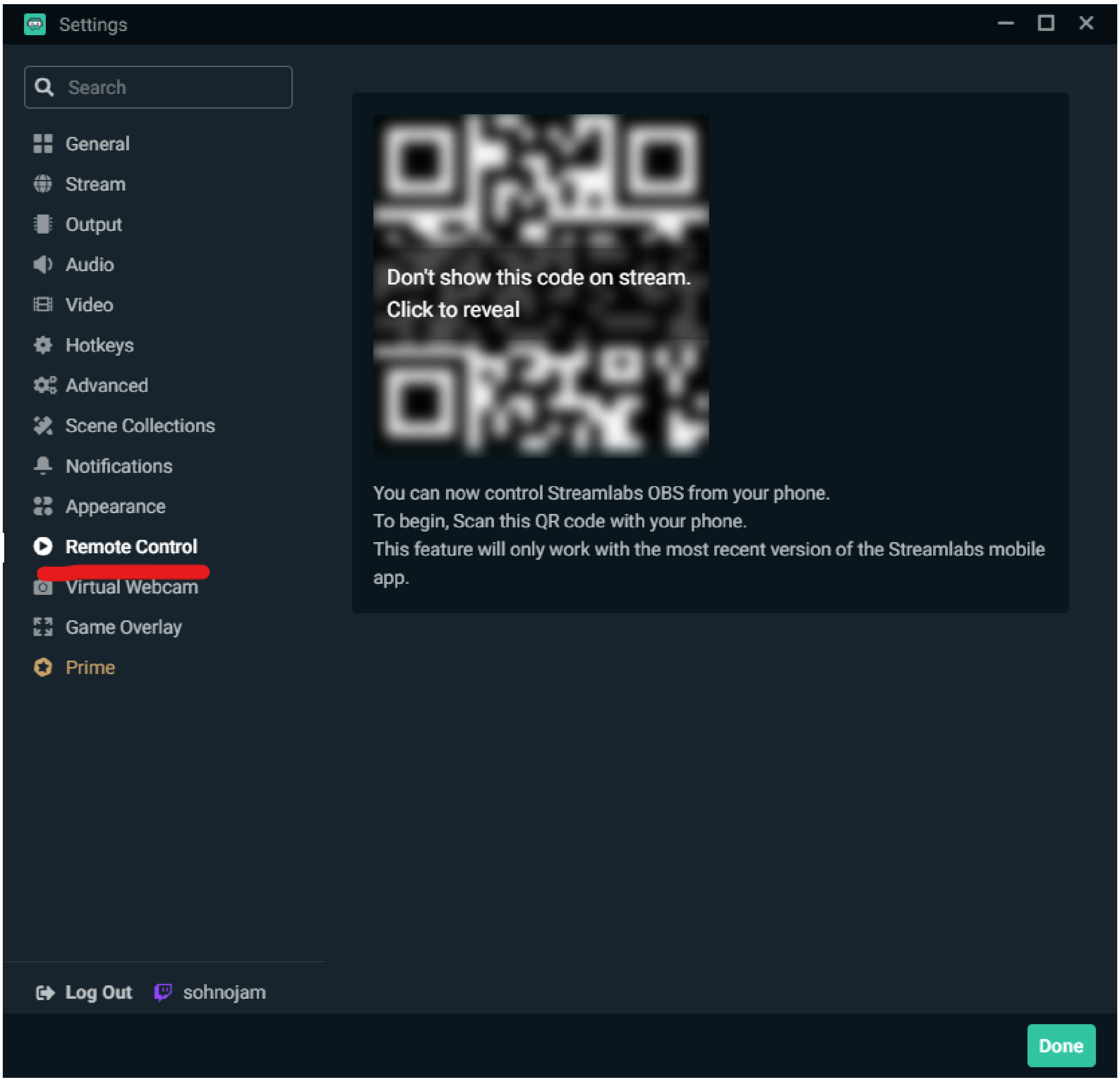
□ Enable System Tray Alerts

□ Enable debug logging

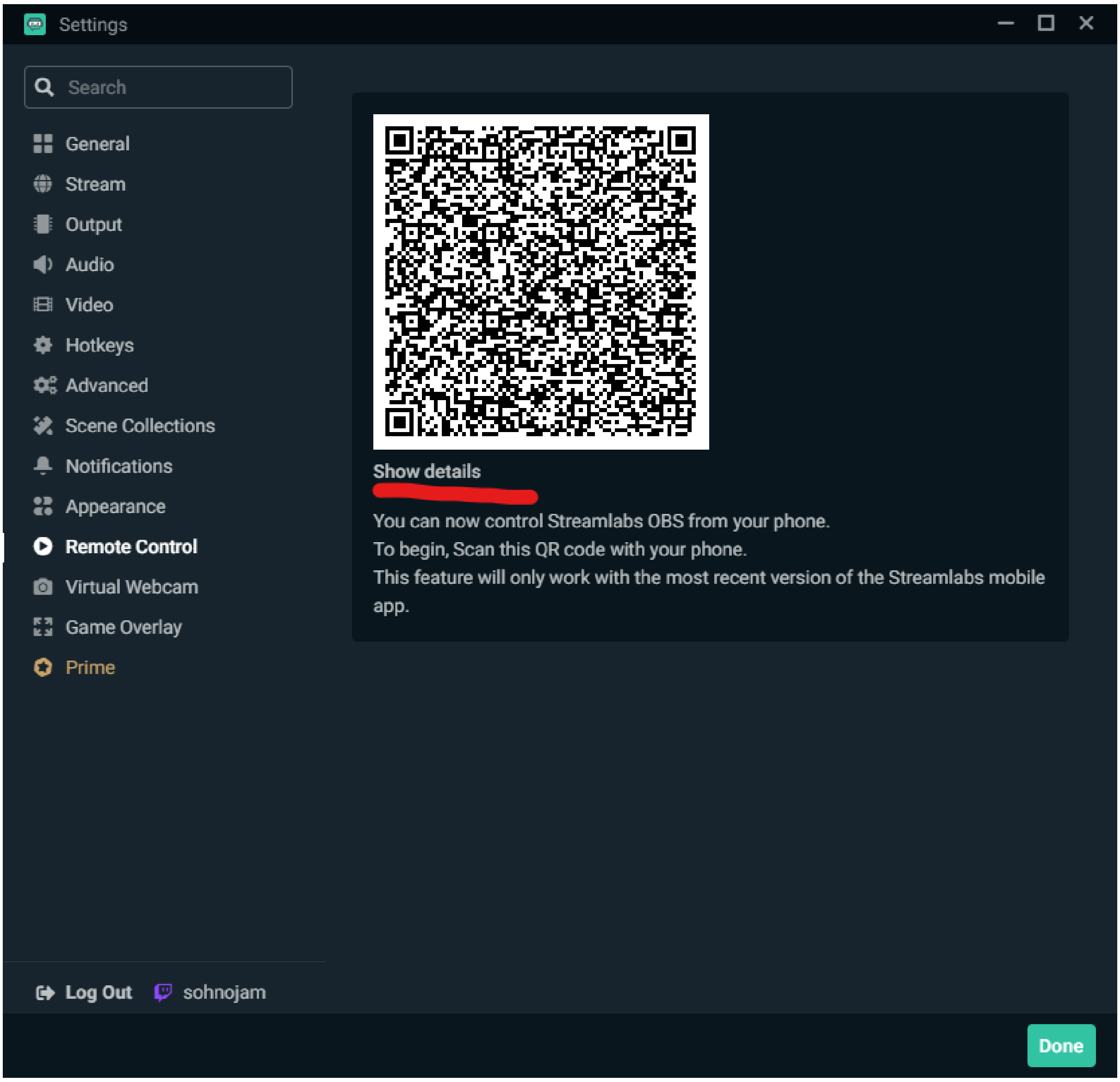
Streamlabs OBS

Open Streamlabs OBS and go into the `Settings` menu by clicking the gear icon. Navigate to the `Remote Control` section. Click the QR Code, then `Show details`. Save the `API token` and `Port` as you will need them later.

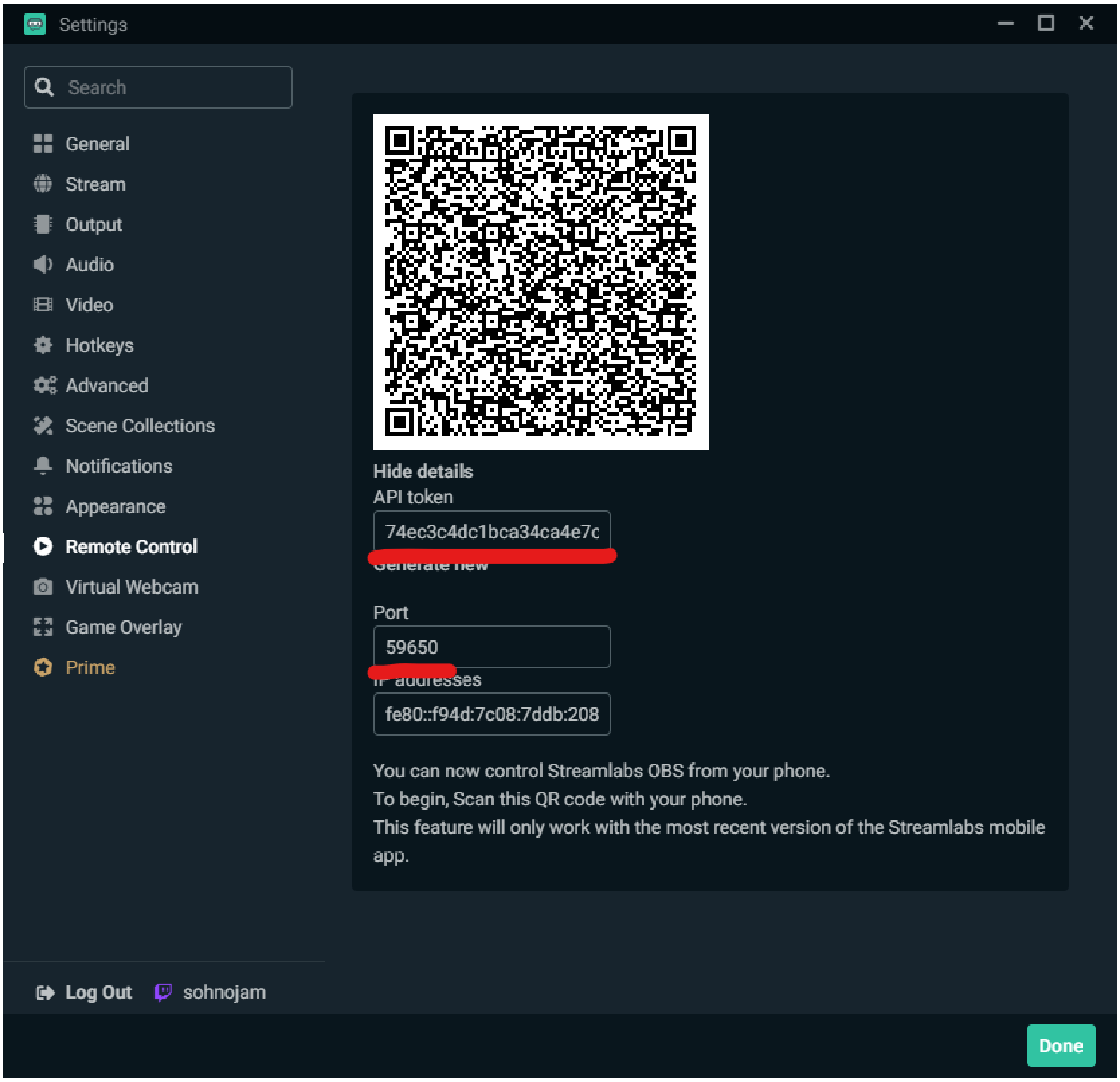




You can now control Streamlabs OBS from your phone.
To begin, Scan this QR code with your phone.
This feature will only work with the most recent version of the Streamlabs mobile app.



You can now control Streamlabs OBS from your phone.
To begin, Scan this QR code with your phone.
This feature will only work with the most recent version of the Streamlabs mobile app.



Hide details

API token

74ec3c4dc1bca34ca4e7c

Generate new

Port

59650

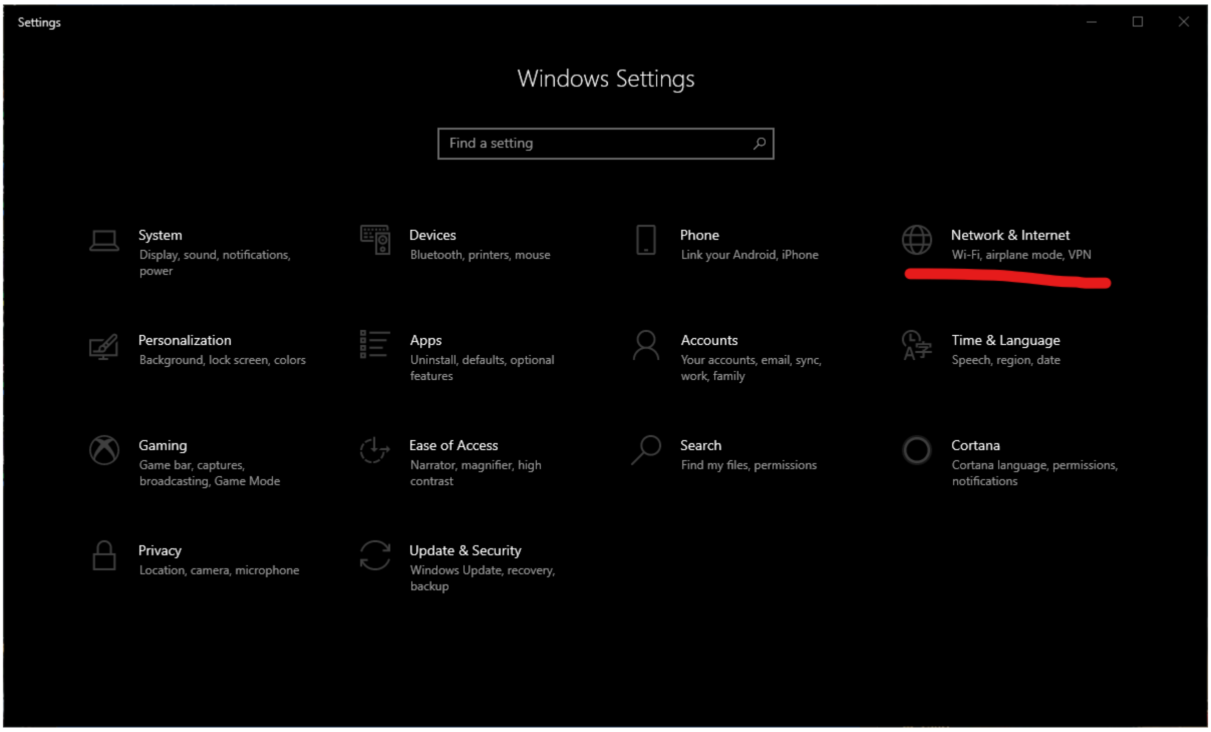
IP addresses

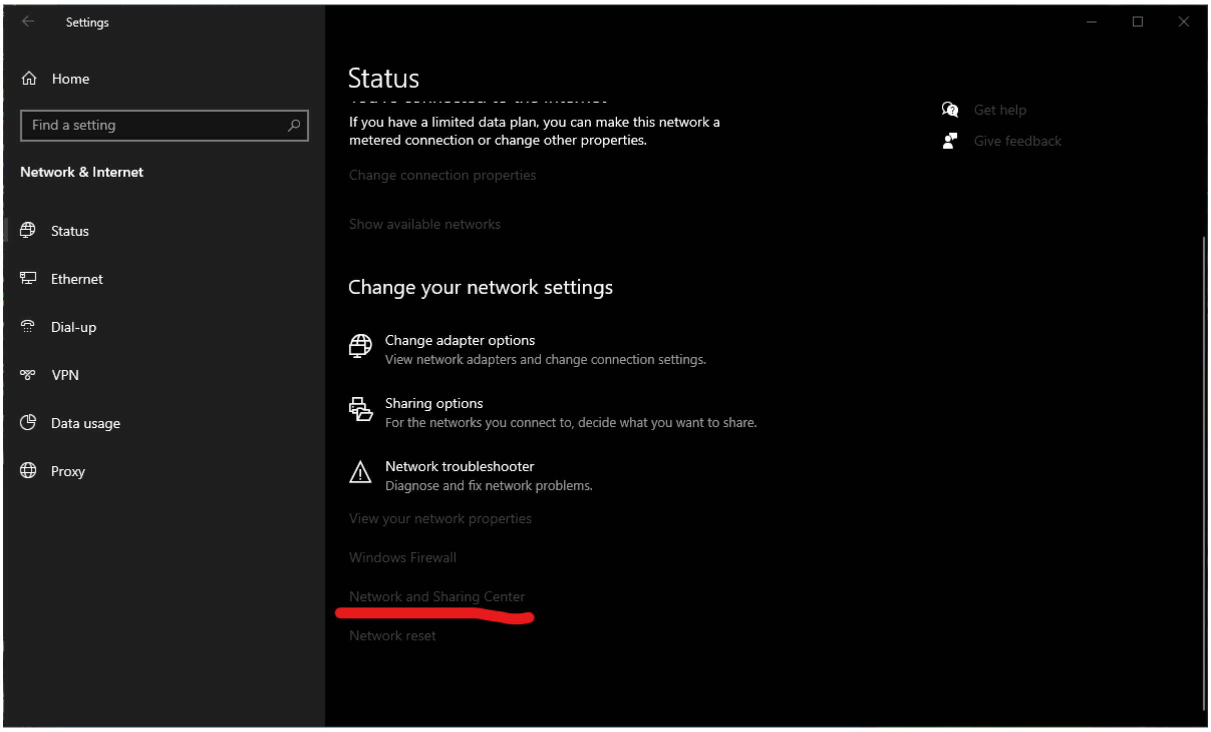
fe80::f94d:7c08:7ddb:208

You can now control Streamlabs OBS from your phone.
To begin, Scan this QR code with your phone.
This feature will only work with the most recent version of the Streamlabs mobile app.

Windows

Open Windows settings, and select `Network & Internet`. In the page that will open, scroll to the bottom and click `Network and Sharing Center`. This will open a new window. There, you will click the bottom line of the highlighted section, which will open the `Connection Status` window. There, click `Details`. There, find the `IPv4 Address`. Make a note of it as you will need it later. If your computer’s IP address is not static, you must make it so, to avoid having to change your configuration every time you restart your computer. Instructions on how to do this are available in Appendix A.


Settings
Windows Settings
Find a setting
System
Display, sound, notifications, power
Devices
Bluetooth, printers, mouse
Phone
Link your Android, iPhone
Network & Internet
Wi-Fi, airplane mode, VPN
Personalization
Background, lock screen, colors
Apps
Uninstall, defaults, optional features
Accounts
Your accounts, email, sync, work, family
Time & Language
Speech, region, date
Gaming
Game bar, captures, broadcasting, Game Mode
Ease of Access
Narrator, magnifier, high contrast
Search
Find my files, permissions
Cortana
Cortana language, permissions, notifications
Privacy
Location, camera, microphone
Update & Security
Windows Update, recovery, backup

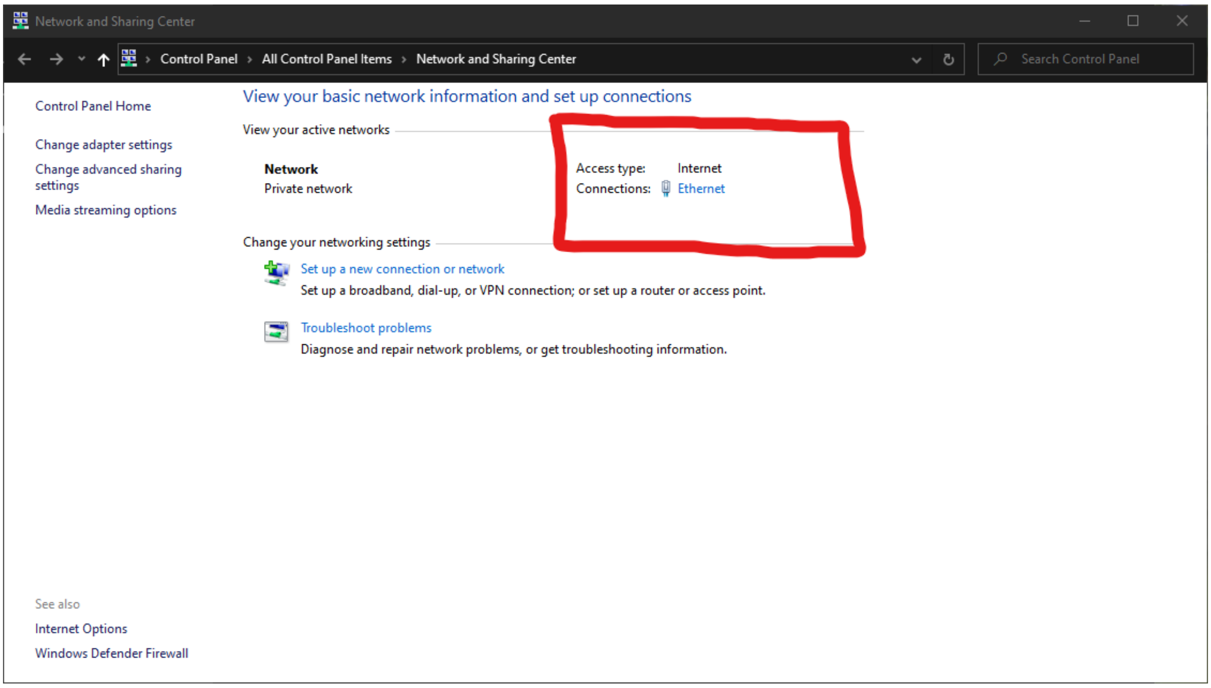


If you have a limited data plan, you can make this network a metered connection or change other properties.

View network adapters and change connection settings.

For the networks you connect to, decide what you want to share.

Diagnose and fix network problems.



Network and Sharing Center
Control Panel › All Control Panel Items › Network and Sharing Center
Search Control Panel
Control Panel Home
Change adapter settings
Change advanced sharing settings
Media streaming options
See also
Internet Options
Windows Defender Firewall

View your basic network information and set up connections

View your active networks

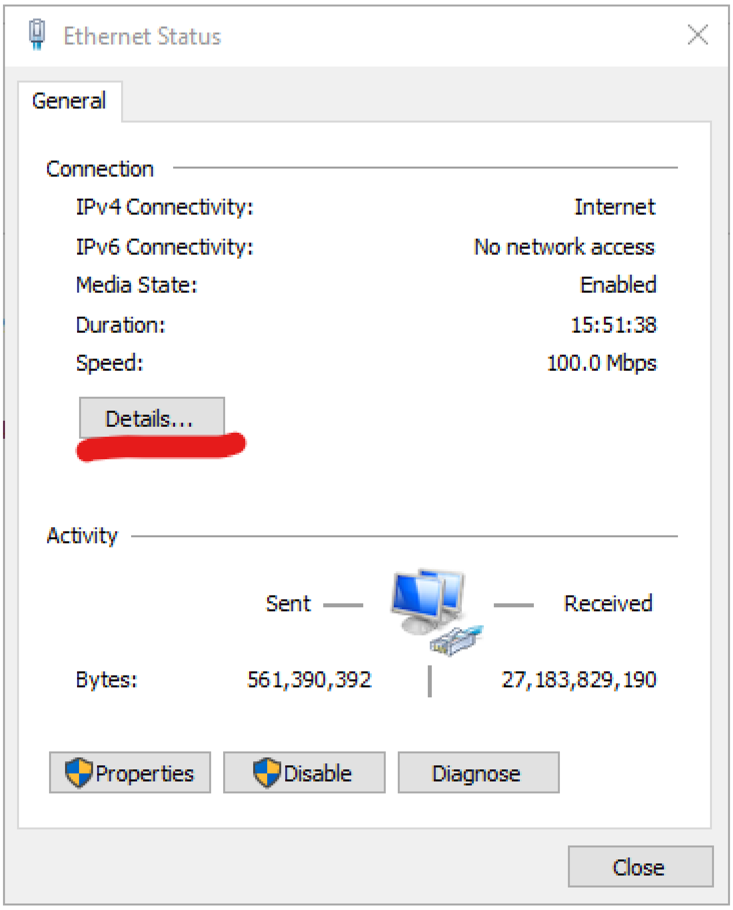
Network
Private network

Access type: Internet
Connections: Ethernet

Change your networking settings

Set up a new connection or network
Set up a broadband, dial-up, or VPN connection; or set up a router or access point.

Troubleshoot problems
Diagnose and repair network problems, or get troubleshooting information.

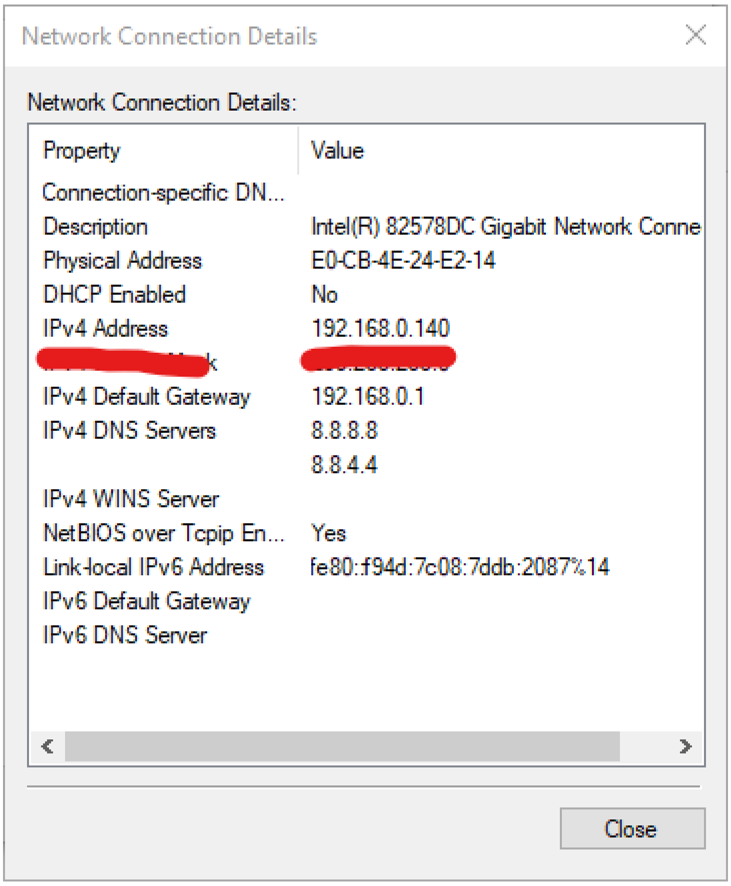


Connection

IPv4 Connectivity:	Internet
IPv6 Connectivity:	No network access
Media State:	Enabled
Duration:	15:51:38
Speed:	100.0 Mbps

Activity

	Sent	Received
Bytes:	561,390,392	27,183,829,190



Network Connection Details:

Property	Value
Connection-specific DN...	
Description	Intel(R) 82578DC Gigabit Network Conne
Physical Address	E0-CB-4E-24-E2-14
DHCP Enabled	No
IPv4 Address	192.168.0.140
[redacted]	[redacted]
IPv4 Default Gateway	192.168.0.1
IPv4 DNS Servers	8.8.8.8 8.8.4.4
IPv4 WINS Server	
NetBIOS over Tcpip En...	Yes
Link-local IPv6 Address	fe80::f94d:7c08:7ddb:2087%14
IPv6 Default Gateway	
IPv6 DNS Server	

Creating a configuration

Go to the configurator page at
https://sohnojam.github.io/dat-stream-deck-configurator

Interface settings

Clicking the `Interface settings` button will open the Interface panel. In this panel you can select the OBS flavor you use, input the `IPv4 Address` and `Port` you copied before. If you are using OBS Studio, input the `Password` you created. If you are using Streamlabs OBS, input the `API token` you copied previously. The `Start state` can be left as `init` until you make further changes.

States

States are essentially the pages of your configuration. Within each state, a key may behave differently than in others, or even not at all. Furthermore, states can store a scene name that can be used to create a temporary scene change that returns to the scene from which it was started.

For example, if you wish to select a scene to start your stream, but that may change from stream to stream, and you make use of a “Starting Stream” card scene, it may be useful to have a `start` state, which when initiated will store the scene before switching to the “Starting Stream” card scene, and then, within the `start` state, a key will be assigned the actions of returning to the scene from which you selected the start state before returning to the `main` state. A similar concept applies to “BRB” card scenes, from which you may wish to return to the previous scene, thus making a `break` scene desirable.

States are assigned colors, which have no practical function during use, but allow for easier identification of key mappings within the configurator.

Keys

All keys shown in the configurator may be assigned actions. All assignments are state-exclusive, meaning that if you wish to have a key perform the same actions in different states, they will have to be added separately.

Additionally, only one assignment may be defined for a specific key within a specific state. However this does not cause any limitations, as assignments support an indefinite number of actions.

Each key that is assigned an action will have a circle displayed below its label in the configurator, in the color of the state in which the assignment is defined. If a state is selected, only that state’s assignments will be displayed.

Actions

Each assignment may have any number of actions, and they are performed in the order they are created and thus displayed in the configurator. At present time it is not possible to reorder actions, so be aware of that fact when defining actions, as to not require an extensive amount of rework due to poor planning.

There are actions that require additional information, which will be referred to as *arguments*. These arguments may be a selected value or a text value. In the event that they are text values, pay close attention to how you enter said text, as it is case sensitive and any leading or trailing spaces will be considered, and if not present in the actual name it refers to, will cause the action to malfunction.

Connect

The action type `Connect` is to be used only in the `Start state` defined in the `Interface settings`. It will cause the application to connect to OBS, authenticate the connection, and when successful, switch to the state defined in the `Start state` argument of the action.

Switch scene

The action type `Switch scene` simply switches to the scene named in the argument `Scene name`, using the currently selected transition, or any transition defined to override that specific scene switch, as defined in your OBS settings.

Set source mute

The action `Set source mute` applies only to audio sources, and are not specific to one scene. It sets the muted state of the source named as defined in the `Source name` argument to the value defined in the `Set to` argument.

Set source visibility

The action `Set source visibility` applies only to visual elements of one specific scene. This includes any video or image source, as well as groups of sources. If the intent is to change the visibility of all instances of a specific source, in all scenes, multiple actions of this type will be required, one for each scene. `Scene name`, `Source name`, and `Set to` are its arguments.

Set transition

Only available in OBS Studio

The action `Set transition` sets the current transition to the one named in the `Transition name` argument.

Set transition duration

Only available in OBS Studio

The action `Set transition duration` sets the current transition duration to the value defined in the `Transition duration` argument (in milliseconds).

Switch state

The action `Switch state` changes the current state of the application to that named in the argument `State name`, thus causing all keys to use the assignments defined in that state. Be sure all states have entry and exit conditions, as to not cause the application to get stuck in one state.

Store current scene

The action `Store current scene` stores the current scene's name to the currently active state. Whenever this is used alongside a `Switch state` action, it should come **after** said action.

Return to stored scene

The action `Return to stored scene` switches the scene to the one stored in the currently active state, if there is one. Whenever this is used alongside a `Switch state` action, it should come **before** said action.

Drop stored scene

The action `Drop stored scene` empties the currently active state's stored scene name. Any `Return to stored scene` actions executed thereafter, and before a subsequent `Store current scene` action, will fail to execute.

Exit

The action `Exit` closes the connection with OBS and exits the application.

Saving your configuration

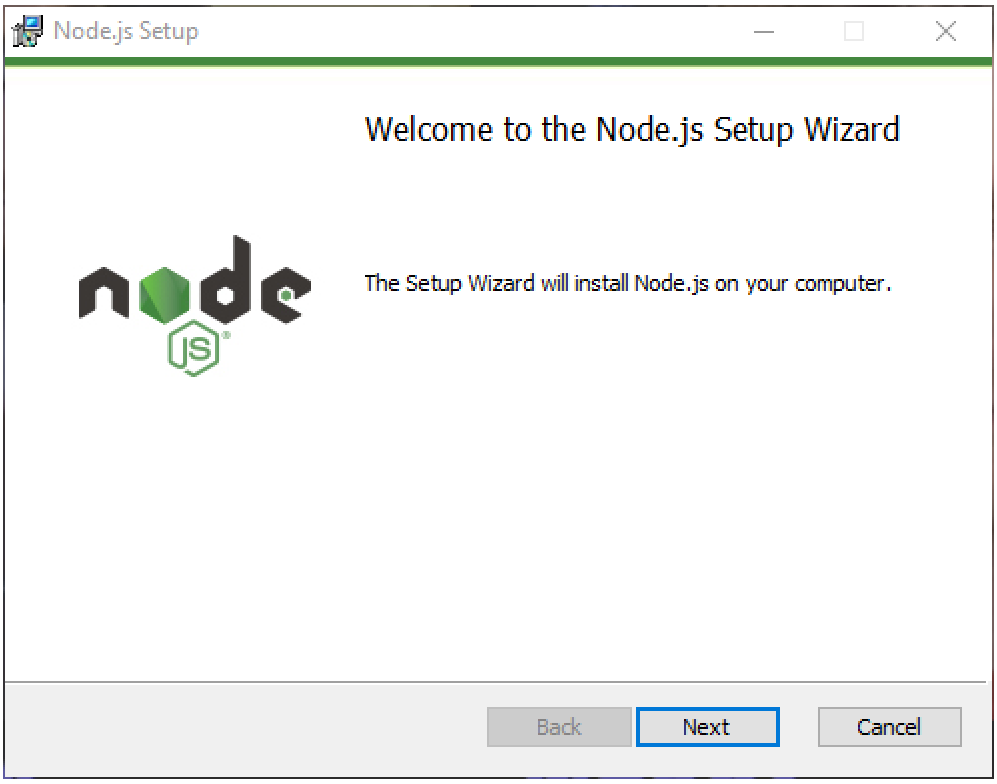
Simply click the `Save config` button and select a location for the file to be stored. Do not change the name or extension of the file, as it is necessary that it be named `dsdconfig`(`.json`) for the application to identify it.

Installing dat-stream-deck

Windows

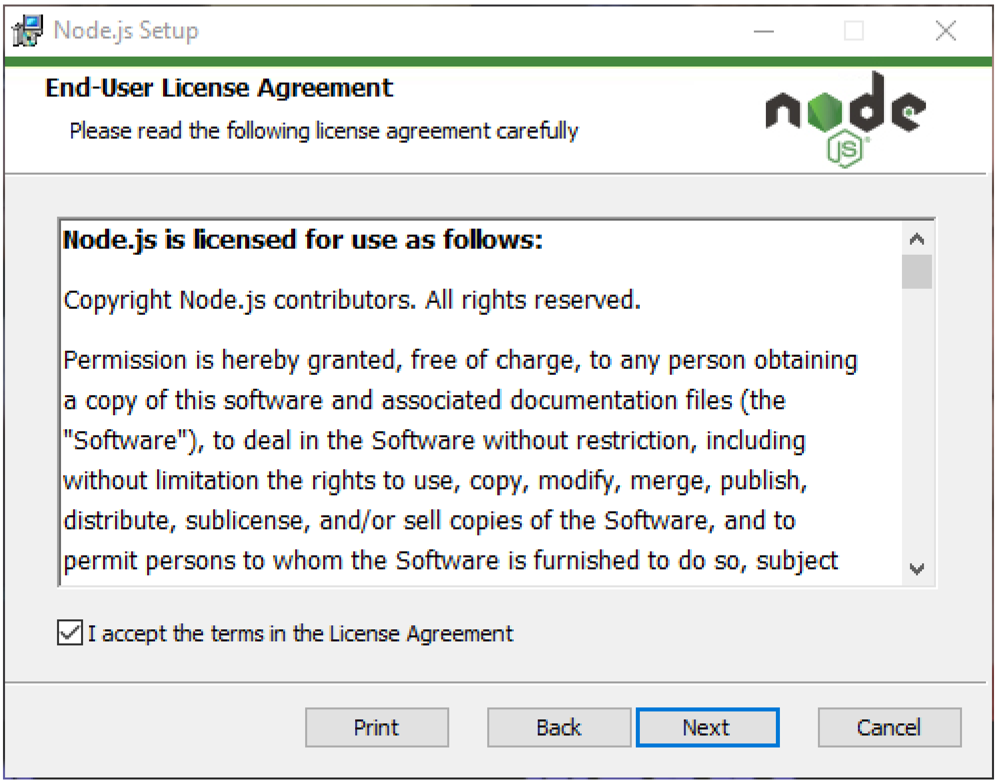
If you are going to run dat-stream-deck on a spare laptop or a spare desktop running Windows, these are the steps to follow to install it. Please note that during the installation process it is assumed that you have a monitor plugged in as well as all required peripherals for operation, however during use only a keyboard is fully required.

Firstly, download and install Node.js from the provided link, following the options shown below.



Welcome to the Node.js Setup Wizard

The Setup Wizard will install Node.js on your computer.



End-User License Agreement

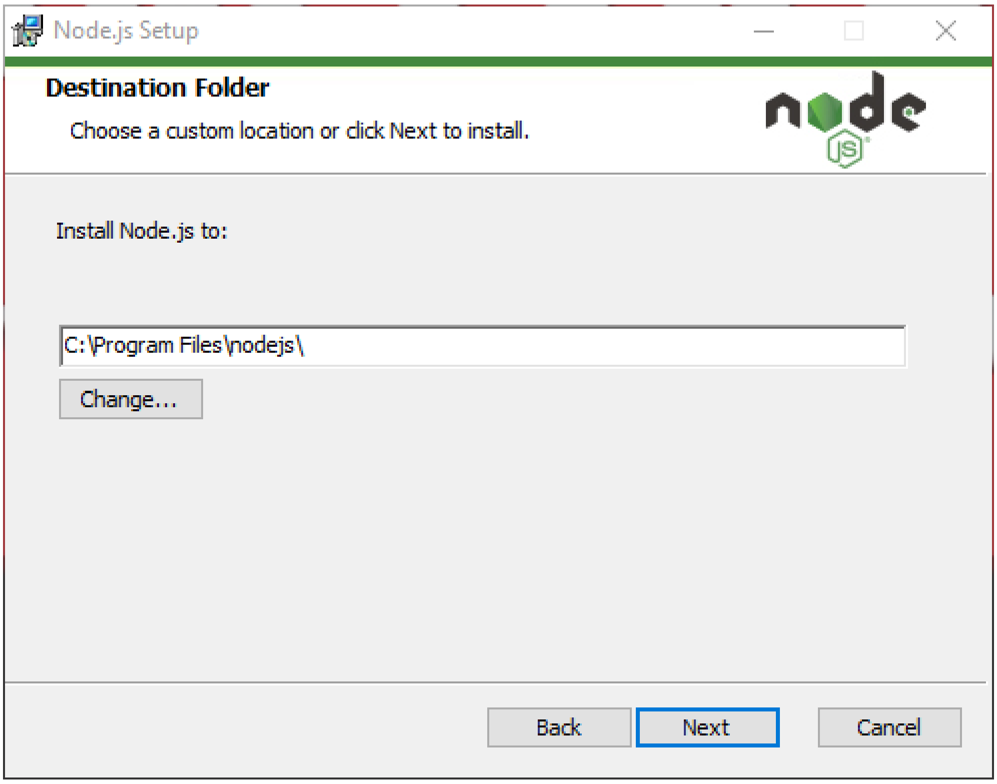
Please read the following license agreement carefully

Node.js is licensed for use as follows:

Copyright Node.js contributors. All rights reserved.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject

☑ I accept the terms in the License Agreement

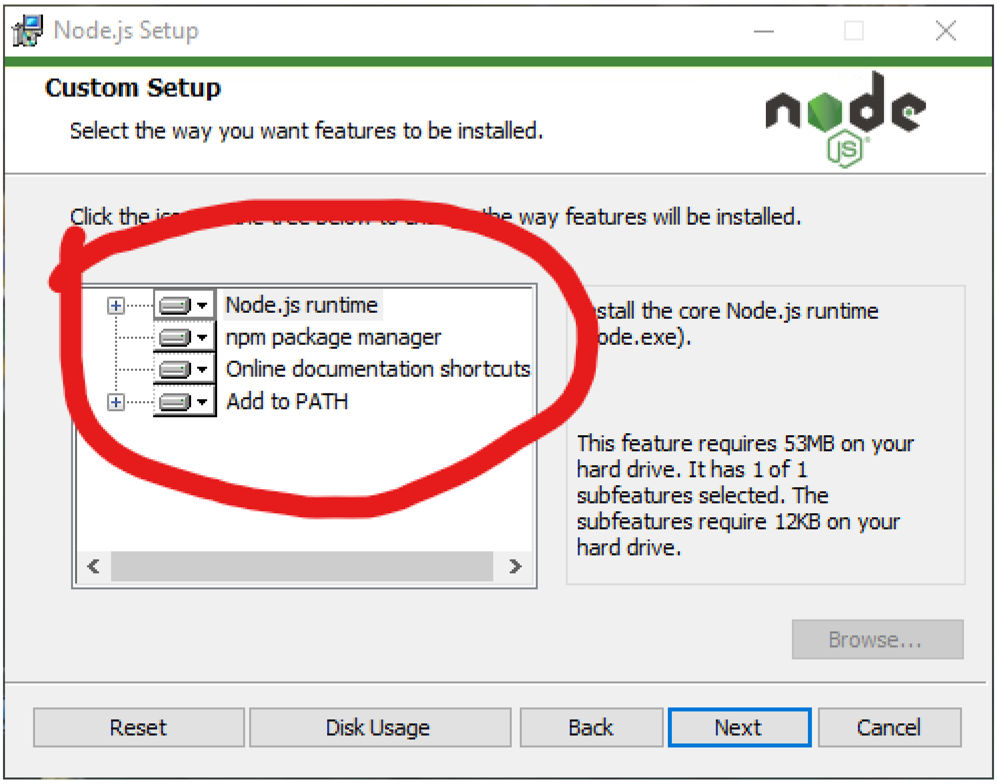


Destination Folder

Choose a custom location or click Next to install.

Install Node.js to:

C:\Program Files\nodejs\



Custom Setup

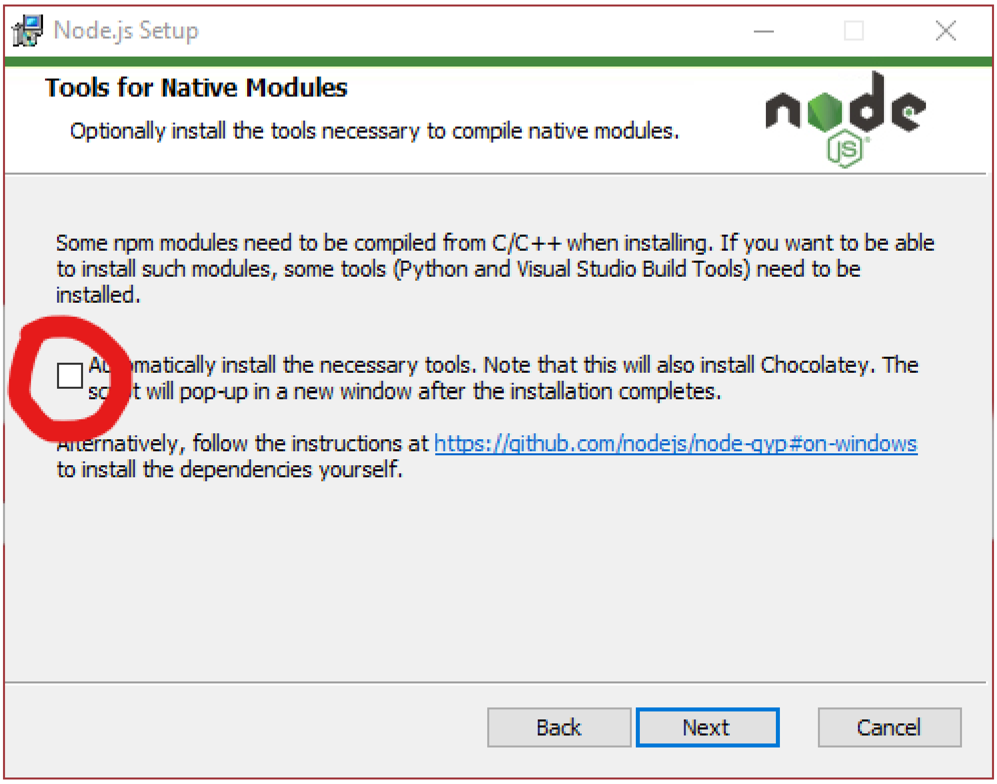
Select the way you want features to be installed.

Click the ic... the way features will be installed.

- Node.js runtime
- npm package manager
- Online documentation shortcuts
- Add to PATH

stall the core Node.js runtime ode.exe).

This feature requires 53MB on your hard drive. It has 1 of 1 subfeatures selected. The subfeatures require 12KB on your hard drive.



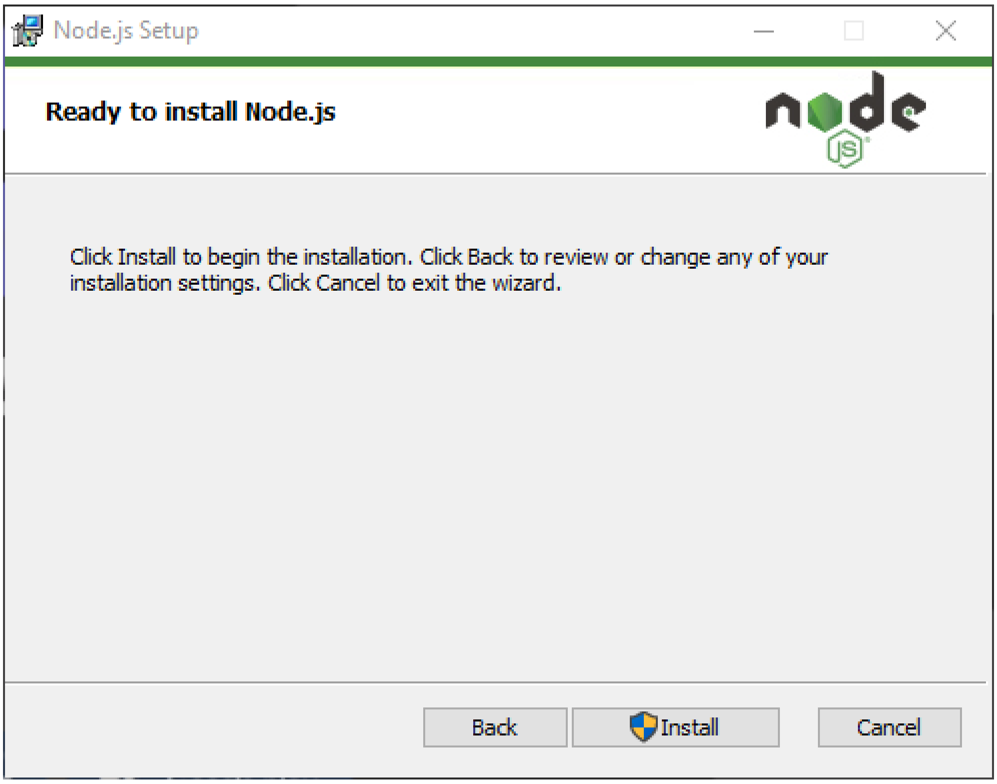
Tools for Native Modules

Optionally install the tools necessary to compile native modules.

Some npm modules need to be compiled from C/C++ when installing. If you want to be able to install such modules, some tools (Python and Visual Studio Build Tools) need to be installed.

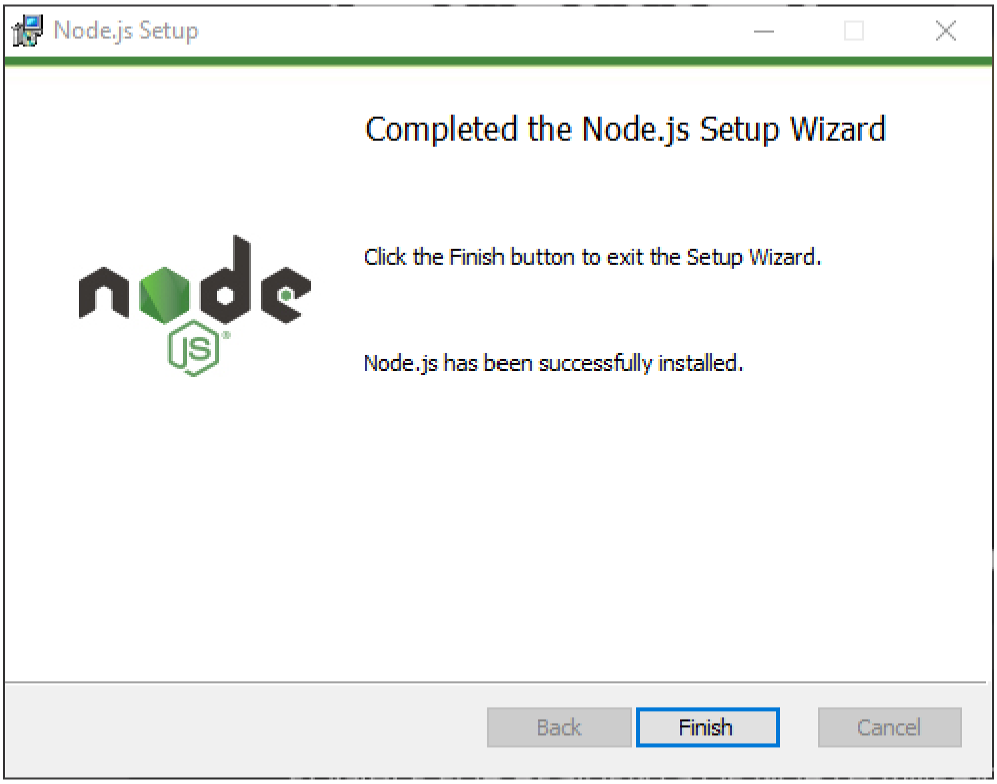
☐ Au matically install the necessary tools. Note that this will also install Chocolatey. The sc t will pop-up in a new window after the installation completes.

lternatively, follow the instructions at https://github.com/nodejs/node-gyp#on-windows to install the dependencies yourself.



Ready to install Node.js

Click Install to begin the installation. Click Back to review or change any of your installation settings. Click Cancel to exit the wizard.



Completed the Node.js Setup Wizard

Click the Finish button to exit the Setup Wizard.

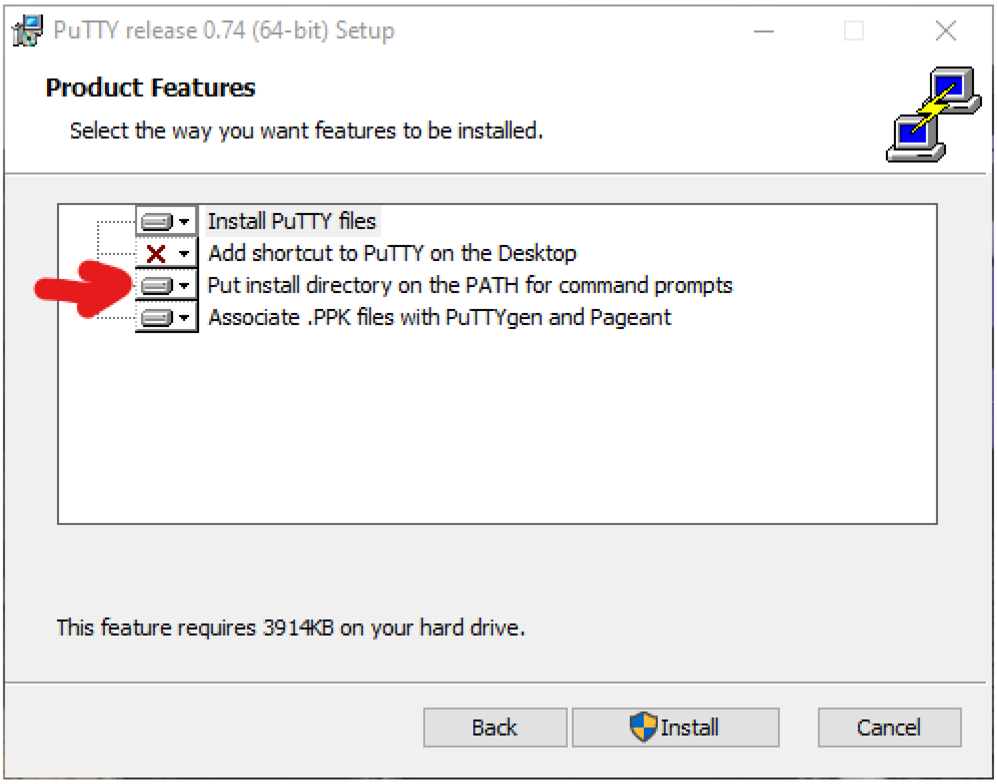
Node.js has been successfully installed.

Once Node.js is installed, go to the folder to which dat-stream-deck has been extracted and run the `install_dependencies.bat` file. A command prompt window will open and npm, the Node.js Package Manager, should install all the required modules. Once it is finished, the command prompt window will close automatically. When it does, copy the `dsdconfig.json` file you downloaded from dat-stream-deck-configurator to this folder, and the installation is complete.

Raspberry Pi

If you are going to run dat-stream-deck on a Raspberry Pi, these are the steps to follow to install it. You will need, in addition to the device, a network cable, access to your router, and a separate computer running Windows during the installation process. During use you will be able to use a wi-fi connection and will require a keyboard connected to the Raspberry Pi.

Firstly, download balenaEtcher, the Raspberry Pi OS Lite disk image, and PuTTY from the links provided in the Required Downloads section, then install both balenaEtcher and PuTTY on your computer. While installing PuTTY, ensure that `Put install directory on the PATH for command prompts` is enabled, as shown below.



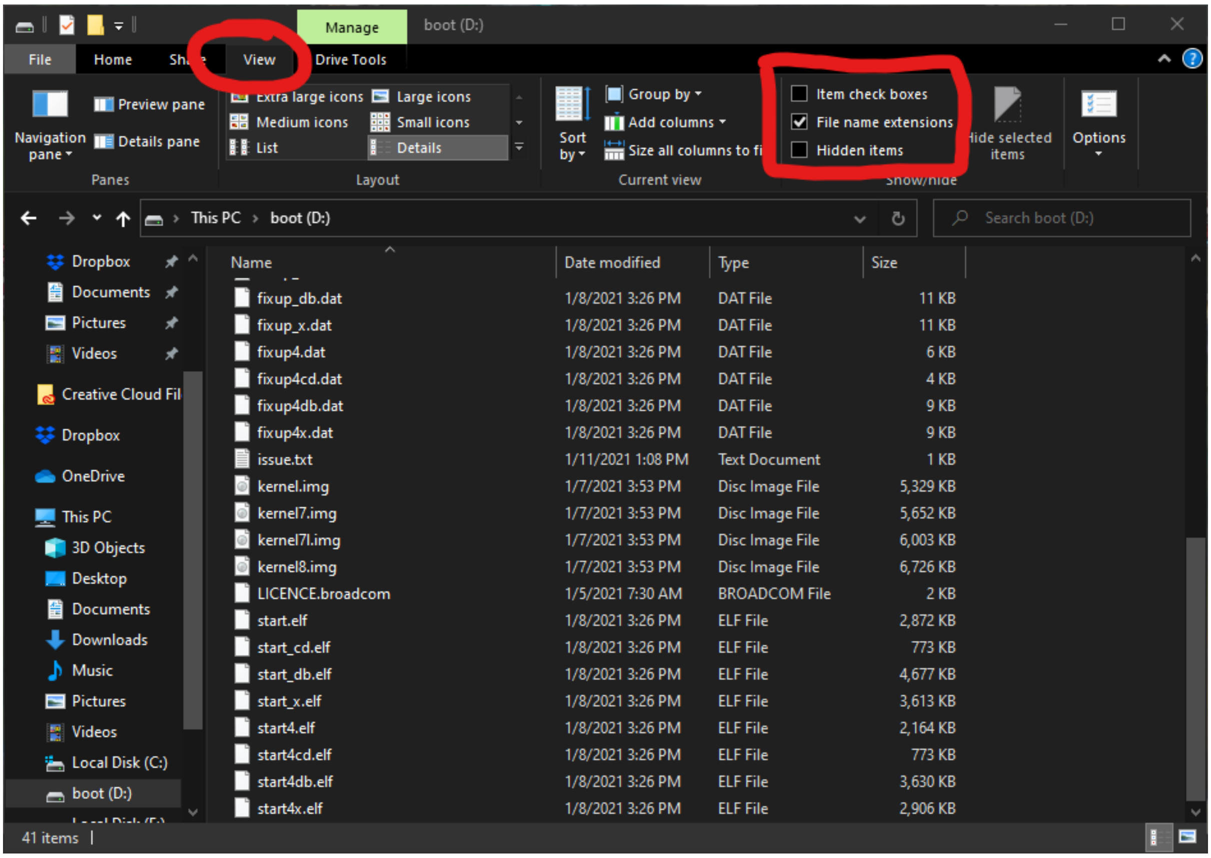
PuTTY release 0.74 (64-bit) Setup
Product Features
Select the way you want features to be installed.

- Install PuTTY files
- ☒ Add shortcut to PuTTY on the Desktop
- Put install directory on the PATH for command prompts
- Associate .PPK files with PuTTYgen and Pageant

This feature requires 3914KB on your hard drive.

Then, connect the microSD card you will use in the Raspberry Pi to your computer and open balenaEtcher. Select the Raspberry Pi OS from `Flash from file` and the microSD card by clicking `Change` under the selected drive, in case it is not selected by default. Then click `Flash!` and wait for it to complete and verify.

Once it is completed, the drive will be automatically ejected from your OS. Disconnect it and reconnect it so it appears again in This PC as `boot`. Open the drive in the file explorer and ensure you have `File name extensions` enabled within the `View` menu, as shown below.



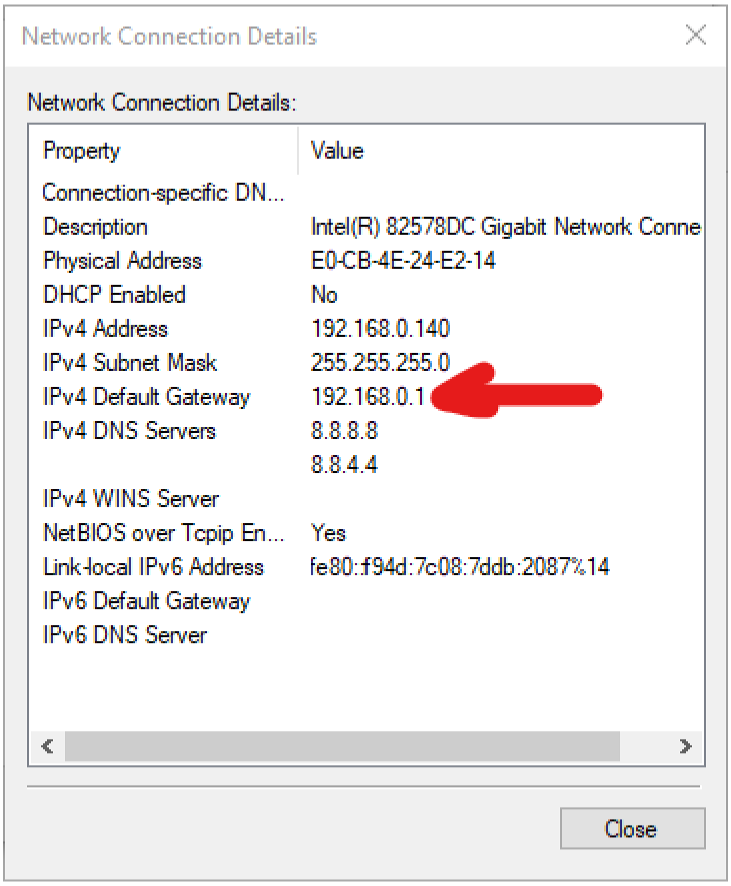
□ Item check boxes
☑ File name extensions
□ Hidden items

Name	Date modified	Type	Size
fixup_db.dat	1/8/2021 3:26 PM	DAT File	11 KB
fixup_x.dat	1/8/2021 3:26 PM	DAT File	11 KB
fixup4.dat	1/8/2021 3:26 PM	DAT File	6 KB
fixup4cd.dat	1/8/2021 3:26 PM	DAT File	4 KB
fixup4db.dat	1/8/2021 3:26 PM	DAT File	9 KB
fixup4x.dat	1/8/2021 3:26 PM	DAT File	9 KB
issue.txt	1/11/2021 1:08 PM	Text Document	1 KB
kernel.img	1/7/2021 3:53 PM	Disc Image File	5,329 KB
kernel7.img	1/7/2021 3:53 PM	Disc Image File	5,652 KB
kernel7l.img	1/7/2021 3:53 PM	Disc Image File	6,003 KB
kernel8.img	1/7/2021 3:53 PM	Disc Image File	6,726 KB
LICENCE.broadcom	1/5/2021 7:30 AM	BROADCOM File	2 KB
start.elf	1/8/2021 3:26 PM	ELF File	2,872 KB
start_cd.elf	1/8/2021 3:26 PM	ELF File	773 KB
start_db.elf	1/8/2021 3:26 PM	ELF File	4,677 KB
start_x.elf	1/8/2021 3:26 PM	ELF File	3,613 KB
start4.elf	1/8/2021 3:26 PM	ELF File	2,164 KB
start4cd.elf	1/8/2021 3:26 PM	ELF File	773 KB
start4db.elf	1/8/2021 3:26 PM	ELF File	3,630 KB
start4x.elf	1/8/2021 3:26 PM	ELF File	2,906 KB

Then, in the Home menu or in the context menu for the drive, right clicking any empty space, create a new text file. It should be created with the name `New Text Document.txt`. Note that it is important that you can see the `.txt` file extension. Rename it to `ssh`, without any extension. Eject the drive from Windows, remove it, and insert it into the Raspberry Pi.

Before connecting the power to the Raspberry Pi, connect it to your router through a network cable, as wi-fi is not yet configured, and only then connect the power cable to it. It should start, and the initialization process of the OS can take up to a minute.

Once about a minute has elapsed, it should be discoverable in the network. To find it, you must first determine your gateway (router) IP address. You can find that from the same dialog that was previously used to find your computer’s local IP address, as shown below.



Network Connection Details:

Property	Value
Connection-specific DN...	
Description	Intel(R) 82578DC Gigabit Network Conne
Physical Address	E0-CB-4E-24-E2-14
DHCP Enabled	No
IPv4 Address	192.168.0.140
IPv4 Subnet Mask	255.255.255.0
IPv4 Default Gateway	192.168.0.1
IPv4 DNS Servers	8.8.8.8 8.8.4.4
IPv4 WINS Server	
NetBIOS over Tcpip En...	Yes
Link-local IPv6 Address	fe80::f94d:7c08:7ddb:2087%14
IPv6 Default Gateway	
IPv6 DNS Server	

Now open Windows PowerShell from the Start menu. When PowerShell is done starting up, enter `ping [your IPv4 Default Gateway]` (in my case `ping 192.168.0.1`) and hit enter. Wait a few seconds and press `Ctrl + C`.

Next, use the command `arp -a`. It should list the IP addresses for all devices currently connected to your network. You can exclude all IP addresses you recognize as belonging to devices other than the Raspberry Pi, and take note of all addresses you do not recognize.

For each IP address you did not recognize, run the command `ssh pi@[address]`, in my case, for example, I would run `ssh pi@192.168.0.147`. One of the addresses will respond quickly requesting you to enter a password, while all others will hang, then return an error. Once the password is requested, enter the password `raspberry`, which is the default password (note that no characters are displayed on screen as you type, this is normal) and hit enter. You should now be connected to the Raspberry Pi, and the general look of the terminal should be different.

Before continuing it is good practice to update all the software installed on the Raspberry Pi, to ensure any security vulnerabilities that have patches available are not present. To do this, run `sudo apt update`, and once that is complete, `sudo apt upgrade`. It should prompt you to confirm the action by entering `y` or `n` and then hitting enter, so enter `y`. Note that it is possible that you are asked to enter the password again, whenever you use a command preceded by `sudo`. If you are, just enter `raspberry`. The upgrade process can take a few minutes, depending on how many packages need to be upgraded.

Once fully up to date, run the command `sudo raspi-config` to open the configurator for the Raspberry Pi. In it, navigate through `1 System Options` and `S1 Wireless LAN` to configure the wi-fi connectivity of the Raspberry Pi. Note that both the SSID (network name) and the passphrase (network password) are case-sensitive. When done, navigate back to the top menu and select `<Finish>`.

At this point, your Raspberry Pi is capable of connecting to the network using wi-fi, so if you wish to unplug it from the power, then unplug it from the network cable, and place it wherever it will be during use, then power it back on, you can do that. After restarting it, it should retain the same IP address, so using the same address in the `ssh pi@[address]` command should work. In case it doesn't, repeat the steps to find all connected devices and try to find its address again.

Once connected again to the Raspberry Pi, run `sudo apt install nodejs npm`, and enter `y` when prompted to confirm the installation. Once that is completed, run the command `mkdir dat-stream-deck`, and then press `Ctrl + D` to disconnect from the Raspberry Pi.

Now, check that, in the PowerShell, it shows your current folder as your user folder. Enter the command cd Downloads and check that it has changed to your Downloads folder, where the dat-stream-deck release package (zip file) and dsdconfig.json file should be located.

Next, run the following command to transfer the release package to the Raspberry Pi

```
pscp -P 22 .\dat-stream-deck-[version].zip
pi@[address]:/home/pi/dat-stream-deck/download.zip
```

or, in my case, for example

```
pscp -P 22 .\dat-stream-deck-v0.1.1.zip
pi@192.168.0.147:/home/pi/dat-stream-deck/download.zip
```

It should prompt you to enter the password again. Then, to transfer the `dsdconfig.json` file, run the command

```
pscp -P 22 .\dsdconfig.json
pi@[address]:/home/pi/dat-stream-deck/dsdconfig.json
```

and enter the password once again.

Connect to the Raspberry Pi through ssh again, by running `ssh pi@[address]`, and once connected, run `cd dat-stream-deck`, and then `unzip download.zip`. Now that the files are all extracted, run `npm install` to install all the module dependencies. When npm finishes running, dat-stream-deck should be ready to run.

To set it up to automatically run when the Raspberry Pi starts, run `cd ..` then `sudo nano .bashrc`. A text editor should open with your `.bashrc` file. Navigate to the bottom using the arrow keys and add, after the last line the following

```
cd dat-stream-deck
npm start
```

and press `Ctrl + X` to close the editor. You will be asked whether to save the file. Press `Y`, then `Enter`.

Now it is important that you gracefully shutdown the Raspberry Pi, since files have been changed. To do this, run `sudo shutdown now`. If you wish to restart it instead, to immediately test it, run `sudo shutdown -r now`.

From this point forwards, all you need to do to start dat-stream-deck is plug in the power to the Raspberry Pi and wait approximately a minute, and to turn it off, simply press the key to which the `Exit` action is bound, wait a few seconds, and remove the power cable from the Raspberry Pi.

Using dat-stream-deck

Windows

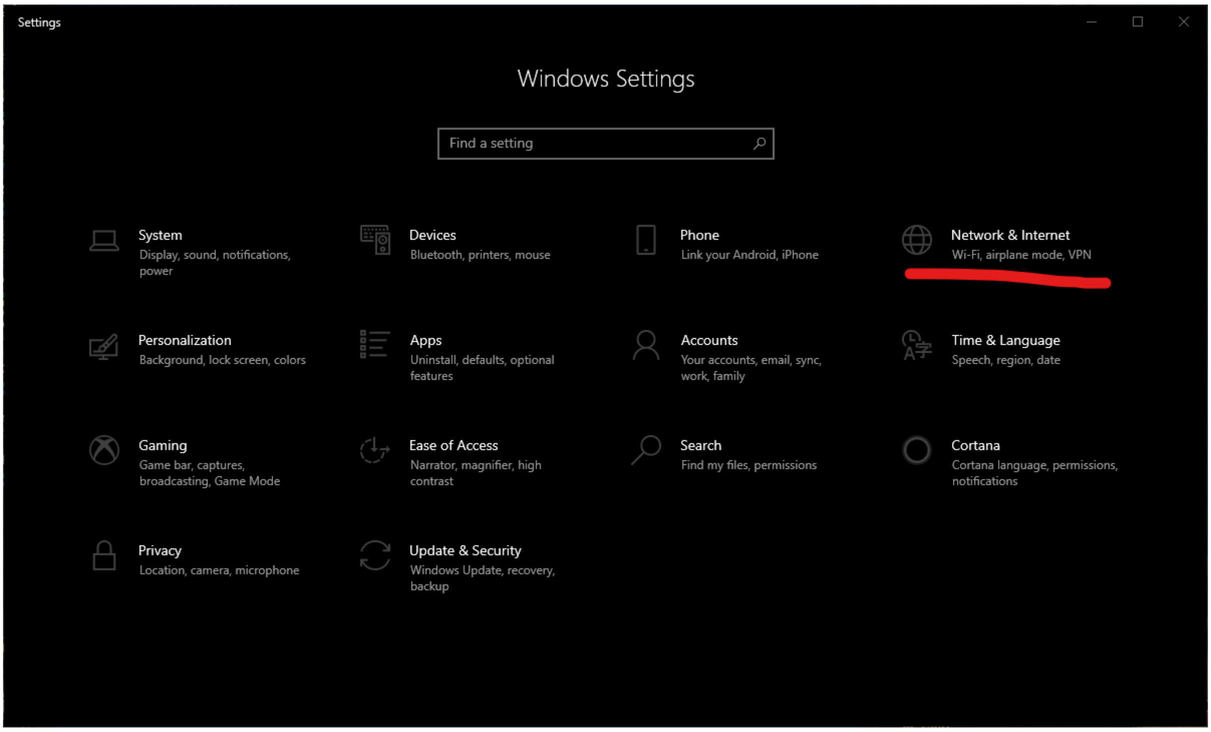
To run dat-stream-deck simply run the `run.bat` file located in the same folder to which dat-stream-deck has been extracted. You can create a shortcut to this file and rename it to anything you'd like, however the file cannot be moved elsewhere. A command prompt window will open and the Node.js initialization messages should appear. Once the line `controller initialized` appears, dat-stream-deck is ready. Open OBS if it isn't yet opened, and press the key to which the `connect` action is bound in the start state (`C` in `init` by default), and everything should be ready to go.

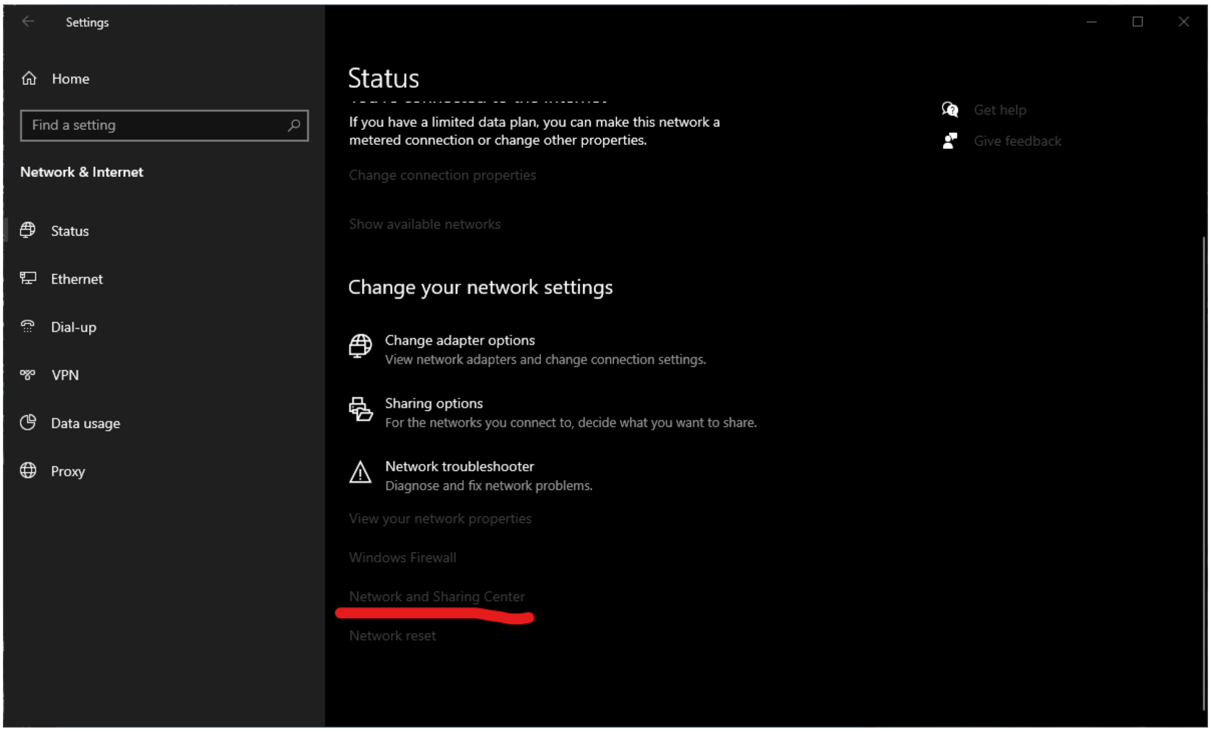
Raspberry Pi

If all the installation steps have been correctly followed, running dat-stream-deck from a Raspberry Pi should be as simple as starting up the Raspberry Pi, waiting around a minute for everything to initialize, and pressing the connect key, and you are set.

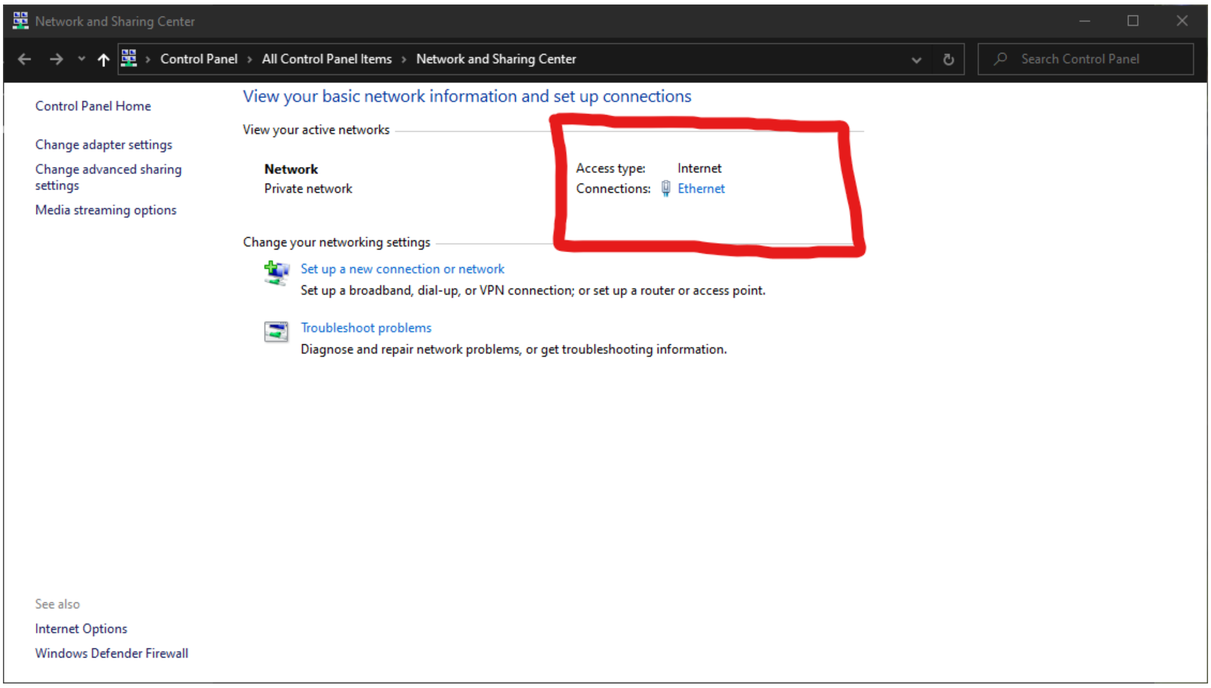
Appendix A: Setting up a fixed IP address for your computer

Firstly, you must determine your current IP address, subnet mask, and gateway address. To do this, follow the steps below, as in the configuration step of the guide.


Settings
Windows Settings
Find a setting
System
Display, sound, notifications, power
Devices
Bluetooth, printers, mouse
Phone
Link your Android, iPhone
Network & Internet
Wi-Fi, airplane mode, VPN
Personalization
Background, lock screen, colors
Apps
Uninstall, defaults, optional features
Accounts
Your accounts, email, sync, work, family
Time & Language
Speech, region, date
Gaming
Game bar, captures, broadcasting, Game Mode
Ease of Access
Narrator, magnifier, high contrast
Search
Find my files, permissions
Cortana
Cortana language, permissions, notifications
Privacy
Location, camera, microphone
Update & Security
Windows Update, recovery, backup


Settings
Home
Find a setting
Network & Internet
Status
Ethernet
Dial-up
VPN
Data usage
Proxy
Status
Get help
Give feedback
Change connection properties
Show available networks
Change your network settings
Change adapter options
View network adapters and change connection settings.
Sharing options
For the networks you connect to, decide what you want to share.
Network troubleshooter
Diagnose and fix network problems.
View your network properties
Windows Firewall
Network and Sharing Center
Network reset

If you have a limited data plan, you can make this network a metered connection or change other properties.



Network and Sharing Center

Control Panel > All Control Panel Items > Network and Sharing Center

Search Control Panel

Control Panel Home

Change adapter settings

Change advanced sharing settings

Media streaming options

View your basic network information and set up connections

View your active networks

Network
Private network

Access type: Internet
Connections: Ethernet

Change your networking settings

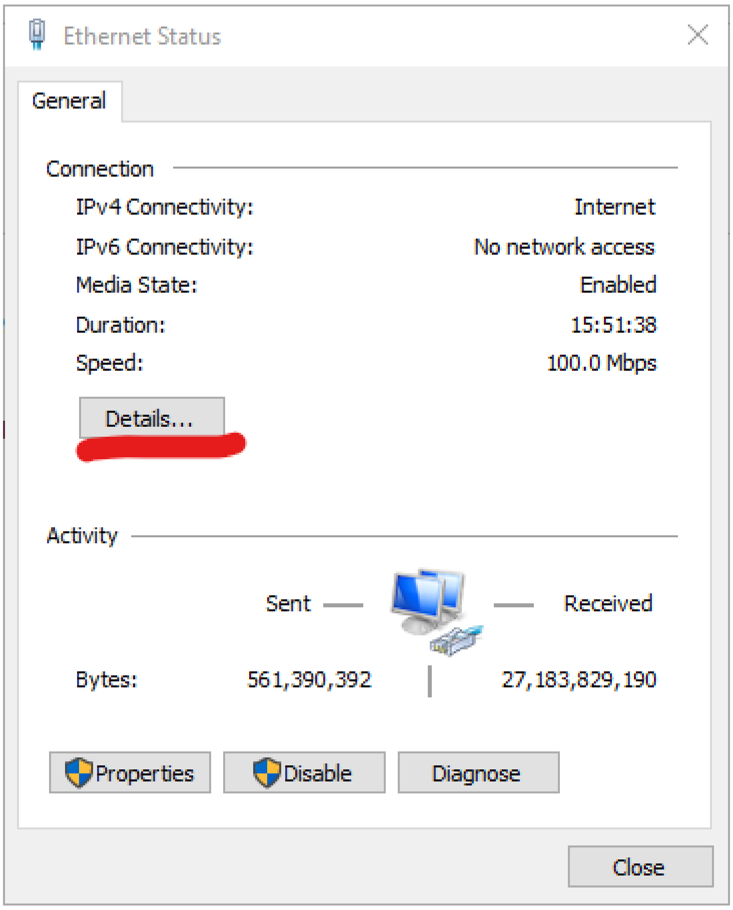
Set up a new connection or network
Set up a broadband, dial-up, or VPN connection; or set up a router or access point.

Troubleshoot problems
Diagnose and repair network problems, or get troubleshooting information.

See also

Internet Options

Windows Defender Firewall



Ethernet Status

General

Connection

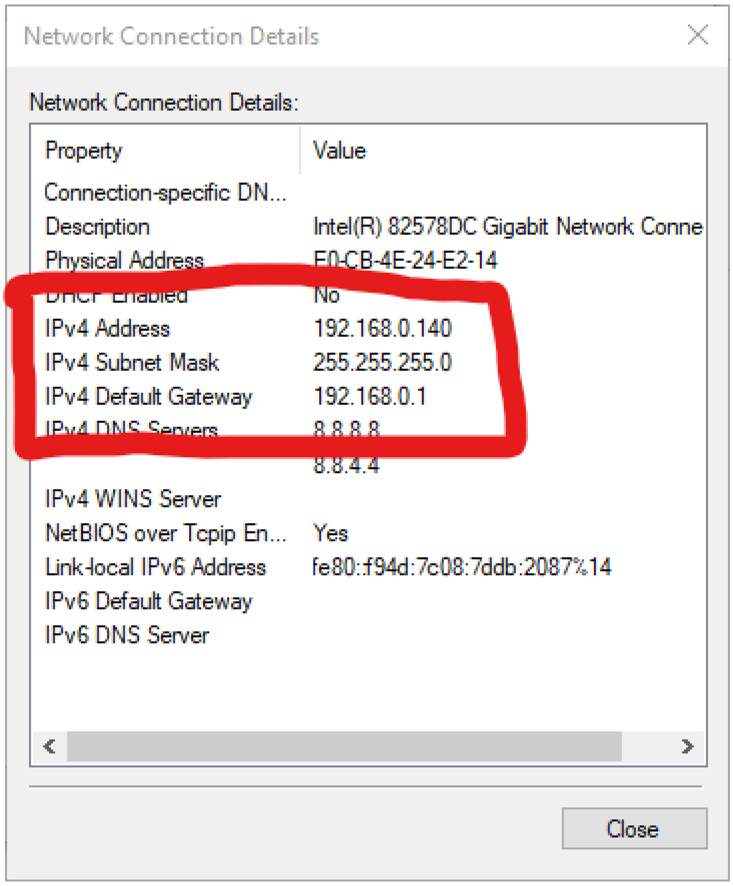
IPv4 Connectivity: Internet
IPv6 Connectivity: No network access
Media State: Enabled
Duration: 15:51:38
Speed: 100.0 Mbps

Details...

Activity

Sent — Received

Bytes: 561,390,392 | 27,183,829,190

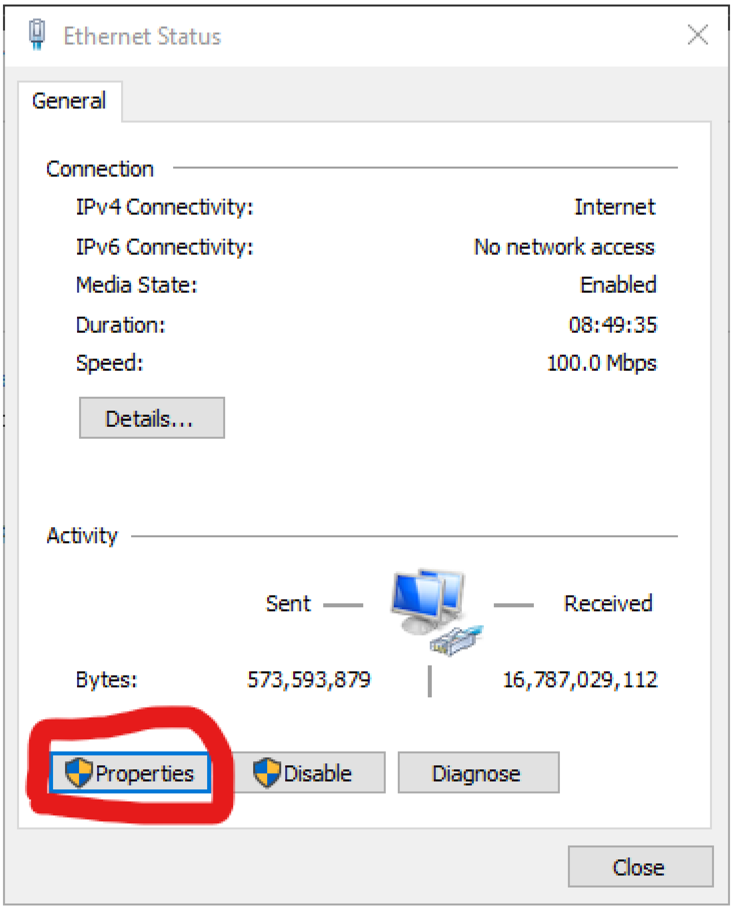


Network Connection Details

Network Connection Details:

Property	Value
Connection-specific DN...	
Description	Intel(R) 82578DC Gigabit Network Conne
Physical Address	F0-CB-4E-24-E2-14
DHCP Enabled	No
IPv4 Address	192.168.0.140
IPv4 Subnet Mask	255.255.255.0
IPv4 Default Gateway	192.168.0.1
IPv4 DNS Servers	8.8.8.8 8.8.4.4
IPv4 WINS Server	
NetBIOS over Tcpip En...	Yes
Link-local IPv6 Address	fe80::f94d:7c08:7ddb:2087%14
IPv6 Default Gateway	
IPv6 DNS Server	

Ideally, to avoid issues, you want to keep these addresses the same as they currently are. To do this, follow these steps.



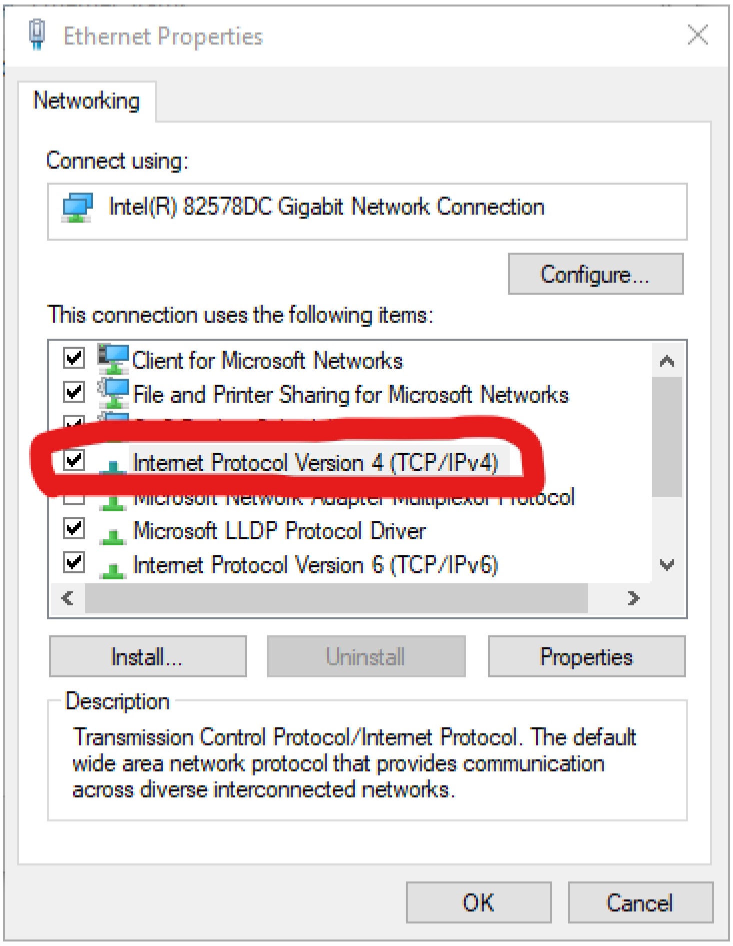
Ethernet Status

General

Connection

IPv4 Connectivity:	Internet
IPv6 Connectivity:	No network access
Media State:	Enabled
Duration:	08:49:35
Speed:	100.0 Mbps

	Sent	Received
Bytes:	573,593,879	16,787,029,112



Ethernet Properties

Networking

Connect using:

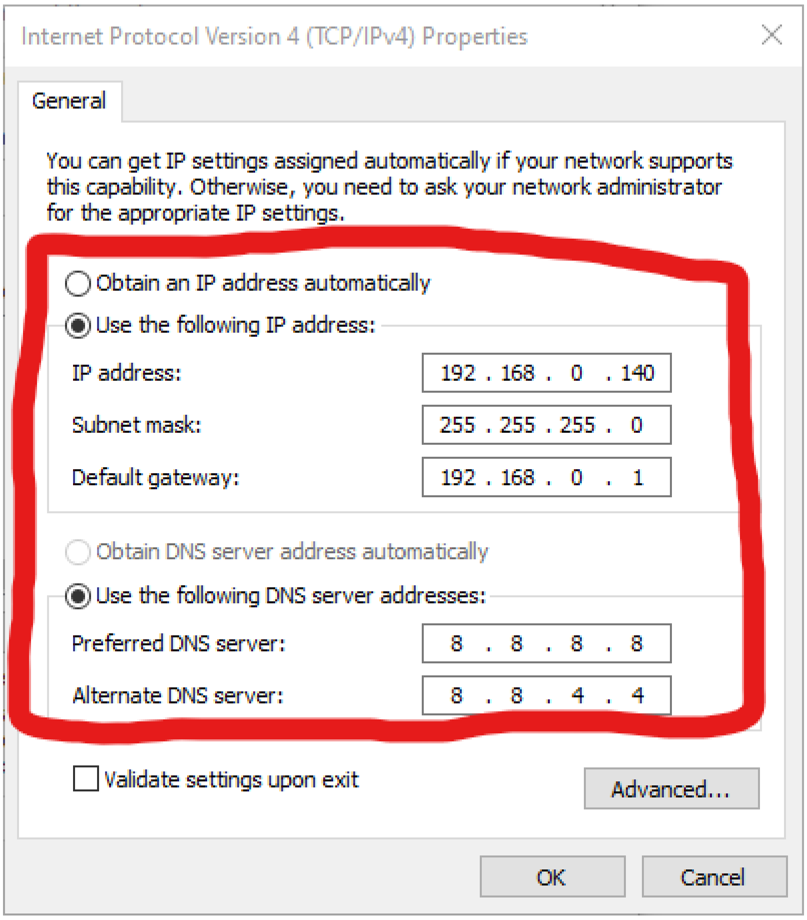
Intel(R) 82578DC Gigabit Network Connection

This connection uses the following items:

☑ Client for Microsoft Networks
☑ File and Printer Sharing for Microsoft Networks
☑ Internet Protocol Version 4 (TCP/IPv4)
□ Microsoft Network Adapter Multiplexor Protocol
☑ Microsoft LLDP Protocol Driver
☑ Internet Protocol Version 6 (TCP/IPv6)

Description

Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.



You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

○ Obtain an IP address automatically

● Use the following IP address:

IP address: 192 . 168 . 0 . 140

Subnet mask: 255 . 255 . 255 . 0

Default gateway: 192 . 168 . 0 . 1

○ Obtain DNS server address automatically

● Use the following DNS server addresses:

Preferred DNS server: 8 . 8 . 8 . 8

Alternate DNS server: 8 . 8 . 4 . 4

□ Validate settings upon exit

Replace the addresses in `IP address`, `Subnet mask`, and `Default gateway` with the values you found in the Network Connection Details window from before.