Configuring a Mail Server with Postfix

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Why host your own email server?

▶ Email for your domain

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Why host your own email server?

- ▶ Email for your domain
- ▶ Single sign-on

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Why host your own email server?

- ▶ Email for your domain
- ▶ Single sign-on
- ▶ Flexibility, control, and ownership

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Why host your own email server?

- ▶ Email for your domain
- ▶ Single sign-on
- ▶ Flexibility, control, and ownership
- ▶ 1337ness

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What do you need?

- A domain name

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What do you need?

- A domain name
- An Internet connection

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What do you need?

- A domain name
- An Internet connection
- A Linux server

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What do you need?

▶ A domain name
▶ An Internet connection
▶ A Linux server
▶ Postfix installed

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What do you need?

- ▶ A domain name
- ▶ An Internet connection
- ▶ A Linux server
- ▶ Postfix installed
- ▶ Fetchmail, Procmail, Formail, etc.

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What do I have?

- zacintosh.com and lundscape.com domains

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What do I have?

- ▶ zacintosh.com and lundscape.com domains
- ▶ A DSL connection with a static IP address

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What do I have?

- ▶ zacintosh.com and lundscape.com domains
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- ▶ Ubuntu Hardy Heron Server (8.04)

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DNS Record Types

- MX: Mail Exchange
  - Specifies where to deliver mail for a domain
  - Data: [priority] [domain.com.]

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DNS Record Types

- ▶ MX: Mail Exchange
    - ▶ Specifies where to deliver mail for a domain
    - ▶ Data: [priority] [domain.com.]
- ▶ A: Alias
    - ▶ Associates a domain with an IP address
    - ▶ Data: [IP address]

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DNS Records

Name	Type	Data
zacintosh.com	MX	10 mail.zacintosh.com.
lundscape.com	MX	10 mail.zacintosh.com.
mail.zacintosh.com	A	69.68.196.78

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Installing Postfix

```
apt-get install postfix mailutils fetchmail procmail
```

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Some Basic Stuff

The Postfix configuration file: /etc/postfix/main.cf

```
# The greeting banner (follows the 220 code)
smtpd_banner = $myhostname ESMTP $mail_name (Debian/GNU)
# Don't notify users of new mail
biff = no

# appending .domain is the MUA's job.
append_dot_mydomain = no

myhostname = athos.zacintosh.com
myorigin = $myhostname
```

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Destination

```
mydestination = lundscape.com,
                zacintosh.com,
                lund,
                blog.lundscape.com,
                claude.zacintosh.com,
                wiki.lundscape.com,
                athos.zacintosh.com,
                athos.lund,
                athos,
                localhost.localdomain,
                localhost
```

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Mailboxes and rewriting email addresses

```
# Don't limit mailbox size
mailbox_size_limit = 0
# Use a dash (-) instead of a plus (+)
recipient_delimiter = -
# Use Maildir instead of Mbox
home_mailbox = Maildir/

# Rewrite incomplete email addresses
remote_header_rewrite_domain = domain.invalid
# Append $myorigin to email addresses originating
# on this machine
local_header_rewrite_clients = permit_inet_interfaces
```

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Accepting email to relay

```
# Localhost and my network are "trusted" clients
mynetworks = 127.0.0.0/8 192.168.1.0/24
# Accept mail from all network interfaces
inet_interfaces = all
# Accept mail from IPv4 and IPv6
inet_protocols = all
```

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Accepting email to relay, cont.

```
smtpd_sasl_local_domain =
smtpd_sasl_auth_enable = yes
# Require authentication
smtpd_sasl_security_options = noanonymous
broken_sasl_auth_clients = yes
# Allow authenticated users or unauthenticated users on
# the local network
smtpd_recipient_restrictions = permit_sasl_authenticated,
                               permit_mynetworks,
                               reject_unauth_destination
```

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Relaying mail to another host

```
relayhost = [smtp.embarqmail.com]
smtp_sasl_auth_enable = yes
smtp_sasl_password_maps = hash:/etc/postfix/saslpass
smtp_sasl_security_options = noanonymous
```

File /etc/postfix/saslpass looks like:

```
smtp.embarqmail.com username:password
```

Next run:
```
postmap /etc/postfix/saslpass
```

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Aliases

```
alias_database = hash:/etc/aliases,
                 hash:/etc/postfix/aliases
alias_maps = $alias_database
```

File /etc/aliases looks like:

```
postmaster: root
root: zac
zachary.lund: zac
zackary: zac
family: zac, mom, cal, ben
```

Next run:
```
newaliases
```

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Canonical Maps

```
recipient_canonical_classes = envelope_recipient
recipient_canonical_maps =
        hash:/etc/postfix/recipient_canonical
sender_canonical_maps =
        hash:/etc/postfix/sender_canonical
```

File /etc/postfix/recipient_canonical looks like:

```
zachary    zac
chelsea    cal
donna      mom
```

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Canonical Maps, cont.

File /etc/postfix/sender_canonical looks like:

```
zac         zachary@mydomain.com
cal         chelsea@mydomain.com
ben         ben@mydomain.com
mom         donna@mydomain.com
```

Next run:

```
postmap /etc/postfix/recipient_canonical
postmap /etc/postfix/sender_canonical
```

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TLS

Let's send and receive mail securely when the server we are talking to supports it.

```
smtpd_tls_auth_only = no
smtp_use_tls = yes
smtpd_use_tls = yes
smtp_tls_note_starttls_offer = yes
smtpd_tls_loglevel = 1
smtpd_tls_received_header = yes
smtpd_tls_session_cache_timeout = 3600s
tls_random_source = dev:/dev/urandom
```

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TLS, cont.

Specify the SSL keys and certificates. This requires generating SSL keys and certificates.

```
smtpd_tls_key_file = /etc/ssl/private/lund.key
smtpd_tls_cert_file = /etc/ssl/certs/lund.crt
# Use the CACert Class3 certificate:
smtpd_tls_CAfile = /etc/ssl/certs/cacert_class3.crt
```

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▶ SSL Key Generation

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- SSL Key Generation
- Port Forwarding

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- ▶ SSL Key Generation
- ▶ Port Forwarding
- ▶ Spam Filtering

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- ▶ SSL Key Generation
- ▶ Port Forwarding
- ▶ Spam Filtering
- ▶ List Managers

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- ▶ SSL Key Generation
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- ▶ List Managers
- ▶ Fetchmail, Procmail, Formail, etc.

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References

- Postfix:
  `http://www.postfix.org/postconf.5.html`
  (man 5 postconf)
- This Presentation:
  `http://blog.lundscape.com`