

# Презентация по лабораторной работе №9

Настройка POP3/IMAP сервера

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Галацан Николай

Российский университет дружбы народов, Москва, Россия

- Галацан Николай
- 1032225763
- уч. группа: НПИбд-01-22
- Факультет физико-математических и естественных наук
- Российский университет дружбы народов

Приобретение практических навыков по установке и простейшему конфигурированию POP3/IMAP-сервера.

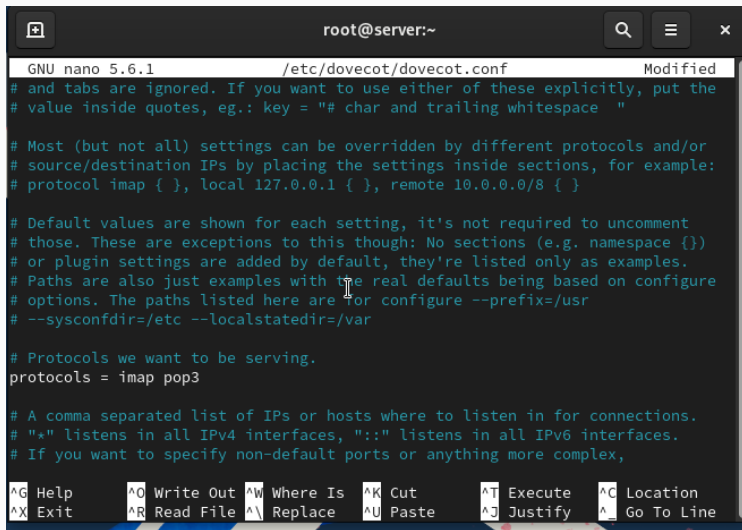
## Установка Dovecot

---

```
dnf -y install dovecot telnet
```

## Настройка dovecot

---



```
GNU nano 5.6.1 /etc/dovecot/dovecot.conf Modified
# 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

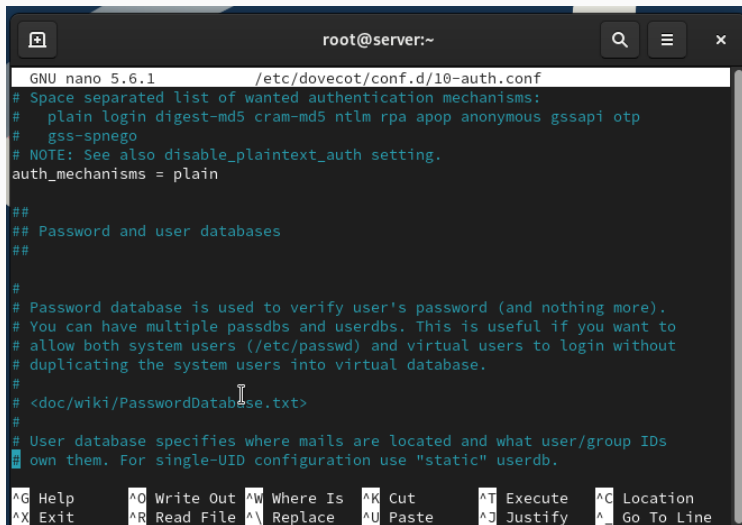
# Protocols we want to be serving.
protocols = imap pop3

# 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,
```

^G Help    ^O Write Out    ^W Where Is    ^K Cut    ^T Execute    ^C Location  
^X Exit    ^R Read File    ^\ Replace    ^U Paste    ^J Justify    ^\_ Go To Line

Рис. 1: Редактирование файла /etc/dovecot/dovecot.conf

## Выполнение лабораторной работы



```
root@server:~
GNU nano 5.6.1 /etc/dovecot/conf.d/10-auth.conf
# 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

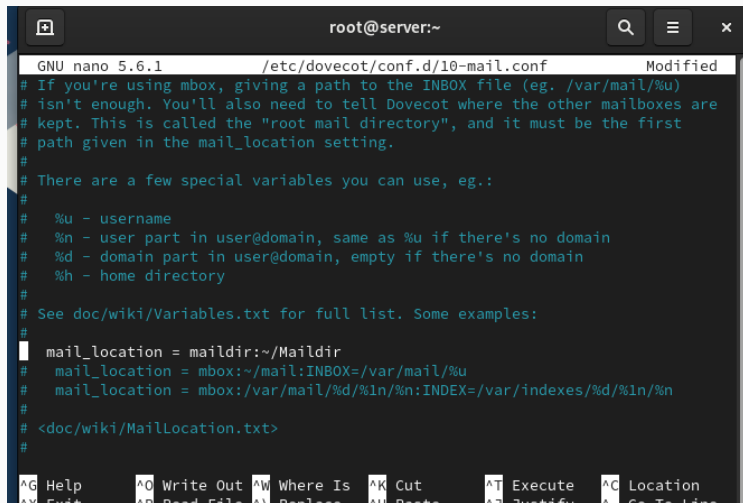
##
## Password and user databases
##

#
# Password database is used to verify user's password (and nothing more).
# You can have multiple passdbs and userdbs. This is useful if you want to
# allow both system users (/etc/passwd) and virtual users to login without
# duplicating the system users into virtual database.
#
# <doc/wiki/PasswordDatabase.txt>
#
# User database specifies where mails are located and what user/group IDs
# own them. For single-UID configuration use "static" userdb.

^G Help      ^O Write Out ^W Where Is  ^K Cut       ^T Execute   ^C Location
^X Exit      ^R Read File ^\ Replace   ^U Paste     ^J Justify   ^_ Go To Line
```

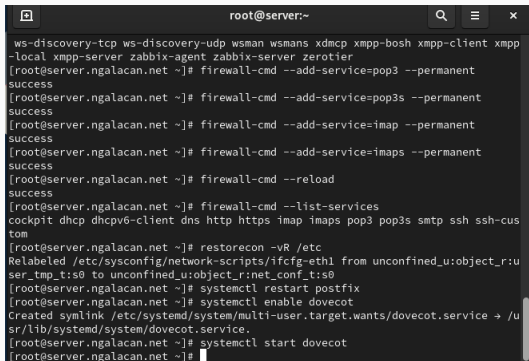
Рис. 2: Редактирование файла /etc/dovecot/conf.d/10-auth.conf





```
GNU nano 5.6.1 /etc/dovecot/conf.d/10-mail.conf Modified
# If you're using mbox, giving a path to the INBOX file (eg. /var/mail/%u)
# 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/%ln/%n:INDEX=/var/indexes/%d/%ln/%n
#
# <doc/wiki/MailLocation.txt>
#
^G Help      ^O Write Out ^W Where Is  ^K Cut      ^T Execute  ^C Location
^X Exit      ^R Read File ^U Replace  ^U Paste    ^J Justify  ^_ Go To Line
```

Рис. 3: Редактирование файла /etc/dovecot/conf.d/10-mail.conf



```
root@server:~  
ws-discovery-tcp ws-discovery-udp wsman wsmans xdmcp xmpp-bosh xmpp-client xmpp  
-local xmpp-server zabbix-agent zabbix-server zerotier  
[root@server.ngalacan.net ~]# firewall-cmd --add-service=pop3 --permanent  
success  
[root@server.ngalacan.net ~]# firewall-cmd --add-service=pop3s --permanent  
success  
[root@server.ngalacan.net ~]# firewall-cmd --add-service=imap --permanent  
success  
[root@server.ngalacan.net ~]# firewall-cmd --add-service=imaps --permanent  
success  
[root@server.ngalacan.net ~]# firewall-cmd --reload  
success  
[root@server.ngalacan.net ~]# firewall-cmd --list-services  
cockpit dhcp dhcpv6-client dns http https imap imaps pop3 pop3s smtp ssh ssh-cus  
tom  
[root@server.ngalacan.net ~]# restorecon -vR /etc  
Relabeled /etc/sysconfig/network-scripts/ifcfg-eth1 from unconfined_u:object_r:u  
ser_tmp_t:s0 to unconfined_u:object_r:net_conf_t:s0  
[root@server.ngalacan.net ~]# systemctl restart postfix  
[root@server.ngalacan.net ~]# systemctl enable dovecot  
Created symlink /etc/systemd/system/multi-user.target.wants/dovecot.service → /u  
sr/lib/systemd/system/dovecot.service.  
[root@server.ngalacan.net ~]# systemctl start dovecot  
[root@server.ngalacan.net ~]#
```

Рис. 4: Конфигурация Postfix, межсетевого экрана для работы с POP3 и IMAP и запуск Dovecot

## Проверка работы Dovecot

---

```
tail -f /var/log/maillog
```

```
[root@server.ngalacan.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.ngalacan.net ~]# dovecadm mailbox list -u ngalacan
INBOX
[root@server.ngalacan.net ~]#
```

Рис. 5: Просмотр почты и mailbox

```
dnf -y install evolution
```

The screenshot shows the 'Identity' window in the Evolution email client. On the left is a sidebar with a list of options: 'Welcome', 'Restore from Backup', 'Identity' (which is selected and highlighted), 'Receiving Email', 'Sending Email', 'Account Summary', and 'Done'. The main area of the window has a title bar 'Identity' with a close button 'x'. Below the title bar is a message: '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.' The form is divided into two sections: 'Required Information' and 'Optional Information'. Under 'Required Information', there is a 'Full Name:' label followed by a text box containing 'ngalacan', and an 'Email Address:' label followed by a text box containing 'ngalacan@ngalacan.net'. Under 'Optional Information', there is a 'Reply-To:' label followed by an empty text box, an 'Organization:' label followed by an empty text box, and an 'Aliases:' label followed by a large empty text box. To the right of the 'Aliases' text box are three buttons: 'Add', 'Edit', and 'Remove'. At the bottom of the main area, there is a checkbox labeled 'Look up mail server details based on the entered e-mail address' which is checked. At the very bottom of the window are three buttons: 'Cancel', 'Back', and 'Next'.

Identity x

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

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: ngalacan

Email Address: ngalacan@ngalacan.net

**Optional Information**

Reply-To:

Organization:

Aliases:

Add  
Edit  
Remove

☒ Look up mail server details based on the entered e-mail address

Cancel Back Next

Рис. 6: Evolution: настройка учетной записи

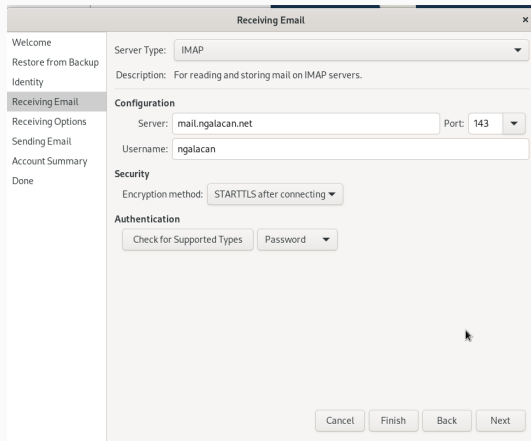


Рис. 7: Evolution: настройка IMAP-сервера для входящих сообщений



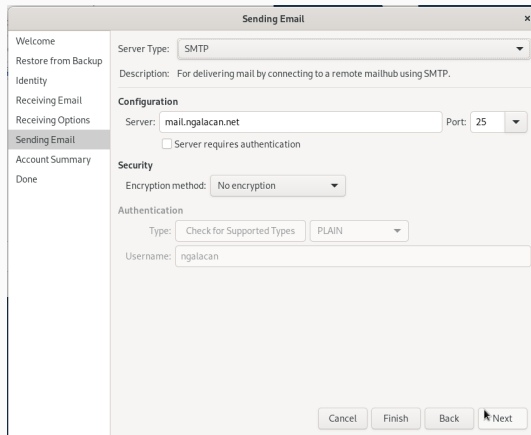
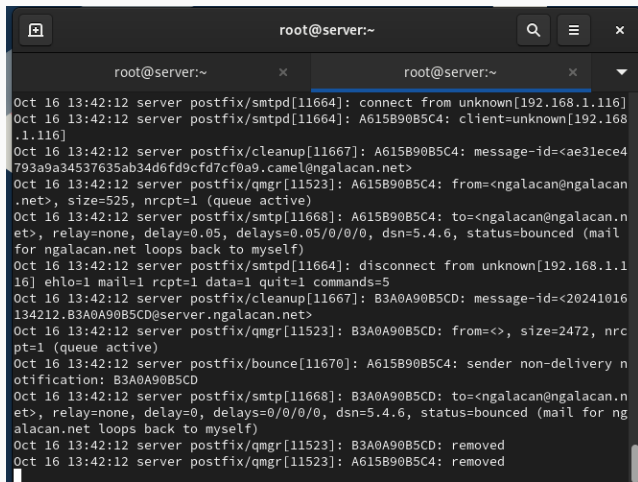


Рис. 8: Evolution: настройка SMTP-сервера для исходящих сообщений

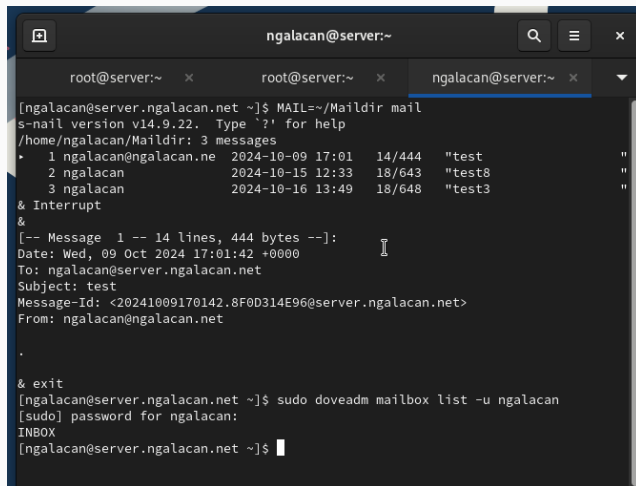


The image shows a terminal window titled 'root@server:~' with a search icon, a menu icon, and a close icon in the top right corner. The terminal displays a series of log messages from the postfix mail service. The logs show connections, message processing, and disconnections. The messages are as follows:

```
Oct 16 13:42:12 server postfix/smtpd[11664]: connect from unknown[192.168.1.116]
Oct 16 13:42:12 server postfix/smtpd[11664]: A615B90B5C4: client=unknown[192.168.1.116]
Oct 16 13:42:12 server postfix/cleanup[11667]: A615B90B5C4: message-id=<ae31ece4793a9a34537635ab34d6fd9cfd7cf0a9.camel@ngalacan.net>
Oct 16 13:42:12 server postfix/qmgr[11523]: A615B90B5C4: from=<ngalacan@ngalacan.net>, size=525, nrcpt=1 (queue active)
Oct 16 13:42:12 server postfix/smtp[11668]: A615B90B5C4: to=<ngalacan@ngalacan.net>, relay=none, delay=0.05, delays=0.05/0/0/0, dsn=5.4.6, status=bounced (mail for ngalacan.net loops back to myself)
Oct 16 13:42:12 server postfix/smtpd[11664]: disconnect from unknown[192.168.1.116] ehlo=1 mail=1 rcpt=1 data=1 quit=1 commands=5
Oct 16 13:42:12 server postfix/cleanup[11667]: B3A0A90B5CD: message-id=<20241016134212.B3A0A90B5CD@server.ngalacan.net>
Oct 16 13:42:12 server postfix/qmgr[11523]: B3A0A90B5CD: from=<>, size=2472, nrcpt=1 (queue active)
Oct 16 13:42:12 server postfix/bounce[11670]: A615B90B5C4: sender non-delivery notification: B3A0A90B5CD
Oct 16 13:42:12 server postfix/smtp[11668]: B3A0A90B5CD: to=<ngalacan@ngalacan.net>, relay=none, delay=0, delays=0/0/0/0, dsn=5.4.6, status=bounced (mail for ngalacan.net loops back to myself)
Oct 16 13:42:12 server postfix/qmgr[11523]: B3A0A90B5CD: removed
Oct 16 13:42:12 server postfix/qmgr[11523]: A615B90B5C4: removed
```

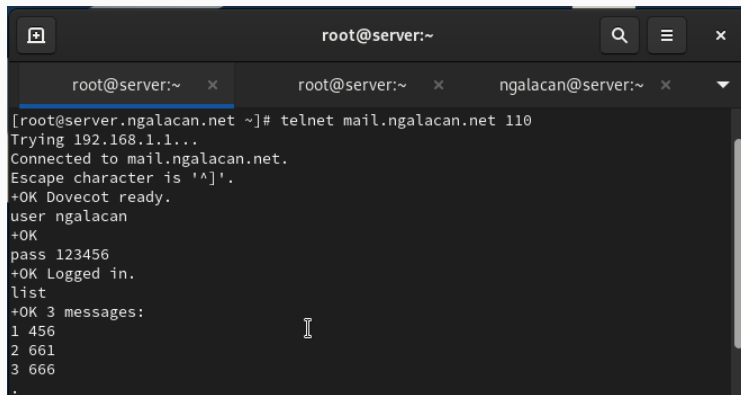
Рис. 9: Просмотр мониторинга почтовой службы на сервере

## Выполнение лабораторной работы



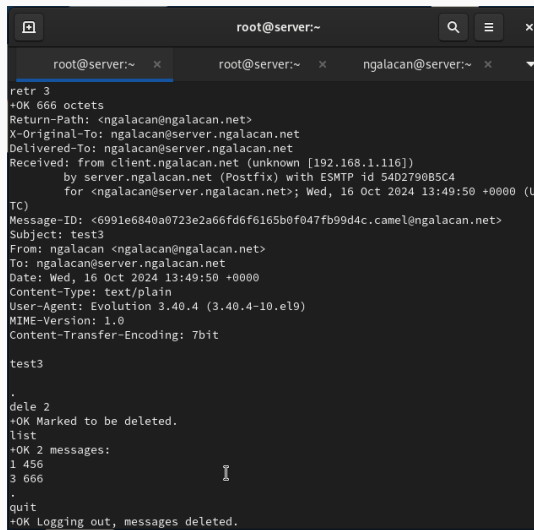
```
ngalacan@server:~  
root@server:~ x root@server:~ x ngalacan@server:~ x  
[ngalacan@server.ngalacan.net ~]$ MAIL=~/.Maildir mail  
s-nail version v14.9.22. Type '?' for help  
/home/ngalacan/Maildir: 3 messages  
  1 ngalacan@ngalacan.ne 2024-10-09 17:01 14/444 "test"  
  2 ngalacan             2024-10-15 12:33 18/643 "test8"  
  3 ngalacan             2024-10-16 13:49 18/648 "test3"  
& Interrupt  
&  
[-- Message 1 -- 14 lines, 444 bytes --]:  
Date: Wed, 09 Oct 2024 17:01:42 +0000  
To: ngalacan@server.ngalacan.net  
Subject: test  
Message-Id: <20241009170142.8F0D314E96@server.ngalacan.net>  
From: ngalacan@ngalacan.net  
.  
& exit  
[ngalacan@server.ngalacan.net ~]$ sudo dovecadm mailbox list -u ngalacan  
[sudo] password for ngalacan:  
INBOX  
[ngalacan@server.ngalacan.net ~]$
```

Рис. 10: Просмотр информации о почтовой службе с помощью dovecadm и mail



```
root@server:~  
[root@server.ngalacan.net ~]# telnet mail.ngalacan.net 110  
Trying 192.168.1.1...  
Connected to mail.ngalacan.net.  
Escape character is '^['.  
+OK Dovecot ready.  
user ngalacan  
+OK  
pass 123456  
+OK Logged in.  
list  
+OK 3 messages:  
1 456  
2 661  
3 666  
.
```

Рис. 11: Подключение с помощью telnet и просмотр писем



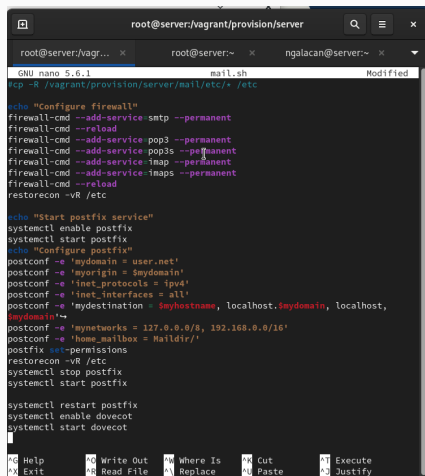
```
root@server:~  
root@server:~ x root@server:~ x ngalacan@server:~ x  
retr 3  
+OK 666 octets  
Return-Path: <ngalacan@ngalacan.net>  
X-Original-To: ngalacan@server.ngalacan.net  
Delivered-To: ngalacan@server.ngalacan.net  
Received: from client.ngalacan.net (unknown [192.168.1.116])  
by server.ngalacan.net (Postfix) with ESMTP id 54D2790B5C4  
for <ngalacan@server.ngalacan.net>; Wed, 16 Oct 2024 13:49:50 +0000 (UTC)  
Message-ID: <6991e6840a0723e2a66fd6f6165b0f047fb99d4c.camel@ngalacan.net>  
Subject: test3  
From: ngalacan <ngalacan@ngalacan.net>  
To: ngalacan@server.ngalacan.net  
Date: Wed, 16 Oct 2024 13:49:50 +0000  
Content-Type: text/plain  
User-Agent: Evolution 3.40.4 (3.40.4-10.el9)  
MIME-Version: 1.0  
Content-Transfer-Encoding: 7bit  
  
test3  
.  
dele 2  
+OK Marked to be deleted.  
list  
+OK 2 messages:  
1 456  
3 666  
.  
quit  
+OK Logging out, messages deleted.
```

Рис. 12: Просмотр письма, удаление, завершение сеанса в telnet

Внесение изменений в настройки  
внутреннего окружения  
виртуальной машины

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## Выполнение лабораторной работы



The screenshot shows a terminal window titled 'root@server: vagrant/provision/server'. The terminal is running the nano 5.6.1 text editor, editing a file named 'mail.sh'. The script content is as follows:

```
GNU nano 5.6.1 mail.sh Modified
#cp -R /vagrant/provision/server/mail/etc/* /etc

echo "Configure firewall"
firewall-cmd --add-service smtp --permanent
firewall-cmd --reload
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

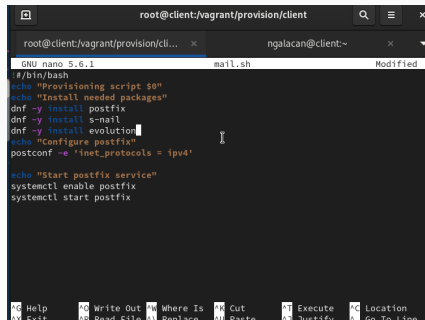
echo "Start postfix service"
systemctl enable postfix
systemctl start postfix

echo "Configure postfix"
postconf -e 'mydomain = user.net'
postconf -e 'myorigin = $mydomain'
postconf -e 'inet_protocols = ipv4'
postconf -e 'inet_interfaces = all'
postconf -e 'mydestination = $myhostname, localhost.$mydomain, localhost,
$mydomain'
postconf -e 'mynetworks = 127.0.0.0/8, 192.168.0.0/16'
postconf -e 'home_mailbox = Maildir/'
postfix set-permissions
restorecon -vR /etc
systemctl stop postfix
systemctl start postfix

systemctl restart postfix
systemctl enable dovecot
systemctl start dovecot
```

The bottom of the terminal shows the nano editor's command shortcuts: ^G Help, ^O Write Out, ^W Where Is, ^K Cut, ^T Execute, ^X Exit, ^R Read File, ^\_ Replace, ^U Paste, and ^J Justify.

Рис. 13: Редактирование mail.sh на сервере



The screenshot shows a terminal window titled 'root@client:/vagrant/provision/client'. The terminal is running the 'nano' text editor to edit a file named 'mail.sh'. The editor's status bar at the top indicates 'GNU nano 5.6.1', the filename 'mail.sh', and 'Modified'. The content of the script is as follows:

```
#!/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
```

The cursor is positioned at the end of the line 'dnf -y install evolution'. At the bottom of the terminal, a row of keyboard shortcuts is visible: H Help, W Write Out, W Where Is, C Cut, E Execute, L Location, X Exit, R Read File, R Replace, P Paste, J Justify, and G Go To Line.

Рис. 14: Редактирование mail.sh на клиенте



## Выводы

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