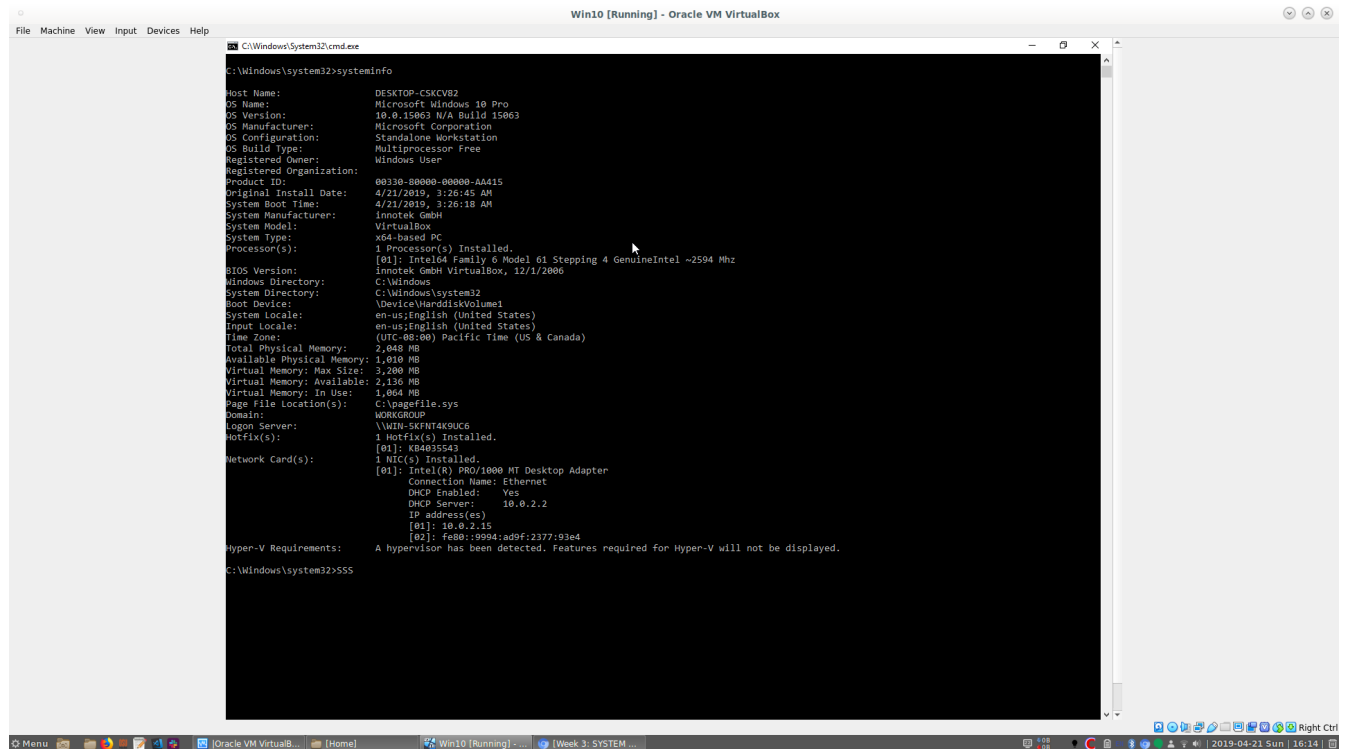


Jong Park
CS 312 – System Architecture
HW 3
April 22, 2019

1. VM Windows 10 install

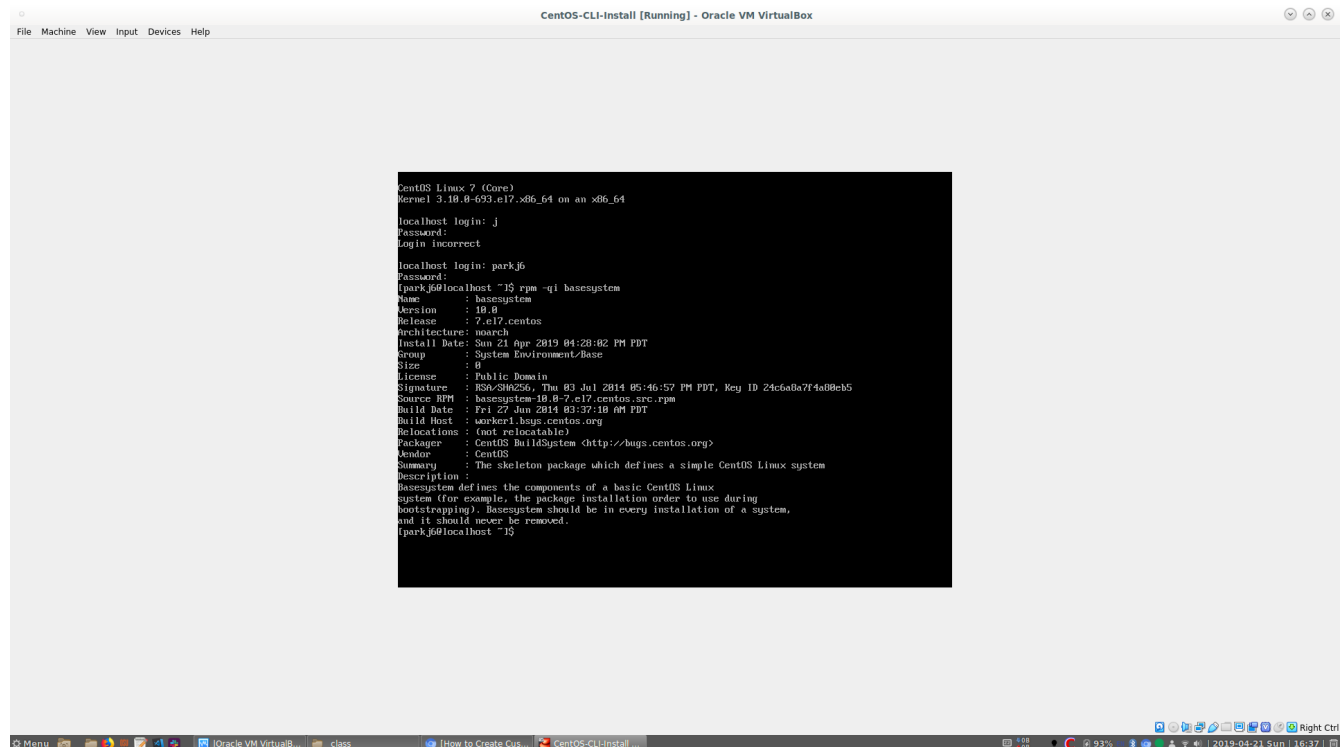


```
C:\Windows\system32>systeminfo

Host Name:                 DESKTOP-CSKCVB2
OS Name:                   Microsoft Windows 10 Pro
OS Version:                18.0.15063 N/A Build 15063
OS Manufacturer:         Microsoft Corporation
OS Configuration:         Standalone Workstation
OS Build Type:             Multiprocessor Free
Registered Owner:         Windows User
Registered Organization:
Product ID:                00330-88000-00000-AA415
Original Install Date:     4/21/2019, 3:26:45 AM
System Boot Time:          4/21/2019, 3:26:18 AM
System Manufacturer:       Innotek GmbH
System Model:              VirtualBox
System Type:               x64-based PC
Processor(s):              1 Processor(s) Installed.
                          [01]: Intel(R) Family 6 Model 61 Stepping 4 GenuineIntel ~2594 Mhz
BIOS Version:              innotek GmbH VirtualBox, 12/1/2006
Windows Directory:        C:\Windows
System Directory:          C:\Windows\system32
Boot Device:               \Device\HarddiskVolume1
System Locale:              en-us:English (United States)
Input Locale:               en-us:English (United States)
Time Zone:                 (UTC-08:00) Pacific Time (US & Canada)
Total Physical Memory:     2,048 MB
Available Physical Memory: 1,010 MB
Virtual Memory: Max Size: 3,200 MB
Virtual Memory: Available: 2,130 MB
Virtual Memory: In Use:    1,064 MB
Page File Location(s):     C:\pagefile.sys
Domain:                    WORKGROUP
Logon Server:              \\WIN-SKFN4K0UC6
Workgroup:                  WORKGROUP
Network Card(s):           1 NIC(s) Installed.
                          [01]: Intel(R) PRO/1000 MT Desktop Adapter
                              Connection Name: Ethernet
                              DHCP Enabled:   Yes
                              DHCP Server:   10.0.2.2
                              IP address(es):
                              [01]: 10.0.2.15
                              [02]: fe80::994:ad9f:2377:93e4
Hyper-V Requirements:      A hypervisor has been detected. Features required for Hyper-V will not be displayed.

C:\Windows\system32>SSS
```

2. VM CentOS install



```
CentOS Linux 7 (Core)
Kernel 3.10.0-693.el7.x86_64 on an x86_64

localhost login: j
Password:
login incorrect

localhost login: parkj6
Password:
# parkj6@localhost ~]$ rpm -qi basesystem
Name           : basesystem
Version        : 10.0
Release        : 7.el7.centos
Architecture   : noarch
Install Date   : Sun 21 Apr 2019 04:20:02 PM PDT
Group          : System Environment/Base
Size           : 0
License        : Public Domain
Signature      : Tue 03 Jul 2014 05:46:57 PM PDT, Key ID 24c6a9a7fa08eb5
Source RPM     : basesystem-10.0-7.el7.centos.src.rpm
Build Date     : Fri 27 Jun 2014 03:37:10 AM PDT
Build Host     : worker1.bugs.centos.org
Relocations    : (not relocatable)
Packager       : CentOS BuildSystem <http://bugs.centos.org>
Vendor         : CentOS
Summary        : The skeleton package which defines a simple CentOS Linux system
Description    :
Basesystem defines the components of a basic CentOS Linux
system (for example, the package installation order to use during
bootstrapping). Basesystem should be in every installation of a system,
and it should never be removed.
# parkj6@localhost ~]$
```

3. List the folder path where all user directories are stored in CentOS7, Windows 10, and macOS High Sierra (you can use our three reference VMs to get these paths, for example). (6 points: 2 for each)

CentOS: /home/\$USERNAME
Windows: C:\Users\%USERNAME%\
MacOS: /users/\$USERNAME

4. What does the name of the Linux folder /usr mean? Is USR an abbreviation for something?

USR stands for Unix System Resources. It contains the largest share of data on system. This is the most important directories in the system as it contains all the user binaries, their documentations, libraries, header files and etc. [1]

5. Explain, in your own words, the difference between the Linux directories /bin, /usr/bin, /sbin, and /usr/sbin. Name a common program located in each. (6 points)

/bin:

Standard binaries needed for basic shell operations of the OS. Used by both root and non-root users.[2]

examples: cat, ls, echo, bash, kill, ps, mv, rm, ping

/usr/bin:

Standard binaries not needed for booting or repairing the system beyond the basic binaries used in operation of shell, located in /bin. [3]

examples: awk, clear, diff, gcc, tail, find, free, sudo

/sbin:

Superuser binaries, basic binaries in order for basic shell operation of the OS but only can be used in root level. [4]

examples: mkfs, reboot, fsck, fdisk, grub, halt, ifconfig

/usr/sbin:

This folder contains non-vital utilities used for administrating a system. It also contains daemons to be run in the background by some programs. [5]

examples: chroot, useradd, pppconfig, groupadd, crond

6. On either the reference CentOS VM, or the one you created above, install the Lynx CLI web browser. Using it, browse to www.slashdot.org, then take a screenshot of some part of that page and attach it with your submission. (6 points)

Shown on next page.

Reference:

1. <https://www.tldp.org/LDP/Linux-Filesystem-Hierarchy/html/usr.html>
2. <http://www.linfo.org/bin.html>
3. http://www.linfo.org/usr_bin.html
4. <http://www.linfo.org/sbin.html>
5. http://www.linfo.org/usr_sbin.html

```
CentOS_CLI_Reference_Dist (Snapshot 3) [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
# Slashdot: News for nerds, stuff that matters (p1 of 32)
#alternate

News for nerds, stuff that matters Search Slashdot Slashdot RSS

Slashdot

* Stories
*
  + Firehose
  + All
  + Popular
* Polls
* Deals

Submit
Search Slashdot

(BUTTON)
* Login
* or
* Sign up
-- press space for more, use arrow keys to move, '?' for help, 'q' to quit.
Arrow keys: Up and Down to move. Right to follow a link; Left to go back.
H)elp O)ptions P)rint G)o M)ain screen Q)uit /=search [delete]=history list
```

```
CentOS_CLI_Reference_Dist (Snapshot 3) [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
# ███ Slashdot: News for nerds, stuff that matters (p3 of 27)
Nickname: _____
Password: _____
[ ] Public Terminal

-----

Log In Forgot your password?

Close

binspamdupenotthebestofftopicslownewsdaystalestupid
freshfunnyinsightfulinterestingmaybe
offtopicflamebaittrollredundantoverrated
insightfulinterestinginformativefunnyunderrated
descriptive

typodupeerror
(NORMAL LINK) Use right-arrow or <return> to activate.
Arrow keys: Up and Down to move. Right to follow a link; Left to go back.
H)elp O)ptions P)rint G)o M)ain screen Q)uit /=search [delete]=history list
```