Building a Home Media Streaming Server with LattePanda Sigma (X86 SBC) + Jellyfin

Building a Home Media Streaming Server with LattePanda Sigma (X86 SBC) + Jellyfin

What Is a Media Streaming Server? (Home Server / Homelab)

You can put your favorite movies, music, shows, books, home videos, photos, and mixed media on your own server, then access them from any terminal — computer, tablet, smartphone. It’ s basically building your own version of a personal cloud.

I like to think of a media streaming service as your **personal or family’ s private server**.

Why Build a Media Streaming Server?

In my household, my child is in kindergarten and starting English learning. He enjoys shows like *Peppa Pig*, *Numberblocks*, *Big Muzzy*. We usually watch on YouTube, but sometimes network issues cause buffering, and there are always ads. If I download those videos and host them on my home streaming server, I can watch without ads, on any device, anytime.

Also, I take a lot of photos on my phone. Storage often runs out, so I used to auto-sync to cloud services like Baidu Cloud, but those come with size limits. To get more space, I’ d have to pay. And there’ s always a privacy concern. 😅

Recently I had a weird experience: I had two Disneyland gift cards, and when I tried to redeem the second one, I couldn’ t choose the date. When I contacted customer service, they asked me to pay an extra 198 yuan. I checked with a coworker — he had the same issue. We even complained to 12135 (regulator). The operator ended up asking me for our household registration (hukou) to prove we were a family, and then handled it.

At that moment I thought: I should get my personal media server up and running. I need to store family documents — hukou booklet, ID cards, marriage certificate, property paperwork — privately and securely.

How to Build the Streaming Server?

I chose **Sigma + Jellyfin**.

What Is Sigma?

LattePanda Sigma is an **x86 single-board computer**. It's a cute mini-system, and it’ s now my secondary host machine. On it I run SEO-related edge AI workloads, and I also run my personal media streaming server.

What Is Jellyfin?

Jellyfin is a completely **free**, **open-source**, cross-platform private media server. It organizes your movies, TV shows, music, and photos into a “Netflix of your own,” and you can stream from it to smartphones, tablets, computers, and TVs anytime.

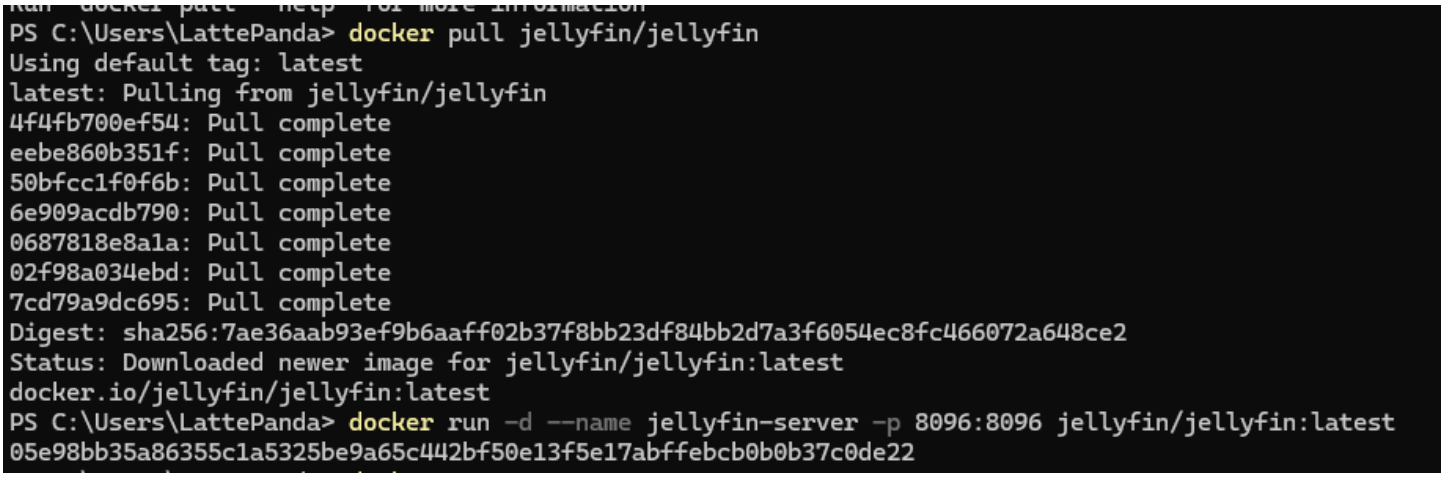
Setup Method

You can use Docker or download an executable directly. If you go with the direct download, I recommend starting from **STEP 03** for configuration.

Using Docker

STEP 01: Let Docker pull the Jellyfin image:

```
代码块
1   docker pull jellyfin/jellyfin
```



Use Lattepanda Sigma Docker to Install Jellyfin and Build a Home Media Server

STEP 02: Run the Jellyfin server container:

代码块

```
docker run -d --name jellyfin-server -p 8096:8096 jellyfin/jellyfin:latest
```

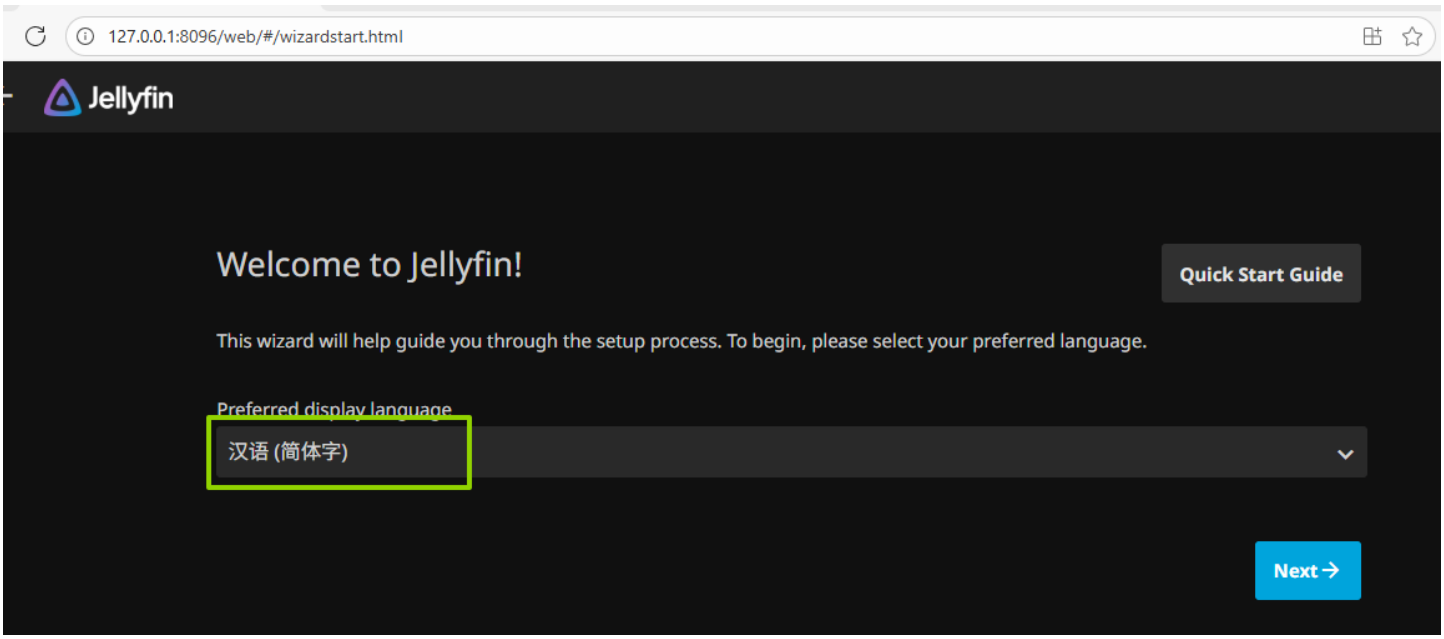
```
PS C:\Users\LattePanda> docker run -d --name jellyfin-server -p 8096:8096 jellyfin/jellyfin:latest
05e98bb35a86355c1a5325be9a65c442bf50e13f5e17abffebcb0b0b37c0de22
PS C:\Users\LattePanda> docker ps -a
CONTAINER ID   IMAGE                     COMMAND                  CREATED          STATUS                            POR
TS                                       NAMES
05e98bb35a86   jellyfin/jellyfin:latest  "/jellyfin/jellyfin"     22 seconds ago   Up 22 seconds (health: starting)  0.0
.0.0:8096->8096/tcp, [::]:8096->8096/tcp  jellyfin-server
```

Launch Jellyfin In Docker On Lattepanda Sigma

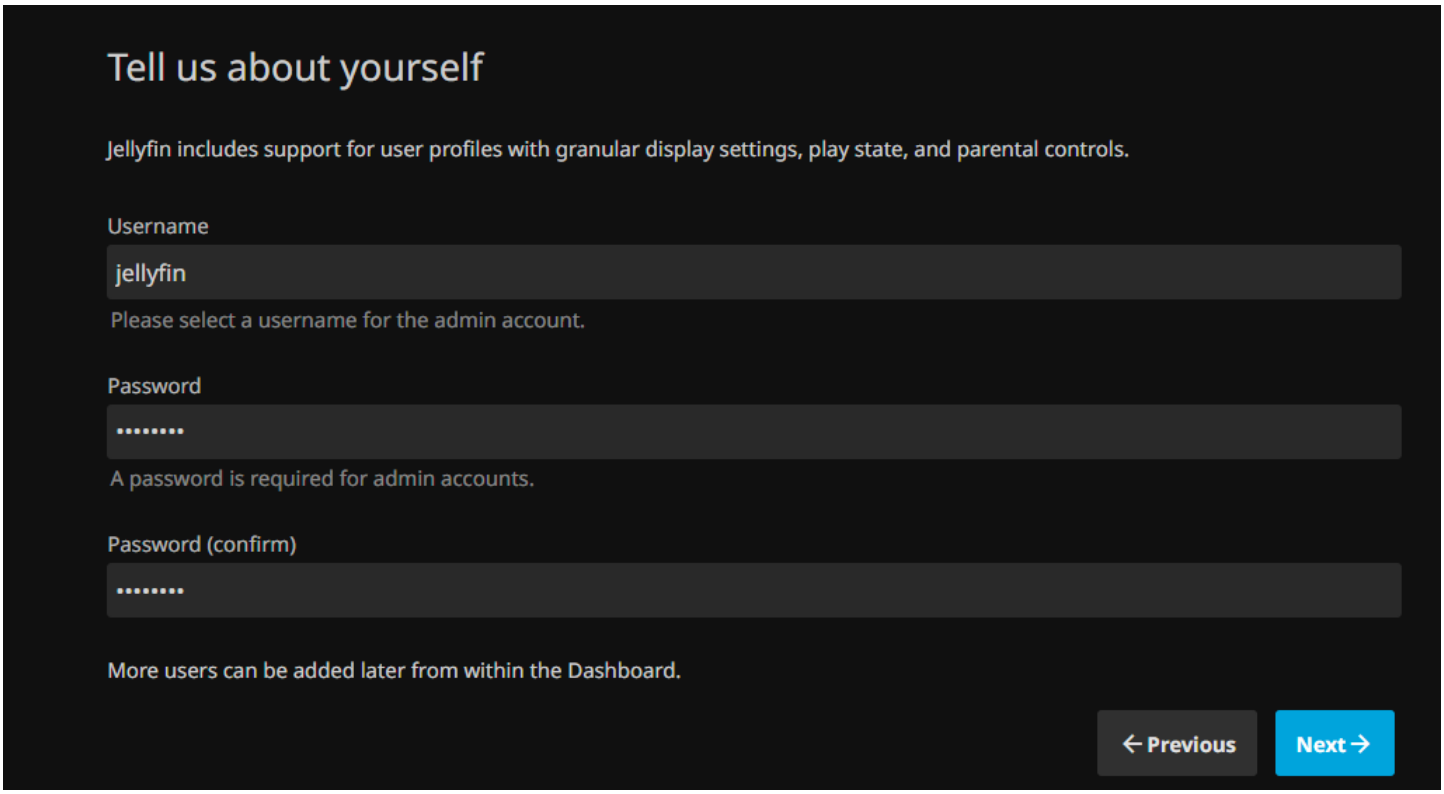
STEP 03: Open your browser and configure the media server:

代码块

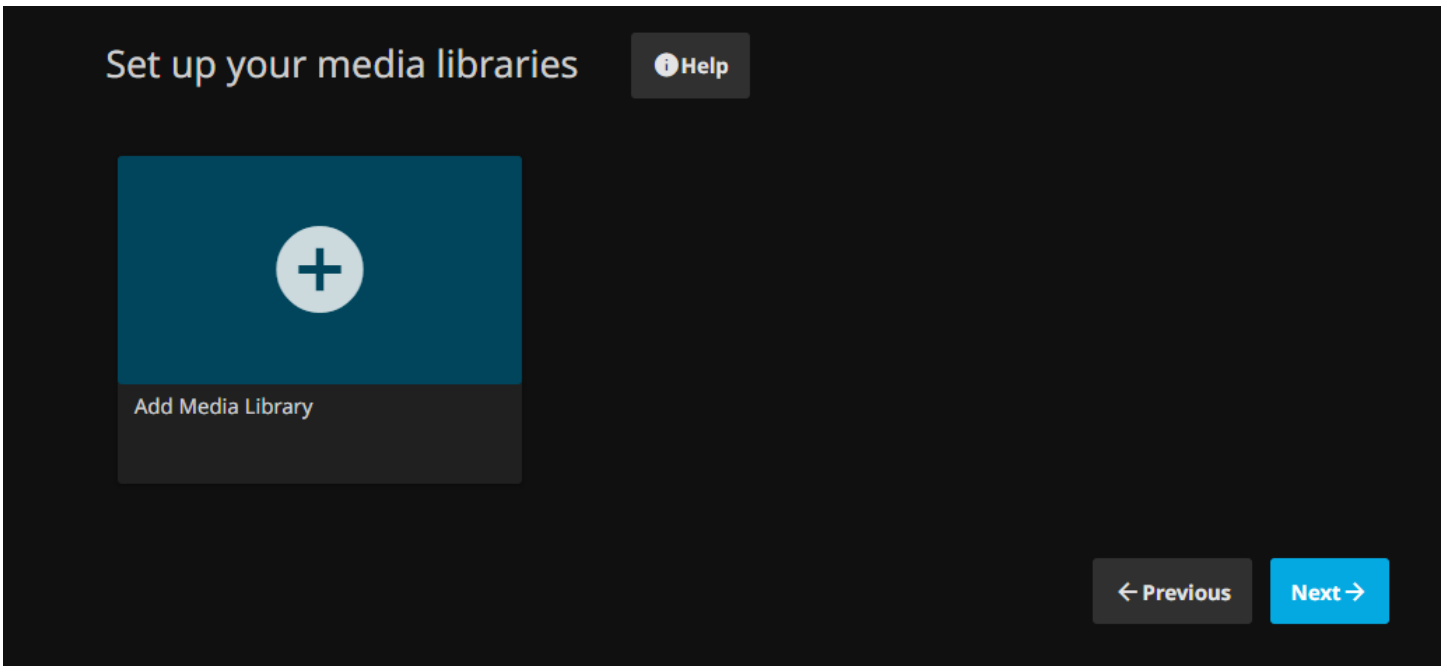
```
http://<your_server_ip>:8096
or

http://127.0.0.1:8096
```



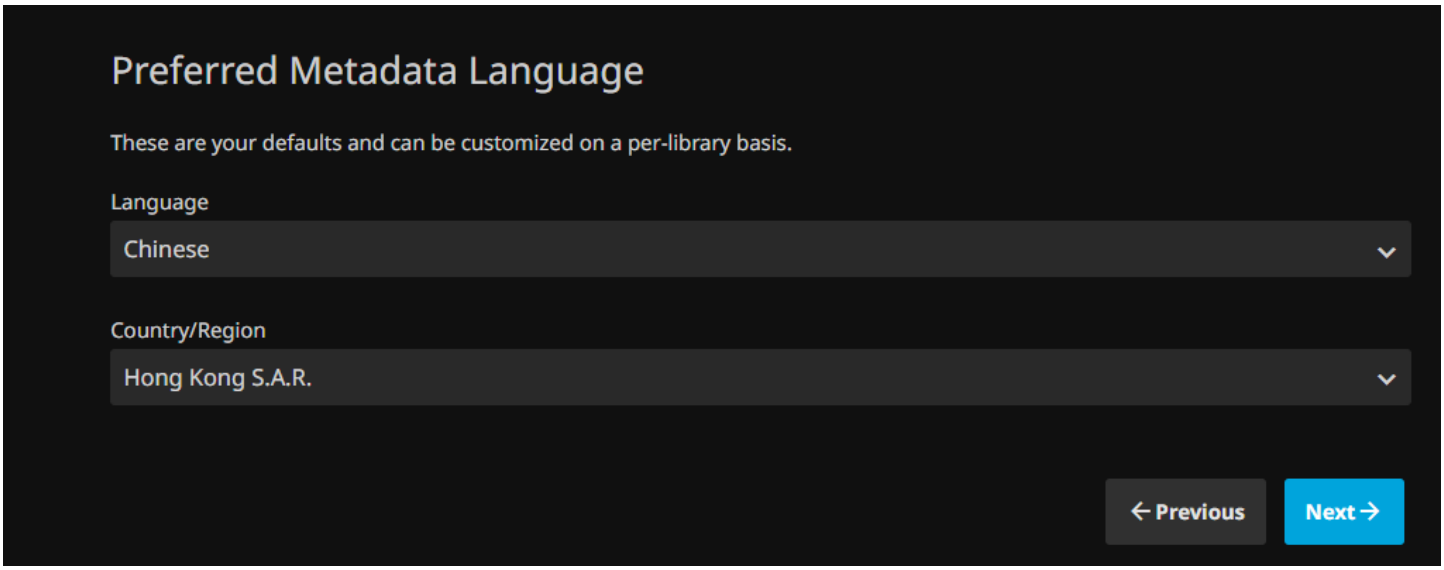
X86 Single Board Computer Configure Jellyfin Set Language Interface



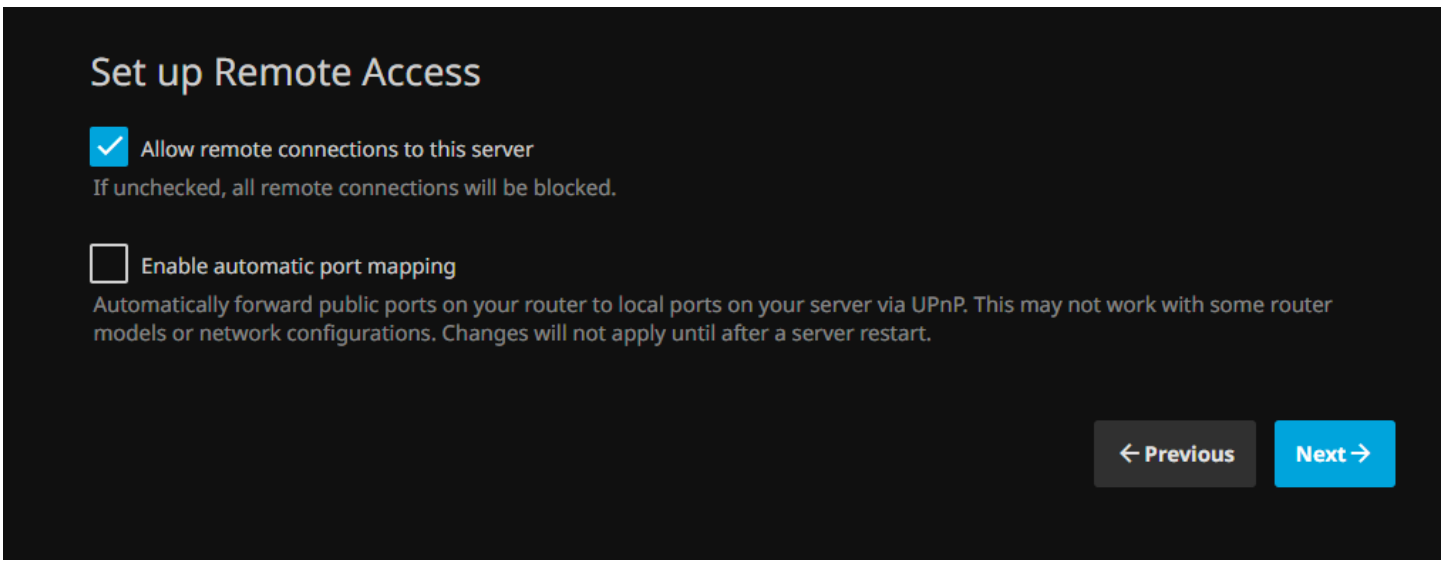
X86 Single Board Computer Configure Jellyfin Set Server Username And Password



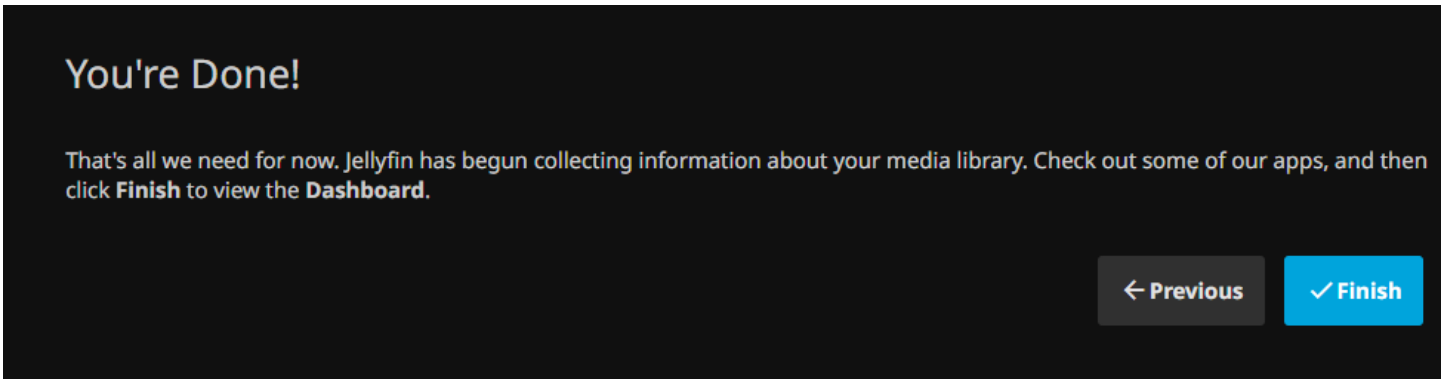
Set Up A Media Service With Jellyfin On An X86 Single-Board Computer, Skippable



Configure Jellyfin Metadata Settings On X86 Sbc Lattepanda Sigma

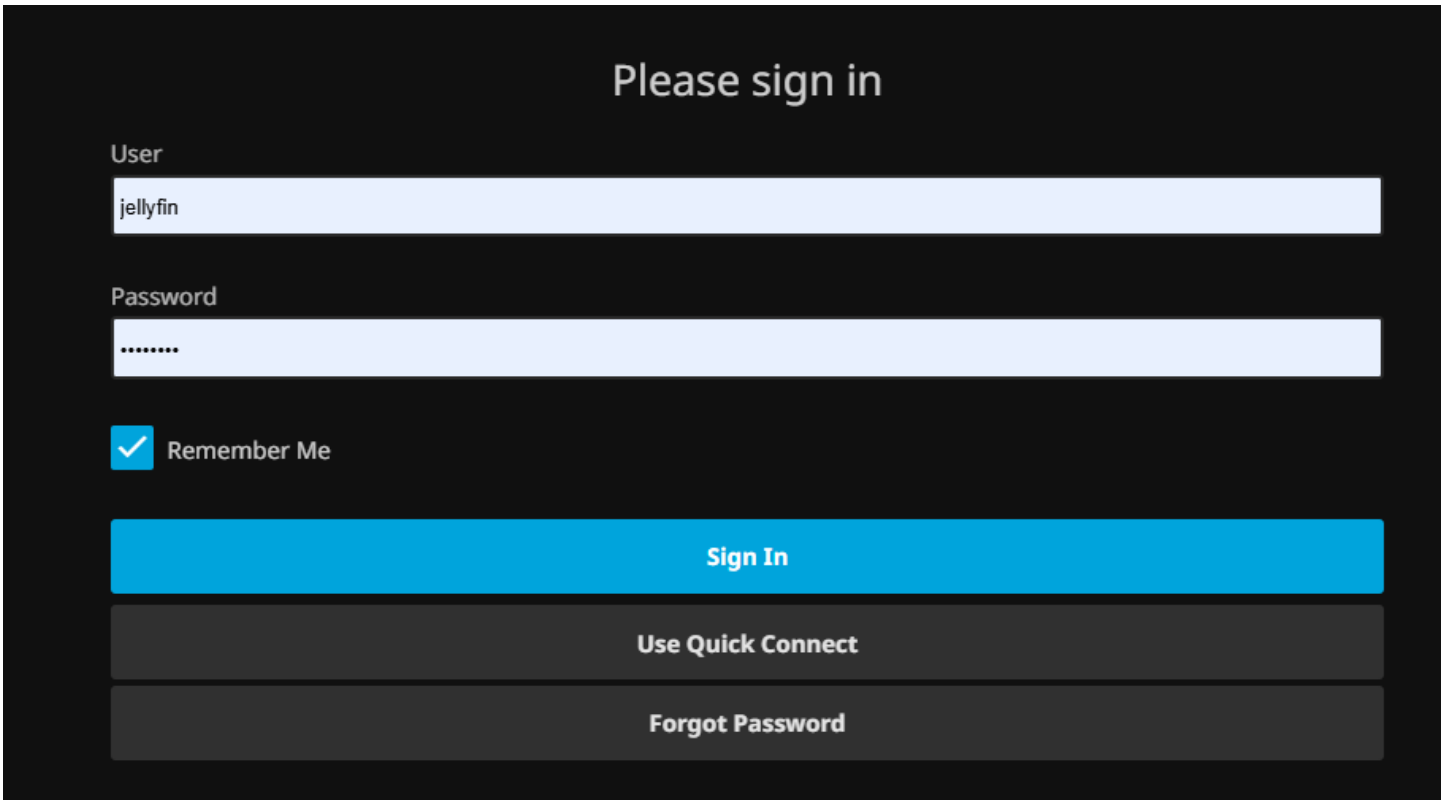


Configure Jellyfin Remote Access On A Lattepanda Sigma X86 Single Board Computer



Jellyfin Setup Completed On Lattepanda Sigma X86 Single Board Computer

STEP 04: Congratulations 🎉 You can now log into your media server!



Configure Jellyfin Server-Side Login on X86 Single-Board Computer Lattepanda Sigma

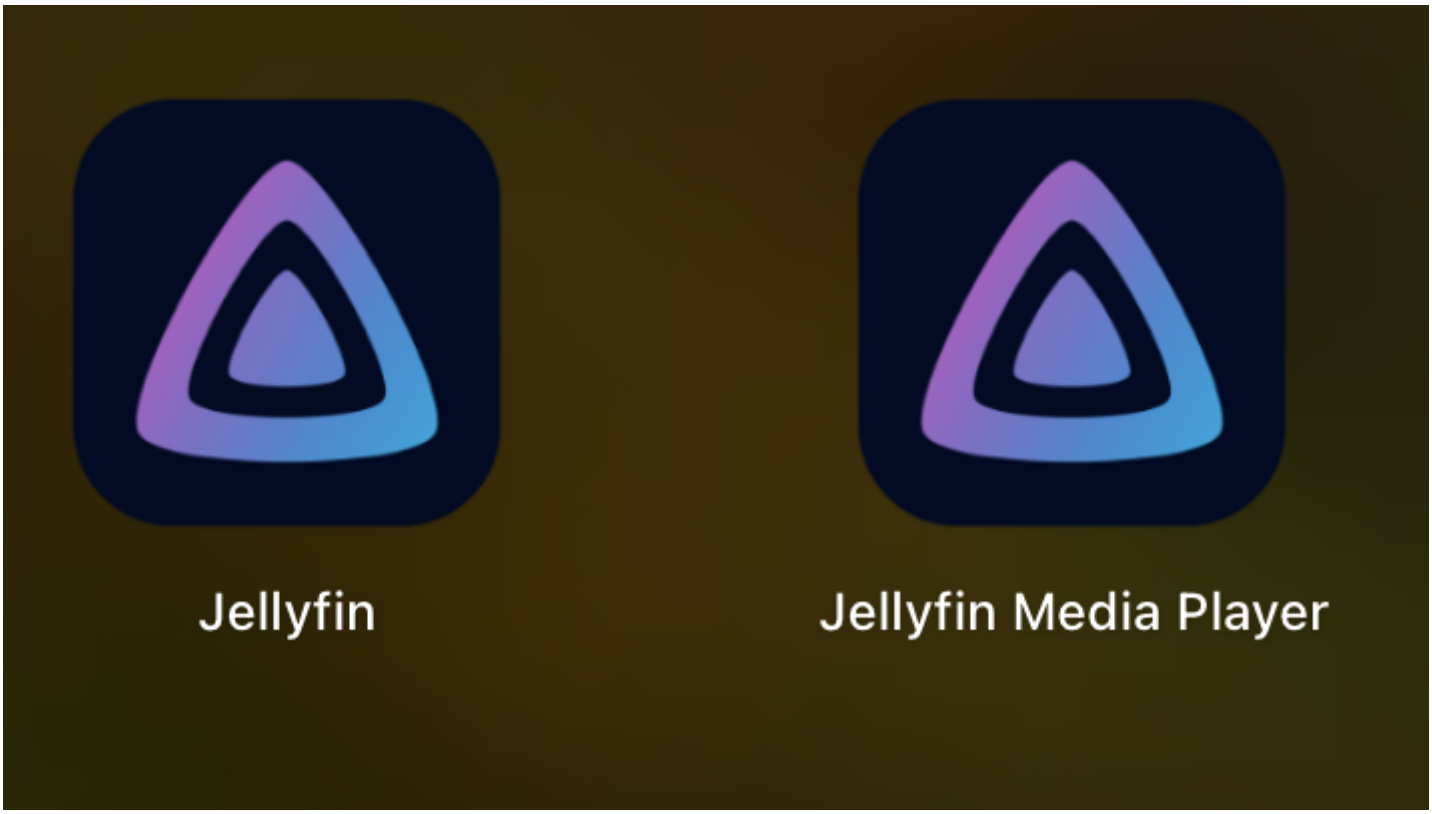
Set your program's live streaming source, select TV live streaming -> tuner type

After selecting M3U Tuner, set the path. You can search for m3u on GitHub for the path. Click below to refresh the guide data.

STEP 05: Client usage

Use a browser to access Jellyfin’ s web client.

On Mac, for instance, you can install the Jellyfin Media Player and connect to your server.



Mac Computers Can Download The Jellyfin Media Player Client

Final Words

So far I’ ve only shown how to set up TV/streaming content. I didn’ t show photo albums, home videos, or book media yet. If you follow this article step by step, after you get the TV streaming working, everything else (music, photos, home movies) is pretty straightforward. Go ahead and explore!

FAQ

Q: Can only x86 SBCs be used to build such a streaming server?
A: No. A desktop PC or any Linux environment can also host Jellyfin or similar services.

Q: Is Jellyfin paid software?
A: No — it’ s completely free, open-source, and runs smoothly.

Q: Is LattePanda Sigma good?

A: I’ ve used it for over a month now, and it feels very capable so far.

References:

https://www.lattepanda.com/blog-308791.html

https://www.lattepanda.com/lattepanda-sigma

https://jellyfin.org/

https://github.com/search?q=m3u&type=repositories

Author: Adair.Zou

Date: September 24, 2025