TOPICOS SELECTOS PARA HPC III

Objetivo

El alumno aprenderá conceptos Avanzados de HPC: Herramientas para BigData, Cómputo en la Nube, Cómputo en malla y diseño de herramientas e infraestructura para centros de cómputo de alto rendimiento y centro de datos.

Contenido:

1) Diseño de herramientas para Sistemas Distribuidos

1.1 Patrones de Middlewares
1.2. Arquitecturas de Cloud Computing
1.3 Arquitecturas de Grid Computing
1.4 Infraestructura como servicios

2) Herramientas para Big Data

2.1. Hadoop
2.2. Storm
2.3. Spark
2.4. Cassandra

3) Herramientas de Soporte para HPC

3.1. Programación Orientada a tareas
3.2. Herramientas para Sistemas Híbridos Heterogéneos
3.3. Despachadores para Sistemas heterogéneos
3.4. Manejadores de Colas
3.5. Sistemas de Archivos Paralelos

4) Computación Verde

4.1. Introducción
4.1. Infraestructura de Cómputo: Centro de Datos y Supercómputo
4.2. Indicadores de Energía en Servidores
4.3. Indicadores de Energía para Centro de Datos
4.4. Indicadores de Energía para Centros de Supercómputo

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