

How To Create File Patches

Single File

This is how to build a patch file that you then apply on a target system to modify one of its files.

Get original copy

```
cp /pathtofile/myfile.conf /pathtofile/myfile.conf.orig
```

Edit the file manually

Using any editor, manually make changes to the file /pathtofile/myfile.conf as desired.

Capture the difference in a patch

```
diff -u /pathtofile/myfile.conf.orig /pathtofile/myfile.conf >myfile.patch
```

Try the patch

Undo the manual changes you made

```
patch -R -p0 <myfile.patch
```

Redo your changes

```
patch -p0 <myfile.patch
```

Recursive Directory

In this example capture all the changes we make to a tree of pelican-themes into a single patch file.

Duplicate

We start by duplicating the complete tree.

```
cp -r ${HOME}/pelican-themes ${HOME}/pelican-themes.orig
```

TIP

I have a tendency keep my orig copy and reuse it a lot as I modify things. To guard against inadvertently changing something within the orig version without noticing and thereby undermining all subsequent diffs may make, I like to boiler plate the .orig files a bit by write protecting them. This is not necessary but it has served me well.

```
chmod -w --recursive pelican-themes.orig/
```

Create Patch File

Now we make all the changes we want within the pelican-themes directory. Once that is done we create the patch file incorporating all changes.

```
cd ${HOME}/pelican-themes  
diff -Naru ../pelican-themes.orig . > ../pelican-themes.patch
```

Note:

- N --new-file treat absent files as empty
- a --text treat all files as text
- r --recursive recursively compare subdirectories
- u -U --unified[=NUM] Output NUM lines of unified context (default 3)

Undo Changes

```
cd ${HOME}/pelican-themes  
patch -Rs -p0 < ${HOME}/pelican-themes.patch
```

Note:

- Remember that directories created by patch must be removed manually
- R --reverse Assume the patch was created with old and new files swapped
- s --silent be quiet unless error occurs
- pN Strip smallest filepath prefix containing N slashes. 0 means full path.

Apply Patch Changes

```
cd ${HOME}/pelican-themes  
patch -s -p0 < ${HOME}/pelican-themes.patch
```