

Compilation:

- To compile the release build, use **make**
- To compile the debug build, use **make DEBUG=TRUE**
- By default, it compiles using arch=compute_75, to use a different compute version use **make ARCH=compute_xx**

Running:

- To run on **single GPU**, first obtain a Cori allocation with 1 GPU then in terminal type **export=OMP_NUM_THREADS=1**
- Then use the following command to run: **srun ./program_gpu ./test_data/ref_file_30000.txt ./test_data/que_file_30000.txt ./test_data/results_30000**
- To run on **multiple GPUs**, first obtain a Cori allocation with **X** GPUs then in terminal type **export=OMP_NUM_THREADS=X**
- Then run using the same command as above, program will detect the GPUs and distribute load accordingly.

Test Data Sets:

- Test Datasets name ends with the number of sequences present in that file.
- For V100 GPU the maximum number of alignments that can be performed in a single iteration is equals to 30000. For profiling purposes please use the files ending in **30000**.
- A reference file contains longer sequences and starts with **ref** while a query file starts with **que** and contains shorter sequences. Result file contains correct alignment results.