The Big Picture

- **The next large NERSC production system "Cori" will be Intel Xeon Phi KNL (Knights Landing) architecture:**
  - >60 cores per node, 4 hardware threads per core
  - Total of >240 threads per node
- **Your application is very likely to run on KNL with simple port, but high performance is harder to achieve.**
- **Many applications will not fit into the memory of a KNL node using pure MPI across all HW cores and threads because of the memory overhead for each MPI task.**
- **Hybrid MPI/OpenMP is the recommended programming model, to achieve scaling capability and code portability.**
- **Current NERSC systems (Babbage, Edison, and Hopper) can help prepare your codes.**