

Cloud Computing Assignment: Virtualization

Terminal Commands

```
root@ccoew:/home/ccoew# virt-manager
root@ccoew:/home/ccoew#
```

```
1)virsh list
```

```
root@ccoew:/home/ccoew# virsh list
  Id      Name                                  State
-----
  1       generic-4                             running
```

```
2)virsh nodeinfo
```

```
root@ccoew:/home/ccoew# virsh nodeinfo
```

```
CPU model:      x86_64
CPU(s):         4
CPU frequency:  1814 MHz
CPU socket(s):  1
Core(s) per socket: 2
Thread(s) per core: 2
NUMA cell(s):   1
Memory size:    8043272 KiB
```

```
root@ccoew:/home/ccoew# virsh sysinfo
```

```
<sysinfo type='smbios'>
  <bios>
    <entry name='vendor'>American Megatrends Inc.</entry>
    <entry name='version'>0505</entry>
    <entry name='date'>01/29/2016</entry>
    <entry name='release'>5.11</entry>
  </bios>
  <system>
    <entry name='manufacturer'>System manufacturer</entry>
    <entry name='product'>System Product Name</entry>
    <entry name='version'>System Version</entry>
    <entry name='serial'>System Serial Number</entry>
    <entry name='uuid'>C48955D6-9447-8102-50AF-D017C29ABA55</entry>
    <entry name='sku'>SKU</entry>
    <entry name='family'>To be filled by O.E.M.</entry>
  </system>
  <baseBoard>
    <entry name='manufacturer'>ASUSTeK COMPUTER INC.</entry>
    <entry name='product'>B150M-K</entry>
    <entry name='version'>Rev X.0x</entry>
    <entry name='serial'>160368663100376</entry>
    <entry name='asset'>Default string</entry>
    <entry name='location'>Default string</entry>
  </baseBoard>
  <processor>
    <entry name='socket_destination'>LGA1151</entry>
    <entry name='type'>Central Processor</entry>
    <entry name='family'>Core i3</entry>
    <entry name='manufacturer'>Intel(R) Corporation</entry>
    <entry name='signature'>Type 0, Family 6, Model 94, Stepping 3</entry>
    <entry name='version'>Intel(R) Core(TM) i3-6100 CPU @ 3.70GHz</entry>
    <entry name='external_clock'>100 MHz</entry>
    <entry name='max_speed'>3700 MHz</entry>
    <entry name='status'>Populated, Enabled</entry>
    <entry name='serial_number'>To Be Filled By O.E.M.</entry>
    <entry name='part_number'>To Be Filled By O.E.M.</entry>
  </processor>
  <memory_device>
    <entry name='size'>8192 MB</entry>
```

```
<entry name='form_factor'>DIMM</entry>
<entry name='locator'>DIMM_A1</entry>
<entry name='bank_locator'>BANK 0</entry>
<entry name='type'>DDR4</entry>
<entry name='type_detail'>Synchronous</entry>
<entry name='speed'>2133 MHz</entry>
<entry name='manufacturer'>Kingston</entry>
<entry name='serial_number'>07478724</entry>
<entry name='part_number'>KHX2133C14/8G</entry>
</memory_device>
</sysinfo>
```

```
3)virsh start vm-name
root@ccoew:/home/ccoew# virsh start cummins
Domain cummins started
```

```
4)virsh shutdown vm-name
root@ccoew:/home/ccoew# virsh shutdown cummins
Domain cummins is being shutdown
```

```
5)virsh dominfo vm-name
root@ccoew:/home/ccoew# virsh dominfo cummins
Id: -
Name: cummins
UUID: 45572539-7a6a-43e4-9301-d80468c2b73a
OS Type: hvm
State: shut off
CPU(s): 1
Max memory: 1048576 KiB
Used memory: 1048576 KiB
Persistent: yes
Autostart: disable
Managed save: no
Security model: apparmor
Security DOI: 0
```

```
6)virsh dominfo vm-name
root@ccoew:/home/ccoew# virsh dominfo generic-4
Id: 1
Name: generic-4
UUID: 8e9a92e2-9223-44be-bbbd-c076a82713e8
OS Type: hvm
State: running
CPU(s): 1
CPU time: 372.6s
Max memory: 1048576 KiB
Used memory: 1048576 KiB
Persistent: yes
Autostart: disable
Managed save: no
Security model: apparmor
Security DOI: 0
Security label: libvirt-8e9a92e2-9223-44be-bbbd-c076a82713e8 (enforcing)
```

```
7)virsh hostname
root@ccoew:/home/ccoew# virsh hostname
ccoew
```

```
8)virsh reboot vm-name
root@ccoew:/home/ccoew# virsh reboot generic-4
Domain generic-4 is being rebooted
```

```
9)virsh vcpuinfo vm-name
root@ccoew:/home/ccoew# virsh vcpuinfo generic-4
VCPU: 0
CPU: 3
```

```
State:          running
CPU time:       33.2s
CPU Affinity:   yyyy
```

```
10)virsh version
root@ccoew:/home/ccoew# virsh version
Compiled against library: libvirt 1.3.1
Using library: libvirt 1.3.1
Using API: QEMU 1.3.1
Running hypervisor: QEMU 2.5.0
```

```
11)virsh suspend vm-name
root@ccoew:/home/ccoew# virsh suspend generic-4
Domain generic-4 suspended
```

```
12)virsh resume vm-name
root@ccoew:/home/ccoew# virsh resume generic-4
Domain generic-4 resumed
```

```
13)virsh capabilities
root@ccoew:/home/ccoew# virsh capabilities
<capabilities>
```

```
<host>
  <uuid>c48955d6-9447-8102-50af-d017c29aba55</uuid>
  <cpu>
    <arch>x86_64</arch>
    <model>Broadwell-noTSX</model>
    <vendor>Intel</vendor>
    <topology sockets='1' cores='2' threads='2'/>
    <feature name='invtsc'/>
    <feature name='mpx'/>
    <feature name='abm'/>
    <feature name='pdpelgb'/>
    <feature name='rdrand'/>
    <feature name='f16c'/>
    <feature name='osxsave'/>
    <feature name='pdcml'/>
    <feature name='xtpr'/>
    <feature name='tm2'/>
    <feature name='est'/>
    <feature name='vmx'/>
    <feature name='ds_cpl'/>
    <feature name='monitor'/>
    <feature name='dtes64'/>
    <feature name='pbe'/>
    <feature name='tm'/>
    <feature name='ht'/>
    <feature name='ss'/>
    <feature name='acpi'/>
    <feature name='ds'/>
    <feature name='vme'/>
    <pages unit='KiB' size='4'/>
    <pages unit='KiB' size='2048'/>
    <pages unit='KiB' size='1048576'/>
  </cpu>
  <power_management>
    <suspend_mem/>
    <suspend_disk/>
    <suspend_hybrid/>
  </power_management>
  <migration_features>
    <live/>
    <uri_transports>
      <uri_transport>tcp</uri_transport>
      <uri_transport>rdma</uri_transport>
```

```

    </uri_transports>
  </migration_features>
  <topology>
    <cells num='1'>
      <cell id='0'>
        <memory unit='KiB'>8043272</memory>
        <pages unit='KiB' size='4'>2010818</pages>
        <pages unit='KiB' size='2048'>0</pages>
        <pages unit='KiB' size='1048576'>0</pages>
        <distances>
          <sibling id='0' value='10'>/>
        </distances>
        <cpus num='4'>
          <cpu id='0' socket_id='0' core_id='0' siblings='0,2'>/>
          <cpu id='1' socket_id='0' core_id='1' siblings='1,3'>/>
          <cpu id='2' socket_id='0' core_id='0' siblings='0,2'>/>
          <cpu id='3' socket_id='0' core_id='1' siblings='1,3'>/>
        </cpus>
      </cell>
    </cells>
  </topology>
  <secmodel>
    <model>apparmor</model>
    <doi>0</doi>
  </secmodel>
  <secmodel>
    <model>dac</model>
    <doi>0</doi>
    <baselabel type='kvm'>+121:+129</baselabel>
    <baselabel type='qemu'>+121:+129</baselabel>
  </secmodel>
</host>

<guest>
  <os_type>hvm</os_type>
  <arch name='i686'>
    <wordsize>32</wordsize>
    <emulator>/usr/bin/qemu-system-i386</emulator>
    <machine maxCpus='255'>pc-i440fx-xenial</machine>
    <machine canonical='pc-i440fx-xenial' maxCpus='255'>ubuntu</machine>
    <machine maxCpus='255'>pc-0.12</machine>
    <machine maxCpus='255'>pc-i440fx-2.4</machine>
    <machine maxCpus='255'>pc-1.3</machine>
    <machine maxCpus='255'>pc-q35-1.6</machine>
    <machine maxCpus='255'>pc-q35-1.5</machine>
    <machine maxCpus='1'>xenpv</machine>
    <machine maxCpus='255'>pc-i440fx-1.6</machine>
    <machine maxCpus='255'>pc-q35-2.2</machine>
    <machine maxCpus='255'>pc-i440fx-vivid</machine>
    <machine maxCpus='255'>pc-0.11</machine>
    <machine maxCpus='255'>pc-q35-2.1</machine>
    <machine maxCpus='255'>pc-q35-xenial</machine>
    <machine maxCpus='255'>pc-i440fx-2.3</machine>
    <machine maxCpus='255'>pc-0.10</machine>
    <machine maxCpus='255'>pc-i440fx-trusty</machine>
    <machine maxCpus='255'>pc-1.2</machine>
    <machine maxCpus='255'>pc-i440fx-2.2</machine>
    <machine maxCpus='1'>isapc</machine>
    <machine maxCpus='255'>pc-i440fx-1.7</machine>
    <machine maxCpus='255'>pc-q35-1.4</machine>
    <machine maxCpus='255'>pc-i440fx-wily</machine>
    <machine maxCpus='128'>xenfv</machine>
    <machine maxCpus='255'>pc-q35-2.5</machine>
    <machine canonical='pc-q35-2.5' maxCpus='255'>q35</machine>
    <machine maxCpus='255'>pc-0.15</machine>
    <machine maxCpus='255'>pc-i440fx-utopic</machine>
  </arch>
</guest>

```

```

<machine maxCpus='255'>pc-i440fx-1.5</machine>
<machine maxCpus='255'>pc-0.14</machine>
<machine maxCpus='255'>pc-q35-2.0</machine>
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<machine maxCpus='255'>pc-i440fx-2.1</machine>
<machine maxCpus='255'>pc-1.0</machine>
<machine maxCpus='255'>pc-i440fx-2.0</machine>
<machine maxCpus='255'>pc-q35-2.4</machine>
<machine maxCpus='255'>pc-q35-2.3</machine>
<machine maxCpus='255'>pc-0.13</machine>
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<domain type='kvm'>
  <emulator>/usr/bin/kvm-spice</emulator>
  <machine maxCpus='255'>pc-i440fx-xenial</machine>
  <machine canonical='pc-i440fx-xenial' maxCpus='255'>ubuntu</
machine>

  <machine maxCpus='255'>pc-i440fx-2.4</machine>
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  <machine maxCpus='255'>pc-i440fx-trusty</machine>
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  <machine maxCpus='255'>pc-1.1</machine>
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  <machine maxCpus='255'>pc-q35-1.7</machine>
  <machine maxCpus='255'>pc-1.0</machine>
  <machine maxCpus='255'>pc-i440fx-2.0</machine>
  <machine maxCpus='255'>pc-q35-2.4</machine>
  <machine maxCpus='255'>pc-q35-2.3</machine>
  <machine maxCpus='255'>pc-0.13</machine>
</domain>
</arch>
<features>
  <cpuselection/>
  <deviceboot/>
  <disksnapshot default='on' toggle='no'>

```

```

        <acpi default='on' toggle='yes'/>
        <apic default='on' toggle='no'/>
        <pae/>
        <nonpae/>
    </features>
</guest>

<guest>
    <os_type>hvm</os_type>
    <arch name='x86_64'>
        <wordsz>64</wordsz>
        <emulator>/usr/bin/qemu-system-x86_64</emulator>
        <machine maxCpus='255'>pc-i440fx-xenial</machine>
        <machine canonical='pc-i440fx-xenial' maxCpus='255'>ubuntu</machine>
        <machine maxCpus='255'>pc-i440fx-2.4</machine>
        <machine maxCpus='255'>pc-1.3</machine>
        <machine maxCpus='255'>pc-0.12</machine>
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        <machine maxCpus='255'>pc-q35-1.5</machine>
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        <machine maxCpus='255'>pc-0.11</machine>
        <machine maxCpus='1'>xenpv</machine>
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        <machine maxCpus='255'>pc-i440fx-1.5</machine>
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        <machine maxCpus='255'>pc-i440fx-2.0</machine>
        <machine maxCpus='255'>pc-q35-2.4</machine>
        <machine maxCpus='255'>pc-q35-2.3</machine>
        <machine maxCpus='255'>pc-0.13</machine>
    <domain type='qemu'/>
    <domain type='kvm'>
        <emulator>/usr/bin/kvm-spice</emulator>
        <machine maxCpus='255'>pc-i440fx-xenial</machine>
        <machine canonical='pc-i440fx-xenial' maxCpus='255'>ubuntu</
machine>

        <machine maxCpus='255'>pc-i440fx-2.4</machine>
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        <machine maxCpus='255'>pc-q35-1.6</machine>
        <machine maxCpus='255'>pc-q35-1.5</machine>
        <machine maxCpus='255'>pc-i440fx-1.6</machine>

```

```

<machine maxCpus='255'>pc-q35-2.2</machine>
<machine maxCpus='255'>pc-i440fx-1.7</machine>
<machine maxCpus='255'>pc-i440fx-vivid</machine>
<machine maxCpus='255'>pc-0.11</machine>
<machine maxCpus='1'>xenpv</machine>
<machine maxCpus='255'>pc-q35-2.1</machine>
<machine maxCpus='255'>pc-q35-xenial</machine>
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<machine maxCpus='255'>pc-1.2</machine>
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<machine maxCpus='1'>isapc</machine>
<machine maxCpus='255'>pc-i440fx-2.3</machine>
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<machine maxCpus='255'>pc-q35-2.3</machine>
<machine maxCpus='255'>pc-0.13</machine>
</domain>
</arch>
<features>
  <cpuselection/>
  <deviceboot/>
  <disksnapshot default='on' toggle='no' />
  <acpi default='on' toggle='yes' />
  <apic default='on' toggle='no' />
</features>
</guest>

</capabilities>

```

14) virsh pool-list

```

root@ccoew:/home/ccoew# virsh pool-list
Name                               State    Autostart
-----
ccoew                             active   yes
default                           active   yes
Spool1                             active   yes

```

15) virsh pool-info pool_name

```

root@ccoew:/home/ccoew# virsh pool-info Spool1
Name:                               Spool1
UUID:                               cb4cbddb-add8-46aa-b780-048cd021301a
State:                              running
Persistent:                         yes
Autostart:                          yes
Capacity:                           91.54 GiB
Allocation:                         67.31 GiB
Available:                         24.23 GiB

```