# 6. Linux CLI - scp

scp and rsync are two methods for transferring files between different systems. You will need to buddy up with someone else or setup 2 linux systems to learn these commands.

## scp

scp stands for secure copy. Remember the cp command from earlier? The scp command allows you to copy a file over a network. There are a few ways of using it. scp always uses this convention:

```
scp "file from here" "to here"
```

Here are some examples. See if you can create and transfer files between two hosts using some of these.

### Copy the file "foobar.txt" from a remote host to the local host

```
:> scp your_username@remotehost:foobar.txt /some/local/directory
```

### Copy the file "foobar.txt" from the local host to a remote host

```
:> scp foobar.txt your_username@remotehost:/some/remote/directory
```

### Copy the directory "foo" from the local host to a remote host's directory "bar"

```
:> scp -r foo your_username@remotehost:/some/remote/directory/bar
```

### Copy the file "foobar.txt" from remote host "pi1" to remote host "pi2"

```
:> scp your_username@pi1:/some/remote/directory/foobar.txt \
your_username@pi2:/some/remote/directory/
```

<-The backslash means "continue the command on the next line"

### Copying the files "foo.txt" and "bar.txt" from the local host to your home directory on the remote host

```
:> scp foo.txt bar.txt your_username@remotehost:~
```

### Copy multiple files from the remote host to your current directory on the local host

```
:> scp your_username@remotehost:/some/remote/directory/\{a,b,c\} …
```

```
:> scp your_username@remotehost:~/\{foo.txt,bar.txt\} …
```

These commands only give you the from part of the command. Construct the from part in place of the elipsis (the …)

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# Extra steps: Improving scp performance

By default scp uses the Triple-DES cipher to encrypt the data being sent. Using the Blowfish cipher has been shown to increase speed. This can be done by using option -c blowfish in the command line.

```
:> scp -c blowfish some_file your_username@remotehost:~
```

It is often suggested that the -C option for compression should also be used to increase speed. The effect of compression, however, will only significantly increase speed if your connection is very slow. Otherwise it may just be adding extra load on the CPU. An example of using blowfish and compression:

```
:> scp -c blowfish -C local_file your_username@remotehost:~
```

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