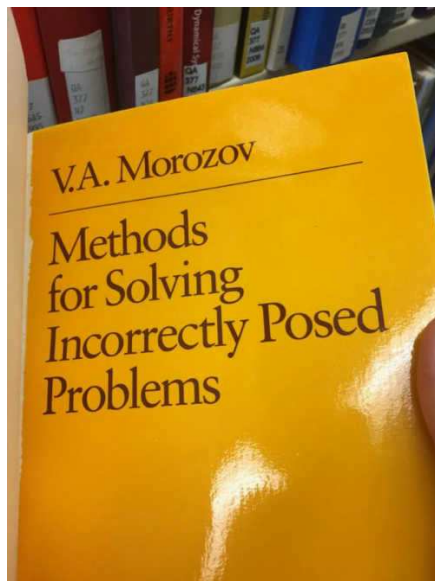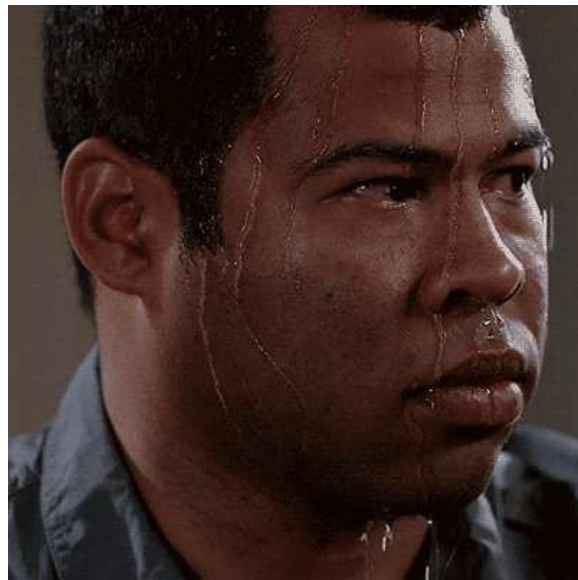# FQA 9 – Troubleshooting

9.1 – First

- STATE YOUR ASSUMPTIONS.

- `cat /etc/os-release` to verify you are not, in fact, running Ubuntu Linux with a Plan 9 theme.

- Are you running drawterm?

- Verify your OpenBSD configuration.

- Are you using the `qwerty` keyboard layout?

- Before reporting a bug, try the latest ISO image.

- MAKE SENSE.

- When all else fails, see: *FQA 2.4 – Reporting Bugs*

9.2 – Booting

9.2.1 – Boot parameters

- Immediately after the BIOS screen, hit any key until you see the > prompt. From there, values from `plan9.ini` may be temporarily added or changed. Read: `9boot(8)`

- Boot parameters beginning with a * are interpreted by the kernel. All other parameters are passed as environment variables to the boot process.

- Adding or changing a parameter: `param=value`

- Removing a parameter: `clear param=`

- When finished, type `boot` to resume booting.

9.2.2 – Break into a shell

At the `[bootargs]` prompt, type `!rc` and hit enter to break into a shell. Type `exit` to return to the `[bootargs]` prompt.

9.2.3 – Editing plan9.ini

- It is not possible to edit plan9.ini stored on the ISO, but parameters can be changed temporarily before booting. See above.

- On a harddrive installation, `plan9.ini` is stored with the bootloader and the kernel in a small FAT partition called `9fat` at the beginning of the `plan9` partition. The `9fat` can be mounted by executing `9fs 9fat` from the livecd or the installed system. The file `/n/9fat/plan9.ini` can then be edited with a text editor like `acme(1)`, `sam(1)` or `ed(1)`.

- If your change to `plan9.ini` or the `9fat` made the system unbootable, it is always possible to manually override parameters on the > prompt (see above) or start the system from the livecd and pick your installed `cwfs` or `hjfs` partition on the `[bootargs]` prompt. Example: `local!/dev/sdC0/fscache`

9.2.4 – Boot media not recognized

- Break into a shell, then type `grep -n '^01' '#$/pci/'*ctl` to get the pci vid/did of the installed disk controllers. then look in the sd drivers to see if the controller is already recognized.

- Sometimes, there is a problem with the drive, not the controller. `cat /dev/sd*/ctl` to get the status of the individual drives.

- Try different BIOS settings like AHCI/IDE mode.

- Try the USB troubleshooting steps (see below). Sometimes USB problems prevent unrelated devices from working properly.

9.2.5 – I moved my hard drive between ports

If your file system is `cwfs(4)`:

- Let's assume it went from sdE0 to sdE1.

- At the bootargs prompt:

```
local!/dev/sdE1/fscache -c
filsys main c(/dev/sdE1/fscache)(/dev/sdE1/fsworm)
filsys dump o
filsys other /dev/sdE1/other
end
```

[Continued on next page]

9.3 – Graphics

9.3.1 – Rio fails to start

See the discussion of graphics in *FQA 4 – 9front Installation Guide.* When you find a working mode, update your `plan9.ini`.

9.3.2 – VESA BIOS does not contain a valid mode

The standard solution is to have the customer send the computer back to the manufacturer, who reflashes the EEPROM with the correct information and return the computer to the customer.

9.4 – Networking

9.4.1 – Networking is not working

Read: *FQA 6.2.8 – Verifying network settings*

9.4.2 – Cannot resolve domain names

If `ndb/dns` is running but you are still unable to resolve domains, you can try adding a DNS server directly to `/net/ndb`.

Read: *FQA 6.2.5 – DNS Resolution*

9.4.3 – /mnt/web/clone does not exist

Programs that require `webfs(4)` to be running require `webfs(4)` to be running.

Read: `hget(1)`, `mothra(1)`

9.4.4 – PCMCIA WiFi stopped working after reboot

Do `fshalt` and power down completely instead of just rebooting with `fshalt -r`.

9.5 – USB

9.5.1 – Devices not recognized or not working

- Break into a shell, or simply type in a `rio` window: `cat /dev/usbevent` and try plugging in a USB device. If the devices where detected, some output should appear on screen. This doesnt mean we have a working driver for it but verifies that the USB controller and HUB driver recognized the device.

- Dump USB controller status to the console with `echo dump >/dev/usb/ctl` after that, you might recover the output from `/dev/kmesg` or run `cat /dev/kprint` in a separate rio window to not spill it all over the screen. Check the `nintr` and `tdintr` counters to see if they are all zero. If thats the case, then this is might be a interrupt routing problem sometimes caused by broken/incomplete BIOS MP tables. See below.

- If USB keyboard is the only option, try to enable PS2 emulation in the BIOS and disable kernel usb support. See below.

- if the machine employs a USB3.0 (xHCI) controller, try to disable USB3.0 support in BIOS as the driver may not support your chipset yet.

9.5.2 – System freezes after showing memory sizes

- The boot parameter `*acpi=0` will disable ACPI (probably needed for 386 machines).

- Try the boot parameter `*nomp=` to disable multiprocessor mode.

- Try the boot parameter `*nousbehci=` (This disables USB 2.0.)

- Try the boot parameter `*nousbuhci=`

- Try the boot parameter `*nousbohci=`

- Try the boot parameter `*nousbprobe=` (This disables USB completely)

- Try the boot parameter `*noetherprobe=` (This disables Ethernet)

9.6 – auth This space left intentionally blank.

9.99999999999999999999999999999999999999 – GIVE UP

Give up now.

Go away.

Every joke is a tiny revolution
— George Orwell