

# Лабораторная работа №9

## Настройка POP3/IMAP сервера

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# Установка Dovecot

```
root@server:~ x root@server:~
[root@server.ismakhorin.net ~]# dnf -y install dovecot telnet
Last metadata expiration check: 2:59:07 ago on Tue 21 Nov 2023 09:04:35 PM UTC.
Dependencies resolved.
=====
Package                Architecture Version                                Repository    Size
=====
Installing:
dovecot                x86_64    1:2.3.16-10.el9                       appstream     4.7 M
telnet                 x86_64    1:0.17-85.el9                         appstream     63 k
Installing dependencies:
clucene-core           x86_64    2.3.3.4-42.20130812.e8e3d20git.el9    appstream     585 k
libexttextcat          x86_64    3.4.5-11.el9                          appstream     209 k
Transaction Summary
=====
Install 4 Packages

Total download size: 5.6 M
Installed size: 20 M
Downloading Packages:
(1/4): telnet-0.17-85.el9.x86_64.rpm    115 kB/s | 63 kB    00:00
(2/4): libexttextcat-3.4.5-11.el9.x86_64.rpm 308 kB/s | 209 kB    00:00
(3/4): clucene-core-2.3.3.4-42.20130812.e8e3d20git.el9.x86_64.rpm 826 kB/s | 585 kB    00:00
(4/4): dovecot-2.3.16-10.el9.x86_64.rpm    6.2 MB/s | 4.7 MB    00:00
-----
Total                                2.6 MB/s | 5.6 MB    00:02
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
```

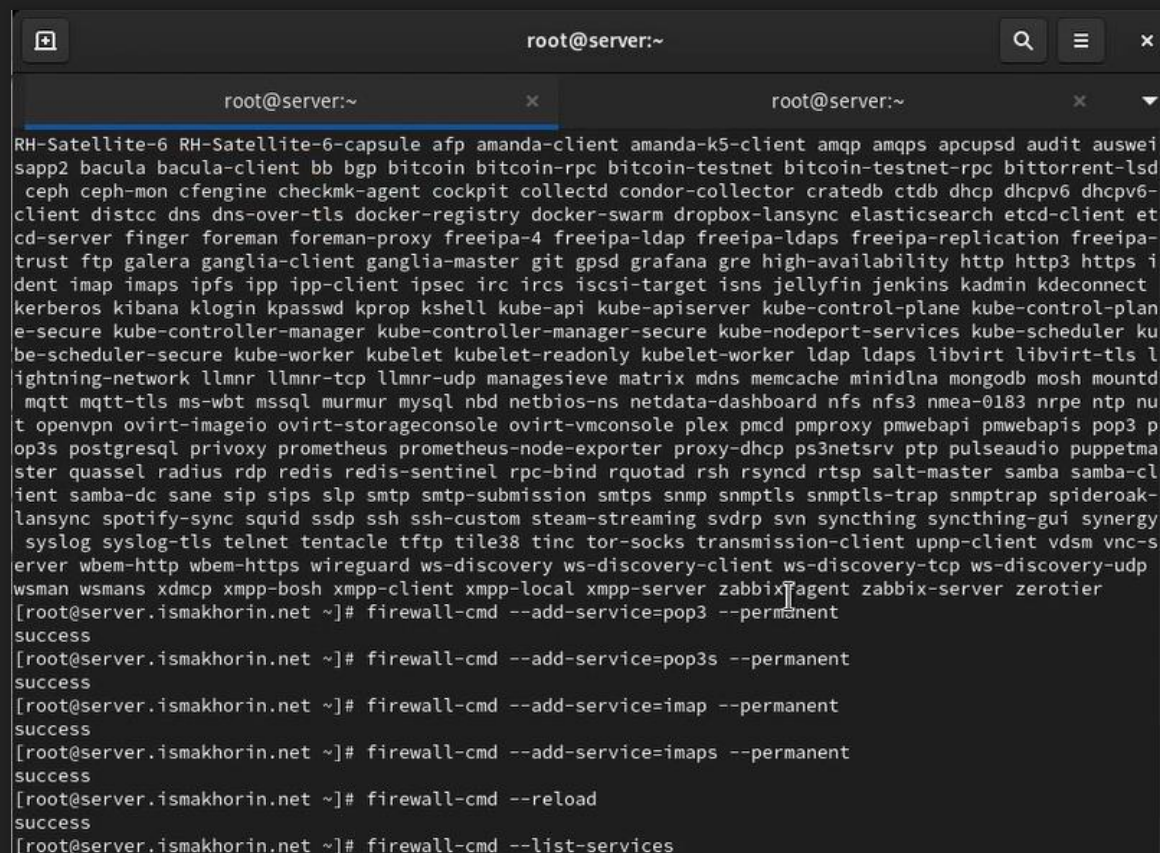
Рис. 1. Открытие режима суперпользователя и установка пакета dovecot telnet.

# Настройка dovecot

```
[root@server.ismakhorin.net ~]# postconf -e 'home_mailbox = Maildir/'
```

**Рис. 2.1.** Настройка в Postfix каталога для доставки почты.

# Настройка dovecot



```
root@server:~  
root@server:~  
RH-Satellite-6 RH-Satellite-6-capsule afp amanda-client amanda-k5-client amqp amqps apcupsd audit auswei  
sapp2 bacula bacula-client bb bgp bitcoin bitcoin-rpc bitcoin-testnet bitcoin-testnet-rpc bittorrent-bsd  
ceph ceph-mon cfengine checkmk-agent cockpit collectd condor-collector cratedb ctdb dhcp dhcpv6 dhcpv6-  
client distcc dns dns-over-tls docker-registry docker-swarm dropbox-lansync elasticsearch etcd-client et  
cd-server finger foreman foreman-proxy freeipa-4 freeipa-ldap freeipa-ldaps freeipa-replication freeipa-  
trust ftp galera ganglia-client ganglia-master git gpsd grafana gre high-availability http http3 https i  
dent imap imaps ipfs ipp ipp-client ipsec irc ircs iscsi-target isns jellyfin jenkins kadmin kdeconnect  
kerberos kibana klogin kpasswd kprop kshell kube-api kube-apiserver kube-control-plane kube-control-plan  
e-secure kube-controller-manager kube-controller-manager-secure kube-nodeport-services kube-scheduler ku  
be-scheduler-secure kube-worker kubelet kubelet-readonly kubelet-worker ldap ldaps libvirt libvirt-tls l  
ightning-network llmnr llmnr-tcp llmnr-udp managesieve matrix mdns memcache minidlna mongodb mosh mountd  
mqtt mqtt-tls ms-wbt mssql murmur mysql nbd netbios-ns netdata-dashboard nfs nfs3 nmea-0183 nrpe ntp nu  
t openvpn ovirt-imageio ovirt-storageconsole ovirt-vmconsole plex pmcd pmproxy pmwebapi pmwebapis pop3 p  
op3s postgresql privoxy prometheus prometheus-node-exporter proxy-dhcp ps3netsrv ptp pulseaudio puppetma  
ster quassel radius rdp redis redis-sentinel rpc-bind rquotad rsh rsyncd rtsp salt-master samba samba-cl  
ient samba-dc sane sip sips slp smtp smtp-submission smtps snmp snmptls snmptls-trap snmptrap spideroak-  
lansync spotify-sync squid ssdp ssh ssh-custom steam-streaming svdrp svn syncthing syncthing-gui synergy  
syslog syslog-tls telnet tentacle tftp tile38 tinc tor-socks transmission-client upnp-client vds vnc-s  
erver wbem-http wbem-https wireguard ws-discovery ws-discovery-client ws-discovery-tcp ws-discovery-udp  
wsman wsmans xdmcp xmpp-bosh xmpp-client xmpp-local xmpp-server zabbix-agent zabbix-server zerotier  
[root@server.ismakhorin.net ~]# firewall-cmd --add-service=pop3 --permanent  
success  
[root@server.ismakhorin.net ~]# firewall-cmd --add-service=pop3s --permanent  
success  
[root@server.ismakhorin.net ~]# firewall-cmd --add-service=imap --permanent  
success  
[root@server.ismakhorin.net ~]# firewall-cmd --add-service=imaps --permanent  
success  
[root@server.ismakhorin.net ~]# firewall-cmd --reload  
success  
[root@server.ismakhorin.net ~]# firewall-cmd --list-services
```

Рис. 2.2. Конфигурация межсетевого экрана, разрешив работу службам протоколов POP3 и IMAP.

# Настройка dovecot

```
[root@server.ismakhorin.net ~]# restorecon -vR /etc
[root@server.ismakhorin.net ~]# systemctl restart postfix
[root@server.ismakhorin.net ~]# systemctl enable dovecot
Created symlink /etc/systemd/system/multi-user.target.wants/dovecot.service → /usr/lib/systemd/system/dovecot.service.
[root@server.ismakhorin.net ~]# systemctl start dovecot
```

**Рис. 2.3.** Восстановление контекста безопасности в SELinux. Перезапуск Postfix и запуск Dovecot.

# Проверка работы Dovecot

```
[root@server.ismakhorin.net ~]# MAIL=~/Maildir mail
s-nail: No mail for root at /root/Maildir
s-nail: /root/Maildir: No such entry, file or directory
[root@server.ismakhorin.net ~]# dovecadm mailbox list -u ismakhorin
INBOX
[root@server.ismakhorin.net ~]# █
```

**Рис. 3.1.** Просмотр на терминале сервера имеющейся почты и mailbox пользователя.



# Проверка работы Dovecot

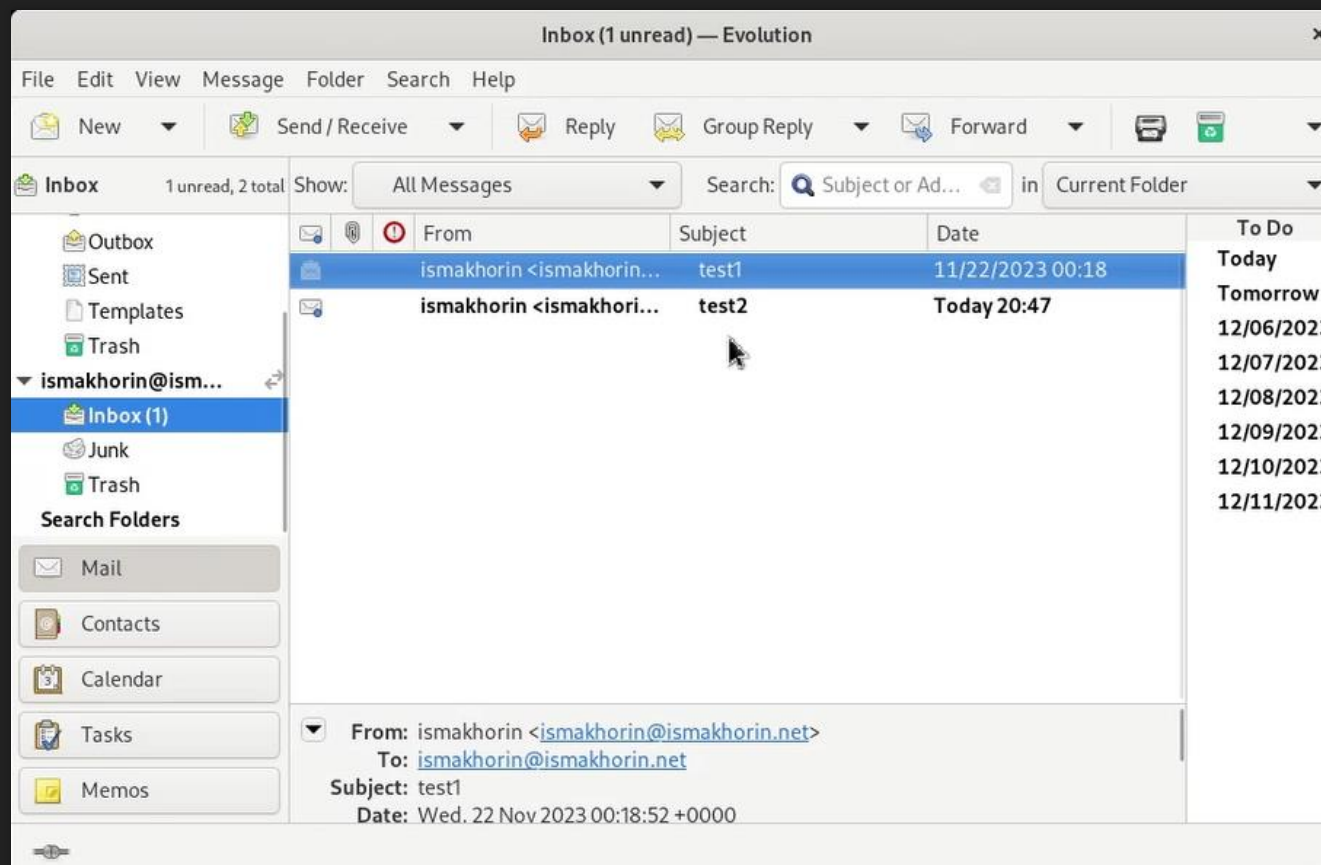
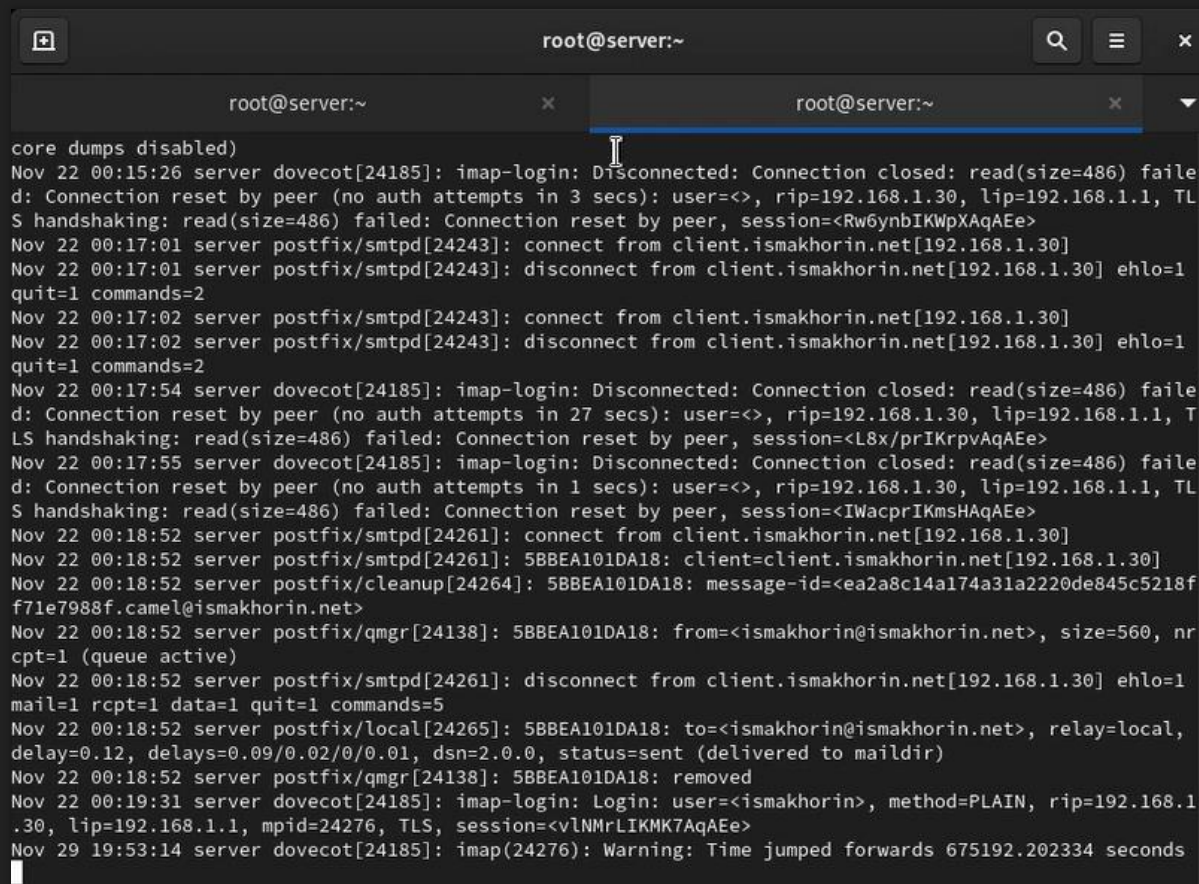


Рис. 3.2. Отправка из почтового клиента нескольких тестовых писем и проверка их доставки.

# Проверка работы Dovecot



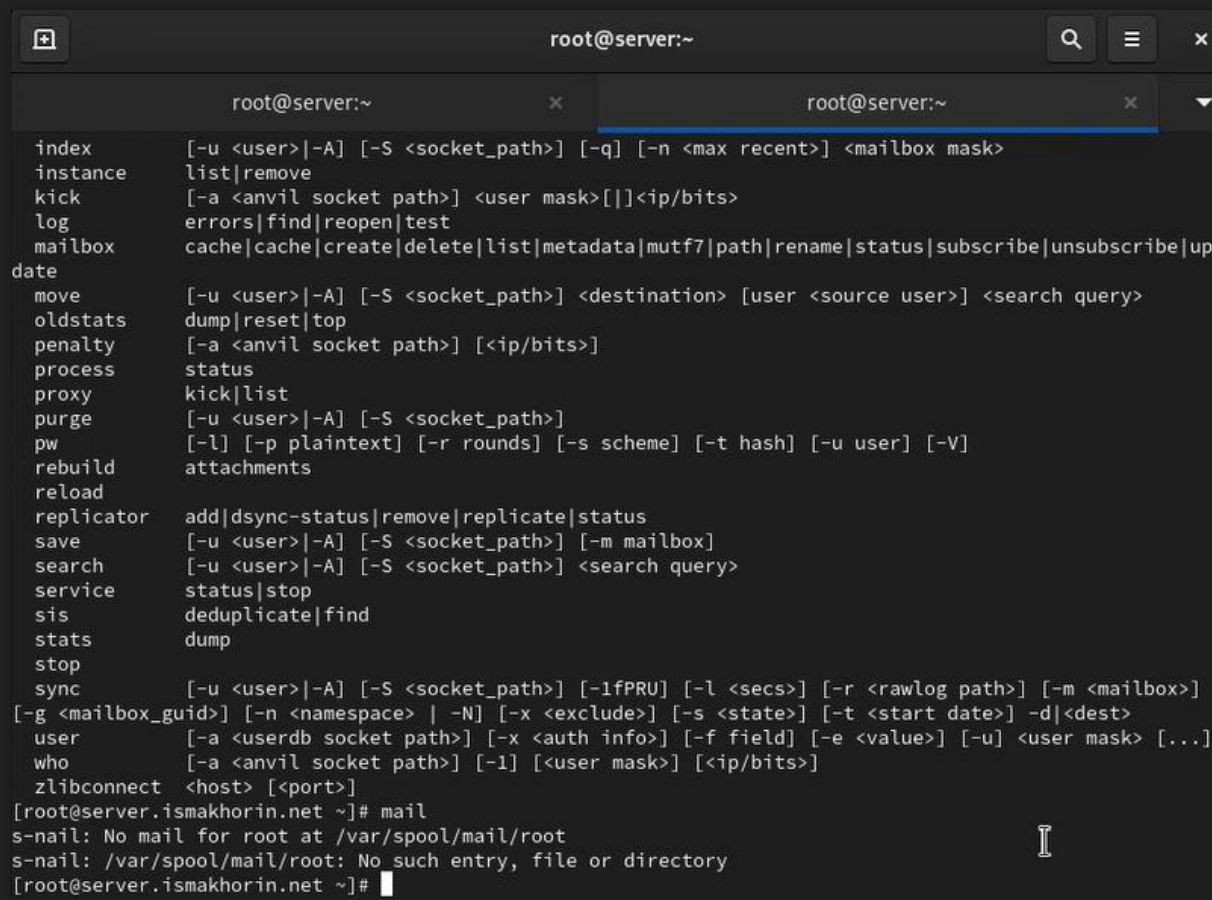
The image shows a terminal window titled 'root@server:~' with two tabs. The active tab displays a log of Dovecot and Postfix activities. The logs include messages about failed IMAP logins, SMTP connections, and a time jump warning.

```
core dumps disabled)
Nov 22 00:15:26 server dovecot[24185]: imap-login: Disconnected: Connection closed: read(size=486) failed: Connection reset by peer (no auth attempts in 3 secs): user=<>, rip=192.168.1.30, lip=192.168.1.1, TLS handshaking: read(size=486) failed: Connection reset by peer, session=<Rw6ynbIKWpXAqAEe>
Nov 22 00:17:01 server postfix/smtpd[24243]: connect from client.ismakhorin.net[192.168.1.30]
Nov 22 00:17:01 server postfix/smtpd[24243]: disconnect from client.ismakhorin.net[192.168.1.30] ehlo=1 quit=1 commands=2
Nov 22 00:17:02 server postfix/smtpd[24243]: connect from client.ismakhorin.net[192.168.1.30]
Nov 22 00:17:02 server postfix/smtpd[24243]: disconnect from client.ismakhorin.net[192.168.1.30] ehlo=1 quit=1 commands=2
Nov 22 00:17:54 server dovecot[24185]: imap-login: Disconnected: Connection closed: read(size=486) failed: Connection reset by peer (no auth attempts in 27 secs): user=<>, rip=192.168.1.30, lip=192.168.1.1, TLS handshaking: read(size=486) failed: Connection reset by peer, session=<L8x/prIKrpvAqAEe>
Nov 22 00:17:55 server dovecot[24185]: imap-login: Disconnected: Connection closed: read(size=486) failed: Connection reset by peer (no auth attempts in 1 secs): user=<>, rip=192.168.1.30, lip=192.168.1.1, TLS handshaking: read(size=486) failed: Connection reset by peer, session=<IWacprIKmsHAqAEe>
Nov 22 00:18:52 server postfix/smtpd[24261]: connect from client.ismakhorin.net[192.168.1.30]
Nov 22 00:18:52 server postfix/smtpd[24261]: 5BBEA101DA18: client=client.ismakhorin.net[192.168.1.30]
Nov 22 00:18:52 server postfix/cleanup[24264]: 5BBEA101DA18: message-id=<ea2a8c14a174a31a2220de845c5218ff71e7988f.camel@ismakhorin.net>
Nov 22 00:18:52 server postfix/qmgr[24138]: 5BBEA101DA18: from=<ismakhorin@ismakhorin.net>, size=560, nr_cpt=1 (queue active)
Nov 22 00:18:52 server postfix/smtpd[24261]: disconnect from client.ismakhorin.net[192.168.1.30] ehlo=1 mail=1 rcpt=1 data=1 quit=1 commands=5
Nov 22 00:18:52 server postfix/local[24265]: 5BBEA101DA18: to=<ismakhorin@ismakhorin.net>, relay=local, delay=0.12, delays=0.09/0.02/0/0.01, dsn=2.0.0, status=sent (delivered to maildir)
Nov 22 00:18:52 server postfix/qmgr[24138]: 5BBEA101DA18: removed
Nov 22 00:19:31 server dovecot[24185]: imap-login: Login: user=<ismakhorin>, method=PLAIN, rip=192.168.1.30, lip=192.168.1.1, mpid=24276, TLS, session=<vLNMrLIKMK7AqAEe>
Nov 29 19:53:14 server dovecot[24185]: imap(24276): Warning: Time jumped forwards 675192.202334 seconds
```

Рис. 3.3. Просмотр сообщений, выдающихся при мониторинге почтовой службы на сервере.



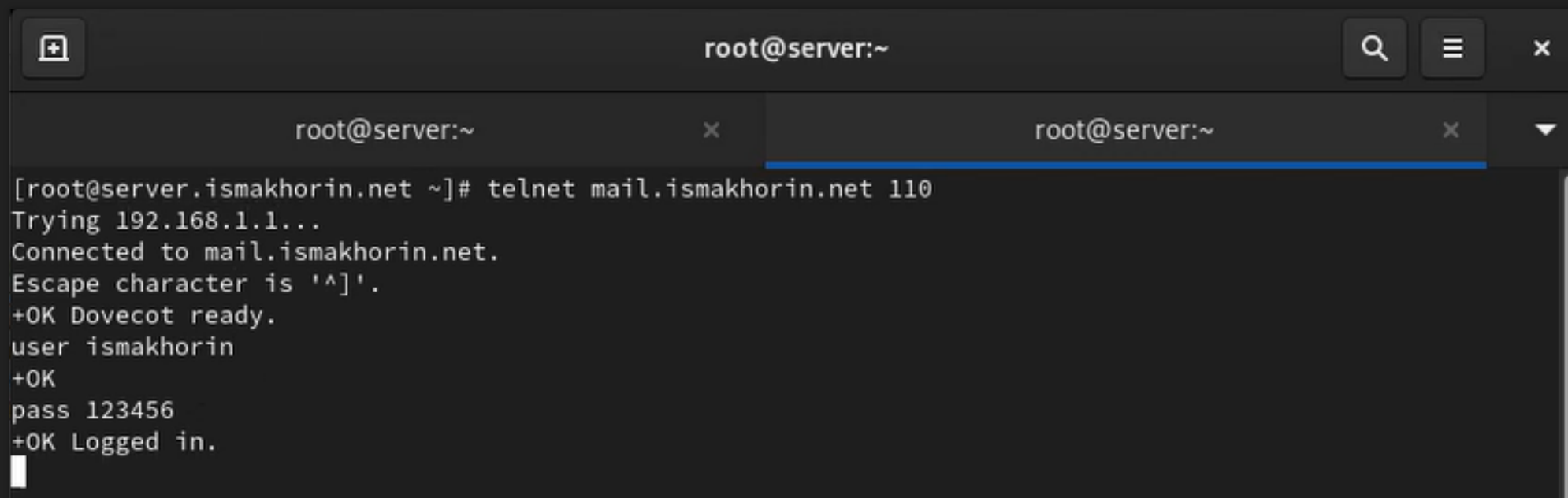
# Проверка работы Dovecot



```
root@server:~  
index [-u <user>|-A] [-S <socket_path>] [-q] [-n <max recent>] <mailbox mask>  
instance list|remove  
kick [-a <anvil socket path>] <user mask>[<ip/bits>  
log errors|find|reopen|test  
mailbox cache|cache|create|delete|list|metadata|utf7|path|rename|status|subscribe|unsubscribe|up  
date  
move [-u <user>|-A] [-S <socket_path>] <destination> [user <source user>] <search query>  
oldstats dump|reset|top  
penalty [-a <anvil socket path>] [<ip/bits>  
process status  
proxy kick|list  
purge [-u <user>|-A] [-S <socket_path>  
pw [-l] [-p plaintext] [-r rounds] [-s scheme] [-t hash] [-u user] [-V]  
rebuild attachments  
reload  
replicator add|dsync-status|remove|replicate|status  
save [-u <user>|-A] [-S <socket_path>] [-m mailbox]  
search [-u <user>|-A] [-S <socket_path>] <search query>  
service status|stop  
sis deduplicate|find  
stats dump  
stop  
sync [-u <user>|-A] [-S <socket_path>] [-lfPRU] [-l <secs>] [-r <rawlog path>] [-m <mailbox>  
[-g <mailbox_guid>] [-n <namespace> | -N] [-x <exclude>] [-s <state>] [-t <start date>] -d|<dest>  
user [-a <userdb socket path>] [-x <auth info>] [-f field] [-e <value>] [-u <user mask> [...]  
who [-a <anvil socket path>] [-l] [<user mask>] [<ip/bits>  
zlibconnect <host> [<port>  
[root@server.ismakhorin.net ~]# mail  
s-nail: No mail for root at /var/spool/mail/root  
s-nail: /var/spool/mail/root: No such entry, file or directory  
[root@server.ismakhorin.net ~]#
```

Рис. 3.4. Просмотр сообщений, выдающихся при использовании doveadm и mail.

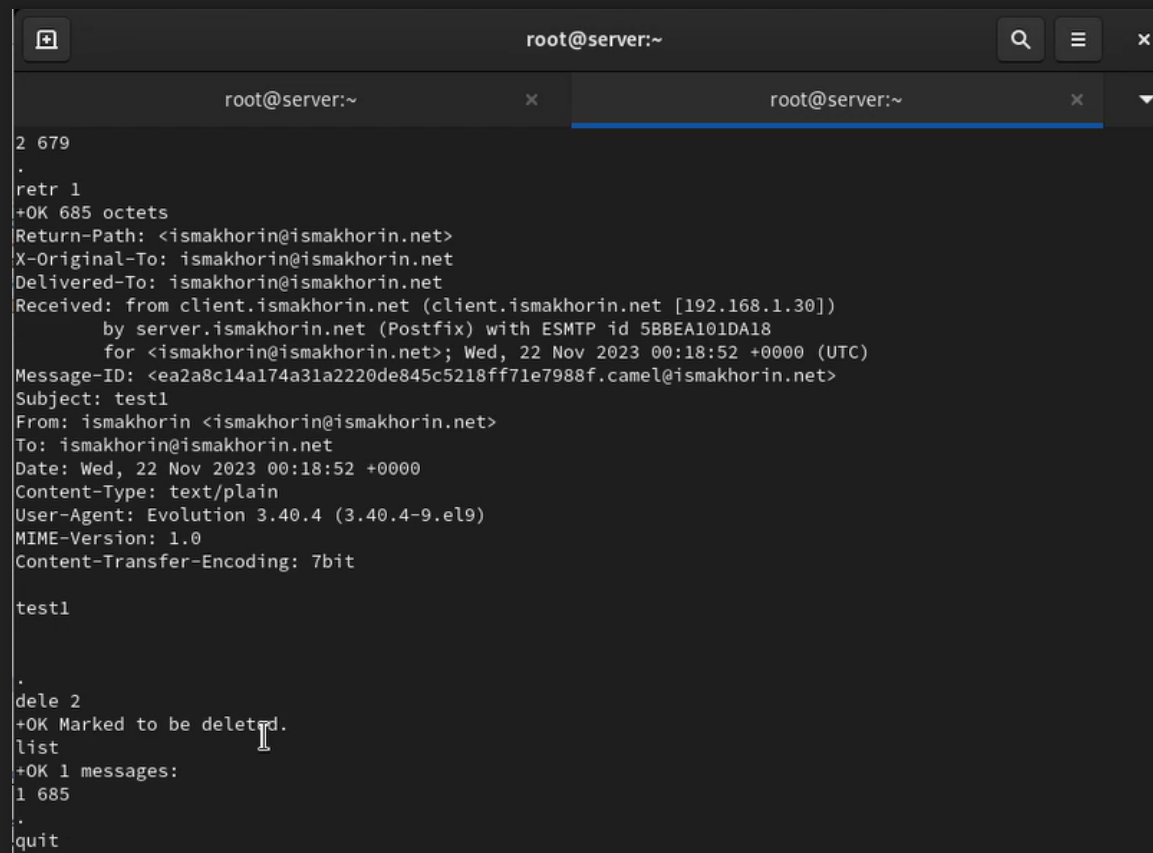
# Проверка работы Dovecot

A terminal window with a dark background and light text. The title bar at the top reads 'root@server:~'. Below the title bar, there are two tabs, both labeled 'root@server:~'. The main content area shows a Telnet session. The prompt is '[root@server.ismakhorin.net ~]#'. The user enters 'telnet mail.ismakhorin.net 110'. The output shows the connection process: 'Trying 192.168.1.1...', 'Connected to mail.ismakhorin.net.', 'Escape character is '^]'.', '+OK Dovecot ready.', 'user ismakhorin', '+OK', 'pass 123456', and '+OK Logged in.'. A cursor is visible at the end of the last line.

```
root@server:~  
[root@server.ismakhorin.net ~]# telnet mail.ismakhorin.net 110  
Trying 192.168.1.1...  
Connected to mail.ismakhorin.net.  
Escape character is '^]'.  
+OK Dovecot ready.  
user ismakhorin  
+OK  
pass 123456  
+OK Logged in.
```

**Рис. 3.5.** Подключение с помощью протокола Telnet к почтовому серверу по протоколу POP3 (через порт 110), ввод своего логина для подключения и пароля.

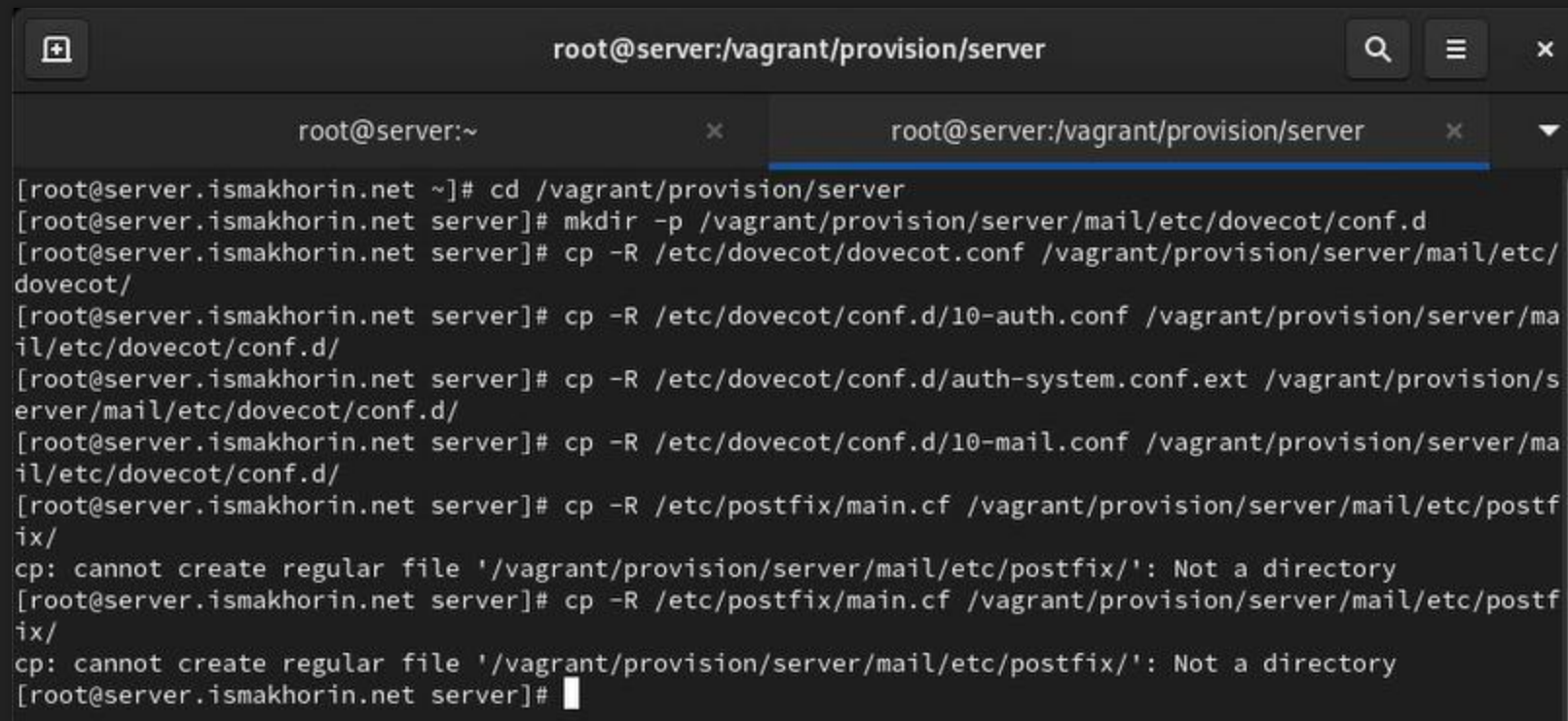
# Проверка работы Dovecot



```
root@server:~  
2 679  
.  
retr 1  
+OK 685 octets  
Return-Path: <ismakhorin@ismakhorin.net>  
X-Original-To: ismakhorin@ismakhorin.net  
Delivered-To: ismakhorin@ismakhorin.net  
Received: from client.ismakhorin.net (client.ismakhorin.net [192.168.1.30])  
        by server.ismakhorin.net (Postfix) with ESMTP id 5BBEA101DA18  
        for <ismakhorin@ismakhorin.net>; Wed, 22 Nov 2023 00:18:52 +0000 (UTC)  
Message-ID: <ea2a8c14a174a31a2220de845c5218ff71e7988f.camel@ismakhorin.net>  
Subject: test1  
From: ismakhorin <ismakhorin@ismakhorin.net>  
To: ismakhorin@ismakhorin.net  
Date: Wed, 22 Nov 2023 00:18:52 +0000  
Content-Type: text/plain  
User-Agent: Evolution 3.40.4 (3.40.4-9.el9)  
MIME-Version: 1.0  
Content-Transfer-Encoding: 7bit  
  
test1  
  
.  
dele 2  
+OK Marked to be deleted.  
list  
+OK 1 messages:  
1 685  
.  
quit
```

**Рис. 3.6.** Получение списка писем, получение первого письма из списка, удаление второго письма из списка, завершение сеанса работы с telnet.

# Внесение изменений в настройки внутреннего окружения виртуальной машины



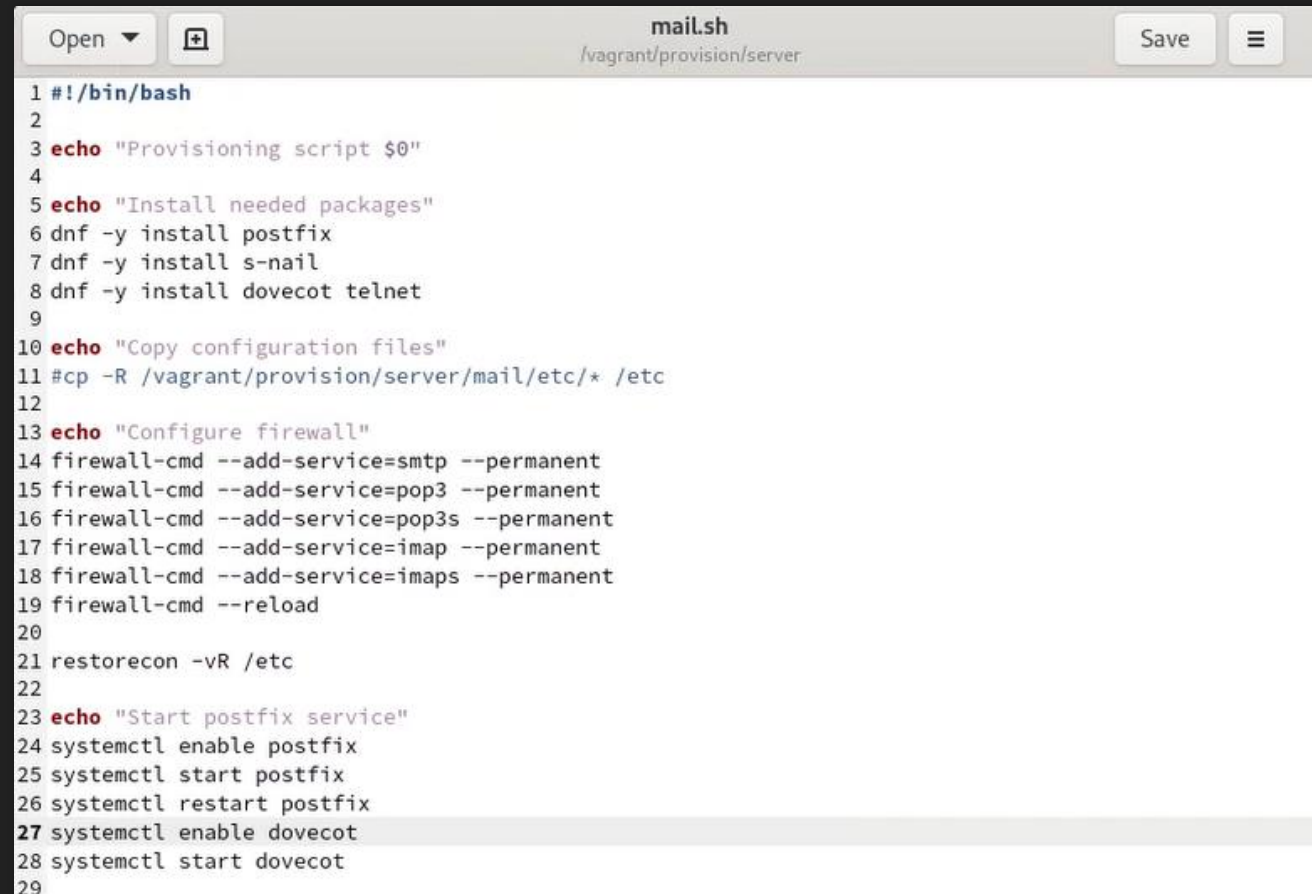
```
root@server:/vagrant/provision/server

[root@server.ismakhorin.net ~]# cd /vagrant/provision/server
[root@server.ismakhorin.net server]# mkdir -p /vagrant/provision/server/mail/etc/dovecot/conf.d
[root@server.ismakhorin.net server]# cp -R /etc/dovecot/dovecot.conf /vagrant/provision/server/mail/etc/dovecot/
[root@server.ismakhorin.net server]# cp -R /etc/dovecot/conf.d/10-auth.conf /vagrant/provision/server/mail/etc/dovecot/conf.d/
[root@server.ismakhorin.net server]# cp -R /etc/dovecot/conf.d/auth-system.conf.ext /vagrant/provision/server/mail/etc/dovecot/conf.d/
[root@server.ismakhorin.net server]# cp -R /etc/dovecot/conf.d/10-mail.conf /vagrant/provision/server/mail/etc/dovecot/conf.d/
[root@server.ismakhorin.net server]# cp -R /etc/postfix/main.cf /vagrant/provision/server/mail/etc/postfix/
cp: cannot create regular file '/vagrant/provision/server/mail/etc/postfix/': Not a directory
[root@server.ismakhorin.net server]# cp -R /etc/postfix/main.cf /vagrant/provision/server/mail/etc/postfix/
cp: cannot create regular file '/vagrant/provision/server/mail/etc/postfix/': Not a directory
[root@server.ismakhorin.net server]#
```

**Рис. 4.1.** Переход на виртуальной машине server в каталог для внесения изменений в настройки внутреннего окружения `/vagrant/provision/server/`. Помещение в соответствующие подкаталоги конфигурационных файлов Dovecot и замена конфигурационного файла Postfix.



# Внесение изменений в настройки внутреннего окружения виртуальной машины




```
1 #!/bin/bash
2
3 echo "Provisioning script $0"
4
5 echo "Install needed packages"
6 dnf -y install postfix
7 dnf -y install s-nail
8 dnf -y install dovecot telnet
9
10 echo "Copy configuration files"
11 #cp -R /vagrant/provision/server/mail/etc/* /etc
12
13 echo "Configure firewall"
14 firewall-cmd --add-service=smtp --permanent
15 firewall-cmd --add-service=pop3 --permanent
16 firewall-cmd --add-service=pop3s --permanent
17 firewall-cmd --add-service=imap --permanent
18 firewall-cmd --add-service=imaps --permanent
19 firewall-cmd --reload
20
21 restorecon -vR /etc
22
23 echo "Start postfix service"
24 systemctl enable postfix
25 systemctl start postfix
26 systemctl restart postfix
27 systemctl enable dovecot
28 systemctl start dovecot
29
```

Рис. 4.2. Внесение изменений в файл /vagrant/provision/server/mail.sh.



# Внесение изменений в настройки внутреннего окружения виртуальной машины



```
1 #!/bin/bash
2
3 echo "Provisioning script $0"
4
5 echo "Install needed packages"
6 dnf -y install postfix
7 dnf -y install s-nail
8 dnf -y install evolution
9
10 echo "Configure postfix"
11 postconf -e 'inet_protocols = ipv4'
12
13 echo "Start postfix service"
14 systemctl enable postfix
15 systemctl start postfix
```

**Рис. 4.3.** Корректирование на виртуальной машине client в каталоге /vagrant/provision/client файла mail.sh.

# ВЫВОД

- В ходе выполнения лабораторной работы были приобретены практические навыки по установке и простейшему конфигурированию POP3/IMAP-сервера.

Спасибо за внимание!