Actas de Reunion

Reunion 23/07/2021

Hora	7:45 am
Duración	20 min
Temas Tratados	- Documento laboratorio real en cronos. - Documentos sobre configuración del cluster. - SOLO SE HACE HPL, NO HPCG.
Items Accionables	- Completar laboratorio de Cronos. - Revisar configuración actual de cluster, configurar IB (indagar más por que no aparecen las interfaces, entonces puede que toque instalarlo desde 0), manejador de recursos (SLURM) y sistema de archivos compartido (ver cual de los dos NFS es más conveniente). - Automatizar los backups.

2. HPL and HPCG (11.25 points)

The proposal should include descriptions of the software environment (operating system, complier, math library, MPI software, software version, etc.), the testing method, performance optimization methods, performance estimation, problem and solution analysis, etc. In-depth analysis on HPL, HPCG algorithms and the source codes would be a plus.

Download the HPL software at: http://www.netlib.org/benchmark/hpl/.
Download the HPCG software at: https://github.com/hpcg-benchmark/hpcg

It is recommended to run verification and optimization of HPL and HPCG benchmarks on x86 Xeon CPU or Tesla GPU platforms. In addition, if other hardware platforms are used, you are welcomed to submit the related analysis and results of demonstrating reasonable performance.

Reunion 26/07/2021

Hora	7:46 pm
Duración	143 min
Temas Tratados	- Configuración de InfiniBand.
Items Accionables	- Hay que terminar de instalar eso :(

Reunion 29/07/2021

Hora	8:30 pm
Duración	38 min
Temas Tratados	- Desatrasar a nuevo miembro del grupo. - Distribución de tareas para meta volante 1.

Items Accionables	- Instalar la suite del compilador de intel (Simon)
	  - https://software.intel.com/content/www/us/en/develop/tools/oneapi/base-toolkit/download.html?operatingsystem=linux&distributions=webdownload&options=offline
	  - https://software.intel.com/content/www/us/en/develop/tools/oneapi/hpc-toolkit/download.html?operatingsystem=linux&distributions=webdownload&options=offline
	  - https://software.intel.com/content/www/us/en/develop/documentation/mpi-developer-reference-linux/top/introduction.html
	- Configurar NFS (Isa)
	  - https://www.tecmint.com/install-nfs-server-on-centos-8/
	  - https://www.linuxtechi.com/setup-nfs-server-on-centos-8-rhel-8/
	- Configurar InfiniBand (Samu + Isa)
	  - https://access.redhat.com/documentation/en-us/red_hat_enterprise_linux/8/pdf/configuring_infiniband_and_rdma_networks/Red_Hat_Enterprise_Linux-8-Configuring_InfiniBand_and_RDMA_networks-en-US.pdf
	  - https://access.redhat.com/documentation/en-us/red_hat_enterprise_linux/7/html/networking_guide/ch-configure_infiniband_and_rdma_networks
	- Investigar HPL (David + Simon)
	  - https://www.netlib.org/benchmark/hpl/

Reunion 31/07/2021

Hora	9:10 pm
Duración	60 min
Temas Tratados	- Instalación del intel OneApi base y HPC en ambos nodos.

Items Accionables	- Investigar tuning de intel MPI (David + Simon)
	  - https://software.intel.com/content/www/us/en/develop/articles/tuning-the-intel-mpi-library-basic-techniques.html
	  - Autotuning de mpi: https://software.intel.com/content/www/us/en/develop/documentation/mpi-developer-reference-linux/top/environment-variable-reference/tuning-environment-variables/autotuning.html
	- Investigar HPL (David + Simon)
	  - https://www.netlib.org/benchmark/hpl/
	- Configurar InfiniBand (Samu + Isa)
	  - https://access.redhat.com/documentation/en-us/red_hat_enterprise_linux/8/pdf/configuring_infiniband_and_rdma_networks/Red_Hat_Enterprise_Linux-8-Configuring_InfiniBand_and_RDMA_networks-en-US.pdf
	  - https://access.redhat.com/documentation/en-us/red_hat_enterprise_linux/7/html/networking_guide/ch-configure_infiniband_and_rdma_networks

Reunion 03/08/2021

Hora	7:30 pm
Duración	60 min
Temas Tratados	- Instalación del intel OneApi base y HPC en ambos nodos.

Items Accionables	- Investigar tuning de intel MPI (David + Simon)
	  - https://software.intel.com/content/www/us/en/develop/articles/tuning-the-intel-mpi-library-basic-techniques.html
	  - Autotuning de mpi: https://software.intel.com/content/www/us/en/develop/documentation/mpi-developer-reference-linux/top/environment-v

	ariable-reference/tuning-environment-variables/autotuning.html
	
	- Investigar HPL (David + Simon)
	  - https://www.netlib.org/benchmark/hpl/
	
	- Configurar InfiniBand (Samu + Isa)
	  - https://access.redhat.com/documentation/en-us/red_hat_enterprise_linux/8/pdf/configuring_infiniband_and_rdma_networks/Red_Hat_Enterprise_Linux-8-Configuring_InfiniBand_and_RDMA_networks-en-US.pdf
	  - https://access.redhat.com/documentation/en-us/red_hat_enterprise_linux/7/html/networking_guide/ch-configure_infiniband_and_rdma_networks

Reunion 07/08/2021

Hora	10:00 am
Duración	6 horas (Sesión de trabajo)
Temas Tratados	- Instalación del intel OneApi base y HPC tools en ambos nodos. - Configuración de make para intel MPI y MKL.

Reunion 08/08/2021

Hora	3:00 pm
Duración	6 horas (Sesión de trabajo)
Temas Tratados	- Soluciuón de bugs. - Reconfiguración de red infiniband y reinstalación de driver Mellanox en el nodo 8. - Binding de procesos. - Reinstalación de intel OneAPI. - Uso de HPL de Intel.