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Every day, computers are inundated with hundreds of files. Fsniper welcomes the new arrivals and processes them according to rules that you define. **BY HEIKE JURZIK**

Fsniper [1] is a handy tool that watches for new or modified files and executes commands on the basis of file name criteria. The user configures the rule set that identifies a file and specifies the details of the response, which can be either a short command or a whole shell script. The tool can also respond to MIME types (e.g., *audio/mpeg* for MP3 or *image/jpeg* for JPEG files), shell wildcards, or regular expressions.

To install Fsniper, download the source code from the project homepage, then unpack the Fsniper archive and run the usual three commands:

```
./configure
make
make install
```

If you prefer to install prebuilt packages, Debian and RPM packages are available.

The command center for Fsniper is the configuration file in the hidden *.config* folder below your home directory. Before you launch Fsniper for the first time, manually create the *~/config/fsniper/config* file. To reflect your environment, you can copy the *example.conf* file from the source code folder and modify it.

The setup file contains the *watch* command, followed by any number of nested blocks enclosed in braces. The

nested blocks associate files with commands. If a file name matches the criteria defined in the block, Fsniper executes the command. For example,

```
watch {
  ~/downloads {
    *.pdf {
      handler = lp %%
    }
  }
}
```

```
}
}
```

tells Fsniper to monitor the *downloads* folder below the home directory. When a PDF file arrives, Fsniper automatically runs the *lp* command to send the file to the printer. (%% stands for the file name with the full path.) For PostScript files, you don't need another line, just

Listing 1: Monitoring Directories with Fsniper

```
# Sample configuration for Fsniper
watch {
  # monitor '~/downloads/print'
  ~/downloads/print {
    # monitor both subdirectories
    recurse = true
    # look for '.pdf' and '.ps' type files
    /\. (pdf|ps)$/ {
      # send files with full path name
      to
      # the standard printer via 'lp':
      handler = lp %%
    }
  }
  # monitor '~/downloads/torrents'
  ~/downloads/torrents {
    # watch for Torrent files (MIME type)
    application/x-bittorrent {
      # Prompt: 'yes' = move file to '~/torrents'
      # 'no' = do nothing
      handler = if zenity --text "Found new Torrent file (%f). Add to Torrent directory?" --question; then mv %% ~/torrents; fi
    }
  }
  ~/downloads/music {
    recurse = true
    # MIME type: all audio file formats
    audio/* {
      # move file to '/home/shares'
      handler = mv %% /home/shares
    }
  }
}
```

use the following regular expression to match both `.pdf` and `.ps` files:

```
/\.(pdf|ps)$/ { ...
```

Regular expressions are enclosed in slashes, and don't forget to place the backslash in front of the period so Fsniper will treat the period as a literal character. The parentheses are for the two file extensions, and the dollar sign denotes the end of line. Fsniper is finicky about the order of the instructions: The program works through them sequentially from the top down.

As mentioned earlier, Fsniper can also process MIME types. The second block of instructions in Listing 1 waits for torrent files. Fsniper calls the Zenity user interface tool to handle these files and sends a Yes/No prompt to the user. If the user clicks *Cancel*, nothing else happens.

Clicking *OK* moves the file to the `~/torrents` folder, where it is picked up by a BitTorrent client and the file transfer begins. The `%f` in the text for the dialog box outputs the file name, unlike `%`,

which outputs the file name and path. To launch Fsniper, press `Alt + F2` to pop up a quick launcher terminal, then type the program name. After modifying the configuration, you need to terminate the tool – `killall fsniper`, for example – and then relaunch.

Fsniper uses the `~/config/fsniper/log` file to store a fairly terse log. For more details, you need to launch Fsniper with the `--verbose` command-line option. Then, you can view the log file at the command line with, say, `tail -f`. The `--log-to-stdout` parameter tells Fsniper to output the log directly to the screen.

Infinite Options

Fsniper can assist with a wide ranges of common tasks. For example, if you share a home network with other users, you can tell Fsniper to move any arriving audio files to the network (Listing 1, last block of instructions), thus sharing new music directly. Or, to transfer files to remote computers, for example, you could even add special rules that call `Rsync` or `Scp`.

Fsniper's *handler* can handle delays and restart unfinished data transfer operations (e.g., caused by an unreachable remote computer).

To restart an unfinished operation, just insert two lines in front of the first (*watch*) block to tell Fsniper how long to wait before retrying and how many retries to attempt:

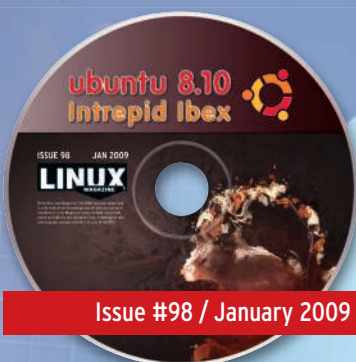
```
delay_time = 300
delay_repeats = 10
```

Firefox downloads also need special attention. The Firefox browser creates temporary files with a `.part` extension, and it does not write the file name until the download has successfully completed. If you check out Fsniper's source code directory, you will find a *contrib* folder with a script that offers a potential workaround for this issue. ■

INFO

[1] Fsniper download: <http://projects.l3ib.org/trac/fsniper>

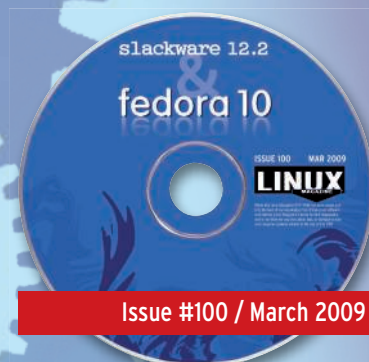
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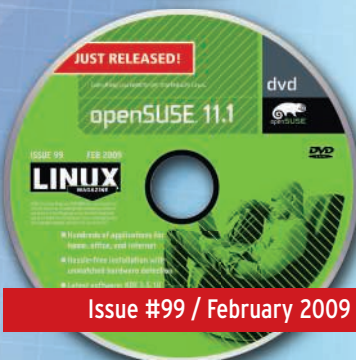
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