



Exercise 40.2: Using cpio for Backup

We are going to do essentially the same exercise now, but using **cpio** in place of **tar**. We'll repeat the slightly altered instructions for ease of use.

1. Create a directory called `backup` and in it place a compressed **cpio** archive of all the files under `/usr/include`, with the highest level directory being `include`. You can use any compression method (**gzip**, **bzip2** or **xzip**).
2. List the files in the archive.
3. Create a directory called `restore` and unpack and decompress the archive.
4. Compare the contents with the original directory the archive was made from.

✓ Solution 40.2

1.

```
$ (cd /usr ; find include | cpio -c -o > /home/student/backup/include.cpio)
```

```
82318 blocks
```

or to put it in a compressed form:

```
$ (cd /usr ; find include | cpio -c -o | gzip -c > /home/student/backup/include.cpio.gz)
```

```
82318 blocks
```

```
$ ls -lh include*
```

```
total 64M
-rw-rw-r-- 1 coop coop 41M Nov  3 15:26 include.cpio
-rw-rw-r-- 1 coop coop 6.7M Nov  3 15:28 include.cpio.gz
-rw-rw-r-- 1 coop coop 5.3M Nov  3 14:44 include.tar.bz2
-rw-rw-r-- 1 coop coop 6.8M Nov  3 14:44 include.tar.gz
-rw-rw-r-- 1 coop coop 4.7M Nov  3 14:46 include.tar.xz
```

2.

```
$ cpio -ivt < include.cpio
```

```
drwxr-xr-x 86 root    root          0 Oct 29 07:04 include
-rw-r--r--  1 root    root       42780 Aug 26 12:24 include/unistd.h
-rw-r--r--  1 root    root        957 Aug 26 12:24 include/re_comp.h
-rw-r--r--  1 root    root       22096 Aug 26 12:24 include/regex.h
.....
```

Note the redirection of input; the archive is not an argument. One could also do:

```
$ cd ../restore
$ cat ../backup/include.cpio | cpio -ivt
$ gunzip -c include.cpio.gz | cpio -ivt
```

3.

```
$ rm -rf include
$ cpio -id < ../backup/include.cpio
$ ls -lR include
```

or

```
$ cpio -idv < ../backup/include.cpio

$ diff -qr include /usr/include
```