Association Lyonnaise pour le Développement de l'Informatique Libre

salle des rancy Maison pour tous

# Héberger ses mails

Sébastien Dufromentel, Clément Février
ALDIL, Conférence « jeudi du libre »

4 avril 2013

ubuntu-lyon

Internet : Réseau Libre Non Centré

# Intervenants

Clément Février

- Doctorant en physique
- Président d'Ubuntu-Lyon et membre de l'ALDIL
- Serveur : tour, sous Ubuntu (desktop).

Sébastien « Elzen » Dufromentel

- Doctorant en informatique ; ancien prof d'école
- Fondateur du collectif « Internet : Réseau Libre Non-Centré »
- Serveur : portable, sous Debian.

# Pourquoi l'auto-hébergement ?

- Usagers d'*Internet*
- Militants du Logiciel Libre
- Plus pratique, tout simplement

Référence : Benjamin Bayart, « Internet Libre ou Minitel 2.0 »
(→ http ://www.fdn.fr/)
Voir aussi sur http ://fadrienn.irlnc.org


# Pourquoi héberger ses mails ?

- Tout le monde utilise les mails
- Que feriez-vous avec votre courrier papier ?

# Plan

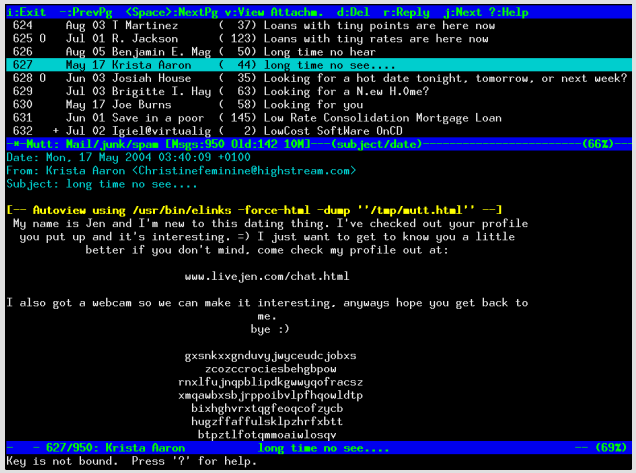
# Principes généraux

# Quelques clients mails possibles





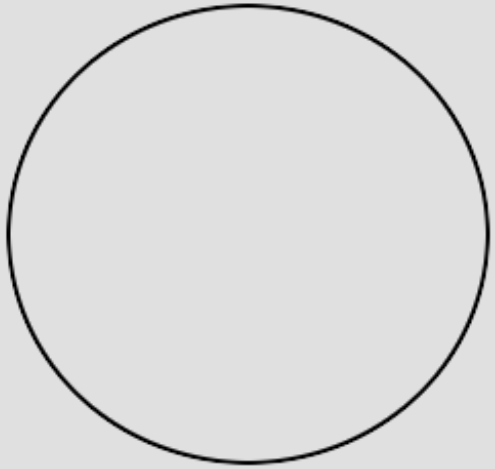

Thunderbird, Evolution, Sylpheed, Claws-Mail, k9mails, Roundcube




Mutt

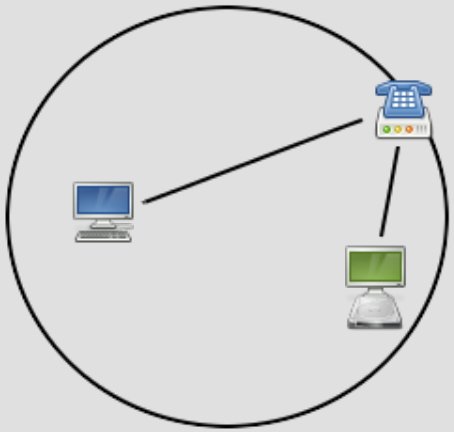
# Légende pour les schémas suivants

votre ordinateur, votre serveur, votre routeur, vos destinataires, un spammeur



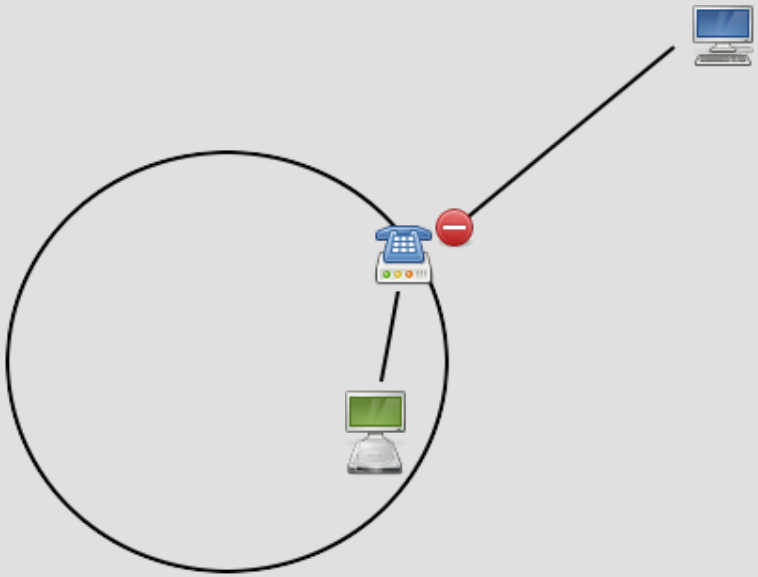
votre réseau local

# Récupération des mails (IMAP)



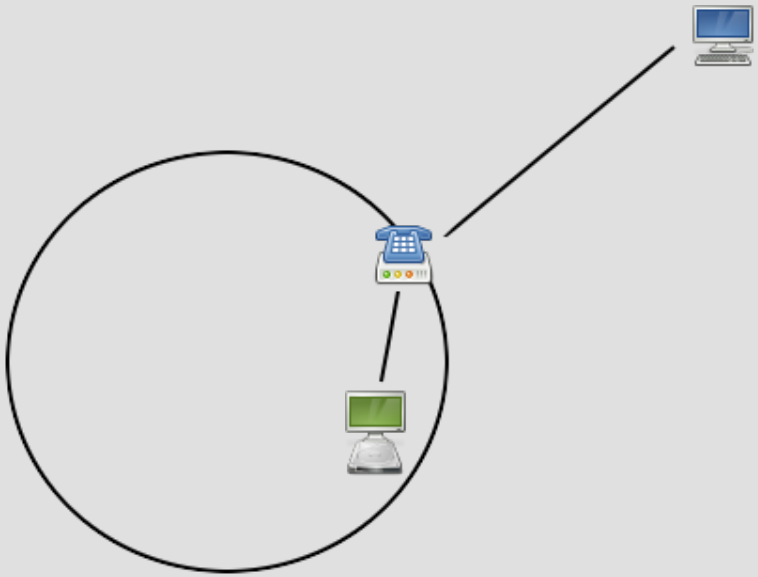
- Échange IMAP interne
- Authentification [OK]

# Récupération des mails (IMAP)



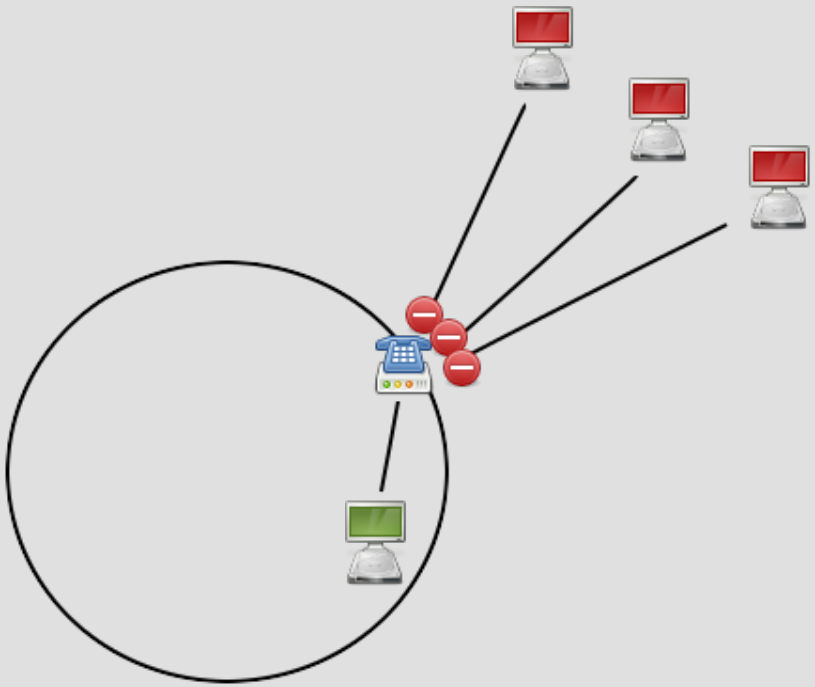
- Échange IMAP externe
- Pas de redirection [KO]

# Récupération des mails (IMAP)



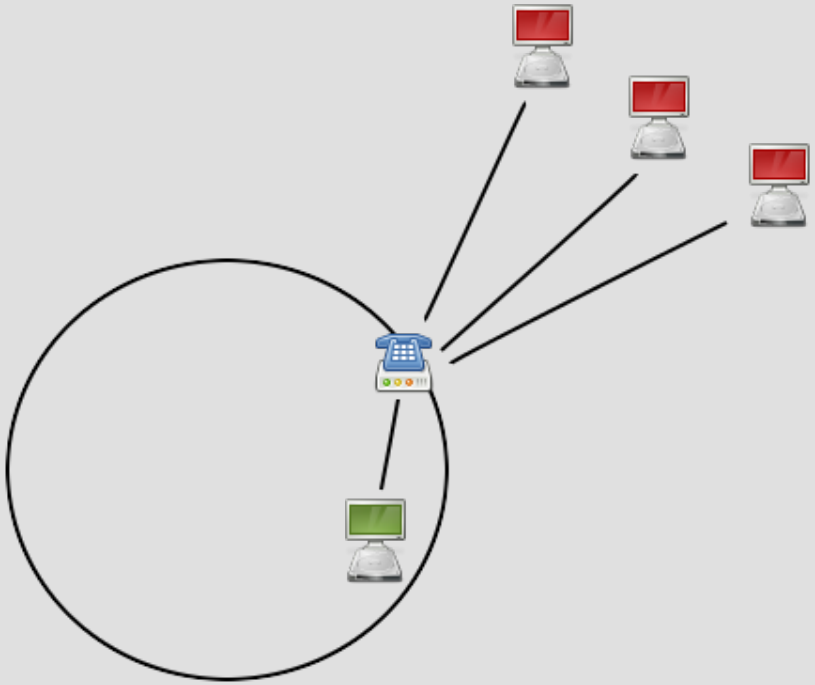
- Échange IMAP externe
- Redirection [OK]
  - port 143 (en clair)
  - port 993 (chiffré)
- Authentification [OK]

# Communication entre serveurs (SMTP)



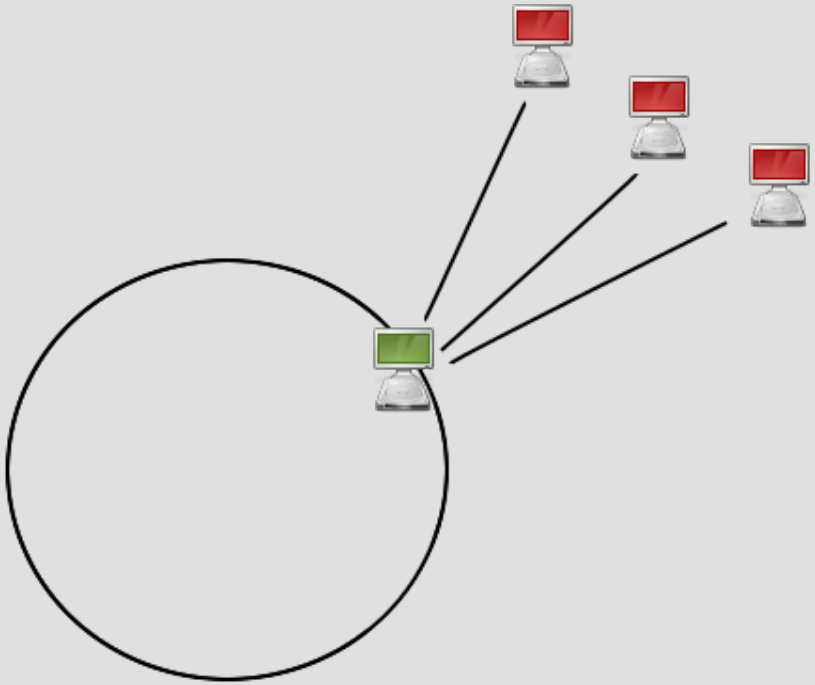
- Échange SMTP externe
- Pas de redirection [KO]

# Communication entre serveurs (SMTP)



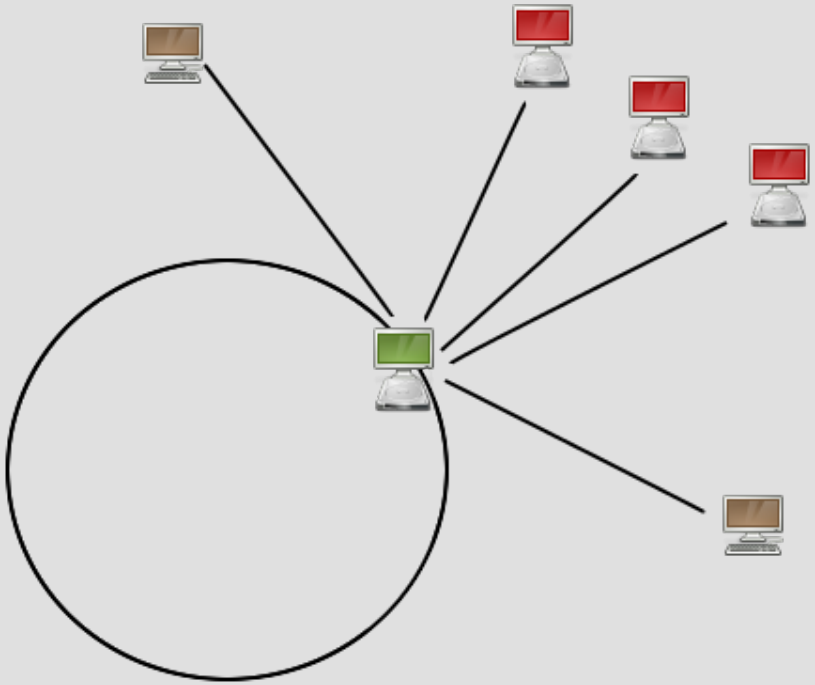
- Échange SMTP externe
- Redirection [OK]
  - port 25 (en clair)
  - port 465 (chiffré)

# Communication entre serveurs (SMTP)



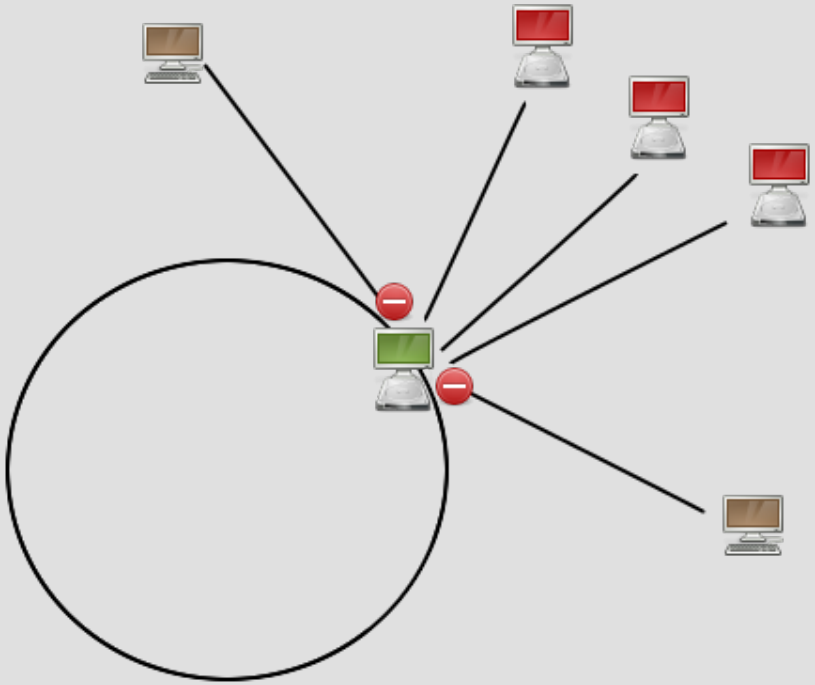
- Échange SMTP externe
- Redirection [OK]
  - port 25 (en clair)
  - port 465 (chiffré)

# Envoi de mails (SMTP)



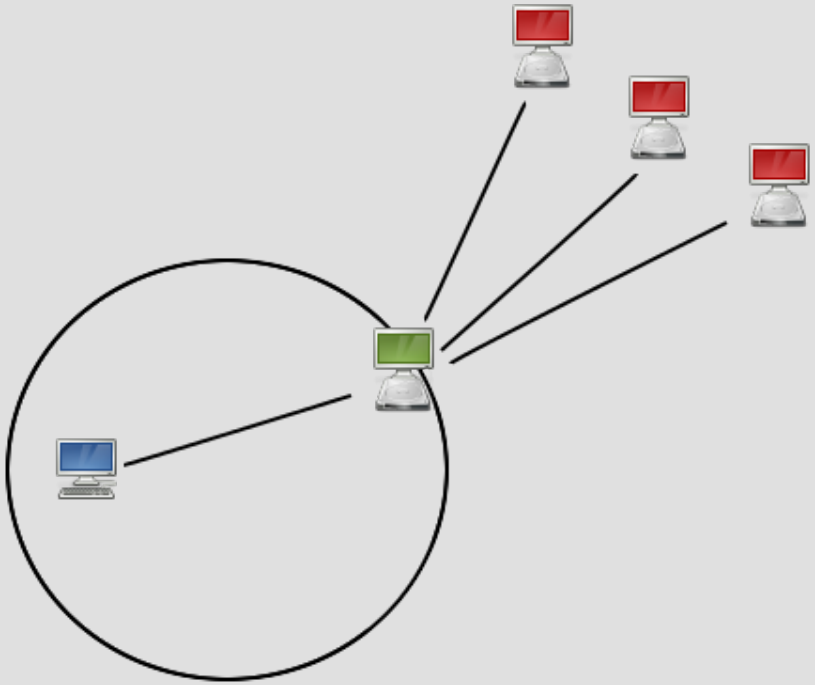
- Échange SMTP externe
- Accès ouvert [KO]

# Envoi de mails (SMTP)



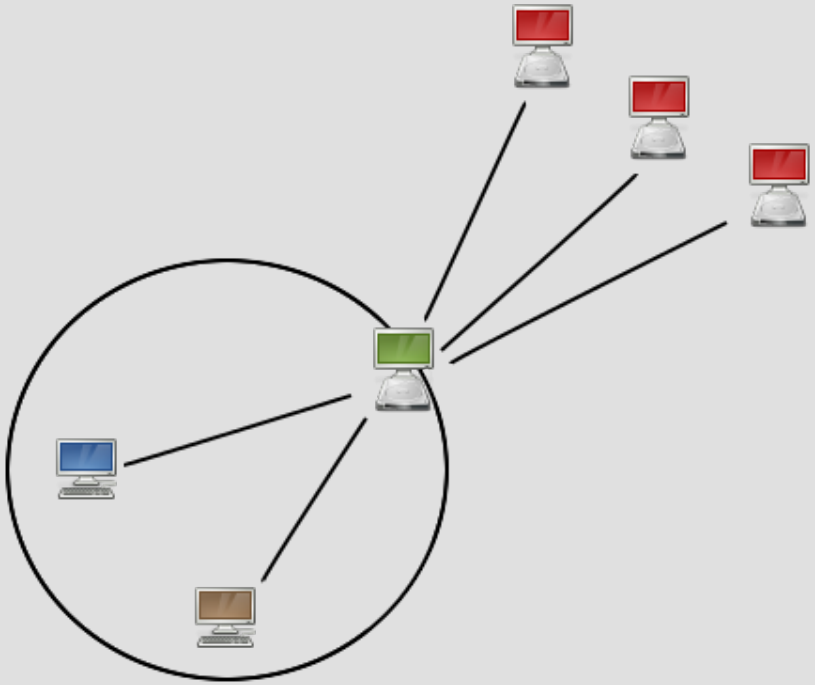
- Échange SMTP externe
- Accès restreint [OK]

# Envoi de mails (SMTP)



- Échange SMTP interne
- Accès ouvert [OK]

# Envoi de mails (SMTP)



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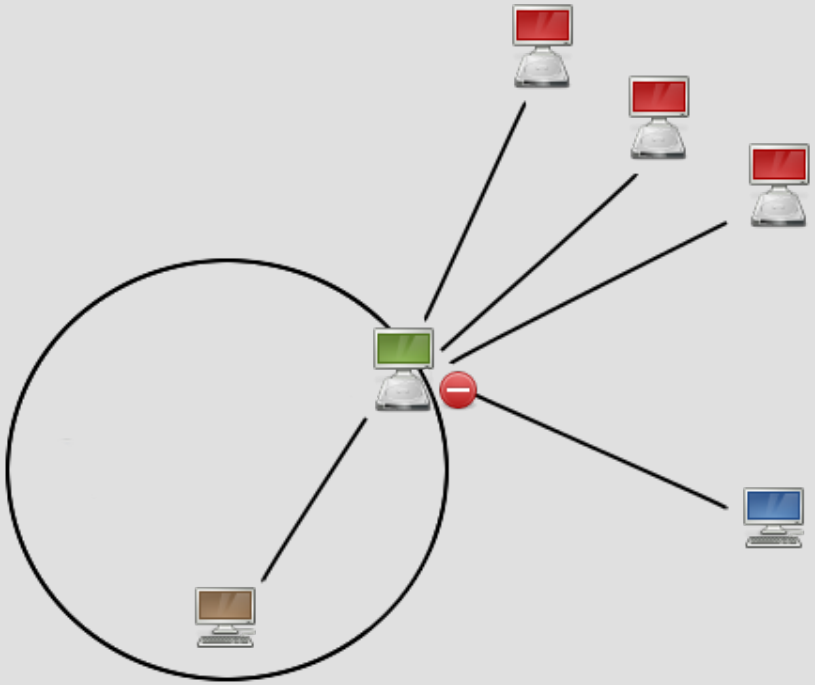
# Envoi de mails (SMTP)



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- Accès restreint [KO]

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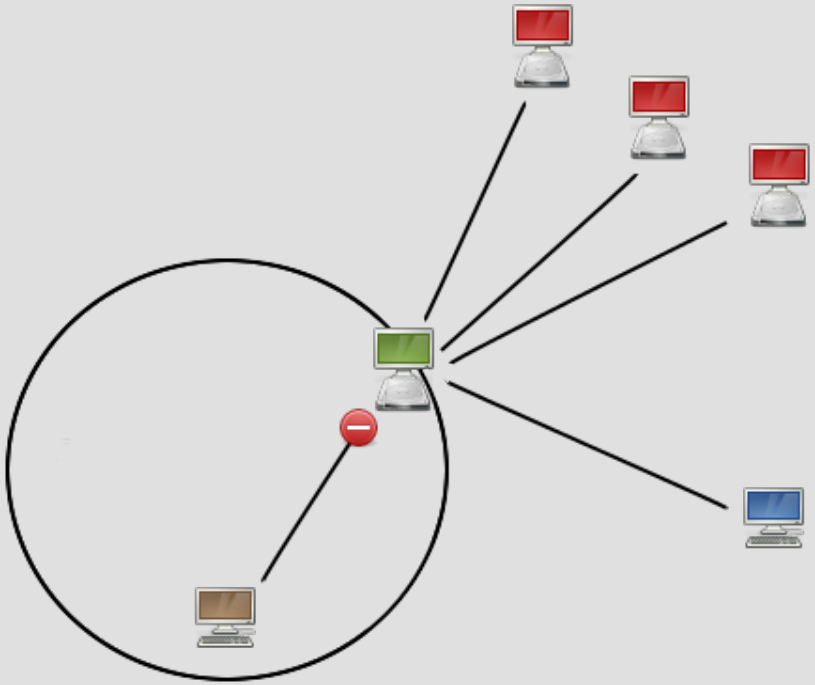


- Échange SMTP externe
- Authentification [OK]

# Chiffrement des messages réseau


Note : les enveloppes représentent les messages réseaux qui *contiennent* le mail.

- Échanges chiffrés avec le serveur (TLS)...
- ...mais échanges en clair entre serveurs !

⇒ pensez à chiffrer les mails confidentiels !

# Chiffrement des mails eux-mêmes

- Système à clef publique/clef privée (RSA)
- Ce qui est chiffré par une clef ne peut être déchiffré que par l'autre
- Utilisé pour le chiffrement, mais aussi pour l'authentification
- Voir sur http ://www.yionel.fr/ ?p=680
- Ne dépend pas du serveur ! Configurez votre client.

# Mise en place

# Matériel requis

- Assez peu de capacités requises
- Ordinateur de récupération, portable, mini-ordinateur. . .
- Un minimum d'espace disque (au moins quelques Gio. . . )
- Possibilité de tourner toute la journée

# Conditions d'accès au réseau

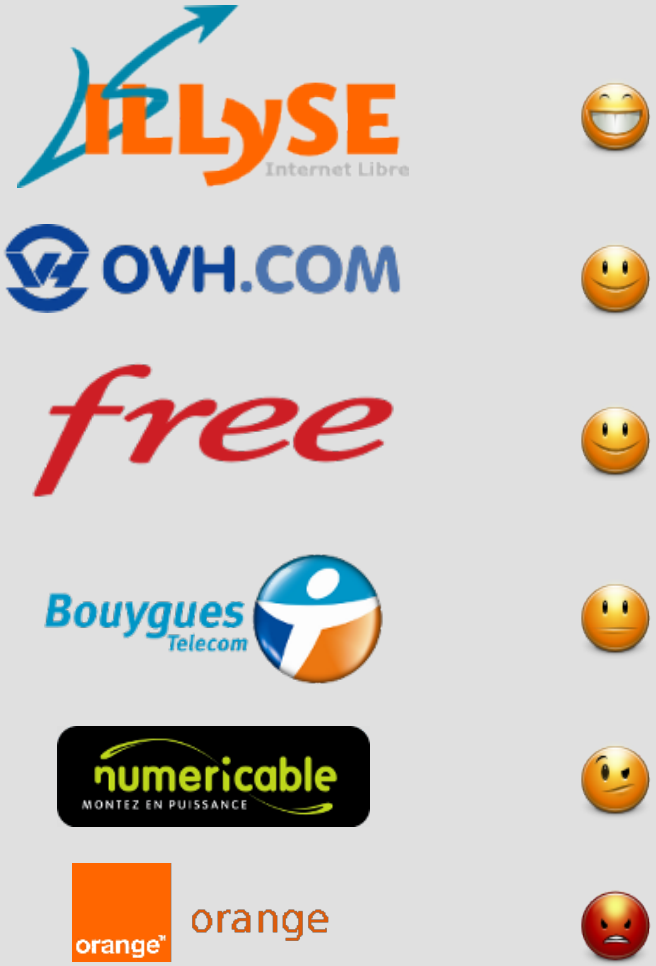
- [REQUIS] Connexion permanente
- [REQUIS] Port 25 ouvert
- [CONSEILLÉ] IP fixe
- [CONSEILLÉ] Reverse DNS

$\Rightarrow$ Vérifiez votre FAI !

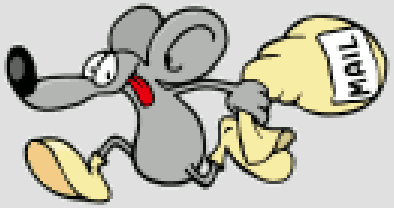
# Conditions d'accès au réseau

- [REQUIS] Connexion permanente
- [REQUIS] Port 25 ouvert
- [CONSEILLÉ] IP fixe
- [CONSEILLÉ] Reverse DNS

⇒ Vérifiez votre FAI !



# Installation du serveur




POSTFIX

≪ postfix, sasl2-bin ≫

DOVECOT

≪ dovecot-imapd ≫

**Sources du tutoriel :**

http ://blog.rom1v.com/2009/08/hebergez-vos-mails-sur-ubuntu-server-et-liberez-vous/

http ://blog.rom1v.com/2010/01/ajouter-lauthentification-smtp-sur-un-serveur-mail/

( http ://fadrienn.irlnc.org/serveur/installation/mails/ )

# Configuration de postfix

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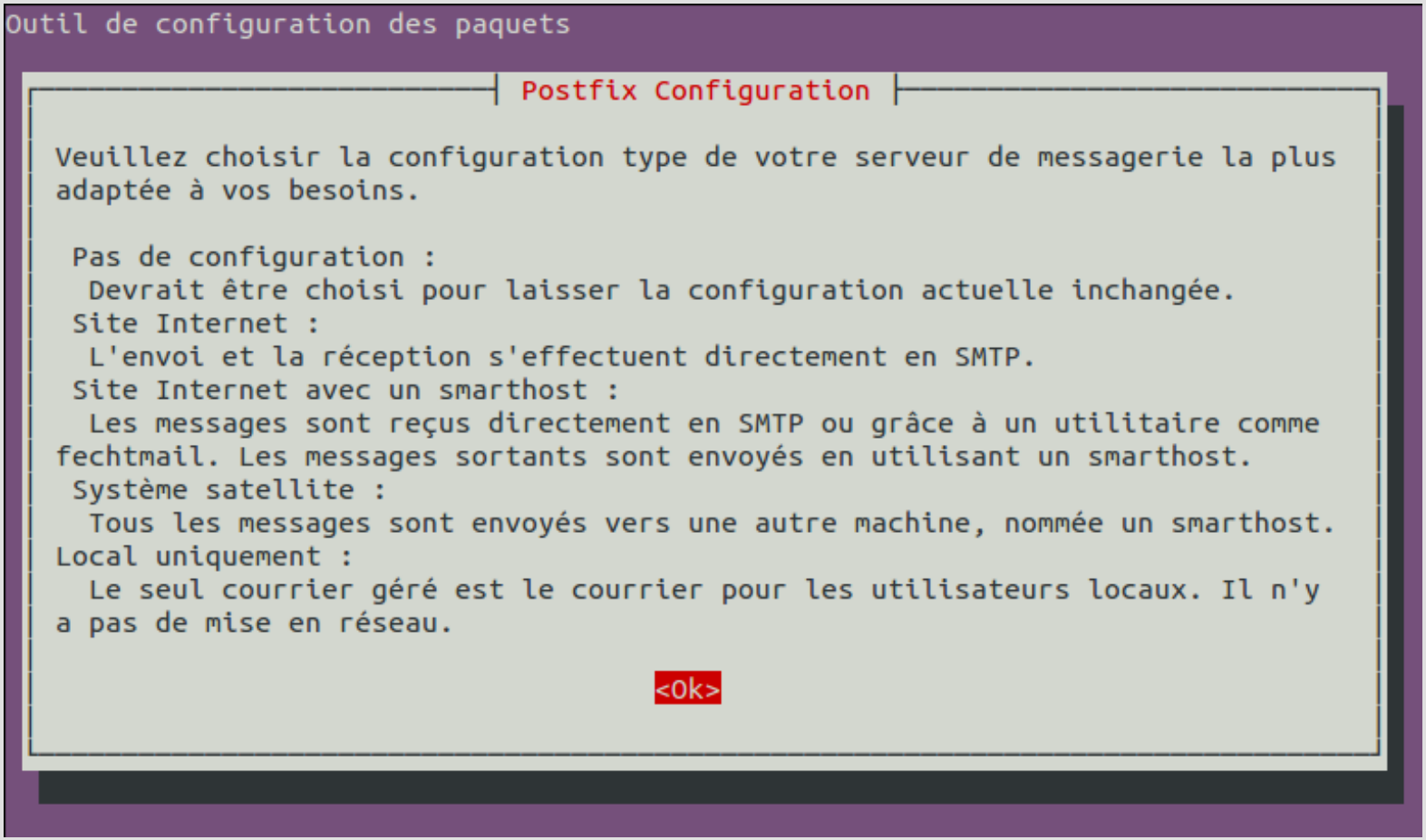

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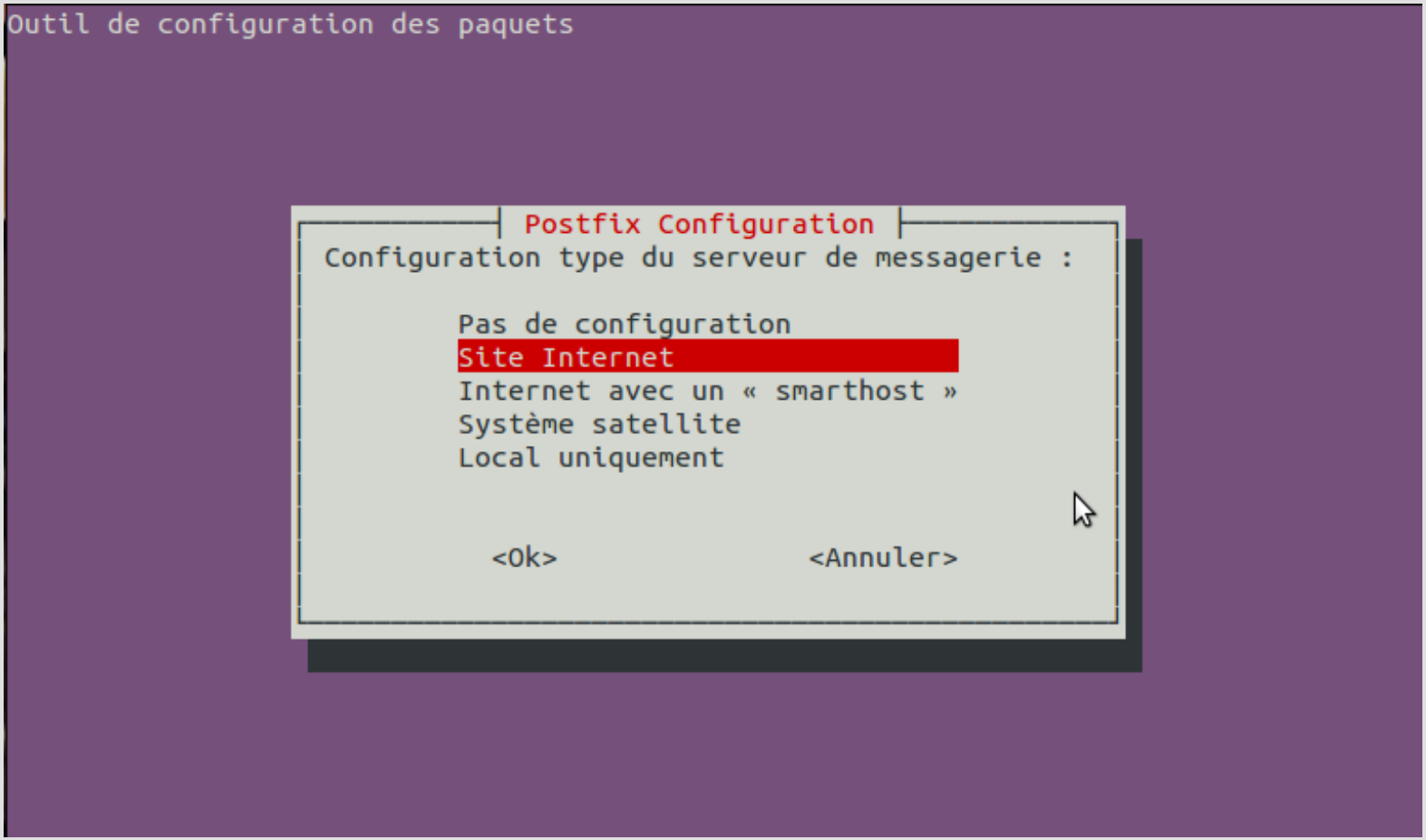

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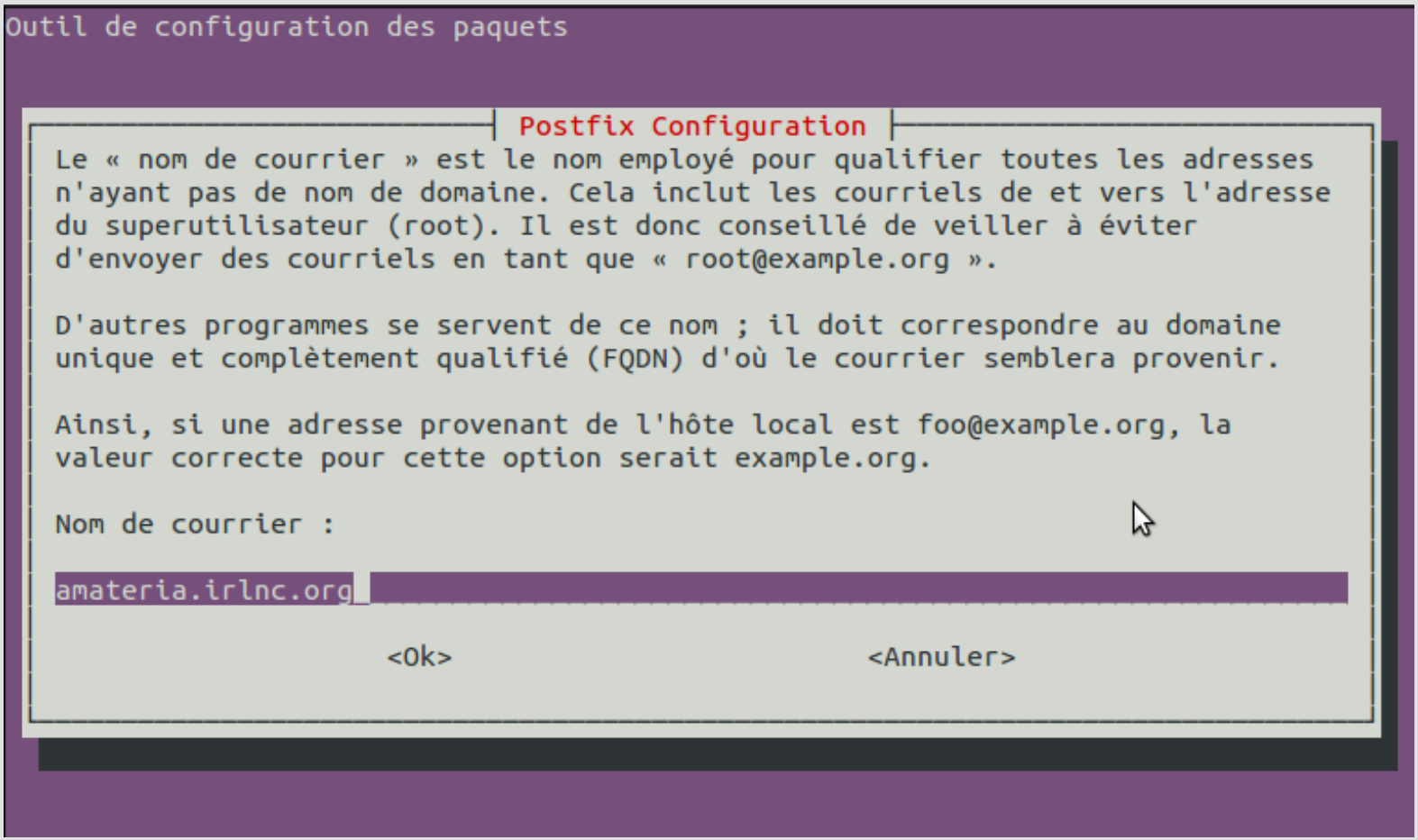

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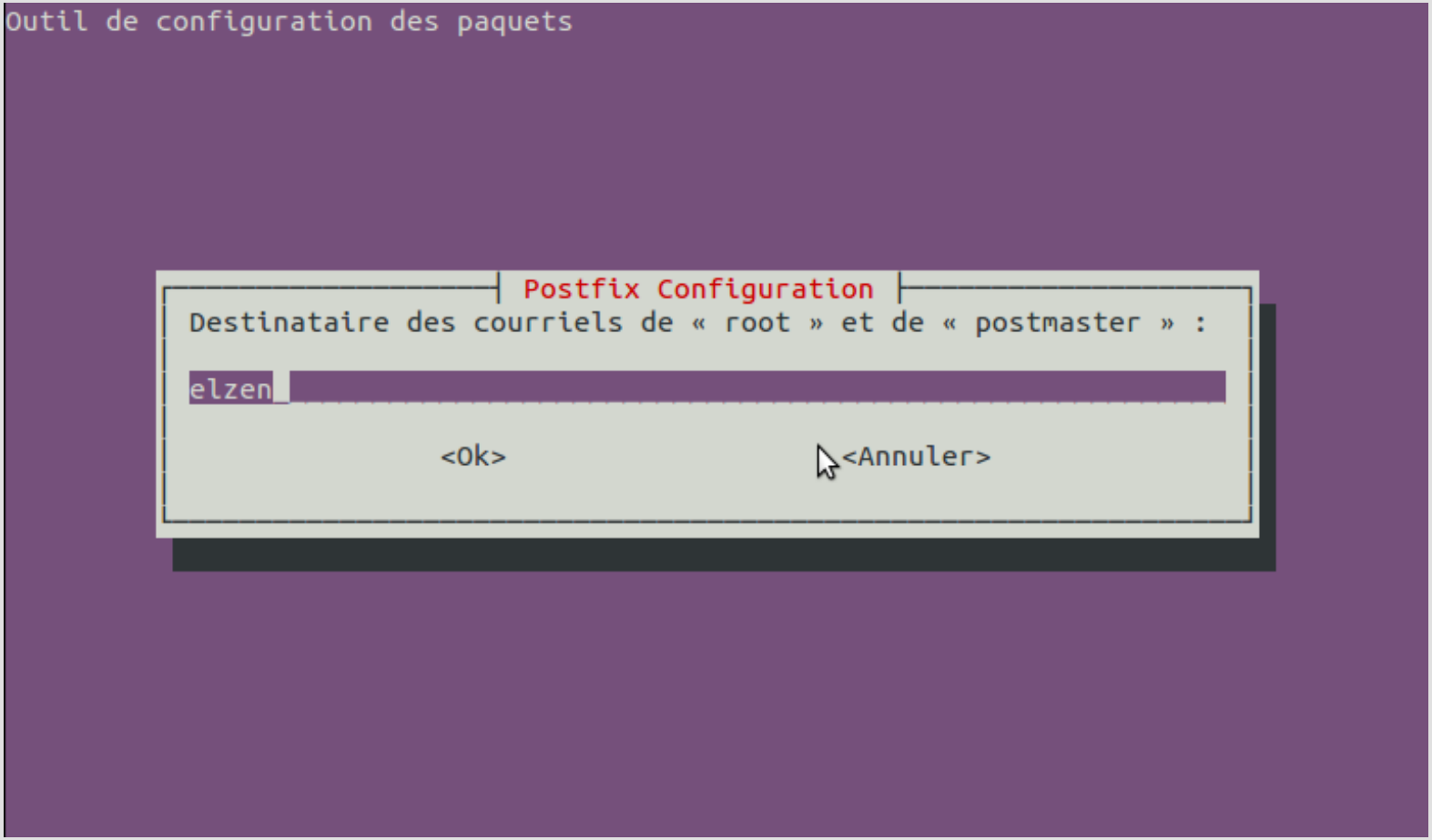

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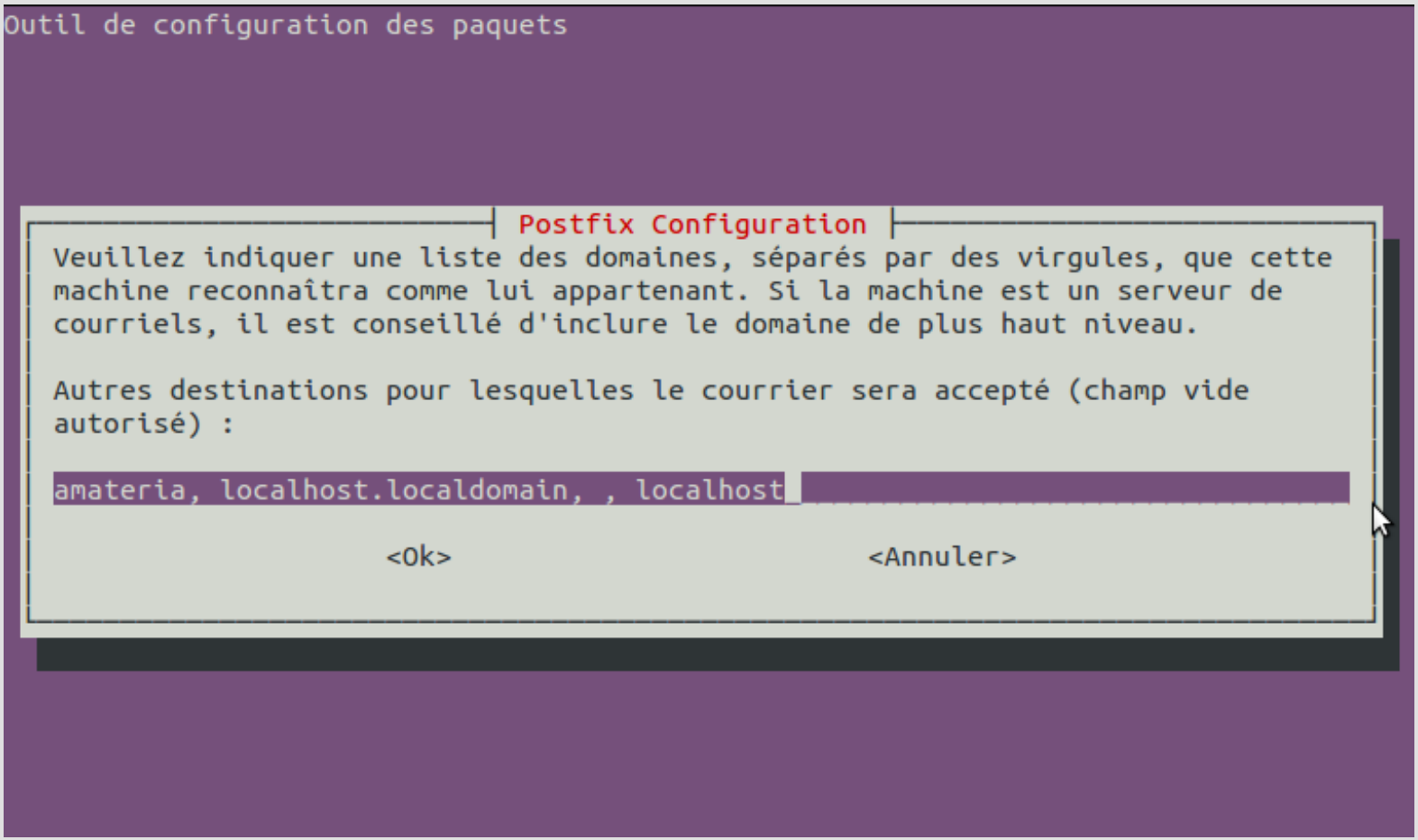
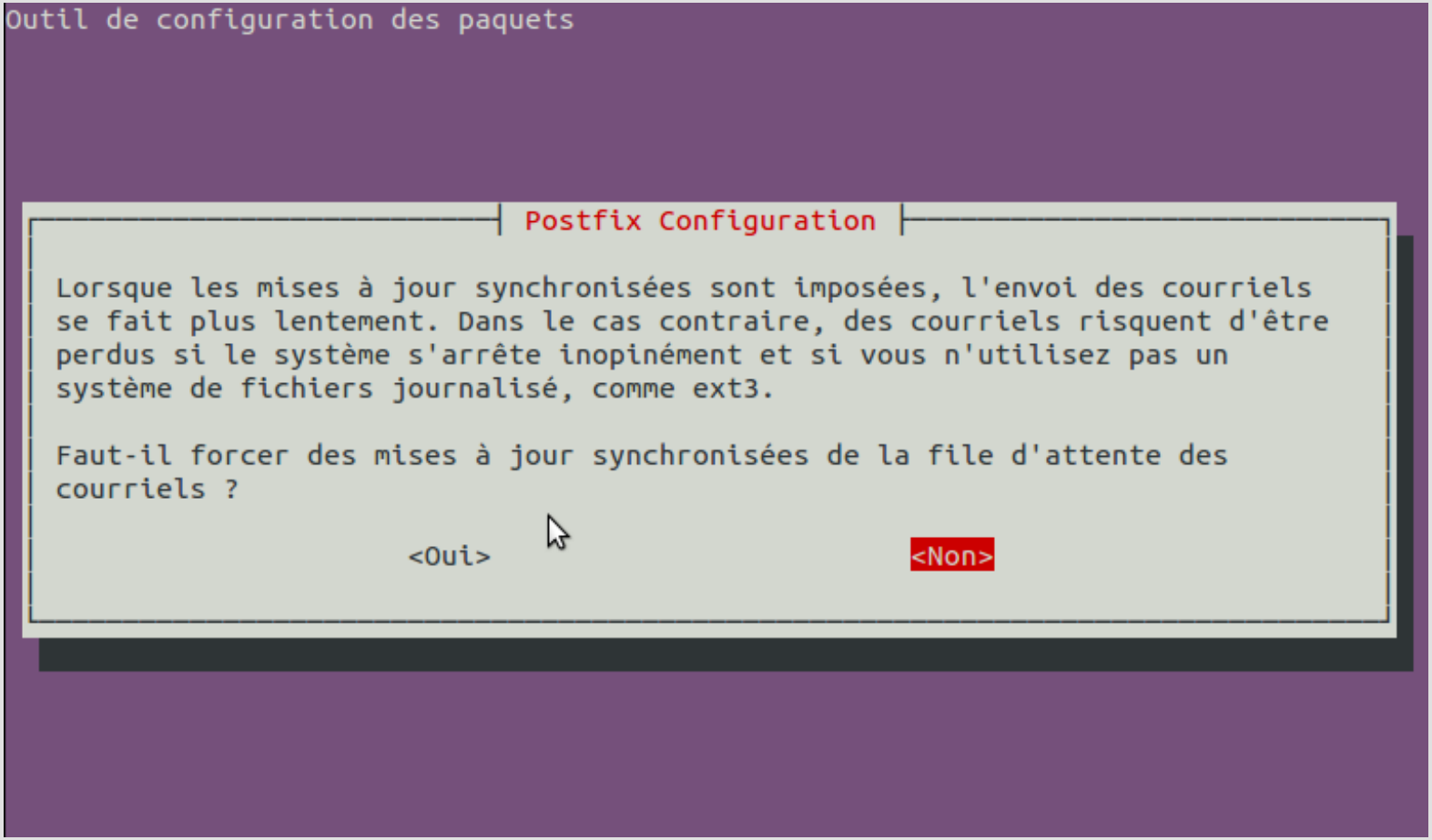
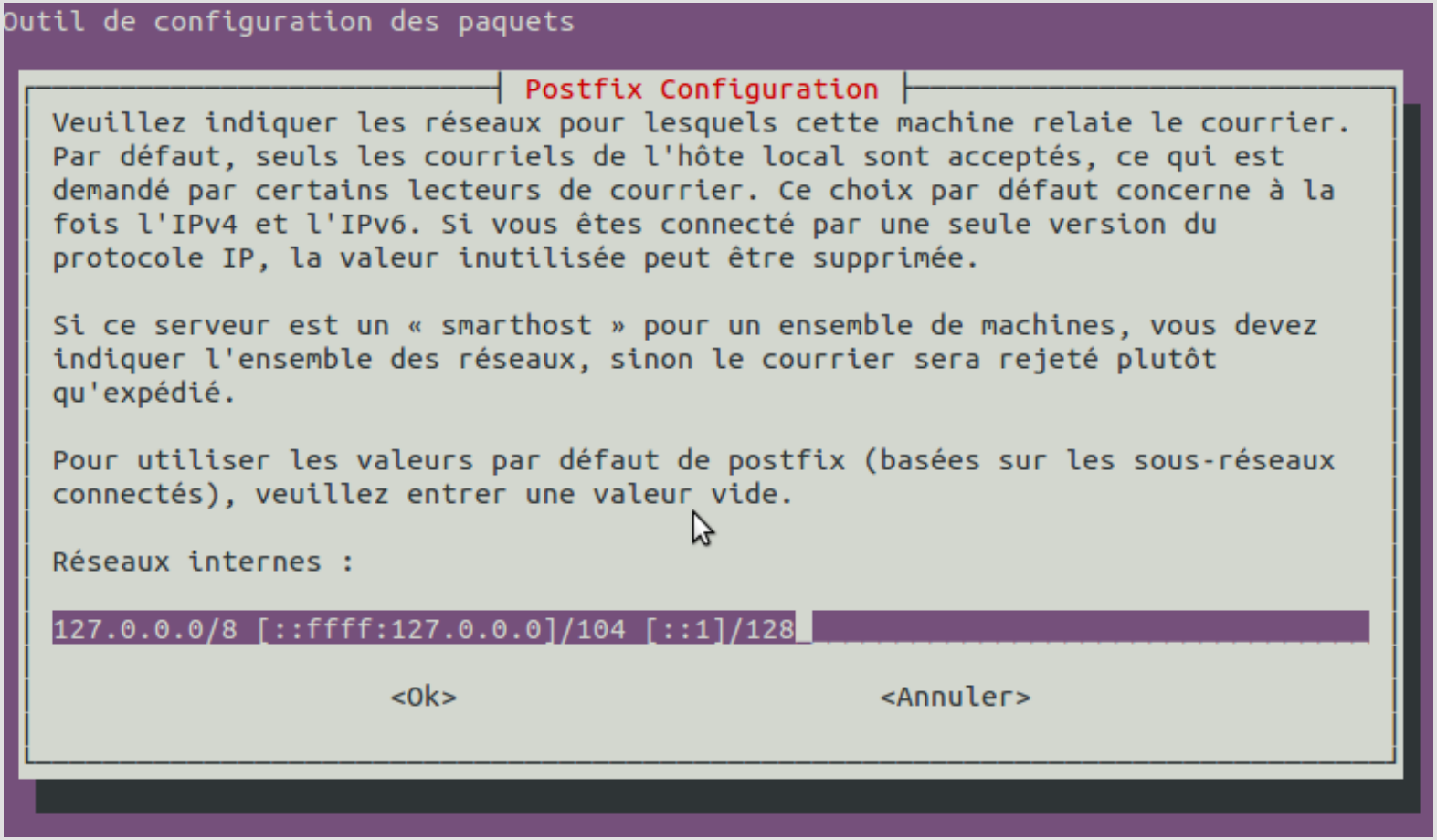


# Configuration de postfix



# Configuration de postfix



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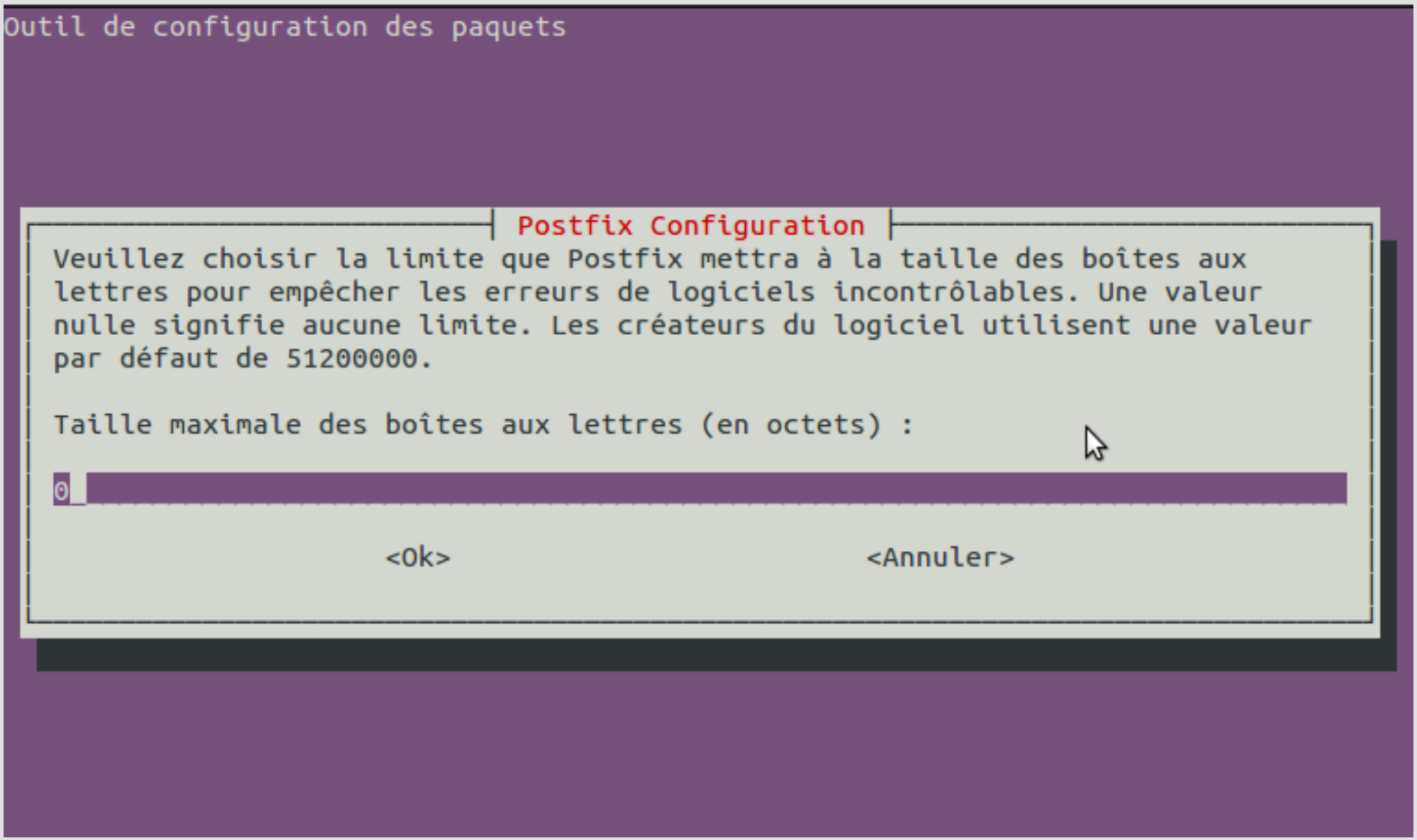

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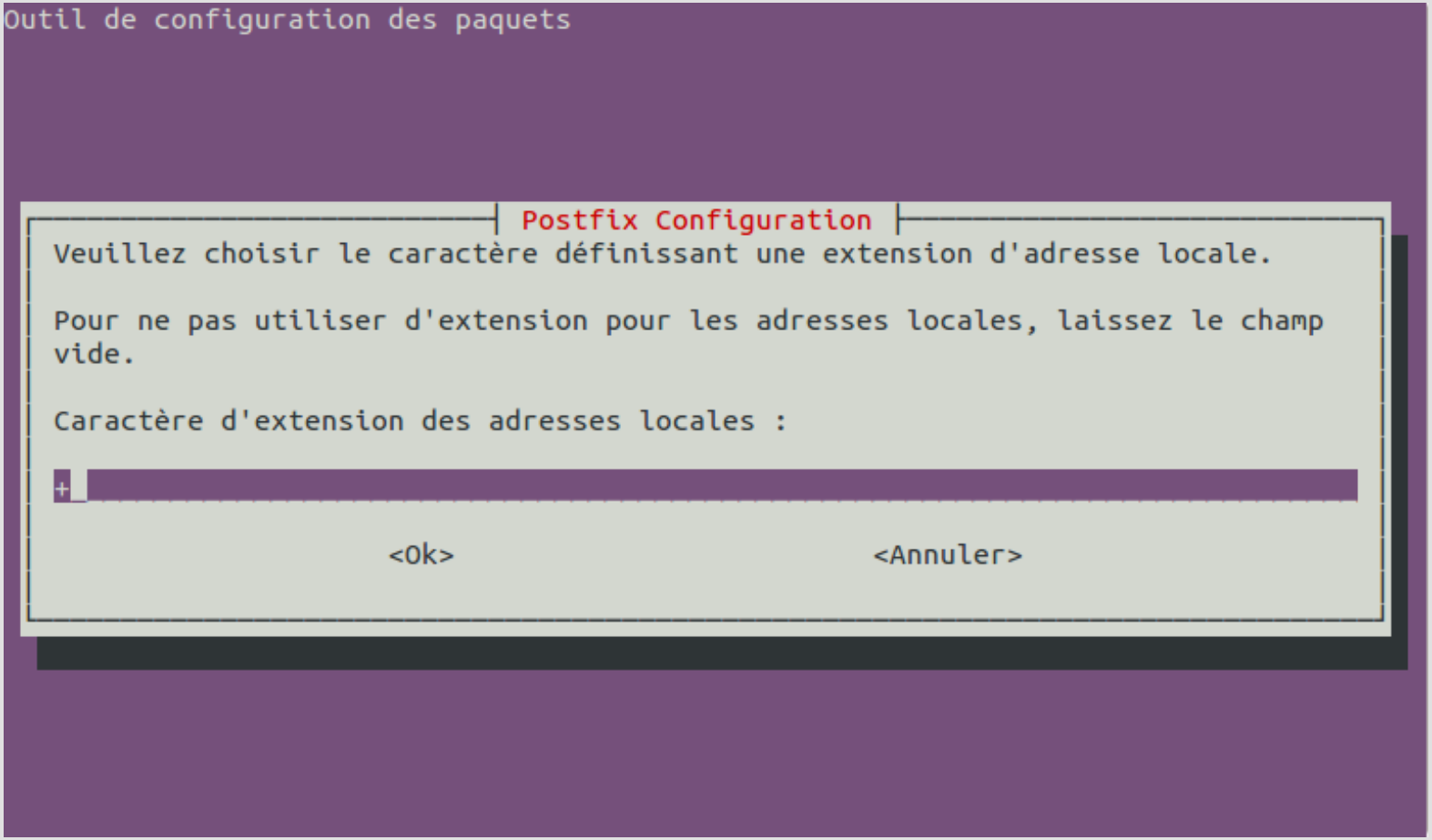

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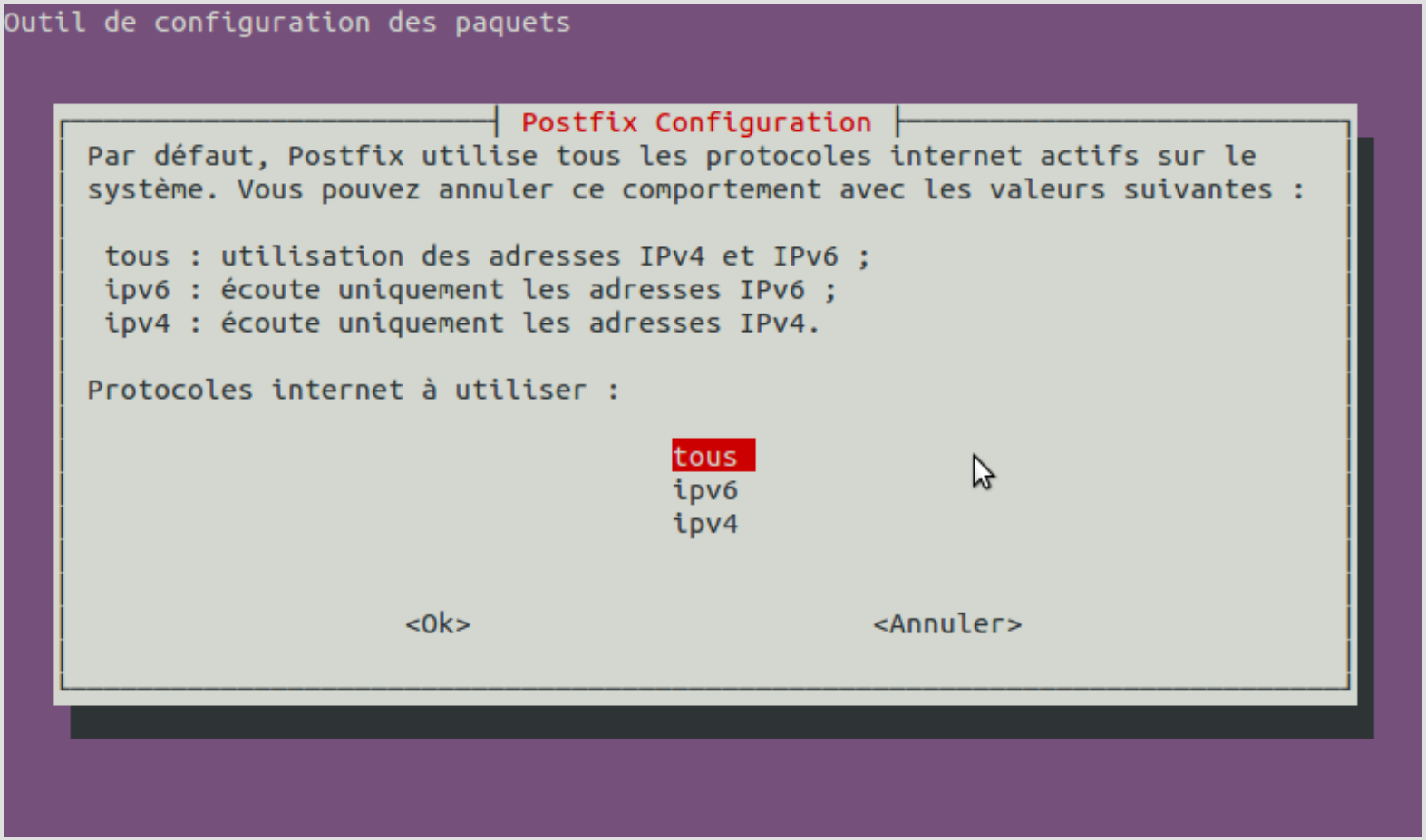


# Configuration de postfix

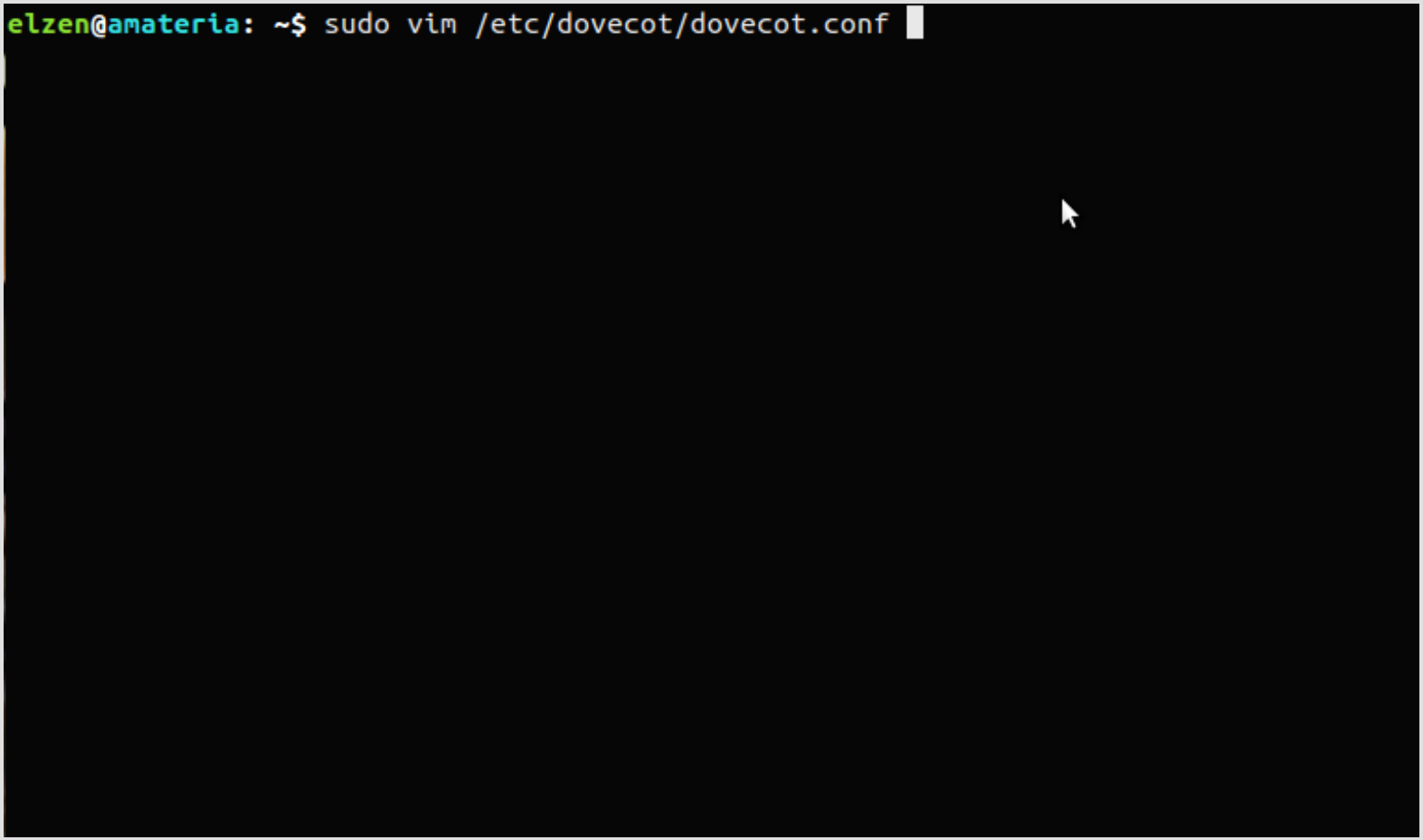
```
elzen@amateria: ~$ sudo dpkg-reconfigure postfix
 * Stopping Postfix Mail Transport Agent postfix                    [ OK ]
setting synchronous mail queue updates: false
setting myorigin
setting destinations: amateria, localhost.localdomain, , localhost
setting relayhost:
setting mynetworks: 127.0.0.0/8 [::ffff:127.0.0.0]/104 [::1]/128
setting mailbox_size_limit: 0
setting recipient_delimiter: +
setting inet_interfaces: all
setting inet_protocols: all
WARNING: /etc/aliases exists, but does not have a root alias.

Postfix is now set up with the changes above.  If you need to make changes, edit
/etc/postfix/main.cf (and others) as needed.  To view Postfix configuration
values, see postconf(1).

After modifying main.cf, be sure to run '/etc/init.d/postfix reload'.

Running newaliases
 * Stopping Postfix Mail Transport Agent postfix                    [ OK ]
 * Starting Postfix Mail Transport Agent postfix                    [ OK ]
elzen@amateria: ~$ sudo vim /etc/postfix/main.cf
```

# Configuration de postfix

```
19
20 # TLS parameters
21 smtpd_tls_cert_file=/etc/ssl/certs/ssl-cert-snakeoil.pem
22 smtpd_tls_key_file=/etc/ssl/private/ssl-cert-snakeoil.key
23 smtpd_use_tls=yes
24 smtpd_tls_session_cache_database = btree:${data_directory}/smtpd_scache
25 smtp_tls_session_cache_database = btree:${data_directory}/smtp_scache
26
27 # See /usr/share/doc/postfix/TLS_README.gz in the postfix-doc package for
28 # information on enabling SSL in the smtp client.
29
30 myhostname = amateria
31 alias_maps = hash:/etc/aliases
32 alias_database = hash:/etc/aliases
33 mydestination = amateria, localhost.localdomain, , localhost
34 relayhost =·
35 mynetworks = 127.0.0.0/8 [::ffff:127.0.0.0]/104 [::1]/128
36 mailbox_size_limit = 0
37 recipient_delimiter = +
38 inet_interfaces = all
39 myorigin = /etc/mailname
40 inet_protocols = all
41
42 home_mailbox = Maildir/
-- INSERTION --                                          42,24         Bas
```

# Configuration de postfix

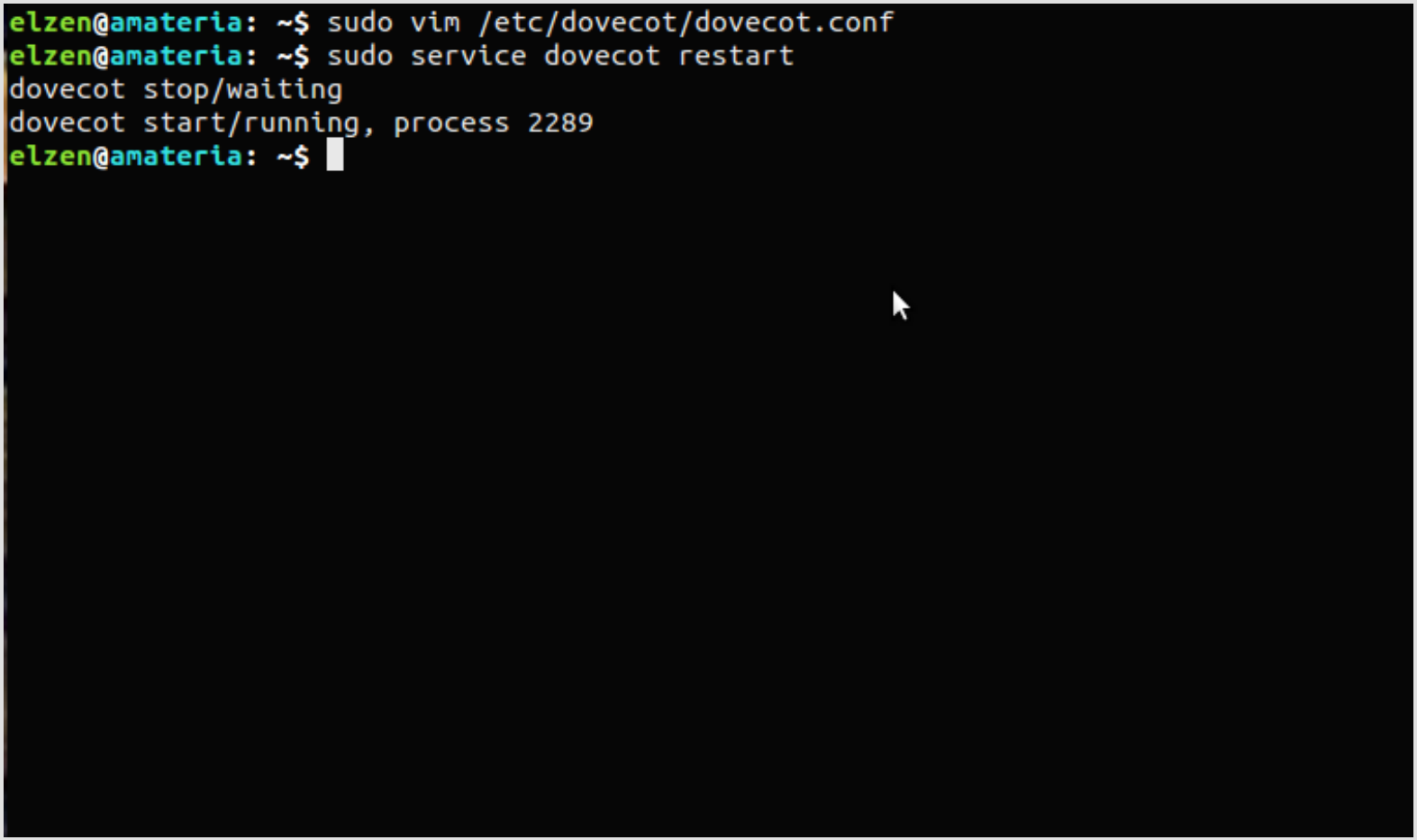
# Configuration de dovecot



# Configuration de dovecot

```
77
78 dict {
79   #quota = mysql:/etc/dovecot/dovecot-dict-sql.conf.ext
80   #expire = sqlite:/etc/dovecot/dovecot-dict-sql.conf.ext
81 }
82
83 # Most of the actual configuration gets included below. The filenames are
84 # first sorted by their ASCII value and parsed in that order. The 00-prefixes
85 # in filenames are intended to make it easier to understand the ordering.
86 !include conf.d/*.conf
87
88 # A config file can also tried to be included without giving an error if
89 # it's not found:
90 !include_try local.conf
91
92 # Ajouts à partir d'ici ↓
93 protocols = imap
94 mail_location = maildir:~/Maildir
~
~
~
~
~
~
-- INSERTION --                                          94,34         Bas
```

# Configuration de dovecot



# Configuration de SASL

```
elzen@amateria: ~$ # sudo apt-get install sasl2-bin
elzen@amateria: ~$ sudo adduser postfix sasl
Ajout de l'utilisateur « postfix » au groupe « sasl »...
Ajout de l'utilisateur postfix au groupe sasl
Fait.
elzen@amateria: ~$ sudo vim /etc/default/saslauthd
```

# Configuration de SASL

```
46 # WARNING: DO NOT SPECIFY THE -d OPTION.
47 # The -d option will cause saslauthd to run in the foreground instead of as
48 # a daemon. This will PREVENT YOUR SYSTEM FROM BOOTING PROPERLY. If you wish
49 # to run saslauthd in debug mode, please run it by hand to be safe.
50 #
51 # See /usr/share/doc/sasl2-bin/README.Debian for Debian-specific information.
52 # See the saslauthd man page and the output of 'saslauthd -h' for general
53 # information about these options.
54 #
55 # Example for chroot Postfix users: "-c -m /var/spool/postfix/var/run/saslauthd"
56 # Example for non-chroot Postfix users: "-c -m /var/run/saslauthd"
57 #
58 # To know if your Postfix is running chroot, check /etc/postfix/master.cf.
59 # If it has the line "smtp inet n - y - - smtpd" or "smtp inet n - - - - smtpd"
60 # then your Postfix is running in a chroot.
61 # If it has the line "smtp inet n - n - - smtpd" then your Postfix is NOT
62 # running in a chroot.
63 # OPTIONS="-c -m /var/run/saslauthd"
64 OPTIONS="-c -m /var/spool/postfix/var/run/saslauthd"
~
~
~
~
~
-- INSERTION --                                          64,53         Bas
```

# Configuration de SASL

```
 1 #
 2 # Settings for saslauthd daemon
 3 # Please read /usr/share/doc/sasl2-bin/README.Debian for details.
 4 #
 5
 6 # Should saslauthd run automatically on startup? (default: no)
 7 # START=no
 8 START=yes
 9
10 # Description of this saslauthd instance. Recommended.
11 # (suggestion: SASL Authentication Daemon)
12 DESC="SASL Authentication Daemon"
13
14 # Short name of this saslauthd instance. Strongly recommended.
15 # (suggestion: saslauthd)
16 NAME="saslauthd"
17
18 # Which authentication mechanisms should saslauthd use? (default: pam)
19 #
20 # Available options in this Debian package:
21 # getpwent  -- use the getpwent() library function
22 # kerberos5 -- use Kerberos 5
23 # pam       -- use PAM
24 # rimap     -- use a remote IMAP server
"/etc/default/saslauthd" 63L, 2326C écrit(s)                  8,9           Haut
```

# Configuration de SASL

```
elzen@amateria: ~$ sudo service saslauthd start
 * Starting SASL Authentication Daemon saslauthd                    [ OK ]
elzen@amateria: ~$ sudo vim /etc/postfix/main.cf
```

# Configuration de SASL

```
30 myhostname = amateria
31 alias_maps = hash:/etc/aliases
32 alias_database = hash:/etc/aliases
33 mydestination = amateria, localhost.localdomain, , localhost
34 relayhost =
35 mynetworks = 127.0.0.0/8 [::ffff:127.0.0.0]/104 [::1]/128
36 mailbox_size_limit = 0
37 recipient_delimiter = +
38 inet_interfaces = all
39 myorigin = /etc/mailname
40 inet_protocols = all
41
42 # Ajouts SASL ↓
43 smtpd_sasl_auth_enable = yes
44 smtpd_recipient_restrictions = permit_sasl_authenticated,reject_unauth_destinati
   on
~
~
~
~
~
~
~
~
-- INSERTION --                                          44,83         Bas
```

# Configuration de SASL

```
elzen@amateria: ~$ sudo service saslauthd start
 * Starting SASL Authentication Daemon saslauthd                    [ OK ]
elzen@amateria: ~$ sudo vim /etc/postfix/main.cf
elzen@amateria: ~$ sudo vim /etc/postfix/sasl/smtpd.conf
```

# Configuration de SASL

# Configuration de SASL

```
elzen@amateria: ~$ sudo service saslauthd start
 * Starting SASL Authentication Daemon saslauthd                    [ OK ]
elzen@amateria: ~$ sudo vim /etc/postfix/main.cf
elzen@amateria: ~$ sudo vim /etc/postfix/sasl/smtpd.conf
elzen@amateria: ~$ sudo service postfix reload
 * Reloading Postfix configuration...                               [ OK ]
elzen@amateria: ~$
```

# Administration

# Gestion des redirections

- Fichier /etc/aliases

```
 1 # /etc/aliases
 2 mailer-daemon: postmaster
 3 postmaster: root
 4 nobody: root
 5 hostmaster: root
 6 usenet: root
 7 news: root
 8 webmaster: root
 9 www: root
10 ftp: root
11 abuse: root
12 noc: root
13 security: root
14 lighttpd: root
15 www-data: root
16 jabber: root
17 xmpp: root
18 root: elzen
19 guest: elzen
```

- Fichier $HOME/.forward

# Lire les logs

Répertoire de base pour les logs : /var/log

```
elzen@fadrienn: ~$ ls -lh /var/log/mail.log
-rw-r----- 1 root adm 400K avril  4 00:30 /var/log/mail.log
elzen@fadrienn: ~$
```

- lisible par le root
- modifié en temps réel
- fichiers d'archives (mail.log.1, mail.log.2.gz, . . . )

# Lire les logs

Répertoire de base pour les logs : /var/log

```
elzen@fadrienn: ~$ ls -lh /var/log/mail.log
-rw-r----- 1 root adm 400K avril  4 00:30 /var/log/mail.log
elzen@fadrienn: ~$
```

Affichage du contenu :

```
elzen@fadrienn: ~$ sudo tail -f /var/log/mail.log
Apr  4 00:27:24 fadrienn postfix/smtpd[31672]: 4F61C320076: client=lns-5-49-61-3.dsl.
dyn.abo.bbox.fr[5.49.61.3]
Apr  4 00:27:24 fadrienn postfix/cleanup[31677]: 4F61C320076: message-id=<515CACA9.70
00201@forumanalogue.fr>
```

# Lire les logs

```
Apr  4 00:30:46 fadrienn postfix/anvil[31674]: statistics: max connection rate 1/60s
for (smtp:5.49.61.3) at Apr  4 00:27:18
Apr  4 00:30:46 fadrienn postfix/anvil[31674]: statistics: max connection count 1 for
 (smtp:5.49.61.3) at Apr  4 00:27:18
Apr  4 00:30:46 fadrienn postfix/anvil[31674]: statistics: max cache size 1 at Apr  4
 00:27:18
```

- Statistiques [OK]
- Rien de particulier à dire. . .

# Lire les logs

```
Apr  4 01:11:53 fadrienn dovecot: imap-login: Login: user=<[redacted]>, method=PLAIN, rip=8
1.220.210.50, lip=192.168.0.7, mpid=32068, TLS, session=<CNHB+nzZawBR3NIy>
Apr  4 01:11:58 fadrienn dovecot: imap([redacted]): Disconnected: Logged out in=261 out=414
32
```

- Connexion par un client mail [OK]
- Contiendra plus de lignes en cas d'action/de message

# Lire les logs

```
Mar 31 21:10:47 fadrienn postfix/smtpd[399]: connect from [redacted][94.23.53.151]
Mar 31 21:10:48 fadrienn postfix/smtpd[399]: 0E7E8320076: client=tdct.org[94.23.53.15
1]
Mar 31 21:10:48 fadrienn postfix/cleanup[403]: 0E7E8320076: message-id=<51588A2E.2090
8@tdct.org>
Mar 31 21:10:48 fadrienn postfix/qmgr[30332]: 0E7E8320076: from=<[redacted]>, siz
e=15765, nrcpt=1 (queue active)
Mar 31 21:10:48 fadrienn postfix/smtpd[399]: disconnect from tdct.org[94.23.53.151]
Mar 31 21:10:48 fadrienn postfix/local[404]: 0E7E8320076: to=<[redacted]fadrienn.irlnc.org
>, relay=local, delay=0.26, delays=0.19/0.01/0/0.06, dsn=2.0.0, status=sent (delivere
d to maildir)
Mar 31 21:10:48 fadrienn postfix/qmgr[30332]: 0E7E8320076: removed
```

- Réception de mail [OK]
- Adresse d'expéditeur, de destinataire
- Pris en charge et délivré

# Lire les logs

```
Mar 27 21:35:31 fadrienn postfix/smtp[881]: connect to gmail-smtp-in.l.google.com[2a0
0:1450:400c:c00::1a]:25: Network is unreachable
Mar 27 21:35:32 fadrienn postfix/smtp[881]: DBB74320074: to=<[redacted]@gmail.com>,
 relay=gmail-smtp-in.l.google.com[173.194.67.27]:25, delay=1.5, delays=0.42/0.04/0.49
/0.52, dsn=2.0.0, status=sent (250 2.0.0 OK 1364416532 i4si8861054wjb.63 - gsmtp)
Mar 27 21:35:32 fadrienn postfix/qmgr[30332]: DBB74320074: removed
Mar 27 21:37:27 fadrienn dovecot: imap(seth): Disconnected: Logged out in=456 out=634
86
```

- Envoi de mail [OK]
- Adresse de destinataire, pas d'expéditeur
- Accepté par le serveur distant

# Lire les logs

```
Mar 25 20:57:31 fadrienn postfix/error[8767]: C467832108B: to=<[redacted]marinecorps.c
om>, relay=none, delay=437385, delays=437342/41/0/1.3, dsn=4.4.1, status=deferred (de
livery temporarily suspended: connect to marinecorps.com[98.124.198.1]:25: Connection
 refused)
Mar 25 20:57:31 fadrienn postfix/error[8749]: CF894320FA5: to=<[redacted]aol.com>, re
lay=none, delay=438772, delays=438730/42/0/0.17, dsn=4.0.0, status=deferred (delivery
 temporarily suspended: host mailin-01.mx.aol.com[205.188.159.42] refused to talk to
me: 554- (RTR:BB)  http://postmaster.info.aol.com/errors/554rtrbb.html 554  Connectin
g IP: 82.233.208.64)
```

- Message temporairement refusé [Oups. . . ]
- Réponse du serveur distant

# Lire les logs

```
Mar 26 11:13:09 fadrienn postfix/smtp[14009]: 49D0232019B: host relaysmtp.luiss.it[19
3.204.157.66] refused to talk to me: 550 5.7.1 Service unavailable; Client host [82.2
33.208.64] blocked using Trend Micro RBL+. Please see http://www.mail-abuse.com/cgi-b
in/lookup?ip_address=82.233.208.64; Mail from 82.233.208.64 blocked using Trend Micro
 Email Reputation database. Please see <http://www.mail-abuse.com/cgi-bin/lookup?82.2
33.208.64>
```

- Message refusé [KO]
- Réponse du serveur distant

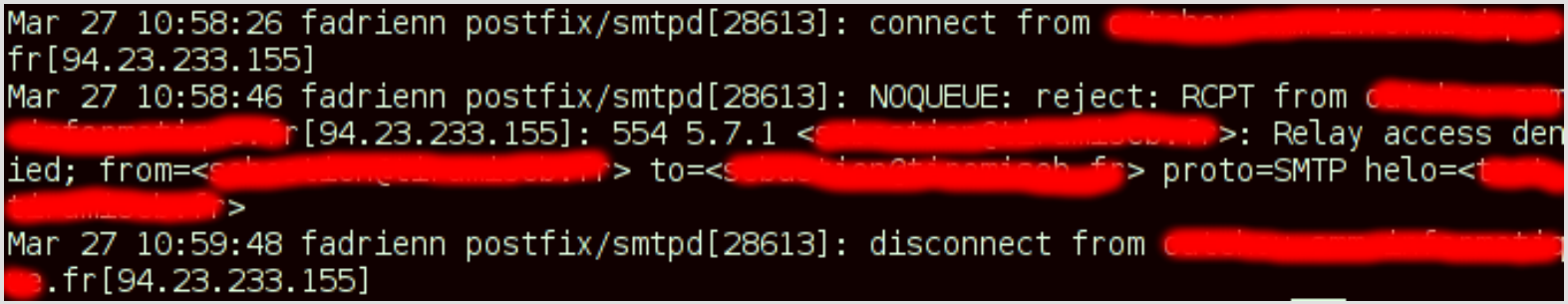
# Je spamme ! Que faire ?

⇒ Premier réflexe : couper le serveur !

```
elzen@fadrienn: ~$ sudo service postfix stop
[ ok ] Stopping Postfix Mail Transport Agent: postfix.
elzen@fadrienn: ~$ sudo postsuper -d ALL
elzen@fadrienn: ~$
```

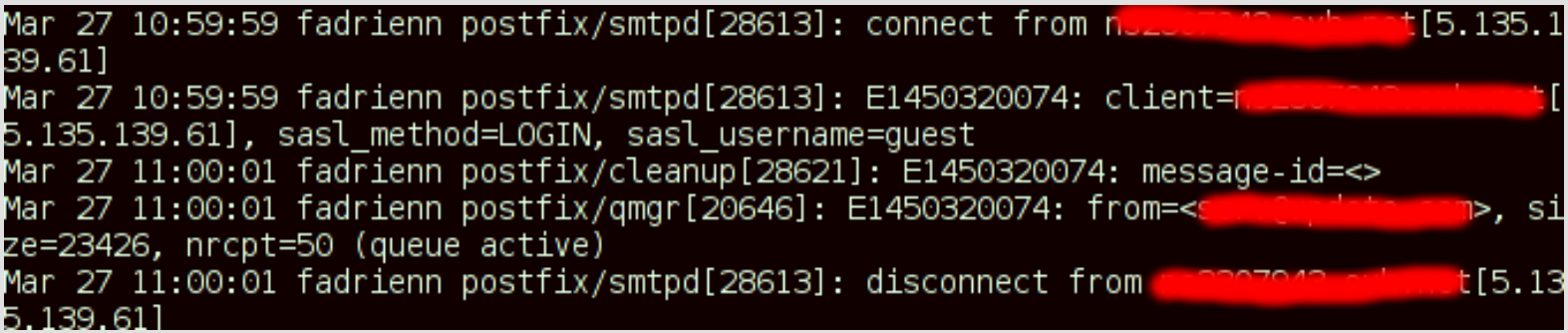
- Puis vider la queue (les mails en attente)
- Puis vérifier la configuration
- Ne pas hésiter à demander de l'aide

# Lire les logs



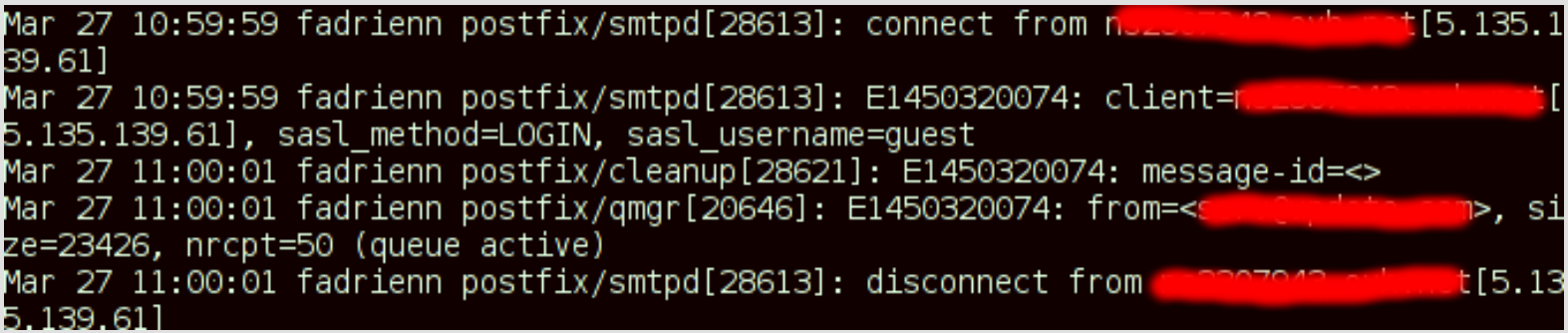

- Tentative d'envoi non-autorisé
- Pas passé : configuration correcte ?

# Lire les logs




- Connexion SASL authentifiée...
- Tiens, ne serait-ce pas la faille ?

# Lire les logs

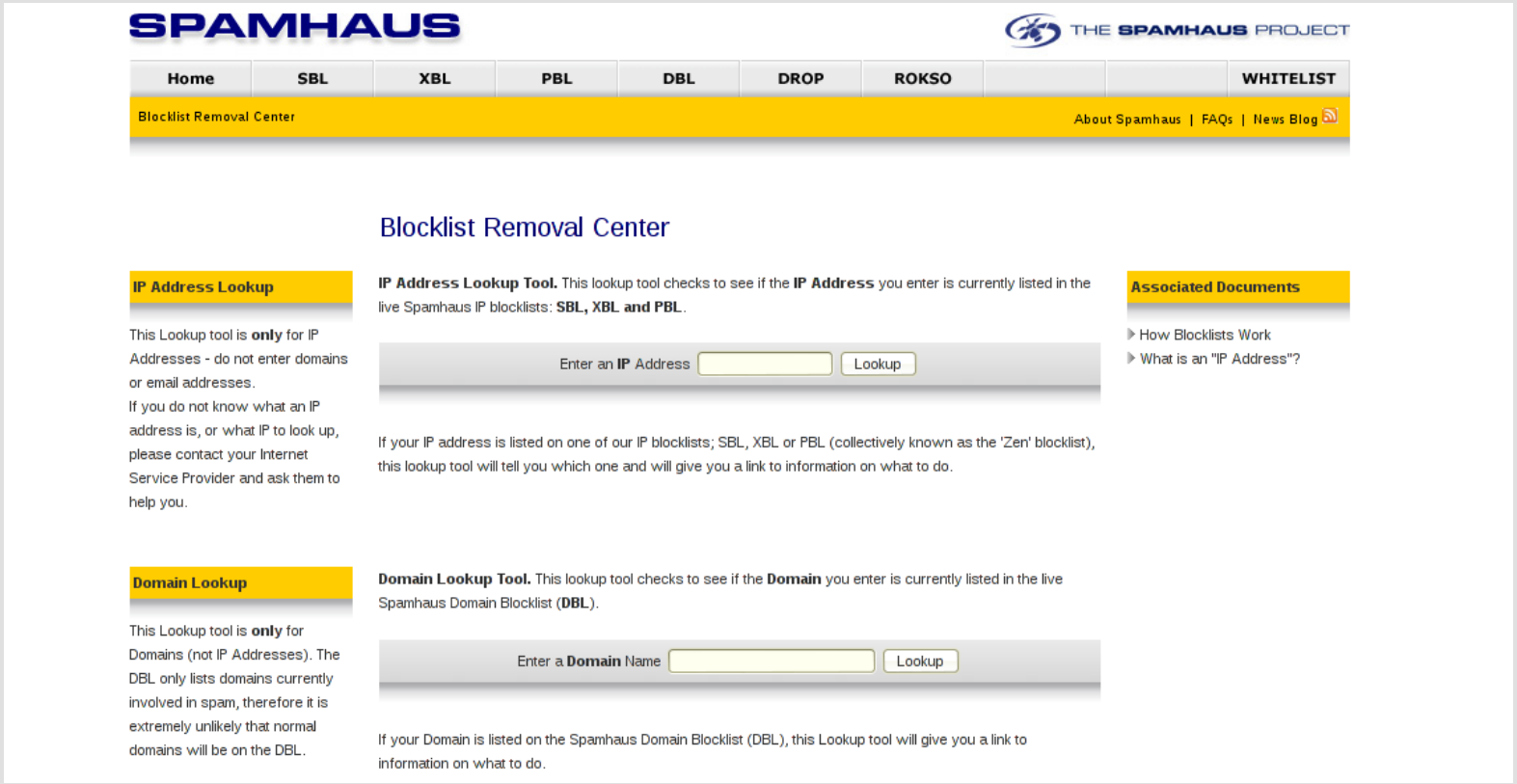



- Connexion SASL authentifiée...
- Tiens, ne serait-ce pas la faille ?

⇒ Toujours vérifier les comptes accessibles !

# Après un blacklistage. . .

Adresses fournies dans les messages d'erreurs envoyés :



# On me spamme ! Que faire ?

Installer un antispam pour filtrer les messages reçus :

- amavis-news (le choix de clément)
- spamassassin (le choix de rom1v)

Pas encore essayé : je ne reçois pas (encore ?) de spam.

# Pour aller plus loin. . .



# Conclusion

- Un peu long, mais pas trop dur à mettre en place
- Besoins de base couverts assez facilement
- Attention à la sécurité (mais pas besoin d'être expert)
- À vous d'essayer !