

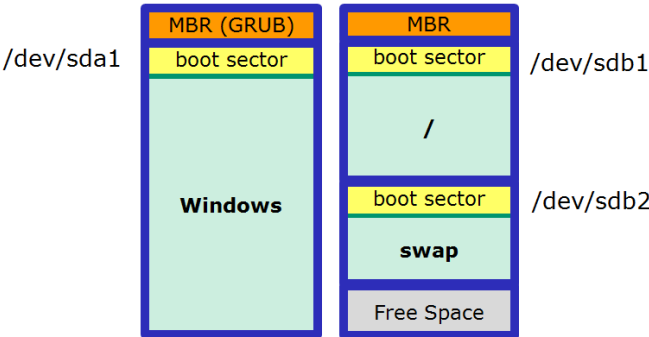
Reference Implementation: Windows XP and CentOS

This is a reference implementation of installing Windows XP on the first IDE drive followed by installing CentOS on the second IDE drive. GRUB boot code is in the MBR of the first drive.

Supplies:

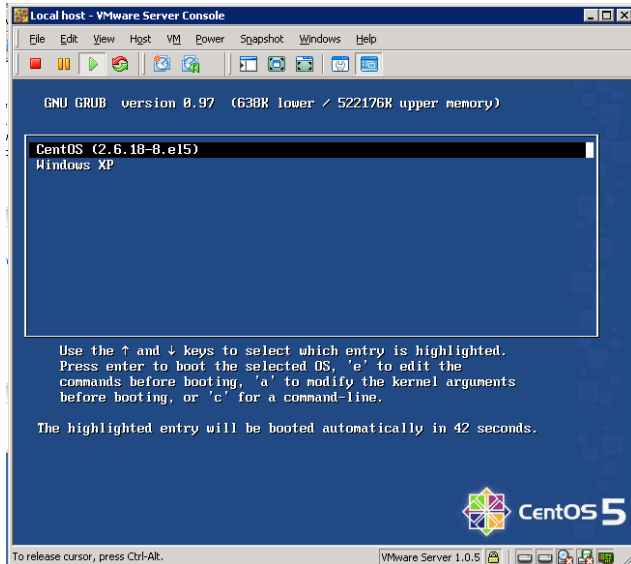
- CentOS 5 ISO image or CD
<http://iso.linuxquestions.org/>
- Windows XP ISO image or CD
- VMWare Server 1.05
<http://www.vmware.com/products/server/>

System Overview

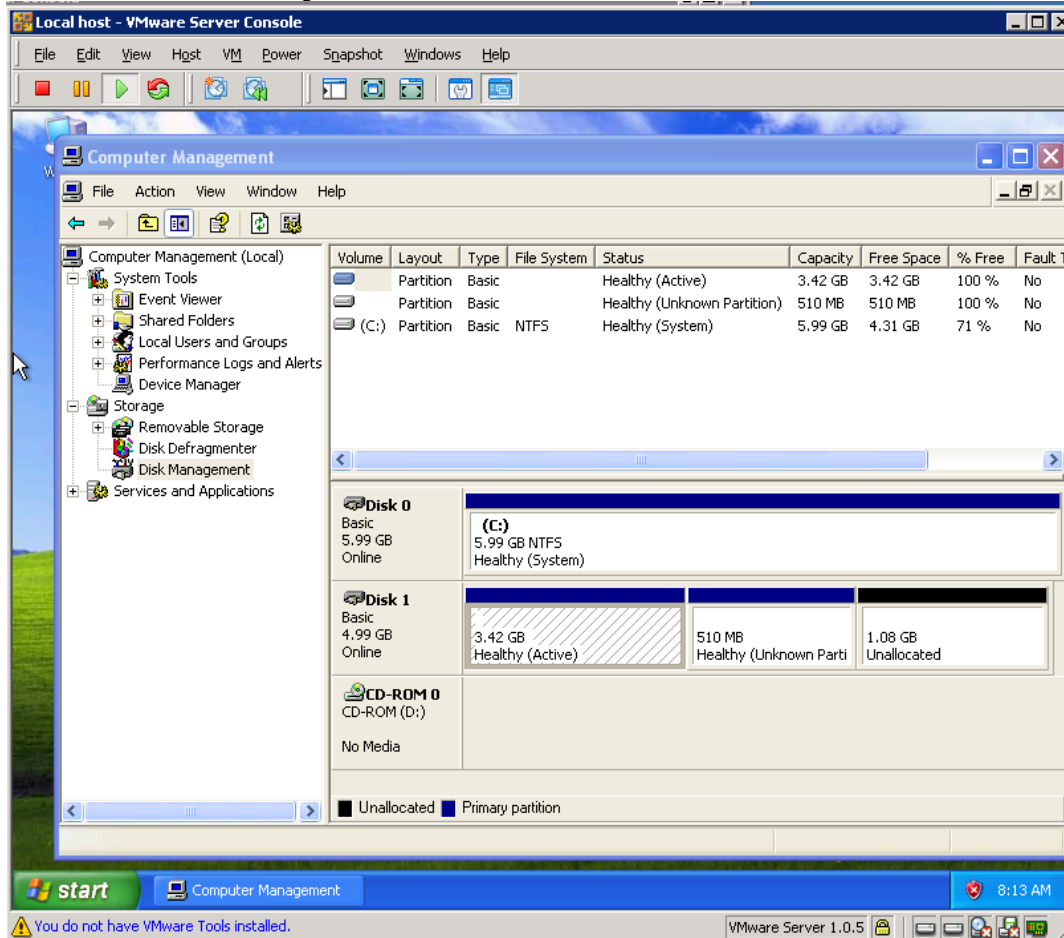


System Details

GRUB Boot Menu



Partitions as seen by Windows



Partitions as seen by Linux

```
[root@dhcpc0 ~]# fdisk -l
```

```
Disk /dev/hda: 6442 MB, 6442450944 bytes
255 heads, 63 sectors/track, 783 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes
```

Device	Boot	Start	End	Blocks	Id	System
/dev/hda1	*	1	782	6281383+	7	HPFS/NTFS

```
Disk /dev/hdb: 5368 MB, 5368709120 bytes
255 heads, 63 sectors/track, 652 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes
```

Device	Boot	Start	End	Blocks	Id	System
/dev/hdb1	*	1	446	3582463+	83	Linux
/dev/hdb2		447	511	522112+	82	Linux swap / Solaris

```
[root@dhcpc0 ~]#
```

GRUB Configuration

```
[root@dhcpc0 ~]# cat /boot/grub/grub.conf
# grub.conf generated by anaconda
#
# Note that you do not have to rerun grub after making changes to this file
# NOTICE: You do not have a /boot partition. This means that
#           all kernel and initrd paths are relative to /, eg.
#           root (hd1,0)
#           kernel /boot/vmlinuz-version ro root=/dev/hdb1
#           initrd /boot/initrd-version.img
#boot=/dev/hda
default=0
timeout=50
splashimage=(hd1,0)/boot/grub/splash.xpm.gz
title CentOS (2.6.18-8.el5)
    root (hd1,0)
    kernel /boot/vmlinuz-2.6.18-8.el5 ro root=LABEL=/ rhgb quiet
    initrd /boot/initrd-2.6.18-8.el5.img
title Windows XP
    rootnoverify (hd0,0)
    chainloader +1
[root@dhcpc0 ~]#
```

Mapping between LABEL=/ and Actual Partition

```
[root@dhcpc0 ~]# tune2fs -l /dev/hdb1 | grep volume
Filesystem volume name: /
[root@dhcpc0 ~]#
```

Mounts Points

```
[root@dhcppc0 ~]# cat /etc/fstab
LABEL=/ / ext3 defaults 1 1
devpts /dev/pts devpts gid=5,mode=620 0 0
tmpfs /dev/shm tmpfs defaults 0 0
proc /proc proc defaults 0 0
sysfs /sys sysfs defaults 0 0
LABEL=SWAP-hdb2 swap swap defaults 0 0
[root@dhcppc0 ~]#
```

```
[root@dhcppc0 ~]# mount
/dev/hdb1 on / type ext3 (rw)
proc on /proc type proc (rw)
sysfs on /sys type sysfs (rw)
devpts on /dev/pts type devpts (rw,gid=5,mode=620)
tmpfs on /dev/shm type tmpfs (rw)
none on /proc/sys/fs/binfmt_misc type binfmt_misc (rw)
sunrpc on /var/lib/nfs/rpc_pipefs type rpc_pipefs (rw)
[root@dhcppc0 ~]#
```

MBR Boot Code (GRUB) on first drive

```
[root@dhcppc0 ~]# xxd -l 512 /dev/hda
0000000: eb48 90d0 bc00 7cfb 5007 501f fcbe 1b7c .H...|.P.P....|
0000010: bf1b 0650 57b9 e501 f3a4 cbbd be07 b104 ...PW.....
0000020: 386e 007c 0975 1383 c510 e2f4 cd18 8bf5 8n.|.u.....
0000030: 83c6 1049 7419 382c 74f6 a0b5 07b4 0302 ...It.8,t.....
0000040: 8100 0080 9f64 2900 0008 fa90 90f6 c280 ....d).....
0000050: 7502 b280 ea59 7c00 0031 c08e d88e d0bc u....Y|..1.....
0000060: 0020 fba0 407c 3cff 7402 88c2 52be 7f7d . .@|<.t...R..}
0000070: e834 01f6 c280 7454 b441 bbaa 55cd 135a .4....tT.A..U..Z
0000080: 5272 4981 fb55 aa75 43a0 417c 84c0 7505 RrI..U.uC.A|.u.
0000090: 83e1 0174 3766 8b4c 10be 057c c644 ff01 ...t7f.L...|.D..
00000a0: 668b 1e44 7cc7 0410 00c7 4402 0100 6689 f..D|....D...f.
00000b0: 5c08 c744 0600 7066 31c0 8944 0466 8944 \..D..pf1..D.f.D
00000c0: 0cb4 42cd 1372 05bb 0070 eb7d b408 cd13 ..B..r...p.}....
00000d0: 730a f6c2 800f 84ea 00e9 8d00 be05 7cc6 s.....|...
00000e0: 44ff 0066 31c0 88f0 4066 8944 0431 d288 D..f1...@f.D.1..
00000f0: cac1 e202 88e8 88f4 4089 4408 31c0 88d0 .....@.D.1...
0000100: c0e8 0266 8904 66a1 447c 6631 d266 f734 ...f..f.D|f1.f.4
0000110: 8854 0a66 31d2 66f7 7404 8854 0b89 440c .T.f1.f.t..T..D.
0000120: 3b44 087d 3c8a 540d c0e2 068a 4c0a fec1 ;D.}<.T.....L...
0000130: 08d1 8a6c 0c5a 8a74 0bbb 0070 8ec3 31db ...l.Z.t...p..l.
0000140: b801 02cd 1372 2a8c c38e 0648 7c60 1eb9 ....r*....H|`..
0000150: 0001 8edb 31f6 31ff fcf3 a51f 61ff 2642 ....1.1.....a.&B
0000160: 7cbe 857d e840 00eb 0ebe 8a7d e838 00eb |..}.@.....}.8..
0000170: 06be 947d e830 00be 997d e82a 00eb fe47 ...}.0...}.*...G
0000180: 5255 4220 0047 656f 6d00 4861 7264 2044 RUB .Geom.Hard D
0000190: 6973 6b00 5265 6164 0020 4572 726f 7200 isk.Read. Error.
00001a0: bb01 00b4 0ecd 10ac 3c00 75f4 c300 0000 .....<.u.....
00001b0: 0000 0000 0000 0000 9ca7 9ca7 0000 8001 .....
00001c0: 0100 07fe ff0d 3f00 0000 4fb1 bf00 0000 .....?...O.....
00001d0: 0000 0000 0000 0000 0000 0000 0000 0000 .....
00001e0: 0000 0000 0000 0000 0000 0000 0000 0000 .....
00001f0: 0000 0000 0000 0000 0000 0000 0000 55aa .....U.
[root@dhcppc0 ~]#
```