

3. (10) Select a node on the Discovery Cluster and report the following information about that node: (please do not ask the system admins for this information)

- a. The CPU model
- b. The cache memory hierarchy, including sizes and associativity of each cache.
- c. The bandwidth and latency of the network interconnect for this node.
- d. The version of Linux installed.

Answer:

- a. I ran the command ***lscpu*** in the terminal to get the model name of the Discovery Cluster

CPU Model Name: Intel(R) Xeon(R) CPU E5-2690 v3

Frequency: 2.60GHz

- b. I ran the command ***getconf -a | grep CACHE*** in the terminal to get information on cache memory hierarchy.

The Cache Memory Hierarchy:

- i. **L1 Instruction cache:**
 - 1. Size : 32768 B (32 KB)
 - 2. Cache Associativity : 8 - way
 - 3. Cache Line size : 64 B
- ii. **L1 data cache:**
 - 1. Size : 32768 B (32 KB)
 - 2. Cache Associativity : 8 - way
 - 3. Cache Line size : 64 B
- iii. **L2 cache:**
 - 1. Size: : 262144 B (256 KB)
 - 2. Cache Associativity : 8 - way
 - 3. Cache Line size : 64 B
- iv. **L3 cache:**
 - 1. Size: : 31457280 B (30720 KB)

- 2. Cache Associativity : 20 - way
- 3. Cache Line size : 64 B

- c. I ran the command ***lshw -class network*** in the terminal to get the product name of the network interface.

Network Interconnect Product Name: OneConnect NIC (Skyhawk)

Vender: Emulex Corporation

Then I looked at the specs of this product online to get the bandwidth. Bandwidth = **10 Gbps**

I calculated latency by pinging from the node. The latency was **7.5 ms** when I was checking.

- d. I ran the command ***lsb_release -a*** in the terminal to get the installed Linux version.

Linux version: CentOS Linux release 7.9.2009 (Core)