

Bulk image resizing and format conversion

All of us use digital cameras and download photos from the cameras, as well as the Internet. When we need to deal with a large number of image files, we can use scripts to easily perform actions on the files in bulk. A regular task we come across with photos is resizing the file. Also, format conversion from one image format to another comes to use (for example, JPEG to PNG conversion). When we download pictures from a camera, the large resolution pictures take a large size. But we may need pictures of lower sizes that are convenient to store and e-mail over the Internet. Hence, we resize it to lower resolutions. This recipe will discuss how to use scripts for image management.

Getting ready

We will use the command `convert` from the **Imagemagick** suite, which contains excellent tools for manipulating images that can work across several image formats and different constructs with rich options. Most of the GNU/Linux distributions don't come with Imagemagick installed by default. You need to manually install the package. For more information, point your web browser to www.imagemagick.org.

How to do it..

In order to convert from one image format to another image format, use:

```
$ convert INPUT_FILE OUTPUT_FILE
```

For example:

```
$ convert file1.png file2.png
```

We can resize an image size to a specified image size either by specifying the scale percentage, or by specifying the width and height of the output image. Resize the image by specifying `WIDTH` or `HEIGHT` as follows:

```
$ convert image.png -resize WIDTHxHEIGHT image.png
```

For example:

```
$ convert image.png -resize 1024x768 image.png
```

It is required to provide either `WIDTH` or `HEIGHT`, so that the other will be automatically calculated and resized so as to preserve the image size ratio:

```
$ convert image.png -resize WIDTHx image.png
```

For example:

```
$ convert image.png -resize 1024x image.png
```

Resize the image by specifying the percentage scale factor as follows:

```
$ convert image.png -resize "50%" image.png
```

Let's see a script for image management:

```
#!/bin/bash
#Filename: image_help.sh
#Description: A script for image management

if [ $# -ne 4 -a $# -ne 6 -a $# -ne 8 ];
then
    echo Incorrect number of arguments
    exit 2
fi

while [ $# -ne 0 ];
do

    case $1 in
        -source) shift; source_dir=$1 ; shift ;;
        -scale) shift; scale=$1 ; shift ;;
        -percent) shift; percent=$1 ; shift ;;
        -dest) shift ; dest_dir=$1 ; shift ;;
        -ext) shift ; ext=$1 ; shift ;;
        *) echo Wrong parameters; exit 2 ;;
    esac;

done

for img in `echo $source_dir/*` ;
do
    source_file=$img
    if [[ -n $ext ]];
    then
        dest_file=${img%.*}.$ext
    else
        dest_file=$img
    fi

    if [[ -n $dest_dir ]];
    then
        dest_file=${dest_file##*/}
    fi
done
```