**NSSA-220 Mini Project 1: Application Performance Monitoring**

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**Introduction**

Write a 3-4 sentence introduction that describes what this project was about. Use the project slides as your guide. I want to see you describe the project in your own words.

**Process Level Metrics**

Describe what the CPU utilization plot shows in 2-3 sentences.

The CPU utilization shows that for APM 3 is the most CPU intensive, Then APM 5 is next most intensive ranging from 10 to 20% most of the time. APM 4 was the next least intensive where as for APM 1, APM 2, and APM 6 had a negligible amount on the cpu.

Describe what the memory utilization plot shows in 2-3 sentences.

For APM 5 it would spike to about 10% every 75 – 100 seconds, APM 6 was a constant increase from 0 to about 10 %. The rest of the APM’s showed no to little effect on memory utilization.

**Potential things to write about**: Which processes used the most CPU/memory? Which processes used the least CPU/memory? Did any processes have any interesting patterns in their CPU and/or memory utilization? Could you see a memory leak (memory use that only increased over time) in any of the processes?

**System Level Metrics**

Describe what the network bandwidth utilization plot shows in 2-3 sentences.

The RX and TX data had a similar pattern to each other, They would send a large package for a set amount of time where the Data rate would increase then it would stop and then a greater or less amount making the average amount either go up or down.

Describe what the hard disk access rates plot shows in 1-2 sentences.

After about 60 seconds one of the APMs starts writing to the disk constantly until about 840 seconds. From then on writing to the disk stops which is shown by the line flattening out.

Describe what the hard disk utilization plot shows in 1-2 sentences.

While one of the APMs was constantly writing to the disk more space was taken up. Until about 840 seconds where the data was deleted and more free space was taken up.

**Potential things to write about**: How similar (or not) were the transmit and receive data rates? Could you see any patterns in how the data rates changed over time? Were there any interesting patterns in the hard disk access rates or hard disk utilization?

**Summary and Lessons Learned**

Write 3-4 sentences that describes whether or not the VM you used had enough computing resources (CPU, memory, network capacity, and disk) to handle the mix of application processes that were running and what lessons you learned while working as a team on this project.

We think that the amount of resource allotted was more than enough for the APMs based on the graphs none of them got close to the caps. The most CPU usage seen was about 60% of the CPU’s power. The thing we learned for the group project was that commenting code should be done since other group members need to know what has been done.