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SRI LANKA INSTITUTE OF INFORMATION TECHNOLOGY

[Enterprise Standards and Best Practices for IT Infrastructure](http://courseweb.sliit.lk/course/view.php?id=137)

**4thYear 2nd Semester 2016**

**Assignment – 06**

**VMware vMotion Requirements**

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## WEEKEND IT

**VMware vMotion**

**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.

VMotion lets you:

* 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.

**Pre Requisites for vMotion**

* The hosts must be licensed for vMotion.
* The hosts must be running ESXi 5.1 or later.
* The hosts must meet the networking requirement for vMotion.
* The virtual machines must be properly configured for vMotion.
* Virtual machine disks must be in persistent mode or be raw device mappings (RDMs).
* The destination host must have access to the destination storage.
* When you move a virtual machine with RDMs and do not convert those RDMs to VMDKs, the destination host must have access to the RDM LUNs.
* Consider the limits for simultaneous migrations when you perform a vMotion migration without shared storage. This type of vMotion counts against the limits for both vMotion and Storage vMotion, so it consumes both a network resource and 16 data store resources.

**Software Requirements for vMotion**

The hosts must be running ESXi 5.1 or later.

VMware tools should be installed.

**Hardware Requirements for vMotion**

CPU compatibility

Processor compatibility

No CD ROM attached

Shared central mass storage

**Pros and Cons of vMotion**

Pros

1. Zero downtime (no downtime)

2. Continuous service availability

3. Useful when performing maintenance on the ESXi host

4. Maximum hardware utilization and availability.

5. Load balancing

Cons

1. Does not allow migration with vMotion between Intel and AMD processors.

2. BIOS settings of the hosts need to enable hardware virtualization and execute protection.

**Steps of doing vMotion on VMware**

1. Power on the ESXi hosts and connect using VMware vSphere client software.

2. Create a virtual machine on the host and power on it.

3. Select the host and go to ‘Configuration’ tab.

4. Go to ‘Networking’ and click on ‘Add Networking’ to create the vSwitch.

5. Choose ‘VMkernel’ on ADD Network Wizard and click on Next.

6. Choose ‘Create a vSphere standard switch’ and click on Next.

7. Provide a network label and set ‘Use this port group for vMotion’.

8. Set the IP settings (IP address and subnet mask) and click on Next.

9. Click on Finish.

10. Go to ‘Networking’ tab and click on ‘Add Networking’.

11. Perform the same steps from step 4 to step 8. (When providing an IP in IP settings provide a different IP than the earlier one)

12. Click on Next and Finish.

1. Right click on a virtual machine and click on Migrate.

2. Select ‘Change host’ and click on Next.

3. Select the target server where to move the virtual machine and click on Next.

4. Select the vMotion priority as ‘High priority’ and click on Next. 5. Click on Next from the ‘Ready to Complete’ tab.

6. Click on Finish to start the migration. It will take 60 seconds (approx.) to complete the migration process.

(The screenshots of the demonstration cannot be provided at this time due to the lack of

requirements of the PC.)