

Bailey Bonaci
Project 0
Code from Professor Mike Bailey

1. I ran the provided code on the flip2 server. ssh -D47890 bonacib@flip.engr.oregonstate.edu

2. My performance results are as follows:

Using 4 threads

Peak Performance = 619.65 MegaMults/Sec

Using 1 threads

Peak Performance = 167.61 MegaMults/Sec

3. 4-thread-to-one-thread speedup is $S = (\text{Performance with four threads}) / (\text{Performance with one thread}) = 619.65 / 167.61 = 3.7$

4. the 4-thread-to-one-thread speedup is less than 4.0, because there are physical limitations to the hardware and sadly there cannot be 100% efficiency.

5. Parallel Fraction = $F_p = (4./3.)*(1. - (1./S)) = (4./3.)*(1. - (1./3.7)) = 0.97$