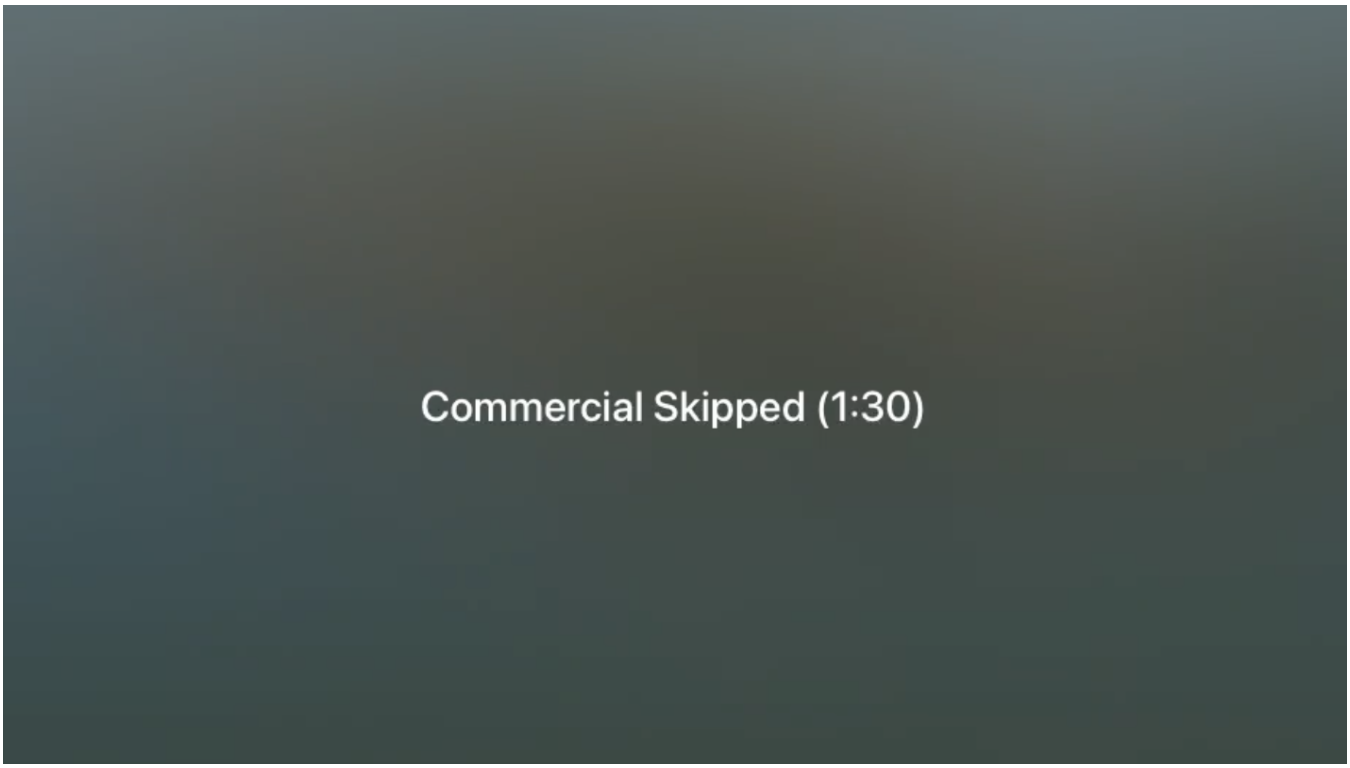
Detecting & skipping commercials on Ubuntu

This is a very detailed guide to using comskip for Emby on Ubuntu. If you follow step-by-step, you will learn a lot about configuring and testing both Emby and Ubuntu.



Step 1 — Preparation

Before starting, I recommend a clean install of Ubuntu 20 or later. If you have Ubuntu already running, some of the steps below may be redundant, but ensure you complete them anyway.

Other requirements include:

1.1. Live TV. Also, you should have Live TV working in Emby and be able to record TV shows. You will also need to know the location of your emby server. Mine is installed in "/opt/emby-server". To check where your is installed, you can use this command from your terminal.

```
$ sudo find / -type d -name "emby-server"
```

1.2. Test recording. And since you will be testing in some steps, it will be helpful to have already recorded a show and know the full path. I will use the example file path below, but you should replace it with the real path to your file:

```
/mnt/Emby/Shows/Test/sample_recording.ts
```

Step 2 — Install comskip

In this step you will install the "donator version" comskip. I strongly recommend that you support the author my making a donation here.

This step does not involve Emby in any way. The instructions were borrowed from here.

2.1. Install comskip and its dependencies. From a terminal, enter the following commands.

```
$ sudo apt-get update
$ sudo apt-get install ffmpeg libavcodec-dev libavformat-dev libavutil-dev
autoconf automake git libargtable2-dev libtool
$ git clone git://github.com/erikkaashoek/Comskip
$ cd Comskip
$ ./autogen.sh
$ ./configure
$ make
$ sudo make install
```

2.2. Verify comskip installation. Verify that comskip is working by entering the command below. The basic instructions for using comskip should be displayed.

```
$ comskip -h
```

2.3. Verify comskip path. Verify the path of comskip by entering the command below. In this case, the path is `/usr/local/bin/comskip`. If your output is different than shown below, be sure to substitute this path when needed in Step 5.

```
$ which comskip
/usr/local/bin/comskip
```

Step 3 — Create a comskip configuration file

Comskip requires the use of a configuration file to accurately detect commercials. For example, here is a basic configuration file that specifies some parameters:

```
detect_method=107
output_edl=1
live_tv=1
edl_skip_field=3
max_commercialbreak=300
verbose=0
output_default=0
delete_logo_file=1
```

These parameters are stored in a file called `comskip.ini`. You need to create a `comskip.ini` file and note the full path to this file for use in Step 5.

1. Download my sample `comskip.ini` as a zip file to your downloads folder and extract it: https://bit.ly/comskipini. This works well for most American, Canadian and UK channels. Feel free to customize this to suit your needs, using Google as needed.

2. Copy the file to your /etc folder with the following command:

   ```
   $ sudo cp ~/Downloads/comskip.ini /etc
   ```

3. The full path of your config file will be: `/etc/comskip.ini`

Step 4 — Test that comskip is working as expected

This step does not involve Emby in any way, but it is important to help troubleshoot any issues later on when we ask Emby to trigger comskip (Step 5). We will use the path to your recorded show from Step 1 and the path to the `comskip.ini` file from Step 3 to test comskip.

4.1 Run comskip on your test recording from Step 1. From your terminal, enter the following command, taking care to adjust the filename as needed.:

```
$ comskip --ini=/etc/comskip.ini '/mnt/Emby/Shows/Test/sample_recording.ts'
```

If comskip is working as expected, the output should be similar to that shown below with a slowly increasing progress indicator. Commercials were found" should be the last line of the output when complete.

```
Comskip 0.82.010, made using ffmpeg
Donator build
The commandline used was:
      comskip
      --ini=/etc/comskip.ini
      "/mnt/Emby/Shows/Test/sample_recording.ts"
Setting ini file to /etc/comskip.ini as per commandline
Using /etc/comskip.ini for initiation values.
0:41:16 - 148470 frames in 685.90 sec(216.46 fps), 1.00 sec(248.00 fps), 99%
148549 frames decoded in 704.88 seconds (210.74 fps)
Commercials were found.
```

4.2. Inspect the EDL file. Using your file manager, navigate to the folder containing your recorded show. You should now see a file named `sample_recording.edl` (note the EDL filename extension). You can view the file contents to confirm the start and end times (in seconds) for the commercials.

```
0.00        77.54       0
2167.10     2293.04     0
```

4.3. Troubleshooting EDL file creation. Here are some common issues that can prevent comskip from working correctly.

- `comskip.ini` is missing. See step 3.
- `comskip.ini` is empty. See step 3.
- `comskip.ini` is called using the wrong path. See step 4.1.
- `comskip.ini` is configured poorly. Replace with this one: https://bit.ly/comskipini
- The test video does not have commercials. Record a new one and open in a video player to ensure at least one commercial is present.

DO NOT PROCEED UNTIL STEP 4.2 SUCCESSFULLY GENERATES AN EDL FILE CONTAINING START AND STOP TIMES.

Step 5 — Launch comskip when Emby records.

In this step we will configure the LiveTV section of Emby to launch the comskip application you installed and tested above when something is recorded.

There are two ways to go here:

- launch comskip when a recording completes.
- launch comskip when a recording begins and look for commercials in real time.

Choose one method or the other, NOT BOTH.

5.1. Post-processing: running comskip when a recording is complete.

1. From your Emby instance, navigate to the `Advanced LiveTV` settings as follows:
    - *Manage server > Live TV / DVR > Advanced*.

2. Scroll down. Locate the following 2 fields and enter the values shown:
    - Post-processing application (see Step 2):
      `/usr/local/bin/comskip`
    - Post-processor command line arguments (see step 3 for the correct path):
      `--ini=/etc/comskip.ini "{path}"`

3. Click the Save button at the bottom to save your changes.

4. To test that this is working, record a new show. When the recording is complete, wait a few minutes and then check for the presence of a new EDL file in the folder containing the show.

   Note: The EDL file should be created shortly after the recording completes. However, comskip can take a while to completely process every frame of your video. The longer the video, the longer it will take to finish. Thus, the EDL file may not be finalized for 5 to 30 minutes after the recording is complete.

5.2. Live-processing: run comskip in real time during a recording.

Live processing requires the installation of the *Emby Scripter-X* plugin. This allows you to execute scripts and commands when specific events occur such as the start of a recording.

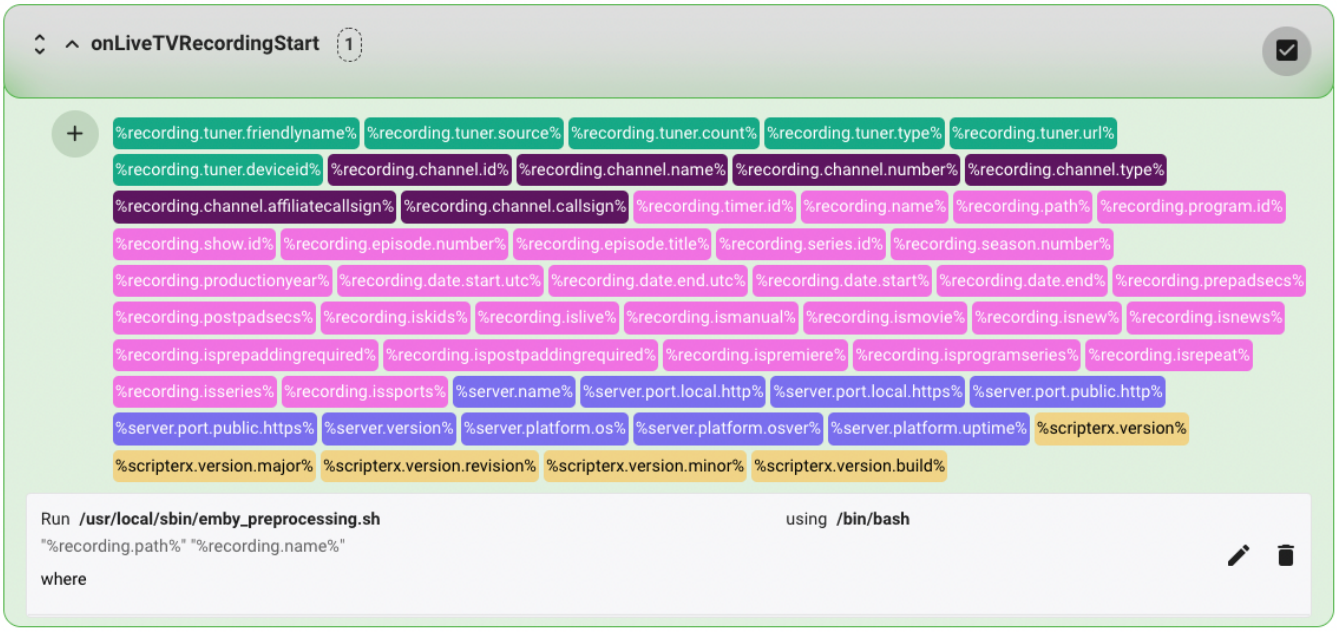
It also requires the use of a bash script called `emby_preprocessing.sh`. The attached bash script is very powerful. It logs activity, and allows you to use show-specific `comskip.ini` files on a per-show basis (see Step 8).

1. Install the *Emby Scripter-X* plugin:
    a. From your Emby instance, navigate to the `Plugins` area as follows:
        i. `Manage server > Plugins`. Click the `Catalog` tab at the top.
    b. In the `General` section, locate and click `Emby Scripter-X`. On the plugin detail page, click the `Install` button. When installation is complete, reboot your Emby server.

2. Create and test the bash file:
    a. Download the `emby_preprocessing.sh` file to your downloads folder and extract it: https://bit.ly/emby_preprocessing.
    b. Copy the file to your `/usr/local/sbin/` folder with the following command:
    `$ sudo cp ~/Downloads/emby_preprocessing.sh /usr/local/sbin/`
    c. Make the bash file executable with the following command:
    `$ sudo chmod +x /usr/local/sbin/emby_preprocessing.sh`
    d. Test that the bash script is working by launching the script along with the test file above and looking for the production of new EDL files (look carefully at the `date modified` info to see if the EDL file is new). Here are the commands based on the examples above:
    `$ cd /usr/local/sbin/`
    `$ ./emby_preprocessing.sh '/mnt/Emby/Shows/Test/sample_recording.ts'`

    DO NOT PROCEED UNTIL `EMBY_PREPROCESSING.SH` GENERATES AN EDL FILE CONTAINING START AND STOP TIMES.

3. Combine the *Emby Scripter-X* plugin with the bash script:
    a. Ensure that the live_tv parameter in `/ect/comskip.ini` is enabled: `live_tv=1` (See step 3).
    b. Navigate to the `Emby Scripter-X` settings as follows: `Manage server > Scripter-X → Actions`.
    c. Scroll down to locate the `onLiveTVRecordingStart` section. Click the section title to display the details.
    d. Click the "`+`" icon at the top-left of the long list of variables and then the `edit/pencil` icon on the right.
    e. Complete the following fields:
        i. Script file: `/usr/local/sbin/emby_preprocessing.sh`
        ii. Parameters: `"%recording.path%" "%recording.name%"`
        iii. using (dropdown): `/bin/bash`



f. Click the `save/check` icon on the right to save the changes.
g. Test that the `Emby Scripter-X` plugin is properly launching the bash script by recording a show and looking for the production of EDL files. Since the bash script includes a 1-minute delay, wait a few minutes and be patient. Once the EDL file is created, you can observe this file during the recording. Entries should show up in real time as commercials are detected.

Step 6 — Installing the Com Skipper plugin for Emby

Now that your system is properly configured and tested, it's time to install the Com Skipper plugin and enjoy the ability to skip commercials while watching a recorded show!

Note: This plugin is not (yet) in the existing plugin catalog and must be installed manually. Once installed, it will appear in the Plugins section of Emby and you can manage it from there.

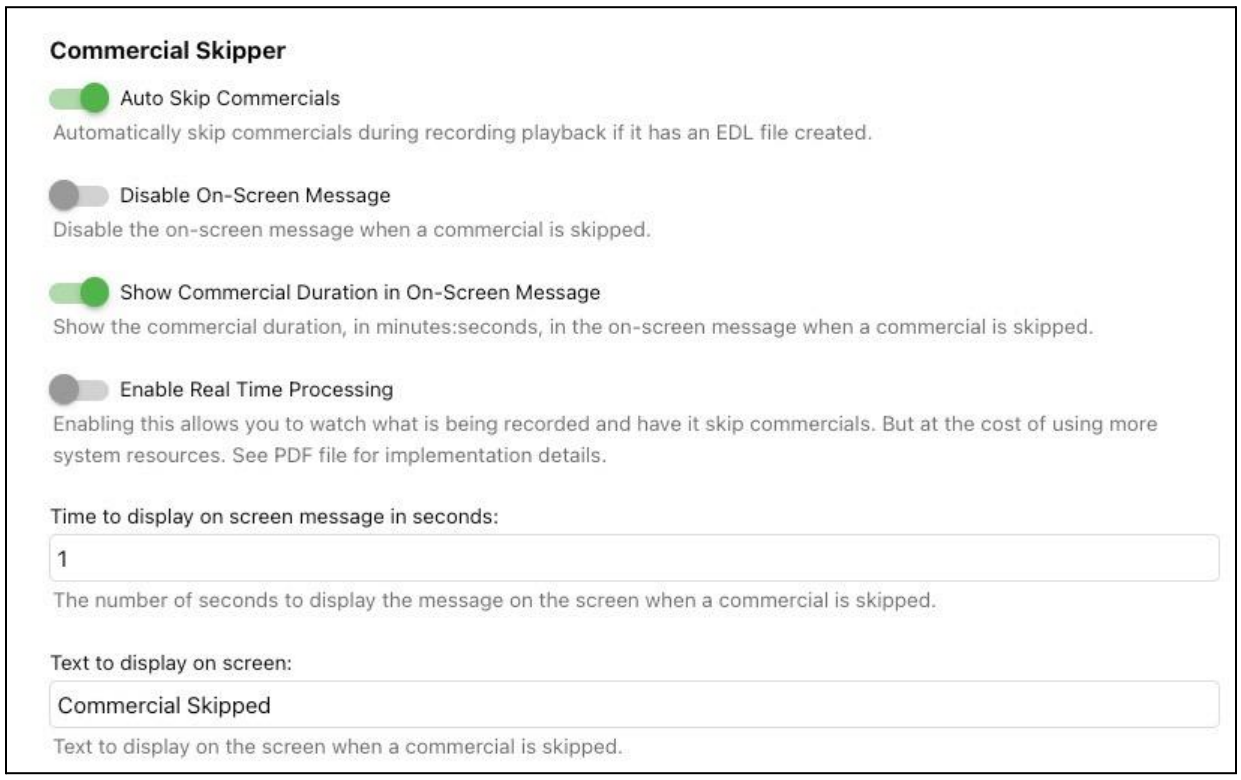
1. Download the com_skipper plugin here: https://github.com/BillOatmanWork/Emby.ComSkipper/releases. You might also consider "watching" this repository to be notified when updates are available.

2. Extract the ZIP file to your downloads folder.

3. Copy the DLL file to the Emby plugins folder with the following command (update to your emby path from step 1 as needed) :
   `$ sudo cp ~/Downloads/ComSkipper.dll /opt/emby-server/system/plugins`

4. Restart Emby from the dashboard.

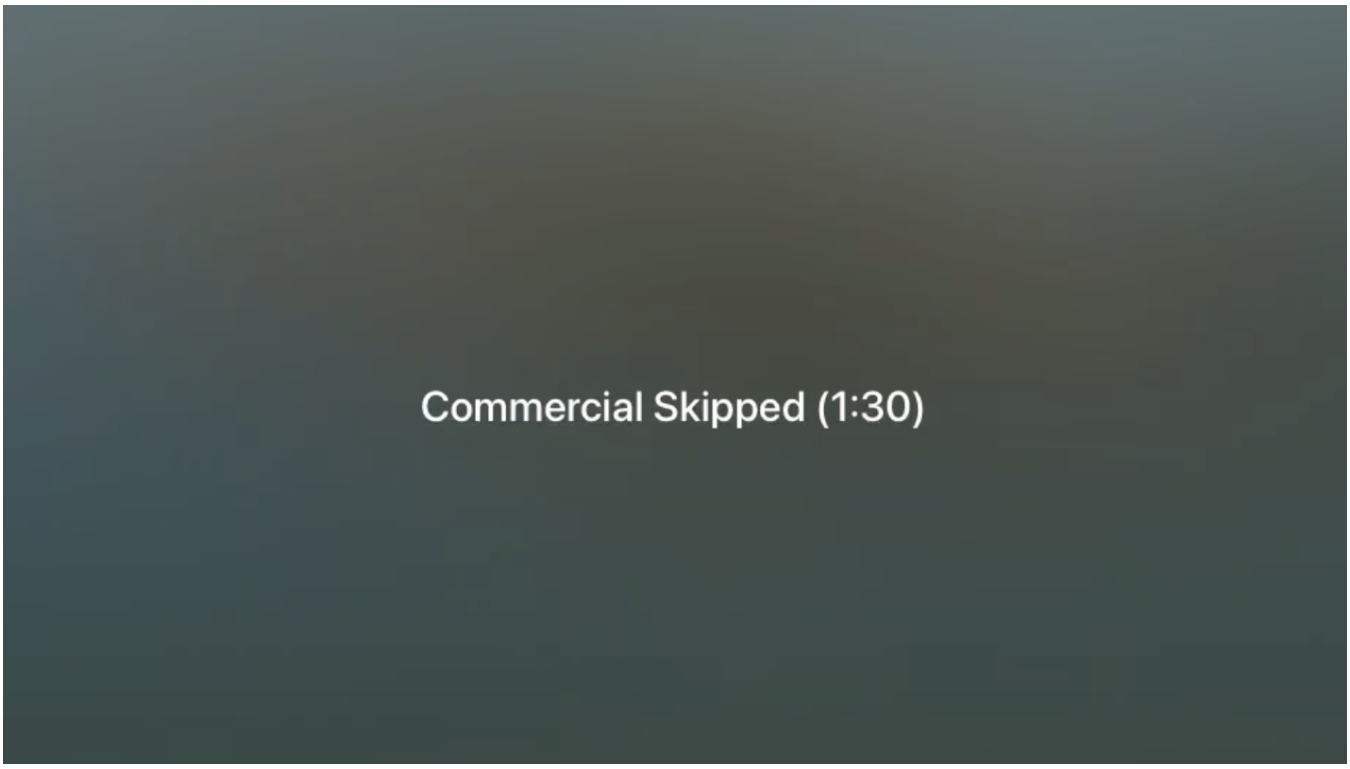
5. Review the plugin settings by navigating to `Manage server > Plugins > Com Skipper > Settings`.
   - Note 1: If using live processing as described in step 5.2 above, be sure to toggle the `Enable Real Time Processing` option here.
   - Note 2: For AppleTV users, you MUST enable the first 2 options for things to work as you expect.



Step 7 — Test commercial skipping in your Emby client!

If everything is configured correctly, commercials will be skipped when you watch either the show you used for testing in Step 4, or the new show you recorded as a test in Step 5. Commercials should be skipped based on the times (in seconds) noted in the EDL files created by comskip.

Depending on your Emby client and settings, you may see a message similar to this when commercials are skipped:



If many of your commercials are not detected, or if the start/end time for the detected commercials is not accurate enough for you, feel free to experiment with the values in `/etc/comskip.ini` until the desired accuracy is achieved. Google is your friend in this pursuit. For example, this thread, and this one regarding country-specific INI files.

Step 8 — Using series-specific comskip.ini files

If you followed the live-processing instructions in Step 5.2, you can use different `comskip.ini` files in the parent folder for any series (show) you are recording. These files can have different parameters than the default file in `/etc`. This is useful for problematic shows that need specific optimization.

For example, let's say you are recording a show called `Seinfeld (1981)`. Use the commands below to copy and then modify your the ini file specifically for this show:

```
$ cp /etc/comskip.ini '/mnt/Emby/TV Shows/Seinfeld (1981)'
$ nano '/mnt/Emby/TV Shows/Seinfeld (1981)/comskip.ini'
```