

Working in Minix

1. How to edit files in minix?

(1) On guest machine:

Minix provides several editors to compile files, vi and mined. Students can get help from manual in minix on how to use them.

```
# man vi      //get help on how to use vi
# vi         //run vi editor
# man mined  //get help on how to use mined
# mined     //run mined editor
```

(2) On host machine:

If not familiar with Minix's editors, students could transfer files back to host machine and edit them under using windows editors, then ftp them back to Minix after update. Host machine need to install a ftp client, such as leapftp or cuteftp. For example, to edit a file /tmp/test in Minix, run leapftp from host machine (windows), connect Minix (supposed Minix IP address is 1921.168.2.2), download file /tmp/test from Minix to windows. After editing it, upload updated file to Minix using leapFtp.

2. How to compile source code?

- Recompile source code in /usr/src/lib, follow steps
update /usr/src/lib/makefile if necessary
cd /usr/src/lib
make install
reboot
cd /usr/src/tools
make hdboot
reboot
- Recompile source code in /usr/src/kernel
cd /usr/src/kernel
make install
cd /usr/src/tools
make hdboot
reboot
- To recompile code in /usr/src/inet, /usr/src/fs and /usr/src/mm, follow the same steps as /usr/src/kernel

- Recompile source code in `/usr/src/commands`, for example, recompile `ping.c`

```
# cd /usr/src/commands/simple
# make ping
# make /usr/bin/ping
/usr/bin/ping will be updated.
```
- Compile a new application file, such as `/usr/tmp/game.c`

```
# cd /usr/tmp
# cc game.c -o game
# chmod +x game
# ./game
```

3. How to recover from crash?

To recompile image file, including kernel, fs, mm and inet, run “make hdbboot” under `/usr/src/tools`. System puts the new-compiled Minix image as `/minix/2.0.4rx` (original 2.0.4, 1st new 2.0.4r0, then 2.0.4r1, and so on) and delete the old one. Before recompiling image file, please make a backup of old image file in case new image doesn’t work after bootup. Follow the steps before recompiling:

```
# cp /minix/2.0.4r0 /minix/2.0.4.bak //if old image file is
// 2.0.4r0, may be 2.0.4r1...

# cd /usr/src/tools
# make hdbboot
# reboot
```

If system cannot boot up, reboot Minix and hit “ESC” during the bootup process, then go into the boot monitor

```
d0p0s0>image=/minix/2.0.4.bak //using old image file
d0p0s0>boot
```

Then we can use the old image file to bootup system.