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Komodo's Team

Komodo is a species of lizard found in the Indonesian islands of Komodo. We choose it because Komodo dragons are quiet but deadly animals, he possess a venomous bite. We believe that we are even quiet but deadly like dragons.

Hardware

Head Node

Supermicro SM815-5
INTEL XEON E5606V3 2.13GHz 4 core
Corsair 8x16GB DDR4 2133 MHz
SAS SSD 1TB
Infiniband Mellanox TDP
1536 Cuda Cores 1085 MHz2GB GDDR5 256-bit

Compute Nodes

Inspur Yingxin NF5280M4
Dual Intel Xeon E2670v3 2.3GHz 12 cores
Corsair 8x16GB DDR4 2133 MHz
Intel SSD 240GB
Infiniband Mellanox TDP
Nvidia Tesla V100

Software

We used Centos 7.5 for operating system. In this cluster, various types of compilers will be installed starting from GNU GCC, Intel Compiler, and Python. As the main API in a cluster of high-performance computing, various types of MPI will be installed starting from openMPI, MPICH, Intel MPI, and MPIVCH. This cluster will be built with FDR Infiniband Mellanox. OpenSM and RDMA will be used as software that will support the performance of FDR Infiniband. In addition, NFS is used as a protocol that will share data on each node connected in a cluster. For the library, another math library, our cluster use many library for support any process while running program. In this architecture, we used Ganglia for monitoring cluster, PBS torque and Maui from adaptive computing is used to manage process queues and scheduling time for each process that is done on a cluster to the hardware. And we used Tensorflow for Artificial Intelligence framework.

Running Strategies

Our plan in running these applications is, we have read from various kinds of references, then share experiences with our seniors or lecturers. As well as each application question is shared with each team member. So that it is more focused on answering application questions.

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