**Workload brief**

**Make better decisions, faster**

**HP Apollo 6000 System for risk analysis**

Rack-scale solutions for better performance, efficiency, and cost of ownership for Financial Services firms using Monte Carlo simulation workloads.

---

**Faster, better, smarter**

The tight competition and rapid pace of change in the global financial markets has fueled the demand for faster Monte Carlo simulation solutions so you can better model—and manage—risk. But increasing performance usually means adding more racks, which in turn requires more space and energy.

HP has taken a new approach to computing for the Financial Services industry, to help improve performance with better energy-efficiency and cost-effectiveness. The HP Apollo 6000 System is a rack-level solution that can be tailored for specific high-performance computing (HPC) workloads. The result is a solution that is purpose-designed to solve Monte Carlo simulations—regardless of scale—faster, better, and smarter than ever before.

**The right compute at the right economics**

The first of many innovations built for the unique requirements of the HPC market, the HP Apollo 6000 System is designed to excel in dense scale-out environments by improving performance and efficiency across racks. For Monte Carlo simulation workloads, it delivers excellent performance per core using less energy in less space than traditional servers.

Right-sized for financial applications, the HP Apollo 6000 System holds up to 160 servers per standard 48U rack. HP’s external power shelf supports up to 120 servers to improve rack-level energy efficiency and reduce costs. Flexibility in networking connects allows you to further improve performance and costs by selecting the option that is just right for your workload. And the HP ProLiant XL250a Gen9 Server tray for HP Apollo 6000 supports up to two NVIDIA graphics processing units (GPUs) or Intel® Xeon Phi™ coprocessors to accelerate simulation performance over a CPU alone.

---

Get better Monte Carlo simulation performance per core, watt, and square foot with low total cost of ownership, delivered by an industry leader in high-performance computing.
Position yourself for success

HP Apollo 6000 System delivers more performance for your budget:

- **Per core**
  - Two 1P servers per HP ProLiant XL220a Server tray with Intel® Xeon® E3-1200 v3 series processors with up to four cores each increase performance per core for single-threaded applications over a 2P blade.
  - Get 2P high-performance servers in the HP ProLiant XL230a Server tray with Intel Xeon E5-2600 v3 series processors providing up to 70 percent more performance while saving up to 36 percent in energy.¹
  - The HP ProLiant XL250a Gen9 Server tray has one 2P server per tray with support for up to two graphics accelerators: NVIDIA Tesla K40 or K80 GPUs accelerate performance up to 24X over a CPU alone,² while Intel Xeon Phi 5110P or 7120P coprocessors provide an additional 14 teraflops accelerated performance.³

- **Per watt**
  - The external power shelf supports up to six chassis, while the HP Advanced Power Manager dynamically allocates power to save on energy.

- **Per square foot**
  - With 10 server, storage, or accelerator trays per 5U chassis, you can fit up to 160 servers in one 48U rack, for 4X the density of traditional servers.

With flexibility that leads to savings

HP innovations give you the flexibility to fit 20 x 1P or 10 x 2P servers in the space of five traditional servers, and to power 80 servers with a single power shelf. The HP Innovation Zone also allows for network interface card and FlexibleLOM options to fit your workload needs while increasing cost savings.

Complete your solution

**HP Services and Support**

HP has a global team of award-winning HPC services experts available to help design, deploy, manage, and support your HPC environment and processes, including consulting, integration, outsourcing, and support.

**HP Financing for HP Apollo Systems**

Having access to technology on terms that align to your business needs is critical, and HP Financial Services is uniquely positioned to help accelerate your move to the data center of the future with a broad portfolio of flexible investment and transition solutions.

There’s no need to wait

Spend less time waiting to see your risk modeling results. Visit the link below or contact your authorized HP sales representative or reseller to find out how the HP Apollo 6000 System can maximize price/performance for your Monte Carlo simulation workloads.

Learn more at [hp.com/go/apollo](http://hp.com/go/apollo)

---

¹²³ Intel.com/performance
²³ nvidia.com/object/tesla-servers.html

© Copyright 2014–2015 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Intel Xeon Phi and Intel Xeon are trademarks of Intel Corporation in the U.S. and other countries.

4AA5-3273ENN, February 2015, Rev. 2