

success story



Singapore-MIT Alliance

**using
Itanium™ 2-based
systems from hp
for research**

The global academic partnership between the Massachusetts Institute of Technology (MIT), National University of Singapore (NUS), and Nanyang Technological University (NTU) has chosen Itanium 2-based systems from HP and the Linux operating system to power its research in physical and life sciences.

"The [Intel®] Itanium 2 processor is designed to support vast amounts of data, users and highly complex calculations, making it an important enabling technology for Singapore's scientific and industrial researchers," said Professor Khoo Boo Cheong, Program Chair of High Performance Computation for Engineered Systems (HPCES) at the Singapore-MIT Alliance (SMA).

SMA faculty and postgraduate students will be using the Itanium 2-based systems to conduct modeling and simulation, design and virtualization, and scientific research into areas such as genome mapping and flow-injection analysis. "Naturally, Linux powered by the Itanium 2 processor is the ideal choice as it provides 64-bit performance and simplicity," said Prof. Khoo, who is also Associate Professor at the Department of Mechanical Engineering at NUS. SMA develops its own software, and Linux provides the flexibility to write software applications that suit its research needs cost-effectively.

Itanium 2-based systems from HP not only provide faster processing speed with increased memory capabilities, but they have also proven to be the ideal platform for high-performance technical compute clusters. "Itanium 2 is also 100% backward compatible, allowing easy two-way scalability and migration from IA-32 to IA-64 and vice versa, complementing our existing systems," said Prof. Khoo.

He added that HP and SMA share the same vision when it comes to the potential of Itanium 2-based systems in scientific computing. "Our students will have valuable exposure to next-generation technologies with the Itanium 2-based systems," he concluded.

customer at a glance

name: Singapore-MIT Alliance

industry sector: research/higher education

URL: <http://Web.mit.edu/sma>

technology highlights

- 15 4-CPU HP rx5670 servers
- Linux operating system
- compute cluster configuration for scientific problem solving

challenges

- support vast amounts of data, users and highly complex calculations
- provide 64-bit performance and simplicity
- meet research needs cost-effectively

solution

- Itanium 2-based systems from HP
- Red Hat Linux

results

- faster processing speed with increased memory capabilities
- ideal platform for cost-effective, high-performance technical compute clusters
- easy two-way scalability and migration from IA-32 to 64-bit computing and vice versa
- flexibility to write software applications cost-effectively provided by Linux



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03/03

5981-6774EN