

Project1 Report

Assignment Project1 report:

//I finish this report independently. But I cannot run the command about hdparm.

//I still have problem about install some parts because my virtual machine cannot connect to the official webpage of CentOS to do the install operation.

processor: 0

vendor_id : GenuineIntel

cpu family : 6

model : 158

model name : Intel(R) Core(TM) i7-7700HQ CPU @ 2.80GHz

stepping : 9

cpu MHz : 2808.002

cache size : 6144 KB

physical id : 0

siblings : 1

core id : 0

cpu cores : 1

apicid : 0

initial apicid : 0

fpu : yes

fpu_exception : yes

cpuid level : 22

wp : yes

flags : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush

mmx fxsr sse sse2 syscall nx rdtscp lm constant_tsc rep_good nopl xtopology nonstop_tsc pn

pclmulqdq monitor ssse3 cx16 sse4_1 sse4_2 x2apic movbe popcnt aes xsave avx rdrand

hypervisor lahf_lm abm 3dnowprefetch avx2 rdseed clflushopt

bogomips: 5616.00

clflush size : 64

cache_alignment : 64

address sizes : 39 bits physical, 48 bits virtual

power management:

MemTotal: 10075032 kB

MemFree: 8742272 kB

MemAvailable: 9250760 kB

Buffers: 4180 kB

Cached: 722440 kB

SwapCached: 0 kB

Active: 562968 kB

Inactive: 537840 kB

Active(anon): 374884 kB

Inactive(anon): 13660 kB

Active(file): 188084 kB
Inactive(file): 524180 kB
Unevictable: 0 kB
Mlocked: 0 kB
SwapTotal: 839676 kB
SwapFree: 839676 kB
Dirty: 0 kB
Writeback: 0 kB
AnonPages: 374232 kB
Mapped: 124852 kB
Shmem: 14356 kB
Slab: 85664 kB
SReclaimable: 47572 kB
SUnreclaim: 38092 kB
KernelStack: 4768 kB
PageTables: 26472 kB
NFS_Unstable: 0 kB
Bounce: 0 kB
WritebackTmp: 0 kB
CommitLimit: 5877192 kB
Committed_AS: 1980124 kB
VmallocTotal: 34359738367 kB
VmallocUsed: 31552 kB
VmallocChunk: 34359704120 kB
HardwareCorrupted: 0 kB
AnonHugePages: 77824 kB
HugePages_Total: 0
HugePages_Free: 0
HugePages_Rsvd: 0
HugePages_Surp: 0
Hugepagesize: 2048 kB
DirectMap4k: 126912 kB
DirectMap2M: 10358784 kB

00:00.0 Host bridge: Intel Corporation 440FX - 82441FX PMC [Natoma] (rev 02)

00:01.0 ISA bridge: Intel Corporation 82371SB PIIX3 ISA [Natoma/Triton II]

00:01.1 IDE interface: Intel Corporation 82371AB/EB/MB PIIX4 IDE (rev 01)

00:02.0 VGA compatible controller: InnoTek Systemberatung GmbH VirtualBox Graphics Adapter

00:03.0 Ethernet controller: Intel Corporation 82540EM Gigabit Ethernet Controller (rev 02)

00:04.0 System peripheral: InnoTek Systemberatung GmbH VirtualBox Guest Service

00:05.0 Multimedia audio controller: Intel Corporation 82801AA AC'97 Audio Controller (rev 01)

00:06.0 USB controller: Apple Inc. KeyLargo/Intrepid USB

00:07.0 Bridge: Intel Corporation 82371AB/EB/MB PIIX4 ACPI (rev 08)

Settings for eth0:

No data available

Settings for enp0s3:

Supported ports: [TP]

Supported link modes: 10baseT/Half 10baseT/Full
100baseT/Half 100baseT/Full
1000baseT/Full

Supported pause frame use: No

Supports auto-negotiation: Yes

Advertised link modes: 10baseT/Half 10baseT/Full
100baseT/Half 100baseT/Full
1000baseT/Full

Advertised pause frame use: No

Advertised auto-negotiation: Yes

Speed: 1000Mb/s

Duplex: Full

Port: Twisted Pair

PHYAD: 0

Transceiver: internal

Auto-negotiation: on

MDI-X: off (auto)

Supports Wake-on: umbg

Wake-on: d

Current message level: 0x00000007 (7)

drv probe link

Link detected: yes

enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500

inet 10.0.2.15 netmask 255.255.255.0 broadcast 10.0.2.255

inet6 fe80::8045:1ca:7832:903f prefixlen 64 scopeid 0x20<link>

ether 08:00:27:79:3f:23 txqueuelen 1000 (Ethernet)

RX packets 14 bytes 1900 (1.8 KiB)

RX errors 0 dropped 0 overruns 0 frame 0

TX packets 229 bytes 20130 (19.6 KiB)

TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

CPU0

0:	131	IO-APIC-edge	timer
1:	1586	IO-APIC-edge	i8042
8:	0	IO-APIC-edge	rtc0
9:	0	IO-APIC-fasteoi	acpi
12:	155	IO-APIC-edge	i8042
14:	15242	IO-APIC-edge	ata_piix
15:	1281	IO-APIC-edge	ata_piix
19:	838	IO-APIC-fasteoi	enp0s3
21:	1589	IO-APIC-fasteoi	snd_intel8x0
22:	3170	IO-APIC-fasteoi	ohci_hcd:usb1

```

NMI:      0   Non-maskable interrupts
LOC:    137059 Local timer interrupts
SPU:      0   Spurious interrupts
PMI:      0   Performance monitoring interrupts
IWI:     3942  IRQ work interrupts
RTR:      0   APIC ICR read retries
RES:      0   Rescheduling interrupts
CAL:      0   Function call interrupts
TLB:      0   TLB shutdowns
TRM:      0   Thermal event interrupts
THR:      0   Threshold APIC interrupts
DFR:      0   Deferred Error APIC interrupts
MCE:      0   Machine check exceptions
MCP:      4   Machine check polls
ERR:      0
MIS:      0
PIN:      0   Posted-interrupt notification event
PIW:      0   Posted-interrupt wakeup event

```

文件系统	容量	已用	可用	已用%	挂载点
/dev/mapper/centos-root	6.2G	4.6G	1.7G	74%	/
devtmpfs	4.8G	0	4.8G	0%	/dev
tmpfs	4.9G	0	4.9G	0%	/dev/shm
tmpfs	4.9G	8.7M	4.8G	1%	/run
tmpfs	4.9G	0	4.9G	0%	/sys/fs/cgroup
/dev/sda1	1014M	176M	839M	18%	/boot
tmpfs	984M	48K	984M	1%	/run/user/0

(gdb) r

Starting program: /root/simple

Breakpoint 1, main () at simple.c:4

```
4      double a[]={1,2,3,4,5,6,7,8,9,10};
```

Missing separate debuginfos, use: debuginfo-install glibc-2.17-196.el7.x86_64

(gdb) r

The program being debugged has been started already.

Start it from the beginning? (y or n) y

Starting program: /root/simple

Breakpoint 1, main () at simple.c:4

```
4      double a[]={1,2,3,4,5,6,7,8,9,10};
```

(gdb) r >> test.txt

The program being debugged has been started already.

Start it from the beginning? (y or n) y

Starting program: /root/simple >> test.txt

Breakpoint 1, main () at simple.c:4

```
4          double a[]={1,2,3,4,5,6,7,8,9,10};
```

(gdb) n

```
5          double sum=0;
```

(gdb) n >> test.txt

A syntax error in expression, near `>> test.txt'.

(gdb) s

```
6          int i=0;
```

(gdb) c

Continuing.

Breakpoint 2, 0x00007ffff7aff6b0 in sqrt () from /lib64/libm.so.6

(gdb) ^CQuit

(gdb)

Source Program

```
#include<stdio.h>
```

```
#include<math.h>
```

```
int main(){
    double a[]={1,2,3,4,5,6,7,8,9,10};
    double sum=0;
    for(int i=0;i<10;i++){
        sum+=sqrt(a[i]);
    }
    double avg=sum/10;
    return avg;
}
```