

Anonymous FTP servers

FTP has been around since the very early days of TCP/IP, ie. the early '60s. It is still one of the most heavily used Internet applications. Here we are interested in setting up an anonymous ftp server. This is a special case of ftp server configuration and perhaps one of the safest. A typical session is

```
% ftp machine.europe.org
Connected to machine.europe.org
220 machine FTP server (UNIX(r) System V Release 4.0) ready.
Name (machine:ngunton) : anonymous
331 Guest login ok, provide email address as password.
Password : ngunton@uwe.ac.uk <this is invisible>
230 User anonymous logged in. Access restrictions apply.
ftp>
ftp> get README
local : README remote :README
200 port command succesful.
150 Opening ASCII mode data connection for README (723 bytes).
226 Transfer complete.
795 bytes received in 0 seconds (0.67 Kbytes/s)
ftp>
ftp> bye
221 Goodbye.
```

1) Create the user account.

Edit the passwd file to include an entry something like

```
ftp:*:500:20:anonymous ftp:/home/ftp:/bin/false
```

The directory will become the top of the tree as far as anonymous logins are concerned. The ftpd will execute the `chroot` command on this directory.

2) create the file structure

Create the file structure shown overleaf. This mimics the main unix file-system. Copy across the bare minimum of commands that are needed and place them in the `bin` subdirectory. Copy a subset of the password file into the `etc` directory. An example is

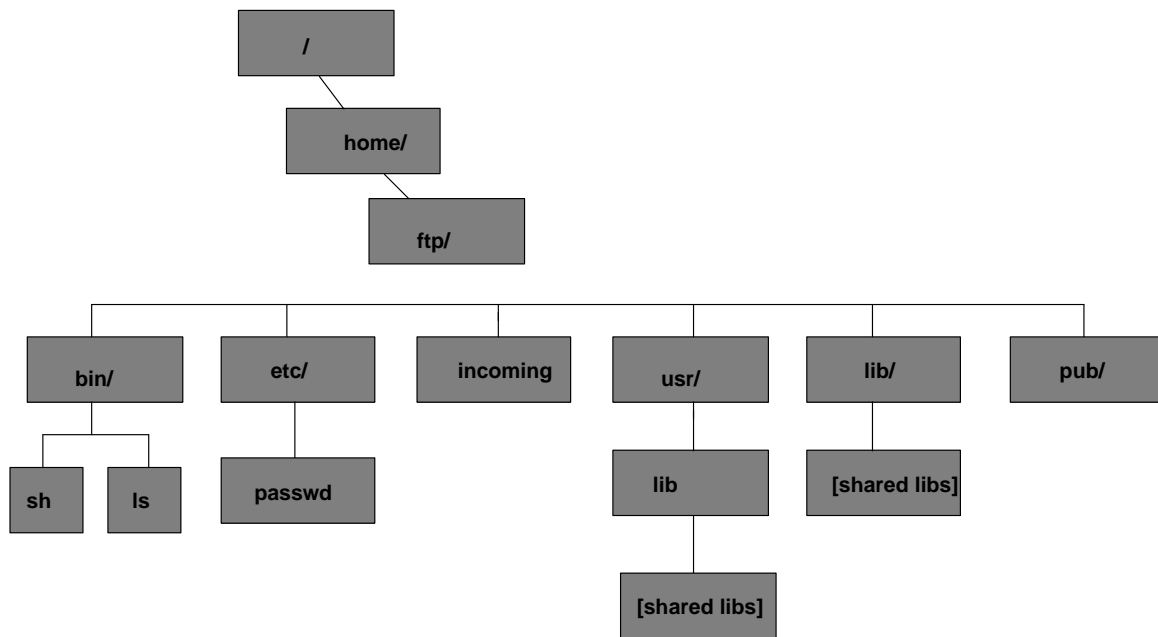
```
root:*:0:0:root:/:
bin:*:1:1:bin:/:
ftp:*:500:20:anonymous ftp:/:
```

You might want to add a `tmp` directory which should be readable and writeable by anyone. If you do this then keep an eye on this directory as it could be used as a repository for improper material. Do

```
mkdir /home/ftp/tmp
chmod 777 /home/ftp/tmp
```

Alternatively use an incoming directory and make it writable only. This prevents visitors from browsing the directory. If a visitor knows the name of a file in the directory, it can still be retrieved.

```
mkdir /home/ftp/incoming
chmod 733 /home/ftp/incoming
```



3) Setting up the libraries

The binaries that have been copied across use dynamically linked libraries. This means that you will have to copy across the libraries needed. You will also need to copy across `ld.so`, the dynamic linker. Do

```
ldd /bin/ls
or
ldd /bin/sh
etc
```

to identify the needed libraries. They must be copied to the equivalent libraries for things to work properly. Another possibility, if you have access to the source code for the commands needed, is to recompile them with static linking.

4) Finishing up.

Make sure you have created a `pub` directory. This is where all publicly available files are to be placed.

Check that all files are owned by `root`. Make sure that `root` is the only one with write access to all except `tmp` and `incoming`. Make sure that the binaries are executable. Then connect as an anonymous guest and retrieve a file!