This is one satellite system. This work must be done individually on each one of them.

This is one satellite system. This work must be done individually on each one of them.

cgl@www:/$
cgl@www:/$ sudo apt-get install exim4 mailutils
cgl@www:/$ echo "Not all configuration screens will be captured. Only those relevant to configuring outgoing email."
Not all configuration screens will be captured. Only those relevant to configuring outgoing email.
cgl@www:/$
cgl@www:/$ sudo dpkg-reconfigure exim4-config
Mail Server configuration

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>
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.dsutux.us
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.dsutux.us

<Ok>  <Cancel>
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.dsutux.us
cgl@www:/$ sudo dpkg-reconfigure exim4-config
  * Stopping MTA for restart
  * Restarting MTA

cgl@www:/$
Remember, this work needs to be done on ALL satellite systems.
cgl@mail:/$ echo "Now on mail server to configure relay for all satellite systems."
Now on mail server to configure relay for all satellite systems.
cgl@mail:/$
cgl@mail:/$ sudo dpkg-reconfigure exim4-config
Not all screens will be captured. Only those relevant to the relay 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:

144.38.214.2; 144.38.214.3; 144.38.214.4; 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:

OR, we could use CIDR notation.

<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:

144.38.214.0/27

<Ok> <Cancel>
cgl@mail:/$ sudo dpkg-reconfigure exim4-config
  * Stopping MTA for restart [ OK ]
  * Restarting MTA [ OK ]
cgl@mail:/$
cgl@www:/$ echo "Back on satellite system now."
Back on satellite system now.
cgl@www:/$
cgl@www:/$ echo "Time for some testing."
Time for some testing.
cgl@www:/$
cgl@www:/$ sudo adduser bob
Adding user `bob' ...
Adding new group `bob' (1001) ...
Adding new user `bob' (1001) 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]
cgl@www:/$
bob@www:~$ echo "Bob on www, now sending message to bob on mail server."
Bob on www, now sending message to bob on mail server.
bob@www:~$ mailx bob@mail dsutux.us
Cc:
Subject: www -> mail
Hello Bob at mail
Bob at www
(typing Ctrl-D now)
bob@www:~$
bob@mail:~$ echo "Back on mail server now."
Back on mail server now.
bob@mail:~$ mailx
"/var/mail/bob": 1 message 1 new
>N  1 bob@www.dsutux.us Tue Oct  1 09:43 23/763 www -> mail
? □
Hello Bob at mail
Bob at www
(typing Ctrl-D now)
bob@mail:~$ echo "Yea. It appears to work so far."
Yea. It appears to work so far.
bob@mail:~$
bob@www:-$ echo "Bob on www, now sending message outside LAN."
Bob on www, now sending message outside LAN.
bob@www:-$ mailx larsen@dixie.edu
Cc:
Subject: dsutux.us to dixie.edu
Please don't send me a bunch of messages while you are testing YOUR systems.
bob@www:-$
From: bob@www.dsutux.us <bob@www.dsutux.us>
To: "Larsen, Curtis" <Larsen@dixie.edu>
Date: Tue, 1 Oct 2013 09:45:00 -0600
Subject: dsutux.us to dixie.edu
Please don't send me a bunch of messages while you are testing YOUR systems.
cgl@www:/$ echo "OK, time to configure for the reception of incoming messages to satellite systems."
OK, time to configure for the reception of incoming messages to satellite systems.
cgl@www:/$
cgl@www:/$ echo "On satellite system now. Remember, this must be done on ALL satellite systems."
On satellite system now. Remember, this must be done on ALL satellite systems.
cgl@www:/$ sudo dpkg-reconfigure exim4-config
cgl@www:/$ echo "Only relevant configuration screens will be captured."
Only relevant configuration screens will be captured.
cgl@www:/$
Mail Server configuration

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

IP-addresses to listen on for incoming SMTP connections:

127.0.0.1 ; ::1

<Ok> <Cancel>
cgl@www:/$ sudo dpkg-reconfigure exim4-config
* Stopping MTA for restart [ OK ]
* Restarting MTA [ OK ]
cgl@www:/$
cgl@mail:/$ echo "Back on mail server. Need to tell exim4 to keep messages destined for satellite sites."
cgl@mail:/$ sudo dpkg-reconfigure exim4-config
cgl@mail:/$ echo "Only relevant screens."
Only relevant screens.
cgl@mail:/$
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.dsutux.us) 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:

```plaintext
mail.dsutux.us; dsutux.us
```

<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.dsutux.us) 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.dsutux.us; dsutux.us; ns1.dsutux.us; ns2.dsutux.us; ETC...
```

<Ok> <Cancel>
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.dsutux.us) 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> <Cancel>
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.dsutux.us) 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:

dsutux.us; *.dsutux.us

<Ok> <Cancel>
cgl@mail:/$ sudo dpkg-reconfigure exim4-config
  * Stopping MTA for restart [ OK ]
  * Restarting MTA [ OK ]
cgl@mail:/$
cgl@ns1:/$ echo "Now on Master DNS for MX configuration"
Now on Master DNS for MX configuration
cgl@ns1:/$
cgl@ns1:/$ sudo emacs /etc/bind/db.dsutux.us
; NS (Name Server) records
@ IN NS ns1.dsutux.us.
@ IN NS ns2.dsutux.us.

; MX (Mail eXchange) records
; make mail addressed to user@dsutux.us be
directed to the mail.dsutux.us server.
; 'mail' below means 'mail.dsutux.us.' It is NOT a keyword, but the
; name of a computer.
@ IN MX 10 mail

; MX records are normally stored next to the
; A records for the same host. Note that if the
; next line refers to the same hostname, the hostname
; may be omitted.

; Remember that my MTA is named 'mail'. 'mail' is the name
; MX records are normally stored next to the A records for the same host. Note that if the next line refers to the same hostname, the hostname may be omitted.

; Remember that my MTA is named 'mail'. 'mail' is the name of the host, not a keyword.

; Do not provide MX records for CNAMEs. This will cause an error in the parsing of the file.

; A (Address) records

ns1 IN A 144.38.214.2
IN MX 10 mail

ns2 IN A 144.38.214.3
IN MX 10 mail

users IN A 144.38.214.4
<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Class</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>ns1</td>
<td>A</td>
<td>IN</td>
<td>144.38.214.2</td>
</tr>
<tr>
<td></td>
<td>MX</td>
<td>IN</td>
<td>10 mail</td>
</tr>
<tr>
<td>ns2</td>
<td>A</td>
<td>IN</td>
<td>144.38.214.3</td>
</tr>
<tr>
<td></td>
<td>MX</td>
<td>IN</td>
<td>10 mail</td>
</tr>
<tr>
<td>users</td>
<td>A</td>
<td>IN</td>
<td>144.38.214.4</td>
</tr>
<tr>
<td></td>
<td>MX</td>
<td>IN</td>
<td>10 mail</td>
</tr>
<tr>
<td>mail</td>
<td>A</td>
<td>IN</td>
<td>144.38.214.5</td>
</tr>
<tr>
<td></td>
<td>MX</td>
<td>IN</td>
<td>10 mail</td>
</tr>
<tr>
<td>www</td>
<td>A</td>
<td>IN</td>
<td>144.38.214.6</td>
</tr>
<tr>
<td></td>
<td>MX</td>
<td>IN</td>
<td>10 mail</td>
</tr>
<tr>
<td>tarzan</td>
<td>CNAME</td>
<td>IN</td>
<td>www</td>
</tr>
<tr>
<td>jane</td>
<td>CNAME</td>
<td>IN</td>
<td>www</td>
</tr>
<tr>
<td>korak</td>
<td>CNAME</td>
<td>IN</td>
<td>www</td>
</tr>
<tr>
<td>borta</td>
<td>CNAME</td>
<td>IN</td>
<td>www</td>
</tr>
<tr>
<td>resources</td>
<td>A</td>
<td>IN</td>
<td>144.38.214.7</td>
</tr>
<tr>
<td></td>
<td>MX</td>
<td>IN</td>
<td>10 mail</td>
</tr>
<tr>
<td>disk</td>
<td>A</td>
<td>IN</td>
<td>144.38.214.8</td>
</tr>
<tr>
<td></td>
<td>MX</td>
<td>IN</td>
<td>10 mail</td>
</tr>
</tbody>
</table>
File Edit Options Buffers Tools Help

; Retry - How often the secondary name servers should retry a refresh, if the refresh is unsuccessful.
; Expire - How long the secondary name servers should keep this information before it is discarded.
; Minimum/TTL - How long negative hits should be stored. This is for other servers that ask us about a non-existent RR. They should cache the negative response for this long.

@ IN SOA ns1.dsutux.us. root.ns1.dsutux.us. (2013100101 ; Serial
                                      3600 ; Refresh every 1 hour
                                      300 ; Retry every 5 minutes
                                      241920 ; Expire in 4 weeks
                                      60 ) ; Negative cache TTL is 1 minute

; NS (Name Server) records
;
@ IN NS ns1.dsutux.us.
@ IN NS ns2.dsutux.us.

; MX (Mail eXchange) records

Wrote /etc/bind/db.dsutux.us
cgl@ns1:/$ sudo service bind9 restart
  * Stopping domain name service... bind9
  waiting for pid 642 to die

  * Starting domain name service... bind9

  [ OK ]
  [ OK ]

cgl@ns1:/$
cgl@ns1:/$ less /var/log/syslog
Oct  1  09:58:42 ns1 named[2146]: command channel listening on 127.0.0.1#953
Oct  1  09:58:42 ns1 named[2146]: command channel listening on ::1#953
Oct  1  09:58:42 ns1 named[2146]: zone 0.in-addr.arpa/IN: loaded serial 1
Oct  1  09:58:42 ns1 named[2146]: zone 127.in-addr.arpa/IN: loaded serial 1
Oct  1  09:58:42 ns1 named[2146]: zone 0-31.214.38.144.in-addr.arpa/IN: loaded serial 2013092501
Oct  1  09:58:42 ns1 named[2146]: zone 255.in-addr.arpa/IN: loaded serial 1
Oct  1  09:58:42 ns1 named[2146]: zone localhost/IN: loaded serial 2
Oct  1  09:58:42 ns1 named[2146]: zone dsutux.us/IN: loaded serial 2013100101
Oct  1  09:58:42 ns1 named[2146]: managed-keys-zone ./IN: loaded serial 37
Oct  1  09:58:42 ns1 named[2146]: running
Oct  1  09:58:42 ns1 named[2146]: zone 0-31.214.38.144.in-addr.arpa/IN: sending notifies (serial 2013092501)
Oct  1  09:58:42 ns1 named[2146]: zone dsutux.us/IN: sending notifies (serial 2013100101)
Oct  1  09:58:42 ns1 named[2146]: client 144.38.214.3#19875: query: dsutux.us IN SOA -E (144.38.214.2)
Oct  1  09:58:42 ns1 named[2146]: client 144.38.214.3#47014: query: dsutux.us IN IXFR -T (144.38.214.2)
Oct  1  09:58:42 ns1 named[2146]: client 144.38.214.3#47014: transfer of 'dsutux.us/IN': AXFR-style IXFR started
Oct  1  09:58:42 ns1 named[2146]: client 144.38.214.3#47014: transfer of 'dsutux.us/IN': AXFR-style IXFR ended

(END)
Oct 1 09:58:42 ns1 named[2146]: command channel listening on 127.0.0.1#953
Oct 1 09:58:42 ns1 named[2146]: command channel listening on ::1#953
Oct 1 09:58:42 ns1 named[2146]: zone 0.in-addr.arpa/IN: loaded serial 1
Oct 1 09:58:42 ns1 named[2146]: zone 127.in-addr.arpa/IN: loaded serial 1
Oct 1 09:58:42 ns1 named[2146]: zone 0-31.214.38.144.in-addr.arpa/IN: loaded serial 2013092501
Oct 1 09:58:42 ns1 named[2146]: zone 255.in-addr.arpa/IN: loaded serial 1
Oct 1 09:58:42 ns1 named[2146]: zone localhost/IN: loaded serial 2
Oct 1 09:58:42 ns1 named[2146]: zone dsutux.us/IN: loaded serial 2013100101
Oct 1 09:58:42 ns1 named[2146]: managed-keys-zone./IN: loaded serial 37
Oct 1 09:58:42 ns1 named[2146]: running
Oct 1 09:58:42 ns1 named[2146]: zone 0-31.214.38.144.in-addr.arpa/IN: sending notifies (serial 2013092501)
Oct 1 09:58:42 ns1 named[2146]: zone dsutux.us/IN: sending notifies (serial 2013100101)
Oct 1 09:58:42 ns1 named[2146]: client 144.38.214.3#19875: query: dsutux.us IN SOA -E (144.38.214.2)
Oct 1 09:58:42 ns1 named[2146]: client 144.38.214.3#47014: query: dsutux.us IN IXFR -T (144.38.214.2)
Oct 1 09:58:42 ns1 named[2146]: client 144.38.214.3#47014: transfer of 'dsutux.us/IN': AXFR-style IXFR started
Oct 1 09:58:42 ns1 named[2146]: client 144.38.214.3#47014: transfer of 'dsutux.us/IN': AXFR-style IXFR ended
(END)
cgl@ns1:\$ dig @144.38.214.2 www.dsutux.us MX | grep www

; >>>> DiG 9.8.1-P1 <<<> @144.38.214.2 www.dsutux.us MX
;www.dsutux.us. IN MX
www.dsutux.us. 3600 IN MX 10 mail.dsutux.us.
cgl@ns1:\$ dig @144.38.214.3 www.dsutux.us MX | grep www

; >>>> DiG 9.8.1-P1 <<<> @144.38.214.3 www.dsutux.us MX
;www.dsutux.us. IN MX
www.dsutux.us. 3600 IN MX 10 mail.dsutux.us.
cgl@ns1:\$ dig @144.38.192.2 www.dsutux.us MX | grep www

; >>>> DiG 9.8.1-P1 <<<> @144.38.192.2 www.dsutux.us MX
;www.dsutux.us. IN MX
www.dsutux.us. 3600 IN MX 10 mail.dsutux.us.
cgl@ns1:\$
cgl@ns1:$ echo "Should test ALL MX records"
Should test ALL MX records
cgl@ns1:$
cgl@www:/$ echo "Time for testing."
Time for testing.
cgl@www:/$ 
Test to Bob. Should send to every satellite's name, and verify that they all make it. Also should test to the domain name.
bob@www:$ echo "Do not expect message on satellite system."
Do not expect message on satellite system.
bob@www:$ mailx
Cannot open mailbox /var/mail/bob: Permission denied
No mail for bob
bob@www:$ echo "Good."
Good.
bob@www:$ 
bob@mail:~$ echo "Do expect the message on mail server."
Do expect the message on mail server.
bob@mail:~$
bob@mail:~$ mailx
"/var/mail/bob": 1 message 1 new
N  1 Curtis Larsen        Tue Oct 1 10:02 43/1968 dixie.edu -> www.dsutux.u
Test to Bob. Should send to every satellite's name, and verify that they all make it. Also should test to the domain name.
bob@mail:~$ echo "OK, this looks good."
OK, this looks good.
bob@mail:~$
I can not stress enough the importance of thorough testing! If you have a typo on one MX record, that host will not work, but all others might work. BE DETAILED!

I can not stress enough the importance of thorough testing! If you have a typo on one MX record, that host will not work, but all others might work. BE DETAILED!

bob@mail:~$ echo 'I can not stress enough the importance of thorough testing! If you have a typo on one MX record, that host will not work, but all others might work. BE DETAILED!'

bob@mail:~$