

## Set Up A Linux Playstation 3 Media Server (Ubuntu Hardy Heron)

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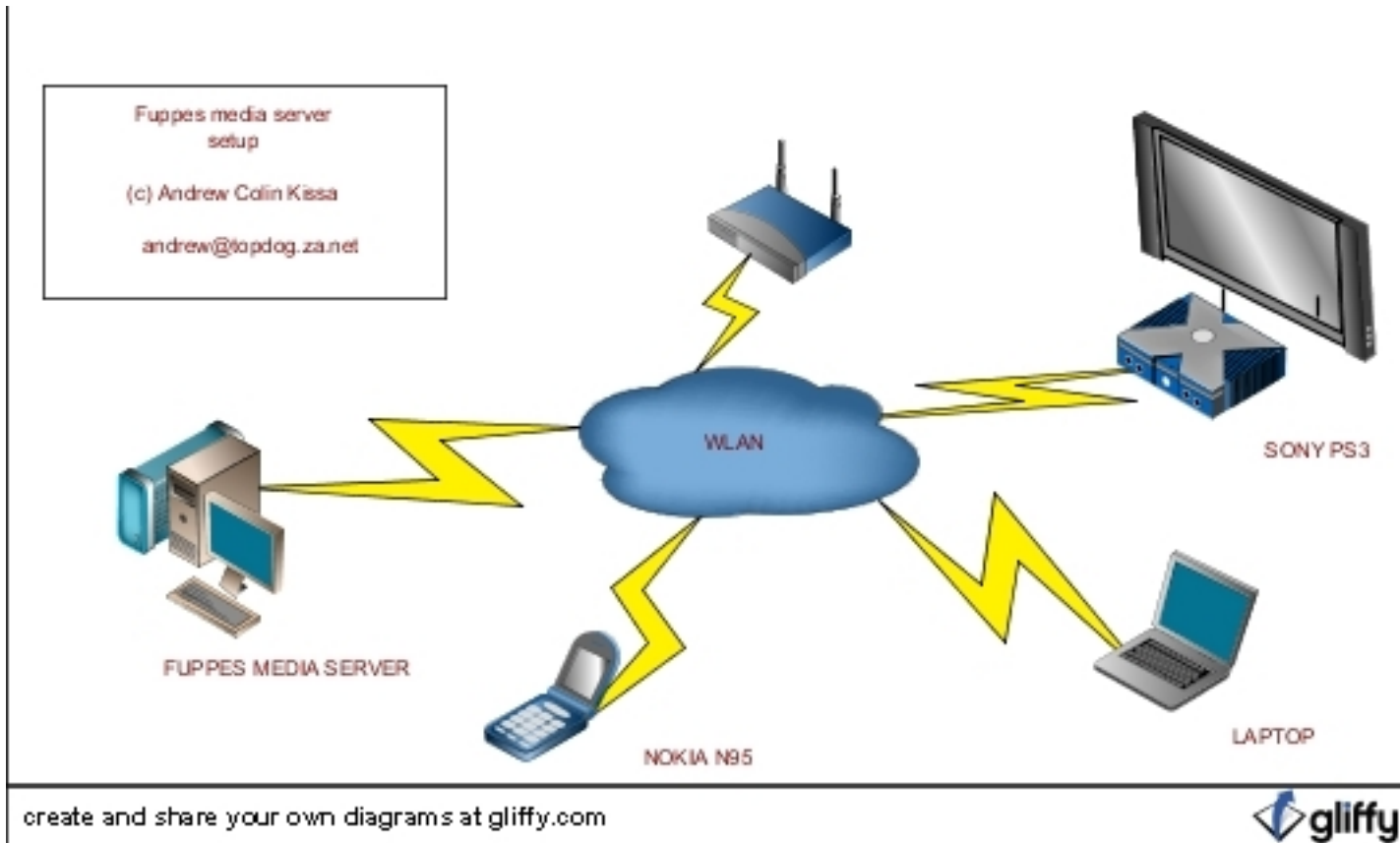
## Set Up A Linux Playstation 3 Media Server (Ubuntu Hardy Heron)

Version 1.0

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Last edited 26/04/2008**Introduction**

The Sony Play station 3 is a DLNA compatible device, DLNA is a framework where home electronics can share digital media and content seamlessly. This tutorial will provide instructions on setting up your Ubuntu hardy computer to share your video, music and photos, allowing you to play them through your DLNA compatible devices. Although several other open source media servers exist, i chose to use Fuppes due to its built in support for transcoding.



## Requirements

- Sony Play station 3 console (or other DLNA capable console/device)
- Computer running ubuntu linux with working WLAN interface
- Wireless LAN
- Working internet connection (to download package)
- Media to be shared

## Installation

- Download and install the fuppes debian package that i have packaged

```
wget http://www.topdog-software.com/oss/fuppes/fuppes_0+svn611-1_i386.deb  
  
dpkg -i fuppes_0+svn611-1_i386.deb
```

## Configuration

- Edit the fuppes configuration file `/etc/fuppes/fuppes.cfg` and the the interface option, in my case i will be using the ip address `192.168.1.1`.

```
<interface>192.168.1.1</interface>
```

- Start fuppes and point your browser to `http://192.168.1.1:56596`

```
/etc/init.d/fuppes restart
```

- Select configuration on the menu on the left
- Under "ContentDirectory settings" -> Add objects, Type the name of the directory you want to share media from (you can also share an itunes db) then click "submit query"
- Add as many directories as you want; I added the following

```
/home/andrew/Videos  
/home/andrew/Music  
/home/andrew/Pictures
```

- Rebuild the media database
- Select Options on the menu on the left
- Click "rebuild database"
- Monitor the status of the rebuild on the status page, you will see the counters increase as you media is indexed.

- Configure multicast route on your machine for the media server to be found by clients, create a file `/etc/network/if-up/fuppes` with the following content (substitute the interface for the one you are using on your machine)

```
#!/bin/bash
#
# in this case eth1 is my WLAN interface change to match yours
if [ "$IFACE" = "eth1" ]; then
    ip ro add 239.0.0.0/8 dev eth1
    /etc/init.d/fuppes restart &>/dev/null
fi
```

## Testing Sony Play Station 3

Connect to your PS3 and go to Video and then select search for media servers, if all went well you should find your media server named fuppes, select that and go to a folder with videos select and play. Repeat this procedure for your music and picture.

## Nokia N95

Go to tools -> Connectivity -> Home media -> Browse media. Your N95 will connect to the WLAN and begin searching and should find your fuppes media server, select it and you will see your folders, From there you can play your media and view your content or copy it to your device.

## Xbox

Fuppes does support Xbox as well, I have not used it however as I do not own one.

## Sample configuration files

- `/etc/fuppes/fuppes.cfg`

```
<?xml version="1.0" encoding="UTF-8"?>
<fuppes_config version="0.7.2.3">
```

```
<shared_objects>
<dir>/home/andrew/Music</dir>
<dir>/home/andrew/Videos</dir>
<dir>/home/andrew/Pictures</dir>
</shared_objects>
<network>
  <!--empty = automatic detection-->
  <interface>192.168.1.1</interface>
  <!--empty or 0 = random port-->
  <http_port>56596</http_port>
  <!--list of ip addresses allowed to access fuppes. if empty all ips are allowed-->
  <allowed_ips>
    <!--<ip>192.168.0.1</ip>-->
  </allowed_ips>
</network>
<content_directory>
  <!--a list of possible charsets can be found under:
    http://www.gnu.org/software/libiconv/-->
  <local_charset>UTF-8</local_charset>
  <!--libs used for metadata extraction when building the database. [true|false]-->
  <use_imagemagick>true</use_imagemagick>
  <use_taglib>true</use_taglib>
  <use_libavformat>true</use_libavformat>
</content_directory>
<transcoding>
  <!--[lame|twolame]-->
  <audio_encoder>lame</audio_encoder>
  <!--[true|false]-->
  <transcode_vorbis>true</transcode_vorbis>
  <transcode_musepack>true</transcode_musepack>
  <transcode_flac>true</transcode_flac>
</transcoding>
<device_settings>
```

```
<!--"default" settings are inherited by specific devices and can be overwritten-->
<device name="default">
  <!--specify the maximum length for file names (0 or empty = unlimited)-->
  <max_file_name_length>0</max_file_name_length>
  <!--[file|container]-->
  <playlist_style>file</playlist_style>
  <show_childcount_in_title>>false</show_childcount_in_title>
  <enable_dlna>true</enable_dlna>
  <transcoding_release_delay>4</transcoding_release_delay>
  <file_settings>
    <!--audio files-->
    <file ext="mp3">
      <type>AUDIO_ITEM</type>
      <mime_type>audio/mpeg</mime_type>
      <dlna>MP3</dlna>
    </file>
    <file ext="ogg">
      <type>AUDIO_ITEM</type>
      <mime_type>application/octet-stream</mime_type>
      <transcode enabled="true">
        <ext>mp3</ext>
        <mime_type>audio/mpeg</mime_type>
        <dlna>MP3</dlna>
        <http_encoding>chunked</http_encoding>
        <decoder>vorbis</decoder>
        <encoder>lame</encoder>
        <bitrate>192</bitrate>
        <samplerate>44100</samplerate>
      </transcode>
    </file>
    <file ext="mpc">
      <type>AUDIO_ITEM</type>
      <mime_type>application/octet-stream</mime_type>
```

```
<transcode enabled="true">
  <ext>mp3</ext>
  <mime_type>audio/mpeg</mime_type>
  <dlna>MP3</dlna>
  <http_encoding>chunked</http_encoding>
  <decoder>musepack</decoder>
  <encoder>lame</encoder>
  <bitrate>192</bitrate>
  <samplerate>44100</samplerate>
</transcode>
</file>
<file ext="wav">
  <type>AUDIO_ITEM</type>
  <mime_type>audio/x-wav</mime_type>
</file>
<file ext="flac">
  <type>AUDIO_ITEM</type>
  <mime_type>audio/x-flac</mime_type>
  <transcode enabled="true">
    <ext>mp3</ext>
    <mime_type>audio/mpeg</mime_type>
    <dlna>MP3</dlna>
    <http_encoding>chunked</http_encoding>
    <decoder>flac</decoder>
    <encoder>lame</encoder>
    <bitrate>192</bitrate>
    <samplerate>44100</samplerate>
  </transcode>
</file>
<file ext="wma">
  <type>AUDIO_ITEM</type>
  <mime_type>audio/x-ms-wma</mime_type>
  <dlna>WMAFULL</dlna>
```

```
</file>
<!--image files-->
<file ext="jpg">
  <ext>jpeg</ext>
  <type>IMAGE_ITEM</type>
  <mime_type>image/jpeg</mime_type>
  <convert enabled="false">
    <!--<dcraw enabled="true">-q 0</dcraw-->
    <ext>png</ext>
    <mime_type>image/png</mime_type>
    <height>0</height>
    <width>0</width>
    <!--set "greater" to "true" if you only want to resize images greater than "height" or "width"-->
    <greater>>false</greater>
    <!--set "less" to "true" if you only want to resize images less than "height" or "width"-->
    <less>>false</less>
    <!--set "less" and "greater" to "false" if you always want to resize-->
  </convert>
</file>
<file ext="bmp">
  <type>IMAGE_ITEM</type>
  <mime_type>image/bmp</mime_type>
</file>
<file ext="png">
  <type>IMAGE_ITEM</type>
  <mime_type>image/png</mime_type>
</file>
<file ext="gif">
  <type>IMAGE_ITEM</type>
  <mime_type>image/gif</mime_type>
</file>
<!--video files-->
<file ext="mpg">
```



```
<ext>mpeg</ext>
<type>VIDEO_ITEM</type>
<mime_type>video/mpeg</mime_type>
</file>
<file ext="mp4">
  <type>VIDEO_ITEM</type>
  <mime_type>video/mp4</mime_type>
</file>
<file ext="avi">
  <type>VIDEO_ITEM</type>
  <mime_type>video/avi</mime_type>
</file>
<file ext="wmv">
  <type>VIDEO_ITEM</type>
  <mime_type>video/x-ms-wmv</mime_type>
</file>
<file ext="vob">
  <type>VIDEO_ITEM</type>
  <mime_type>video/x-ms-vob</mime_type>
</file>
<file ext="vdr">
  <type>VIDEO_ITEM</type>
  <mime_type>video/x-extension-vdr</mime_type>
  <transcode enabled="true">
    <ext>vob</ext>
    <mime_type>video/x-ms-vob</mime_type>
  </transcode>
</file>
<file ext="flv">
  <type>VIDEO_ITEM</type>
  <mime_type>application/x-flash-video</mime_type>
</file>
<file ext="asf">
```

```
<type>VIDEO_ITEM</type>
<mime_type>video/x-ms-asf</mime_type>
</file>
<!--playlists-->
<file ext="pls">
  <type>PLAYLIST</type>
  <mime_type>audio/x-scpls</mime_type>
</file>
<file ext="m3u">
  <type>PLAYLIST</type>
  <mime_type>audio/x-mpegurl</mime_type>
</file>
</file_settings>
</device>
<!--If you have more than one device it is a good idea to set the ip address manually as some devices may have conflicting "user agents".-->
<device name="PS3" enabled="true">
  <user_agent>UPnP/1.0 DLNADOC/1.00</user_agent>
  <user_agent>PLAYSTATION3</user_agent>
  <!--<ip></ip>-->
  <enable_dlna>true</enable_dlna>
  <transcoding_release_delay>50</transcoding_release_delay>
  <file_settings>
    <file ext="ogg">
      <type>AUDIO_ITEM_MUSIC_TRACK</type>
      <transcode enabled="true">
        <http_encoding>stream</http_encoding>
      </transcode>
    </file>
  </file_settings>
</device>
<device name="Xbox 360" virtual="Xbox 360" enabled="false"><description_values>
  <friendly_name>%s %v : 1 : Windows Media Connect</friendly_name>
  <model_name>Windows Media Connect compatible (%s)</model_name>
```

```
<model_number>2.0</model_number>
</description_values>
<user_agent>Xbox/2.0.\d+.\d+ UPnP/1.0 Xbox/2.0.\d+.\d+</user_agent>
<user_agent>Xenon</user_agent>
<xbox360>true</xbox360>
</device>
<device name="Noxon audio" virtual="default" enabled="false">
  <!--Please enter the address of your Noxon. Automatic detection is impossible because the Noxon does not send a "user-agent" in it's requests-->
  <!--<ip></ip>-->
  <playlist_style>container</playlist_style>
  <show_childcount_in_title>true</show_childcount_in_title>
</device>
<device name="Telegent TG 100" virtual="default" enabled="false">
  <user_agent>dma/1.0 \(\http://www.cybertan.com.tw/\)</user_agent>
  <user_agent>UPnP/1.0 DLNADOC/1.00</user_agent>
  <playlist_style>file</playlist_style>
  <max_file_name_length>101</max_file_name_length>
</device>
</device_settings>
</fuppes_config>
```

- /etc/fuppes/vfolder.cfg

```
<?xml version="1.0" encoding="UTF-8"?>
<fuppes_vfolder_config version="0.2">
  <vfolder_layout device="default" enabled="false">
    <vfolder name="Genre">
      <vfolders property="genre">
        <items type="audioItem" />
      </vfolders>
    </vfolder>
```

```
<vfolder name="Genre/Artists">
  <vfolders property="genre">
    <vfolders property="artist">
      <items type="audioItem" />
    </vfolders>
  </vfolders>
</vfolder>

<vfolder name="Artists/Albums">
  <vfolders property="artist">
    <vfolders property="album">
      <items type="audioItem" />
    </vfolders>
  </vfolders>
</vfolder>

<vfolder name="ABC/Artists/Albums">
  <vfolders split="ABC">
    <vfolders property="artist">
      <vfolders property="album">
        <items type="audioItem" />
      </vfolders>
    </vfolders>
  </vfolders>
</vfolder>

<vfolder name="Photos">
  <vfolder name="All">
    <items type="imageItem" />
  </vfolder>
  <vfolder name="Folders">
    <folders filter="contains(imageItem)" />
  </vfolder>
</vfolder>
```

```
<vfolder name="Videos">
  <vfolder name="All">
    <items type="videoItem" />
  </vfolder>
  <vfolder name="Folders">
    <folders filter="contains(videoItem)" />
  </vfolder>
</vfolder>

<vfolder name="shared dirs">
  <shared_dirs full_extend="true" />
</vfolder>

</vfolder_layout>
<vfolder_layout device="Xbox 360" enabled="true">
  <vfolder name="Music" id="1">
    <vfolder name="Album" id="7">
      <vfolders property="album" type="container.album.musicAlbum">
        <items type="audioItem" />
      </vfolders>
    </vfolder>

    <vfolder name="All Music" id="4">
      <items type="audioItem" />
    </vfolder>

    <vfolder name="Artist" id="6">
      <vfolders property="artist" type="container.person.musicArtist">
        <items type="audioItem" />
      </vfolders>
    </vfolder>

    <vfolder name="Folders" id="20">
```

```
<folders filter="contains(audioItem)" />
</vfolder>

<vfolder name="Genre" id="5">
  <vfolders property="genre" type="container.genre.musicGenre">
    <items type="audioItem" />
  </vfolders>
</vfolder>

<vfolder name="Playlist" id="15" />
</vfolder>

<vfolder name="Pictures" id="3">
  <vfolder name="Album" id="13" />

  <vfolder name="All Pictures" id="11">
    <items type="imageItem" />
  </vfolder>

  <vfolder name="Date Taken" id="12" />

  <vfolder name="Folders" id="22">
    <folders filter="contains(imageItem)" />
  </vfolder>
</vfolder>

<vfolder name="Playlists" id="18">
  <vfolder name="All Playlists" id="19" />
  <vfolder name="Folders" id="23" />
</vfolder>

<vfolder name="Video" id="2">
  <vfolder name="Actor" id="10" />
  <vfolder name="Album" id="14" />
  <vfolder name="All Video" id="8">
```

```
<items type="videoItem" />
</vfolder>
  <vfolder name="Folders" id="21" />
    <vfolder name="Genre" id="9" />
  </vfolder>
  <vfolder name="Browse Folders" id="21">
<shared_dirs full_extend="true" />
</vfolder>
  </vfolder_layout>
</fuppes_vfolder_config>
```

## References

- <http://fuppes.ulrich-voelkel.de/>
- <http://en.wikipedia.org/wiki/DLNA>
- [http://www.dlna.org/digital\\_living/how\\_it\\_works/](http://www.dlna.org/digital_living/how_it_works/)