

Лабораторная работа №9

Администрирование сетевых подсистем

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Цели и задачи

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

Выполнение лабораторной работы

Установка Dovecot

- dnf -y install dovecot telnet.

Настройка dovecot

Почтовые протоколы

```
root@server:~# 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
```

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

Метод аутентификации

```
#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
##
```

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

Месторасположение почтовых ящиков

```
# %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 =
```

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

Postfix, firewall, dovecot

```
assel radius rdp redis redis-sentinel rpc-bind rquotad rsh rsyncd rtsp salt-master samba samba-client san  
ba-dc same sip sips sip smtp smtp-submission smtps smnp smptls snmptrap spideroak-lansync s  
potify-sync squid ssdp ssh ssh-custom steam-streaming svdrp svn syncthing syncthing-gui syncthing-relay s  
ynergy syslog syslog-tls telnet tentacle tftp tile38 tinc tor-socks transmission-client upnp-client vdsm  
vnc-server warpinator 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.aamishina.net ~]# firewall-cmd --add-service=pop3 --permanent  
success  
[root@server.aamishina.net ~]# firewall-cmd --add-service=pop3s --permanent  
success  
[root@server.aamishina.net ~]# firewall-cmd --add-service=imap --permanent  
success  
[root@server.aamishina.net ~]# firewall-cmd --add-service=imaps --permanent  
success  
[root@server.aamishina.net ~]# firewall-cmd --reload  
success  
[root@server.aamishina.net ~]# firewall-cmd --list-services  
cockpit dhcp dhcpv6-client dns http https imap imaps pop3 pop3s smtp ssh ssh-custom  
[root@server.aamishina.net ~]# restorecon -vR /etc  
Relabeled /etc/sysconfig/network-scripts/ifcfg-eth1 from unconfined_u:object_r:unconfined_u_t:s0 to unconfine  
d_u:object_r:net_conf_t:s0  
[root@server.aamishina.net ~]# systemctl restart postfix  
[root@server.aamishina.net ~]# systemctl enable dovecot  
Created symlink /etc/systemd/system/multi-user.target.wants/dovecot.service → /usr/lib/systemd/system/dov  
ecot.service.  
[root@server.aamishina.net ~]# systemctl start dovecot  
[root@server.aamishina.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.aamishina.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.aamishina.net ~]# dovecadm mailbox list -u aamishina
INBOX
[root@server.aamishina.net ~]#
```

Рис. 5: Просмотр почты и mailbox

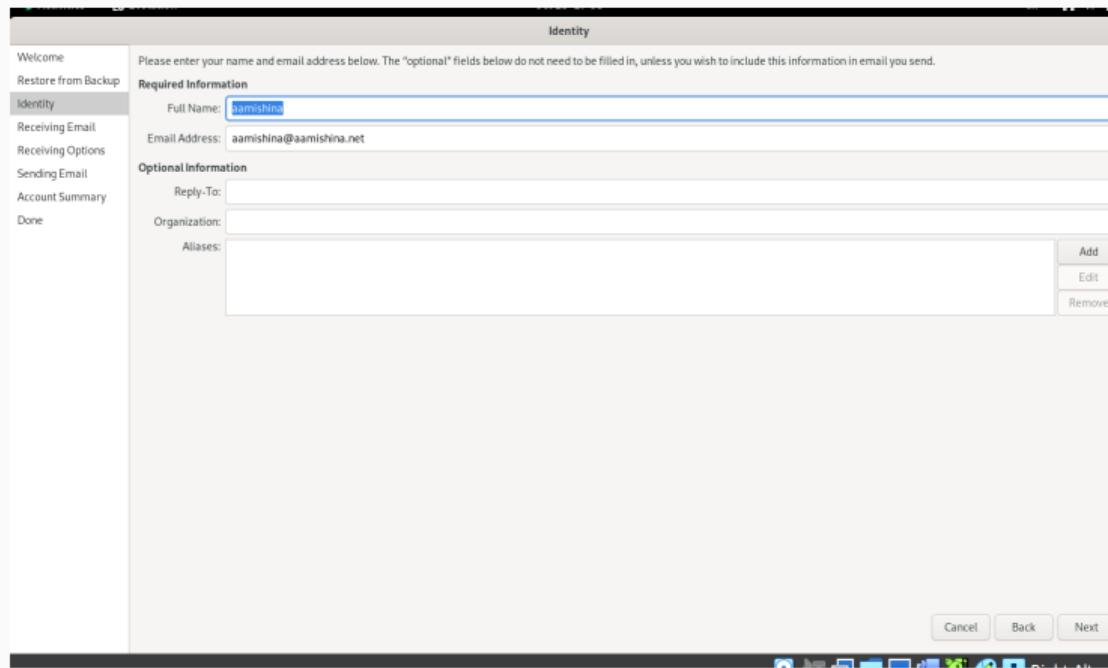


Рис. 6: Evolution: настройка учетной записи

Evolution

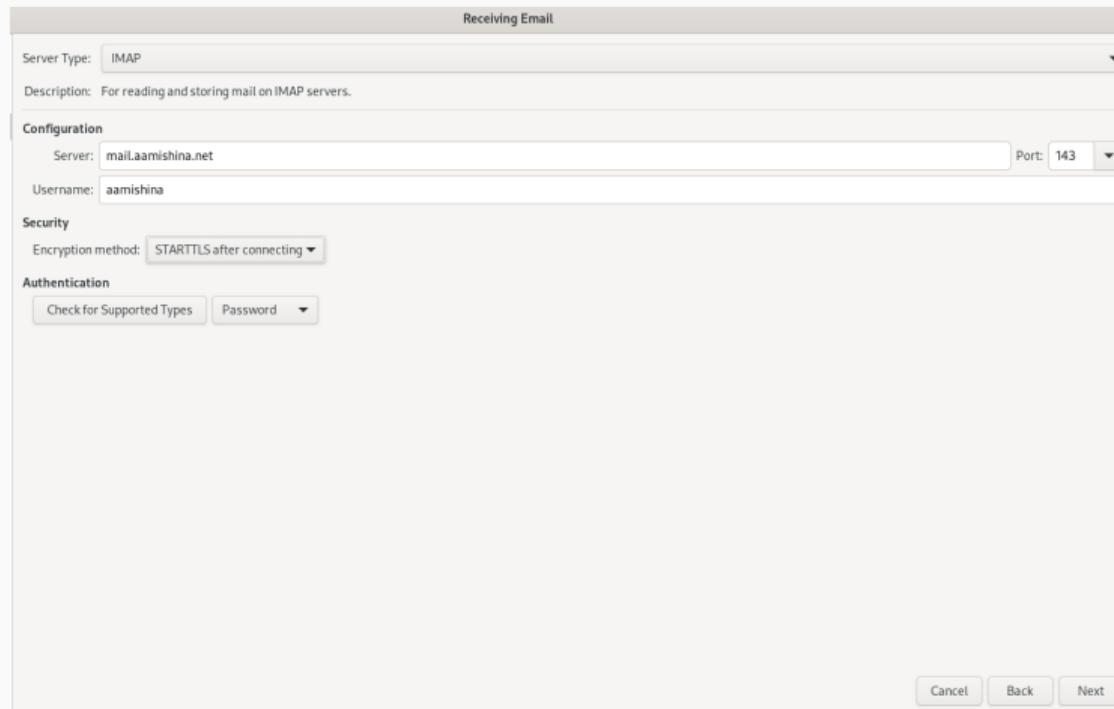


Рис. 7: Evolution: настройка IMAP-сервера для входящих сообщений

Evolution

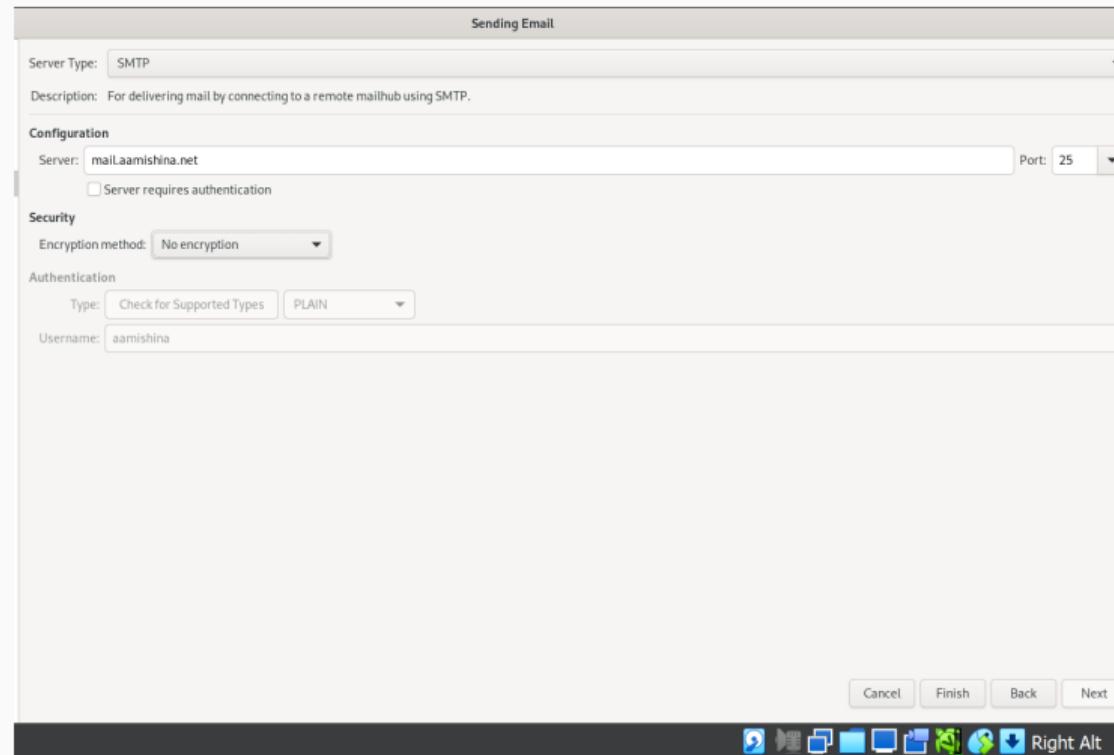


Рис. 8: Evolution: настройка SMTP-сервера для исходящих сообщений

Письма

```
Oct 25 17:44:40 server dovecot[7624]: master: Dovecot v2.3.16 (7e2e900c1a) starting up for imap, pop3 (co
re dumps disabled)
Oct 25 17:59:11 server dovecot[7626]: imap-login: Login: user=<aamishina>, method=PLAIN, rip=192.168.1.57
, lip=192.168.1.1, mpid=7765, TLS, session=<k5RS4FAlHLrAqAE5>
Oct 25 18:02:26 server postfix/smtpd[7784]: connect from unknown[192.168.1.57]
Oct 25 18:02:26 server postfix/smtpd[7784]: 57A0D52EB1: client=unknown[192.168.1.57]
Oct 25 18:02:26 server postfix/cleanup[7788]: 57A0D52EB1: message-id=<7488327f555f1b75dda984c029c83207a1f
b9bfe.camel@aamishina.net>
Oct 25 18:02:26 server postfix/qmgr[7582]: 57A0D52EB1: from=<aamishina@aamishina.net>, size=539, nrcpt=1
(queue active)
Oct 25 18:02:26 server postfix/smtpd[7784]: disconnect from unknown[192.168.1.57] ehlo=1 mail=1 rcpt=1 da
ta=1 quit=1 commands=5
Oct 25 18:02:26 server postfix/local[7789]: 57A0D52EB1: to=<aamishina@aamishina.net>, relay=local, delay=
0.13, delays=0.09/0.03/0/0, dsn=2.0.0, status=sent (delivered to maildir)
Oct 25 18:02:26 server postfix/qmgr[7582]: 57A0D52EB1: removed
Oct 25 18:03:21 server postfix/smtpd[7784]: connect from unknown[192.168.1.57]
Oct 25 18:03:21 server postfix/smtpd[7784]: 34D2C52EB1: client=unknown[192.168.1.57]
Oct 25 18:03:21 server postfix/cleanup[7788]: 34D2C52EB1: message-id=<1210440a5da4cf01eb0bd32c5d021c1710b
51564.camel@aamishina.net>
Oct 25 18:03:21 server postfix/qmgr[7582]: 34D2C52EB1: from=<aamishina@aamishina.net>, size=540, nrcpt=1
(queue active)
Oct 25 18:03:21 server postfix/smtpd[7784]: disconnect from unknown[192.168.1.57] ehlo=1 mail=1 rcpt=1 da
ta=1 quit=1 commands=5
Oct 25 18:03:21 server postfix/local[7789]: 34D2C52EB1: to=<aamishina@aamishina.net>, relay=local, delay=
0.08, delays=0.06/0/0/0.01, dsn=2.0.0, status=sent (delivered to maildir)
Oct 25 18:03:21 server postfix/qmgr[7582]: 34D2C52EB1: removed
```

Рис. 9: Просмотр мониторинга почтовой службы на сервере

Письма

```
[aamishina@server.aamishina.net ~]$ MAIL=~/.Maildir mail
s-nail version v14.9.22. Type '?' for help
/home/aamishina/Maildir: 2 messages 2 unread
•U 1 aamishina          2024-10-25 18:02  18/640
U 2 aamishina          2024-10-25 18:03  18/641
& Interrupt
& Interrupt
& exit
[aamishina@server.aamishina.net ~]$ sudo dovecadm mailbox list -u aamishina
[sudo] password for aamishina:
INBOX
[aamishina@server.aamishina.net ~]$ █
```

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

telnet

```
[aamishina@server.aamishina.net ~]$ sudo -i  
[sudo] password for aamishina:  
[root@server.aamishina.net ~]# telnet mail.aamishina.net 110  
Trying 192.168.1.1...  
Connected to mail.aamishina.net.  
Escape character is '^]'.  
+OK Dovecot ready.  
user aamishina  
+OK  
pass 123456  
+OK Logged in.  
list  
+OK 2 messages:  
1 658  
2 659  
:
```

Рис. 11: Подключение с помощью telnet и просмотр писем

telnet

```
retr 1
+OK 658 octets
Return-Path: <aamishina@aamishina.net>
X-Original-To: aamishina@aamishina.net
Delivered-To: aamishina@aamishina.net
Received: from client.aamishina.net (unknown [192.168.1.57])
        by server.aamishina.net (Postfix) with ESMTP id 57A0052EB1
        for <aamishina@aamishina.net>; Fri, 25 Oct 2024 18:02:26 +0000 (UTC)
Message-ID: <7488327f555f1675dda984c829c83207a1fb9bfe.camel@aamishina.net>
Subject: 
From: aamishina <aamishina@aamishina.net>
To: aamishina@aamishina.net
Date: Fri, 25 Oct 2024 18:02:25 +0000
Content-Type: text/plain
User-Agent: Evolution 3.40.4 (3.40.4-18.el9)
MIME-Version: 1.0
Content-Transfer-Encoding: 7bit

hello, evolution

.

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

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

Внесение изменений в настройки внутреннего окружения виртуальной машины

```
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/'

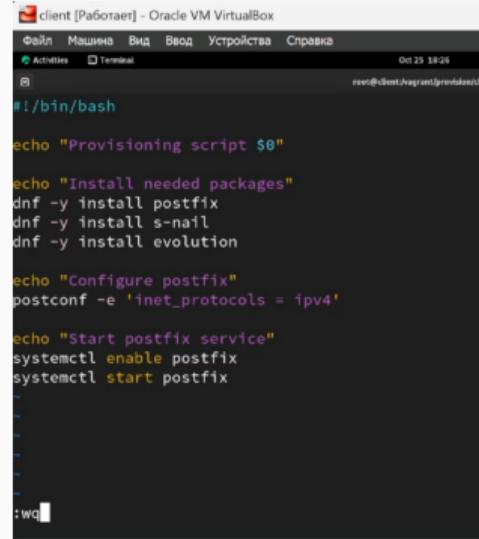
postfix set-permissions

restorecon -vR /etc

systemctl stop postfix
systemctl start postfix

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

Рис. 13: Редактирование mail.sh на сервере



The screenshot shows a terminal window titled "client [Работает] - Oracle VM VirtualBox". The window has a dark theme and displays a bash script being edited. The script content 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
~  
~  
~  
~  
~  
~  
:wq
```

Рис. 14: Редактирование mail.sh на клиенте

Выводы

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