

Virtualization means **Great Savings**

- 6 to 9 month ROI
- 35% to 75% TCO Savings
- 60% to 80% Utilization
- Provisioning time cut from hours to minutes.
- Consolidation Ratios:
  - 10-15:1 in Production
  - 15-20:1 in Development and Testing

**Virtualization Infrastructure:**

Virtualization allows multiple virtual machines with various operating systems to run side-by-side on the same physical machine. Each virtual machine has its own set of virtual hardware, (RAM, CPU, NIC, etc.) upon which an operating system and applications are loaded. Virtualization increases hardware utilization and dramatically decreases capital and operating costs by sharing hardware and resources.

Virtualization means **Consolidation**. Consolidate physical servers into Virtual Servers at an average 10 to 1 ratio for Production applications and 20 to 1 for design and testing applications.

**Partitioning:**

- Multiple applications and operating systems can be supported within a single physical server box.
- Computing resources are treated as a uniform pool to be allocated to virtual machines in a controlled manner.

**Isolation:**

- Virtual machines are completely isolated from the host machine and other virtual machines. If a virtual machine crashes, all others are unaffected.

**Encapsulated:**

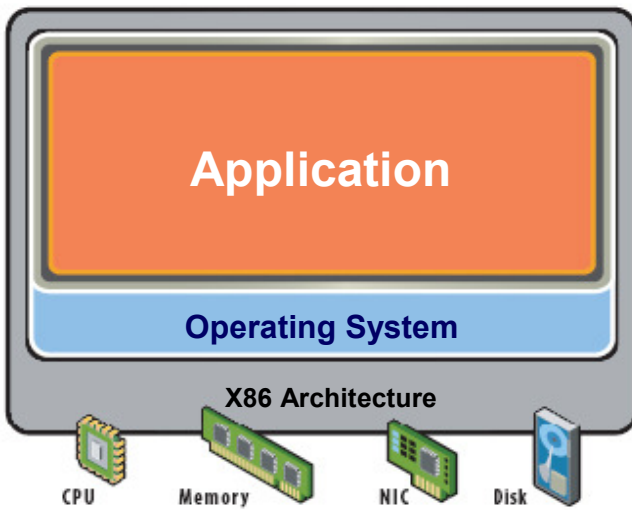
- A complete virtual machine environment is saved as a single file; easy to back up, move and copy.

Virtualization means **Business Continuity**. Minimizing downtime is essential for any organization. Server virtualization minimizes downtime and data loss due to a server crash or failure.

**Disaster Recovery = High Availability:**

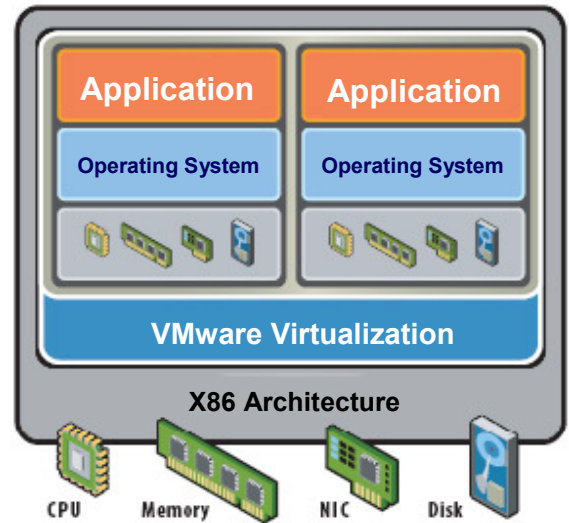
- Automatic restart of virtual machines in case of server failure without the need for dedicated stand-by hardware.
- Eliminates the complexity and costs involved with clustering.





**Before Virtualization:**

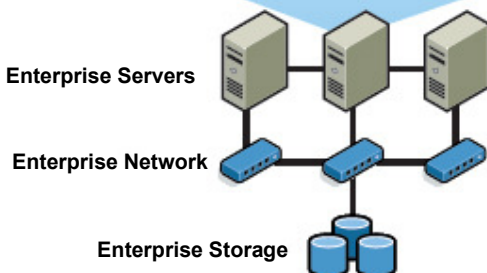
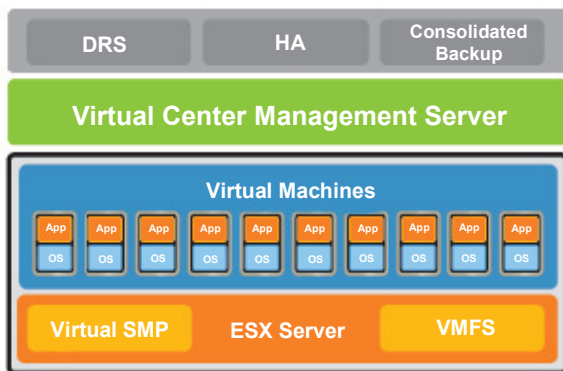
- Single OS Image per machine
- Software and hardware tightly coupled
- Running multiple applications on the same machine often creates conflict
- Underutilized resources
- Inflexible and costly infrastructure



**After Virtualization:**

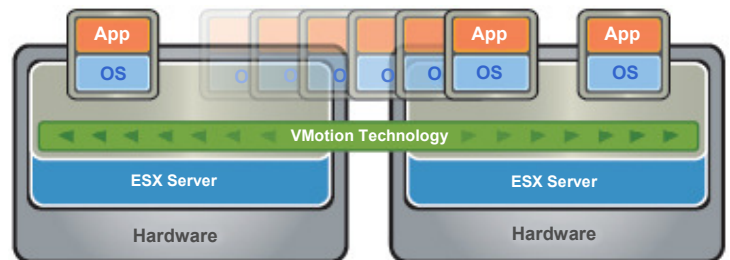
- Hardware-independence of operating system and applications
- Virtual machines can be provisioned to any system
- Can manage OS and application as a single unit by encapsulating them into virtual ma-

**Virtual Infrastructure**



VMware Infrastructure virtualizes and aggregates industry standard servers and their attached network storage.

**VMware VMotion**



VMware VMotion moves live, running virtual machines from one host to another while maintaining continuous service availability.

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