

A Native Install of eComStation 2.0 to the ASUS EEEPC 4G Surf

This document has been written on a whim that I had one night. I have an Asus eeepc, and have had much enjoyment booting eCs from an SD Card, as per the procedure pioneered by Ed Durrant, and available at Hobbes on

<http://hobbes.nmsu.edu/pub/os2/doc/eeepc-howto-install-ecs-to-sd-eng_v21.zip>.

This whole procedure is based around what Ed has written. It would be a good idea to have that printed on one side, as a reference when and if required.

Of course I still had the original Xandros Install that came with the machine as standard equipment, which worked well in conjunction with the SD Card. I looked at two alternative methods by both Sigurd Fastenrath and Yuri Dario, both of which have the advantage of not having to clone an eCS install from the hard disk of another "donor" computer, but as I had a couple of old battlers gathering dust, I thought I would try a different track. Many of my early attempts simply ran into a brick wall, wherein I was either unable to boot the eeepc without having to restore the original Xandros OS, or be greeted with an "Error 17" screen. But in the end, it has been achieved with a surprising lift in performance, and more to come in which I haven't even tried.

So here we go:

1.0 What you need

- 1.1 ASUS EEEPC PC701 4G (Standard – no added options). ¹
- 1.2 Computer with a Primary Partition available.
- 1.3 SD Card with a working eCs install, as per Ed's method (link in the opening paragraph).
- 1.4 Thumb Drive (aka USB memory key), for OS Transfer, at least 1GiB in size.
- 1.5 A registered copy of eComStation 2.0RC5. ²
- 1.6 DFSee for OS/2 - Version 7 or later – installed on SD Card boot system.
- 1.7 Panorama VESA Drivers with Widescreen Support. ³
- 1.8 Program <<http://hobbes.nmsu.edu/pub/os2/system/usbcfgb7a.zip>>. ⁴
- 1.9 OPTIONAL: USB DVD Drive Only needed if there is an unforeseen act (power failure) and the partitioning of the Eeepc Hard Disk has been interrupted. In that case, you may need to Restore the original Xandros system, as per the EeePC Instruction Book.

1 Other models should work too.

2 Later versions should also work.

3 Panorama is available in the eCS betazone. Wide screen support is at:
<<http://en.ecomstation.ru/projects/panorama/?action=down>>

4 This is required, to make sure that the proper USB configuration is created for the eeepc, after you copy the system to it.

2. Installation to donor computer.

We need to install to a C: drive. If you have a free partition (primary or logical) and LVM installed on the system move the drive letters around so that the free partition can have the letter C (at least temporarily). If you're happy to trash the disk simply create one primary partition which by default will become C:. Perform a default install of eComStation to the computer with the following exceptions:

- 2.1 Format the Drive with the bootable JFS File System.
- 2.2 Select the Panorama Display in 800x600 mode, with “No Monitor Selected” on Page 2 of the properties notebook.
- 2.3 Install USBCFGB7 as per its README instructions..

3.0 Thumb Drive Configuration

Thumb Drives usually come formatted as a FAT32 Large Floppy. This needs to be changed. With the Drive inserted and attached in a computer running eCs (this can be the one created in section 2 above).

- 3.1 Run DFSee for eComStation (DFSOS2).
- 3.2 Utilise the same commands as described by Ed for the formatting of and SD Card, with the following differences:
 - 3.2.1 After “Wipe Current Object” go to Fdisk > Change Status to FDISK.
 - 3.2.2 Then “Wipe Start Of Disk to Zero.”
 - 3.2.3 Definitely Reboot.
- 3.3 Complete preparation of Thumb Drive as described for a Secure Digital card by Ed, with the differences of:
 - 3.3.1 Enable LVM Information.
 - 3.3.2 Assign a High Drive Letter (say M:).
 - 3.3.3 Format to the JFS File System.⁵

⁵ HPFS should also work, but performance will be better, if you use JFS.

4.0 First OS Transfer

- 4.1 Turn off your donor PC and insert the freshly formatted thumb drive. ⁶
- 4.2 Insert the eComStation Install CD and boot from it.
- 4.3 Go to Maintenance Console > Command Prompt.
- 4.4 Copy the whole dormant eCs C: Drive to the Thumb Drive with the following command:

```
d:\os2\xcopy c:\* m:\ /h /o /t /s /e /r /v
```

where:

d: = your eCS Install CD

c: = the OS partition on your PC's harddisk

m: = your Thumb Drive

- 4.5 Eject, remove & store your Thumb Drive.
- 4.6 Close down the donor PC and remove the eComStation Install CD.

5. EEEPC Preparation

NOTE: I think it is important to think of Clauses 5.0 to 10.0 as one operation. I have divided them so as to highlight the required steps to take, but it should all be done in one attempt. Give time for this, and take a deep breath. :-)

- 5.1 Power up the EEEPC. When Factory Logo appears Press <F2> to go into the BIOS.
- 5.2 Go to: > Advanced > OS Installation.
- 5.3 Select START.
- 5.4 Press F10 to Save and Exit.

6.0 EEEPC Boot to SD Card

- 6.1 Insert working eCs SD into Drive Bay on EEEPC (as prepared from Ed's instructions).
- 6.2 Reboot EEEPC. When the ASUS EeePC Logo appears, Press <ESC>. A Boot Manger clone will appear.
- 6.3 Choose the SD Card Option. The eCs Boot Blob should appear.
- 6.4 Allow eCS to fully boot and stabilise.

⁶ Some systems have problems booting, if you have a USB device attached at boot time. If that is the case, insert it after booting.

7.0 Wiping the Hard Disk

- 7.1 Run DFSEE (DFSOS2). You will utilise an almost identical method to what we have used to clear a new SD or Thumb Drive of the Factory Setup. The difference being that it is the EEEPC Hard Disk that will be wiped.
- 7.2 Once the Hard Disk has been completely wiped, and the Start Of The Disk has been wiped to Zero, it's ready for the next step.

8.0 Creating the New Partitions

- 8.1 Now Create new Partition Tables, then Create a Primary Partition.
 - 8.1.1 Create it from the start of free space.
 - 8.1.2 As an OS/2 Native HPFS Partition (Item #2 on the DropDown Box).⁷
 - 8.1.3 Mark as Active.
 - 8.1.4 IBM DFSee Aware.
 - 8.1.5 Assign the driveletter as **C:**.
- 8.2 You have a choice of just having the one (1) Partition of 3.8MiB, or a smaller size if you wish to add Partitions later. For Instance, my Primary C: Partition was sized to 1066MiB.
- 8.3 Do NOT make any further partitons at this point. Leave the balance of the Disk as Free Space. Save your Configuration and Exit DFSee, but do not exit eComStation.

9.0 Formatting and System Transfer

- 9.1 At an eCs Command Prompt, type:

format c: /fs:jfs

- 9.2 Now retrieve the Thumb Drive with the eCs Primary OS which was transferred from your Computer.
- 9.3 After insertion of the Thumb Drive into the EEEPC Bay, issue the following command:

xcopy m:* c:\ /h /o /t /s /e /r /v

- 9.4 When the OS Transfer is successful, go to

d:\os2\install\bootdisk (where d: is the SD card)

and type: **sysinstx c:**

- 9.5 The System Transfer is now complete. Shut Down the EEEPC and remove the SD Card and thumb drive.

⁷ Why not JFS? If you select JFS, it will create a LVM volume, which is not bootable. A HPFS volume will be created as a Compatibility volume, which is bootable. It will be formatted as JFS, in a later step.

10. Reboot the EEEPC to your eCs Hard Drive Installation!

- 10.1 Power up your EEEPC. Let it Boot up to the new OS. Do NOT check any USB Devices; they won't work.
- 10.2 Shutdown.
- 10.3 Power up the EEEPC. When Factory Logo appears Press <F2> to go into the BIOS.
- 10.4 Go to: > Advanced > OS Installation.
- 10.5 Select FINISH.
- 10.6 Select F10 to Save and Exit.
- 10.7 eComStation will boot really quickly now: About 30 seconds. Run usbcfg7 to install / configure usb support. Test your USB Devices. They should work now.
- 10.5 Use LVM to Create an additional Partition, as applicable, then format it, as desired.

So there you have it: eComStation on the Hard Disk. I'm sure there are things here that I just haven't tried like:

Creating an eCs Primary Installation using Virtual PC or Svista. ⁸

Using Boot Manager for another OS....say another flavour of Linux or BSD. ⁹

Enabling Sound – That's been done.

Enabling LAN and WLAN – That's been done. Links to these procedures are available at:
<<http://forum.eeeuser.com/viewtopic.php?id=5213&p=4>>

Last but not Least, my Thanks. To Ed and the Team, who tied the Original Non-Destructive Install together. To Doug Bissett, who gave me the inspiration to try JFS, and to everyone in the eCs Community, and elsewhere who has given me the confidence to see this through. Thank You All.

Nick Lysaght

⁸ VirtualBox should also work, after they fix the eCS install problem.

⁹ It may be best to avoid multiple systems, because of the limited disk space.