Sockso: Build a

Tired of having to transfer music around? **Andy Channelle** shows you how to create a personal music server so you can listen to your tunes anywhere.
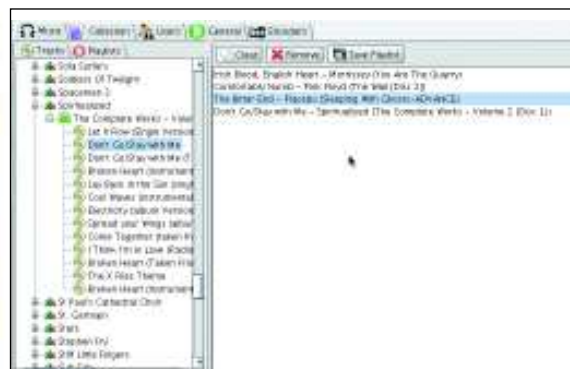
› **Create your server accessible playlists by dragging songs from the file tree to the Playlist window.**

Our expert

Andy Channelle
Andy seems to have been taking his first steps in free software forever, and has been interested in technology since the advent of the Dragon 32.

We love music and we love computers. So put the two together and you have the perfect combination. No, not Kraftwerk, but a server that can stream your MP3 collection to any computer you use. In this tutorial, we're going to download and install an open source media server package, configure it to play our library, design some playlists and remotely access these over a local network. We'll also look at the potential for accessing your collection from outside your home network.

The software we're using for this project is called *Sockso* and the latest version, 1.1.8, is available from **http://sockso.**

› **You can access your music via this smart-looking website.**

pu-gh.com. *Sockso* is available for Linux, Mac and Windows, and there's no installation as such. Instead all you need to do is unzip the file to a suitable location and double-click either the **sockso.jar** file or the **linux.sh** script. The JAR file extension should warn you that *Sockso* is *Java*-based software, so if you don't have it already, find and install version 1.6 of *Java Runtime* through your package manager.

When you fire up *Sockso* for the first time you'll be presented with the main interface. This has a series of tabs running across the top, a note of your current IP address at the bottom and a two-pane section in between. These will eventually be used to access your library and to construct playlists, but at the moment they both look a little desolate. We need to add some music.

Hey Mr DJ, put a record on

To begin adding tracks, select the Collection tab from the top of the window. Here you'll see a large window and a pair of buttons that are used to add and remove folders from your collection. Click the Add button to launch a file browser and navigate to your music collection. This tool imports subfolders, so there's no need to import albums individually – just choose the parent music folder and everything beneath it will be added to the server. Well, links to tracks are created within the software's database – the files aren't actually copied to the new location.

We added the folder **~/home/user/Music** (where **/user** is the server admin's username) and it took about three minutes to add 3,600 songs to the database. You may find it takes longer to parse larger collections, so you could consider leaping beyond these first steps and installing *Sockso* with a *MySQL* back-end to make it easier to handle big collections.

By default, *Sockso* will scan any folders added every five minutes for new tracks. This seems rather excessive, so you

» **Last month** We got organised with Basket Note Pads and OOo outlines.

music server

can change it to scan every hour by going into the General tab and setting Scan Interval to 60. If you add tracks later and want to update quickly, go to Collection and select Scan Now. Oh, and while you're in the General tab, why not rename the server with a tasteful name, such as The Unstoppable LXF Music Machine?

It's time to test the server, so fire up your browser and type **http://localhost:4444** into the address bar. If everything's working correctly, you'll see the standard *Sockso* interface, which presents you with various links under the splashy header and an alphabetical strip on the right-hand side of the window. Selecting a letter takes you to a list of artist names that begin with that character – to the right of each artist name is the number of albums available and to the left are a trio of icons. The first will play everything under that artist, the second adds the tracks to a playlist and the third will download the track (you won't need to do this, as you're running a local version). Clicking on the artist's name will present you with a list of albums and selecting an album displays the individual tracks.

You can also use the Search bar to look for a particular artist or song. This is dynamic, so the list of available tracks will be pared down as you type.

Making playlists

Now, wouldn't it be great to have playlists that are accessible anywhere in the house? Well, *Sockso* makes it simple. Go back to the Music tab and you'll see your music displayed on the left-hand side. Click the disclosure icon (+) next to each artist to reveal albums and then the icon next to an album's name to see its tracks. From here, you can drag tracks to the window on the right. Songs can be re-ordered by dragging them up or down and deleted with the Delete button.

Once you're satisfied, click Save Playlist and give it a name. To see your playlists, click the Playlist tab above the file tree. To edit one, click and drag it to the right-hand pane. Once you've altered your playlist, click Save Playlist again and type in the amended playlist's name.

Return to the server and click the Playlist link. The playlists you've created will be listed under the Site Playlists section
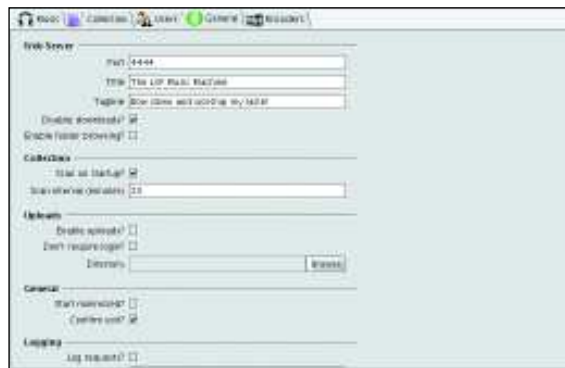
❯ **You can disable downloads to ensure you won't end up with lots of copies of your music everywhere.**

and to the right of this is User Playlists, which enables other users create their own playlists via the web front-end.

Their efforts will appear in the Administration GUI within the Playlists tab, so if a remote user creates a particularly great playlist, you can copy it and make amendments. Just drag it to the Playlist window (on the right), make changes and then save it with a new name.

Network access

Now imagine we're in a house where there are four users who want to access the server. If we're being completely open, each person could direct their browser at the local IP address for the server, but this is likely to be different to the address *Sockso* shows. You can find a machine's IP address in a terminal by typing **ifconfig**. Enter this address into your browser, followed by **:4444** – the port the server's running on.

We want to ensure each of our users logs in to access music and restrict downloads. To do this, go into the Users tab and click the Create User button. Provide a username, password (twice) and an email address, then click on Create User. Before leaving this section, click the Require Log In button. Complete the process by going back to the General tab and selecting Disable Downloads. You've now created your own home network radio station. Smashing!

❯ **The pop-up player is functional without being too bland.**

Playback

By default, any playlists and files you select to play will be opened in a pop-up *Flash* player. This worked on every machine we attempted to connect on, regardless of operating system, and also enables you to start a long playlist and then navigate away from the *Sockso* web interface without losing your music. However, if you have a problem with

Flash, there are other options including streaming to various applications, such as *iTunes* and *Windows Media Player*, or using an embedded player.
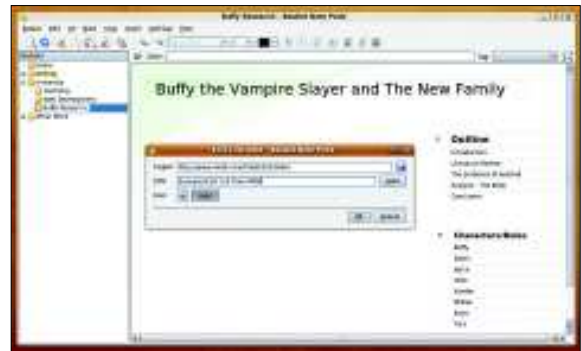
The *Flash* player displays the playlist, enabling you to select tracks to play, a set of transport controls for navigation and any associated album art for the track currently playing.

Basket: Order

Basket can do more than to-do lists – it's also an ideal research tool.

Last month, we built a basic *Basket* system to deal with to-do lists and simple notes. Now we want to revisit this powerful application to look at other ways it can be used to organise, manage and share information. Specifically, we're going to look at the software as a research tool, which could be useful for writing a novel, preparing a report, designing a presentation or planning a household project. We'll also look at acquiring, editing and organising notes, importing information from a variety of sources, sharing information with friends or colleagues and using *Basket Note Pads* to present your research to others.

Preparing the app

First, create a new basket, which can be done by right-clicking the Baskets list and selecting New Basket, or by pressing Ctrl+N. Customise it using the various options – we've gone for a freeform basket – then provide a suitable name and click OK. The space on the right will become the active basket and this can be reconfigured by right-clicking the name and selecting Properties. We can give the basket a title by right-clicking anywhere within the space and selecting the Text option. This will add a space where you can type in some text and format it using the options at the top of the window.

We can also add lists (see **LXF120** for more on this), group them together to make your basket management easier and add additional text elements too. Having added a few objects to the window, it's a good idea to practice moving them around, because what gets moved depends on where you grab an object. For instance, if you've grouped items together, you can remove an object from the group by hovering next to its name (the blue highlight will only cover that item) and dragging it away. This is also how you reorder items in a stack.

❯ **Using the small minus icon, you can collapse a list down to just its title with a single click.**

❯ **It's *Basket*'s ability to work with web-based content and other apps that makes it so useful as a research tool.**

Shift the mouse slightly to the left and the highlight should cover the entire group, which can then be dragged elsewhere.

The next thing we want to add is an image, which is done by dragging and dropping an image file from any folder into the active basket. When doing this, you'll be asked if you want to copy or move the picture. Move will delete the image from its original location, so you'll probably want to select Copy. Once in the basket, an image can be moved around just like anything else. We've created a title for the image and then grouped the two elements together, which can be done by either selecting both objects (click the first then Shift-click the second) and then clicking the paper clip icon in the toolbar, or by dragging one element so it attaches to the other (you'll see a thick black line appear beneath the original object). The second method means it's possible to, for instance, collapse the image beneath its title using the small minus icon. In this way it's possible to build up sophisticated stacks of content and then reduce them down to a title with a click.
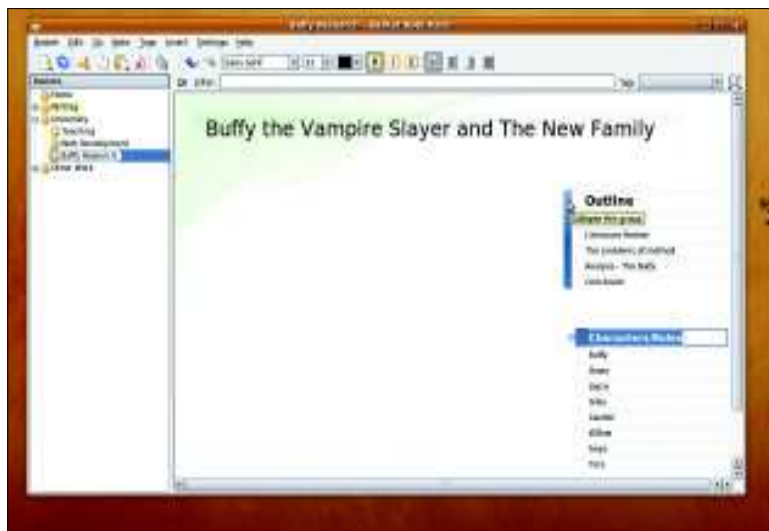
Being visual

If you want to edit the image, you'll need to double-click on it to open it in a suitable editor. When you're done, your alterations are automatically saved to the *Baskets* version, which saves you importing the image twice.

We can also create associated links with our image (or a piece of text) by first selecting it – hover over it until the border appears and click it – then going to Insert > Link and providing the appropriate information. The link will become an appendage of the original text or image, meaning it will collapse using the minus icon as before. In our research basket, we've made a section called web links to house our collection of links associated with the project.
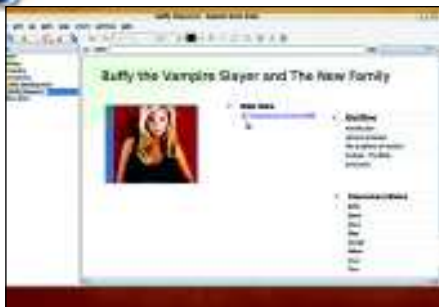
However, in-depth research relies on gathering information from a variety of sources, so look to the walkthrough for more on how *Baskets* integrates with other Linux apps and *Firefox*.

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your research

Step by step: Gathering research

1 Drag and drop a link ❯

To archive useful links you've found on the internet, navigate to the location you want to save, grab the favicon (the small icon next to the address bar) and drop it into your research basket. The link will then be formatted with the name of the page and can be moved around just like any other element within *Basket Note Pads*.

2 Take text from the web ❯

If you find a particularly useful piece of text on the web, highlight and drag it from your web browser (or an application) into your basket, where it will appear as a new element. Note that this kind of text doesn't retain any information about its origin, so it might be best to also add a link to the original source. This text can be edited in the usual way.


3 Take a screenshot ❯

The problem with links is that they might expire or the text may change. A way around this is to take a screenshot of the site. Right-click a space in the basket and select Grab Screen Zone. *Basket* is minimised and the cursor turns into a crosshair. Draw around the page you want to save and it will be inserted into the basket.

4 Export a HTML page ❯

HTML is a great way of backing up or sharing baskets with a friend or colleague who doesn't use *Basket*. Just navigate to File > Export > HTML Page and define a location for the file. This creates a single HTML file and a folder of the assets associated with it. Links in the basket will remain active, making this a good, if simple, web editing app.
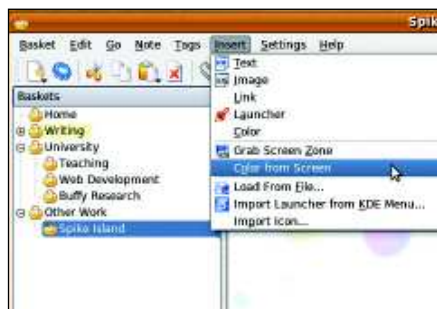
5 Build a colour palette ❯

If you use this software to manage a design project instead, it's possible to build up a colour palette by sampling areas of the screen. So, you could open up a logo on your desktop in *Gimp*, select Insert > Colour From Screen and use the pointer to pick out a colour. The result is a swatch along with a hex value for the colour.

6 Create an app launcher

Finally, you may want to have applications associated with a piece of research – for instance, *CeltX* could be useful if you're writing a screenplay. To do this, right-click and select Launch. Either select your app from the list or browse to it using the ellipsis (**...**) icon. Now click OK to create a button that will launch your application. **LXF**

❯❯ **Next month** Share more than just music and configure an effective firewall.