Determining Hardware Properties

Disk performance

Use `dd` to write bytes to disk:

```
$ sync; sudo time bash -c "(dd if=/dev/zero of=tmp.dat bs=8k count=500000; sync)"
```

500000+0 records in
500000+0 records out
4096000000 bytes (4.1 GB) copied, 34.3706 s, 119 MB/s

Network performance

Use `netcat` to transfer a 4GB file from one VM to another VM:

On the client, run netcat listener:

```
$ nc -l 1234 > tmp.dat
```

On the server, send a 4GB file to client:

```
$ sudo time bash -c "(nc -w 3 server.host.name 1234 < tmp.dat)"
```

```
real 2m56.656s
user 0m1.612s
sys 0m15.088s
```

the throughput was 4000mb/176sec = 22.73 MB/s

CPU

Linux

CPU info is in the virtual file `/proc/cpuinfo`:

```
$ cat /proc/cpuinfo
```

```
processor : 0
vendor_id : GenuineIntel
cpu family : 6
model : 45
model name : Intel(R) Xeon(R) CPU E5-2650 0 @ 2.00GHz
stepping : 7
microcode : 0x70d
cpu MHz : 1795.672
cache size : 20480 KB
physical id : 1
siblings : 2
core id : 2
cpu cores : 1
apicid : 36
initial apicid : 36
fpu : yes
fpu_exception : yes
cpuid level : 13
wp : yes
flags : fpu de tsc msr pae cx8 sep cmov pat clflush mmx fxsr sse sse2 ss ht syscall nx lm constant_tsc rep_good
nopl nonstop_tsc pni pclmulqdq ssse3 cx16 pcid sse4_1 sse4_2 x2apic popcnt tsc_deadline_timer aes hypervisor
lahf_lm arat epb xsaveopt pln pts dtherm
bogomips : 3591.34
clflush size : 64
cache_alignment : 64
address sizes : 46 bits physical, 48 bits virtual
power management:
processor : 1
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clflush size : 64
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power management:
```

Memory

```
$ free

       total          used    free shared buffers  cached
Mem: 8014548       6649104 1365444      0  999756 3663824
-/+ buffers/cache: 1985524 6029024
Swap: 262136         27172  234964
```

MacOSX

List CPU info with:

```
$ system_profiler SPHardwareDataType
```

Hardware:

Hardware Overview:

Model Name: MacBook Air
Model Identifier: MacBookAir6,2
Processor Name: Intel Core i5
Processor Speed: 1.3 GHz
Number of Processors: 1
Total Number of Cores: 2
L2 Cache (per Core): 256 KB
L3 Cache: 3 MB
Memory: 8 GB
Boot ROM Version: MBA61.0099.B04
SMC Version (system): 2.13f7