

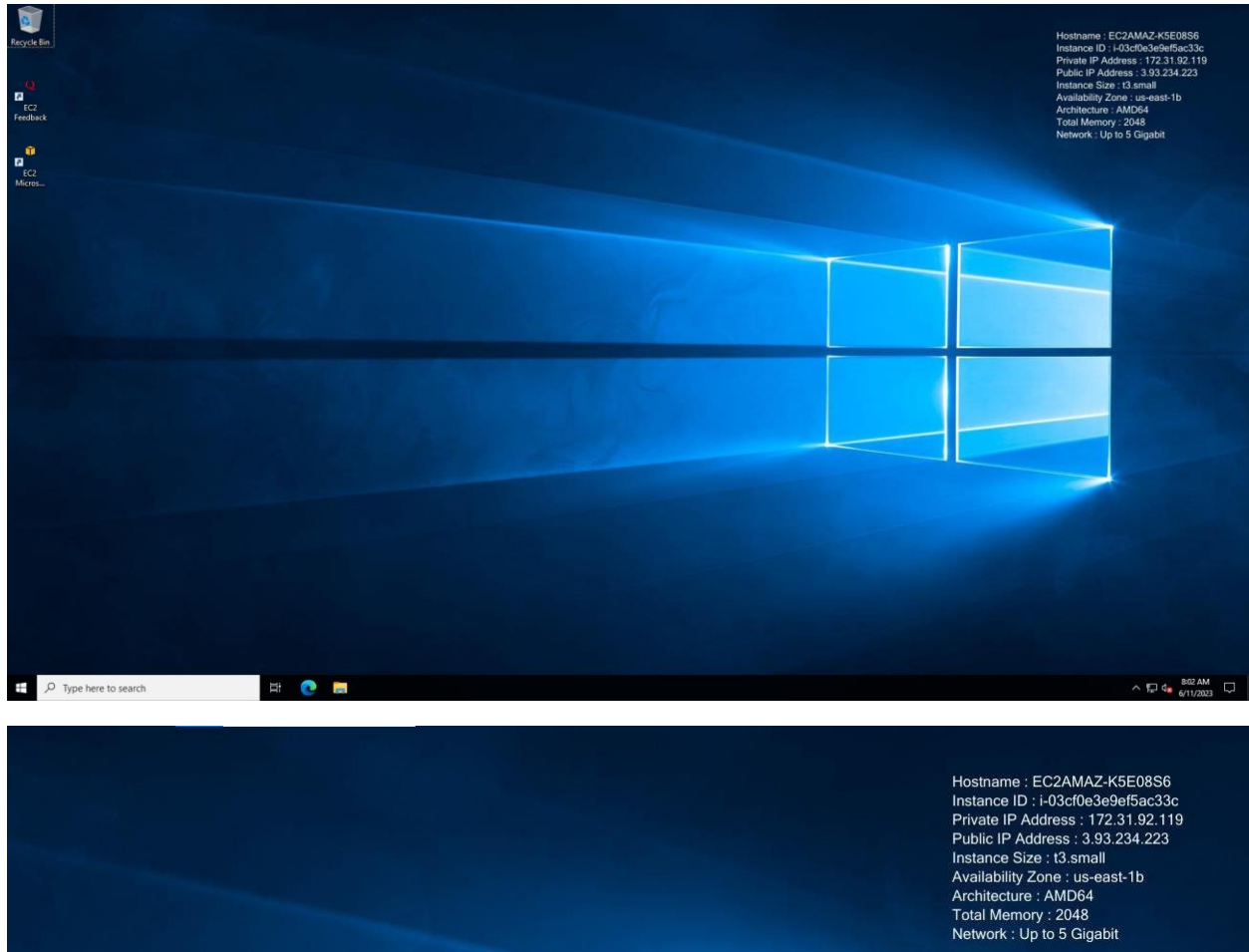
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CIS 2650

Assignment 1

Windows Server Creation and Connection

Screenshot 1 – Windows RDP Connection



Question 1: What AWS instance size did you use and what resources does that provide to your Windows virtual machine?

A:

- *Instance Size:*
 - **t3.small**
- *RAM:*
 - **2.00 GB**
- *Hard disk space:*
 - **30.00 GB**

- *Physical CPUs:*
 - **1**
- *CPU Cores:*
 - **2**

Installing Windows Updates

Screenshot 2 – Windows Updates Performed

Last installed updates	Today at 8:22 AM
Windows Update	Never check for updates
Last checked for updates	Today at 8:22 AM

Windows Computer Name

Screenshot 3 – Changed Computer Name

Device specifications

Device name galvarado1-2023

Question 2: Write two to three paragraphs that describes Microsoft's patch release cycle (e.g. when are they released, what happens if there is a super critical patch, etc.) and the importance of keeping your servers up to date on a regular basis from a security and a reliability perspective.

A: Microsoft follows a monthly release cycle on the second Tuesday of each month, often known as "Patch Tuesday". This consistent schedule allows IT professionals to plan ahead for testing and deployment of the patches. However, in cases of super critical vulnerabilities, Microsoft doesn't wait for the next Patch Tuesday. They release these patches as soon as possible, to ensure that the vulnerabilities are addressed quickly.

Keeping servers up to date on a regular basis is crucial from both a security and reliability perspective. From a security standpoint, updates often include patches for vulnerabilities that have been discovered in the software. By failing to update promptly, an organization can leave their systems open to attacks that exploit these known vulnerabilities. These attacks can lead to data breaches, system downtime, and potentially severe financial and reputational damage. From a reliability standpoint, updates correct bugs and software glitches that can affect system stability and performance. Keeping servers up to date ensures optimal functioning and reduces the risk of unexpected crashes or performance issues that can impact the user experience or business operations.

Static IP Address Assignment

Screenshot 4 – Statically Assigned IP Address

```
Ethernet adapter Ethernet 3:

    Connection-specific DNS Suffix  . : 
    Description . . . . . : Amazon Elastic Network Adapter
    Physical Address. . . . . : 12-17-5B-C5-6D-29
    DHCP Enabled. . . . . : No
    Autoconfiguration Enabled . . . . : Yes
    Link-local IPv6 Address . . . . . : fe80::610b:c2d4:286b:4d0a%5(Preferred)
    IPv4 Address. . . . . : 172.31.92.119(Preferred)
    Subnet Mask . . . . . : 255.255.240.0
    Default Gateway . . . . . : 172.31.80.1
    DHCPv6 IAID . . . . . : 134880059
    DHCPv6 Client DUID. . . . . : 00-01-00-01-2C-17-34-75-12-34-9A-BE-A5-E7
    DNS Servers . . . . . : 172.31.0.2
    NetBIOS over Tcpip. . . . . : Enabled
```

Windows Information Output

From the data in the output from msinfo32 answer the following:

Question 3: From the data in the output from msinfo32:

A:

- How many and what type of processors does your server have?
 - **Intel(R) Xeon(R) Platinum 8259CL CPU @ 2.50GHz, 2500 Mhz, 1 Core(s), 2 Logical Processor(s)**
- How much physical memory does your virtual machine have installed?
 - **2.00 GB**
- How much physical memory does your virtual machine have available?
 - **587 MB**
- What is the exact version number of the Windows Server installation?
 - **Version 10.0.20348 Build 20348**
- What is the BIOS version and date?
 - **Amazon EC2 1.0, 10/16/2017**

Linux Server Creation and Connection

Screenshot 5 – Linux SSH Connection

```
ec2-user@ip-172-31-82-84:~  
login as: ec2-user  
Authenticating with public key "imported-openssh-key"  
  
  _ | _ | _ )  
  _ | ( _ /   Amazon Linux 2 AMI  
  _ | \ _ | _ |  
  
https://aws.amazon.com/amazon-linux-2/  
7 package(s) needed for security, out of 11 available  
Run "sudo yum update" to apply all updates.  
[ec2-user@ip-172-31-82-84 ~]$
```

Question 4: What AWS instance size did you use and what resources does that provide to your Linux virtual machine?

A:

- *Instance Size:*
 - **t2.micro**
- *RAM:*
 - **1 GiB**
- *Hard disk space:*
 - **8 GiB**
- *Physical CPUs:*
 - **1**
- *CPU Cores:*
 - **1**

Add a Linux User

Screenshot 6 – Adding User

```
[ec2-user@ip-172-31-82-84 ~]$ sudo adduser linuser1  
[ec2-user@ip-172-31-82-84 ~]$ sudo su - linuser1  
[linuser1@ip-172-31-82-84 ~]$ mkdir .ssh  
[linuser1@ip-172-31-82-84 ~]$ chmod 700 .ssh  
[linuser1@ip-172-31-82-84 ~]$ touch .ssh/authorized_keys  
[linuser1@ip-172-31-82-84 ~]$ chmod 600 .ssh/authorized_keys  
[linuser1@ip-172-31-82-84 ~]$
```

Question 5: In this assignment we are using ssh keys for authentication. Linux also supports authenticating using a username/password combination. In two to three paragraphs, describe the pros and cons of using these two authentication methods.

A: ***SSH keys provide a highly secure method of authentication, primarily because they use cryptography to establish a secure connection. The advantage here is that, instead of sending a password over the network that could potentially be intercepted, SSH keys allow the client and server to confirm each other's identity without directly sharing any sensitive information. Moreover, SSH keys tend to be far more complex than most passwords, making them significantly harder to crack through brute force. However, SSH keys do come with potential downsides. They require more setup than simply entering a password, and if the private key is lost or stolen, it could provide an attacker with ongoing access to the system.***

On the other hand, username/password combinations, while less secure, are more straightforward and easier to manage. They don't require the creation, distribution, and storage of cryptographic keys. This simplicity makes them more user-friendly and less challenging to implement, especially for users with limited technical knowledge. However, their relative lack of security is a significant drawback. Passwords are typically simpler and easier to guess or crack than SSH keys. They're also more susceptible to being forgotten by users, and they can be intercepted during transmission or discovered through various attacks, like phishing or keystroke logging.

Screenshot 7 – Log in with New User

```
linuser1@ip-172-31-82-84:~  
login as: linuser1  
Authenticating with public key "rsa-key-20230611"  
Last login: Sun Jun 11 09:12:19 2023  
  
  _ |  _ | _ )  
  _ | (  _ | /   Amazon Linux 2 AMI  
  _ | \ _ | _ |  
  
https://aws.amazon.com/amazon-linux-2/  
7 package(s) needed for security, out of 11 available  
Run "sudo yum update" to apply all updates.  
[linuser1@ip-172-31-82-84 ~]$
```

Linux Command Output

Screenshot 8 – Command (uname -a)

```
[ec2-user@ip-172-31-82-84 ~]$ uname -a  
Linux ip-172-31-82-84.ec2.internal 5.10.179-168.710.amzn2.x86_64 #1 SMP Mon May 22 23:10:22 UTC 2023 x86_64 x86_64 x86_64 GNU/Linux  
[ec2-user@ip-172-31-82-84 ~]$
```

Screenshot 9 – Command (dmesg)

```
[ec2-user@ip-172-31-82-84 ~]$ dmesg
[ 0.000000] Linux version 5.10.179-168.710.amzn2.x86_64 (mockbuild@ip-10-0-51-5) (gcc10-gcc (GCC) 10.4.1 20221124 (Red Ha
t 10.4.0-1), GNU ld version 2.35.2-9.amzn2.0.1) #1 SMP Mon May 22 23:10:22 UTC 2023
[ 0.000000] Command line: BOOT_IMAGE=/boot/vmlinuz-5.10.179-168.710.amzn2.x86_64 root=UUID=93fe0022-e5f6-42c2-9ca1-7c5796
79f863 ro console=tty0 console=ttyS0,115200n8 net.ifnames=0 biosdevname=0 nvme_core.io_timeout=4294967295 rd.emergency=power
off rd.shell=0
[ 0.000000] KASLR disabled
[ 0.000000] x86/fpu: Supporting XSAVE feature 0x001: 'x87 floating point registers'
[ 0.000000] x86/fpu: Supporting XSAVE feature 0x002: 'SSE registers'
[ 0.000000] x86/fpu: Supporting XSAVE feature 0x004: 'AVX registers'
[ 0.000000] x86/fpu: xstate_offset[2]: 576, xstate_sizes[2]: 256
[ 0.000000] x86/fpu: Enabled xstate features 0x7, context size is 832 bytes, using 'standard' format.
[ 0.000000] BIOS-provided physical RAM map:
[ 0.000000] BIOS-e820: [mem 0x0000000000000000-0x0000000000009dfff] usable
[ 0.000000] BIOS-e820: [mem 0x0000000000009e000-0x0000000000009ffff] reserved
[ 0.000000] BIOS-e820: [mem 0x000000000000e0000-0x000000000000ffffff] reserved
[ 0.000000] BIOS-e820: [mem 0x00000000000100000-0x000000000003ffffff] usable
[ 0.000000] BIOS-e820: [mem 0x000000000fc000000-0x000000000ffffff] reserved
[ 0.000000] NX (Execute Disable) protection: active
[ 0.000000] SMBIOS 2.7 present.
[ 0.000000] DMI: Xen HVM domU, BIOS 4.11.amazon 08/24/2006
[ 0.000000] Hypervisor detected: Xen HVM
[ 0.000000] Xen version 4.11.
[ 0.000000] Xen Platform PCI: I/O protocol version 1
[ 0.000000] Netfront and the Xen platform PCI driver have been compiled for this kernel: unplug emulated NICs.
[ 0.000000] Blkfront and the Xen platform PCI driver have been compiled for this kernel: unplug emulated disks.
You might have to change the root device
from /dev/hd[a-d] to /dev/xvd[a-d]
in your root= kernel command line option
[ 0.000003] HVMOP pagetable_dying not supported
[ 0.020613] tsc: Fast TSC calibration using PIT
[ 0.020615] tsc: Detected 2400.076 MHz processor
[ 0.020616] tsc: Detected 2400.010 MHz TSC
[ 0.021112] e820: update [mem 0x00000000-0x00000fff] usable ==> reserved
[ 0.021115] e820: remove [mem 0x000a0000-0x000ffff] usable
[ 0.021119] last_pfn = 0x40000 max_arch_pfn = 0x40000000
[ 0.021153] MTRR default type: write-back
[ 0.021154] MTRR fixed ranges enabled:
[ 0.021155] 00000-9FFFF write-back
[ 0.021156] A0000-BFFFF write-combining
[ 0.021157] C0000-FFFFFF write-back
[ 0.021158] MTRR variable ranges enabled:
[ 0.021160] 0 base 000F00000000 mask 3FFFF0000000 uncachable
[ 0.021161] 1 disabled
[ 0.021161] 2 disabled
[ 0.021162] 3 disabled
[ 0.021163] 4 disabled
[ 0.021163] 5 disabled
[ 0.021164] 6 disabled
[ 0.021164] 7 disabled
[ 0.024951] x86/PAT: Configuration [0-7]: WB WC UC- UC WB WP UC- WT
[ 0.036033] found SMP MP-table at [mem 0x000fb9a0-0x000fb9af]
[ 0.036069] check: Scanning 1 areas for low memory corruption
[ 0.036314] RAMDISK: [mem 0x36ac7000-0x3755aff]
[ 0.036329] ACPI: Early table checksum verification disabled
[ 0.036334] ACPI: RSDP 0x000000000000EA020 000024 (v02 Xen )
[ 0.036347] ACPI: XSDT 0x00000000FC00C780 000054 (v01 Xen HVM 00000000 HVML 00000000)
[ 0.036362] ACPI: FACP 0x00000000FC00C440 0000F4 (v04 Xen HVM 00000000 HVML 00000000)
[ 0.036395] ACPI: DSDT 0x00000000FC003940 008A7E (v02 Xen HVM 00000000 INTL 20090123)
[ 0.036399] ACPI: FACS 0x00000000FC003900 000040
[ 0.036403] ACPI: FACS 0x00000000FC003900 000040
[ 0.036407] ACPI: APIC 0x00000000FC00C540 0000D8 (v02 Xen HVM 00000000 HVML 00000000)
[ 0.036411] ACPI: HPET 0x00000000FC00C690 000038 (v01 Xen HVM 00000000 HVML 00000000)
```

```
[ 0.036416] ACPI: WAET 0x00000000FC00C6D0 000028 (v01 Xen HVM 00000000 HVML 00000000)
[ 0.036420] ACPI: SSDT 0x00000000FC00C700 000031 (v02 Xen HVM 00000000 INTL 20090123)
[ 0.036425] ACPI: SSDT 0x00000000FC00C740 000033 (v02 Xen HVM 00000000 INTL 20090123)
[ 0.036428] ACPI: Reserving FACP table memory at [mem 0xfc00c440-0xfc00c533]
[ 0.036429] ACPI: Reserving DSDT table memory at [mem 0xfc003940-0xfc00c3bd]
[ 0.036431] ACPI: Reserving FACS table memory at [mem 0xfc003900-0xfc00393f]
[ 0.036432] ACPI: Reserving FACS table memory at [mem 0xfc003900-0xfc00393f]
[ 0.036433] ACPI: Reserving APIC table memory at [mem 0xfc00c540-0xfc00c617]
[ 0.036434] ACPI: Reserving HPET table memory at [mem 0xfc00c690-0xfc00c6c7]
[ 0.036435] ACPI: Reserving WAET table memory at [mem 0xfc00c6d0-0xfc00c6f7]
[ 0.036436] ACPI: Reserving SSDT table memory at [mem 0xfc00c700-0xfc00c730]
[ 0.036438] ACPI: Reserving SSDT table memory at [mem 0xfc00c740-0xfc00c772]
[ 0.036748] ACPI: Local APIC address 0xfee00000
[ 0.038768] No NUMA configuration found
[ 0.038770] Faking a node at [mem 0x0000000000000000-0x000000003ffffffff]
[ 0.038779] NODE_DATA(0) allocated [mem 0x3ffde000-0x3ffffffff]
[ 0.039275] Zone ranges:
[ 0.039276] DMA [mem 0x0000000000001000-0x000000000000ffffff]
[ 0.039278] DMA32 [mem 0x0000000000100000-0x00000000003ffffffff]
[ 0.039279] Normal empty
[ 0.039280] Movable zone start for each node
[ 0.039284] Early memory node ranges
[ 0.039285] node 0: [mem 0x0000000000001000-0x0000000000009dfff]
[ 0.039286] node 0: [mem 0x0000000000100000-0x00000000003ffffffff]
[ 0.039288] Initmem setup node 0 [mem 0x0000000000001000-0x00000000003ffffffff]
[ 0.039290] On node 0 totalpages: 262045
[ 0.039291] DMA zone: 64 pages used for memmap
[ 0.039292] DMA zone: 21 pages reserved
[ 0.039293] DMA zone: 3997 pages, LIFO batch:0
[ 0.039294] DMA32 zone: 4032 pages used for memmap
[ 0.039294] DMA32 zone: 258048 pages, LIFO batch:63
[ 0.039307] On node 0, zone DMA: 1 pages in unavailable ranges
[ 0.039372] On node 0, zone DMA: 98 pages in unavailable ranges
[ 0.043035] ACPI: PM-Timer IO Port: 0xb008
[ 0.043038] ACPI: Local APIC address 0xfee00000
[ 0.043110] IOAPIC[0]: apic_id 1, version 17, address 0xfec00000, GSI 0-47
[ 0.043116] ACPI: INT_SRC_OVR (bus 0 bus_irq 0 global_irq 2 dfl dfl)
[ 0.043119] ACPI: INT_SRC_OVR (bus 0 bus_irq 5 global_irq 5 low level)
[ 0.043122] ACPI: INT_SRC_OVR (bus 0 bus_irq 10 global_irq 10 low level)
[ 0.043124] ACPI: INT_SRC_OVR (bus 0 bus_irq 11 global_irq 11 low level)
[ 0.043129] ACPI: IRQ0 used by override.
[ 0.043130] ACPI: IRQ5 used by override.
[ 0.043131] ACPI: IRQ9 used by override.
[ 0.043132] ACPI: IRQ10 used by override.
[ 0.043133] ACPI: IRQ11 used by override.
[ 0.043138] Using ACPI (MADT) for SMP configuration information
[ 0.043141] ACPI: HPET id: 0x8086a201 base: 0xfed00000
[ 0.043143] TSC deadline timer available
[ 0.043151] smpboot: Allowing 15 CPUs, 14 hotplug CPUs
[ 0.043160] PM: hibernation: Registered nosave memory: [mem 0x00000000-0x00000fff]
[ 0.043162] PM: hibernation: Registered nosave memory: [mem 0x0009e000-0x0009ffff]
[ 0.043163] PM: hibernation: Registered nosave memory: [mem 0x000a0000-0x000dffff]
[ 0.043164] PM: hibernation: Registered nosave memory: [mem 0x000e0000-0x000fffff]
[ 0.043166] [mem 0x40000000-0xfbf7ffff] available for PCI devices
[ 0.043168] Booting paravirtualized kernel on Xen HVM
[ 0.043171] clocksource: refined-jiffies: mask: 0xffffffff max_cycles: 0xffffffff, max_idle_ns: 7645519600211568 ns
[ 0.047500] setup_percpu: NR_CPUS:8192 nr_cpumask_bits:15 nr_cpu_ids:15 nr_node_ids:1
[ 0.048321] percpu: Embedded 62 pages/cpu s217088 r8192 d28672 u262144
[ 0.048327] pcpu-alloc: s217088 r8192 d28672 u262144 alloc=1*2097152
[ 0.048328] pcpu-alloc: [0] 00 01 02 03 04 05 06 07 [0] 08 09 10 11 12 13 14 --
[ 0.048359] xen: PV spinlocks enabled
[ 0.048363] PV qspinlock hash table entries: 256 (order: 0, 4096 bytes, linear)
```



```

[ 0.048366] Fallback order for Node 0: 0
[ 0.048370] Built 1 zonelists, mobility grouping on. Total pages: 257928
[ 0.048372] Policy zone: DMA32
[ 0.048373] Kernel command line: BOOT_IMAGE=/boot/vmlinuz-5.10.179-168.710.amzn2.x86_64 root=UUID=93fe0022-e5f6-42c2-9cal
-7c579679f863 ro console=tty0 console=ttyS0,115200n8 net.ifnames=0 biosdevname=0 nvme_core.io_timeout=4294967295 rd.emergenc
y=powEROFF rd.shell=0
[ 0.048661] Dentry cache hash table entries: 131072 (order: 8, 1048576 bytes, linear)
[ 0.048740] Inode-cache hash table entries: 65536 (order: 7, 524288 bytes, linear)
[ 0.049013] mem auto-init: stack:off, heap alloc:off, heap free:off
[ 0.050582] Memory: 204012K/1048180K available (12300K kernel code, 9438K rwdData, 7980K rodata, 2456K init, 18776K bss, 9
0148K reserved, 0K cma-reserved)
[ 0.050863] SLUB: HWalign=64, Order=0-3, MinObjects=0, CPUs=15, Nodes=1
[ 0.050877] Kernel/User page tables isolation: enabled
[ 0.050897] ftrace: allocating 39981 entries in 157 pages
[ 0.070988] ftrace: allocated 157 pages with 5 groups
[ 0.071212] rcu: Hierarchical RCU implementation.
[ 0.071213] rcu: RCU restricting CPUs from NR_CPUS=8192 to nr_cpu_ids=15.
[ 0.071215] Rude variant of Tasks RCU enabled.
[ 0.071216] Tracing variant of Tasks RCU enabled.
[ 0.071229] rcu: RCU calculated value of scheduler-enlistment delay is 25 jiffies.
[ 0.071230] rcu: Adjusting geometry for rcu_fanout_leaf=16, nr_cpu_ids=15
[ 0.075834] NR_IRQS: 524544, nr_irqs: 952, preallocated irq: 16
[ 0.075867] xen:events: Using 2-level ABI
[ 0.075983] xen:events: Xen HVM callback vector for event delivery is enabled
[ 0.076121] random: crng init done
[ 0.128490] Console: colour VGA+ 80x25
[ 0.247700] printk: console [tty0] enabled
[ 0.248660] Cannot get hvm parameter CONSOLE_EVTCHN (18): -22!
[ 0.854980] printk: console [ttyS0] enabled
[ 0.860392] ACPI: Core revision 20200925
[ 0.868950] clocksource: hpet: mask: 0xffffffff max_cycles: 0xffffffff, max_idle_ns: 30580167144 ns
[ 0.880606] APIC: Switch to symmetric I/O mode setup
[ 0.888971] x2apic: IRQ remapping doesn't support X2APIC mode
[ 0.896042] Switched APIC routing to physical flat.
[ 0.904003] ..TIMER: vector=0x30 apic1=0 pin1=2 apic2=0 pin2=0
[ 0.930567] clocksource: tsc-early: mask: 0xffffffffffffffff max_cycles: 0x229840d1729, max_idle_ns: 440795276167 ns
[ 0.941056] Calibrating delay loop (skipped), value calculated using timer frequency.. 4800.02 BogoMIPS (lpj=9600040)
[ 0.953056] pid_max: default: 32768 minimum: 301
[ 0.957104] LSM: Security Framework initializing
[ 0.961070] Yama: becoming mindful.
[ 0.965079] SELinux: Initializing.
[ 0.969085] LSM support for eBPF active
[ 0.973098] Mount-cache hash table entries: 2048 (order: 2, 16384 bytes, linear)
[ 0.977061] Mountpoint-cache hash table entries: 2048 (order: 2, 16384 bytes, linear)
[ 0.985459] Last level iTLB entries: 4KB 1024, 2MB 1024, 4MB 1024
[ 0.993056] Last level dTLB entries: 4KB 1024, 2MB 1024, 4MB 1024, 1GB 4
[ 0.997059] Spectre V1 : Mitigation: usercopy/swapgs barriers and __user pointer sanitization
[ 1.005055] Spectre V2 : Mitigation: Retpolines
[ 1.009056] Spectre V2 : Spectre v2 / SpectreRSB mitigation: Filling RSB on context switch
[ 1.017055] Speculative Store Bypass: Vulnerable
[ 1.021061] MDS: Vulnerable: Clear CPU buffers attempted, no microcode
[ 1.029055] MMIO Stale Data: Vulnerable: Clear CPU buffers attempted, no microcode
[ 1.052699] clocksource: xen: mask: 0xffffffffffffffff max_cycles: 0x1cd42e4dffb, max_idle_ns: 881590591483 ns
[ 1.061064] Xen: using vcpuop timer interface
[ 1.061072] installing Xen timer for CPU 0
[ 1.065128] smpboot: CPU0: Intel(R) Xeon(R) CPU E5-2676 v3 @ 2.40GHz (family: 0x6, model: 0x3f, stepping: 0x2)
[ 1.069098] cpu 0 spinlock event irq 53
[ 1.073153] Performance Events: unsupported p6 CPU model 63 no PMU driver, software events only.
[ 1.077095] rcu: Hierarchical SRCU implementation.
[ 1.081401] NMI watchdog: Perf NMI watchdog permanently disabled
[ 1.085276] smp: Bringing up secondary CPUs ...
[ 1.089062] smp: Brought up 1 node, 1 CPU

```



```
[ 1.093060] smpboot: Max logical packages: 15
[ 1.097068] smpboot: Total of 1 processors activated (4800.02 BogoMIPS)
[ 1.109405] node 0 deferred pages initialised in 4ms
[ 1.113198] devtmpfs: initialized
[ 1.116681] x86/mm: Memory block size: 128MB
[ 1.117437] clocksource: jiffies: mask: 0xffffffff max_cycles: 0xffffffff, max_idle_ns: 7645041785100000 ns
[ 1.121069] futex hash table entries: 4096 (order: 6, 262144 bytes, linear)
[ 1.125422] NET: Registered protocol family 16
[ 1.129206] DMA: preallocated 128 KiB GFP_KERNEL pool for atomic allocations
[ 1.133077] DMA: preallocated 128 KiB GFP_KERNEL|GFP_DMA pool for atomic allocations
[ 1.137069] DMA: preallocated 128 KiB GFP_KERNEL|GFP_DMA32 pool for atomic allocations
[ 1.141080] audit: initializing netlink subsys (disabled)
[ 1.145233] thermal_sys: Registered thermal governor 'fair_share'
[ 1.145235] thermal_sys: Registered thermal governor 'step_wise'
[ 1.149064] thermal_sys: Registered thermal governor 'user_space'
[ 1.153070] cpuidle: using governor ladder
[ 1.161059] cpuidle: using governor menu
[ 1.165135] ACPI: bus type PCI registered
[ 1.169062] acpiphp: ACPI Hot Plug PCI Controller Driver version: 0.5
[ 1.173642] PCI: Using configuration type 1 for base access
[ 1.178617] Kprobes globally optimized
[ 1.184159] audit: type=2000 audit(1686473894.564:1): state=initialized audit_enabled=0 res=1
[ 1.189319] HugeTLB registered 2.00 MiB page size, pre-allocated 0 pages
[ 1.358822] ACPI: Added _OSI(Module Device)
[ 1.361066] ACPI: Added _OSI(Processor Device)
[ 1.365061] ACPI: Added _OSI(3.0 _SCP Extensions)
[ 1.369062] ACPI: Added _OSI(Processor Aggregator Device)
[ 1.373071] ACPI: Added _OSI(Linux-Dell-Video)
[ 1.377062] ACPI: Added _OSI(Linux-Lenovo-NV-HDMI-Audio)
[ 1.381062] ACPI: Added _OSI(Linux-HPI-Hybrid-Graphics)
[ 1.390654] ACPI: 3 ACPI AML tables successfully acquired and loaded
[ 1.393709] xen: --> pirq=16 -> irq=9 (gsi=9)
[ 1.394630] ACPI: Interpreter enabled
[ 1.397072] ACPI: (supports S0 S4 S5)
[ 1.401061] ACPI: Using IOAPIC for interrupt routing
[ 1.405090] PCI: Using host bridge windows from ACPI; if necessary, use "pci=nocrs" and report a bug
[ 1.409453] ACPI: Enabled 2 GPEs in block 00 to 0F
[ 1.437774] ACPI: PCI Root Bridge [PCI0] (domain 0000 [bus 00-ff])
[ 1.441069] acpi PNP0A03:00: _OSC: OS supports [ASPM ClockPM Segments MSI HPX-Type3]
[ 1.445073] acpi PNP0A03:00: fail to add MMCONFIG information, can't access extended PCI configuration space under this b
ridge.
[ 1.450027] acpiphp: Slot [0] registered
[ 1.454617] acpiphp: Slot [3] registered
[ 1.457553] acpiphp: Slot [4] registered
[ 1.461363] acpiphp: Slot [5] registered
[ 1.465313] acpiphp: Slot [6] registered
[ 1.469303] acpiphp: Slot [7] registered
[ 1.473182] acpiphp: Slot [8] registered
[ 1.477195] acpiphp: Slot [9] registered
[ 1.481306] acpiphp: Slot [10] registered
[ 1.485340] acpiphp: Slot [11] registered
[ 1.489250] acpiphp: Slot [12] registered
[ 1.493137] acpiphp: Slot [13] registered
[ 1.497132] acpiphp: Slot [14] registered
[ 1.501912] acpiphp: Slot [15] registered
[ 1.505706] acpiphp: Slot [16] registered
[ 1.509460] acpiphp: Slot [17] registered
[ 1.513462] acpiphp: Slot [18] registered
[ 1.517665] acpiphp: Slot [19] registered
[ 1.521476] acpiphp: Slot [20] registered
[ 1.525943] acpiphp: Slot [21] registered
[ 1.529876] acpiphp: Slot [22] registered
[ 1.533459] acpiphp: Slot [23] registered
```

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[ 1.537476] acpiphp: Slot [24] registered
[ 1.541981] acpiphp: Slot [25] registered
[ 1.545729] acpiphp: Slot [26] registered
[ 1.549748] acpiphp: Slot [27] registered
[ 1.553727] acpiphp: Slot [28] registered
[ 1.557492] acpiphp: Slot [29] registered
[ 1.561473] acpiphp: Slot [30] registered
[ 1.565946] acpiphp: Slot [31] registered
[ 1.569497] PCI host bridge to bus 0000:00
[ 1.573064] pci_bus 0000:00: root bus resource [io 0x0000-0x0cf7 window]
[ 1.577059] pci_bus 0000:00: root bus resource [io 0x0d00-0xffff window]
[ 1.581063] pci_bus 0000:00: root bus resource [mem 0x000a0000-0x000bffff window]
[ 1.585062] pci_bus 0000:00: root bus resource [mem 0xf0000000-0xfbffffff window]
[ 1.589074] pci_bus 0000:00: root bus resource [bus 00-ff]
[ 1.593886] pci 0000:00:00.0: [8086:1237] type 00 class 0x060000
[ 1.600615] pci 0000:00:01.0: [8086:7000] type 00 class 0x060100
[ 1.605334] pci 0000:00:01.1: [8086:7010] type 00 class 0x010180
[ 1.611667] pci 0000:00:01.1: reg 0x20: [io 0xc100-0xc10f]
[ 1.614117] pci 0000:00:01.1: legacy IDE quirk: reg 0x10: [io 0x01f0-0x01f7]
[ 1.617062] pci 0000:00:01.1: legacy IDE quirk: reg 0x14: [io 0x03f6]
[ 1.621061] pci 0000:00:01.1: legacy IDE quirk: reg 0x18: [io 0x0170-0x0177]
[ 1.625062] pci 0000:00:01.1: legacy IDE quirk: reg 0x1c: [io 0x0376]
[ 1.630424] * Found PM-Timer Bug on the chipset. Due to workarounds for a bug,
* this clock source is slow. Consider trying other clock sources
[ 1.633067] pci 0000:00:01.3: [8086:7113] type 00 class 0x068000
[ 1.640217] pci 0000:00:01.3: quirk: [io 0xb000-0xb03f] claimed by PIIX4 ACPI
[ 1.642913] pci 0000:00:02.0: [1013:00b8] type 00 class 0x030000
[ 1.645944] pci 0000:00:02.0: reg 0x10: [mem 0xf0000000-0xf1ffffff pref]
[ 1.649543] pci 0000:00:02.0: reg 0x14: [mem 0xf3000000-0xf3000fff]
[ 1.656540] pci 0000:00:03.0: [5853:0001] type 00 class 0xff8000
[ 1.658085] pci 0000:00:03.0: reg 0x10: [io 0xc000-0xc0ff]
[ 1.661552] pci 0000:00:03.0: reg 0x14: [mem 0xf2000000-0xf2ffffff pref]
[ 1.670870] ACPI: PCI Interrupt Link [LNKA] (IRQs *5 10 11)
[ 1.673405] ACPI: PCI Interrupt Link [LNKB] (IRQs 5 *10 11)
[ 1.677442] ACPI: PCI Interrupt Link [LNKC] (IRQs 5 10 *11)
[ 1.681466] ACPI: PCI Interrupt Link [LNKD] (IRQs *5 10 11)
[ 1.696365] xen:balloon: Initialising balloon driver
[ 1.705995] iommu: Default domain type: Translated
[ 1.709494] pci 0000:00:02.0: vgaarb: setting as boot VGA device
[ 1.713053] pci 0000:00:02.0: vgaarb: VGA device added: decodes=io+mem,owns=io+mem,locks=none
[ 1.713065] pci 0000:00:02.0: vgaarb: bridge control possible
[ 1.717058] vgaarb: loaded
[ 1.720253] EDAC MC: Ver: 3.0.0
[ 1.721933] NetLabel: Initializing
[ 1.725068] NetLabel: domain hash size = 128
[ 1.729058] NetLabel: protocols = UNLABELED CIPSOv4 CALIPSO
[ 1.733074] NetLabel: unlabeled traffic allowed by default
[ 1.737061] PCI: Using ACPI for IRQ routing
[ 1.741062] PCI: pci_cache_line_size set to 64 bytes
[ 1.741819] e820: reserve RAM buffer [mem 0x0009e000-0x0009ffff]
[ 1.742171] hpet: 3 channels of 0 reserved for per-cpu timers
[ 1.745076] hpet0: at MMIO 0xfed00000, IRQs 2, 8, 0
[ 1.749061] hpet0: 3 comparators, 64-bit 62.500000 MHz counter
[ 1.755170] clocksource: Switched to clocksource xen
[ 1.778981] VFS: Disk quotas dquot 6.6.0
[ 1.783155] VFS: Dquot-cache hash table entries: 512 (order 0, 4096 bytes)
[ 1.789719] pnp: PnP ACPI init
[ 1.793151] system 00:00: [mem 0x00000000-0x0009ffff] could not be reserved
[ 1.799446] system 00:00: Plug and Play ACPI device, IDs PNP0c02 (active)
[ 1.799542] system 00:01: [io 0x08a0-0x08a3] has been reserved
[ 1.805241] system 00:01: [io 0x0cc0-0x0ccf] has been reserved
[ 1.812174] system 00:01: [io 0x04d0-0x04d1] has been reserved
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[ 1.819244] system 00:01: Plug and Play ACPI device, IDs PNP0c02 (active)
[ 1.819286] xen: --> pirq=17 -> irq=8 (gsi=8)
[ 1.819305] pnp 00:02: Plug and Play ACPI device, IDs PNP0b00 (active)
[ 1.819332] xen: --> pirq=18 -> irq=12 (gsi=12)
[ 1.819348] pnp 00:03: Plug and Play ACPI device, IDs PNP0f13 (active)
[ 1.819368] xen: --> pirq=19 -> irq=1 (gsi=1)
[ 1.819379] pnp 00:04: Plug and Play ACPI device, IDs PNP0303 PNP030b (active)
[ 1.819398] xen: --> pirq=20 -> irq=6 (gsi=6)
[ 1.819400] pnp 00:05: [dma 2]
[ 1.819415] pnp 00:05: Plug and Play ACPI device, IDs PNP0700 (active)
[ 1.819443] xen: --> pirq=21 -> irq=4 (gsi=4)
[ 1.819454] pnp 00:06: Plug and Play ACPI device, IDs PNP0501 (active)
[ 1.819525] system 00:07: [io 0x10c0-0x1141] has been reserved
[ 1.825237] system 00:07: [io 0xb044-0xb047] has been reserved
[ 1.830939] system 00:07: Plug and Play ACPI device, IDs PNP0c02 (active)
[ 1.840018] pnp: PnP ACPI: found 8 devices
[ 1.850540] clocksource: acpi_pm: mask: 0xffffffff max_cycles: 0xffffffff, max_idle_ns: 2085701024 ns
[ 1.857545] NET: Registered protocol family 2
[ 1.861010] IP idents hash table entries: 16384 (order: 5, 131072 bytes, linear)
[ 1.866736] tcp_listen_portaddr_hash hash table entries: 512 (order: 1, 8192 bytes, linear)
[ 1.872902] TCP established hash table entries: 8192 (order: 4, 65536 bytes, linear)
[ 1.880358] TCP bind hash table entries: 8192 (order: 5, 131072 bytes, linear)
[ 1.887259] TCP: Hash tables configured (established 8192 bind 8192)
[ 1.893720] MPTCP token hash table entries: 1024 (order: 2, 24576 bytes, linear)
[ 1.901478] UDP hash table entries: 512 (order: 2, 16384 bytes, linear)
[ 1.908347] UDP-Lite hash table entries: 512 (order: 2, 16384 bytes, linear)
[ 1.915828] NET: Registered protocol family 1
[ 1.920994] NET: Registered protocol family 44
[ 1.925876] pci_bus 0000:00: resource 4 [io 0x0000-0x0cf7 window]
[ 1.931863] pci_bus 0000:00: resource 5 [io 0x0d00-0xffff window]
[ 1.937701] pci_bus 0000:00: resource 6 [mem 0x000a0000-0x000bffff window]
[ 1.944362] pci_bus 0000:00: resource 7 [mem 0xf0000000-0xfbffffff window]
[ 1.951188] pci 0000:00:01.0: PIIX3: Enabling Passive Release
[ 1.956898] pci 0000:00:00.0: Limiting direct PCI/PCI transfers
[ 1.962770] pci 0000:00:01.0: Activating ISA DMA hang workarounds
[ 1.968930] pci 0000:00:02.0: Video device with shadowed ROM at [mem 0x000c0000-0x000dffff]
[ 1.981158] pci 0000:00:02.0: pci_fixup_video+0x0/0xe0 took 12141 usecs
[ 1.989312] PCI: CLS 0 bytes, default 64
[ 1.995961] Trying to unpack rootfs image as initramfs...
[ 2.024257] Freeing initrd memory: 10832K
[ 2.029305] clocksource: tsc: mask: 0xffffffffffffffff max_cycles: 0x229840d1729, max_idle_ns: 440795276167 ns
[ 2.040647] check: Scanning for low memory corruption every 60 seconds
[ 2.050827] Initialise system trusted keyrings
[ 2.056038] Key type blacklist registered
[ 2.061601] workingset: timestamp_bits=36 max_order=18 bucket_order=0
[ 2.069646] zbud: loaded
[ 2.073368] SGI XFS with ACLs, security attributes, quota, no debug enabled
[ 2.081510] Key type asymmetric registered
[ 2.086699] Asymmetric key parser 'x509' registered
[ 2.092505] Block layer SCSI generic (bsg) driver version 0.4 loaded (major 251)
[ 2.100970] io scheduler mq-deadline registered
[ 2.106393] io scheduler kyber registered
[ 2.111353] io scheduler bfq registered
[ 2.294823] shpchp: Standard Hot Plug PCI Controller Driver version: 0.4
[ 2.301920] intel_idle: Please enable MWAIT in BIOS SETUP
[ 2.308945] xen: --> pirq=22 -> irq=28 (gsi=28)
[ 2.309135] xen:grant_table: Grant tables using version 1 layout
[ 2.316037] Grant table initialized
[ 2.320447] Cannot get hvm parameter CONSOLE_EVTCHN (18): -22!
[ 2.327084] Serial: 8250/16550 driver, 4 ports, IRQ sharing disabled
[ 2.334830] 00:06: ttyS0 at I/O 0x3f8 (irq = 4, base_baud = 115200) is a 16550A
[ 2.364293] Invalid max_queues (4), will use default max: 1.

```

```

[ 2.371592] xen_netfront: Initialising Xen virtual ethernet driver
[ 2.379611] i8042: PNP: PS/2 Controller [PNP0303:PS2K,PNP0f13:PS2M] at 0x60,0x64 irq 1,12
[ 2.391481] serio: i8042 KBD port at 0x60,0x64 irq 1
[ 2.397013] serio: i8042 AUX port at 0x60,0x64 irq 12
[ 2.404494] input: AT Translated Set 2 keyboard as /devices/platform/i8042/serio0/input/input0
[ 2.415069] rtc_cmos 00:02: registered as rtc0
[ 2.420062] rtc_cmos 00:02: setting system clock to 2023-06-11T08:58:16 UTC (1686473896)
[ 2.428589] rtc_cmos 00:02: alarms up to one day, 114 bytes nvram, hpet irqs
[ 2.435955] intel_pstate: CPU model not supported
[ 2.441279] hid: raw HID events driver (C) Jiri Kosina
[ 2.448094] NET: Registered protocol family 10
[ 2.457909] Segment Routing with IPv6
[ 2.462301] NET: Registered protocol family 17
[ 2.467484] IPI shorthand broadcast: enabled
[ 2.472115] sched_clock: Marking stable (1667148878, 804940077)->(2923468372, -451379417)
[ 2.480204] registered taskstats version 1
[ 2.485127] Loading compiled-in X.509 certificates
[ 2.492765] Loaded X.509 cert 'Build time autogenerated kernel key: 2e1ea25573ed8d1fc82d4f8e6c167325e668afe5'
[ 2.505266] zswap: loaded using pool lzo/zbud
[ 2.510644] Key type .fscrypt registered
[ 2.515260] Key type fscrypt-provisioning registered
[ 2.520598] ima: No TPM chip found, activating TPM-bypass!
[ 2.526717] ima: Allocated hash algorithm: sha1
[ 2.532063] ima: No architecture policies found
[ 2.555105] blkfront: xvda: barrier or flush: disabled; persistent grants: disabled; indirect descriptors: enabled; bounce buffer: disabled;
[ 2.575165] xvda: xvda1
[ 2.639598] Freeing unused decrypted memory: 2036K
[ 2.646186] Freeing unused kernel image (initmem) memory: 2456K
[ 2.653513] Write protecting the kernel read-only data: 22528k
[ 2.661999] Freeing unused kernel image (text/rodata gap) memory: 2032K
[ 2.670796] Freeing unused kernel image (rodata/data gap) memory: 212K
[ 2.679662] Run /init as init process
[ 2.684811] with arguments:
[ 2.684813] /init
[ 2.684813] with environment:
[ 2.684814] HOME=/
[ 2.684815] TERM=linux
[ 2.684815] BOOT_IMAGE=/boot/vmlinuz-5.10.179-168.710.amzn2.x86_64
[ 2.684816] biosdevname=0
[ 2.687968] systemd[1]: systemd 219 running in system mode. (+PAM +AUDIT +SELINUX +IMA -APPARMOR +SMACK +SYSVINIT +UTMP +LIBCRYPTSETUP +GCRYPT +GNUTLS +ACL +XZ +LZ4 -SECCOMP +BLKID +ELFUTILS +KMOD +IDN)
[ 2.716043] systemd[1]: Detected virtualization xen.
[ 2.722385] systemd[1]: Detected architecture x86-64.
[ 2.729067] systemd[1]: Running in initial RAM disk.
[ 2.742820] systemd[1]: No hostname configured.
[ 2.748821] systemd[1]: Set hostname to <localhost>.
[ 2.755208] systemd[1]: Initializing machine ID from random generator.
[ 2.789147] systemd[1]: Reached target Timers.
[ 2.799004] systemd[1]: Reached target Local File Systems.
[ 2.810720] systemd[1]: Reached target Swap.
[ 3.142648] SCSI subsystem initialized
[ 3.155633] libata version 3.00 loaded.
[ 3.157294] ata_piix 0000:00:01.1: version 2.13
[ 3.159333] scsi host0: ata_piix
[ 3.164111] scsi host1: ata_piix
[ 3.167792] ata1: PATA max MWDMA2 cmd 0x1f0 ctl 0x3f6 bmdma 0xc100 irq 14
[ 3.174174] ata2: PATA max MWDMA2 cmd 0x170 ctl 0x376 bmdma 0xc108 irq 15
[ 3.381122] XFS (xvda1): Mounting V5 Filesystem
[ 3.558264] XFS (xvda1): Ending clean mount
[ 3.838504] systemd-journald[1027]: Received SIGTERM from PID 1 (systemd).
[ 3.855698] printk: systemd: 13 output lines suppressed due to ratelimiting
[ 3.900920] SELinux: Runtime disable is deprecated, use selinux=0 on the kernel cmdline.

```

Screenshot 10 – Command (lspci)

```

[ec2-user@ip-172-31-82-84 ~]$ lspci
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 82371SB PIIX3 IDE [Natoma/Triton II]
00:01.3 Bridge: Intel Corporation 82371AB/EB/MB PIIX4 ACPI (rev 01)
00:02.0 VGA compatible controller: Cirrus Logic GD 5446
00:03.0 Unassigned class [ff80]: XenSource, Inc. Xen Platform Device (rev 01)
[ec2-user@ip-172-31-82-84 ~]$

```

Screenshot 11 – Command (ls -la /etc)

```
[ec2-user@ip-172-31-82-84 ~]$ ls -la /etc
total 1132
drwxr-xr-x 81 root root      8192 Jun 11 09:37 .
dr-xr-xr-x 18 root root      257 Jun 11 08:58 ..
drwxr-xr-x  4 root root       35 Jun  2 18:21 acpi
-rw-r--r--  1 root root       16 Jun  2 18:21 adjtime
-rw-r--r--  1 root root     1518 Jun  7 2013 aliases
-rw-r--r--  1 root root    12288 Jun 11 08:58 aliases.db
drwxr-xr-x  2 root root     4096 Jun  2 18:21 alternatives
drwxr-xr-x  3 root root       17 Jun  2 18:21 amazon
-rw-----  1 root root       541 Jan 16 2020 anacrontab
-rw-r--r--  1 root root        1 Jan 16 2020 at.deny
drwxr-x---  3 root root       43 Jun  2 18:21 audisp
drwxr-x---  3 root root       83 Jun 11 08:58 audit
drwxr-xr-x  2 root root       94 Jun  2 18:21 bash_completion.d
-rw-r--r--  1 root root    2853 Feb 21 2020 bashrc
drwxr-xr-x  2 root root        6 Mar 28 22:31 binfmt.d
drwxr-xr-x  2 root root        6 Jul 31 2018 chkconfig.d
-rw-r--r--  1 root root    1371 Aug 24 2022 chrony.conf
drwxr-xr-x  2 root root       70 Jun  2 18:21 chrony.d
-rw-r-----  1 root chrony    540 Dec 16 2021 chrony.keys
drwxr-xr-x  2 root root       26 Jun  2 18:21 cifs-utils
drwxr-xr-x  4 root root       59 Jun  2 18:21 cloud
drwxr-xr-x  2 root root       73 Jun 11 08:58 cron.d
drwxr-xr-x  2 root root       57 Jun  2 18:21 cron.daily
-rw-----  1 root root        0 Jan 16 2020 cron.deny
drwxr-xr-x  2 root root       22 Jun  2 18:20 cron.hourly
drwxr-xr-x  2 root root        6 Oct 18 2017 cron.monthly
-rw-r--r--  1 root root     451 Oct 18 2017 crontab
drwxr-xr-x  2 root root        6 Oct 18 2017 cron.weekly
-rw-r--r--  1 root root    1620 Feb 21 2020 csh.cshrc
-rw-r--r--  1 root root     866 Feb 21 2020 csh.login
drwxr-xr-x  4 root root       78 Jun  2 18:20 dbus-1
drwxr-xr-x  2 root root       44 Jun  2 18:21 default
drwxr-xr-x  2 root root        6 Nov  2 2018 depmod.d
drwxr-x---  5 root root      104 Jun  2 18:21 dhcp
-rw-r--r--  1 root root    5090 Jan 23 2020 DIR_COLORS
-rw-r--r--  1 root root    5725 Jan 23 2020 DIR_COLORS.256color
-rw-r--r--  1 root root    4669 Jan 23 2020 DIR_COLORS.lightbgcolor
-rw-r--r--  1 root root    1285 May 18 2022 dracut.conf
drwxr-xr-x  2 root root       38 Jun  2 18:21 dracut.conf.d
-rw-r--r--  1 root root     112 Nov 16 2022 e2fsck.conf
-rw-r--r--  1 root root        0 Feb 21 2020 environment
-rw-r--r--  1 root root    1362 Feb 21 2020 ethertypes
-rw-r--r--  1 root root        0 Jun  7 2013 exports
drwxr-xr-x  2 root root        6 Aug 17 2018 exports.d
-rw-r--r--  1 root root       70 Feb 21 2020 filesystems
-rw-r--r--  1 root root       91 Jun  2 18:21 fstab
drwxr-xr-x  2 root root        6 Mar 25 2022 gcrypt
-rw-r--r--  1 root root     842 Jul 31 2018 GeoIP.conf
-rw-r--r--  1 root root     858 Jul 31 2018 GeoIP.conf.default
drwxr-xr-x  2 root root        6 Jul 29 2022 gnupg
-rw-r--r--  1 root root       94 Jul 31 2018 GREP_COLORS
drwxr-xr-x  4 root root       40 Jun  2 18:20 groff
-rw-r--r--  1 root root       700 Jun 11 09:28 group
-rw-r--r--  1 root root     683 Jun 11 09:12 group-
lrwxrwxrwx  1 root root       22 Jun  2 18:20 grub2.cfg -> ../boot/grub2/grub.cfg
lrwxrwxrwx  1 root root       22 Jun  2 18:20 grub2-efi.cfg -> ../boot/grub2/grub.cfg
drwx-----  2 root root     253 Jun  2 18:21 grub.d
-----  1 root root       565 Jun 11 09:28 gshadow
-----  1 root root       552 Jun 11 09:12 gshadow-
drwxr-xr-x  3 root root       20 Jun  2 18:20 gss
drwxr-xr-x  2 root root       79 Jun  2 18:21 gssproxy
```



```

-rw-r--r-- 1 root root 1591 May 31 21:13 hibagent-config.cfg
-rw-r--r-- 1 root root 801 Feb 2 17:38 hibinit-config.cfg
-rw-r--r-- 1 root root 9 Jun 7 2013 host.conf
-rw-r--r-- 1 root root 29 Jun 11 08:58 hostname
-rw-r--r-- 1 root root 126 Jun 2 18:21 hosts
-rw-r--r-- 1 root root 370 Jun 7 2013 hosts.allow
-rw-r--r-- 1 root root 460 Jun 7 2013 hosts.deny
-rw-r--r-- 1 root root 4849 Jul 27 2018 idmapd.conf
-rw-r--r-- 1 root root 282 Jun 2 18:21 image-id
lrwxrwxrwx 1 root root 11 Jun 2 18:20 init.d -> rc.d/init.d
-rw-r--r-- 1 root root 511 Sep 22 2022 inittab
-rw-r--r-- 1 root root 942 Jun 7 2013 inputrc
drwxr-xr-x 2 root root 159 Jun 2 18:20 iproute2
-rw-r--r-- 1 root root 23 Oct 26 2021 issue
-rw-r--r-- 1 root root 22 Oct 26 2021 issue.net
-rw-r--r-- 1 root root 646 Dec 15 04:14 krb5.conf
drwxr-xr-x 2 root root 6 Dec 15 04:18 krb5.conf.d
-rw-r--r-- 1 root root 24264 Jun 11 09:37 ld.so.cache
-rw-r--r-- 1 root root 28 Apr 11 08:51 ld.so.conf
drwxr-xr-x 2 root root 91 Jun 2 18:20 ld.so.conf.d
-rw-r--r-- 1 root root 191 Oct 12 2017 libaudit.conf
drwxr-xr-x 2 root root 35 Jun 2 18:20 libnl
-rw-r--r-- 1 root root 2391 Oct 12 2013 libuser.conf
-rw-r--r-- 1 root root 97 Jun 11 08:58 locale.conf
-rw-r--r-- 1 root root 127 Jun 2 18:21 localtime
-rw-r--r-- 1 root root 2028 Aug 1 2018 login.defs
-rw-r--r-- 1 root root 662 Jul 31 2013 logrotate.conf
drwxr-xr-x 2 root root 74 Jun 2 18:21 logrotate.d
drwxr-xr-x 3 root root 43 Jun 2 18:20 lsm
drwxr-xr-x 6 root root 100 Jun 2 18:21 lvm
-r--r--r-- 1 root root 33 Jun 11 08:58 machine-id
-rw-r--r-- 1 root root 111 Jul 10 2020 magic
-rw-r--r-- 1 root root 5171 Apr 29 2019 man_db.conf
-rw-r--r-- 1 root root 1106 Nov 16 2022 mke2fs.conf
drwxr-xr-x 2 root root 44 Jun 2 18:21 modprobe.d
drwxr-xr-x 2 root root 22 Jun 2 18:21 modules-load.d
lrwxrwxrwx 1 root root 25 Jun 2 18:21 motd -> /var/lib/update-motd/motd
lrwxrwxrwx 1 root root 19 Jun 2 18:20 mtab -> ../proc/self/mounts
-rw-r--r-- 1 root root 570 May 22 17:16 my.cnf
drwxr-xr-x 2 root root 31 Jun 2 18:20 my.cnf.d
-rw-r--r-- 1 root root 9450 Aug 28 2018 nanorc
-rw-r--r-- 1 root root 767 Mar 5 2020 netconfig
drwxr-xr-x 3 root root 26 Jun 2 18:20 NetworkManager
-rw-r--r-- 1 root root 58 Sep 22 2022 networks
-rw-r--r-- 1 root root 967 Aug 17 2018 nfs.conf
-rw-r--r-- 1 root root 3390 Aug 17 2018 nfsmount.conf
-rw-r--r-- 1 root root 1713 Jun 2 18:20 nsswitch.conf
-rw-r--r-- 1 root root 1702 Apr 11 08:51 nsswitch.conf.bak
drwxr-xr-x 3 root root 36 Jun 2 18:20 openldap
drwxr-xr-x 2 root root 6 Apr 9 2019 opt
-rw-r--r-- 1 root root 212 Oct 26 2021 os-release
drwxr-xr-x 2 root root 4096 Jun 11 09:37 pam.d
-rw-r--r-- 1 root root 1406 Jun 11 09:28 passwd
-rw-r--r-- 1 root root 1359 Jun 11 09:12 passwd-
drwxr-xr-x 3 root root 21 Jun 2 18:20 pkcs11
drwxr-xr-x 10 root root 116 Jun 2 18:21 pki
drwxr-xr-x 2 root root 28 Jun 2 18:21 plymouth
drwxr-xr-x 5 root root 52 Jun 2 18:20 pm
drwxr-xr-x 2 root root 6 Aug 1 2018 popd
drwxr-xr-x 2 root root 154 Jun 2 18:21 postfix
drwxr-xr-x 3 root root 123 Jun 2 18:20 ppp
drwxr-xr-x 2 root root 78 Jun 2 18:20 prelink.conf.d

```

```

-rw-r--r-- 1 root root      233 Jun  7  2013 printcap
-rw-r--r-- 1 root root    1819 Feb 21  2020 profile
drwxr-xr-x 2 root root      277 Jun  2 18:21 profile.d
-rw-r--r-- 1 root root   6545 Feb 21  2020 protocols
-rw----- 1 root root        0 Jun 11 08:58 .pwd.lock
drwxr-xr-x 2 root root       35 Jun  2 18:20 python
lrwxrwxrwx 1 root root       10 Jun  2 18:20 rc0.d -> rc.d/rc0.d
lrwxrwxrwx 1 root root       10 Jun  2 18:20 rc1.d -> rc.d/rc1.d
lrwxrwxrwx 1 root root       10 Jun  2 18:20 rc2.d -> rc.d/rc2.d
lrwxrwxrwx 1 root root       10 Jun  2 18:20 rc3.d -> rc.d/rc3.d
lrwxrwxrwx 1 root root       10 Jun  2 18:20 rc4.d -> rc.d/rc4.d
lrwxrwxrwx 1 root root       10 Jun  2 18:20 rc5.d -> rc.d/rc5.d
lrwxrwxrwx 1 root root       10 Jun  2 18:20 rc6.d -> rc.d/rc6.d
drwxr-xr-x 10 root root     127 Jun  2 18:20 rc.d
lrwxrwxrwx 1 root root       13 Jun  2 18:20 rc.local -> rc.d/rc.local
-rw-r--r-- 1 root root   1787 Jul 26  2018 request-key.conf
drwxr-xr-x 2 root root       30 Jun  2 18:21 request-key.d
-rw-r--r-- 1 root root     112 Jun 11 08:58 resolv.conf
-rw-r--r-- 1 root root   1634 Nov 27  2018 rpc
drwxr-xr-x 2 root root       87 Apr 17 16:58 rpm
-rw-r--r-- 1 root root     458 Jun  1 15:56 rsyncd.conf
-rw-r--r-- 1 root root   3232 Feb  7 17:28 rsyslog.conf
drwxr-xr-x 2 root root       50 Jun  2 18:21 rsyslog.d
-rw-r--r-- 1 root root     966 Sep 22  2022 rwtab
drwxr-xr-x 2 root root       23 Sep 22  2022 rwtab.d
drwxr-xr-x 2 root root       24 Jun  2 18:21 sasl2
drwxr-xr-x 3 root root       34 Jun  2 18:21 scl
-rw-r--r-- 1 root root   6722 Apr 23 22:23 screenrc
-rw----- 1 root root     221 Feb 21  2020 securetty
drwxr-xr-x 6 root root    4096 Jun  2 18:20 security
drwxr-xr-x 5 root root       81 Jun  2 18:21 selinux
-rw-r--r-- 1 root root  670293 Jun  7  2013 services
-rw-r--r-- 1 root root     216 Jul 31  2018 sestatus.conf
drwxr-xr-x 2 root root   4096 Jun  2 18:21 setuptool.d
----- 1 root root       736 Jun 11 09:28 shadow
----- 1 root root       705 Jun 11 09:12 shadow-
-rw-r--r-- 1 root root       63 Jun  2 18:21 shells
drwxr-xr-x 2 root root       62 Jun  2 18:20 skel
drwxr-xr-x 2 root root     225 Jun 11 09:37 ssh
drwxr-xr-x 2 root root       19 Jun  2 18:20 ssl
-rw-r--r-- 1 root root     212 Sep 22  2022 statetab
drwxr-xr-x 2 root root        6 Sep 22  2022 statetab.d
-rw-r--r-- 1 root root        0 Feb 21  2020 subgid
-rw-r--r-- 1 root root        0 Feb 21  2020 subuid
-rw-r----- 1 root root   1786 Feb 17 10:37 sudo.conf
-r--r----- 1 root root   4328 Feb 17 10:37 sudoers
drwxr-x--- 2 root root       33 Jun 11 08:58 sudoers.d
-rw-r----- 1 root root   3181 Feb 17 10:37 sudo-ldap.conf
drwxr-xr-x 5 root root    4096 Jun 11 09:37 sysconfig
-rw-r--r-- 1 root root     449 Sep 22  2022 sysctl.conf
drwxr-xr-x 2 root root       74 Jun  2 18:21 sysctl.d
drwxr-xr-x 5 root root     172 Jun  2 18:21 systemd
-rw-r--r-- 1 root root       31 Oct 26  2021 system-release
-rw-r--r-- 1 root root       32 Oct 26  2021 system-release-cpe
drwxr-xr-x 2 root root        6 Nov 22  2022 terminfo
drwxr-xr-x 2 root root        6 Mar 28 22:31 tmpfiles.d
-rw-r--r-- 1 root root     750 Mar  9 23:05 trusted-key.key
drwxr-xr-x 3 root root       54 Jun 11 08:58 udev
-rw-r--r-- 1 root root     163 Jun  2 18:20 .updated
-rw-r--r-- 1 root root     557 Jul 27  2018 updatedb.conf
drwxr-xr-x 2 root root       86 Jun  8  2021 update-motd.d
-rw-r--r-- 1 root root   4242 Apr 14 03:28 vimrc

```



```
-rw-r--r-- 1 root root 1183 Apr 14 03:28 virc
-rw-r--r-- 1 root root 4479 Jun 8 2019 wgetrc
drwxr-xr-x 5 root root 57 Jun 2 18:20 X11
drwxr-xr-x 4 root root 38 Jun 2 18:20 xdg
drwxr-xr-x 2 root root 6 Apr 9 2019 xinetd.d
drwxr-xr-x 6 root root 100 Jun 2 18:20 yum
-rw-r--r-- 1 root root 862 Jun 23 2022 yum.conf
drwxr-xr-x 2 root root 54 Jun 2 18:21 yum.repos.d
[ec2-user@ip-172-31-82-84 ~]$
```

Screenshot 12 – Command (ls -la /etc >> ~/etc_listing.txt)

```
[ec2-user@ip-172-31-82-84 ~]$ ls -la /etc >> ~/etc_listing.txt
[ec2-user@ip-172-31-82-84 ~]$
```

Screenshot 13 – Command (cat ~/etc_listing.txt)

```
[ec2-user@ip-172-31-82-84 ~]$ cat ~/etc_listing.txt
total 1132
drwxr-xr-x 81 root root      8192 Jun 11 09:37 .
dr-xr-xr-x 18 root root      257 Jun 11 08:58 ..
drwxr-xr-x  4 root root        35 Jun  2 18:21 acpi
-rw-r--r--  1 root root        16 Jun  2 18:21 adjtime
-rw-r--r--  1 root root     1518 Jun  7 2013 aliases
-rw-r--r--  1 root root    12288 Jun 11 08:58 aliases.db
drwxr-xr-x  2 root root     4096 Jun  2 18:21 alternatives
drwxr-xr-x  3 root root        17 Jun  2 18:21 amazon
-rw-----  1 root root      541 Jan 16 2020 anacrontab
-rw-r--r--  1 root root         1 Jan 16 2020 at.deny
drwxr-x---  3 root root        43 Jun  2 18:21 audisp
drwxr-x---  3 root root        83 Jun 11 08:58 audit
drwxr-xr-x  2 root root        94 Jun  2 18:21 bash_completion.d
-rw-r--r--  1 root root     2853 Feb 21 2020 bashrc
drwxr-xr-x  2 root root         6 Mar 28 22:31 binfmt.d
drwxr-xr-x  2 root root         6 Jul 31 2018 chkconfig.d
-rw-r--r--  1 root root     1371 Aug 24 2022 chrony.conf
drwxr-xr-x  2 root root        70 Jun  2 18:21 chrony.d
-rw-r-----  1 root chrony    540 Dec 16 2021 chrony.keys
drwxr-xr-x  2 root root        26 Jun  2 18:21 cifs-utils
drwxr-xr-x  4 root root        59 Jun  2 18:21 cloud
drwxr-xr-x  2 root root        73 Jun 11 08:58 cron.d
drwxr-xr-x  2 root root        57 Jun  2 18:21 cron.daily
-rw-----  1 root root         0 Jan 16 2020 cron.deny
drwxr-xr-x  2 root root        22 Jun  2 18:20 cron.hourly
drwxr-xr-x  2 root root         6 Oct 18 2017 cron.monthly
-rw-r--r--  1 root root     451 Oct 18 2017 crontab
drwxr-xr-x  2 root root         6 Oct 18 2017 cron.weekly
-rw-r--r--  1 root root     1620 Feb 21 2020 csh.cshrc
-rw-r--r--  1 root root     866 Feb 21 2020 csh.login
drwxr-xr-x  4 root root        78 Jun  2 18:20 dbus-1
drwxr-xr-x  2 root root        44 Jun  2 18:21 default
drwxr-xr-x  2 root root         6 Nov  2 2018 depmod.d
drwxr-x---  5 root root       104 Jun  2 18:21 dhcp
-rw-r--r--  1 root root     5090 Jan 23 2020 DIR_COLORS
-rw-r--r--  1 root root     5725 Jan 23 2020 DIR_COLORS.256color
-rw-r--r--  1 root root     4669 Jan 23 2020 DIR_COLORS.lightbgcolor
-rw-r--r--  1 root root     1285 May 18 2022 dracut.conf
drwxr-xr-x  2 root root        38 Jun  2 18:21 dracut.conf.d
-rw-r--r--  1 root root       112 Nov 16 2022 e2fsck.conf
-rw-r--r--  1 root root         0 Feb 21 2020 environment
-rw-r--r--  1 root root     1362 Feb 21 2020 ethertypes
-rw-r--r--  1 root root         0 Jun  7 2013 exports
drwxr-xr-x  2 root root         6 Aug 17 2018 exports.d
-rw-r--r--  1 root root        70 Feb 21 2020 filesystems
-rw-r--r--  1 root root        91 Jun  2 18:21 fstab
drwxr-xr-x  2 root root         6 Mar 25 2022 gcrypt
-rw-r--r--  1 root root     842 Jul 31 2018 GeoIP.conf
-rw-r--r--  1 root root     858 Jul 31 2018 GeoIP.conf.default
drwxr-xr-x  2 root root         6 Jul 29 2022 gnupg
-rw-r--r--  1 root root        94 Jul 31 2018 GREP_COLORS
drwxr-xr-x  4 root root        40 Jun  2 18:20 groff
-rw-r--r--  1 root root       700 Jun 11 09:28 group
-rw-r--r--  1 root root     683 Jun 11 09:12 group-
lrwxrwxrwx  1 root root        22 Jun  2 18:20 grub2.cfg -> ../boot/grub2/grub.cfg
lrwxrwxrwx  1 root root        22 Jun  2 18:20 grub2-efi.cfg -> ../boot/grub2/grub.cfg
drwx-----  2 root root     253 Jun  2 18:21 grub.d
-----  1 root root     565 Jun 11 09:28 gshadow
-----  1 root root     552 Jun 11 09:12 gshadow-
drwxr-xr-x  3 root root        20 Jun  2 18:20 gss
drwxr-xr-x  2 root root        79 Jun  2 18:21 gssproxy
```

```

-rw-r--r-- 1 root root 1591 May 31 21:13 hibagent-config.cfg
-rw-r--r-- 1 root root 801 Feb 2 17:38 hibinit-config.cfg
-rw-r--r-- 1 root root 9 Jun 7 2013 host.conf
-rw-r--r-- 1 root root 29 Jun 11 08:58 hostname
-rw-r--r-- 1 root root 126 Jun 2 18:21 hosts
-rw-r--r-- 1 root root 370 Jun 7 2013 hosts.allow
-rw-r--r-- 1 root root 460 Jun 7 2013 hosts.deny
-rw-r--r-- 1 root root 4849 Jul 27 2018 idmapd.conf
-rw-r--r-- 1 root root 282 Jun 2 18:21 image-id
lrwxrwxrwx 1 root root 11 Jun 2 18:20 init.d -> rc.d/init.d
-rw-r--r-- 1 root root 511 Sep 22 2022 inittab
-rw-r--r-- 1 root root 942 Jun 7 2013 inputrc
drwxr-xr-x 2 root root 159 Jun 2 18:20 iproute2
-rw-r--r-- 1 root root 23 Oct 26 2021 issue
-rw-r--r-- 1 root root 22 Oct 26 2021 issue.net
-rw-r--r-- 1 root root 646 Dec 15 04:14 krb5.conf
drwxr-xr-x 2 root root 6 Dec 15 04:18 krb5.conf.d
-rw-r--r-- 1 root root 24264 Jun 11 09:37 ld.so.cache
-rw-r--r-- 1 root root 28 Apr 11 08:51 ld.so.conf
drwxr-xr-x 2 root root 91 Jun 2 18:20 ld.so.conf.d
-rw-r----- 1 root root 191 Oct 12 2017 libaudit.conf
drwxr-xr-x 2 root root 35 Jun 2 18:20 libnl
-rw-r--r-- 1 root root 2391 Oct 12 2013 libuser.conf
-rw-r--r-- 1 root root 97 Jun 11 08:58 locale.conf
-rw-r--r-- 1 root root 127 Jun 2 18:21 localtime
-rw-r--r-- 1 root root 2028 Aug 1 2018 login.defs
-rw-r--r-- 1 root root 662 Jul 31 2013 logrotate.conf
drwxr-xr-x 2 root root 74 Jun 2 18:21 logrotate.d
drwxr-xr-x 3 root root 43 Jun 2 18:20 lsm
drwxr-xr-x 6 root root 100 Jun 2 18:21 lvm
-r--r--r-- 1 root root 33 Jun 11 08:58 machine-id
-rw-r--r-- 1 root root 111 Jul 10 2020 magic
-rw-r--r-- 1 root root 5171 Apr 29 2019 man_db.conf
-rw-r--r-- 1 root root 1106 Nov 16 2022 mke2fs.conf
drwxr-xr-x 2 root root 44 Jun 2 18:21 modprobe.d
drwxr-xr-x 2 root root 22 Jun 2 18:21 modules-load.d
lrwxrwxrwx 1 root root 25 Jun 2 18:21 motd -> /var/lib/update-motd/motd
lrwxrwxrwx 1 root root 19 Jun 2 18:20 mtab -> ../proc/self/mounts
-rw-r--r-- 1 root root 570 May 22 17:16 my.cnf
drwxr-xr-x 2 root root 31 Jun 2 18:20 my.cnf.d
-rw-r--r-- 1 root root 9450 Aug 28 2018 nanorc
-rw-r--r-- 1 root root 767 Mar 5 2020 netconfig
drwxr-xr-x 3 root root 26 Jun 2 18:20 NetworkManager
-rw-r--r-- 1 root root 58 Sep 22 2022 networks
-rw-r--r-- 1 root root 967 Aug 17 2018 nfs.conf
-rw-r--r-- 1 root root 3390 Aug 17 2018 nfsmount.conf
-rw-r--r-- 1 root root 1713 Jun 2 18:20 nsswitch.conf
-rw-r--r-- 1 root root 1702 Apr 11 08:51 nsswitch.conf.bak
drwxr-xr-x 3 root root 36 Jun 2 18:20 openldap
drwxr-xr-x 2 root root 6 Apr 9 2019 opt
-rw-r--r-- 1 root root 212 Oct 26 2021 os-release
drwxr-xr-x 2 root root 4096 Jun 11 09:37 pam.d
-rw-r--r-- 1 root root 1406 Jun 11 09:28 passwd
-rw-r--r-- 1 root root 1359 Jun 11 09:12 passwd-
drwxr-xr-x 3 root root 21 Jun 2 18:20 pkcs11
drwxr-xr-x 10 root root 116 Jun 2 18:21 pki
drwxr-xr-x 2 root root 28 Jun 2 18:21 plymouth
drwxr-xr-x 5 root root 52 Jun 2 18:20 pm
drwxr-xr-x 2 root root 6 Aug 1 2018 popt.d
drwxr-xr-x 2 root root 154 Jun 2 18:21 postfix
drwxr-xr-x 3 root root 123 Jun 2 18:20 ppp
drwxr-xr-x 2 root root 78 Jun 2 18:20 prelink.conf.d

```

```

-rw-r--r-- 1 root root      233 Jun  7  2013 printcap
-rw-r--r-- 1 root root    1819 Feb 21  2020 profile
drwxr-xr-x 2 root root      277 Jun  2 18:21 profile.d
-rw-r--r-- 1 root root   6545 Feb 21  2020 protocols
-rw----- 1 root root      0 Jun 11 08:58 .pwd.lock
drwxr-xr-x 2 root root      35 Jun  2 18:20 python
lrwxrwxrwx 1 root root      10 Jun  2 18:20 rc0.d -> rc.d/rc0.d
lrwxrwxrwx 1 root root      10 Jun  2 18:20 rc1.d -> rc.d/rc1.d
lrwxrwxrwx 1 root root      10 Jun  2 18:20 rc2.d -> rc.d/rc2.d
lrwxrwxrwx 1 root root      10 Jun  2 18:20 rc3.d -> rc.d/rc3.d
lrwxrwxrwx 1 root root      10 Jun  2 18:20 rc4.d -> rc.d/rc4.d
lrwxrwxrwx 1 root root      10 Jun  2 18:20 rc5.d -> rc.d/rc5.d
lrwxrwxrwx 1 root root      10 Jun  2 18:20 rc6.d -> rc.d/rc6.d
drwxr-xr-x 10 root root     127 Jun  2 18:20 rc.d
lrwxrwxrwx 1 root root      13 Jun  2 18:20 rc.local -> rc.d/rc.local
-rw-r--r-- 1 root root    1787 Jul 26  2018 request-key.conf
drwxr-xr-x 2 root root      30 Jun  2 18:21 request-key.d
-rw-r--r-- 1 root root     112 Jun 11 08:58 resolv.conf
-rw-r--r-- 1 root root    1634 Nov 27  2018 rpc
drwxr-xr-x 2 root root      87 Apr 17 16:58 rpm
-rw-r--r-- 1 root root     458 Jun  1 15:56 rsyncd.conf
-rw-r--r-- 1 root root    3232 Feb  7 17:28 rsyslog.conf
drwxr-xr-x 2 root root      50 Jun  2 18:21 rsyslog.d
-rw-r--r-- 1 root root     966 Sep 22  2022 rwtab
drwxr-xr-x 2 root root      23 Sep 22  2022 rwtab.d
drwxr-xr-x 2 root root      24 Jun  2 18:21 sasl2
drwxr-xr-x 3 root root      34 Jun  2 18:21 scl
-rw-r--r-- 1 root root    6722 Apr 23 22:23 screenrc
-rw----- 1 root root     221 Feb 21  2020 securetty
drwxr-xr-x 6 root root    4096 Jun  2 18:20 security
drwxr-xr-x 5 root root      81 Jun  2 18:21 selinux
-rw-r--r-- 1 root root   670293 Jun  7  2013 services
-rw-r--r-- 1 root root     216 Jul 31  2018 sestatus.conf
drwxr-xr-x 2 root root    4096 Jun  2 18:21 setuptool.d
----- 1 root root      736 Jun 11 09:28 shadow
----- 1 root root      705 Jun 11 09:12 shadow-
-rw-r--r-- 1 root root      63 Jun  2 18:21 shells
drwxr-xr-x 2 root root      62 Jun  2 18:20 skel
drwxr-xr-x 2 root root     225 Jun 11 09:37 ssh
drwxr-xr-x 2 root root      19 Jun  2 18:20 ssl
-rw-r--r-- 1 root root     212 Sep 22  2022 statetab
drwxr-xr-x 2 root root      6 Sep 22  2022 statetab.d
-rw-r--r-- 1 root root      0 Feb 21  2020 subgid
-rw-r--r-- 1 root root      0 Feb 21  2020 subuid
-rw-r----- 1 root root    1786 Feb 17 10:37 sudo.conf
-r--r----- 1 root root    4328 Feb 17 10:37 sudoers
drwxr-x--- 2 root root      33 Jun 11 08:58 sudoers.d
-rw-r----- 1 root root    3181 Feb 17 10:37 sudo-ldap.conf
drwxr-xr-x 5 root root    4096 Jun 11 09:37 sysconfig
-rw-r--r-- 1 root root     449 Sep 22  2022 sysctl.conf
drwxr-xr-x 2 root root      74 Jun  2 18:21 sysctl.d
drwxr-xr-x 5 root root     172 Jun  2 18:21 systemd
-rw-r--r-- 1 root root      31 Oct 26  2021 system-release
-rw-r--r-- 1 root root      32 Oct 26  2021 system-release-cpe
drwxr-xr-x 2 root root      6 Nov 22  2022 terminfo
drwxr-xr-x 2 root root      6 Mar 28 22:31 tmpfiles.d
-rw-r--r-- 1 root root     750 Mar  9 23:05 trusted-key.key
drwxr-xr-x 3 root root      54 Jun 11 08:58 udev
-rw-r--r-- 1 root root     163 Jun  2 18:20 .updated
-rw-r--r-- 1 root root     557 Jul 27  2018 updatedb.conf
drwxr-xr-x 2 root root      86 Jun  8  2021 update-motd.d
-rw-r--r-- 1 root root    4242 Apr 14 03:28 vimrc

```

```

-rw-r--r-- 1 root root 1183 Apr 14 03:28 virc
-rw-r--r-- 1 root root 4479 Jun 8 2019 wgetrc
drwxr-xr-x 5 root root 57 Jun 2 18:20 X11
drwxr-xr-x 4 root root 38 Jun 2 18:20 xdg
drwxr-xr-x 2 root root 6 Apr 9 2019 xinetd.d
drwxr-xr-x 6 root root 100 Jun 2 18:20 yum
-rw-r--r-- 1 root root 862 Jun 23 2022 yum.conf
drwxr-xr-x 2 root root 54 Jun 2 18:21 yum.repos.d
[ec2-user@ip-172-31-82-84 ~]$

```

Screenshot 14 – Command (cat /proc/cpuinfo | grep -I -e '^cpu' -e 'l\$' -e '^\$')

```

[ec2-user@ip-172-31-82-84 ~]$ cat /proc/cpuinfo | grep -I -e '^cpu' -e 'l$' -e '^$'
cpu family      : 6
cpu MHz         : 2400.076
siblings        : 1
cpu cores       : 1
cpuid level     : 13
[ec2-user@ip-172-31-82-84 ~]$

```

Screenshot 15 – Command (free -ht)

```

[ec2-user@ip-172-31-82-84 ~]$ free -ht
              total        used         free       shared    buff/cache   available
Mem:           952M          88M          250M           464K           612M           721M
Swap:            0B            0B             0B
Total:          952M          88M          250M
[ec2-user@ip-172-31-82-84 ~]$

```

Screenshot 16 – Command (sudo yum update)

```
[ec2-user@ip-172-31-82-84 ~]$ sudo yum update
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core
Resolving Dependencies
--> Running transaction check
---> Package curl.x86_64 0:7.88.1-1.amzn2.0.1 will be updated
---> Package curl.x86_64 0:8.0.1-1.amzn2.0.1 will be an update
---> Package hibagent.noarch 0:1.1.0-5.amzn2 will be updated
---> Package hibagent.noarch 0:1.1.0-6.amzn2 will be an update
---> Package libcurl.x86_64 0:7.88.1-1.amzn2.0.1 will be updated
---> Package libcurl.x86_64 0:8.0.1-1.amzn2.0.1 will be an update
---> Package libfastjson.x86_64 0:0.99.4-3.amzn2 will be updated
---> Package libfastjson.x86_64 0:0.99.4-3.amzn2.0.1 will be an update
---> Package openssh.x86_64 0:7.4p1-22.amzn2.0.1 will be updated
---> Package openssh.x86_64 0:7.4p1-22.amzn2.0.2 will be an update
---> Package openssh-clients.x86_64 0:7.4p1-22.amzn2.0.1 will be updated
---> Package openssh-clients.x86_64 0:7.4p1-22.amzn2.0.2 will be an update
---> Package openssh-server.x86_64 0:7.4p1-22.amzn2.0.1 will be updated
---> Package openssh-server.x86_64 0:7.4p1-22.amzn2.0.2 will be an update
---> Package openssl.x86_64 1:1.0.2k-24.amzn2.0.6 will be updated
---> Package openssl.x86_64 1:1.0.2k-24.amzn2.0.7 will be an update
---> Package openssl-lib.x86_64 1:1.0.2k-24.amzn2.0.6 will be updated
---> Package openssl-lib.x86_64 1:1.0.2k-24.amzn2.0.7 will be an update
---> Package pcre.x86_64 0:8.32-17.amzn2.0.2 will be updated
---> Package pcre.x86_64 0:8.32-17.amzn2.0.3 will be an update
---> Package rsync.x86_64 0:3.1.2-11.amzn2.0.1 will be updated
---> Package rsync.x86_64 0:3.1.2-11.amzn2.0.2 will be an update
--> Finished Dependency Resolution

Dependencies Resolved

=====
Package                                     Arch                                     Version
=====
Updating:
curl                                       x86_64                                8.0.1-1.amzn2.0.1
hibagent                                 noarch                                1.1.0-6.amzn2
libcurl                                  x86_64                                8.0.1-1.amzn2.0.1
libfastjson                             x86_64                                0.99.4-3.amzn2.0.1
openssh                                  x86_64                                7.4p1-22.amzn2.0.2
openssh-clients                         x86_64                                7.4p1-22.amzn2.0.2
openssh-server                         x86_64                                7.4p1-22.amzn2.0.2
openssl                                  x86_64                                1:1.0.2k-24.amzn2.0.7
openssl-lib                             x86_64                                1:1.0.2k-24.amzn2.0.7
pcre                                      x86_64                                8.32-17.amzn2.0.3
rsync                                    x86_64                                3.1.2-11.amzn2.0.2
=====

Transaction Summary
=====
Upgrade 11 Packages

Total download size: 4.8 M
Is this ok [y/d/N]: y
Downloading packages:
Delta RPMs disabled because /usr/bin/applydeltarpm not installed.
(1/11): hibagent-1.1.0-6.amzn2.noarch.rpm
(2/11): curl-8.0.1-1.amzn2.0.1.x86_64.rpm
(3/11): libcurl-8.0.1-1.amzn2.0.1.x86_64.rpm
(4/11): libfastjson-0.99.4-3.amzn2.0.1.x86_64.rpm
(5/11): openssh-clients-7.4p1-22.amzn2.0.2.x86_64.rpm
(6/11): openssh-7.4p1-22.amzn2.0.2.x86_64.rpm
(7/11): openssh-server-7.4p1-22.amzn2.0.2.x86_64.rpm
```

```

(8/11): openssl-1.0.2k-24.amzn2.0.7.x86_64.rpm
(9/11): pcre-8.32-17.amzn2.0.3.x86_64.rpm
(10/11): openssl-libs-1.0.2k-24.amzn2.0.7.x86_64.rpm
(11/11): rsync-3.1.2-11.amzn2.0.2.x86_64.rpm
-----
Total
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Updating : 1:openssl-libs-1.0.2k-24.amzn2.0.7.x86_64
  Updating : openssh-7.4p1-22.amzn2.0.2.x86_64
  Updating : libcurl-8.0.1-1.amzn2.0.1.x86_64
  Updating : curl-8.0.1-1.amzn2.0.1.x86_64
  Updating : openssh-clients-7.4p1-22.amzn2.0.2.x86_64
  Updating : openssh-server-7.4p1-22.amzn2.0.2.x86_64
  Updating : 1:openssl-1.0.2k-24.amzn2.0.7.x86_64
  Updating : pcre-8.32-17.amzn2.0.3.x86_64
  Updating : hibagent-1.1.0-6.amzn2.noarch
  Updating : libfastjson-0.99.4-3.amzn2.0.1.x86_64
  Updating : rsync-3.1.2-11.amzn2.0.2.x86_64
  Cleanup  : curl-7.88.1-1.amzn2.0.1.x86_64
  Cleanup  : openssh-server-7.4p1-22.amzn2.0.1.x86_64
  Cleanup  : openssh-clients-7.4p1-22.amzn2.0.1.x86_64
  Cleanup  : openssh-7.4p1-22.amzn2.0.1.x86_64
  Cleanup  : libcurl-7.88.1-1.amzn2.0.1.x86_64
  Cleanup  : 1:openssl-1.0.2k-24.amzn2.0.6.x86_64
  Cleanup  : hibagent-1.1.0-5.amzn2.noarch
  Cleanup  : 1:openssl-libs-1.0.2k-24.amzn2.0.6.x86_64
  Cleanup  : pcre-8.32-17.amzn2.0.2.x86_64
  Cleanup  : libfastjson-0.99.4-3.amzn2.x86_64
  Cleanup  : rsync-3.1.2-11.amzn2.0.1.x86_64
  Verifying : openssh-clients-7.4p1-22.amzn2.0.2.x86_64
  Verifying : 1:openssl-libs-1.0.2k-24.amzn2.0.7.x86_64
  Verifying : curl-8.0.1-1.amzn2.0.1.x86_64
  Verifying : 1:openssl-1.0.2k-24.amzn2.0.7.x86_64
  Verifying : rsync-3.1.2-11.amzn2.0.2.x86_64
  Verifying : openssh-7.4p1-22.amzn2.0.2.x86_64
  Verifying : libfastjson-0.99.4-3.amzn2.0.1.x86_64
  Verifying : openssh-server-7.4p1-22.amzn2.0.2.x86_64
  Verifying : hibagent-1.1.0-6.amzn2.noarch
  Verifying : libcurl-8.0.1-1.amzn2.0.1.x86_64
  Verifying : pcre-8.32-17.amzn2.0.3.x86_64
  Verifying : openssh-7.4p1-22.amzn2.0.1.x86_64
  Verifying : rsync-3.1.2-11.amzn2.0.1.x86_64
  Verifying : pcre-8.32-17.amzn2.0.2.x86_64
  Verifying : hibagent-1.1.0-5.amzn2.noarch
  Verifying : openssh-server-7.4p1-22.amzn2.0.1.x86_64
  Verifying : curl-7.88.1-1.amzn2.0.1.x86_64
  Verifying : openssh-clients-7.4p1-22.amzn2.0.1.x86_64
  Verifying : 1:openssl-libs-1.0.2k-24.amzn2.0.6.x86_64
  Verifying : libfastjson-0.99.4-3.amzn2.x86_64
  Verifying : libcurl-7.88.1-1.amzn2.0.1.x86_64
  Verifying : 1:openssl-1.0.2k-24.amzn2.0.6.x86_64

Updated:
  curl.x86_64 0:8.0.1-1.amzn2.0.1             hibagent.noarch 0:1.1.0-6.amzn2             libcurl.x86_64 0:8.0.1-1.amzn2.0.1
  openssh-clients.x86_64 0:7.4p1-22.amzn2.0.2  openssh-server.x86_64 0:7.4p1-22.amzn2.0.2  openssl.x86_64 1:1.0.2k-24.amzn2.0.7
  rsync.x86_64 0:3.1.2-11.amzn2.0.2

Complete!

```

From the data in the output from the above commands answer the following:

Question 6: From the data in the output from these commands:

A:

- How many and what type of processors does your server have?
 - **Intel Pentium M Dothan**
- How much physical memory does your virtual machine have installed?
 - **952M**
- How much physical memory does your virtual machine have available?
 - **250M**
- What is the exact version number of the Linux kernel in use?
 - **5.10.179-168.710.amzn2.x86_64**

***Deliverables for assignment 1 include this document completed as well as the text file export of the msinfo32 information. You will submit both of these documents in canvas.