Sri Lanka Institute of Information Technology

ESBPII assignment -VMotion.

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VMotion

VMware VMotion enables the live migration of running virtual machines from one physical server to another with zero downtime, continuous service availability, and complete transaction integrity. It is transparent to users.

How does VMotion works.

First, the entire state of a virtual machine is encapsulated by a set of files stored on shared storage. VMware's clustered Virtual Machine File System (VMFS) allows multiple installations of ESX Server to access the same virtual machine files concurrently. Then the active memory and precise execution state of the virtual machine is rapidly transferred over a high speed network. Finally the networks used by the virtual machine are also virtualized by the underlying ESX Server. This ensures that even after the migration, the virtual machine network identity and network connections are preserved.

Benefits of VMotion

- Automatically optimize and allocate entire pools of resources for maximum hardware utilization and availability.
- Perform hardware maintenance without any scheduled downtime.
- Proactively migrate virtual machines away from failing or underperforming servers.

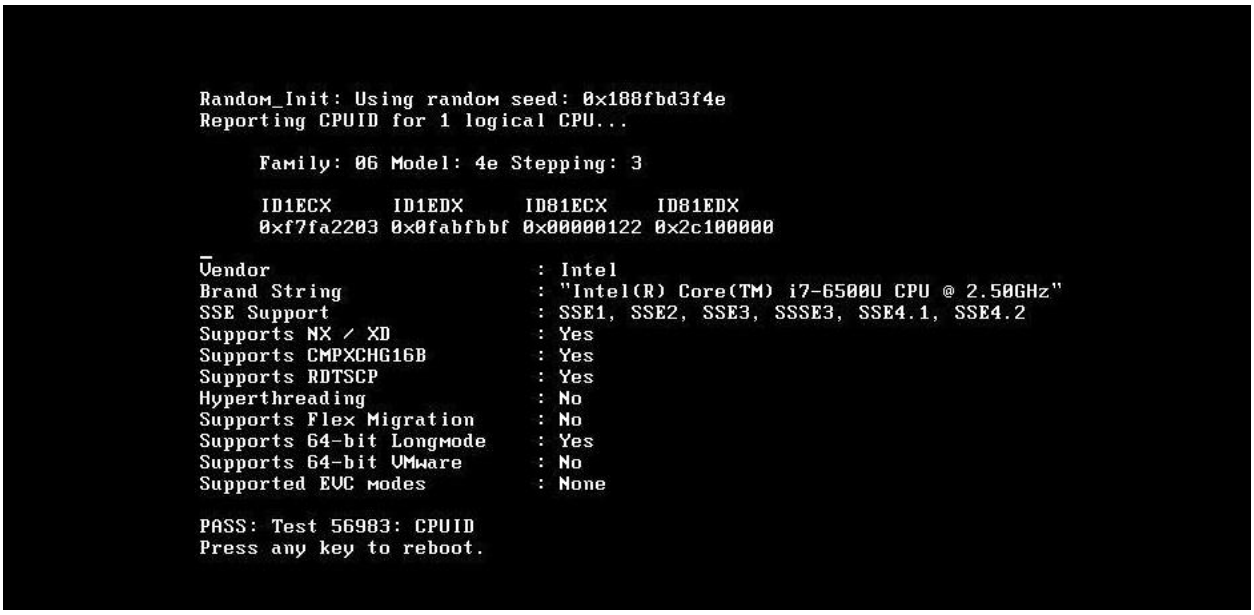
Requirements for VMotion

The following hardware requirements are required for VMotion in virtual machine.

- Virtual machine must not have a connection to virtual devices (eg:CD-Rom) with a local image mounted.
- Virtual machine shouldn't have a connection to an internal switch.
- Virtual machine must not have CPU affinity configured.

Hosts should have following requirements.

- Visibility to all storage used by the VM. (Fiber channel, iSCSI, NAS)
- At least a Gigabit Ethernet network.(faster the network more concurrent VMotion migrations allows)
- Access to same physical networks.
- Compatible CPUs. Using VMware CPU identification utility, CPU characteristic can be identified. Comparing the reports for both hosts Incompatibilities can be detected.



References:

http://www.mosaictec.com/tessera/what-is-vmotion.htm