

# **Computer System Benchmarking**

## **Performance Evaluation**

This Experiment has been carried out on Chameleon testbed  
(<https://www.chameleoncloud.org>)

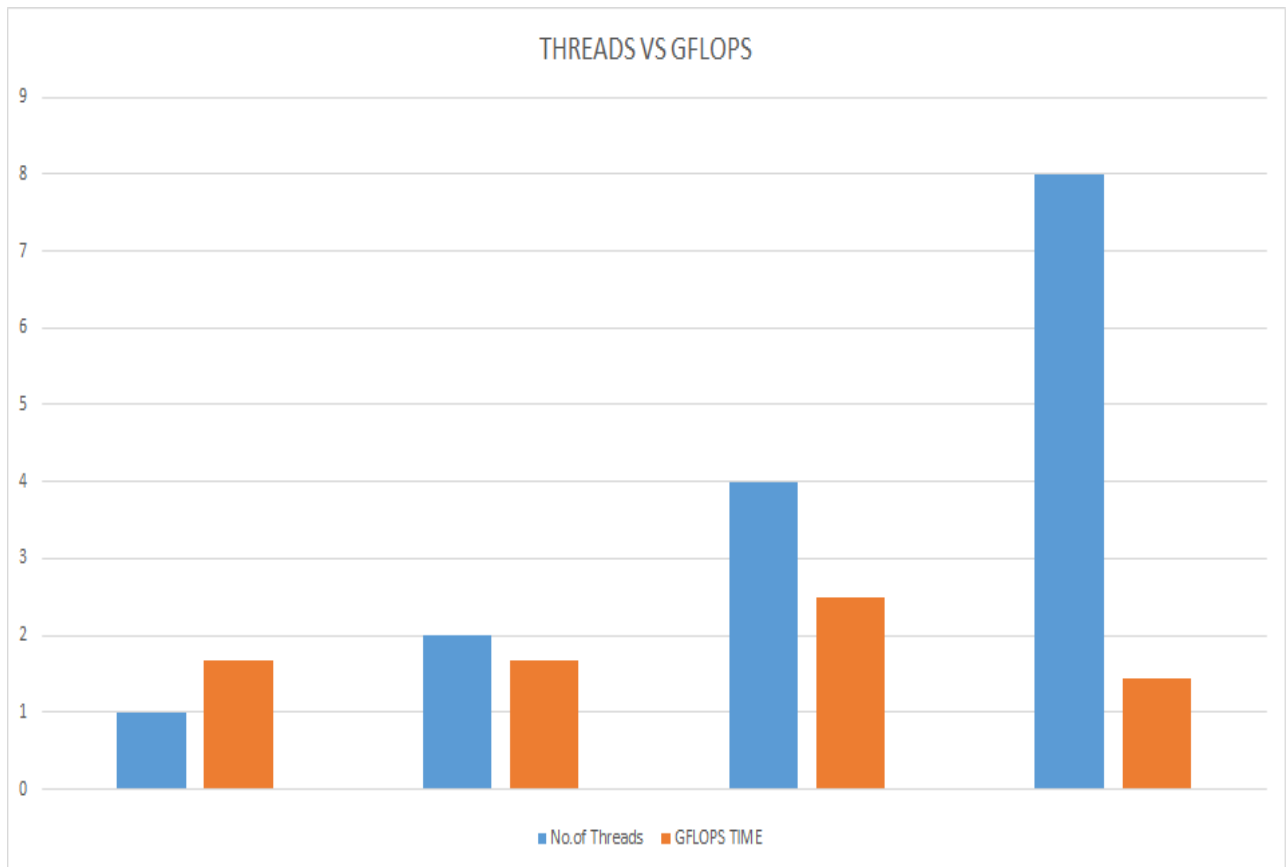
By using KVM virtual machine m1.medium  
(2 virtual processors with 4GB RAM and 40GB disk).

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# 1. CPU Benchmarking

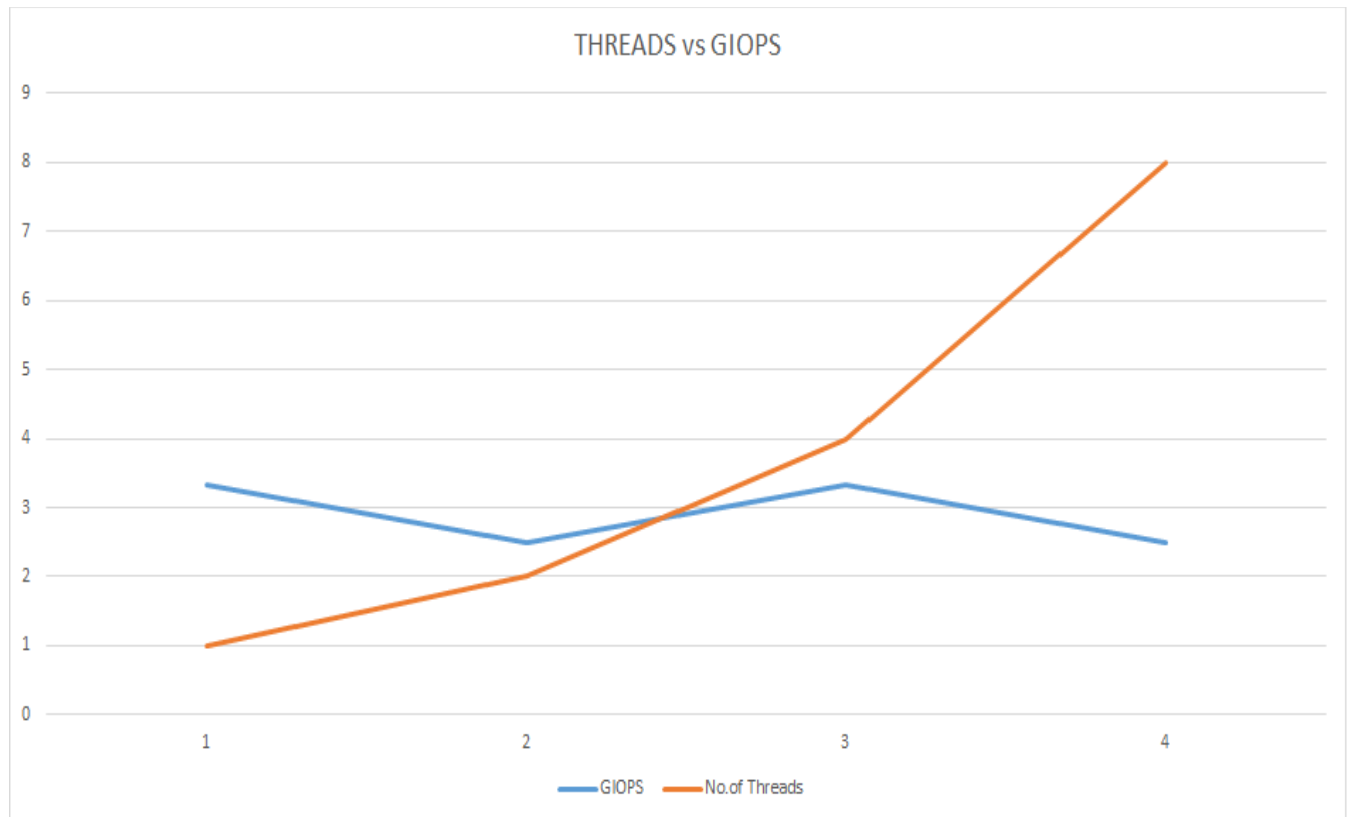
## 1.1. GFlops



**Above graph shows Threads vs GFlop time.**

We can see that as threads increases GFlops time decreases which shows parallelism is working perfectly.

## 1.2. Glops

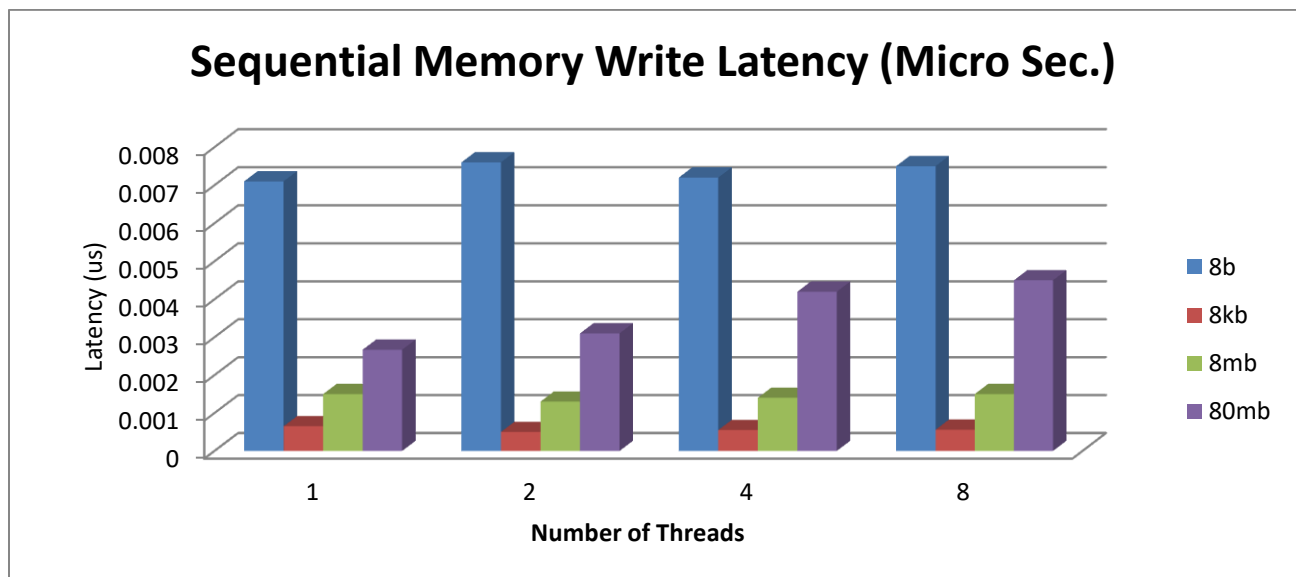
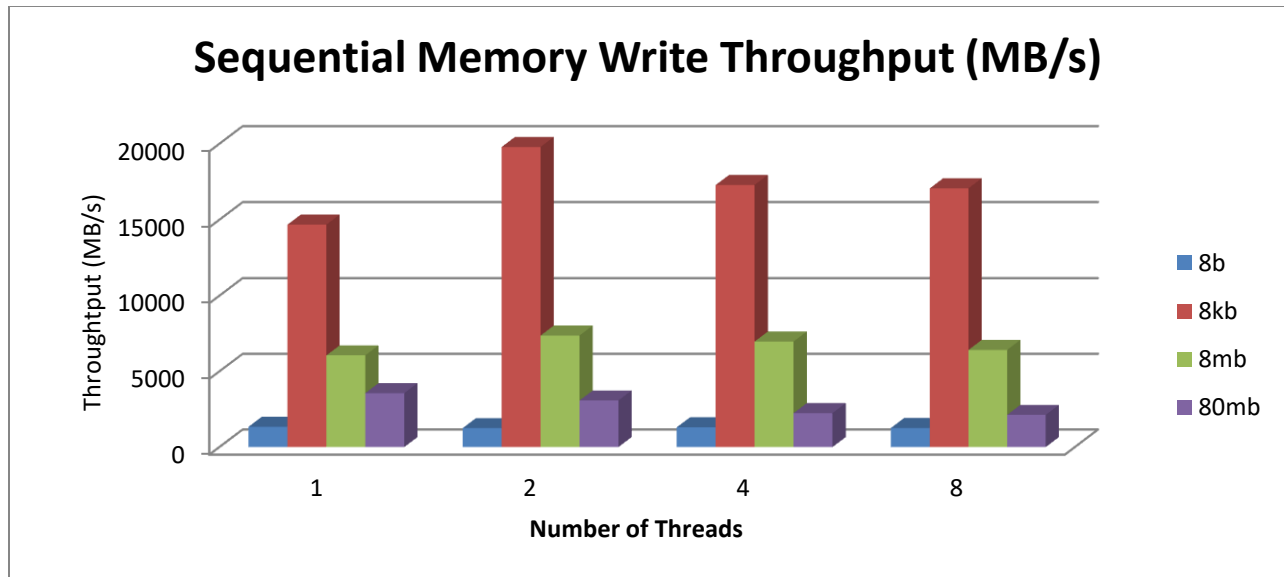


**Above line chart shows Threads vs Glops time.**

We can see that as threads increases Glops time decreases which shows parallelism is working perfectly.

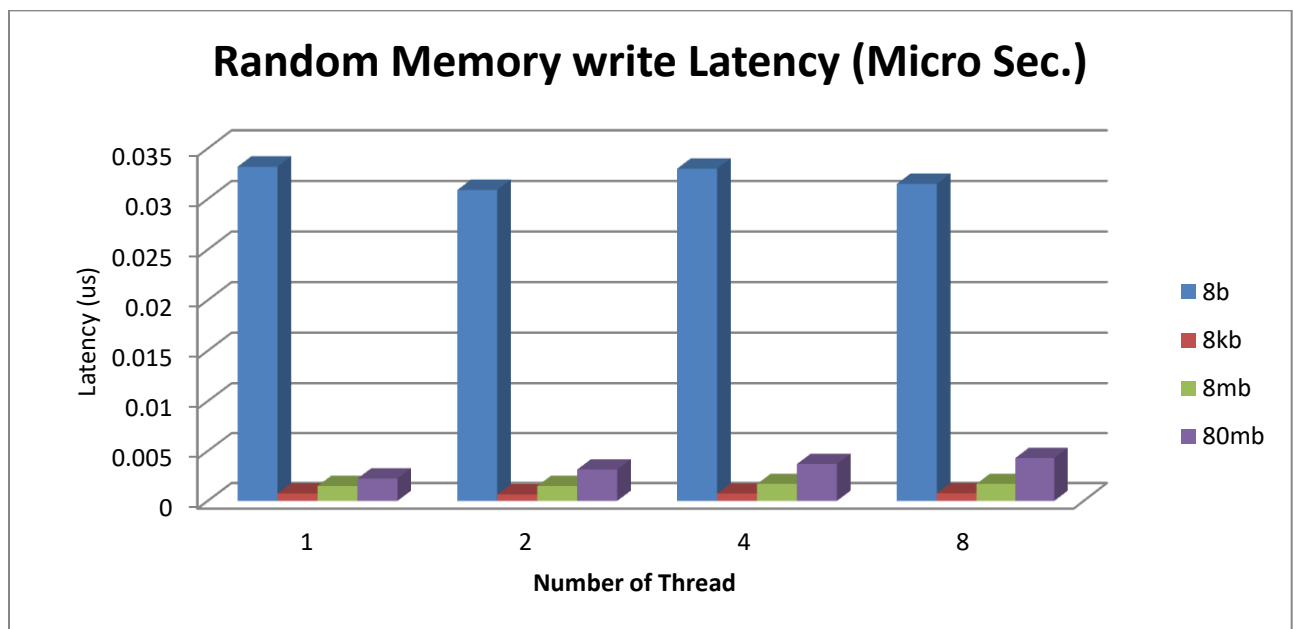
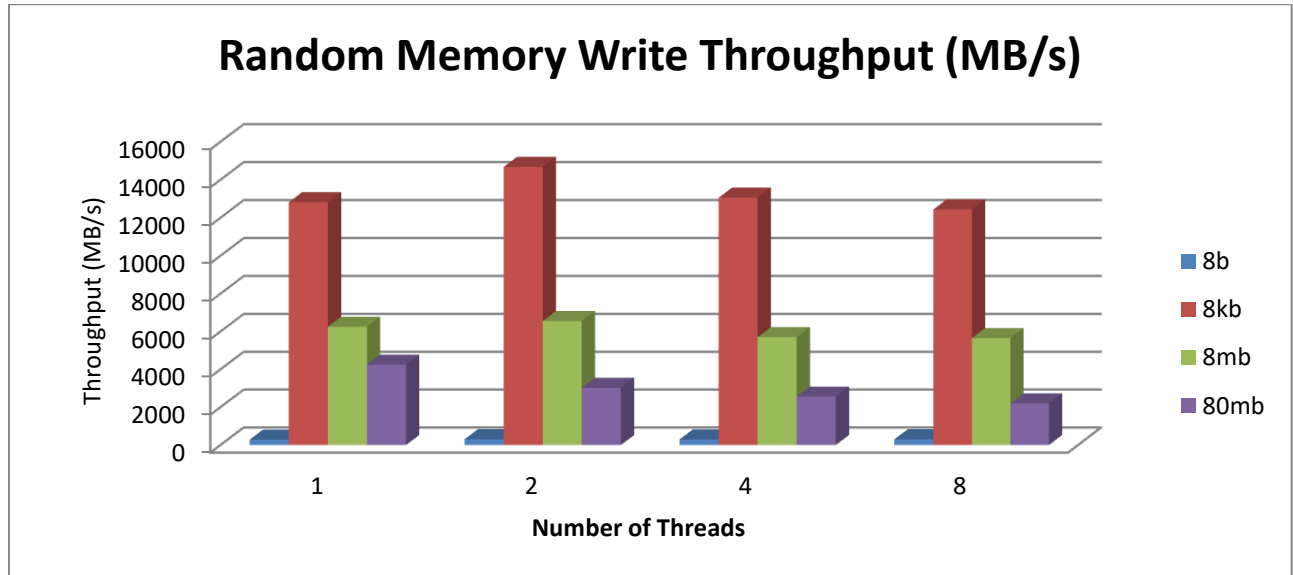
## 2. Memory Benchmarking

### 2.1. Sequential Memory Write



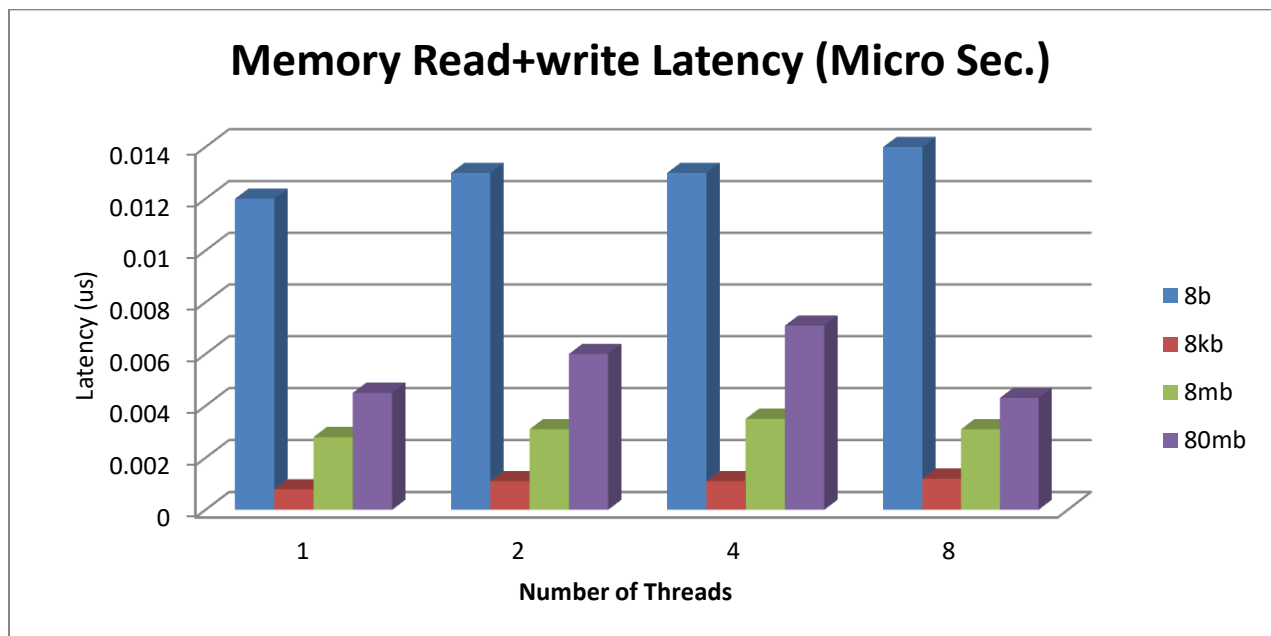
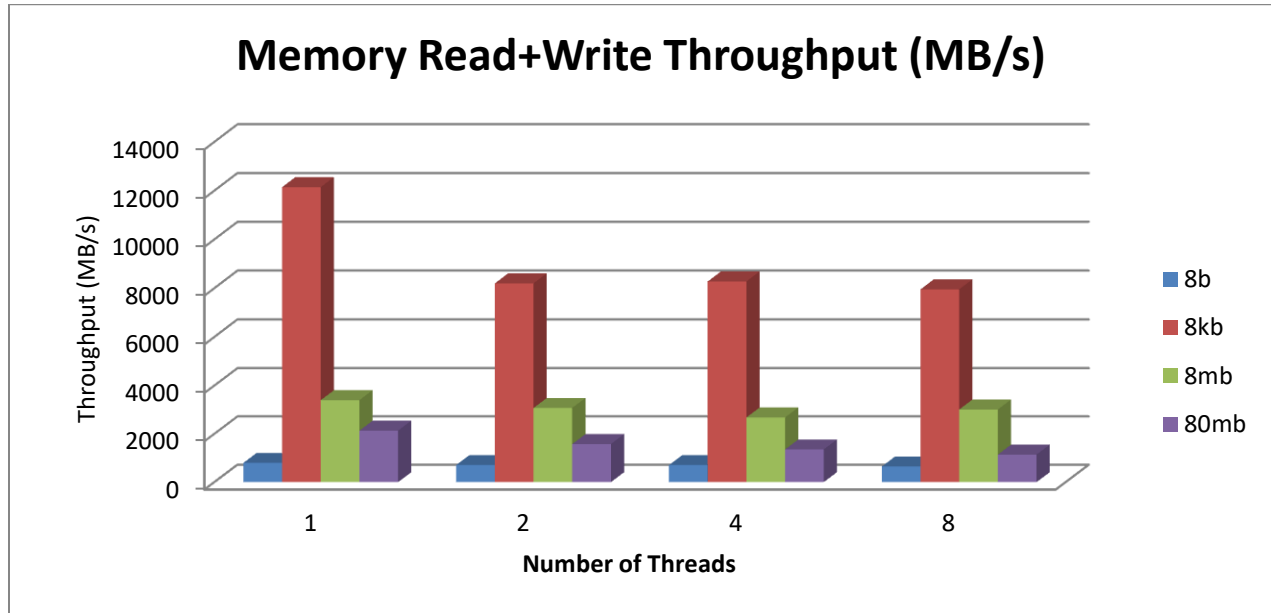
As number of Threads increases Throughput Increases & Latency Decreases due to parallelism.

## 2.2. Random Memory Write



As number of Threads Increases Throughput Increases & Latency Decreases due to parallelism.

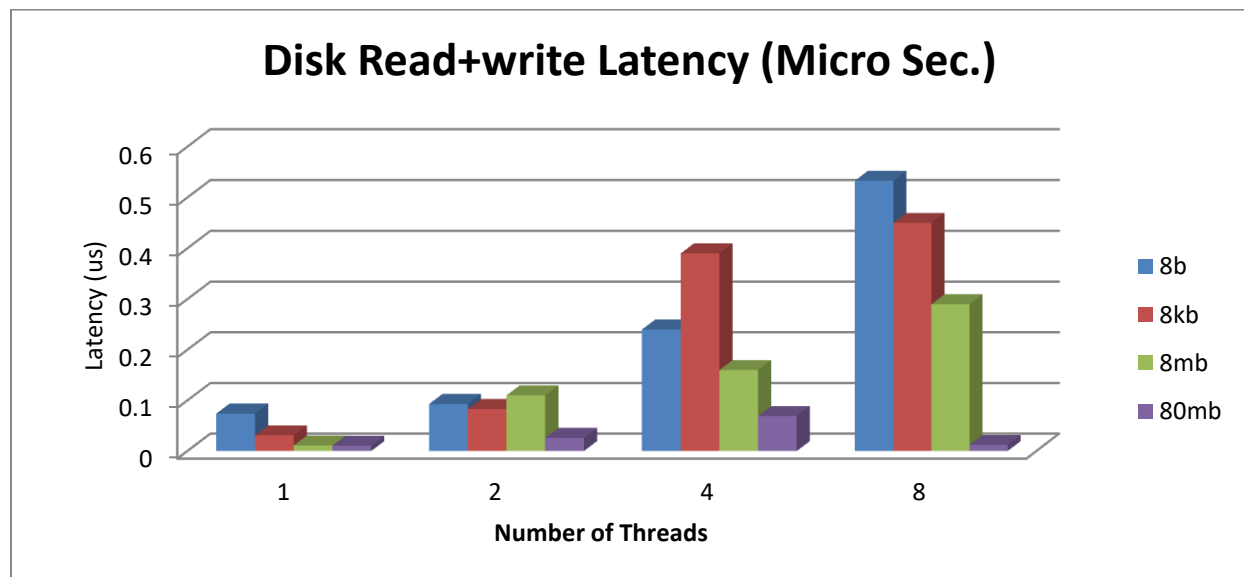
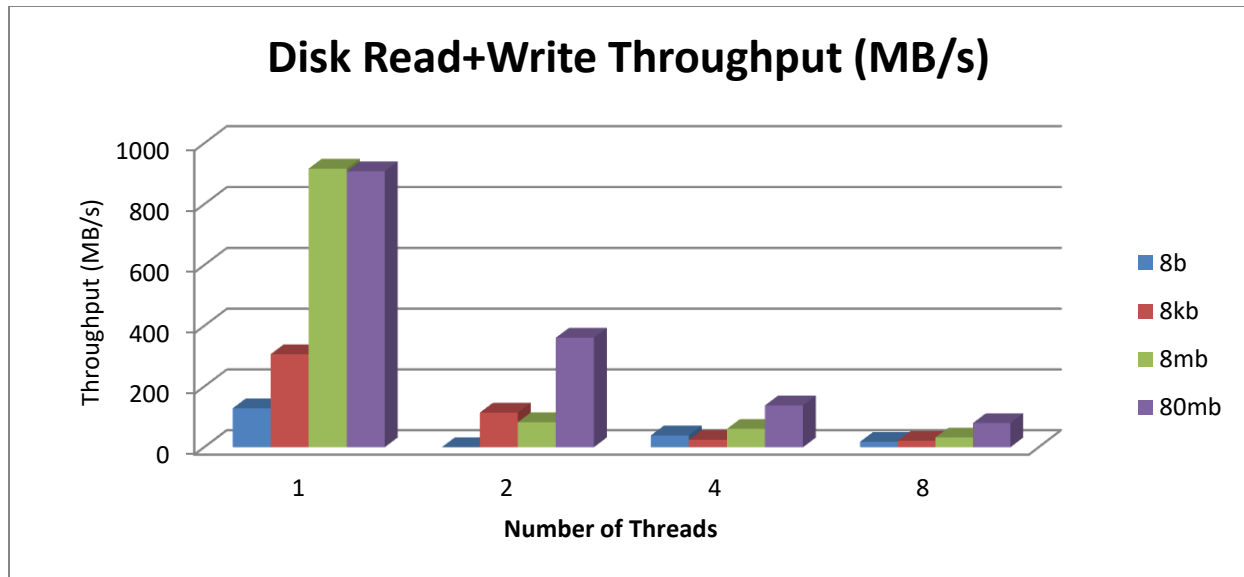
## 2.3. Memory Read + Write



As number of Threads Increases Throughput Decreases & Latency Increases.

# 3. Disk Benchmarking

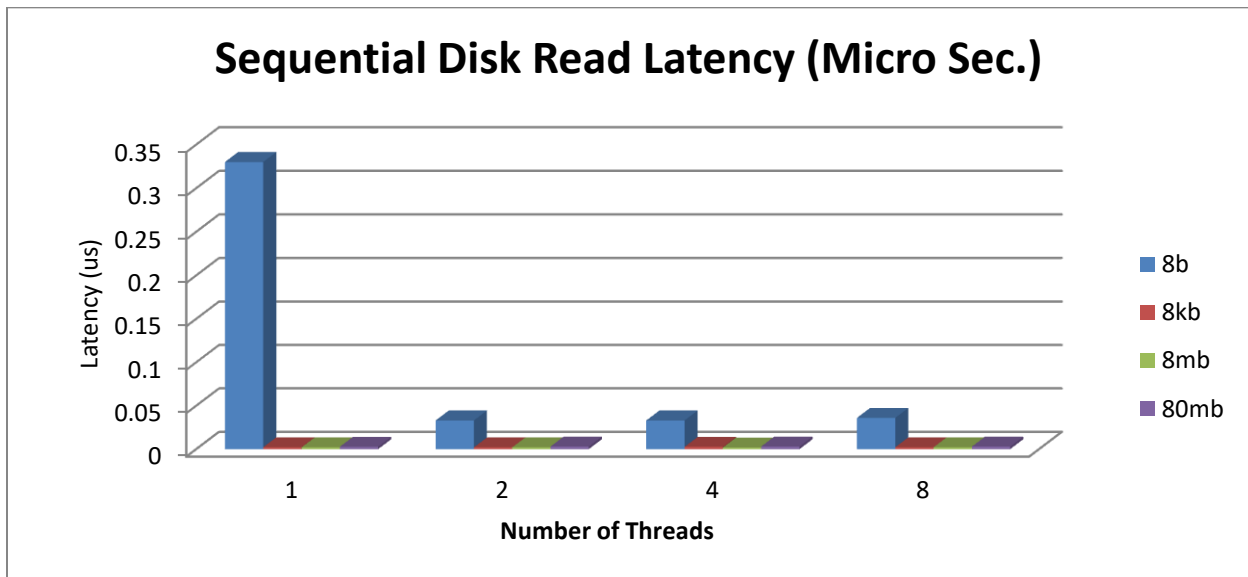
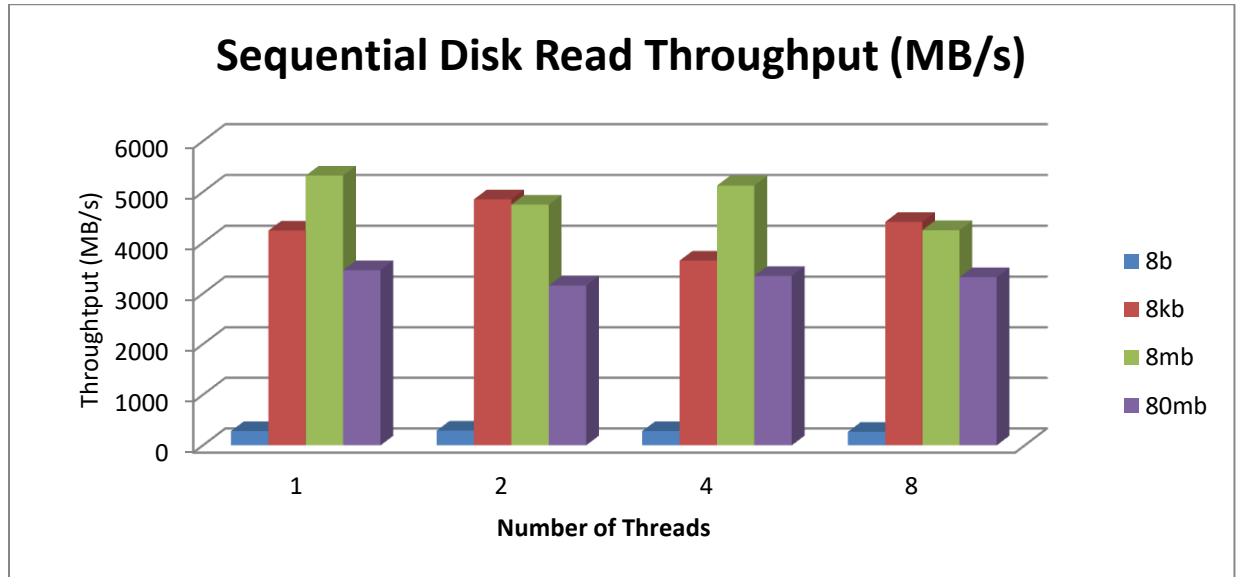
## 3.1. Disk Read + Write



As number of Threads Increases Throughput Decreases & Latency Increases.

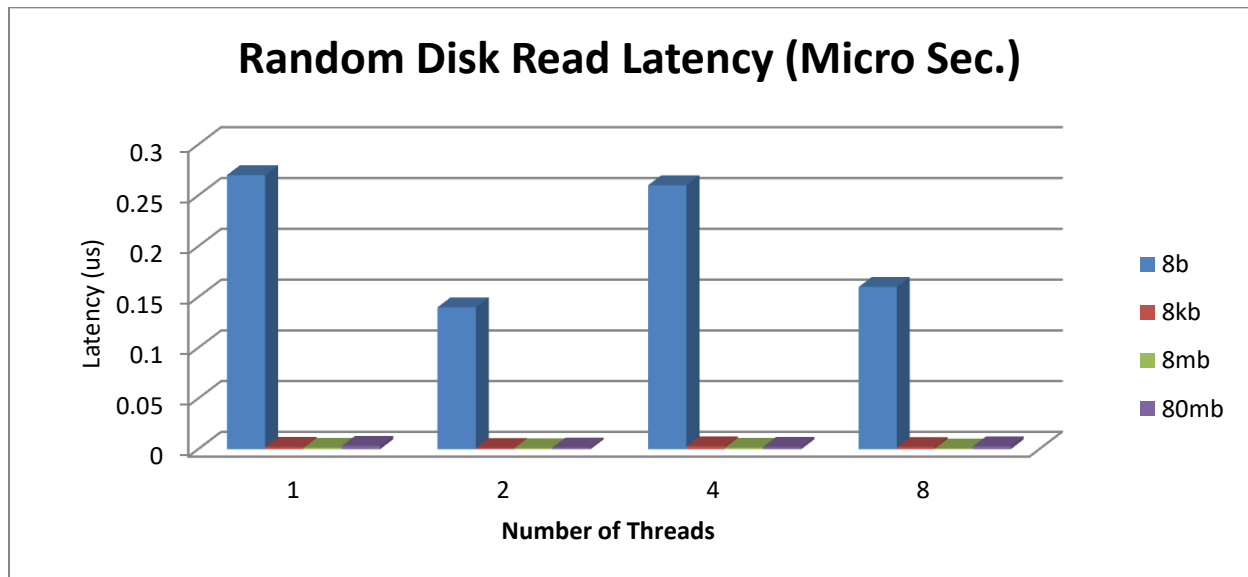
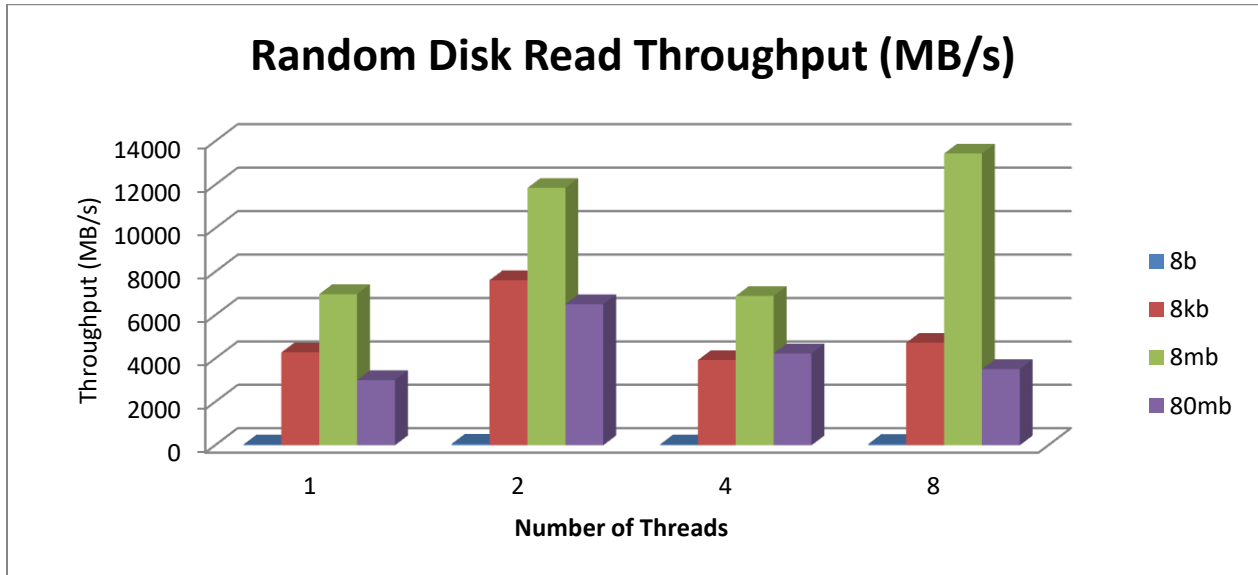


### 3.2. Sequential Disk Read



As number of Threads Increases Throughput Increases & Latency Decreases due to parallelism.

### 3.3. Random Disk Read



As number of Threads Increases Throughput Increases & Latency Decreases due to parallelism.

## 4. Conclusion

Through our Experiments we concluded that:

- In CPU GFlops is faster than IOps.
- Sequential Memory Write is faster than Random Memory write.
- Sequential Disk Read is faster than Random Disk Read.