Debian Edu / Skolelinux Terra 3.0 Release Manual

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Contents

1 Anleitung zum Release von Debian Edu etch 3.0 Codename "Terra"

Dies ist das (*noch unvollständige*) Release Manual für das Debian Edu etch 3.0 Release.

This document was put into the `debian-edu-doc` package on `2007-12-04`.

Die Version auf http://wiki.skolelinux.no/DebianEdu/Documentation/Etch ist ein Wiki und wird häufig aktualisiert.

Übersetzungen sind Teil des `debian-edu-doc` Pakets, das auf einem Webserver installiert sein kann .

2 Über Debian Edu und Skolelinux

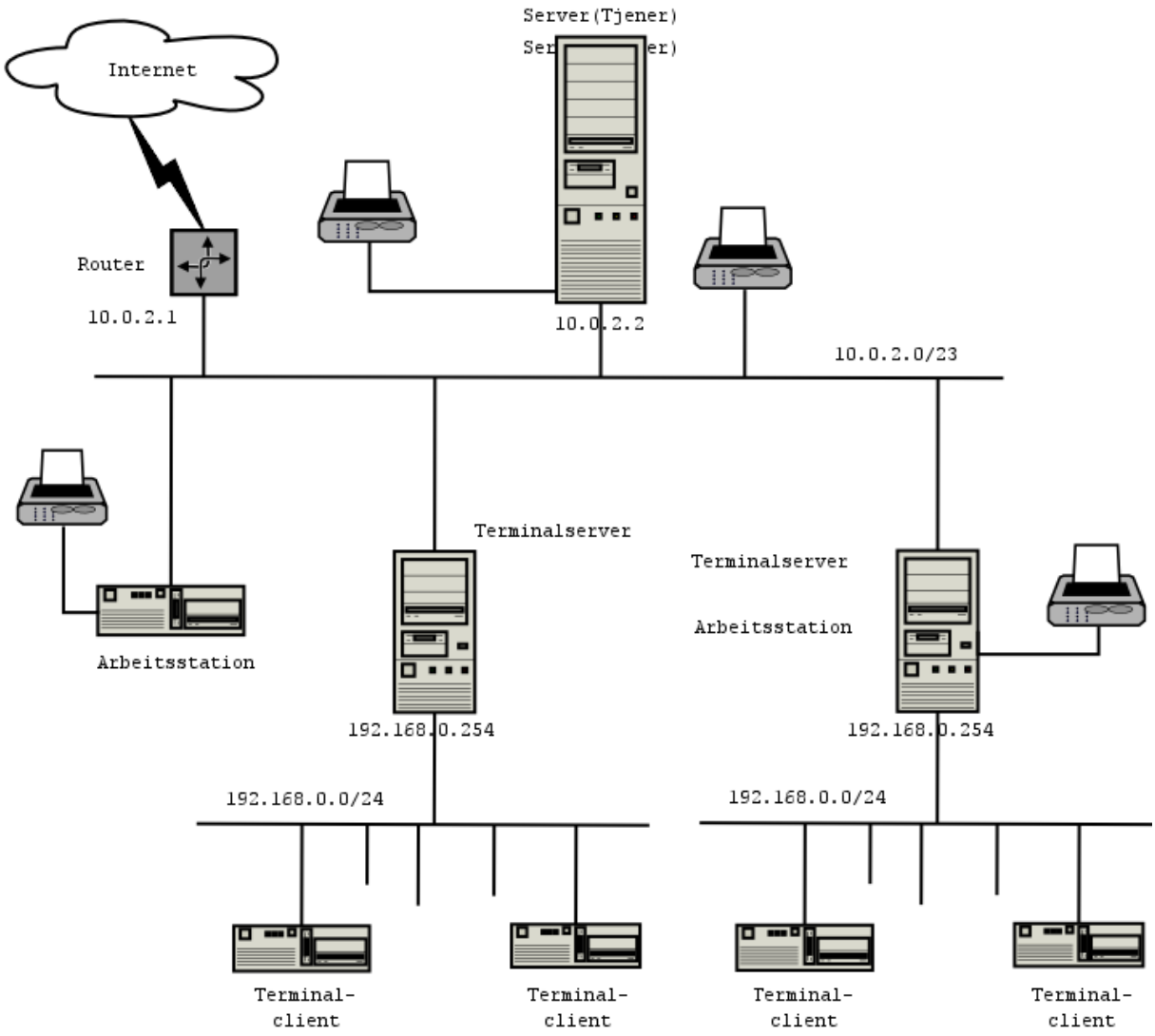
Skolelinux ist vom Debian-edu Projekt die Custom Debian Distribution (CDD) in der Entwicklung. Dies bedeutet, dass Skolelinux eine Version von Debian mit einer vorkonfigurierten Umgebung ist, die ihnen ein komplett eingerichtetes Schulnetzwerk zur Verfügung stellt. In Norwegen, wo die Entwicklung von Skolelinux begann, ist die Hauptzielgruppe Schulen mit Schülern im Alter von 6 bis 16 Jahren.

Das System wird in einigen Ländern in der ganzen Welt benutzt, mit den meisten Benutzern in Norwegen, Deutschland und Frankreich.

3 Architektur

Dieser Abschnitt erläutert die Netzwerktopologie und die Serverdienste einer Skolelinux-Installation.

3.1 Netzwerk



(Das `debian-edu-doc` Quellpaket enthält dieses Bild als `dia` Datei.)

Die Abbildung ist eine Skizze der angenommenen Netzwerktopologie. Die Grundeinstellungen von Skolelinux gehen davon aus, dass es genau einen Hauptserver ('Tjener') gibt, während normale Arbeitsstationen und Terminalserver (mit ihren zugehörigen Thin-Client-Terminals) eingebunden werden können. Die Anzahl der Arbeitsstationen ist beliebig (zwischen 0 und 400). Gleiches gilt für Terminalserver, die ihre Thin-Clients jeweils auf einem separaten Netzwerksegment bedienen, so dass der Netzwerkverkehr zwischen den Thin-Clients und ihrem Terminalserver den Rest der Netzwerkdienste nicht stört.

Der Grund dafür, dass es nur einen Hauptserver in jedem Schulnetzwerk geben kann, ist dass der Hauptserver DHCP anbietet. Dies kann immer nur eine Maschine in einem Netzwerk machen. Es ist möglich, die Dienste des Hauptservers auf andere Maschinen auszulagern, indem man diese Dienste dort aufsetzt und die DNS-Konfiguration auf dem Hauptserver so abändert, dass der DNS-Alias für die geänderten Dienste auf die richtige Maschine zeigt.

Um die Standardinstallation von Skolelinux einfach zu halten, läuft die Internetverbindung über einen separaten Router. Es besteht die Möglichkeit, eine separate Maschine mit Debian zu installieren und sie als Router für Skolelinux mit der von ihnen bevorzugten Internet-Einwahlmethode zu konfigurieren (Die notwendige Einrichtung um die Standardsituation an die Gegebenheiten anzupassen, sollte separat dokumentiert werden).

3.2 Dienste

With the exception of the control of the thin-clients, all services are initially set up on one central computer (the main server). For performance reasons, the thin-client-server should be a separate machine (though it is possible to install both the main server and thin-client server profiles on the same machine). All services are allocated a dedicated DNS-name and are offered exclusively over IPv4. The allocated DNS name makes it easy to move individual services from the main-server to a different machine, by simply stopping the service on the main-server, and changing the DNS configuration to point to the new location of the service (which should be setup on that machine first of course).

Aus Sicherheitsgründen werden Passwörter stets verschlüsselt übertragen , so dass keine Klartextpasswörter in das Netzwerk gelangen.

Unten ist eine Liste von Diensten, die standardmässig in einem Skolelinuxnetzwerk eingerichtet sind, mit dem DNS Namen jedes einzelnen Dienstes in rechteckigen Klammern. Wo es möglich ist, entspricht der DNS Name dem Dienstenamen in `/etc/services` ,sonst wurde die allgemeine Bezeichnung des Dienstes als DNS-Name verwendet. Alle Konfigurationsdateien verwenden möglichst den DNS Namen (ohne Domäne), um die Änderung von IP-Bereichen oder Domänennamen zu erleichtern.

- Zentralisierte Aufzeichnung von Systemprotokollen [syslog]
- Domain Name Service DNS (Bind) [domain]
- Automatische Netzwerk Konfiguration von Maschinen (DHCP) [bootps]
- Zeit Synchronisation (NTP) [ntp]
- Heimatverzeichnisse über Netzwerk Dateisysteme (SMB/NFS)
- Elektronisches Postamt [postoffice]
- Verzeichnisdienst (OpenLDAP) [ldap]
- Benutzer Verwaltung (lwat)
- Web Server (Apache/PHP) [www]
- Zentrale Datensicherung (sl-backup, slbackup-php) [backup]
- Webseiten Zwischenspeicher / Proxy Server (Squid) [webcache]
- Druckdienst (CUPS) [ipp]
- Fernzugriff (OpenSSH) [ssh]
- Automatische Konfiguration [cfengine]
- Terminal Server/s (LTSP) [ltspserver\#]
- Maschinen- und Dienste-Überwachung mit Fehlerberichterstattung, sowie Status und Trendaufzeichnungen im Webinterface und Benachrichtigung per E-mail (munin,nagios and site-summary)

Each user stores his personal files in his home folder which is made available by the server. Home folders are accessible from all machines, giving users access to the same files regardless of which machine they are using. The server is operating system agnostic in offering access using NFS for Unix Clients, SMB for Windows and Macintosh clients.

E-Mail ist nur zur lokalen Auslieferung vorkonfiguriert (z.B. innerhalb der Schule), aber die E-Mailzustellung kann, sofern die Schule einen festen Internetzugang hat, so konfiguriert werden, dass

auch in das Internet E-Mail ausgeliefert werden können. Mailinglisten werden basierend auf der Benutzerdatenbank eingerichtet, so dass jede Klasse ihre eigene Mailingliste hat. Client PC's sind so konfiguriert, dass sie ihre E-Mails an den Server ('smarthost') senden. Benutzer können auf ihre E-Mails mit den Protokollen POP3 oder IMAP zugreifen.

All services are accessible using the same username and password, thanks to the central user database for authentication and authorization.

Um die Leistung bei häufig zugegriffenen Web-Sites zu steigern, wird ein lokaler proxy-server (squid) benutzt, der die angefragten Web-Seiten für den wiederholten Zugriff zwischenspeichert. In Verbindung mit der Sperrung des Netzwerkverkehrs in dem Router, ermöglicht dies ebenso die Kontrolle über den Internetzugriff einzelner Maschinen.

Die Netzwerkeinrichtung der Client-PC's erfolgt automatisch mit DHCP. Normale Client-PC's bekommen IP-Adressen aus dem privaten Subnetz 10.0.2.0/23 zugeteilt, während Thinclients über das dem zugehörigen Thinclient-Server entsprechende Subnetz 192.168.0.0/24 mit ihm verbunden sind (damit der Netzwerkverkehr der Thinclients nicht den Rest der Netzwerkdienste stören).

Zentrales Mitschreiben von Systemnachrichten ist so konfiguriert, dass alle Maschinen ihre syslog Meldungen zum Server übertragen. Der Syslogdienst akzeptiert nur eingehende Nachrichten aus dem lokalen Netzwerk.

Standardmäßig ist der DNS-Server mit einer domain nur für interne Benutzung konfiguriert (*.intern), bis eine richtige ("external") DNS domain konfiguriert werden kann. Der DNS-Server ist als ein zwischenspeichernder DNS-Server konfiguriert, so dass alle Maschinen des Netzwerks ihn als Haupt-DNS-Server benutzen können.

Schüler und Lehrer haben die Möglichkeit, Webseiten zu veröffentlichen. Der Webserver bietet Mechanismen zur Authentifizierung von Benutzern und Einschränkung des Zugriffs auf individuelle Seiten und Unterverzeichnisse für bestimmte Benutzer und Gruppen. Benutzer haben die Möglichkeit dynamische Webseiten zu erstellen, da der Server programmierbar ist.

Informationen über Benutzer und Maschinen können an zentraler Stelle geändert werden und sind automatisch für alle Maschinen zugreifbar. Um dies zu erreichen, ist ein zentralisierter Verzeichnisserver eingerichtet. Das Verzeichnis hält Informationen über Benutzer, Benutzergruppen, Maschinen und Maschinengruppen. Um eine Verwirrung des Benutzers zu vermeiden, wird kein Unterschied zwischen Datei Gruppen, Mailinglisten und Netzwerkgruppen gemacht. Dies impliziert, dass Gruppen von Maschinen, die Netzwerkgruppen sein müsen, den gleichen Namensraum wie Benutzergruppen und Mailinglisten haben.

Die Verwaltung von Diensten und Benutzern wird meistens und überwiegend web(-basiert) durchgeführt und folgt dabei etablierten Standards, die mit den in Skolelinux enthaltenen Webbrowsern gut funktionieren. Die Übertragung von bestimmten Aufgaben an individuelle Benutzer oder Benutzergruppen wird von dem Verwaltungssystem ermöglicht.

Um bestimmte Probleme mit NFS zu vermeiden und um die Fehlersuche zu vereinfachen, muss die Zeit der verschiedenen Maschinen im Netzwerk synchronisiert werden. Um dies zu gewährleisten, ist der Skolelinux Server als ein lokaler Netzwerk-Zeitprotokollserver (NTP) eingerichtet und alle Arbeitsstationen und Clients sind so eingerichtet, dass sie ihre Uhr mit der des Servers synchronisieren. Der Server selbst sollte sich mit NTP über das Internet gegen Zeitservern höherer Ordnung (Stratuum) synchronisieren, um sicherzustellen, dass das ganze Netzwerk die korrekte Zeit führt.

Drucker können entweder an das Netzwerk, an einen Server, eine Arbeitsstation oder einen Thin-Client-Server angeschlossen werden. Zugriff auf Drucker kann für bestimmte Benutzer entsprechend ihrer Gruppenzugehörigkeit kontrolliert werden. Dies wird durch die Benutzung von Mengenbegrenzungen und Zugriffskontrollisten für Drucker erreicht.

3.2.1 Thin Client Dienste

Eine Einrichtung als Thin-Client ermöglicht es einem gewöhnlichen Pc, als (X)Terminal zu funktionieren. Das heisst, dass diese Maschine von einer Diskette startet, oder unter Benutzung des Netzwerkkarten PROM direkt von dem Server , ohne die lokale Festplatte zu benutzen. Die benutzte Thin-Client Einrichtung, ist die des Linux Terminal Server Projekts (LTSP).

Thin Clients sind ein guter Weg, um ältere schwächere Maschinen zu benutzen, da sie alle Programme effektiv auf dem LTSP-Server ausführen. Dies funktioniert wie folgt: Der Dienst benutzt DHCP und TFTP um sich mit dem Netzwerk zu verbinden und davon zu starten. Als nächstes wird das Dateisystem per NFS vom LTSP-Server eingehängt und letztendlich X11 gestartet und mit dem selben LTSP-Server über XDMCP verbunden, damit sichergestellt ist, dass alle Programme auf dem LTSP-Server ausgeführt werden.

Der Thin Client Server ist eingerichtet um Systemmeldungen der Thin Clients zu empfangen und diese an den zentralen Systemmeldungsempfänger weiterzuleiten. (weitere Anmerkungen zur Identifikation von Thin Clients auf dem Hauptserver)

3.3 Administration

Alle Linux Maschinen die durch eine Skolelinux CD oder DVD installiert wurden, sind durch einen zenttalen Computer verwaltbar, üblicherweise dem Hauptserver. Es ist möglich, sich auf allen Maschinen mit ssh einzuloggen und somit vollen Zugriff auf die Maschinen zu haben.

Wir benutzen cfengine um Konfigurationsdateien zu editieren.Diese Dateien werden durch den Server auf den Clients auf Stand gehalten.

Alle Benutzerinformationen werden in einem LDAP-Verzeichnis gehalten. Aktualisierungen von Benutzerkonten werden in dieser Datenbank durchgeführt, die auch von den Clients zur Authentifizierung der Benutzer benutzt wird.

3.4 Installation

Die Installation ist entweder von CD oder von DVD möglich.

Das Ziel ist, in der Lage zu sein, einen Server von CD/DVD zu installieren und Clients über das Netzwerk zu installieren indem alle anderen Maschinen vom Netzwerk starten. Die DVD Installation arbeitet ohne Zugriff auf das Internet.

Die Installation sollte keine Fragen stellen, mit der Ausnahme der gewünschten Sprache (z.B. Norwegian Bokmal, Nynorsk, Sami, German, ...) und dem Maschinen Profil (Server, Arbeitsstation, Thin Client Server). Alle anderen Einstellungen werden automatisch mit vernünftigen Werten vorbelegt, um von dem Systemadministrator von einer zentraler Stelle nach der Installation geändert werden zu können.

3.5 Konfiguration des Dateisystem-Zugriffs

Jedem Skolelinux Benutzerkonto ist ein Abschnitt des Dateisystems auf dem Server zugewiesen. Dieser Abschnitt (Benutzerverzeichnis) beinhaltet die Konfigurationsdateien, Dokumente, E-Mails und Webseiten des Benutzer. Einige der Dateien sollten mit Lesezugriff für andere Benutzer auf dem System ausgestattet sein, einige sollten lesbar für Jedermann im Internet und manche sollten für Keinen, außer dem Benutzer selbst, lesbar sein.

Um sicherzustellen, dass alle Festplatten, die für Benutzerverzeichnisse oder gemeinsame Verzeichnisse auf allen Computern in der Installation benutzt werden, einheitlich benannt werden können, sind sie als `/skole/host/directory/` . Zunächst ist ein Verzeichnis auf dem Dateiserver erstellt, `/skole/tjener/home0/` , in dem all die Benutzerverzeichnisse erstellt wurden. Mehr Verzeichnisse können dann erzeugt werden, wenn sie benötigt werden, um bestimmten Benutzergruppen oder bestimmte Muster der Nutzung unterzubringen.

Um die Kontrolle von geteiltem Dateizugriff unter Benutzung von Dateigruppen zu ermöglichen, jeder Benutzer muss einer primären Gruppe ohne anderen Mitgliedern zugeordnet sein. Der Name dieser privaten Gruppe sollte identisch mit dem Benutzernamen sein. (Mehr Info über private Gruppen ist von Redhat verfügbar.) Dies erlaubt für alle neuen von dem Benutzer erzeugten Dateien das Setzen des vollen Zugriffs für die Dateigruppe. Zusammen mit dem set-gid Bit auf Verzeichnissen und der Vererbung von Rechten, ermöglicht es kontrollierten gemeinsamen Dateizugriff zwischen den Mitgliedern einer Dateigruppe. Dazu sollte die umask 00X des Benutzer sein. (Falls alle Benutzer anfänglich in der Lage sein sollen, neue erstellte Dateien zu lesen, dann X=2. Falls nur der relevanten Gruppe anfänglicher Lesezugriff gegeben werden soll, dann ist X=7.)

Die anfängliche Einstellung der Zugriffsrechte für neu erstellte Dateien ist eine Sache der Politik. Sie können einerseits so eingestellt sein, dass jedem Lesezugriff gegeben wird, der später durch den Benutzer gezielt wieder entfernt werden kann, oder sie sind anfänglich gesperrt, mit der Notwendigkeit sie durch gezielten Benutzereingriff zugreifbar zu machen. Der erste Ansatz fördert das Teilen von Wissen und macht das System mehr transparent, wogegen die zweite Methode das Risiko von ungewünschter Verbreitung von empfindlichen Informationen senkt. Das Problem mit der ersten Lösung ist, dass es für die Benutzer nicht ersichtlich ist, dass das von ihnen erstellte Material durch alle anderen zugreifbar ist. Dies ist nur durch die Untersuchung der Benutzerverzeichnisse erkennbar, wo man sehen kann, dass die Dateien lesbar sind. Das Problem mit der zweiten Lösung besteht darin, dass wahrscheinlich wenig

Leute ihre Dateien zugreifbar machen möchten, selbst wenn sie keine empfindlichen Informationen enthalten und der Inhalt hilfreich für neugierige Benutzer wäre, die lernen wollen, wie andere bestimmte Probleme gelöst haben (typischerweise Konfigurationsthemen).

Empfehlung: Die Dateien werden anfänglich auf lesbar für alle gesetzt, aber bestimmte Verzeichnisse werden erzeugt, in denen der Inhalt anfänglich gesperrt ist. Dies wird einfach entscheiden, ob die Datei lesbar gemacht werden soll, oder nicht. Konkret sollte umask auf 002 gesetzt werden und `~/` mit den Privilegien0775 erzeugt werden, `~/priv/` mit 0750 und `~/pub/` mit 0775. Dateien, die nicht lesbar für andere sein sollen, sollten in `~/priv/` gespeichert werden, wogegen öffentliche Dateien in `~/pub/` gespeichert werden. Andere Dateien werden anfänglich zugreifbar sein, können aber wie benötigt gesperrt werden.

ssh erfordert, dass das Heimatverzeichnis des Benutzers nur durch den Benutzer beschreibbar ist, somit ist das maximum an Zugriffsprivilegien 755 für `~/` .

- - Zugriff auf Heimatverzeichnisse (*~/.)? - Heimatverzeichnisse - Gemeinsame Verzeichnisse?

3.6 Zufällige Notizen

Diese zufälligen Notizen betreffen Dinge, die in diesem Dokument enthalten sein sollten.

- Zentralisierte Benutzerdatenbank mit Gruppierung und der Fähigkeit zu kontrollieren, welche Gruppen auf welche Maschinen Zugriff haben.
- Gruppierung von Maschinen und der Fähigkeit der Zugriffskontrolle auf Netzwerkdienste für diese Gruppen (Zugriffssperre auf das Internet durch squid)
- Sollte auf einen DNS Namen nach RFC 2606 prüfen.

Dieses Kapitel wurde kopiert und eingefügt von http://developer.skolelinux.no/arkitektur/arkitektur.html.en (zu diesem Zeitpunkt war es Copyright © 2001, 2002, 2003, 2004 Petter Reinholdtsen < pere@hungry.com >, released under the GPL) - Notiz an Übersetzer: es gibt bereits Übersetzungen für dieses Dokument, die Sie auch kopieren und einfügen können. Aber erhalten Sie jene Copyright Notizen ebenso.

4 Funktionen

4.1 Neue Funktionen im "3.0 Terra" Release 2007-07-22

- Basierend auf Debian 4.0 Etch released 2007-04-08.
- Grafischer Installer mit Mausunterstützung.
- Graphischer Startbildschirm während des Startens.
- LSB 3.1 kompatibel
- Linux Kernel Version 2.6.18
  - Unterstützung für SATA Kontroller und Festplatten.
- X.org Version 7.1
- KDE Desktop Umgebung Version 3.5.5
- OpenOffice.org Version 2.0.
- LTSP5 (version 0.99debian12)
- Automatische Verfolgung von installierten Maschinen mit Sitesummary.
- Automatische Konfiguration von Munin unter Benutzung der Daten von Sitesummary.
- Automatische Versionskontrolle von Konfigurationsdateien in /etc/ mit svk.
- Dateisystemgrößen können erweitert werden, während das Dateisystem eingehängt ist.

  - Unterstützung der automatischen Erweiterung des Dateisystems nach vordefinierten Regeln.

- Lokale Geräteunterstützung auf Thin Clients.
- Neue Prozessor Architekturen: amd64 (voll unterstützt) und powerpc (experimentelle Unterstützung, Installationsmedium startet nur auf Newworld Unterarchitektur)
- Multiarchitektur-DVD's für i386, amd64 und powerpc
- Rückschritt: Die CD-Installation erfordert Internetzugriff während der Installation. Vorherige Versionen konnten von einer CD ohne Internetzugriff installiert werden.
- Rückschritt: `webmin` ist jetzt aus Debian entfernt worden, wegen Problemen es zu unterstützen. Wir haben ein neues webbasiertes Benutzer Administrationswerkzeug namens `lwat` hinzugefügt, das nicht die gleichen Funktionen wie `wlus` hat, dem alten Benutzer Administrationswerkzeug. Aber `wlus` erfordert `webmin` .
- Rückschritt: swi-prolog ist nicht Teil von etch, aber es war Teil von sarge. Das HowTo teach and learn Kapitel beschreibt wie swi-prolog auf etch installiert wird.

4.2 Funktionen in 2.0 Release 2006-03-14

- Basierend auf Debian 3.1 Sarge released 2005-06-06.
- Linux kernel version 2.6.8.
- XFree86 version 4.3.
- KDE version 3.3.
- OpenOffice.org 1.1.

4.3 Funktionen in "1.0 Venus" Release 2004-06-20

- Basierend auf Debian 3.0 Woody released 2002-07-19.
- Linux kernel version 2.4.26.
- XFree86 version 4.1.
- KDE version 2.2.

4.4 Mehr Informationen zu älteren Releases

Mehr Informationen zu älteren Releases können auf http://developer.skolelinux.no/info/cdbygging/-news.html gefunden werden..

5 Vorraussetzungen

Es gibt verschiedene Möglichkeiten eine Skolelinux Lösung einzurichten. Es kann einfach auf einem alleinstehendem PC, oder einer regionalen Lösung mit vielen Schulen installiert werden. Diese Vielfalt an Konfigurationen macht einen großen Unterschied aus, wie eingerichtet werden, Netzwerkkomponenten, Servern und Clients betreffend.

- Ein router/gateway (IP 10.0.2.1), der Zugang zum Internet bietet (wenn die Standard Netzwerktopologie benutzt wird)
- Der Computers, auf dem Debian Edu / Skolelinux ausgeführt werden soll, muß entweder einen i386, amd64 oder powerpc Prozessor haben.
  - Auf powerpc wird das Installationsmedium nur auf den newworld sub-architektur Maschinen starten, die Apple-Systeme mit einem transparenten Gehäuse sind.

- Für den Hauptserver (10.0.2.2): dies ist der einzige Computer im Netzwerk, auf dem das `Haupt--Server` -Profilinstalliert wird.
- Arbeitsstation(en) und/oder Thin client (LTSP) Server
- thin clients clients
- thin client (LTSP) servers need two network cards when using the default network architecture:
  - eth0 connected to the main network (10.0.2.0/23)
  - eth1 (192.168.0.0/24) serving the thin-clients
- disk space requirements depend on profiles used, but any disk from 8 GiB will be sufficient. As usual, the bigger the better.
- for the thin clients 32 MB RAM and 133 MHz is recommended as minimum. Swap is required
- for workstations or standalone PCs 450 MHz, 256 MiB RAM and 8 GiB disc space are recommended minimum requirements
- for diskless workstations (also known as LowFat clients) 256 MB RAM and 800 MHz or more is recommended minimum requirements. Swapping over the network is automatically enabled, the swap size is 32mb, if you need more you can tune this by editing /etc/ltsp/nbdswapd.conf on tjener to set the SIZE variable.
- for Laptops 256 MB RAM and 450 MHz are minimum requirements

FIXME: add links to explainations of main-server and thinclient-server
A list of tested hardware is provided from http://wiki.debian.org/DebianEdu/Hardware/ .

5.1 Network requirements

5.1.1 Internet-Router

A router/gateway, connected to the internet on the external interface and running on the IP address 10.0.2.1 on the internal interface. The router must not run a DHCP server, it can run a DNS server, though this is not needed and will not be used.

If you are looking for a i386 based solution, we recommend IPCop or floppyfw . If you need something for an embedded router we recommend OpenWRT , check here for supported hardware . If you are into BSD unix, pfsense and m0n0wall are good choices. Though since they are BSD based, we think they are better suited for more experienced administrators.

It's possible to use a different network setup, this is the documented procedure to do this. If you are not forced to do this by an existing network infrastructure, we recommend against doing so and recommend you stay with the default network architecture.

6 Installation

6.1 Wo Sie weitere Informationen finden können

We recommend to read or at least take a look at the release notes for Debian etch before you start installing a system for production use. If you just want to give Debian Edu/Skolelinux a try, you don't have to though, it should just work 

Even more information about the Debian etch release is available in its installation manual.

6.2 Herunterladen eines Installationsmediums für Debian Edu etch 3.0r0

6.2.1 DVD's für i386, amd64 und powerpc

Das für mehrere Architekturen geeignete DVD-ISO-Image ist 4,4 GiB groß. Um es herunterzuladen, nutze eine der beiden Methoden:

- `ftp://ftp.skolelinux.org/skolelinux-cd/debian-edu-etch-amd64-i386-powerpc-DVD-3.0r0.iso`

  `http://ftp.skolelinux.org/skolelinux-cd/debian-edu-etch-amd64-i386-powerpc-DVD-3.0r0.iso`

  `rsync ftp.skolelinux.org::skolelinux-cd/debian-edu-etch-amd64-i386-powerpc-DVD-3.0r0.iso`

Oder, um eine Netzinstallation durchzuführen, kannst Du eine CD für die i386 und für die amd64 Architektur herunterladen.

- `ftp://ftp.skolelinux.org/skolelinux-cd/debian-edu-etch-i386-netinst-3.0r0.iso`

  `http://ftp.skolelinux.org/skolelinux-cd/debian-edu-etch-i386-netinst-3.0r0.iso`

  `rsync ftp.skolelinux.org::skolelinux-cd/debian-edu-etch-i386-netinst-3.0r0.iso`

amd64

- `ftp://ftp.skolelinux.org/skolelinux-cd/debian-edu-etch-amd64-netinst-3.0r0.iso`

  `http://ftp.skolelinux.org/skolelinux-cd/debian-edu-etch-amd64-netinst-3-.0r0.iso`

  `rsync ftp.skolelinux.org::skolelinux-cd/debian-edu-etch-amd64-netinst-3-.0r0.iso`

and powerpc (suited for the newworld sub-architecture)

- `ftp://ftp.skolelinux.org/skolelinux-cd/debian-edu-etch-powerpc-netinst--3.0r0.iso`

  `http://ftp.skolelinux.org/skolelinux-cd/debian-edu-etch-powerpc-netinst--3.0r0.iso`

  `rsync ftp.skolelinux.org::skolelinux-cd/debian-edu-etch-powerpc-netinst--3.0r0.iso`

The powerpc port has not been tested as much as the other architectures, though it should work just fine and has been reported to work. Still, we consider the port an experimental release of Debian Edu, which we might not be able to support as the other archs.

Der Quellcode für dieses Release ist auf einem DVD-Image verfügbar

- `ftp://ftp.skolelinux.org/skolelinux-cd/debian-edu-etch-source-DVD-3.0r0-.iso`

  `http://ftp.skolelinux.org/skolelinux-cd/debian-edu-etch-source-DVD-3.0r-0.iso`

  `rsync ftp.skolelinux.org::skolelinux-cd/debian-edu-etch-source-DVD-3.0r-0.iso`

6.3 Request a CD/DVD by mail

For those without a fast internet connection, we offer to send you a CD or DVD for the cost of the CD or DVD and shipping. Just send an email to cd@skolelinux.no and we will discuss the payment details (for shipping and media)  Remember to include the address you want the CD or DVD to be sent to in the email.

6.4 Installation von CD

Die Installation mit der Netinstall CD nutzt einige Pakete von der CD und den Rest aus dem Netz. Die Menge der aus dem Netz zu ladenden Pakete hängt vom jeweiligen Installationsprofil ab.

- Main server: 8 of 115 MiB downloaded.
- Main server and Thin client server: 618 of 1082 MiB downloaded.
- Main server and Workstation: 618 of 1081 MiB downloaded.
- Thin client server: 618 of 1052 MiB downloaded.
- Workstation: 618 of 1051 MiB downloaded.
- Standalone: 618 of 1020 MiB downloaded.
- Barebone: 12 of 83 MiB downloaded.

The profiles are explained below.

6.5 Installationsoptionen

When you do an Debian Edu installation you have a few options to choose. But don't be afraid, there aren't many. We have done a good job hiding the complexity of Debian during the installation and beyond. However, Debian Edu is Debian, and if you want there are more than 15000 packages to choose from and a billion configuration options. But for the majority of our users, our defaults should be fine.

- Normal graphical installation is the default on i386 and amd64. The powerpc installer does not support graphical installation. Enter `install` at the boot prompt to do an i386 text-mode install.
- The `debian-edu-expert boot` option adds the barebone profile to the profile options, and switches to manual partitioning. Enter `installgui debian-edu-expert` or `install debian-edu-expert` at the syslinux/yaboot prompt to enter expert mode.
- If you want to boot the amd64 text mode with the multiarch DVD it would be `amd64-install` . Likewise you can choose `amd64-expertgui` to get the GUI version on amd64.
- If you want to boot the i386 mode with the multiarch DVD on an amd64 machine you need to manually select `install` (text mode) or `expertgui` (graphical mode). The multiarch DVD defaults to use amd64-installgui on x86 64-bits machines, and installgui on x86 32-bits machines.
- Choose a language (for the installation and the installed system)
- Choose a time-zone
- Choose a keyboard keymap (usually the countrys default is fine)
- **Choose a profile** :
  - server
    - This is the main server (tjener) for your school providing the following services: file, print, intranet, proxy, DNS, DHCP, LDAP, backup, nagios, simesummary, munin. All services are pre-configured and working out of the box. You must only install one main server per school!
  - workstation
    - A computer booting from its local hard drive, and running all software and devices locally like an ordinary computer, but the user login is authenticated by the main server, where the user's files and desktop profile are stored.
  - thin client server
    - Thin client (and diskless workstation) server. Clients with no hard drive boot and run software from this server. This computer needs two network cards, a lot of memory, and ideally more than one processor or core.

  - standalone
    * An ordinary computer that can function without a main server, ie. doesn't need to be on the network. Includes laptops.
  - barebone
    * This profile is only available when using the 'debian-edu-expert' boot option. It will install the base packages and configure the machine to integrate into the Debian Edu network, but without any services and applications. It is useful as a platform for single services manually moved out from the main-server.

  The first 3 profiles can all be installed on the same machine. That means the main server can also be a thin client server and can be used as a workstation.

- say yes to automatic partioning, it will destroy the data on the harddrives!
- say yes to partman
- bitte sagen Sie Ja, um die Informationen an http://popcon.skolelinux.org/ zu übertragen - Sie müssen dies aber nicht 
- wait
- be happy

FIXME: this section needs a link to diskless workstation installation howto.

6.5.1 A note on manual partitioning

If you decide to do manual partitioning for the main-server, you need to make sure that the directory /skole/tjener/home0 exists, probably by mounting a partition there. If you don't create that directory you will only be able to login as root. The reason is that the user creation system require this directory to exist to be able to create users home directories, and without a users home directory the user can not log in.

6.5.2 A note on notebooks

In principal it makes sense to either install notebooks with the workstation or with the standalone profile. But keep in mind, that the workstation profile uses LDAP for the user accounts and NFS for the home directories, so those workstations will only work while in the network where they can access the server. If you plan to use your laptop at home or on the road, choose the standalone profile.

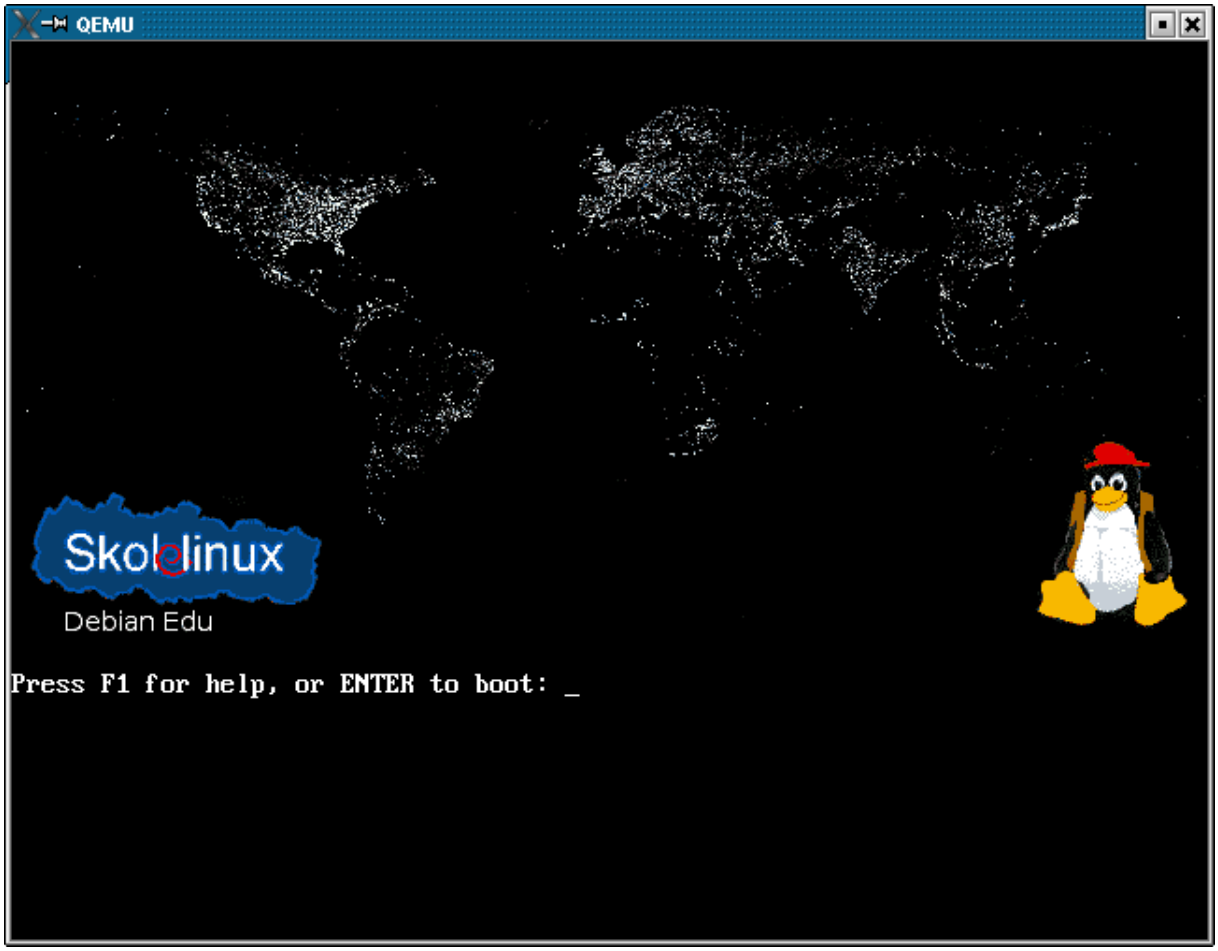
It is possible to reconfigure workstations to cache authentication information and sync the home directories to local disk (and resync to the server when in the network) with `unison` , but there is currently no howto available for this.

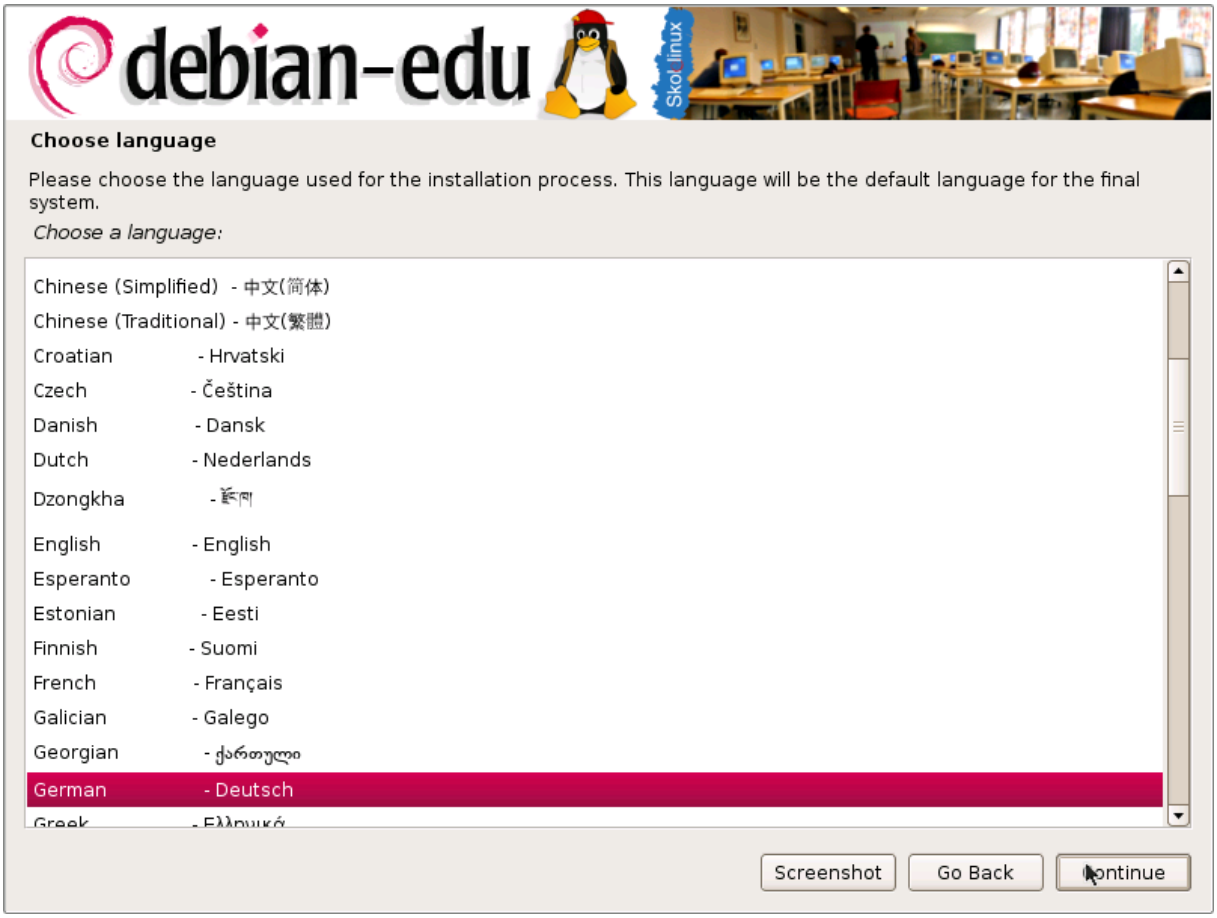
6.5.3 A note on DVD installs

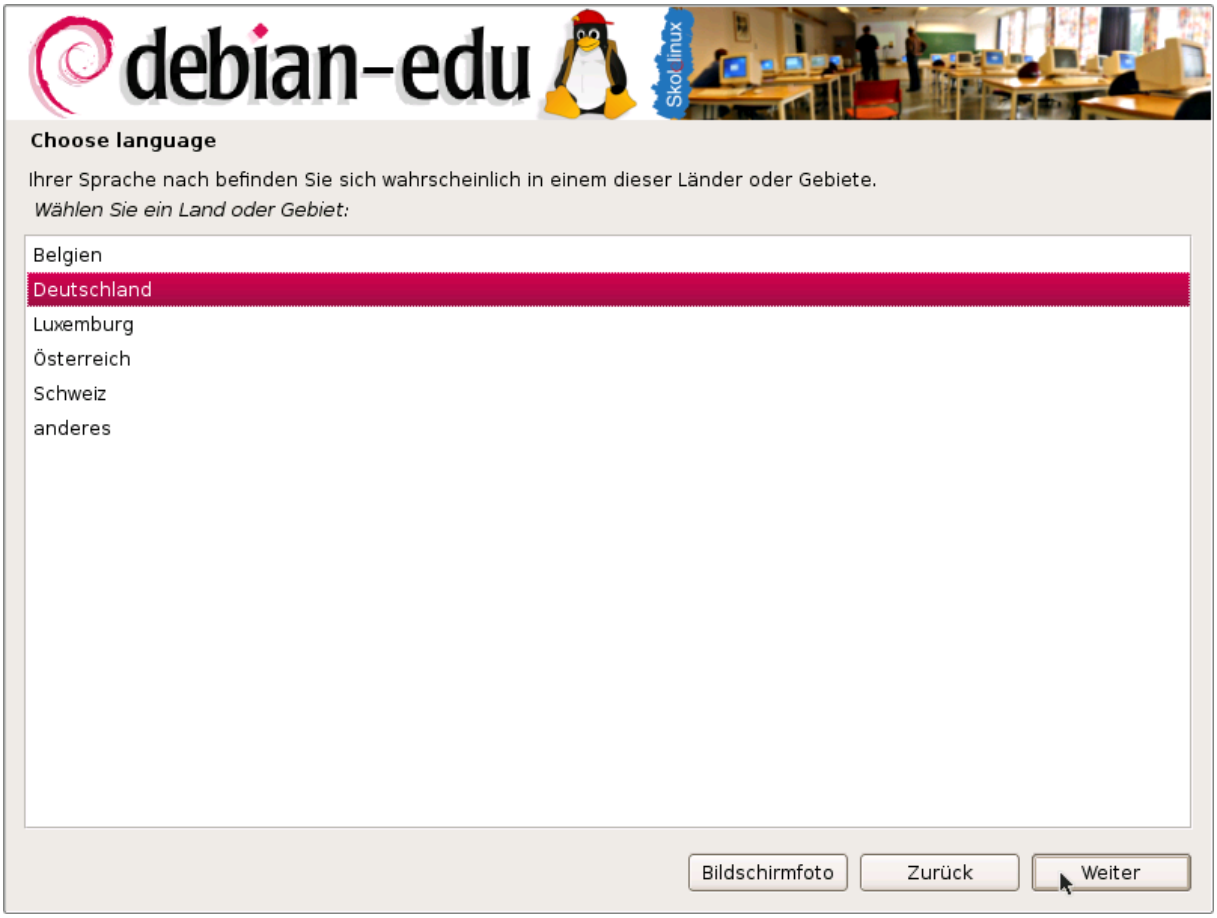
If you install from a DVD `/etc/apt/sources.list` will only contain sources from the DVD. If you have an internet connection we strongly suggest to add the following lines to it, so that available (security) updates can be installed:

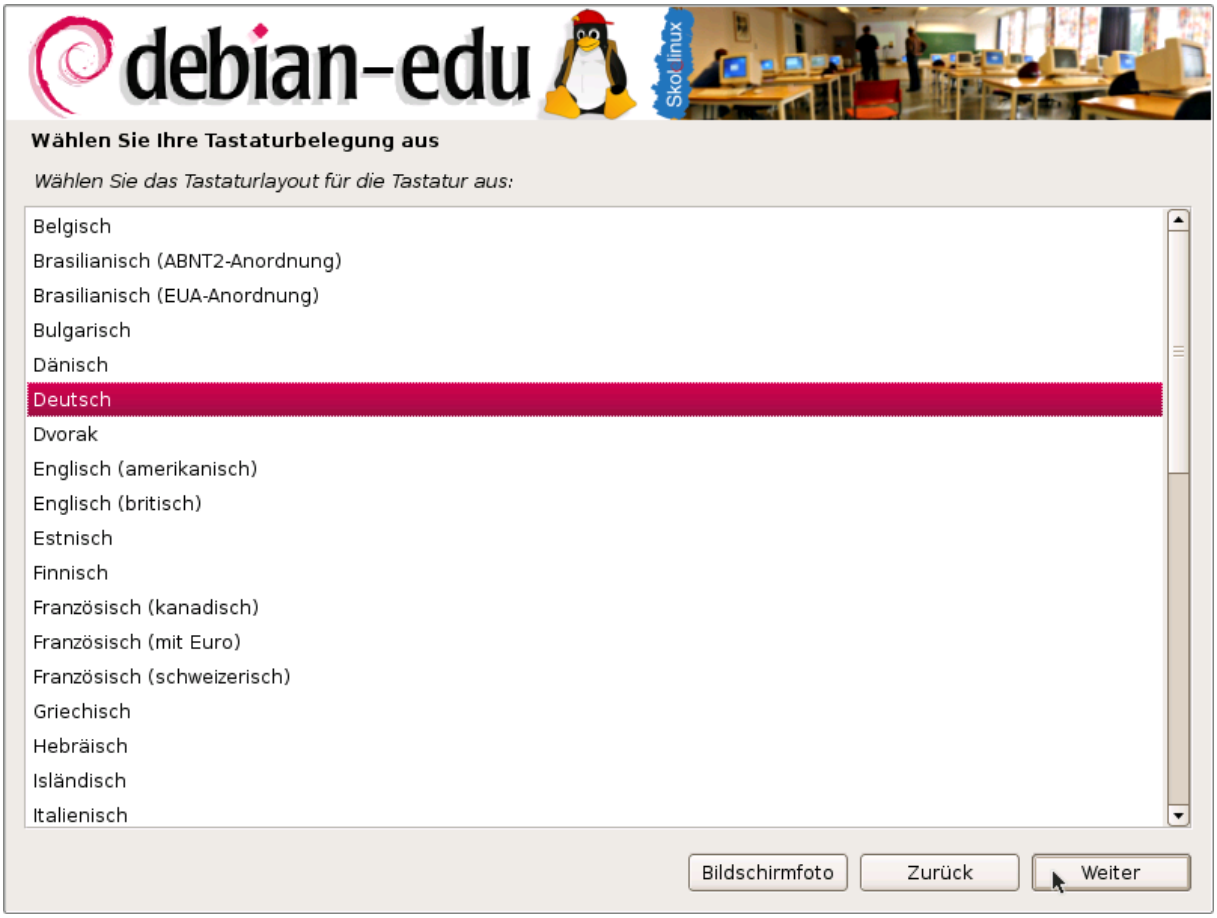
```
deb http://ftp.debian.org/debian/ etch main
deb http://security.debian.org/ etch/updates main
deb http://ftp.skolelinux.org/skolelinux etch local
```

6.6 Screenshot tour through an i386 main-server + thin-client-server installation

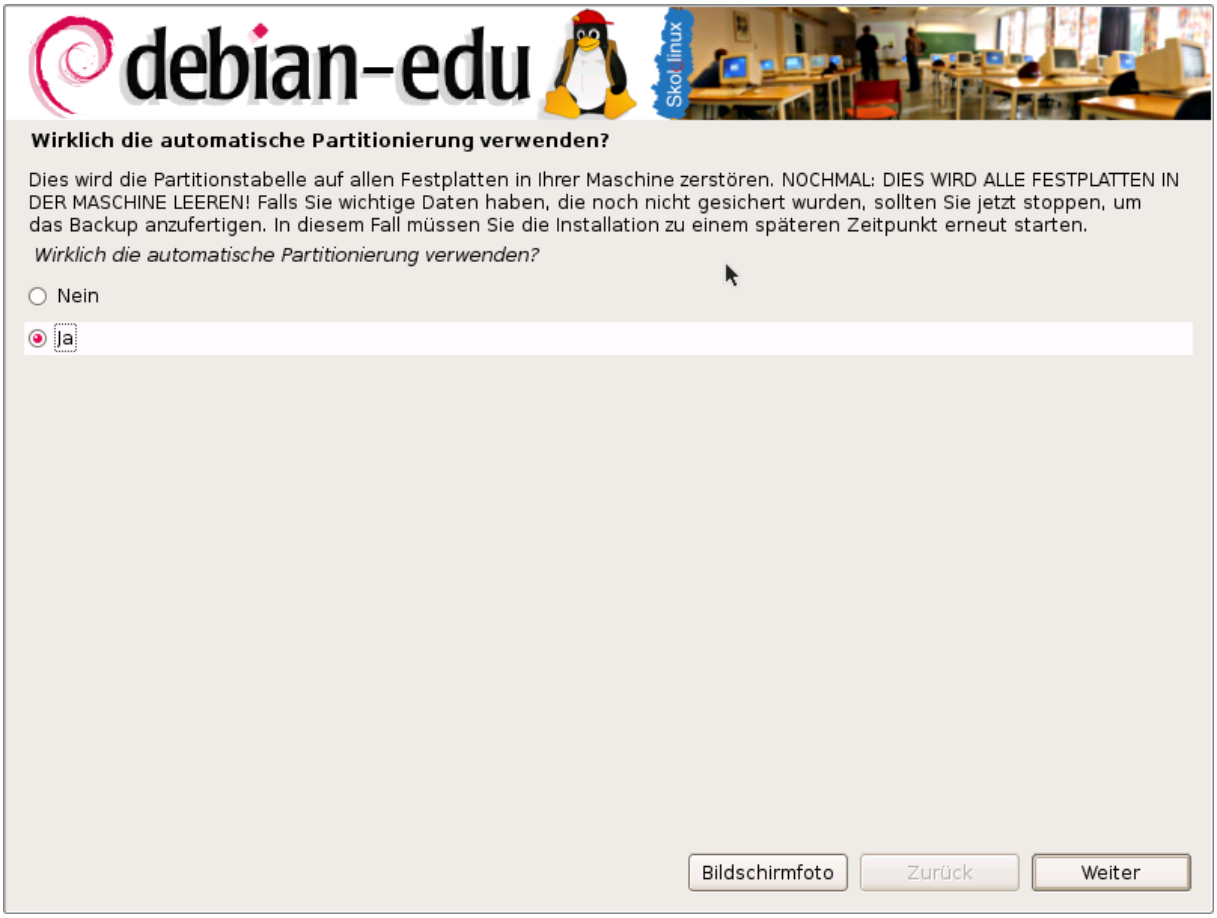


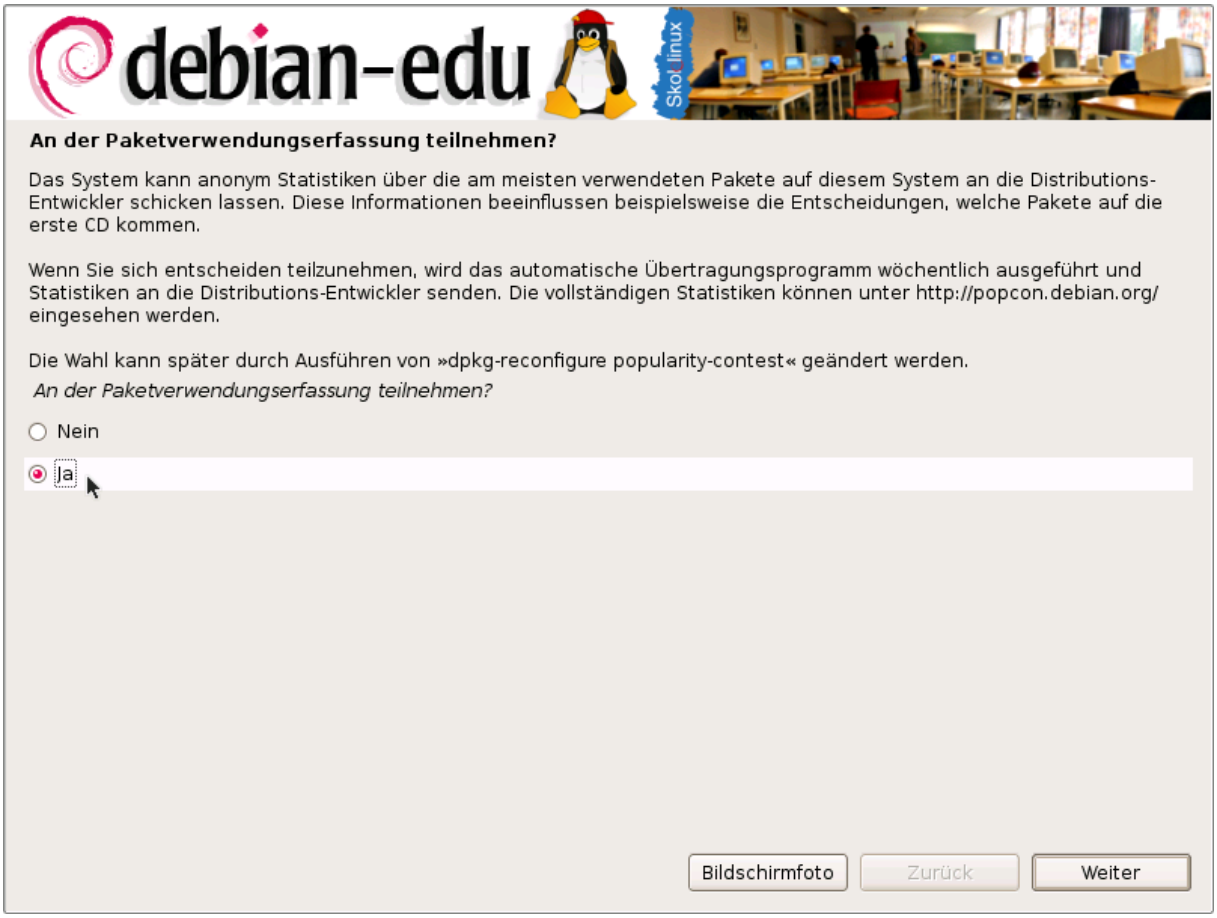

debian-edu
Skolelinux
Choose language
Please choose the language used for the installation process. This language will be the default language for the final system.
Choose a language:
Chinese (Simplified) - 中文(简体)
Chinese (Traditional) - 中文(繁體)
Croatian - Hrvatski
Czech - Čeština
Danish - Dansk
Dutch - Nederlands
Dzongkha - རྫོང་ཁ
English - English
Esperanto - Esperanto
Estonian - Eesti
Finnish - Suomi
French - Français
Galician - Galego
Georgian - ქართული
German - Deutsch
Greek - Ελληνικά
Screenshot
Go Back
Continue

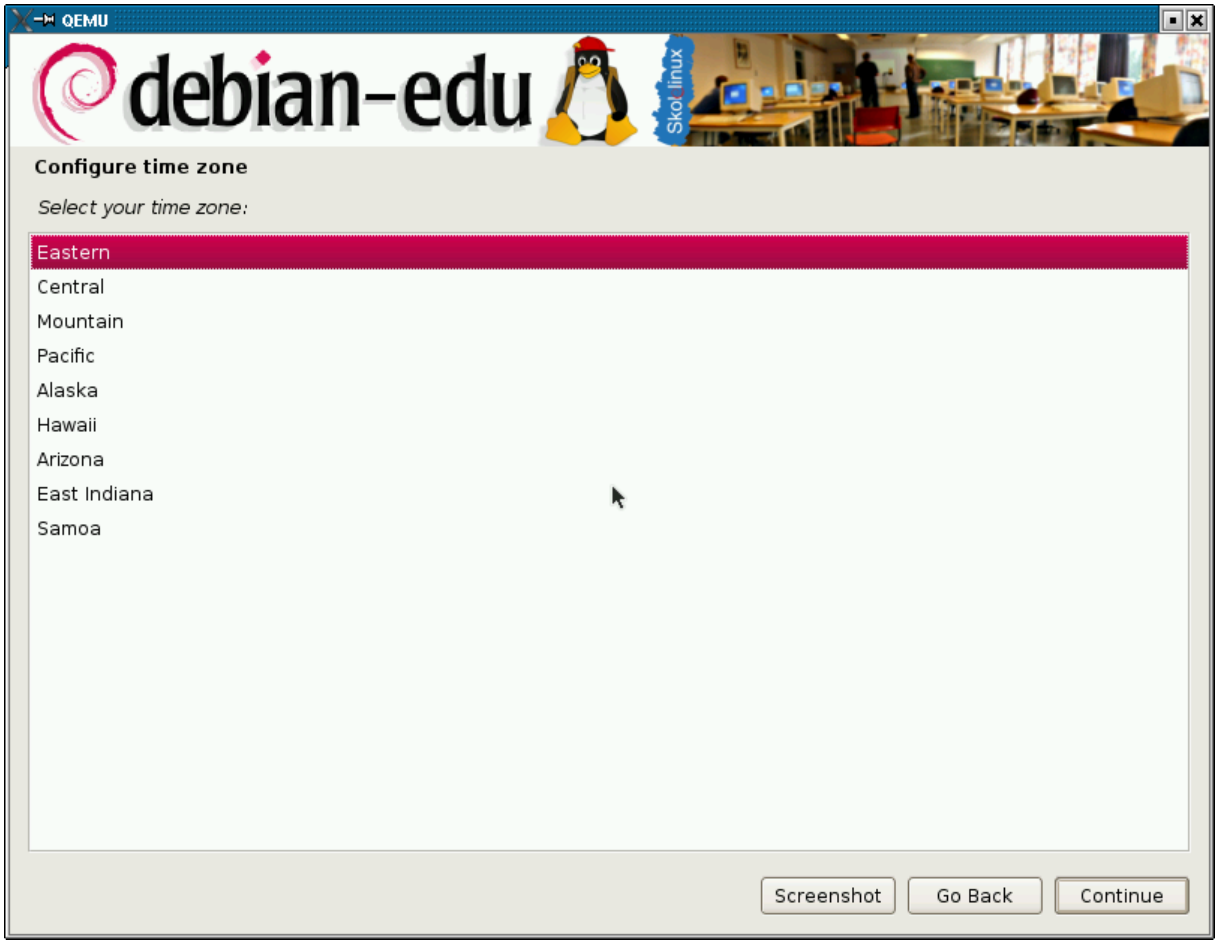

debian-edu
Skolelinux
Choose language
Ihrer Sprache nach befinden Sie sich wahrscheinlich in einem dieser Länder oder Gebiete.
Wählen Sie ein Land oder Gebiet:
Belgien
Deutschland
Luxemburg
Österreich
Schweiz
anderes
Bildschirmfoto
Zurück
Weiter

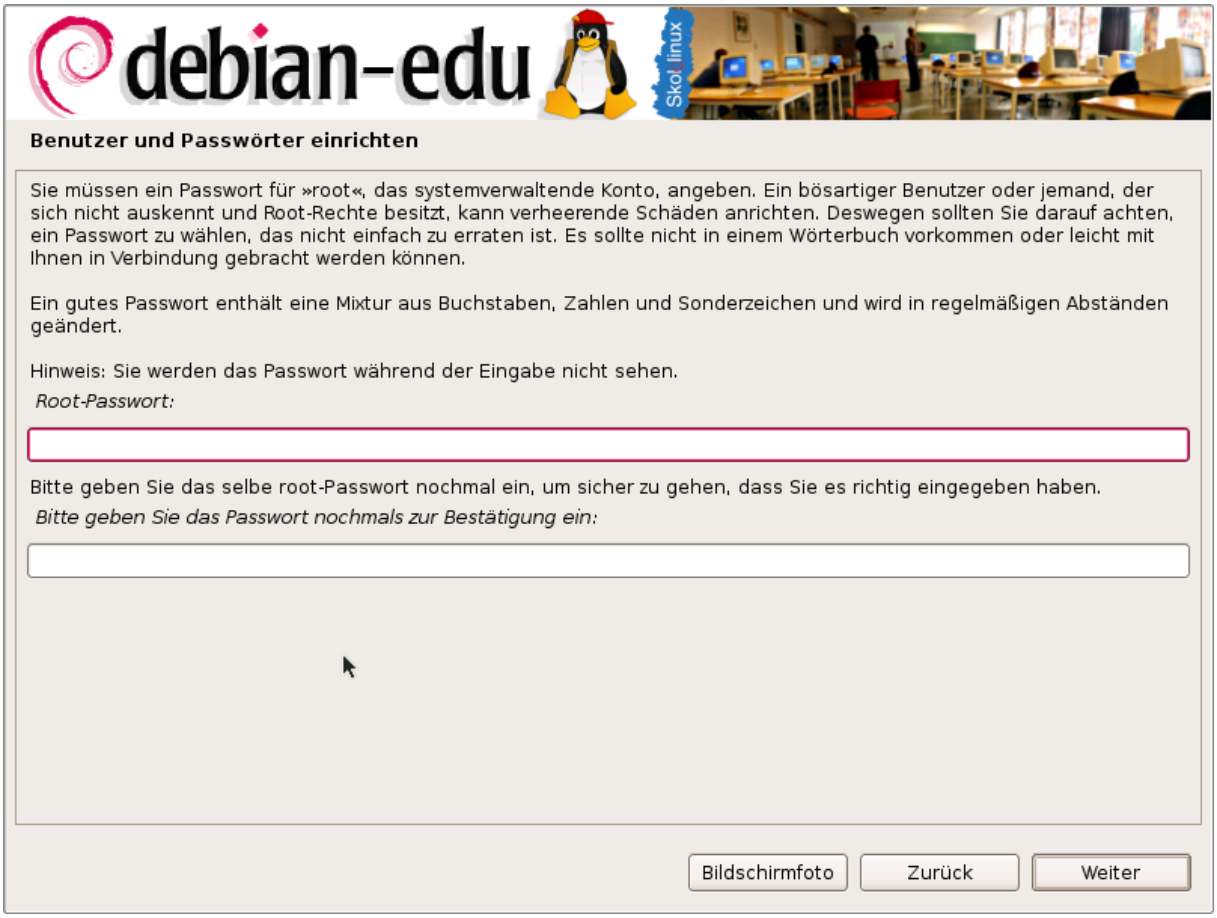

debian-edu
Skolelinux
Wählen Sie Ihre Tastaturbelegung aus
Wählen Sie das Tastaturlayout für die Tastatur aus:
Belgisch
Brasilianisch (ABNT2-Anordnung)
Brasilianisch (EUA-Anordnung)
Bulgarisch
Dänisch
Deutsch
Dvorak
Englisch (amerikanisch)
Englisch (britisch)
Estnisch
Finnisch
Französisch (kanadisch)
Französisch (mit Euro)
Französisch (schweizerisch)
Griechisch
Hebräisch
Isländisch
Italienisch
Bildschirmfoto
Zurück
Weiter

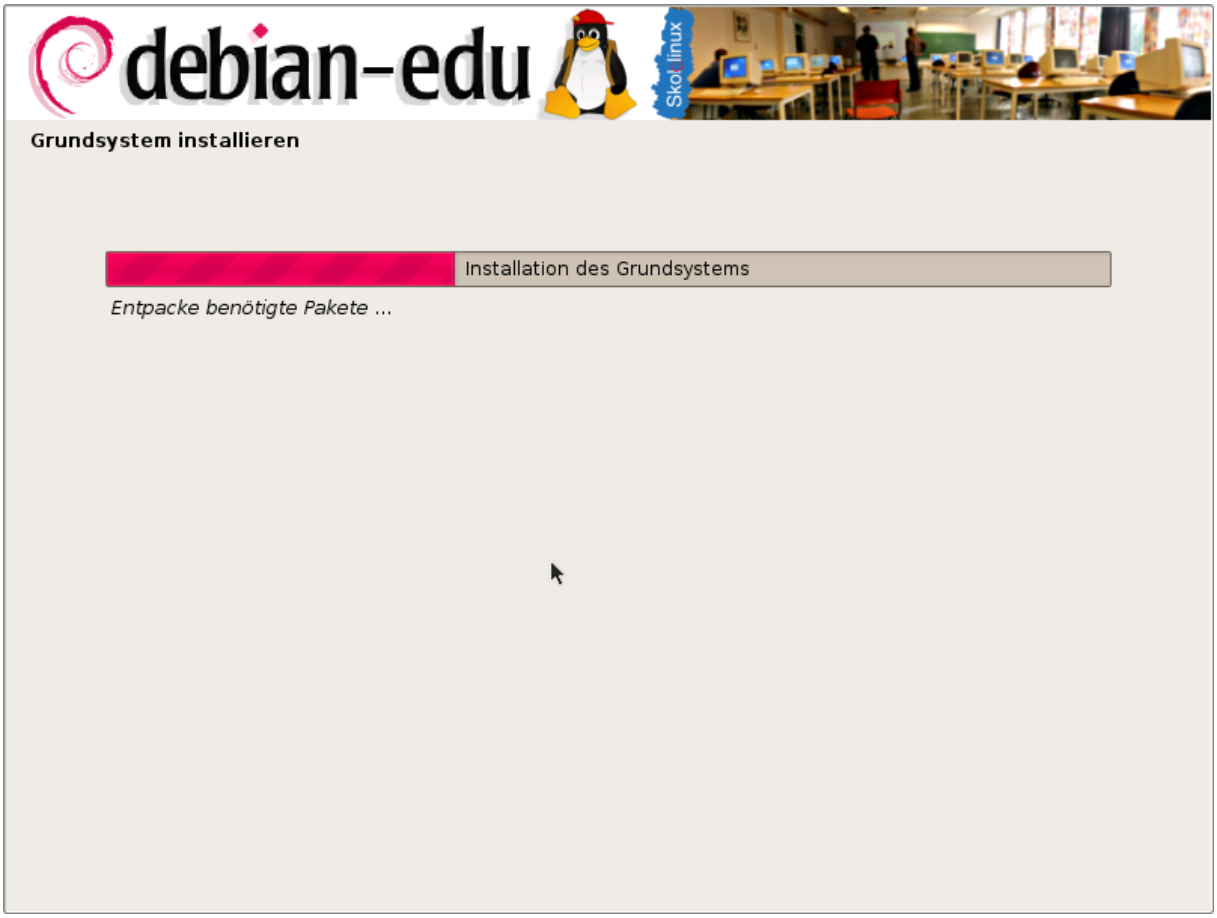

debian-edu
Skolelinux
Debian-Edu-Profil auswählen
Die Profile, die Sie auswählen, legen fest, welche Dienste nach der Installation sofort benutzt werden können. Sie können mehrere Profile auswählen, müssen aber mindestens eines auswählen.
Jedes Debian-Edu-Netz benötigt einen, und nur einen, »Hauptserver«. Dieser Server bietet (Netz-)Dienste (hauptsächlich Dateidienste und LDAP), ohne die das Netz nicht funktionsfähig ist, an. Da diese Maschine alle Daten enthält, benötigt sie eine große Festplatte. Dieses Profil beinhaltet keine grafische Oberfläche (GUI); falls Sie ein GUI wünschen, müssen Sie das Profil »Arbeitsplatzrechner« oder »Terminal-Server« installieren.
Eine Maschine, auf der das Profil »Arbeitsplatzrechner« installiert ist, ist ein normaler Rechner. Benutzer, die sich an einem »Arbeitsplatzrechner« anmelden, werden am »Hauptserver« authentifiziert und ihre persönlichen Daten und Einstellungen werden auf dem »Hauptserver« gespeichert.
Maschinen, auf denen das »Terminal-Server«-Profil installiert ist, ermöglichen den Anschluss von Thin-Clients. Dieses Profil beinhaltet auch das Profil »Arbeitsplatzrechner«, um die Programme zur Verfügung zu stellen, die auch auf einem regulären Arbeitsplatzrechner installiert sind. Um einer zu hohen Netzlast vorzubeugen, müssen Maschinen, auf denen ein Terminal-Server läuft, zwei Netzwerkkarten besitzen. Die Profile »Hauptserver«, »Terminal-Server« und »Arbeitsplatzrechner« können auch auf der selben Maschine installiert werden.
Das Profil »Einzelplatzrechner« kann nicht mit einem der Profile »Haupt-Server«, »Terminal-Server« oder »Arbeitsplatzrechner« auf der selben Maschine installiert werden.
Maschinen, die mit dem Profil »Einzelplatzmaschine« installiert werden, laufen außerhalb des Debian-Edu-Netzes (z.B. zu Hause bei Schülern und Lehrern) als Einzelplatzrechner.
Bitte wählen Sie die auf diesen Rechner passenden Profile.
Hauptserver
Arbeitsplatzrechner
Terminal-Server
Bildschirmfoto
Zurück
Weiter

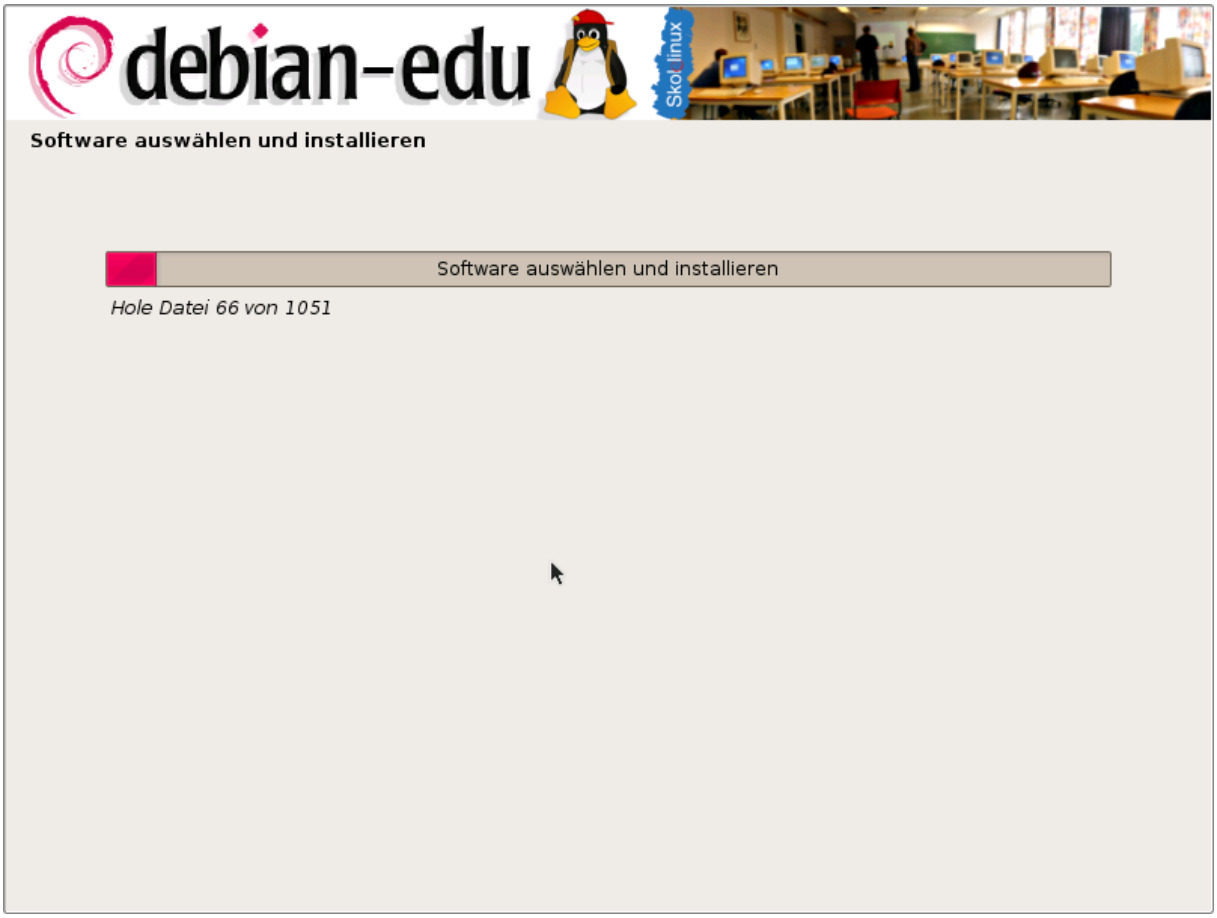

debian-edu
Skolelinux
Wirklich die automatische Partitionierung verwenden?
Dies wird die Partitionstabelle auf allen Festplatten in Ihrer Maschine zerstören. NOCHMAL: DIES WIRD ALLE FESTPLATTEN IN DER MASCHINE LEEREN! Falls Sie wichtige Daten haben, die noch nicht gesichert wurden, sollten Sie jetzt stoppen, um das Backup anzufertigen. In diesem Fall müssen Sie die Installation zu einem späteren Zeitpunkt erneut starten.
Wirklich die automatische Partitionierung verwenden?
Nein
Ja
Bildschirmfoto
Zurück
Weiter

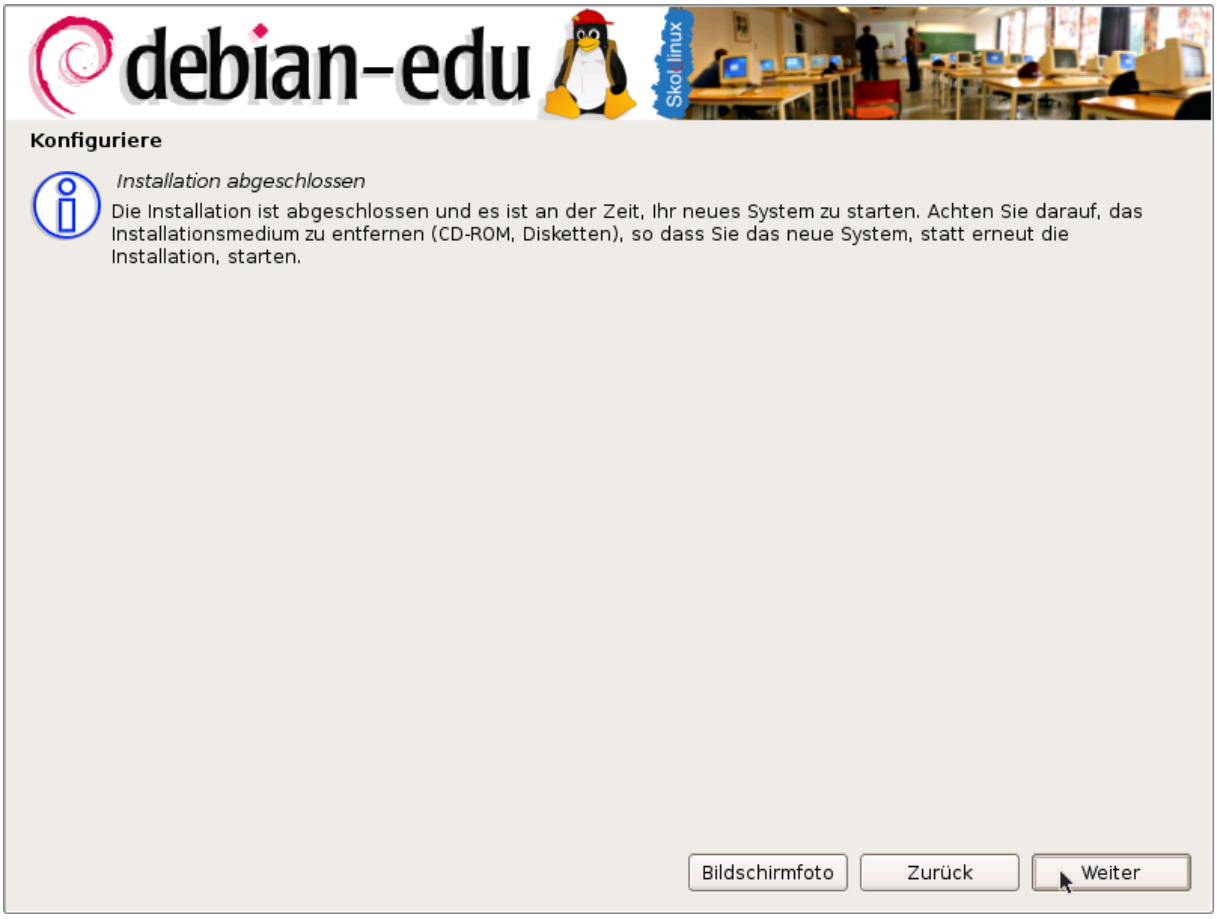

debian-edu
Skolelinux
An der Paketverwendungserfassung teilnehmen?
Das System kann anonym Statistiken über die am meisten verwendeten Pakete auf diesem System an die Distributions-Entwickler schicken lassen. Diese Informationen beeinflussen beispielsweise die Entscheidungen, welche Pakete auf die erste CD kommen.
Wenn Sie sich entscheiden teilzunehmen, wird das automatische Übertragungsprogramm wöchentlich ausgeführt und Statistiken an die Distributions-Entwickler senden. Die vollständigen Statistiken können unter http://popcon.debian.org/ eingesehen werden.
Die Wahl kann später durch Ausführen von »dpkg-reconfigure popularity-contest« geändert werden.
An der Paketverwendungserfassung teilnehmen?
Nein
Ja
Bildschirmfoto
Zurück
Weiter

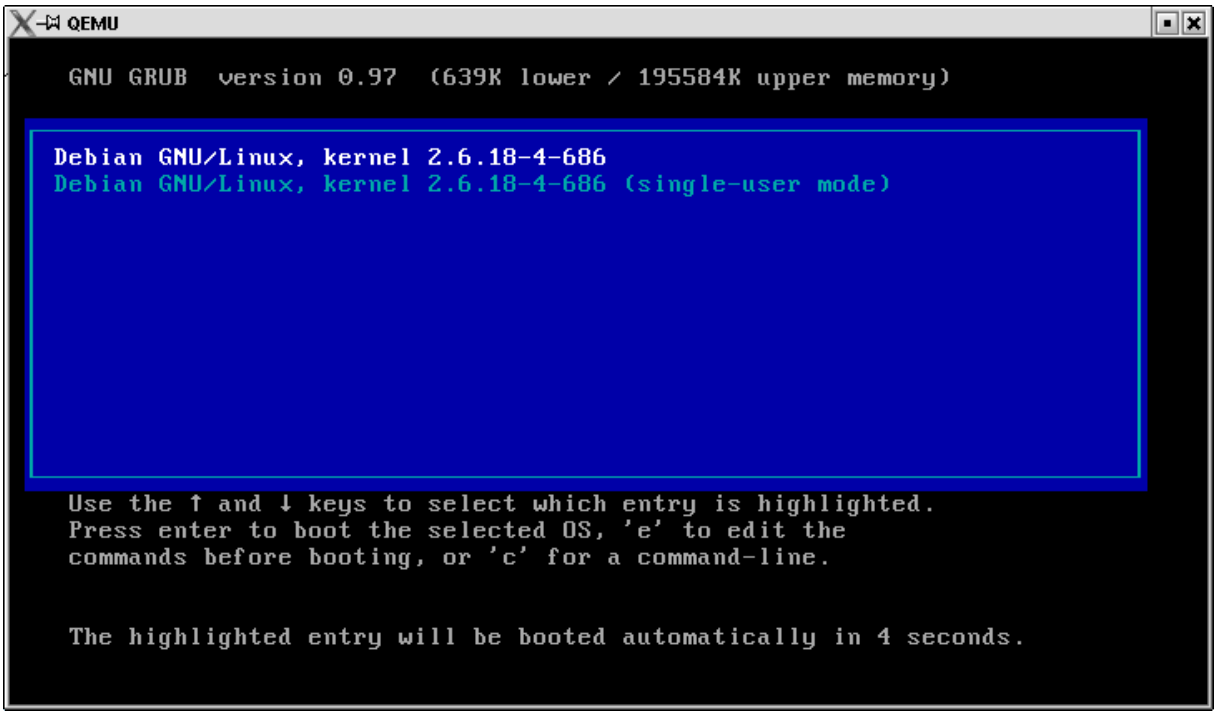

QEMU
debian-edu
Skolelinux
Configure time zone
Select your time zone:
Eastern
Central
Mountain
Pacific
Alaska
Hawaii
Arizona
East Indiana
Samoa
Screenshot
Go Back
Continue

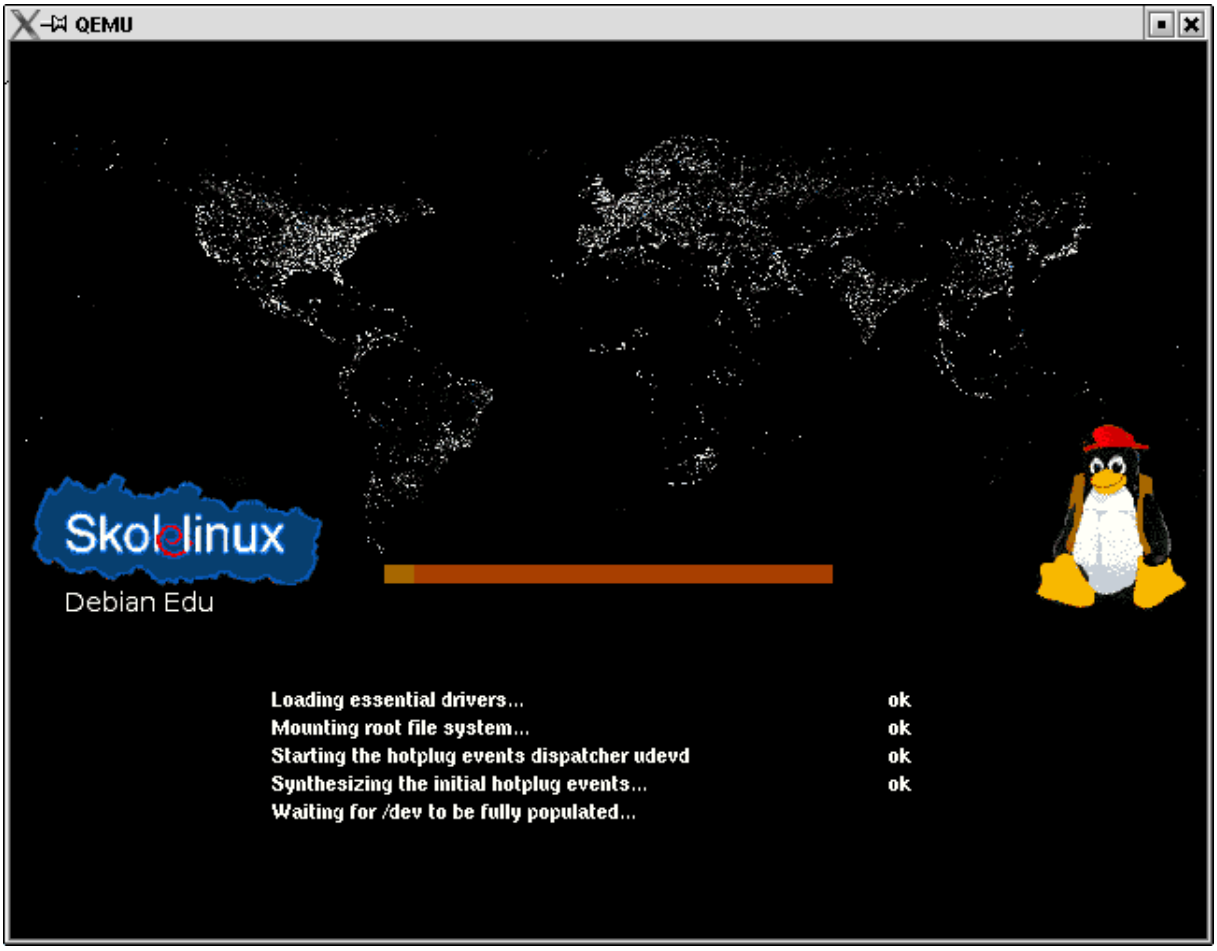

debian-edu
Skolelinux
Benutzer und Passwörter einrichten
Sie müssen ein Passwort für »root«, das systemverwaltende Konto, angeben. Ein bösartiger Benutzer oder jemand, der sich nicht auskennt und Root-Rechte besitzt, kann verheerende Schäden anrichten. Deswegen sollten Sie darauf achten, ein Passwort zu wählen, das nicht einfach zu erraten ist. Es sollte nicht in einem Wörterbuch vorkommen oder leicht mit Ihnen in Verbindung gebracht werden können.
Ein gutes Passwort enthält eine Mixtur aus Buchstaben, Zahlen und Sonderzeichen und wird in regelmäßigen Abständen geändert.
Hinweis: Sie werden das Passwort während der Eingabe nicht sehen.
Root-Passwort:
Bitte geben Sie das selbe root-Passwort nochmal ein, um sicher zu gehen, dass Sie es richtig eingegeben haben.
Bitte geben Sie das Passwort nochmals zur Bestätigung ein:
Bildschirmfoto
Zurück
Weiter


debian-edu
Skolelinux
Grundsystem installieren
Installation des Grundsystems
Entpacke benötigte Pakete ...

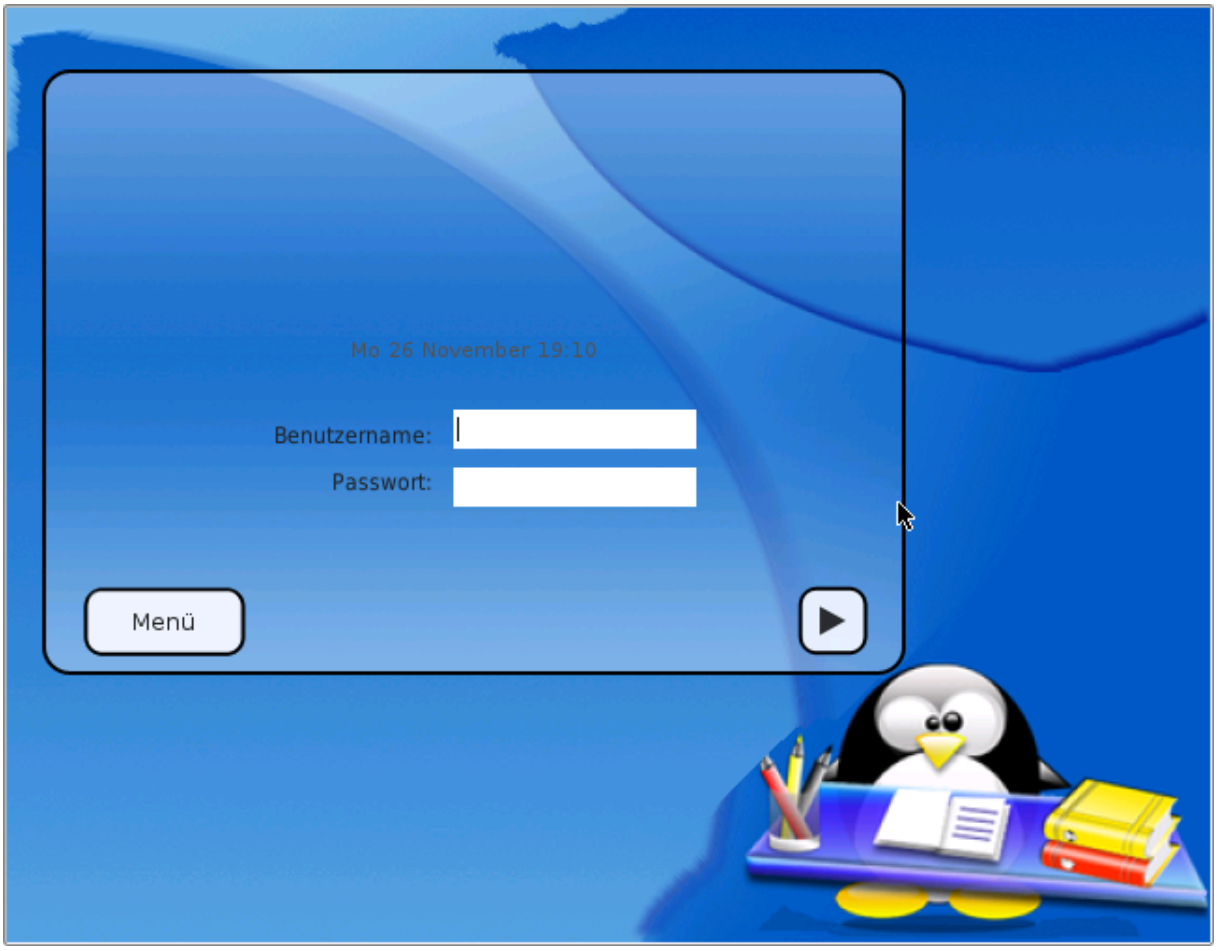

debian-edu
Skolelinux
Software auswählen und installieren
Software auswählen und installieren
Hole Datei 66 von 1051


debian-edu
Konfiguriere
Installation abgeschlossen
Die Installation ist abgeschlossen und es ist an der Zeit, Ihr neues System zu starten. Achten Sie darauf, das Installationsmedium zu entfernen (CD-ROM, Disketten), so dass Sie das neue System, statt erneut die Installation, starten.
Bildschirmfoto
Zurück
Weiter


QEMU
GNU GRUB version 0.97 (639K lower / 195584K upper memory)
Debian GNU/Linux, kernel 2.6.18-4-686
Debian GNU/Linux, kernel 2.6.18-4-686 (single-user mode)
Use the ↑ and ↓ keys to select which entry is highlighted.
Press enter to boot the selected OS, 'e' to edit the
commands before booting, or 'c' for a command-line.
The highlighted entry will be booted automatically in 4 seconds.



The KDM login screen was manually adjusted to reduce the resolution for this screen shot.

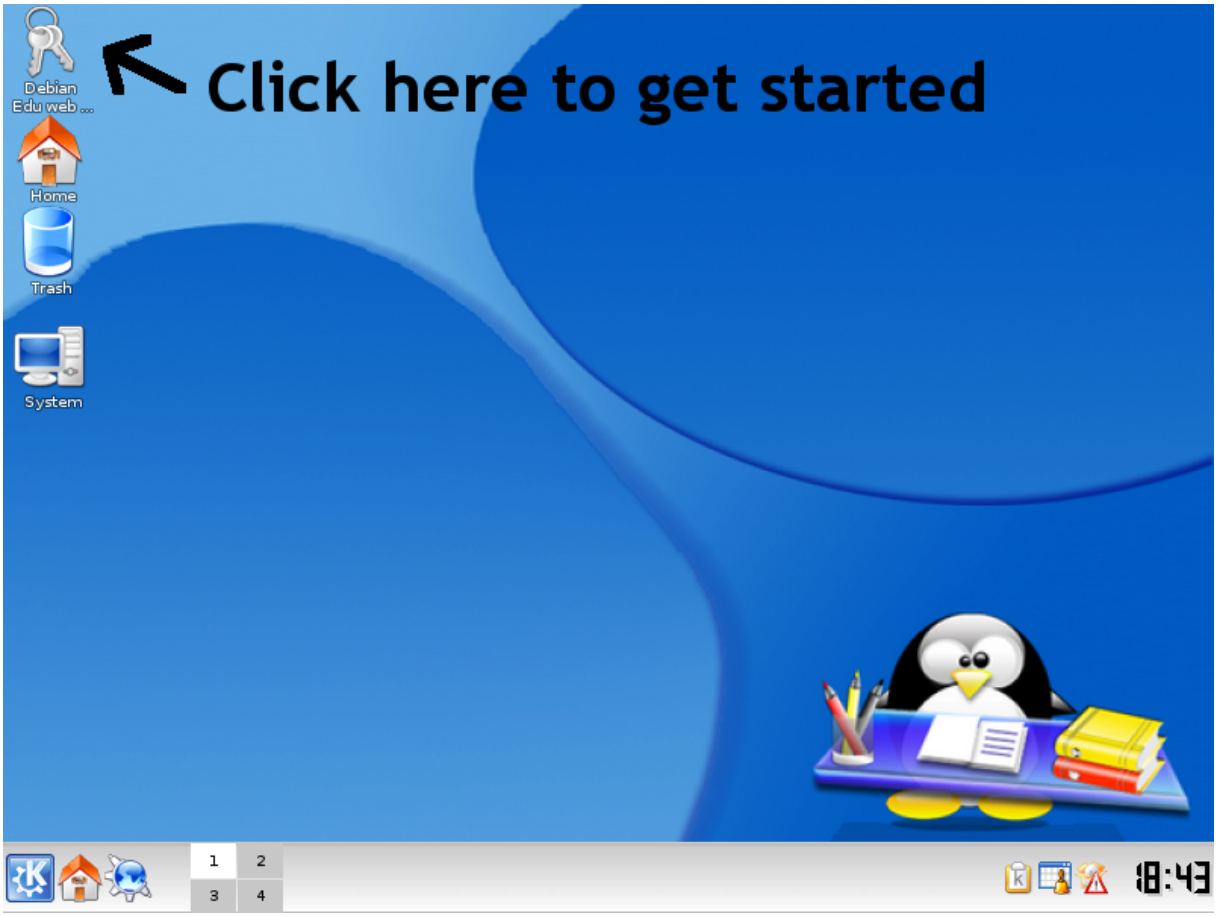


7 Getting started

This chapter describes the first steps you need to do after the installation to get started. The minimum you need to do is:

- adding workstations to host netgroups (for exporting home-directories via NFS)
- adding users
- it's advised to add the workstations to the dhcpd-config - LTSP-servers must be added.

This is described below.
The HowTo chapter describes more tips and tricks and frequently asked questions, while this chapter describes the stuff everybody needs to do.



7.1 Services running on the main server

There are several services running on the main server which can be managed via a web management interface. We'll describe each service here.

7.1.1 Web based management, using lwat

Lwat is a web based management tool, that will help you manage some important parts of your Debian Edu setup. You can manage this four main groups (add, modify, delete):

- User Administration
- Group Administration
- Automount informations
- Machine Administration

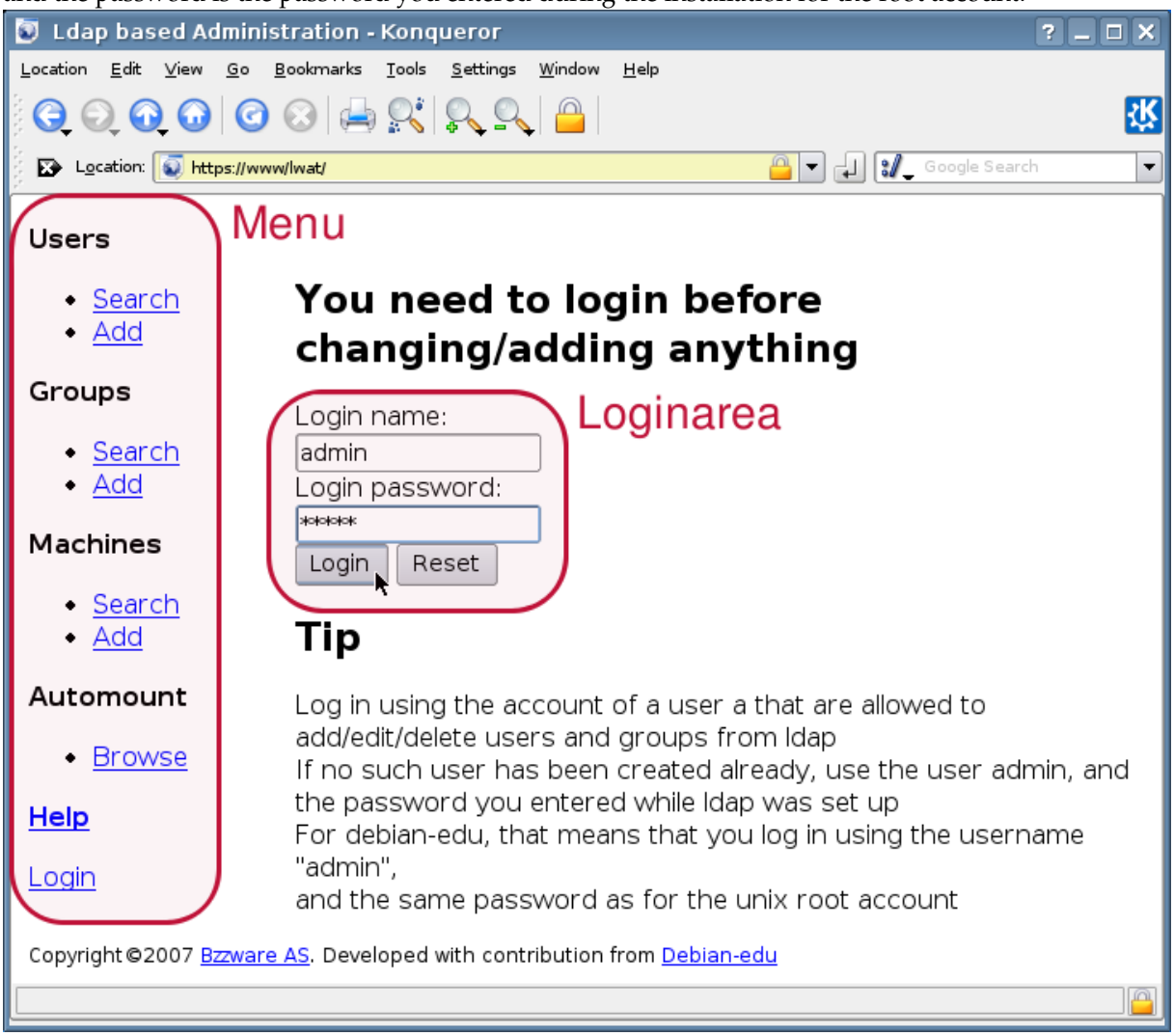
To access lwat point your webbrowser to https://www/lwat . You will get an error message, because of atleast 2 facts:

- the certificate is self-signed
- The certificate is generated for tjener.intern
- you may also get an error if the installation is more than one month old, since the certificate is only valid for one month.

When you have neglected the warnings (or fixed them...), you will see the page below with the menu fixed to the left part and the varying main part on the right. First you'll see a login screen where you can login with your admin account. If you visit this site the first time after installation, the loginname there is:

```
admin
```

and the password is the password you entered during the installation for the root account.



After login the loginarea will disappear and you can choose a task in the menu.

7.1.2 User Management with lwat

In Debian Edu account informations are stored in a LDAP directory and get used from there not only from the main server itself, but also from the workstations and thinclient server in the network. This way the information about students, pupils, teachers, ... only need to be entered once and are then available on all systems of the network.

To get the work done efficiently lwat will assist you on getting your users data entered to the LDAP directory.

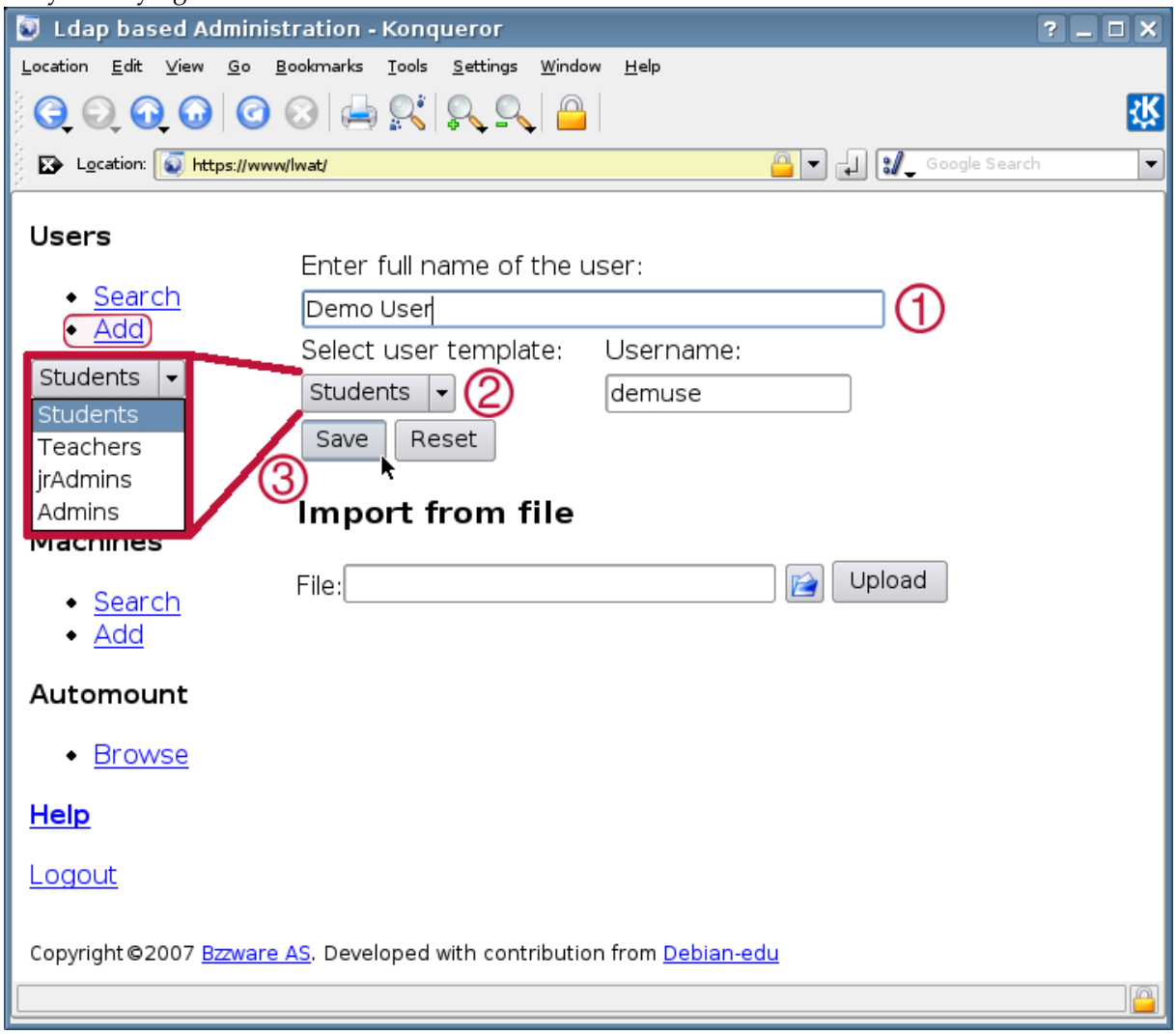
You can add users, group them in usergroups (for example to refer the members of a class more easily), update them and remove them again. The menu entries for this are the four topmost entries (in the two topmost groups).

7.1.2.1 Adding users To add users you only have to choose "Add" in the "Users" section of the menu. After choosing this entry you will see a form where you can enter the data of the user you want to add. The most important thing to add is the full name of your user (point one in the image). As you enter you will see, that lwat will generate a username automatically based on the realname. If you don't like the generated username you can change it later. Second you need to choose the role of your account, which is used by lwat to determine the privileges the user has for systemadministration. Currently lwat knows the following roles:

role	granted privileges
Students	Login and use the system
Teachers	Same as Students
jrAdmins	Same as Teachers, but can also change other user passwords (besides the ones of Admins)
Administratoren	Admins have ultimate privileges. They can add/modify/delete users/groups/machines/automounts and let windows systems join the Skolelinux domain

After choosing a suitable role you can hit the "Save" button and the user is added.

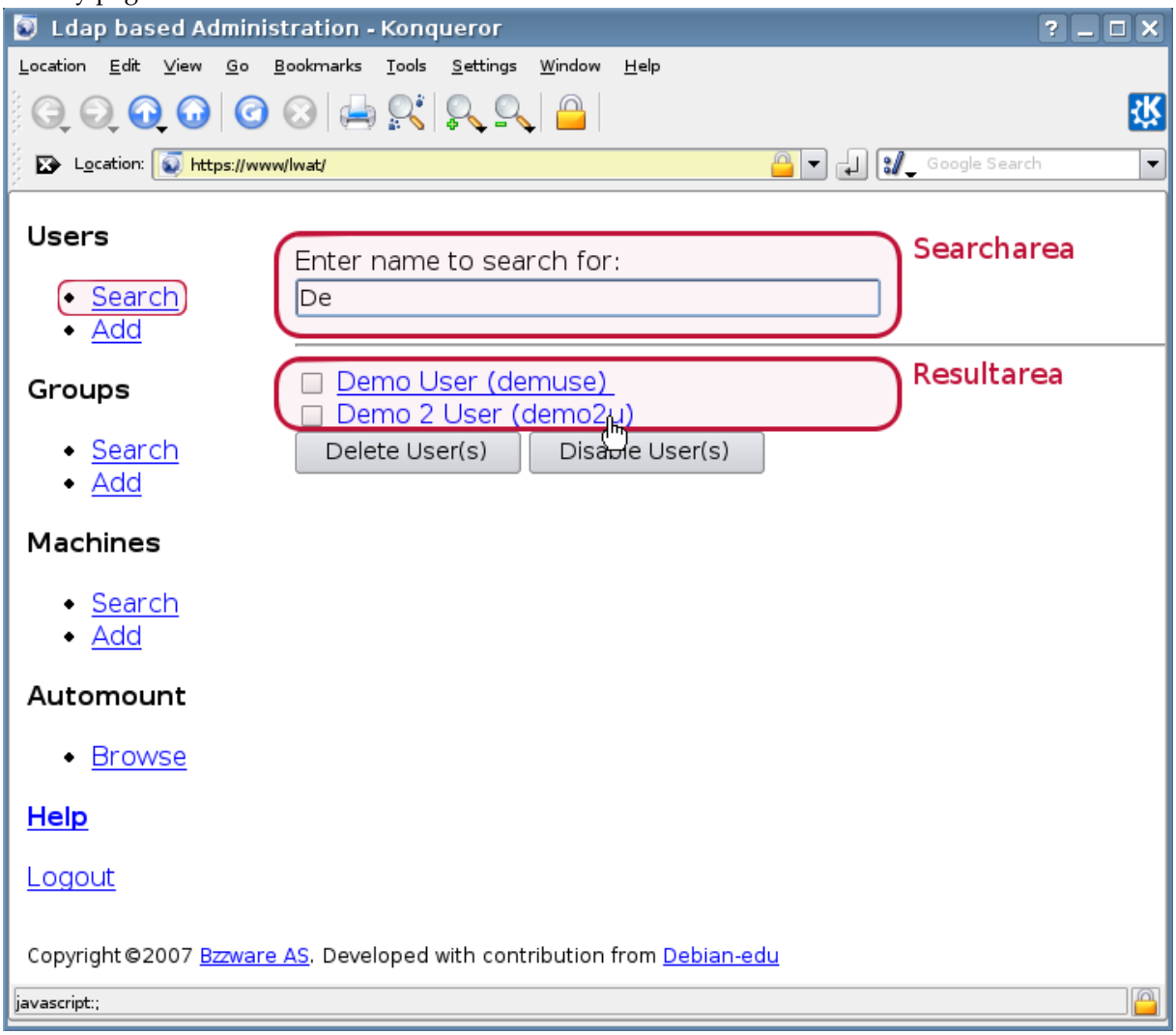
You may miss the option to set a password, that has been deactivated, but you can set a own password by modifying the user added.



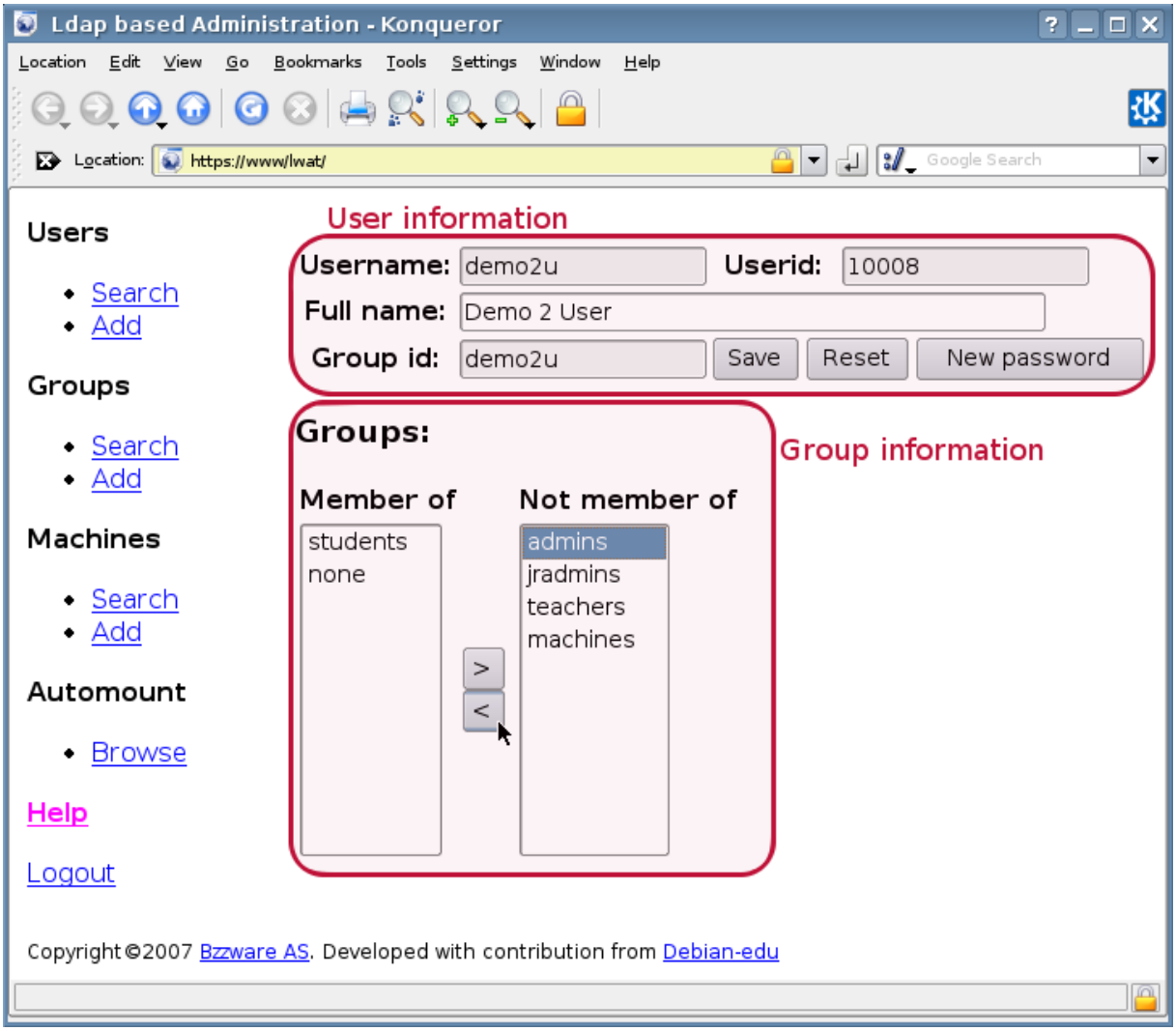
If all went well, you will see a short notice at the end of page with the data added to the ldap directory (also the form gets reset):

```
Added user: Demo User
username: demuse
password: somethingsecret
```

7.1.2.2 Search and delete Users To modify or delete a user you need to first find her using the search menu entry. You will find a form (searcharea in the screenshot) where you can enter either the realname or the username of the user. The results will show up below the form (marked as resultarea in the image). On the left of every result line there is a checkbox you can use to delete or disable on or more user with the two buttons below. If you want to modify a user, just click on it, all result lines are links to the modify page.



A new page will show up where you can modify information directly belonging to a user, change the password of the user and modify the list of groups the user belongs to.



7.1.3 Group Management with lwat

The mangement of groups is very similarly to the management of users. You can enter a name and a description per group. When be searching for groups you can also delete or disable all users of the groups found. From the modification page you can access all the users of that group.

The groups entered in the group management are also regular unix groups, so you can use them for file permissions too.

7.1.4 Machine Management with lwat

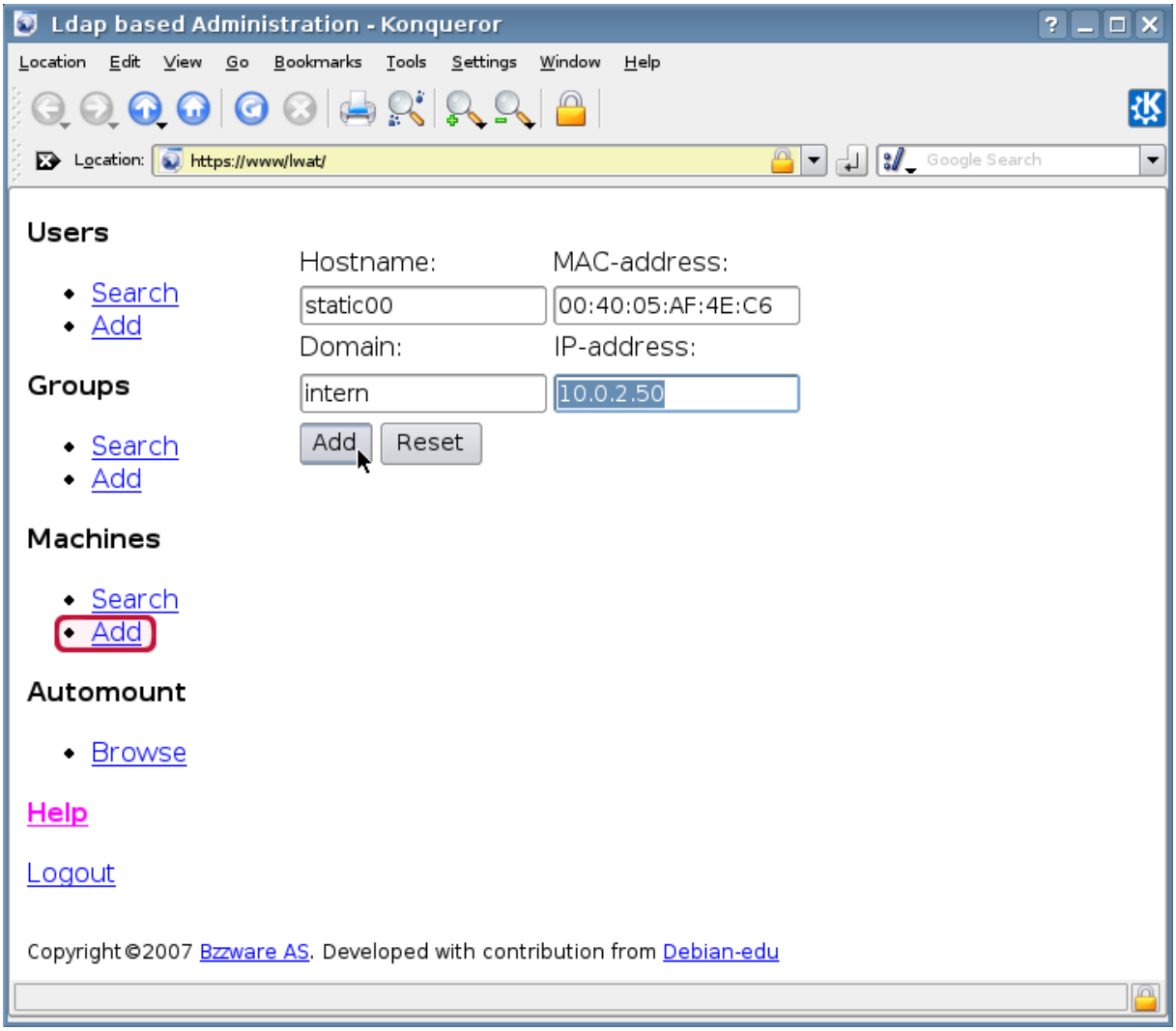
With the machine management you can basically manage all IP based devices in your Debian Edu network. Every machine added to the LDAP directory using lwat has a Hostname, an IP-address, an MAC-address and a domain name which usually is "intern". For a more verbose description about the Debian Edu architecture see the architecture chapter of this manual.

If you add a machine, you can use an ip/hostname from the preconfigured address space. The following ip ranges are predefined:

The addresses from 10.0.2.100 till 10.0.2.255 and 10.0.3.0 till 10.0.3.243 are reserved for dhcp and are assigned dynamically.

To assign a host with the MAC-address 00:40:05:AF:4E:C6 a static IP-address you only have to enter the MAC-address and the hostname static00, the remaining fields will be filled automatically according to the predefined configuration.

First address	Last address	hostname
10.0.2.10	10.0.2.29	ltspserver*xx*
10.0.2.30	10.0.2.49	printer*xx*
10.0.2.50	10.0.2.99	static*xx*



 This will not configure the dhcp server. You need to configure the host statically or edit the configuration of the dhcp server by hand as shown directly below.

7.1.4.1 Assign static ip addresses with dhcp

To assign a static ip address to a host which you added to the ldap tree via lwat, you need to edit `/etc/dhcp3/dhcpd.conf` and run `/etc/init.d/dhcp3-server restart` as root.

For our example above you would, after open /etc/dhcpd3/dhcpd.conf in your favourite editor, search for the configuration section of the host *static00* . You should find something exactly like this:

```
host static00 {
  hardware ethernet 00:00:00:00:00:00;
  fixed-address static00;
}
```

You need to replace the all-zero MAC-address with the correct one of your static host. For our example host it will look like this:

```
host static00 {
  hardware ethernet 00:40:05:AF:4E:C6;
  fixed-address static00;
}
```

 Don't forget to restart the dhcpd as described above whenever you have changed the configuration.

7.1.4.2 More lwat documentation

The full documentation for lwat can be found at `/usr/share/doc/lwat/` on the main server or online .

7.1.5 Printer Managment

For Printer Management point your webbrowser to https://www:631 This is the normal cups management site where you can add/delete/modfiy your printers and can clean up the printing queue. For changes where you have to login as root with your root password, you will be forced to use ssl encryption.

If you connect the printer for the first time, we suggest to run `printconf` as root. FIXME: explain what to do when this does not accomplish anything.

7.1.6 Clock synchronization

The default configuraiton in Debian Edu is to keep the clocks on all machines synchronous but not necessarily correct. NTP is used to update the time. The clocks will not be synchronized with an external source by default, to make sure the machines to not use external network connections active all the time. This was configured like this after a school discovered their ISDN network was up all the time, giving them a nasty extra phone bill.

To enable synchronization with an external clock, the file /etc/ntp.conf on the main-server need to be modified. The comments in front of the `server` entries need to be removed. After this, the ntp server need to be restarted by running `/etc/init.d/ntp restart` as root. To test if the server is using the external clock sources, run `ntpq -c lpeer` .

7.1.7 Extend full partitions

Because of a bug in the automatic partition, some partitions might be too full after installation. To extend the full partitions, run `debian-edu-fsautoresize -n` as root. See the "Resize Partitions" HowTo in the administration howto chapter for more information.

8 Maintainance

8.1 Updating the software

This section explains how to use `aptitude upgrade` and kde-update-notifier.

Using `aptitude` is really simply. To update a system you need to execute two commands on the command line as root: `aptitude update` (updates the lists of available packages) and `aptitude upgrade` (upgrades the packages for which an upgrade is available).

Instead of using the command line you can also use kde-update-notifier. FIXME: Explain how, maybe with a screenshot.

It is also a good idea to install `cron-apt` and `apt-listchanges` and configure them to send mail to an address you are reading.

`cron-apt` will notify you once a day via email, which packages need an update. It does not install these updates, but downloads them (usually in the night), so you don't have to wait for the download, when you do `aptitude upgrade` .

`apt-listchanges` can send new changelog entries to you.

8.2 Backup Management

For the backup management point your browser to https://www/slbackup-php . Please note that you have to access this site via ssl, since you have to enter the root password there. If you try to access this site without using ssl it will fail.

Per default the tjener will backup `/skole/tjener/home0` ,`/etc/` and the ldap to /skole/backup which is in the lvm. If you only want to have things twice (if you delete something) this setup should be fine for you.

`/root/.svk` will also be backed up if you install from etch-test today. (FIXME this, once it's in etch.)

Be aware that this backup doesn't protect you from failing harddrives.

If you want to backup your data to an external server, a tape device or another harddrive you'll have to modify the existing configuration a bit. FIXME: I have to have a look on the webpage of slbackup-php to describe this further

8.3 Server Monitoring

8.3.1 Munin

Munin trend reporting system is available from https://www/munin/ . It provides system status measurement graphis on a daily, weekly, monthly and yearly basis, and allow the system administrator help when looking for bottlenecks and the source of system problems.

The list of machines being monitored using munin is generated automatically based on the list of hosts reporting to sitesummary. All hosts with the package munin-node installed is registered for munin monitoring. It will normally take two days from a machine is installed until munin monitoring start, because of the order the cron jobs are executed. To speed up the process, run `/etc/cron.daily/sitesummary-client` as root on the freshly installed machine, and `/etc/cron.daily/sitesummary` as root on the sitesummary server (normally the main-server).

Information about the munin system is available from http://munin.projects.linpro.no/ .

8.3.2 Nagios

Nagios system and service monitoring is available from https://www/nagios2/ .

The username is nagiosadmin and the password is undefined, you must set your own password before you can login and use nagios. For security reasons, avoid using the samme password as root. To change the password you can run the following command as root:

```
htpasswd /etc/nagios2/htpasswd.users nagiosadmin
```

By default from Debian-Edu 3.0r1 Nagios does not send email. This can be changed by replacing `notify-by-nothing` with `host-notify-by-email` and `notify-by-email` in the file `/etc/nagios2/debian-edu/contacts.cfg` .

Information about the nagios system is available from http://www.nagios.org/ or in the `nagios-2-doc` package.

8.3.3 Sitesummary

A simple report from sitesummary is available from https://www/sitesummary/ .

Some documentation on sitesummary is available from http://wiki.debian.org/DebianEdu/HowTo/SiteSummary

9 Upgrades

Before explaining how to upgrade, please note, that you do this update on your productive server on your own risk. **Debian Edu/Skolelinux comes with ABSOLUTELY NO WARRANTY, to the extent permitted by applicable law.** Please read this chapter completly before attempting to upgrade.

More information about the Debian etch release is available in its installation manual.

If you want to be sure that after the upgrade everything works like before , you should test the upgrade on a test server, which is configured the same way as your production server. There you can test the upgrade without risk and see if everything works as it should.

Also it might be wise to wait a bit and keep running sarge for some more weeks, so that others can test the upgrade, experience problems and document them here. Debian Edu sarge will receive continued support for some time in the future, but when Debian ceases support for sarge , Debian Edu will (have to) do that too. This is expected to happen in April 2008.

9.1 Upgrades from Debian Edu sarge

Please read this chapter completly before you start upgrading your systems.

In case of problems you could also read the releasenotes for Debian etch . (Debian Edu/Skolelinux "2.0 Terra" installed a 2.6 kernel as default, but if you are running a 2.4 kernel, you *should* read the notes on upgrading from kernel 2.4 to 2.6 before you upgrade!)

9.1.1 Partioning scheme changed

The main problem upgrading from the sarge-based Release to Terra is that the Partition Scheme changed completly. The sarge-based Release has two volume Groups:

- vg_data which holds the Data Partition as /skole/tjener/home0, ...
- vg_system contains System Partitions as /var, /usr /var/spool/squid

But the etch based release has only 1 Volume Group due to internal changes of the Installer.

The main problem is that the vg_system volumegroup is quite small since the data in this partition is mostly static. When trying the upgrade on a virtual machine with an 8GB harddrive, the upgrade failed since it was not possible to free more space on the vg_sytem. Please note that you should have about 1,5GB free space on /var and about 600MB free space on /usr. If this is not the case the upgrade will fail because of too little free space on the device.

9.1.2 Prepare the system

If you have enough space in the vg_system volumegroup but not in the lv_var partition, you have to resize this partition:

- 1.) Umount the `/var` partition, you 'll have to umount the `/var/spool/squid` partition for this to work, too:

  ```
  /etc/init.d/squid stop
  umount /var/spool/squid
  umount -fl /var
  ```

  2.) fsck the partition:

  ```
  e2fsck -f /dev/vg_system/lv_data
  ```

  3.) resize the partition:

  ```
  lvextend -L +1GB /dev/vg_system/lv_data
  ```

  4.) resize the filesystem:

  ```
  resize2fs /dev/vg_system/lv_data
  ```

  5.) mount the partitions again:

–

```
mount /var
mount /var/spool/squid
/etc/init.d/squid start
```

Now modify `/etc/apt/sources.list` to contain these lines

•

```
deb http://ftp.debian.org/debian etch main
deb http://security.debian.org/ etch/updates main
deb http://ftp.skolelinux.org/skolelinux etch local
```

And start the upgrade with:

•

```
aptitude update
aptitude dist-upgrade
```

9.1.3 Answers to debconf questions raising during upgrade

Here we can give you some hints, what you should answer to the debconf question during the upgrade. But please note: This upgrade HowTo is based on a very plain fresh installation of an mainserver + terminalserver.

Which questions exactly raise up in addition to the ones described here depends on what is additionally installed on your system. (Additionally to what is installed as default in the sarge based Debian Edu release). So if there are any questions which you don't know how to answer, don't hesitate to ask us at the mailinglist (debian-edu@lists.debian.org) or at IRC (irc.oftc.net): #debian-edu.

* Configure nagios-common.

- Here you have to enter a password for the *nagiosadmin* user.

* Configure console-data

- Choose "Don't change keyboard layout"

* Configure openssh-server

- Don't deactivate challenge-response Auth.

* Configure systat

- Choose the default (yes) here.

* Configure popularity-contest

- If you choose "yes", this will help us improve Debian Edu. (We'll get an weekly report which programs are how often used). The data is gathered anonymously and you have the option to say "no".

* Configure libnss-ldap

1. Change the prompt to: *ldaps://ldap/*
2. Change the prompt to: *dc=skole,dc=skolelinux,dc=no*
3. Use ldapversion 3 here
4. Which account should root use for ldap lookups FIXME
5. Which password should root use here FIXME

* Upgrade glibc now. Answer "yes".
* Restart Services. Answer "yes".
These are the debconf questions you will see if you have no additional packages installed.
Now the upgrade process will start to upgrade the packages.
Please note: You will be asked several times if you want to keep your old modified version of a configfile or if you want to get the latest. The default is to keep your modified one. Unless you really have modified something, please always choose: "Install the latest one".
The upgrade will fail with this error message:

```
Errors were encountered while processing:
 mozilla-firefox-locale-it
 mozilla-firefox-locale-el
E: Sub-process /usr/bin/dpkg returned an error code (1)
```

To fix this you have to edit these two files: */var/lib/dpkg/info/mozilla-firefox-locale-it.postrm* and */var/lib/dpkg/info/mozilla-firefox-local-el.postrm* and comment out in both the line containing: *update-mozilla-firefox-chrome* . Then restart the upgrade process with:

```
apt-get -f install
```

Now the upgrade continues:
* Several Modified configuration files (nagios)

- You should always keep your installed one (default) and hit enter

Then the installation failes another time:

```
Errors were encountered while processing:
 slapd
E: Sub-process /usr/bin/dpkg returned an error code (1)
```

In order to fix this, rename this directory: */var/backups/dc=skole,dc=skolelinux,dc=no-2.2.23-8.ldapdb* and since openldap now runs as user *openldap* (instead of as root) the permissions of the configuration files have to be changed:

```
chown -R openldap:openldap /etc/ldap/
apt-get -f install
```

Then the installation should finish **without** an error. Since now many packages are not upgrades please restart the dist-upgrade process again with:

```
aptitude dist-upgrade
```

The next error raising up is this one:

```
Errors were encountered while processing:
 /var/cache/apt/archives/courier-authlib-ldap_0.58-4_i386.deb
E: Sub-process /usr/bin/dpkg returned an error code (1)
```

Please remove the package: *courier-ldap* with

```
aptitude remove courier-ldap
```

and wait until it is finished.Then restart the dist-upgrade process again.
If you have only the default packages installed the upgrade process should now finish without raising more errors.

9.1.4 Problem upgrading bind

The only remaining upgrade issue is that the user of bind9 has changed, so you'll have to chown all bind-configuration files.

```
chown bind:root -R /etc/bind
```

See #386791 for more information.

9.1.5 Samba groupmaps handeling changed

There has been a change in how samba handles groupmaps between sarge and etch. Samba in sarge handled groupmaps internally, so a unix group was also a samba group. In etch samba keeps groupmap information in the LDAP database. Unfortunatly this issue was discovered too late for our LDAP admin tool "lwat" to be aware of the situation.

When you upgrade your LDAP from a sarge installation, you must make sure to create the Domain Admins account, neccessary for correct samba domain operation. Create the Domain Admins account with the command:

```
/usr/bin/net groupmap add rid=512 unixgroup=admins \
             type=domain ntgroup="Domain Admins" \
             comment="All system administrators in the school"
```

If you want your Windows computers to be aware of what groups users are in, you must create the groupmaps in LDAP manually, this is explained in more detail in the HowTo/NetworkClients chapter of this manual.

9.2 Upgrades from older Debian Edu / Skolelinux installations

Upgrades from the woody based Debian Edu / Skolelinux installation are not supported. Upgrade to the sarge based version first, a howto can be found at http://wiki.debian.org/DebianEdu/HowTo/-UpgradeFrom1.0 . Then upgrade to Terrra (etch-based Release).

10 HowTo

- HowTos for general administriation
- HowTos for the desktop
- HowTos for networked clients
- HowTos for teaching and learning

11 HowTos for general administration

The Getting Started and Maintainance chapters describe how to get started with Debian Edu and how to do the basic maintainance work. The howtos in this chapter are already "advanced" tipps and tricks.

11.1 Installing single service machines for spreading the load from main-server

- barebone install using debian-edu-expert
- install the packages for the service
- configure the service
- disable the service on main-server
- update dns on main-server

11.2 Tracking /etc/ using the svk version control system

With the introduction of the `debian-edu-etc-svk` script in Debian Edu, all files in `/etc/` are tracked using svk as a version control system. This make it possible to see when a file added, changed and removed, as well as what was changed if the file is a text file. The svk repository is stored in `~root/.svk/` .

This feature is activated automatically in the Etch based version of Debian Edu, and all changes done during installation are registered. Changes in `/etc/` are commited every hour.

List of useful commands:

```
debian-edu-etc-svk diff
debian-edu-etc-svk log
debian-edu-etc-svk status
debian-edu-etc-svk commit
debian-edu-etc-svk ignore
```

11.2.1 Usage examples

In a freshly installed system try this to see all changes done since the system was installed:

```
debian-edu-etc-svk diff -r6 | less
```

To see the list of changes done in /etc/, use this command:

```
debian-edu-etc-svk log | less
```

To see the changes done to a specific file, specify the file:

```
debian-edu-etc-svk diff -r6 /etc/resolv.conf | less
```

To revert a change, use the diff command to look at the change, and edit the file to undo the change, or use a command like this to do it automatically:

```
( cd /etc && debian-edu-etc-svk diff -r6 /etc/resolv.conf | patch -p1 -R )
```

To manually commit a file, because you don't want to wait up to an hour:

```
debian-edu-etc-svk commit /etc/resolv.conf
```

If you don't want a specific file to be tracked in svk, you can tell to ignore it. But this is rarely useful 

```
debian-edu-etc-svk ignore /etc/path/to/file/to/be/ignored
```

11.2.2 For those who upgraded from sarge/woody

/etc in svk was introduced with the etch based release of Debian Edu. If you installed your system prior to this, you need to initialize svk once with the following command run as root:

```
debian-edu-etc-svk init
```

This adds all files in /etc to svk and also activates the hourly commit cronjob.

11.3 Resize Partitions

Most partitions in Debian Edu are logical LVM volumes. Only the /boot/ partition is not. With the Debian/Etch release of Debian Edu, it is possible to extend partitions while they are mounted. This is a feature of the Linux kernel since version 2.6.10. Shrinking partitions still need to happen while the partition is unmounted.

It is a good idea to avoid creating very large partitions, as large partitions will take a long time to restore from backup if the need should arise, and file system check take a very long time for large partitions. A good limit can be 20 GiB. It is better, if possible, to create several smaller partitions than one very large one.

To make it easier to extend full partitions, the `debian-edu-fsautoresize` script is provided. When invoked, it reads the configuration from `/usr/share/debian-edu-config/fsautoresizetab` , `/site/etc/fsautoresizetab` and `/etc/fsautoresizetab` , and based on the rules provided in these files propose to extend partitions with too little free space. Without any arguments, it will only write the commands needed to extend the file system, and the argument `-n` is needed to actually extend the file systems.

11.3.1 Logical Volumne Management

Logical Volumne Management (LVM) enables resizing the partitions while they are mounted and in use. You can learn more about LVM in the LVM HowTo .

11.4 Using volatile.debian.org

Since volatile.debian.org is a relativly new service, introduced with Debian Etch, it's not enabled on default installations.

11.4.1 What is debian-volatile?

Quoting from the webpage:

- Some packages aim at fast moving targets, such as spam filtering and virus scanning, and even when using updated data patterns, they do not really work for the full time of a stable release. The main goal of volatile is allowing system administrators to update their systems in a nice, consistent way, without getting the drawbacks of using unstable, even without getting the drawbacks for the selected packages. So debian-volatile will only contain changes to stable programs that are necessary to keep them functional.

11.4.2 How to use volatile

Since the volatile archive key is included in the `debian-archive-keyring` package, which is installed by default, you do not have to add this key manually to roots keyring anymore. Just add the following line to `/etc/apt/sources.list` :

```
deb http://volatile.debian.org/debian-volatile etch/volatile main
```

And run `aptitude update && aptitude upgrade` .

11.5 Using backports.org

You are running Debian Edu, because you prefer the stability of Debian Edu. It runs great, there is just one problem: sometimes software is a little bit more outdated as you like. This is where backports.org steps in.

Backports are recompiled packages from Debian testing (mostly) and Debian unstable (in a few cases only, e.g. security updates), so they will run without new libraries (wherever it is possible) on a stable Debian distribution like Debian Edu. **We recommend you to pick out single backports which fits your needs, and not to use all backports available there.** Please follow the instructions on http://www.backports.org to use these backports.

You will need to add the backports.org archive key to root's `gpg` keyring, so that `apt` can use this repository securily . This is done by running these commands as root:

```
# install the debian-keyring securily:
aptitude install debian-keyring
# fetch the backports.org key insecurily:
gpg --keyserver pgpkeys.pca.dfn.de --recv-keys 16BA136C
# check securily if the key is correct and add it to root's keyring if it is:
gpg --keyring /usr/share/keyrings/debian-keyring.gpg --check-sigs 16BA136C && gpg ↩
    --export 16BA136C | apt-key add -
# update the list of available packages:
aptitude update
```

Then you can either use `aptitude -t etch-backports install <packagename>` to install or update packages once, or you can configure a package to be always installed from backports.org though `/etc/apt/preferences` which is described in the instructions on backports.org .

The second variant has the advantage, that updates to backports are installed automatically when they are available. With the first variant you need to update manually.

11.6 Java

```
apt-get install sun-java5-plugin sun-java5-jre sun-java5-fonts
```

11.7 HowTos from wiki.debian.org

The HowTos from http://wiki.debian.org/DebianEdu/HowTo/ are either user- or developer-specific. Let's move the user-specific HowTos over here (and delete them over there)! (But first ask the authors (see the history of those pages to find them) if they are fine with moving the howto and putting it under the GPL.)

- http://wiki.debian.org/DebianEdu/HowTo/AutoNetRespawn
- http://wiki.debian.org/DebianEdu/HowTo/BackupPC
- http://wiki.debian.org/DebianEdu/HowTo/ChangeIpSubnet
- http://wiki.debian.org/DebianEdu/HowTo/SiteSummary
- http://wiki.debian.org/DebianEdu/HowTo/Squid_LDAP_Authentication

12 HowTos for the desktop

12.1 KDE Kiosk mode

Two default profiles are included:

debian_edu_pupils (enabled for members of the students file group)

- customized set of icons appears on student desktops
- makes sure that the programs behind the desktop icons also show up in the kde panel
- adept is not started
- makes sure that students cannot start another kde session
- disables possibility to gain root access for students

debian_edu_root (enabled for the root user and members of the admins file group)

- adds a desktop icon to connect to the local webserver on tjener to provide easy access to all the administration programs

Note: : modifications to the profiles can be done using `kiosktool` . However, unless you follow the step below, your changes will be overwritten by upgrades.

If you want to modify the kiosk profiles, you can either copy the existing ones and modify them, or create new kiosk profiles in (for example) `/etc/kde3/kioskprofiles/` and enable them in `/etc-/kde-user-profile` . The kiosk tool will do this for you if you click "profile properties" and browse to a new folder.

If you don't want to use kioskmode, disable it in `/etc/kderc` or `/etc/kde-user-profile` . (FIXME: in which of the two?!)

12.2 Modifying the kdm login screen

In Debian/Etch, the way to customize the kdm login screen was changed. Now, it is done by adding a file in `/etc/default/kdm.d/` specifying variables to override the default.

Here is one example used to activate the theme in the `desktop-base` package:

```
USETHEME="true"
THEME="/usr/share/apps/kdm/themes/debian-moreblue"
```

See the code in `/etc/init.d/kdm` for information on how these variables are used.

12.3 Flash

To install the Adobe Flash Player web browser plugin, install the `flashplugin-nonfree` debian package. It requires a working Internet connection and will download the precompiled binary from Adobe.

 version 9.0.31.0.1 of the package do not work in Etch. This is expected to be fixed in the near future. [2007-11-30]

An alternative is to install flashplayer-mozilla from debian-multimedia. It work with both konqueror and firefox.

To install newer version of flash, download correct deb-package from ftp://ftp.skolelinux.no/debian/-pool/contrib/f/flashplugin-nonfree/ and install with dpkg -i <package-name> as root.

 **Warning** : The software you install has no trust path. Software installed with `apt-get` is cryptographically signed to ensure a trust path.

E.g. to install flashplugin for i386 architecture as root. Download via webbrowser or with wget:

```
wget ftp://ftp.skolelinux.no/debian/pool/contrib/f/flashplugin-nonfree/ ↩
    flashplugin-nonfree_9.0.48.0.2_i386.deb
```

If you previously installed flashplayer-mozilla, you must remove this first:

```
apt-get remove flashplayer-mozilla
```

Then install:

```
dpkg -i flashplugin-nonfree_9.0.48.0.2_i386.deb
```

12.3.1 Sound with Flash in thin clients

If sound doesn't sound properly in thin clients when browsing certain pages (as youtube.com), it can be solved installing a package in the thin clients server. To do it, login as root in the server:

 **Warning** : The software you install has no trust path. Software installed with `apt-get` is cryptographically signed to ensure a trust path.

```
wget http://pulseaudio.vdbonline.net/libflashsupport/libflashsupport_1.0~2219-1 ↩
    _i386.deb
```

Then:

```
dpkg -i libflashsupport_1.0~2219-1_i386.deb
```

12.4 Other useful plugins

After adding the multimedia repository:

```
apt-get install mozilla-mplayer mozilla-acroread acroread-plugins
```

12.5 Playing DVDs

libdvdcss is needed for playing most commercial !DVDs. For legal reasons it's not included in Debian (Edu). If you are legally allowed to use it, you can use the packages from debian-multimedia.org.

To use www.debian-multimedia.org visit the homepage and find a mirror, or just add

```
deb http://debian-multimedia.org etch main
```

to your sources list. Eventually install key package for multimedia (debian-multimedia-keyring).

Install multimedia and dvd libraries

```
apt-get install libdvdcss2 w32codecs
```

13 HowTos for networked clients

13.1 Thin Clients vs Diskless workstations

Instructions on how to enable diskless workstations / stateless workstations / lowfat clients / half-thick clients are available from http://wiki.debian.org/DebianEdu/HowTo/LtspDisklessWorkstation

13.2 LTSP in detail

13.2.1 lts.conf

To make special adaptations and configurations for specific thinclients, you can edit the file `/opt/ltsp/i386/etc/lts.conf` . Have a look at `/opt/ltsp/i386/usr/share/doc/ltsp-client/examples/lts.conf` to see examples and what parameters you can specify.

The default values is defined under `[default]` , to configure one client, specify which client using the client mac adress or ipadress like this `[192.168.0.10]` .

Example: To make the thinclient ltsp010 use 1280x1024 resolution, add something like this:

```
[192.168.0.10]
X_MODE_0 = 1280x1024
X_HORZSYNC = "60-70"
X_VERTREFRESH = "59-62"
```

somewhere below the default settings.

Depending on what changes you make, it may be necessary to restart X on the client (by pressing alt+ctrl+backspace) or restart the client.

To use ipadresses in `lts.conf` you should add the client mac-address to your dhcp-server. Otherwise you should use the client mac-address directly in you `lts.conf` file.

13.2.2 Load balancing LTSP servers

It is possible to set up the clients to connect to one of several servers for load balancing. One way is listing several servers using `LDM_SERVER` in `lts.conf` . Another is by providing `/opt/ltsp/i386/usr/lib/ltsp/get_hosts` as a script printing one or more servers to connect to. In addition to this, each ltsp chroot need to include the ssh host key for each of the servers.

This feature was new in ltsp version 0.99debian12+0.0.edu.etch.8 to be included in 3.0r1.

13.2.3 Sound with LTSP clients

If the client has sound hardware support and alsa is used (currently, this is the default sound system in Debian), module snd-pcm-oss should be loaded by the client hardware to assure esd can find /dev/dsp. If it's not done automatically, this line:

MODULE_01 = "snd-pcm-oss"

should be added to the server in the /opt/ltsp/i386/etc/lts.conf file.

13.3 Connecting Windows machines to the network / Windows integration

13.3.1 Joining the domain

For Windows clients the Windows domain "SKOLELINUX" is available to be joined. A special service called Samba, installed on the main-server tjener, enables Windows clients to store profiles and userdata and also authenticates the users during the login.

In order to make Windows clients join the domain some (few) steps are required:

1. Create a user with membership in the "admins" group (if not already existing)

- In order to be able to join the "SKOLELINUX" domain a member of the admins group needs to authorize the process. If not yet existing a user with that membership needs to be added (for more information see <link to lwat docu>). The user "root" will **not** work, because there is no password for root in Samba.

2. Configure the Windows client as static host

- When joining a samba domain some special data is stored on the domain controller (tjener). This data is needed to recognize the Windows client later as being allowed to authenticate users. In order to enable Samba to store this data, Samba requires an static host configuration to be present. This could be added by using the LWAT web interface (see also <link to lwat>). When adding the static host configuration it is important to check the "Samba host" option, otherwise will lack the required data to be able to join the domain.

3. On the Windows client: Make sure the network and system configuration matches the data stored on tjener (hostname and ip configuration)

- It's really important, that the Windows hosts has the same data, otherwise Samba will not find the host added in step 2.

4. Join the domain as usual using the user added in step 1.

- Depending on the version and language of you Windows installation, you should find the configuration about the domain or workgroup of your system somewhere in the system properties. A freshly installed Windows system should belong to a default workgroup. You can join the domain by selecting "Domain" instead of "Workgroup" and entering SKOLELINUX as new domain. Pressing enter will then open a new window, where the login data of the user created in step 1. can be entered. After some time the Windows client opens a popup window with a welcome message. After the obligatory reboot the loginscreen offers a option to login into the domain.

Windows will sync the profile of domain users on every login and logout. Depending on how much data stored in the profile this could take some time. To minimize the time needed, one should deactivate things like local cache in browsers (you could use the squid proxycache installed on tjener instead) and save file into the H: volume instead of "Own files".

13.3.1.1 User groups in Windows

Groupmaps must also be added for any other user groups you add through `lwat` . If you want your user groups to be available in Windows eg for netlogon scripts or other group dependant actions, you can add them using variations of the following command. Samba will function without these groupmaps, but Windows machines won't be group aware.

```
/usr/bin/net groupmap add unixgroup=students \
             type=domain ntgroup="students" \
             comment="All students in the school"
```

13.3.2 XP home

Users bringing in their XP home laptop can still connect to Tjener using their skolelinux credentials, provided the workgroup is set to SKOLELINUX. However, they may need to disable the windows firewall before Tjener will appear in Network Neighbourhood (or whatever its called now).

13.3.3 Managing roaming profiles

Roaming profiles contain user work environments, which include the desktop items and settings. Some examples of these environments are personal files, desktop icons, screen colors, mouse settings, window size and position, application configurations and network and printer connections. Roaming profiles are available wherever the user logs on, provided the server is available.

Since the profile is copied from the server to the machine during logon, and copied back to the server during logout. A large profile can make windows login/logout painfully slow. There can be many reasons for a large profile, but the most common problems is that users save their files on the windows desktop or in my documents instead of in their homedir. Also some badly designed programs use the profile for scratch space, and other data.

The educational approach One way to deal with to large profiles is to explain the situation for the users. tell them not to store huge files on the desktop and if they fail to listen it's their own fault when login is slow.

Tweaking the profile A different way to deal with the problem is to remove parts of the profile, and redirect other parts to regular file storage. This moves the work load from the users to the administrator, while adding the complexity of the installation. There are atlest three ways to edit the parts that are removed from the roaming profile.

13.3.3.1 Using machine policies you can edit the machines policy and copy it to all other computers.

1. pick a freshly installed windows computer, and run gpedit.msc
2. under the selection User Configuration -> Administrative Templates -> System -> User Profiles -> Exclude directories in roaming profile, you can enter a semicolon separated string of directories to exclude from the profile, the directories are internationalize and must be written in your own language the way they are in the profile. Example of directories to exclude are
   - log
   - Locale settings
   - Temporary Internet Files
   - My Documents
   - Application Data
   - Temporary Internet Files
3. Save your changes, and exit the editor.
4. Copy `c:\windows\system32\GroupPolicy` to all other windows machines.
   - It's a good idea to copy it to your windows os deployment system to have it included at install time.

13.3.3.2 Using global policies By using the windows policy editor (poledit.exe), you can can create a Policy file (NTConfig.pol) file and put it in your netlogon share on tjener. This would have the advantage of working almost instantly on all machines. But is unfortunatly not as easy as it sounds. And you can quite easily lock yourself out of your windows machines. If you have experience with this please elaborate here... FIXME

13.3.3.3 Editing Windows registry You can edit the registry of the local computer, and copy this registry key to other computers

1. Start the Registry Editor.
2. Navigate to `HKEY_CURRENT_USER\Software\Microsoft\Windows NT\CurrentVersion-\Winlogon`
3. Use the menu `Edit menu->New->String Value .`
4. Call it `ExcludeProfileDirs`

5. Enter a semicolon sepatated string of paths to exclude. (same way as machine policy)

Now you can choose to export this registry key as a .reg file, Mark a selection, right click and select export. Save the file and you can double click it, or add it to a script to spread it to other machines.

Sources:

- http://technet2.microsoft.com/windowsserver/en/technologies/featured/gp/default.mspx
- http://www.samba.org/samba/docs/man/Samba-HOWTO-Collection/PolicyMgmt.html
- http://isg.ee.ethz.ch/tools/realmen/det/skel.en.html
- http://www.css.taylor.edu/~nehresma/samba.html

13.3.4 Redirecting parts of profile

Sometimes just removing the directory from the profile is not enough. You may experience that users loose files because they mistakenly save things into my documents, when this is not saved in the profiles. Also you may want to redirect the directories some badly programed applications use to normal network shares.

13.3.4.1 Using machine policies Everything under Using machine policies above applies. You edit using gpedit.msc and copy the Policy to all machines The redirection should be available under User Configuration -> Windows Settings->Folder Redirection Things that can be nice to redirect are Desktop or My Documents.

One thing to remember is that if you enable folder redirection, those folders are automatically added to the syncroniced folders list. If you do not want this, you should also disable that in following

- User Configuration -> Administrative Templates -> Network -> Offline Files
- Computer Configuration -> Administrative Templates -> Network -> Offline Files

13.3.4.2 Using global policies FIXME

13.3.5 Avoiding roaming profiles

13.3.5.1 Using a local policy Using local policies you can disable roaming profile on individual machines. This is often wanted on special machines, for instance on dedicated machines, or machines that have lower then usual bandwith.

You can use the machine policy method describe above, the key is in

- Administrative Templates -> system -> User Profiles -> Only allow local profiles

13.3.5.2 Using global policies FIXME: what is the roaming profile key for the global policy editor

13.3.5.3 altering samba config By editing the samba config you can disable roaming profiles for the entire network. Perhaps everyone have their own dedicated machine? and nobody else is allowed to touch it. To disable the roaming profiles for the entire network you can alter the smb.conf file on tjener and unset the logon path and logon home variables, and restart samba.

```
logon path = ""
logon home = ""
```

13.4 Remote Desktops with RDP, VNC, NX or Citrix

Some municipalities provide a remote desktop solution so that students and teachers can access Skolelinux from their home computer running Windows, Mac or Linux.

- RDP - the easiest way to access Windows terminal server. Just install the `rdesktop` package.
- VNC client (Virtual Network Computer) gives access to Skolelinux remotely. Just install the `xvncviewer` package.
- NX graphical client gives students and teachers access to Skolelinux remotely on Windows, Mac or Linux PC. One municipality in Norway has provided NX support to all their students since 2005. They report that the solution is stable.
- Citrix ICA client HowTo to access Windows terminal server from Skolelinux.

13.5 HowTos from wiki.debian.org

The HowTos from http://wiki.debian.org/DebianEdu/HowTo/ are either user- or developer-specific. Let's move the user-specific HowTos over here (and delete them over there)! (But first ask the authors (see the history of those pages to find them) if they are fine with moving the howto and putting it under the GPL.)

- http://wiki.debian.org/DebianEdu/HowTo/LocalDeviceLtspfs
- http://wiki.debian.org/DebianEdu/HowTo/LtspDisklessWorkstation

14 HowTos for teaching and learning

14.1 moodle

Run `aptitude install moodle` as root to install moodle.

Some schools in France use moodle to keep track of students' facilities and credit points. FIXME: more examples, etc.

14.2 Monitoring pupils

Some schools use control tools like Controlaula or Italc to supervise their students. FIXME: explain how to install and use it.

```
apt-get install italc
```

Warning : monitoring humans might be unethical and illegal in your jurisdiction.

14.3 Restricting pupils network access

Some schools use squidguard or dansguardian to restrict internet access. FIXME: explain how to install and use it.

Warning : restricting access to information or freedom of speech might be unethical and illegal in your jurisdiction.

14.4 Installing swi-prolog on etch

`swi-prolog` was available in sarge, but was not part of etch. But you can just install the version from sarge on a etch system.

Warning : The software you install has no trust path. Software installed with `apt-get` is cryptographically signed to ensure a trust path.

```
# swi-prolog depends on libreadline4, also not in etch
wget http://ftp.de.debian.org/debian/pool/main/r/readline4/libreadline4_4.3-11 ↩
    _i386.deb
dpkg -i libreadline4_4.3-11_i386.deb

wget http://ftp.de.debian.org/debian/pool/main/s/swi-prolog/swi-prolog_5.2.13-1 ↩
    _i386.deb
dpkg -i swi-prolog_5.2.13-1_i386.deb
```

`swi-prolog-doc` is part of etch 

14.5 HowTos from wiki.debian.org

The HowTos from http://wiki.debian.org/DebianEdu/HowTo/ are either user- or developer-specific. Let's move the user-specific HowTos over here (and delete them over there)! (But first ask the authors (see the history of those pages to find them) if they are fine with moving the howto and putting it under the GPL.)

- http://wiki.debian.org/DebianEdu/HowTo/TeacherFirstStep - incomplete but interesting

15 Contribute

15.1 Let us know you exist

There are Debian Edu users all over the world. A very easy form of contribution is to let us know you exist and use Debian Edu - this motivates us very much and therefore is already a valuable contribution. 

The Debian Edu projects provide a database of schools and users of the system to help the users find each other, and also to have an idea about where the users of the distribution are located. Please let us know about your installation, by registering in this database. To register your school, use this web form .

15.2 Contribute locally

Currently there are local teams in Norway, Germany, France and in the region of Extremadura in Spain. "Isolated" contributors and users exist in Greece, the Netherlands, Japan and elsewhere.

The support chapter explains and links to localized ressources, as *contribute* and *support* are two sides of the same coin.

15.3 Contribute globally

Internationally we are organized in different teams working on different subjects.

The developer mailing list is most of the time our main medium for communication, though we have monthly meetings on IRC on #debian-edu on irc.debian.org and less frequently even real gatherings, where we meet each other in person.

A good way to learn what is happening in the development of Debian Edu is to subscribe to the commit mailinglist .

15.4 Documentation writers and translators

This document needs your help! First and foremost, it is not finished yet: If you read it, you will notice various FIXMEs within the text. If you happen to know (a bit of) what needs to be explained there, please consider sharing your knowledge with us.

The source of the text is a wiki and can be edited with a simple webbrowser. Just go to http://wiki.skolelinux.no/-DebianEdu/Documentation/Etch/ and you can contribute easily. Note: An user account is needed to edit the pages, you need to create a wiki user first.
[1]

Another very good way to contribute and to help users is by translating software and documentation. Information how to translate this document can be found in the translation chapter of this book. Please consider to help the translation effort of this book!

- 1 We use wiki.skolelinux.no because the version of moinmoin on wiki.debian.org does not support exporting the wiki as `docbook` . Once it is upgraded, we will move this document over.

16 Support

16.1 Volunteer based support

16.1.1 in English

- http://wiki.debian.org/DebianEdu
- https://init.linpro.no/mailman/skolelinux.no/listinfo/admin-discuss - support mailing list
- #debian-edu on irc.debian.org - IRC channel, mostly development related, do not expect real time support even though it frequently happens 

16.1.2 in Norwegian

- https://init.linpro.no/mailman/skolelinux.no/listinfo/bruker - support mailing list
- https://init.linpro.no/mailman/skolelinux.no/listinfo/linuxiskolen - mailinglist for the development member organisation in Norway (FRISK)
- #skolelinux on irc.debian.org - IRC channel to support norwegian users

16.1.3 in German

- http://www.skolelinux.de/mailman/listinfo/user - support mailing list
- http://wiki.skolelinux.de - wiki with lots of HowTos etc.
- #skolelinux.de on irc.debian.org - IRC channel to support german users

16.1.4 in French

- http://lists.debian.org/debian-edu-french - support mailinglist

16.1.5 in Spanish

- http://www.skolelinux.es - spanish portal

16.2 Professional support

Lists of companies providing professional support are available from http://wiki.debian.org/DebianEdu/-Help/ProfessionalHelp .

17 Copyright und Autoren

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19 Übersetzungen dieses Dokuments

Fully translated versions of this document are not yet available. Incomplete translations for Norwegian Bokmål, Spanish and German exist.

19.1 HowTo translate this document

Translations of this document are kept in .po files like in many free software projects, read `usr/share/doc/debian-edu-doc/README.release-manual-translations` for more information on this. Please read also read this, if you want to start/help translating this document.

To commit your translations you need to be a member of the alioth project `debian-edu` . To translate, you just need to check out some files from from svn (which can be done anonymously), create patches and send those to [debian-edu@lists.debian.org].

You can checkout the `debian-edu-doc` source anonymously with the following command (you need to have the `subversion` package installed for this to work):

- `svn co svn://svn.debian.org/svn/debian-edu/trunk/src/debian-edu-doc`

Then edit the `documentation/release-manual/release-manual.$CC.po` (where you replace $CC with your language code). There are many tools for translating available, we suggest to use `kbabel` .

Then you either commit the file directly to svn (if you have the rights to do so) or send the file to the mailinglist.

To update your local copy of the repository use the following command inside the `debian-edu--doc` directory:

- `svn up`

Read /usr/share/doc/debian-edu-doc/README.release-manual-translations to find information how to create a new .po file for your language if there is none yet, and how to update translations.

Please report any problems.

20 Appendix A - The GNU Public License

```
Note to translators: there is no need to translate the GPL license text.
```

20.1 Anleitung zum Release von Debian Edu etch 3.0 Codename "Terra"

20.2 GNU GENERAL PUBLIC LICENSE

Version 2, June 1991

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20.4 END OF TERMS AND CONDITIONS

21 Appendix B - about Debian Edu Live CD/DVDs

21.1 Features of the Standalone image

- Almost all packages from the Standalone profile
- All packages from the laptop task
- The KDE desktop profile for students/pupils.

21.1.1 Activating translations and regional support

To activate a specific translation, boot using `locale=ll_CC.UTF-8` as a boot option, where ll_CC.UTF-8 is the locale name you want. To aciviate a given keyboard layout, use the `keyb=KB` option where KB is the wanted keyboard layout. More information on this feature is available from the live cd build script documentation . Here is a list of commonly used locale codes:

Language (Region)	Locale value	Keyboard layout
Norwegian Bokmål	nb_NO.UTF-8	no
Norwegian Nynorsk	nn_NO.UTF-8	no
German	de_DE.UTF-8	de
French (France)	fr_FR.UTF-8	fr
Greek (Greece)	el_GR.UTF-8	el
Japanese	ja_JP.UTF-8	jp
Northern Sami (Norway)	se_NO	no(smi)

A complete list of locale codes is available in `/usr/share/i18n/SUPPORTED` , but only the UTF-8 locales are supported by the live images. Not all locales have translations installed, though. The keyboard layout names can be found in /usr/share/keymaps/i386/.

21.1.2 Stuff to know

- the password for the user is "user", root has no passwd set.

21.1.3 Known issues with the image

- none known yet.

21.1.4 Download

The image is 1.2 GiB and available using FTP , HTTP or rsync from ftp.skolelinux.org at cd-etch-live/.