

# Администрирование сетевых подсистем

Настройка POP3/IMAP сервера (Лабораторная работа №9)

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## Цели и задачи работы

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Приобретение практических навыков установки и конфигурирования почтового сервера **Dovecot**, обеспечивающего работу по протоколам **POP3** и **IMAP**.

1. Изучить назначение и различия почтовых протоколов.
2. Настроить работу сервисов **Postfix** и **Dovecot**.
3. Проверить аутентификацию и доставку почты.
4. Провести тестирование работы IMAP и POP3.
5. Автоматизировать развертывание конфигурации в Vagrant.

## Теоретическая часть

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- **SMTP** — передача писем между серверами (порты 25, 465, 587).
- **POP3** — получение писем с сервера и их удаление (порты 110, 995).
- **IMAP** — удалённая работа с письмами без их удаления (порты 143, 993).

- **Postfix** — почтовый транспортный агент (MTA), выполняющий доставку писем.
- **Dovecot** — сервер POP3/IMAP, обеспечивающий доступ пользователей к ящикам.

## Практическая часть

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# Настройка Dovecot

```
root@server:~# sudo -i
dovecot.conf [-M--] 0 L:[ 1+26 27/104] *(1179/4318b) 0010 0x00A
## Dovecot configuration file

# If you're in a hurry, see http://wiki2.dovecot.org/QuickConfiguration

# "doveconf -n" command gives a clean output of the changed settings. Use it
# instead of copy&pasting files when posting to the Dovecot mailing list.

# '#' character and everything after it is treated as comments. Extra spaces
# and tabs are ignored. If you want to use either of these explicitly, put the
# value inside quotes, eg.: key = "# char and trailing whitespace "

# Most (but not all) settings can be overridden by different protocols and/or
# source/destination IPs by placing the settings inside sections, for example:
# protocol imap { }, local 127.0.0.1 { }, remote 10.0.0.0/8 { }

# Default values are shown for each setting, it's not required to uncomment
# those. These are exceptions to this though: No sections (e.g. namespace {})
# or plugin settings are added by default, they're listed only as examples.
# Paths are also just examples with the real defaults being based on configure
# options. The paths listed here are for configure --prefix=/usr
# --sysconfdir=/etc --localstatedir=/var

# Protocols we want to be serving.

protocols = imap pop3

# A comma separated list of IPs or hosts where to listen in for connections..
# '*' listens in all IPv4 interfaces, ':::' listens in all IPv6 interfaces.
# If you want to specify non-default ports or anything more complex,
```

1Help 2Save 3Mark 4Replac 5Copy 6Move 7S

# Настройка Dovecot



root@server:~ - sudo -i

```
10-auth.conf      [-M--]  0 L:[ 75+29 104/129] *(4475/5249b) 0035 0x023
# the auth service to run as root to be able to read this file.
#auth_krb5_keytab =

# Do NTLM and GSS-SPNEGO authentication using Samba's winbind daemon and
# ntlm_auth helper. <doc/wiki/Authentication/Mechanisms/Winbind.txt>
#auth_use_winbind = no

# Path for Samba's ntlm_auth helper binary.
#auth_winbind_helper_path = /usr/bin/ntlm_auth

# Time to delay before replying to failed authentications.
#auth_failure_delay = 2 secs

# Require a valid SSL client certificate or the authentication fails.
#auth_ssl_require_client_cert = no

# Take the username from client's SSL certificate, using
# X509_NAME_get_text_by_NID() which returns the subject's DN's
# CommonName..
#auth_ssl_username_from_cert = no

# Space separated list of wanted authentication mechanisms:
#  plain login digest-md5 cram-md5 ntlm rpa apop anonymous gssapi otp
#  gss-spnego
# NOTE: See also disable_plaintext_auth setting.

auth_mechanisms = plain

##
## Password and user databases
```

1Help

2Save

3Mark

4Replac

5Copy

6Move

# Настройка аутентификации



root@server:~ – sudo -i

```
auth-system.conf.ext [----] 2 L:[ 1+13 14/ 38] *(420 /1151b) 0010 0x00A
# Authentication for system users. Included from 10-auth.conf.
#
# <doc/wiki/PasswordDatabase.txt>
# <doc/wiki/UserDatabase.txt>
#
# PAM authentication. Preferred nowadays by most systems.
# PAM is typically used with either userdb passwd or userdb static.
# REMEMBER: You'll need /etc/pam.d/dovecot file created for PAM
# authentication to actually work. <doc/wiki/PasswordDatabase.PAM.txt>
passdb {
    driver = pam
}

###
### User databases
###

userdb {
    driver = passwd
}

# Static settings generated from template <doc/wiki/UserDatabase.Static.txt>
#userdb {
#    #driver = static
#    # Can return anything a userdb could normally return. For example:
#    #
#    # args = uid=500 gid=500 home=/var/mail/%u
#    #
#    # LDA and LMTP needs to look up users only from the userdb. This of course
#    # doesn't work with static userdb because there is no list of users.
```

1help

2Save

3Mark

4Replac

5Copy

6Move

# Настройка почтового хранилища

```
root@server:~ - sudo -i

10-mail.conf      [-M--]  0 L:[ 11+13  24/418] *(852 /17792b) 0109 0x06D
# isn't enough. You'll also need to tell Dovecot where the other mailboxes are
# kept. This is called the "root mail directory", and it must be the first
# path given in the mail_location setting.
#
# There are a few special variables you can use, eg.:
#
# %u - username
# %n - user part in user@domain, same as %u if there's no domain
# %d - domain part in user@domain, empty if there's no domain
# %h - home directory
#
# See doc/wiki/Variables.txt for full list. Some examples:
#
mail_location = maildir:~/Maildir
#
# mail_location = mbox:~/mail:INBOX=/var/mail/%u
# mail_location = mbox:/var/mail/%d/%1n/%n:INDEX=/var/indexes/%d/%1n/%n
#
# <doc/wiki/MailLocation.txt>
#
#mail_location = .
#
# If you need to set multiple mailbox locations or want to change default
# namespace settings, you can do it by defining namespace sections.
#
# You can have private, shared and public namespaces. Private namespaces
# are for user's personal mails. Shared namespaces are for accessing other
# users' mailboxes that have been shared. Public namespaces are for shared
# mailboxes that are managed by sysadmin. If you create any shared or public
# namespaces you'll typically want to enable ACL plugin also, otherwise all

1Help      2Save      3Mark      4Replac      5Copy      6Move      7Sea
```

## Настройка Postfix и служб

```
[root@server.smahmudov.net ~]#  
[root@server.smahmudov.net ~]# firewall-cmd --add-service=pop3 --permanent  
success  
[root@server.smahmudov.net ~]# firewall-cmd --add-service=pop3s --permanent  
success  
[root@server.smahmudov.net ~]# firewall-cmd --add-service=imap --permanent  
success  
[root@server.smahmudov.net ~]# firewall-cmd --add-service=imaps --permanent  
success  
[root@server.smahmudov.net ~]# firewall-cmd --reload  
success  
[root@server.smahmudov.net ~]# firewall-cmd --list-services  
cockpit dhcp dhcpv6-client dns http https imap imaps pop3 pop3s smtp ssh ssh-custom  
[root@server.smahmudov.net ~]# restorecon -vR /etc  
Relabeled /etc/NetworkManager/system-connections/eth1.nmconnection from unconfined_u:object_r:user_tmp_t:s0 to unconfined_u:object_r:s0  
[root@server.smahmudov.net ~]# systemctl restart postfix  
[root@server.smahmudov.net ~]# systemctl enable dovecot  
Created symlink '/etc/systemd/system/multi-user.target.wants/dovecot.service' → '/usr/lib/systemd/system/dovecot.service'.  
[root@server.smahmudov.net ~]# systemctl start dovecot  
[root@server.smahmudov.net ~]#
```

Рис. 5: Настройка межсетевого экрана и разрешение служб IMAP и POP3

```
[smahmudov@server.smahmudov.net ~]$ sudo tail -f /var/log/maillog
[sudo] password for smahmudov:
Oct 10 05:19:56 server postfix/postfix-script[11432]: stopping the Postfix mail system
Oct 10 05:19:56 server postfix/master[1531]: terminating on signal 15
Oct 10 05:19:56 server postfix/postfix-script[11510]: starting the Postfix mail system
Oct 10 05:19:56 server postfix/master[11512]: daemon started -- version 3.8.5, configuration /etc/postfix
Oct 10 05:20:10 server dovecot[11687]: master: Dovecot v2.3.21 (47349e2482) starting up for imap, pop3
```

Рис. 6: Мониторинг журнала maillog

**Account Summary**next

This is a summary of the settings which will be used to access your mail.

### Account Information

Name:

The above name will be used to identify this account.  
Use for example, "Work" or "Personal".

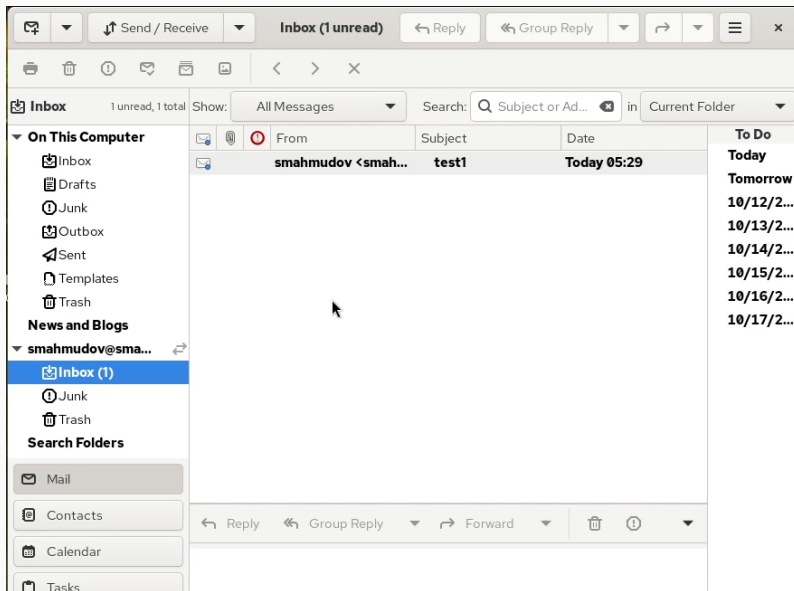
### Personal Details

Full Name: smahmudov

Email Address: smahmudov@smahmudov.net

Receiving	Sending
Server Type: imapx	smtp
Server: mail.smahmudov.net	mail.smahmudov.net
Username: smahmudov	smahmudov
Security: STARTTLS	None

# Проверка отправки и получения письма





# Проверка отправки и получения письма

```
Oct 10 05:27:10 server dovecot[11689]: imap-login: Disconnected: Connection closed (no auth attempts in 5 secs): user=<>, rip=192.168.1.30, lip=192.168.1.1, TLS, session=<Hk5jK8dAkKDAqAE>
Oct 10 05:28:38 server dovecot[11689]: imap-login: Login: user=<snahmudov>, method=PLAIN, rip=192.168.1.30, lip=192.168.1.1, mpid=12802, TLS, session=<2zqhMMdA3MHAqAE>
Oct 10 05:29:18 server postfix/smtpd[12885]: connect from client.snahmudov.net[192.168.1.30]
Oct 10 05:29:18 server postfix/smtpd[12885]: 2A04B6077198: client=client.snahmudov.net[192.168.1.30]
Oct 10 05:29:18 server postfix/cleanup[12889]: 2A04B6077198: message-id=<aa4c5c6206869ebd35e05dc2852fc662ecc1f7cb.canel@snahmudov.net>
Oct 10 05:29:18 server postfix/qmgr[11514]: 2A04B6077198: from=<snahmudov@snahmudov.net>, size=548, nrcpt=1 (queue active)
Oct 10 05:29:18 server postfix/smtpd[12885]: disconnect from client.snahmudov.net[192.168.1.30] ehlo=1 mail=1 rcpt=1 data=1 quit=1 commands=5
Oct 10 05:29:18 server postfix/local[12890]: 2A04B6077198: to=<snahmudov@snahmudov.net>, relay=local, delay=0.01, delays=0.01/0/0/0, dsn=2.0.0, status=sent (delivered to maildir)
Oct 10 05:29:18 server postfix/qmgr[11514]: 2A04B6077198: removed
```

Рис. 9: Мониторинг журнала maillog при получении письма

## Просмотр почты на сервере

```
[smanmudov@server.smanmudov.net ~]#  
[smahmudov@server.smahmudov.net ~]$ MAIL=~/.Maildir/mail  
s-nail version v14.9.24.  Type '?' for help  
/home/smahmudov/Maildir: 1 message 1 unread  
►U 1 smahmudov          2025-10-10 05:29 18/651  "test1  
&  
[-- Message 1 -- 18 lines, 651 bytes --]:  
Message-ID: <aa4c5c6206869ebd35e05dc2852fc662ecc1f7cb.camel@smahmudov.net>  
Subject: test1  
From: smahmudov <smahmudov@smahmudov.net>  
To: smahmudov@smahmudov.net  
Date: Fri, 10 Oct 2025 05:29:18 +0000  
  
test1  
  
&  
At EOF  
&  
At EOF  
& Interrupt  
&  
At EOF  
&
```

Рис. 10: Просмотр входящего письма с помощью mail

## Проверка POP3 через Telnet

```
+OK Logged in.
list
+OK 2 messages:
1 667
2 667
.
retr 1
+OK 667 octets
Return-Path: <smahmudov@smahmudov.net>
X-Original-To: smahmudov@smahmudov.net
Delivered-To: smahmudov@smahmudov.net
Received: from client.smahmudov.net (client.smahmudov.net [192.168.1.30])
        by server.smahmudov.net (Postfix) with ESMTP id 2A04B607719B
        for <smahmudov@smahmudov.net>; Fri, 10 Oct 2025 05:29:18 +0000 (UTC)
Message-ID: <aa4c5c6206869ebd35e05dc2852fc662ecc1f7cb.camel@smahmudov.net>
Subject: test1
From: smahmudov <smahmudov@smahmudov.net>
To: smahmudov@smahmudov.net
Date: Fri, 10 Oct 2025 05:29:18 +0000
Content-Type: text/plain
Content-Transfer-Encoding: 7bit
User-Agent: Evolution 3.52.4 (3.52.4-2.el10_0)
MIME-Version: 1.0

test1
.
dele 2
+OK Marked to be deleted.
quit
+OK Logging out, messages deleted.
Connection closed by foreign host.
[root@server.smahmudov.net ~]#
```

## Выводы по проделанной работе

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В ходе лабораторной работы был установлен и настроен почтовый сервер **Dovecot**, обеспечивающий работу по протоколам **IMAP** и **POP3**, а также транспортный агент **Postfix** для отправки писем по **SMTP**.