

Linux for Luxembourgish Highschools



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Context and Goals

Linux for Luxembourgish Highschools

- Local services: file storage, printing
- Full-featured internet access: mail, www, etc.
- Ease of Administration

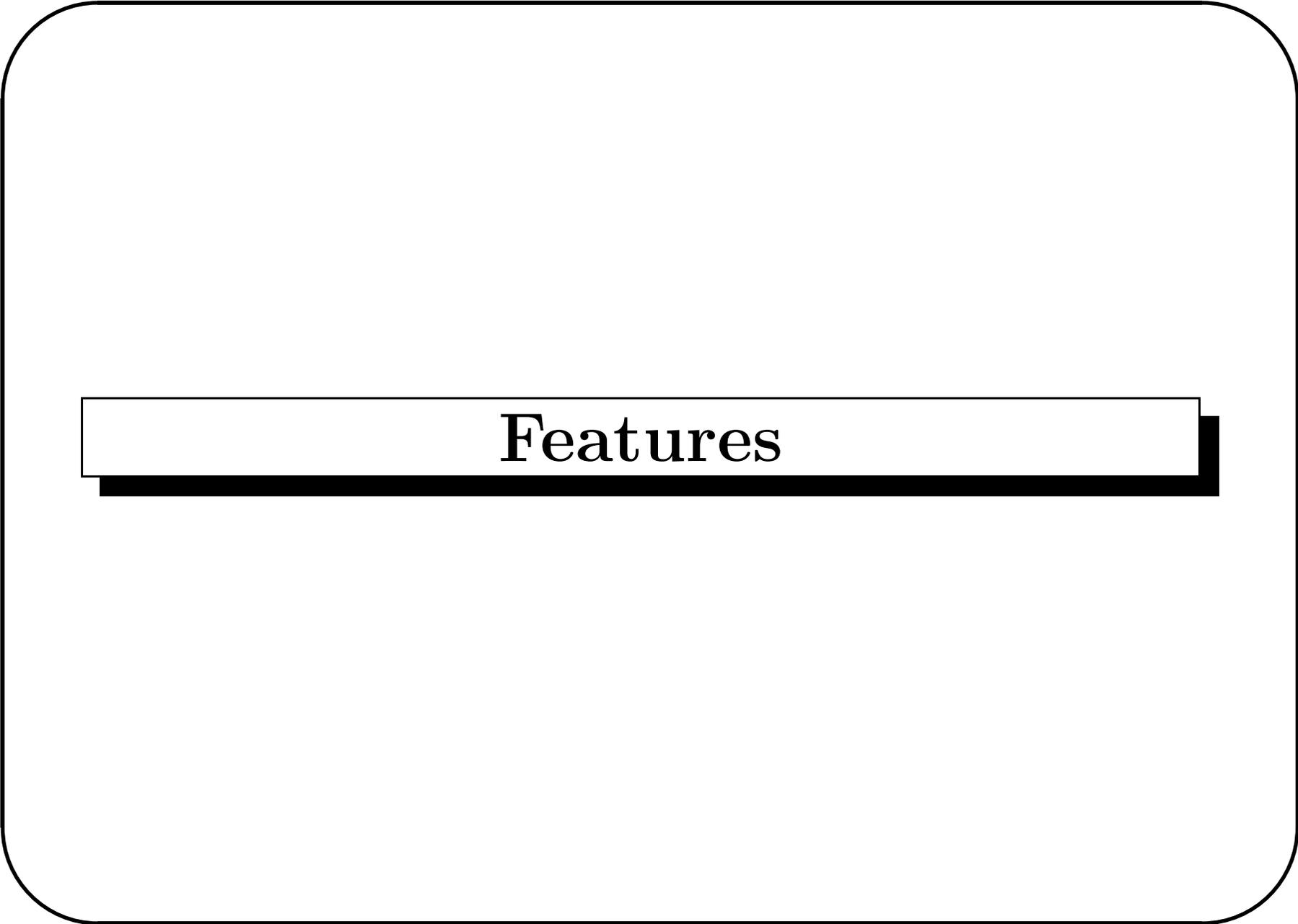
This work has been started as an initiative of Kiwanis club Esch, and partially funded as a *“Projet d’établissement du LTNB”*

Outline

- **History**
- **Features**
 - Windows file and print serving
 - Web browsing and hosting
 - E-mail: sendmail, Horde/IMP
 - Client PC installation: UDPcast
 - Administration via webmin
- Key figures
- Webmin demo
- Conclusion

History

- Born out of an initiative of *Kiwanis Club Esch*
- Initially only available in school library
- Creation of a PE to extend to all computer classrooms
- In cooperation with Linux User Group Luxembourg
- LTNB system “grown organically”
- LGL system more formalized
- LTML system validated “turnkey” installation CD

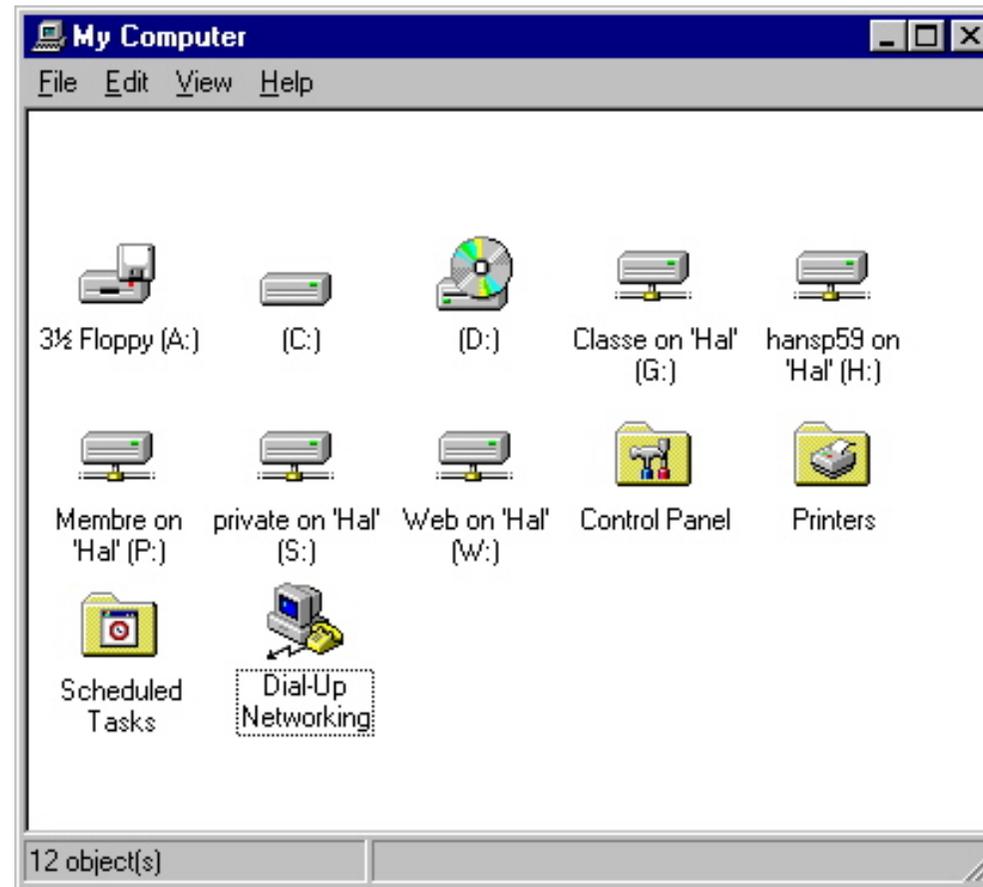


Features

Samba file serving

- Files Directly accessible from Windows clients
- Fine-grained permission
- **Available drives**
 - Specific to student: P:, S: and W:.
 - Common to a class: G:
 - Public (readable for everybody): `\\ linux\ public`
 - "Project" related drives

Explorer Screenshot



Samba print serving

- Printers accessible from Linux and Windows clients
- Supported connectivity:
 - HP Jet-direct (network printer)
 - Directly attached to server
 - Attached to windows workstations

Email

- Friendly email addresses:
`FirstName.LastName@student.school.lu`
names
- E-mail accessible from within via IMAP browser
- E-mail accessible from outside via IMP/Horde
webmail

IMP Webmail Screenshot

The screenshot shows a web browser window displaying the IMP webmail interface. The browser's address bar shows the URL `http://www.lgl.lu/webmail/`. The interface includes a menu bar (Location, Edit, View, Go, Bookmarks, Tools, Settings, Window, Help) and a toolbar with various navigation and utility icons. Below the browser window, the IMP webmail interface is visible, showing the 'INBOX' folder selected. The status bar indicates 'Dossier: INBOX: purgé | 1 non lu, 0 récent' and 'IMP, Version 2.2.6'. The main content area displays a list of three messages in the inbox, with columns for 'Date', 'De', 'Objet', and 'Taille'. The messages are:

	Date	De	Objet	Taille
<input type="checkbox"/>	2000-09-17	root	Utilisateurs	98 kb
<input type="checkbox"/>	2000-09-17	root	Mots de passe	110 kb
<input type="checkbox"/>	2000-09-17	root	Alias en double	590

Navigation and action links are provided above and below the message list, including 'Tout sélectionner', 'Annuler la sélection', 'Déplacer', 'Copier', 'Supprimer', 'Restaurer', 'Masquer les messages effacés', and 'Vider la corbeille'. A sidebar on the left contains the IMP logo and navigation options: 'INBOX', 'Nouveau message', 'Dossiers', and 'Déconnexion'.

Web browsing

- Squid web cache
 - Accelerated browsing experience, particularly suited for a school environment
 - Possibility of blocking sites with questionable content
 - Accountability: URL's visited are logged

Web hosting

- Public school web page
- Internal school web page
- Personal web pages for each student, accessible via the W: drive

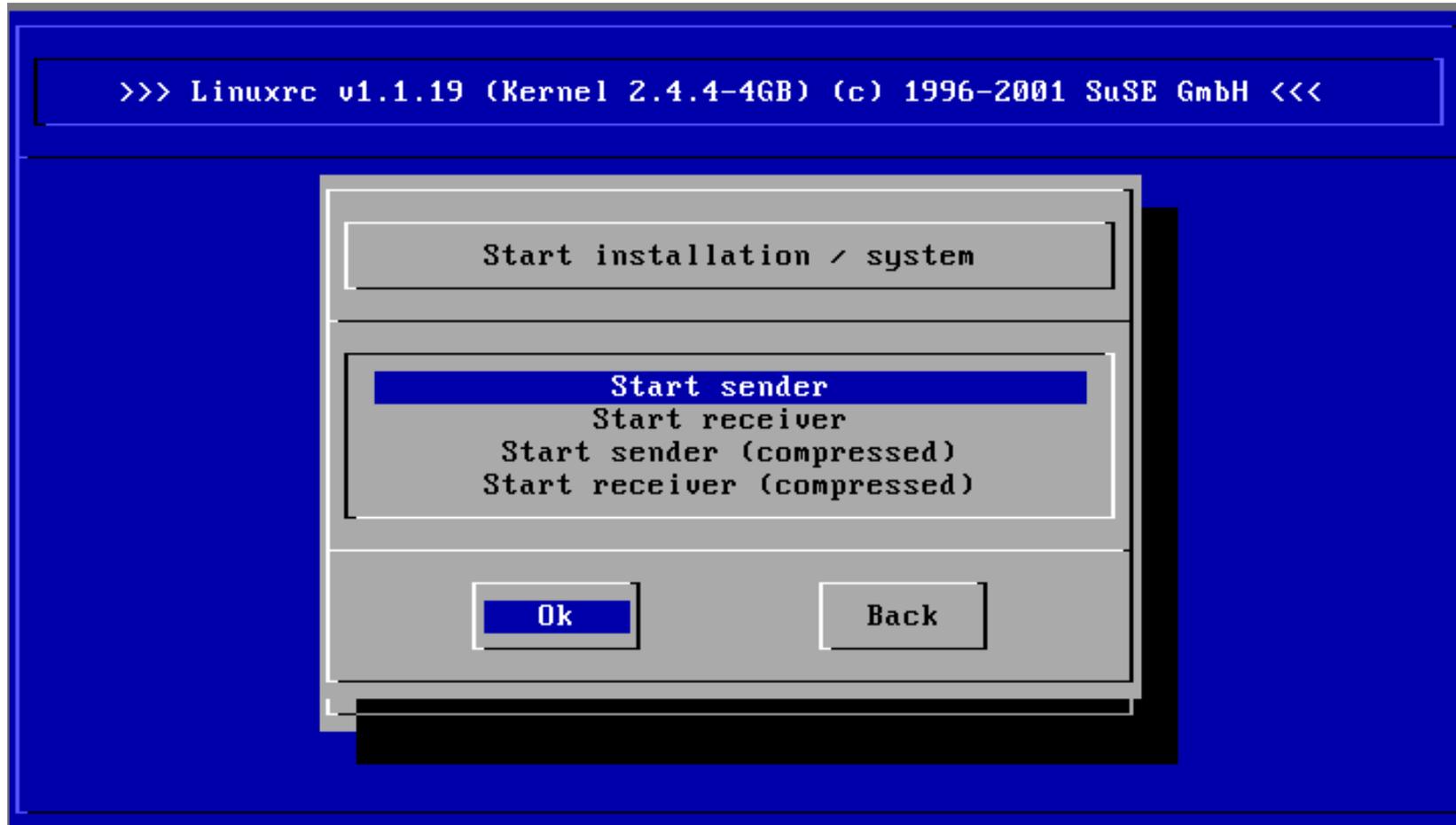
Firewall

- Protects the school network against attacks from outside
- Protects the outside world against attacks by the students
- Enforces usage of web proxy
- Allows flexible allocation of IP addresses by using *Network Address Translation*

UDPCast

- Allows to “clone” client PC’s
 - For “first time” installation and upgrades
 - For “repairing” PC’s after students messed with them
- Takes advantage of Ethernet multicast to send to multiple destinations at once simultaneously
- Example: partition of 1GB can be copied to a whole classroom in under 5 minutes!
- Easy-to-use menu driven boot disk.
- Available at <http://www.UDPCast.linux.lu>

UDPCast Screenshot



Webmin administration interface

- User management
- Management of NT clients
- Firewall administration (blocking sites, consulting logs)

Key figures

- 4 schools
- ± 4000 students

School	students	since
LTNB	1000	1994
LGL	1250	Spring 1999
LTML	1250	Fall 1999
EPND	625	Spring 2001