

2: Installing Infinity Tools

Welcome back! In [Chapter 1](#), you set up your Linux server. Now we'll connect to it and install Infinity Tools. Don't worry - we'll walk through every step together!

What We'll Do in This Chapter

By the end of this chapter, you will:

- Know how to connect to your server from your computer
- Have Infinity Tools downloaded and installed on your server
- Be able to run Infinity Tools for the first time

Time needed: About 15-20 minutes

What is SSH? (Simple Explanation)

SSH stands for "Secure Shell" - but you don't need to remember that! Think of SSH as a secure tunnel that connects your computer to your server. It's like having a remote control for your server that you can use from your regular computer.

Why we need it: Since your server is "in the cloud" (not physically in front of you), we need a way to control it. SSH is that way - it's safe, secure, and the standard way to manage servers.

Don't worry! SSH might sound technical, but we'll show you exactly how to use it. It's actually quite simple once you see it in action!

Step 1: Connect to Your Server with SSH

The first thing we need to do is connect to your server. The steps are slightly different depending on whether you use Windows, Mac, or Linux. Choose your computer type below:

For Windows Users

Windows 10 and 11 have SSH built-in (it's a program called "SSH" that comes with Windows). Here's how to use it:

Option A: Using Windows Terminal or Command Prompt

1. Open Command Prompt or PowerShell:

- Press the `Windows` key
- Type "cmd" or "PowerShell"
- Click on "Command Prompt" or "Windows PowerShell"

2. Connect to your server:

- Type this command (replace `YOUR_IP_ADDRESS` with your actual server IP):

```
ssh root@YOUR_IP_ADDRESS
```

For Hetzner: `root` stays `root` (Hetzner uses root by default)

For DigitalOcean: `root` stays `root` (most DigitalOcean images use root)

Example: If your server IP is `123.45.67.89`, you would type:

```
ssh root@123.45.67.89
```

3. You'll see a security warning:

- The first time you connect, Windows will ask "Are you sure you want to continue connecting?"
- Type `yes` and press Enter
- This is normal and safe - it's just Windows double-checking

4. Enter your password:

- For **Hetzner:** If you did not provide an SSH key (we did not cover that here), Hetzner sends you a one time password via email. You will have to change it immediately after your first log-in (Linux will force you to change it).
- For **DigitalOcean:** Enter the password you created when setting up your droplet
- **Important:** When you type the password, you won't see any characters appear (not even dots). This is normal for security! Just type and press Enter.

5. You're connected!

- If successful, you'll see something like: `root@infinity-tools-server:~#`
- This means you're now controlling your server!

Option B: Using PuTTY (Alternative for Windows)

If you prefer a graphical interface, you can use [PuTTY](#):

1. **Download PuTTY:** Go to putty.org and download PuTTY
2. **Open PuTTY:** Double-click the downloaded file
3. **Enter your server details:**
 - Host Name: Your server IP address

- Port: 22 (leave as default)
 - Connection Type: SSH
4. **Click "Open"**
 5. **Enter your username:** `root`
 6. **Enter your password** when prompted
 7. **You're connected!**

More Resources for Windows:

- [Microsoft Terminal Tutorial](#)
- [YouTube Tutorial](#)

For Mac Users

Mac has SSH built-in (it's in the [Terminal](#) app). Here's how to use it:

1. **Open Terminal:**

- Press `Command + Space` (Command is the ⌘ key)
- Type "Terminal"
- Press Enter

2. **Connect to your server:**

- Type this command (replace `YOUR_IP_ADDRESS` with your actual server IP):

```
ssh root@YOUR_IP_ADDRESS
```

Example: If your server IP is `123.45.67.89`, you would type:

```
ssh root@123.45.67.89
```

3. **You'll see a security warning:**

- The first time you connect, Mac will ask "Are you sure you want to continue connecting?"
- Type `yes` and press Enter

4. **Enter your password:**

- For **Hetzner:** If you did not provide an SSH key (we did not cover that here), Hetzner sends you a one time password via email. You will have to change it immediately after your first log-in (Linux will force you to change it).
- For **DigitalOcean:** Enter the password you created when setting up your droplet
- **Important:** When you type the password, you won't see any characters appear. This is normal! Just type and press Enter.

5. **You're connected!**

- If successful, you'll see something like: `root@infinity-tools-server:~#`
- You're now controlling your server!

More Resources

- [User Guide for macOS Terminal](#)
- [YouTube video \(thanks Tony!\)](#)

For Linux Users

Linux has SSH built-in. If you use Linux, you probably already knew that. Here's how to use it:

1. Open Terminal:

- Press `Ctrl + Alt + T` (on most Linux systems)
- Or search for "Terminal" in your applications menu

2. Connect to your server:

- Type this command (replace `YOUR_IP_ADDRESS` with your actual server IP):

```
ssh root@YOUR_IP_ADDRESS
```

Example: If your server IP is `123.45.67.89`, you would type:

```
ssh root@123.45.67.89
```

3. You'll see a security warning:

- The first time you connect, it will ask "Are you sure you want to continue connecting?"
- Type `yes` and press Enter

4. Enter your password:

- For **Hetzner**: If you did not provide an SSH key (we did not cover that here), Hetzner sends you a one time password via email. You will have to change it immediately after your first log-in (Linux will force you to change it).
- **Important:** When you type the password, you won't see any characters appear. This is normal! Just type and press Enter.

5. You're connected!

- If successful, you'll see something like: `root@infinity-tools-server:~#`
- You're now controlling your server!

Troubleshooting: Can't Connect?

Common issues and solutions:

- **"Connection refused" or "Connection timed out":**
 - Check that your server is running in your cloud provider's dashboard
 - Make sure you're using the correct IP address
 - Wait a minute or two after creating the server - it might still be starting up

- **"Permission denied":**
 - Double-check your password (remember, you won't see characters when typing)
 - Make sure you're using `root` as the username
 - For DigitalOcean: Check your email - they send the password there
- **"Host key verification failed":**
 - This happens if you've connected to a different server with the same IP before
 - This is usually safe to ignore, but if you're concerned, ask for help

Step 2: Get the Infinity Tools Installer

You'll receive the Infinity Tools installer as a file that you need to transfer to your server. This file is usually named something like `infinity-tools-installer.run`.

Where to Get the Installer

The installer file will be provided to you through:

- **Email attachment** - Check your email for the installer file
- **Download link** - A secure download link will be sent to you
- **USB drive** - If you received a physical copy

Important: Make sure you have the installer file on your computer before proceeding!

Step 3: Transfer the Installer to Your Server

Now we need to get the installer file from your computer to your server. We'll use an FTP client - a program that helps you transfer files between computers.

What is an FTP Client?

An FTP client is a program that lets you upload files from your computer to your server. Think of it like copying a file from one folder to another, but over the internet.

Why we need it: Your server is in the cloud, so we need a way to send files to it. FTP clients make this easy and secure.

Recommended FTP Clients for Beginners

Here are some beginner-friendly FTP clients. Choose one that works with your computer:

For Windows Users

[FileZilla](#) (Recommended - Free)

- ☐ Very easy to use
- ☐ Free to download
- ☐ Works with Windows 10 and 11
- ☐ Has a simple drag-and-drop interface

How to get FileZilla:

1. Go to filezilla-project.org
2. Click "Download FileZilla Client"
3. Download the Windows version
4. Install it like any other program

[WinSCP](#) (Alternative - Free)

- ☐ Also very easy to use
- ☐ Free to download
- ☐ Good for Windows users

For Mac Users

[Cyberduck](#) (Recommended- Free)

- ☐ Very beginner-friendly
- ☐ Free to download
- ☐ Clean, simple interface

[FileZilla](#) (Alternative - Free)

- ☐ Works great on Mac
- ☐ Free to download
- ☐ Simple interface

For Linux Users

[FileZilla](#) (Recommended - Free)

- ☐ Available for most Linux distributions
- ☐ Free to download
- ☐ Easy to install

How to install FileZilla on Linux:

- **Ubuntu/Debian:** `sudo apt install filezilla`
- **Fedora:** `sudo dnf install filezilla`
- **Arch Linux:** `sudo pacman -S filezilla`

How to Use Cyberduck (Step-by-Step)

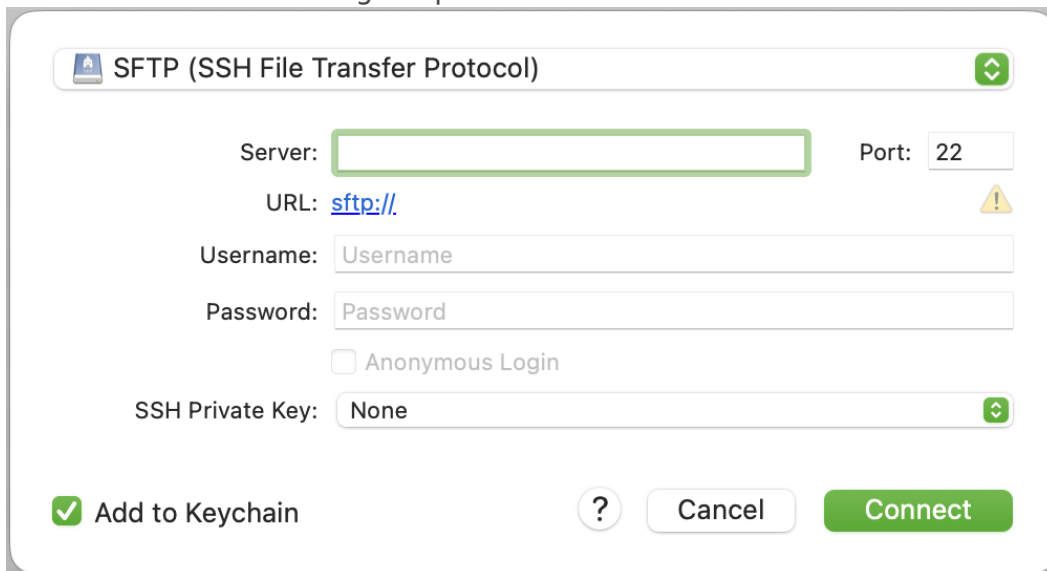
We'll use Cyberduck as an example, but other FTP clients work similarly:

1. **Open Cyberduck**
2. **Connect to your server:**

- Click



in the toolbar. This dialogue opens:

A dialog box titled "SFTP (SSH File Transfer Protocol)". It contains several input fields: "Server:" (empty), "Port:" (22), "URL:" (sftp:// with a warning icon), "Username:" (Username), "Password:" (Password), and "SSH Private Key:" (None). There is an "Anonymous Login" checkbox which is unchecked. At the bottom, there is a checked "Add to Keychain" checkbox, a help icon (?), a "Cancel" button, and a green "Connect" button.

- Select "SFTP" in the dropdown menu on top
- Server: enter your server's IP address here, something like 192.168.1.0
- Port: this should be automatically set to 22 - that's just how it's supposed to be
- Username: the username you have used for SSH, so root@IP_ADDRESS
- Password: your SSH password
- Connect

3. **After connection:**

- You should see something like this:

Filename	Size	Modified
> bin		-- 22.04.24, 15:08
> bin.usr-is-merged		-- 26.02.24, 13:58
> boot		-- 23.10.25, 08:52
> cdrom		-- 27.08.24, 17:39
> dev		-- 10.10.25, 15:13
> etc		-- 01.11.25, 07:48
> home		-- 02.11.25, 17:49
> lib		-- 22.04.24, 15:08
> lib.usr-is-merged		-- 26.02.24, 13:58
> lib64		-- 22.04.24, 15:08
> lost+found		-- 14.08.25, 13:02
> media		-- 27.08.24, 16:18
> mnt		-- 27.08.24, 16:18
> opt		-- 30.10.25, 14:51
> proc		-- 10.10.25, 15:13
> root		-- 30.10.25, 14:52
> run		-- Today, 09:58
> sbin		-- 22.04.24, 15:08
> sbin.usr-is-merged		-- 03.04.24, 11:11
> snap		-- 10.10.25, 15:13
> srv		-- 27.08.24, 16:18
> sys		-- 10.10.25, 15:13
> tmp		-- Today, 09:04
> usr		-- 27.08.24, 16:18
> var		-- 14.08.25, 13:11

4. Navigate to the right folder:

- On the right side (your server), double-click on `/` to go to the root folder
- Then double-click on `root` to go to your home folder

5. Upload the installer:

- On the left side (your computer), find the installer file
- Right-click on the installer file
- Select "Upload" or drag it to the right side
- Wait for the upload to complete

Verify the Upload

After uploading, let's make sure the file is on your server. Go back to your SSH connection and type:

```
ls -lh infinity-tools*.run
```

You should see the installer file listed. If you see it, you're ready to continue!

Troubleshooting File Transfer

Can't connect to server:

- Double-check your server IP address
- Make sure you're using port 22

- Verify your username is `root`
- Check that your server is running

Upload fails:

- Make sure you have enough space on your server
- Check that you have permission to upload files
- Try uploading to a different folder (like `/tmp`)

File not found after upload:

- Check that you uploaded to the right folder
- Look for the file in different locations
- Make sure the file name is correct

Step 4: Install Infinity Tools

Now comes the exciting part - installing Infinity Tools! The installer will set everything up for you automatically.

Make the Installer Executable

First, we need to tell Linux that this file can be run (executed). Type this command:

```
chmod +x infinity-tools*.run
```

What this does: Makes the installer file executable (able to run)

Run the Installer

Now let's install Infinity Tools! Type this command:

```
sudo ./infinity-tools*.run
```

What's happening:

- `sudo` means "run as administrator" - we need special permissions to install software
- `./` means "run the file in this directory"
- `infinity-tools*.run` means "the installer file we just downloaded"

During installation, you'll see:

- A welcome message from Infinity Tools

- Progress information as files are copied
- Dependencies being installed (like "gum" - a menu tool)
- A success message when it's done!

How long does it take? Usually 1-3 minutes, depending on your server's speed.

What Gets Installed

The installer automatically:

- Copies Infinity Tools to `/opt/InfinityTools/`
- Creates a shortcut command called `infinity-tools`
- Sets up all necessary permissions
- Installs a menu tool (called "gum") for the interactive interface

Success Message

When installation completes, you'll see a message like:

```
 INSTALLATION SUCCESSFUL!
```

```
 Quick Start:
```

- Run: `sudo infinity-tools`
- Or: `cd /opt/InfinityTools && sudo bash start-tools.sh`

If you see this message, congratulations! Infinity Tools is now installed on your server!

Step 5: Verify Installation

Let's make sure everything installed correctly. Type this command:

```
which infinity-tools
```

You should see: `/usr/local/bin/infinity-tools`

This confirms the shortcut was created successfully!

Step 6: Run Infinity Tools for the First Time

Now for the moment you've been waiting for - let's start Infinity Tools!

Starting Infinity Tools

Type this command:

```
sudo infinity-tools
```

What happens:

- Infinity Tools will start loading
- You'll see a message like "[] Loading Infinity Tools components..."
- Then the main menu will appear!

What You'll See

When Infinity Tools starts, you'll see a beautiful menu with options like:

- [] APPS - SOFTWARE (to install applications)
- [] SECURITY & NETWORKING (security tools)
- [] INFRASTRUCTURE & CORE SYSTEMS (Docker, etc.)
- [] BACKUP MANAGEMENT (backup tools)
- [] STATUS & HEALTH (check what's running)

How to navigate: Use your arrow keys to move up and down, and press Enter to select an option.

First Steps in Infinity Tools

When you first start Infinity Tools, here's what to do:

1. Check System Readiness:

- Infinity Tools might automatically check if your system is ready
- It will tell you if anything needs to be fixed

2. Install Docker (if needed):

- Docker is required for most applications
- Go to "[] INFRASTRUCTURE & CORE SYSTEMS" → "Install Docker"
- Follow the prompts - Infinity Tools will handle everything!

3. Explore the Menu:

- Take some time to look around
- Don't worry - you can't break anything by just browsing!
- Each section has helpful descriptions

Congratulations! ?

You've successfully:

- Connected to your server via SSH
- Downloaded Infinity Tools
- Installed Infinity Tools
- Started Infinity Tools for the first time

You're now ready to use Infinity Tools!

What's Next?

Now that Infinity Tools is installed and running, you can:

- **Install Docker** (if not already installed) - Go to Infrastructure menu
- **Install your first application** - Choose from WordPress, Vaultwarden, Nextcloud, and more!
- **Set up security** - Configure firewall and security settings
- **Configure backups** - Set up automatic backups for your data

Quick Reference

Connecting to your server:

```
ssh root@YOUR_IP_ADDRESS
```

Starting Infinity Tools:

```
sudo infinity-tools
```

Where Infinity Tools is installed:

```
/opt/InfinityTools/
```

If you need to run it manually:

```
cd /opt/InfinityTools  
sudo bash start-tools.sh
```

Tips for Success

- **Take your time:** There's no rush. Explore the menu at your own pace.
- **Read the prompts:** Infinity Tools will guide you through each step.
- **Don't worry about mistakes:** Most actions can be undone or redone.
- **Keep your server password safe:** Write it down in a secure place.
- **If something goes wrong:** You can always reconnect and try again.

Troubleshooting

I Can't Connect to My Server

- Check that your server is running in your cloud provider's dashboard
- Verify you're using the correct IP address
- Make sure you're using the correct username (usually `root`)
- Wait a minute or two after creating the server - it might still be starting

The Installer Won't Run

- Make sure you used `sudo` before the command
- Check that you ran `chmod +x` on the installer file
- Verify the file downloaded completely (check file size)
- Make sure you're in the directory where you downloaded the file

Infinity Tools Won't Start

- Make sure you're using `sudo` before the command
- Check that installation completed successfully
- Verify with: `ls -la /opt/InfinityTools/` (you should see files listed)
- Try running manually: `cd /opt/InfinityTools && sudo bash start-tools.sh`

I Lost Connection During Installation

- Don't worry! Just reconnect to your server
- Check if installation completed: `ls -la /opt/InfinityTools/`
- If files are there, try running: `sudo infinity-tools`
- If installation didn't complete, just run the installer again

Security Note

Important: Your server is now accessible via SSH. To keep it secure:

- Always use strong passwords
- Don't share your server password with anyone
- Consider setting up SSH keys (more secure than passwords) - we'll cover this in a future chapter
- Keep your server updated

Infinity Tools can help with security too - check out the Security & Networking section in the menu!

You did it! Infinity Tools is now installed and ready to use. In the next chapters, you'll learn how to install your first applications and configure everything you need.

Next: [Setting up your Foundation](#)

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