10.   Windows File sharing

10.1 Definitions

- A folder or file is _shared_ if it is accessible to more than one user.

- A _network resource_ can be a shared file or folder accessible over a network.

10.2 Requirements

In order to share files or folders over a network the following requirements have to be fulfilled.

- The hosts between you want to share files or folder need to be within the same network if no router is used.

- The hosts need to have different computer names.

- The network location associated to the network interface should not be "public", as this will configure the firewall such that most of the incoming requests are blocked.

- If a host is connected to a domain then sharing will only work with hosts within the same domain.

10.3 Methods of File sharing

10.3.1 Modern: Homegroup

A homegroup has to be created in the Windows Network and Sharing Center of one host first. All other Windows hosts in the same network can join this homegroup afterwards. On every host you can adjust what standard folders you want to share.

advantages of homegroups:

- simple to configure

- only one password is needed to connect to the homegroup. This password is different to all user password.

In order to access a network resource you can enter the corresponding UIC (Uniform Naming Convention) in the Windows explorer address bar, for example:

\\computername   or   \\192.168.0.20

This is valid for all sharing methods.

10.3.2 Most simple: Public folder

All files in the Windows "Public" folder in are by default shared to all users on the same host. In addition you can configure the Public folder to be accessible to ALL hosts on the network in the "advanced sharing settings" of the "network and sharing center".

10.3.3 Old school but most performing: Advanced sharing

In the context menu (menu with right-click) of every folder you can adjust an advanced sharing. Here you will set:

- the name under which you want to share the folder

- the users an groups allowed

- the permissions for every group or user

In order to have the Windows firewall configured correctly you need to allow the printer and sharing in the advanced sharing settings of the network and sharing center.

Example:

laptop_sam		laptop_joao	
users:	admin sam friends	users:	admin joao frenn
shared folder:	Fotoen	shared folder:	Porno

In order to access the Porno share Sam will have to enter \\laptop_joao\Porno in the Windows explorer. In order to identify himself towards the host laptop_mika Tim will need to enter a local username and password, as for example "frenn". This username and password will then be saved in the Windows Credentials manager for future use.