

# How to Make a Server - PC

## Before You Begin

Before you try to do any of this at home, you **MUST** get your parent's permission and choose a time when they can supervise and help.

Setting up and running an online server means that anyone with your external IP address will be able to join your server and play in your Minecraft world.

Think carefully about who you invite to play on your server!

### ⚡ Home Use Only

Do not do this at camp! We use LAN servers at camp instead.



## Verifying the Latest Version of Java

First, make sure you have the latest version of Java.

- If you don't, use [this link](#) to download it.

### 💡 Troubleshooting

If you need help troubleshooting this process, refer to the [Minecraft Wiki article on online server set up](#).

Some solutions to server issues require adjusting critical settings on your computer. If this is done improperly, there can be damage to your computer.

## Tutorials/Setting up a server

< Tutorials  
(Redirected from [Setting up a server](#))

### Warning

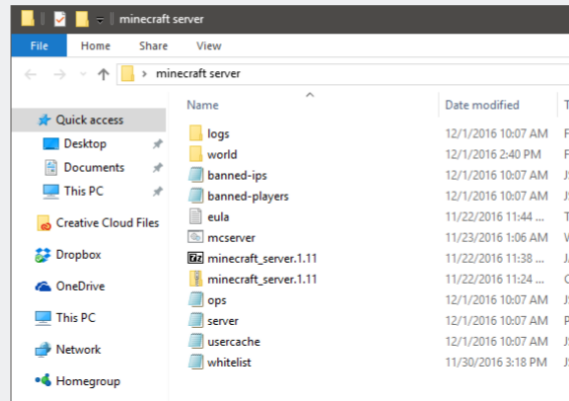
Before following these instructions please note that running server software on your computer without a clear understanding of what you are doing may seriously harm your system and lead to vulnerabilities.<sup>[1]</sup>

This tutorial takes you through the steps of **setting up your own server** using the default server software that [Mojang](#) distributes free of charge. The software may be installed on most operating systems, including Windows, Mac and Linux.

## Minecraft\_Server.jar

First, you'll need the server files. You can get these for free from Mojang's site:

1. Go to the [Minecraft Server Downloads page](#) and download **minecraft\_server.1.11.jar**.
2. Once the download finishes, copy **minecraft\_server.1.11.jar** into a new folder on your desktop and call this folder "Minecraft Server".
3. Double-click **minecraft\_server.1.11.jar** to run it. You'll see some new files appear in the folder along with it.



### 💡 New Version?

If Minecraft updates to a new version, the directions above will still apply but "1.11" will be replaced with whatever the new version number is!

## Batch File to Run Server

1. Right-click inside the Server folder where you put the Minecraft\_Server.1.11.jar.
2. Select **New > Text Document**.
3. Name the new document "Run".
4. Inside the Notepad document, paste the following line:

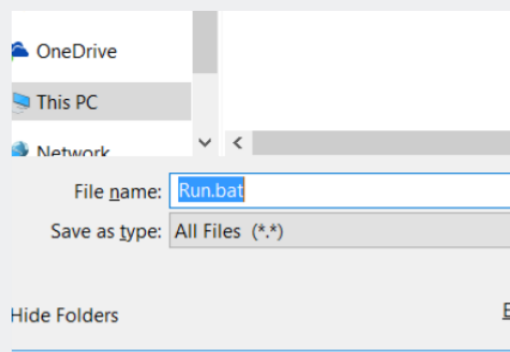
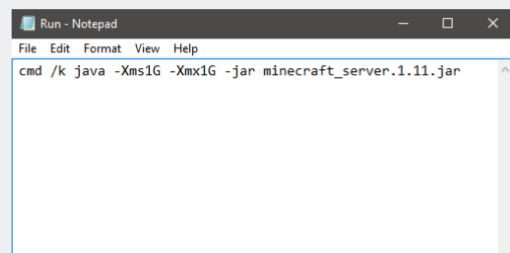
```
1 | cmd /k java -Xms1G -Xmx1G -jar minecraft_server.1.11.jar
```

**IMPORTANT:** If you're using a different version of the server, change "minecraft\_server.1.11.jar" to match the name of the version you're using.

Now you need to Save As a **batch** file, which is a file Windows uses to run command line commands.

5. Click **File > Save As**.
6. In the field **Save as Type**, select **All Files**.
7. Set the file name to "Run.bat".

Make sure you remove the **.txt** at the end of the filename!



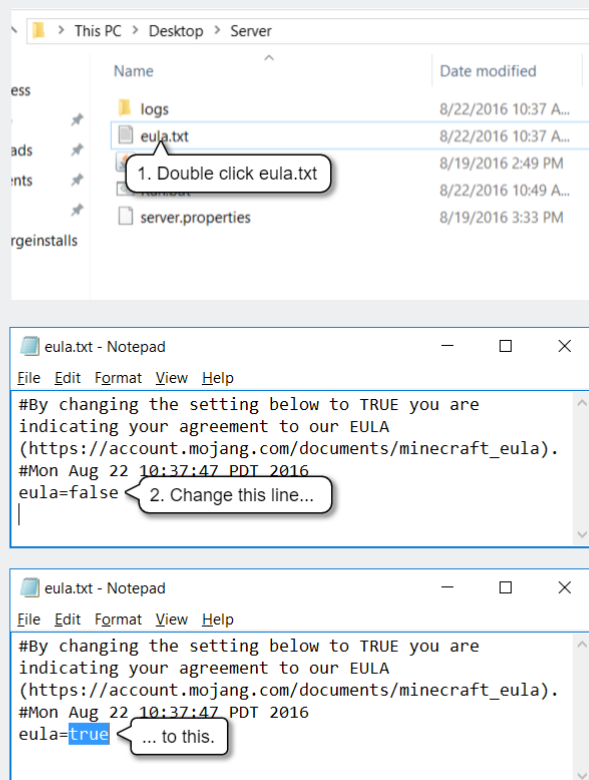
## Agreeing to the EULA

Mojang provides a license agreement you must agree to before launching a Minecraft server. You'll need to edit the file **eula.txt** to indicate that you agree.

1. Double-click **eula.txt**.

You can read the EULA by copying and pasting the text from the file or by clicking [here](#).

2. Change the line `eula=false` to `eula=true`.

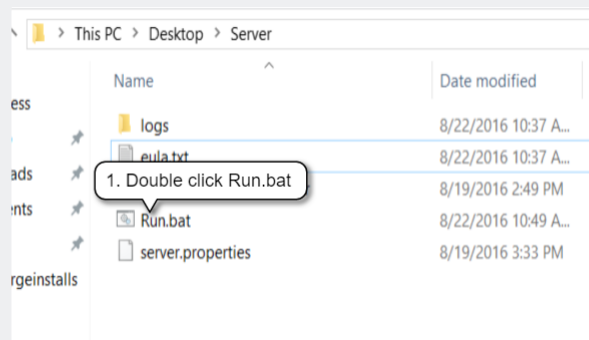


## Launching Your Server

Now you're ready to launch your server!

- Double-click **Run.bat** and your server will launch.

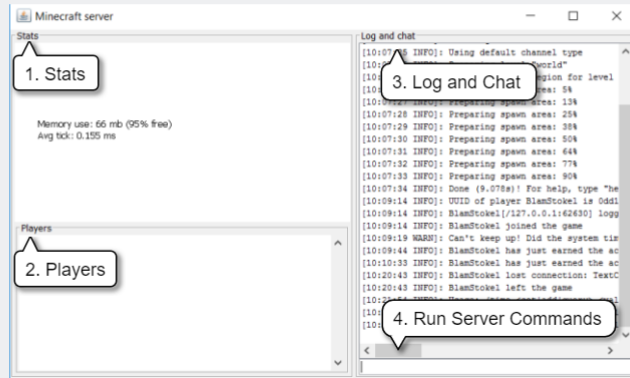
A window will appear with some info about your server. As long as you leave this window open, your server is running and players will be able to connect!



## The Server Window

Your server provides some information to help you keep track of what's going on, even if you're not in-game.

1. You can see how much memory the server is using in the **Stats** panel.
2. You can check who is currently connected to the server in the **Players** panel.
3. You can see server messages and player chats in the **Log and Chat** panel.
4. You can use the field on the bottom-right to enter server commands.



### Server Commands

Server commands allow advanced users more control over their server.

You can find a list of all possible commands [here](#).

## Joining Your Server

Now it's time to join your server from Minecraft.

1. Run **Minecraft**.
2. On the main menu, click **Multiplayer**.
3. Click **Add Server**.
4. Name your server in the **Server Name** field.
5. Type "localhost" in the **Server Address** field.
6. Click **Done**.
7. Select your server and click **Join Server**.

You should now be able to play on your home server.

Next, you'll need to set up your internet connection so other players can connect.

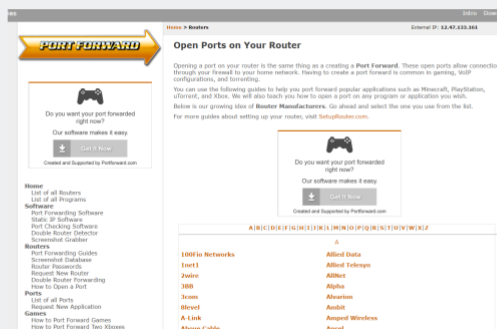


## Port Forwarding

The next step in the process requires adjusting the settings on your router so other users can access your computer through it.

This process will be different for everyone because it's based on the kind of router you have.

1. Before you begin, [read this page on portforward.com](http://portforward.com) that offers some basic information on port forwarding.
2. Go to [this link](http://this link) for a list of port forwarding guides.
3. Select your router's make and model from the list and follow the instructions provided.



### 💡 Is Your Router Not on the List?

If you can't find your router on the list on that site here's a couple things to try:

- If you can find your manufacturer but not the model: Try the directions for the closest number to your model you can find. They're often similar processes.
- Search for your router's model and "port forwarding" on the web.
- Contact your router's customer support and ask how to forward ports.

## Finding Your External IP Address

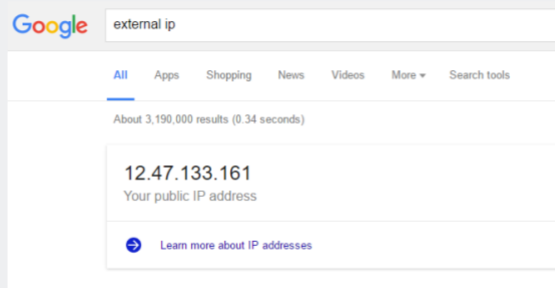
Once you've forwarded your ports, you'll need to find your external IP.

1. Open a browser and go to [google.com](http://google.com)
2. Type "external ip" in the search bar and press **Enter** or **Return**.
3. Google will tell you your external IP address.

Your external IP address will either be **IPv4** or **IPv6** and will look like one of the examples below:

- Sample IPv4 address:  
`12.34.456.789`
- Sample IPv6 address:  
`2001:0db8:0a0b:12f0:0000:0000:0000:0001`

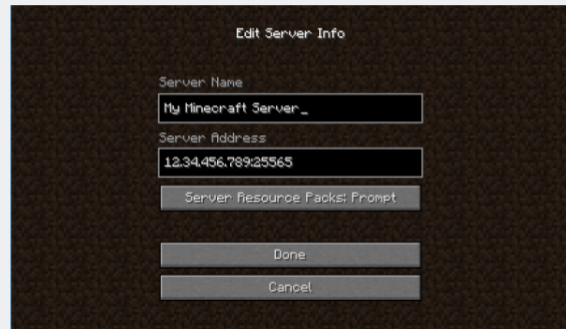
Save this number – you'll need it for other people to connect to your server.



## Connecting to Your Server

Now that you've port-forwarded your connection, other players can connect using your **external IP address**. Have players joining your server follow the steps below:

1. In Minecraft, click **Multiplayer**.
2. Click **Add Server**.
3. Enter a server name.
4. Enter the server address. This will be your **external IP** followed by the port number: **25565**. This will look like the address in the image on the right.
  - If you have an **IPv6** address, enclose your address in `[]` characters like this:  
`[2001:0db8:0a0b:12f0:0000:0000:0000:0001]:25565`
5. Click **Done**. Minecraft will try to connect to the server. Once connected, select the server and click **Join Server**.



### Inviting Players to Join

Anyone you give your external IP address to will be able to play on your Minecraft server. Make sure that you trust whomever you invite to play.

It's safest only to invite people you know. **Ask your parents** before inviting new players to join!

## Server.properties File

You can also adjust some settings of the game using the file in the Server folder called **Server.properties**.

- Open the file with any text editor, and you can change the properties of your Minecraft world by editing lines of the file.

The most common properties you might change are:

- `gamemode=0`: change this to `gamemode=1` to put your server in creative mode.
- `max-players=20`: change this number to increase or decrease the number of players that can join your server at one time.

You can find a reference for all the options available on the Minecraft Wiki [here](#).

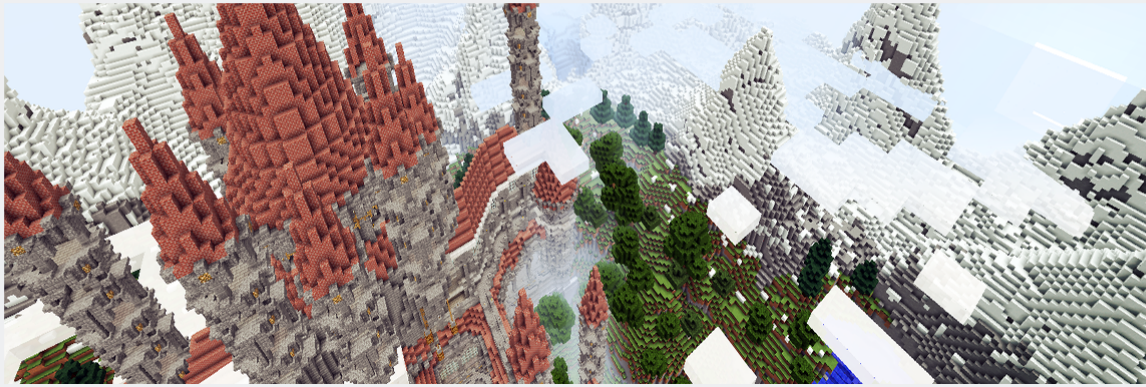
### Editing Server Properties

You won't need to change anything in this file for your server to work.

Don't make changes to the file unless you're sure

```
1 #Minecraft server properties
2 #Tue Aug 23 10:07:34 PDT 2016
3 generator-settings=
4 op-permission-level=4
5 allow-nether=true
6 level-name=world
7 enable-query=false
8 allow-flight=false
9 announce-player-achievements=true
10 server-port=25565
11 max-world-size=29999984
12 level-type=DEFAULT
13 enable-rcon=false
14 force-gamemode=false
15 level-seed=
16 server-ip=
17 network-compression-threshold=256
18 max-build-height=256
19 spawn-npcs=true
20 white-list=false
21 spawn-animals=true
22 snooper-enabled=true
23 hardcore=false
24 resource-pack-sha1=
25 online-mode=true
```





### ↻ Recap

- Always ask your parents for permission before you start setting up an online server!
- You must download the server software from Minecraft and use port forwarding to allow others access to your server.

### 🔗 Try This!

- Don't forget that you can double-check steps and get more information on setting up servers [here](#).