

# HP Launches Virtualization Technologies That Cut Networking Costs by 55 Percent

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HP today announced breakthrough networking, storage and server technologies that reduce costs, increase bandwidth flexibility and improve overall performance of virtual server environments.

The HP Virtual Connect Flex-10 Ethernet module, a direct connect storage bundle for HP BladeSystem, and the HP ProLiant DL385 G5p server are among HP's offerings that are helping customers efficiently deploy their virtualized infrastructures.

While a growing number of companies deploy server virtualization to gain operational savings within their technology infrastructures, the cost of networking virtual servers continues to climb – for example, a typical server that hosts virtual machines requires six network connections.

To reap the benefits of their virtualized environment, companies are finding it necessary to invest in additional networking equipment, including network expansion cards, switches and cables. As an example, customers must purchase expensive network switches in either one Gigabit (Gb) or 10Gb increments to meet the increased bandwidth required for additional virtual server workloads.

HP's new Virtual Connect Flex-10 Ethernet module is the industry's first interconnect technology that can allocate the bandwidth of a 10Gb Ethernet network port across four network interface card (NIC) connections. This increase in bandwidth flexibility eliminates the need for additional network hardware equipment. As a result, customers

deploying virtual machines and utilizing Virtual Connect Flex-10 can realize savings of up to 55 percent in network equipment costs.

Virtual Connect Flex-10 can save 240 watts of power per HP BladeSystem enclosure – or 3,150 kilowatt hours per year – compared to existing networking technologies.

“Customers looking to eliminate the common obstacles of networking costs and bandwidth flexibility should look no further than HP,” said Mark Potter, vice president and general manager, BladeSystem, HP. “These technologies break down the barriers of virtualized networks, giving customers the greatest return on their investments.”

## **Cost benefits and four-to-one network consolidation**

HP Virtual Connect Flex-10 distributes the capacity of a 10Gb Ethernet port into four connections, and enables customers to assign different bandwidth requirements to each connection. Optimizing bandwidth based on application workload requirements enables customers to leverage their 10Gb investments across multiple connections, supporting virtual machine environments and other network intensive applications. This reduces overall network costs and power usage by provisioning network bandwidth more efficiently.

The recently announced HP ProLiant BL495c virtualization blade includes built-in Virtual Connect Flex-10 functionality that enables it to support up to 24 NIC connections. With increased network bandwidth and memory capacity, the BL495c can accommodate more virtual servers than other competitive blade server offerings on the market.

Existing HP ProLiant c-Class blade customers can upgrade to Virtual Connect Flex-10 with the new HP NC532m Flex-10 expansion card.

## **Simple, cost-effective storage expansion for HP BladeSystem customers**

HP's new direct connect storage bundle for HP BladeSystem includes two HP StorageWorks 3Gb serial attached SCSI (SAS) BL switches and an MSA2000sa storage array.

Traditionally, BladeSystem server administrators have had limited direct-attach or shared storage options and have had to rely on personnel with specialized knowledge to build a storage area network (SAN) based solution. This new low-cost, reliable storage option allows server administrators to easily deploy scalable shared SAS storage without the costs and complexity SANs require. By simply purchasing additional MSA2000sa arrays, customers can deploy up to 192 terabytes of external shared storage directly connected to an HP BladeSystem enclosure.

The combination of the HP ProLiant BL495c virtualization blade server, Virtual Connect Flex-10 modules and the shared SAS storage bundle reduces the cost per virtual machine by more than 50 percent when compared to competitive solutions.

HP has enhanced its Virtual Connect 4Gb Fibre Channel module to allocate storage resources on a per virtual machine basis. This further simplifies storage and virtualization deployments for Fibre Channel storage customers. Customers can assign up to 128 separate SAN volumes per server blade for greater performance and flexibility.

## **Innovative server design removes bottlenecks to virtual server performance**

The new HP ProLiant DL385 G5p is a rack-based server optimized for virtualization. It offers up to 6 terabytes of internal storage as well as

double the memory and a 67-percent improvement in energy efficiency when compared to previous generations. Based on the new AMD Opteron 2300 Series Quad-Core processor, the DL385 G5p improves application performance and expands support for virtual machines.

The newly announced offerings are all available today, for the following U.S. list prices: The HP Virtual Connect Flex-10 Ethernet module is \$12,199; the HP NC532m Flex-10 NIC upgrade card is \$699; the HP Virtual Connect 4Gb FC module is \$9,499; the HP ProLiant DL385 G5p is \$2,259; and the HP direct connect storage for HP BladeSystem bundle is \$9,999.

Provided by HP

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