

# **Exercise 3 “Windows Installation and Configuration”**

## **Instructions and preparatory questions**

Administration of Computer Systems, Fall 2009

This document is available online at:  
<http://www.hh.se/te2003>

## **Exercise 3 – Windows Installation and Configuration**

### **Practical information – Read this first!**

This exercise consists of two parts:

1. Preparatory questions in this document that should be answered before coming to the exercise session (before starting the exercise session the assistant will ask you to show and explain your answers)
2. A practical exercise session where you will work with actual equipment in order to answer the remaining questions in this document.

You should complete the preparatory questions individually. During the practical exercise session you will work together with another student in the lab.

To sign up for a session for this exercise, use the signup system. (You can find a link via the course webpage)

Before starting the practical part show the assistant that you have finished the preparatory questions, when you are done with the practical part you must notify the assistant so that he/she can check and sign your work. No signature = no credits for the exercise.

If you get stuck on the practical part the assistant is there to assist you, however in order to learn you are of course expected to come up with solutions mainly on your own.

Information necessary to complete both the preparatory and practical part of the exercise will be given at the lectures. Lecture slides are available at the course webpage <http://www.hh.se/te2003/>

***Good luck and have fun!***

### **BIOS Setup**

Check boxes  
when done

Change the boot order in BIOS to:

1. CD-ROM
2. Hard drive
3. Everything else

### **Partitioning and formatting the hard drive.**

Partitioning and formatting can be done from within the Windows installer, however the Windows 2000 partitioning tool does not support all filesystems. In this lab you will use the linux-based "GParted" tool that is on the lab CD.

1. Boot "GParted" from the lab CD, you may have to specify language and graphics options in order to boot
2. Remove any existing partitions from the drive
3. Create a 3000MiB large primary partition to install Windows on, the file system type should be NTFS
4. Create a 2000MiB large FAT32 partition
5. Create a 2000MiB large EXT2 partition
6. Make sure that your changes are applied and that the FAT32 and EXT2 partitions are formatted correctly.
7. How large does the software say your partitions are and in which unit?: \_\_\_\_\_

### **Installing Windows 2000**

1. Install Windows on the 3000MiB NTFS partition you created previously, format the NTFS partition using the Windows installer, otherwise the OS will not boot!
  - a. Make all necessary configurations, such as Swedish keyboard.
  - b. Set the name of the computer to "HH"
  - c. The administrator password should be 2004nd#
2. While you wait, answer the following question

A common way to specify the size of computer storage such as hard drives and RAM is to use the unit 'megabyte'. However it is not completely clear what a megabyte actually is! There are two main definitions:

- Either it is  $1024B * 1024B = 1\,048\,576\ B$  (sometimes called a mebibyte, MiB)
- Or it is  $1000B * 1000B = 1\,000\,000\ B$  (using the SI unit mega =  $10^6$ , called MB)

Show, including calculations, how many GiB 3000MiB is:

3. After installation is complete
  - a. Install the network card drivers. They are located on the lab-CD in the "GX260DRIVERS" directory.

Exercise 3, Administration of Computer Systems, Fall 2009

- i. Click on the executable file NETWORK.EXE, it will unpack to a directory of your choice.
  - ii. Go to the device manager: Start->Settings->Control Panel->System->Hardware->Device Manager
  - iii. Right click on "Ethernet controller" and select "Properties"
  - iv. Choose "Reinstall driver"
  - v. Choose to search for a suitable driver
  - vi. Choose to specify a location, deselect the other options
  - vii. Specify the location where you unpacked the drivers
  - viii. Select the correct driver by clicking through the file hierarchy, you are installing the driver for Windows 2000 (Win2k)
- b. Configure your network settings
- i. Go to the TCP/IP settings: Start->Settings->Network and Dial-up Connections
  - ii. Right-click on Local Area Connection
  - iii. Choose TCP/IP and click Properties
  - iv. Assign the IP, Subnet mask, gateway and DNS servers as instructed by the lab assistant.
- c. Download and install **HDD-Health** (<http://www.panterasoft.com/>)
- d. Go online and download the **Free PortScanner** port probing tool ([http://www.nsauditor.com/network\\_tools/free\\_port\\_scanner.html](http://www.nsauditor.com/network_tools/free_port_scanner.html))
- e. Pair up with another group that has finished installing and configuring their network. Find out your IP numbers (Run->"cmd"->ipconfig) and scan each others machines to see which ports are open. Scan the ports set by default in the program.

What ports are open?: \_\_\_\_\_

**Preparatory question 1**

What information can you find about the following services on Windows 2000, are they crucial, is it a security risk to have them running and listening to connections?

Endpoint Mapper (EPMAP): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

NetBIOS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Microsoft Directory Services (DS): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Preparatory question 2**

What is Windows "Safe-mode"? \_\_\_\_\_  
\_\_\_\_\_

**Fixing windows startup problems**

1. Start notepad
2. Enter the following into a new file:  
:LOOP  
start script.bat  
goto LOOP
3. Save the file to the desktop with filename **script.bat**
4. Create a shortcut to this file in the "Startup" folder by clicking on the file and dragging it to the Start Menu->Programs->Startup and dropping it there.
5. Reboot the system, you should now have a problem that occurs when Windows starts.

The file you just created is a small program, what does it do? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

6. Boot into safe-mode and fix the problem.

Why is safe mode helpful in this case? \_\_\_\_\_  
\_\_\_\_\_

Exercise 3, Administration of Computer Systems, Fall 2009

**HD**

Using HDD-health answer the following questions:

What is the capacity of the drive? \_\_\_\_\_

What is the model of the hard drive? \_\_\_\_\_

What temperature does the hard drive keep? \_\_\_\_\_

How many times has the hard drive been started/stopped? \_\_\_\_\_

For how long has the hard drive been running in total? \_\_\_\_\_

***Preparatory question 3***

What is the expected life span of an ATA/IDE hard drive? \_\_\_\_\_

What is a normal operating temperature for an ATA/IDE drive? \_\_\_\_\_

**STUDENT KEEPS THIS PART AS RECEIPT**

**Student information**

First name

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Last name

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Personal identity number

						-				
--	--	--	--	--	--	---	--	--	--	--

**Exercise 3 assistant signatures**

Preparatory questions OK: \_\_\_\_\_

Exercise session OK: \_\_\_\_\_

Date: \_\_\_\_\_

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**LAB ASSISTANT DETACHES AND KEEPS THIS PART**

**Student information**

First name

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Last name

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Personal identity number

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**Your signature below indicates that you have completed the preparatory questions and exercise 3 session on your own. Sharing code, answers etc. between groups is not allowed.**

\_\_\_\_\_  
Student signature

\_\_\_\_\_  
Date