HP ProLiant demonstrates blade virtualization performance leadership

ProLiant BL685c G5 and ProLiant BL495c G5 take VMmark records

HP Leadership

»The NEW HP ProLiant BL495c G5 is an innovative high-performance blade optimized for virtualization. With technology such as HP Virtual Connect Flex-10 and AMD™ Rapid Virtualization Indexing, the ProLiant BL495c G5 is optimized for hosting virtual machines.

»The HP ProLiant B685c G5 server blade delivers no-compromise performance and expansion and excellent density with its four processor server blade form factor. With up to four Quad-Core AMD Opteron processors, 128GB of DDR2 memory, two hot plug serial hard-drives, four embedded Gigabit NICs, and three I/O expansion slots, the HP ProLiant BL685c delivers the density you want with the performance you need to handle the most demanding enterprise class applications.

Customer Value

What are the customer benefits of using the HP ProLiant blades for virtualization?

HP ProLiant BladeSystem offers the best density per industry standard rack, making it possible for customers to achieve the greatest amount of consolidation through the greatest potential number of virtual machines per rack.
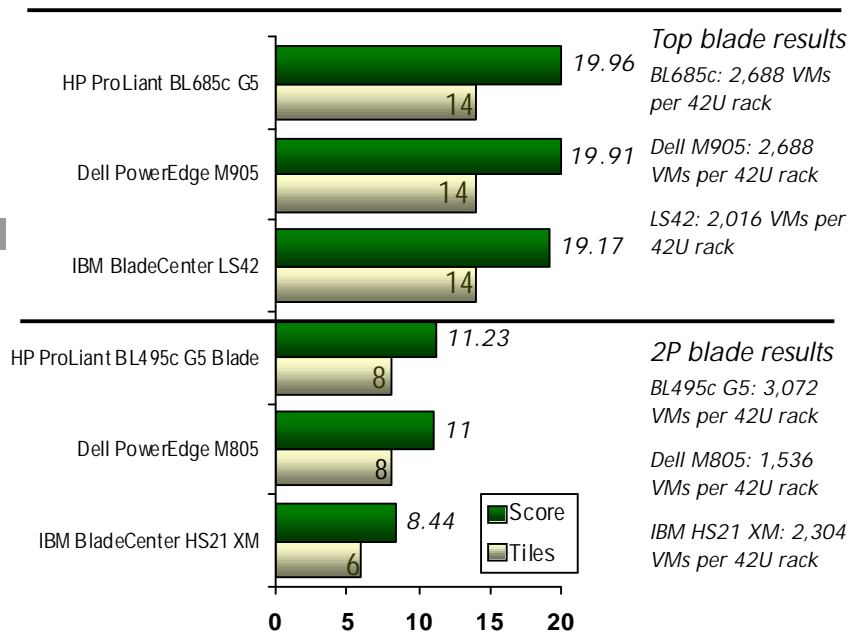
Because the ProLiant BL685c G5 has such excellent density in its four-processor blade and offers 4P blade memory expansion capacity, it is no wonder its latest VMmark benchmark results showed the ultimate in blade virtualization performance. With this result, customers could achieve up to 2,688 virtual machines per on a single 42U rack (14 tiles x 6 virtual machines per tile x 32 blades per 42U rack).

The ProLiant BL495c G5 eliminates the performance bottlenecks of a virtual machine host. Engineered with more memory and I/O than any other two-processor server blade, the world's first virtualization blade maximizes the number and performance of VMs that customers can deploy per blade. This means customers can add more VMs to their network without adding additional IT staff, and can get more bang for their buck out of expensive hypervisor licenses. Using the VMware benchmark, ProLiant BL495c G5 has the potential to achieve 3,072 VMs per 42U rack.

Key Points

- The HP ProLiant BL685c G5 delivers the best blade performance for virtualization with its latest record of 19.96 @ 14 tiles – up to 2,688 VMs and 4 TB memory per 42U rack!
- The HP ProLiant BL495c G5 is the best 2P blade with a result of 11.23 @ 8 tiles – up to 3,072 VMs per 42U rack!

Figure 1. Vendor VMmark top blade and 2P blade results

Top blade results
BL685c: 2,688 VMs per 42U rack

Dell M905: 2,688 VMs per 42U rack

LS42: 2,016 VMs per 42U rack

2P blade results
BL495c G5: 3,072 VMs per 42U rack

Dell M805: 1,536 VMs per 42U rack

IBM HS21 XM: 2,304 VMs per 42U rack

Test results as of 01-20-09.

Technology for better business outcomes

The ProLiant advantage

HP proven performance

Proven performance is part of the reason that HP is #1 in server shipments. HP has posted hundreds of benchmark results on the most commonly used benchmarks on hundreds of ProLiant servers and blades, helping customer to identify reasons to be confident in HP.

Table 1. VMmark configuration for system results

System Description	VMmark Version & Score	Processors	Published Date
Top blade results			
HP ProLiant BL685c G5 Quad-Core AMD Opteron processor Model 8384 2.7GHz 128GB (16 x 8GB) RAM; 4 sockets/16 total cores/16 total threads	VMmark v1.1 VMware ESX v3.5.0 Update 3	19.96 @ 14 tiles	12/09/08
Dell PowerEdge M905 Quad-Core AMD Opteron processor Model 8384 2.7GHz 128GB (16 x 8GB) RAM; 4 sockets/16 total cores/16 total threads	VMmark v1.1 VMware ESX v3.5.0 Update 3 BETA (Build 120079)	19.91 @ 14 tiles	11/12/08
IBM BladeCenter LS42 Quad-Core AMD Opteron processor Model 8384 2.7GHz 128GB (16 x 8GB) RAM; 4 sockets/16 total cores/16 total threads	VMmark v1.1 VMware ESX v3.5.0 Update 3 BETA (Build 121023)	19.17 @ 14 tiles	01/13/09
Top 2P blade results			
HP ProLiant BL495c G5 Quad-Core AMD Opteron processor Model 2384 2.7GHz 64GB (8 x 8GB) RAM; 2 sockets/8 total cores/8 total threads	VMmark v1.1 VMware ESX v3.5.0 Update 3	11.23 @ 8 tiles	12/30/08
Dell PowerEdge M805 blade Quad-Core AMD Opteron processor Model 2384 2.7GHz 64GB (8 x 8GB) RAM; 2 sockets/8 total cores/8 total threads	VMmark v1.1 VMware ESX v3.5.0 Update 3 BETA (Build 120079)	11.00 @ 8 tiles	11/17/08
IBM BladeCenter HS21 XM Quad-Core Intel Xeon X5450 3.0GHz 32GB RAM 2 sockets/8 total cores/8 total threads	VMmark v1.1 VMware ESX v3.5.0 Update 1	8.44 @ 6 tiles	09/05/08

Test results as of 01-20-09. For more details, please visit: http://www.vmware.com/products/vmmark/results.html

For more information

HP ProLiant BL685c G5 server blade: www.hp.com/servers/bl685c

HP ProLiant BL495c G5 server blade: www.hp.com/servers/proliant/bl495c