Computer Clusters – Lab Assignment, Part 1

On the lab computers you will find a virtual machine running Windows Server 2008 in C:\BSII\WS2008EEVL.

Use this virtual machine to create a total of 3 different virtual machines either

- by making 3 additional copies of the whole virtual machine, or
- by write-protecting the virtual disk, and then creating 3 virtual machines, specifying that they are to use the write-protected virtual disk, and then taking a snapshot, as was explained in class.

Run the program NewSID in C:\Kits\NewSID on each of the virtual machines. Give the systems the names Srv%, Clus%_1, and Clus%_2 (or similar), replacing “%” with the number of your lab group. Specify the address 192.168.1.%3 as the DNS server, and give the existing network adapters the addresses 192.168.2.%1 on Clus%_1, 192.168.2.%2 on Clus%_2, and 192.168.1.%3 on Srv%.

Activate Windows in each of the virtual machines.

Make Srv% the domain server by

- adding the role „Active Directory Domain Services“ (with the additional option “DNS Server”)  
- running dcpromo.exe (from a command line).

Add Clus%_1 and Clus%_2 to the domain: Server Manager -> Change System Properties, and add the feature “Failover Cluster” on them.

The existing network adapters on Clus%_1 and Clus%_2 (in network 192.168.2.*) will be used for the connection to the iSCSI targets on a different computer, so they (probably) have to be changed to “bridged”. The existing adapter on Srv% (in network 192.168.1.*) is for the “public” network, so it may remain of type NAT, or can be changed to host-only.

Add two additional network adapters each to Clus%_1 and Clus%_2 (e.g. of type host-only), using the IP addresses 192.168.1.%1, and 192.168.3.%1 on Clus%_1, resp. 192.168.1.%2, and 192.168.3.%2 on Clus%_2 (similar to the table on p. 351, except that we do not need any further network adapter on Srv%, and that you always precede the final number in IP addresses by your lab group). The network 192.168.3.* will be used for the heartbeat connection between the cluster nodes.

After completing this lab assignment, your virtual machines are almost ready to be configured into a Failover Cluster. What is missing yet are the shared disks.