HomeNet - Local Area Network Media Server - Documentation & Setup

--- HomeNet Local Media Server (LMS) was developed as a simplified **media center alternative** to replace or supplement complex and resource-hungry UPnP / DLNA media servers like Plex or XBMC. It is especially useful on Chromebooks because ChromeOS does not enable direct UPnP access. **Homenet LMS** does not use UPnP or DLNA, instead opting to use a small, fast, lightweight Civet Web server (Windows, Linux, or Mac) running silently in the background on your home computer. No NAS is required. We like the K.I.S.S. philosophy.

As a minimalist lightweight media center focused on speed and simplicity, some features are absent in LMS. There are **no thumbnails, categories, indexing** or other distractions. Try the online demo to view efficient nested **text-based directories and files**. Unlike often-bloated UPnP/DLNA servers, there is **no database** to be maintained or updated so disk thrashing and performance concerns are gone. Note that your **in-home wi-fi version of HomeNet** will typically have much better connectivity compared to the internet-dependent online demo.

Download Setup ZIP files   **options:**   *1.* Windows 64-bit   *2.* Windows 32-bit   *3.* for preinstalled PHP-enabled web servers (Linux / Mac / Windows)

Is your HomeNet LMS already installed? You can **update to the latest version** by replacing old files with the latest index/web files (150KB)

--- Default (Extended) Media Formats --plus-- **Optional VLC-Web-Plugin Transcode Formats**

By **default**, HomeNet can play **MP4, MKV, WebM, MOV, M4V, and OGV** video files and **MP3, M4A, M4B, OGG, and WAV** audio files in Google Chrome and Firefox browser tabs. Google Chrome is recommended for enhanced media and Chromecast compatibility.

HomeNet also developed a **VLC plugin player** for playing almost all media formats via VLC's **on-the-fly transcoding**. This is limited, however, to those with VLC media player installed and either Windows Google Chrome or Linux Firefox browsers. In your web browser you can play **AVI, WMV, FLV, MPG, VOB, and 3GP** video files, **WMA, FLAC, ALAC, and AU** audio files, plus streaming radio and video **playlist** files **ASX, ASF, PLS, and XSPF**.
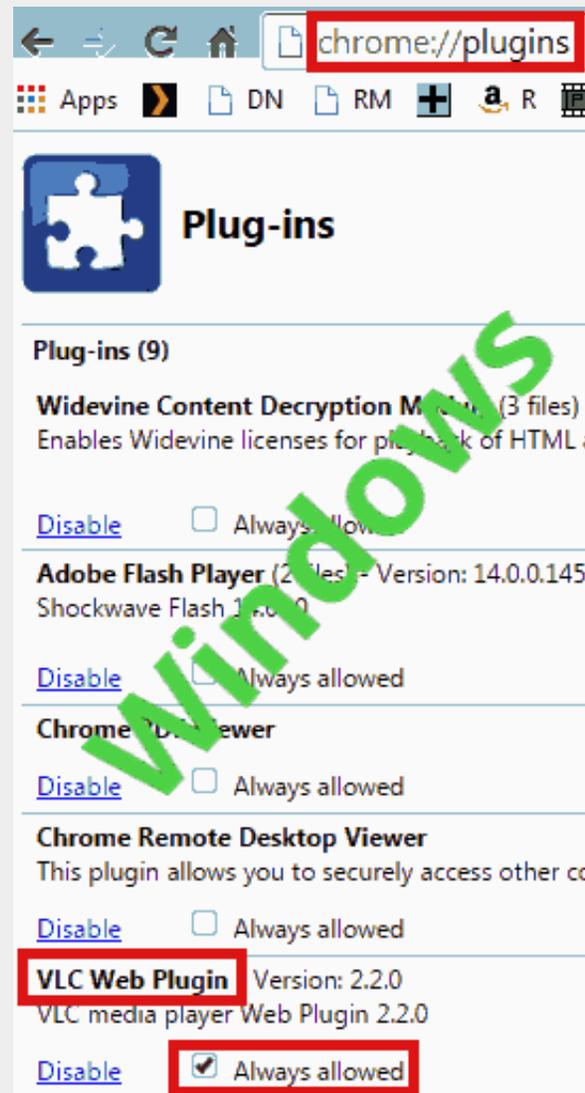
Chromecast owners can play any of the 6 video and 5 audio **default media formats** via the HomeNet Chromecast URL player. Chromecast does not yet support the additional **transcoded** VLC-plugin media formats. (However, VideoLan is working on a Chromecast solution.)

--- VLC "transcode anything" MEDIA PLAYER AND WEB PLUGIN

Download: <u>Windows 64</u> ~ <u>Windows 32</u> ~ <u>Mac OS/X</u> ~ <u>Ubuntu</u> ~ <u>Debian</u> ~ <u>Other</u>

HomeNet uses VideoLan's VLC-plugin to expand its playable media formats. You can **create an ASF file** with just an internet address (URL) inside to play almost any internet media file or stream. You can rename any file.M3U or file.PLS to file.ASF to make it work best with the VLC plugin. For Android compatibility (<u>Ultimate Media Player</u>), rename file.PLS **radio stream file** to file.ASF (the most flexible VLC-compatible playlist format).

The HomeNet **VLC web player** tries to guess whether to start up as an audio player or video player by looking at the filename. Filenames that contain the character sets below are assumed to be audio only. **Remember to change your browser's VLC Web Plugin to** Always allowed

mp3 m4a m4b flac audio ~ ogg. wma. radio. ~ .ogg .alac .wav .wma | .m3u .pls .xspf

Note: *.ASF / *.ASX files could be audio or video. There is a video button in case the HomeNet best guess is wrong.

--- Filters and Functions - Chromecast, files, media, VLC, and HTML5

1. **Chromecast** - only HomeNet **default format** files - click file link to send file to [Chromecast URL Player](#)
2. **Files** - click file link to send file direct to [new browser tab](#)
3. **Media** - default+VLC media files - send "default media" **to browser**, "other media" **to** [VLC plugin player](#)
4. **VLC** - default+VLC media files and streams - **send all files to** [VLC plugin player](#)
5. **HTML5** - only default files (same as Chromecast) - click to send to [new browser tab](#)

HomeNet LMS requires good HTML5 controls compatibility for browser A/V playback. All versions of Microsoft's Internet Explorer failed this test. **IE should not be used for HomeNet LMS or this web site.** Google Chrome and Firefox are recommended. Optional **Chromecast** (cast to TV) functions are currently only available using Google Chrome with [Google Cast Extension](#) (Firefox is working on a Chromecast upgrade.)

--- DOWNLOADS - SETUP ZIP FILES AND CONTENTS

The standard downloads (link at top) are for **64-bit** Windows or **32-bit** Windows.

1. Microsoft **Visual C++** runtime - 7MB - 64-bit or 32-bit / required for Civetweb server
2. **PHP 5.5** VC11 (non-thread safe) - 50MB - placed in **/homenet/cgi-bin**
3. **Civetweb** 1.6 web server files - 1.2MB - 64-bit or 32-bit
4. **Homenet** local php web files and images - 165KB

For **pre-installed** web servers (with PHP) on **Windows, Linux or Mac**, just download the 165KB **v3.2-homenet-Linux-netmedia.zip**
This omits 60MB of Windows PHP server files, VC++ runtime, Civetweb program and documentation, etc.

--- STEP-BY-STEP PROCEDURES (Windows)

1. Download 64-bit or 32-bit setup ZIP file
2. Unzip downloaded file and place **/homenet** at the same level as or higher than your media files
3. Double-click **vcredist_x64.exe** (or vcredist_x86.exe) to install Visual C++ runtime
4. Double-click **civetweb64.exe** (or civetweb32.exe) to start web server
5. In web browser, enter address **http://localhost/homenet** to verify web site
6. Important: [Change your computer's IP address and gateway from DHCP to "fixed"](#)
7. Re-verify at new fixed IP **http://192.168.1.117/homenet** (change to *your* IP number)

If you prefer to create / share a new color theme and background image, you can create your own local custom.css file based on <u>this one</u>. Then, edit your index.php file(s) to use your new css file instead of the Homenet default css.

--- STEP-BY-STEP PROCEDURES (Linux - Apache Web Server)

1. If **Apache/PHP** is not installed, using **Synaptic**, search for **php5** and check **mark for installation**
2. Then, in Synaptic, click "Mark all Upgrades" and click "Apply" to install Apache2 web server with PHP5
3. In a CLI terminal, enter **cd /var/www/html** and then enter **sudo ln -s ~ netmedia** [see note below]
4. Download files from <u>UPDATE-files-only or v3.2-homenet-Linux-netmedia.zip</u> and place them into your Linux **user directory**
5. In your web browser, enter address **localhost/netmedia/** to verify web site
6. **Important:** replace DHCP with "fixed" network IP address, DNS, Gateway (Network Connections IPV4 "manual mode" & reboot)
7. Re-verify at new fixed IP **http://192.168.1.117/netmedia/** (change to *your* IP number)

** NOTE: due to a difference related to how Linux and Windows handle file paths, a different Linux/Mac start directory is required.

-- Linux/Mac will use **http://192.168.x.xxxx/netmedia/** as your local **Linux HomeNet web address** instead of **http://192.168.x.xxxx/homenet/**

--- HomeNet Tips and Notes

1. Your homenet directory (Windows) can be changed to a different name. Examples: LMS webserver www or wifi etc.

2. If you installed the 64-bit or 32-bit **HomeNet "complete"** ZIP file, you now also have a fast full-featured Windows web server with PHP and LUA. Wi-fi **downloading of Android APK** and other files from a Windows PC to your **Android smartphone** is now easy and convenient.

3. HomeNet tries to abide by a practical "function first" **minimalist** philosophy. However, others will prefer a bit more "eye candy". So, we added some nice background images to HomeNet web "demo" pages. If you prefer a more **barebones look** with **no background images**, just edit the last line of your HomeNet **index php** file(s). The **barebones option** may have the added advantage of loading HomeNet web pages a bit faster.

Standard: `<body onload="startup(false);">` --- Barebones: `<body onload="startup(true);">`

In "barebones mode", you can also customize with your HomeNet background image. By default, a sample **homenet.image** is set as your "barebones" background image. You can delete this file if you don't want any image background. Or, you can replace that image file with your own **JPEG, PNG or GIF** background image. Just rename homenet.image to homenet.image.old and copy your own background image to your **/homenet** directory. Finally, **rename *your-image.jpg* to *homenet.image*** to set your image as your new HomeNet background. Sample:

The actual **homenet.image** included with setup files is a monochrome photo of our local <u>Las Vegas Red Rock Canyon</u> area.

For added "barebones" flexibility your can add a **"style"** section to your index php file(s). Just insert your **style code** above the last line.

```
<style>

body {

        background: indigo url( /PHOTOS/yourImage.jpg ) no-repeat ;
        background-position: center 132px ;
        background-size: 100% ;
}


#subdir { color: white ; }   /***   For more directory name visibility on my Android smartphone   ***/

</style>
```

You can have one **"style"** section with a background image for all five index php files or five individual **styles/backgrounds**, one for each index file.

4. Newer versions of HomeNet default to web access via the normal internet port 80 (set in your **civetweb.conf** file). This allows convenient access to your local HomeNet menu at [**http://192.168.x.xxx / homenet /**] Sometimes port 80 causes a probem with some wi-fi routers. To change this web port, just change the **listening_ports** line in your civetweb.conf file. For example, change the line to [**listening_ports 2222**]. You would then access the HomeNet menu at [**http://192.168.x.xxx:2222 / homenet /**]

It is possible to **access your own HomeNet movies and files over the internet** when traveling. This requires setting up **router port forwarding**. However, this can be a little tricky and dependent on your router and wifi setup. So, we will not document it here. If someone has created a successful **port forwarding setup FAQ** for their HomeNet installation, please forward your experience by email to **info (at) gooplusplus.com** and we will include it as a helpful link for use by other HomeNet users.

5. If more than one person uses **Homenet LMS** to access your home network media files, you may want to **shield some of them** from accidental snooping. To make a directory or file more private, change the name by starting it with a left parenthesis. If one of your directories has the name **private photos**, change it to **(private photos)**. Likewise, if you rename file **wildcrazy.mp4** to **(wildcrazy.mp4**, Homenet's main web pages will not display it. Renamed files and directories can still be viewed using secondary **tree listings** by clicking upper left corner buttons.

For extra privacy, you can also remove access to **tree-view** by deleting or renaming **tree-hnv.php**. One more option to add extra privacy to your local web server is to disable display of directory files. Add the line [**enable_directory_listing no**] to your **civetweb.conf**. (For other web servers like Mongoose, Nginx or Apache, consult your web server documentation.)
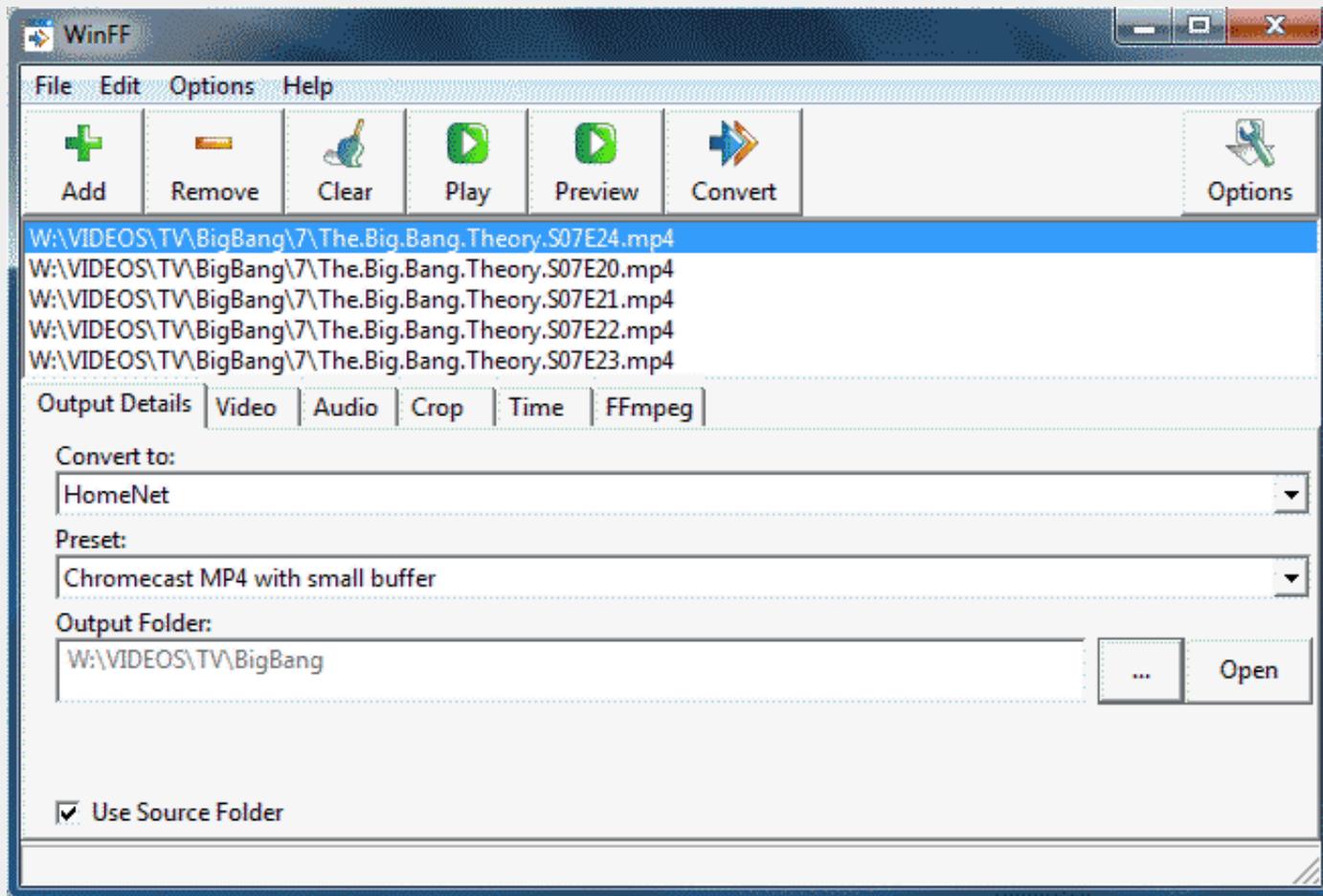
6. Homenet LMS enables playing **more audio and video formats** in your web browser's HTML5 player and via Chromecast. Google Chrome and Firefox built-in **HTML5 web players** typically can play **MP4 and Webm** video files plus **MP3 and OGG** audio files. Homenet LMS expands this somewhat. Here are the Homenet HTML5/Chromecast playable formats:

Homenet LMS	video files	audio files	stream playlists
DEFAULT	*MKV *MOV MP4 M4V OGV WebM	MP3 M4A *M4B OGG WAV	none (radio / TV / etc)
VLC plugin	AVI DIVX FLV MPG VOB WMV 3GP	AU FLAC MID RA RM WMA	ASF ASX PLS XSPF

* As of July 2014, MKV, MOV, and M4B only work in Google's Chrome browser and via Google Chromecast.

** Some MP4, M4V and MOV files will only play audio. These are mostly files encoded with a **proprietary DIVX** video codec. There are also some MP4 files which will play video but not audio. These are mostly files encoded with a **proprietary DTS or AC3** audio codec.

To play non-compatible video files with your HTML5 web browser or on TV via Chromecast, try converting to an **MP4** file with **H.264 video** codec and **AAC audio** codec. The best free option is to download the **WinFF ffmpeg converter**. Next, import our special **winFF-presets-HomeNet.wff** file. HomeNet's optimized MP4 presets reduce lag and buffering problems that can occur when playing not-ready-for-network video files. The HomeNet **MP4 small buffer preset** is especially useful for converting video files for optimal TV playback via Chromecast.

VIDEO

AUDIO Radio / News

files media VLC HTML5

Demo (TOP) /Test Files

1.avi 1.flac 1.flv 1.m4a 1.m4b 1.m4v 1.mkv 1.mov 1.mp3 1.mp4 1.mpg 1.ogg

1.ogv 1.wav 1.webm 1.wma 1.wmv 1.xspf 11MB.webm 15MB.source.mp4

Ambient Radio.asf BBC-R4.radio.asx DIVX.MP4 EastbayTV 15s wait.asx Israeli-Govt-TV.asx

KCRW.radio.pls KCRW.radio.pls.ASF NPR.radio.asf TWiT Live TV.asf TWiT Radio.asf

UK-blues-radio.PLS.asf Wildlife.wmv jazz-radio.M3U.asf radio.TV.asf test.png

Goo plus plus