The following steps will need to be done on each satellite system
joe@www-thegummibear:~$ sudo apt-get install exim4 mailutils
[sudo] password for joe:
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages were automatically installed and are no longer required:
  linux-headers-4.4.0-31 linux-headers-4.4.0-31-generic linux-image-4.4.0-31-generic
  linux-image-extra-4.4.0-31-generic
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
  exim4-base exim4-config exim4-daemon-light guile-2.0-libs libgc1c2 libgsasl7 libkyotocabinet16v5
  libltldl7 libmailutils4 libmysqlclient20 libntlm0 libpython2.7 libpython2.7-minimal
  libpython2.7-stdlib libunistring0 mailutils-common mysql-common
Suggested packages:
  exim4n4 exim4-doc-html | exim4-doc-info spf-tools-perl swaks mailutils-mh mailutils-doc
The following NEW packages will be installed:
  exim4 exim4-base exim4-config exim4-daemon-light guile-2.0-libs libgc1c2 libgsasl7
  libkyotocabinet16v5 libltldl7 libmailutils4 libmysqlclient20 libntlm0 libpython2.7
  libpython2.7-minimal libpython2.7-stdlib libunistring0 mailutils mailutils-common mysql-common
0 upgraded, 19 newly installed, 0 to remove and 37 not upgraded.
Need to get 9,674 kB of archives.
After this operation, 43.3 MB of additional disk space will be used.
Do you want to continue? [Y/n]
I am not capturing all screens, just relevant ones
joe@www-thegummibear:~$ sudo dpkg-reconfigure exim4-config
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 'smahost' 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>
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:

```
www.thegummibear.com
```

<Ok>  <Cancel>
Mail Server configuration

The option to hide the local mail name in outgoing mail was enabled. It is therefore necessary to specify the domain name this system should use for the domain part of local users' sender addresses.

Visible domain name for local users:

www.thegummibear.com

<Ok>  <Cancel>
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:

mail.thegummibear.com

<Ok>  <Cancel>
joe@www-thegummibear:~$ sudo service exim4 restart
joe@www-thegummibear:~$
joe@www-thegummibear:~$ echo "remember you need to do this on ALL satellite systems"
remember you need to do this on ALL satellite systems
joe@www-thegummibear:~$
`joe@mail-thegummibear:~$ echo "Now I am on my mail server"
Now I am on my mail server
`joe@mail-thegummibear:~$ echo "we need to make it aware that it is a relay for my satellites"
we need to make it aware that it is a relay for my satellites
`joe@mail-thegummibear:~$`
joe@mail-thegummibear:~$ sudo dpkg-reconfigure exim4-config
only capturing relevant screens, not all of them

only capturing relevant screens, not all of them
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:

144.38.199.162; 144.38.199.163; 144.38.199.165; and so forth...

<Ok> <Cancel>
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:

144.38.199.160/27 or I could do network and mask notation like this

<Ok> <Cancel>
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:

.199.160/27 this can really mess stuff up, so do a semicolon list if you dont understand

<Ok>     <Cancel>
joe@www-thegummibear:~$ echo "back on satellite, ready to test"
back on satellite, ready to test
joe@www-thegummibear:~$
joe@www-thegummibear:~$ sudo adduser bob
[sudo] password for joe:
Adding user 'bob' ...
Adding new group 'bob' (1016) ...
Adding new user 'bob' (1013) with group 'bob' ...
Creating home directory '/home/bob' ...
Copying files from '/etc/skel' ...
Enter new UNIX password:
Retype new UNIX 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] Y
joe@www-thegummibear:~$
echo "now i am bob, ready to send"
now i am bob, ready to send
mailx bob@mail.theummibear.com
Subject: www -> mail
Test from one satellite to my mailserver
joe@mail-thegummibear:~$ echo "back on mailserver"
back on mailserver
joe@mail-thegummibear:~$
2016-10-04 13:16:36 1brVc-0006jv-4M <= bob@mail.the gum mibear.com U=bob P=local S=546
2016-10-04 13:16:36 1brVc-0006kY-B5 <= bob@mail.the gum mibear.com U=bob P=local S=566
2016-10-04 13:16:36 1brVc-0006kY-B5 => tommy@smtp.dwarf.website R=smarthost T=remote_smtp_smarthost H=stumail.cs.dixie.edu [144.38.192.231] C="250 OK id=1brVc-0001XE-HX"
2016-10-04 13:16:36 1brVc-0006kY-B5 Completed
2016-10-04 13:16:36 1brVc-0006ke-0f <= tommy@smtp.dwarf.website H=stumail.cs.dixie.edu (stumail-2016.cs.dixie.edu) [144.38.192.231] P=esmtps X=TLS1.2:ECDHE_RSA_AES_128_GCM_SHA256:128 CV=no S=1059 id=E1brVc-0006Jl-Kq@smtp
2016-10-04 13:16:36 1brVc-0006ke-0f => bob <bob@mail.the gum mibear.com> R=local_user T=mail_spool
2016-10-04 13:16:36 1brVc-0006ke-0f Completed
2016-10-04 13:16:41 1brVc-0006jv-4M => tommy@dwarf.website H=stumail.cs.dixie.edu [144.38.192.231] C="250 OK id=1brVcj-0001XM-Ha"
2016-10-04 13:16:41 1brVc-0006jv-4M Completed
2016-10-04 13:29:03 Start queue run: pid=26213
2016-10-04 13:29:03 End queue run: pid=26213
2016-10-04 13:59:03 Start queue run: pid=26224
2016-10-04 13:59:03 End queue run: pid=26224
2016-10-04 14:13:50 exim 4.86_2 daemon started: pid=27074, -q30m, listening for SMTP on [127.0.0.1]:25 [127.0.0.1]:587 [::1]:25 [::1]:587 [144.38.199.164]:25 [144.38.199.164]:587 and for SMTPS on [127.0.0.1]:465 [::1]:465 [144.38.199.164]:465
2016-10-04 14:13:50 Start queue run: pid=27077
2016-10-04 14:13:50 End queue run: pid=27077
2016-10-04 14:15:37 no host name found for IP address 144.38.199.165
2016-10-04 14:15:37 1brW7l-00072t-3j <= bob@www.the gum mibear.com H=(www.the gum mibear.com) [144.38.199.165] P=esmtps X=TLS1.2:ECDHE_RSA_AES_128_GCM_SHA256:128 CV=no S=737 id=E1brW7k-000520-0Y@www.the gum mibear.com
2016-10-04 14:15:37 1brW7l-00072t-3j => bob <bob@mail.the gum mibear.com> R=local_user T=mail_spool
2016-10-04 14:15:37 1brW7l-00072t-3j Completed

(END)
bob@mail-thegummibear:~$ mailx
"/var/mail/bob": 2 messages 2 unread
>U 1 bob@www.thegummibie Tue Oct 4 14:15 24/913 www -> mail
U 2 bob@www.thegummibie Tue Oct 4 14:20 23/884 www -> mail
```
bob@www-thegummibear:~$ echo "back on www. Sending outside my network"
bob@www-thegummibear:~$ echo "Don't test my address, test yours!"
bob@www-thegummibear:~$ mailx joseph.francom@gmail.com
Cc:
Subject: www -> gmail
Can I get this on my gmail account?
Control + D to end
bob@www-thegummibear:~$
```
Can I get this on my gmail account?
Control + D to end
If you try to reply from your outside address, it will fail until we do some more configuration.
```
bob@www-thegummibear:~$ echo "This NEW configuration MUST be done on all satellite systems for things to work!"
This NEW configuration MUST be done on all satellite systems for things to work!
bob@www-thegummibear:~$  ```
bob@www-thegummibear:~$ sudo dpkg-reconfigure exim4-config
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 'smtphost' 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

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>
$ echo "Looks like I didn't have to change anything"
Looks like I didn't have to change anything
bob@mail-thegummibear:~$ echo "Back on mailserver"
Back on mailserver
bob@mail-thegummibear:~$ echo "Make sure exim knows about satellite sites"
Make sure exim knows about satellite sites
bob@mail-thegummibear:~$
bob@mail-thegummibear:~$ sudo dpkg-reconfigure exim4-config
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 recipient domains for which this machine should consider itself the final destination. These domains are commonly called 'local domains'. The local hostname (mail.theummibear.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.theummibear.com; theummibear.com; ns1.theummibear.com; ns2.theummibear.com; etc...

<Ok> <Cancel>
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:

Or ...

<Ok> <CancelButton>
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:

thegummibear.com; *.thegummibear.com
joe@ns1-thegummibear:/etc/bind$ echo "now on dns master to add mx records for all satellite systems"
now on dns master to add mx records for all satellite systems
joe@ns1-thegummibear:/etc/bind$
joe@ns1-thegummibear:~/etc/bind$ sudo vi db.thegummibear.com
; Negative Cache TTL

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

; MX Records
; The following will cause MTAs to send messages addressed
; to user@thegummibear.com to the mail.thegummibear.com server, with
; a priority of 10.
; It is important that 'mail' is the name of my MTA host. It is NOT a
; keyword in this file

@ IN MX 10 mail

; for completeness, if a user sends mail to foo@mail.thegummibear.com
; we will direct it correctly
mail IN MX 10 mail

; MX records are normally stored next to A records
; My MTA is named mail, it is NOT a keyword in this file
; DO NOT provide MX records for CNAMEs

; A address records

ns1 IN A 144.38.199.162
"db.thegummibear.com" 65L, 1537C written
; MX records are normally stored next to A records
; My MTA is named mail, it is NOT a keyword in this file
; DO NOT provide MX records for CNAMEs

; A address records

ns1     IN     A     144.38.199.162
         IN     MX    10    mail
ns2     IN     A     144.38.199.163
         IN     MX    10    mail
mail    IN     A     144.38.199.164
         IN     MX    10    mail
www     IN     A     144.38.199.165
         IN     MX    10    mail
filesystem IN     A     144.38.199.166
         IN     MX    10    mail
db      IN     A     144.38.199.167
         IN     MX    10    mail
resources IN     A     144.38.199.168
         IN     MX    10    mail
examplefs IN     A     144.38.199.172
         IN     MX    10    mail

; Some CNAME addresses
"db.thegummibear.com" 73L, 1665C written
joe@ns1-thegummibear:/etc/bind$ sudo service bind9 restart
joe@ns1-thegummibear:/etc/bind$

joe@ns1-thegummibear:/etc/bind$ echo "Examine your logs to see if it started correctly and sent notifies"
Examine your logs to see if it started correctly and sent notifies
joe@ns1-thegummibear:/etc/bind$
joe@ns1-thegummibear:/etc/bind$ dig @ns1.thegummibear.com www.thegummibear.com MX
DiG 9.10.3-P4-Ubuntu @ns1.theummibear.com www.theummibear.com MX
(1 server found)
Got answer:
-HEADER-> opcode: QUERY, status: NOERROR, id: 17058
flags: qr aa rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 2, ADDITIONAL: 4

OPT PSEUDOSECTION:
EDNS: version: 0, flags: udp: 4096
QUESTION SECTION:
@www.theummibear.com. IN MX

ANSWER SECTION:

AUTHORITY SECTION:

ADDITIONAL SECTION:
mail.theummibear.com. 3600 IN A 144.38.199.164
ns1.theummibear.com. 3600 IN A 144.38.199.162
ns2.theummibear.com. 3600 IN A 144.38.199.163

Query time: 0 msec
SERVER: 144.38.199.162#53(144.38.199.162)
WHEN: Tue Oct 04 14:32:33 MDT 2016
MSG SIZE rcvd: 154
joe@ns1-thegummibear:/etc/bind$ echo "Test ALL your MX records using dig"
Test ALL your MX records using dig
joe@ns1-thegummibear:/etc/bind$
joe@ns1-thegummibear:/etc/bind$ echo "now to test from outside my LAN"
now to test from outside my LAN
joe@ns1-thegummibear:/etc/bind$
Can I get this on my gmail account?  
Control + D to end
Can I get this on my gmail account?
Control + D to end

Here is my test response!!!
I hope you get it.
Please don't everyone send to my account!
bob@mail-thegummibear:~$ mail
"/var/mail/bob": 3 messages 1 new 2 unread
  U  1 bob@www.thegummibe Tue Oct 4 14:15 24/913 www -> mail
  U  2 bob@www.thegummibe Tue Oct 4 14:20 23/884 www -> mail
<3  3 Joe Francom Tue Oct 4 14:35 92/4527 Re: www -> gmail

<
```bash
bob@www-thegummibear:~$ mailx
Cannot open mailbox /var/mail/bob: Permission denied
No mail for bob
```
```
bob@www-thegummibear:~$ mail
Cannot open mailbox /var/mail/bob: Permission denied
No mail for bob
```
```
bob@www-thegummibear:~$ echo "On the satellite system, this is working as expected. Should NOT be received here. User has to log into mail server to retrieve email"
On the satellite system, this is working as expected. Should NOT be received here. User has to log into mail server to retrieve email
```
```
bob@www-thegummibear:~$  
```
bob@www-thegummibear:~$ echo "Test from each of your Satellites. Double check your error logs."
Test from each of your Satellites. Double check your error logs.
bob@www-thegummibear:~$ echo "/var/log/syslog"
/var/log/syslog
bob@www-thegummibear:~$ echo "and"
and
bob@www-thegummibear:~$ echo "/var/log/exim4/mainlog and /var/log/exim4/rejectlog, and other log files"
/var/log/exim4/mainlog and /var/log/exim4/rejectlog, and other log files
bob@www-thegummibear:~$