High performance computing: Changing the world with speed, efficiency and accuracy

Do you have a sprawling university campus where thousands of students are trying to solve complex problems like climate change, social security or precision medicine? or do you have thousands of researchers working on an AI-based technology to fuel India's next space mission?

You might already know that a high-performance computing (HPC) solution is what you must look for! But how would you ensure that you have the HPC solution with the efficiency and accuracy you need? How will you integrate a HPC solution with your existing systems? How would you be able to scale your existing system to achieve the desired outcome? Or alternately build a solution ground up like a green field project?

Let us look at how a HPC cluster could help you.

A high performance computing cluster could be your propulsion fuel
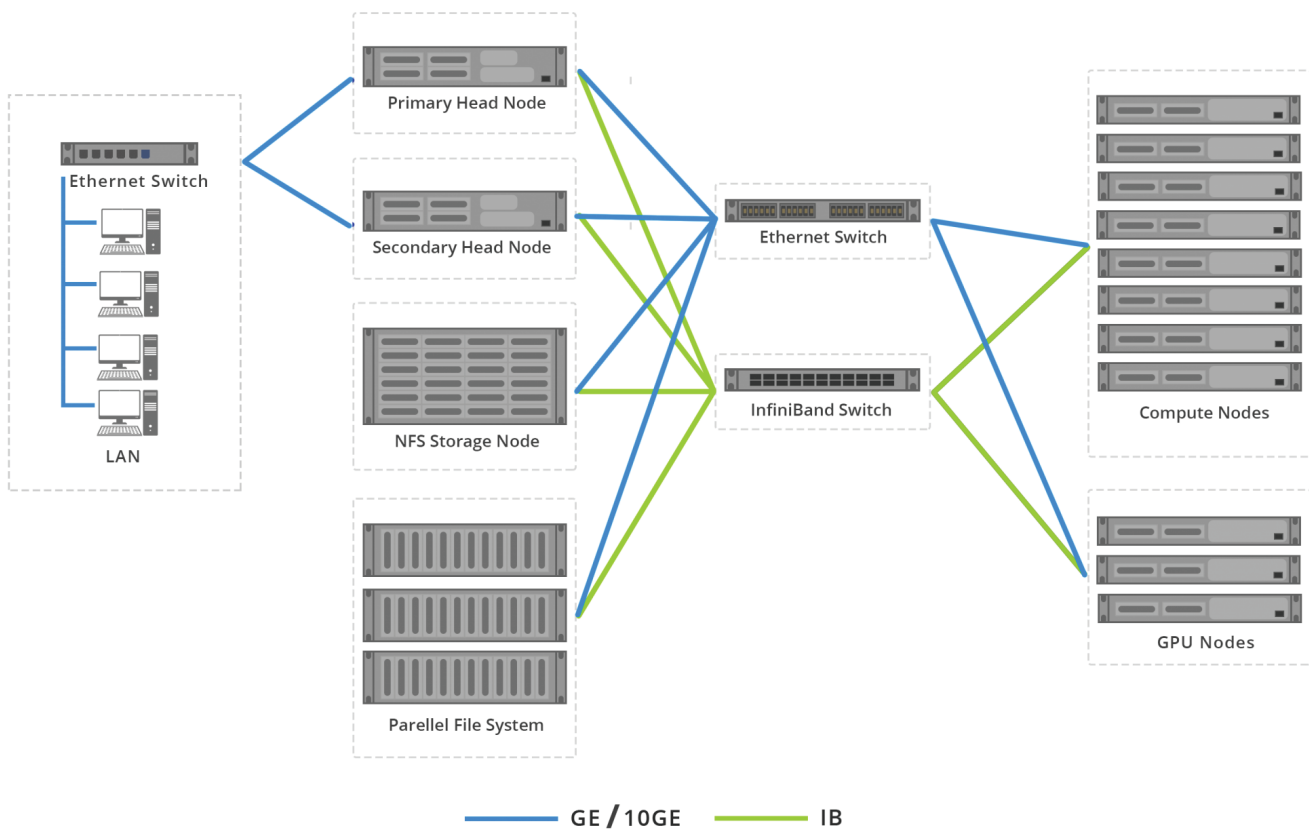
With a multitude of cores and processors, a huge memory, high-speed networking and large data storage, a HPC cluster can significantly increase accuracy and speed of your computing system. It can run advanced, large-scale parallel computing application programs with an accelerated efficiency, thus delivering a dramatic boost in throughput and cost savings.

Primary Head Node

Secondary Head Node

NFS Storage Node

Parellel File System

Ethernet Switch

LAN

Ethernet Switch

InfiniBand Switch

Compute Nodes

GPU Nodes

GE / 10GE   IB

Which sectors should deploy high performance computing solutions?

Whether you are into sectors such as space science, medical science, environmental science, oil and gas, media and entertainment or, you have a technology institution; HPC clusters, Graphic processing Unit (GPU) clusters and visualization clusters can help you achieve high speed computation, or to tackle high resolution and real time simulations.

What should you look for in a high performance computing (HPC) solution provider?

Depending on your requirement, ideal high-performance computing solution providers put together a custom solution with the best of technology from across the globe.

If you are looking for a high performance computing solution provider, make sure that they have the following:

Dedicated teams: A dedicated team focused on working out a solution based on your needs & pain areas, is better than opting for an existing solution that may/may not be as nuanced.

Agile solutions: With the amount of data that needs to be processed, solutions need to be agile and adaptable. Deployment of alternate algorithms and software, if and when required, could save a lot of time and effort.

Brand agnostic vendors: Rather than working with vendors who offer proprietary solutions of specific providers, go for high-performance computing solution providers that are vendor agnostic in nature having deep domain expertise along with wide partnerships with industry leading hpc vendors like INTEL ,Dell EMC , IBM, HP, NVidia ,Super micro.

GBB's HPC solutions

GBB, an end-to-end IT infrastructure solutions provider, focusing on consulting, design, deployment and management of end to end IT Infrastructure solutions that are innovative and cost-optimized.

HPC solutions deployed by GBB are being used extensively by various reputed technical universities across India. HPC solutions are designed & deployed based on the nature of requirement , workloads and applications.

With a pool of experienced engineers and dedicated teams, GBB's HPC solutions combine the best of technology and human minds to help customers focus on doing what they do best - changing the world.

Voice of our customers

GBB has done an excellent job of building our 40 Node GPU Cluster. Their after sales support and response time has exceeded our expectations.

MR. BHASKAR PRASAD

GM, IT Services, IIIT, Hyderabad

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The upgradation of our existing HPC Nodes and Storage was managed without any challenges by team GBB. We rely on them for all our HPC requirements.

DR. AMIT ACHARYYA

Associate Professor, Department of Electrical Engineering, IIT, Hyderabad

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Our HPC is always up and running due to GBB's efforts. Even before we encounter a difficulty, the team anticipates all possibilities and comes up with solutions.

DR. ARUN. K. MANNA

Assistant Professor, Department of Chemistry, IIT Tirupati

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