

# Virtualisation

## Virtualisation and Server Consolidation

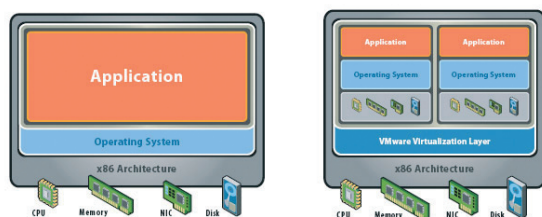


### What is Virtualisation?

#### In a nutshell

Virtualisation software is an abstraction layer between operating systems, applications and actual physical platforms. The operating system sees a consistent, uniform set of hardware no matter what components are in the physical machine.

When encapsulated in virtual machines, full systems (applications, OS, BIOS and virtual hardware) are easily transportable between different physical machines, because the Virtualisation layer isolates them from the change of platform.



Virtualisation is a form of partitioning because multiple virtual machines can be run simultaneously on the same physical platform, unaware and essentially unaffected by the presence of other virtual machines.

“Even more amazing than the product’s efficiency was the way it reduced our costs. VMware software probably saved us several hundred thousand dollars within a year on hardware purchases alone. As QUALCOMM grows, we anticipate even greater savings.” – Paul Poppleton, IT Manager, QUALCOMM

#### Development and Test Optimisation

CIO’s are under constant pressure to deliver high quality enterprise applications more quickly at a lower cost. While delivering quality software on time and on budget has never been easy, the task is further complicated by modern multi-tier architectures and multiple versions of operating systems, browsers, and firewalls.

Using a Virtualisation platform for development and testing results in immediate improvement in time to market, costs, and quality.

#### Key benefits of Virtualisation

##### Virtualisation and Server Consolidation

Virtualisation enables enterprises to:

- Consolidate servers and desktops used in test and development
- Copy production environments into virtual machines for testing and share complete environments among different teams
- Simulate complex multi-tier applications on a single physical platform.

##### Improved Storage Access

The SAN becomes a pooled resource that hosts operating systems (encapsulated) and data providing greatly improved reliability and availability of services.

Costs are reduced because servers effectively share fewer ports and cards to access pooled resources. If you have not been able to justify the cost of a SAN before a virtualised solution is the answer.

##### Business Continuity & DR

Each year hundreds of data centres worldwide will experience significant unplanned service interruptions. Using virtual infrastructure, IT managers can improve all aspects of business continuity & DR by realising:

- Faster, more flexible, and more reliable disaster recovery at a lower cost achieved through the removal of dependencies of operating systems on specific server hardware
- Significant reductions in planned and unplanned downtime by running virtual environments on fewer but highly resilient platforms of servers and storage
- Simplified and repeatable processes for implementing business continuity solutions enabled by hardware independence.

### How can Virtualisation benefit my business

#### Lower total cost of ownership

Gartner estimate a 25% reduction in TCO as typical for most implementations, due primarily to the greatly improved server utilisation and management that Virtualisation provides.

#### Improved operational efficiency

As enterprises grow, IT need to rapidly increase computing capacity – often in the form of new servers with a variety of operating environments. The resulting server sprawl is costly in terms of capital and people needed to operate, manage, and upgrade new servers.

Server consolidation and containment provides a solution for these problems. Virtual infrastructure enables workload isolation and granular resource control for all of the system's computing and I/O resources.

Virtualisation facilitates rapid changes to meet business needs, new servers are deployed in minutes not hours, making it easier to move servers between physical hardware.

#### Isolation and Encapsulation

Virtual machines are completely isolated from the host machine and other virtual machines. If a virtual machine crashes, all others are unaffected. Data does not leak across virtual machines and applications can only communicate over configured network connections. Complete virtual machine environments are saved as a single file; easy to back up, move and copy.

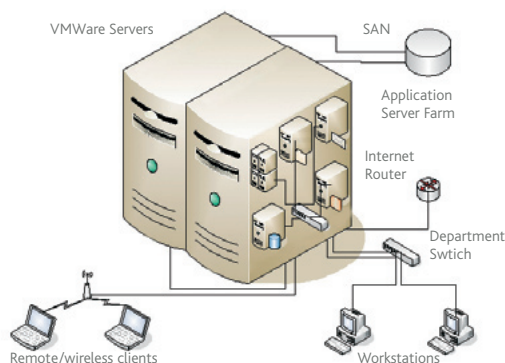
#### Partitioning

Multiple applications and operating systems can be supported within a single physical system. Servers can be consolidated into virtual machines on either a scale-up or scale-out architecture. Computing resources are treated as a uniform pool to be allocated to virtual machines in a controlled manner for much greater utilisation.

#### Make Gen-i your first choice for Virtualisation

Gen-i has implemented virtualised environments for a wide range of company sizes and industry types throughout NZ. We have assisted with physical to virtual migrations for manufacturing companies, law firms, charities, universities and shipping ports.

Gen-i has the finest virtualisation capabilities in NZ, we experienced design consultants and over 50 technical staff who are trained in the implementation and support of virtualised environments such as VMware ESX.



Our experts are vendor agnostic so we can provide objective non-biased solutions across the entire virtualised platform – you can be assured of a solution that is tailored to your requirements based on the optimum configuration of hardware, software and specialist services.

Virtualisation requires expertise across the entire life of the project if you are to gain the full benefit. Gen-i provides full end to end integration services from consulting, planning, design, project management builds, implementation.

#### The right solution for a wide range of problems

Whether you are looking for an easier way to manage your infrastructure, reduce costs, improve Disaster Recovery, better utilise and/or consolidate your server assets or flexible test environment, there is a virtualisation solution for your business.

• • **For more information**

• • To find out more about Virtualisation, ask your Telecom  
• • Account Manager, call us on 0800 805 810 or visit our  
• • website: [www.gen-i.co.nz](http://www.gen-i.co.nz)

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