FINALLY!!! After days of debugging code and having lots of frustration, the code is ALIVE!

The simulator is now running under our modifications, and it is behaving as we expected. Monday was really a good day, after our weekly meeting, the professor told us that if we couldn’t get the simulator to run, then she will have to intervene. Right after that we get to the lab and make the thing WORKING. It seems that we had two problems:

1. After thinking that our code was perfect, we found another bug: Our code wasn’t prepared for certain cases. So the code went to an infinite loop (We love that!) and it was crashing. The thing is that the simulator handles lots of different cases, and when we inserted our code, we needed to be cautious with those cases. Since they were a lot, we cover almost all of them. But finally we cover them all.

2. The other problem is that the beginning of our code was checking some status before we triggered our new scheme. We needed to check the status AFTER we got our new architecture running. That little problem was causing me a headache.

After we reported our progress to our direct supervisor and faculty mentor, it is time for running simulations and getting data! We need to compare the differences between the original one
Early results:

We set a baseline (6bufforiginal-dark blue line), then we run various settings of our modified code. As we can see in the graph, the original scheme has lower latency (which is better) as compared with the other lines. But, the purple line which is the better of the 4 modified schemes is very close to it. In fact, I calculated the average difference in the latency of the original vs. 3links5buff and it is 1.92%!

We run lots of simulation comparing the schemes, and we got similar results. The only problem is that the Q-Latency is getting to high in the modified scheme compared to the original one, and that’s not good. We may need to modify our scheme in order to get a better overall latency, because I got the feeling that Q-Latency is as important as network latency.

Next week we are going to look also the energy comparison between the two schemes. The main goal of these modifications is to have an energy efficient system, while having marginal performance drop. We’ll have a look at the energy and keep working on the simulations results.