HP ProLiant BL685c G6: #1 4-socket blade virtualization performance on VMmark Benchmark

HP Leadership

84 Virtual Machines
Up to 2,688 VMs per 42U Rack
20.87 @14 tiles
Best 4P Virtualization
HP ProLiant BL685c G6

Customer Value

What are the benefits of using the HP ProLiant BL685c G6 for virtualization?

HP understands our customers' business needs and is best equipped to deliver a consolidation solution to fit those needs.
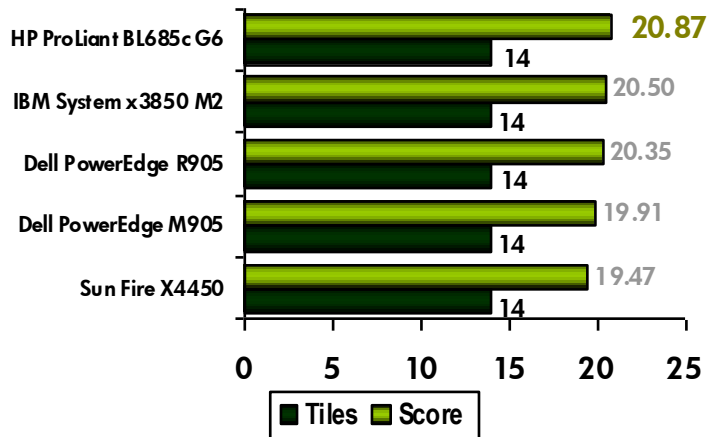
This ultra-dense server blade is the best 4P candidate for virtualization applications. With 32 memory sockets for up to 256 GB memory capacity and up to 16 network connections per blade using on-board Virtual Connect Flex-10 enabled Ethernet controllers, the BL685c G6 provides ample I/O and memory to support virtualization needs. The newly redesigned BL685c G6 is built for performance intensive applications and virtualized environments. Dual Dynamic Power Management and Rapid Virtualization Indexing improve application performance. Because the BL685c G6 can deliver up to 8 servers per 10U enclosure and 4 enclosures per industry standard rack, customers could achieve up to 32 servers and potentially up to 2,688 virtual machines in an industry standard rack.

Key Points

• The new HP ProLiant BL685c G6 with new 2.9-GHz Quad-Core AMD Opteron™ processors is the highest performing server blade on the VMmark benchmark with a score of **20.87@14 tiles**.
• With this result, customers have the potential to achieve up to 2,688 Virtual Machines per 42U industry standard rack.

Figure 1. VMmark benchmark comparison

BL685c G6 comparison to top 4P Dell, IBM, Sun and 4P Dell blade

Server	Tiles	Score
HP ProLiant BL685c G6	14	20.87
IBM System x3850 M2	14	20.50
Dell PowerEdge R905	14	20.35
Dell PowerEdge M905	14	19.91
Sun Fire X4450	14	19.47

■ Tiles □ Score

Results as of 04-27-09

Each tile is a collection of 6 diverse workloads each running its own virtual machine

Technology for Better Business Outcomes

Table 1. VMmark configuration for results in chart on page 1

System Description	VMmark Version	Score	Published Date
HP ProLiant BL685c G6 Quad-Core AMD Opteron™ 8389 2.9 GHz 4 sockets/16 cores/16 total threads 128 GB RAM	VMmark v 1.1 VMware ESX v4.0 Build 148783	20.87@14 tiles	04/27/09
IBM System x3850 M2 6-Core Intel® Xeon® X7460 2.66 GHz 4 sockets/24 cores/24 total threads 128 GB RAM	VMmark v 1.1 VMware ESX v3.5.0 Update 3 Build 123630	20.50@14 tiles	03/24/09
Dell PowerEdge R905 Quad-Core AMD Opteron 8384 2.7 GHz 4 sockets/16 cores/16 total threads 128 GB RAM	VMmark v1.1 VMware ESX V3.5.0 Update 3 BETA Build 120079	20.35@14 tiles	11/12/08
Dell PowerEdge M905 (blade) Quad-Core AMD Opteron 8384 2.7 GHz 4 sockets/16 cores/16 total threads 128 GB RAM	VMmark v1.1 VMware ESX v3.5.0 Update 3 BETA Build 120079	19.91@14 tiles	11/12/08
Sun Fire X4450 6-core Intel Xeon X7460 2.66 GHz 4 sockets/24 cores/24 total threads 80 GB RAM	VMmark v 1.1 VMware ESX v3.5.0 Update 2	19.47@14 tiles	01/13/09

Test results as of 04-27-09. For more details, please visit: http://www.vmware.com/products/vmmark/results.html

What VMmark measures

The VMmark benchmark is intended to measure the performance of virtualized servers on a system under test (SUT) so that customers can compare the capabilities of different platforms for virtualization. VMmark represents the performance of virtual machines within a server running VMware ESX and a set combination of operating systems and specially tuned applications reflecting a typical datacenter environment. VMmark uses a collection of 'sub-tests' derived from commonly used load-generation tools as well as from benchmarks developed by the Standard Performance Evaluation Corporation (SPEC®). VMmark is an open standards effort that is agnostic toward hardware platforms and different virtualization software systems. VMmark uses workloads that represent common applications in datacenters. It is important to note that VMmark is designed to benchmark the performance of the virtualization software and the hardware, and is not designed as a benchmark of any other software component.

For more information

HP ProLiant BL685c G6 server: http://www.hp.com/servers/bl685c

HP VMware information: http://www.hp.com/go/vmware

An HP authored overview of the VMmark benchmark on HP ProLiant servers and server blades:
ftp://ftp.compaq.com/pub/products/servers/benchmarks/VMmark_Overview.pdf

VMmark overview: http://www.vmware.com/products/vmmark/overview.html