



```
joe@mail:~$ echo "We need to install the MTA package"
```

```
We need to install the MTA package
```

```
joe@mail:~$ sudo apt update && sudo apt install exim4
```



```
joe@mail:~$ echo "We also need to install the command-line MUA"
```

```
We also need to install the command-line MUA
```

```
joe@mail:~$ sudo apt install mailutils
```

```
joe@mail:~$ ip a | grep 144
```

```
inet 144.38.199.40/28 brd 144.38.199.47 scope global ens4
```

```
joe@mail:~$ echo "My ip address above"
```

```
My ip address above
```

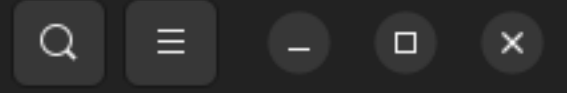
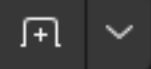
```
joe@mail:~$ echo "I will now configure the MTA for my domain. I will receive email directly from the internet, but will use a smarthost to send through campus firewall"
```

```
I will now configure the MTA for my domain. I will receive email directly from the internet, but will use a smarthost to send through campus firewall
```

```
joe@mail:~$
```



```
joe@mail:~$ sudo dpkg-reconfigure exim4-config
```



# Package configuration

## Mail Server configuration

Please select the mail server configuration type that best meets your needs.

Systems with dynamic IP addresses, including dialup systems, should generally be configured to send outgoing mail to another machine, called a 'smarthost' for delivery because many receiving systems on the Internet block incoming mail from dynamic IP addresses as spam protection.

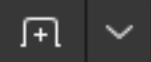
A system with a dynamic IP address can receive its own mail, or local delivery can be disabled entirely (except mail for root and postmaster).

General type of mail configuration:

- internet site; mail is sent and received directly using SMTP
- mail sent by smarthost; received via SMTP or fetchmail
- mail sent by smarthost; no local mail
- local delivery only; not on a network
- no configuration at this time

<Ok>

<Cancel>



# Package configuration

## Mail Server configuration

The 'mail name' is the domain name used to 'qualify' mail addresses without a domain name.

This name will also be used by other programs. It should be the single, fully qualified domain name (FQDN).

Thus, if a mail address on the local host is foo@example.org, the correct value for this option would be example.org.

This name won't appear on From: lines of outgoing messages if rewriting is enabled.

System mail name:

mail.thegummibear.com

<Ok>

<Cancel>



# Package configuration

## Mail Server configuration

Please enter a semicolon-separated list of IP addresses. The Exim SMTP listener daemon will listen on all IP addresses listed here.

An empty value will cause Exim to listen for connections on all available network interfaces.

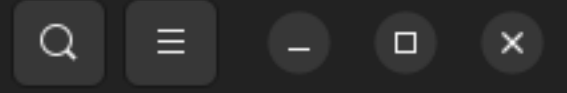
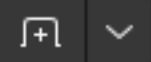
If this system only receives mail directly from local services (and not from other hosts), it is suggested to prohibit external connections to the local Exim daemon. Such services include e-mail programs (MUAs) which talk to localhost only as well as fetchmail. External connections are impossible when 127.0.0.1 is entered here, as this will disable listening on public network interfaces.

IP-addresses to listen on for incoming SMTP connections:

127.0.0.1 ; ::1

<Ok>

<Cancel>



# Package configuration

## Mail Server configuration

Please enter a semicolon-separated list of IP addresses. The Exim SMTP listener daemon will listen on all IP addresses listed here.

An empty value will cause Exim to listen for connections on all available network interfaces.

If this system only receives mail directly from local services (and not from other hosts), it is suggested to prohibit external connections to the local Exim daemon. Such services include e-mail programs (MUAs) which talk to localhost only as well as fetchmail. External connections are impossible when 127.0.0.1 is entered here, as this will disable listening on public network interfaces.

IP-addresses to listen on for incoming SMTP connections:

127.0.0.1 ; ::1; 144.38.199.40

<Ok>

<Cancel>





## Package configuration

### Mail Server configuration

Please enter a semicolon-separated list of recipient domains for which this machine should consider itself the final destination. These domains are commonly called 'local domains'. The local hostname (mail.thegummibear.com) and 'localhost' are always added to the list given here.

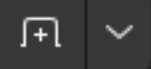
By default all local domains will be treated identically. If both a.example and b.example are local domains, acc@a.example and acc@b.example will be delivered to the same final destination. If different domain names should be treated differently, it is necessary to edit the config files afterwards.

Other destinations for which mail is accepted:

mail.thegummibear.com; thegummibear.com

<Ok>

<Cancel>



## Package configuration

### Mail Server configuration

Please enter a semicolon-separated list of IP address ranges for which this system will unconditionally relay mail, functioning as a smarthost.

You should use the standard address/prefix format (e.g. 194.222.242.0/24 or 5f03:1200:836f::/48).

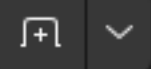
If this system should not be a smarthost for any other host, leave this list blank.

Machines to relay mail for:

don't put anything here yet

<Ok>

<Cancel>



# Package configuration

## Mail Server configuration

Please enter a semicolon-separated list of IP address ranges for which this system will unconditionally relay mail, functioning as a smarthost.

You should use the standard address/prefix format (e.g. 194.222.242.0/24 or 5f03:1200:836f::/48).

If this system should not be a smarthost for any other host, leave this list blank.

Machines to relay mail for:

<Ok>

<Cancel>



# Package configuration

## Mail Server configuration

Please enter the IP address or the host name of a mail server that this system should use as outgoing smarthost. If the smarthost only accepts your mail on a port different from TCP/25, append two colons and the port number (for example smarthost.example::587 or 192.168.254.254::2525). Colons in IPv6 addresses need to be doubled.

If the smarthost requires authentication, please refer to the Debian-specific README files in /usr/share/doc/exim4-base for notes about setting up SMTP authentication.

IP address or host name of the outgoing smarthost:

stumail.cs.utahtech.edu

<Ok>

<Cancel>



# Package configuration

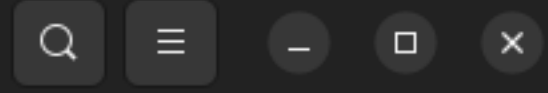
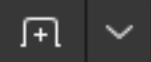
## Mail Server configuration

The headers of outgoing mail can be rewritten to make it appear to have been generated on a different system. If this option is chosen, 'mail.thegummibear.com', 'localhost' and 'mail.thegummibear.com; thegummibear.com' in From, Reply-To, Sender and Return-Path are rewritten.

Hide local mail name in outgoing mail?

<Yes>

<No>



# Package configuration

## Mail Server configuration

In normal mode of operation Exim does DNS lookups at startup, and when receiving or delivering messages. This is for logging purposes and allows keeping down the number of hard-coded values in the configuration.

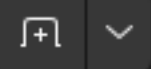
If this system does not have a DNS full service resolver available at all times (for example if its Internet access is a dial-up line using dial-on-demand), this might have unwanted consequences. For example, starting up Exim or running the queue (even with no messages waiting) might trigger a costly dial-up-event.

This option should be selected if this system is using Dial-on-Demand. If it has always-on Internet access, this option should be disabled.

Keep number of DNS-queries minimal (Dial-on-Demand)?

<Yes>

<No>



# Package configuration

## Mail Server configuration

Exim is able to store locally delivered email in different formats. The most commonly used ones are mbox and Maildir. mbox uses a single file for the complete mail folder stored in /var/mail/. With Maildir format every single message is stored in a separate file in ~/Maildir/.

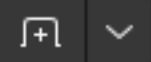
Please note that most mail tools in Debian expect the local delivery method to be mbox in their default.

Delivery method for local mail:

- mbox format in /var/mail/**
- Maildir format in home directory

<Ok>

<Cancel>



## Package configuration

### Mail Server configuration

The Debian exim4 packages can either use 'unsplit configuration', a single monolithic file (/etc/exim4/exim4.conf.template) or 'split configuration', where the actual Exim configuration files are built from about 50 smaller files in /etc/exim4/conf.d/.

Unsplit configuration is better suited for large modifications and is generally more stable, whereas split configuration offers a comfortable way to make smaller modifications but is more fragile and might break if modified carelessly.

A more detailed discussion of split and unsplit configuration can be found in the Debian-specific README files in /usr/share/doc/exim4-base.

Split configuration into small files?

<Yes>

<No>



## Package configuration

**Mail Server configuration**

Mail for the 'postmaster', 'root', and other system accounts needs to be redirected to the user account of the actual system administrator.

If this value is left empty, such mail will be saved in /var/mail/mail, which is not recommended.

Note that postmaster's mail should be read on the system to which it is directed, rather than being forwarded elsewhere, so (at least one of) the users listed here should not redirect their mail off this machine. A 'real-' prefix can be used to force local delivery.

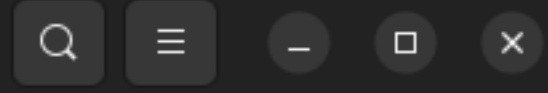
Multiple user names need to be separated by spaces.

Root and postmaster mail recipient:

put the username that you created on the machine here

<Ok>

<Cancel>



# Package configuration

## Mail Server configuration

Mail for the 'postmaster', 'root', and other system accounts needs to be redirected to the user account of the actual system administrator.

If this value is left empty, such mail will be saved in /var/mail/mail, which is not recommended.

Note that postmaster's mail should be read on the system to which it is directed, rather than being forwarded elsewhere, so (at least one of) the users listed here should not redirect their mail off this machine. A 'real-' prefix can be used to force local delivery.

Multiple user names need to be separated by spaces.

Root and postmaster mail recipient:

joe

<Ok>

<Cancel>

```
joe@mail:~$ echo "restart exim to make sure things are going ok"
```

```
restart exim to make sure things are going ok
```

```
joe@mail:~$ sudo service exim4 restart
```

```
joe@mail:~$ sudo service exim4 status
```

```
● exim4.service - LSB: exim Mail Transport Agent
```

```
Loaded: loaded (/etc/init.d/exim4; generated)
```

```
Active: active (running) since Tue 2023-08-08 17:25:35 UTC; 4s ago
```

```
Docs: man:systemd-sysv-generator(8)
```

```
Process: 4621 ExecStart=/etc/init.d/exim4 start (code=exited, status=0/SUCCESS)
```

```
Tasks: 1 (limit: 1026)
```

```
Memory: 11.6M
```

```
CPU: 777ms
```

```
CGroup: /system.slice/exim4.service
```

```
└─4871 /usr/sbin/exim4 -bd -q30m
```

```
Aug 08 17:25:34 mail systemd[1]: Starting LSB: exim Mail Transport Agent...
```

```
Aug 08 17:25:34 mail exim4[4621]: * Starting MTA
```

```
Aug 08 17:25:35 mail exim4[4621]: ...done.
```

```
Aug 08 17:25:35 mail systemd[1]: Started LSB: exim Mail Transport Agent.
```

```
joe@mail:~$ echo "I think it might be ok"
```

```
I think it might be ok
```

```
joe@mail:~$
```

```
joe@mail:~$ sudo tail /var/log/syslog
```

```
Aug  8 17:25:34 myserver systemd[1]: exim4.service: Deactivated successfully.
```

```
Aug  8 17:25:34 myserver systemd[1]: exim4.service: Unit process 4603 (exim4) remains running after unit stopped.
```

```
Aug  8 17:25:34 myserver systemd[1]: Stopped LSB: exim Mail Transport Agent.
```

```
Aug  8 17:25:34 myserver systemd[1]: exim4.service: Consumed 1.214s CPU time.
```

```
Aug  8 17:25:34 myserver systemd[1]: exim4.service: Found left-over process 4603 (exim4) in control group while starting unit. Ignoring.
```

```
Aug  8 17:25:34 myserver systemd[1]: This usually indicates unclean termination of a previous run, or service implementation deficiencies.
```

```
Aug  8 17:25:34 myserver systemd[1]: Starting LSB: exim Mail Transport Agent...
```

```
Aug  8 17:25:34 myserver exim4[4621]: * Starting MTA
```

```
Aug  8 17:25:35 myserver exim4[4621]: ...done.
```

```
Aug  8 17:25:35 myserver systemd[1]: Started LSB: exim Mail Transport Agent.
```

```
joe@mail:~$ echo "I think it appears to be running fine"
```

```
I think it appears to be running fine
```

```
joe@mail:~$
```



```
joe@mail:~$ cd /etc/exim4/
```

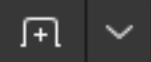
```
joe@mail:/etc/exim4$ ls
```

```
conf.d  exim4.conf.template  passwd.client  update-exim4.conf.conf
```

```
joe@mail:/etc/exim4$ echo "This directory houses our configuration"
```

```
This directory houses our configuration
```

```
joe@mail:/etc/exim4$
```



```
joe@mail:/etc/exim4$ echo "The following file was generated by the wizard, we can directly  
edit if we know what we are doing"
```

```
The following file was generated by the wizard, we can directly edit if we know what we ar  
e doing
```

```
joe@mail:/etc/exim4$ cat update-exim4.conf.conf
```



```
joe@mail:/etc/exim4$ cd /var/log/exim4/
```

```
joe@mail:/var/log/exim4$ ls
```

```
mainlog
```

```
joe@mail:/var/log/exim4$ echo "The log files for this service are stored here"
```

```
The log files for this service are stored here
```

```
joe@mail:/var/log/exim4$ █
```

```
joe@mail:/var/log/exim4$ cat mainlog
2023-08-08 17:19:19 Warning: No server certificate defined; will use a selfsigned one.
  Suggested action: either install a certificate or change tls_advertise_hosts option
2023-08-08 17:19:19 exim 4.95 daemon started: pid=2899, -q30m, listening for SMTP on [127.
0.0.1]:25 [::1]:25
2023-08-08 17:19:21 Start queue run: pid=2910
2023-08-08 17:19:21 End queue run: pid=2910
2023-08-08 17:24:54 Warning: No server certificate defined; will use a selfsigned one.
  Suggested action: either install a certificate or change tls_advertise_hosts option
2023-08-08 17:24:54 exim 4.95 daemon started: pid=3954, -q30m, listening for SMTP on [127.
0.0.1]:25 [::1]:25 [144.38.199.40]:25
2023-08-08 17:24:55 Start queue run: pid=3957
2023-08-08 17:24:55 End queue run: pid=3957
2023-08-08 17:25:15 Warning: No server certificate defined; will use a selfsigned one.
  Suggested action: either install a certificate or change tls_advertise_hosts option
2023-08-08 17:25:15 exim 4.95 daemon started: pid=4603, -q30m, listening for SMTP on [127.
0.0.1]:25 [::1]:25 [144.38.199.40]:25
2023-08-08 17:25:16 Start queue run: pid=4606
2023-08-08 17:25:16 End queue run: pid=4606
2023-08-08 17:25:35 Warning: No server certificate defined; will use a selfsigned one.
  Suggested action: either install a certificate or change tls_advertise_hosts option
2023-08-08 17:25:35 exim 4.95 daemon started: pid=4871, -q30m, listening for SMTP on [127.
0.0.1]:25 [::1]:25 [144.38.199.40]:25
2023-08-08 17:25:35 Start queue run: pid=4872
2023-08-08 17:25:35 End queue run: pid=4872
joe@mail:/var/log/exim4$ echo "Seems ok"
Seems ok
joe@mail:/var/log/exim4$
```





```
joe@ns1:/etc/bind$ echo "We need to add appropriate DNS records. Make sure you are on your ns1 machine"
```

```
We need to add appropriate DNS records. Make sure you are on your ns1 machine
```

```
joe@ns1:/etc/bind$ sudo vi db.thegummibear.com
```

```
; db file for thegummibear.com
; this is just a comment and is not important
;
;
$TTL      86400
@         IN      SOA      ns1.thegummibear.com. root.ns1.thegummibear.com. (
                        10          ; Serial
                        604800     ; Refresh
                        86400      ; Retry
                        2419200    ; Expire
                        86400      ; Negative Cache TTL
);

@         IN      NS       ns1.thegummibear.com.
@         IN      NS       ns2.thegummibear.com.

; this entry indicates that any email destined for thegummibear.com should be sent
; to whatever machine is resolved by the A record `mail`
@         IN      MX       10      mail

; this entry indicates that any email destined for mail.thegummibear.com should be
; send to whatever machine is resolved by the A record `mail`
mail     IN      MX       10      mail

fs       IN      A        144.38.199.35
ns1      IN      A        144.38.199.36
ns2      IN      A        144.38.199.37
www      IN      A        144.38.199.38
db       IN      A        144.38.199.39

"db.thegummibear.com" 43L, 1157B written
```

```
joe@ns1:/etc/bind$ echo "Don't forget to restart bind"
```

```
Don't forget to restart bind
```

```
joe@ns1:/etc/bind$ dig @localhost thegummibear.com MX
```

```
; <<>> DiG 9.18.12-0ubuntu0.22.04.2-Ubuntu <<>> @localhost thegummibear.com MX
```

```
; (1 server found)
```

```
;; global options: +cmd
```

```
;; Got answer:
```

```
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 4823
```

```
;; flags: qr aa rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 2
```

```
;; OPT PSEUDOSECTION:
```

```
; EDNS: version: 0, flags:; udp: 1232
```

```
; COOKIE: 26b726549e9e16070100000064d27c243139ae9e65739e06 (good)
```

```
;; QUESTION SECTION:
```

```
;thegummibear.com.          IN      MX
```

```
;; ANSWER SECTION:
```

```
thegummibear.com.          86400  IN      MX      10 mail.thegummibear.com.
```

```
;; ADDITIONAL SECTION:
```

```
mail.thegummibear.com.    86400  IN      A       144.38.199.40
```

```
;; Query time: 0 msec
```

```
;; SERVER: 127.0.0.1#53(localhost) (UDP)
```

```
;; WHEN: Tue Aug 08 17:32:20 UTC 2023
```

```
;; MSG SIZE rcvd: 110
```

```
joe@ns1:/etc/bind$
```



```
joe@ns1:/etc/bind$ echo "I just digged for a DNS record for thegummibear.com asking for wh  
at mailserver should handle mail for that domain. Let's do for the other"  
I just digged for a DNS record for thegummibear.com asking for what mailserver should hand  
le mail for that domain. Let's do for the other  
joe@ns1:/etc/bind$ dig @localhost mail.thegummibear.com MX
```

at mailserver should handle mail for that domain. Let's do for the other"  
I just digged for a DNS record for thegummibear.com asking for what mailserver should handle mail for that domain. Let's do for the other

```
joe@ns1:/etc/bind$ dig @localhost mail.thegummibear.com MX
```

```
; <<>> DiG 9.18.12-0ubuntu0.22.04.2-Ubuntu <<>> @localhost mail.thegummibear.com MX
```

```
; (1 server found)
```

```
;; global options: +cmd
```

```
;; Got answer:
```

```
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 45355
```

```
;; flags: qr aa rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 2
```

```
;; OPT PSEUDOSECTION:
```

```
; EDNS: version: 0, flags:; udp: 1232
```

```
; COOKIE: 4b19ad041661ec560100000064d27c5724c827312f1799eb (good)
```

```
;; QUESTION SECTION:
```

```
;mail.thegummibear.com.      IN      MX
```

```
;; ANSWER SECTION:
```

```
mail.thegummibear.com.  86400  IN      MX      10 mail.thegummibear.com.
```

```
;; ADDITIONAL SECTION:
```

```
mail.thegummibear.com.  86400  IN      A       144.38.199.40
```

```
;; Query time: 0 msec
```

```
;; SERVER: 127.0.0.1#53(localhost) (UDP)
```

```
;; WHEN: Tue Aug 08 17:33:11 UTC 2023
```

```
;; MSG SIZE rcvd: 110
```

```
joe@ns1:/etc/bind$
```

```
joe@ns1:/etc/bind$ echo "Do similar dig tests on the slave"
```

```
Do similar dig tests on the slave
```

```
joe@ns1:/etc/bind$ echo "Or on an upstream server"
```

```
Or on an upstream server
```

```
joe@ns1:/etc/bind$ dig @8.8.8.8 mail.thegummibear.com | grep 144
```

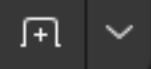
```
mail.thegummibear.com. 21600 IN A 144.38.199.40
```

```
joe@ns1:/etc/bind$ █
```

```
joe@mail:~$ echo "Back on mailserver now. Going to test sending and receiving an email"
Back on mailserver now. Going to test sending and receiving an email
joe@mail:~$ sudo adduser bob
Adding user `bob' ...
Adding new group `bob' (1002) ...
Adding new user `bob' (1002) with group `bob' ...
Creating home directory `/home/bob' ...
Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for bob
Enter the new value, or press ENTER for the default
    Full Name []:
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []:
Is the information correct? [Y/n]
joe@mail:~$
```

```
joe@mail:~$ sudo adduser alice
Adding user `alice' ...
Adding new group `alice' (1003) ...
Adding new user `alice' (1003) with group `alice' ...
Creating home directory `/home/alice' ...
Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for alice
Enter the new value, or press ENTER for the default
    Full Name []:
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []:
Is the information correct? [Y/n]
joe@mail:~$ █
```





```
joe@mail:~$ sudo su - bob  
bob@mail:~$ mailx alice
```



```
joe@mail:~$ sudo su - bob
```

```
bob@mail:~$ mailx alice
```

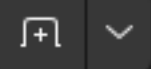
```
Subject: hello
```

```
this is an email message
```

```
I can terminate the message by pressing control+d
```

```
Cc:
```

```
bob@mail:~$ █
```

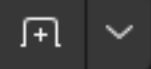


```
joe@mail:~$ echo "Check the logs"
```

```
Check the logs
```

```
joe@mail:~$ sudo cat /var/log/exim4/mainlog
```

```
joe@mail:~$ sudo cat /var/log/exim4/mainlog
2023-08-08 17:19:19 Warning: No server certificate defined; will use a selfsigned one.
  Suggested action: either install a certificate or change tls_advertise_hosts option
2023-08-08 17:19:19 exim 4.95 daemon started: pid=2899, -q30m, listening for SMTP on [127.
0.0.1]:25 [::1]:25
2023-08-08 17:19:21 Start queue run: pid=2910
2023-08-08 17:19:21 End queue run: pid=2910
2023-08-08 17:24:54 Warning: No server certificate defined; will use a selfsigned one.
  Suggested action: either install a certificate or change tls_advertise_hosts option
2023-08-08 17:24:54 exim 4.95 daemon started: pid=3954, -q30m, listening for SMTP on [127.
0.0.1]:25 [::1]:25 [144.38.199.40]:25
2023-08-08 17:24:55 Start queue run: pid=3957
2023-08-08 17:24:55 End queue run: pid=3957
2023-08-08 17:25:15 Warning: No server certificate defined; will use a selfsigned one.
  Suggested action: either install a certificate or change tls_advertise_hosts option
2023-08-08 17:25:15 exim 4.95 daemon started: pid=4603, -q30m, listening for SMTP on [127.
0.0.1]:25 [::1]:25 [144.38.199.40]:25
2023-08-08 17:25:16 Start queue run: pid=4606
2023-08-08 17:25:16 End queue run: pid=4606
2023-08-08 17:25:35 Warning: No server certificate defined; will use a selfsigned one.
  Suggested action: either install a certificate or change tls_advertise_hosts option
2023-08-08 17:25:35 exim 4.95 daemon started: pid=4871, -q30m, listening for SMTP on [127.
0.0.1]:25 [::1]:25 [144.38.199.40]:25
2023-08-08 17:25:35 Start queue run: pid=4872
2023-08-08 17:25:35 End queue run: pid=4872
2023-08-08 17:36:16 1qTQcy-0001Ia-0e <= bob@mail.thegummibear.com U=bob P=local S=539
2023-08-08 17:36:16 1qTQcy-0001Ia-0e => alice <alice@mail.thegummibear.com> R=local_user T
=mail_pool
2023-08-08 17:36:16 1qTQcy-0001Ia-0e Completed
joe@mail:~$
```



```
joe@mail:~$ echo "Login as alice and check"
```

```
Login as alice and check
```

```
joe@mail:~$ sudo su - alice
```

```
alice@mail:~$ mail
```

```
joe@mail:~$ echo "Login as alice and check"
Login as alice and check
joe@mail:~$ sudo su - alice
alice@mail:~$ mail
Mail version 8.1.2 01/15/2001.  Type ? for help.
"/var/mail/alice": 1 message 1 new
>N 1 bob@mail.thegummi Tue Aug 08 17:36 21/725 hello
& 1
Message 1:
From bob@mail.thegummibear.com Tue Aug 08 17:36:16 2023
Envelope-to: alice@mail.thegummibear.com
Delivery-date: Tue, 08 Aug 2023 17:36:16 +0000
To: alice@mail.thegummibear.com
Subject: hello
MIME-Version: 1.0
Content-Type: text/plain; charset="UTF-8"
Content-Transfer-Encoding: 8bit
From: bob@mail.thegummibear.com
Date: Tue, 08 Aug 2023 17:36:16 +0000

this is an email message
I can terminate the message by pressing control+d

& q
Saved 1 message in /home/alice/mbox
alice@mail:~$ echo "She received it"
> "
She received it

alice@mail:~$
```



```
joe@mail:~$ ls /var/spool/mail
```

```
alice
```

```
joe@mail:~$ echo "This spool directory holds email messages"
```

```
This spool directory holds email messages
```

```
joe@mail:~$
```



```
joe@mail:~$ echo "Let's try an external email"
```

```
Let's try an external email
```

```
joe@mail:~$ echo "you should not use my email, use your own"
```

```
you should not use my email, use your own
```

```
joe@mail:~$ mailx dixiejoe2020@gmail.com
```

```
Subject: testing
```

```
Post Malone has a new album? meh.
```

```
Cc:
```

```
joe@mail:~$ █
```



```
joe@mail:~$ sudo tail /var/log/exim4/mainlog
```

```
2023-08-08 17:25:35 exim 4.95 daemon started: pid=4871, -q30m, listening for SMTP on [127.0.0.1]:25 [::1]:25 [144.38.199.40]:25
```

```
2023-08-08 17:25:35 Start queue run: pid=4872
```

```
2023-08-08 17:25:35 End queue run: pid=4872
```

```
2023-08-08 17:36:16 1qTQcy-0001Ia-0e <= bob@mail.thegummibear.com U=bob P=local S=539
```

```
2023-08-08 17:36:16 1qTQcy-0001Ia-0e => alice <alice@mail.thegummibear.com> R=local_user T=mail_spool
```

```
2023-08-08 17:36:16 1qTQcy-0001Ia-0e Completed
```

```
2023-08-08 17:40:46 1qTQhK-0001Jc-J2 <= joe@mail.thegummibear.com U=joe P=local S=496
```

```
2023-08-08 17:40:47 1qTQhK-0001Jc-J2 TLS session: (certificate verification failed): certificate invalid: delivering unencrypted to H=stumail.cs.utahtech.edu [144.38.192.231] (not in hosts_require_tls)
```

```
2023-08-08 17:40:48 1qTQhK-0001Jc-J2 => dixiejoe2020@gmail.com R=smarthost T=remote_smtp_smarthost H=stumail.cs.utahtech.edu [144.38.192.231] K C="250- 511 byte chunk, total 511\n250 OK id=1qTQhL-000hBl-U4"
```

```
2023-08-08 17:40:48 1qTQhK-0001Jc-J2 Completed
```

```
joe@mail:~$ echo "It says it sent"
```

```
It says it sent
```

```
joe@mail:~$
```



```
joe@mail:~$ echo "I never received it... look at the logs"
```

```
I never received it... look at the logs
```

```
joe@mail:~$ less /var/log/exim4/mainlog
```

```
joe@mail:~$ echo "nothing useful there"
```

```
nothing useful there
```

```
joe@mail:~$ echo "The issue is that google wants to make sure that we aren't sending spam,  
to rectify this issue we need to add a TXT record on our DNS server"
```

```
The issue is that google wants to make sure that we aren't sending spam, to rectify this i  
ssue we need to add a TXT record on our DNS server
```

```
joe@mail:~$
```

```
86400 ) ; Negative Cache TTL
```

```
;
```

```
@ IN NS ns1.thegummibear.com.  
@ IN NS ns2.thegummibear.com.
```

```
@ IN MX 10 mail  
mail IN MX 10 mail
```

```
;I added these TXT records, you should be able to duplicate exactly
```

```
@ IN TXT "v=spf1 mx ip4:144.38.192.231 a:stumail.cs.utahtech.edu ~all"  
mail IN TXT "v=spf1 mx ip4:144.38.192.231 a:stumail.cs.utahtech.edu ~all"
```

```
@ IN A 144.38.199.38  
fs IN A 144.38.199.35  
ns1 IN A 144.38.199.36  
ns2 IN A 144.38.199.37  
www IN A 144.38.199.38  
db IN A 144.38.199.39  
mail IN A 144.38.199.40
```

```
; THE AAAA will be used if they are coming from an ipv6 network
```

```
-- INSERT --
```



```
joe@ns1:/etc/bind$ echo "Don't forget to increment serial and restart bind"
```

```
Don't forget to increment serial and restart bind
```

```
joe@ns1:/etc/bind$
```



```
joe@mail:~$ mailx dixiejoe2020@gmail.com
```

```
Subject: can i receive this now
```

```
here is my message
```

```
Cc:
```

```
joe@mail:~$
```

Gmail

Search mail

Compose

Inbox 1

Starred

Snoozed

Sent

Drafts

More

Labels



1-1 of 1



Primary

Promotions

Social

checkbox star joe

can i receive this now - here is my message

12:19 PM

0.32 GB of 15 GB used

Terms · Privacy · Program Policies

Last account activity: 1 hour ago  
Details





```
joe@mail:~$ echo "Now test response from gmail"
```

```
Now test response from gmail
```

```
joe@mail:~$
```



Gmail

Search mail

Compose

Inbox

Starred

Snoozed

Sent

Drafts 1

More

Labels +



1 of 1

can i receive this now Inbox x



joe  
to me

12:19 PM (0 minutes ago)



here is my message



← joe (mail.thegummibear.com)



Hello how are you doing today? |



Send [dropdown] [text color] [attach] [link] [emojis] [insert] [lock] [edit] [more]



```
joe@mail:~$ mail
```

```
Mail version 8.1.2 01/15/2001.  Type ? for help.
```

```
"/var/mail/joe": 1 message 1 new
```

```
>N  1 dixiejoe2020@gmai  Wed Aug 09 18:21    77/3780  Re: can i receive this now
```

```
& 1
```

```
& 1
```

```
& I received it, type 1 to read the message
```



joe@mail: ~



```
joe@mail:~$ echo "Things appear to be working ok for now"
```

```
Things appear to be working ok for now
```

```
joe@mail:~$
```