Handling Terminals

A terminal or virtual terminal defines an interactive session with a user.

Telnet and ssh clients emulate terminals, a bad client emulation or a client/server emulation mismatch will cause issues with the display on the screen.

Linux allows terminals to be connected to serial ports.

There are many different types of terminals. How you interact with the terminal depends on its type. Linux needs to know which type of terminal you are using.

You still need to know how to talk to the terminal.

`/etc/termcap`

Each type has a name. Each name has associated capabilities.

```
d0|vt100|vt100-am|vt100am|dec vt100:\
  :do=^J:co#80:li#24:cl=\E[;H\E[2J:sf=2*\ED:\
  :le=^H:bs:am:cm=5\E[%i%d;%dH:nd=2\E[C:up=2\E[A:\
  :ce=\E[K:cd=\E[J:so=2\E[7m:se=2\E[m:\
  :us=\E[4m:ue=\E[m:md=2\E[1m:mr=2\E[7m:\
  :mb=\E[5m:me=\E[m:is=\E[1;24r:\
  :rf=/usr/lib/tabset/vt100:\
  :rs=\E>\E[?3l\E[?4l\E[?5l\E[?7h\E[?8h:\
  :ks=\E[?1h\E=:ke=\E[?1l\E>:ku=\EOA:kd=\EOB:\
  :kr=\EOC:kl=\EOD:kb=^H:ho=\E[H:k1=\EOP:k2=\EOQ:\
  :k3=\EOR:k4=\EOS:pt:sr=2*\EM:vt#3:xn:\
  :sc=\E7:rc=\E8:cs=\E[%i%d;%dr:\
  :tc=vt-generic:
```

Example: for the `vt100` the down arrow key (`kd`) sends an escape followed by an `O` followed by an `B`

special: `tc`–include another entry here; values before the `tc` are overrides.

Adjusting your terminal settings.

`stty:` – sets options for the terminal

`stty erase ^H` – control H becomes the backspace key
`stty kill ^U` – control U becomes line erase
`stty intr ^C` – control C sends an interrupt signal to the foreground program.

For special keys the following can be used
`stty erase ^V^H` – hit the backspace key where it says ^H

`stty --all` – examine your tty settings

Key processing:
Many keystrokes are not delivered to the program;
for example, control-C interrupts the program.

`stty` can be used to change what is delivered
There are system calls that allow a program can disable
the special meaning of keys.

Virtual Consoles

6 virtual consoles available.

Access with `alt-F1 .. alt-F6`
Called `/dev/tty1 .. /dev/tty6`
w shows tty as `v01 .. v06`

You can switch back and forth.

A virtual console has an `agetty` when waiting for a login.