LHC COMPUTING GRID

NO VIDEO CARD LCFGNG CLIENT INSTALLATION

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Abstract: *How to install a computer with Lcfg if ther is no video card on the target machine.*

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1. Introduction

1.1. Objectives of this Document

Help administrator who use lcfgng with clients without Video card.

Part I
What to do

The problem is very simple in the installation process video card is need at two step. The first one is the init file of the minimal system used by Lcfg to install the system, it use directly the video device, and the second is the grub installation software which is looking for a screen (actually i do not know why).

Part II
How to do !

To solve the first problem i had create a init script where :

```
[ "$CONSOLE" ] || CONSOLE="/dev/console"

if [ "`/sbin/consoletype`" = "vt" ] ; then
   DBGTERM=/dev/tty2
else
   DBGTERM=$CONSOLE
fi
```

is replace by the next lines.(It seem that tty2 is the screen in single user mode.)

```
[ "$CONSOLE" ] || CONSOLE="/dev/console"

#if [ "`/sbin/consoletype`" = "vt" ] ; then
   DBGTERM=/dev/null
#else
#   DBGTERM=$CONSOLE
#fi
```

The next things to do is to deconfiguring GRUB in the profiles you want to use. If you are working with the release configuration files you will find everything in redhat73-cfg.h file. The boot loader will be PXE. You have to copy on the lcfgng server in /tftpboot/kernel/ folder the kernel used on clients. Pxe will give this kernel to the lcfgng client and say to them to use root locally. At the end of the installation process lcfgng client change the pxe configuration from a network boot to an hard disk boot, this change is made with a cgi ack.cgi. In our case we need an other cgi to change the configuration this cgi is call acknovid.cgi and must be copy in /var/obj/conf/server/web/install/. The right of this cgi must be the same as the right of ack.cgi. You can copy acknovid.cgi from the next lines.

```
[root@lxshare0402 source]# more /var/obj/conf/server/web/install/acknovid.cgi
#!/usr/bin/perl
```

```
$pxelinux_dir="/tftpboot/pxelinux.cfg";

# Configuration file to boot from HD
$boothd = "boot-pxe-hd.cfg";

print "Content-type: text/plain\n\n";

$point_address = $ENV{'REMOTE_ADDR'};
@address = split(/\./, $point_address);
print "$point_address is now allowed to boot from HD\n";
$hexaddr = sprintf ("%X%X%X%X",$address[0], $address[1], $address[2], $address[3]);

system ("cd $pxelinux_dir ; ln -fs $boothd $hexaddr");
```

The file boot-pxe-hd.cfg is the configuration of the boot loader when the system will be installed this file must be copy in /tftpboot/pxelinux.cfg. boot-pxe-hd.cfg :

```
default linux

label linux
  kernel kernel/vmlinuz-2.4.20-18.7smp
  ipappend 1
  append root=/dev/hda2
```

Now th last thing to do is to modify a few the boot loader for the installation, i had call this file lcfg-install-nointeract-73-novid.cfg. You can copy the file from here :

```
default linux

label linux
  kernel kernel/kernelboot-2.4.18-18.7.x.cernsmp
  ipappend 1
  append root=/dev/nfs nfsroot=/opt/local/linux/nginstallroot/7.3\
  init=/etc/rc_install_novid nointeract=yes\
  pxe_http_ack=/install/acknovid.cgi
```

So we have finish we can install without video card.