

## File / Directory Transfer with SCP: Windows ↔ macOS/Linux

This step-by-step guide shows how to enable SSH, transfer files / directory with **SCP**, and troubleshoot common issues between **Windows** and **macOS/Linux** machines. All examples assume both systems are on the same local network.

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### 1. Enable and Verify SSH:

- on **MAC / LINUX** [Terminal]

1. Enable SSH (Remote Login):

```
sudo systemsetup -setremotelogin on
```

2. Check SSH status:

```
systemsetup -getremotelogin
```

3. Verify port 22 is listening:

```
sudo lsof -iTCP -sTCP:LISTEN -n -P | grep ssh  
or  
netstat -an | grep ".22"
```

- on **Windows** [PowerShell as Administrator]

1. Install OpenSSH Server (if needed):

```
Add-WindowsCapability -Online -Name OpenSSH.Server~~~~0.0.1.0
```

2. Start and enable the service:

```
Start-Service sshd
```

```
Set-Service -Name sshd -StartupType 'Automatic'
```

3. Verify the service is running:

```
Get-Service sshd
```

4. Allow SSH in the firewall (port 22):

```
New-NetFirewallRule -Name sshd -DisplayName 'OpenSSH Server (sshd)'  
-Enabled True -Direction Inbound -Protocol TCP -Action Allow  
-LocalPort 22
```

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## 2. SCP File Transfer:

**NOTE:** → Replace placeholders: <windows\_user>, <windows\_machine\_IP>, <mac\_user>, <mac\_IP>, <file.docx>

- Use user@host:/path/to/file for remote paths.
- Use quotes around Windows paths **containing spaces**, e.g. "C:/Users/<user\_name/My File.docx".
- **When using Linux** use the following path: (replace **Users** with **home**)  
/home/<linux\_user>/Desktop/<fileName.\_>

on MAC / LINUX [Terminal]

- **From Windows → Mac/Linux** (run on Mac pulls/downloads file from Windows)

```
scp  
<windows_user>@<windows_machine_IP>:/Users/<windows_user>/Desktop/<fileName._> [space] /Users/<mac_user>/Downloads/
```

Alternative (Windows path with quotes) if the above command doesn't work:

```
scp "<windows_user>@<windows_machine_IP>:C:/Users/<windows_user>/Desktop/<fileName._>" [space] /Users/<mac_user>/Downloads/
```

- **From Mac/Linux → Windows** (run on Mac pushes/uploads file to Windows)

```
scp /Users/<mac_user>/Desktop/<fileName._> [space]  
<windows_user>@<windows_machine_IP>:"C:/Users/<windows_user>/Downloads/"
```

on Windows [PowerShell or CMD with SCP available]

**NOTE:** In PowerShell, use double quotes around the destination path if it contains spaces.

- **From Mac/Linux → Windows** (run on Windows pulls/downloads file from Mac)

```
scp <mac_user>@<mac_IP>:/Users/<mac_user>/Desktop/<fileName._> [space] "C:\Users\<windows_user>\Downloads\"
```

- **From Windows → Mac/Linux** (run on Windows pushes/uploads file to Mac)

```
scp "C:\Users\<windows_user>\Desktop\<fileName._>" [space]  
<mac_user>@<mac_IP>:/Users/<mac_user>/Downloads/
```

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### 3. SCP Directory Transfers (recursive):

**NOTE:** Use `-r` to copy directories and their contents.

When using **Linux** use the following path: (replace **Users** with **home**)

`/home/<linux_user>/Desktop/<folderName._>`

on **MAC / LINUX** [Terminal]

- **From Windows → Mac** (run on Mac and pull/download from Windows):

```
scp -r <windows_user>@<windows_machine_IP>:/Users/<windows_user>/
Desktop/<folderName> [space] /Users/<mac_user>/Downloads/
```

- **From Mac → Windows** (run on Mac and push/upload to Windows):

```
scp -r /Users/<mac_user>/Desktop/FolderName [space]
<windows_user>@<windows_machine_IP>:"C:/Users/<windows_user>/
Downloads/<FolderName>"
```

on **Windows** [PowerShell or CMD with SCP available]

- **From Windows → Mac** (run on Windows and pull/download from Windows):

```
scp -r <mac_user>@<mac_IP>:/Users/<mac_user>/Desktop/<folderName>
[space] "C:\Users\<windows_user>\Downloads\"
```

- **From Mac → Windows** (run on Windows and push/upload to Mac):

```
scp -r "C:\Users\<windows_user>\Desktop\<folderName>" [space]
<mac_user>@<mac_IP>:/Users/<mac_user>/Downloads/
```