

# How to send files to Raspberry Pi using SSH

## What is SSH?

SSH stands for Secure Shell — it's a network protocol that lets you securely log in to and control another computer remotely, usually over the internet or your local network.

Think of it as opening a remote terminal window on your Raspberry Pi from your laptop or another device.

## What You Can Do with SSH:

1. Run terminal commands on your Pi from another machine
2. Transfer files (using scp, rsync, or SFTP)
3. Install software, run Python scripts, update your system
4. Control a headless Raspberry Pi (one without monitor/keyboard)

## Enable SSH on Raspberry Pi

### Option 1: Using Raspberry Pi OS with Desktop

- Go to **Preferences → Raspberry Pi Configuration**
- Under the Interfaces tab, enable **SSH**
- Reboot afterwards, `sudo reboot`

### Option 2: If You're Using Pi Headless

- Put a file named ssh (with no extension) into the boot partition of the SD card
- When the Pi boots, SSH will be enabled

## Find Pi's IP address

1. In Terminal, `hostname -I`
2. You will see something that looks like this: `192.168.1.42`, this is your pi's IP address

## File Transfer

### 1. From Your Computer → Raspberry Pi

```
scp /path/to/local/file pi@<raspberry_pi_ip>:/home/pi/
```

## 2. To Send a Whole Folder

```
scp -r /path/to/local/folder pi@<raspberry_pi_ip>:/home/pi/
```

## 3. From Raspberry Pi → Your Computer

```
scp pi@<raspberry_pi_ip>:/home/pi/somefile.txt /local/path/
```

## Tips

1. The default username is usually `pi`
2. If SSH asks you to confirm the connection the first time, type `yes`
3. If your Pi is using a custom SSH port (e.g. 2222), add `-P 2222`

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Revision #2

Created 15 April 2025 11:01:07 by Joanne Leung

Updated 15 April 2025 11:13:34 by Joanne Leung