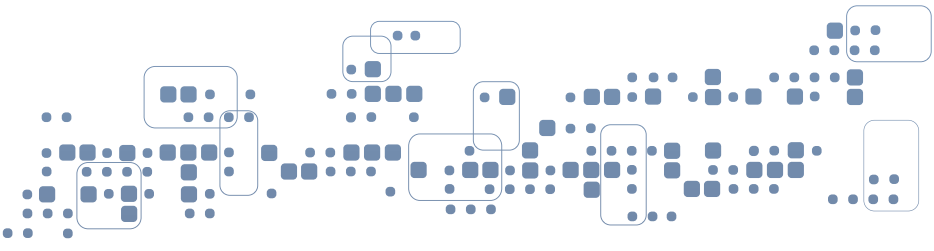
Is your IT infrastructure becoming too complex?



Switch to the VMBlueBox !

IBM, VMware and Intel have joined forces to offer a very simple, innovative solution that will make your IT system easier to use:

an ideal, all-in-one package, combining hardware, a NAS server and virtualization

IBM vmware intel

Key facts

- Intuitive management via a simplified administration console
- An adaptive solution that evolves with your business needs, when more applications or higher performance are required
- A complete solution that can be installed by an IBM-certified partner

IBM BladeCenter S

DETAILS OF OFFERING

This ready-to-use solution comes with:

- IBM BladeCenter S chassis with 5 blade servers, including 3 application servers and 2 NFS servers powered by Intel® Xeon® processors
- Red Hat license (file server)
- VMware® Infrastructure 3 standard licenses (virtualization of the physical servers, and associated OS and applications)
- Dedicated storage area for virtual machines
- Dedicated storage area for backups
- 3-year maintenance and support for all components

WHEN DO YOU NEED VIRTUALIZATION?

There are compelling reasons to implement virtualization, whatever the size of your company. Some of the main reasons for taking this step include:

- Consolidation of applications in a single, compact, modular system
- Saving space in the server room or fitting IT equipment into an office or store environment
- Reduction in energy usage
- Control and management of desktops
- Requirement to maintain legacy applications, even if the OS is no longer supported on new servers
- Implementation of a disaster recovery and business continuity plan

WHAT IS VIRTUALIZATION?

VMware® virtualization allows x86 servers to support multiple application workloads, each with its own operating system. Using VMware, server utilization is higher, less space is required for servers, management capabilities are enhanced, and the cost of server infrastructure is reduced. Virtualization involves inserting a thin layer of software directly on the computer hardware.
This software layer creates virtual machines and contains a virtual machine monitor or “hypervisor” that allocates hardware resources dynamically and transparently so that multiple operating systems can run concurrently on a single physical server.

Each virtual machine represents an application workload and its OS, but it has now become a whole set of files that are easy to handle. Virtual machines, which are stored on a storage system (NAS), can be restarted at any time, on any x86 system. By having multiple virtual machines on a virtualized physical server, you reduce the number of servers and the associated costs.

But virtualizing a single physical machine is only the start. VMware offers a high-performance virtualization platform, capable of expanding to support hundreds of physical machines and interconnected storage peripherals to form a complete virtual infrastructure.

* Windows 2003/Linux virtual machines, 15 GB DD, 1vCPU, 1 GB RAM
** To ensure optimum security, arrange for an external backup to be made on a server, enabling you to back up images of your virtual machines to tape.

HARDWARE

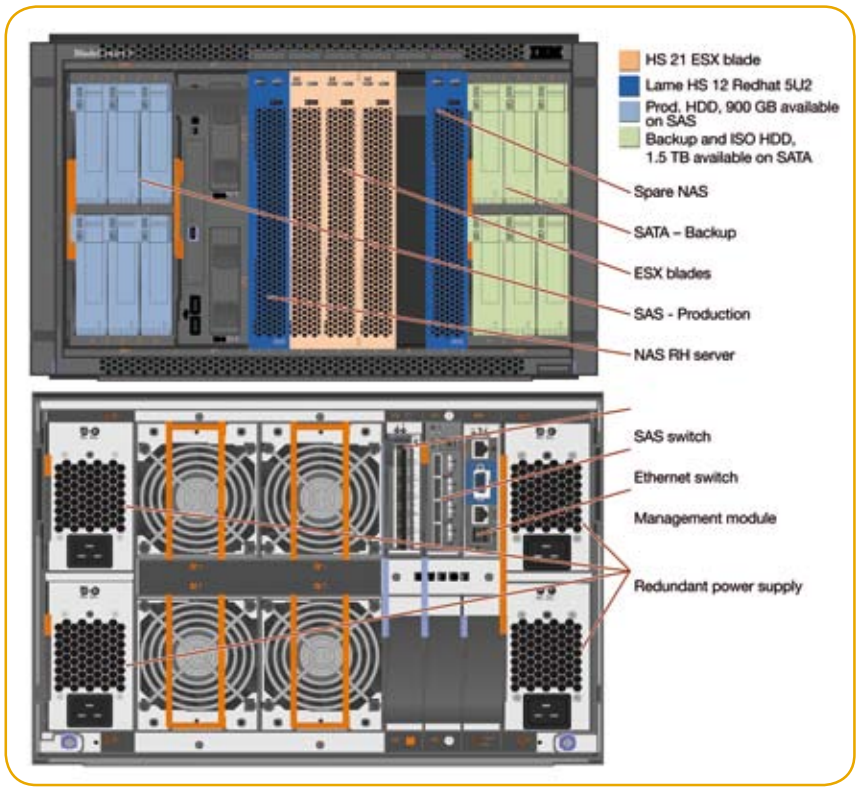
This “all-in-one” solution was developed to meet the needs of small and midsized businesses. IBM BladeCenter S integrates servers, storage, networking, and an easy-to-use configuration tool in a single chassis.

If you think that blade solutions are not suitable for your environment, **IBM BladeCenter S** will change your mind. Specially designed for companies running 4 to 50 servers, it genuinely takes into account all the constraints associated with small and midsized businesses to offer a high-performance solution that is also easy to administer.

Don’t worry if you don’t have a machine room with extra air conditioning and PSUs, BladeCenter S is designed so that it can be installed outside a datacenter, in a normal office environment, and can be plugged into a standard wall socket. Its fans are designed to maintain a reasonable acoustic level (63dB maximum, equivalent to the noise emitted when a TV program is on).

There is no need for highly qualified IT staff.
BladeCenter S comes as standard with a configuration support tool and an easy-to-use management tool, with everything being integrated in the chassis (servers, storage, networking).

Don’t fear either that a blade solution is oversized: the VMBlueBox features 5 blades out of the 6 possible BladeCenter S blades (single or dual Intel® Xeon® processors), offering considerable flexibility in terms of configuration.



PROCESSORS

VMBlueBox blade servers are powered by Intel® Xeon® processors, innovative components that enhance virtualization. These multi-core processors guarantee optimum performance and energy efficiency to boost servers. In addition, thanks to Intel VT (Virtualization Technology) and a unique “platform” approach that no longer limits hardware support to processors only, but extends it to other components too (chipsets, network cards), servers powered by Intel® Xeon® processors help to consolidate a larger number of applications per virtual environment and facilitate better management of 64-bit operating systems and applications with VMware ESX.
Based on the optimized Intel® Core™ architecture, offering 64-bit compatibility and a cache memory capacity of up to 12 MB, along with a main bus of up to 1333 MHz, Quad-Core Intel® Xeon® 3300 series processors produce performance levels that are vital for small and midsized companies looking to develop their business and manage it more efficiently and profitably, as well as to ensure the reliability and security of their key asset: information.
Designed for dual-processor servers, Quad-Core Intel® Xeon® 5400 series processors use 45 nm technology. They provide performance gains of up to 20% and an improvement of 38% in energy efficiency, compared to previous-generation quad-core processors, making them ideal for your virtualization projects.

VIRTUALIZATION SOFTWARE

The VMBlueBox comes with VMware® Infrastructure, the most widely deployed virtualization software suite in the world for optimizing and managing standard IT environments. The VMware suite is fully optimized, and has been rigorously tested and certified as compatible with the widest range of hardware, operating systems and software applications. VMware Infrastructure provides built-in centralized management, resource optimization, application availability and operational automation capabilities.

The version of VMware installed in the VMBlueBox includes the following components:

- Hypervisor: VMware® ESX
- Storage virtualization: VMware® VMFS, VMware® Virtual SMP
- Centralized administration: VMware® Virtual Center
- Patch management: VMware® Update Manager
- Backup utility: VMware® Consolidated Back Up
- High availability: VMware® High Availability

Your energy savings

VMBlueBox	Non-virtualized configuration
BladeCenter S (up to 45 virtual machines)	40 x3350 single-processor servers
2 HS12 Quad-Core Intel Xeon blades 2.5 GHz	
3 HS21 Quad-Core Intel Xeon blades 2.66 GHz	
Idle : 1,157 watts	Idle : 8,840 watts
Max. : 1500 watts	Max. : 12,080 watts
Amp. : 6.8 A	Amp. : 56 A
Btu/h : 5,121	Btu/h : 41,200

WHY CHOOSE IBM, VMWARE AND INTEL?

IBM and VMware have been working together for more than eight years, and have more than 10,000 joint customers.

IBM, VMware and Intel have joined forces to design excellent virtualization platforms, offering the best balance for virtual workloads. In blade environments, the IBM BladeCenter virtualization solution provides a platform that is easy to manage, consumes little energy and facilitates evolution over time thanks to its Intel® Xeon® processors. You will benefit from the experience of successful deployment with a wide range of IBM customers and from greater reliability, resulting from the in-depth integration of Intel, IBM and VMware technologies and a unique source of integrated support.

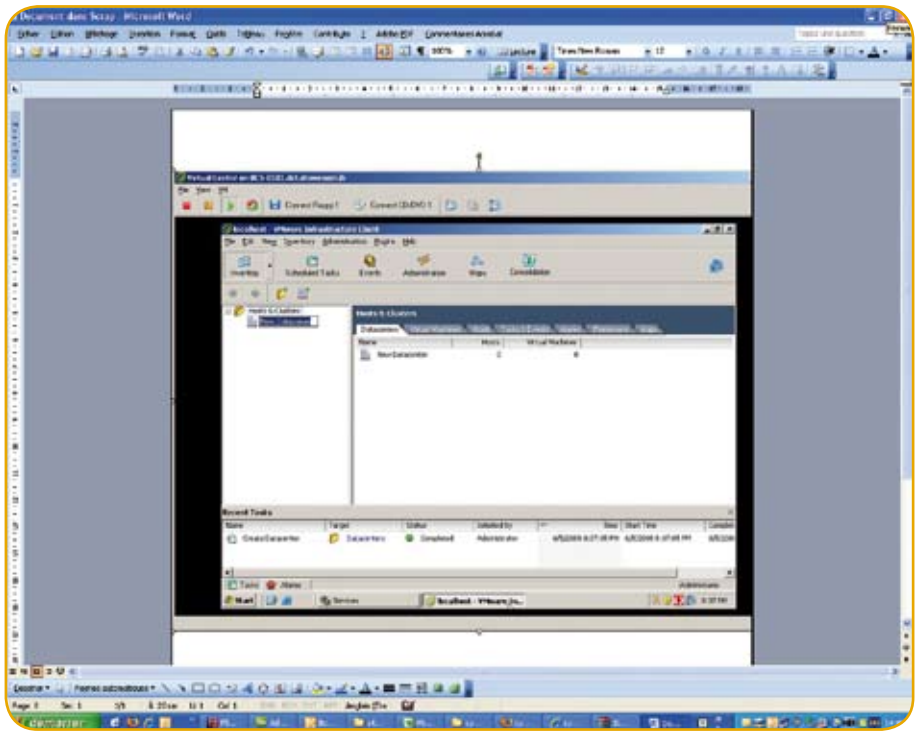
This will then give you the chance to devote IT resources to the development of your company, since less time is needed for administrative tasks. The result: innovation and a long-term competitive edge for your business.

IBM, VMware and Intel are offering you the benefits opened up by their cooperation: greater efficiency through simplification.

HOW THE VMBLUEBOX BENEFITS YOUR COMPANY

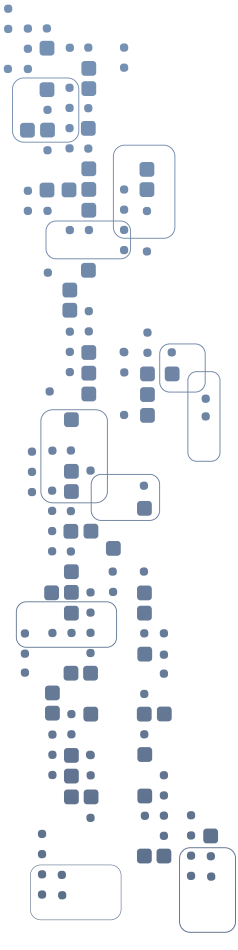
- Easy to manage: all virtualized applications are in the same system
- Futureproof IT solution: the IBM chassis can be upgraded to support evem more virtual machines by adding blades or by replacing existing blades with more powerful blades. Legacy applications, which are encapsulated in virtual machines, continue to run exactly as before
- Less space required: reduced footprint (7U rack)
- Reduced utility bill (at maximum power, 4 times fewer watts will be consumed than with 20 physical servers)
- Cooling requirements almost zero: BladeCenter S can be installed in any environment
- The very latest 45 nm Intel® Xeon® processors, combining optimum performance and high energy efficiency*

*Intel Xeon x5460 series processors achieve performance levels that are up to 20% (1.25 times) higher than those of equivalent processors in the 5365 series (based on published results taken from the SPECjbb2005 test bench on 12 November 2007). Intel Xeon 5460 series processors achieve energy efficiency levels that are up to 38% (1.36 times) higher than those for the equivalent E5335 processors (based on published results taken from the SPECjbb2005 test bench on 12 November 2007)



WHAT IS YOUR MAJOR CONCERN?

IBM, VMware and Intel can meet your requirements by offering reliability, ease of use and long-term security.



TO FIND OUT MORE, VISIT:

www.vmware.com /go/ibm
www.ibm.com/virtualization/vmware

www.ibm.com/systems/bladecenter/hardware/chassis/blades/

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