

# Linux Days 2002, Advanced Tutorial

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# Summary

- 1. Unix System Services
- 2. Mail subsystem

# Server applications

- General
- Squid
- Ssh
- Ftp: wuftp

# Server application: Squid

- Caches Web requests
- Standalone daemon

# Server application: Squid > configuration

- **Configured via `/etc/squid/squid.conf`:**

- ◇ `acl name criterion parameters`
- ◇ `http_access allow|deny [!]aclname`
- ◇ `deny_info FILE aclname`
- ◇ `authenticate_program /usr/lib/squid/ncsa_auth /etc/shadow`

- **Order (of `http_access` clauses) is important**

- **Example:**

- ◇ Allow all access from inside
- ◇ For outside access, ask for password

```
acl localNets src 10.0.0.0/255.0.0.0 127.0.0.1
acl password proxy_auth REQUIRED
http_access allow localNets
http_access allow password
http_access deny all
```

- **Documentation at <http://www.squid-cache.org/>**

# Server application: Squid > logfile

- Log files can be found in  
`/var/log/squid/access.log`

- Example:

```
1033291882.682      132 127.0.0.1 TCP_MISS/200 14634 GET http://www.pt.lu/ -  
DIRECT/194.154.192.107 text/html
```

```
1033377731.635      130 192.168.37.143 TCP_MISS/200 14626 GET  
http://www.pt.lu/ aknaff DIRECT/194.154.192.107 text/html
```

```
> perl -e 'print localtime(1033377731.635)."\n" '  
Mon Sep 30 11:22:11 2002
```

# Server applications: SSH

- Encrypted remote login to other sites
- Possibility to tunnel X protocol: `ssh -X somehost`
- Possibility to tunnel arbitrary ports (protection against snooping):
  - ◇ `ssh -L 5900:localhost:5900 somehost`
  - ◇ `ssh -R 6001:localhost:6000 somehost`
- Default configuration suitable for most uses
- Optional key-based authentication

# Server applications: Wu.ftp

- Access to downloadable files
- Started by `xinetd`
- Not encrypted
- Possibility to have "anonymous" users
- `/etc/ftpusers`
- Advanced configuration in `/etc/ftppass`
  - ◇ guest users
  - ◇ classes (limits number of logins)
  - ◇ upload directories
  - ◇ ...



# Server applications: Mail

- **Sendmail**
  - ◇ sends mail to other machines
  - ◇ receives mail from other machines
- **Imap, Pop**
  - ◇ allows users to browse their mailbox

# Server applications: Mail > Sendmail

- Standalone daemon
- /etc/mail directory

# Server applications: Mail > Sendmail (1)

- **aliases**
  - ◇ nice names for users (incoming)
- **virtusertable**
  - ◇ same as aliases, but for managing several mail domains
- **genericstable**
  - ◇ nice names for users (outgoing)
- **mailertable**
  - ◇ "manually" configure paths to certain destinations

# Server applications: Mail > Sendmail (2)

- local-host-names (sendmail.cw)
  - ◇ Defines which domains are local mailboxes
- access
  - ◇ Spam control
- relay-domains
  - ◇ Defines who may use this mailer
  - ◇ Destination or origin must be local (or both)
- sendmail.mc (linux.mc)
  - ◇ Master configuration files
  
- After changing one of the files, you need to type `make`

# Server applications: Mail > Sendmail > sendmail.mc

- MASQUERADE\_AS: outgoing domain name
- FEATURE('dnsbl', ..., ...): spamcontrol
- GENERICS\_DOMAIN('mailhost.test.lu')

# Server applications: Mail > Sendmail

- Documentation at <http://www.sendmail.org>

# Server applications: Mail > Imap

- Started by `xinetd`
- Needs almost no configuration
- For encrypted operation, key File in  
`/usr/share/ssl/certs/imapd.pem`
- Access by mail client such as `kmail` or `mozilla`

# Server applications: Mail > Imp

- Web application: started by apache
- Part of the Horde project
- Horde is composed of several projects:
  - ◇ Imp: web mail
  - ◇ Turba: address book



# Horde preparations (1)

- Install php ( `rpm -i php-4*.rpm` )

- On Redhat switch on *short open tags* in `/etc/php.ini`:

```
short_open_tag = On
```

- Install missing pear modules

```
pear install http://pear.php.net/get/Log
```

```
pear install http://pear.php.net/get/Net_Socket
```

```
pear install http://pear.php.net/get/Mail_Mime
```

# Horde preparations (2)

## ○ Webmail.conf file

```
# #####  
# Webmail configuration  
Alias /horde/ "/usr/local/horde-2.1/"  
Alias /webmail "/usr/local/horde-2.1/imp-3.1"  
  
<Directory /usr/local/horde-2.1>  
    DirectoryIndex index.php  
    Options Indexes FollowSymLinks  
    AllowOverride None  
    order allow,deny  
    allow from all  
</Directory>
```

## ○ Include it from httpd.conf:

```
Include "/etc/httpd/conf/webmail.conf"
```

# Horde basic setup

- **File:** horde/config/horde.php

- **Where to store user's preferences?**

```
$conf['prefs']['driver'] = 'sql';
```

- **Where is the database located?**

```
$conf['prefs']['params']['phptype'] = 'mysql';
```

```
$conf['prefs']['params']['hostspec'] = 'localhost';
```

```
$conf['prefs']['params']['username'] = 'username';
```

```
$conf['prefs']['params']['password'] = 'password';
```

```
$conf['prefs']['params']['database'] = 'horde';
```

```
$conf['prefs']['params']['table'] = 'horde_prefs';
```

- **How to send mail?**

```
$conf['mailer']['type'] = 'smtp';
```

# Horde registry (apps and authentication)

- **File:** horde/config/registry.php

- **Chose application which manages login:**

```
$this->registry['auth']['login'] = 'imp';  
$this->registry['auth']['logout'] = 'imp';
```

- **Activate applications:**

```
$this->applications['imp'] = array(  
    'fileroot' => dirname(__FILE__) . '/../imp',  
    'webroot' => $this->applications['horde']['webroot'].'/imp',  
    'icon' => $this->applications['horde']['webroot'].'/imp/graphics/imp.gif',  
    'name' => _("Mail"),  
    'allow_guests' => false,  
    'show' => true  
);
```

```
$this->applications['turba'] = array(  
    'fileroot' => dirname(__FILE__) . '/../turba',  
    'webroot' => $this->applications['horde']['webroot'].'/turba',  
    'icon' => $this->applications['horde']['webroot'].'/turba/graphics/turba.gif',  
    'name' => _("Addressbook"),  
    'allow_guests' => false,  
    'show' => true  
);
```

# Imp header menu

- **File:** horde/imp/config/menu.php
- **Add icon for Turba, the address manager**

```
$_menu[] = array(  
    'url' =>        '/horde/turba',  
    'text' =>       'Address Book',  
    'icon' =>       'turba.gif',  
    'icon_path' =>  '/horde/turba/graphics',  
    'target' =>     '_blank',  
    'onclick' =>    ''  
);
```

# Next presentation

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- Iptables (firewall) setup