# Debian/GNU Linux Mailing Overview of the Mailing

Károly Erdei

December 9, 2009

Károly Erdei — Debian/GNU Linux Mailing

(ロ) (部) (E) (E) =

# 1 Mailing

#### 2 Protocols

3 SPAM

- 4 Antispam
- 5 Thunderbird
- 6 Domain Name System



ヘロト ヘ節ト ヘヨト ヘヨト

# 1 Mailing

#### 2 Protocols

3 SPAM

- 4 Antispam
- 5 Thunderbird
- 6 Domain Name System

#### 7 Links

ヘロト ヘ節ト ヘヨト ヘヨト

Mailing Sending e-mails across the Internet

#### Basics, Terminology

- Message transfer between special hosts (Mail gateways)
  - Mail gateway: dedicated computers to process and transfer e-mails
  - MTA Mail Transfer Agent: sendmail, exim, postfix..
  - Protocol: SMTP Simple Mail Transfer Protocol (RFC 821, 1982)
- Message retrieval by mail user agent (MUA)
  - MUAs: Thinderbird, xfmail, pine, etc.
  - POP3: Post Office Protocol, version 3
  - IMAP: Internet Message Access Protocol, version 4
- Representation of messages
  - RFC 822: Basic Message Format (7-bit text only)
  - MIME: Multipurpose Internet Mail Extension (1992)
  - S/MIME: Secure MIME; PGP/MIME: Pretty Good Privacy

Structure and meaning of the e-mail address

#### E-Mail address: name@domain

**name**: real name, symbolic name, alias, mailbox name

- example: john.shaw, secretary, research, johnny
- mailbox: the place where the messages on the receiving mail gateway will be stored in formats mbox or maildir
- mbox format: the messages will be stored in one file; new message will be appended; delimiter: empty line; begins with: ^ From
- maildir: each message will be stored as a separate file in the directory
- alias: an alternative name which translates to the name of the mailbox
- domain: DNS domain name (risc.jku.at, jku.at)
  - defines MX resource record which host deliver the messages to
  - there can be more mail exchangers (mail gateways) for the domain
    - ;; QUESTION SECTION:
    - ;risc.uni-linz.ac.at. IN MX
    - ;; ANSWER SECTION:
    - risc.uni-linz.ac.at. 1363 IN MX 20 bullfinch.risc.uni-linz.ac.at. 1363 IN MX 30 grauwal.risc.uni-linz.ac.

## e-Mail Transfer Process

Message transfer process in overview

#### User sends a message

- to the local (e.g. RISC) mail gateway by the MUA (e.g. Thunderbird)
- Local mail gateway
  - first spools message locally in the spool area /var/spool/mqueue
  - after transfers message from the spool area to the recipients (remote) mail gateway

#### Local mail gateway receives a message for a user

- from the mail gateway of remote senders
- Received message is placed into the mailbox of the user on the local mail gateway

#### User downloads the message (e.g. by Firefox, POP) from

the local mail gateway to laptop or PC's home directory

(ロ) (部) (E) (E) =

#### e-Mail Transfer Process - gateways SMTP speaking processes on mail gateways transfer mails

#### Process for background transfer is client of remote mail server

- Uses DNS (Domain Name System) to dermine name of mail exchanger for destination domain
  - DNS responses MX resource record for domain
- Uses DNS to map name of mail exchanger to IP address
- Creates TCP connection to server process on mail gateway
- Transfers copy of message to server, which stores copy in mailbox
- If transfer succeeds, sending process removes copy from mail queue
- If connection cannot be established, records time of transfer attempt in the mail queue entry for the message and terminates

#### Process for background transfer periodically sweeps spool area

- Spooled mail can be delivered as soon as mail exchanger is up again
- If spooled mail cannot be delivered after some extended time (default 5 days), process returns message to sender

# 1 Mailing

## 2 Protocols

- 3 SPAM
- 4 Antispam
- 5 Thunderbird
- 6 Domain Name System

#### 7 Links

ヘロト ヘ節ト ヘヨト ヘヨト

## Mailing, Internet Standards (STDs) SMTP - Transfer Protocol

## STD 10 / RFC 821: Simple Mail Transfer Protocol

- Specifies how messages are passed from one host to another
- Communication is based on readable ASCII text commands
  - R: 220 uhu.risc.uni-linz.ac.at ESMTP Sendmail 8.13.8 S: HELO sender hostname R: 250 OK S: MAIL FROM: <e-mail address> R: 250 OK S: RCPT TO: <e-mail address> R: 250 OK S: DATA R: 354 Start mail input; end with <CRLF>.<CRLF> S: <CRLF>.<CRLF> R: 250 OK S: quit R: 221 name closing
- other commands: VRFY Smith; EXTN secretary
- Mail server/clients understand extended version (ESMTP)
  - ESMPT is requested by client via EHLO instead of HELO
  - ENHANCEDSTATUSCODES, 8BITMIME, AUTH DIGEST-MD5 CRAM-MD5 PLAINE, STARTTLS

#### Mailing, Internet Standards (STDs) Message Format for english text

#### STD 11 / RFC 822: Basic Message Format

- 7-bit ASCII format, primarily for english text
  - only plain text, binary must be converted
- Mail header and Mail body is separated by an empty line
  - Mail header begins with a From line in mbox format
- Mail header User Fields provided by MUA
  - From: To: Cc: Subject: Sender: Bcc:
  - Bcc: not visible im header
  - All of them can be set by most of the MUA: used by spammers, they fake the header lines
- Mail header Automatic Fields provided by MUA,MTA
  - Date: Message-Id: Return-path: Received:, X-fields
  - Received: can follow the mail gateways as e-mails pass them

MIME: Multipurpose Internet Mail Extension How to send other contents as ASCII text

## RFC 1341: Messages in other character sets and with binary contents

Use RFC 822 basic message format

- MIME messages can be transferred by normal (older) SMTP agents
- Only mail reader/writer (MUA) must be MIME enabled
- Define additional header fields:
  - MIME-Version: , Content-Id:
  - Content-Transfer-Encoding: How content is encoded as ASCII
  - Content-Type: MIME-type of content
  - Content-Description: Human-readable description of content
- Content-Transfer-Encoding:
  - 7-bit, Quoted-Printable, Base64 (for binary data); 8-bit; Binary
- Content-Type: 7 MIME types with multiple subtypes
  - Text, Image, Audio, Video, Application, Message, Multipart,
- Content Subtypes: text/plain, text/richtext, message/rfc822
  - application/octet-stream, application/PostScript multipart/mixed, multipart/alternative

e-Mail Security Use cryptographic methods !

#### Email is not a secure communication medium

- Reliability: messages may be lost
  - Only transfer from mail queue to next mail server is guarantueed
  - User may be asked to confirm receipt of a message
  - Header field Disposition-Notification-To: address
- Privacy: messages may be read by unauthorized persons
  - Messages are transferred in clear text
- Authenticity: message sender may be faked
  - It is easy to create messages with faked From: fields
- Integrity: message content may be changed
  - Intermediate transfer agent may modify message
- Integrity, Authenticity, Privacy achived by cryptographic methods
  - Privacy: by Encryption
  - Integrity, Authenticity: by Digital signatures

#### Emails are as secure as postcards are without cryptographic methods

# 1 Mailing

## 2 Protocols

3 SPAM

- 4 Antispam
- 5 Thunderbird
- 6 Domain Name System

#### 7 Links

ヘロト ヘ部ト ヘヨト ヘヨト

SPAM living with it spam is dangerous

# What is SPAM

- nearly identical messages sent to numerous recipients by e-mail
- any email message where the senders identity is forged
- common synonyms for spam
  - UBE: unsolicited bulk e-mail
  - UCE: unsolicited commercial e-mail

## Problems with SPAM

- contains an attachment which is a virus/trojan
  - to became your Windows PC a bot net host
- phishing: spam ask users to enter personal information on fake Web sites using e-mail forged to look like it is from a bank or other organization such as PayPal
- spoofing: your e-mail address used as sender of spam
  - you get all bounced mails (500-5000 in short time)
- spam contains links to advertised/malicious web sites

# SPAM living with it

#### How spammers work

- collecting e-mail addresses
  - from chatrooms, websites, newsgroups
  - infecting Windows PCs, where viruses collects address books
- sending spam mails
  - using open mail gateways (not anymore)
  - using bot nets, by infecting Windows PCs with viruses, Trojans
- dictionary attacks
  - spammer sends e-mail based on dictionary
  - 150.000 rejected by blacklists + 40.000 dictionary attack

# Main problem to fight SPAM

- governments did not accept appropriate law again spammers, SPAM
- Iaw only in some countries: in EU, Australia
- EU: SPAM for direct marketing are not allowed without the consent or in respect of the subscriber (receiver of spam)

SPAM living with it Origin of spam, statistics

# Origin of SPAM

- Origin of spam refers to the geographical location of the computer from which the spam is sent
- the spammer, the hijacked spam-sending computer, the spamvertised server, and the user target of the spam are all often located in different countries
- As much as 80% of spam received by Internet users in North America and Europe can be traced to fewer than 200 spammers

## Statistics

- total volume of spam April 2008: over 100 billion emails/day
- 90% of incoming email traffic is spam in NA,EU, Australasia
- 96.5% of e-mail received by businesses was spam by June 2008

Living with SPAM Statistics (checked Dec 2009 by Wikipedia)

#### Origin of spam in the third quarter of 2008

- \* The United States (18.9%, up from 14.9% in Q2)
- \* Russia (8.3%, up from 7.5%)
- \* Turkey (8.2%, up from 6.8%)
- \* China (5.4%, down from 5.6%)
- \* Brazil (4.5%, unchanged)

When grouped by continents, spam comes mostly from:

- \* Asia (39.8%, up from 35.4%)
- \* Europe (23.9%, down from 29.5%)
- \* North America (21.8%, up from 18.2%)
- \* South America (13.2%, down from 14.8%)

Number of IP addresses used for spamming

- \* top three as the United States, China, and Russia
- \* followed by Japan, Canada, and South Korea

# 1 Mailing

## 2 Protocols

3 SPAM

# 4 Antispam

5 Thunderbird

6 Domain Name System

#### 7 Links

ヘロト ヘ部ト ヘヨト ヘヨト

#### Antispam techniques I What the end user can and should do

#### Give your e-mail address only to trusted persons/sites

- never put your e-mail address in text form to a web site
- post to lists as anonym, use faked, invalid email address and name
- avoid responding to spam
  - dont use links: remove me from the list (you'll confirm your e-mail address)
  - be carefull with your vacation message: you can send a reply to a spammer
- don't use contact forms on web sites: (problems with server side scripting)
- don't register anywhere with real e-mail address ( I hope, amazon.de is ok, but other sites ?)
- use temporary e-mail addresses (if possible)
  - the e-mail address (alias) expires after a given time

# Do NOT read and send HTML emails

Antispam techniques II

## Be careful using and configuring your mail program

- don't use html in e-mail programs (MUA) !
  - set the outgoing mail format to PLAIN TEXT
  - for an e-mail message it is not necessary to use html
  - you can use any type of attachment (to send .doc, .jpg, etc. files )
- RISKs by reading HTML formatted e-mails
  - mail client starts a browser or the function of browser is integrated
  - html browser interpret the contents automatically (check settings)
  - they start scripts, download, show images, without asking you
  - html spam can contain scripst, which allow spammer to spy your computer (address, etc) spyware will may be installed
  - html spam can contain web bugs, which allow spammer to get further information from you, save viruses, Trojans, you became a bot net host, etc.
- mail clients which don't display html, attachments, images have fewer risk !

Antispam techniques Using SpamAssassin (SA)

#### SA - email spam filtering based on content-matching rules

- uses a variety of spam-detection techniques
  - DNS-based and checksum-based spam detection
  - Bayesian filtering, blacklists and online databases
- can be integrated with the mail server
  - to automatically filter all mail for a site
- avarded: Linux New Media Award 2006
  - Best Linux-based Anti-spam Solution

# Operation

- uses large set of rules to decide e-mail is spam or ham
  - rule (called test in SA) bases mostly on regular expression to decide spam contents
- each test has a score value to assign to e-mail, if matches
  - positive value indicates spam, negative ham
- all test combine the results in a global score

#### SpamAssassin The RISC setup, how to use it

#### How to tune the default configuration

- all e-mails at RISC will be checked by SA
- you can use procmail to sort your e-mails in folders
  - to learn: man procmail; man .procmailrc;
  - RISC User Guides: How to configure SpamAssassin for your needs
- configuration file: .spamassassin/user\_prefs
- you can change, tune the values for different variables:
  - change the value for required\_hits 3.0
  - change the score value for the different checks by setting it to zero
- configure your white list or blacklist
  - whitelist\_from @jku.at
  - this will let through all e-mails with @jku.at, faked addresses, too !
  - blacklist\_from @hknetmail.com
- use sa-learn to tune the Bayesian algoritm

sa-learn --spam --mbox /path/to/spaminput

# 1 Mailing

#### 2 Protocols

3 SPAM

4 Antispam

#### 5 Thunderbird

6 Domain Name System

#### 7 Links

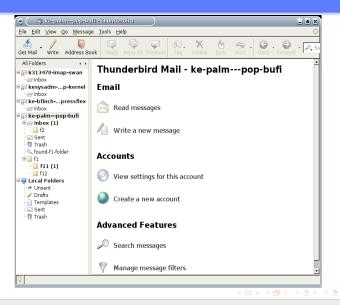
ヘロト ヘ節ト ヘヨト ヘヨト

#### Mozilla Thunderbird current version 2.0.0.23

# Thunderbird is the best free MUA

- free, open source, cross-platform e-mail and news client
- supports multiple e-mail, newsgroup and RSS accounts
  - supports multiple identities within accounts
- Spam mail filtering
  - own Bayesian spam filter
  - whitelist, based on the included address book
  - understands the classifications of SpamAssassin
- Standars supported natively
  - POP and IMAP with SSL/TLS,
  - S/MIME secure email (digital signing and message encryption using certificates)
  - PGP signing, encryption, and decryption by the Enigmail extension
- Security protection includes
  - disabling loading of remote images within messages
  - disabling JavaScript
- Additional features are available via extensions

# Main Window of Thunderbird



# Settings for an email account

Account Settings		×
Security	Account Settings - <ke-palmpop-bufi></ke-palmpop-bufi>	1
Server Settings	Account Name: ke-palmpop-bufi	-
Composition & Addressi Offline & Disk Space	Default Identity	
Junk Settings Return Receipts	Each account has an identity, which is the information that other people see when they read your messages.	
Security ke-bfinch-imap-kerdei-pre	Your Name: Karoly Erdei	
-Server Settings -Copies & Folders	Email Address: k.erdei@risc.uni-linz.ac.at	
Composition & Addressi Offline & Disk Space	Reply-to Address: Organization:	
Junk Settings Return Receipts Security	A <u>t</u> tach this signature:	
E ke-palmpop-bufi Server Settings	<u>C</u> hoose	
-Copies & Folders	Attach my <u>v</u> Card to messages <u>Edit Card</u>	
Composition & Addressi Disk Space	Outgoing Server (SMTP): risc-smtpauth - smtpauth.risc.uni-linz.ac.at (	
Junk Settings Return Receipts	Manage Identities	
Security Local Folders		
Disk Space Junk Settings		
Outgoing Server (SMTP)		
Add Account		
Set as De <u>f</u> ault		
Remove Account		
	Cancel OK	1

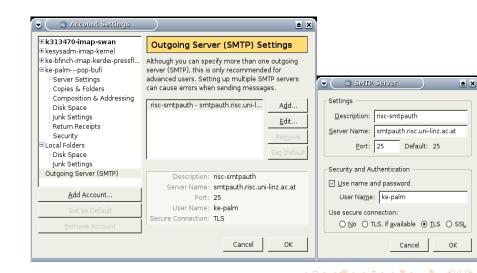
# Setting the incoming mail server

* k313470-imap-swan         * kespinch-imap-kerdel-pressfl         Server Settings         - Corpois & Folders         - Corpoistion & Addressing         - Mix Settings         - Server Settings         - Corpoistion & Addressing         - Brever Settings         - Corpoistion & Addressing         - Server Settings         - Corpoistion & Addressing         - Server Settings         - Corpoistion & Addressing         - Server Settings         - Corpoist S Folders         - Corpoistion & Addressing         - Disk Space         - Junk Settings         - Becurity         Becure Folders         - Disk Space         - Junk Settings         - Becure Folders         - Disk Space         - Junk Settings         - Becure Folders         - Disk Space         - Junk Settings         - Becure Folders         - Disk Space         - Junk Settings         - Becure Folders         - Disk Space         - Junk Settings         - Berover Account         Set as Default         Bernove Account         Bernove Account	👻 🤇 Account Settings	
Eke-finch-imap-kerdei-pressfl       Server Type:       POP Mail Server         Server Settings       Server Settings         Coppies & Folders       User Name:       Dullfinch.risc.uni-linz.ac.a.       Port:       995       Default: 995         Junk Settings       Beturn Receipts       Security Settings       Use secure connection:       Never O TLS, if gavailable O ILS O SSL       Use secure authentication         Server Settings       Objects & Folders       Objects & Solders       Server Settings         Coppies & Folders       Server Settings       Server Settings         Junk Settings       Check for new messages at startup       minutes         Security       Automatically download new messages       Eetch headers only         Ustain Gald Account       Set as Default       Empty Trash on Egit       Advanced		Server Settings
Junk Settings       Check for new messages at startup         Junk Settings       Check for new messages every       10         Security       Automatically download new messages         Disk Space       Etch headers only         Junk Settings       Cleave messages on server         Outgoing Server (SMTP)       Eave messages on server         Add Account       For at most         Set as Default       Until I glete them         Bemove Account       Empty Trash on Egit	ke-bfinch-imap-kerdei-pressfl     Server Settings     Copies & Folders     Composition & Addressing     Offline & Disk Space     Junk Settings     Return Receipts     Security     Server Settings     Copies & Folders     Composition & Addressing	Server Type: POP Mail Server Server Name: bullfinch.risc.uni-linz.ac.a port: 995 Default: 995 User Name: ke-palm Security Settings Use secure connection: O Never O TLS, if available O TLS O SSL Use secure authentication
Add Account     Until I delete them       Set as Default     Until I delete them       Bernove Account     Empty Trash on Egit	Junk Settings -Return Receipts -Security E Local Folders -Disk Space -Junk Settings	Check for new messages every 10 minutes Automatically download new messages Eetch headers only
Cancel OK	Set as De <u>f</u> ault	Until I delete them
		Cancel OK

# Security setting: sign and encrypt an e-mail

👻 🤇 😋 Account Settings	
★ k313470-imap-swan ★ kesysadm-imap-kernel	Security
<ul> <li>Kesysadirining-kerieli</li> <li>Server Settings</li> <li>Copies &amp; Folders</li> <li>Composition &amp; Addressing</li> <li>Offline &amp; Disk Space</li> <li>Junk Settings</li> <li>Return Receipts</li> <li>Security</li> </ul>	To send and receive signed or encrypted messages, you should specify both a digital signing certificate and an encryption certificate. Digital Signing Use this certificate to digitally sign messages you send: Select Clear
■ ke-palmpop-bufi -Server Settings -Copies & Folders -Composition & Addressing -Disk Space	Digitally sign messages (by default)      Encryption Use this certificate to encrypt & decrypt messages sent to you:     Select Clear
Junk Settings Return Receipts Security	Default encryption setting when sending messages: Never (do not use encryption)
□ Local Folders □ Disk Space □ Junk Settings Outgoing Server (SMTP)	Required (can't send message unless all recipients have certificates)     Certificates
<u>A</u> dd Account	View Certificates Security Devices
Set as De <u>f</u> ault	
<u>R</u> emove Account	
	Cancel OK

# Setting the stmp out host



# Using more signatures

Account properties

🖢 🤇 🔇 Choose a file		<b>≜</b> ×
🔁 ke	🔹 🛅 ke 🛛 signatures	
Desktop	Name	▼ Modified
File System	尼 signature	10/20/2007
download	🗑 signature.2	Sunday
attachments	📄 signature.di	Sunday
	🗑 signature.office	10/20/2007
	signature.private	Tuesday
<b>∲</b> <u>A</u> dd <b>@</b> <u>R</u> emove		All Files 🔽
		X Cancel

・ロン ・聞と ・ヨン ・ヨン

#### Using message filters Tools/Message Filters

👻 🗳 Message Filters		
Eilters for: ke-palmpop-bufi		Filter <u>L</u> og
Enabled filters are run automatically in the order shown	below.	
Filter Name	Enabled	<u>N</u> ew
ff f12	<ul> <li>✓</li> <li>✓</li> </ul>	<u>E</u> dit
f11	~	Delete
		Move <u>U</u> p Move <u>D</u> own
Run sele <u>c</u> ted filter(s) on: <u>Inbox</u>	\$	<u>R</u> un Now
1		

・ロン ・聞と ・ヨン ・ヨン

Using message filters - Which field to filter

🗑 🌀 Filter Rules	a x
Filter name: f12	
,	
For incoming messages that:	
○ Match all of the following	all <u>m</u> essages
Subject (\$ contains (\$ f12	+ -
Subject contains	+ -
Subject	
From	
Body	
Date	
E Priority	
Status 🗧 🛊 f12 on ke-palmpop-bufi	<b>\$</b> + -
То	
Cc	
To or cc	
Age In Days	
Size	
Customize	Cancel OK

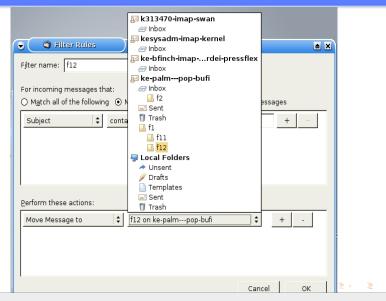
# Using message filters - Set relation

🚽 🤇 🕲 Filter Rules			
Filter name: f12			
,			
For incoming messages th			
○ Match all of the followin	g	ollowing O Match all <u>m</u>	iessages
Subject 🗧 🖨	contains 🛛 🖨	f12	+ -
Subject 😫	contains 🗘		+ -
	contains		
	doesn't contain		
	is		
Perform these actions:	isn't begins with		
_	ends with		
Move Message to		pop-bufi 🗧 🖨	+ ·
,		Car	ncel OK
		< □	→ < □ > < □ > <

# Using message filters - Set action

6	) 🌀 Filter Rules	
	Move Message to	
'	Copy Message to	
	Forward Message to	
(	Reply with Template	Match any <u>o</u> f the following O Match all <u>m</u> essages
Γ	Mark As Read	ains [‡] [12 +   -
	Add Star	ains 🗘 f12
	Set Priority to	
	Tag Message	
	Set Junk Status to	
	Delete Message	
	Delete From POP Server	
ļ	Fetch From POP Server	
	Move Message to 🗧 🗘	f12 on ke-palmpop-bufi 🗧 + -
ļ		
		Cancel OK

# Using message filters - Set destination



# Using Folders and Virtual Folders

#### Using Folders

- Thunderbird uses mbox format to save the e-mails
- folder consist any number subfolders but only one mbox folder
- folders have tree structure
- you can create folders on static critearia
  - folder: CBWE; subfolders: questionaire, lecturer, etc.

# Using Virtual Folders (VF)

- creating virtual folders:
  - specify a set of search criteria on messages, accounts
  - save the search as a virtual folder
- you work with the virtual folders as a conventional folder
- you can dinamically rerun the search each time
- you can always modify the search criteria
- VF is not a real folder, no messages are moved into it

# Folder properties

🗟 🤇 🕤 Folder Properties 💦 🗎 🗎	×			
General Information Retention Policy				
Name: f12				
Default Character <u>E</u> ncoding: Western (ISO-8859-1)				
☐ Apply default to all messages in the folder (individual message character encoding settings and auto-detection will be ignored)				
<u>R</u> ebuild Index				
Cancel OK				

イロト イロト イヨト イヨト 三日

# Virtual folder properties

👻 🤇 🕥 Edit Saved Sear	ch Properties for found-f1-folder
<u>N</u> ame:	found-f1-folder
Select the folders to search:	C <u>h</u> oose
	used for this saved search folder: • Match any <u>of</u> the following O Match all <u>m</u> essages
Subject 🗘	contains 🔯 f1 + -
	Cancel OK

・ロト ・四ト ・ヨト ・ヨト

# Creating new folder

For accounts and folders as subfolder

•	🌀 New Folder		×
<u>N</u> ar	me:		
f12	21		
<u>C</u> re	ate as a subfolder of:		
ke	-palmpop-bufi	\$	
k3:	13470-imap-swan	+	
kes	sysadm-imap-kernel	•	
ke-	bfinch-imap-kerdei-pressflex	•	
ke-	-palmpop-bufi		choose this for the parent
Loo	cal Folders	•	<i>⊡</i> Inbox →
n K			🖃 Sent
		2	🗍 Trash
	choose this for the par	rent	🕼 f1 💦 🔸
	🔐 f11		
	<mark>∏</mark> f12		

# Searching in folders

Preparing creation of Virtual Folder

👻 🥥 Search Messages 📃 🛋 🗶							
Search for messages in: ke-palmpop-bufi 😫							
✓ Search subfolde	✓ Search subfolders						
○ M <u>a</u> tch all of the	following 💿 Match	n any <u>o</u> f the following					
Subject (\$ contains (\$ f12 + -							
Subject	Sender	Date	Priority	Location 🖪			
f12	Karoly Erdei	11/12/2008 09:16 PM		Sent			
f12	Karoly Erdei	11/12/2008 09:20 PM		Sent			
f12	Karoly Erdei	11/12/2008 09:21 PM		Sent			
f12	Karoly Erdei	11/12/2008 09:25 PM		Sent			
f12				Sent			
f12 Karoly Erdei 11/12/2008 09:41 PM f12							
f12 Karoly Erdei 11/12/2008 09:16 PM Trash 💌							
Open File + Delete Open Message Folder Save as Search Folder							
10 matches found							

## New saved search folder Create new Virtual Folder

💌 🤇 New Saved Search Folder 🗎 🗶	
<u>N</u> ame:	found-f12-folder
<u>C</u> reate as a subfolder of:	ke-palmpop-bufi
Select the folders to search:	C <u>h</u> oose
Search Online (Gives up-to-date results for IMAP and News folders but increases time to open the folder)	
Configure the search criteria used for this saved search folder:	
○ Match all of the following ④ Match any of the following ○ Match all messages	
Subject 🗧 🗘	contains 🗘 f12 + -
	Cancel OK

イロト イポト イヨト イヨト 三日

# 1 Mailing

#### 2 Protocols

3 SPAM

4 Antispam

#### 5 Thunderbird

6 Domain Name System

#### 7 Links

ヘロト ヘ部ト ヘヨト ヘヨト

# Domain Names System

#### **DNS** - Domain Names

- This section has been removed from the course material 2009
- If you are interested in DNS please
  - search in Google for material
  - check the short overview in the CBWE 2008 material (Mailing)

# 1 Mailing

#### 2 Protocols

3 SPAM

- 4 Antispam
- 5 Thunderbird
- 6 Domain Name System



# User Guides at RISC for Mailing The RISC setup

# Configuration Mailing

- https://www.risc.uni-linz.ac.at/internals/userinformation/ completeguide/userguides/mailing/client-ssl/client-ssl.html
- https://www.risc.uni-linz.ac.at/internals/userinformation/ completeguide/userguides/mailing/smtp-relay/smtp-relay.html

#### Procmail

https://www.risc.uni-linz.ac.at/internals/userinformation/ completeguide/userguides/mailing/procmail.html

#### Spamassassin

https://www.risc.uni-linz.ac.at/internals/userinformation/ completeguide/userguides/mailing/spamassassin/spamassassin.html

End of Mailing

Thanks for your attantion !

▲□▶▲□▶▲□▶▲□▶ ▲□▶ ▲□▶