

# 1 Technique

## Finding the Power in KDE Protocols

### Save Time By

- ✓ Creating links to allow quick access to important data
- ✓ Moving audio and image files with Konqueror
- ✓ fishing for remote files with a secure connection
- ✓ Easily accessing local network information
- ✓ Reading documentation — fast!

When you type a typical URL, such as `http://www.google.com/index.html`, into your Web browser, you likely don't think about how you're making use of it. That is, you don't think about `http://` being a *protocol*, `www.google.com` being an *address* that the protocol handler knows how to deal with, and `index.html` identifying a resource at that address.

If you haven't thought about URLs and their individual parts for a while, you may be surprised to find out that KDE adds a number of new protocol handlers, called *KIO slaves*, that know how to serve up data from new and unusual sources, such as CDs and remote systems, through the Konqueror Web browser.

Using the right protocol saves you the time of manually copying resources all over the Web. The protocols are a varied bunch. In this technique, we show you protocols that work with audio CDs or your digital camera, handle remote file management, manage printers and e-mail, and read documentation. Check them out — you can save time in lots of ways.

### Discovering Your Protocols

Finding out about KDE protocols is not an easy task. They aren't well documented, and they can be tough to find. Some are universally helpful, whereas others are more specialized (such as the LinPoch project at `linpoch.sourceforge.net`, which lets you interact with Nokia cell phones from KDE applications). Here's how to see what protocols are installed on the following versions of Linux:

- ✓ **Fedora:** Open the KDE Menu and choose System Tools→Info Center; then click Protocols.
- ✓ **SuSe:** Open the KDE Menu and choose System→Monitor→Info Center.
- ✓ **Mandrake:** Open the KDE Menu and choose System→Configuration→KDE→Information→Protocols.

The Available IO Slaves column displays a list of available protocols. For more information about a protocol, click the protocol name, and the documentation is displayed in the right column.



Some of the protocols are not documented. If you find one that sounds interesting, search the Web to see if someone has written about it.



Depending on which version of KDE you have and which options are installed, the protocols you find will vary.

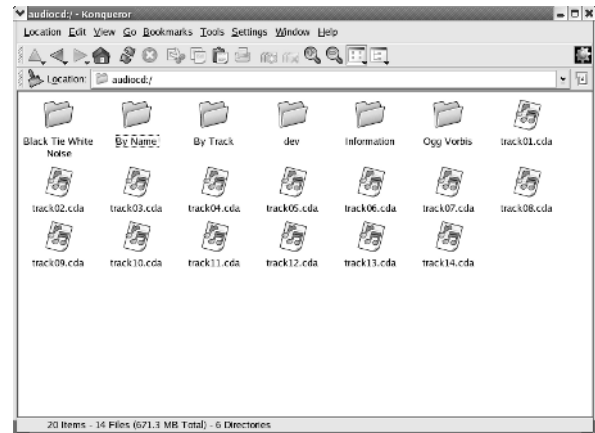
## Working with CD Audio Tracks Using audiocd:

Linux gives you all sorts of ways to rip the tracks off audio CDs, but we haven't found anything easier than KDE's `audiocd:` protocol. This protocol is a breeze to use:

- 1. Insert a music CD into your drive.**  
If your CD player program starts, just close it.
- 2. Open the Konqueror Web Browser.**
- 3. When Konqueror opens, enter `audiocd:/` in the Location bar and press Enter.**

If your copy of KDE was compiled with `audiocd:` support, the Web browser displays options for ripping the audio files, as shown in Figure 1-1.

(See the preceding section to find out how to view a list of available protocols.) See Table 1-1 for details on what the options do and how they work.



• **Figure 1-1: The KDE audiocd: protocol.**



Not all copies of KDE are created equal. The copy of KDE currently distributed with Fedora includes support for copying to `.wav`, `.cda`, and `.ogg` files, but it doesn't include the information to create MP3s. You can get a copy of KDE that has MP3 compiled in at [www.kde.org](http://www.kde.org).



Depending on your MP3 player, you may be able to save lots of time loading files. If your player can emulate a hard drive, you can open it with Konqueror and drag your music on and off the player.

**TABLE 1-1: RIPPING AUDIO FILES WITH AUDIOCD:**

Option	What Is It?	How to Use It
CDA Files	A directory that contains one file for each audio track on the CD ( <code>track01.cda</code> , <code>track02.cda</code> , ...).	Drag one of these <code>.cda</code> files to your desktop (or to another folder), and <code>audiocd:</code> copies the raw audio track to the new location.
By Track	A directory that contains one file for each audio track ( <code>track01.wav</code> , <code>track02.wav</code> , ...).	Drag one of these <code>.wav</code> files to your desktop (or to another folder), and <code>audiocd:</code> converts the audio track to WAV format.
Ogg Vorbis	A directory that contains one file for each audio track, in Ogg Vorbis format (such as <code>16 Burning Down The House.ogg</code> , <code>14 Once In A Lifetime.ogg</code> , ...).	Drag one of these <code>.ogg</code> files to your desktop (or to another folder), and <code>audiocd:</code> converts the audio track to Ogg Vorbis format.

Option	What Is It?	How to Use It
MP3	A directory that contains audio tracks in MP3 format.	Drag an .mp3 file to your desktop (or to another folder), and <code>audiocd</code> : converts the audio track to MP3 format.
By Name	A directory that contains audio tracks (with song names) in WAV format (16 Burning Down The House.wav, 14 Once In A Lifetime.wav, ...). This directory is similar to By Track, except that you get to see song titles in the By Name directory (By Track only shows you the track numbers). You won't see a By Name directory if Konqueror can't find your CD in the Web's <code>cddb</code> database.	
Album Name	A directory that contains one file for each audio track, in WAV format (identical to By Name except that the directory name is the album name).	

## Managing Snapshots with the camera: Protocol

The `camera: protocol` treats your digital camera like it's just another storage device, only this one is full of pictures. `camera:` gives you thumbnail previews of the photos on your camera, so you can easily identify and move your images to where you need them. Just drag the images to your desktop (or to another folder). Double-click an image file to open it with your favorite editor (see Technique 3 to find out how to choose an editor), and you're working in a snap.

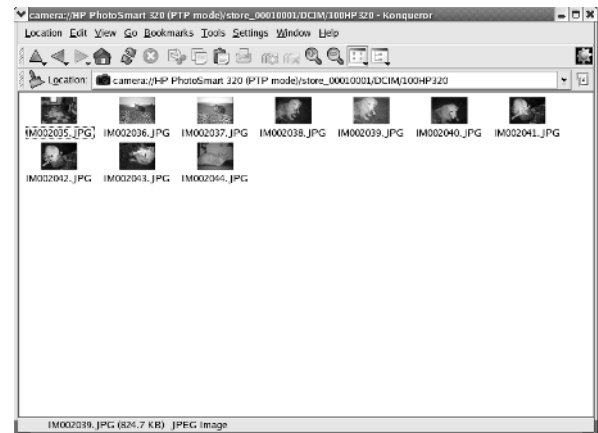


You can also use an image as your desktop wallpaper. Drag the thumbnail to the desktop and choose Set as Wallpaper from the menu that appears.

To use the `camera: protocol`, follow these steps:

1. Plug in your digital camera and be sure it's turned on.
2. Open the Konqueror Web Browser.
3. Type `camera:/` in the address line and press Enter.

That's all there is to it (see Figure 1-2).



• **Figure 1-2:** The `camera: protocol`, in action.

From here, finding your way around the inside of your camera is just a matter of exploring.



When we plug in our HP PhotoSmart 320 digital camera and use the `camera: protocol`, we see the single directory HP PhotoSmart 320 (PTP mode). Underneath the HP PhotoSmart 320 folder, our pictures are in a subdirectory named `store_00010001/DCIM/100HP320`. The directory structure used by your digital camera is likely to be different. Use Konqueror to find your way around the inside of your camera. After you know where your images are stored, you should be able to open those

images directly from KDE-friendly applications like KquickShow and KView.



Don't bother trying to remember a long, complex URL that corresponds to where your pictures are stored. Instead, drag the folder to your desktop and choose Link Here. Then, whenever you want to play with your camera, plug it in and click the shortcut.

One thing to note — your pictures reside only in your camera until you copy them onto your computer. Be sure to store the pictures on your computer before deleting them from your camera. After you copy the pictures you want to keep, it's easy to erase the images from your camera; just delete them or drag them to the trash like any other file.

## Remote File Management with fish:

`fish:` is a remote file access protocol. Using `fish:`, you can work with files stored on a remote Linux system as if they were located right on your desktop. To use `fish:`, open a KDE browser (Konqueror is a good choice) and enter `fish://` followed by the host name (or IP address) of the machine you're fishing for.

Under the hood, `fish:` uses SSH (Secure Shell) to do its work, so you must have an SSH server up and running on the remote machine before you can go fishing. `fish:` prompts you for a user name and password on the remote system before allowing you access to files. After you've connected, you can interact with the remote files and directories in the same way you would deal with local files: Drag them to your desktop, drag them to other folders, drag them to the trash, or just edit them in place.

Here are some quick things you can do with the `fish:` protocol:

- ✓ Manage files on another system with the Konqueror file manager/browser. Using `fish:` and Konqueror, you can easily move, copy,

archive, open, and browse remote files the same way you handle files stored on your computer.

- ✓ Open `fish:` folders on two (or more!) systems and copy files or even entire directories from one machine to another by dragging from one window to another.
- ✓ Create a secure link on your local desktop that points to a remote system. When you open the link, `fish:` prompts you for login information so not just anyone can get access via your computer. To create a desktop link, right-click on your desktop and choose New⇨File⇨Link to Location (URL). Type in a name for your link and enter a URL in the form `fish://computer-name/directory`, for example `fish://bastille/home/freddie/Desktop`.
- ✓ Edit remote files with KWrite. When you open a remote file (such as `fish://versaille/bash_profile`), any changes that you make are automatically saved *back* to the remote system.



The KDE protocols are a part of KDE, not Linux. That means that any KDE-friendly application (Kate, Konqueror, KMail, and so on) can use them, but non-KDE applications won't understand them. You can open a `fish:` URL in just about any KDE application, and the resource appears as if it were on your local system. Note that not all KDE applications are protocol-enabled, which means that they won't understand `fish:` URLs. You'll just have to try out each application.

## Getting Help with help:, info:, and man:

KDE protocols give you fast access to help when you need it. KDE sports three documentation protocols: `man:`, `info:`, and `help:`. To use the protocols, open your Konqueror browser, enter the protocol name in the Location line, and press Enter. Konqueror will take you to the top-level index for the protocol you choose:

- ✓ `man:` When you browse through the `man:` protocol, you see a short index that provides access to the ten or so sections of the Linux man pages.



The `man:` protocol is a great way to read man pages because the documentation is pleasantly formatted and cross-referenced.



When you navigate down one level from the main index, the second level leaves a bit to be desired. For some reason (we assume that someone intends to fill in more information later), it says “no idea” in a column to the right of the topic list. Just ignore this and click your topic, and you’ll find the information you need.

- ✓ `info:` This protocol gives you access to documentation written in the Texinfo format, a format popular with GNU software. Like `man:`, `info:` documentation is cross-referenced and displays a browsable menu with links that take you to the documentation you want to read.
- ✓ `help:` This protocol lets you read documentation in KDE’s documentation format. To find subjects within `help:`, type `help:/`, followed by the topic name. (For example, `help:/kate` takes you to the Kate handbook.) If you need general information about your KDE environment, a good starting point is `help:///khelpcenter`.



Just like Web page bookmarks that you can create when surfing the Web, documentation bookmarks are great navigational time-savers. Bookmark your favorite man pages so they’re easily accessible the next time you need them! To create a new bookmark, just choose **Bookmarks** → **Add Bookmark**.

## Viewing Your Local Network with the `smb:` Protocol

Use the `smb:` protocol to quickly browse other machines on your local SMB (Samba and Windows file/printer sharing) network. Enter `smb:/` in the

Konqueror address line and press Return to see the SMB workgroups in your local network. Click an SMB workgroup to see all the computers in that workgroup. Click one of the computers, and you see the resources that computer is willing to share. Just drag and drop the data you need or make clickable links to resources — the time you save will amaze you.



Use `smb:` to create desktop shortcuts to your network locations. Just start your copy of Konqueror, enter `smb:/` in the address line, and press Enter. Choose a workgroup and then a computer within that workgroup. Now drag a share name to your desktop. Next time you need data from that machine, you have it at the click of a button.

## Other KDE Protocols

We haven’t covered all the KDE protocols in this technique. There are quite a few others you can explore. Check out the ones listed in Table 1-2.

**TABLE 1-2: OTHER KDE PROTOCOLS**

Protocol	What You Do with It
<code>print:</code>	Manage printers, print jobs, and print queues from your Web browser.
<code>devices:</code>	Find all your storage devices here — hard drives, NFS and Samba file systems, and removable media.
<code>imap:</code> <code>pop3:</code> <code>mailto:</code>	Send, receive, or just play around with your mailbox as if it were a local file system.
<code>webdav:</code>	Modify a remote Web site or collaborate with others over the Web.



You can find more protocols on the Web. Search for *KIO slave* at your favorite search engine.

### ***KDE protocols versus GNOME VFS***

KDE has protocols, and GNOME has the VFS (virtual file system). KDE protocols and GNOME VFS modules do pretty much the same thing: They make data available from unconventional sources. The name *protocol* may seem a bit misleading, but it's called that because the name of the protocol goes in the protocol part of a URL. We think that *virtual file system* is a more straightforward name than *protocol* because a virtual file system basically creates make-believe file systems and lets you use them to quickly access your data.

Both the KDE protocols and the GNOME VFS work from within a Web browser, but the GNOME VFS works best at the command line. We have to admit that we're fond of KDE for its usability and speed. However, sometimes GNOME can be a real timesaver, as you discover in Technique 2.