Install Ubuntu

Make sure system software is up to date. Next, prepare the system configuration for the SageTV Server install as follows:

1. Set up correct hostname and IP address for network

   (Use System->Administration->Network).

2. Set up samba

   (Use System->Administration->Synaptic Package Manager and search for samba)

3. Make the directories needed for SageTV:

   mkdir /opt/sagetv/server

   mkdir /opt/sagetv/client

   mkdir /var/media

   mkdir /var/media/tv

   mkdir /var/media/videos

   mkdir /var/media/pictures

   mkdir /var/media/music

4. Share the following directories (System->Administration->Shared Folders):

   /var/media/tv

   /var/media/videos

   /var/media/pictures

   /var/media/music

5. Reconfigure samba as per http://download.sagetv.com/linuxweb/smb.conf

6. Download the following files from: http://sagetv.com/download.html

   For the server:

   Download SageTV Media Server for Linux (V6.3 tarball)

   Download SageTV Media Server for Linux (V6.3 Debian package installer)

   For the client:

   Download SageTV Placeshifter for Linux (V6.3 tarball)

   Download SageTV Placeshifter for Linux (V6.3 Debian package installer)

Install SageTV Server

Install SageTV Linux Server by following these steps:

1. Extract the server tarball with:

    tar -xzf server.tar.gz -C /opt/sagetv/server

2. Install the SageTV dependencies:

    sudo apt-get install sun-java6-jre libfaad2-0 libmad0 liblame0

3. Install the SageTV Server debian package using the following:

    sudo gdebi sagetv-server_6.3.5_i386.deb

    This will prompt you for the activation key. You don't need to install most of the TV tuner drivers as listed in SageTV's instructions, because Ubuntu installs many of them by default.

The installer sets up the SageTV server to start at boot, using /etc/init.d/sagetv. You can start the server process manually by executing the startsage script:

    /opt/sagetv/server/startsage

The stopsage script can also be run manually to stop the server.

Install the Linux Client

Install SageTV Linux Client by following these steps:

1. Extract the mini client:

    tar -xzf miniclient.tar.gz -C /opt/sagetv/client

2. Install additional packages:

    sudo apt-get install nvidia-cg-toolkit libfaac

    If you have an Nvidia video card, the nvidia-cg-toolkit is needed for the libCg.so and libCgGL.so libraries. Install the appropriate package for your card.

3. Install the client with:

    sudo gdebi sagetv-client_6.3.5_i386.deb

4. Add missing client library directories to the LD_LIBRARY_PATH being set in sageclient.sh:

    export LD_LIBRARY_PATH=.:/usr/lib/jvm/java-6-sun-1.6.0.03/jre/lib/i386/client:/usr/lib/jvm/java-6-sun-1.6.0.03/jre/lib/i386/xawt:/usr/lib/jvm/java-6-sun-1.6.0.03/jre/lib/i386

How to set up a shortcut

The following steps will set up a shortcut to the Linux Client on the Ubuntu desktop:

1. You'll find an entry for the SageTV Client under:

   Applications ->Sound & Video

2. Right-click on that entry, and select "Add this launcher to desktop"

3. Modify the launcher command for the shortcut's properties to read:

   /opt/sagetv/client/sageclient.sh 127.0.0.1

   or

   /opt/sagetv/client/sageclient.sh -fullscreen 127.0.0.1

General Debugging

To log errors:

1. Add the following to the Sage.properties file in /opt/sagetv/server:

   debug_logging=TRUE

2. Change sageclient.sh to log debug output:

   #java -cp MiniClient.jar:jogl.jar:gluegen-rt.jar:. sage.miniclient.MiniClient $1 $2 > /dev/null 2>&1

   java -cp MiniClient.jar:. sage.miniclient.MiniClient $1 $2 > miniclient.log 2>&1

3. Use the ldd command against *.so in the server directory and against *.so and mplayer in the miniclient directory to check that library dependencies are satisfied. For example:

   cd /opt/sagetv/server

   ldd *.so

   cd /opt/sagetv/client

   ldd *.so

   ldd mplayer

There are two reasons a library might show up as "not found":

1. The package that provided the library has not been installed

2. The system isn't looking in the correct directory

To see if a library is on the system, use the find command. For example:

   cd /

   sudo find . -name libjawt.so -print

You'll get output something like this:

    libjawt.so /usr/lib/jvm/java-6-sun-1.6.0.03/jre/lib/i386

Go to the directory where the library is found, and repeat ldd with that library, to make sure all of its dependencies are also found.

If the libTSnative.so library, (which is actually in the SageTV server directory), is not being found, you can create a sagetv.conf file in /etc/ld.so.conf.d that contains:

    /opt/sagetv/server

Do a man on ldconfig to find out how to update the cache (or reboot). Alternatively, you could add the directory to the LD_LIBRARY_PATH.