Introduction

This tutorial describes how to setup a local mail server using **Postfix**, **Dovecot** And **Squirrelmail** in CentOS 7.

Server information :

- **OS:** CentOS 7 64bit minimal server
- **IP Address:** 192.168.70.xx/24
- **Hostname:** mail.serverxxx.sdnog.lab
- **ftp server :** 192.168.70.1

Let us get started now.

Prerequisites:

1. Remove default MTA sendmail first if it's already installed. Sendmail will not be installed by default in minimal installation, so you can sdnogip this step.

```
yum remove sendmail
```

2. make sure you have Mail server MX records in the forward and reverse zone files of your lab DNS.

3. Add hostname entries in **/etc/hosts** file as shown below:

```
vi /etc/hosts
```

Add your FQDN:

```
127.0.0.1 localhost localhost.localdomain localhost4
localhost4.localdomain4

::1 localhost localhost.localdomain localhost6
localhost6.localdomain6
```

```
192.168.70.xx mail.serverxxx.sdnog.lab mail
```

4. I **disabled SELinux** to reduce the complexity in postfix configuration.

To do that, edit:

```
vi /etc/sysconfig/selinux
```

Change **SELINUX=enforcing** to **SELINUX=disabled**.

```
SELINUX=disabled
```

5. Install EPEL Repository:

Squirrelmail webmail client is not available in CentOS official repositories. So let us enable EPEL repository.

```
yum install epel-release
```

6. Allow the Apache default port **80** through your firewall/router:

```
firewall-cmd --permanent --add-port=80/tcp
```

Restart firewall using command:

```
firewall-cmd --reload
```

Restart your server to take effect all changes.

Install Postfix

Postfix is a free open source mail transfer agent (MTA). It is fast, secure and easy to administer. It's an alternative to Sendmail, which is the default MTA for RHEL.

Now, install Postifix using command:

```
yum install postfix
```

Configuring Postfix

Edit **/etc/postfix/main.cf** file:

```
vi /etc/postfix/main.cf
```

Find and edit the following lines:

```
## Line no 77 - Uncomment and set your mail server FQDN ##
myhostname = mail.serverxxx.sdnog.lab
## Line 85 - Uncomment and Set domain name ##
mydomain = sdnog.lab
## Line 101 - Uncomment ##
myorigin = $mydomain
## Line 115 - Uncomment and Set ipv4 ##
inet_interfaces = all
## Line 121 - Change to all ##
inet_protocols = all
## Line 166 - Comment ##
#mydestination = $myhostname, localhost.$mydomain, localhost,
## Line 167 - Uncomment ##
mydestination = $myhostname, localhost.$mydomain, localhost,
$mydomain
## Line 266 - Uncomment and add IP range ##
mynetworks = 192.168.70.0/24, 127.0.0.0/8
## Line 421 - Uncomment ##
home_mailbox = Maildir/
```

Save and exit the file.

Start/restart Postfix service now:

```
systemctl enable postfix
systemctl restart postfix
```

Testing Postfix mail server

First, create a test user called **"sdnog"**.

```
useradd sdnog
```

Set the password for the user sdnog as sdnog@123:

```
passwd sdnog
```

Access the server via Telnet and enter the commands manually shown in red colored text.

telnet localhost smtp

Sample output:

```
Trying ::1...
Connected to localhost.
Escape character is '^]'.
220 serverxxx.sdnog.labESMTP Postfix
ehlo localhost     ## Type this line ##
250- mail.serverxxx.sdnog.lab
250-PIPELINING
250-SIZE 10240000
250-VRFY
250-ETRN
250-ENHANCEDSTATUSCODES
250-8BITMIME
250 DSN
mail from:<sdnog>     ## Type this - mail sender address ##
250 2.1.0 Ok
rcpt to:<sdnog>     ## Type this - mail receiver address ##
250 2.1.5 Ok
data     ## Type this to input body of Email ##
354 End data with <CR><LF>.<CR><LF>
Welcome to serverxxx mail server     ## Body of the Email ##

.     ## Type dot (.) after composing your email ##

250 2.0.0 Ok: queued as E2B522032F93

quit     ## Type quit to exit from mail ##

221 2.0.0 Bye


Connection closed by foreign host.
```

Now navigate to the user **"sdnog"** mail directory and check whether the new mail has been received.

```
ls /home/sdnog/Maildir/new/
```

Sample output:

```
1437722056.Vfd01I203e3e7M938078. mail.serverxxx.sdnog.lab
```

Success! A new mail is received to the user "sdnog".

To read the mail, enter the following command:

```
cat /home/sdnog/Maildir/new/1437722056.Vfd01I203e3e7M938078.
mail.serverxxx.sdnog.lab
```

Sample output:

```
Return-Path: <sdnog@sdnog.lab>
X-Original-To: sdnog
Delivered-To: sdnog@sdnog.lab
Received: from localhost (localhost [IPv6:::1])
 by serverxxx.sdnog.lab(Postfix) with ESMTP id E2B522032F93
 for <sdnog>; Fri, 24 Jul 2015 12:42:36 +0530 (IST)
Message-Id: <20xx724071330.E2B522032F93@serverxxx.sdnog.lab>
Date: Fri, 24 Jul 2015 12:42:36 +0530 (IST)
From: sdnog@sdnog.lab

Welcome to serverxxx mail server
```

Done. Postfix is working!!

Install Dovecot

Dovecot is an open source IMAP and POP3 mail server for Unix/Linux systems.

To install it, run:

```
yum install dovecot
```

Configuring Dovecot

Edit file **/etc/dovecot/dovecot.conf** file,

```
vi /etc/dovecot/dovecot.conf
```

Uncomment the following line:

```
## Line 24 - umcomment ##

protocols = imap pop3 lmtp
```

Edit file **/etc/dovecot/conf.d/10-mail.conf** file

```
vi /etc/dovecot/conf.d/10-mail.conf
```

Make the changes as shown below:

```
## Line 24 - uncomment ##

mail_location = maildir:~/Maildir
```

Edit **/etc/dovecot/conf.d/10-auth.conf**

```
vi /etc/dovecot/conf.d/10-auth.conf
```

And make the changes as shown below:

```
## line 10 - uncomment##
disable_plaintext_auth = yes

## Line 100 - Add the word: "login" ##
auth_mechanisms = plain login
```

Edit file **/etc/dovecot/conf.d/10-master.conf**,

```
vi /etc/dovecot/conf.d/10-master.conf
```

Make changes as shown below:

```
## Line 91, 92 - Uncomment and add "postfix"
#mode = 0600
   user = postfix
   group = postfix
[...]
```

Start Dovecot service:

```
systemctl enable dovecot


systemctl start dovecot
```

Testing Dovecot

It's time to test Dovecot configuration. Enter the following command in Terminal:

```
telnet localhost pop3
```

Enter the commands manually which are marked as bold:

```
Trying ::1...
Connected to localhost.
Escape character is '^]'.
+OK Dovecot ready.
user sdnog      ## Enter the mail user name ##
+OK
pass centos      ## Enter the password ##
+OK Logged in.
retr 1      ## Type this command to view mail ##
+OK 415 octets
Return-Path: <sdnog@sdnog.lab>
X-Original-To: sdnog
Delivered-To: sdnog@sdnog.lab
Received: from localhost (localhost [IPv6:::1])
 by serverxxx.sdnog.lab(Postfix) with ESMTP id E2B522032F93
```

```
 for <sdnog>; Fri, 24 Jul 2015 12:42:36 +0530 (IST)
Message-Id: <20xx724071330.E2B522032F93@serverxxx.sdnog.lab>
Date: Fri, 24 Jul 2015 12:42:36 +0530 (IST)
From: sdnog@sdnog.lab

Welcome to serverxxx mail server
.
quit     ## Type 'quit' to exit ##
+OK Logging out.
Connection closed by foreign host.
```

As you see in the above result, Dovecot is working!

Install Squirrelmail

Sending and receiving mails form command line is not easy all the time. It is better if we do it from a graphical console. No worries. We can easily send/receive mails using webmail client called **Squirrelmail** via a web browser.

Make sure that you've installed and enabled **EPEL** repository.

Then, Install Squirrelmail using the following command:

```
yum install squirrelmail
```

Configuring Squirrelmail

Navigate to **/usr/share/squirrelmail/config/** directory:

```
cd /usr/share/squirrelmail/config/
```

..and run the following command to configure Squirrelmail.

```
./conf.pl
```

The following wizard will open. Enter choice **"1"** to set your organization details:

```
SquirrelMail Configuration: Read: config.php (1.4.0)
---------------------------------------------------------
Main Menu --
1. Organization Preferences
2. Server Settings
3. Folder Defaults
4. General Options
5. Themes
6. Address Books
7. Message of the Day (MOTD)
8. Plugins
9. Database
10. Languages

D. Set pre-defined settings for specific IMAP servers

C Turn color off
S Save data
Q Quit

Command >> 1
```

The following wizard will open. Enter **"1"** again to modify your organization details:

```
SquirrelMail Configuration: Read: config.php (1.4.0)
---------------------------------------------------------
Organization Preferences
1. Organization Name : SquirrelMail
2. Organization Logo : ../images/sm_logo.png
3. Org. Logo Width/Height : (308/111)
4. Organization Title : SquirrelMail $version
```

```
5. Signout Page :
6. Top Frame : _top
7. Provider link : http://squirrelmail.org/
8. Provider name : SquirrelMail

R Return to Main Menu
C Turn color off
S Save data
Q Quit

Command >> 1
```

Set your Organization name and press Enter:

```
We have tried to make the name SquirrelMail as transparent as
possible. If you set up an organization name, most places where
SquirrelMail would take credit will be credited to your
organization.

If your Organization Name includes a '$', please precede it with
a \.
Other '$' will be considered the beginning of a variable that
must be defined before the $org_name is printed.
$version, for example, is included by default, and will print the
string representing the current SquirrelMail version.

[SquirrelMail]: Serverxxx
```

Similarly, set all the details such as organization title, logo, provider name in the above wizard. Once you done, press **"S"** to save the changes, and press **"R"** to return back to your main menu:

```
SquirrelMail Configuration : Read: config.php (1.4.0)
---------------------------------------------------------
Organization Preferences
1.  Organization Name      : Serverxxx
2.  Organization Logo      : ../images/sm_logo.png
```

```
3.  Org. Logo Width/Height : (308/111)
4.  Organization Title     : SquirrelMail $version
5.  Signout Page           :
6.  Top Frame              : _top
7.  Provider link          : http://squirrelmail.org/
8.  Provider name          : Serverxxx Mail

R   Return to Main Menu
C   Turn color off
S   Save data
Q   Quit

Command >> S
```

Now, enter **"2"** to setup mail **Server settings** such as domain name and mail agent etc.:

```
SquirrelMail Configuration : Read: config.php (1.4.0)
---------------------------------------------------------
Main Menu --
1.  Organization Preferences
2.  Server Settings
3.  Folder Defaults
4.  General Options
5.  Themes
6.  Address Books
7.  Message of the Day (MOTD)
8.  Plugins
9.  Database
10. Languages

D.  Set pre-defined settings for specific IMAP servers

C   Turn color off
S   Save data
Q   Quit
```

```
Command >> 2
```

Enter **"1"**, Enter your mail domain (ex. **serverxxx. local**) and press Enter key.

```
SquirrelMail Configuration : Read: config.php (1.4.0)
---------------------------------------------------------
Server Settings

General
-------
1. Domain : localhost
2. Invert Time : false
3. Sendmail or SMTP : Sendmail

A. Update IMAP Settings : localhost:143 (uw)
B. Change Sendmail Config : /usr/sbin/sendmail

R Return to Main Menu
C Turn color off
S Save data
Q Quit

Command >> 1

The domain name is the suffix at the end of all email addresses.
If
for example, your email address is jdoe@example.com, then your
domain
would be example.com.

[localhost]: sdnog.lab
```

Enter **"3"** and change from sendmail to Postfix MTA (i.e. SMTP):

```
SquirrelMail Configuration : Read: config.php (1.4.0)
---------------------------------------------------------
Server Settings

General
-------
1.  Domain                  : sdnog.lab
2.  Invert Time             : false
3.  Sendmail or SMTP        : Sendmail
```

```
A.  Update IMAP Settings   : localhost:143 (uw)
B.  Change Sendmail Config : /usr/sbin/sendmail

R   Return to Main Menu
C   Turn color off
S   Save data
Q   Quit

Command >> 3
```

Enter **"2"** to switch from sendmail MTA to postfix.

```
You now need to choose the method that you will use for sending
messages in SquirrelMail.  You can either connect to an SMTP
server
or use sendmail directly.

  1.  Sendmail
  2.  SMTP

Your choice [1/2] [1]: 2
```

Now enter **"S"** followed by **"Q"** to save and exit Squirrelmail configuration.

Create a squirrelmail vhost in apache config file:

```
vi /etc/httpd/conf/httpd.conf
```

Add the following lines at the end:

```
Alias /webmail /usr/share/squirrelmail
<Directory /usr/share/squirrelmail>
 Options Indexes FollowSymLinks
 RewriteEngine On
 AllowOverride All

 DirectoryIndex index.php

 Order allow,deny

 Allow from all
```

```
</Directory>
```

Restart the Apache service:

```
systemctl restart httpd
```

Create mail users

Create some users for testing. In my case I create two users namely **"ahmed"** and **"hiba"**.

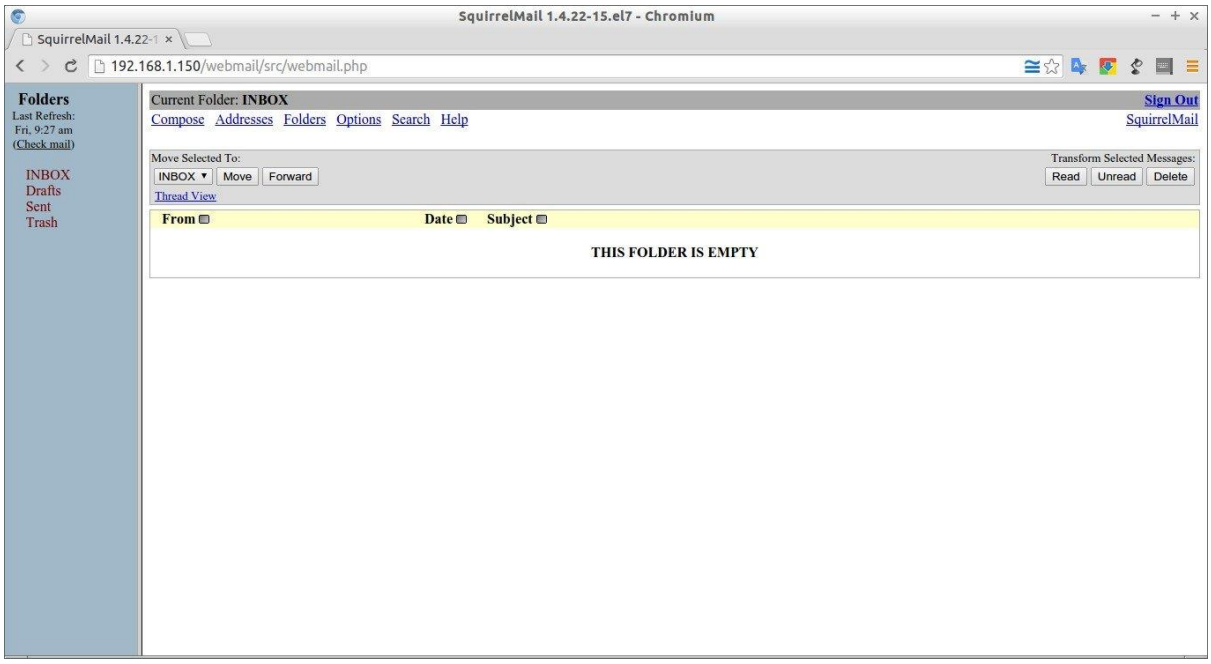
```
useradd ahmed
passwd ahmed
useradd hiba
passwd hiba
```

Access Webmail

Now navigate to **http://ip-address/webmail** or **http://domain-name/webmail** from your browser.

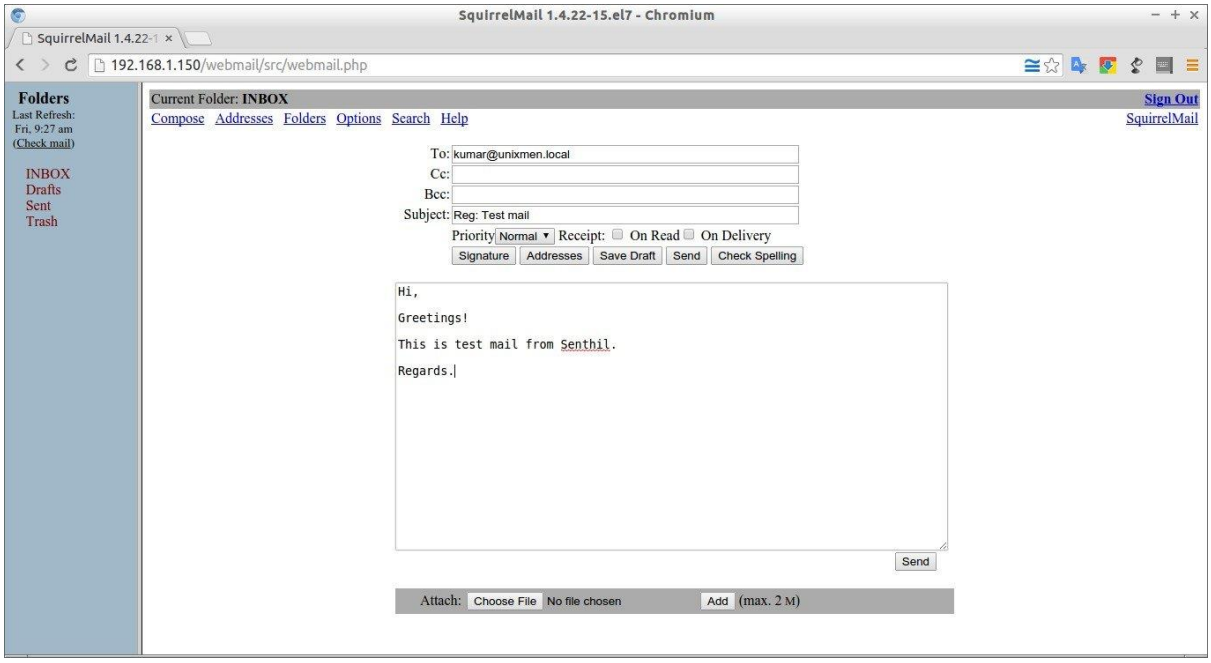
The following screen should appear. Enter the username and password of the user which we have created earlier.

Now, you'll be able to access the user mail box.

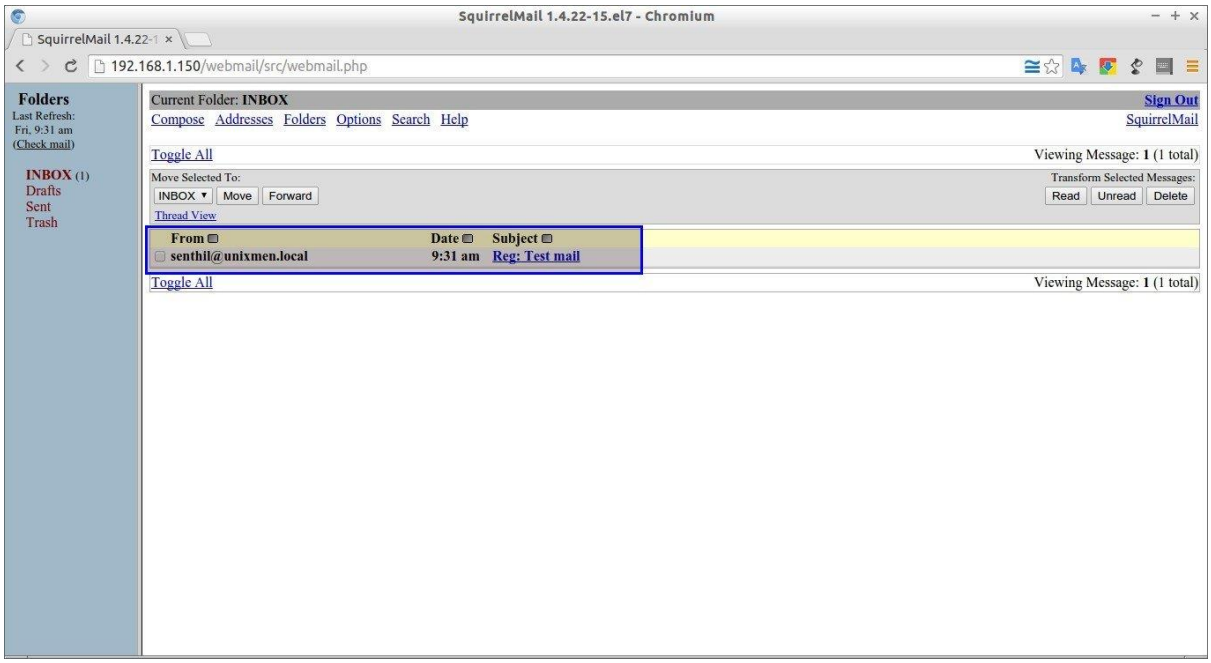


Compose mails

Let us compose a test mail from user **"ahmed"** to user**"hiba"**. Click on the Compose link on the top. Enter the recipient mail id (ex. hiba@sdnog.lab), subject and body of the mail and click Send.

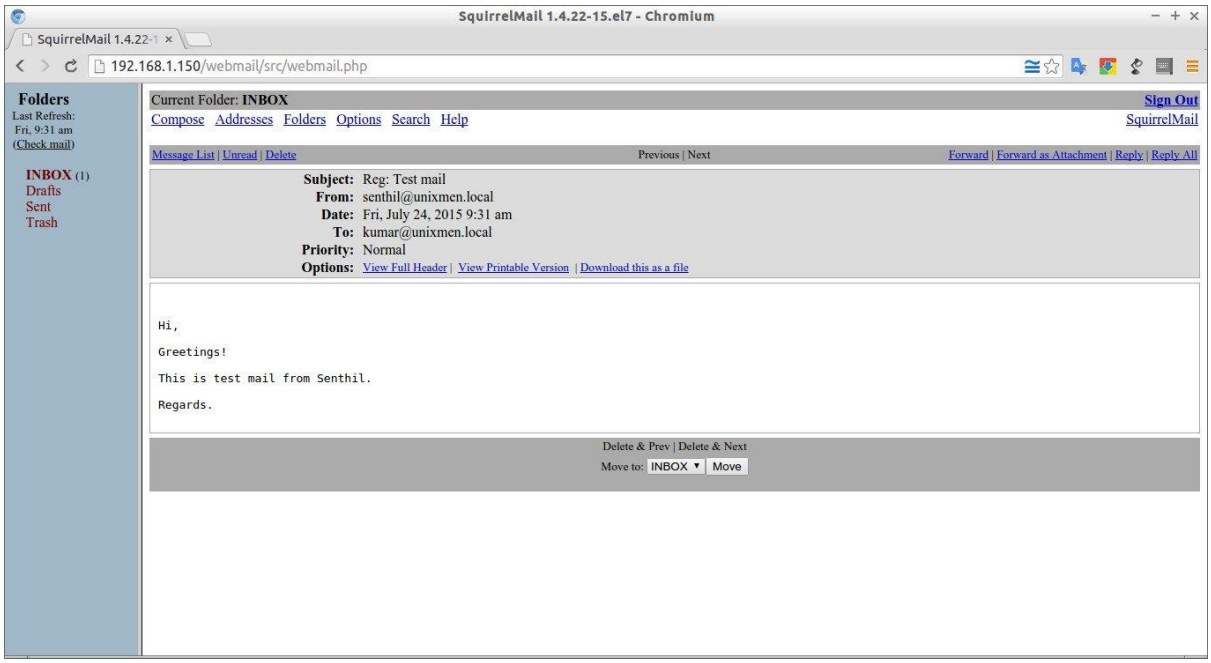


Now, log out from user **"ahmed"**and log in to user **"hiba"** mail and check for any new mail.



Hurrah! We have got a new mail from **ahmed@sdnog.lab** mail id.

To read the mail, click on it. You'll now be able to read, reply, delete or compose a new mail.



That’s all for now. We’ve successfully configured a local mail server that will serve in/out mails within a local area network.