

# Server Virtualization

Maywood Solutions are experts in the art of Virtualization.

By applying our tried and tested Virtual Infrastructure Methodology we can plan, design, test, deploy and manage complex infrastructure solutions.

## Is Your Business Ready for Server Virtualization?

Virtualisation is fast emerging as a game-changing technology within the enterprise computing space. What was once viewed as a technology used purely in testing and development is now becoming main-stream, affecting the entire data-centre ecosystem. More and more companies are now looking at making the jump from test and development into live production environments.

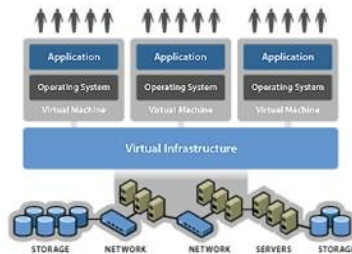
Although the adoption of virtualisation has not yet happened on a particularly wide scale be in no doubt that it will! There are numerous advantages to virtualisation that mean it will only be a matter of time before it becomes main stream and an integral part of most IT infrastructures.

In this current, tough economic climate, IT is expected to get more done but is faced with ever declining budgets and increased pressures on reducing costs with limited resources whilst SLA's are becoming more and more critical.

By virtualising your datacentre, IT can take back control and start to realise the cost savings and business agility benefits of deploying a virtual infrastructure. The question is not whether you can afford to virtualise, but rather "How can you afford not to?"

### What is Server Virtualization?

Virtualization is a proven software technology that is rapidly transforming the IT landscape and fundamentally changing the way that IT operate. Today's powerful x86 server hardware was designed to run a single OS and a single application, leaving most servers vastly underutilised and introducing server sprawl, as most organisations require multiple applications and operating systems and therefore servers too!



Virtualization allows you run multiple virtual machines on one single physical machine, sharing the resources of that physical machine across multiple environments.

Each individual virtual machine can run a different operating system and multiple applications all of which is hosted on the same physical server. They all run in complete isolation from each other, eliminating any risk of compatibility issues and failing virtual machines.

Virtualization platforms transform or "virtualize" the hardware resources of an x86 server (including the CPU, RAM, hard disk and network card) to create a fully functional virtual machine that can run its own operating system and applications just like a "real" server. Each virtual machine contains a complete system, eliminating potential conflicts. Virtualization software works by inserting a thin layer of software directly on the server hardware or on a host operating system. This contains a virtual machine monitor (VMM) or "hypervisor" that allocates hardware resources dynamically and transparently.

Multiple operating systems run concurrently on a single physical computer and share hardware resources with each other. By encapsulating an entire machine, including CPU, memory, operating system, and network devices, systems, applications, and device drivers. You can safely run several operating systems and applications at the same time on a single computer, with each having access to the resources it needs when it needs them.



**CITRIX**

**vmware**

**Windows Server 2008**  
Hyper-V



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## What Benefits Can Virtual Infrastructure Deliver to My Business?

Virtualisation dramatically improves the efficiency and availability of resources and applications in your organization. Internal resources are typically underutilized under the old “one server, one application” model and IT administrators spend far too much time managing servers rather than innovating and working on strategic business projects.

In addition to this, the cost of floor/rack space in the data centre and providing power to the servers and cooling is becoming increasingly more expensive. Virtualization actively reduces these costs.

### Reduce Capital Expenditure Costs

Moving to a virtual environment reduces your physical infrastructure footprint by consolidating server hardware into a centralised datacenter. By implementing a virtual infrastructure, you will achieve better utilization of the physical server hardware and ultimately reduce the number of physical servers. This will not only save on the cost of the hardware but save in real estate, cooling and power costs too.



- Increase server utilization rates from **15% to 80%**
- Achieve consolidation ratios of **10:1!**
- Avoid planned downtime with live migration of Vm's
- Accelerate server provisioning times

### Reduce Operational Expenditure Costs

The “Green Issue” is becoming increasingly more important to businesses. Good green credentials are seen as beneficial and can gain you competitive advantage.

In reality if attaining those green credentials actually results in more expenditure then it is unlikely to get the go ahead, but what if it saved you money and gave you the green advantage?

- Reduce energy costs by up to 80%!
- Dynamically power down servers and applications
- Simplify procurement, installation and provisioning
- Automate administration of common activities



### Quickly Respond to Business Needs

Deployment processes are becoming more difficult to manage in a complex environment and IT is unable to adapt as quickly to changing business requirements. By moving to a virtual environment helps with procurement, setup and delivery, giving IT the efficiency and agility needed for rapid deployment. New virtual machines can be provisioned and deployed in a matter of hours rather than weeks.

### Reduce Business Continuity Costs

Virtualization encapsulation (creating an entire system into a single file) and abstraction (removing away the underlying physical hardware) helps to reduce the cost and complexity of business continuity by offering high availability and disaster recovery solutions where a virtual machine can easily be replicated and moved to any target server.

