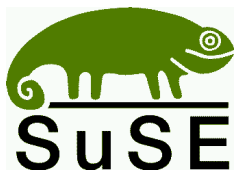


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SuSE Linux IMAP Server

Installation, Configuration and Administration



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Installation, Configuration and Administration with the SuSE Linux IMAP
Server

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1st version 1999

2nd version 2000

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Contents

| | | |
|----------|---|-----------|
| 1 | Introduction and Fundamentals | 7 |
| 1.1 | Foreword | 7 |
| 1.2 | Introduction | 8 |
| 1.3 | Features | 8 |
| 1.4 | Hardware | 9 |
| 1.5 | Further Documentation | 9 |
| 2 | Installation | 11 |
| 2.1 | Prerequisites | 11 |
| 2.2 | Installation | 11 |
| 3 | Web Administration | 17 |
| 3.1 | Logging In | 17 |
| 3.2 | User Administration | 17 |
| 3.2.1 | Creating New Users | 18 |
| 3.2.2 | Changing the User Login Password | 18 |
| 3.2.3 | Deleting a User | 19 |
| 3.2.4 | Setting Up User Quotas | 19 |
| 3.3 | Alias Administration | 19 |
| 3.3.1 | Creating Mail Aliases for a User | 20 |
| 3.3.2 | Deleting Mail Aliases for a User | 21 |
| 3.3.3 | Distribution Lists via Mail Aliases | 21 |
| 3.4 | Administering Folders | 21 |
| 3.4.1 | Creating Personal Folders | 21 |
| 3.4.2 | Renaming Folders | 22 |
| 3.4.3 | Deleting Folders | 22 |
| 3.4.4 | Allocating Permissions to Folders | 22 |
| 3.4.5 | Creating Shared Folders | 22 |

| | | |
|----------|---|-----------|
| 4 | Advanced Server Configuration | 25 |
| 4.1 | Configuring further settings | 25 |
| 4.1.1 | Changing the Size Limit for Message Attachments | 25 |
| 4.1.2 | Changing the Default Setting for the Number of Messages Displayed per Folder Page . . . | 26 |
| 4.1.3 | Changing the Defaults for Mail Sorting . . . | 26 |
| 5 | An Introduction to Using Folders | 29 |
| 5.1 | Folder Usage | 29 |
| 5.1.1 | Using Personal Folders | 29 |
| 5.1.2 | Subscribing to Shared Folders | 30 |
| 5.2 | Checking Inbox for New Messages | 30 |
| 5.3 | Incoming Messages | 30 |
| 5.3.1 | Viewing Messages | 31 |
| 5.3.2 | Answering the Sender of a Message . . . | 31 |
| 5.3.3 | Answering all Recipients of a Message . . . | 32 |
| 5.3.4 | Moving Messages | 32 |
| 5.3.5 | Copying Messages | 32 |
| 5.3.6 | Forwarding Messages | 32 |
| 5.3.7 | Saving Messages | 33 |
| 5.3.8 | Deleting Messages or Moving them to the Trash Can | 33 |
| 5.3.9 | Permanently Deleting Messages or Emptying Trash Can | 33 |
| 5.3.10 | Restoring Messages | 33 |
| 5.4 | Creating New Messages | 34 |
| 5.4.1 | Creating and Sending New Messages . . . | 34 |
| 5.4.2 | Using the Address Book | 34 |
| 5.4.3 | LDAP Address Book Usage | 35 |
| 5.4.4 | Adding LDAP Address Book Entries to the Personal Contact List | 35 |
| 5.4.5 | Using the Personal Contact List | 36 |
| 5.4.6 | Adding Attachments to New Messages . . . | 36 |
| 5.4.7 | Creating a Signature | 36 |
| 6 | Configuring an External IMAP Client | 39 |
| 6.1 | Configuring the LDAP Address Book | 39 |
| 6.2 | Configuring the IMAP Client | 40 |

| | |
|--|-----------|
| 7 Administration Functions for the User | 43 |
| 7.1 Logging in to the imapwusr | 43 |
| 7.2 Defining Filter Rules | 43 |
| 7.2.1 Examples of regular expressions as filter criteria | 44 |
| 7.3 Changing the Login Password | 45 |
| 7.4 Changing User Data | 45 |
| 7.5 Vacation Messages | 46 |
| 7.5.1 Setting up a Vacation Message | 46 |
| 7.5.2 Defining the Vacation Period | 47 |
| 7.5.3 Defining the Vacation Text | 47 |
| 7.5.4 Defining Forwarding E-Mail Addresses | 48 |
| 7.5.5 Deleting Vacation Times | 48 |
| 8 Index | 49 |

Chapter 1

Introduction and Fundamentals

1.1 Foreword

This handbook describes the installation, configuration and administration of the SuSE Linux IMAP Server. Before you read this handbook, you should be familiar with the basics of a Linux system. The information contained in this documentation is, to the best of our knowledge, accurate and complete. Of course, errors can never be completely excluded. SuSE GmbH is not liable for direct or indirect damage which might be caused by the installation or use of this software.

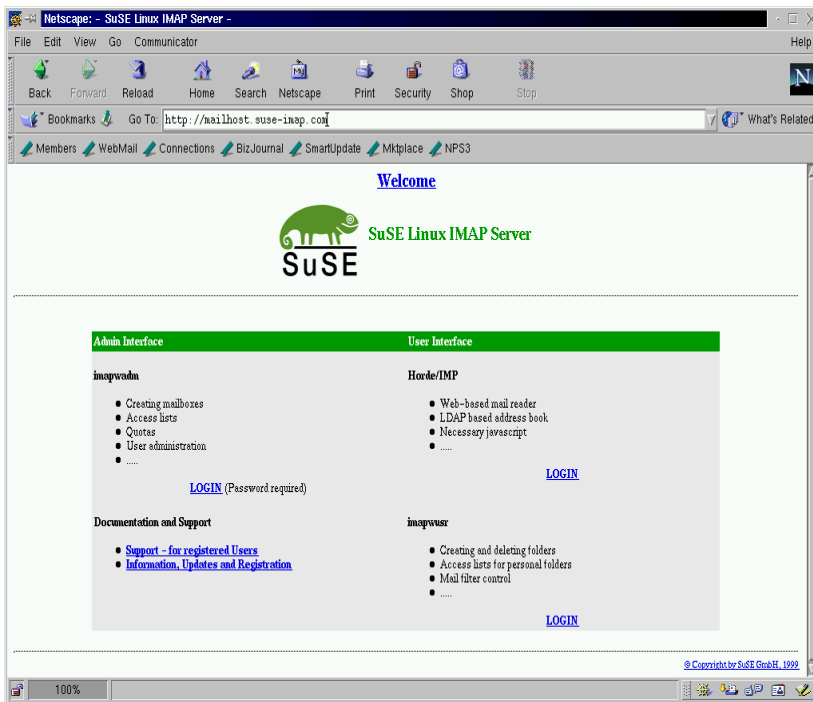


Figure 1.1: The screen of the SuSE Linux IMAP Server

1.2 Introduction

The SuSE Linux IMAP Server allows you to receive, send and prepare e-mails according to the guidelines of the “Distributed electronic mail models in IMAP4”. These guidelines are defined in RFC 1733 and are based on the IMAP (Internet Message Access Protocol). In accordance with this RFC, there are three possible models of client/server-based e-mail; the SuSE Linux IMAP Server knows all these models, which are described in more detail below:

Mail reception in accordance with RFC 1733

Offline: With this procedure the client makes a connection to the server at periodic intervals and picks up all newly-arrived e-mails. Afterwards the messages being transferred are deleted from the server. Further processing is then left entirely to the e-mail client. This is how the widely used protocols POP and UUCP function, for example.

Online: With this procedure the e-mails remain on the server and are processed directly there in an online session. Since all data remains on the server, the e-mail client does not need to process any messages locally. The IMAP protocol here provides many efficient possibilities when using this method.

Disconnected: This procedure is a mixture of the above two methods. E-mails are transferred from the server to the client, processed there and then synchronized with the server the next time a connection is made. The PCMAIL protocol works with this procedure.

1.3 Features

The SuSE Linux IMAP Server is a complete package with a wide variety of options:

- Support for all commands from RFC 2060 to call up, manipulate, delete, process and search the message database, as well as for setting and deleting flags.
- Support for ACL (RFC 2086), Quotas (RFC 2087), Literal+ (RFC 2088), Namespace (RFC 2342), Uidplus (RFC 2359), Unselect and IMAP Referrals (RFC 2193).
- Full SSL/TLS support (in the German version only!).
- Based on the Cyrus IMAP Server from Carnegie Mellon University.
- Includes the POP3 Server with support for the POP3 Extension Mechanism, in accordance with RFC 2449. This extension allows encrypted connections in accordance with RFC 2222. In addition, limits can be placed on the smallest interval which the client may request new e-mails. This provides a good protection against users who have set the poll time of their mail programs to a low value, thus putting unnecessary strain on the server.
- Postfix with support in accordance with RFC 821 (SMTP protocol), RFC 1047 (Bugfix multiple delivery), RFC 1123 (Host requirements), RFC 1651 (SMTP service extensions), RFC 1652 (8bit-MIME transport), RFC

1854 (SMTP Pipelining), RFC 1870 (Message Size Declaration), RFC 1985 (ETRN command) (partial), RFC 2197 (Pipelining).

- LDAP connection: in this configuration, filters conforming to RFC 2254 are supported and are used especially for the alias resolution of mail addresses for RFC 822.
- Administration takes place via a web interface that allows administration of users, mailboxes, ACLs and their quotas for the mailboxes. All user data is stored on an LDAP server.
- E-mails can be used by users with any IMAP-capable e-mail clients, such as Netscape Messenger, Microsoft Outlook, etc.
- A web-based e-mail client is included and can be used with any javascript-capable web browser. In addition, a public and a private address book are both implemented here. The user web interface provides a simple and convenient access to all features of the SuSE Linux IMAP Server.
- To administer the personal mailbox, a web interface is also included (creating, deleting, allocating permissions, etc.).
- Furthermore a web front end is available for user-defined mail filtering. Automatic vacation messages can be easily configured with this.
- Your SuSE Linux IMAP Server-CD enables an automatic installation on all PCs with supported hardware (see Section 1.4).

1.4 Hardware

The following hardware is supported by the automatic installation and should be regarded as the minimum requirements.

| | |
|----------------|--|
| Processor(s): | Pentium II or higher |
| Memory: | 64MB to 2GB RAM |
| Bus: | PCI (AGP for graphics cards) |
| SCSI: | Adaptec SCSI controller (aic7880, aic7890) |
| Hard drive: | EIDE or SCSI larger than 2GB |
| CD-ROM: | ATAPI or SCSI |
| Streamer: | SCSI |
| Graphics Card: | SVGA |
| Monitor: | SVGA |

The SuSE Linux IMAP Server can, generally speaking, be installed and operated on any hardware supported by Linux.

1.5 Further Documentation

Documentation on further software packages can be found in `/usr/doc/packages`.

Chapter 2

Installation

2.1 Prerequisites

For the installation of the SuSE Linux IMAP Server you need to have the following information available:

1. the IP address for the SuSE Linux IMAP Server,
2. the netmask,
3. the hostname of your SuSE Linux IMAP Server and
4. the IP address of your DNS server (if this exists).

2.2 Installation

- Switch on the computer and insert the CD ROM into a bootable drive. Your system should now boot from this medium and begin with the automatic installation.
- If your computer is not able to boot from CD-ROM, please use the floppy boot disk included. Switch on your computer and insert the floppy boot disk and the CD-ROM into the respective drives. Your system should now boot from the floppy disk and continue the installation via CD-ROM.
- After **linuxrc** has started, select, in the following menus, the language for screen messages, the type of monitor used (color, black & white) and the desired keyboard layout. Afterwards you must install **Network cards or (SCSI) controller drivers** as modules (see Fig. 2.1). Other modules which are not needed when booting can be installed any time later on.
- After booting, the hard drive is partitioned. If Linux is the only system on your computer, then you should select *automatic* (see Fig. 2.2). Your hard drive will be optimally partitioned for the operation of your SuSE Linux IMAP Server. If you have special partitioning needs, then you should select the item *manual*. Manual partitioning should only be carried out if you have installed other operating systems on the same disk or intend to later. **You should proceed here with extreme caution, so that you do not delete important data by mistake!**
- Afterwards YaST creates the required partitions and formats these accordingly.
- Then YaST installs the necessary software packages of your SuSE Linux IMAP Server (see Fig. 2.3).

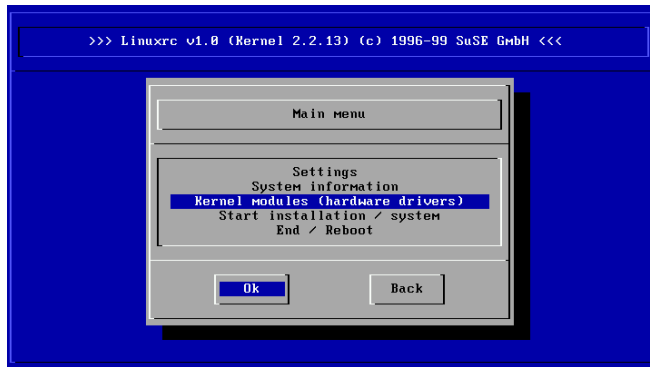


Figure 2.1: Selecting further modules needed for booting

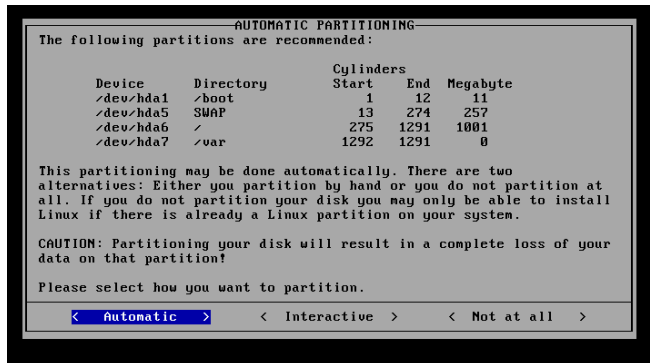


Figure 2.2: Partitioning of the hard drive

- After the software installation has been completed, you should now select the kernel suitable for your system. The various kernels are described in detail, making it quite simple to choose the appropriate kernel for your SuSE Linux IMAP Server (see Fig. 2.4).
- In the next step you are asked for the type of CD-ROM drive installed.

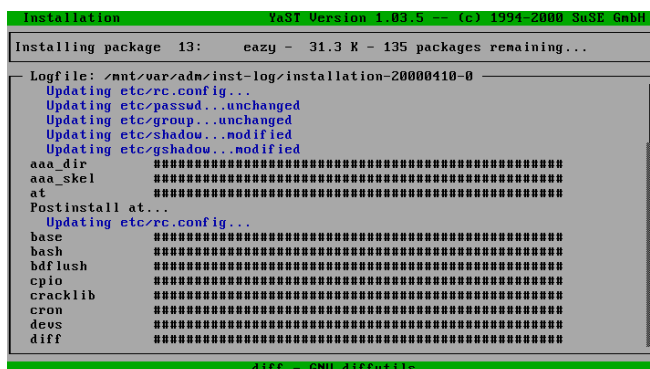


Figure 2.3: Installation of the software packages

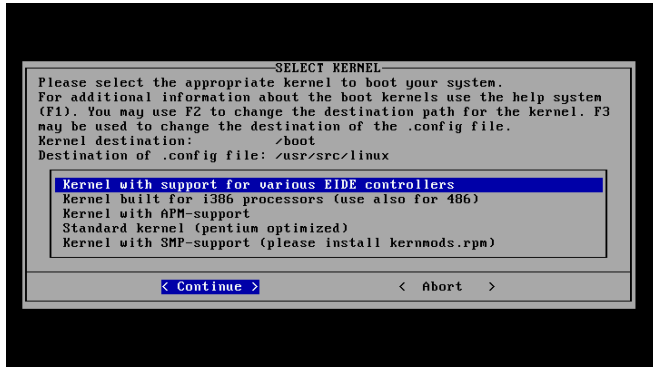


Figure 2.4: Selecting the appropriate kernel

Please enter this here.

- Then you must set up the Linux Loader, *LILO*, in order to be able to boot the selected kernel later, and thus the system as well. Normally you do not need to make any changes to the default settings (see Fig. 2.5).

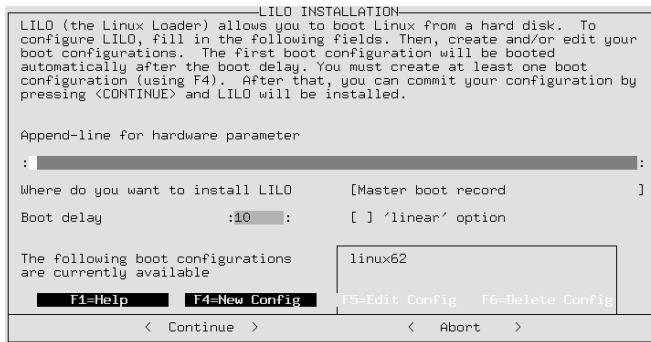


Figure 2.5: Creating a boot configuration

- Press **(F4)**, to create a new boot configuration (see Fig. 2.6). Enter a name in the window “LILO BOOT CONFIGURATION”, e.g. “Linux”. All further standard entries can also be left as they are here. Press the **(Tab)** key until the cursor is on the **<Next>** button, and confirm this by pressing **(↵)**. YaST calls up the Linux Loader after leaving this dialog. You will then be in the previous mask. Press **(Tab)** until the cursor is again on the **<Next>** button. Pressing **(↵)** now will carry out the LILO configuration.
- Afterwards you must configure a time zone for your computer (see Fig. 2.7).
- SuSEconfig is started and enters the previously defined values into the system configuration. Next, the newly installed system of your SuSE Linux IMAP Server is started (see Fig. 2.8) after you have confirmed the relevant message, and YaST is started.

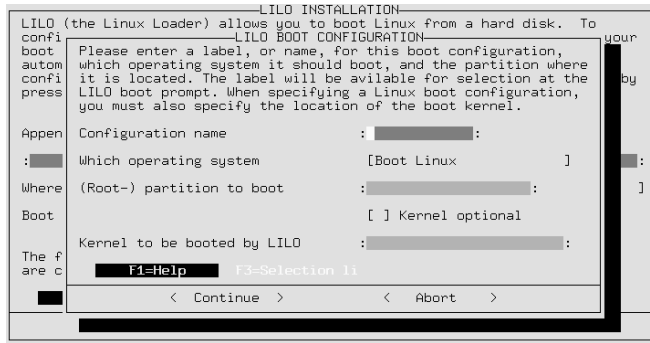


Figure 2.6: Create a new boot configuration



Figure 2.7: Configure the time zone

- If you have a modem or a mouse, you can enter the information for these in the masks which will then appear (see Fig. 2.9).
- You are now asked if you want to start the program GPM. Usually you will answer yes.
- Next a specially developed setup tool is started (see Fig. 2.10). Here enter the values for the IP address, the netmask, the default gateway, the

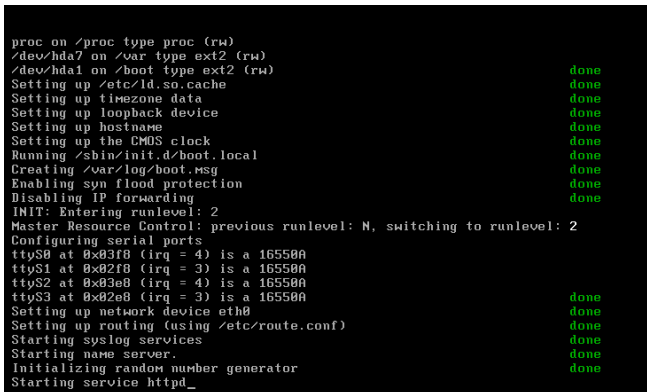


Figure 2.8: System start after the installation

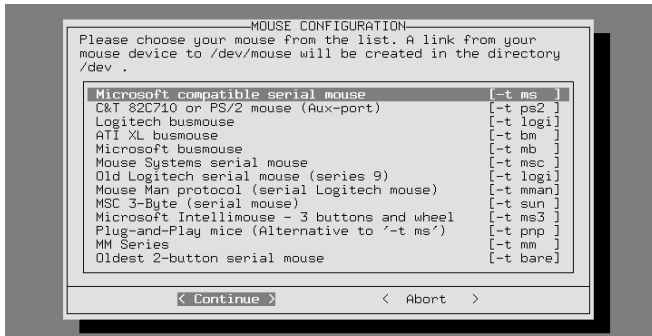


Figure 2.9: Setting up the mouse

hostname, the IP address(es) of the DNS server as well as the appropriate suffixes for the domain search list. If no DNS server is available in your network, then just enter the IP address of your SuSE Linux IMAP Server.

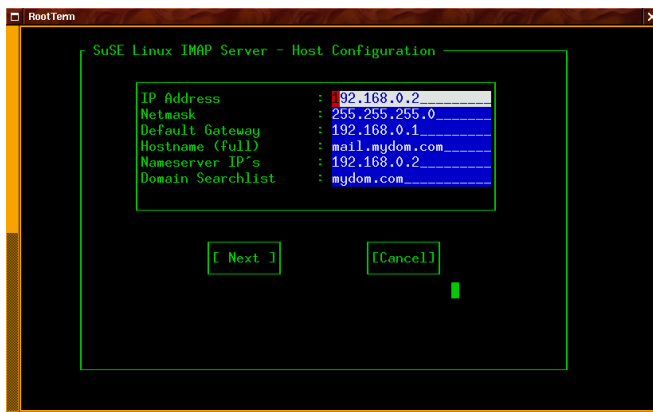


Figure 2.10: SuSE Linux IMAP Server setup

- In the following mask you can take over the automatically generated values for the LDAP-BaseDN or adjust this to your own requirements. Then set a password for the server administrator, “cyrus” and enter the name of your organization. (see Fig. 2.11). Choose your administrator password with special care. You should make sure that you use a different password here than the one which you will assign to the user “root”. Also bear in mind that this password cannot easily be changed later on.
- After the installation has been successfully completed you should log in as the user “root” with the “root”-password to your SuSE Linux IMAP Server. You should keep in mind that this password needs to be a secure one before the IMAP server is brought online. Start the program YaST by entering “yast”. There, in *System administration* you will find the item *User administration*. Here you can change the password for the user “root” directly.

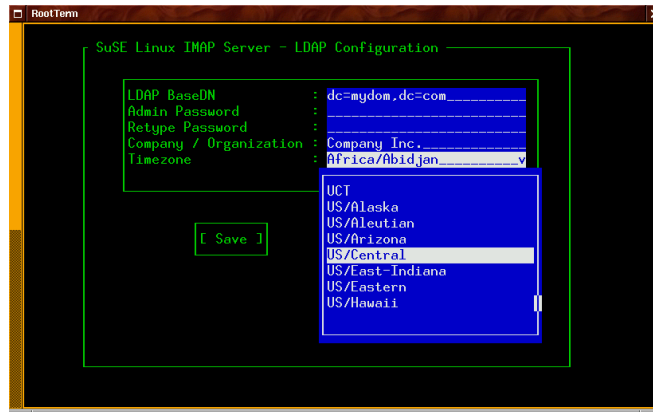


Figure 2.11: LDAP setup

- As soon as your SuSE Linux IMAP Server is being used in production, all system messages are assigned to the user “mailadmin”. You should regularly log in in the user interface “Horde/IMP” in your SuSE Linux IMAP Server with the user name “mailadmin” and check through the accumulated system messages, so that you can intervene at an early stage in case problems occur. Now you should change the “mailadmin” password for the user “mailadmin” as described in section 3.2.2.

Web Administration

3.1 Logging In

You can reach the start page of your SuSE Linux IMAP Server using any javascript-capable browser, by entering one of the following addresses: `http://<hostnameoftheSuSELinuxIMAPServer>` or `http://<IPaddressoftheSuSELinuxIMAPServer>` (see Fig. 3.1).

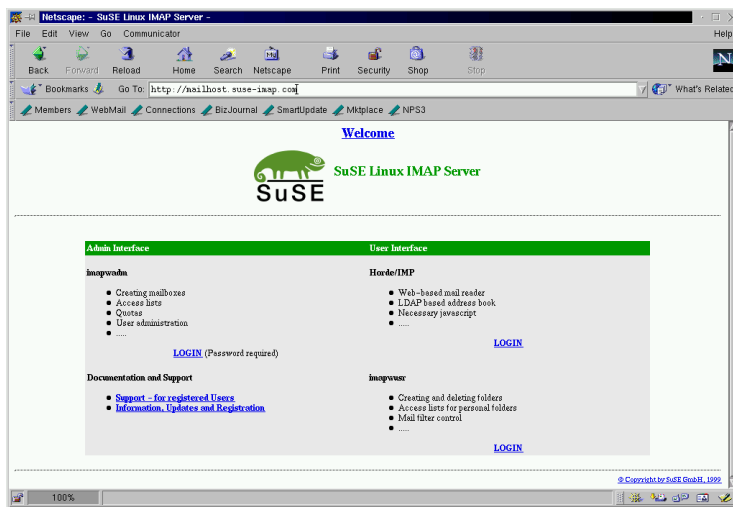


Figure 3.1: SuSE Linux IMAP Server start page

Log in at the admin interface (“imapwadm”) as the user “cyrus” with the administrator password previously set up. An online help is available for you in the web interface. Here you can create new users (see Section 3.2.1), allocate any number of folders to them and assign permissions. Most features are self-explanatory.

3.2 User Administration

The following sections describe how, as administrator of a SuSE Linux IMAP Server, you can

- create new users,
- delete users,

3. Web Administration

- change user login passwords and
- set up user quotas (limitations on capacity).

3.2.1 Creating New Users

In order to create a new user, click on the left hand frame in the area “Functions” on the entry *Add new user*. Then the dialog “Adding a Mailuser” (see Fig. 3.2) will appear in the right hand section. In the entry fields provided, fill in the relevant data for the new user and confirm this by clicking on *Add*. The user has now been created on your SuSE Linux IMAP Server. The corresponding user is allocated a mail address which is derived from the folder name specified, and a mail alias for this user is automatically generated as follows: <First Name>.<Last Name>. Additional mail-aliases can be created at a later stage for the user (see Section 3.3.1). For every newly registered user the folders “Inbox”, “old”, “public” and “sent-mail” are created by default, all of which can contain up to 1000 messages. For the newly created folders a user is given permissions to be able to read, process and delete messages. Others have, initially, no permissions to do these things.

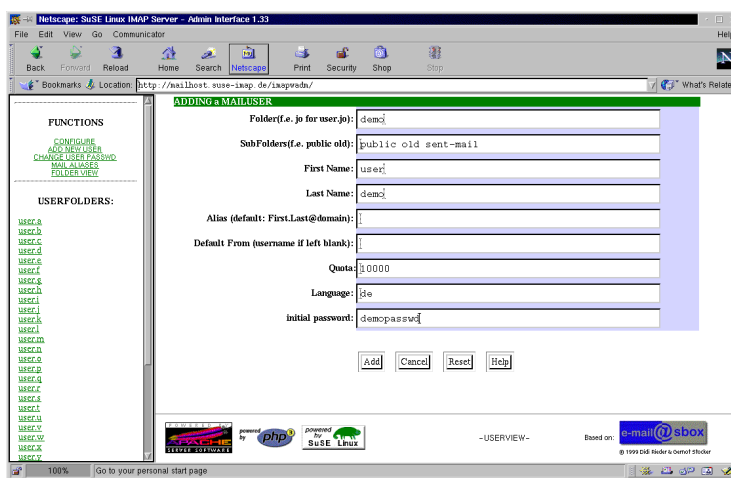


Figure 3.2: Adding a new mail user

3.2.2 Changing the User Login Password

You have the opportunity to change users' login passwords later on. This is necessary so that a user can access your SuSE Linux IMAP Server again, in case he loses or forgets his password.

To do this, in the left hand frame of the Admin-Interface “imapwadm” select the item *Change user passwd*. In the section on the right, select in the field *user*: the login name of the user concerned. In the fields *new Password*: and *retype Password*: you should now add the new password, and confirm this entry by clicking on *Change*.

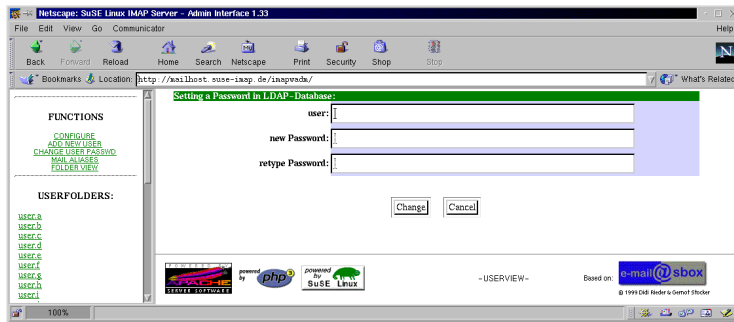


Figure 3.3: Changing a user password

3.2.3 Deleting a User

You can delete a user completely from your SuSE Linux IMAP Server. To do this, select the user to be deleted in the left hand frame, beneath “User folders:”. In the right hand section all folders are then displayed which belong to this user. Now select, in the first dropdown list, in the field *Modify Directory Tree*: in the right hand frame the inbox folder. Here this has the name `/user/<Login Name>` and is listed as the first entry of the available (sub-) folder. In the second dropdown list of this area, select the action *delete* and then click on *exec*. A warning points out to you that all the data of the selected user will be deleted and removed from the system. Confirm this message with *confirm* to delete it once and for all. Be aware that when performing such a deletion, all folders of the user as well as all the messages they contain will be lost. Apart from this the user data from the LDAP database (last name, first name, organization, department etc. – and thus also from the LDAP address book (see Section 5.4.3) – as well as his personal contact list is also deleted. Entries in the personal contact lists (see Section 5.4.5) of other users which point to this user are not affected by this deletion.)

3.2.4 Setting Up User Quotas

In order to efficiently calculate and control the use of resources better in the folders created, you have the possibility of setting up user-related quotas.

By default, when a user is set up, (see Section 3.2.1) 10000 kB as a user quota are allocated for all folders belonging to that user. He thus has the a chance of administering data up to this size in his folder. Of course, you can also modify this value. To do this, select the user concerned in the left hand frame, to have his folder configuration displayed in the right area. Now enter, in the entry field for the area *Modify Directory Tree*: the new upper limit in kB, and in the second dropdown list, the function *SETQUOTAS*

3.3 Alias Administration

The following sections describe how, as an administrator for a SuSE Linux IMAP Server, you can

- create mail aliases for users,

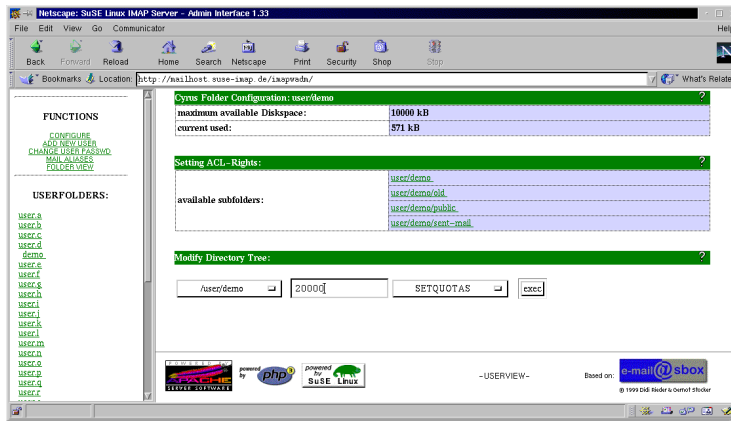


Figure 3.4: Adjusting user quotas later on

- delete mail aliases for users and
- create distribution lists through mail aliases.

3.3.1 Creating Mail Aliases for a User

You can set up any number of aliases for a user, at any time. To do this, click in the left hand frame on the entry *Mail Aliases*. In the right hand frame the dialog shown in figure 3.5 appears.

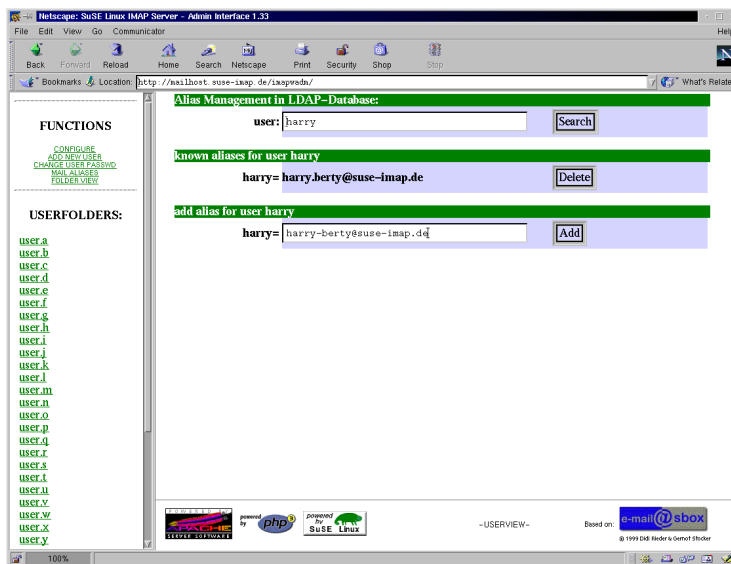


Figure 3.5: Defining mail-aliases

In the area “Alias-Management in LDAP-Database”, now enter the user for whom you would like to define a new mail alias, and then click on the button *Search* on the right hand side. Then all mail aliases belonging to this user are listed in the field “known aliases for user <User>”. Now enter a new alias

in the field “add alias for user <User>”. By clicking on the button *add*, this alias for the corresponding user will be created.

3.3.2 Deleting Mail Aliases for a User

To delete a mail alias, you should first have the list of aliases for the user concerned displayed, as described in section 3.3.1.

You can delete an alias for this user by clicking on the *delete* button for the corresponding mail alias in the field “known aliases for user <User>”, deleting this alias from your SuSE Linux IMAP Server.

3.3.3 Distribution Lists via Mail Aliases

You can set up distribution lists on your SuSE Linux IMAP Server. A distribution list is first nothing more than a defined mail address. A mail with this one receipt address can then be re-directed to any number of other addresses on your SuSE Linux IMAP Server automatically. In order to create such a mailing list, simply give a name for a mail alias (e.g. “accounting”) for all recipients who should receive mail from this list.

Example:

You want to create a mailing list for all staff in the accounts department. Create an alias named `accounting@domain.de` (the domain here can be left out, as it is completed automatically) and add the addresses of all of the accounting staff. Then a single e-mail sent to `accounting@domain.de` will be delivered to all of the accounting staff.

3.4 Administering Folders

The following sections describe how you, as the administrator of a SuSE Linux IMAP Server can

- create personal folders for your users,
- delete or rename existing folders,
- allocate basic permissions to folders and
- create “shared folders”.

3.4.1 Creating Personal Folders

Configurations of created users are stored in the left hand frame in the field *User folders:*. In order to create additional folders for an already existing user, click on the entry *user.<first letter of the folder name>* and then select the user. In the right hand frame that user’s current folder configuration will now appear. In the section *Modify Directory Tree:* (see Fig. 3.6) you have the chance to create further folders, either by entering the name of the new folder in the entry field, or selecting the function *CREATE* in the dropdown list. By clicking on *exec* the new folder is created.

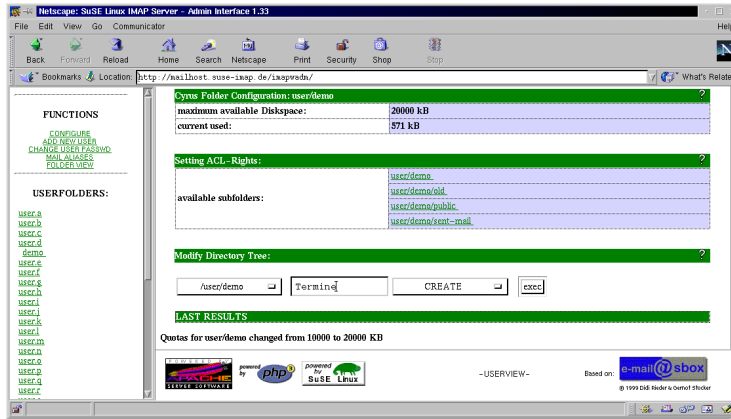


Figure 3.6: Creating further folders

3.4.2 Renaming Folders

You can rename existing folders by selecting the relevant folder in the first dropdown list and typing the new name in the entry field. By selecting the function *rename* in the second list and confirming the action by clicking on *exec*, the folder selected is then renamed (see Fig. 3.6).

3.4.3 Deleting Folders

You can delete a folder (or many, recursively) by selecting the folder to be deleted in the first dropdown list, and in the second list, choosing the function *delete* (or *recursive delete*). Clicking on *exec* will then carry out the deletion of these folders (see Fig. 3.6).

3.4.4 Allocating Permissions to Folders

As soon as you select a user folder in the field *Setting ACL-Rights:* (see Fig. 3.4) on the right hand side, the rights currently set for this folder appear in the right hand frame (see Section 3.7). In the field *User access list:* you can set or remove various rights for the folder selected, by activating or deactivating the appropriate buttons. Clicking on *update* enables the newly defined rights for the active folder. Details on allocating access rights can be found in the online help, which can be accessed by clicking on the question mark on the right next to the field *User access list:* or *Add user to access list:*.

3.4.5 Creating Shared Folders

You can also create “shared folders”. If these are provided with the appropriate rights (ACLs), they can also be read and written to by other users. Through this you can create a kind of “pseud” newsgroup. A “shared folder” is initially created in the same way as a personal folder (see Section 3.2.1). In order to make this accessible to all users, select the desired folder via the item *Setting ACL-Rights:* (see Fig. 3.4) and then enter, in the field *Add user to access list* the value “anyone” (see Fig. 3.8), followed by the appropriate rights.

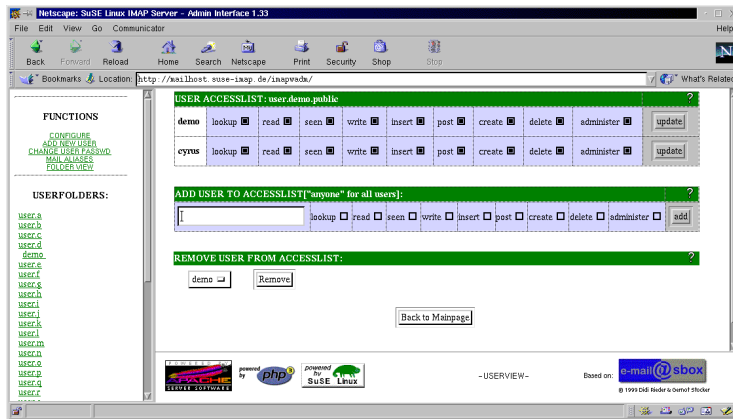


Figure 3.7: Allocating rights for a folder

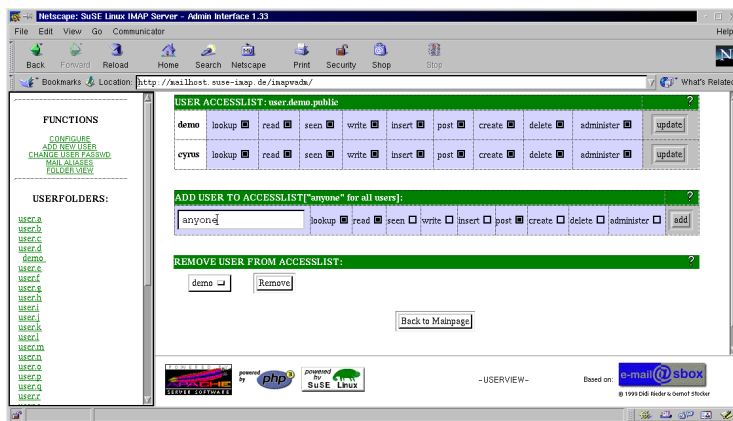


Figure 3.8: Allocating rights for a “shared folder”

If you just want to allow a defined group of users access to a “shared folder” and not everyone, then, in the field *Add user to access list* (see Fig. 3.8) you must enter all authorized users, along with the appropriate rights for this folder, one after another.

You can later remove access rights to a “shared folder” for specific users. There are two different ways of doing this:

1. Remove the required rights for the user in question in the field *User access list*: (deactivating the relevant rights buttons), and then clicking on *update* (see Section 3.9).
2. In the first dropdown list in the field *Remove user from access list*:, choose the user whom you want to exclude from using the selected folder, and click on *Remove*. Then all rights to the “shared folder” will be removed from this user (see Section 3.9).

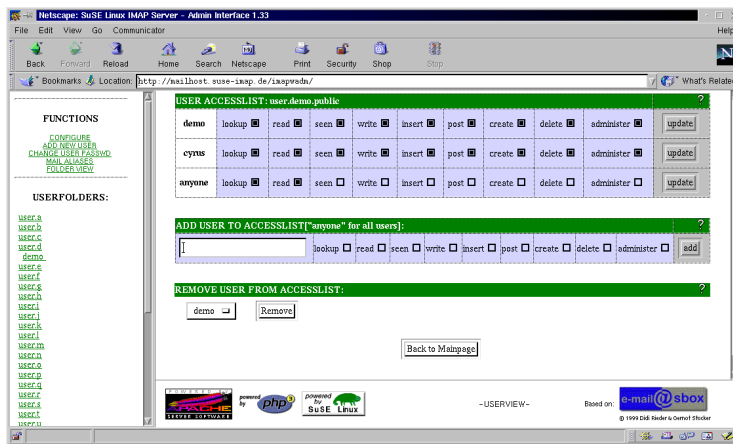


Figure 3.9: Removing user rights from a “shared folder”

Advanced Server Configuration

4.1 Configuring further settings

The following sections describe the advanced configuration of your SuSE Linux IMAP Server. Here you will learn how to:

- set the maximum size for mail attachments,
- adjust the number of the maximum simultaneously displayed news headers per folder page and
- change the default setting for mail sorting.

Attention!

If you consider it necessary to make one of the configuration changes described below, you should make these changes very carefully. Errors in the configuration files described below could lead to your SuSE Linux IMAP Server not functioning correctly.

4.1.1 Changing the Size Limit for Message Attachments

When writing new messages (see Section 5.4), attachments can be added to a mail by default only up to a size of 5MB (per mail). If a user later tries to attach files to a mail which exceed this size, he will receive an appropriate message.

As the administrator of the SuSE Linux IMAP Server, however, you are in a position to adjust this value. However, a certain amount of “manual” work is necessary to achieve this. ;-)

Log in to your SuSE Linux IMAP Server as the user “root” and change to the directory /etc/httpd. With an editor (e.g. vi), open the file php3.ini and search for the section “Paths and Directories” (see Fig. 4.1.1). Beneath this you will find the entry “upload_max_filesize =”. This defines the size limit for mail attachments and by default is set to “5 242 880” (value in bytes). This corresponds to a size of 5MB. Adjust this value to meet your requirements and save the file.

Afterwards, you need to restart your SuSE Linux IMAP Server in order for the changes to take effect. To the following command at the command line: “rcapache restart”.

```
Paths and Directories

include_path =
doc_root =
user_dir =
;upload_tmp_dir =
upload_max_filesize = 5242880
extension_dir = ./
```

File contents 4.1.1: Extract from the configuration file `/etc/httpd/php3.ini`

4.1.2 Changing the Default Setting for the Number of Messages Displayed per Folder Page

When displaying a mail folder (see Section 5.3.1), by default a maximum of 30 mails per page is set. If this value seems too large or too small for you, you can increase or decrease it at a later stage. To do this, log in to your SuSE Linux IMAP Server as “root” and change to the directory `/usr/local/httpd/htdocs/horde/imp/config`. With an editor (e.g. `vi`) open the file `mailbox.php3` and search for the section which is printed in Figure 4.1.2:

```
/* attributes for mailbox pages */
$default->max_frm_chars = 40;
$default->max_sub_chars = 50;
$default->max_messages_page = 30;
$default->fetch_mime_info = true;
```

File contents 4.1.2: Number of messages per page

The relevant parameter for the maximum number of messages displayed per folder here is named `$default->max_messages_page =`. Change the value after the “equals” sign according to your requirements and then save this file.

4.1.3 Changing the Defaults for Mail Sorting

When a mail/message folder (see Section 5.3.1) is displayed, new messages, by default, are listed in the sequence in which they arrived. You can modify this behavior so that the mails can be listed according to one of the following criteria:

- when the message arrived,
- the time message was sent,
- by sender,
- by subject or
- by size.

In addition you can also specify if the mails should be displayed in ascending or descending order. Log in to your SuSE Linux IMAP Server as the user “root” and change to the directory `/usr/local/httpd/htdocs/horde/imp/config`.

With an editor (e.g. vi), open up the file mailbox.php3 and look for the section printed in Fig. 4.1.3.

```
/* sort order. can be one of:
 * SORTARRIVAL
 * SORTDATE
 * SORTFROM
 * SORTSUBJECT
 * SORTSIZE
 */
$default->sort_crit = SORTARRIVAL;
$default->sort_dir  = 0;
```

File contents 4.1.3: Configuration of sort order of messages

Change the value after the variable **\$default->sort_crit =** to one of the values SORTARRIVAL (Sort according to arrival time of message), SORTDATE (Sort according to date message was sent), SORTFROM (Sort according to sender), SORTSUBJECT (Sort according to subject) or SORTSIZE (Sort according to size).

In addition you can determine via the value of the variable **\$default->sort_dir =** if sorting should be done in ascending or descending order. The value “0” here defines an ascending order, the value “1” a descending one.

An Introduction to Using Folders

5.1 Folder Usage

Folders created for a user or folders to which the user has been granted access by the administrator can be used in a variety of ways to suit a user's requirements. The server basically distinguishes between personal folders (those which the administrator has created for a new user when this user's account is set up) and "shared" folders (these are other users' folders for which a user has been granted access permission).

5.1.1 Using Personal Folders

Any javascript-capable Web browser can be used to reach the start page of your SuSE Linux IMAP Server by entering one of the following two addresses: `http://<hostnameoftheSuSELinuxIMAPServer>`
`http://<IP-addressesoftheSuSELinuxIMAPServer>` (see Fig. 5.1). Personal folders can be used via the "Horde/IMP" user interface .

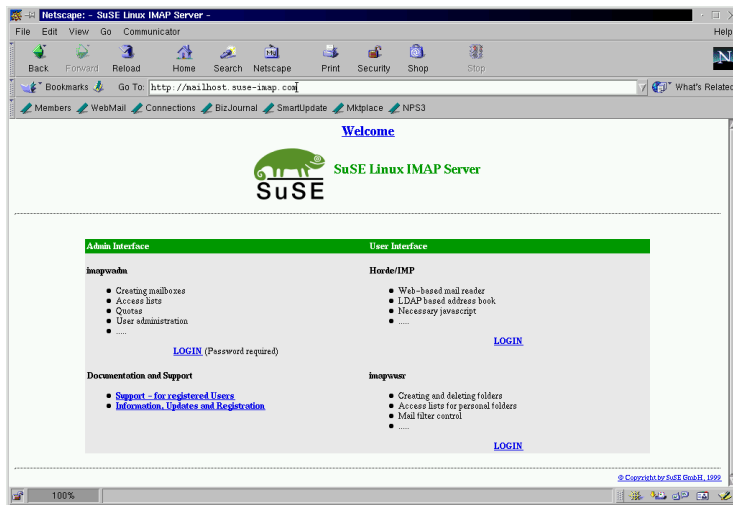


Figure 5.1: SuSE Linux IMAP Server login

After logging in with their login names and their respective passwords, the users' personal folders are made available to them and can be used. By default the "Inbox" folder is displayed in the right hand frame and shows

a list of messages that have arrived. (see Fig. 5.2). Users can open or work on additional folders made available to them via the menu panel in the left hand frame. Up to 1000 messages can be saved in each of these directories.

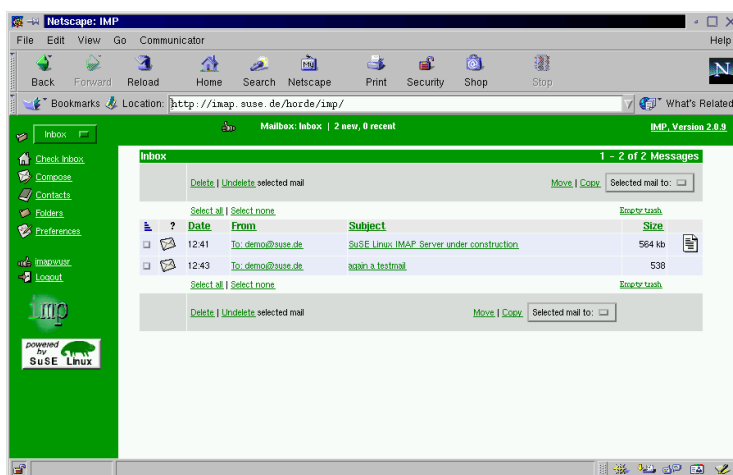


Figure 5.2: View of the “Inbox” folder - messages that have arrived

5.1.2 Subscribing to Shared Folders

In addition to using their personal folders, users can also use shared folders for which they have been granted permission to access (see Section 5.1.1 and 3.4.5). By clicking on the *folder* button in the left hand frame, an overview of the folders available to that user is displayed. Under the section *subscribe to a folder* a dropdown list appears with all the folders available to the user (including shared folders!). In this list any number of additional folders can be *subscribed to*. These will then appear in the dropdown list in the left hand frame, ready for reading or processing.

5.2 Checking Inbox for New Messages

When new users log in at the “Horde/IMP” user interface all messages received until then are displayed in the right hand frame (see Fig. 5.2). If new messages arrive during a session, users are notified by a small dialog window. New mails can be viewed at any time by clicking on *Check Inbox*. Unread e-mails have a light blue background and are indicated in the browser with a symbol in the second column of the header. Those which have already been read have a white background and are not marked with this symbol. Furthermore, information about the sender, subject and size as well as possible attachments is shown for every message.

5.3 Incoming Messages

Incoming mails can be handled in various ways. Reading or viewing a message comes first, of course. Incoming e-mails can be answered directly, they

can be moved to a separate folder or can even be redirected to other recipients. The following sections will give a detailed description of these possibilities.

5.3.1 Viewing Messages

The content of a folder can be viewed in a tabular form at any time. This is done by selecting the required folder from the dropdown list in the left hand frame. By default a maximum of 30 message headers are shown on a page (see Fig. 5.3). If a selected folder contains more than 30 (the amount of messages contained in the current folder is indicated in the top right hand area, as are the numbers of the messages displayed on the current page), users can view the remaining pages, each containing a maximum of 30 message headers.

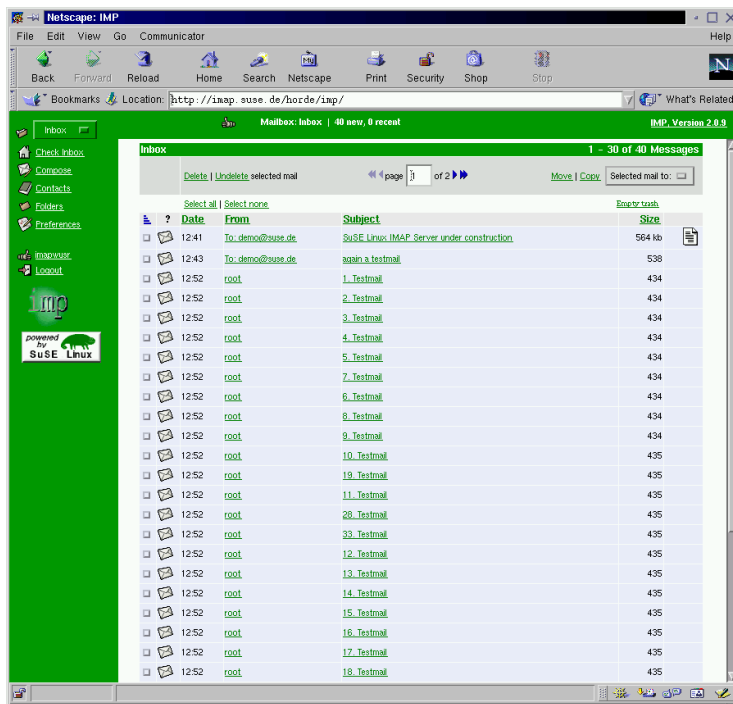


Figure 5.3: Mail folder with more than 30 messages

Pages can be changed by either using the mouse to click on the blue navigation arrows or by directly entering the target page number into the *Page* entry field and confirming this with return. A message can be viewed by clicking on the subject in the message header line. A message selected in this way will then be displayed in full (see Fig. 5.4).

5.3.2 Answering the Sender of a Message

A message currently on display (see Section 5.3.1) can be answered directly by clicking on *Answers* (see Fig. 5.4). A new window, called “Create message” (see Section 5.4) then opens and already contains the recipient, the subject as well as the quoted source text.

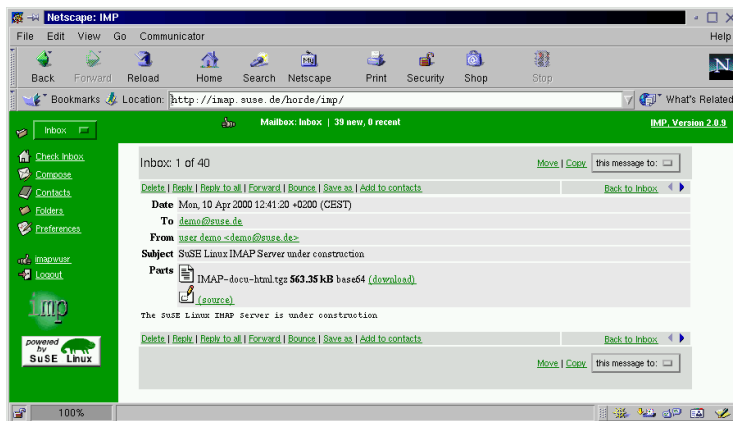


Figure 5.4: Viewing new messages

5.3.3 Answering all Recipients of a Message

If a message on display (see Section 5.3.1) is forwarded to several recipients, then a recipient can directly reply to all the other recipients of the message with one answer. This is done by clicking *answer all* (see Fig. 5.4) to open a new window “Create message” (see Section 5.4). This message window already contains the recipients and subject, and the quoted source text.

5.3.4 Moving Messages

Received messages can be forwarded to other folders. Should this be necessary in spite of defined filter rules, whereby incoming mails are automatically distributed into folders (see Section 7.2), then messages can be moved in the following ways: With a folder overview, for example, the overview of the “Inbox” folder (see Section 5.2), any number of messages can be marked simultaneously. This is done by clicking on the square marking box in front of each of the messages. Once all the messages to be moved to another folder are marked, just select the target folder from the dropdown list in the right hand frame and then click on *Move*. The selected messages are then moved to the required target folder.

5.3.5 Copying Messages

Received messages can be copied to other folders. The procedure is similar to that described in section 5.3.4, except that once the messages to be copied are selected, the *copy* entry must be clicked.

5.3.6 Forwarding Messages

A user can forward any number of messages to other recipients. The message to be forwarded must first be opened (see Section 5.3.1). Within the message the *forwarding* entry is then clicked (see Section 5.4). The “Create message” window is then shown and already contains all the relevant data (subject, attachments, text of message) of the message to be forwarded. All that the user

needs to enter is the required forwarding address and then send the message. The procedure is identical to creating a new message (see Section 5.4).

5.3.7 Saving Messages

If users want to save received messages locally into their own file systems, they first of all have to view the required message (see Section 5.3.1). This is followed by clicking on the *Save as* (see Section 5.4) entry, whereupon a dialog box for saving files is shown. The path and the file name of the message under which it is to be saved must be selected and finally the *OK* button is clicked. The message is then saved along with possible attachments in the required file in the MIME-Format.

5.3.8 Deleting Messages or Moving them to the Trash Can

Messages can be deleted most easily by first of all marking the message to be deleted in the message overview of a folder (cf. section 5.2). This is done by selecting the relevant message via a mouse click in the box in the first column of each message header. Once the *delete* button is clicked, the marked messages are moved into the trash can for the selected folder. While these messages will continue to be shown in the particular folder, they are marked as deleted with a trash can symbol in the second column of the message header.

5.3.9 Permanently Deleting Messages or Emptying Trash Can

Messages which have been moved to the trash can (see Section 5.3.8), can be permanently deleted when the trash can is emptied. To empty the trash can in a particular folder, select it from the dropdown list in the left hand frame and click on the *empty trash can* entry.

Attention! All messages contained in the trash can are permanently deleted and cannot be restored after the *empty trash can* operation has been performed.

5.3.10 Restoring Messages

If a user would again like to save received messages which have already been deleted (see Section 5.3.8), then this is possible at any time, provided the deleted messages were not permanently deleted by emptying the trash can (see Section 5.3.9).

After selecting a particular folder from the dropdown list in the left hand frame, a user can restore any messages which have already been moved to the trash can. To do this, click the marking square belonging to the respective message and then click the *restore* entry. The restored messages are then taken from the trash can and are again made available. The trash can symbol in the second column of the message header is removed from the restored messages.

5.4 Creating New Messages

When creating new messages, users can attach various files as well as easily select particular recipients via existing address books/contact lists. In the sections below we will show how messages can be conveniently written.

5.4.1 Creating and Sending New Messages

New messages can be created by clicking the *write message* button in the left hand frame. This opens a new window “Create message” (see Fig. 5.5). The fields *To*, *Cc* as well as *Bcc* can be used to enter additional recipients. If, for example, more than one recipient is to be included in the field *To*, these must be separated by a comma.

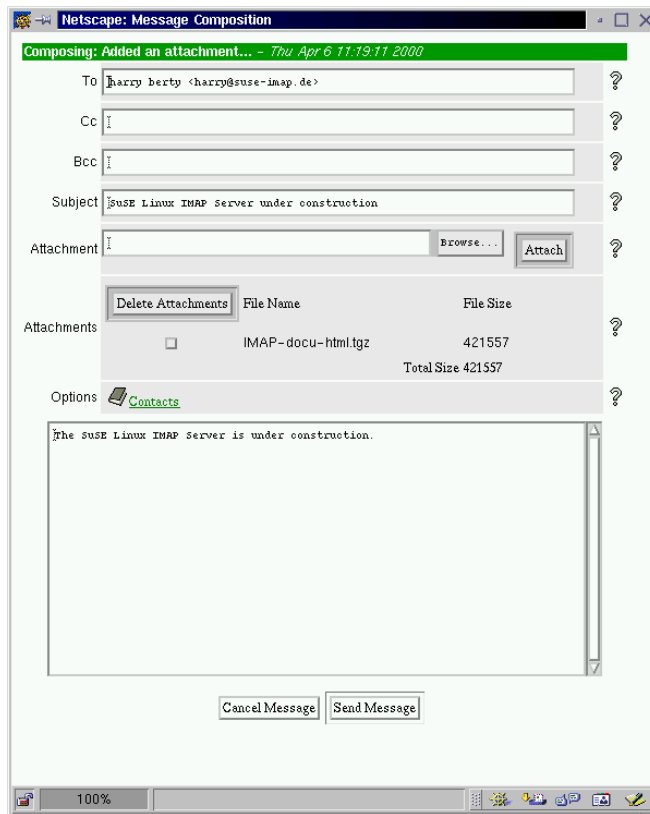


Figure 5.5: Creating a new message

Likewise, any number of attachments can still be added to the message by first selecting the required files via the *Browse* button and then attaching them to the message by clicking *attach*. One click on *Send Message* will then send the message.

5.4.2 Using the Address Book

If the user clicks on *Contacts* (see Fig. 5.5) in the option field, a new window is opened in which various LDAP-based address books can be viewed

and used. It also offers the possibility of organizing a personal contact list (see Fig. 5.6). The SuSE Linux IMAP Server automatically administrates all registered users in an LDAP-based address book of its own. It can be used to address all recipients within your organization. Frequently used addresses can be entered into a user's contact list so as to be given quick access to these recipients.

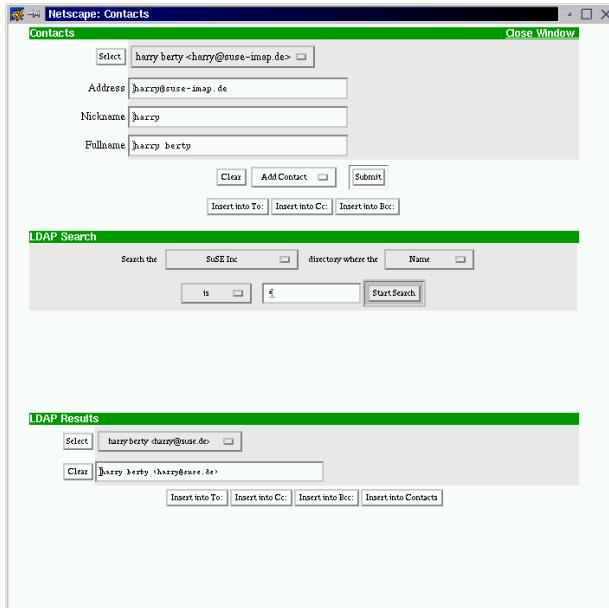


Figure 5.6: “Contacts” dialog

5.4.3 LDAP Address Book Usage

In the area under “LDAP search” (see Fig. 5.6) address books of various public LDAP servers as well as the address book of the SuSE Linux IMAP Server can be used. In the first dropdown list you select the required LDAP server with *Search through*, in the second dropdown list the search criteria with *directory* and in the third drop condition to compare. Once a search term is specified in the entry field (“*” for all matches), clicking the *start search* will display the results of the search in the dialog under “LDAP results”. One or more recipients can be directly selected from the search results. By selecting either *Insert into To:*, *Insert into Cc:* or *Insert into Bcc:*, addresses can be added to the new message.

5.4.4 Adding LDAP Address Book Entries to the Personal Contact List

It is recommended that frequently used addresses are placed into a personal contact list. When selecting a recipient, the same procedure as described in section 5.4.3 must first be followed. The desired recipients are then selected from the field “LDAP results” (see Fig. 5.6) and added to the personal contact list by clicking on *Add to contact list*. The recipient in question is then taken over in the three fields of *Address*, *Name abbreviation* and *Name* in the area of

“Contacts”. In the first dropdown list of the “Contacts field” the *Add contact* action is then performed and is confirmed with *Submit*. The chosen recipient will then be added to the personal contact list.

5.4.5 Using the Personal Contact List

Frequently needed recipients can be directly taken over from a user’s contact list into a new message by selecting these from the “Contacts” area in the first dropdown list and then clicking on one of the following fields *Insert into To:*, *Insert into Cc:* or *Insert into Bcc:* (see Fig. 5.7). When the selection of recipients has been completed, *Close window* in the top right hand area of the window is selected and the new message is returned to (see Section 5.4).

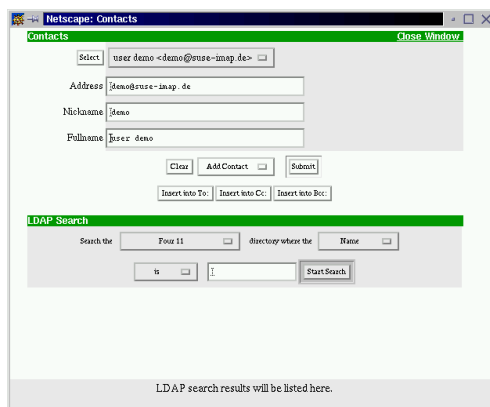


Figure 5.7: Addresses from the personal contact list

5.4.6 Adding Attachments to New Messages

Any number of attachments can be added to a message. This is done by clicking on the *Browse* button in the “Create message” dialog (see Fig. 5.8). Any file can be selected from the file selection dialog which then appears and by clicking on the *Attach* button it can be attached to the new message. If more than one attachment is to be added to a message, this procedure can be repeated. Attachments to a new message can be deleted at any time before sending the message by marking the attachment to be deleted and then clicking on the *Delete Attachments* button.

5.4.7 Creating a Signature

A user’s “signature” can be automatically added to the end of every message without having to type it in every time. This is done by clicking on the *settings* button in the left hand frame. The dialog as illustrated in figure 5.9 will then appear in the right hand frame.

In the section under “Edit signature” users can enter their signatures which are to be automatically attached to the end of every mail. Normally a sender’s name is entered here, along with a with a few lines which can include the address, phone number, and fax number. In the section “Edit full name” users

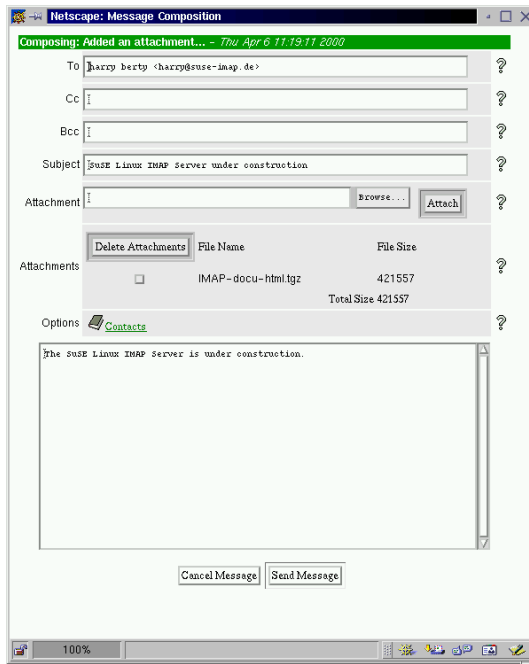


Figure 5.8: New message with attachment

can now also modify their sender names (not their sender addresses) in case these are incomplete or were incorrectly assigned when set up by the administrator (see Section 3.2.1)

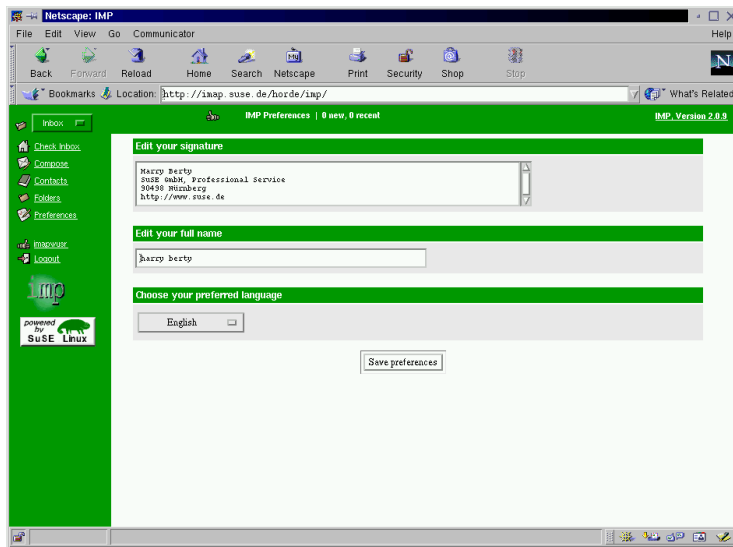


Figure 5.9: Creating a signature

Chapter 6

Configuring an External IMAP Client

As an alternative to the options described in chapter 5, users can also use the SuSE Linux IMAP Server via an external IMAP client. For this, the Netscape Communicator, available at no cost for nearly all operating systems, is suitable, as well as Microsoft Outlook. Below you will find some information on how to configure an IMAP client for the SuSE Linux IMAP Server, where the Netscape Communicator is configured as an example.

6.1 Configuring the LDAP Address Book

You can use the LDAP address book of your SuSE Linux IMAP Server via the Netscape Communicator. To do this, start up Netscape Communicator and in the menu “Communicator” select the entry “Address Book” (see Fig. 6.1).

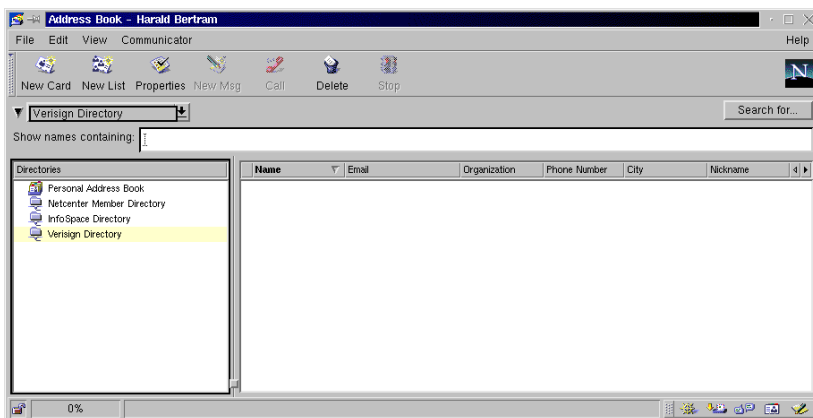


Figure 6.1: The address book of Netscape Communicator

In the new dialog, now select the menu “File”, and then, the entry “New Directory...”. In the field for “Description:” enter the name of your Organization (see Fig. 6.2). In the field “LDAP Server:” you must then enter the hostname of your SuSE Linux IMAP Server. Under “Server Root:” you must make the same entries as you defined in Section 2.2 during the installation of the Server. Confirm this dialog by clicking on *OK*.

6. Configuring an External IMAP Client

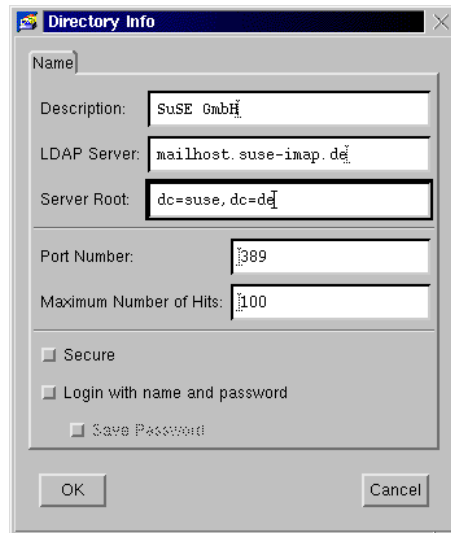


Figure 6.2: The LDAP configuration for the address book

Via the button *Search for...* you can look through the LDAP address database and use the addresses entered there (see Section 6.3).

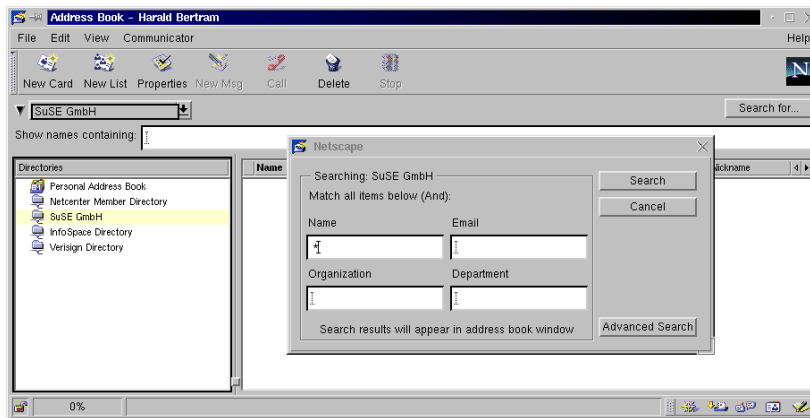


Figure 6.3: Searching the LDAP directory for all entries

6.2 Configuring the IMAP Client

To configure the IMAP Client in the Netscape Communicator, click on the menu “Edit” and then select the sub-menu item, “Preferences”. Then in the left hand field choose the category “Mail & Newsgroups” -> “Identity” and enter the corresponding values here for an already existing user (see Fig. 6.4).

Then select the category “Mail & Newsgroups” -> “Mail Servers”. Click on the button *Add* to enter a new IMAP Server. In the setup dialog, first choose the tab *General* (see Fig. 6.5).

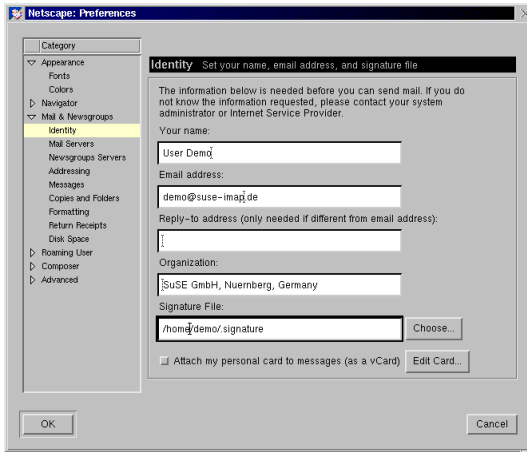


Figure 6.4: Netscape Communicator - configuring identity

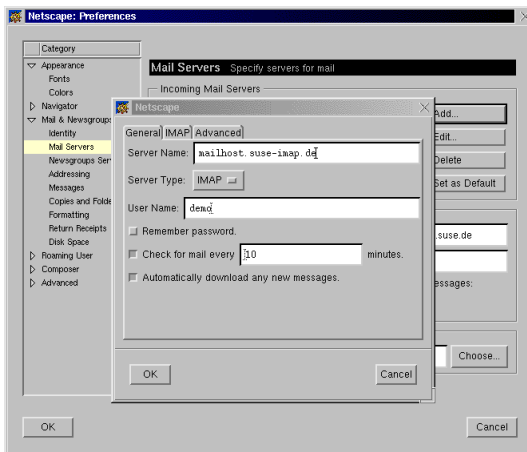


Figure 6.5: Netscape Communicator - configuring the IMAP Server

In the field “Server Name:”, enter the hostname of your SuSE Linux IMAP Server. As the “Server Type:” select the entry *IMAP*. In the field “User Name:” enter the name of the relevant user. Then close this dialog by clicking on *OK*. Under “Outgoing Mail Server” (see Fig. 6.6) you should enter both the name of your SuSE Linux IMAP Server and the user name, and confirm these entries by clicking on *OK*. This completes the configuration of the IMAP client. The user can now make a connection to your SuSE Linux IMAP Server from Netscape Messenger and use his mail folder directly via Netscape Messenger.

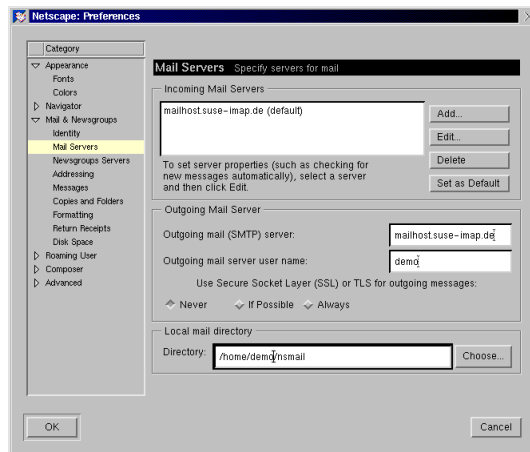


Figure 6.6: Netscape Communicator - Configuring the Outgoing Mail Server

Chapter 7

Administration Functions for the User

7.1 Logging in to the `imapwusr`

If the user is not yet registered in the user interface, he can reach the start page of your SuSE Linux IMAP Server with any java addresses:

`http://<hostnameoftheSuSELinuxIMAPServer>`

`http://<IPaddressoftheSuSELinuxIMAPServer>` (see Fig. 3.1).

Then they must log in to the user interface “`imapwusr`” with their login name and corresponding password (see Section 7.1). A renewed log in is not necessary as long as the user is already registered in the user interface “Horde/IMP” (see Section 5.1.1). The user can, in the current session, click directly on the item `imapwusr` in the left hand frame of the user interface “Horde/IMP” (see Section 5.2) in order to change to the “`imapwusr`” administration interface.

Here a user has the following choices:

1. create a set of personal filter rules (see Section 7.2),
2. change his login password (see Section 7.3),
3. modify his user data (see Section 7.4) and
4. set up an automatic vacation message for the sender of incoming e-mails (see Section 7.5).

7.2 Defining Filter Rules

Each user can define a set of filter rules for mail administration. Through the definition of filter rules, incoming mails can thus be

- forwarded to any folder,
- forwarded to another mail address or
- deleted immediately after being received.

For each rule a number of criteria can be defined according to which incoming mail for the user is checked and further processed. In order to create new filter rules the user, after logging in to the “`imapwusr`”, (see Fig. 7.1) clicks in the left hand frame on *Forwarding mails*. Already existing rules are then displayed in the right hand frame. Here you also have the chance to create new

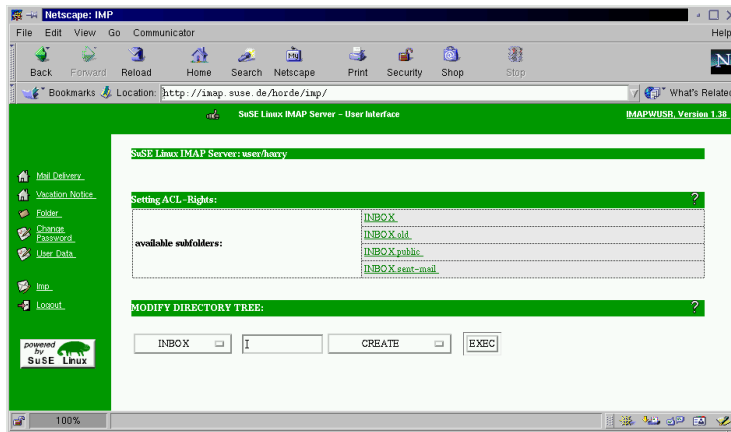


Figure 7.1: The “imapwusr” user interface after login

filter rules or delete existing ones (see Fig. 7.2). A user creates a new filter rule by clicking in the righthand frame on the button *New filter*. In the field “First step: create new filter:” the user now has the option of defining various criteria for a filter rule. For more information on the regular expression syntax used in the filter rules, (see Fig. 7.2.1 for the definition of regular expressions as filter conditions¹) size, subject, sender, recipient or header can be taken into consideration. After the definition of filter criteria, the user must specify the corresponding action to be taken (forwarding to another folder, forwarding to another mail address, deletion).

The user can define complex filter rules by specifying a number of criteria within one filter and with this, creating an AND-link with the various criteria within the filter rule. Via the button *Add Rules* any number of additional criteria can be added to a filter rule. An OR-link between various criteria can be achieved by defining a separate filter rule for each filter condition.

If the user has finished defining a filter rule, then he can add this to the set of his personal filter rules by clicking on the *Activate Filter* button in the field 2nd step: activate new filter.

7.2.1 Examples of regular expressions as filter criteria

| Regular expressions | Meaning |
|---------------------|--|
| owner-.* | matches expressions starting with “owner-” |
| department[1-7] | matches “department1” to “department7” |
| br[ao]wn | corresponds to “brawn” or “brown” |
| (SuSE—IMAP)-Server | matches “SuSE-Server” and “IMAP-Server” |

¹ The filter condition entered (e.g. *Complete Mail Header contains “owner-maillist”*) is evaluated as a regular expression!

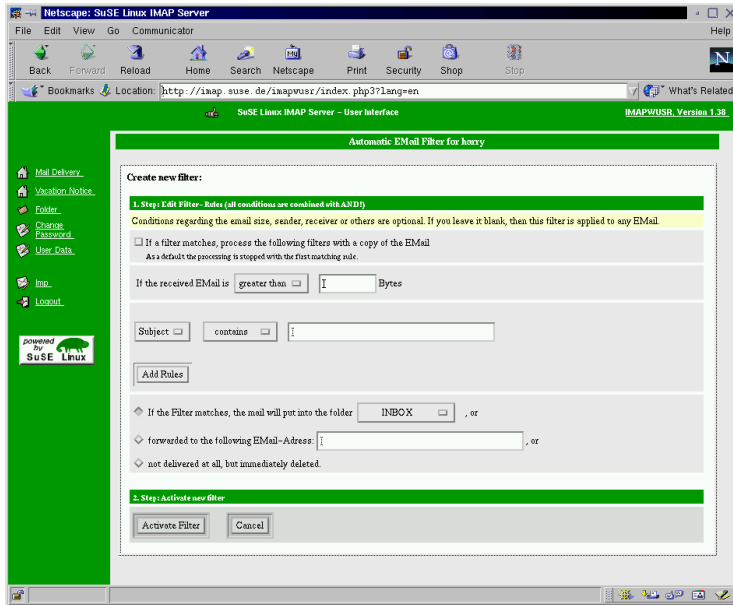


Figure 7.2: Defining a filter rule

7.3 Changing the Login Password

A user can change his login password at any time. To do this, he should click on *Change password* in the left hand frame. In the right hand frame he should enter the current password in *Old password* (see Fig. 7.3) and in the lines below, type in the new password he has chosen in *New Password*, and type it again as confirmation in *Repeat Password*.

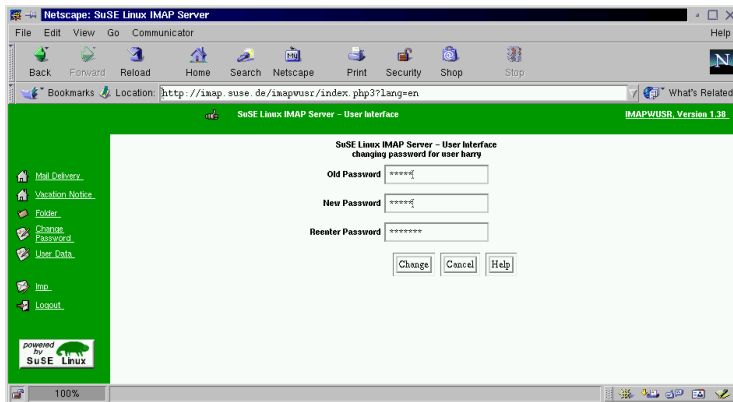


Figure 7.3: Changing the login password

7.4 Changing User Data

Users can update their saved personal data at any time. To do this, click in the left hand frame on *user data*. The current data is then displayed in the right

hand framed. (see Fig. 7.4). Now the user can update the data listed in the right hand frame by clicking on *Change* the updated data is then saved to the SuSE Linux IMAP Server.

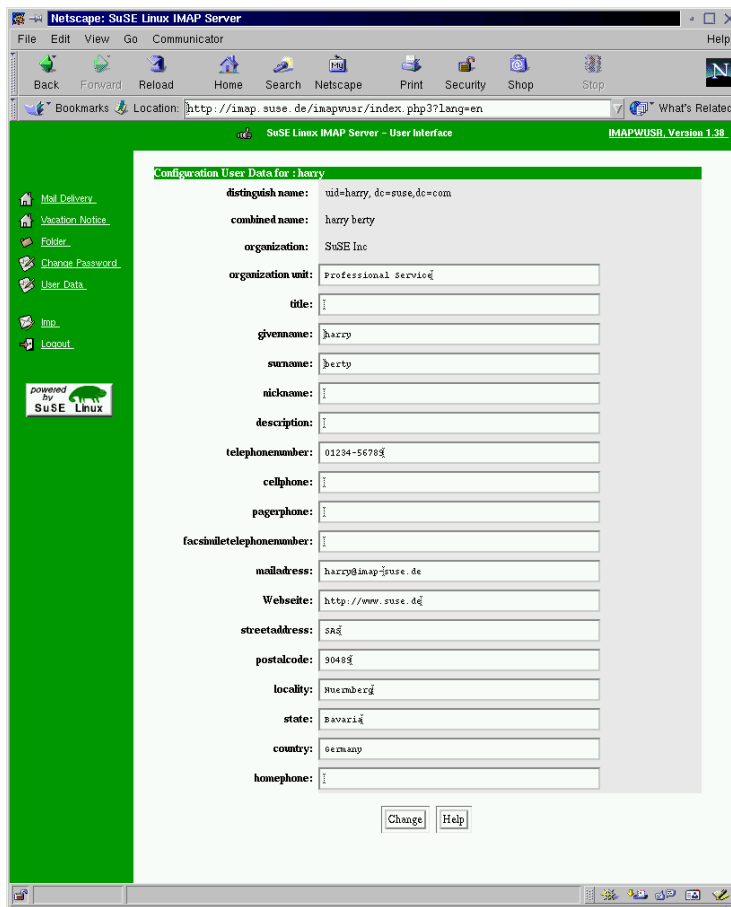


Figure 7.4: Changing user data

7.5 Vacation Messages

When users are absent from e-mail for extended periods of time (such as holidays, illness, business trips etc.), the user can set up absence/vacation messages (Vacation) which are automatically sent back to the sender of incoming mail. It is possible to set up various vacation messages in advance for different time periods. Additional e-mail addresses can be defined, to which incoming e-mails can be forwarded during the vacation. In the following section you will learn how the user can set up such vacation messages.

7.5.1 Setting up a Vacation Message

To set up a new time-limited vacation message, the user clicks on the left hand frame on the entry *Automatic message*. Then, in the right hand frame, the sec-

tions “Already entered vacations” and “Specify new vacation:” (see Fig. 7.5) appear. In the field “Already entered vacations:”, all defined vacation times are listed together with the corresponding actions set up for these (automatic messages and/or forwarding of incoming e-mails to other addresses). The vacation time period which is currently valid is marked with the entry *Active* (colored red). In the section “Define new vacation:” the user can now set up a new vacation message for a defined period, as well as one or several e-mail address where incoming e-mails can be forwarded to.

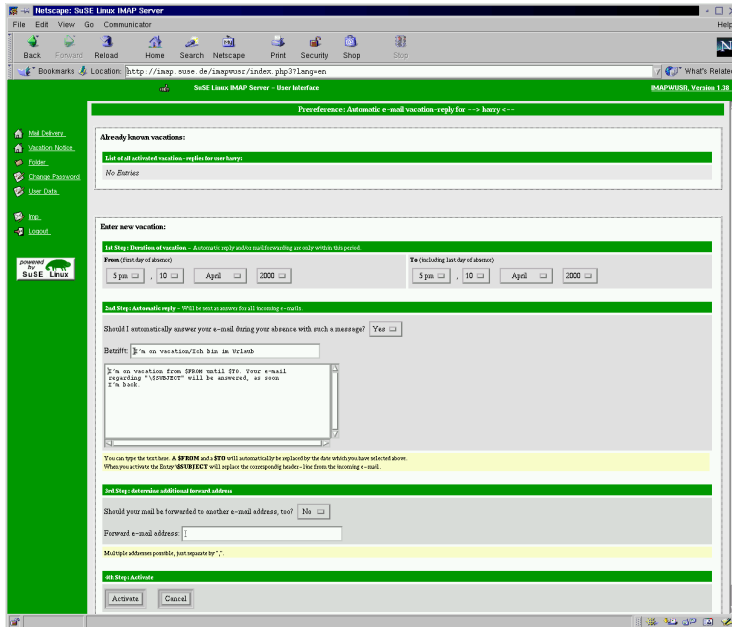


Figure 7.5: Defining the period of vacation

7.5.2 Defining the Vacation Period

In the section “Define new vacation:”, “Step 1: Length of vacation” the user first selects the time period via the dropdown lists *From* and *To*, selecting the time and date of the beginning and end of the vacation by mouse click.

7.5.3 Defining the Vacation Text

In “Step 2: Automatic answer” the user can now, via the dropdown list *Should e-mail automatically be answered with a corresponding message during your absence?* define (see Fig. 7.5) if the sender of the incoming e-mail should automatically receive a vacation message. Choosing “yes” activates the automatic sending of vacation messages. In the entry field *Subject:* users can enter whatever subject they like concerning their absence. In the larger field beneath this they have the option of writing a detailed message text outlining the reasons of his absence as well as a note about when he will return, or something of a similar nature. Within this field, a number of pre-defined variables can be used. The meaning of the possible variables in vacation messages is listed in table 7.1.

| Variables | is replaced in the vacation message by |
|-----------|--|
| \$FROM | the beginning of the vacation |
| \$TO | the end of the vacation |
| \$SUBJECT | subject of the incoming e-mail |

Table 7.1: Variables in vacation messages

7.5.4 Defining Forwarding E-Mail Addresses

In “Step 3: Defining additional forwarding addresses” of the section “Define new absence:” the user now has the opportunity of defining any number of e-mail addresses to which incoming mails can be forwarded during his absence a business trip, for example, they have the opportunity to divert important e-mails to another e-mail account in order to be able to read these from another location. Using this mechanism, e-mails can be forwarded to a representative so that the business process is not interrupted.

If e-mails are to be forwarded to one or more e-mail accounts, the user clicks in the dropdown list “Should all e-mails also be forwarded to another e-mail address during your absence?” on the selection *Yes* and in the entry field *Forwarding e-mail address:* types in the address to which the incoming message should be forwarded. If incoming e-mails are to be forwarded to several different addresses, then the user must separate these entries with a blank space. When the activate button is selected the newly set up vacation messages are then enabled on your SuSE Linux IMAP Server.

7.5.5 Deleting Vacation Times

Vacation times entered by the user are deleted automatically when the time period has expired. Apart from this, he has the possibility of deleting vacation times manually before they have expired. To delete a vacation time manually the user clicks in the left hand frame on the entry *Automatic messaging*. Then, in the right hand frame, the sections “Already entered vacations:” and “Specify new vacations:” appear. In the section “Already entered vacations:” the vacation times defined for the user are listed individually. The user can now delete a specific vacation period by clicking on the entry *[Delete]* in front of the time period in question.

Chapter 8

Index

Index

- ACL, 8, 22
- address book, 35
- admin interface, 17
- admin-interface, 18
- administrator, 15
- aliases, 18, 19
- answering, 32
- answers, 32
- attachment, 34
- attachments, 25, 36

- CD-ROM, 11
- client, 8
- complex filter rules, 44
- condition lines, 44
- contact list, 35, 36
- copying, 32
- creating a signature, 36
- criteria, 43
- Cyrus IMAP Server, 8

- deleting, 33
- deleting vacation times, 48
- disconnected, 8
- DNS server, 11, 15
- driver, 11

- filter rules, 43
- floppy boot disk, 11
- folder, 29
- folders, 17, 21, 22
- forwarding, 33
- forwarding addresses, 48

- forwarding lists, 21

- gateway, 14
- GPM, 14

- hardware, 9
- Horde, 16, 29, 30, 43
- hostname, 11, 15

- IMAP, 8, 9
- imapwadm, 17, 18
- imapwusr, 43
- IMP, 16, 29, 30, 43
- Inbox, 30, 32
- Inbox folder, 18, 19
- IP address, 11, 14

- kernel, 12

- LDAP, 9, 15, 35
- LILO, 13
- limit, 25
- link, 44
- Linux Loader, 13
- linuxrc, 11
- Literal+, 8
- login password, 43, 45

- mail filtering, 9
- mail sorting, 26
- mailbox.php3, 26, 27
- max_messages_page, 26
- message header, 31
- messages, 25, 34
- modem, 14
- modules, 11

- mouse, 14
- moving, 32

- namespace, 8
- netmask, 11, 14

- offline, 8
- old folder, 18
- online, 8
- online help, 17

- partitioning, 12
- permissions, 22
- php3.ini, 25
- POP, 8
- POP3, 8
- Postfix, 8
- public folder, 18

- quotas, 8, 9, 19

- recipients, 34–36
- regular expression, 44
- restoring, 33
- RFC, 8
- RFC 821, 8
- RFC 2088, 8
- RFC 1047, 8
- RFC 1123, 8
- RFC 1651, 8
- RFC 1652, 8
- RFC 1733, 8
- RFC 1854, 9
- RFC 1870, 9
- RFC 1985, 9
- RFC 2060, 8
- RFC 2086, 8
- RFC 2193, 8

- RFC 2197, 9
- RFC 2222, 8
- RFC 2342, 8
- RFC 2359, 8
- RFC 2449, 8
- RFC 822, 9
- saving, 33
- search list, 15
- sent-mail folder, 18
- server, 8
- shared folders, 22
- software installation,
12
- sort_crit, 27
- sort_dir, 27
- SORTARRIVAL, 27
- SORTDATE, 27
- SORTFROM, 27
- SORTSIZE, 27
- SORTSUBJECT, 27
- SSL, 8
- subscribe, 30
- SuSEconfig, 13
- system messages, 16
- timezone, 13
- TLS, 8
- trash can, 33
- Uidplus, 8
- unselect, 8
- upload_max_filesize,
25
- user “cyrus”, 15
- user “cyrus”, 17
- user data, 43, 45
- user interface, 29, 43
- user mailadmin, 16
- user root, 15, 25, 26
- UUCP, 8
- vacation, 46
- vacation messages,
43, 46
- vacation period, 47
- vacation text, 47
- variables, 47
- wast paper basket, 33
- web browser, 29, 43
- web interface, 17
- YaST, 11, 13, 15