Abstract: The Portland Group – recent updates

This talk will cover the new features in the PGI compilers and tools. PGI has been selected by the Department of Energy to supply C/C++/Fortran compilers which are GPU enabled for the CORAL machines going into Lawrence Livermore and Oak Ridge National Laboratories. These platforms are based on OpenPOWER and Nviida’s Volta GPU’s which communicate using NVLink. The new architecture enables managed memory which allows the hardware to move memory pages between the CPU’s memory and the GPU’s memory. The talk with discuss this new architecture and compiler support for managed memory.

PGI has enabled multicore OpenACC support across CPU cores. The pathway enables programmers to run the same OpenACC code on both CPU and GPU and server as a pathway to future architectures.

In addition to OpenPOWER and multicore support, the compilers have been updated to support OpenACC 2.0, as well as a variety of language features in Fortran, C, and C++ as well as GNU compatibility in the C++ compiler.