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How to Install Universal Media Server to Stream Media to Any Devices

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Universal Media Server (UMS) is a cross-platform and free DLNA-compliant, HTTP(s) PnP Media server, which provides a number of capabilities such as sharing multimedia files such as images, videos, and audio between modern devices such as game consoles, smart TVs, Blu-ray players, Roku devices, and smartphones. UMS was originally based on a **PS3 Media Server** in order to ensure greater stability and file compatibility.

UMS streams a wide range of media formats with little or absolutely no configuration. It is powered by a number of [multimedia tools](#) such as VLC media player, FFmpeg, AviSynth, MEncoder, tsMuxeR, MediaInfo, and many more.

[You might also like: [Best Media Server Software for Linux](#)]



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In this guide, we examine how to install **Universal Media Server** on [Debian-based distributions](#). We will demonstrate its installation using **Ubuntu 22.04**.

Step 1: Install Additional Packages and Dependencies

A few additional packages and dependencies are required by the **Universal Media Server**. These include a VLC media player, MPlayer, mediainfo, and mencoder for encoding videos.

To install these packages, run the following command.

```
$ sudo apt install mediainfo dcraw vlc mplayer mencoder
```

```
tecmin@ubuntu:~$  
tecmin@ubuntu:~$ sudo apt install mediainfo dcraw vlc mplayer mencoder  
[sudo] password for tecmin:  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
vlc is already the newest version (3.0.16-1build7).  
The following packages were automatically installed and are no longer required:  
  linux-image-unsigned-5.15.0-25-generic linux-modules-5.15.0-25-generic  
  linux-modules-extra-5.15.0-25-generic  
Use 'sudo apt autoremove' to remove them.  
The following additional packages will be installed:  
  libaudio2 libenca0 libmng2 libvorbisidec1  
Suggested packages:  
  gphoto2 nas mediainfo-gui mplayer-doc netselect | fping  
The following NEW packages will be installed:  
  dcraw libaudio2 libenca0 libmng2 libvorbisidec1 mediainfo mencoder mplayer  
0 upgraded, 8 newly installed, 0 to remove and 239 not upgraded.  
Need to get 3,693 kB of archives.  
After this operation, 9,467 kB of additional disk space will be used.  
Do you want to continue? [Y/n] Y
```

Install Dependencies in Ubuntu

Step 2: Install Universal Media Server in Ubuntu

Universal Media Server is available for download from its GitHub repository for various devices including:

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- x86 (For 32-bit older PCs).
- x86_64 (For 64-bit PCs).
- arm64 / armhf (For devices with ARM processors e.g Raspberry Pi).

Since we are running **Ubuntu 22.04**, we will download the 64-bit tarball file. The latest version of **Universal Media Server** is **11.4.0** at the time of writing this guide.

So, [download the Universal Media Server](#) compressed file as follows and replace the version number accordingly to match the latest release using the following [wget command](#).

```
$ wget https://github.com/UniversalMediaServer/UniversalMediaServer
```

Once the tarball has been downloaded, navigate to the location where you downloaded the tarball file and extract the tarball file to the **/opt** directory and rename the uncompressed folder **'ums'**.

```
$ sudo tar -zxvf UMS-11.4.0-x86_64.tgz -C /opt/ --transform s/ums-
```

Verify the existence of the folder **'ums'** in the **/opt** directory.

```
$ ls /opt
```

```
tecmin@ubuntu:~$  
tecmin@ubuntu:~$  
tecmin@ubuntu:~$ ls -l /opt  
total 4  
drwxr-xr-x 7 root root 4096 Sep 11 09:02 ums  
tecmin@ubuntu:~$  
tecmin@ubuntu:~$
```

Check UMS Directory

Ubuntu

The last step is to launch the media server. To do so, run the following script.

```
$ /opt/ums/UMS.sh
```

This loads all the necessary components needed to run the media server. Finally, the media server service will be started at port **9001**, and instructions on how to access the media server will be displayed at the end of the script's output.

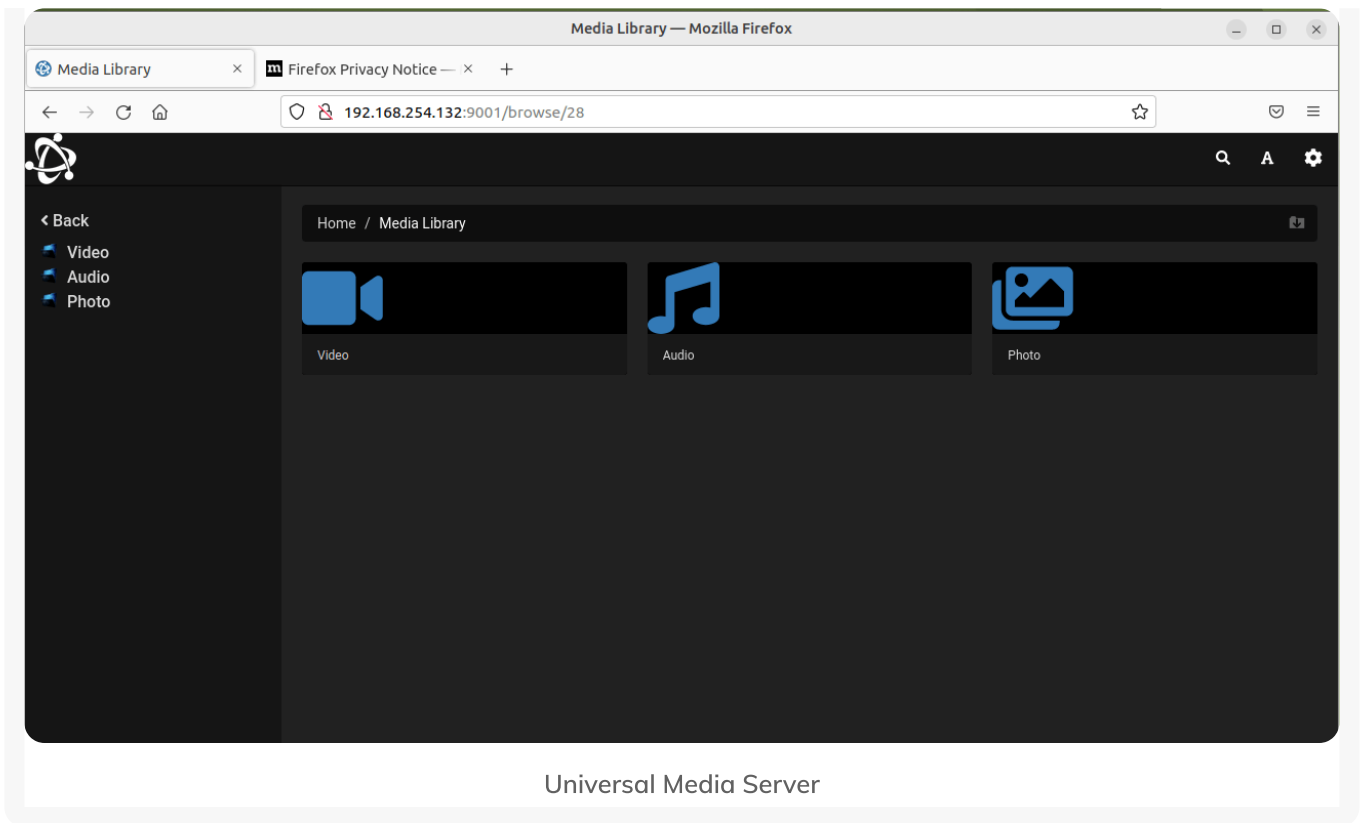
```
INFO 09:03:46.470 [main] Transcoding engine "VLC Web Video (Legacy)" is available
INFO 09:03:46.512 [main] Transcoding engine "DCRaw" is available
INFO 09:03:46.512 [main] Transcoding engine "youtube-dl" is available
INFO 09:03:46.628 [main] Generated new random UUID: c0862d93-e077-4cda-a3ae-c357f9f2b322
INFO 09:03:46.630 [main] Configuration saved to "/home/tecmint/.config/UMS/UMS.conf"
INFO 09:03:46.630 [main] Using the following UUID configured in UMS.conf: c0862d93-e077-4cda-a3ae-c357f
9f2b322
INFO 09:03:47.168 [main] Web interface is available at: http://192.168.254.132:9001
INFO 09:03:50.892 [main] Universal Media Server is now available for renderers to find
INFO 09:03:54.067 [Library Scanner] Library scan completed in 3 seconds
```

Start Universal Media Server in Ubuntu

As such, to access **Universal Media Server**, browser the URL provided. The URL will be different in your case.

```
http://server-ip:9001
```

You will get the following interface.



Step 4: Configure Universal Media Server Systemd Service

When the script is terminated on the command line, the UMS service halts. A better way to run the media server is to configure it as a systemd service so that you can easily start, stop and manage it without any interruptions.

To do this, create a systemd file.

```
$ sudo nano /etc/systemd/system/ums.service
```

Next, paste the following lines. Be sure to replace every instance of '**tecmin**t' with your own username for User and Group attributes.

```
[Unit]
Description=Run UMS as tecmint
DefaultDependencies=no
After=network.target
```

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```
[Service]
Type=simple
User=tecmint
Group=tecmint
ExecStart=/opt/ums/UMS.sh
TimeoutStartSec=0
RemainAfterExit=yes
Environment="UMS_MAX_MEMORY=500M"

[Install]
WantedBy=default.target
```

Save the changes and exit the configuration file. The reload systemd and enable and start **UMS** service using the following commands.

```
$ sudo systemctl daemon-reload
$ sudo systemctl enable ums.service
$ sudo systemctl start ums.service
```

Once started, check the **Universal Media Service** status via command:

```
$ sudo systemctl status ums.service
```

```
tecmint@ubuntu:~$
tecmint@ubuntu:~$ sudo systemctl status ums
● ums.service - Run UMS as tecmint
   Loaded: loaded (/etc/systemd/system/ums.service; enabled; vendor preset: enabled)
   Active: active (running) since Sun 2022-09-11 09:17:55 EDT; 6s ago
     Main PID: 182495 (java)
       Tasks: 22 (limit: 2201)
      Memory: 58.7M
         CPU: 1.078s
    CGroup: /system.slice/ums.service
            └─182495 jre17/bin/java -Xmx500M -Xss2048k -Dfile.encoding=UTF-8 -Djava.net.preferIPv4Stack
```

Universal Media Server Status

From the output, we can see that **UMS** is running as expected.

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This concludes our guide on how to install **Universal Media Server** on Debian-based distributions. From here, you can upload and stream your multimedia files across multiple devices. Your feedback on this guide is welcome.

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