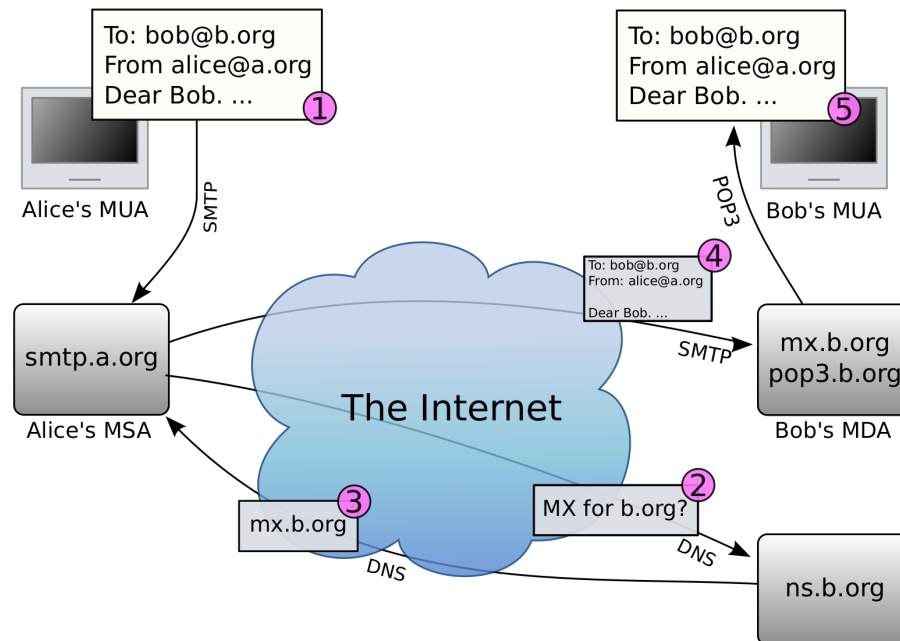


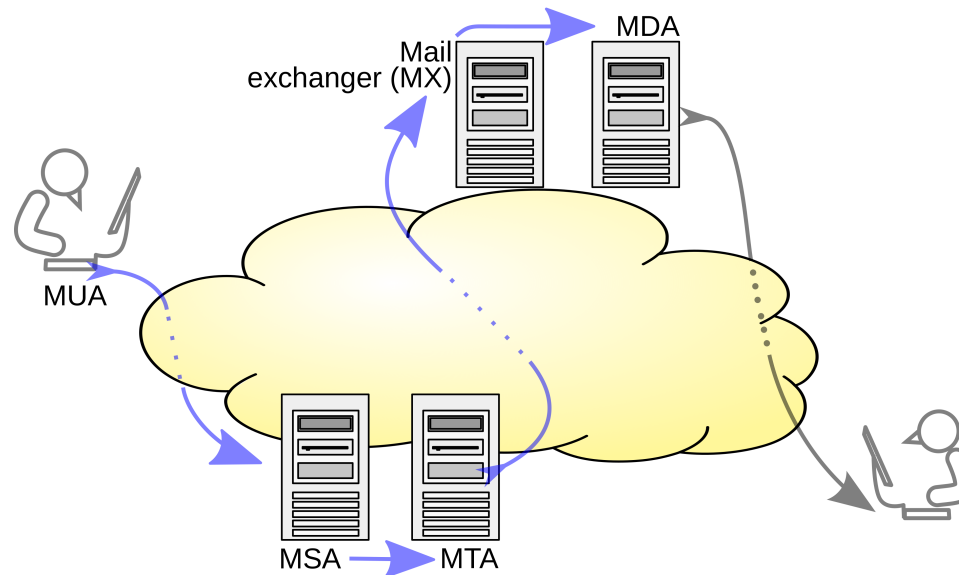
Mail Relay Diagram



MUA = Mail User Agent (mutt, ...)

MSA = Mail Submission Agent

SMTP Transfer Model



MTA = Mail Transmission Agent (Outgoing mail server)

POP3

Post Office Protocol (POP) is an application-layer Internet standard protocol used by e-mail clients to retrieve e-mail from a mail server. POP version 3 (**POP3**) is the version in common use, and along with **IMAP** the most common protocols for email retrieval.

IMAP = Internet Message Access Protocol (IMAP) is an Internet standard protocol used by email clients to retrieve email messages from a mail server over a TCP/IP connection.

IMAP was designed with the goal of permitting complete management of an email box by multiple email clients, therefore clients generally leave messages on the server until the user explicitly deletes them. An IMAP server typically listens on port number **143**. IMAP over SSL/TLS (IMAPS) is assigned the port number **993**.

IMAP is an internet protocol that allows email clients to communicate with an email service, such as Gmail. IMAP is a replacement for the older POP3

email protocol.

MUTT

```
set from = "username@gmail.com"
set realname = "First Last"

# IMAP settings
set imap_user = "username@gmail.com"
set imap_pass = "mailbox password>"

# SMTP settings
set smtp_url = "smtps://username@smtp.gmail.com"
set smtp_pass = "mailbox password>"

# Remote Gmail folders
set folder = "imaps://imap.gmail.com/"
set spoolfile = "+INBOX"
set postponed = "+[Gmail]/Drafts"
set record = "+[Gmail]/Sent Mail"
set trash = "+[Gmail]/Trash"
```

Open Relay

An open mail relay is a **Simple Mail Transfer Protocol (SMTP)** server configured in such a way that it allows anyone on the Internet to send e-mail through it, not just mail destined to or originating from known users.

open mail relays have become unpopular because of their exploitation by spammers and worms. Many relays were closed, or were placed on blacklists by other servers.

POP and POP3

Exim4

- Exim4 is a Message Transfer Agent (MTA)
- Exim4 can be installed to replace of Sendmail or Postfix

Installation

```
# hostname testserver.com
# sudo -i (to Enter with root permissions)
# apt-get update
# apt-get install exim4
```

Configuration

```
# dpkg-reconfigure exim4-config
```

- Select "internet site; mail is sent and received directly using SMTP" option.
- Provide the IP address from which you want to receive the request and send emails. Here, you can give a semicolon-separated list of IP address for multiple IP's.
- Enter the domain address of the clients' recipient domains for which this SMTP will relay the mails. T.ex: testserver;localhost;gmail.com

- Enter a semicolon-separated list of IP address ranges for which this system will unconditionally relay mails. (Functioning as a smart host). This is generally the localhost which will be taken.
- A smart host or smarthost is an email server via which third parties can send emails and have them forwarded on to the email recipients' email servers.
- Smarthosts were originally open mail relays, but most providers now requiring authentication from the sender, to verify that the sender is authorised.
- Select Keep number of DNS-queries minimal (Dial-on-Demand) to No
- Select the delivery method for the local mail's as mbox.
- Select Split configuration into small files? to No.

Add Client

After the configuration we can add the client using the same configuration command or we can directly edit the configuration file and add the additional client to use with this SMTP server.

```
# sudo su
# nano /etc/exim4/update-exim4.conf.conf

## Edit this file and /etc/mailname by hand and execute update-exim4.conf
# yourself or use 'dpkg-reconfigure exim4-config' #
# Please note that this is not a dpkg-conffile and that automatically changing
# to this file might happen. The code handling this will honor your local
# changes, so this is usually fine, but will break local schemes that mess
# around with multiple versions of the file.
## update-exim4.conf uses this file to determine variable values to generate
# exim configuration macros for the configuration file.
## Most settings found in here do have corresponding questions in the
# Debconf configuration, but not all of them.
## This is a Debian specific file
dc_eximconfig_configtype='internet'
dc_other_hostnames='server.com'
dc_local_interfaces='127.0.0.1'
```

```
dc_readhost=''
dc_relay_domains='192.168.1.1'
dc_minimaldns='false'
dc_relay_nets='cgi.com'
dc_smarthost=''
CFILEMODE='644'
dc_use_split_config='false'
dc_hide_mailname=''
dc_mailname_in_oh='true'
dc_localdelivery='maildir_home'
```

dc_relay_nets are used to add the IP address of the client/servers

dc_relay_domains are used to add the domain names of the client/servers

After the successful configuration, you are allowed to use this server for sending or relaying emails from your servers and client for sending the notifications for your programs or projects.