

Лабораторная работа №9

Настройка POP3/IMAP сервера

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Вводная часть

- Целью данной работы является приобретение практических навыков по установке и простейшему конфигурированию POP3/IMAP-сервера.

Основная часть

- Открытие режима суперпользователя и установка пакета dovecot telnet.

```
root@server:~# sudo -i
el-z-10&arch=x86_64 [Recv failure: Connection reset by peer]
- Curl error (56): Failure when receiving data from the peer for https://mirrors.fedoraproject.org/metalink?repo=ep
el-z-10&arch=x86_64 [Send failure: Broken pipe]
Error: Failed to download metadata for repo 'epel': Cannot prepare internal mirrorlist: Interrupted by signal
[root@server.anspelov.net ~]# dnf -y install dovecot telnet
Extra Packages for Enterprise Linux 10 - x86_64
150 kB/s | 33 kB 00:00
Extra Packages for Enterprise Linux 10 - x86_64
2.3 MB/s | 4.8 MB 00:02
Rocky Linux 10 - BaseOS
578 B/s | 4.3 kB 00:07
Rocky Linux 10 - BaseOS
7.8 MB/s | 22 MB 00:02
Rocky Linux 10 - AppStream
17 kB/s | 4.3 kB 00:00
Rocky Linux 10 - AppStream
2.5 MB/s | 2.2 MB 00:00
Rocky Linux 10 - CRB
17 kB/s | 4.3 kB 00:00
Rocky Linux 10 - CRB
1.2 MB/s | 531 kB 00:00
Rocky Linux 10 - Extras
9.6 kB/s | 3.1 kB 00:00
Rocky Linux 10 - Extras
19 kB/s | 5.5 kB 00:00
Dependencies resolved.
=====
Package Architecture Version Repository Size
=====
Installing:
dovecot x86_64 1:2.3.21-16.el10 appstream 4.9 M
telnet x86_64 1:0.17-94.el10 appstream 62 k
Transaction Summary
=====
Install 2 Packages

Total download size: 5.0 M
Installed size: 18 M
Downloading Packages:
(1/2): telnet-0.17-94.el10.x86_64.rpm 110 kB/s | 62 kB 00:00
(2/2): dovecot-2.3.21-16.el10.x86_64.rpm 7.2 MB/s | 4.9 MB 00:00
-----
Total 5.3 MB/s | 5.0 MB 00:00
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
Preparing
```

- Список почтовых протоколов

```
# Protocols we want to be serving.  
#protocols = imap pop3 lmtp submission  
protocols = imap pop3
```


- Настраиваем месторасположение почтовых ящиков пользователей

```
# <doc>/etc/dovecot.conf>
#
mail_location = maildir:~/Maildir

# If you need to set multiple mailbox locations or
# other settings, you can use the following syntax:
```

- Настройка в Postfix каталога для доставки почты.

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

Настройка Dovecot

- Конфигурация межсетевого экрана, разрешив работать службам протоколов POP3 и IMAP.

```
[root@server.anspelov.net ~]# firewall-cmd --get-services
0-AD RH-Satellite-6 RH-Satellite-6-capsule afp alvr amanda-client amanda-k5-client amqp amqps anno-1602 anno-1800 apc
upsd aseqnet audit ausweisapp2 bacula bacula-client bareos-director bareos-filedaemon bareos-storage bb bgp bitcoin b
itcoin-rpc bitcoin-testnet bitcoin-testnet-rpc bittorrent-lsd ceph ceph-exporter ceph-mon cfengine checkmk-agent civi
lization-iv civilization-v cockpit collectd condor-collector cratedb ctdb dds dds-multicast dds-unicast dhcp dhcpv6 d
hcpv6-client distcc dns dns-over-quic dns-over-tls docker-registry docker-swarm dropbox-lansync elasticsearch etcd-cl
ient etcd-server factorio finger foreman foreman-proxy freeipa-4 freeipa-ldap freeipa-ldaps freeipa-replication freei
pa-trust ftp galera ganglia-client ganglia-master git gpsd grafana gre high-availability http http3 https ident imap
imaps iperf2 iperf3 ipfs ipp ipp-client ipsec irc ircs iscsi-target isns jenkins kadmin kdeconnect kerberos kibana kl
ogin kpasswd kprop kshell kube-api kube-apiserver kube-control-plane kube-control-plane-secure kube-controller-manage
r kube-controller-manager-secure kube-nodeport-services kube-scheduler kube-scheduler-secure kube-worker kubelet kube
let-readonly kubelet-worker ldap ldaps libvirt libvirt-tls lightning-network llmnr llmnr-client llmnr-tcp llmnr-udp m
anagesieve matrix mdns memcache minecraft minidlna mmpd mongod mosh moudnd mpd mqttt mqttt-tls ms-wbt mssql murmur mys
ql nbd nebula need-for-speed-most-wanted netbios-ns netdata-dashboard nfs nfs3 nmea-0183 nrpe ntp nut opentelemetry o
penvpn ovirt-imageio ovirt-storageconsole ovirt-vmconsole plex pncd pmpoxy pwebapi pwebapis pop3 pop3s postgresql
privoxy prometheus prometheus-node-exporter proxy-dhcp ps2link ps3netsrv ptp pulseaudio puppetmaster quassel radius r
adsec rdp redis redis-sentinel rootd rpc-bind rquodas rsh rsyncd rtp salt-master samba samba-client samba-dc sane se
ttlrs-history-collection sip sips slimevr slp smtp smtp-submission smtps snmp snmptls snmptls-trap snmptrap spideroa
k-lansync spotify-sync squid ssdp ssh ssh-custom statsrv steam-lan-transfer steam-streaming stellaris stronghold-crus
ader stun stuns submission supertuxkart svdrp svn syncthing syncthing-gui syncthing-relay synergy syscomlan syslog sy
slog-tls telnet tentacle terraria http3 wire38 tinc tor-socks transmission-client turn turns upnp-client vdsms vnc-serv
er vrtp warpinator wbem-http wbem-https wireguard ws-discovery ws-discovery-client ws-discovery-host ws-discovery-tcp
ws-discovery-udp wsdd wsdd-http wsmn wsmans xdncp xmpp-bosh xmpp-client xmpp-local xmpp-server zabbix-agent zabbix-
java-gateway zabbix-server zabbix-trapper zabbix-web-service zero-k zerotier
[root@server.anspelov.net ~]# firewall-cmd --add-service=pop3 --permanent
success
[root@server.anspelov.net ~]# firewall-cmd --add-service=pop3s --permanent
success
[root@server.anspelov.net ~]# firewall-cmd --add-service=imap --permanent
success
```

- Восстановление контекста безопасности в SELinux. Перезапуск Postfix и запуск Dovecot.

```
[root@server.anspelov.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:NetworkManager_etc_rw_t:s0
[root@server.anspelov.net ~]# systemctl restart postfix
[root@server.anspelov.net ~]# systemctl enable dovecot
Created symlink '/etc/systemd/system/multi-user.target.wants/dovecot.service' -> '/usr/lib/systemd/system/dovecot.service'.
[root@server.anspelov.net ~]# systemctl start dovecot
[root@server.anspelov.net ~]# █
```

Проверка работы Dovecot

- Просмотр на терминале сервера имеющейся почты и mailbox пользователя.

```
[root@server.anspelov.net ~]# tail -f /var/log/maillog
Oct 21 13:03:03 server postfix/postfix-script[18427]: refreshing the Postfix mail system
Oct 21 13:03:03 server postfix/master[17185]: reload -- version 3.8.5, configuration /etc/postfix
Oct 27 11:29:26 server postfix/postfix-script[1786]: starting the Postfix mail system
Oct 27 11:29:26 server postfix/master[1796]: daemon started -- version 3.8.5, configuration /etc/postfix
Oct 27 11:48:39 server postfix/postfix-script[15207]: stopping the Postfix mail system
Oct 27 11:48:39 server postfix/master[1796]: terminating on signal 15
Oct 27 11:48:39 server postfix/postfix-script[15210]: waiting for the Postfix mail system to terminate
Oct 27 11:48:41 server postfix/postfix-script[15288]: starting the Postfix mail system
Oct 27 11:48:41 server postfix/master[15290]: daemon started -- version 3.8.5, configuration /etc/postfix
Oct 27 11:49:07 server dovecot[15504]: master: Dovecot v2.3.21 (47349e2482) starting up for inap, pop3
^C
[root@server.anspelov.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.anspelov.net ~]# doveadm mailbox list -u anspelov
INBOX
[root@server.anspelov.net ~]#
```

Установка Evolution

- Установка Evolution на клиенте

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

=====
Package                Arch  Version                                Repo    Size
=====
Installing:
evolution              x86_64 3.52.4-2.el10_0                      epel    4.6 M
Installing dependencies:
cmark-lib              x86_64 0.30.3-5.el10_0                      epel    96 k
cpuinfo                x86_64 24.09.26-1.git1e83a2f.el10_0.1      epel    42 k
evolution-langpacks    noarch 3.52.4-2.el10_0                      epel    6.0 M
flite                  x86_64 2.2-10.el10_0                        epel    12 M
gspell                 x86_64 1.14.0-1.el10_0                      epel    111 k
harfbuzz-icu           x86_64 8.4.0-6.el10                         appstream 15 k
highlight              x86_64 4.13-1.el10_0                        epel    930 k
highway                x86_64 1.2.0-7.el10_0                       epel    448 k
hyphen                 x86_64 2.8.8-26.el10                       appstream 29 k
javascriptcoregtk4.1  x86_64 2.47.3-2.el10_0                      epel    8.3 M
libaom                 x86_64 3.12.0-1.el10_0                      epel    1.8 M
libavif                x86_64 1.0.4-7.el10_0                       epel    89 k
libdav1d               x86_64 1.5.1-1.el10_0                       epel    615 k
libjxl                 x86_64 1:0.10.4-1.el10_0                   epel    1.2 M
libmanette             x86_64 0.2.9-2.el10_0                       epel    58 k
libvmaf                x86_64 3.0.0-2.el10_0                       epel    194 k
openexr-libs           x86_64 3.1.10-8.el10                       appstream 1.1 M
svt-av1-libs           x86_64 2.3.0-1.el10_0                       epel    2.0 M
webkit2gtk4.1          x86_64 2.47.3-2.el10_0                      epel    26 M
woff2                  x86_64 1.0.2-21.el10                       appstream 63 k
Installing weak dependencies:
jxl-pixbuf-loader      x86_64 1:0.10.4-1.el10_0                   epel    19 k

Transaction Summary
=====
Install 22 Packages
```

- Настройка почтового клиента

CancelBack

IdentityNext

WelcomeRestore from BackupIdentityReceiving EmailSending EmailAccount SummaryDone

Please enter your name and email address below. The "optional" fields below do not need to be filled in, unless you wish to include this information in email you send.

Required Information

Full Name:

Email Address:

Optional Information

Reply-To:

Organization:

Signature: None ▼ Add New Signature...

Aliases:

Add

Edit

Remove

- Настройка почтового клиента

The screenshot shows the 'Receiving Email' configuration window in the Evolution mail client. The window has a sidebar on the left with navigation links: 'Welcome', 'Restore from Backup', 'Identity', 'Receiving Email' (which is highlighted), 'Receiving Options', 'Sending Email', 'Account Summary', and 'Done'. At the top of the main panel, there are 'Cancel', 'Back', and 'Next' buttons. The main configuration area is titled 'Receiving Email' and contains the following sections:

- Server Type:** A dropdown menu set to 'IMAP'.
- Description:** Text indicating 'For reading and storing mail on IMAP servers.'
- Configuration:**
 - Server:** Text input field containing 'mail.anspelov.net'.
 - Port:** A dropdown menu set to '143'.
 - Username:** Text input field containing 'anspelov'.
- Security:**
 - Encryption method:** A dropdown menu set to 'STARTTLS after connecting'.
- Authentication:**
 - A button labeled 'Check for Supported Types'.
 - A dropdown menu set to 'Password'.

- Настройка почтового клиента

The screenshot shows the 'Sending Email' configuration window in Evolution. The window has a title bar with 'Cancel', 'Back', 'Sending Email', 'Next', and 'Finish' buttons. On the left is a sidebar with a list of steps: 'Welcome', 'Restore from Backup', 'Identity', 'Receiving Email', 'Receiving Options', 'Sending Email' (which is highlighted), 'Account Summary', and 'Done'. The main area is divided into several sections: 'Server Type' is set to 'SMTP'; 'Description' states 'For delivering mail by connecting to a remote mailhub using SMTP.'; 'Configuration' section includes a 'Server' field with 'mail.anspelov.net', a 'Port' dropdown set to '25', and an unchecked checkbox for 'Server requires authentication'; 'Security' section has an 'Encryption method' dropdown set to 'No encryption'; 'Authentication' section has a 'Type' dropdown set to 'PLAIN' and a 'Username' field with 'anspelov'; and 'Send Options' section has an unchecked checkbox for 'Re-encode message before send'.

Cancel Back **Sending Email** Next Finish

Welcome
Restore from Backup
Identity
Receiving Email
Receiving Options
Sending Email
Account Summary
Done

Server Type: SMTP

Description: For delivering mail by connecting to a remote mailhub using SMTP.

Configuration

Server: mail.anspelov.net Port: 25

☐ Server requires authentication

Security

Encryption method: No encryption

Authentication

Type: Check for Supported Types PLAIN

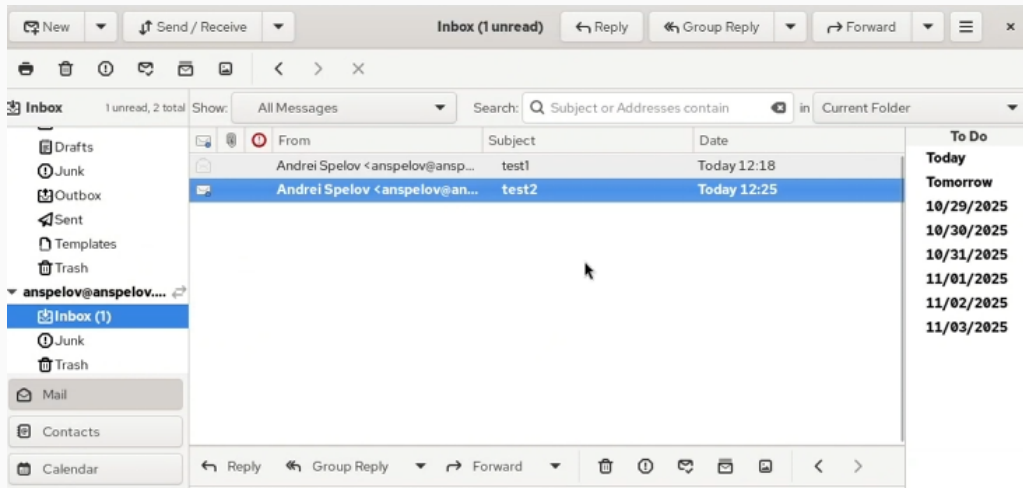
Username: anspelov

Send Options

☐ Re-encode message before send

Проверка работы Dovecot

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



Проверка работы Dovecot

- Просмотр сообщений, выдающихся при мониторинге почтовой службы на сервере. Просмотр сообщений, выдающихся при использовании dovecot и mail.

```
[root@server.anspelov.net ~]# tail -f /var/log/maillog
Oct 27 12:21:37 server dovecot[15506]: pop3-login: Disconnected: Disconnected: Too many bad commands (no auth attempt
s in 18 secs): user=<>, rip=192.168.1.1, lip=192.168.1.1, secured, session=<muXg8CJCv3AqAEB>
Oct 27 12:23:47 server dovecot[15506]: pop3-login: Login: user=<anspelov>, method=PLAIN, rip=192.168.1.1, lip=192.168
.1.1, mpid=19852, secured, session=<EPic+CJC+tfAqAEB>
Oct 27 12:24:50 server dovecot[15506]: pop3(anspelov)<19852><EPic+CJC+tfAqAEB>: Disconnected: Logged out top=0/0, ret
r=1/655, del=0/1, size=639
Oct 27 12:25:30 server postfix/smtpd[20065]: connect from unknown[192.168.1.2]
Oct 27 12:25:30 server postfix/smtpd[20065]: 9C89B31591: client=unknown[192.168.1.2]
Oct 27 12:25:30 server postfix/cleanup[20068]: 9C89B31591: message-id=<b6ae79c774749e6c28768df12b98b639c5ad9b0e.camel
@anspelov.net>
Oct 27 12:25:30 server postfix/qmgr[15292]: 9C89B31591: from=<anspelov@anspelov.net>, size=527, nrcpt=1 (queue active
)
Oct 27 12:25:30 server postfix/smtpd[20065]: disconnect from unknown[192.168.1.2] ehlo=1 mail=1 rcpt=1 data=1 quit=1
commands=5
Oct 27 12:25:30 server postfix/local[20069]: 9C89B31591: to=<anspelov@anspelov.net>, relay=local, delay=0.08, delays=
0.04/0.03/0/0.01, dsn=2.0.0, status=sent (delivered to maildir)
Oct 27 12:25:30 server postfix/qmgr[15292]: 9C89B31591: removed
^C
[root@server.anspelov.net ~]# MAIL=~/.Maildir mail
s-nail: No mail for root at /root/Maildir
```

Проверка работы Dovecot

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

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

Проверка работы Dovecot

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

```
list
+OK 2 messages:
1 639
2 640
.
retr 1
+OK 639 octets
Return-Path: <anspelov@anspelov.net>
X-Original-To: anspelov@anspelov.net
Delivered-To: anspelov@anspelov.net
Received: from client.anspelov.net (unknown [192.168.1.2])
    by server.anspelov.net (Postfix) with ESMTP id BDF1E9EFB
    for <anspelov@anspelov.net>; Mon, 27 Oct 2025 12:18:11 +0000 (UTC)
Message-ID: <cb9e6e2d1fea82b6708c4f1e760aedfea4bb17ae.camel@anspelov.net>
Subject: test1
From: Andrei Spelov <anspelov@anspelov.net>
To: anspelov@anspelov.net
Date: Mon, 27 Oct 2025 12:18:11 +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
.
```

Внесение изменений в настройки внутреннего окружения виртуальной машины

- 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.

```
[root@server.anspelov.net ~]# cd /vagrant/provision/server
[root@server.anspelov.net server]# mkdir -p /vagrant/provision/server/mail/etc/dovecot/conf.d
[root@server.anspelov.net server]# cp -R /etc/dovecot/dovecot.conf /vagrant/provision/server/mail/etc/dovecot/
[root@server.anspelov.net server]# cp -R /etc/dovecot/conf.d/10-auth.conf /vagrant/provision/server/mail/etc/dovecot/
conf.d/
[root@server.anspelov.net server]# cp -R /etc/dovecot/conf.d/auth-system.conf.ext /vagrant/provision/server/mail/etc/
dovecot/conf.d/
[root@server.anspelov.net server]# cp -R /etc/dovecot/conf.d/10-mail.conf /vagrant/provision/server/mail/etc/dovecot/
conf.d/
[root@server.anspelov.net server]# █
```

Внесение изменений в настройки внутреннего окружения виртуальной машины

- Внесение изменений в файл /vagrant/provision/server/mail.sh.

```
mail.sh      [----] 23 L:[ 1+22 23/ 34] *(672 /1069b) 0010 0x00A
#!/bin/bash
echo "Provisioning script $0"

echo "Install needed packages"
dnf -y install postfix
dnf -y install s-nail
dnf -y install dovecot telnet
echo "Copy configuration files"
cp -R /vagrant/provision/server/mail/etc/* /etc
echo "Configure firewall"
firewall-cmd --add-service=smtp --permanent
firewall-cmd --add-service=pop3 --permanent
firewall-cmd --add-service=pop3s --permanent
firewall-cmd --add-service=imap --permanent
firewall-cmd --add-service=imaps --permanent
firewall-cmd --reload
restorecon -vR /etc
echo "Start postfix service"
systemctl enable postfix
systemctl start postfix
systemctl restart postfix
systemctl enable dovecot
systemctl start dovecot
echo "Configure postfix"
postconf -e 'mydomain = user.net'
postconf -e 'myorigin = $mydomain'
postconf -e 'inet_protocols = ipv4'
postconf -e 'inet_interfaces = all'
```

Внесение изменений в настройки внутреннего окружения виртуальной машины

- Корректирование на виртуальной машине client в каталоге /vagrant/provision/client файла mail.sh.

```
mail.sh [-M--] 24 L:[ 1+ 5 6/ 11] *(142 / 281b) 0010 0x
#!/bin/bash
echo "Provisioning script $0"
echo "Install needed packages"
dnf -y install postfix
dnf -y install s-nail
dnf -y install evolution
echo "Configure postfix"
postconf -e 'inet_protocols = ipv4'
echo "Start postfix service"
systemctl enable postfix
systemctl start postfix
```


Вывод

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