**Configure a system to forward all email to a central mail server.**

**Prerequisites**

In order to test this configuration, you will need to [configure a central mail server](https://www.certdepot.net/rhel7-configure-central-mail-server/).

**Installation Procedure**

The configuration of a master **DNS** server can be avoided by using the **[mail.example.com]** syntax (see below) or the IP address of the mail gateway.

Install the **postfix** package if it is not already there:

# **yum install -y postfix**

Activate the **postfix** service at boot (normally already enabled):

# **systemctl enable postfix**

Start the **postfix** service (normally already started):

# **systemctl restart postfix**

**Main Configurations**

There are two cases to distinguish:

* the system doesn’t receive any mail from outside but forwards all mails sent by local users (even mails from local users to local users) to a **central mail server**: this is the **null-client** configuration,
* the system accepts any mail from the local network and forwards them with the ones sent by the local users to a **central mail server**: this is the **mail gateway** configuration.

The **RHCE 7** exam objective seems to be more geared towards the **null-client** configuration.  
This tutorial will explain how to put in place this configuration. Details related to the mail **gateway** configuration will be shown later.

**Null-client Configuration**

Let’s assume that your server is called **server.example.com** on the **192.168.1.0/24** network and your central mail server (outgoing mail gateway) is called **mail.example.com** at **192.168.1.1**.  
Edit the **/etc/postfix/main.cf** file and change the following directives:

**myhostname = server.example.com**

**mydomain = example.com**

**myorigin = $mydomain**

**inet\_interfaces = loopback-only**

**mydestination =**

**relayhost = 192.168.1.1**

Note1: Be careful not to specify **$mydomain** in the **mydestination** option (this will store all the mails locally, which is not exactly what you want).  
Note2: If you’ve got a **DNS** server dealing with **MX** records, you can specify **relayhost = mail.example.com** instead of the IP address.  
Note3: If you don’t set up a **DNS** server (but use the **/etc/hosts** file) or if your **DNS** server doesn’t deal with **MX** records, you can specify **relayhost = [mail.example.com]**, this form turns off **MX** lookups.

Check the syntax:

# **postfix check**

Check the non-default configuration:

# **postconf -n**

Reload the **postfix** configuration:

# **systemctl restart postfix**

Note: It is normally not necessary to restart the processes when parameters are changed, a **reload** is enough. However, when changing the **inet\_interfaces** parameter, you need to restart all the processes.

There is an quicker way than editing the **/etc/postfix/main.cf** file, you can also use the **postconf** command. This command with the **-e** option changes a parameter with its specified value and writes everything in the **/etc/postfix/main.cf** file! You can check that by restarting the **postfix** processes or rebooting the server!

# **postconf -e 'relayhost = 192.168.1.1'**

To get the value associated with the **relayhost** parameter, type:

# **postconf relayhost**

relayhost = 192.168.1.1

**Time To Test**

To send a mail to **me** at the central mail server (you need to create such a user on your central mail server), type:

# **echo "This is a test." | mail -s "Test" me@example.com**

Note: The **echo** command introduces the content of the mail. The **-s** option specifies the mail subject followed by the recipient.

To check the local mail queue, type:

# **mailq**

-Queue ID- --Size-- ----Arrival Time---- -Sender/Recipient-------

822FA3DE4       535 Tue Aug  5 16:54:45  root@example.com

(cannot update mailbox /var/mail/me for user me. destination /var/mail/me is not owned by recipient)

me@example.com

-- 0 Kbytes in 1 Request.

To requeue a mail (**-r**), type:

# **postsuper -r 822FA3DE4**

postsuper: name\_mask: all

postsuper: inet\_addr\_local: configured 2 IPv4 addresses

postsuper: inet\_addr\_local: configured 2 IPv6 addresses

postsuper: renamed file deferred/8/822FA3DE4 as maildrop/822FA3DE4

postsuper: 822FA3DE4: requeued

postsuper: Requeued: 1 message

To delete the mail (**-d**) in the local queue, type:

# **postsuper -d 822FA3DE4**

Note: The **postsuper -d ALL** command deletes all the mails in the mail queue (**ALL** in upper case).

To read the previous mail for **me** on the central mail server (here **mail.example.com**), connect to it and type:

[mail]# **su - me**

**$ mail**

Heirloom Mail version 12.4 7/29/08. Type ? for help.

"/var/spool/mail/me": 1 message

U 1 root Tue Aug 5 18:31 22/755 "Subject: Test"

To check all the process followed by an email, type:

# **tail -f /var/log/maillog**

18:07:40 postfix/pickup[2338]: 822FA3DE4: uid=89 from=<root@example.com> orig\_id=0FB353E45

18:07:40 postfix/cleanup[24446]: 822FA3DE4: message-id=<20140805145446.0FB353E45@server.example.com>

18:07:40 postfix/qmgr[2339]: 822FA3DE4: from=<root@example.com>, size=535, nrcpt=1 (queue active)

18:07:40 postfix/local[24448]: warning: specify "strict\_mailbox\_ownership = no" to ignore mailbox ownership mismatch

18:07:41 postfix/local[24448]: 822FA3DE4: to=<me@example.com>, relay=local, delay=4375, delays=4375/0.02/0/0.25, dsn=4.2.0, status=deferred (cannot update mailbox /var/mail/me for user me. destination /var/mail/me is not owned by recipient)

**Gateway Configuration**

In case you want to set up a mail **gateway** configuration (a server receiving emails from the local network and forwarding them to a central mail server), execute the following steps.

Edit the **/etc/postfix/main.cf** file and change the following directives:

**myhostname = server1.example.com**

**mydomain = example.com**

**myorigin = $mydomain**

**inet\_interfaces = all**

**mydestination = $myhostname, localhost.$mydomain, localhost**

**mynetworks = 192.168.10.0/24, 127.0.0.0/8**

**relayhost = 192.168.10.1**

Note: Compared to the **null-client** configuration, **Postfix** processes listen to all network interfaces (the **inet\_interfaces** directive), accept mails sent to the **example.com** domain (the **mydestination** directive) restricted to the local network (the **mynetworks** directive).

**Caution**: Don’t specify **$mydomain** in the **mydestination** variable if you don’t want to store mails locally (this mistake was previously made in this tutorial).

Check the syntax:

# **postfix check**

Check the non-default configuration:

# **postconf -n**

Reload the **postfix** configuration:

# **systemctl restart postfix**

Open the firewall to receive emails from outside:

# **firewall-cmd --permanent --add-service=smtp**

success

Reload the firewall configuration:

# **firewall-cmd --reload**

success

**Useful Tips**

Before or during the exam, you can go to the **/usr/share/doc/postfix-2.10.1/README\_FILES** directory to read the **BASIC\_CONFIGURATION\_README** and **STANDARD\_CONFIGURATION\_README** files filled with many **Postfix** configuration examples