

# User manual

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## CONGRATULATIONS

Congratulations on your purchase of B3.

All you want from a full-size PC you get from our mini-sized B3, designed to fit your home better than an always running PC. With B3 you get a product in a small form factor but still fully featured. B3 protects our network for a safer home network.

## CONSIDER THE ENVIRONMENT

Do you really need to print this manual?

## SAFETY PRECAUTIONS

Please read the following information before continuing.

- To prevent loss of data or malfunction, always shut down B3 properly. To shut down, keep the button pressed for five seconds. The front light will blink while shutting down, and turn off when B3 is ready to be disconnected.
- Never remove the power cord while the LED on front is lit or blinking!
- Do not drop your B3 or expose it to other kinds of sudden mechanical shocks as this may result in data loss and damage to the hard drive.
- Keep liquids away from your B3.
- Do not use your B3 in a dusty environment.
- Do not use your B3 in ambient temperatures out of the range 10°C and 30°C.
- If your B3 is moved from a cool environment to a warmer environment, please allow the drive to acclimatize to the ambient temperature before operating the device.
- Only use the power adapter that was supplied with your B3.

## NETWORK SETUP OPTIONS

A Local Area Network (LAN) can look very different from place to place. To make it smooth and simple for you to get an idea of how to connect your B3 into your home LAN, take a look at the following scenario pictures.

You might not have the exact same setup as in the scenarios below but feel free to combine and configure to make it fit your needs and requirements.

### ROUTER + FIREWALL + SERVER MODE

In this connection setup B3 is placed as the first device in your home network (LAN).

Note that B3 does not include a DSL modem. If your old router has a built in DSL modem you can not replace that router with B3. If this is the case, connect B3 as a server in your network.

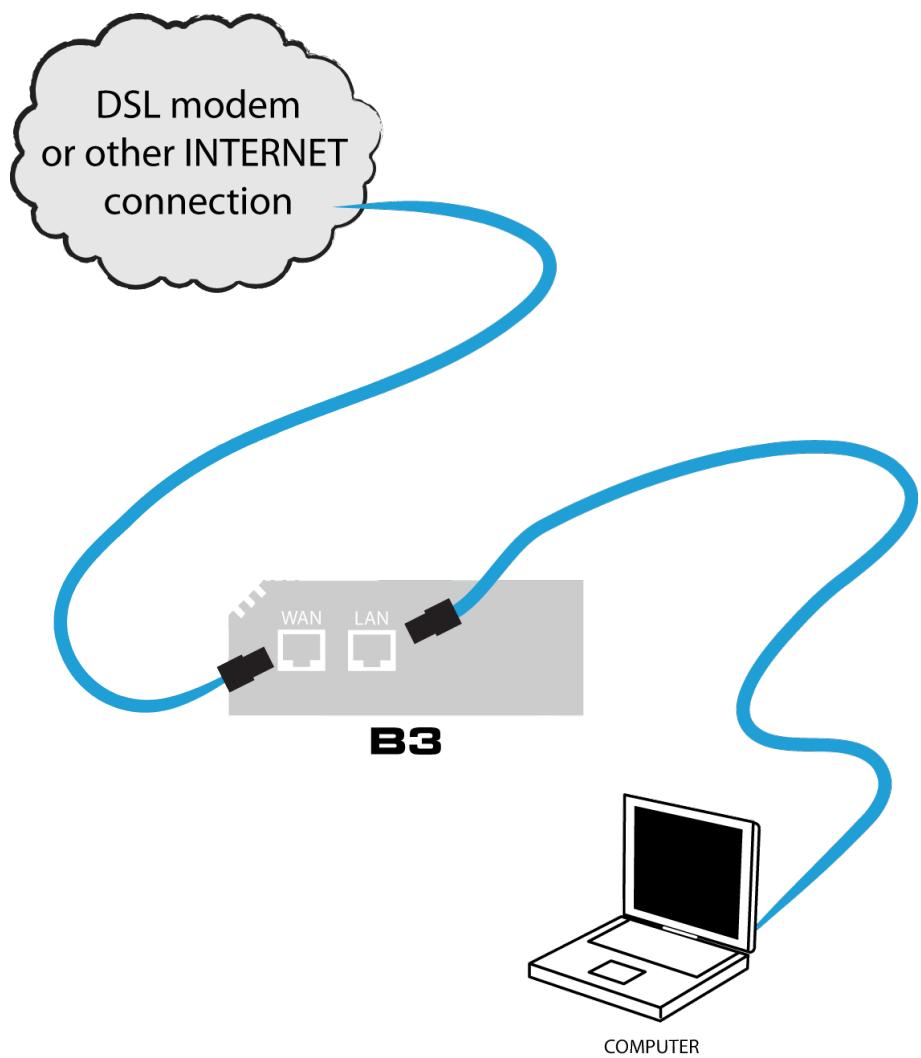
If you have a separate DSL modem, connect a LAN cable from the DSL modem and the other end to the WAN port on B3.

If you have a Ethernet wall outlet (RJ45), connect this directly to the WAN port on B3.

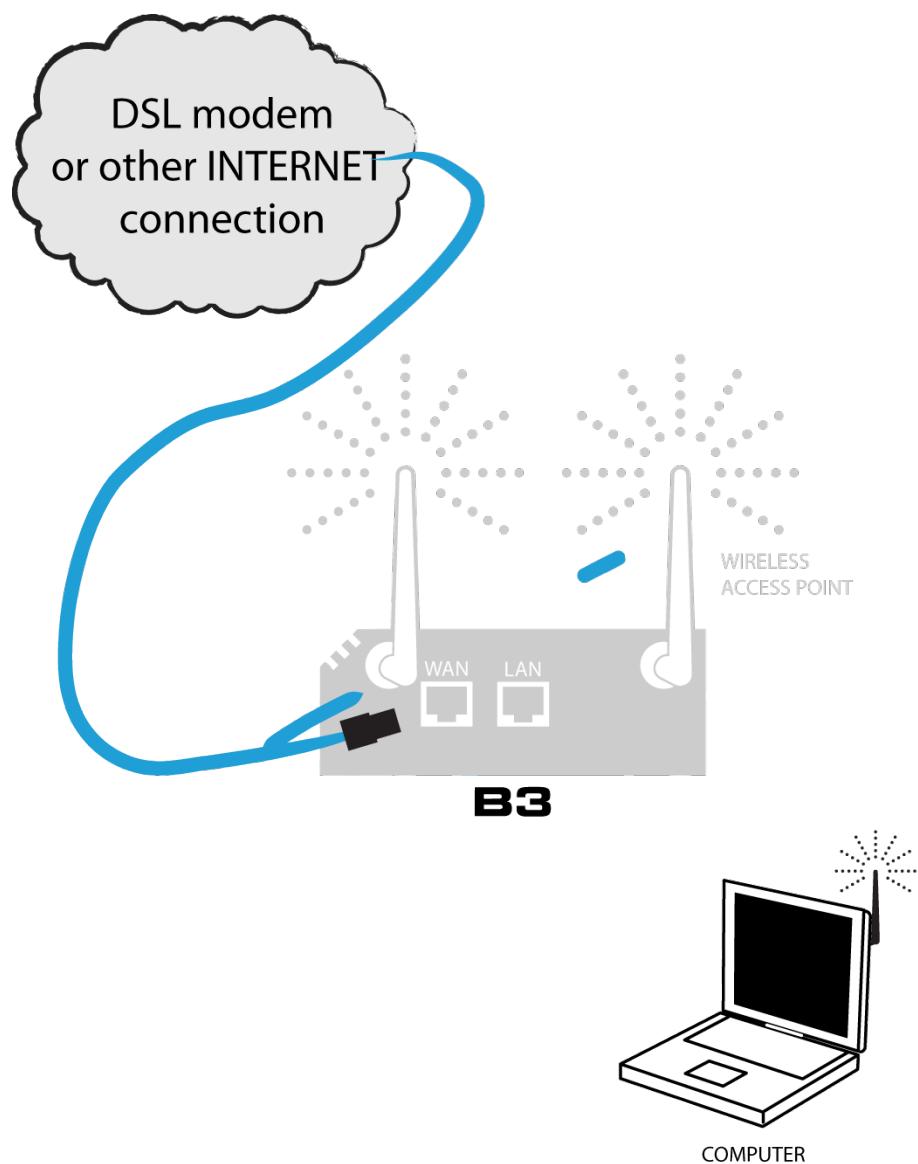
### SERVER MODE

Use this connection setup if you have another router that you wish to use.

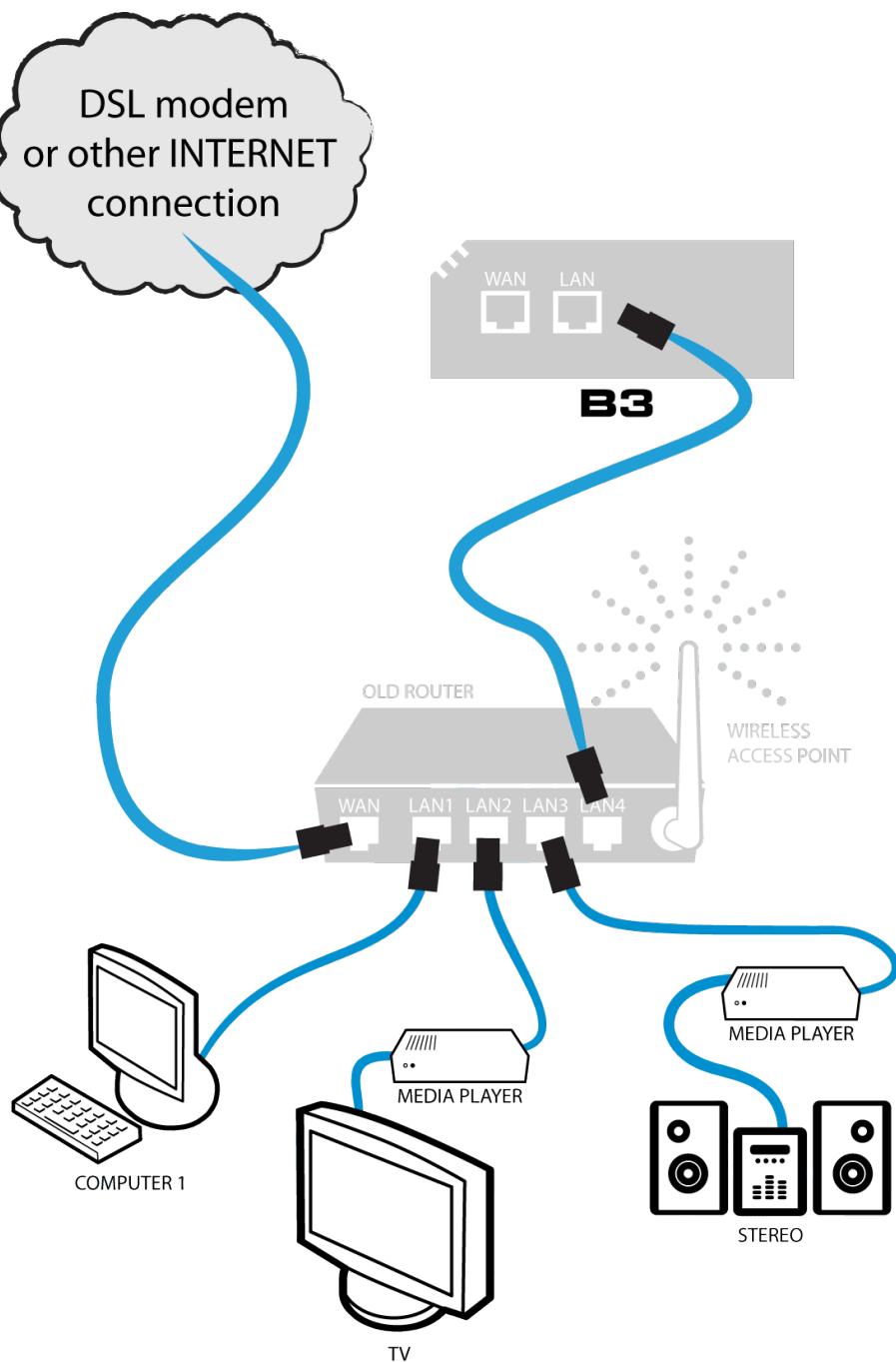
Connect B3s LAN port to your already existing LAN.

**SCENARIO 1**

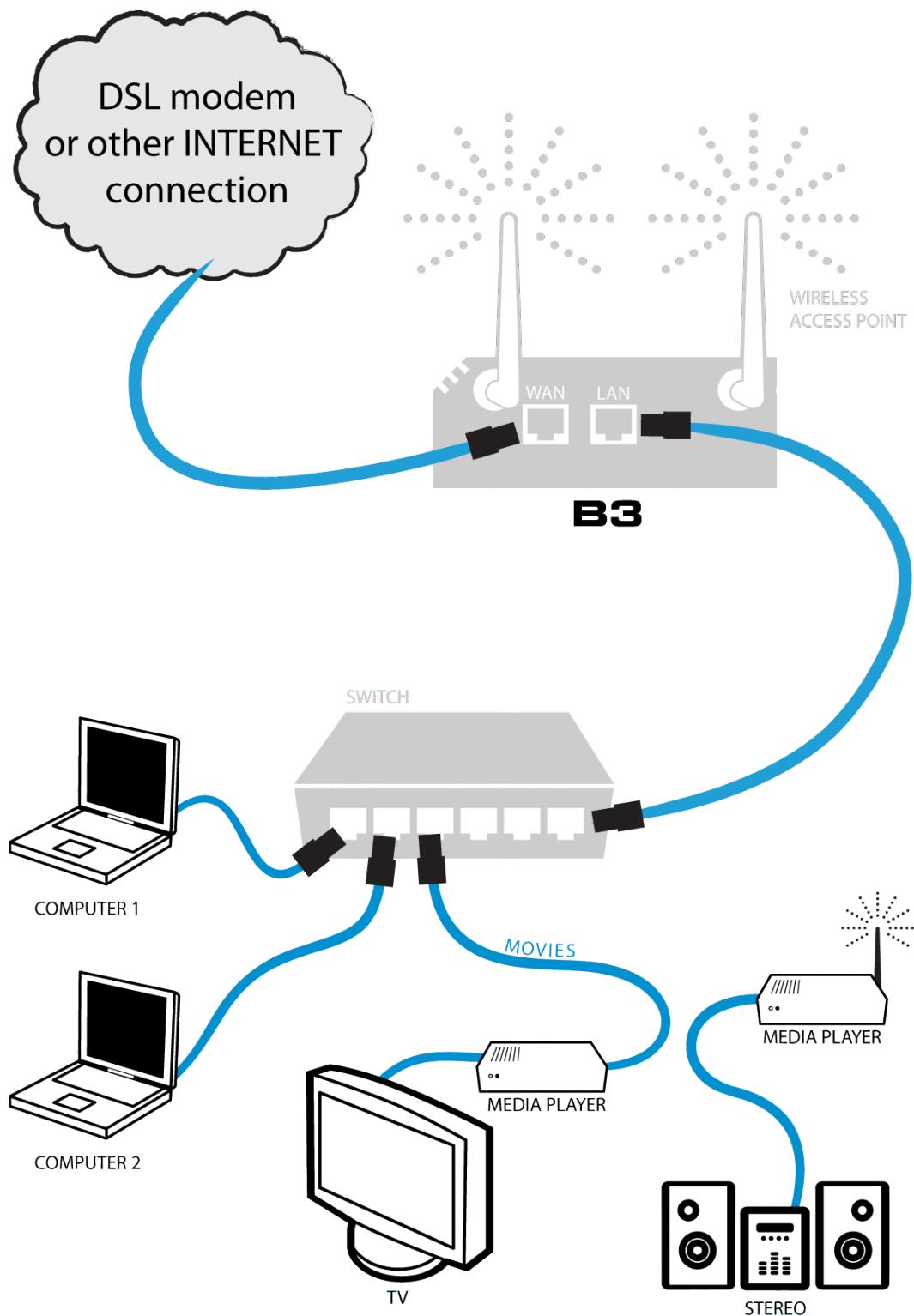
B3 serves as router + firewall + server. Only one computer in your LAN, connected via cable.

**SCENARIO 2**

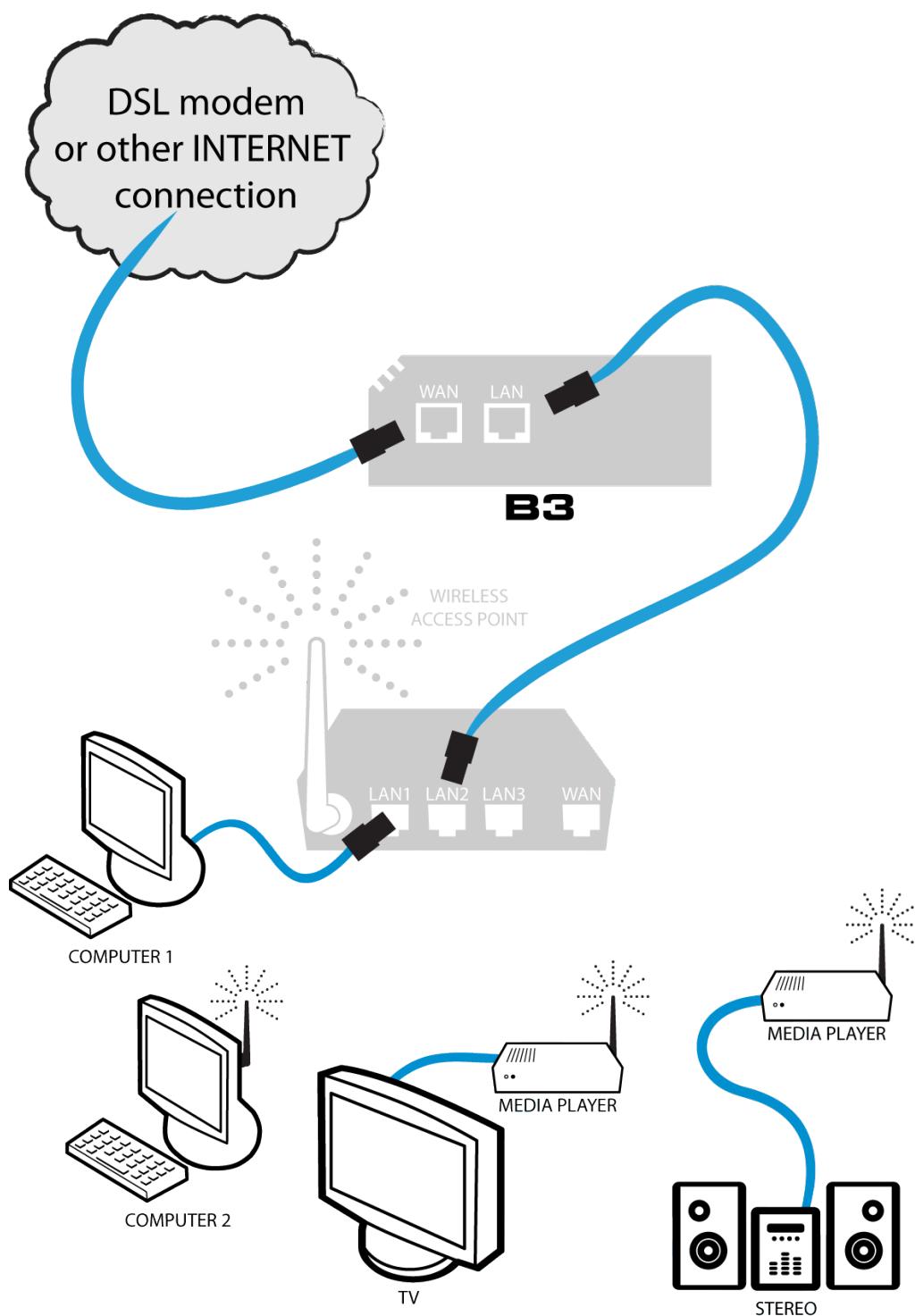
B3 serves as router + firewall + server. One or more computers in your LAN, connected wireless via WiFi. This scenario requires you to have the wireless B3.

**SCENARIO 3**

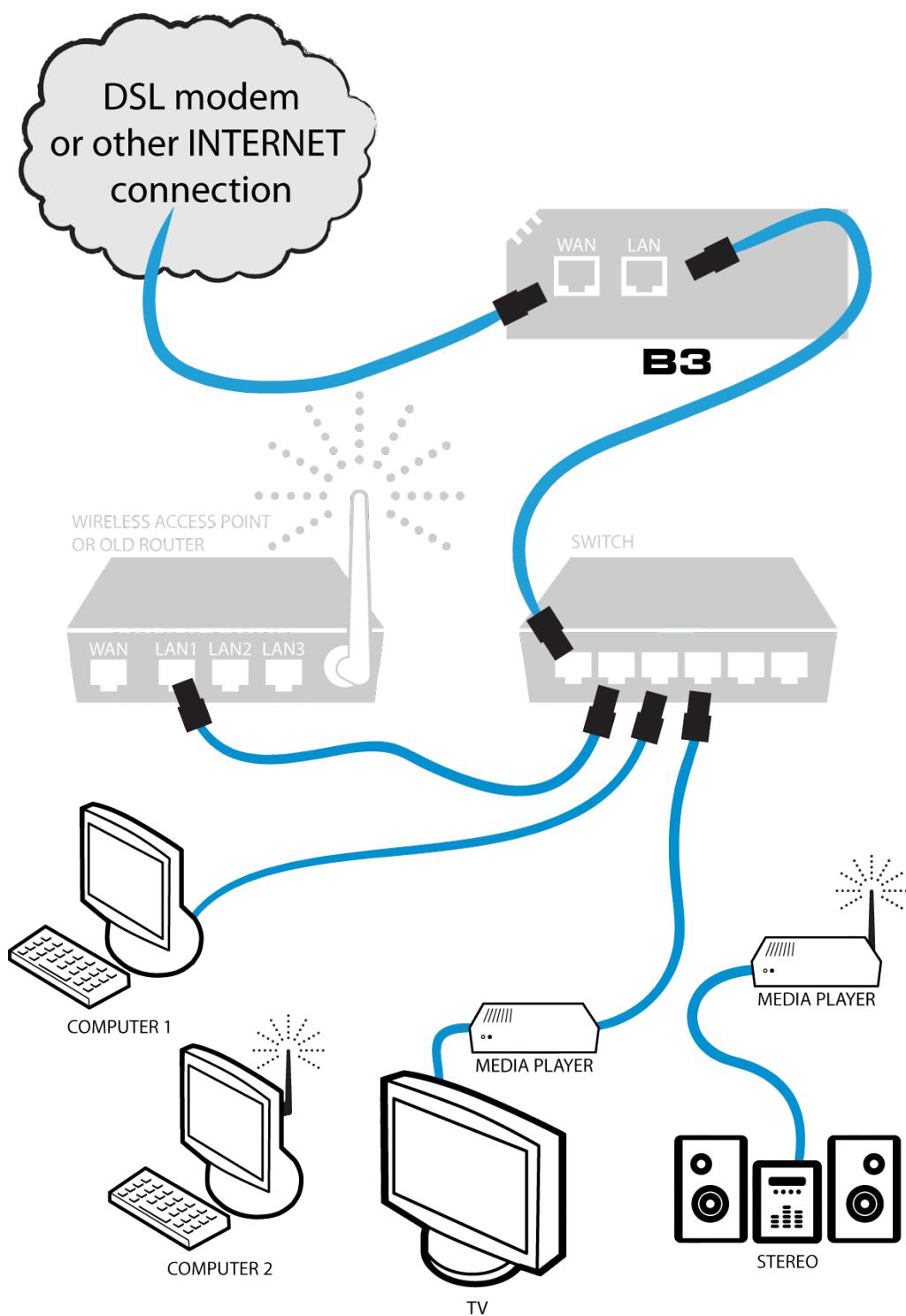
You prefer using your old firewall and router. B3 serves only as server. Connect B3's LAN port to one of your router LAN ports. Leave B3's WAN port unconnected.

**SCENARIO 4**

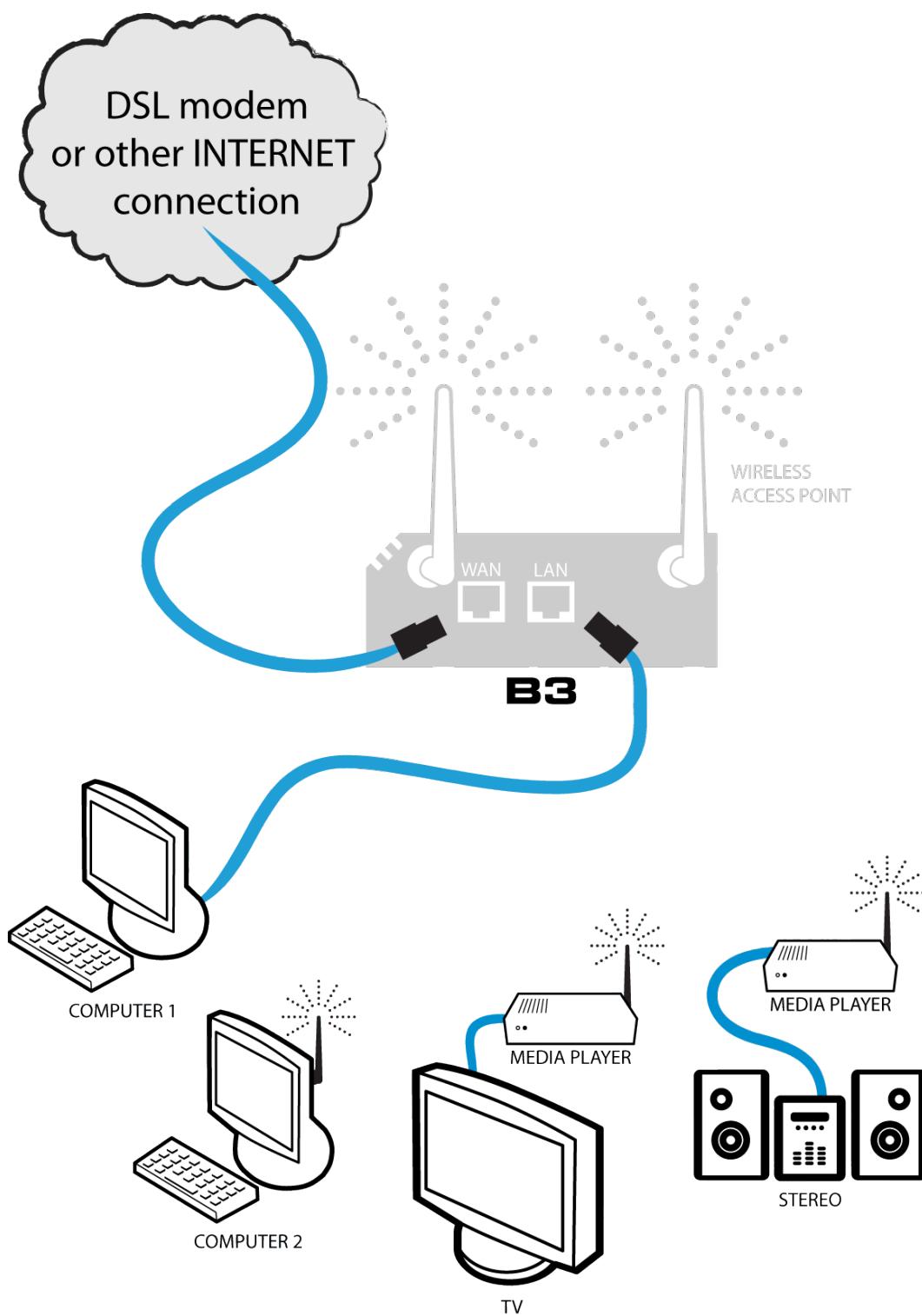
B3 serves as router + firewall + server. You want to connect more than one network device in your LAN via cable or WiFi. Use a switch to split up your LAN connection. This scenario requires you to have the wireless B3.

**SCENARIO 5**

B3 serves as router + firewall + server. You want to connect more than one network device in your LAN via cable or WiFi and you have an old router with wireless access point. Connect B3's LAN port to one of your router LAN ports. You may also use your old router as an switch, connecting network devices (such as computers or media players) to its other LAN ports. Remember to disable an existing DHCP server in your OLD router.

**SCENARIO 6**

B3 serves as router + firewall + server. Almost same configuration as in scenario 5 but using a switch for your network devices with cable. Remember to disable an existing DHCP server in your OLD router.

**SCENARIO 7**

B3 serves as router + firewall + server. You have only one computer using a cable in your LAN and several wireless devices. This scenario requires you to have the wireless B3.

## FEATURES

B3 is a miniature server, primarily for use at home or in a small business. Nonetheless, B3 is loaded with functionality, which makes it very versatile:

- Just store your photos on B3 and make them available for others with a few clicks.
- Torrent downloader: Turn off your computer and relax! Let B3 download your large files instead of leaving your PC on all the time. B3 also handles HTTP and FTP downloads.
- File server: Allows you to access all your files from work or school at all times. Time to live life smarter and forget about USB memories and other portable media.
- Streaming media servers: Put your MP3 collection in the 'music' folder on B3, and all your music will instantly be available to all iTunes compatible (DAAP), or UPnP compatible players. Squeezebox Server for streaming to Logitech Squeezebox.
- Router: Use B3 as a router and firewall for maximum security.
- Wireless access point: High wireless speed in B3 with 802.11n makes your wireless clients perform their best.
- Web, eMail and FTP server: Fully featured server functionality allows you to turn off your PC.
- Central eMail server: B3 can retrieve your eMail from various accounts, collecting them in one place. Check all your eMail at one place, via B3's web-mail or IMAP server.
- PIM: With calendar, address book, notes and webmail.
- Print server: Plug your USB printer in to B3, and share it to all your home computers.
- Easy to use: All pre-installed functionality is controlled with a very easy to use web interface. You do not need to install anything on your host computer.
- Linux inside: Except for the above mentioned pre-installed functionality, B3

is essentially a standard Linux computer, but with the advantages of being silent and small. Choose from 10000+ Linux Debian applications and configure B3 to do whatever you want. SSH access with full system access is provided.

- Integrated backup solution: B3 has an integrated backup function that enables you to make backup of your important files stored on B3.
- Tiny case: A small, easily placed aluminium case, measuring only 11.5 x 4.5 x 18.5 cm (4.5 x 1.8 x 7 in), small as a pocket book. Painted with a thin layer of black rubber and with a dim blue LED, the design easily blends in with any environment.
- Silent cooling: An innovative solid aluminium case cools the hard drive efficiently, without the need for fans. Combined with the low power electronics, fully passive cooling is possible - without compromising the server's longevity.
- Environmentally friendly: Compared to a always-on standard server PC, B3 uses 90-95% less energy. This also means that you save money, actually, B3 saves you about 100 Euro every year just on the electricity bill, compared to having an always-on standard PC.

# GETTING TO KNOW YOUR B3

## FRONT SIDE



The front LED indicates B3's status:

Steady blue light - B3 is up and running.

No light - B3 is powered off.

Purple - B3 is booting up or shutting down.

Green - system installation in progress.

Red - system message, broken RAID for example.

## BACK SIDE



1. Power on / off button.
2. WAN and LAN ethernet connectors. The green LEDs to the right on respective connector indicates a 1Gbit connection, the yellow LEDs to the left indicates a 100MBit connection.
3. 2 x USB host port type A.
4. 1 x eSATA.
5. Slot for Kensington lock.
6. 12 V (@3A) power jack.

## INSIDE

Your B3's hard drive has 3 partitions: System partition, Data partition and Swap partition. It is totally normal that you do not see the total disk size (i.e. 40GB, 500GB, 1TB or 2TB) available in the web interface as the System partition and the Swap partition takes some of the space.

## INSTALLATION

There are two ways of using your B3.

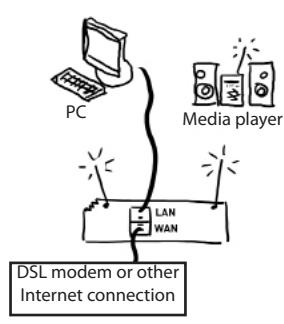
- Router + Firewall + Server mode (recommended)
- Server mode

Your B3 has an auto detect function on the LAN port. This means that B3 will search the LAN for an DHCP server. If a DHCP server is found, B3 will configure itself to obtain an IP address on the LAN port. If no DHCP server is found, B3 will fall back to the static IP address 192.168.10.1.

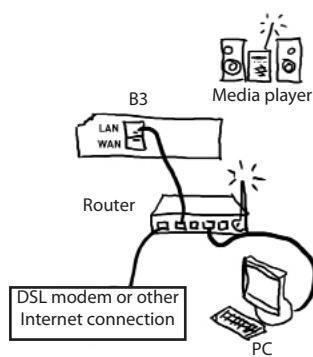
B3 will obtain an IP address automatically on the WAN port.

1. Decide whether you want B3 to be lying down or standing upright. Assemble the rubber feet accordingly.
2. Use the enclosed network cable and connect it between B3's LAN port and your network, either directly to your computer or to a switch or router. Also if using B3 as a router connect B3's WAN port to your Internet connection or DSL modem.

Router + firewall + server mode



Server mode



3. Connect the power brick to a wall outlet and to B3.
4. After about 1 minute when the blue lamp on B3's front is constantly lit blue B3 is powered up.
5. Start an Internet browser on your computer and type **http://b3** in the address field. If you are using Mac or Linux type **http://b3.local** instead.

6. A dialogue box where you are prompted for password will pop up. Log in using the password admin.
7. Follow the Setup wizard. It is recommended to create a user for every person who will use B3.

Your B3 is now ready for use!

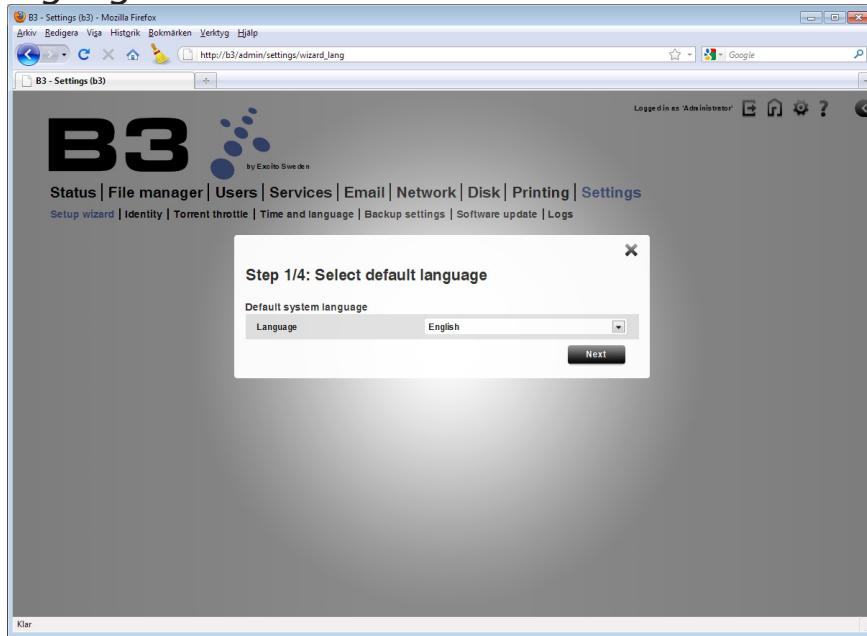
## A FEW TIPS!

- It is strongly suggested that the admin password is changed. Read about how to change the password in chapter “Users” on page 31.
- Perform a software update to ensure that your B3 runs the latest software: Click ‘Settings’ and ‘Software update’, then press ‘Update system’.
- You should not use the admin account as your personal account.
- If you need support on activating “Obtain an IP address automatically” (DHCP) on your PC read the section “DHCP setup on your PC”.

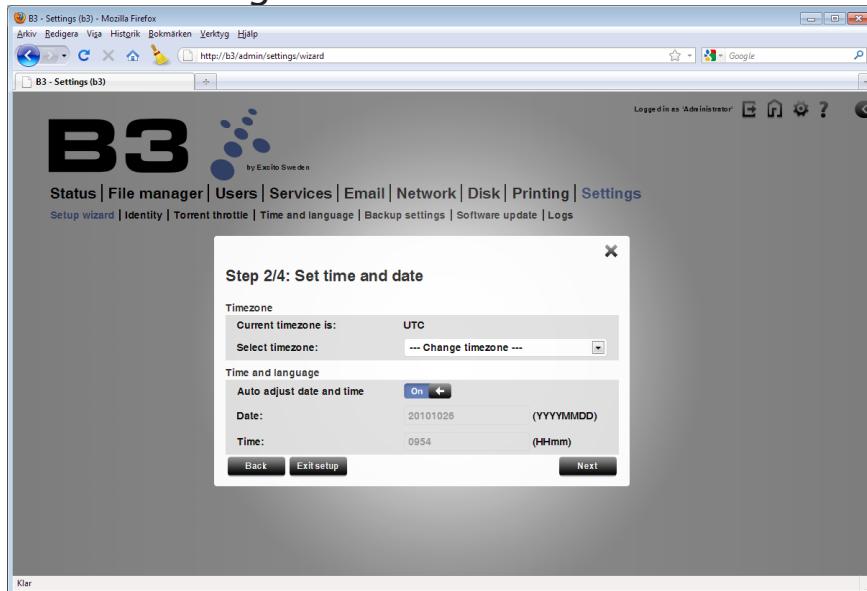
# SETUP WIZARD

Use the integrated Setup wizard to make the very first important settings on your B3 such as language, time and date, add users and make network settings. You can run the wizard at any time later on as well to do this setup.

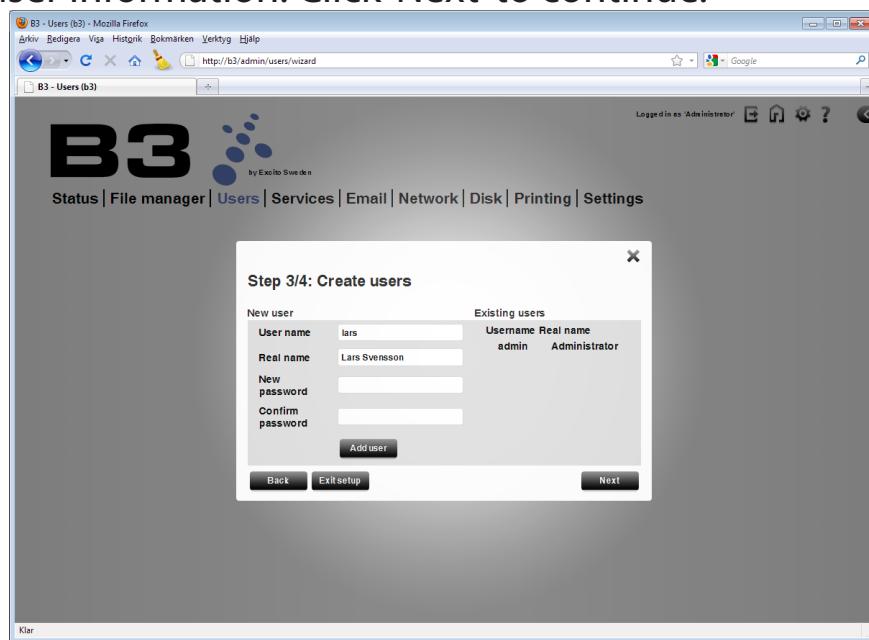
1. Step 1 - Select default language. B3's user interface will be shown in the chosen language. Click 'Next' to continue.



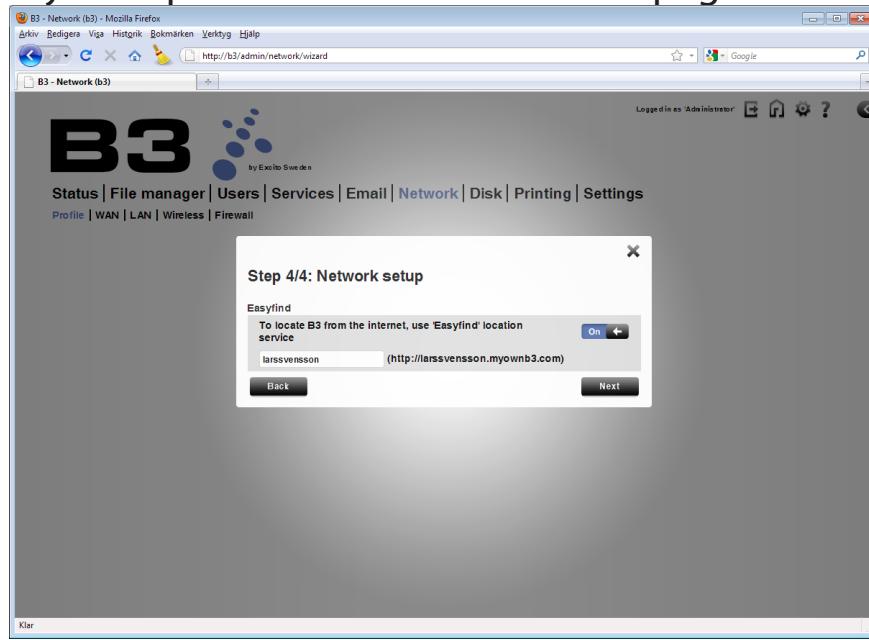
2. Step 2 - Date and time. Choose time zone and the date and time. You also have the possibility to use an Internet time server. By doing this the date and time is automatically set and updated and you do not have to do any manual time settings. Click 'Next' to continue.



3. Step 3 - Create a user, or as many as you desire. Click 'Add user' after filling in the user information. Click 'Next' to continue.



4. Step 4 - Network setup. If you would like to register for an free personal Easyfind name, activate it here. You will reach your B3 browsing Internet to <http://<your-Easyfind-name>.myownb3.com>. Read about Easy find in chapter "Easyfind - personal domain name" on page 133. Click 'Next' to continue.



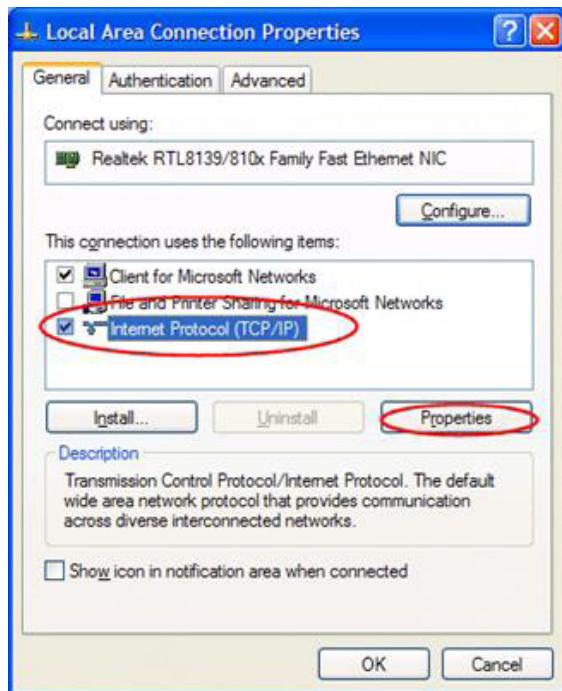
Setup complete. Click 'Finish setup' to exit the wizard.

## DHCP SETUP ON YOUR PC

### MICROSOFT WINDOWS 7, VISTA, XP, 2000, ME OR 98

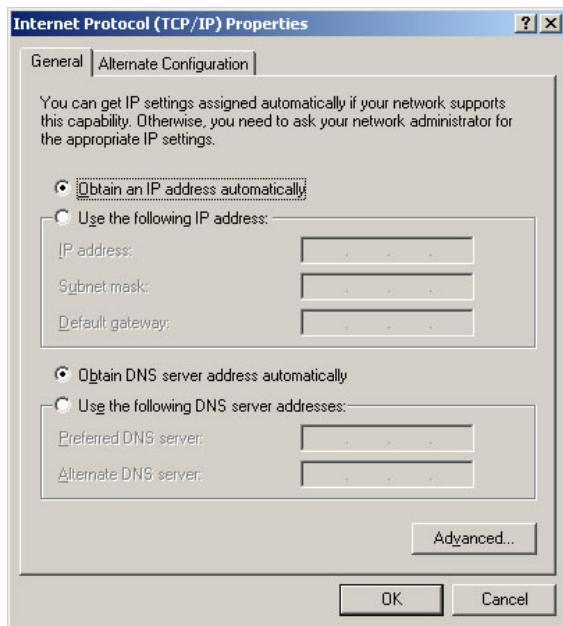
Change your PC to obtain an IP address automatically by following these instructions:

1. Open Windows Start menu.
2. Open Control Panel.
3. Classic view: Open Network Connections. Category view: Select Network and Internet Connections, and then Network Connections.
4. Double-click on your active LAN or Internet connection.
5. Click Properties. This opens the Local Area Connections Properties window.
6. In the General tab, highlight the Internet Protocol (TCP/IP) item, and click Properties. This opens the Internet Protocol (TCP/IP) Properties window.



7. In the General tab, write down your old IP address, Subnet mask and default gateway.

8. Click “Obtain an IP address automatically”



9. Click OK.

10. Click OK to close each window

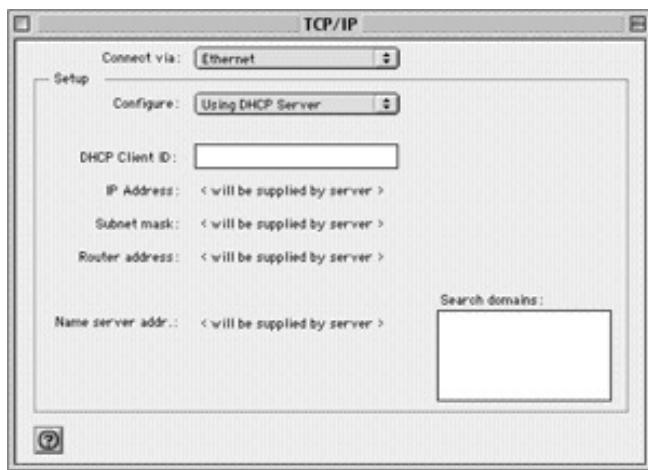
11. Restart your computer if asked for.

## MAC

Change your Mac to obtain an IP address automatically by following these instructions:

### Mac OS 8.6 or 9.x

1. From the Apple menu: select Control Panels then TCP/IP.



2. From the "Connect via" box, select your Mac's ethernet interface.
3. From the "Configure" box, select "Using DHCP Server". Leave the DHCP Client ID box empty.
4. Close the TCP/IP Control Panel.

### Mac OS X

1. From the Apple menu: choose System Preferences then Network.
2. If not already selected: select Built-in Ethernet in the Configure list.
3. If not already selected: select Using DHCP in the TCP/IP tab.
4. Save your changes.

## LINUX

To change your Linux PC to obtain an IP address automatically is done differently depending on what Linux distribution you have; please consult the appropriate documentation on how to do this.

## ADMINISTRATION

Logging in as the administrator you get certain privileges and access to the B3 settings. You should only use the administrator account when setting up your B3 and managing disks and backup jobs.

Only admin can change B3's settings and add new users. Also note that admin can not be removed. Admin do not have access to a download manager. Daily use should be with another added user.

Please notice that administrator log in is by default disabled on the WAN port. To enable this change the Admin account settings by clicking 'Edit user' next to admin under the menu 'Users'. Read about it here in chapter "Specific administrator setting" on page 32.

The default username and password for the administrator account is:

**Username: admin**

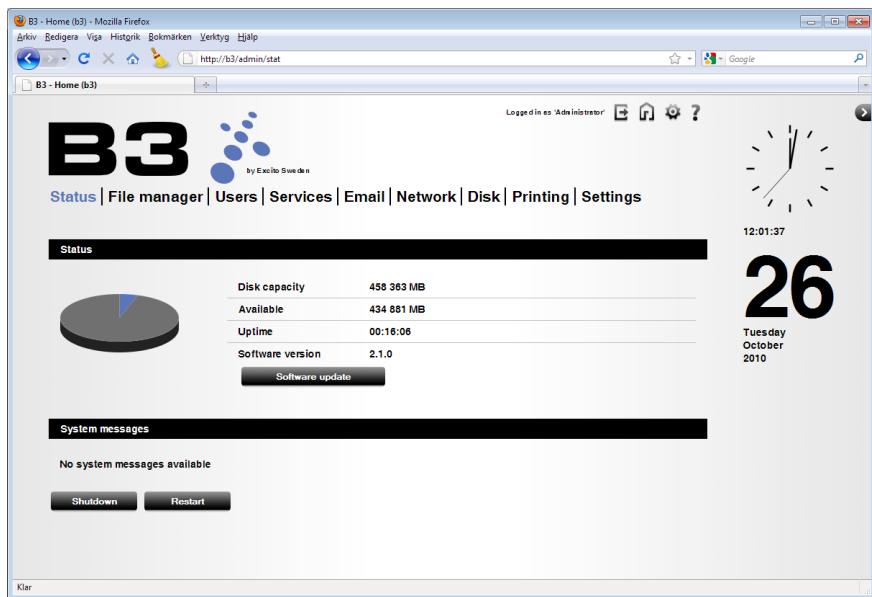
**Password: admin**

As a security measure, it is strongly recommended to change the admin password.

## ADMINISTRATOR LOG IN

1. Start an Internet browser on your computer and type **http://b3 (http://b3.local if using Mac)**.
2. Click the gear wheel in the upper right corner
3. Fill in the administrator log in name 'admin' and password 'admin'.
4. To change the administrator password, click 'Users'
5. Click 'Edit' to the right of the administrator row.
6. Fill in a new password and press Update.

## STATUS



This is the start page when logged in as administrator.

Here you find information about the installed hard drive size and remaining disk space, B3 uptime and the installed software revision number.

Clicking Software update will take you to the update page.

Clicking the Power down button shuts down B3 in the same way as pressing the button on the backside of the unit. To start up again, press the button on the backside.

The Restart button restarts B3. You will be able to reach the user interface and B3's services within about 2 minutes. When the front LED is solid blue B3 is ready to be used again.

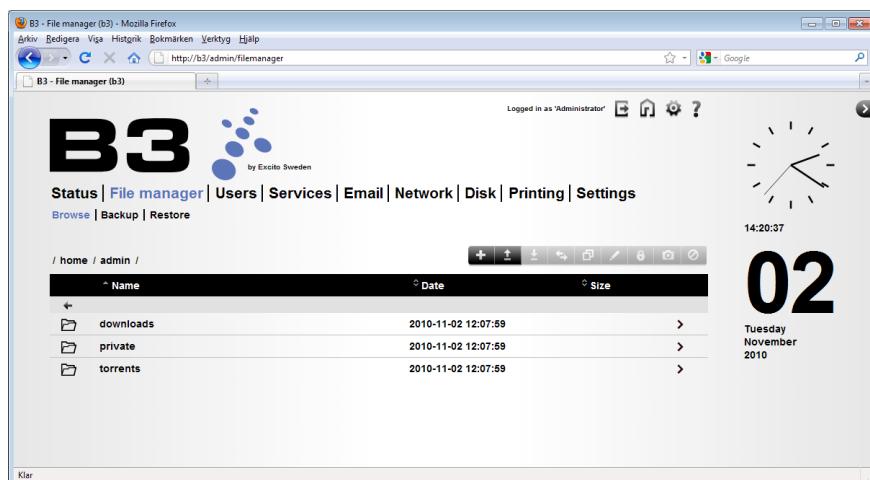
## FILE MANAGER

The page contains three folders: 'Browse', 'Backup' and 'Restore'. Read more about using the filemanager in the chapter "File server" on page 68.

## BROWSE

The Browse page shows files stored on B3. Here you are able to reach your files on B3 if you are away from home. Click files or folders and use the icons in the file function bar to perform different actions. The functions from left to right are:

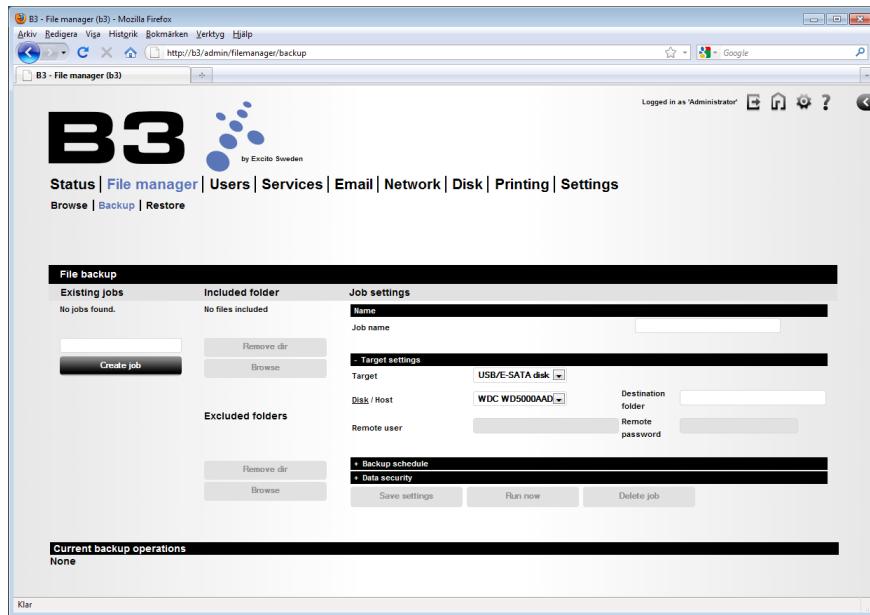
- Create folder
- Upload file
- Download as zip
- Move files
- Copy files
- Rename
- Change permissions
- Add to album
- Delete



A friendly reminder, do not use the administrator login to manage your files.  
Log in with a standard user!

## BACKUP

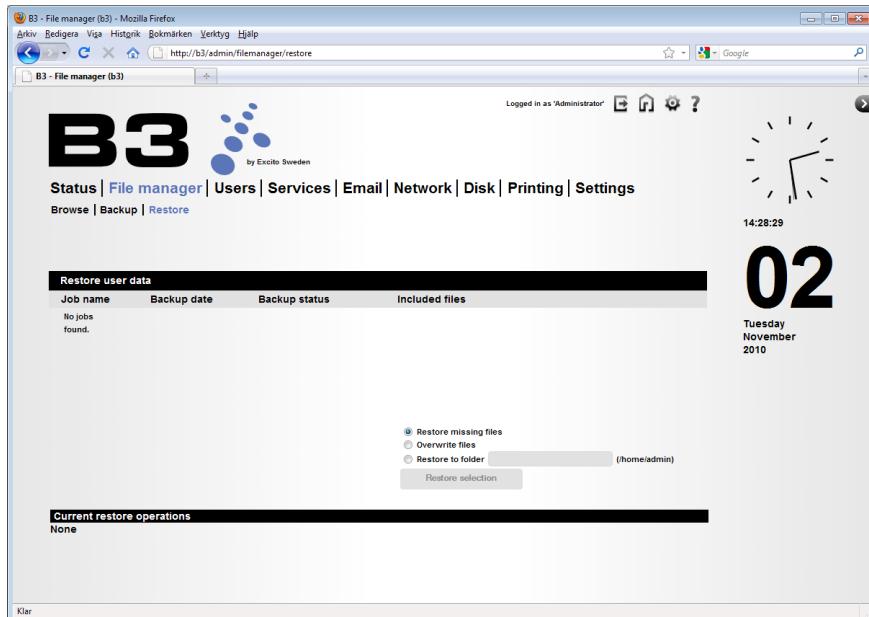
B3 has a integrated backup function. Backing up your important files with this feature gives you the security to always feel safe about not loosing anything that means a lot to you. Read more about using the backup feature in the chapter "Backup" on page 108.



- Existing jobs - The backup jobs you have created.
- Job settings - Specific settings such as target, schedule and encryption for each backup job.

## RESTORE

Here you select among your backup jobs to restore files. Read more about using the backup feature in the chapter "Backup" on page 108.



- Restore user data - Information about available backup jobs.
  - Restore missing files - Restores files that has been erased from your B3.
  - Overwrite files - Restores files from backup to B3, overwrites the destination file.
  - Restore to directory - Restores files from a backup to B3, choose the destination directory for the files. Only directories under /admin is allowed.

## USERS

Clicking on Users in the top menu, you will see the following page. Read more about users in the chapter “Users” on page 52.

The screenshot shows a Mozilla Firefox browser window with the title 'B3 - Users (b3)'. The address bar displays 'http://b3/admin/users'. The page itself has a header with the B3 logo and navigation links: Status, File manager, Users (highlighted in blue), Services, Email, Network, Disk, Printing, and Settings. A sub-header 'Users' is shown above a table. The table lists two users: 'admin' and 'lars'. The columns are 'User name', 'Real name', and 'Allow shell login'. For 'admin', the values are 'Administrator' and 'No'. For 'lars', the values are 'Lars Svensson' and 'No'. Each row has an 'Edit' button. At the bottom left of the table is a 'Add new user' button. On the right side of the page, there is a small calendar graphic showing the date '26' and the text 'Tuesday October 2010'. The status bar at the bottom of the browser window says 'Klar'.

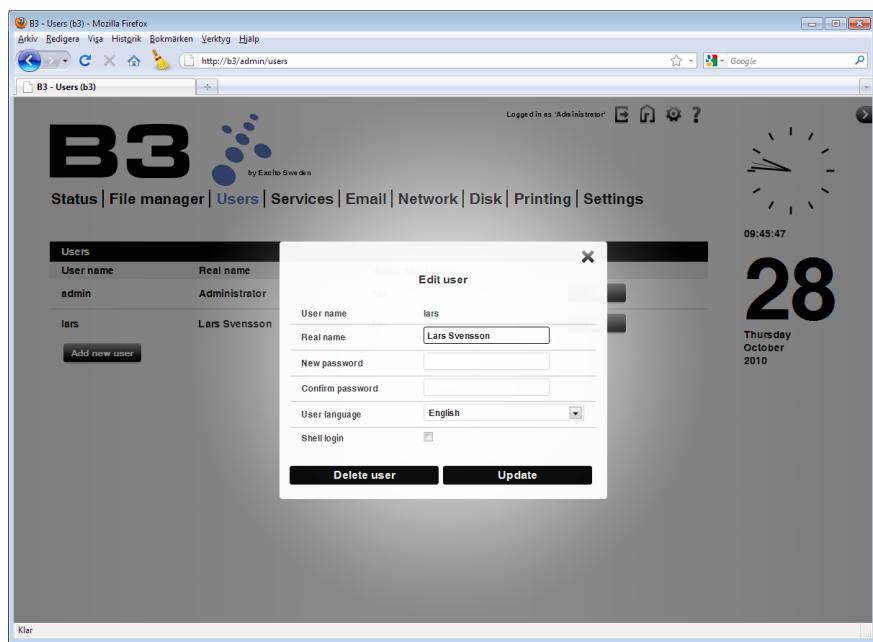
Here you find all the registered users on your B3.

## ADD NEW USER

Click to add a new user click “Add new user”.

## EDIT USER

Click on 'Edit' to change user information.



- Username - Changing the user name (login name) is not possible. To achieve this you will have to delete the user via the administrator login and add a new user with the correct name.
- Real name - To add the user's 'Real name'; fill in the information here.
- New password - The administrator can change every users password. Every user has the possibility to change their own password via their own log in. It is strongly suggested that the admin password is changed from the default password.
- User language - Change the user interface language for the selected user.

## SPECIFIC ADMINISTRATOR SETTING

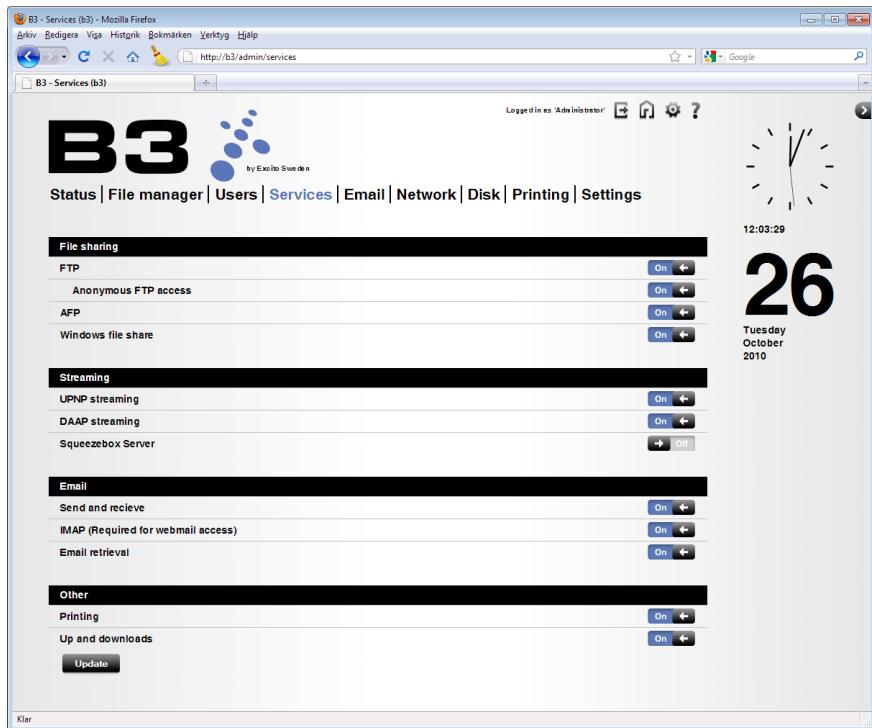
Click "Edit" next to Administrator.

Allow remote access to system settings - The default setting is to block remote access (from the WAN port) for the 'admin' account. To be able to administrate your B3 from outside (Internet) your network check this box.

## SERVICES

A Linux service is an application (or set of applications) that runs in the background waiting to be used, or carrying out essential tasks.

The Services menu provides menu items that let you administer certain services with either enable (the checkbox marked) or disable (the checkbox unmarked).



- File sharing - Read more in chapter "File server" on page 68.
  - FTP - The B3 FTP server.
  - Anonymous FTP access - Allow users to log in to FTP server without a password.
  - AFP - The Apple Filing Protocol (AFP) is a network protocol that offers file services for Mac OS X and original Mac OS.
  - Windows file share - Windows file share (Samba) is used to share files and printers in a Windows network.
- Streaming - Read more in chapter "Media servers" on page 75.
  - UPnP streaming - Universal Plug and Play (UPnP) server. The server shares/streams media data like audio/video/picture/files to UPnP-clients on the network. Please notice that if you are located in a unsecure network; dis-

able UPnP because otherwise you are able to browse the whole file system via Mediatomb's web interface which could be a security risk.

- DAAP streaming - Digital Audio Access Protocol (DAAP) server. Media server for the Roku SoundBridge and iTunes.
- Squeezebox Server - is a streaming audio server supported by Logitech that streams music to the Squeezebox product line.
- Email - Read more in chapter "Email server" on page 84.
  - Send and receive - This is for postfix the SMTP server: Sending and receiving eMails.
  - Imap (Required for webmail access) - This is for dovecot the IMAP server. This service is required for the webmail access to be functional.
  - Email retrieval - This is for fetchmail, a daemon that collects eMails to B3
- Other
  - Printing - B3 print server.
  - Up and downloads - possibility to up / download files on B3, i.e. filemanager and torrents.

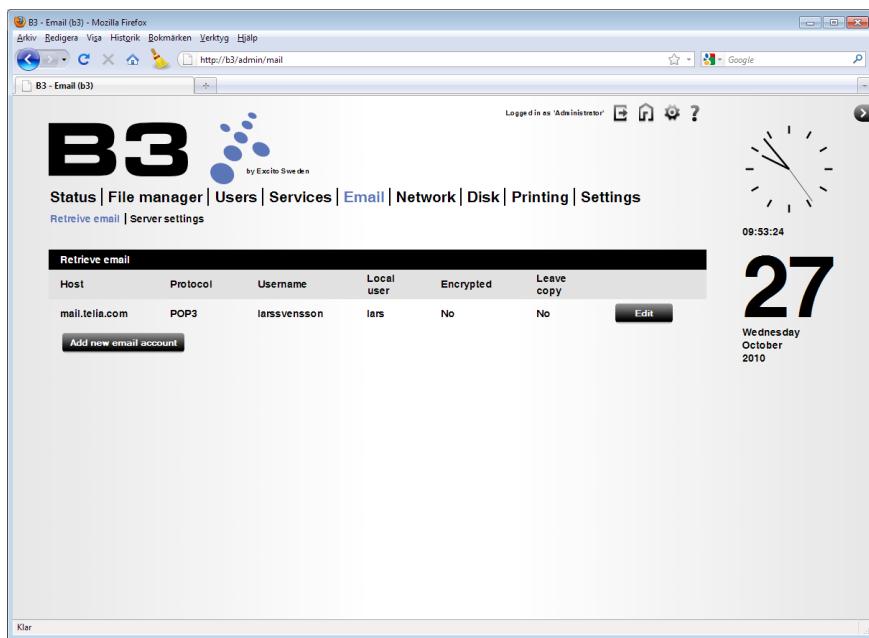
## EMAIL

Read about the email configuration in chapter "Email server" on page 84

The Email page contains two folders: 'Retrieve email' and 'Server settings'.

### RETRIEVE EMAIL

If you set up B3 to fetch your Email from other external Email accounts you may have, they will be stored on B3 and available via IMAP or web email, wherever you are. Logged in as administrator you must select to which user the retrieved email should be directed, this must be done for every retrieved email account added. Prior to this you must have added a user.

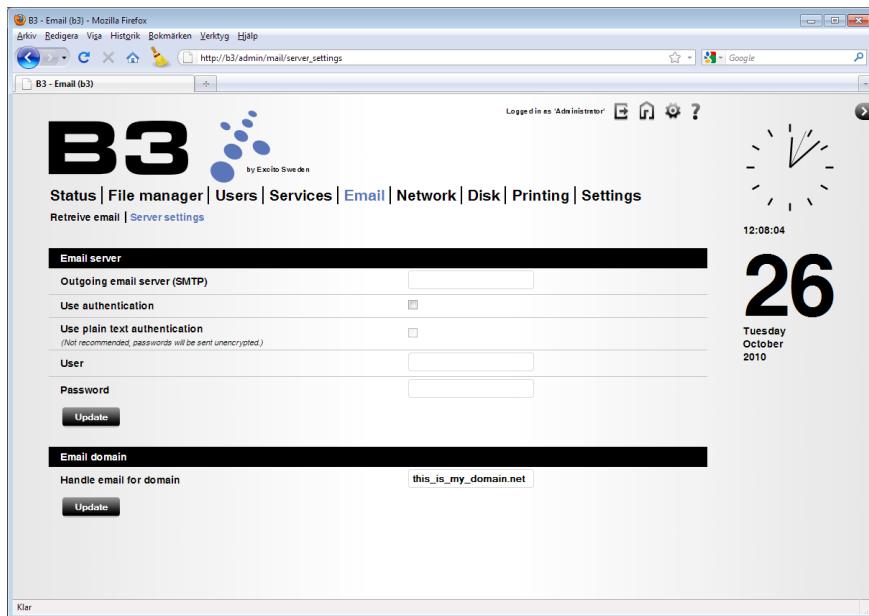


Retrieve email from individual accounts - Shows your current accounts for email retrieval.

"Add new email account" - Fill in the information given to you by your email account provider.

"Edit" - Change the account settings.

## SERVER SETTINGS



## Email server

Outgoing email server (SMTP) - Leave fields empty to let B3 handle your outgoing eMails. If your Internet Service Provider (ISP) blocks outgoing traffic on

port 25 you must use an alternative SMTP server than B3. Fill in the information provided to you by your ISP.

## Email domain

If you have your own domain name it is possible to let B3 handle your incoming and outgoing Email. Enter your domain name here.

You also have to direct the MX pointers of your domain to your external IP address. MX pointers specifies how email should be routed on Internet. Consult the name server provider of your domain regarding MX pointers.

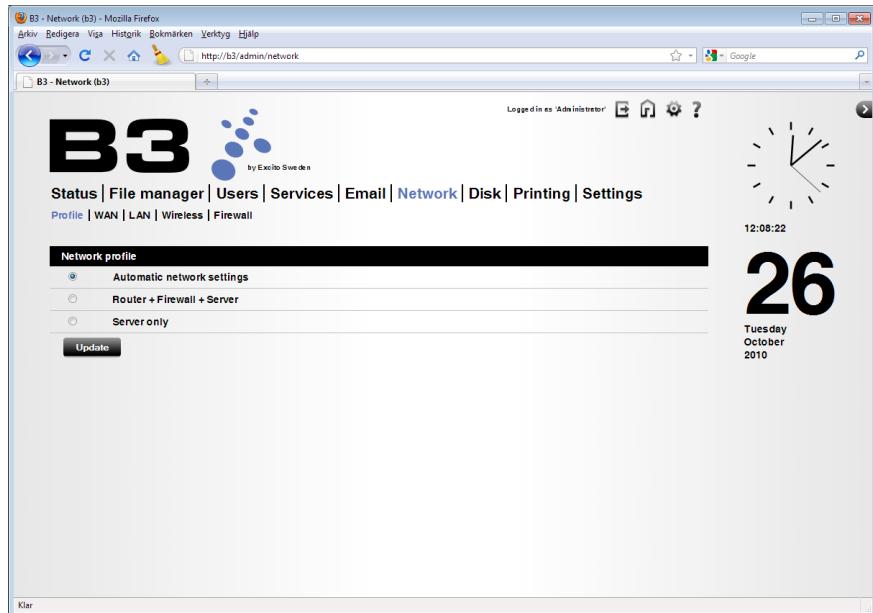
Now all mail sent to 'your-B3-username@<your-domain>' will end up on b3.

# NETWORK

The network page contains five folders: 'Profile', 'WAN', 'LAN', "Wireless" and 'Firewall'.

## PROFILE

By running the Setup wizard (described in chapter "Installation" on page 19) you choose a Network profile. To change profile later on you make your choice here.



- Automatic network settings - B3 will by default automatically identify your network structure. First B3 tries to locate a DHCP server in your LAN. If no DHCP server is found B3 will use a fixed IP address (192.168.10.1) on the LAN

port and start a DHCP server to provide other computers in the LAN with network information. If a DHCP server is found in the LAN, B3 will obtain IP-address automatically on the LAN port. B3 will also try to retrieve network settings on WAN port (Internet). Editing the WAN and LAN sections is not possible in this profile.

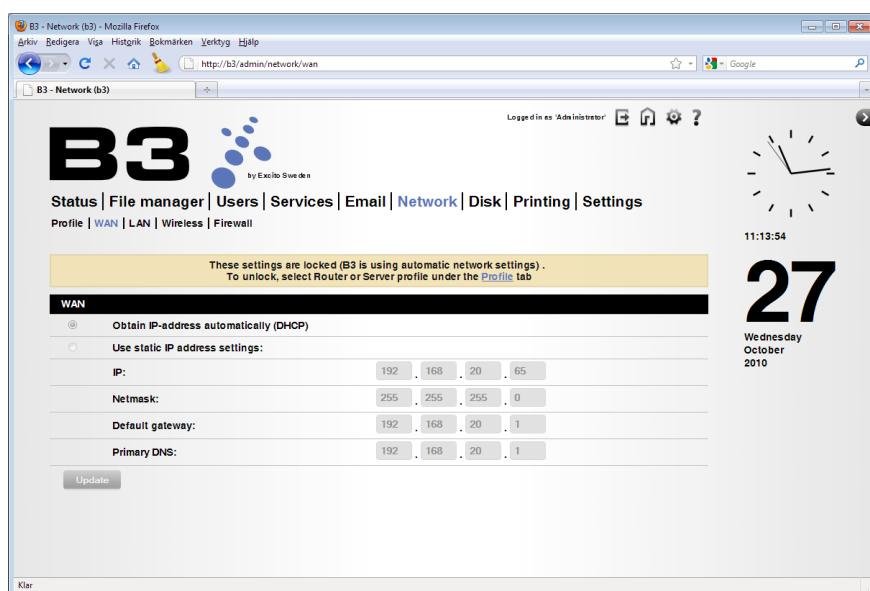
- Router + Firewall + Server mode - B3 will use a fixed IP address (192.168.10.1) on the LAN port and start a DHCP server to provide other computers in the LAN with network information. B3 will also try to retrieve network settings on WAN port (Internet). It is possible to manually edit the network settings in this profile.
- Server only - B3 will automatically try to retrieve network settings on LAN. The WAN port should be left unconnected. It is possible to manually edit the network settings in this profile.

After editing the network settings you might need to reboot your computers and other network devices in your LAN.

Update saves your changes.

## WAN

Here you configure how your B3 will handle your Wide Area Network (WAN) port. The default setting is to Obtain an IP address.



- Obtain IP-address automatically (DHCP) - The Dynamic Host Configuration Protocol (DHCP) automates the assignment of IP address, Netmask, Default

gateway, and other IP parameters. Use this option if your Internet provider requires you to use DHCP. This is the default and most common option.

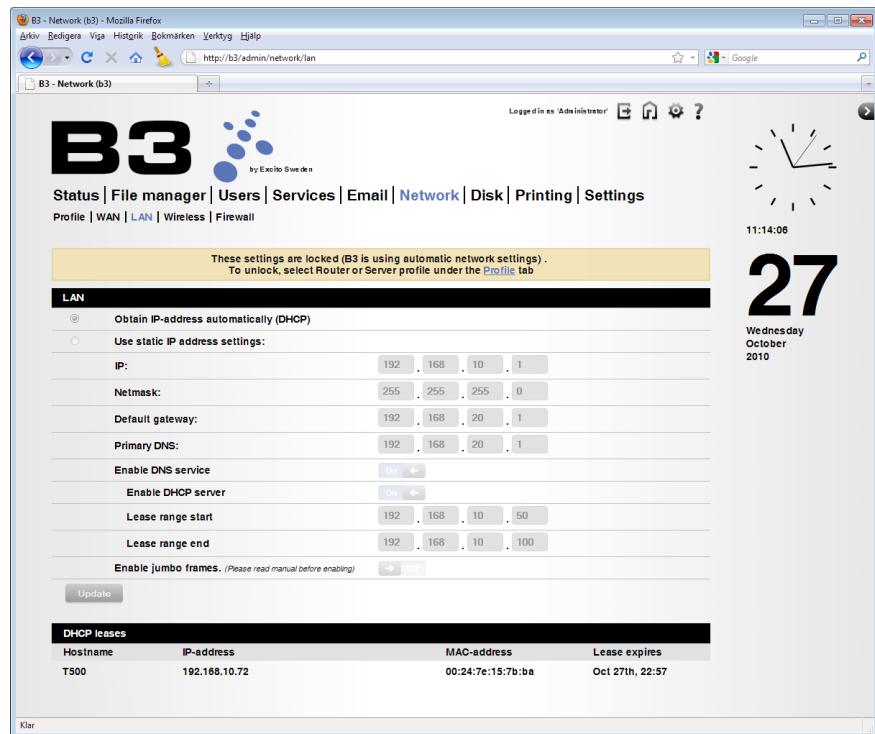
- Use static IP address settings - Static IP address, Netmask, Default gateway and Primary DNS are manually assigned to B3 by the administrator. Use this option if your Internet provider requires you to manually enter the values.

Please notice that the WAN settings are not editable in the profile 'Automatic network settings', shown for information only.

Update saves your changes.

## LAN

Here you configure how you reach your B3 from computers in your Local Area Network (LAN). Your B3 has an auto detect function on the LAN port. This means that when connected, B3 will search the LAN for an DHCP server. If a DHCP server is found, B3 will configure itself to obtain an IP address on the LAN port. If no DHCP server is found, B3 will fall back to the static IP address 192.168.10.1.



- Obtain IP-address automatically - Use this option if you use another DHCP server than B3 in your LAN, for example a router or gateway. B3 will obtain an IP address automatically.
- Use static IP address settings - Your B3 will be reached on this static IP ad-

dress in your LAN. The default fall back IP is : 192.168.10.1.

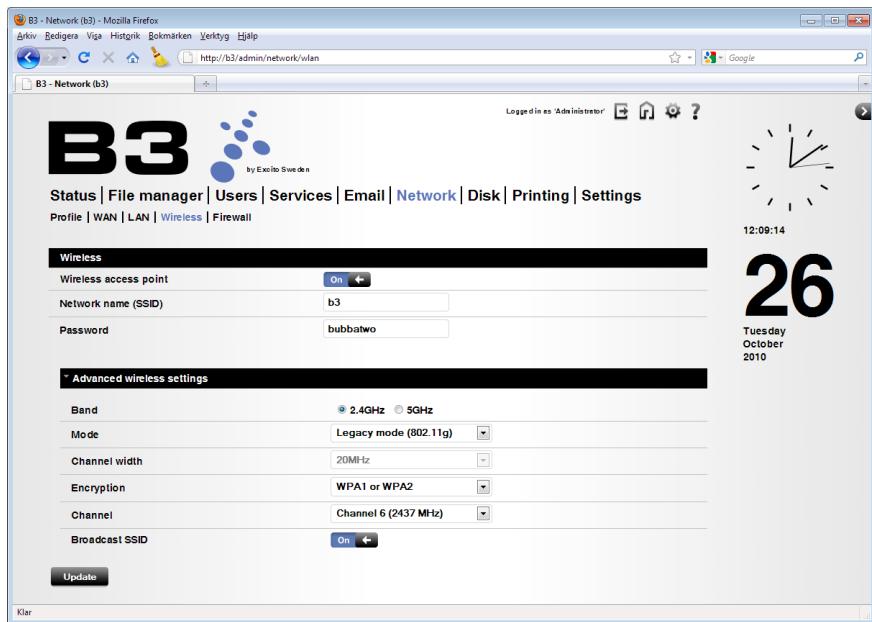
- Enable DNS service - The Domain Name System (DNS) translates domain names into IP addresses. When you type in a domain name, the DNS server translates the name into the corresponding IP address.
- Enable DHCP server - The DHCP server gives out IP addresses when a device, connected into B3's LAN port, is starting up and requests an IP address. The device must be set as a DHCP client to "Obtain IP address automatically".
- Lease range - The DHCP address pool (Lease range) contains the range of the IP address that will automatically be assigned to the clients (for example computers, media players) on the network.
- Enable Jumbo frames - This option enables transmissions of larger data chunks on the LAN interface. **WARNING** - this requires that all equipment on the LAN works in this environment. Use with caution. That said, this feature can improve performance on file transfers between B3 and Gigabit capable devices.
- DHCP leases - Shows the current network devices in your LAN when having B3 as your router. If several network devices has the same hostname the last connected will be shown as a \*.

Please notice that the LAN settings are not editable in the profile 'Automatic network settings', shown for information only.

Update saves your changes.

## WIRELESS

B3 can act as your access point, both in 'Router + Firewall + Server mode' or in 'Server mode'. Read more about setting up the access point in chapter "B3 as wireless accesspoint" on page 61.



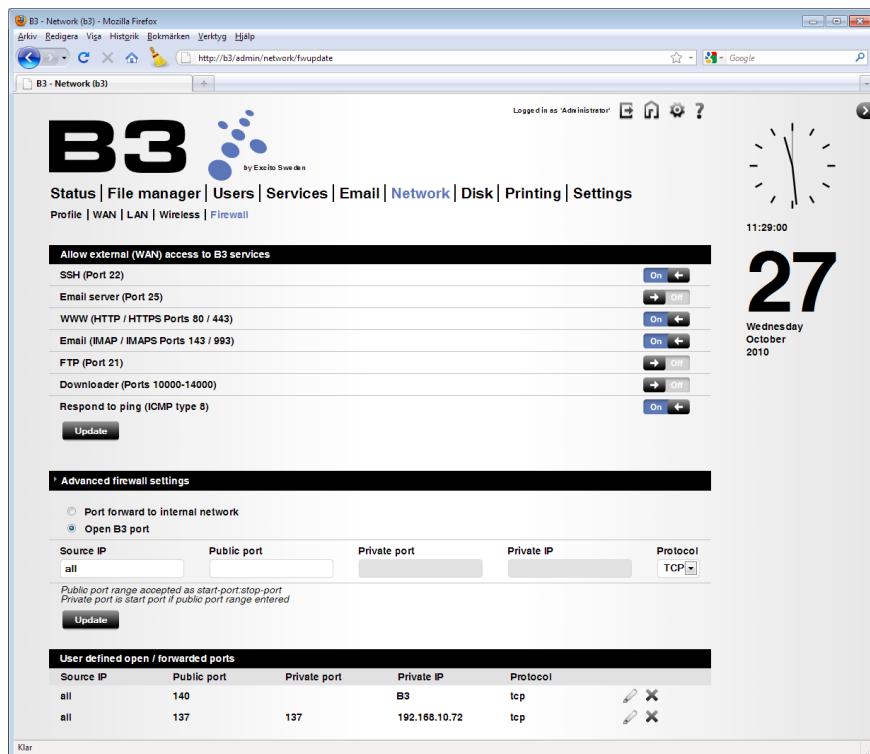
- Wireless
  - Enable wireless - Select this box to enable the wireless access point in B3.
  - Network name (SSID) - This is the name that identifies a particular wireless network. The default name is your B3's host name. The SSID can be up to 32 characters long.
  - Password - The password (aka pass phrase) is a set of characters that must be entered exactly the same in both your B3 and your network clients. Enter the password in ASCII characters. The length must be between 8 to 63 for WPA and 5 or 13 characters for WEP.
- Advanced wireless settings
  - Band - Choose what frequency band to use. 802.11n operates at two frequencies: 5 GHz and 2.4 GHz. Only devices which operate in the same frequency band can communicate with one another.
  - Mode - Select which 802.11 mode to operate in. Modes are as follows: 'Legacy mode (802.11a/g)' - up to 54 Mbit/s and 'Mixed mode (802.11n + 802.11a/g)' - up to 300 Mbit/s.

- Channel width - Maximum transfer rate for 20 MHz is 130 Mbit/s. Maximum transfer rate for 40 MHz is 270 Mbit/s.
- Encryption - Choose between WEP, WPA1 or WPA2. WEP is not recommended due to low security.
- Channel - Select the channel on your wireless access point in B3. In areas with several wireless networks, lower transfer speeds may be experienced. Then try a different channel. Channel availability is different for different countries due to regulations.
- Broadcast SSID - Uncheck this box to hide B3's SSID. By default the SSID is broadcasted.

Update saves your changes.

## FIREWALL

B3 has a built-in firewall to protect your internal network and B3 itself. Read more about the firewall in chapter "B3 as router and firewall" on page 59.



### Allow external (WAN) access to B3 services

- SSH (Port 22) - Enables Secure Shell (SSH) to B3 from WAN.
- Email server (Port 25) - Enables access from WWW to B3's port 25. This is the

default email server port for sending and receiving email.

- WWW (HTTP / HTTPS Ports 80 / 443) - Enables WWW traffic to B3 from WAN.
- Email (IMAP / IMAPS Ports 143 / 993) - Enables access from WWW to B3's ports 143 and 993. These ports are used for sending and receiving email.
- FTP (Port 21) - Enables FTP connections from WAN to B3's port 21.
- Downloader (Ports 10000-14000) - Enables faster torrent download. This rule opens the ports 10000-14000.
- Respond to ping (ICMP type 8) - Enables ping from WAN. The default setting disables computers on the Internet to get a reply back from B3 when it is being "pinged". This increases the security.

### **Open port / Add port forward**

Choose 'Port forward to internal network' or 'Open B3 port' with the radio buttons. With 'Portforward' you open a port from a network device in your internal LAN to the Internet (WAN). 'B3 public port' opens a port from B3 to the Internet (WAN)

- Source IP - The source IP on the WAN side that the port forward will be directed to. Enter 'all' if all the port forward are not directed to a specific IP address.
- Public port - The port number on the WAN side. You can input a single port or a range of ports (ex. 4001:4005)
- Private port - The port number on the LAN side. Enter a single start port if range is used in Public port (ex. 4001).
- Private IP - The destination IP on the LAN side network that will be providing the virtual services (desired port forward).
- Protocol - The protocol used for the virtual service: TCP or UDP.

### **User defined open / forwarded ports - shows the enabled port forwards.**

Press the pen symbol to the right of the rule to edit the port forward. Press the red X to the right of the rule to delete the port forward.

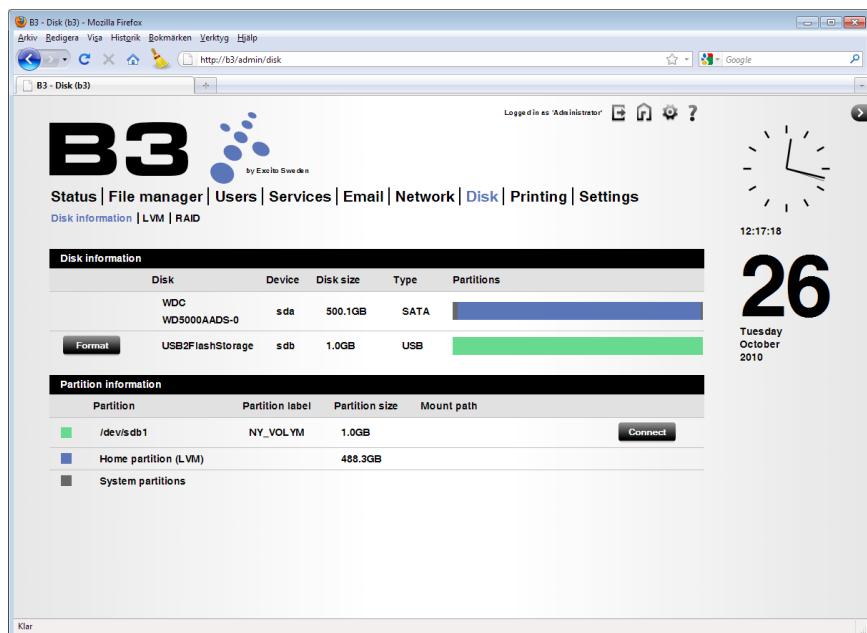
Update saves your changes.

# DISK

The disk page contains three folders: 'Disk information', 'LVM' and 'RAID'.

## INFORMATION

Here you find the status of internal and external disks and storage devices. When a new device is attached you must press 'Connect' to be able to use the device.



- **Disk information** - Shows disk name, size, disk type and a graphical overview of the partitions.
- **Partition information** - Description of the partitions on the disks.

Pressing the 'Connect' when a new device is inserted means you will have access to the files in your 'storage/extern' catalogue. When you want to unplug the external disk drive / USB memory you must click 'Disconnect' first to ensure that it is safe to unplug the device.

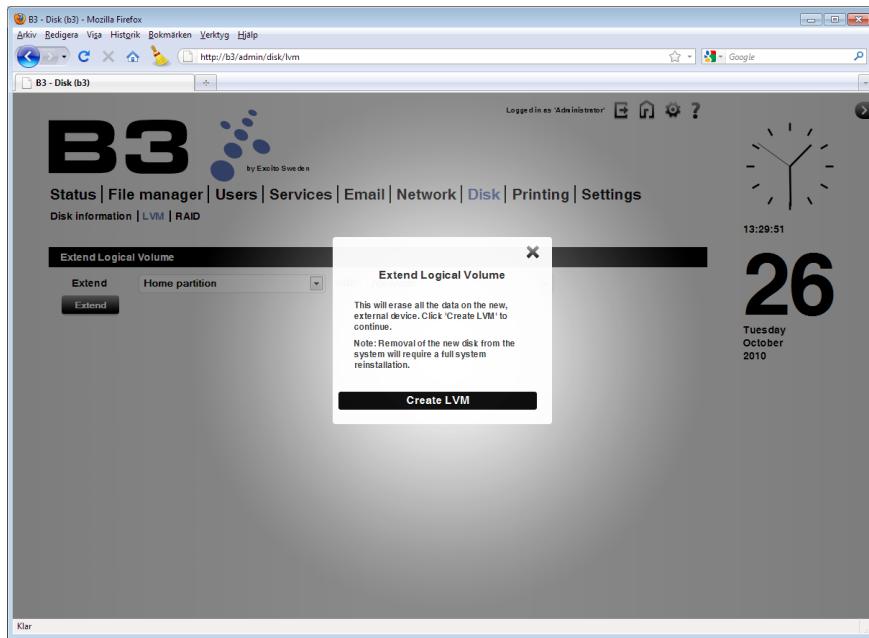
Read more about managing disks in chapter "External storage" on page 129.

## LVM

Extend your home partition with an attached external disk. This will create a single logical volume of the internal home partition and a attached disk. In other words, you will experience one big disk instead of two smaller. The total

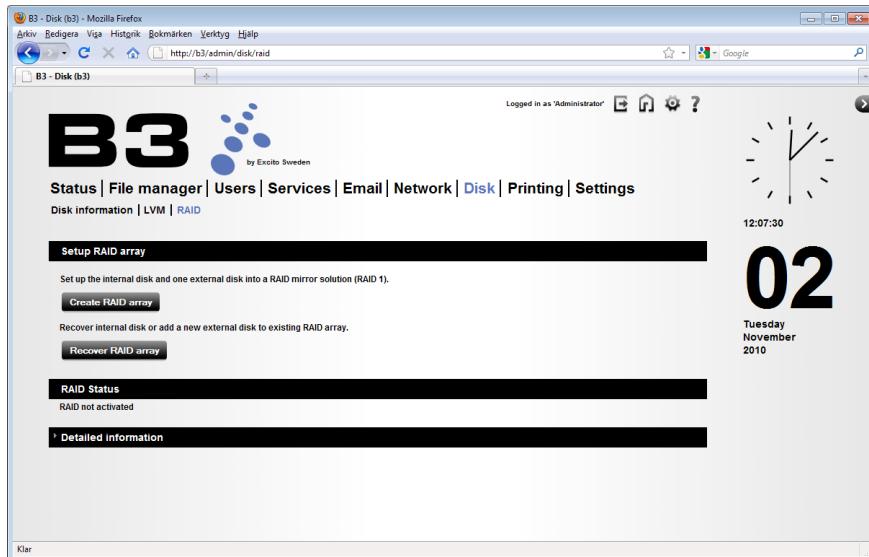
disk size will be the external disk size added to home partition size.

Read more about LVM in chapter “LVM - Extended disk” on page 105.



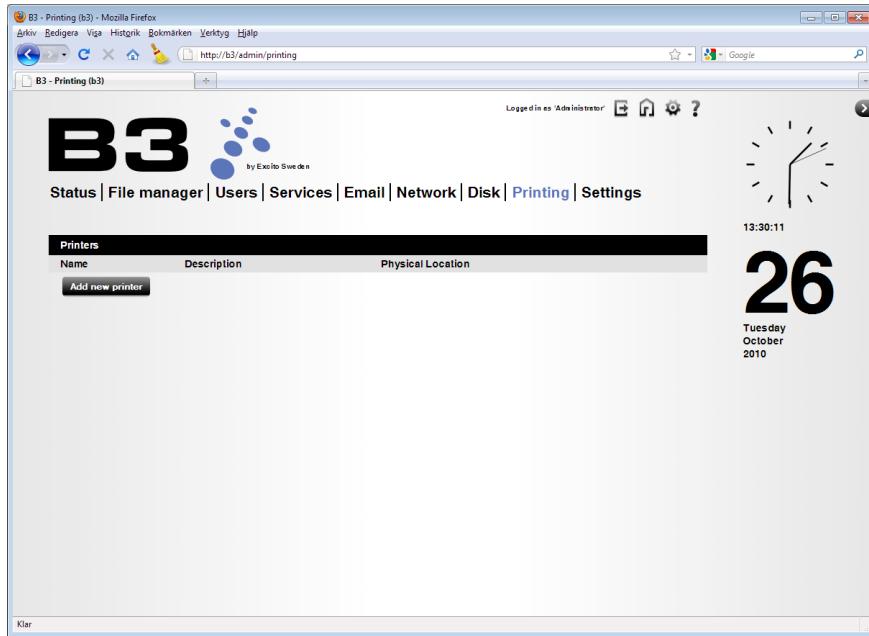
## RAID

Here you create a RAID 1 array and find information about your RAID setup. Read more about RAID in the chapter “RAID” on page 97.



## PRINTING

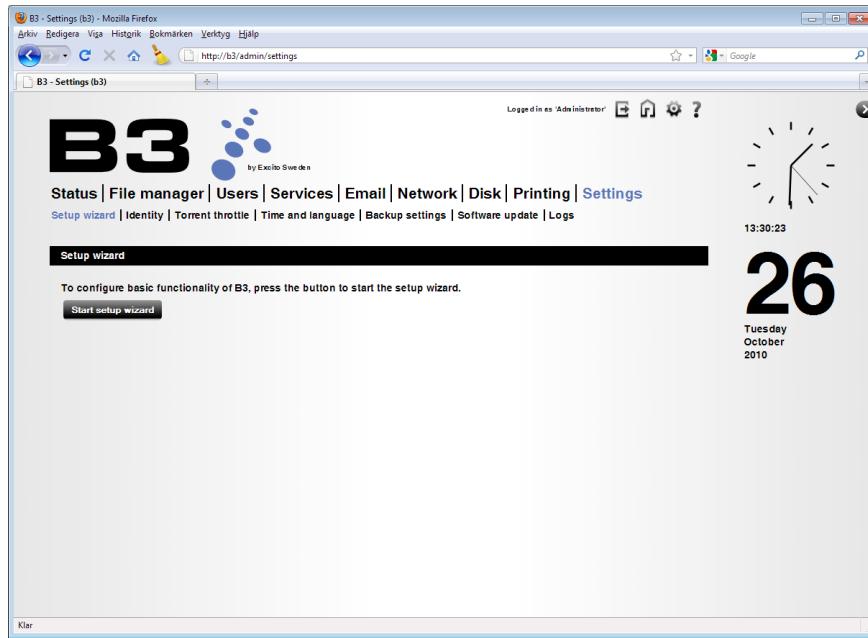
The printing page shows status of the connected printers. Read more about connecting printers in the chapter “Printer server” on page 89.



## SETTINGS

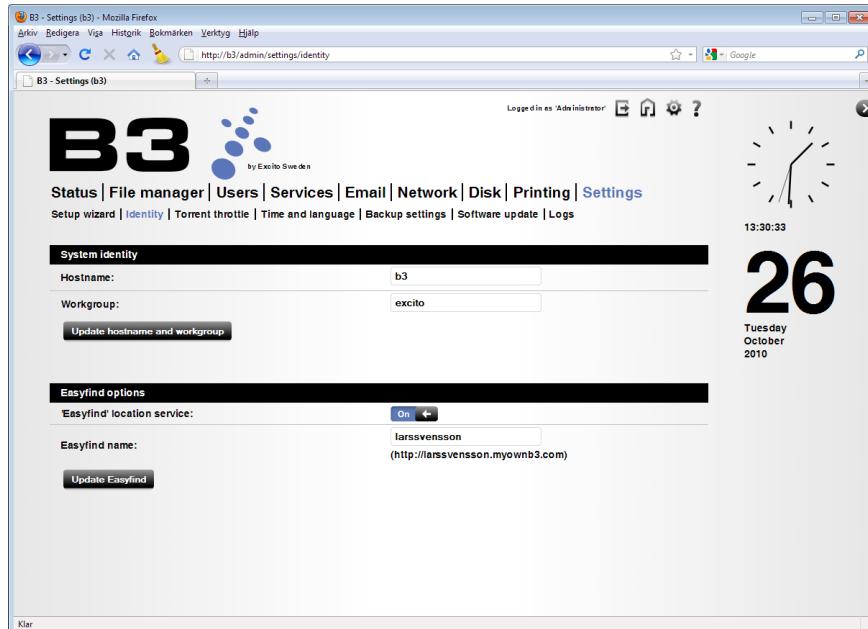
The settings page contains seven folders: 'Setup wizard', 'Identity', 'Torrent throttle', 'Time and language', 'Backup settings', 'Software update' and 'Logs'.

### SETUP WIZARD



Use the Setup wizard to make the very first important settings on your B3. Read more about the Setup wizard in chapter "Setup wizard" on page 21.

### IDENTITY



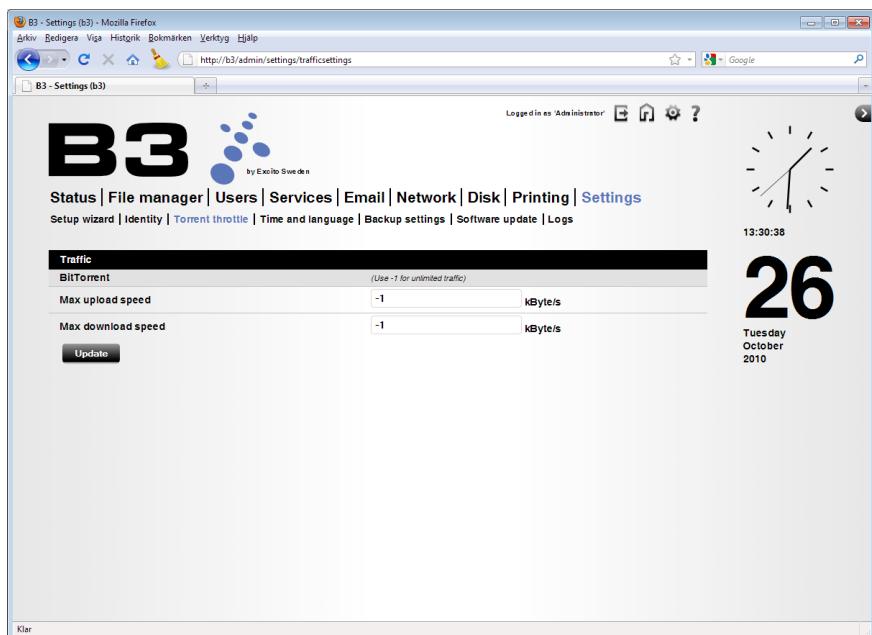
- Hostname - is the unique name by which a network-attached device is

known on a network.

- Workgroup - Devices in the same Workgroup may allow each other access to their files, printers, or Internet connection. Use the same workgroup name on B3 as on your computer.
- Easyfind location service - Using our free service Easyfind you will be able to reach your B3 wherever you are. You will be able to find your B3 wherever you are typing <http://<your-Easyfind-name>.myownb3.com>.
- Easyfind name - Choose a name for your B3 on the Easyfind network.

Update saves your changes.

## TORRENT THROTTLE



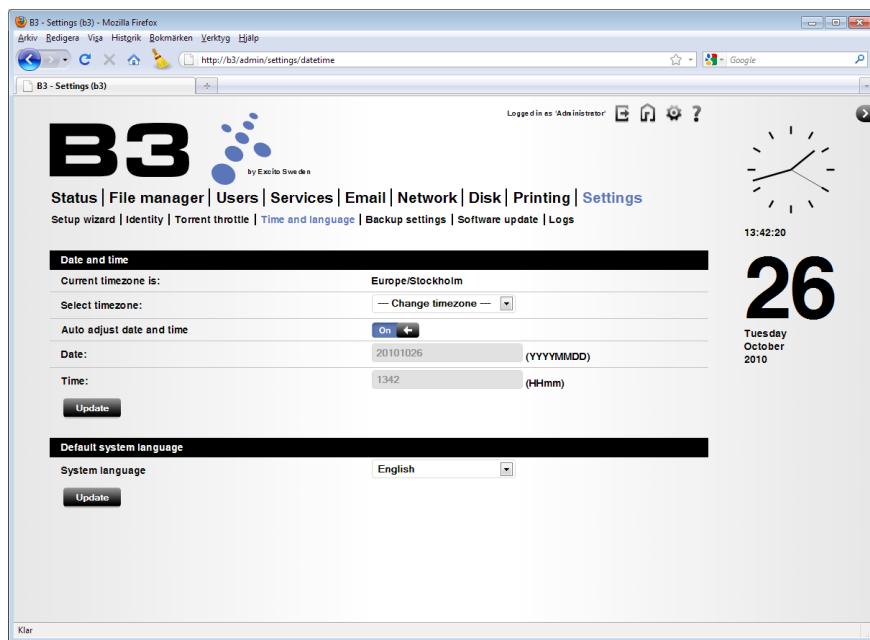
You might want to set the maximum upload / download speed on your torrents.

For example if you have a limited broadband connection you do not want to fill your uplink completely. Then set the "Max upload speed" to a preferred value. Use "Max download speed" in the same manner.

Using -1 as value = no speed limit.

Update saves your changes.

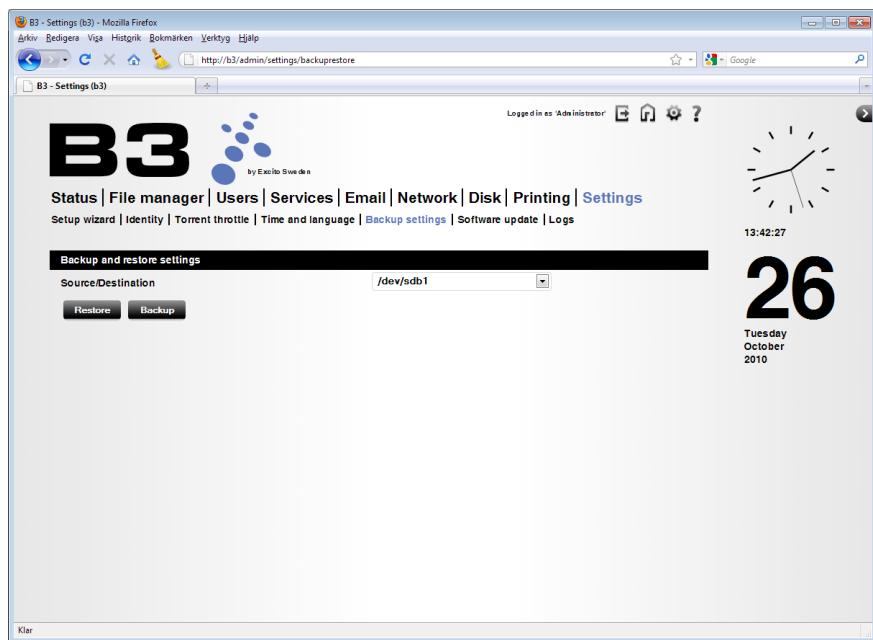
## TIME AND LANGUAGE



- Timezone
  - Current timezone is - Shows the selected timezone.
  - Select timezone - Select your timezone in the drop down list.
- Date and time
  - Auto adjust date and time - This enables B3 to set the date and time automatically via an Internet server.
  - Date - Set the system date manually.
  - Time - Set the system time manually.
- Default system language
  - System language - Select language for the user interface.

Update saves your changes.

## BACKUP SETTINGS



This feature will backup all your B3 settings for you in case you reinstall B3 or need to move the settings to another B3 unit. The following settings will be saved:

- User accounts (including admin login via WAN setting, passwords) but no user data
- Backup jobs
- Services settings
- Email account settings
- Network setup (all settings ie profile, hostname, wireless settings, firewall rules etc)
- Printers

### Make a settings backup

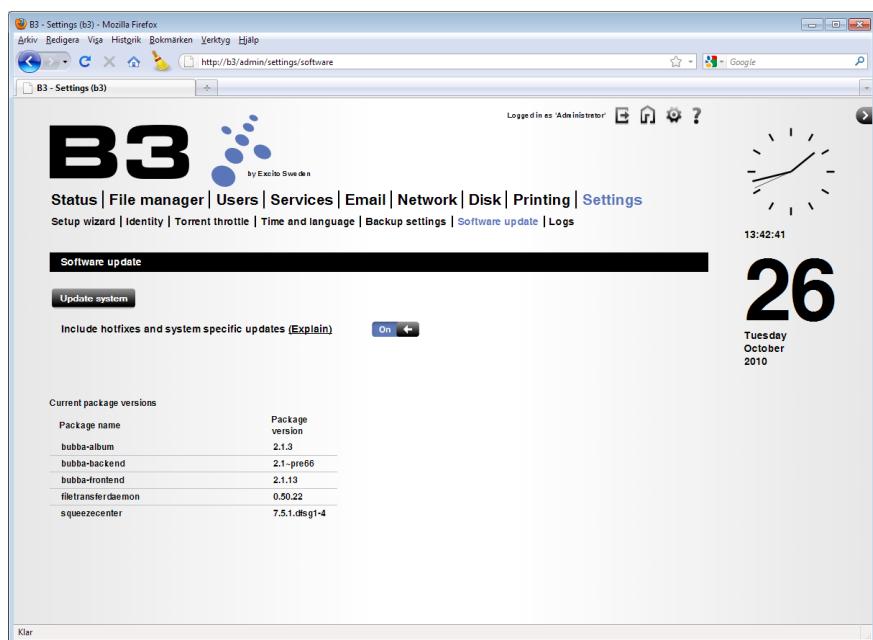
1. Insert a external storage device (USB memory or USB disk) into B3.
2. Choose the Source/Destination and press Backup.
3. All settings are now saved on a file on the chosen external storage device.

## Restore a settings backup

1. Insert the storage device containing the backup file into B3.
2. Observe that the current users on B3 will be removed and the users stored in the backup file will be restored. Although the user data from current user on B3 will be left intact in the /home/[user] catalogue.
3. Press restore.
4. You might need to reconnect your B3 depending on how your restored network settings are configured (for example restoring static IP settings on B3).

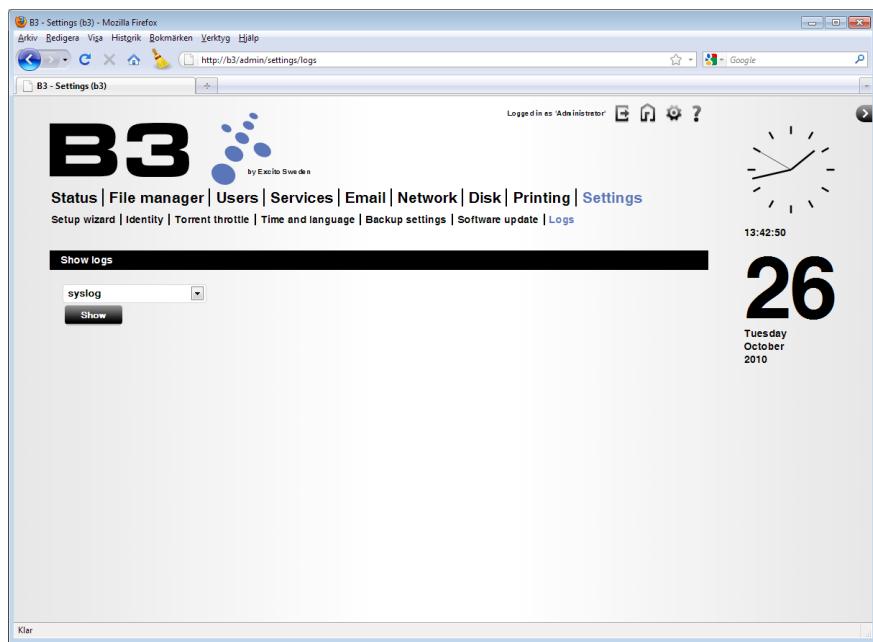
For backup of user data and the storage catalogue, please read chapter “Backup” on page 108.

## SOFTWARE UPDATE



B3's software can be easily updated to gain new functionality. Press 'Update system', and the software update is automatically performed. The 'Include hotfixes' feature is used to collect status information and give you the most appropriate updates for your B3. Read about hotfixes and software update in chapter “Software update” on page 136.

## LOGS



To fault trace on your B3 without logging in with SSH use the Logs function. Select the desired log file in the drop down menu and click 'Show'.

## USERS

Most of B3's services are available on a per-user basis. It is recommended that you add one user for every person using B3.

All users get their own...

- ...home folder. All users can read content stored there, but only write content in their own folder.
- ...private folder. No other users are allowed to read content stored here.
- ...download folder. Files downloaded by the download manager ends up here.
- ...Email account.
- ...FTP account.
- ...download manager.

However, some services are available to all users, without restrictions:

- All users have full access to the storage and music folders.
- All users have full access to installed printers.
- Creating and editing photo albums.

Examples on the folder structure:

\B3\ - Root.

\B3\storage\ - Public file area, accessible to all users.

\B3\home\web\ - Public web area, same for all users. This folder is the public web area share.

\B3\home\user1\ - User file area.

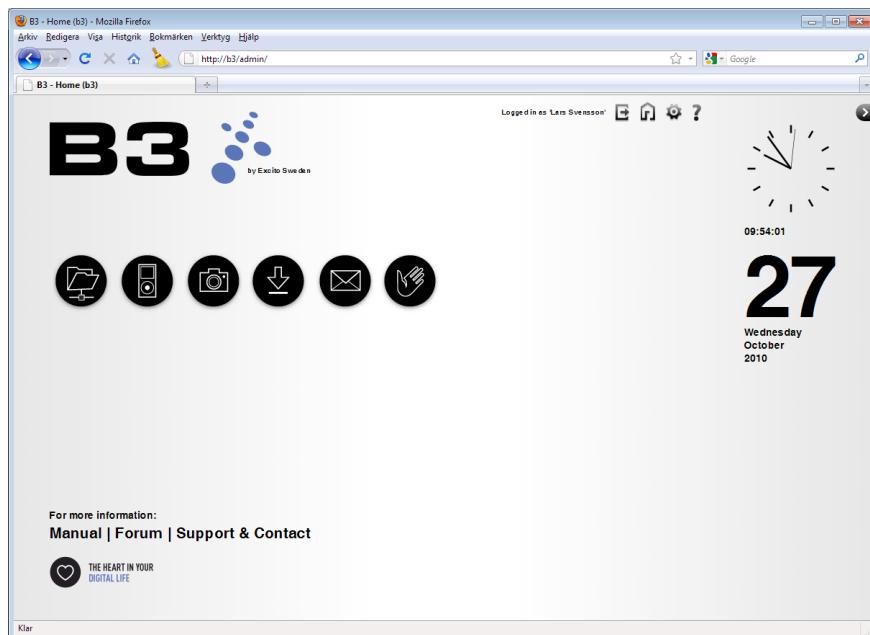
\B3\home\user1\private\ - Private file area, readable only by user1.

## START PAGE

This is the default start page. Find it by browsing to **http://b3** (**http://b3.local** if using Mac) or by browsing to **http://<your-Easyfind-name>.myownb3.com** or **http://www.<your-domain>** from outside your network. Refer to chapter "Reaching B3 from outside" on page 133 for more information.

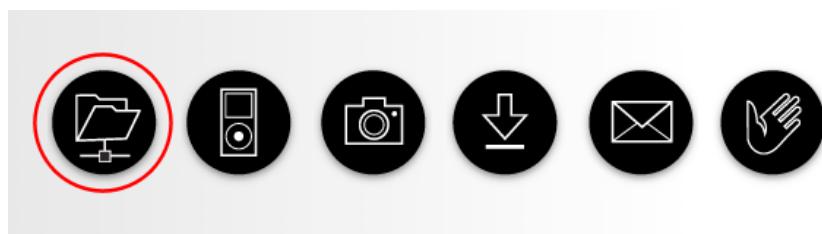
Log in with your B3 user (not the administrator).

Here you find links to the most important features of B3.

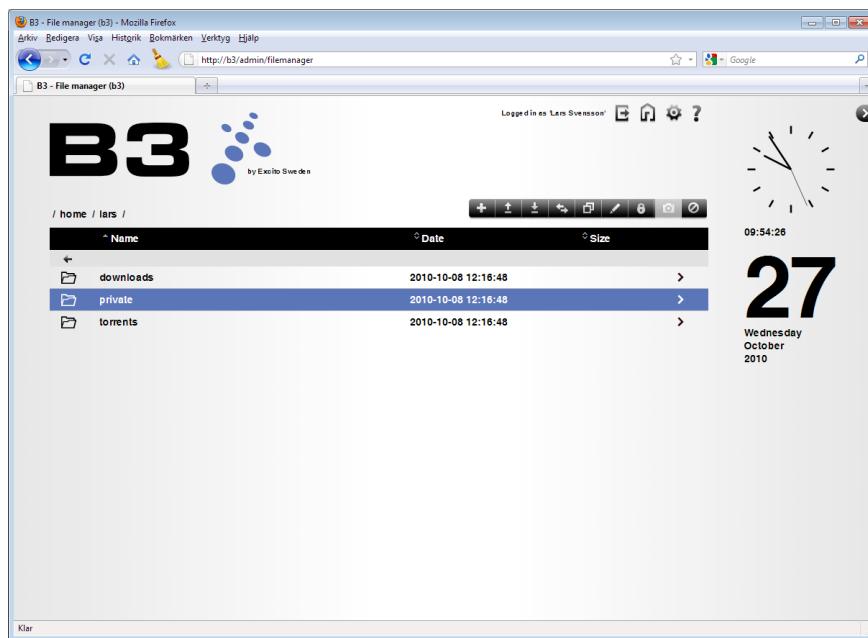


Clicking on the round icons will take you to each feature. Below you find all icons described!

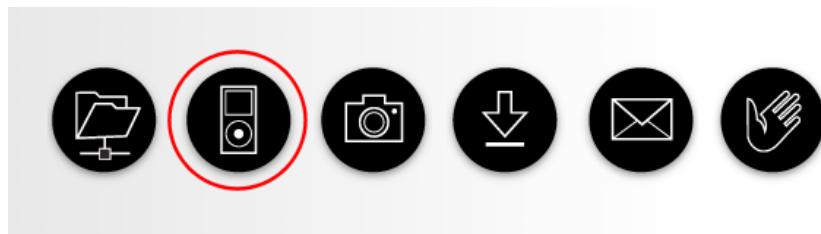
## FILEMANAGER



The filemanager page shows files stored on B3. Read more about using the filemanager in the chapter "File server" on page 68.



## MUSIC

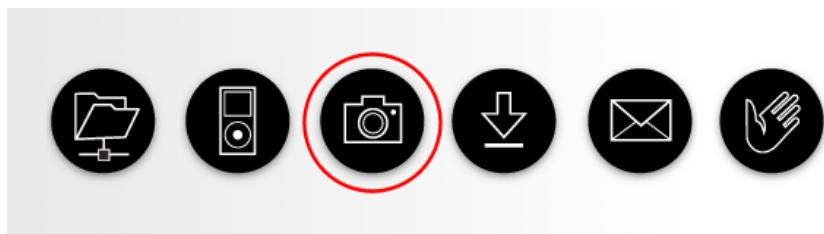


All your music will be available to you over the Internet, wherever you are. Store music in /storage/music and it will be available to the integrated music player Fireplay. Credits for Fireplay goes to Bo Mellberg!

The screenshot shows a media player window titled 'FirePlay - Mozilla Firefox'. The title bar includes the URL 'http://b3/admin/music'. The main interface features a media control bar at the top with buttons for play/pause, volume, and track navigation. Below the control bar is a search bar with the text 'fireplay v0.91 by Bo Mellberg'. The central area contains four panels: 'Source' (Library), 'Genre' (All (3 genres)), 'Artist' (All (5 artists)), and 'Album' (All (1 album)). A large table below lists 12 songs by Foo Fighters from their album 'Echoes, Silence, Patience & Grace'. At the bottom of the screen, there is a footer with links for 'Show cover art', 'Download selected', and 'Get FireFly media server'.

Nbr	Song	Artist	Album
1	Pretender	Foo Fighters	Echoes, Silence, Patience & Grace
2	Let It Die	Foo Fighters	Echoes, Silence, Patience & Grace
3	Erase/Replace	Foo Fighters	Echoes, Silence, Patience & Grace
4	Long Road to Ruin	Foo Fighters	Echoes, Silence, Patience & Grace
5	Come Alive	Foo Fighters	Echoes, Silence, Patience & Grace
6	Stranger Things Have Happened	Foo Fighters	Echoes, Silence, Patience & Grace
7	Cheer Up, Boys ('Your Make Up Is Running)	Foo Fighters	Echoes, Silence, Patience & Grace
8	Summer's End	Foo Fighters	Echoes, Silence, Patience & Grace
9	Balled of the Beaconsfield Miners	Foo Fighters	Echoes, Silence, Patience & Grace
10	Status	Foo Fighters	Echoes, Silence, Patience & Grace
11	But, Honestly	Foo Fighters	Echoes, Silence, Patience & Grace
12	Home	Foo Fighters	Echoes, Silence, Patience & Grace

## PHOTO ALBUM



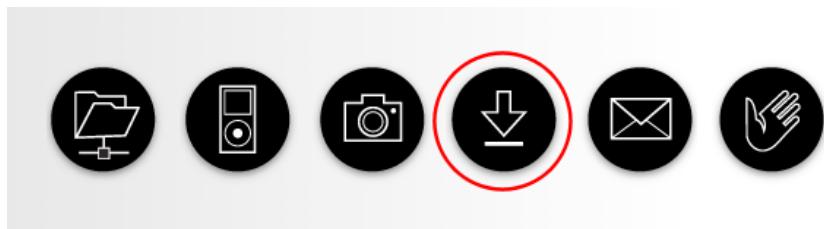
Share your digital photos with friends and family! With B3 you get easy to use, out of the box photo album! All you need is your digital pictures!

All B3 users share the photo album feature and may add and edit photo albums.

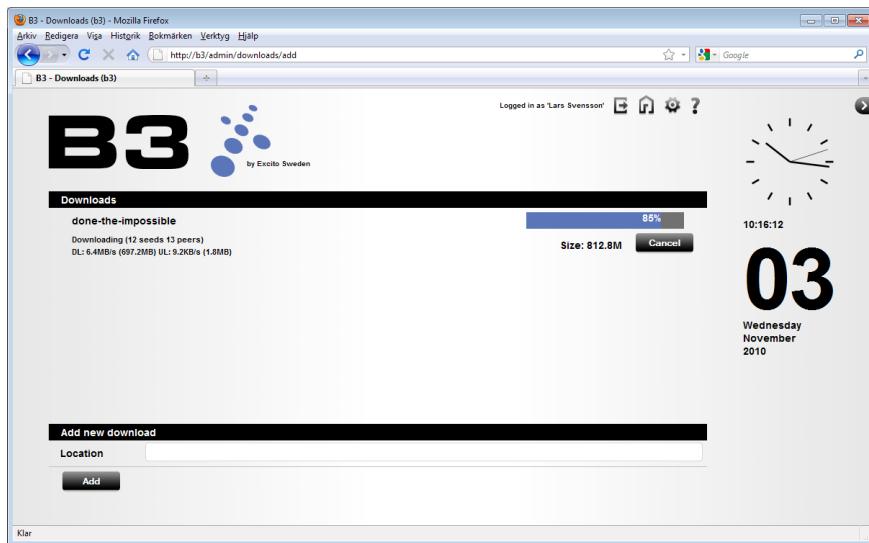
Add album users for viewing the albums. Album users do not have anything in common with regular B3 users.

Read more about the photo album in the chapter "Photo album" on page 90.

## DOWNLOADS

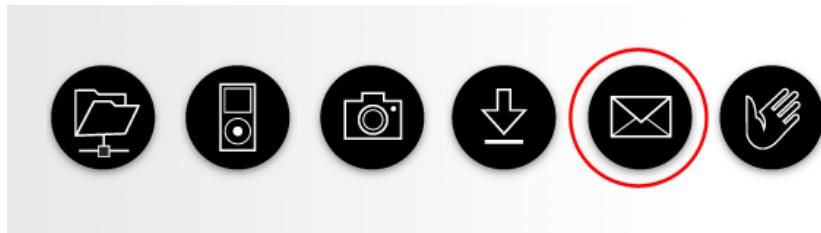


Download files directly to your B3, even when you are away from home. Note that the administrator does not have access to the Download manager. Read more about the Download manager in chapter "Download manager" on page 66.



- Downloads - Here you find your active downloads.
- Add new download - Paste a link to the file / torrent you want to download in the Location field.

## WEBMAIL

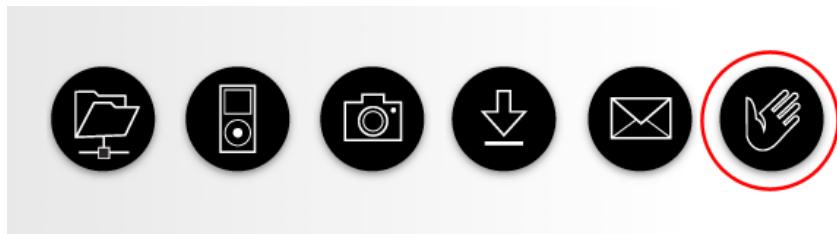


Use the B3's webmail feature to read your mail wherever you are. Click the mail icon and log in with your B3 username.

Read about the email configuration in chapter "Email server" on page 84

If you set up B3 to fetch your Email from other external Email accounts you may have, they will be stored on B3 and available via IMAP or web email, wherever you are.

## USER SETTINGS



Here every user can change the personal information, such as 'Real name', password and language settings for the specific user. Changing the user name (login name) is not possible. To achieve this you will have to delete the user via the administrator login and add a new user with the correct name.

## USER INFORMATION

The screenshot shows the 'User information' section of the B3 administration interface. At the top, there's a navigation bar with links like 'Arkiv', 'Redigera', 'Viga', 'Historig', 'Bokmarken', 'Verktyg', and 'Hjälp'. Below that is a sub-navigation bar with 'B3 - Users (b3)' and a search bar. The main area has a large 'B3' logo and the text 'by Ecclio Sweden'. It displays a user profile for 'Lars Svensson' with fields for 'User name' (lars), 'Real name' (Lars Svensson), 'New password' (empty), 'Confirm password' (empty), 'User language' (Default system language), and 'User language' (System default). A 'Update settings' button is at the bottom. To the right is a digital clock showing '09:51:02' and a large date display showing '27 Wednesday October 2010'. At the bottom left is a 'Klar' button.

## EMAIL

Add new email account - To start fetching email from an external account, click here. Fill in the information given to you by your email account provider.

Active email accounts will be shown here.

The screenshot shows the 'Email' section of the B3 administration interface. The top navigation bar and sub-navigation bar are identical to the 'User information' screen. The main area has a 'Retrieve email' heading and a table with one row for an account. The columns are 'Host' (mail.telia.com), 'Protocol' (POP3), 'Username' (larssvensson), 'Local user' (lars), 'Encrypted' (No), and 'Leave copy' (No). There's an 'Edit' button next to the last column. Below the table is a 'Add new email account' button. To the right is a digital clock showing '09:53:50' and a large date display showing '27 Wednesday October 2010'. At the bottom left is a 'Klar' button.

## B3 AS ROUTER AND FIREWALL

Replace your old router with B3! Using B3 as your router and firewall is the best and simplest way for you to reach your content on B3 from the Internet. The firewall is pre-configured to fit most peoples needs, but is easy reconfigured.

Note that B3 does not include a DSL modem. If your old router has a built in DSL modem you can not replace that router with B3. If this is the case, connect B3 as a server in your network. See chapter "Server mode" on page 7

### ROUTER

The router functionality in B3 determines the next network point to which a packet should be forwarded toward. Network devices on the LAN side of B3 will be given IP-addresses from the built in DHCP server. Connect a switch in B3's LAN port to be able to connect several computers or other network devices via cable. A description about the router settings is found in chapter "Network" on page 36.

### NAT

Network Address Translation (NAT) is the process of modifying network address information while the traffic is passing through the router. The purpose is to remap a given address space into another. By doing this the internal network devices (LAN) are hidden from the external network (WAN).

### FIREWALL

A firewall protects your home computers from attacks from the outside, by blocking traffic that is not directly requested from the inside. B3 has this functionality. You find a description of B3's firewall features in chapter "Firewall" on page 41.

## ALLOW EXTERNAL (WAN) ACCESS TO B3 SERVICES

By enabling and disabling these settings in the firewall, you are able to open standard ports in an convenient way.

## PORT FORWARD

A device connected on the Internet has at least one IP address. The IP address is a unique number that is used to identify a device. Every IP address is divided up into many ports.

When one device (for example a computer on the Internet) sends data to another device (for example your computer at home), it sends the data from a port on the external computers IP address to a port on your local computers IP address. Computers on the Internet can not see the IP address on your local computer at home, they only see your routers external IP address (that is B3's external IP address).

Some programs run on your local computer needs to have an "gate" exposed to the Internet to function correctly: you need to use the function Port forward in your firewall.

The Port forward tells your router in B3 which computer on the LAN to send the data to. When you have set up the port forwarding rules, your router takes the data from the external IP-address:port number (for example 93.122.158.30:551, where 93.122.158.30 is the IP address and 551 is the port number) and sends that data to an internal IP-address:port number (for example 192.168.10.10:551).

In B3 Port forwarding rules are created per port or per a range of ports. A rule set up for port 551 will only work for port 551. Rules set up for the port range 550-552 will open the three ports 550, 551, 552.

## B3 AS WIRELESS ACCESSPOINT

Weather you use B3 in “Router + Firewall + Server mode” or in “Server mode” you can use B3 as your wireless access point. The wireless access point is an optional module and is not included in all B3s.

### Features

- Faster Wireless Networking - provides up to 300Mbps\* wireless connection with other 802.11n wireless clients. This capability allows you to participate in real-time activities online, such as high quality video streaming, online gaming, and real-time audio.
- Fully compatible with older 802.11a/b/g devices.
- Strong encryption with WPA 1 or WPA 2 pre shared key.

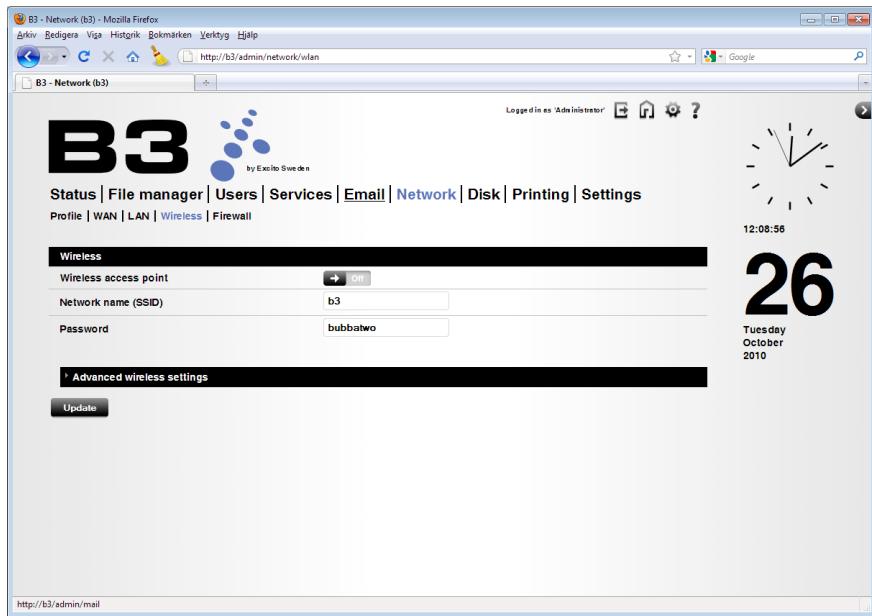
\*Maximum wireless signal rate derived from IEEE standard 802.11g and draft 802.11n specifications. 802.11n speeds obtainable when operating exclusively among other N products. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate. Environmental factors will adversely affect the wireless signal range.

Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate. Environmental factors will adversely affect the wireless signal range.

For more information about the terminology, read the section “WiFi Glossary” on page 64 below.

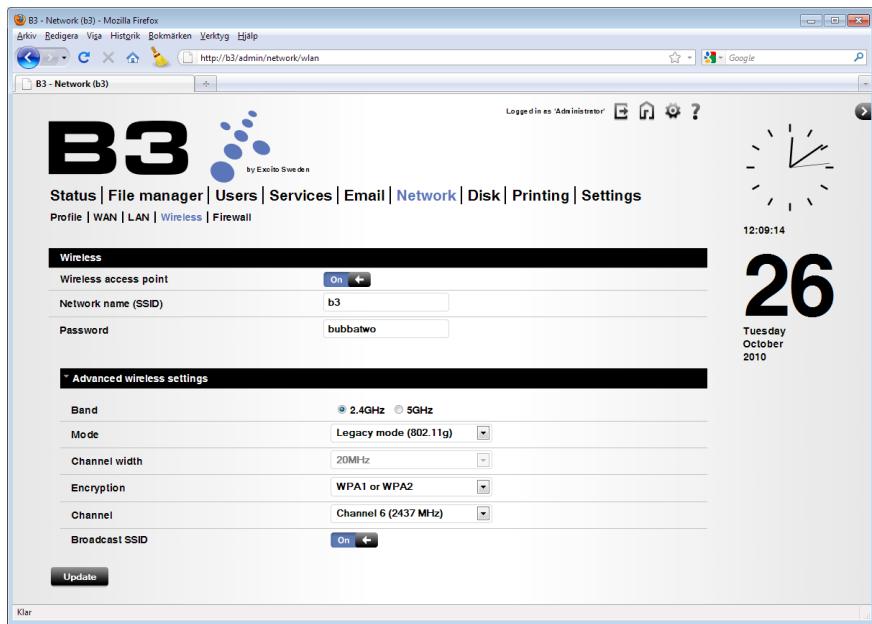
## CONFIGURE THE WIRELESS ACCESS POINT

1. Browse to **http://b3** (**http://b3.local** if using Mac).
2. Log on as administrator.
3. Click Network -> Wireless



4. Use the default 'Network name' or change to one of your own choice. The default name is your B3s host name. The name can be up to 32 characters long. The SSID is case-sensitive.
5. It is recommended to change the 'Password' (aka pass phrase). The required length of the password varies depending on encryption method. A WPA key need to be between 8 and 63 characters of length. A WEP key need to be 5 or 13 characters of length.
6. Select the box 'Enable wireless' to activate the access point. Update saves your changes.

7. Click the 'Advanced wireless settings' tab to reach the advanced settings.



8. Select frequency band, 2.4GHz or 5GHz, depending on your other network clients. All clients that shall communicate must be on the same frequency.

9. Choose what mode to use in your wireless network.

- Legacy mode (802.11a/g) - Select this if all of your wireless clients are 802.11a/g.
- Mixed mode (802.11n + 802.11a/g) - Select this if you are using 802.11n or/and 802.11a/g wireless clients.

10. Choose the channel width. Choosing 40MHz in a 802.11n network might improve the transfer rate.

- Select 20MHz if you are not using any 802.11n wireless clients.
- Select 40MHz if you are using 802.11n wireless clients only.

11. Choose preferred encryption. WEP2 is recommended. All your network clients need to have the selected encryption method as your AP (B3) available to be able to connect to your wireless network. Choose between

- None
- WEP
- WPA1

- WPA2
  - WPA1 or WPA2
12. Select the channel on your wireless access point in B3. In areas with several wireless networks, lower transfer speeds may be experienced. Then try a different channel.
13. B3's SSID will be visible to all other wireless clients by default. If you want to hide your SSID, unselect this box. You will then manually have to fill in the SSID in your clients to connect to your wireless network.
14. Update saves your changes.

## WiFi GLOSSARY

802.11a 802.11a uses the 5 GHz band.

802.11b 802.11b uses the 2.4 GHz band.

802.11g 802.11g uses the 2.4 GHz band.

802.11n 802.11n uses the 2.4 GHz and 5 GHz bands. This is the latest generation of Wi-Fi described by the IEEE standard. 802.11n has the capability to transfer data up to five times faster than its predecessors.

AES AES is an encryption protocol introduced in WPA2 to make communications over a Wi-Fi network private.

Access point (AP) A device which serves as a central wireless connection point for a wireless network.

Channel 802.11 divides each of the bands into channels. Availability of channels is regulated by in which country the access point is operating.

Channel width

In the 802.11n standard there is an option to run in the double channel width, 40MHz. Maximum transfer rate for 20 MHz is 130 Mbit/s. Maximum transfer rate for 40 MHz is 270 Mbit/s.

Client A device (computer, phone, media player etc.) in your network, wireless or wired.

Dual-band      The capability of a product to communicate in either / both the 2.4MHz or 5MHz frequency bands.

Encryption      Encryption is the process of transforming information using an algorithm to make it unreadable to unauthorized persons. A key specifies the particular transformation of data.

Frequency band      Only devices which operate in the same frequency band can communicate with one another. Better or worse performance with higher or lower frequencies may be realized, depending on the environment.

Network name (SSID)      This name identifies a particular wireless network.

Pass phrase / Password      This is the key that is used when encrypting. The required length of the key varies depending on encryption method. The same key is entered in the access point as well as in the clients on the wireless network.

PSK (Pre-shared key)      The pre-shared key is the same as the pass phrase (password) in a WPA encrypted network.

Region      Availability of channels is regulated by in which country the access point is operating. Also maximum permitted transmit power varies by region. The region for Wi-Fi in B3 is read from the Time zone setting.

TKIP      TKIP is an encryption protocol introduced in WPA to make communications over a Wi-Fi network private.

WEP      An early security standard used in wireless networks to encrypt network traffic. WEP should not be used for any sensitive data transmission, as there are well-known vulnerabilities in this very old form of security. If any devices on a wireless network only support WEP, the entire network is vulnerable. WEP is not supported by the 802.11n standard.

WPA1 & WPA2      These encryption protocols was created in response to several serious weaknesses found in the WEP standard. WPA2 is the latest and most secure. Use this if possible, all your wireless devices must support it.

## DOWNLOAD MANAGER

### USING THE DOWNLOAD MANAGER

Use the B3 download manager to download files directly to your B3, wherever you are. The only thing you need is a Internet connection and to browse your way home to your B3: <http://<your-Easyfind-name>.myownb3.com>, <http://www.<your-domain>> or <http://<your-ip-address>>.

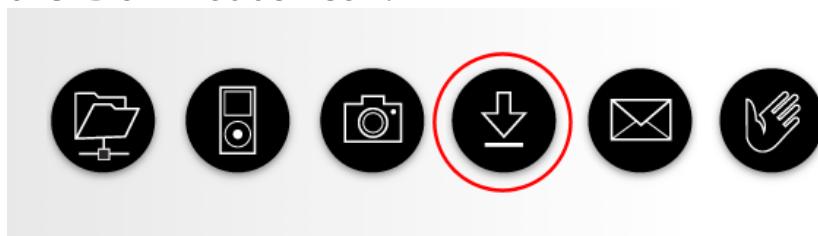
Of course if you already are in your home network browse to **http://b3 (http://b3.local if using Mac)**.

Large, time consuming downloads are handled by B3 while your computer is turned off.

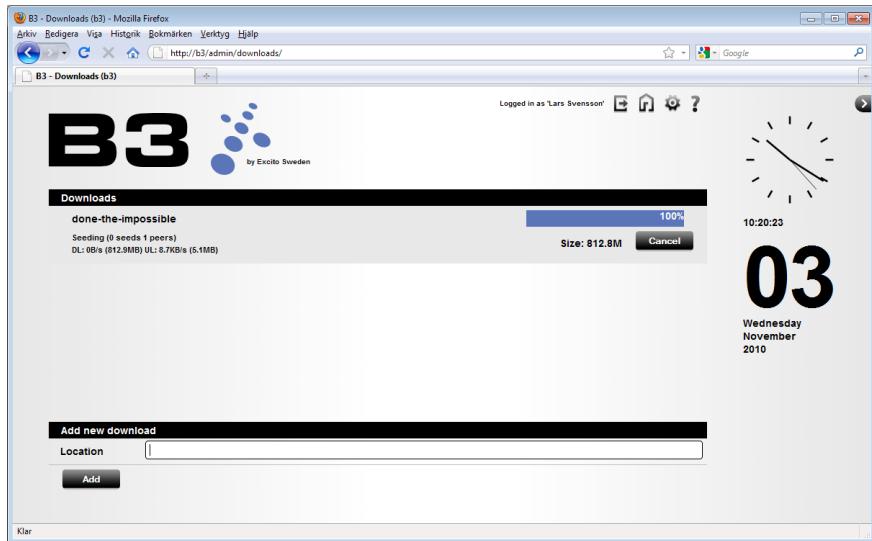
When you initiate your first download a catalogue is created in your /home/[username] directory: /home/[username]/downloads.

### How TO DOWNLOAD

1. At home browse to **http://b3 (http://b3.local if using Mac)** or if you are away from home <http://<your-Easyfind-name>.myownb3.com>, <http://www.<your-domain>> or <http://<your-ip-address>>.
2. Click the “Downloads” icon.



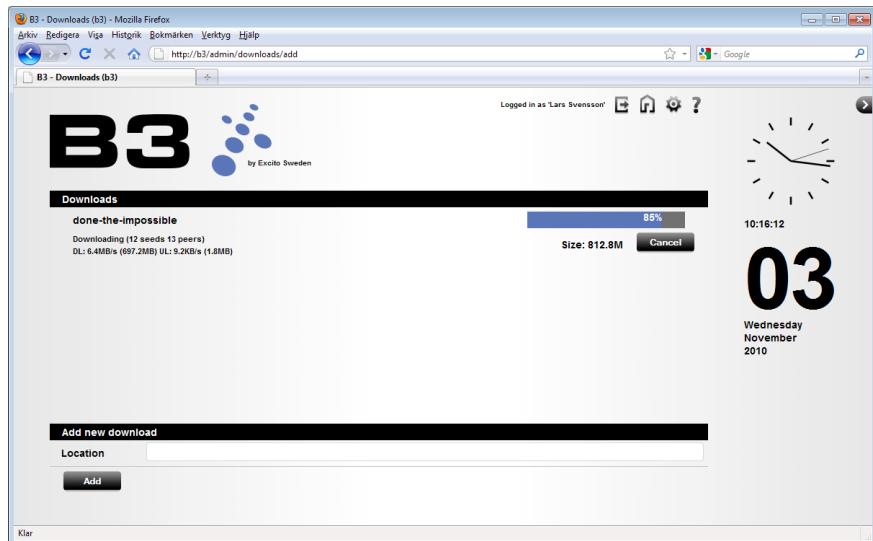
3. Log in as your standard user.
4. To initiate a download you need to copy\* the URL to the file (or torrent) you desire to download and paste it into the “Location” field on your B3 and click “Add”.
5. When the progress bar reaches 100% your download is completed. When downloading BitTorrents, note that the download manager will continue to share the file until you press Cancel or Clear.



\*To copy the URL simply right click on the file (or torrent). Depending on which browser you use and what type of file you desire to download select the appropriate in the right click menu: "Copy Shortcut", "Copy Link Location", "Copy Image Location"

As you add files for download, B3 allocates disk space for the files. If you look in the /home/[username]/downloads/ catalogue it seems if the files exist but as long as the progress bar still not has reached 100% the files are not complete.

Currently the download manager support the standards HTTP, FTP and BitTorrent downloads. You don't need to open any ports in your firewall when using the download manager, but for torrent downloads it is recommended to open the ports 10000-14000 in the firewall under "Allow external (WAN) access to B3 services".



B3 downloading large files while the user is at work

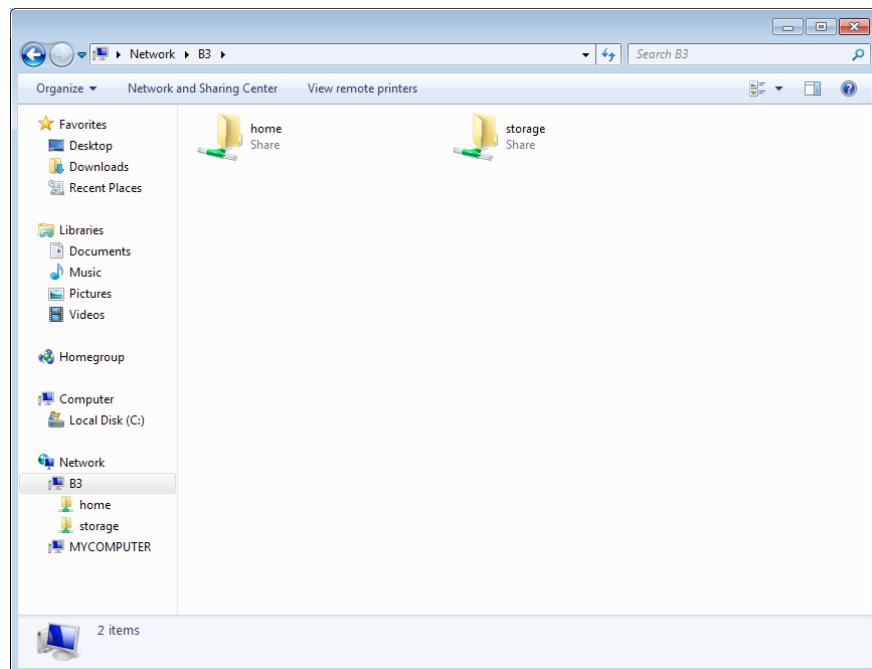
## FILE SERVER

The file server functionality allows you to reach your files anywhere. It is recommended to use B3 as your storage central, to allow you to reach your files even if you are not at home.

### WINDOWS EXPLORER (SAMBA)

From your local network (LAN), you can reach your files simply by browsing to B3 using Windows Explorer.

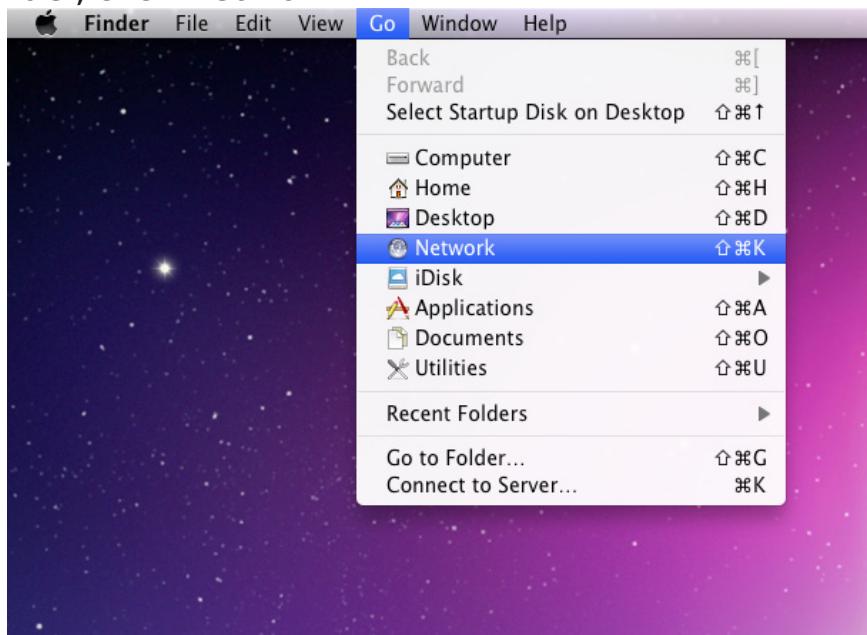
1. Open Windows explorer, click Network and then B3. Alternatively type \\b3 in the location field.
2. Click home to reach your private content, or storage to reach general, non-private content.



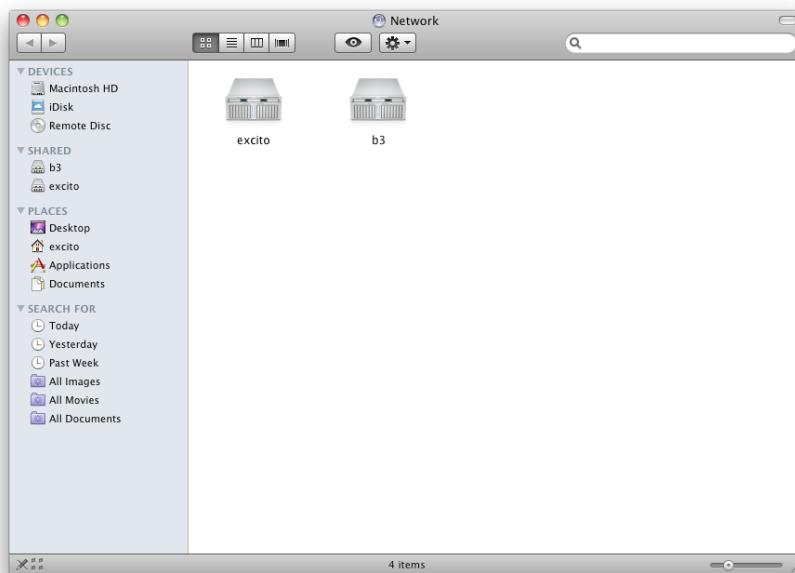
## MAC OS X 10.6

Using Finder in Mac you easily find your B3.

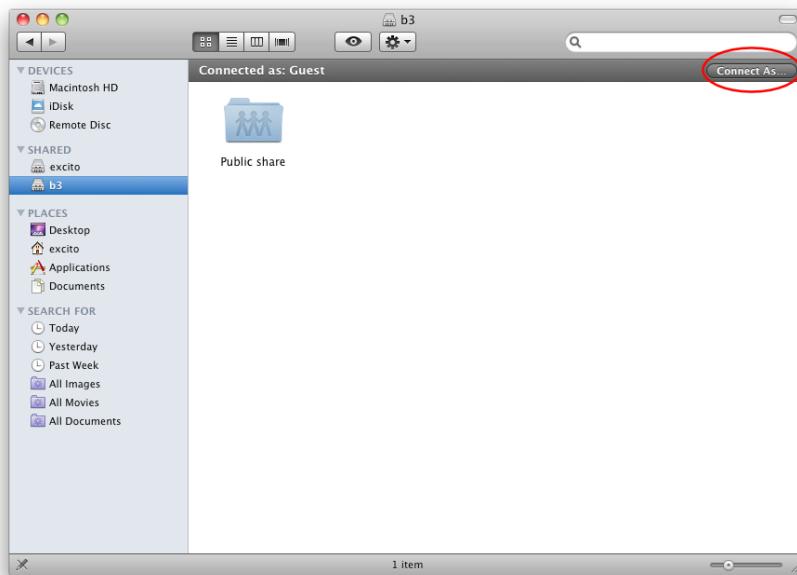
### 1. In Finder, click Network



### 2. You now see all your connected network devices. Click B3



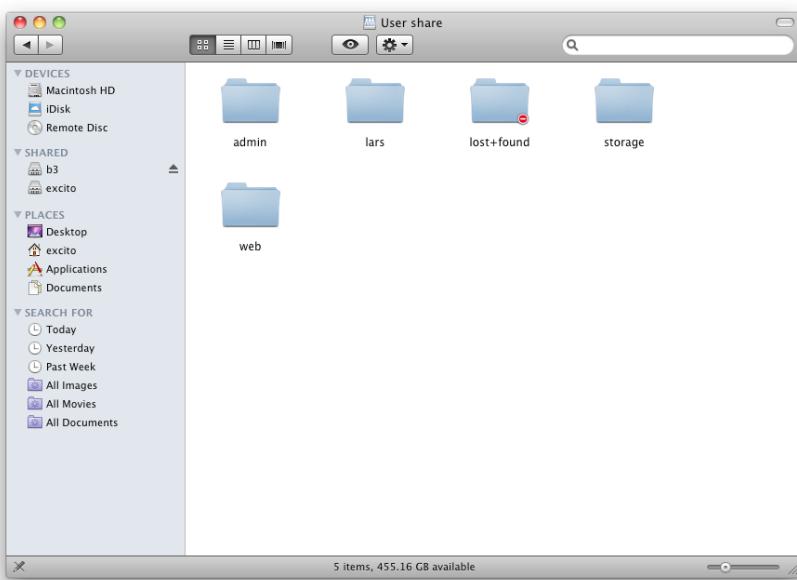
3. You will be able to enter B3's Public share. To reach your private folder click 'Connect As...'



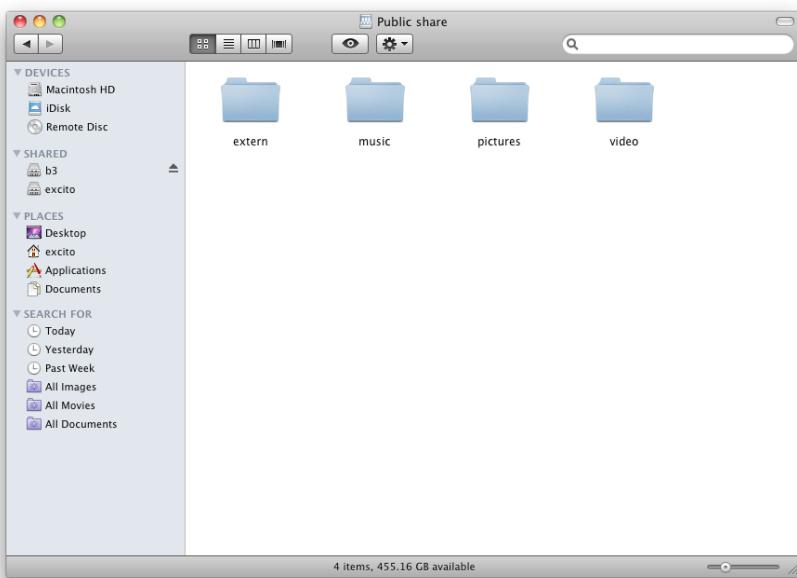
4. Enter your B3 username and password (not administrator) and click Connect.



5. Now you can enter your home folder, in this case lars.



6. This is the Public share



## WEB BASED FILE MANAGER

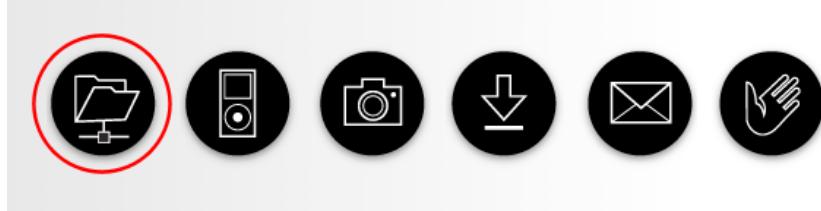
When you are away from home, the simplest way to reach your files on B3 is using the web based file manager.

Please note that the web based filemanager has a limit in handling files that together has a size greater than 2GB, instead use Samba or FTP.

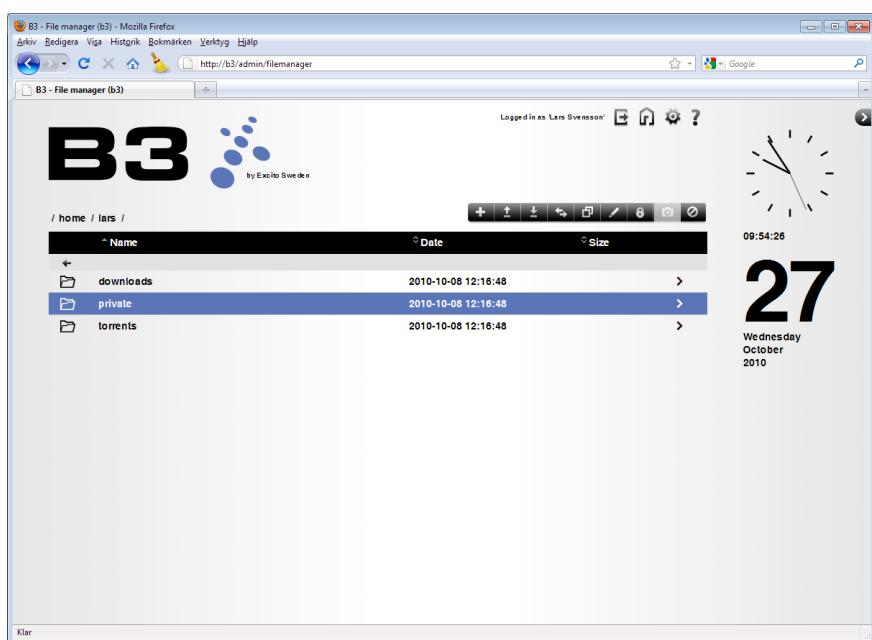
1. Browse to: <http://<your-Easyfind-name>.myownb3.com>, <http://www.<your-domain>> or <http://<your-ip-address>>. For instance: <http://82.214.205.104>. If

you do not know your IP address, read chapter “Reaching B3 from outside” on page 133. From the inside of your network, just browse to **http://b3** (**http://b3.local** if using Mac).

2. Click the “Filemanager” icon.



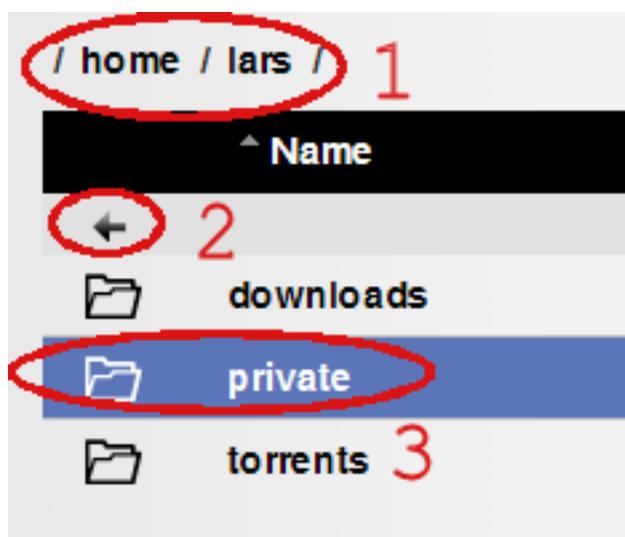
3. Log in using your standard user.



User browsing files on B3.

You will see your location in the folder structure on the top left side; in the picture above you are located in /home/lars catalogue.

- To move up in the folder structure, click the desired folder name (circle 1), or click the left arrow (circle 2).
- To move into a folder, double click it (circle 3).
- To download a file from your B3 to your PC, double click on the filename.



Click files or folders and use the icons in the file function bar to perform different actions.



The functions from left to right are:

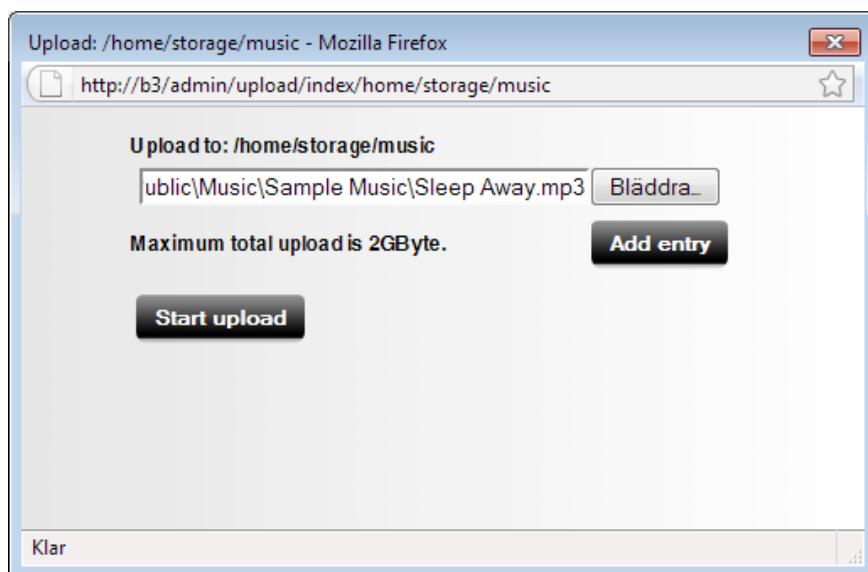
- Create folder - To create a folder on your B3, click the Create folder button and follow the instructions.
- Upload files - To upload files from your PC to B3, click the Upload files button and follow the instructions. If nothing happens, disable your browsers pop-up blocker.
- Download as zip - To download multiple files or folders, mark the items you wish to download and choose Download as zip. To download a single file from B3 to your PC, the easiest is to double click on the file name.
- Move files - To move files or folders on B3. Select the files to move. Then browse to the desired target position. Finally click the Move button.
- Copy files - To copy files or folders on B3. Select the files to copy. Then browse to the desired target position. Finally click the Copy button.
- Rename - Mark the file or folder and click Rename.
- Change permissions - File permissions are a way that the system controls who can do what with each file or folder. To change permissions on files or folders select the items you want to change permission on, and click

## Change permission.

- Add to album - Please notice that this menu option only is available when browsing in the '/home/storage/pictures' catalogue. Mark the files you want to add to the photo album and click 'Add to album'.
- Delete - To delete files or folders select the items you want to delete, and click Delete.

## Uploading files

Select files from your PC to upload to B3.



## USING THE FTP SERVER

Every user on B3 gets an FTP account created automatically.

### Connecting to the B3 FTP

In your FTP client, type B3 as server name, and your user name and password. If you want to reach the FTP server from outside use your external IP or domain name (<your-domain> or <your-ip-address>) as server name in your FTP client. Open required ports in your firewall, described in chapter "Firewall" on page 41 or in chapter "Reaching B3 from outside" on page 133.

## AFP

The Apple Filing Protocol (AFP) is a network protocol that offers file services for Mac OS X and original Mac OS.

## MEDIA SERVERS

B3 has three media server technologies: Squeezebox Server, DAAP and UPnP. Squeezebox Server is used for streaming to Logitech Squeezebox, DAAP is used for music only, while UPnP can be used for music, video and pictures (photos).

Some media players such as Popcorn Hour are able to find the media content on B3, without the need for a media server. Simply browse your network (from example Popcorn Hour) and connect to B3 via SMB or NFS (NFS will be available in B3 in a nearby software update).

## MUSIC

All music placed in the \storage\music folder will automatically be visible by Squeezebox Server, DAAP (iTunes) or UPnP compatible music players on your network when the respective services are enabled.

### Examples on music players:

- Logitech Squeezebox product line
- iTunes PC application
- Roku/Pinnacle Soundbridge hardware music player
- Olive Musica hardware music player
- Dlink DSM 320/520
- Nokia 770 and 800 Tablet PC
- PS3



The Roku Soundbridge audio player

## VIDEO AND PICTURES

All video and picture files stored in \storage\video and \storage\pictures will automatically be available through the UPnP server for playback by any UPnP compatible devices when the UPnP service is enabled.

Examples on video players:

- Popcorn Hour
- PS3
- Dlink DSM 320/520
- Nokia 770 and 800 Tablet PC

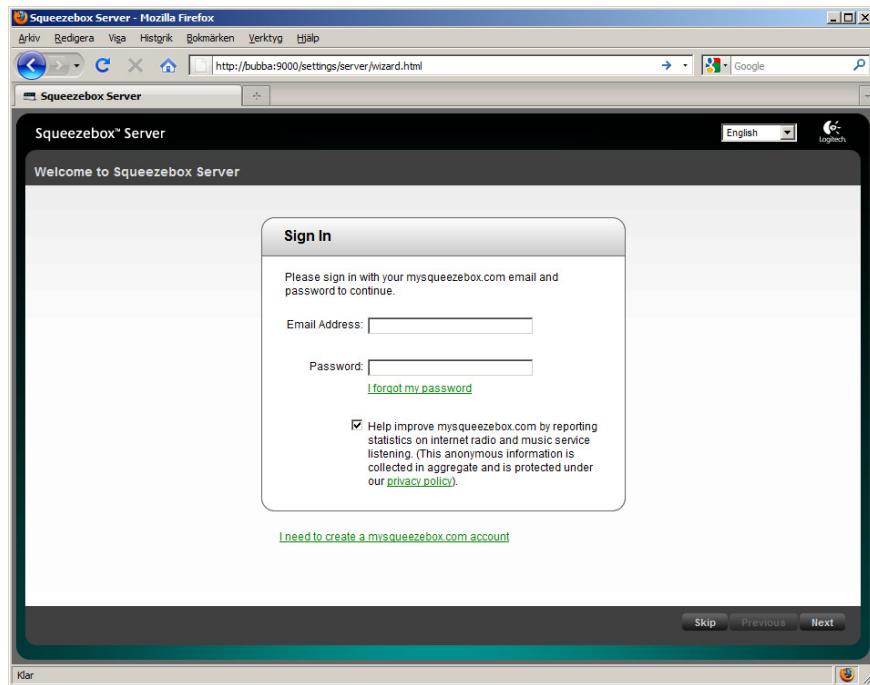
## SQUEEZEBOX SERVER

Media server for the Logitech Squeezebox product line.

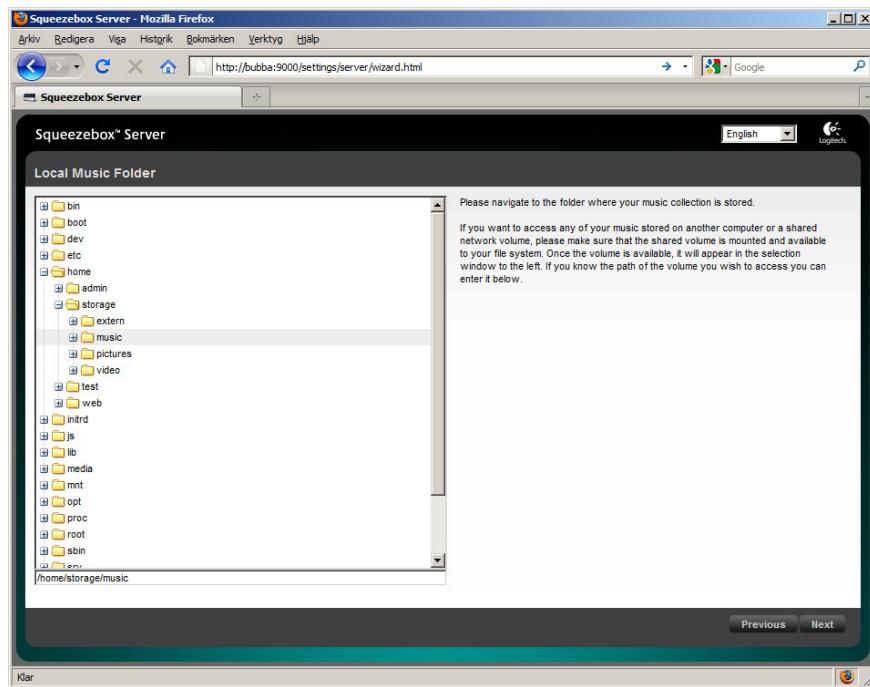
Before you can start using your Squeeze product with Squeezebox Server you have to do an initial setup. And preferably set up a automatic rescan of your music library. Do like this:

1. Start by logging in as administrator. Activate 'Squeezebox Server' under 'Services'. It will take a few minutes for 'Squeezebox Server' to start. Be patient before continuing with step two below.

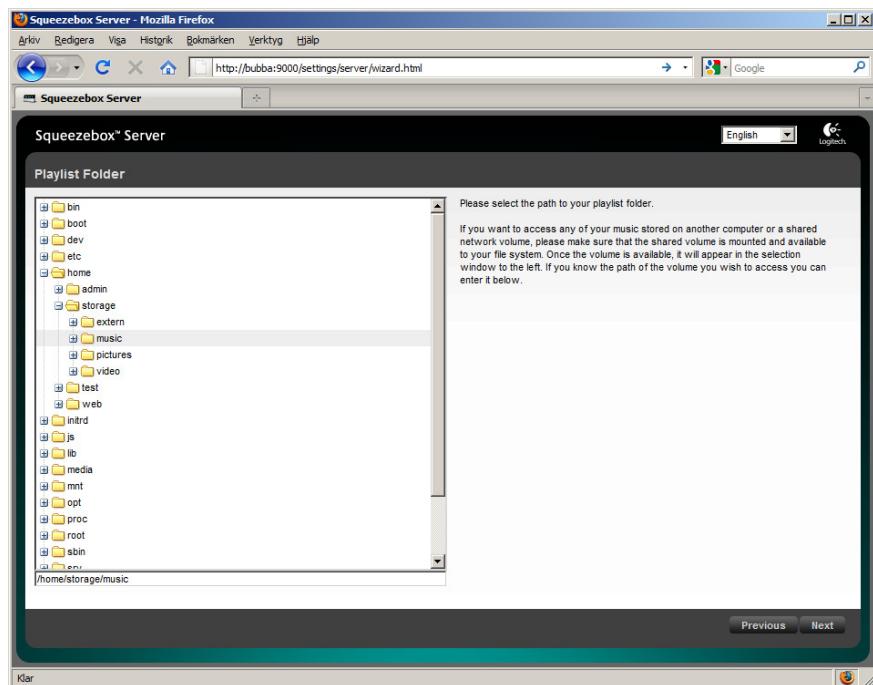
2. Access Squeezebox Server by browsing to **http://B3:9000**. Click "Skip" to proceed to the setup.



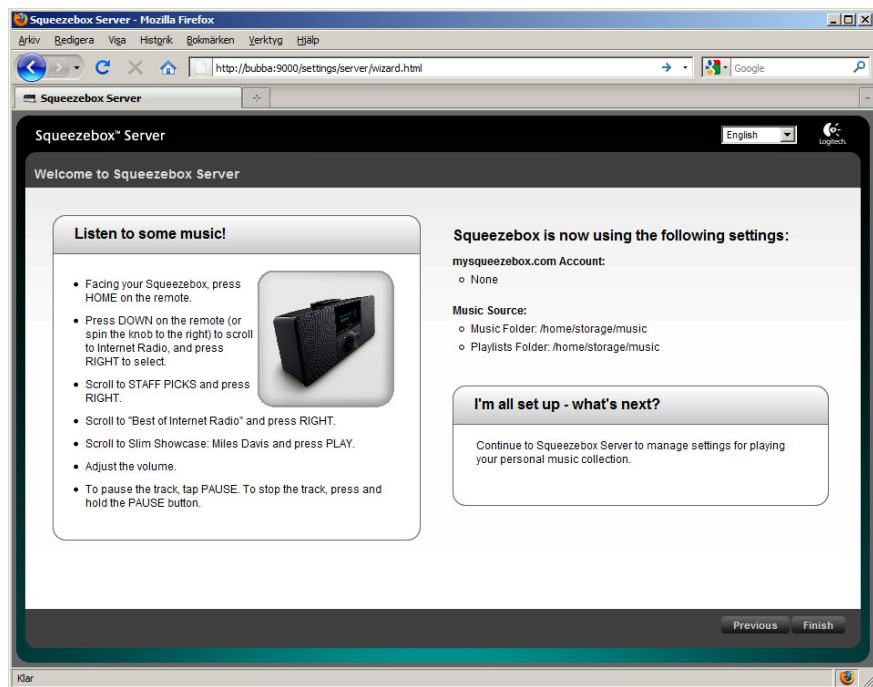
3. Locate music folder. Verify that the catalogue home/storage/music is selected and click 'Next'.



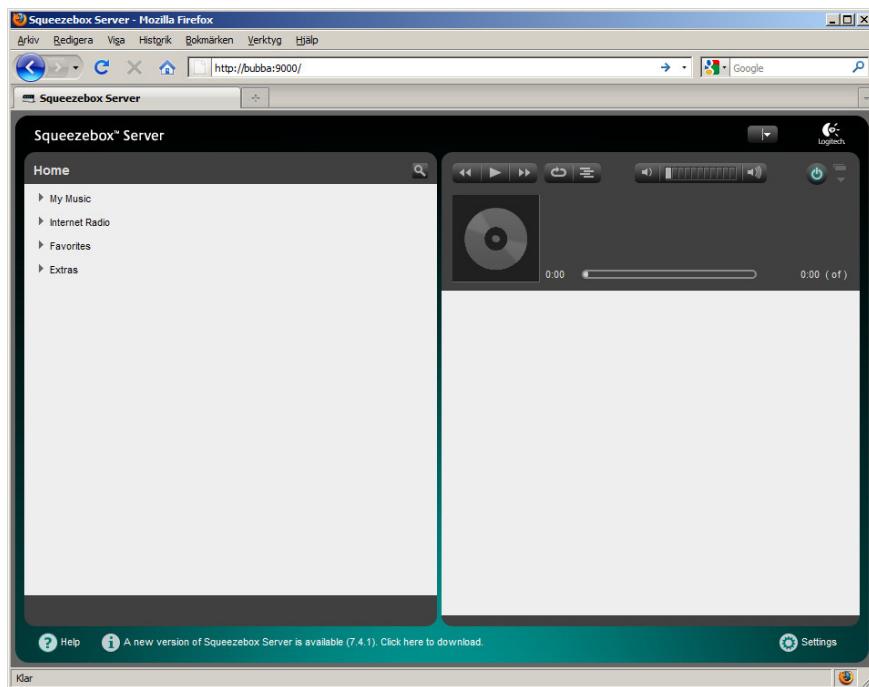
4. Locate playlist folder. Verify that the catalogue home/storage/music is selected and click 'Next'.



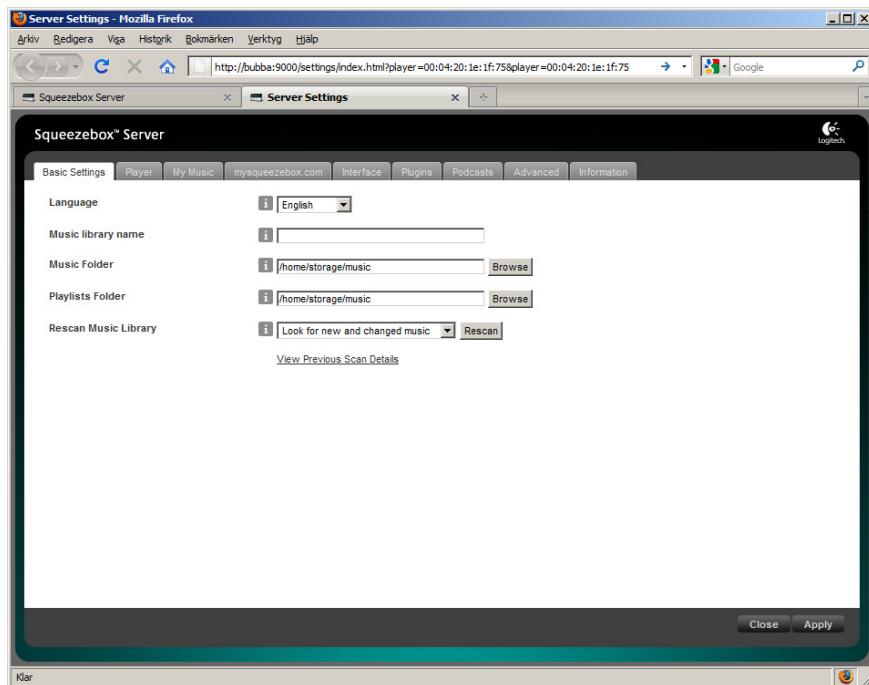
5. Click 'Finish' to complete the setup.



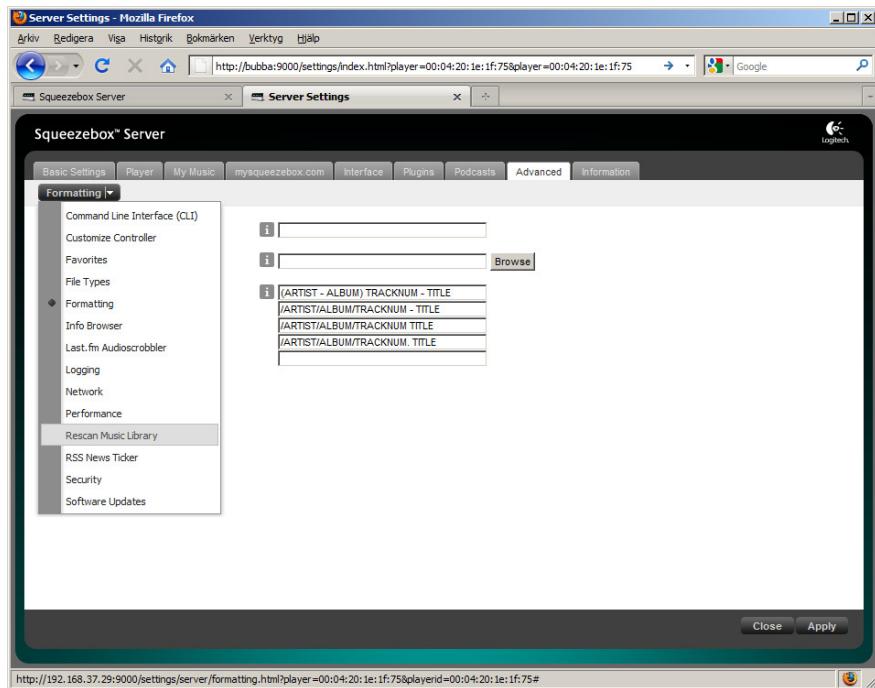
6. To setup a frequent library scan for new music click 'Setting', down to the right.



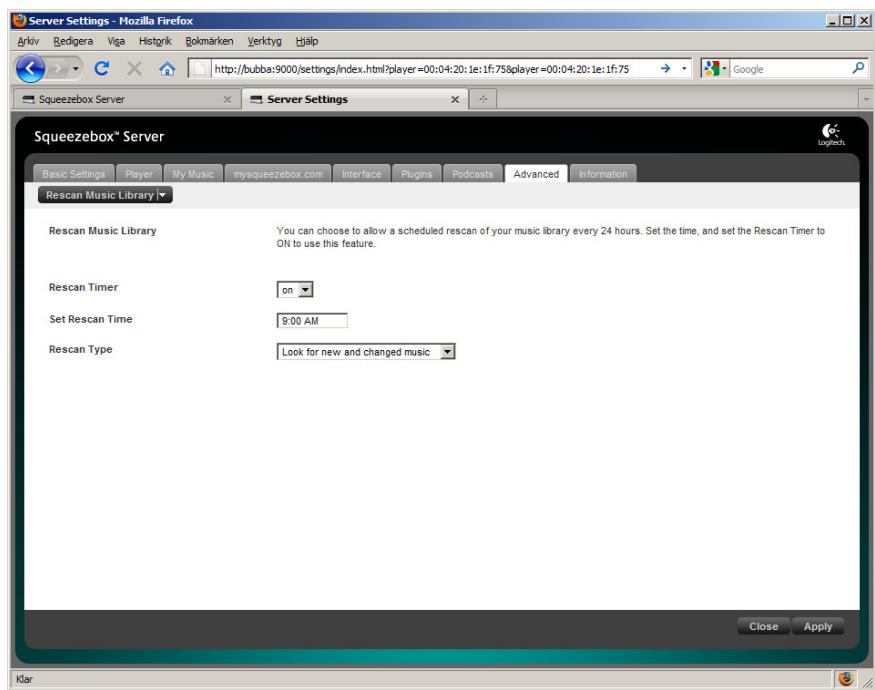
7. The Squeezebox server settings page. Click 'Rescan' to initiate a music library scan. This can also be done via the remote control directly on your Squeeze unit. The scan will take quite some time if your music library is large.



8. To setup a frequent library scan for new music click the 'Advanced' tab and click the drop down list to the left on the screen. Click 'Rescan music Library'.



9. Select preferred settings and click 'Apply'.



10. The settings are now done. After a complete scan of your music library you are ready to start listening to music through your player.

## FIREFLY MEDIA SERVER

Media server for the Roku SoundBridge and iTunes. It serves your music files using Roku Server Protocol (RSP) and Digital Audio Access Protocol (DAAP).

You can access the Firefly Media Server by browsing to:

**http://b3:3689**

User: admin

Password: excito

The screenshot shows the Firefly Media Server interface running in Mozilla Firefox. The title bar reads "Firefly Media Server - Mozilla Firefox". The address bar shows the URL "http://b3:3689/index.html". The main content area is titled "Server Status". It contains several tables and sections:

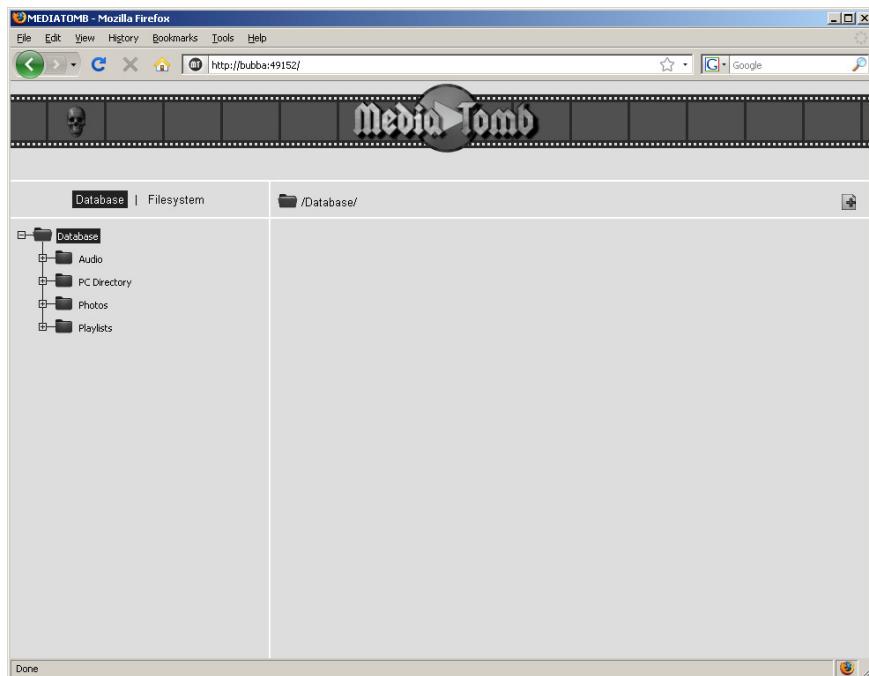
- Service Status:** A table showing services like Bonjour, Firefly Media Server, and File scanner with their status (Stopped, Running, Idle) and control buttons (Stop Server, Start Scan, Start Full Scan).
- Plugin Version:** A table showing daap, rsp, and ssc-ffmpeg versions as svn-1696.
- System Metrics:** A table showing Uptime (1 hour, 23 minutes, 19 seconds), Songs (52), Songs Served (0), and DB Version (2).
- Client IP:** A table showing Client IP (192.168.0.103) and Action (Serving xml-rpc method).

## MEDIATOMB MEDIA SERVER

Media server for UPnP compatible devices. It serves your media files using UPnP.

You can access the Mediatomb Media Server by browsing to:

**http://b3:49152** (by default MediaTomb Media Server will select a free port starting with 49152).

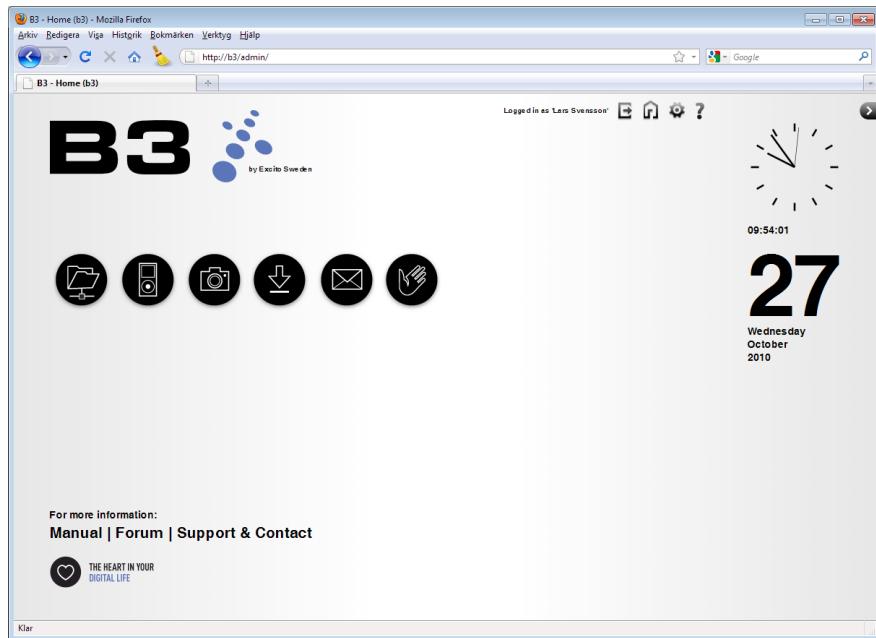


# WEB SERVER

## ADDING YOUR OWN CONTENT

Use a file browser and go to '\b3\home\web\' and replace the 'index.html' file with your own web content. Your web content will be visible by browsing to **http://b3** (**http://b3.local** if using Mac) from inside your home network, or by browsing to **http://<your-Easyfind-name>.myownb3.com** or **http://www.<your-domain>** from outside your network. Refer to chapter "Reaching B3 from outside" on page 133 for more information.

To reach B3's user interface, browse to **http://b3/admin** (**http://b3.local/admin** if using Mac). From outside your network the administrator interface is reached here: **http://<your-Easyfind-name>.myownb3.com/admin** or **http://www.<your-domain>/admin**.



B3's default web page

## ENCRYPTION

If you browse to https instead of http (i.e. **https://<your-Easyfind-name>.myownb3.com** or **https://www.<your-domain>**), the data transfer over Internet will be encrypted.

## EMAIL SERVER

There are several ways to read Email these days. It is also common to have several Email accounts on several different places. B3 provides a simple solution to this, by collecting all your Email at one place.

### Remember to:

- Enable the email services, described in chapter "Services" on page 33.
- Open required ports in your firewall, described in chapter "Firewall" on page 41 or in chapter "Reaching B3 from outside" on page 133.

You will find an overview of the email settings in chapter "Email" on page 34.

## RETRIEVE EMAIL - THE FETCHMAIL SERVICE

Fetchmail is a very convenient way to collect all your Email at one place. If you set up B3 to fetch your Email from other external Email accounts you may have, they will be stored on B3 and available via IMAP or web email, wherever you are. Set up this service by adding a fetchmail account under the 'Email' button in the administration interface.

When using retrieve email (whether you choose IMAP or POP) B3 will erase the eMails from the server and store them locally on your computer.

### Usage example - retrieve email

To fetch email from your external account (i.e. 'user1extern@yahoo.com'):

1. Log on to B3 web admin interface using as 'user1'.
2. Click 'Email' -> 'Retrieve email'. Click 'Add new email account'. Fill in your email information provided to you by your external Email provider. It is actually the same information you use when setting up your Email client (i.e. Microsoft Outlook') to read email from there.

Now, email to 'user1extern@yahoo.com' are also received by B3, and made available to user1.

This Email is available either using the webmail function (<http://b3/mail> or <http://b3.local/mail> if using Mac) or if you want to read the Email using your favourite Email client (see section READING EMAIL below). Done!

## SEND EMAIL - SENDING EMAILS

When sending Email B3 will acts as SMTP (Simple Email Transfer Protocol) server.

In your mail client (Outlook, Thunderbird etc) fill in your B3's hostname as outgoing SMTP server.

### Port 25 blocked

It is not uncommon that your ISP (Internet Service Provider) blocks outgoing traffic on port 25, to prevent potential viruses in your PC to send Email. If this is the case B3 can't be used as SMTP server. Your ISP probably provides an alternative SMTP server.

Check with your ISP, and update the 'Outgoing email server (SMTP)' field in the web administration interface accordingly. To do this log in as administrator, click "Email" and "Server settings".

## RECEIVE EMAIL - HANDLING INCOMING EMAILS

If you have your own domain name it is possible to let B3 handle your incoming and outgoing Email, instead of paying for this service.

When adding a user, you automatically get an Email account set up on your B3.

Follow these steps to get the Email service running:

1. Browse to **http://b3** (**http://b3.local** if using Mac).
2. Log on as administrator.
3. Click 'Email' and then 'Server settings'.
4. Enter your domain name (i.e. '<your-domain>') in the field 'Handle email for domain'.
5. Click update.

In order for this to work you also need to open the appropriate ports in your firewall (open appropriate ports in 'Integrated B3 services', read chapter "B3 as router and firewall" on page 59 and "Reaching B3 from outside" on page 133)

After this has been done, Email sent to users @ your domain will be received by

B3. The recipient will have the emails stored in the 'Email' folder. For instance, Email sent to 'user1@<your-domain>' will be made available to user1, and Email sent to 'user2@<your-domain>' will be made available to user2.

There are two ways to access your Email, either from the web email service or using IMAP to make the Email available in your favourite Email client.

### Usage example - your own domain

You own the domain name '<your-domain>', and want to be able to receive Email to 'user1@<your-domain>' and 'user2@<your-domain>'.

1. Set up B3 to receive Email to '<your-domain>', by following the instructions under 'Handling Incoming eMails' above.
2. Create the users user1 and user2 on B3.
3. Open port 25 in your firewall, described in chapter "Firewall" on page 41 or in chapter "Reaching B3 from outside" on page 133

Now, Email to 'user1@<your-domain>' and 'user2@<your-domain>' are received by B3, and made available to the respective users.

### Handle more than one domain

It is possible to receive Email from more than one domain. Just type the domain names in the 'Handle email for domain' field (space separated).

Note that B3 can't separate these domains; Email to user1@<your-domain1>.com and to user1@<your-domain2>.com will end up in the same mailbox (the one belonging to user1). The Email routing is done only on user basis.

## READING EMAIL

### WEB EMAIL

Browse to **http://b3/mail** (**http://b3.local/mail** if using Mac), and log in using your private user name and password. This service will also be available from the outside by browsing to your Easyfind name <http://www.<your-Easyfind-name>.com/mail> or '<http://<your-domain>/mail>'. Log in using your personal B3 user name and password.

## PC EMAIL CLIENT

To be able to read your Email from home or from work, add B3 as an account in your Email client (i.e. Microsoft Outlook). Simply type 'B3' (your B3's hostname) as incoming (IMAP) server.

If you use the IMAP server from the outside your network (i.e. from work), type your home Easyfind name, IP address or domain name. Use your personal B3 user name and password. It is common in high-end mobile phones to have built-in IMAP Email clients. With these type of mobile phones you can connect to B3 and in a convenient way access all your Email where ever you are.

As a security measure B3 uses IMAP via SSL (port 993). Activate this in your Email client to be able to connect to your B3.

### SSL settings in Thunderbird

In the "Tools" menu choose "Account Settings...". Choose your Email account and click "Server Settings". Under "Security Settings" choose SSL. To confirm click OK.

### SSL settings in Outlook 2007

In the "Tools" menu choose "Account Settings....". Choose your Email account and click "Change". Click the button "More Settings" and then the "Advanced" tab. In the drop down list to the right of IMAP choose SSL. To confirm click "OK", "Next" and "Finish".

## HORDE - THE WEB EMAIL CLIENT

Use Horde to read your Email via a web browser, for example Firefox or Internet explorer. Simply browse to <http://www.<your-Easyfind-name>.com/mail>, <http://www.<your-domain>/mail> or <http://<your-ip-address>/mail>.

### Initial setup

Before starting to use the web email client you have to set up a "default identity" (i.e. your name and email address) and "Locale and time".

1. Browse to horde as described above.
2. Log in using your user name and password.

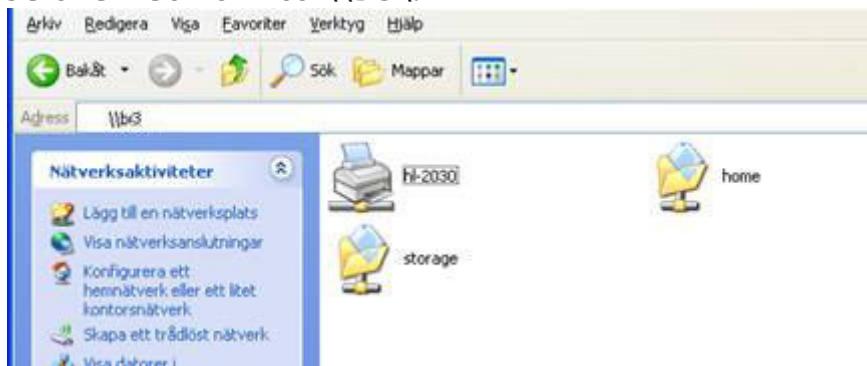
3. Click “Options” in the left menu.
4. Choose “Email” in the drop down list to the right of “Edit options for:”.
5. Click on “Personal Information”.
6. Fill in at least the information “Identity’s name:”, “Your full name:” and “Your From: address:”. Click “Save options”.
7. Choose “Global Options” in the drop down list to the right of “Edit options for:”.
8. Click on “Local and time”.
9. Choose your settings and click “Save Options”

## PRINTER SERVER

With the Print Server you will get easy and comfortable printer access. B3 gives you a more efficient way of using your printer in your home- or in your office-networks. The print server allows multiple users to share a printer from anywhere on the network without sharing one PC. All you need is a USB printer and its drivers.

### INSTALLATION

1. Connect your USB printer to B3's USB connector.
2. In a web browser, browse to **http://b3** (**http://b3.local** if using Mac).
3. Log on as administrator.
4. Click the Printing button.
5. Press Add new printer.
6. The printer name shows, add this printer and fill out the requested information.
7. Browse the network to \\B3\.



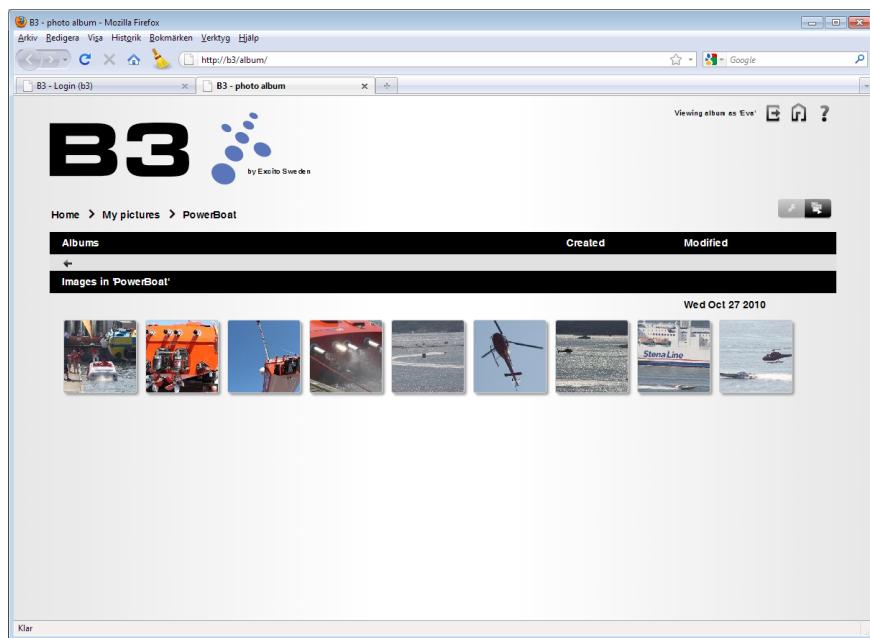
8. The printer will now show up next to the home and storage folders. Double click the printer icon.
9. You will be prompted for the printer driver, follow the instructions and install the printer. When this is done, the printer is ready to be used. Repeat steps 7-9 for all work stations using the printer.

# PHOTO ALBUM

Share your digital photos with friends and family! With B3 you get easy to use, out of the box photo album! All you need is your digital pictures!

## Features:

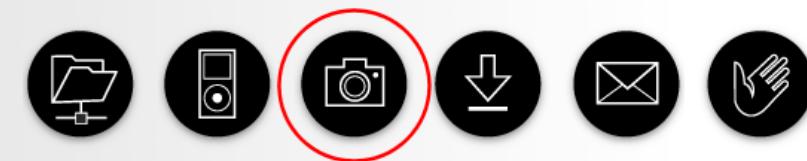
- Automatic thumbnail creation - fast and convenient album viewing for those with limited bandwidth.
- Add captions for each photo or album in your collection.
- Slide show function.
- Your images are safe on your own B3 instead of hosted somewhere else.
- Public or password protected albums.
- Easy to use.



## CREATE AN ALBUM

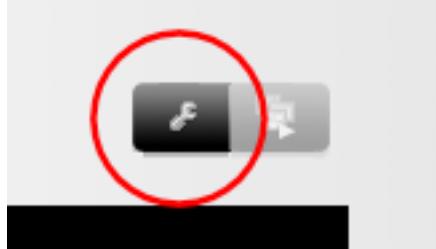
1. Store your photos in storage/pictures.
2. In a web browser, browse to **http://b3** (**http://b3.local** if using Mac).

3. Click the Photos icon to go to the photo album.



4. Log in with a B3 user (not administrator).

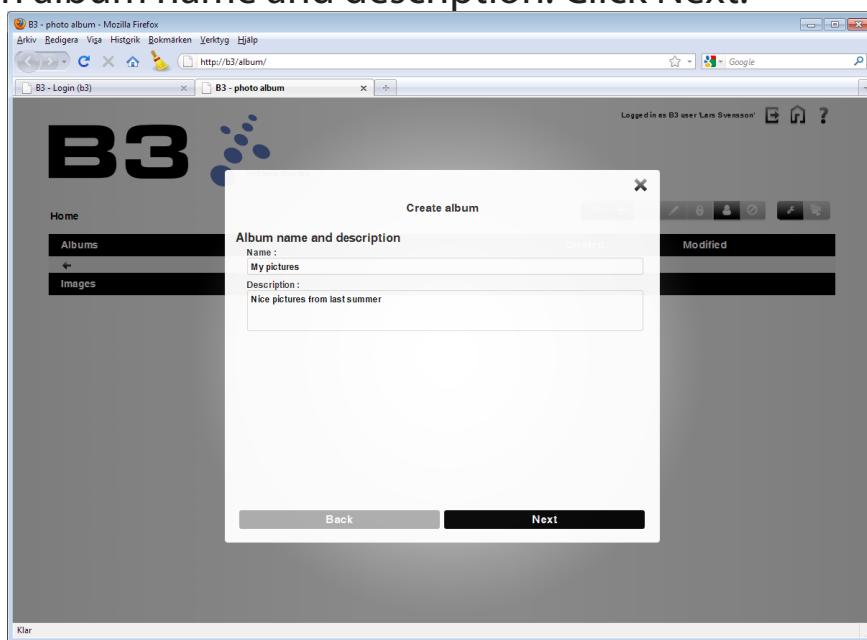
5. Click the wrench icon to enter Manage mode.



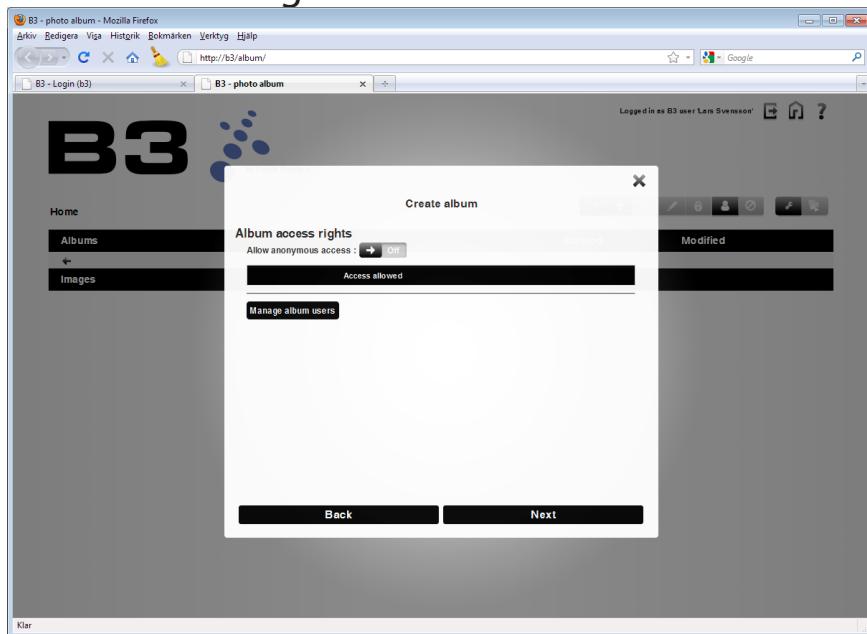
6. Click the icon Create album to start the album wizard



- Set an album name and description. Click Next.

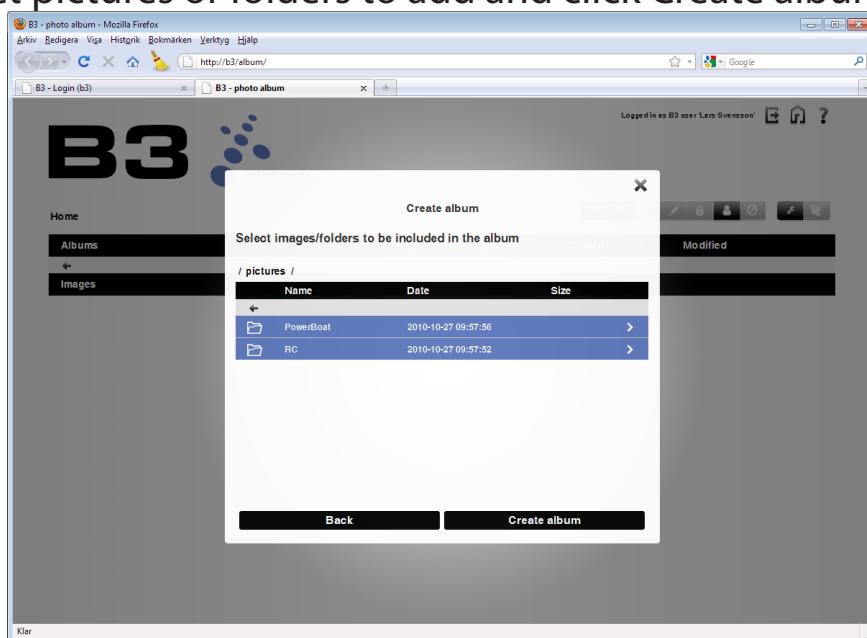


- Set the user access rights for the album:



- For public albums - activate 'Allow anonymous access'.
- For private albums - click 'Manage users' to create album users. Click the plus icon. Fill in user information and click the ok icon. Close the Manage album user window. Click 'Access allowed' for the user. Click Next.

- Select pictures or folders to add and click Create album.



- Click the wrench icon to exit Manage mode.
- Now you see all albums you have access rights to. Remember to log in with your album user to see private pictures.

## EDIT AN ALBUM

1. In a web browser, browse to **http://b3** (**http://b3.local** if using Mac).
2. Click the Photos icon to go to the photo album.
3. Log in with a B3 user (not administrator).
4. Click the wrench icon to enter Manage mode.
5. Select the album you wish to edit.
6. Use the menu item from the tool bar to edit the album.



You have the following edit options:

- Add images
- Move images
- Rename
- Permissions
- Manage users
- Delete

7. Click the wrench icon again to exit Manage mode.

## ADD ALBUM USERS

1. In a web browser, browse to **http://b3** (**http://b3.local** if using Mac).
2. Click the Photos icon to go to the photo album.
3. Log in with a B3 user (not administrator).
4. Click the wrench icon to enter Manage mode.
5. Click the Manage user icon



6. Follow the on screen guide.

7. Click the wrench icon again to exit Manage mode.

## PERMISSIONS

To view an album one of these two requirements needs to be met:

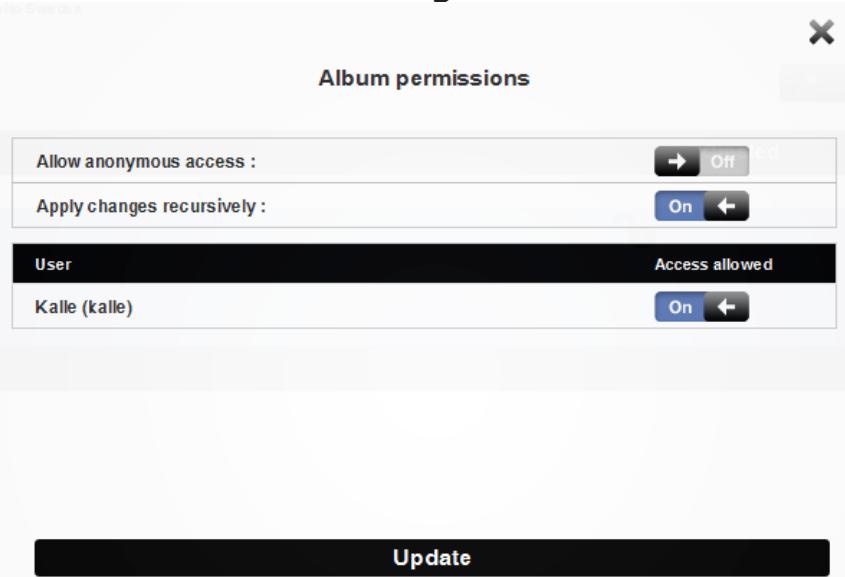
- The album is public
- You are logged in with a album user that has access rights to the album.

### EDIT ACCESS RIGHTS ON AN ALBUM

1. In a web browser, browse to **http://b3** (**http://b3.local** if using Mac).
2. Click the Photos icon to go to the photo album.
3. Log in with a B3 user (not administrator).
4. Click the wrench icon to enter Manage mode.
5. Select (highlight) the album you wish to edit.
6. Click on the Permissions icon:



7. Now you can edit the access rights of the album:



- To make the album open for anyone to view, select 'Allow anonymous access'.
- To make the album viewable to a specific user, disable anonymous access and enable the user.
- If there is subalbums in the selected album and you which the access rights to apply to all subalbum, select 'Apply changes recursively' before clicking 'Update'.

8. Click the wrench icon again to exit Manage mode.

## WHERE DO I FIND MY PICTURES?

To view your pictures when you are at home, in your local network, simply open a web browser and type **http://b3** (**http://b3.local** if using Mac).

If you are away from home, open a web browser and browse to your Easyfind name **http://www.<your-Easyfind-name>.com** or '**http://<your-domain>**

Then click the Photos icon to go to the photo album. Enjoy the public albums or log in using the album user you have created!

# RAID

The RAID function in B3 combines the /home partition and one external hard disk into a single logical unit.

B3 supports RAID 1 that duplicates data across the internal disk and one eSATA disk, providing full redundancy. The /home partition and the external hard disk each store exactly the same data, at the same time, and at all times. Data is not lost as long as one disk survives a disk failure. Notice that a RAID system does not save unintentionally deleted files. If this is the type of security you are looking for, please use the integrated backup function instead: read chapter "Backup" on page 108. For maximum security: combine RAID and a frequent backup job!

At any given moment, the contents of /home partition on B3 and the external hard disk in the array are identical to the content of the other disk in the array.

## Important

- To get out the most of your disks, use an external disk in the same size as your internal disk in B3.
- Total capacity of the array equals the capacity of the smallest disk in the array.
- It will take some time to create or restore a RAID array. For a 1TB disk it will take about 4 hours. This is handheld in the background of the B3 system and will not be indicated to the user.
- To reuse your B3 standalone without the RAID setup you have to reinstall your B3 system.

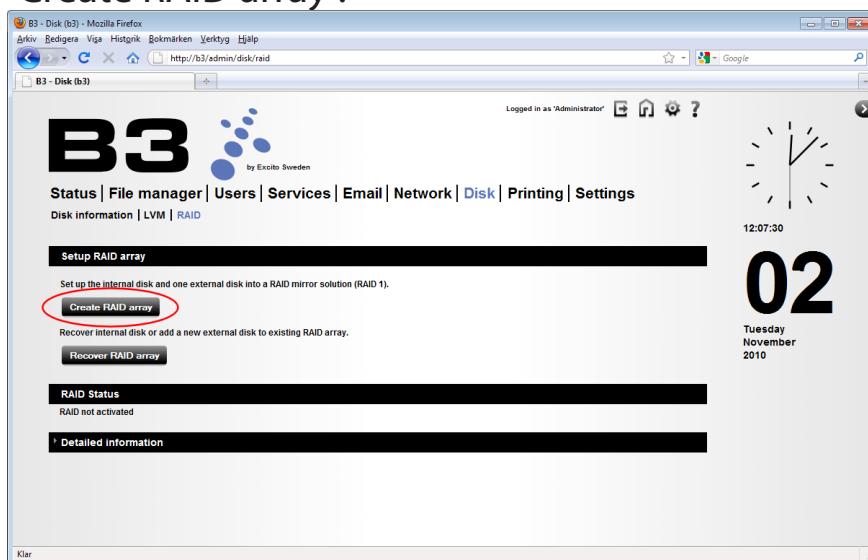
## Warning

An old RAID disk will automatically be connected and included into the B3 system upon boot, even though you have not set up your B3 for a RAID extension. It is impossible to remove the extension without reinstallation. To format an old external RAID extended disk, connect the disk to a already running B3. Then choose 'Format' in the 'Disk -> Information' menu.

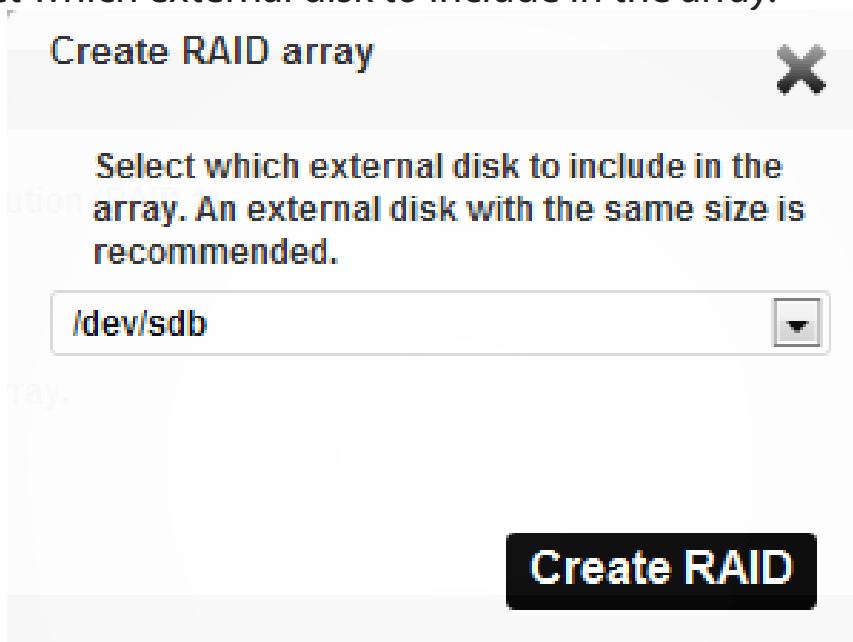
## CREATE RAID ARRAY

Warning! The process will destroy all user data - both on the internal and external disk.

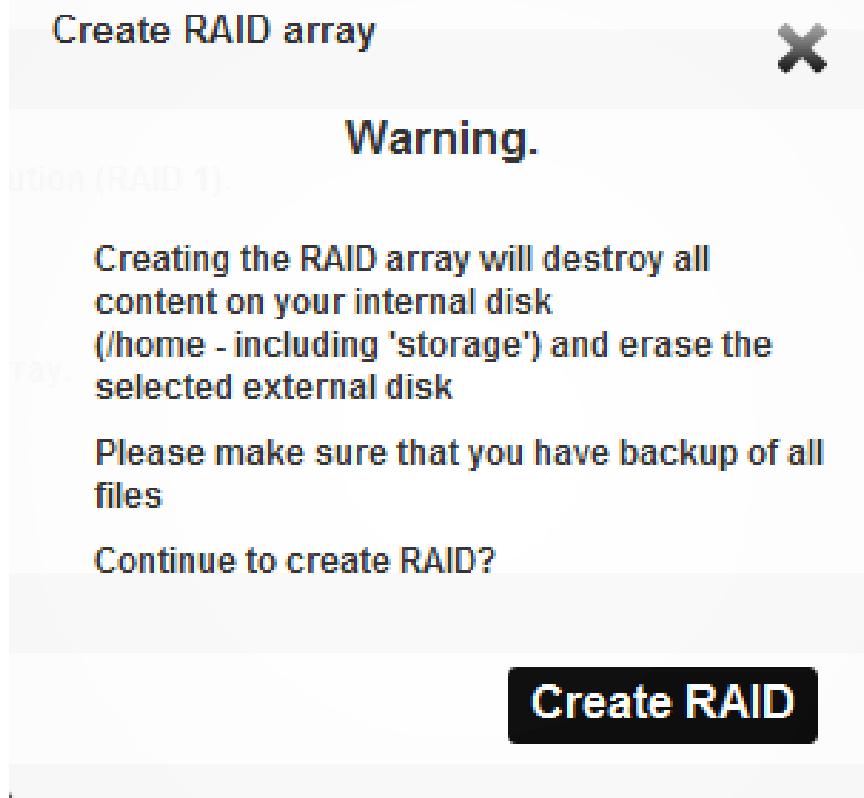
1. Attach an eSATA disk. Please notice that the disk should be pre formatted, without old RAID or LVM systems.
2. Browse to **http://b3 (http://b3.local if using Mac)**.
3. Log in as administrator.
4. Click Disk -> RAID.
5. Click "Create RAID array".



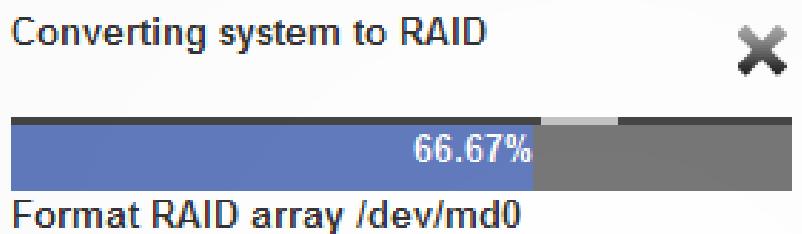
6. Select which external disk to include in the array.



7. Warning! All data on both disks will be erased. Click 'Create RAID'.



8. Wait for the progress bar to complete. Be patient, it will take some time to create a RAID array if you are using large disks.



9. When finished, your external disk has been included in your RAID array.

### Converting system to RAID



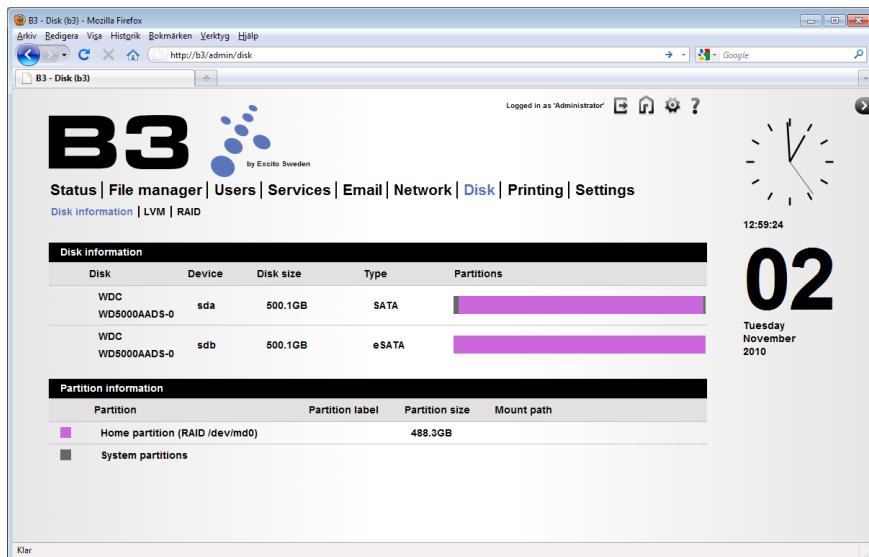
## RAID STATUS

Log in as administrator, click Disk -> RAID. Here you will find information about current RAID status.

The screenshot shows a web-based RAID management interface. At the top, there's a navigation bar with links like Status, File manager, Users, Services, Email, Network, Disk, Printing, and Settings. Below that, a sub-menu for Disk information includes LVM and RAID. The main area has sections for 'Setup RAID array' (with 'Create RAID array' and 'Recover RAID array' buttons), 'RAID Status' (showing 'Normal operation'), and 'Detailed information'. Under 'Detailed information', there are two tables: 'List of RAID arrays' and 'List of RAID disks'. The 'List of RAID arrays' table shows one array named '/dev/md0' with level 'raid1', state 'Clean', and size '488.3G'. The 'List of RAID disks' table shows two disks, '/dev/sda2' and '/dev/sdb1', both attached to parent array '/dev/md0', both in 'In sync' state, and both with size '488.4G'. A large digital clock on the right displays '02' (representing 12:59:50) and the date 'Tuesday November 2010'.

- List of RAID arrays - shows the total disk space, i.e. the smallest available disk (the B3 /home partition or the external eSATA disk) in the array.
- List of RAID disks - shows the disks attached to the RAID system.

In the Disk -> Information menu you also find information about your RAID setup.



## RECOVER RAID ARRAY

There might be different reasons for you wanting to perform a 'Recover RAID' operation:

- Disc failure; internal or external.
- Changing to a new disc; internal or external.
- Disconnecting the external RAID disk by mistake.

### RECOVER THE INTERNAL DISK

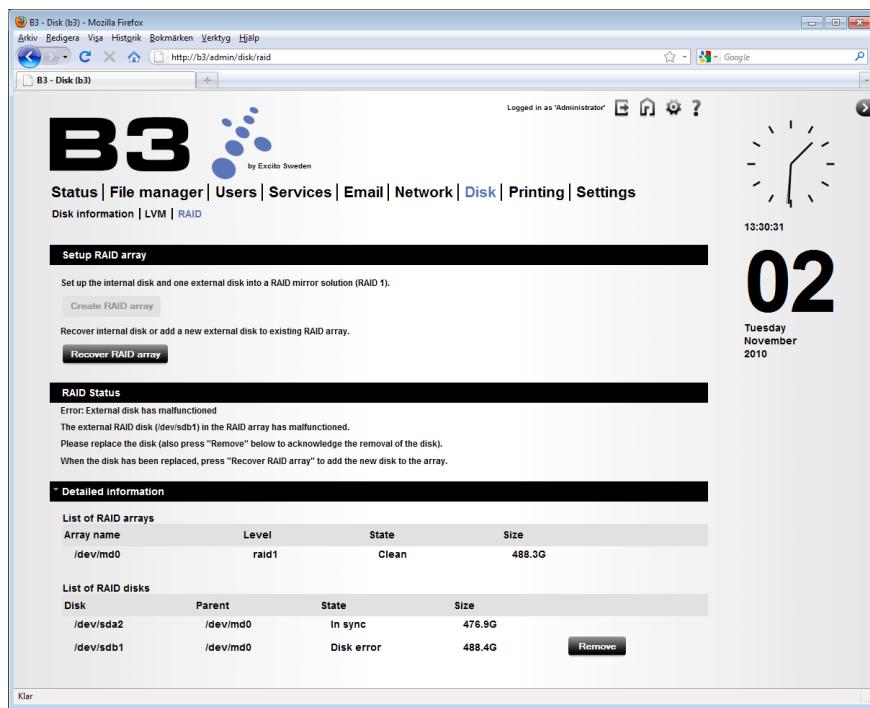
Please note that all user data on the new hard drive will be destroyed during this operation.

1. If you have a disk failure on your internal disk in B3 you have to start by exchanging the disk. Read chapter "Customizing B3 - SW & HW" on page 143 to learn how to make a disk change.
2. You need to reinstall the B3 software according to chapter "Installing & re-installing software" on page 139.
3. Update the B3 according to chapter "Software update" on page 136 to utilize the latest possible software and reboot the B3
4. Log in as administrator.
5. Click Disk -> RAID and the button 'Recover RAID array'

6. Select which external disk that contains RAID data. Click 'Recover internal disk'.
7. Warning! All data will be erased from the internal disk. Click 'Create array'.
8. When finished, your internal disk has been added to your RAID array.
9. Re create the users the previously had accounts on your B3 (before the internal disk crash) via the Users menu. Now all the users has access to their old files.

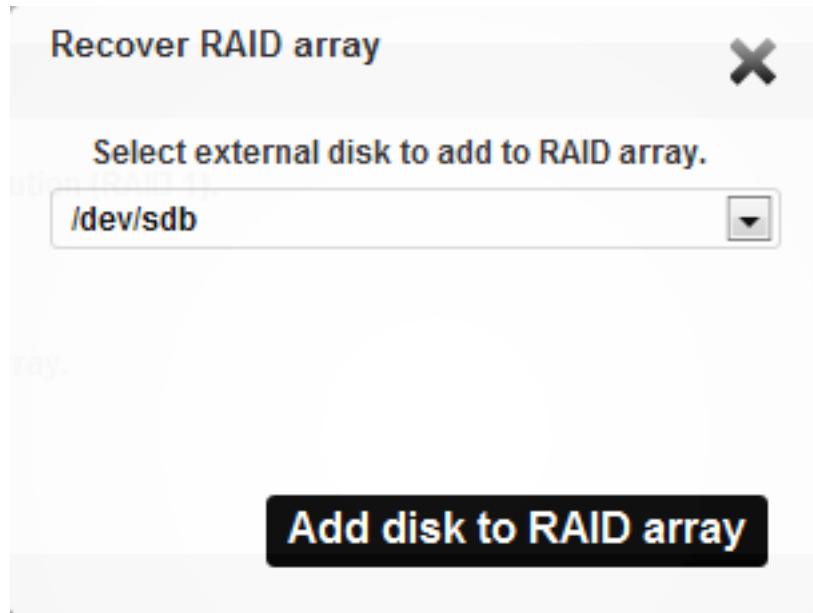
## RECOVER THE EXTERNAL DISK

1. Log in as administrator.
2. Acknowledge the RAID failure notification on the status page.
3. Click Disk -> RAID.
4. A disc failure or if you have by mistake disconnected the external disk will be shown as below

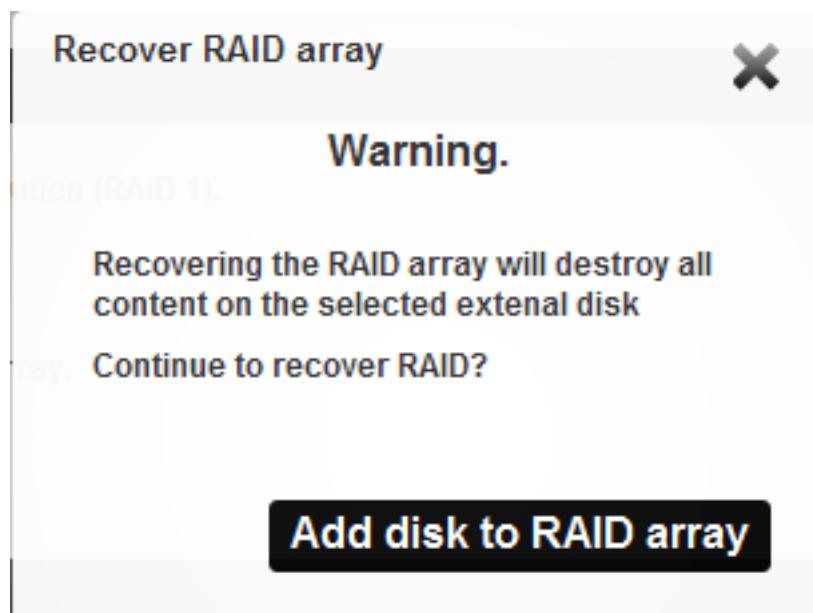


5. Delete the external disc from the 'List of RAID disks' by clicking 'Remove'.
6. Disconnect the external disk from the backside of B3.
7. Attach a new external disk.

8. Click "Recover RAID array".
9. Select which external disk to add to RAID array. Click 'Add disk to RAID array'.



10. Warning! All data will be erased from the external disk. Click 'Add disk to RAID array'.



11. Press 'Close' to continue working with B3. The synchronization is in progress.



12. The synchronization progress is shown in the Disk page.

The screenshot shows the B3 Disk management interface. At the top, there's a navigation bar with links like Status, File manager, Users, Services, Email, Network, Disk, Printing, and Settings. Below that is a sub-navigation bar with Disk information, LVM, and RAID. The main area has sections for "Setup RAID array" (with "Create RAID array" and "Recover RAID array" buttons) and "RAID Status". The "RAID Status" section is circled in red and displays the message: "Recovering RAID array '/dev/md0'. Current recover progress is 6% and is estimated to finish in 2 hours 32 minutes". Below this is a "Detailed information" section with tables for "List of RAID arrays" and "List of RAID disks". The "List of RAID arrays" table shows one entry: Array name /dev/md0, Level raid1, State Clean, Size 488.3G. The "List of RAID disks" table shows two entries: Disk /dev/sda2, Parent /dev/md0, State In sync, Size 476.9G; Disk /dev/sdb1, Parent /dev/md0, State spare, Size 488.4G. The date and time on the right side of the screen are Tuesday November 2010, 14:20:12.

When finished, your disks has been synchronized into your RAID array.

## REMOVE RAID

To remove RAID from your system you need to reinstall the whole system. Read about reinstalling in chapter "Installing & reinstalling software" on page 139.

## LVM - EXTENDED DISK

Extend your home partition with an attached external disk. This will create a single logical volume of the internal home partition and a attached disk. In other words, you will experience one big disk instead of two smaller. The total disk size will be the external disk size added to home partition size.

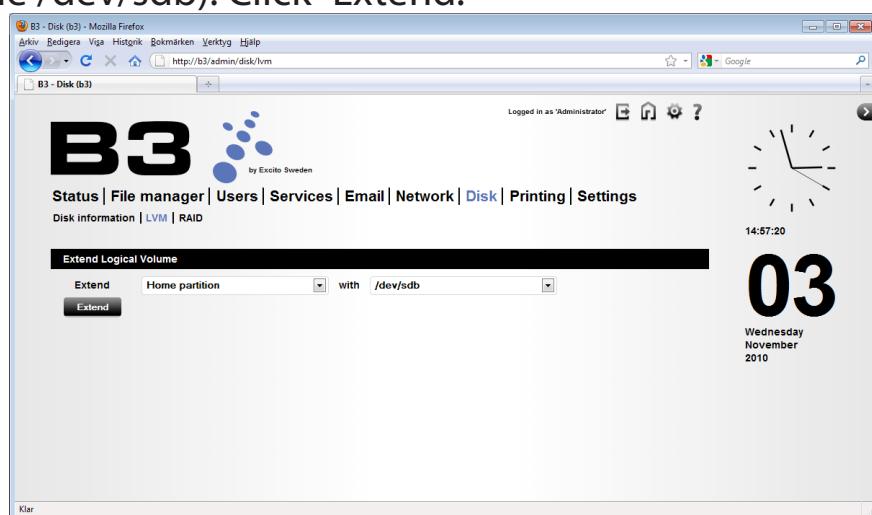
### Warning

- Please notice that this is an non reversible operation. After your system has been extended together with the external drive, your system will always need to be connected to the external drive - and will not function without it. To be able to use your B3 standalone again, you will need to reinstall the whole system.
- An old LVM disk will automatically be connected and included into the B3 system upon boot, even though you have not set up your B3 for an LVM extension. It is impossible to remove the extension without reinstallation. To format an old external LVM extended disk, connect the disk to a already running B3. Then choose 'Format' in the 'Disk -> Information' menu.

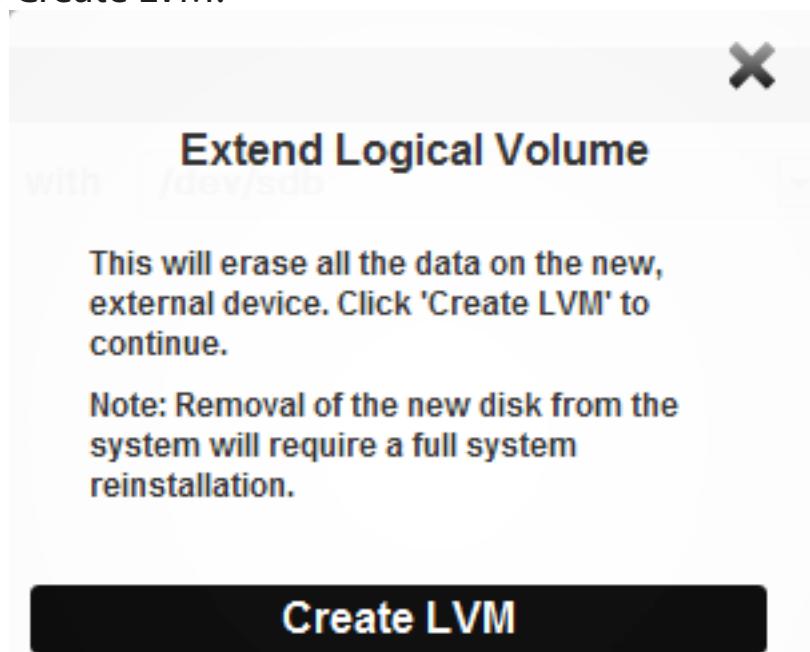
## CREATE EXTENDED DISK (LVM)

1. Attach a external disk, USB or eSATA. Please notice that the disk should be pre formatted, without old RAID or LVM systems.
2. Browse to **http://b3** (**http://b3.local** if using Mac).
3. Log in as administrator.
4. Click Disk -> Extend disk (LVM).

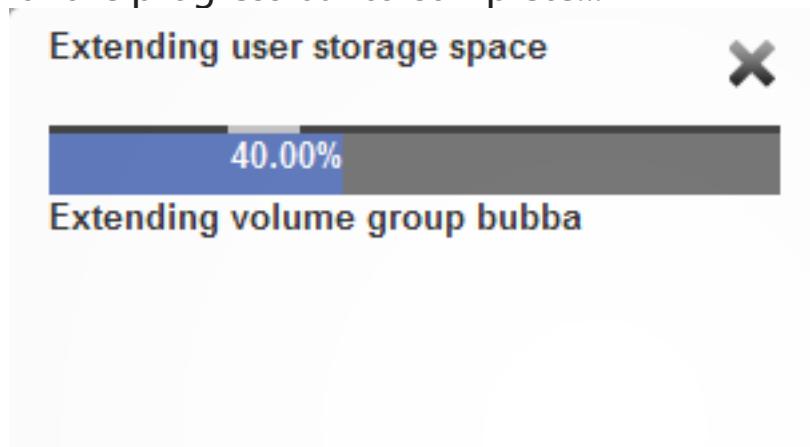
5. Select the 'Home partition' and the partition from the external disk (for example /dev/sdb). Click "Extend".



6. Click 'Create LVM'.



7. Wait for the progress bar to complete...



- When finished, your system has been extended together with the external drive.

## LVM STATUS

Log in as administrator, click Disk -> Information. Here you will find information about current disk status. The total storage area is now extended to both disk.

The screenshot shows a Mozilla Firefox browser window titled 'B3 - Disk (b3) - Mozilla Firefox'. The address bar shows 'http://b3/admin/disk'. The page displays disk information for two drives: 'WDC WD10EARS-00Y' (sda) and 'WDC WD5000AADS-0' (sdb). The 'Disk information' section shows disk sizes (1000.2GB and 500.1GB), type (SATA and eSATA), and partitions. The 'Partition information' section shows a single 'Home partition (LVM)' with a size of 1488.5GB. On the right side of the interface, there is a clock showing '15:08:30' and a date/time display showing 'Wednesday November 2010' with a large '03' indicating the day.

## REMOVE EXTENDED DISK (LVM)

To remove Extended disk (LVM) from your system you need to reinstall the whole system. Read about reinstalling in chapter "Installing & reinstalling software" on page 139.

## BACKUP

It is always recommended to backup your critical data. Always make sure you have a fresh copy of your critical files on a separate hard drive. B3 has an integrated backup function that enables you to make backup of your important files stored on B3.

For backing up data from your PC to B3, read chapter "Backup from your PC to B3" on page 116.

For backing up B3 user accounts, email accounts and all other important settings, read chapter "Backup settings" on page 49.

## BACKUP YOUR B3

### Features:

- Incremental backup
- Select how many full backups you want to keep
- Schedule backup jobs as you like
- Store backup jobs locally (USB, eSATA) or remote (SSH, FTP)
- Encrypt your backup files automatically

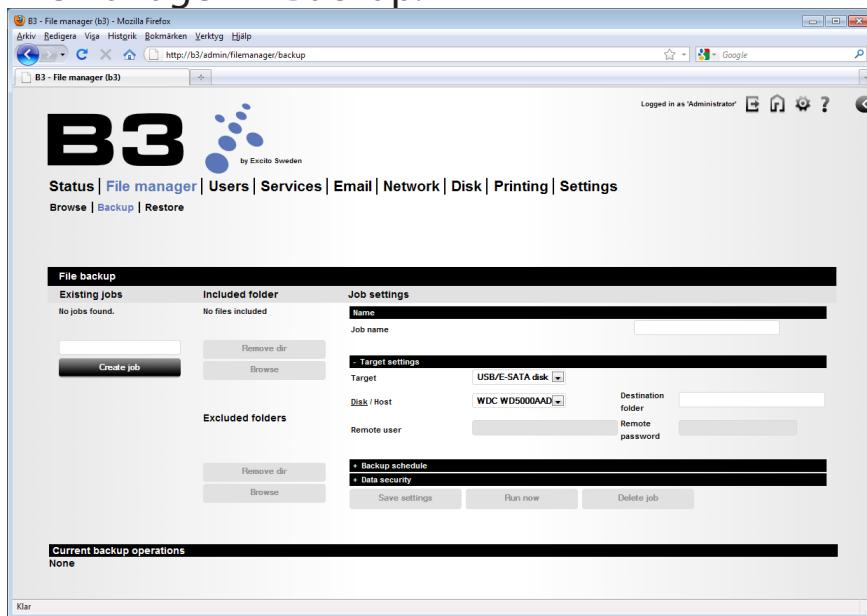
You find the backup function, logged in as administrator, in the menu "Filemanager -> Backup". The backup function will perform a full backup the first time a job is run. The next time (the same job is run) it will perform a incremental backup and will only save the files that has been added or changed.

### Tips

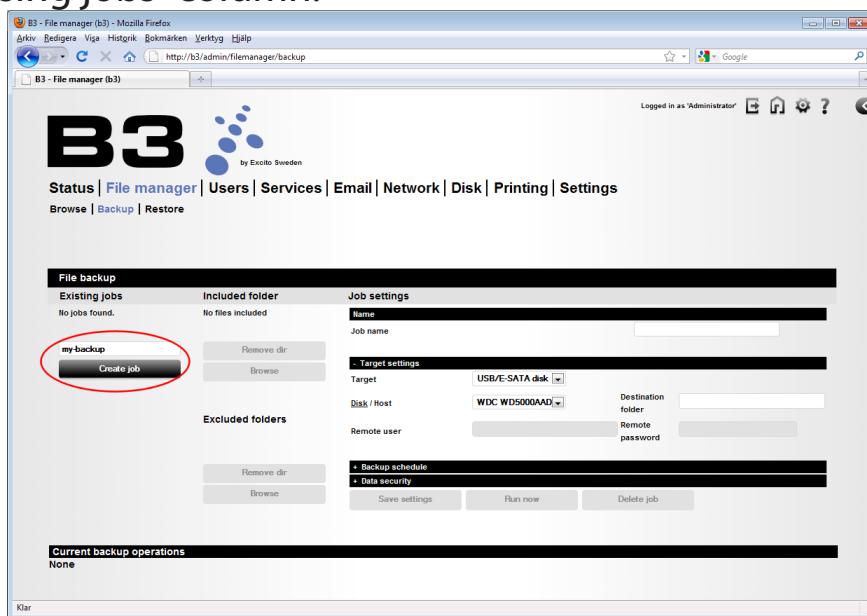
- Your personal eMails are stored in '\home\[username]\Email\'. Create a backup job containing that Email folder to secure your eMails.
- Perform a backup of B3 settings (described here: Administrator section Settings) to save your backup job settings.
- For maximum security: combine RAID (chapter "RAID" on page 97) and a frequent backup job!

## CREATE A BACKUP JOB

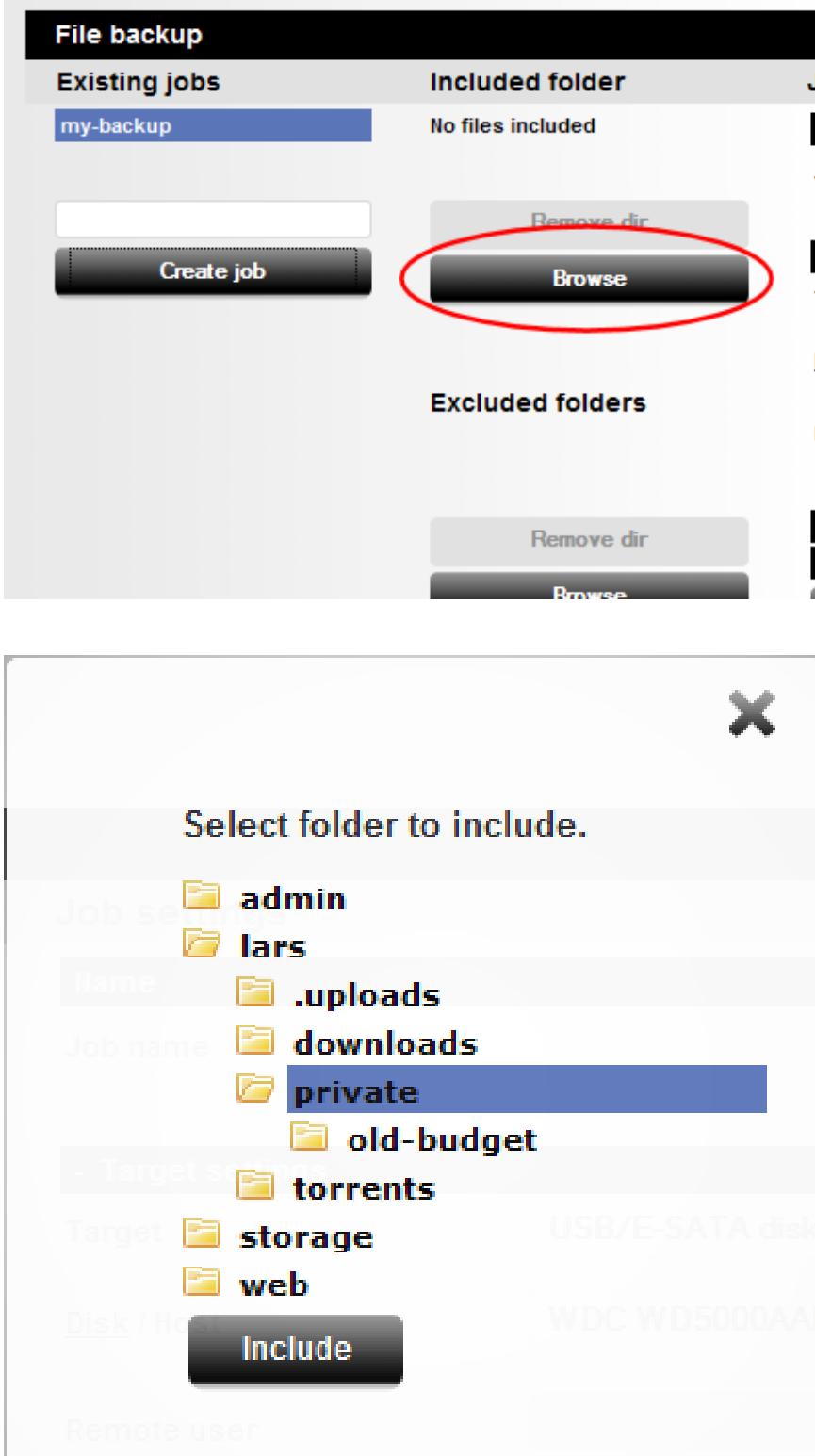
1. Browse to **http://b3** (**http://b3.local** if using Mac).
2. Click the gear wheel in the upper right corner and log in as administrator.
3. Click Filemanager -> Backup.



4. Fill in a job name for the backup in the text box to the left on the screen and click "Create job". The new backup job gets automatically highlighted in the "Existing jobs" column.



5. Add the files you want to include in the backup job by clicking the “Browse” button under the “Included directories” menu. Subdirectories will automatically be included.



6. If there are files in subdirectories that you want to exclude, click the “Browse” button under the “Excluded directories” menu and select the non wanted directories.

**File backup**

Existing jobs	Included folder
my-backup	/home/lars/private

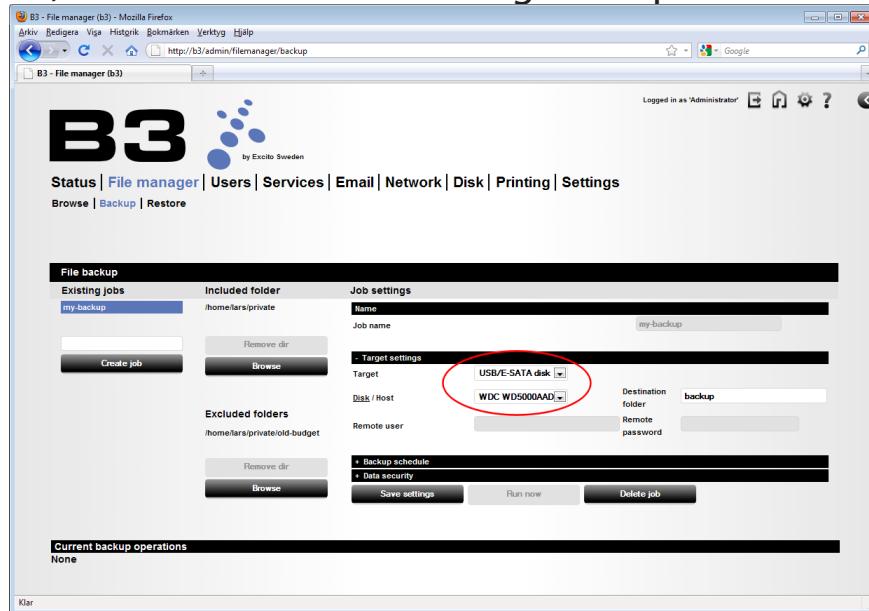
**Excluded folders**

**Select folder to exclude.**

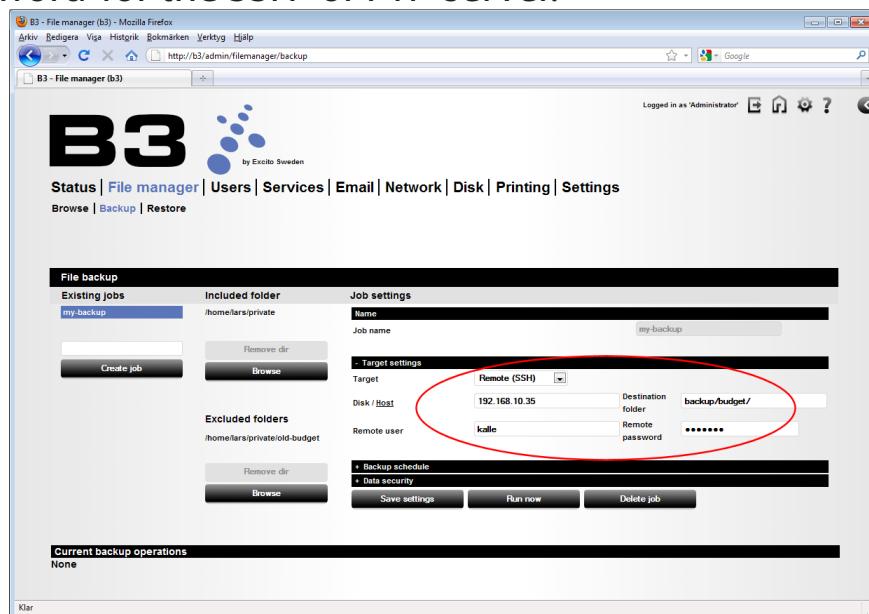
Job name:   
  
  
Job name:   
  
  
  
Target:  USB/E-SATA disk  
  
Disk / Host:   
Remote user:

7. Select target for the backup job by clicking on the drop down menu to the right of "Target".

- If choosing local USB / eSATA disk you have to select the disk by pressing the "Disk" drop down list. Fill in the "Destination directory" (i.e. backup\important) or leave it blank for saving backup in the root directory.

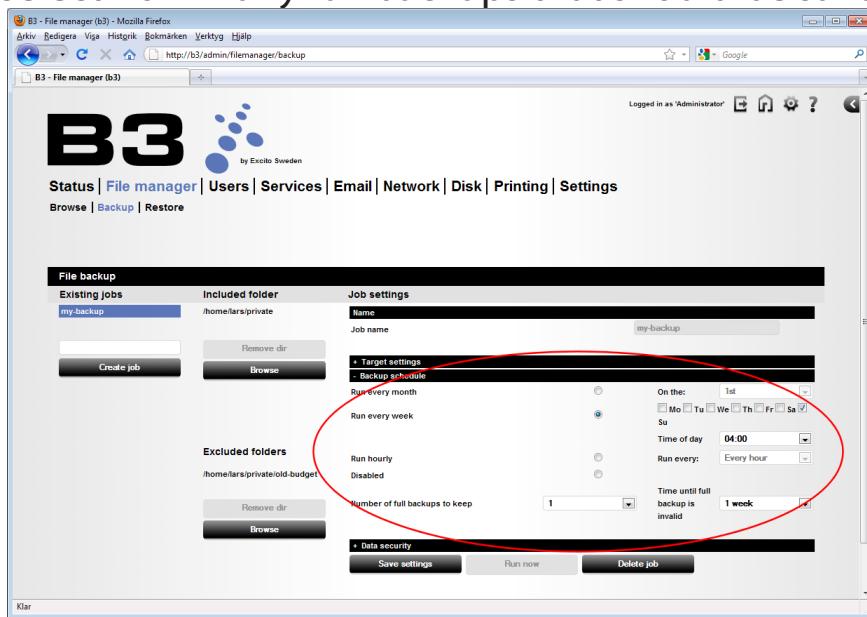


- If choosing remote SSH / FTP you have to fill in 'Host' (i.e. an IP-address), 'Destination directory' (i.e. backup/important/) or leave it blank for saving backup in the remote root directory. Also fill in 'Remote user' and 'Remote password' for the SSH- or FTP-server.

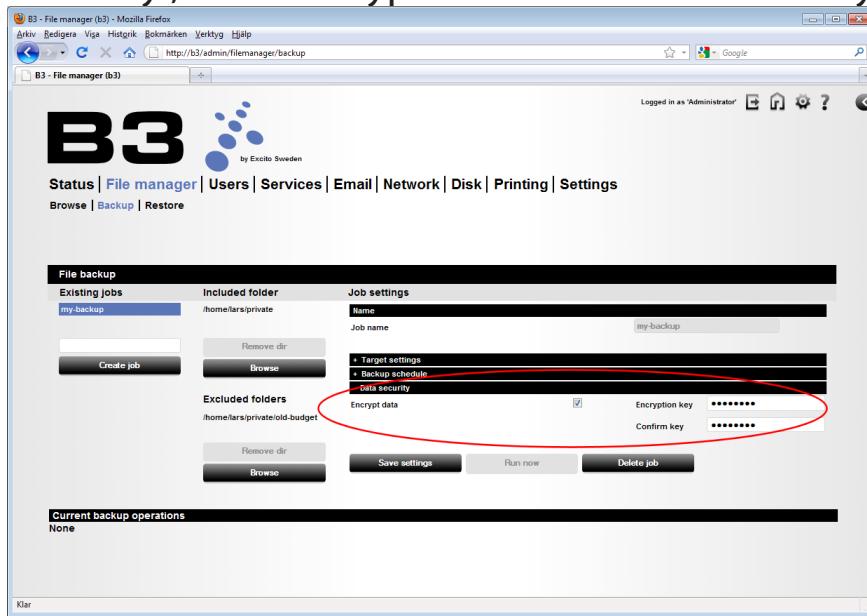


If the destination directory will be created if it does not exist already.

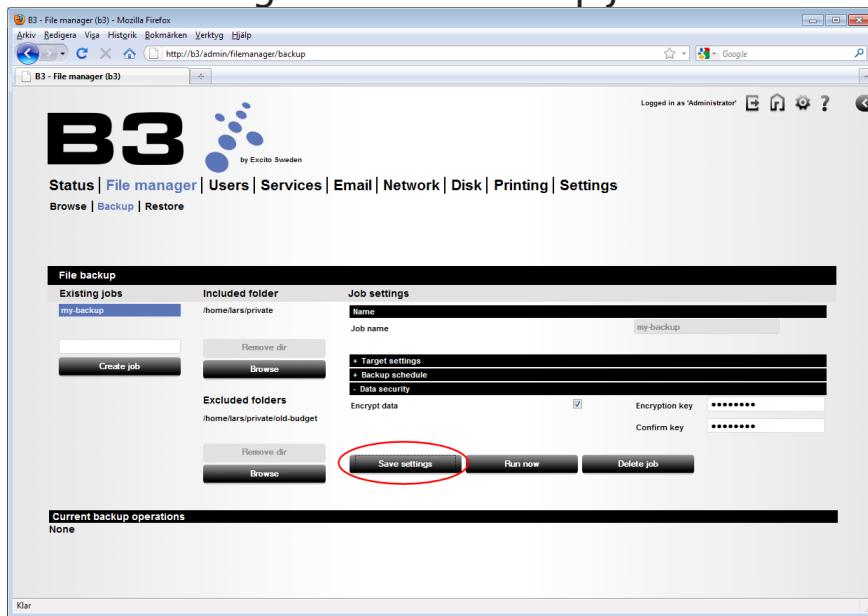
8. Click “Backup schedule” to set the time and intensity to run the backup job. Also select how many full backups that should be saved.



9. To increase security you have the option to encrypt the backup job. Click “Data security”, click “Encrypt data” and select an encryption key.



## 10. Click 'Save settings' save the backup job..

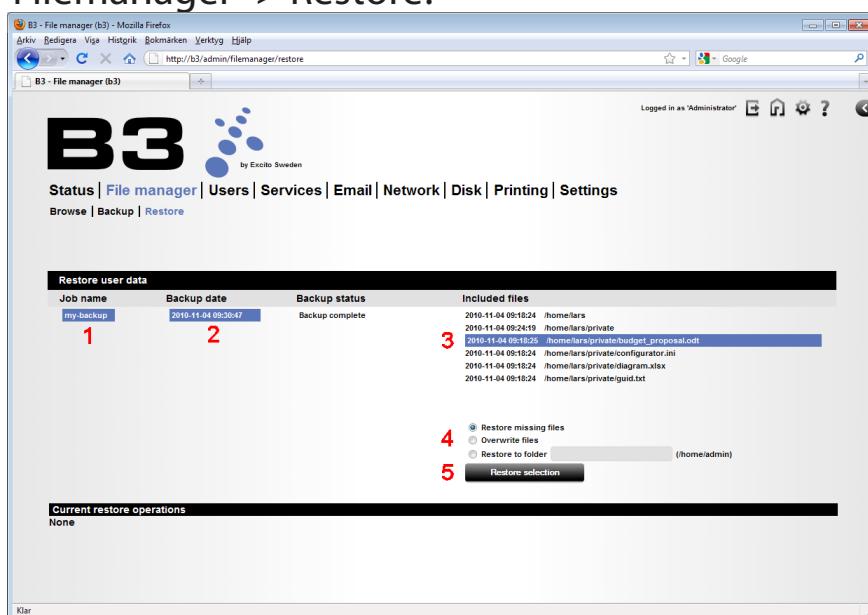


## 11. To run the job immediately, click "Run now".

The saved backup job will now run according to your schedule.

## RESTORE FILES FROM A BACKUP JOB

1. Browse to **http://b3** (**http://b3.local** if using Mac).
2. Click the gear wheel in the upper right corner and log in as administrator.
3. Click 'Filemanager -> Restore'.



4. Select the backup job under 'Job name' you need to restore files from (1).
5. Select the 'Backup date' to restore from (2).
6. Select the files or folders (with automatically included files) you need to restore. The files that will be restored will be highlighted in blue (3).
7. Choose in what way you want to restore the files: 'Restore missing files', 'Overwrite files' or 'Restore to directory' (4).
8. Click 'Restore selection' (5).

When the restore is complete 'Restore complete' will be shown.

### **Usage example - Number of fullbackups to keep**

If you for example choose the following backup settings:

- Run every week and every day.
- Number of fullbackups to keep: 5
- Time until full backup is invalid: 1 week

The result will be:

- Week 1, day 1. A full backup (no 1) will run for the first time.
- The first week: A incremental backup will run against backup no 1.
- Week 2, day 1. A new full backup (no 2) will run for the first time.
- The second week. A incremental backup will run against backup no 2.

This will go on until you have 5 full backups (five weeks). When the next backup is completed, week 6, the first backup (no 1) will be deleted.

## BACKUP FROM YOUR PC TO B3

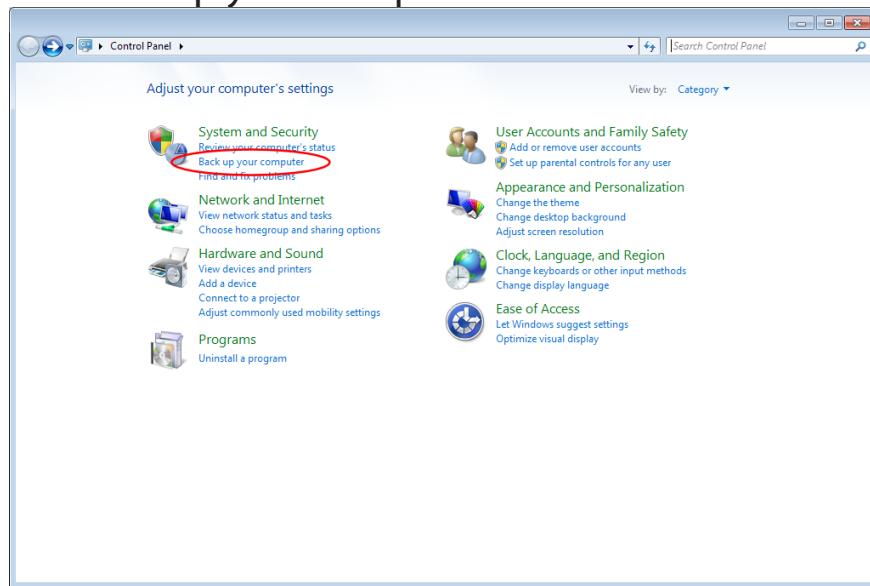
B3 is a perfect medium for backup whether it is your data, email, photography's or your music you need to be extra careful about. One simple solution is to create a shortcut on your desktop, pointing directly to your private B3 folder. Just drag and drop all important documents there, regularly. Now, a disk crash on your PC won't be fatal.

A more sophisticated way of doing backup from your PC is to use the integrated backup function in Windows.

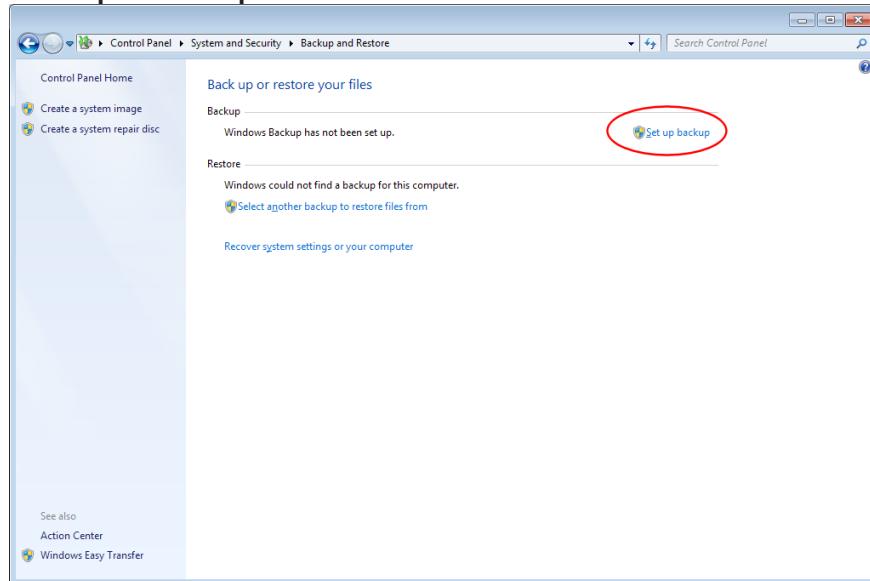
### WINDOWS 7

Backup your important files from your PC to B3 via Windows 7 Backup and Restore function.

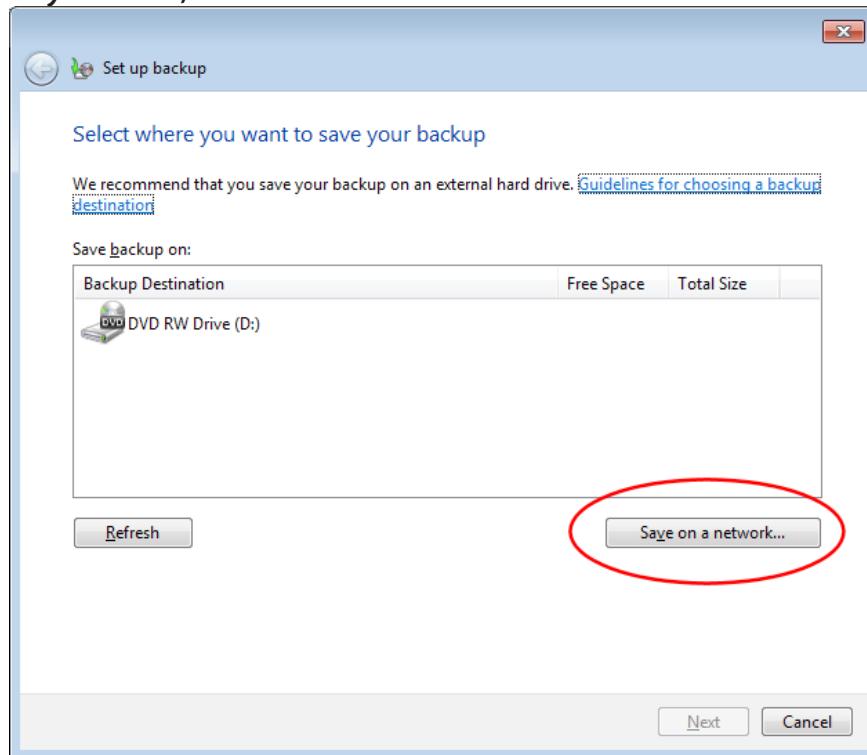
1. Start Backup and Restore: Open the Control Panel, under 'System and Security' click 'Backup your computer'



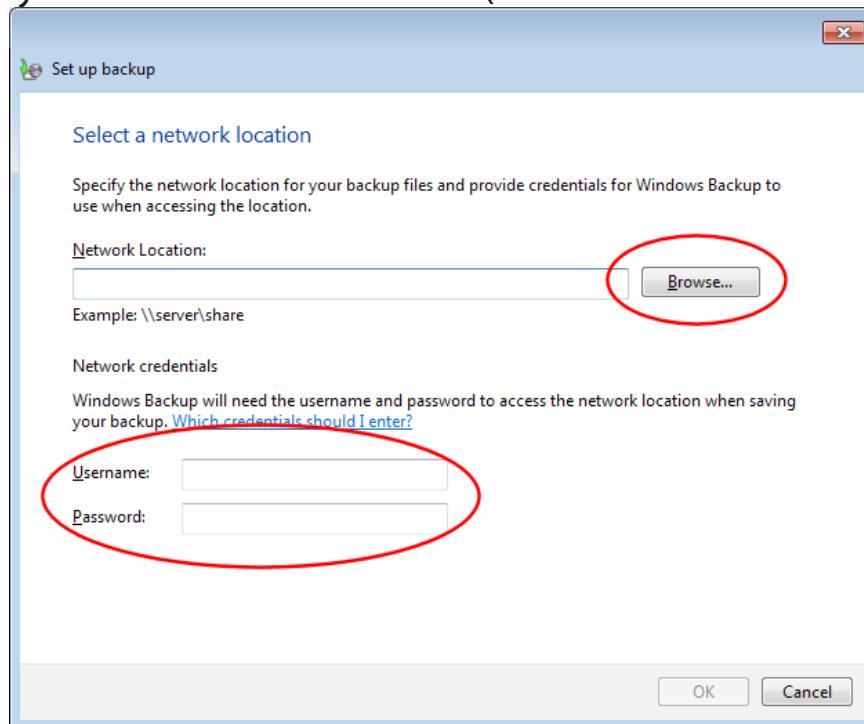
## 2. Click 'Set up backup'



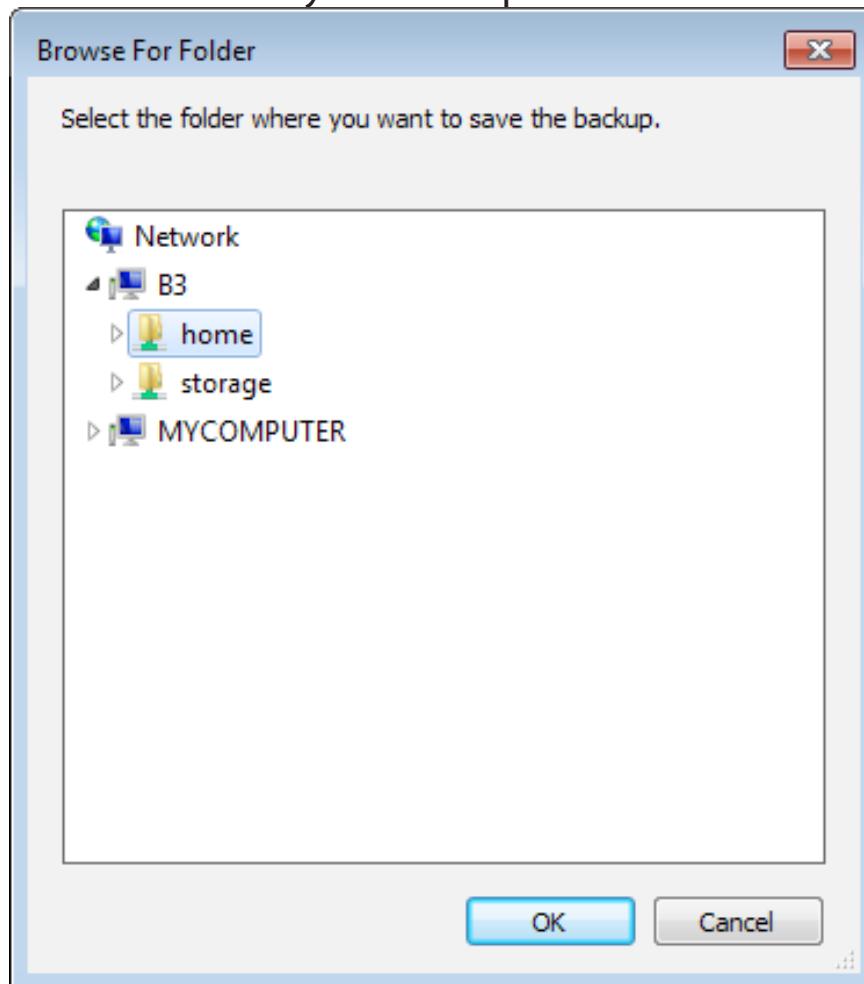
## 3. To find your B3, click 'Save on network...'



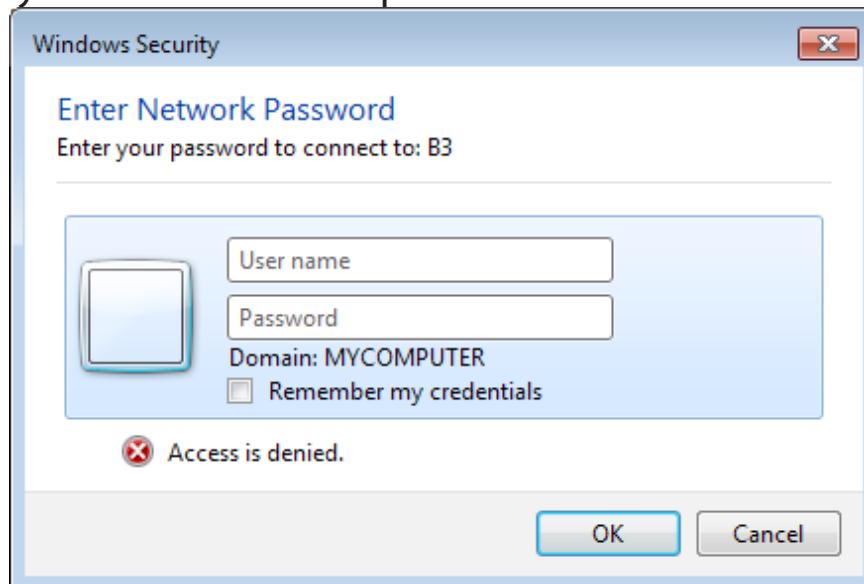
4. Fill in your B3s user information (not B3s administrator) and click 'Browse'.



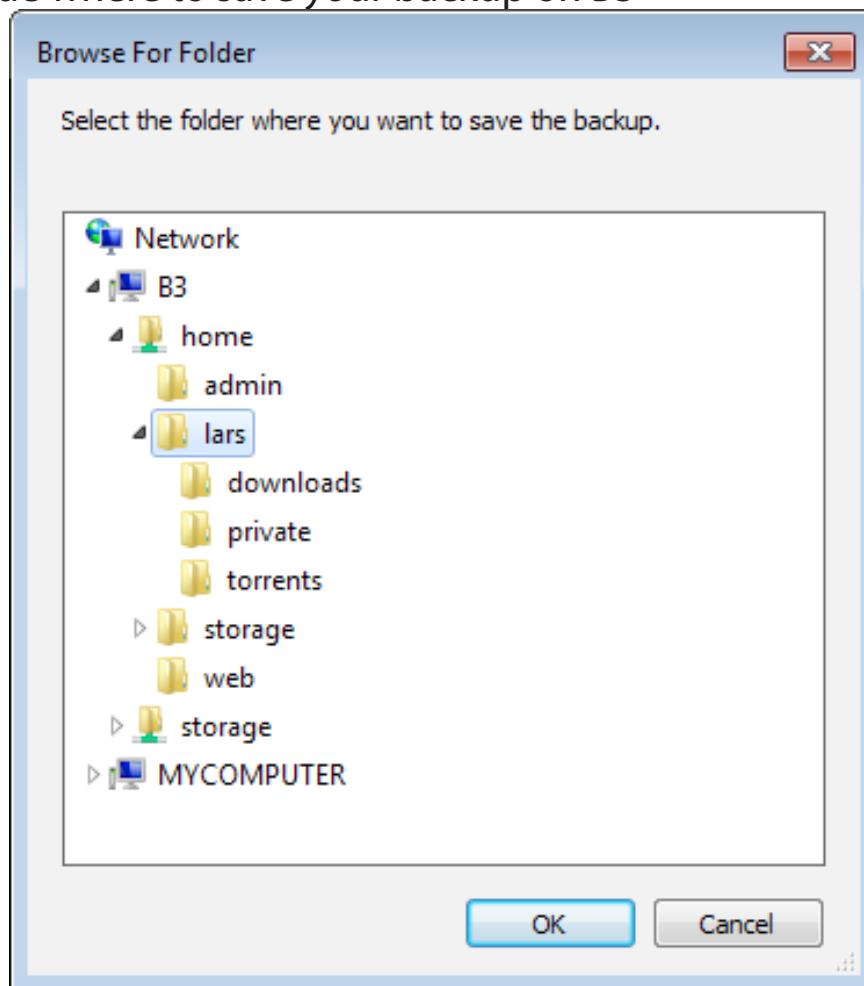
5. Decide where to save your backup on B3.



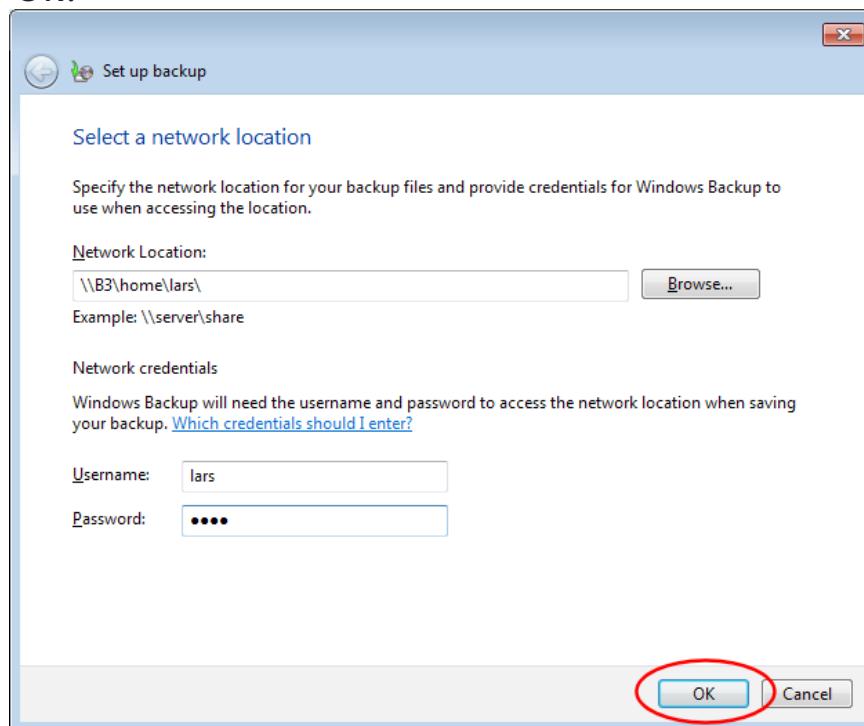
6. Fill in your user name and password to B3 if asked for.



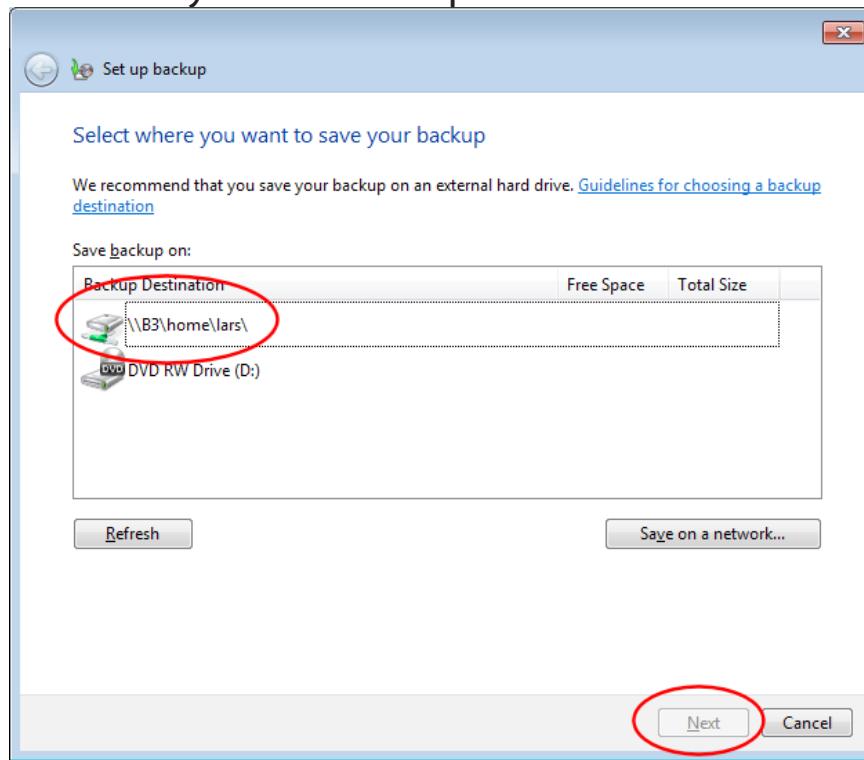
7. Decide where to save your backup on B3



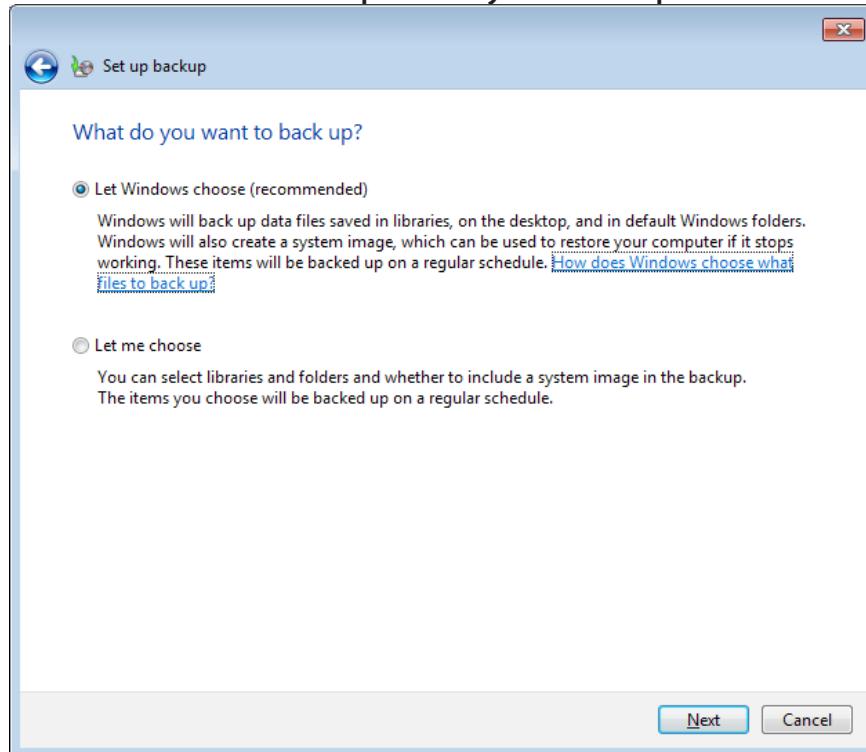
## 8. Click 'Ok'.



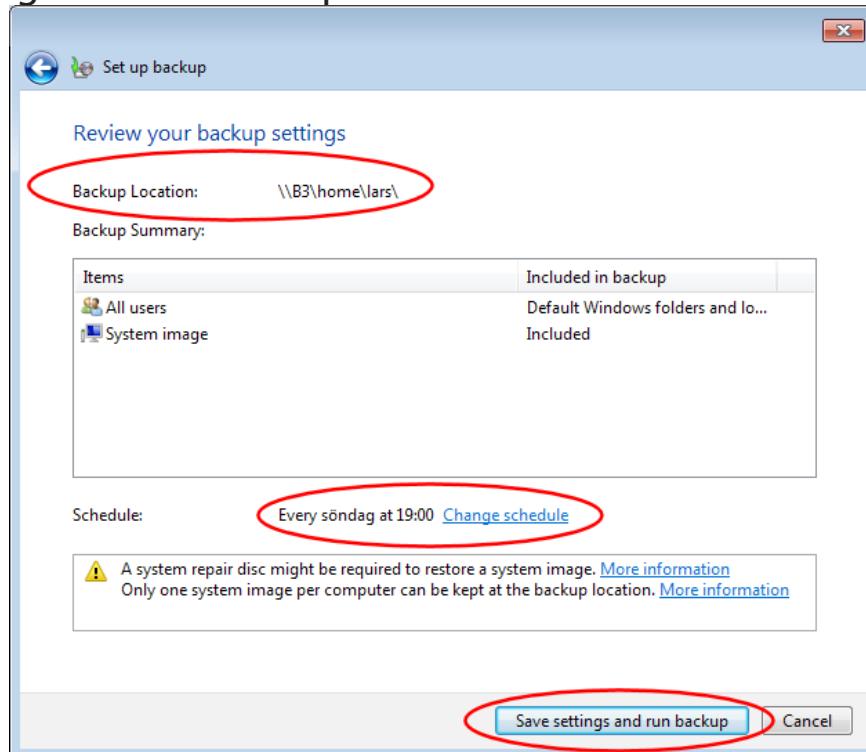
## 9. Select the newly added backup destination and click 'Next'.



## 10. Choose what to backup from your computer.



## 11. Verify the backup target. Edit the backup schedule if needed. Click 'Save settings and run backup'.



## WINDOWS XP

Backup your important files from your PC to B3 via Windows XP Backup Manager.

If you are a Windows XP Professional user, Windows integrated backup manager is pre installed.

If you are a Windows XP Home user the Windows backup manager has to be installed from the original Windows Home CD. Insert the CD in your computer. Click “Perform Additional Tasks” and then “Browse this CD”. After that in Windows Explorer, double-click the ValueAdd folder, then Msft, and then Ntbackup. To install the Backup utility Double-click the Ntbackup.msi.

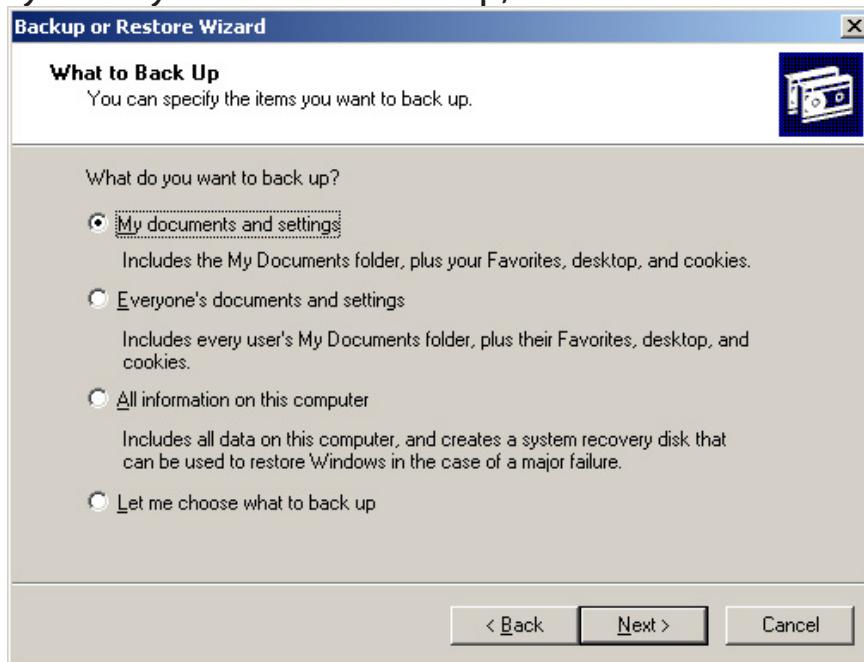
1. Start the Backup and Restore Center (Start -> Programs -> Accessories -> System Tools -> Backup). Click Next.



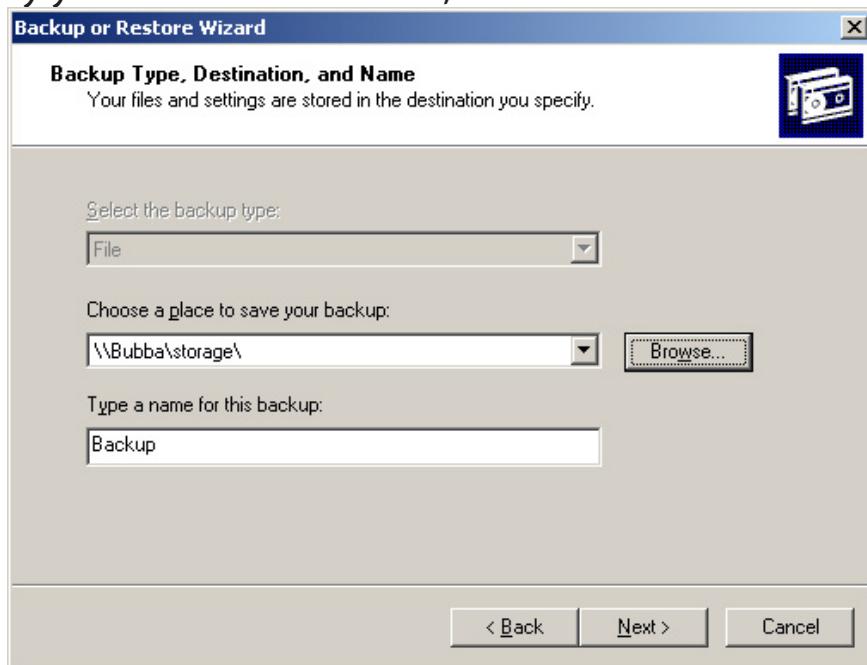
## 2. Select Backup and click Next:



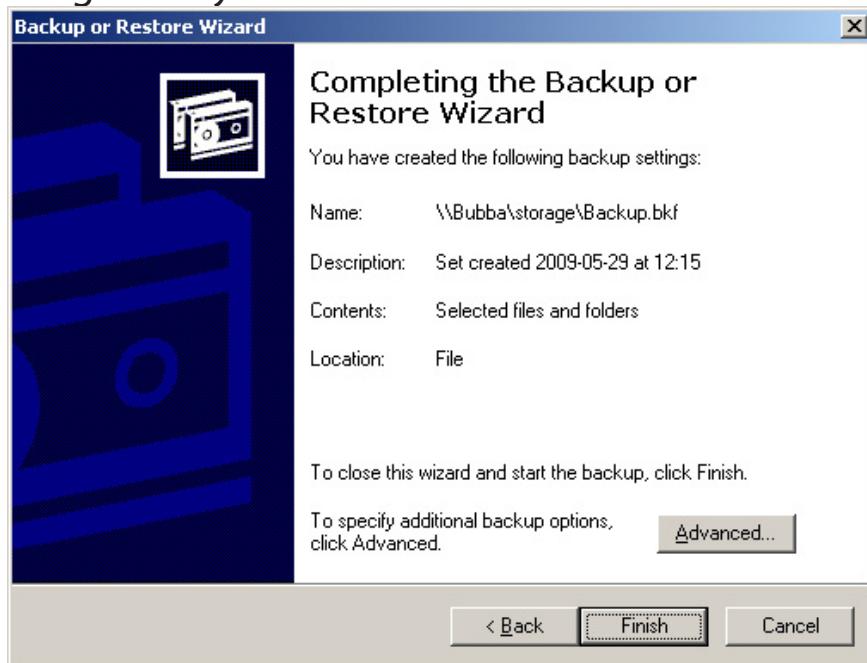
## 3. Specify what you want to backup, click Next and follow the instructions:



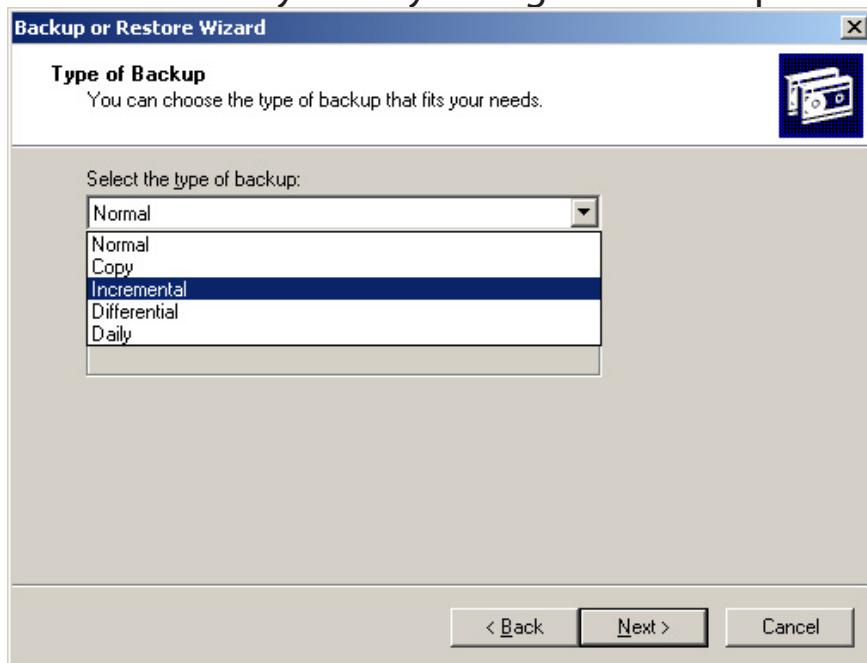
4. Specify your B3 as destination, click Next:



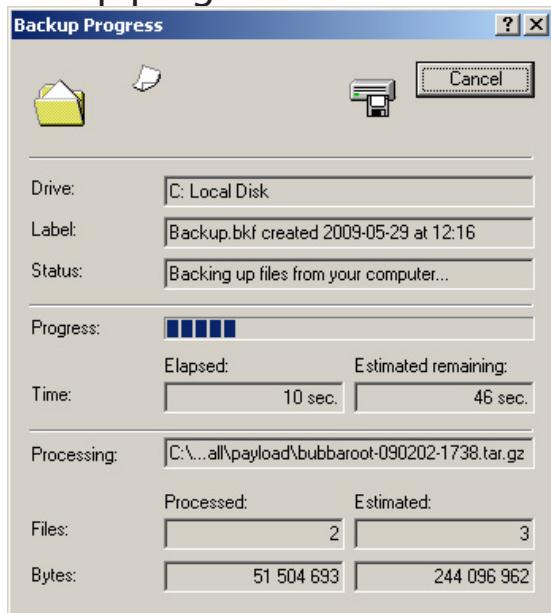
5. Click Finish to perform a standard backup or Advanced to change the backup settings to fit your needs:



6. In the advanced tab you may change the backup method:



7. The backup progress window:



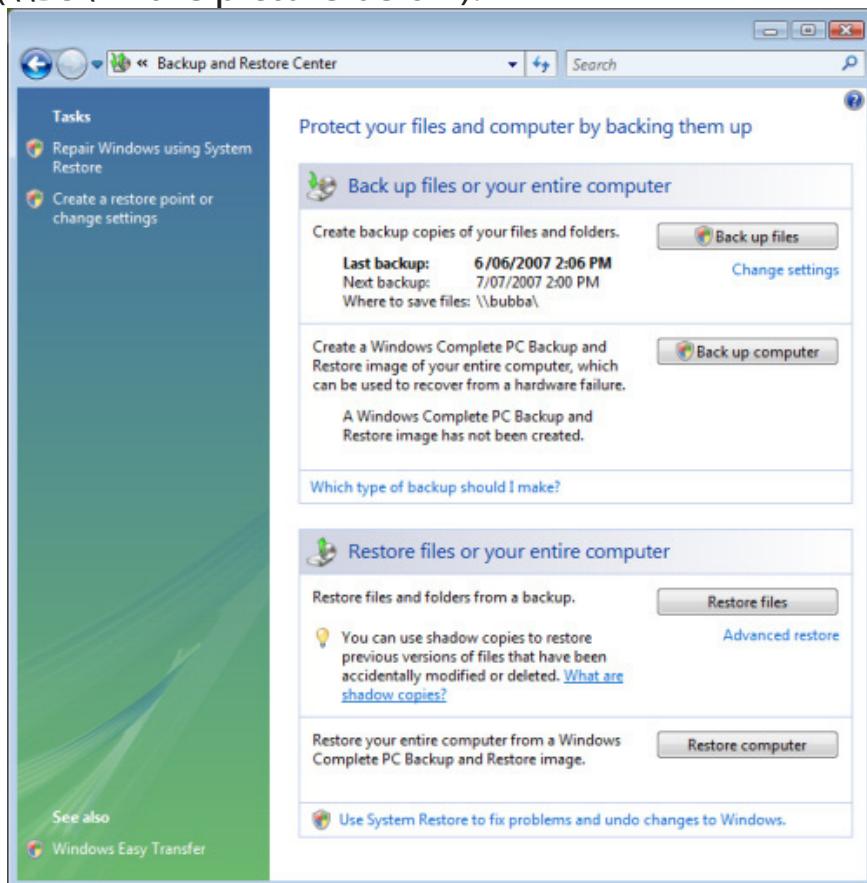
If you would like to do backup your data automatically you have to set up Scheduled Task in Windows. To do this click "Start -> Programs -> Accessories -> System Tools -> Scheduled Tasks" and create a new scheduled task.

To restore your files, select Restore in step two above and select your backup file stored on your B3.

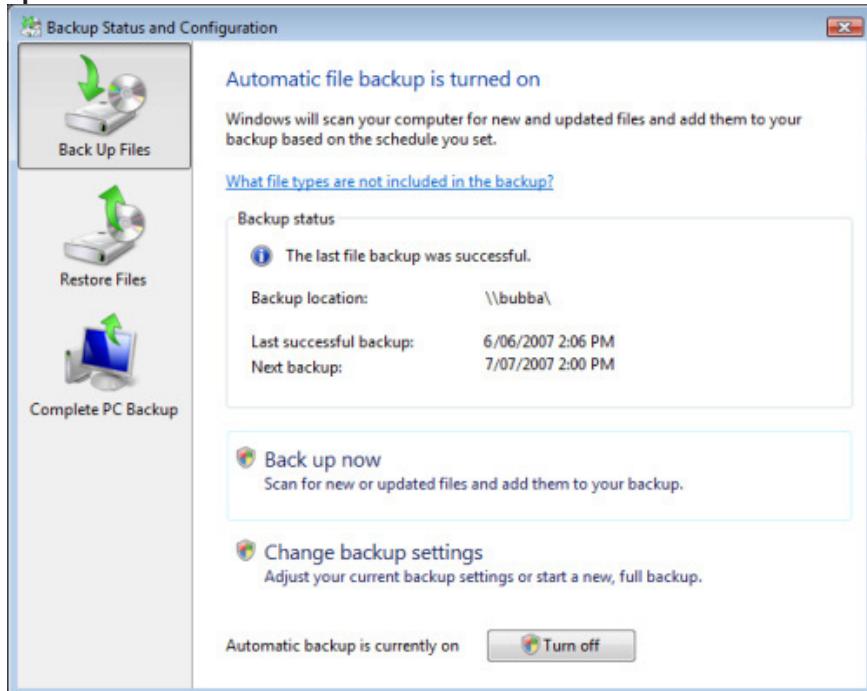
## WINDOWS VISTA

Backup your important files from your PC to B3 via Windows Vista Backup and Restore Center.

1. Start the Backup and Restore Center (Start -> Control Panel -> Backup & Restore). Click “Change settings” and select how you would like to use the backup utility: daily, weekly or monthly backups. Specify where to save the files (\\\B3\\ in the picture below).



## 2. Backup status:



To restore your files, select "Restore Files" in step one above and select your backup file stored on your B3.

## PIM

A Personal Information Manager (PIM) is a set of applications that functions as a personal organizer. Horde is your PIM application in B3. Horde handles the most important details for you to keep you up to date, where ever you are.

- Email
- Personal notes
- Address book
- Calendar

PIM from inside your network: **http://b3/pim** (**http://b3.local** if using Mac).

PIM from outside your network: `http://<your-Easyfind-name>.myownb3.com/pim`, `http://www.<your-domain>/pim` or `http://<your-ip-address>/pim`. If you do not know your external IP address, read chapter “Reaching B3 from outside” on page 133.

As you use PIM to reach your webmail read about it in chapter “Email server” on page 84.

# EXTERNAL STORAGE

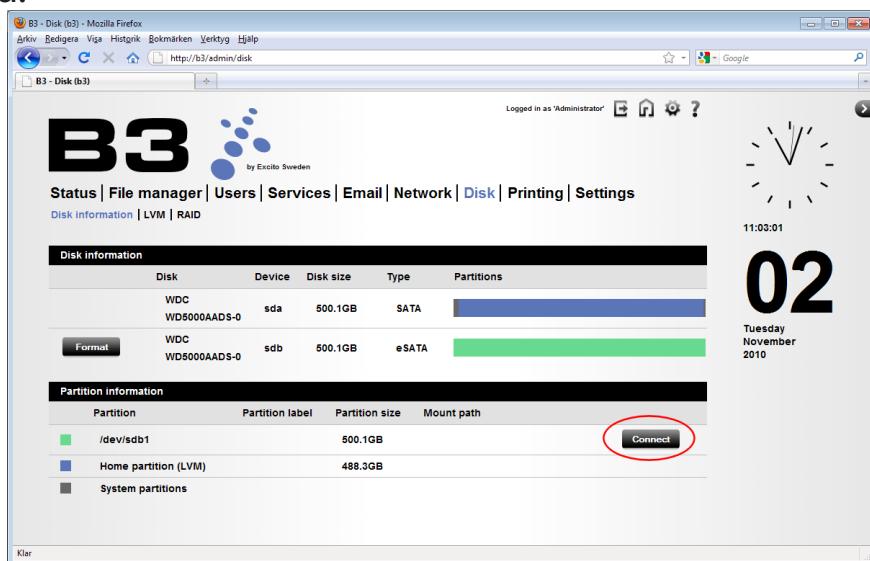
Information about connected external drives is visible in the Disk -> Information section when logged in as Administrator.

## Warning

**Do not attach your old external RAID or LVM extended disks before your B3 is up and running. To format external disks with a previous RAID or LVM system: Start your B3 without the external disk connected. Connect the disk after the boot is completed and perform a disk format.**

## CONNECTING

1. To obtain more disk space with an external USB or eSATA drive, plug in your drive into one of B3s back side connectors.
2. Log in as administrator.
3. Press 'Connect' next to the newly attached disk in the Disk -> Information menu.



4. Now you find your external hard drive under the folder /storage/extern. Click the link in the B3s web user interface. In Windows Explorer or Finder in Mac, type \\.\b3\storage\extern.

The screenshot shows the B3 Disk Management interface. At the top, there's a navigation bar with links for Status, File manager, Users, Services, Email, Network, Disk (highlighted in blue), Printing, and Settings. Below that is a sub-menu for Disk information, LVM, and RAID. The main area has two tabs: 'Disk information' and 'Partition information'. Under 'Disk information', there's a table with two rows:

Disk	Device	Disk size	Type	Partitions
WDC WD5000AADS-0	sda	500.1GB	SATA	

Under 'Partition information', there's another table:

Partition	Partition label	Partition size	Mount path
/dev/sdb1		500.1GB	/home/storage/extern /WDC_WD5000AADS-0-1
Home partition (LVM)		488.3GB	
System partitions			

A red circle highlights the 'Mount path' column for the first partition entry. The date in the top right corner is Tuesday November 2010, and the time is 11:45:02. A large black '02' is overlaid on the screen.

## FORMAT AN EXTERNAL DISK

Warning! All data on the external disk will be erased. The disk will be formatted with the file system EXT3.

1. Click the 'Format' button next to the disk name.

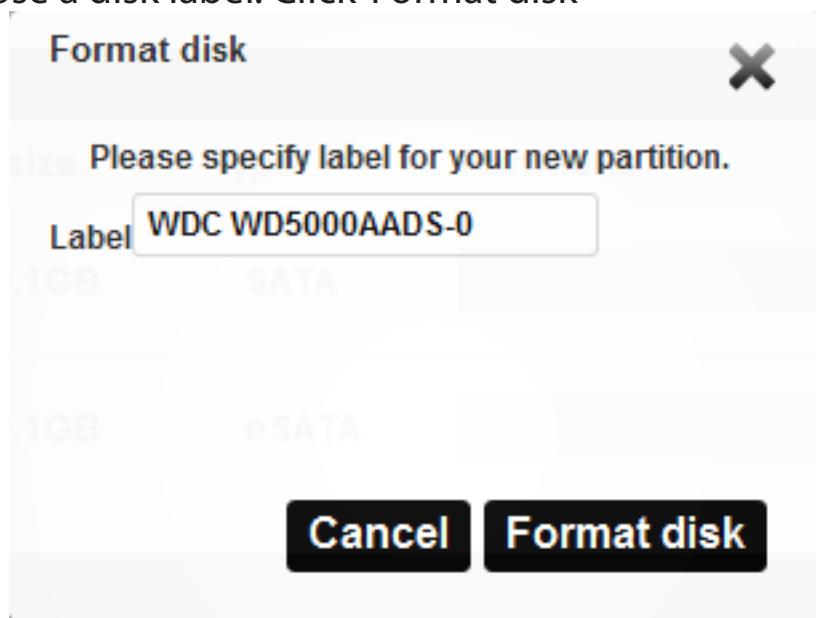
This screenshot shows the 'Disk information' section of the B3 interface. It lists two disks:

Disk	Device
WDC WD5000AADS-0	sda
WDC WD5000AADS-0	sdb

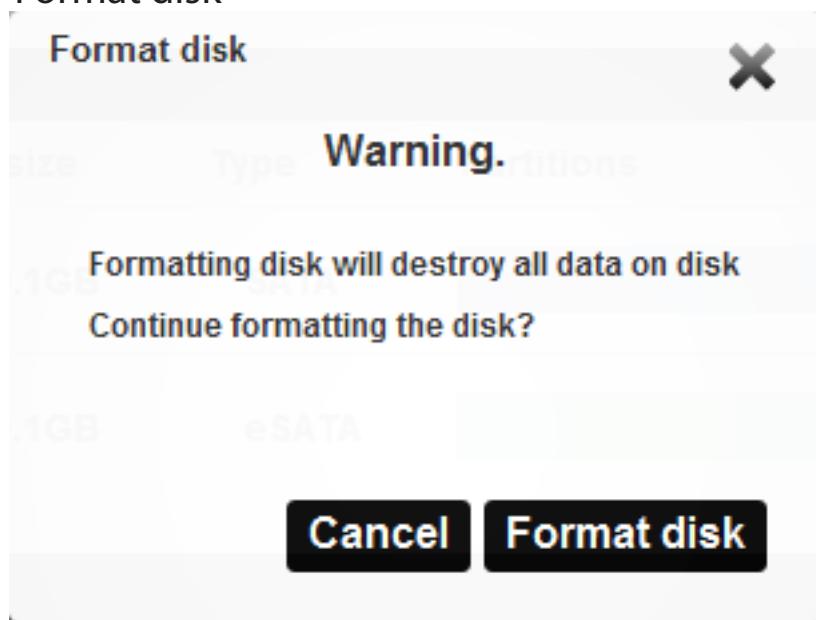
A red circle highlights the 'Format' button for the first disk (sda). Below this is the 'Partition information' section:

Partition	Partition
-----------	-----------

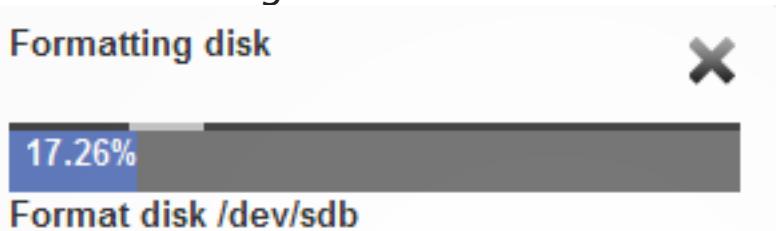
2. Choose a disk label. Click 'Format disk'



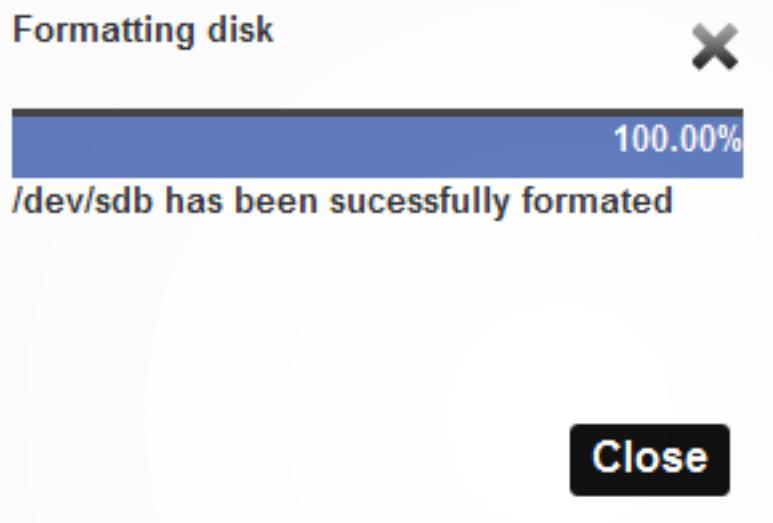
3. Click 'Format disk'



4. Progress bar indicating the format.



5. Click 'Close' to complete the operation.



## UNPLUGGING

To unplug a disk from B3 you first must make sure the drive is ready to be disconnected. Click 'Disconnect' next to the disk under 'Partition information'.

The screenshot shows the B3 Disk management interface in a Mozilla Firefox browser window. The URL is http://b3/admin/disk/. The page displays disk and partition information. In the 'Disk information' section, two disks are listed: 'WDC WD5000AADS-0' (SATA) and 'WDC WD5000AADS-0' (eSATA). The eSATA disk is highlighted with a red circle around its 'Disconnect' button. In the 'Partition information' section, three partitions are listed: '/dev/sdb1' (500.1GB), 'Home partition (LVM)' (488.3GB), and 'System partitions'. The '/dev/sdb1' row also has a red circle around its 'Disconnect' button. The interface includes a logo for 'B3 by Excede Sweden' and a clock showing '11:58:36' and the date 'Tuesday November 2010'.

## REACHING B3 FROM OUTSIDE

### USING B3 AS ROUTER + FIREWALL + SERVER

This is the simplest way of connecting to B3 from the Internet!

The firewall in B3 protects your home computers from attacks from the outside, by blocking traffic that is not directly requested from the inside. B3 has this functionality. In chapter "Firewall" on page 59 you find information about the firewall settings.

You can easily enable access for certain services such as email access from WWW etc or choose to open standard ports in an convenient way.

Use Easyfind described in section Easyfind below to let you or your friends to easy find your B3 on the Internet.

### EASYFIND – PERSONAL DOMAIN NAME

Easyfind is a free DNS hosting service provided by Excito to make it simple for you to reach your B3 - anywhere, anytime. To be able to use Easyfind you have to have B3 as router in your LAN.

Log in as administrator, click 'Settings' -> 'Identity' and activate 'Easyfind location service'. Select an Easyfind name and click update. Now you will be able to find your B3 wherever you are typing <http://<your-Easyfind-name>.myownb3.com>.

If you have a dynamic IP address, you need an additional service that keeps track of your current IP address. You will get that using our service Easyfind and you will be able to reach your B3 wherever you are.

If you change your easyfind name, the old name will immediately be released for others to use. Excito holds the right to terminate the service or remove inappropriate names without notice.

## EXTERNAL IP ADDRESS

If you need to find out what your external IP address is, browse to <http://check-ip.dyndns.org> or any similar site. You may or may not have a fixed IP address, consult your Internet service provider to find out. If you do not have a fixed IP address, it may change without notice.

## USING ANOTHER FIREWALL / GATEWAY THAN B3

### PASSING TRAFFIC THROUGH YOUR FIREWALL

If you have a hardware firewall (commonly called Internet router or gateway) installed between B3 and your Internet connection, you have to make the firewall let certain traffic through in order to get the B3 functionality available from the outside. This is commonly referred to as 'port forwarding'. Consult your firewall or gateway manual on how to do this on your specific device. The following ports are required to be forwarded in order to get the corresponding service to work:

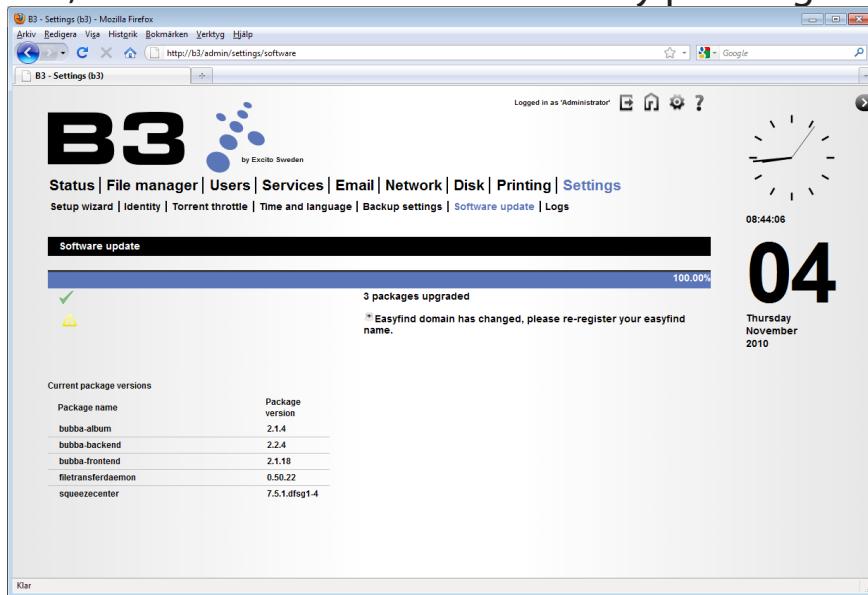
Port number	Service name	Explanation
20 (TCP)	FTP	To make B3's FTP server available from the outside
21 (TCP)	FTP	To make B3's FTP server available from the outside
22 (TCP/UDP)	SSH	Remote login protocol only for advanced users
25 (TCP/UDP)	SMTP	Email, incoming and outgoing
80 (TCP)	HTTP	WWW traffic, including web email, B3 administration interface and your personal web content
143 (TCP/UDP)	IMAP	To make B3's IMAP server reachable from the outside
443 (TCP)	HTTPS	Secure (encrypted) HTTP. Open this to allow secure access to web email, B3 administration interface and your personal web content.
993 (TCP)	IMAPS	Secure (encrypted) IMAP. Open this to allow secure access to B3's IMAP server.

Note: Opening ports are a security risk. Do not open ports you do not intend to use.

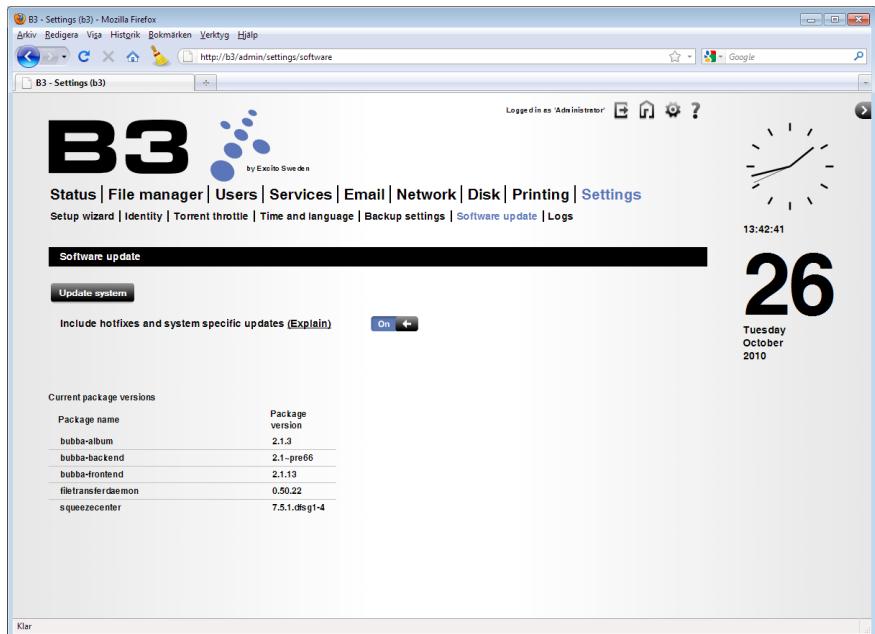
# SOFTWARE UPDATE

B3's software can easily be updated to gain new functionality.

1. Browse to **http://b3** (**http://b3.local** if using Mac).
2. Click the gearwheel and log in as administrator.
3. Click 'Settings' and 'Software update'.
4. Press 'Update' system, and the update is automatically performed. Please have patient, it might take a while to perform an update.
5. When the update is complete status information will be shown. If a '+' sign is shown, more information is available by pressing it.



Information about installed software versions is shown under 'Current package versions'.



## HOTFIXES

This feature collects status information from your B3 and sends to Excito for automated analysis. The update server can then take appropriate actions if your system has problems. The system information is sent to Excito via an encrypted connection, and server responses are GPG signed to ensure the security and that the content is distributed by Excito.

By default this feature is enabled. To disable it uncheck the box. If doing so you might not get the most important updates to your B3.

**Any information collected by Excito will never be exposed to any other party than Excito. The information will only be used to pin point errors and perform the best matched updates for your B3.**

All information that is collected is listed below.

- MAC address
- IP addresses
- Serial number and key
- RAM memory size

- CPU model
- Status for the installed B3 specific packages
- The log file /tmp/B3-apt.log if existing
- Current software release version
- Current running kernel
- Root disc partition usage
- Disc partition setup (LVM/RAID)

## INSTALLING & REINSTALLING SOFTWARE

It is possible to reinstall a B3. This is useful if you have unintentionally destroyed something, have had a disk crash or wish to exchange the disk drive.

You will need a USB stick or external USB-hard drive to perform a software installation. Please notice that your memory stick must have a partition table. Unfortunately most available USB memories lack a partition table today. So if you experience install problems this is most likely the case, try another stick or a USB-hard drive.

On <http://www.excito.com> you are able to buy a already prepared Excito USB stick with a partition table and the latest released software.

Your B3's hard drive has 3 partitions: System partition, Data partition and Swap partition. It is totally normal that you do not see the total disk size (i.e. 500GB , 1TB or 2TB) available in the web interface as the System partition and the Swap partition takes some of the space.

### STANDARD INSTALLATION

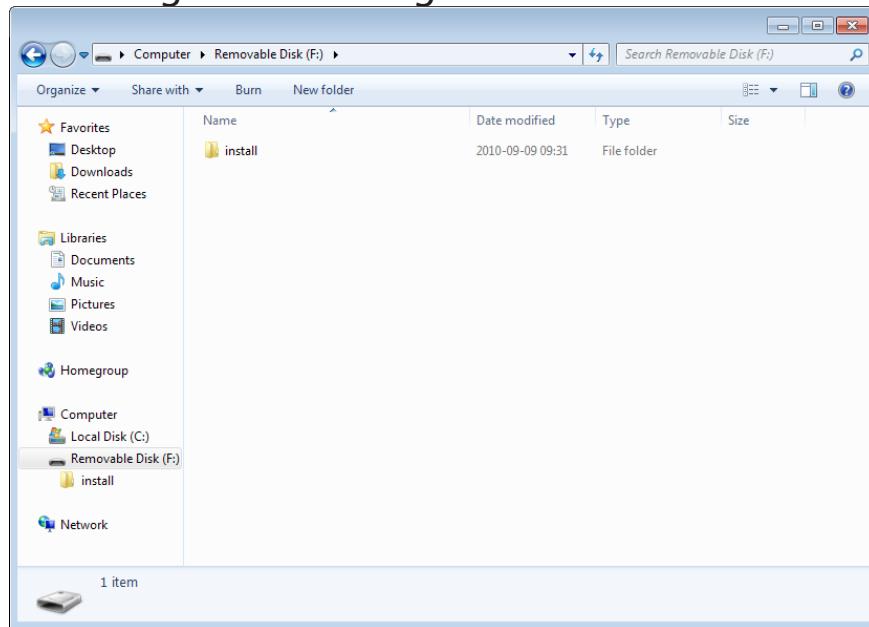
**Note: All your personal data will be lost if doing this operation. A complete hard drive format will be done.**

1. Download the recovery image at:

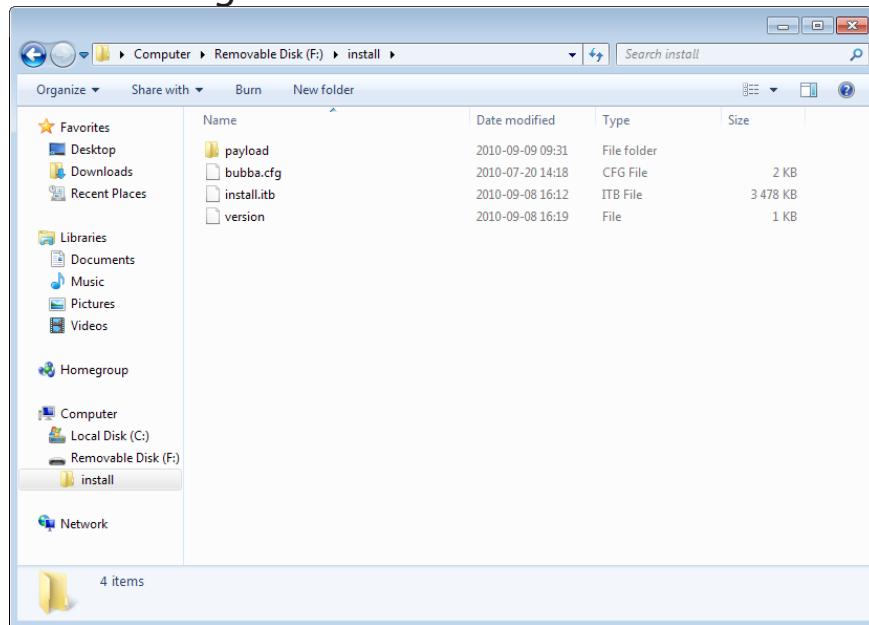
<http://update.excito.net/install/latest/b3>

2. Insert the USB memory stick (minimum size 512 MByte) in to your PC and format it, select FAT32 as file system. The USB stick must have a partition table.

3. Unzip the downloaded recovery image to the root catalogue on the USB stick. You will get one catalogue in the USB root called install:



The install catalogue contains sub-folders:



4. Shut down B3.
5. Remove power to B3.
6. Place the USB memory in one of B3's USB ports, which one doesn't matter.
7. Hold the power button pressed, keeping it pressed, and plug in the power cord to B3 again.
8. Wait until the front LED is green. B3 will now automatically format the disk, and install the Linux file system on it. The installation will take about 15 min-

utes to complete with a 1 TB disk, 20 minutes with a 2 TB disk.

9. The front LED will become purple and finally turn blue. The installation is now complete
10. You will find your B3 unit via a web browser on **http://b3** (**http://b3.local** if using Mac).
11. Enter the web interface and perform a software update to ensure that your B3 runs the latest software: Click 'Settings' and 'Software update', then press 'Update system'.
12. Reboot your B3. This is needed in case that the kernel was updated.

All done!

## RESCUE SYSTEM

It is possible to boot up your B3 from a USB stick without formatting your hard drive. This could be useful if you by mistake have "locked" yourself out from your B3. In the '\install' catalogue you will find the 'bubba.cfg' file. Edit the settings in this file to fit your needs. Please notice that editing the config file in Windows with Notepad or Wordpad will destroy the file. Use an editor like Notepad2 or ConTEXT.

If choosing 'rescue system' a SSH connection will be available at the WAN port. You will need to have an DHCP server as B3 in this mode will obtain an IP address automatically.

### Important:

- You need a DHCP server as B3 in this mode will obtain an IP address automatically.
- Connect B3 WAN port to your DHCP server.
- A SSH connection will be available on the WAN port using username: 'root'; password: 'excito'.
- After changing the 'bubba.cfg' file, follow the same procedure for booting as the standard installation.
- If you do not know what you are doing, do not do it!

## FRONT LED INFORMATION

- No light - power off
- Blue - B3 active
- Green - programming in progress
- Purple - Booting or shutting down
- Red - error indication (missing RAID disc etc)

# CUSTOMIZING B3 - SW & HW

For advanced users, B3 is a perfect platform for experimenting or for configuring to fit your special needs. This requires some Linux skills, and is not officially supported by Excito. However, you will find some hints below. We have intentionally not made these instructions too detailed; if you don't understand it, don't try it.

If you are curious anyway, you will find how-tos, hints and ideas in our web forum: <http://forum.excito.net/> and on our wiki: <http://wiki.excito.org/wiki/>.

## SSH - WITH ROOT LOGIN

In order to get shell access to your B3, use a SSH client (i.e. PuTTY for Windows). For security reasons, neither admin nor root have direct SSH access. Log on using your normal user name and password, and use su to get root access. The user must have 'Shell login' activated.

Note that root access gives access to the entire Linux system, and using it without caution may erase your data and cause your B3 to malfunction.

**The root password is excito.**

## INSTALLING OTHER APPLICATIONS

Since B3 is based on a standard Linux Debian platform, all Debian packages are available for installation. Use apt (Advanced Package Tool) to install whatever you find suitable.

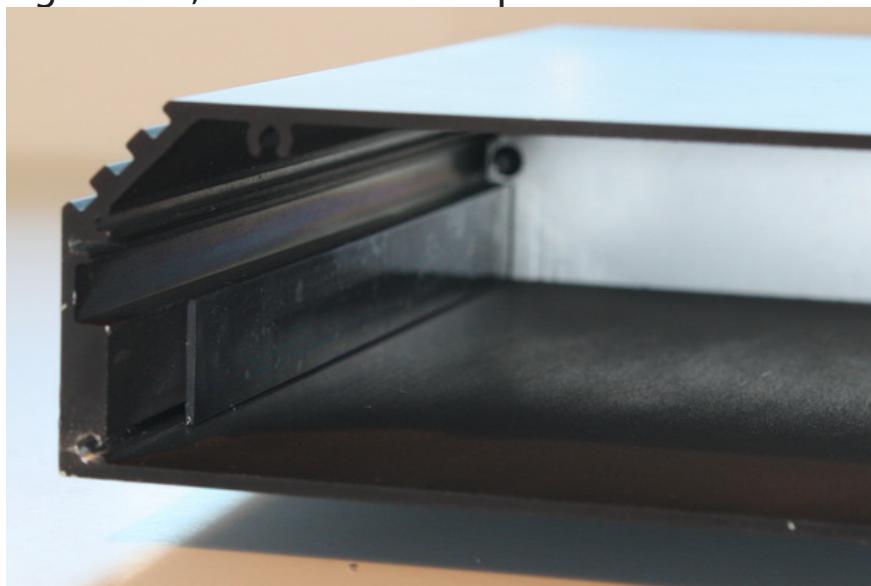
When doing update from the web interface, an 'apt-get update' and 'apt-get dist-upgrade' is done.

## INSTALLING A DISK

This instruction applies to users who wish to exchange their disk.

B3's interior is subject to ESD (Electro-Static Discharge) damage, and appropriate measures must be taken to prevent damage. Always make sure that you are electrically discharged before touching the B3's circuit board or internal connectors. To get electrically discharged touch something in your home that is grounded, like an element, a sink or a water pipe.

1. Unscrew the three screws at the back of B3 using a Torx T10 (on older B3 use 2.0 hex) screwdriver. Remove the back panel and pull out the circuit board.
2. Cut loose two small pieces (10mm long) of heat pad and place on top of each other. Then place them on the front of the hard drive (the side facing from the hard drive connectors).
3. Looking into B3, attach one heat pad on the left hand side shown in picture.



4. Looking into B3, attach one heat pad on the right hand side shown in picture.



5. Mount the two metal sliders on each side of your hard drive with the four silver screws.



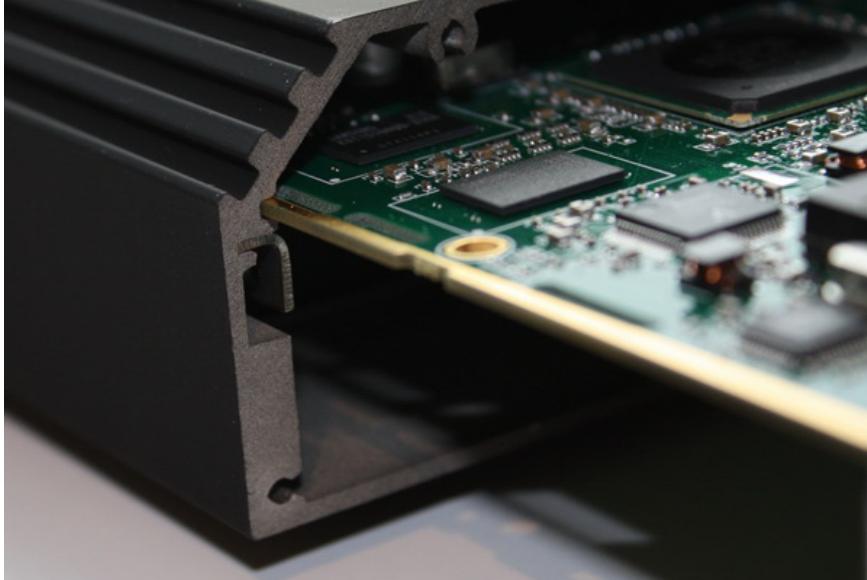
6. Slide the hard drive all the way into B3.



7. Slide the circuit board into B3 above the hard drive.



8. Close up showing circuit board insertion.



9. Mount the back side piece with the three screws. Be careful when inserting the screws, making sure that the threads are aligned correctly.



10. All done!

## TECHNICAL DATA

Downloader (HTTP, FTP, TORRENT)

iTunes music streaming (Firefly/DAAP/Soundbridge)

UPnP media streaming (Mediatomb)

Squeezebox Streaming (Squeezebox server)

File server (HTTP, Samba, FTP, SCP, AFP)

Web server (Apache, PHP5 and MySql)

Webmail client (Horde, with calendar and notes)

Email Server (Dovecot, Postfix)

Fetchmail Server (Fetchmail)

Easyfind service

Printer Server (Cups)

SSH connection to internal Linux

Linux 2.6 + Debian Squeeze

Firewall (Iptables)

Router

Wireless access point (802.11 abgn, 2 x MIMO, dual band, fully open source)

DNS server

DHCP server

RAID 1 support with eSATA disk

Integrated backup solution (remote or local target)

Web photo album

## SUPPORT

- In this manual, located on your B3 and on <http://www.excito.com/>, you will find all B3's features explained.
- Make sure that you are reading the latest version of the manual: do a software update in B3's web interface as the manual located on B3 is a part of B3's software distribution, and will be updated with software updates.
- You will find the most common questions in our FAQ. Browse to <http://www.excito.com/> and click 'support'.
- We have a forum where you can communicate with other B3 users, <http://forum.excito.net/>. Use the search function to find out if your problem already has been solved!
- We have a wiki with great how-tos, <http://wiki.excito.org/wiki> Take advantage of the information others has written to you!
- If you do not find what you are looking for, send an Email to [support@excito.com](mailto:support@excito.com) with your questions.

## GPL STATEMENT

This product uses GPL/LGPL software. For more information please read the GNU LICENSE document found here <http://www.gnu.org/licenses/gpl.txt>.

## LIMITED WARRANTY

Subject to the terms and conditions set forth herein, Excito Elektronik i Skåne AB, ("Excito") provide this Limited Warranty:

Only to the person or entity that originally purchased the product from Excito or its authorized reseller or distributor

**Limited Warranty:** Excito warrants that the hardware portion of the Excito product described below ("Hardware") will be free from material defects in workmanship and materials under normal use from the date of original retail purchase of the product, for the period set forth below ("Warranty Period"), except as otherwise stated herein.

## Hardware: Two (2) Years

The customer's sole and exclusive remedy and the entire liability of Excito and its suppliers under this Limited Warranty will be, at Excito's option, to repair or replace the defective Hardware during the Warranty Period at no charge to the original owner or to refund the actual purchase price paid. Any repair or replacement will be rendered by Excito at an Authorized Excito Service Office. The replacement hardware need not be new or have an identical make, model or part. Excito may, at its option, replace the defective Hardware or any part thereof with any reconditioned product that Excito reasonably determines is substantially equivalent (or superior) in all material respects to the defective Hardware. Repaired or replacement hardware will be warranted for the remainder of the original Warranty Period or ninety (90) days, whichever is longer, and is subject to the same limitations and exclusions. If a material defect is incapable of correction, or if Excito determines that it is not practical to repair or replace the defective Hardware, the actual price paid by the original purchaser for the defective Hardware will be refunded by Excito upon return to Excito of the defective Hardware. All Hardware or part thereof that is replaced by Excito, or for which the purchase price is refunded, shall become the property of Excito upon replacement or refund.

**Limited Software Warranty:** Excito warrants that the software portion of the product ("Software") will substantially conform to Excito's then current functional specifications for the Software, as set forth in the applicable documentation, from the date of original retail purchase of the Software for a period of ninety (90) days ("Software Warranty Period"), provided that the Software is properly installed on approved hardware and operated as contemplated in its documentation. Excito further warrants that, during the Software Warranty Period, the magnetic media on which Excito delivers the Software will be free of physical defects.

The customer's sole and exclusive remedy and the entire liability of Excito and its suppliers under this Limited Warranty will be, at Excito's option, to replace the non-conforming Software (or defective media) with software that substantially conforms to Excito's functional specifications for the Software or to refund the portion of the actual purchase price paid that is attributable to the Software. Except as otherwise agreed by Excito in writing, the replacement Software is provided only to the original licensee, and is subject to the terms

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Excito will not be held responsible for any packages that are lost in transit to Excito. The repaired or replaced packages will be shipped to the customer via any common carrier selected by Excito. Expedited shipping is available upon request and provided shipping charges are prepaid by the customer. Excito may reject or return any product that is not packaged and shipped in strict compliance with the foregoing requirements, or for which an RMA number is not visible from the outside of the package. The product owner agrees to pay Excito's reasonable handling and return shipping charges for any product that is not packaged and shipped in accordance with the foregoing requirements, or that is determined by Excito not to be defective or non-conforming.

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