HPC Overview

In 2014 The National Institute of Aerospace, funded by a grant through the Economic Development Authority for the City of Hampton, launched the inaugural NIA High Performance Computing Center having a nearly 20 TFlop Cluster capability. NIA manages and actively develops the High Performance Computing (HPC) environment and provides this service to all NIA faculty, staff, students, NASA, local schools and affiliates.

With close to 3000 clustered CPU's and 19 TFlop of data processing space, NIA has responded to the need for locally available computational processing, built on a solid Linux foundation and backed by Bright Computing Cluster Server Manager ©.

Tools that are currently Available:

Intel Compilers — The Intel compiler suite includes Fortran 70/90/95, C, C++ and OpenMP .The **OpenMP** Application Program Interface (API) supports multi-platform shared-memory parallel programming in C/C++ and Fortran on all architectures, including Unix platforms and Windows NT platforms.

Open64 Compiler Suite — The Open64 compiler suite includes C, C++, Fortran 77/90/95 and OpenMP compilers and debuggers. The Open64 compiler suite is an open source product.

Portland Group Compilers — The Portland Group (PGI) compiler suite includes Fortran 70/90/95, High Performance Fortran (HPF) **High Performance Fortran (HPF)** is an extension of Fortran 90 with constructs that support parallel computing, published by the High Performance Fortran Forum (HPFF), C, C++ and OpenMP.

Computer Cluster Pricing
(Per Core Cost, Per Hour):

Commercial Customer	$0.10
PTI Incubator Companies	$0.05
NIA, NASA & University Research	$0.05
Hampton City Schools	No Charge

Special Pricing for High Volume Multi-Week Jobs;
Mininum Charge ($250) for Commercial Customers
Monthly Billing Cycle;
Lowest Rates for Fixed Monthly Usage

Computer Cluster Guidelines

Storage Guidelines: User space is limited on the home directory filesystem (*/home*) to 40 GB per user.

Export Control/ITAR
Use of Export Controlled Software and Data is restricted from use on the NIA HPC.

End User Agreement Required to access the NIA HPC

For more information contact the National Institute of Aerospace at 757.325.6716