**Macchiato Installation Process**

Most steps from: https://www.linode.com/docs/email/postfix/email-with-postfix-dovecot-and-mysql

1. Install Debian (May already be done)
   1. See project initiation sheet for root user/password
   2. Hostname: macchiato
2. Remove GUI if it exists?
   1. sudo apt-get remove gdm
   2. sudo apt-get autoremove
3. Remove postfix/dovecot if preinstalled
   1. sudo apt-get remove postfix
   2. sudo apt-get remove dovecot
4. Edit /etc/apt/sources.list
   1. Add the following repos
      1. deb http://ftp.us.debian.org/debian stable main contrib non-free
      2. deb http://ftp.debian.org/debian/ wheezy-updates main contrib non-free
      3. deb http://security.debian.org/ wheezy/updates main contrib non-free
         1. Already there but needs more sources
      4. Generated from: <http://debgen.simplylinux.ch/>
5. apt-get update / apt-get upgrade
   1. VERY IMPORTANT: Fixes GHOST (glibc) issue as of 1/28/15

**| SNAPSHOT: Vanilla Server + Updates |**

1. Security
   1. Install Fail2Ban
      1. apt-get install fail2ban
   2. Disable Password Authentication
      1. Generate a public and private key with puttygen
         1. SSH-2 RSA, 1024bit
         2. Key passphrase: root password
         3. DON’T CLOSE PUTTYGEN
      2. Go to server
         1. mkdir ~/.ssh
         2. chmod 700 ~/.ssh
         3. nano ~/.ssh/authorized\_keys2
         4. Copy in data from large box on puttygen (all one line)
         5. chmod 600 ~/.ssh/authorized\_keys2
      3. Load generated private key into kitty, use saved session
      4. Disable username/password login
         1. nano /etc/ssh/sshd\_config
         2. Find PasswordAuthentication, (uncomment) set to “no”
         3. Find UsePAM, set to “no”
         4. Save config, /etc/init.d/ssh restart

**| SNAPSHOT: More Updates + Security |**

1. Install postfix, dovecot, mysql
   1. Internet Site
   2. FQDN: local.jmazouri.com
   3. Mysql Password: root password

**| SNAPSHOT: Installed Postfix, Dovecot, Mysql |**

1. Configure Mysql Database
   1. Execute Mysql Email DB Script document
   2. Test to ensure script executed properly
      1. SELECT \* FROM mailserver.virtual\_domains;
      2. SELECT \* FROM mailserver.virtual\_users;
      3. SELECT \* FROM mailserver.virtual\_aliases;

**| SNAPSHOT: Configured MySQL |**

1. Configure Postfix
   1. Make a copy of orignal config
      1. cp /etc/postfix/main.cf /etc/postfix/main.cf.orig
   2. Edit config
      1. nano /etc/postfix/main.cf
      2. Comment out all TLS parameters
      3. Use Dovecot paths

smtpd\_tls\_cert\_file=/etc/dovecot/dovecot.pem  
smtpd\_tls\_key\_file=/etc/dovecot/private/dovecot.pem  
smtpd\_use\_tls=yes  
smtpd\_tls\_auth\_only = yes  
#Enabling SMTP for authenticated users, and handing off authentication to Dovecot  
 smtpd\_sasl\_type = dovecot  
 smtpd\_sasl\_path = private/auth  
 smtpd\_sasl\_auth\_enable = yes  
  
 smtpd\_recipient\_restrictions =  
 permit\_sasl\_authenticated,  
 permit\_mynetworks,  
 reject\_unauth\_destination

* + 1. ^ That should enable remote email and stuff
    2. Comment out mydestination, replace with the following for vmail
       1. mydestination = localhost
    3. Hand off delivery to Dovecot
       1. #Handing off local delivery to Dovecot's LMTP, and telling it where to store mail  
           virtual\_transport = lmtp:unix:private/dovecot-lmtp
    4. Read virtual configuration from mysql
       1. #Virtual domains, users, and aliases  
           virtual\_mailbox\_domains = mysql:/etc/postfix/mysql-virtual-mailbox-domains.cf  
           virtual\_mailbox\_maps = mysql:/etc/postfix/mysql-virtual-mailbox-maps.cf  
           virtual\_alias\_maps = mysql:/etc/postfix/mysql-virtual-alias-maps.cf
  1. Save

1. Create the three mysql config files
   1. /etc/postfix/mysql-virtual-mailbox-domains.cf
      1. user = mailuser  
         password = throughrainsleetsnoworhail  
         hosts = 127.0.0.1  
         dbname = mailserver  
         query = SELECT 1 FROM virtual\_domains WHERE name='%s'
      2. Save, restart postfix service
      3. Test to see if config works
         1. postmap -q local.jmazouri.com mysql:/etc/postfix/mysql-virtual-mailbox-domains.cf
            1. Should be "1"
   2. /etc/postfix/mysql-virtual-mailbox-maps.cf
      1. user = mailuser  
          password = throughrainsleetsnoworhail  
          hosts = 127.0.0.1  
          dbname = mailserver  
          query = SELECT 1 FROM virtual\_users WHERE email='%s'
      2. Save, restart postfix service
      3. Test to see if config works
         1. postmap -q [jmazouri@local.jmazouri.com](mailto:jmazouri@local.jmazouri.com) mysql:/etc/postfix/mysql-virtual-mailbox-maps.cf
            1. Should be "1"
   3. /etc/postfix/mysql-virtual-alias-maps.cf
      1. user = mailuser  
         password = throughrainsleetsnoworhail  
         hosts = 127.0.0.1  
         dbname = mailserver  
         query = SELECT destination FROM virtual\_aliases WHERE source='%s'
      2. Save, restart postfix service
      3. Test to see if config works
         1. postmap -q [garbage@local.jmazouri.com](mailto:garbage@local.jmazouri.com) mysql:/etc/postfix/mysql-virtual-alias-maps.cf
            1. Should be "[scottrax@local.jmazouri.com](mailto:scottrax@local.jmazouri.com)"
2. Edit the Postfix Master Config
   1. Make a backup
      1. cp /etc/postfix/master.cf /etc/postfix/master.cf.orig
   2. nano /etc/postfix/master.cf
      1. Uncomment line "submission"
      2. Uncomment line "smtps"
      3. Save, restart postfix service

**| SNAPSHOT: Configured Postfix |**

1. Dovecot Configuration
   1. Make a backup of ALL config files
      1. cp /etc/dovecot/dovecot.conf /etc/dovecot/dovecot.conf.orig  
         cp /etc/dovecot/conf.d/10-mail.conf /etc/dovecot/conf.d/10-mail.conf.orig  
         cp /etc/dovecot/conf.d/10-auth.conf /etc/dovecot/conf.d/10-auth.conf.orig  
         cp /etc/dovecot/dovecot-sql.conf.ext /etc/dovecot/dovecot-sql.conf.ext.orig  
         cp /etc/dovecot/conf.d/10-master.conf /etc/dovecot/conf.d/10-master.conf.orig  
         cp /etc/dovecot/conf.d/10-ssl.conf /etc/dovecot/conf.d/10-ssl.conf.orig
2. nano /etc/dovecot/dovecot.conf
   1. Add protocols under "!include\_try /usr/share/dovecot/protocols.d/\*.protocol"
      1. protocols = imap pop3 lmtp
3. nano /etc/dovecot/conf.d/10-mail.conf
   1. Find mail\_location, set it to
      1. mail\_location = maildir:/var/mail/vhosts/%d/%n
   2. find mail\_privileged\_group, set it to
      1. mail\_privileged\_group = mail
   3. Save
   4. Verify permissions
      1. ls -ld /var/mail
      2. Should be similar to
         1. drwxrwsr-x 2 root mail 4096 Mar 6 15:08 /var/mail
4. Create directories for domains
   1. mkdir -p /var/mail/vhosts/local.jmazouri.com
5. Create vmail user and set permissions for /var/mail
   1. groupadd -g 5000 vmail
   2. useradd -g vmail -u 5000 vmail -d /var/mail
   3. chown -R vmail:vmail /var/mail
6. nano /etc/dovecot/conf.d/10-auth.conf
   1. Disable plaintext auth, uncomment line
   2. Find auth\_mechanisms, change to
      1. auth\_mechanisms = plain login
   3. Find system user login line, comment it
      1. #!include auth-system.conf.ext
   4. Enable MySQL Auth
      1. Uncomment the following line
         1. !include auth-sql.conf.ext
   5. Save, close
7. nano /etc/dovecot/conf.d/auth-sql.conf.ext
   1. Replace with
   2. passdb {  
       driver = sql  
       args = /etc/dovecot/dovecot-sql.conf.ext  
      }  
      userdb {  
       driver = static  
       args = uid=vmail gid=vmail home=/var/mail/vhosts/%d/%n  
      }
   3. Save, close
8. nano /etc/dovecot/dovecot-sql.conf.ext
   1. Find driver line, uncomment and set to:
      1. driver = mysql
   2. Uncomment connect line, set to
      1. connect = "host=127.0.0.1 dbname=mailserver user=mailuser password=through rain sleet snow and hail"
   3. Uncomment default\_pass\_scheme, set to
      1. default\_pass\_scheme = SHA512-CRYPT
   4. Add password\_query after comment header, set to
      1. password\_query = SELECT email as user, password FROM virtual\_users WHERE email='%u';
   5. Save, close
9. Fix permissions
   1. chown -R vmail:dovecot /etc/dovecot
   2. chmod -R o-rwx /etc/dovecot
10. nano /etc/dovecot/conf.d/10-master.conf
    1. Disable unencrypted imap and pop3 by setting the following
       1. service imap-login {  
           inet\_listener imap {  
           port = 0  
           }  
           ...  
           }  
            
           service pop3-login {  
           inet\_listener pop3 {  
           port = 0  
           }  
           ...  
           }
    2. Find service lmtp section and edit
       1. unix\_listener /var/spool/postfix/private/dovecot-lmtp {  
           mode = 0600  
           user = postfix  
           group = postfix  
           }
    3. Find service auth section and edit
       1. service auth {  
           # auth\_socket\_path points to this userdb socket by default. It's typically  
           # used by dovecot-lda, doveadm, possibly imap process, etc. Its default  
           # permissions make it readable only by root, but you may need to relax these  
           # permissions. Users that have access to this socket are able to get a list  
           # of all usernames and get results of everyone's userdb lookups.  
           unix\_listener /var/spool/postfix/private/auth {  
           mode = 0666  
           user = postfix  
           group = postfix  
           }  
            
           unix\_listener auth-userdb {  
           mode = 0600  
           user = vmail  
           #group =  
           }  
            
           # Postfix smtp-auth  
           #unix\_listener /var/spool/postfix/private/auth {  
           # mode = 0666  
           #}  
            
           # Auth process is run as this user.  
           user = dovecot  
          }
    4. Find service auth-worker section, uncomment user, set to vmail
       1. service auth-worker {  
           # Auth worker process is run as root by default, so that it can access  
           # /etc/shadow. If this isn't necessary, the user should be changed to  
           # $default\_internal\_user.  
           user = vmail  
          }
    5. Save, close
11. Verify certs exist
    1. ls /etc/dovecot/dovecot.pem  
       ls /etc/dovecot/private/dovecot.pem
12. nano /etc/dovecot/conf.d/10-ssl.conf
    1. Set ssl = required
    2. Make sure cert paths are right
    3. Save, close
13. Restart Dovecot service

**| SNAPSHOT: Configured Dovecot |**

1. Test with email client (I like thunderbird)
   1. Username is full email
   2. Use Port 993 for IMAP, port 995 for POP3, port 25 for SMTP w/ SSL + STARTTLS
   3. In this case, domain was macchiato.local.jmazouri.com
   4. Regular (plaintext) password, no worries as it gets encrypted anyway

**WORKS GREAT**

**(if it doesn't work great, try these things:** [**https://www.linode.com/docs/email/postfix/troubleshooting-problems-with-postfix-dovecot-and-mysql**](https://www.linode.com/docs/email/postfix/troubleshooting-problems-with-postfix-dovecot-and-mysql)**)**