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# Get started with OpenSSH for Windows

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Applies to:  ✅ Windows Server 2025, ✅ Windows Server 2022, ✅ Windows Server 2019, ✅ Windows Server 2016

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**Choose your product version:**

| Windows Server 2025 | Windows Server 2022 | Windows Server 2019 |

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OpenSSH is a connectivity tool for remote sign-in that uses the SSH protocol. It encrypts all traffic between client and server to eliminate eavesdropping, connection hijacking, and other attacks.

An OpenSSH-compatible client can be used to connect to Windows Server and Windows client devices.

> ⓘ **Important**
>
> If you downloaded the OpenSSH beta from the GitHub repo at **PowerShell/Win32-OpenSSH** ↗, follow the instructions listed there, not the ones in this article. Some information in the Win32-OpenSSH repository relates to prerelease product that may be substantially modified before it's released. Microsoft makes no warranties, express or implied, with respect to the information provided there.

## Prerequisites

Before you start, your computer must meet the following requirements:

- A device running at least Windows Server 2019 or Windows 10 (build 1809).

- PowerShell 5.1 or later.

- An account that is a member of the built-in Administrators group.

## Prerequisites check

To validate your environment, open an elevated PowerShell session and do the following:

- Enter *winver.exe* and press enter to see the version details for your Windows device.

- Run `$PSVersionTable.PSVersion`. Verify your major version is at least 5, and your minor version at least 1. Learn more about installing PowerShell on Windows.

- Run the following command. The output shows `True` when you're a member of the built-in Administrators group.

| PowerShell | 🗐 Copy |
| --- | --- |

```
(New-Object Security.Principal.WindowsPrincipal([Security.Principal.Windows
```

## Enable OpenSSH for Windows Server 2025

Starting with Windows Server 2025, OpenSSH is now installed by default. You can also enable or disable the `sshd` service in Server Manager.

| GUI | PowerShell |

To enable SSHD using Server Manager:

1. In **Server Manager**, on the navigation pane to the left, select **Local Server**.

2. In the **Properties** window, locate **Remote SSH Access**.

3. Select **Disabled** to enable the OpenSSH service.

> ⓘ **Note**
>
> If you need to allow or restrict specific users or groups from using OpenSSH for remote access, add them to the **OpenSSH Users** user group.

## Connect to OpenSSH Server

Once installed, you can connect to OpenSSH Server from a Windows or Windows Server device with the OpenSSH client installed. From a PowerShell prompt, run the following command.

| PowerShell | 🗐 Copy |
| --- | --- |

```
ssh domain\username@servername
```

Once connected, you get a message similar to the following output.

| PowerShell | 🗐 Copy |
| --- | --- |

```
The authenticity of host 'servername (10.00.00.001)' can't be established.
ECDSA key fingerprint is SHA256:(<a large string>).
```

```
Are you sure you want to continue connecting (yes/no)?
```

Entering *yes* adds that server to the list of known SSH hosts on your Windows client.

At this point, the service prompts you for your password. As a security precaution, the characters of your password aren't displayed as you enter them.

Once connected, you should see the following Windows command shell prompt:

| PowerShell | ⧉ Copy |
|---|---|

```
domain\username@SERVERNAME C:\Users\username>
```

# Uninstall OpenSSH for Windows

| GUI | PowerShell |
|---|---|

To uninstall OpenSSH using Windows Settings:

1. Open **Settings**, select **System**, then select **Optional Features** (also referred to as **Manage optional features**).

2. In the list, select **OpenSSH Client** or **OpenSSH Server**.

3. Select **Uninstall**.

If the service was in use when you uninstalled it, you should restart Windows.

# Next steps

Now that you're done installing OpenSSH Server for Windows, here are some articles that can help you learn how to use it:

- Learn more about using key pairs for authentication in [OpenSSH key management](#)

- Learn more about the [OpenSSH Server configuration for Windows](#)

# Feedback

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# Additional resources

⬡ Training

**Module**

[Develop on a remote machine using SSH with Visual Studio Code - Training](#)

In this module, you'll learn how to seamlessly develop on a remote machine using the Visual Studio Code Remote - SSH extension. We'll explore how to run and debug code located on a remote machine, while locally using Visual Studio Code's full feature set.

**Certification**

[Microsoft Certified: Windows Server Hybrid Administrator Associate - Certifications](#)

As a Windows Server hybrid administrator, you integrate Windows Server environments with Azure services and manage Windows Server in on-premises networks.

🌐 English (United States)

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