Opgavehæfte til kursus i Netteknik7

1) Installation af server 2003

Del 1: basalinstallation

Tænd for PC,en og stik Server CD-rom'en i drevet, eller ditto og genstart maskinen.

Tidligt i opstarten skal boot på CD accepteres ved at trykke på en tast.

Hvis boot på CD fejler, gå ind i BIOS og ret boot-sekvensen til, så PC'en booter fra CD før harddisk.

Windows Setup Setup is loading files (Partition Manager)...	Først loades en del filer ind i RAM'en:

Windows Server 2003, Standard Edition Setup
 	
  Welcome to Setup.
 	
  This portion of the Setup program prepares Microsoft(R)
  Windows(R) to run on your computer.
 	
    • To set up Windows now, press ENTER.
    • To repair a Windows installation using
       Recovery Console, press R.
    • To quit Setup without installing Windows, press F3.
 	
  ENTER=Continue R=Repair F3=Quit
	Tast Enter

```
Windows Licensing Agreement

  END-USER LICENSE AGREEMENT FOR
  MICROSOFT SOFTWARE

  MICROSOFT WINDOWS SERVER 2003, STANDARD EDITION
  MICROSOFT WINDOWS SERVER 2003, ENTERPRISE EDITION

  PLEASE READ THIS END-USER
  LICENSE AGREEMENT ("EULA") CAREFULLY.  BY
  INSTALLING OR USING THE SOFTWARE THAT
  ACCOMPANIES THIS EULA ("SOFTWARE"), YOU AGREE
  TO THE TERMS OF THIS EULA.  IF YOU DO NOT
  AGREE, DO NOT USE THE SOFTWARE AND, IF
  APPLICABLE, RETURN IT TO THE PLACE OF
  PURCHASE FOR A FULL REFUND.

  THIS SOFTWARE DOES NOT TRANSMIT ANY
  PERSONALLY IDENTIFIABLE INFORMATION FROM YOUR
  SERVER TO MICROSOFT COMPUTER SYSTEMS WITHOUT
  YOUR CONSENT.

    1. GENERAL.  This EULA is a legal agreement between you (either
       an individual or a single entity) and Microsoft Corporation
       ("Microsoft").  This EULA governs the Software, which
       includes computer software (including online and electronic
       documentation) and any associated media and printed
       materials.  This EULA applies to updates, supplements, add
       -on components, and Internet-based services components of

  F8=I agree   ESC=I do not agree   PAGE DOWN=Next Page
```

Efter endnu en del kopiering popper licens-aftalen frem – tast blot F8 for at acceptere den.

```
Windows Server 2003, Standard Edition Setup

  The following list shows the existing partitions and
  unpartitioned space on this computer.

  Use the UP and DOWN ARROW keys to select an item in the list.

    •  To set up Windows on the selected item, press ENTER.

    •  To create a partition in the unpartitioned space, press C.

    •  To delete the selected partition, press D.

  ┌─────────────────────────────────────────────────────────┐
  │ 8190 MB Disk 0 at Id 0 on bus 0 on symmpi [MBR]          │
  │                                                          │
  │     Unpartitioned space                    8189 MB       │
  │                                                          │
  │                                                          │
  │                                                          │
  │                                                          │
  │                                                          │
  └─────────────────────────────────────────────────────────┘

  ENTER=Install   C=Create Partition   F3=Quit
```

Her kan den interne harddisk partitioneres. Hvis der eksisterer partitioner i forvejen kan de slettes og nye partitioner kan oprettes.

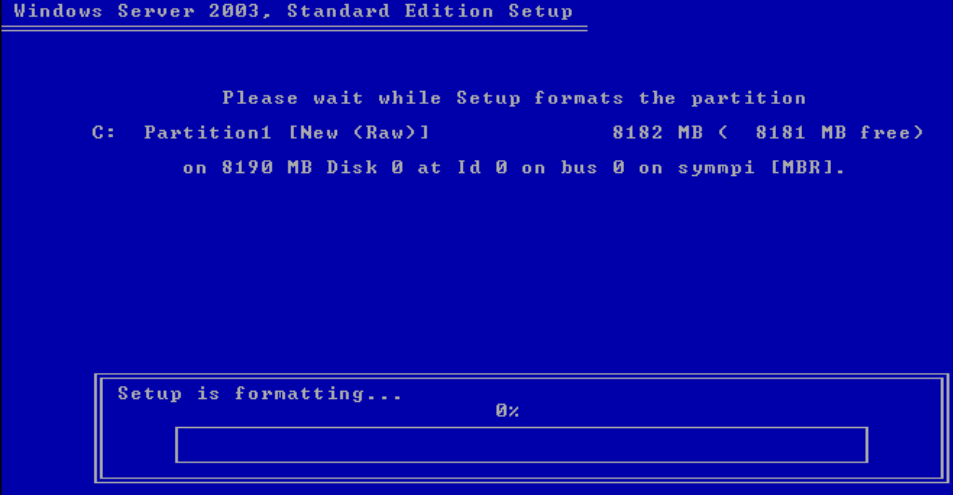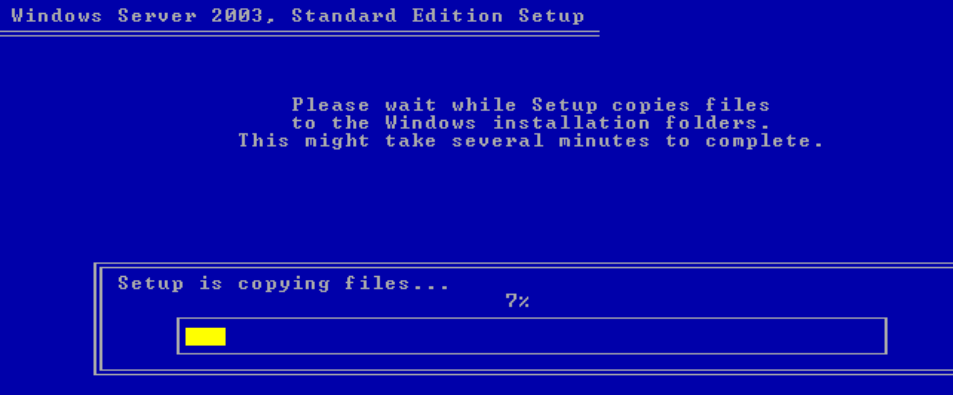I dette tilfælde oprettes en partition ved at taste C

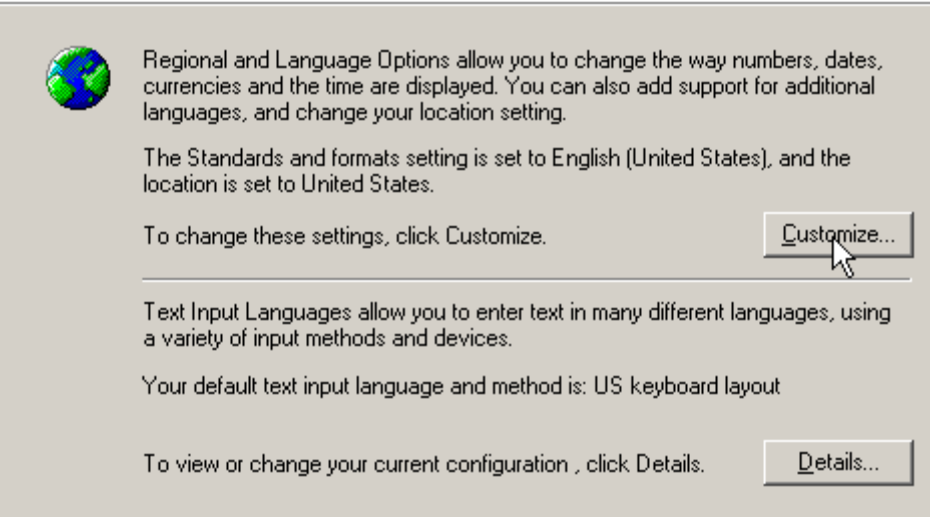|	

```Windows Server 2003, Standard Edition Setup```
 	
``` You asked Setup to create a new partition on```
``` 8190 MB Disk 0 at Id 0 on bus 0 on symmpi [MBR].```
 	
```   •   To create the new partition, enter a size below and```
```   press ENTER.```
 	
```   •   To go back to the previous screen without creating```
```   the partition, press ESC.```
 	
``` The minimum size for the new partition is   8 megabytes (MB).```
``` The maximum size for the new partition is 8182 megabytes (MB).```
``` Create partition of size (in MB):   8182▪```
 	
``` ENTER=Create   ESC=Cancel```
	I dette tilfælde oprettes en samlet partition.
	
	Hvis der er god plads på serveren anbefaler jeg, at der oprettes en partition på mindst 10 GB til server-installationen, mens rettes forbliver upartitioneret.

```Windows Server 2003, Standard Edition Setup```
 	
``` The following list shows the existing partitions and```
``` unpartitioned space on this computer.```
 	
``` Use the UP and DOWN ARROW keys to select an item in the list.```
 	
```   •   To set up Windows on the selected item, press ENTER.```
 	
```   •   To create a partition in the unpartitioned space, press C.```
 	
```   •   To delete the selected partition, press D.```
 	
``` 8190 MB Disk 0 at Id 0 on bus 0 on symmpi [MBR]```
 	
```   C: Partition1 [New (Raw)]   8182 MB (8181 MB free)```
```   Unpartitioned space   8 MB```
 	
``` ENTER=Install   D=Delete Partition   F3=Quit```
	Marker den oprettede partition og tast Enter.

```Windows Server 2003, Standard Edition Setup```
 	
``` The partition you selected is not formatted. Setup will now```
``` format the partition.```
 	
``` Use the UP and DOWN ARROW keys to select the file system```
``` you want, and then press ENTER.```
 	
``` If you want to select a different partition for Windows,```
``` press ESC.```
 	
```   Format the partition using the NTFS file system (Quick)```
```   Format the partition using the FAT file system (Quick)```
```   Format the partition using the NTFS file system```
```   Format the partition using the FAT file system```
	Formater med NTFS og tast Enter.

```Windows Server 2003, Standard Edition Setup``` Please wait while Setup formats the partition C: Partition1 [New (Raw)] 8182 MB (8181 MB free) on 8190 MB Disk 0 at Id 0 on bus 0 on symmpi [MBR]. Setup is formatting... 0%	Partitionen formateres, og….
```Windows Server 2003, Standard Edition Setup``` Please wait while Setup copies files to the Windows installation folders. This might take several minutes to complete. Setup is copying files... 7%	Filer kopieres til den.
Windows ○ Collecting information ○ Dynamic Update ○ Preparing installation ○ Installing Windows ○ Finalizing installation Setup will complete in approximately: 39 minutes The Windows Server 2003 family provides the most productive infrastructure platform for powering networks, applications, and Web services	Efter en genstart starter installation i en grafisk grænseflade, hvor der skal besvares en række spørgsmål.
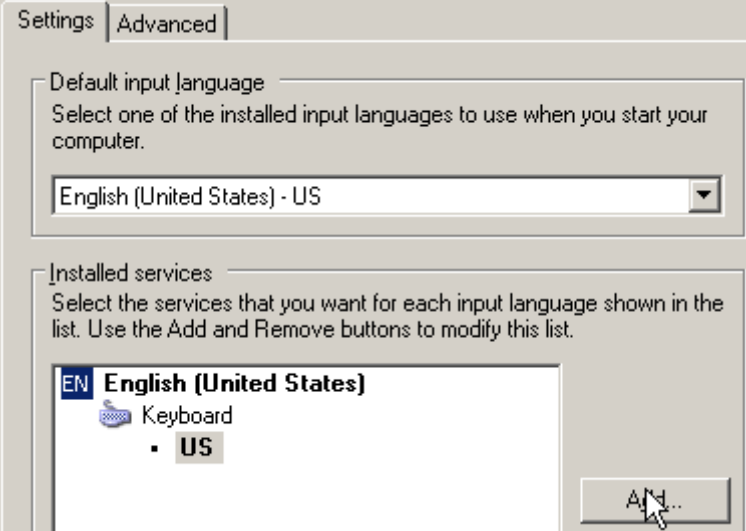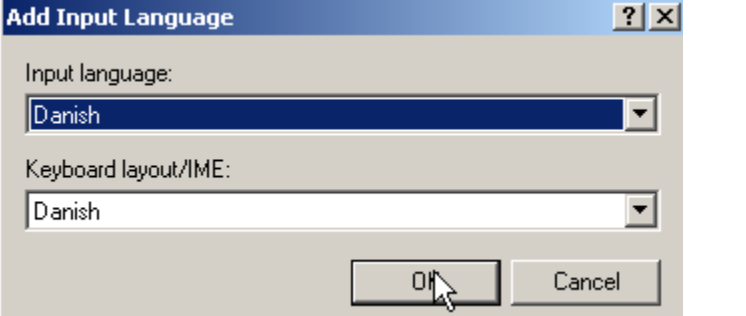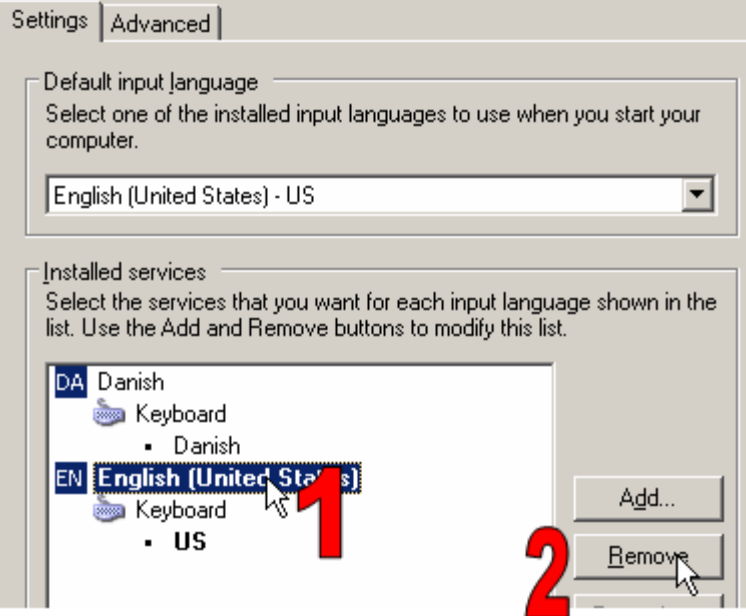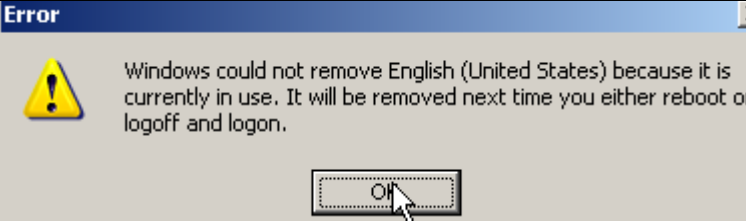
Regional and Language Options You can customize Windows for different regions and languages. Regional and Language Options allow you to change the way numbers, dates, currencies and the time are displayed. You can also add support for additional languages, and change your location setting. The Standards and formats setting is set to English (United States), and the location is set to United States. To change these settings, click Customize. _Customize..._ Text Input Languages allow you to enter text in many different languages, using a variety of input methods and devices. Your default text input language and method is: US keyboard layout To view or change your current configuration , click Details. _Details..._	Klik som vist:
Regional and Language Options ? X Regional Options | Languages | Advanced Standards and formats **2** This option affects how some programs format numbers, currencies, dates, and time. Select an item to match its preferences, or click Customize to choose your own formats: Danish ▾ _Customize..._ **1** Samples Number: 123.456.789,00 Currency: kr 123.456.789,00 Time: 13:16:16 Short date: 04-06-2007 Long date: 4. juni 2007 Location To help services provide you with local information, such as news and weather, select your present location: United States ▾	Vælg Danish og fanebladet Languages:
Regional Options | Languages | Advanced Text services and input languages To view or change the languages and methods you can use to enter text, click Details. _Details..._	Klik på knappen Details:

Settings | Advanced |
 	
Default input language
Select one of the installed input languages to use when you start your computer.
 	
English (United States) - US ▼
 	
Installed services
Select the services that you want for each input language shown in the list. Use the Add and Remove buttons to modify this list.
 	
EN **English (United States)**
   Keyboard
      · **US**
 	
Add…
	Klik Add…

Add Input Language ? × Input language: Danish ▼ Keyboard layout/IME: Danish ▼ OK Cancel	Tast blot D – så hopper den selv til Danish begge steder – klik OK:

Settings | Advanced |
 	
Default input language
Select one of the installed input languages to use when you start your computer.
 	
English (United States) - US ▼
 	
Installed services
Select the services that you want for each input language shown in the list. Use the Add and Remove buttons to modify this list.
 	
DA Danish
   Keyboard
      · Danish
EN **English (United States)**
   Keyboard
      · US
 	
Add…
Remove
	Markér English og klik Remove og Apply:

Error × ⚠ Windows could not remove English (United States) because it is currently in use. It will be removed next time you either reboot or logoff and logon. OK	Den viste melding popper op – klik blot OK, Marker English igen, og klik Remove.
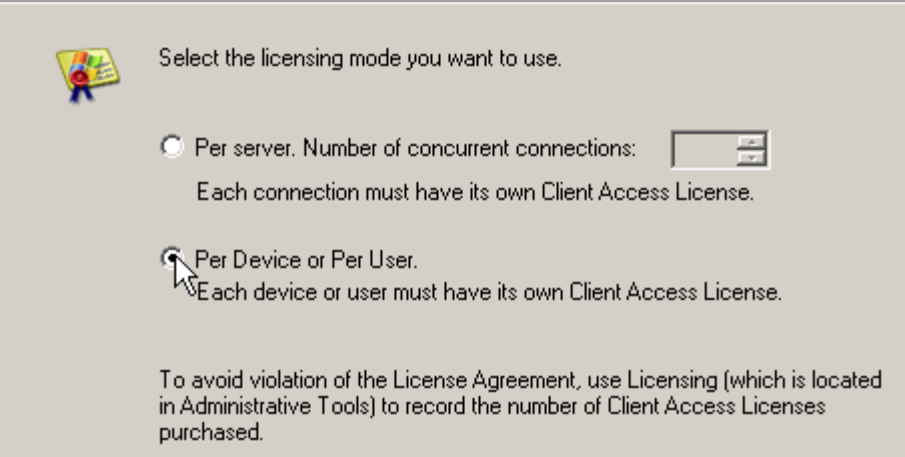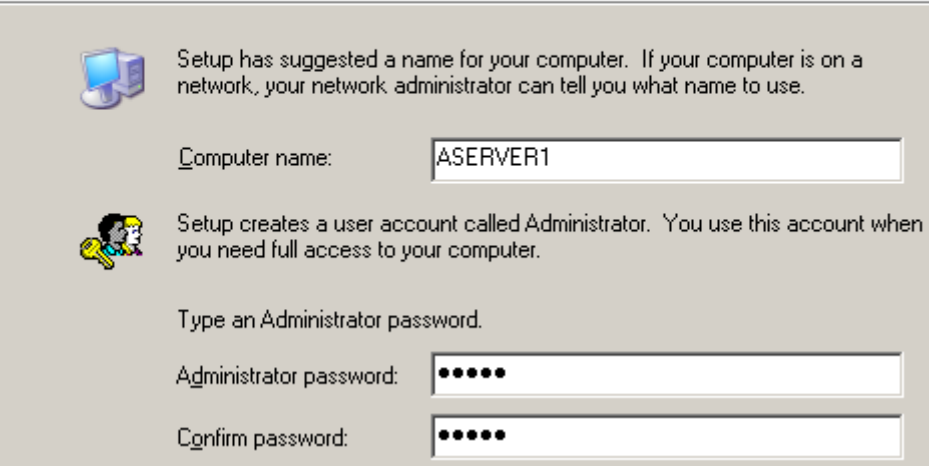
	Vælg Fanebladet Advanced og vælg også her Danish. Klik OK og Next
Regional Options | Languages | Advanced | Language for non-Unicode programs This system setting enables non-Unicode programs to display menus and dialogs in their native language. It does not affect Unicode programs, but it does apply to all users of this computer. Select a language to match the language version of the non-Unicode programs you want to use: Danish	
Type your full name and the name of your company or organization. Name: euc Organization: euc < Back Next >	Skriv blot som vist og klik Next
Your Product Key Your Product Key uniquely identifies your copy of Windows. Please see your License Agreement Administrator or System Administrator to obtain your 25-character Volume License product key. For more information see your product packaging. Type the Volume License Product Key below: Product Key: XXXX - XXXX - XXXX - XXXX - XXXX	Skriv licenskoden – udleveres af læreren.
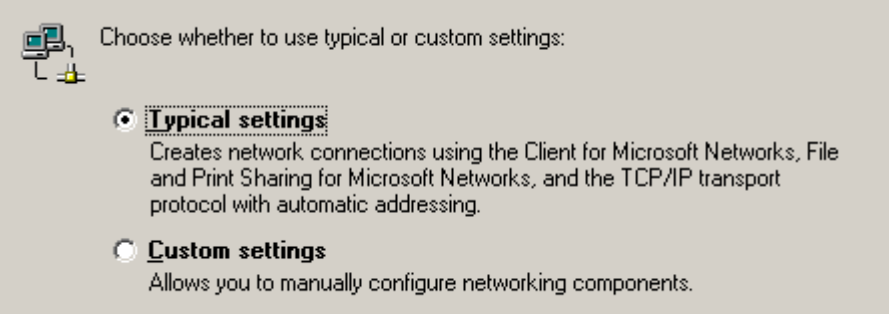
Licensing Modes Windows Server 2003 supports two licensing modes. Select the licensing mode you want to use. ○ Per server. Number of concurrent connections: Each connection must have its own Client Access License. ● Per Device or Per User. Each device or user must have its own Client Access License. To avoid violation of the License Agreement, use Licensing (which is located in Administrative Tools) to record the number of Client Access Licenses purchased.	Vælg Licens mode som vist og klik Next
Computer Name and Administrator Password You must provide a name and an Administrator password for your computer. Setup has suggested a name for your computer. If your computer is on a network, your network administrator can tell you what name to use. Computer name: ASERVER1 Setup creates a user account called Administrator. You use this account when you need full access to your computer. Type an Administrator password. Administrator password: ••••• Confirm password: •••••	Giv Installationen et navn – det vil afhænge af hvilke server du er i gang med at installere – se i opgave **Fejl! Henvisningskilde ikke fundet.**. Vælg admin som password – det er til at huske.
⚠ You have specified a password for the Administrator account that does not meet the criteria for strong passwords. We recommend that you use a password that meets the first two criteria below and at least three of the others: - Has at least 6 characters - Does not contain "Administrator" or "Admin" - Contains uppercase letters (A, B, C, and so on) - Contains lowercase letters (a, b, c, and so on) - Contains numbers (0, 1, 2, and so on) - Contains non-alphanumeric characters (#, &, ~, and so on) Are you sure you want to continue with the current password? [Yes] [No]	Klik blot Yes til denne popup.
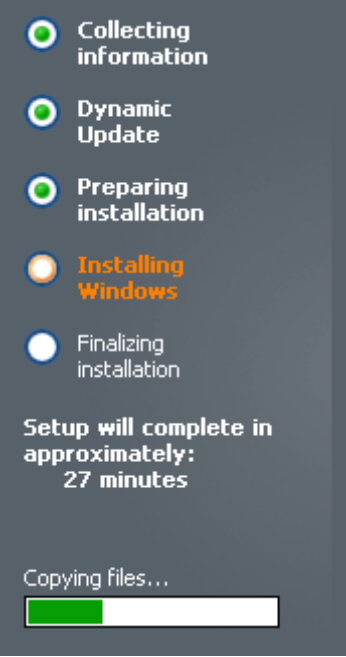
Improved security The Windows Server 2003 family delivers enhanced security with Internet Information Services 6.0, which offers restricted, safer functionality by default, SmartCard authentication, and improved security technologies to protect your infrastructure. ○ Collecting information ○ Dynamic Update ○ Preparing installation ● Installing Windows ○ Finalizing installation Setup will complete in approximately: 32 minutes Installing Network	Så kører det for os!!!!! – i endnu et stykke tid.
Choose whether to use typical or custom settings: ● **Typical settings** Creates network connections using the Client for Microsoft Networks, File and Print Sharing for Microsoft Networks, and the TCP/IP transport protocol with automatic addressing. ○ **Custom settings** Allows you to manually configure networking components.	Vælg som vist og klik Next:
Workgroup or Computer Domain A workgroup is a collection of computers that have the same workgroup name. A domain is a collection of computers defined by a network administrator. Do you want this computer to be a member of a domain? (You may need to obtain this information from your network administrator.) ● No, this computer is not on a network, or is on a network without a domain. Make this computer a member of the following workgroup: WORKGROUP ○ Yes, make this computer a member of the following domain:	Vælg som vist og klik Next:
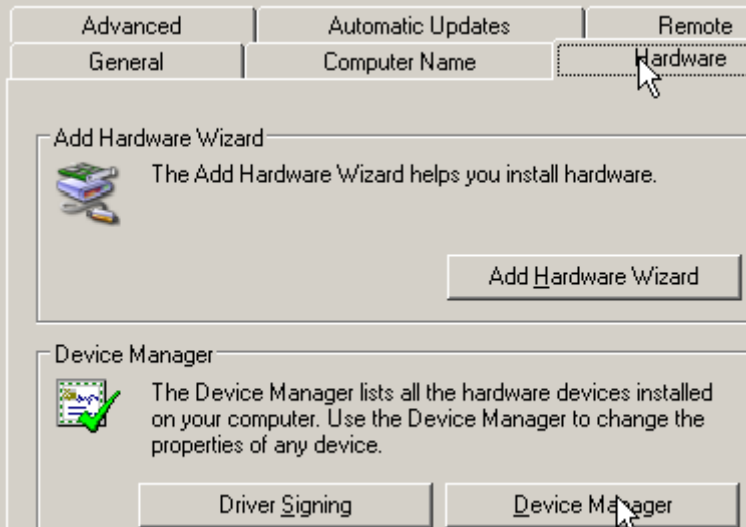
		Så kører det igen og efter en genstart er installationen færdig.
Collecting information Dynamic Update Preparing installation **Installing Windows** Finalizing installation Setup will complete in approximately: 27 minutes Copying files...		

Del 2: Checke hardware

Checkning af hardware foregår i Device Manager:

		Højreklik på My computer og vælg Properties.
My Computer Open Explore Search... Manage Map Network Drive... Disconnect Network Drive... Show on Desktop Rename Properties		
Advanced — Automatic Updates — Remote General — Computer Name — Hardware Add Hardware Wizard The Add Hardware Wizard helps you install hardware. Add Hardware Wizard Device Manager The Device Manager lists all the hardware devices installed on your computer. Use the Device Manager to change the properties of any device. Driver Signing — Device Manager		Vælg som vist:

□ 📟 ASERVER1 　⊞ 🔋 Batteries 　⊞ 💻 Computer 　⊞ 💾 Disk drives 　⊞ 🖥 Display adapters 　⊞ 💿 DVD/CD-ROM drives 　⊞ 🖴 Floppy disk controllers 　⊞ 🖴 Floppy disk drives 　⊞ 🖴 IDE ATA/ATAPI controllers 　⊞ ⌨ Keyboards 　⊞ 🖱 Mice and other pointing devices 　⊞ 📶 Network adapters 　⊞ 🔌 Ports (COM & LPT) 　⊞ 🖳 Processors 　⊞ 🔗 SCSI and RAID controllers 　⊞ 🔊 Sound, video and game controllers 　⊞ 🖥 System devices	I dette tilfælde er der igen gule spørgsmålstegn, men hvis der er det, læg mærke til om det omfatter netkortet og/eller grafikkortet – disse drivere skal installeres. Bruger Internettet, læreren og evt. andre værktøjer, så som PC Wizard: http://www.pcworld.dk/download/66/14 45

Del 3: Kopier i386 til C-drev i separat mappe (f.eks. 2k3)

Kopiér i386 mappen og support-mappen fra Server CD til en nyoprettet mappe på C-drevet :

```
□ 💿 Local Disk (C:)
　□ 📁 2k3
　　⊞ 📁 I386
　　⊞ 📁 SUPPORT
```

Del 4: Installere SP

Download den nyeste service pack til server 2003 (eller få den udleveret af læreren) og gennemfør installationen ved at dobbeltklikke på den downloadede *.exe-fil.

Del 5: Slipstreaming af den kopierede i386 mappe.

Placér den pågældende Servicepack exe-fil eller hotfix i en mappe. Stien til denne mappe kaldes, f.eks. c:\sp.
I386-mappen fra server-CD skal nu opdateres med den nyeste SP. Denne i386 er placeret i en mappe – stien hertil kaldes f.eks c:\2k3
Fra kommandoprompt, skriv denne kommando: **hotfixname /x**
Pak hotfixen ud i samme mappe. Når den er udpakket, åben en kommandoprompt og gå til c:\sp\i386\update og skriv: **update /s:c:\2k3**
Læg mærke til at i386-mappen ikke skal medtages i kommandoen.
Denne kommando integrerer en servicepack eller hotfix i en eksisterende i386-mappe.

2) Opsætning af det fysiske netværk.
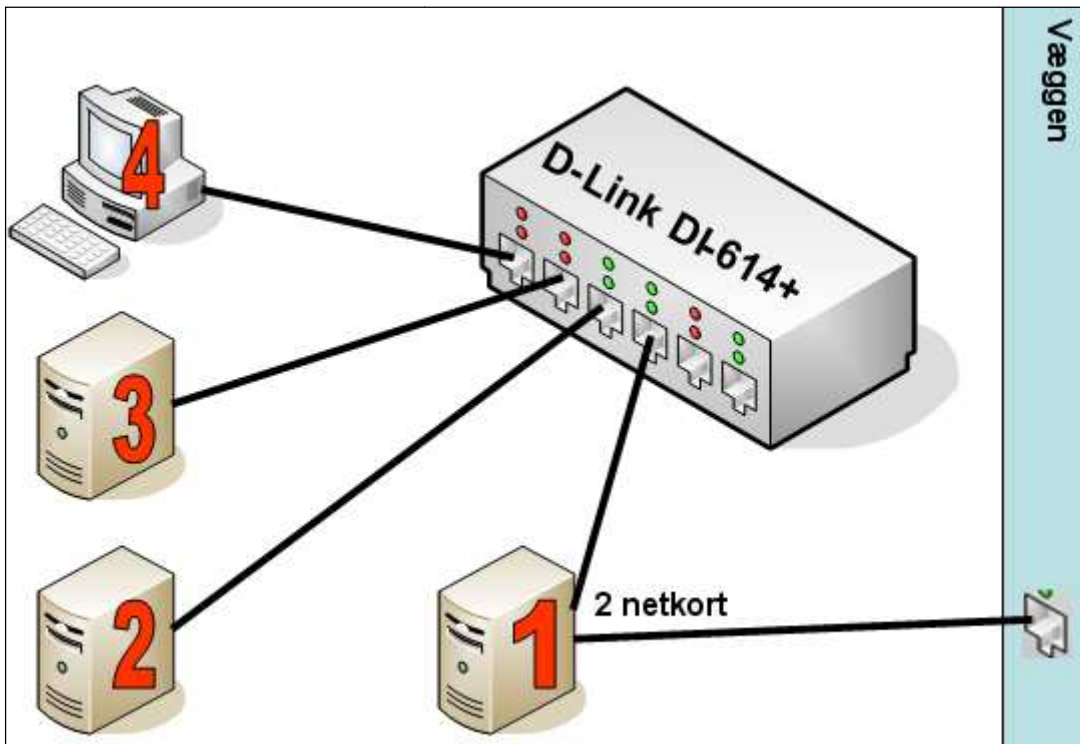
Først skal computerne forbindes, dels til switchen, dels – for nr. 1's vedkommende – til væggen, som vist på tegningen.

Sørg for at slå DHCP servicen og wireless access-point fra i D-Link'en.

Hvis ikke det er sket:
Kopiér i386 mappen fra Server CD til C-drevet:

3) Omdøbe computere

Hold A	Hold B	Hold C	Hold D
Aserver1	Bserver1	Cserver1	Dserver1
AXP	BXP	CXP	DXP

Opgavehæfte til kursus i Netteknik7

System Properties

Advanced | Automatic Updates | Remote
General | Computer Name | Hardware

Windows uses the following information to identify your computer on the network.

Computer description:

For example: "IIS Production Server" or "Accounting Server".

Full computer name: RRAS.tekkom-test.local

Domain: tekkom-test.local

To rename this computer or join a domain, click Change. [Change...]

Computer Name Changes

You can change the name and the membership of this computer. Changes may affect access to network resources.

Computer name:
AServer1

Klik OK og acceptér genstart.

Rollefordeling:

2	Domain controller, DNS, filserver, WINS server, DHCP server, printserver	Server
4	Medlem af domænet	XP
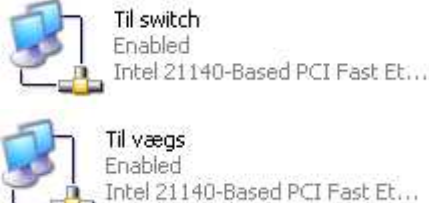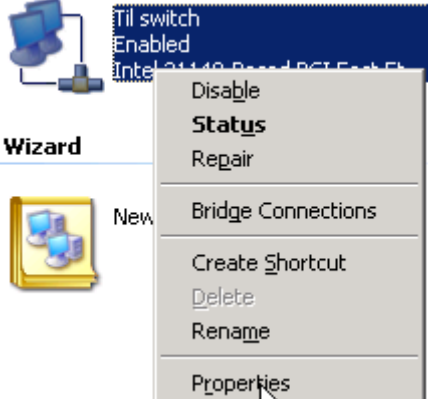
IP-addresserings-plan:

Net 1	10.0.1.x	255.255.255.0
1		10.0.1.1
2		10.0.1.2
3		10.0.1.3
4		DHCP klient
Net 2	10.0.2.x	255.255.255.0
1		10.0.2.1
2		10.0.2.2
3		10.0.2.3
4		DHCP klient

Net 3	10.0.3.x	255.255.255.0
1		10.0.3.1
2		10.0.3.2
3		10.0.3.3
4		DHCP klient
Net 4	10.0.4.x	255.255.255.0
1		10.0.4.1
2		10.0.4.2
3		10.0.4.3
4		DHCP klient

4) Opsætning af server 1 med fast IP:

Network Connections	I kontrol Panel: Dobbeltklik på *Network connections*
Til switch — Enabled — Intel 21140-Based PCI Fast Et… / Til vægs — Enabled — Intel 21140-Based PCI Fast Et…	Først bør de 2 netkort omdøbes. Derved besluttes også hvilket netkort, der skal forbindes til væggen og hvilken til switchen:
Til switch	Det gøres nemmest ved blot at venstre-klikke på det pågældende netkort, og trykke på tasten F2. Nu kan navnet laves om.
Til switch — Enabled — Intel 21140-Based PCI Fast Et… / Disable / **Status** / Repair / Bridge Connections / Create Shortcut / Delete / Rename / Properties / **Wizard** / New	Netkortet, der skal forbindes til switchen, skal have en fast IP-adresse. Højreklik på dette netkort, og vælg *Properties*:

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This connection uses the following items: ☑ 💻 Client for Microsoft Networks ☐ 💻 Network Load Balancing ☑ 💻 File and Printer Sharing for Microsoft Networks ☑ ⟁ Internet Protocol (TCP/IP) [Install...] [Uninstall] [Properties]	Markér Internet Protocol (TCP/IP) og klik ***Properties.***
○ Obtain an IP address automatically ◉ Use the following IP address: IP address: `10 . 0 .   .` Subnet mask: `255 . 255 . 255 . 0` Default gateway: `10 . 0 .   .` ○ Obtain DNS server address automatically ◉ Use the following DNS server addresses: Preferred DNS server: `10 . 0 .   .` Alternate DNS server: `  .   .   .`	**De sidste 2 udfyldes som følger:** {table below}
○ Obtain an IP address automatically ◉ Use the following IP address: IP address: `10 . 0 . 1 . 1` Subnet mask: `255 . 255 . 255 . 0` Default gateway: `  .   .   .` ○ Obtain DNS server address automatically ◉ Use the following DNS server addresses: Preferred DNS server: `10 . 0 . 1 . 2` Alternate DNS server: `  .   .   .`	F.eks. for hold A:

Hold:	A	B	C	D
IP-adresse	1.1	2.1	3.1	4.1
Gateway		Blank		
DNS	1.2	2.2	3.2	4.2

Check at netkortet, der forbindes til væggen, er konfigureret som følger:

◉ Obtain an IP address automatically
○ Use the following IP address:
IP address: ` .   .   .`
Subnet mask: ` .   .   .`
Default gateway: ` .   .   .`
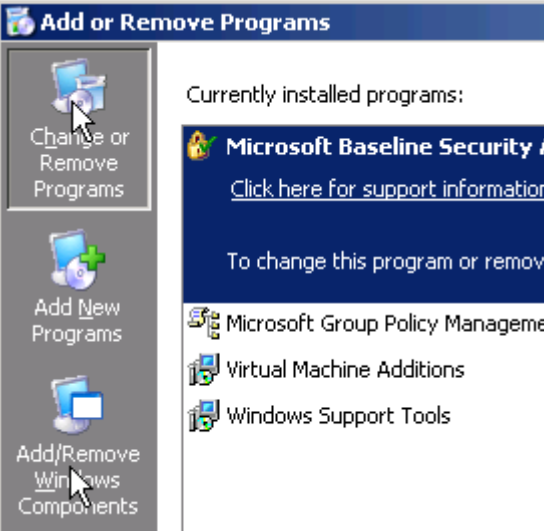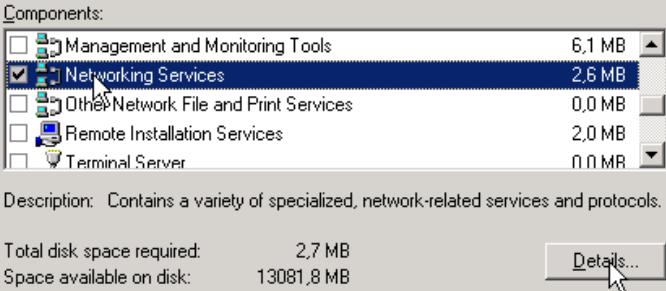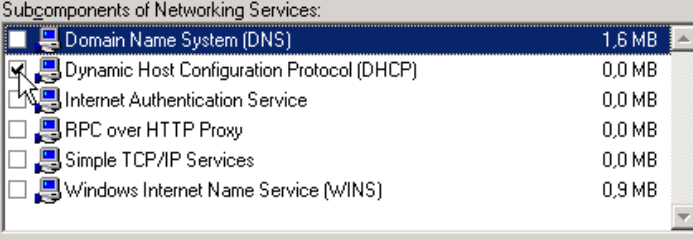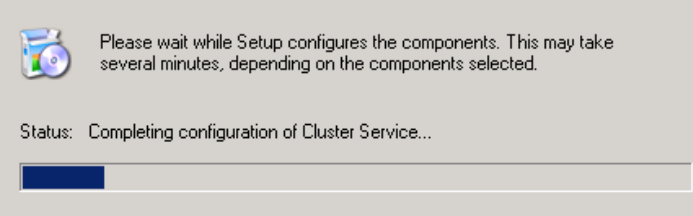
◉ Obtain DNS server address automatically
○ Use the following DNS server addresses:
Preferred DNS server: ` .   .   .`
Alternate DNS server: ` .   .   .`
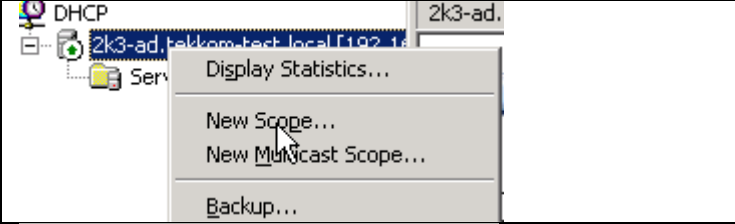
5) Installere DHCP på Server nr. 1

	DHCP servicen installeres ved hjælp af Add or remove programs i Kontrol Panel. Dobbeltklik.
	Klik på Add/remove Windows Components
	Klik på teksten *Networking Services* (sæt IKKE fluebenet ud for), og klik på Details:
	Sæt fluebenet ud for *Dynamic host configuration protocol(DHCP)* og klik OK og Next.
	Under installationen bliver der brug for at hente nogle filer fra I386-mappen. Klik Browse knappen og find frem til den i386-mappe, der ligger på C-drevet. Gennemfør installationen og klik Finish.
	Åben DHCP-konsollen: **Der skal nu oprettes det IP-område, som serveren skal uddele IP-adresser fra!**

DHCP
2k3-ad. tekkom-test.local [192.1...
Serv
  Display Statistics…
  New Scope…
  New Multicast Scope…
  Backup…
	Jeg viser oprettelse af det scope, som hold A skal bruge – de andre scope skal følge de IP-adresse-områder, der er angivet i dias 6.
	Højreklik på server navnet og vælg New Scope, og klik Next:

Type a name and description for this scope. This i how the scope is to be used on your network. Name: Hold A Description: IP-område for Hold A	Giv det et navn og en beskrivelse, a.l.a det viste og klik Next:
IP Address Range You define the scope address range by identifying a set addresses. Enter the range of addresses that the scope distributes. Start IP address: 10 . 0 . 1 . 5 End IP address: 10 . 0 . 1 .100 A subnet mask defines how many bits of an IP address IDs and how many bits to use for the host ID. You can s length or as an IP address. Length: 8 Subnet mask: 255 . 255 . 255 . 0	Opret IP-området: start og slut f.eks. scopet som vist, og klik Next:
Add Exclusions Exclusions are addresses or a range of addresses that are server. Type the IP address range that you want to exclude. If you address, type an address in Start IP address only. Start IP address: End IP address: . . . . . . Excluded address range:	Hop over, klik blot Next:

Lease Duration The lease duration specifies how lo scope. Lease durations should typically be connected to the same physical ne portable computers or dial-up clients Likewise, for a stable network that locations, longer lease durations are Set the duration for scope leases w Limited to: Days: Hours: Minutes: 8 0 0	Accepter default, klik blot Next:
Configure DHCP Options You have to configure the most common DHCP scope. When clients obtain an address, they are given D addresses of routers (default gateways), DNS se scope. The settings you select here are for this scope a Server Options folder for this server. Do you want to configure the DHCP options for t ● Yes, I want to configure these options now ○ No, I will configure these options later	Accepter Yes og klik Next

Router (Default Gateway)
You can specify the routers, or default gateways.
 	
To add an IP address for a router used by clients
 	
IP address:
10 . 0 . 1 . 1   Add
      Remove
      Up
      Down
	Indskriv den Default gateway (Server1's indre IP), der passer og Klik Add.
	Klik Next:

Domain Name and DNS Servers The Domain Name System (DNS) maps an clients on your network. You can specify the parent domain you want the DNS name resolution. Parent domain: To configure scope clients to use DNS servers servers. Server name: Resolve	Den tager vi senere. Klik blot Next:

WINS Servers Computers running Windows can use WINS se names to IP addresses. Entering server IP addresses here enables Win broadcasts to register and resolve NetBIOS nar Server name: [ ] Resolve	Den tager vi senere. Klik blot Next:
Activate Scope Clients can obtain address leases only if a scope is activated. Do you want to activate this scope now? ⊙ Yes, I want to activate this scope now ○ No, I will activate this scope later	Accepter at aktivere scopet og klik Next og Finish:

DHCP
└ 2k3-ad.tekkom-test.local [192.168.127.10]
   └ Scope [10.0.1.0] Hold A
      ├ Address Pool
      ├ Address Leases
      ├ Reservations
      └ Scope Options
   └ Server Options	

På XP'en:

Run…	Åben en DOS-prompt
Type the name Internet resour Open: cmd	Skriv cmd efterfulgt af Enter-tasten (↵) eller klik OK

`C:\>ipconfig /release`
`C:\>ipconfig /renew`
`C:\>ipconfig /all`
	Skriv disse tre kommandoer efter tur i den viste rækkefølge og afslut dem med Enter-tasten.
	Det er muligt at den første giver fejlmelding – fred være med det.
	
	Nr. 1 frigiver en IP-konfiguration, der er leveret af en DHCP-server
	Nr. 2 sender endnu en anmodning til DHCP-serveren om en ny IP-konfiguration
	Nr. 3 viser denne konfiguration.