

Лабораторная работа №9

Настройка POP3/IMAP сервера

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30 октября 2025

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Информация

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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

Extra Packages for Enterprise Linux 10 - x86_64 2.0 MB/s | 4.8 MB 00:02
Rocky Linux 10 - BaseOS 572 B/s | 4.3 kB 00:07
Rocky Linux 10 - BaseOS 7.3 MB/s | 22 MB 00:03
Rocky Linux 10 - AppStream 12 kB/s | 4.3 kB 00:00
Rocky Linux 10 - AppStream 3.6 MB/s | 2.2 MB 00:00
Rocky Linux 10 - CRB 14 kB/s | 4.3 kB 00:00
Rocky Linux 10 - CRB 1.1 MB/s | 531 kB 00:00
Rocky Linux 10 - Extras 11 kB/s | 3.1 kB 00:00
Rocky Linux 10 - Extras 15 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 941 kB/s | 62 kB 00:00
(2/2): dovecot-2.3.21-16.el10.x86_64.rpm 7.9 MB/s | 4.9 MB 00:00
-----
Total 5.1 MB/s | 5.0 MB 00:00
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
```

- Список почтовых протоколов

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


- Настраиваем месторасположение почтовых ящиков пользователей

```
# <doc/wiki/MailLocation.txt>
#
mail_location = maildir:~/Maildir

# If you need to set multiple mailbox locations or want to change default
# namespace settings, you can do it by defining namespace sections.
#
```

- Настройка в Postfix каталога для доставки почты.

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

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

```
ane kube-control-plane-secure kube-controller-manager kube-controller-manager
-secure kube-nodeport-services kube-scheduler kube-scheduler-secure kube-work
er kubelet kubelet-readonly kubelet-worker ldap ldaps libvirt libvirt-tls lig
htning-network llmnr llmnr-client llmnr-tcp llmnr-udp managesieve matrix mdns
memcache minecraft minidlna mndp mongodb mosh mountd mpd mqtt mqtt-tls ns-wb
t mssql murmur mysql nbd nebula need-for-speed-most-wanted netbios-ns netdata
-dashboard nfs nfs3 nmea-0183 nrpe ntp nut opentelemetry openvpn ovirt-imagei
o ovirt-storageconsole ovirt-vmconsole plex pmcd pmproxy pmwebapi pmwebapis p
op3 pop3s postgresql privoxy prometheus prometheus-node-exporter proxy-dhcp p
s2link ps3netrv ptp pulseaudio puppetmaster quassel radius radsec rdp redis
redis-sentinel rootd rpc-bind rquotad rsh rsyncd rtsp salt-master samba samba
-client samba-dc sane settlers-history-collection sip sips slimevr slp smtp s
ntp-submission smtps snmp snmptls snmptls-trap snmptrap spideroak-lansync spo
tify-sync squid ssdp ssh ssh-custom statsrv steam-lan-transfer steam-streamin
g stellaris stronghold-crusader stun stuns submission supertuxkart svdrp svn
syncthing syncthing-gui syncthing-relay synergy syscomlan syslog syslog-tls t
elnet tentacle terraria tftp tile38 tinc tor-socks transmission-client turn t
urns upnp-client vdsu vnc-server vrrp warpinator wben-http wben-https wiregua
rd ws-discovery ws-discovery-client ws-discovery-host ws-discovery-tcp ws-dis
covery-udp wsd wsd-http wsmn wsmns xdmcp xmpp-bosh xmpp-client xmpp-local
xmpp-server zabbix-agent zabbix-java-gateway zabbix-server zabbix-trapper za
bbix-web-service zero-k zerotier
[root@server.arromichina.net ~]# firewall-cmd --add-service=pop3 --permanent
success
[root@server.arromichina.net ~]#
[root@server.arromichina.net ~]# firewall-cmd --add-service=pop3s --permanent
success
[root@server.arromichina.net ~]# firewall-cmd --add-service=imap --permanent
success
[root@server.arromichina.net ~]# firewall-cmd --add-service=imaps --permanent
```

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

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

Проверка работы Dovecot

- Просмотр на терминале сервера имеющейся почты и mailbox пользователя.

```
[root@server.arromichina.net ~]# tail -f /var/log/maillog
Oct 22 20:57:24 server postfix/local[18850]: E83F0204206D: to=<root@arromichi
na.net>, relay=local, delay=3579, delays=3579/0.05/0/0.01, dsn=2.0.0, status=
sent (delivered to mailbox)
Oct 22 20:57:24 server postfix/qmgr[18334]: E83F0204206D: removed
Oct 28 10:58:58 server postfix/postfix-script[1479]: starting the Postfix mai
l system
Oct 28 10:58:58 server postfix/master[1481]: daemon started -- version 3.8.5,
configuration /etc/postfix
Oct 28 11:15:19 server postfix/postfix-script[11344]: stopping the Postfix ma
il system
Oct 28 11:15:19 server postfix/master[1481]: terminating on signal 15
Oct 28 11:15:19 server postfix/postfix-script[11347]: waiting for the Postfix
mail system to terminate
Oct 28 11:15:21 server postfix/postfix-script[11433]: starting the Postfix ma
il system
Oct 28 11:15:21 server postfix/master[11435]: daemon started -- version 3.8.5
, configuration /etc/postfix
Oct 28 11:15:38 server dovecot[11615]: master: Dovecot v2.3.21 (47349e2482) s
tarting up for imap, pop3, lmtp
```

- Установка Evolution на клиенте

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

Rocky Linux 10 - BaseOS                               7.2 MB/s | 22 MB   00:03
Rocky Linux 10 - AppStream                             15 kB/s | 4.3 kB  00:00
Rocky Linux 10 - AppStream                             3.6 MB/s | 2.2 MB  00:00
Rocky Linux 10 - CRB                                   15 kB/s | 4.3 kB  00:00
Rocky Linux 10 - CRB                                   1.0 MB/s | 531 kB  00:00
Rocky Linux 10 - Extras                                 11 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:
evolution               x86_64            3.52.4-2.el10_0     epel                  4.6 M
Installing dependencies:
cmack-lib               x86_64            0.30.3-5.el10_0     epel                  96 k
cpufinfo                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:

AddEditRemove

- 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 area, there are 'Cancel', 'Back', and 'Next' buttons. The title of the window is 'Receiving Email'. The configuration is divided into several sections: 'Server Type' is set to 'IMAP'; 'Description' is 'For reading and storing mail on IMAP servers.'; 'Configuration' section includes 'Server' (mail.arromichina.net), 'Port' (143), and 'Username' (arromichina); 'Security' section shows 'Encryption method' set to 'STARTTLS after connecting'; and 'Authentication' section has 'Check for Supported Types' and 'Password' buttons. A mouse cursor is pointing at the 'STARTTLS after connecting' dropdown menu.

Cancel Back **Receiving Email** Next

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

Server Type: IMAP

Description: For reading and storing mail on IMAP servers.

Configuration

Server: mail.arromichina.net Port: 143

Username: arromichina

Security

Encryption method: STARTTLS after connecting

Authentication

Check for Supported Types Password

- Настройка почтового клиента

The screenshot shows the 'Sending Email' configuration window in the Evolution email client. The window has a sidebar on the left with navigation links: 'Welcome', 'Restore from Backup', 'Identity', 'Receiving Email', 'Receiving Options', 'Sending Email' (which is highlighted), 'Account Summary', and 'Done'. The main area is titled 'Sending Email' and contains several sections: 'Server Type' is set to 'SMTP'; 'Description' states 'For delivering mail by connecting to a remote mailhub using SMTP.'; the 'Configuration' section shows the 'Server' as 'mail.arromichina.net' and the 'Port' as '25', with an unchecked checkbox for 'Server requires authentication'; the 'Security' section shows the 'Encryption method' as 'No encryption'; the 'Authentication' section shows the 'Type' as 'Check for Supported Types' and 'PLAIN', with the 'Username' set to 'arromichina'; and the 'Send Options' section has an unchecked checkbox for 'Re-encode message before send'. Navigation buttons 'Cancel', 'Back', 'Next', and 'Finish' are located at the top of the window.

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.arromichina.net Port: 25

☐ Server requires authentication

Security

Encryption method: No encryption

Authentication

Type: Check for Supported Types PLAIN

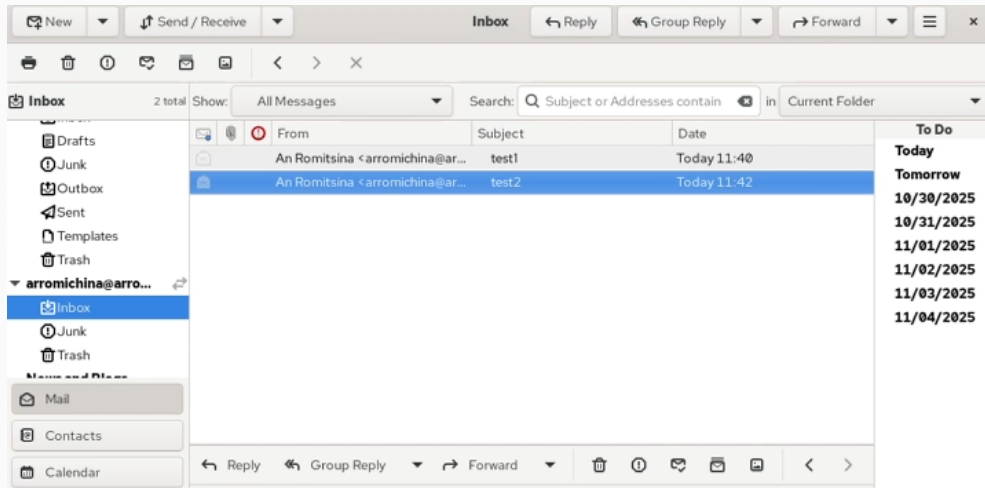
Username: arromichina

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 doveadm и mail.

```
romichina.net>, relay=local, delay=0.09, delays=0.06/0.03/0/0.01, dsn=2.0.0,
status=sent (delivered to maildir)
Oct 28 11:40:33 server postfix/qmgr[11438]: 2CE6723434B0: removed
Oct 28 11:42:03 server postfix/smtpd[14773]: connect from unknown[192.168.1.2
]
Oct 28 11:42:03 server postfix/smtpd[14773]: DBF7D23434B0: client=unknown[192
.168.1.2]
Oct 28 11:42:03 server postfix/cleanup[14777]: DBF7D23434B0: message-id=<54a8
b78a69ab2740a970375b4ab30ebdd9d0a9a1.camel@arromichina.net>
Oct 28 11:42:03 server postfix/qmgr[11438]: DBF7D23434B0: from=<arromichina@a
rromichina.net>, size=562, nrcpt=1 (queue active)
Oct 28 11:42:03 server postfix/smtpd[14773]: disconnect from unknown[192.168.
1.2] ehlo=1 mail=1 rcpt=1 data=1 quit=1 commands=5
Oct 28 11:42:03 server postfix/local[14778]: DBF7D23434B0: to=<arromichina@ar
romichina.net>, relay=local, delay=0.04, delays=0.03/0/0/0.01, dsn=2.0.0, sta
tus=sent (delivered to maildir)
Oct 28 11:42:03 server postfix/qmgr[11438]: DBF7D23434B0: removed
Oct 28 11:43:50 server postfix/smtpd[15208]: connect from unknown[192.168.1.2
]
Oct 28 11:43:50 server postfix/smtpd[15208]: 1B13823434B0: client=unknown[192
.168.1.2]
Oct 28 11:43:50 server postfix/cleanup[15211]: 1B13823434B0: message-id=<d0eb
3830342093e0df94da50fdb052eacb0819f6.camel@arromichina.net>
Oct 28 11:43:50 server postfix/qmgr[11438]: 1B13823434B0: from=<arromichina@a
rromichina.net>, size=558, nrcpt=1 (queue active)
Oct 28 11:43:50 server postfix/smtpd[15208]: disconnect from unknown[192.168.
```

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

```
[root@server.arromichina.net ~]# telnet mail.arromichina.net 110
Trying 192.168.1.1...
Connected to mail.arromichina.net.
Escape character is '^]'.
+OK Dovecot ready.
user arromichina
+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 3 messages:
1 690
2 693
3 689
.
retr 1
+OK 690 octets
Return-Path: <arromichina@arromichina.net>
X-Original-To: arromichina@arromichina.net
Delivered-To: arromichina@arromichina.net
Received: from client.arromichina.net (unknown [192.168.1.2])
        by server.arromichina.net (Postfix) with ESMTP id 2CE6723434B0
        for <arromichina@arromichina.net>; Tue, 28 Oct 2025 11:40:33 +0000 (U
TC)
Message-ID: <c5992d3007da475e1844e584543103977b7b0247.camel@arromichina.net>
Subject: test1
From: An Romitsina <arromichina@arromichina.net>
To: arromichina@arromichina.net
Date: Tue, 28 Oct 2025 11:40:32 +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 lol
.
```

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

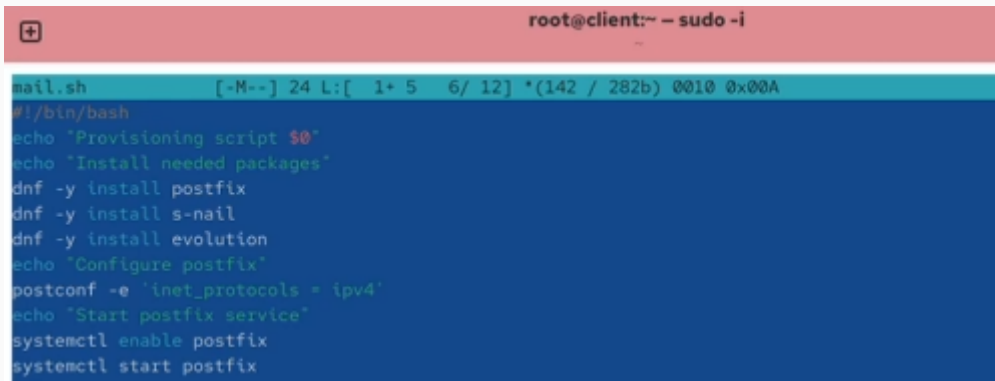
Внесение изменений в настройки внутреннего окружения виртуальной машины

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

```
mail.sh [-M--] 23 L:[ 1+21 22/ 33] *(671 /1067b) 0010 0x00[*][X
#!/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.



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

mail.sh [-M--] 24 L:[ 1+ 5 6/ 12] *(142 / 282b) 0010 0x00A
#!/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.