Лабораторная работа №10

Тема «Расширенные настройки SMTP-сервера»

по дисциплине «Администрирование сетевых подсистем»

Выполнил: Щербак Маргарита Романовна

Студент группы: НПИбд-02-21

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Цель работы:

Приобретение практических навыков по конфигурированию SMTP-сервера в части настройки аутентификации.

Задание

1. Настроить Dovecot для работы с LMTP.
2. Настроить аутентификацию посредством SASL на SMTP-сервере.
3. Настроить работу SMTP-сервера поверх TLS.
4. Скорректировать скрипт для Vagrant, фиксирующий действия расширенной настройки SMTP-сервера во внутреннем окружении виртуальной машины server.

Выполнение работы

Настройка LMTP в Dovecote

mc [root@server.mrshcherbak.net]:/etc/dovecot/conf.d

```
10-master.conf      [-M--]  0 L:[ 53+24  77/133] *(1918/3642b) 0010 0x00A

service lmtp {
  unix_listener /var/spool/postfix/private/dovecot-lmtp {
    group = postfix
    user = postfix
    mode = 0600
  }

  # Create inet listener only if you can't use the above UNIX socket
  #inet_listener lmtp {
    # Avoid making LMTP visible for the entire internet
    #address =
    #port =
  #}
}

service imap {
  # Most of the memory goes to mmap()ing files. You may need to increase this
  # limit if you have huge mailboxes.
  #vsz_limit = $default_vsz_limit

  # Max. number of IMAP processes (connections)
  #process_limit = 1024
}

service pop3 {
  # Max. number of POP3 processes (connections)
  #process_limit = 1024
}

service submission {
  # Max. number of SMTP Submission processes (connections)
  #process_limit = 1024
}

service auth {
1Help  2Save  3Mark  4Replac  5Copy
```

mc [root@server.mrshcherbak.net]:/etc/dovecot

```
dovecot.conf        [B---]  0 L:[ 12+13  25/103] *(1194/4360b) 0112 0x070
# 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 lmtp submission
protocols = imap pop3 lmtp

# 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,
```

Настройка в Dovecot сервиса lmtp для связи с Postfix

```
[root@server.mrshcherbak.net conf.d]# postconf -e 'mailbox_transport = lmtp:unix:private/dovecot-lmtp'
```

mc [root@server.mrshcherbak.net]:/etc/dovecot/conf.d

```
10-auth.conf       [BM--]  0 L:[ 45+ 6  51/128] *(2476/5247b) 0097 0x061
#auth_username_translation =

# Username formatting before it's looked up from databases. You can use
# the standard variables here, eg. %Lu would lowercase the username, %n would
# drop away the domain if it was given, or "%n-AT-%d" would change the '@' into
# "-AT-". This translation is done after auth_username_translation changes.
auth_username_format = %Ln

# If you want to allow master users to log in by specifying the master
# username within the normal username string (ie. not using SASL mechanism's
# support for it), you can specify the separator character here. The format
# is then <username><separator><master username>. UW-IMAP uses "*" as the
# separator, so that could be a good choice.
```

```
[root@server.mrshcherbak.net conf.d]# systemctl restart postfix
[root@server.mrshcherbak.net conf.d]# systemctl restart dovecot
```

```
[mrshcherbak@client.mrshcherbak.net ~]$ echo .| mail -s "LMTP test" mrshcherbak@mrshcherbak.net
```

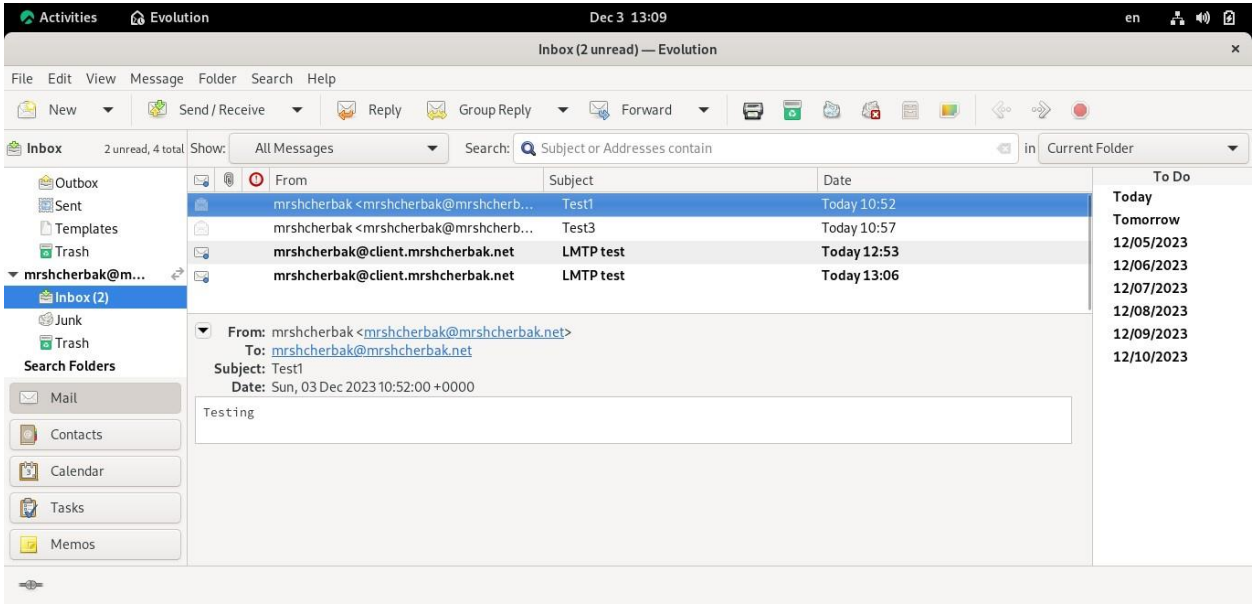
Activities Terminal Dec 3 13:10 en

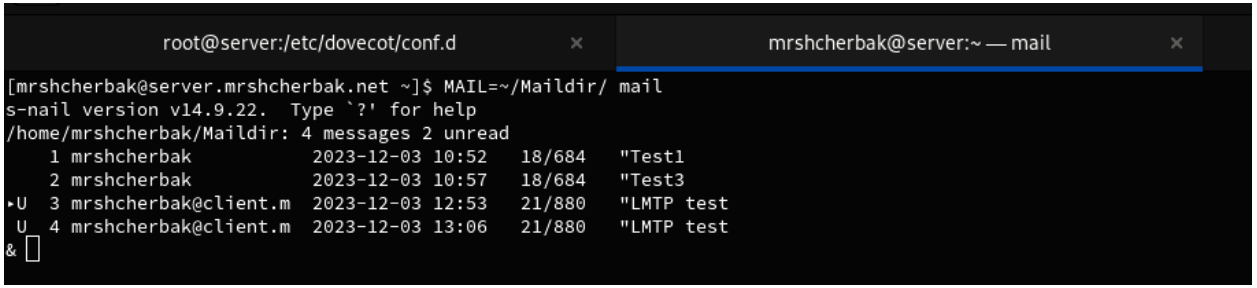
root@server:~

root@server:/etc/dovecot/conf.d | mrshcherbak@server:~ — mail | root@server:~

```
[mrshcherbak@server.mrshcherbak.net ~]$ sudo -i
[sudo] password for mrshcherbak:
[root@server.mrshcherbak.net ~]# tail -f /var/log/maillog
Dec  3 11:06:54 server dovecot[12011]: master: Dovecot v2.3.16 (7e2e900c1a) starting up for imap, pop3 (core dumps disabled)
Dec  3 11:10:13 server dovecot[12011]: master: Warning: Killed with signal 15 (by pid=12086 uid=0 code=kill)
Dec  3 11:10:14 server dovecot[12095]: master: Dovecot v2.3.16 (7e2e900c1a) starting up for imap, pop3 (core dumps disabled)
Dec  3 11:11:16 server dovecot[12095]: master: Warning: Killed with signal 15 (by pid=12142 uid=0 code=kill)
Dec  3 11:11:17 server dovecot[12097]: log(12097): Warning: Killed with signal 15 (by pid=1 uid=0 code=kill)
Dec  3 11:11:17 server dovecot[12151]: master: Dovecot v2.3.16 (7e2e900c1a) starting up for imap, pop3 (core dumps disabled)
Dec  3 11:20:11 server dovecot[12153]: pop3-login: Login: user=<mrshcherbak>, method=PLAIN, rip=192.168.1.1, lip=192.168.1.1, mpid=12350, secured, session=<mVJFL5kLVqDAqAEB>
Dec  3 11:20:59 server dovecot[12153]: pop3(mrshcherbak)<12350><mVJFL5kLVqDAqAEB>: Disconnected: Logged out top=0/0, retr=1/718, del=1/3, size=2106
Dec  3 11:21:46 server dovecot[12153]: imap-login: Login: user=<mrshcherbak>, method=PLAIN, rip=192.168.1.31, lip=192.168.1.1, mpid=12398, TLS, session=<i/nrNJkLLsjAqAEf>
Dec  3 11:42:50 server dovecot[12153]: imap(mrshcherbak)<12398><i/nrNJkLLsjAqAEf>: Disconnected: Connection closed (IDLE finished 1255.983 secs ago) in=422 out=1601 deleted=0 expunged=0 trashed=0 hdr_count=0 hdr_bytes=0 body_count=0 body_bytes=0
Dec  3 12:51:05 server postfix/postfix-script[13963]: stopping the Postfix mail system
Dec  3 12:51:05 server postfix/master[10358]: terminating on signal 15
Dec  3 12:51:07 server postfix/postfix-script[14041]: starting the Postfix mail system
Dec  3 12:51:07 server postfix/master[14043]: daemon started -- version 3.5.9, configuration /etc/postfix
Dec  3 12:51:13 server dovecot[12151]: master: Warning: Killed with signal 15 (by pid=14048 uid=0 code=kill)
Dec  3 12:51:14 server dovecot[12153]: log(12153): Warning: Killed with signal 15 (by pid=1 uid=0 code=kill)
Dec  3 12:51:15 server dovecot[14057]: master: Dovecot v2.3.16 (7e2e900c1a) starting up for imap, pop3, lmtp (core dumps disabled)
Dec  3 12:55:00 server postfix/smtpd[14124]: connect from client.mrshcherbak.net[192.168.1.31]
Dec  3 12:55:00 server postfix/smtpd[14124]: 299741071462: client=client.mrshcherbak.net[192.168.1.31]
Dec  3 12:55:00 server postfix/cleanup[14128]: 299741071462: message-id=<20231203125459.BE9C0104D6F4@client.mrshcherbak.net>
Dec  3 12:55:00 server postfix/qmgr[14045]: 299741071462: from=<mrshcherbak@client.mrshcherbak.net>, size=576, nrcpt=1 (queue active)
Dec  3 12:55:00 server postfix/smtpd[14124]: disconnect from client.mrshcherbak.net[192.168.1.31] ehlo=2 starttls=1 mail=1 rcpt=1 data=1 quit=1 commands=7
Dec  3 12:55:00 server dovecot[14059]: lmtp(14131): Connect from local
Dec  3 12:55:00 server dovecot[14059]: lmtp(mrshcherbak)<14131><22sdEKR6bGUzNwAAGBK6FQ>: msgid=<20231203125459.BE9C0104D6F4@client.mrshcherbak.net>: saved mail to INBOX
Dec  3 12:55:00 server postfix/lmtp[14130]: 299741071462: to=<mrshcherbak@mrshcherbak.net>, relay=server.mrshcherbak.net[private/dovecot-lmtp], delay=0.19, delays=0.02/0.02/0.08/0.07, dsn=2.0.0, status=sent (250 2.0.0 <mrshcherbak@mrshcherbak.net> 22sdEKR6bGUzNwAAGBK6FQ Saved)
Dec  3 12:55:00 server postfix/qmgr[14045]: 299741071462: removed
Dec  3 12:55:00 server dovecot[14059]: lmtp(14131): Disconnect from local: Logged out (state=READY)
Dec  3 13:06:15 server postfix/smtpd[14266]: connect from client.mrshcherbak.net[192.168.1.31]
Dec  3 13:06:15 server postfix/smtpd[14266]: 8E8701071462: client=client.mrshcherbak.net[192.168.1.31]
Dec  3 13:06:15 server postfix/cleanup[14269]: 8E8701071462: message-id=<20231203130615.39C75100592C@client.mrshcherbak.net>
Dec  3 13:06:15 server postfix/qmgr[14045]: 8E8701071462: from=<mrshcherbak@client.mrshcherbak.net>, size=576, nrcpt=1 (queue active)
Dec  3 13:06:15 server postfix/smtpd[14266]: disconnect from client.mrshcherbak.net[192.168.1.31] ehlo=2 starttls=1 mail=1 rcpt=1 data=1 quit=1 commands=7
Dec  3 13:06:15 server dovecot[14059]: lmtp(14272): Connect from local
```

Проверка доставки писем





Настройка SMTP-аутентификации

Фрагмент конфигурации в файле настраивает службу аутентификации пользователей

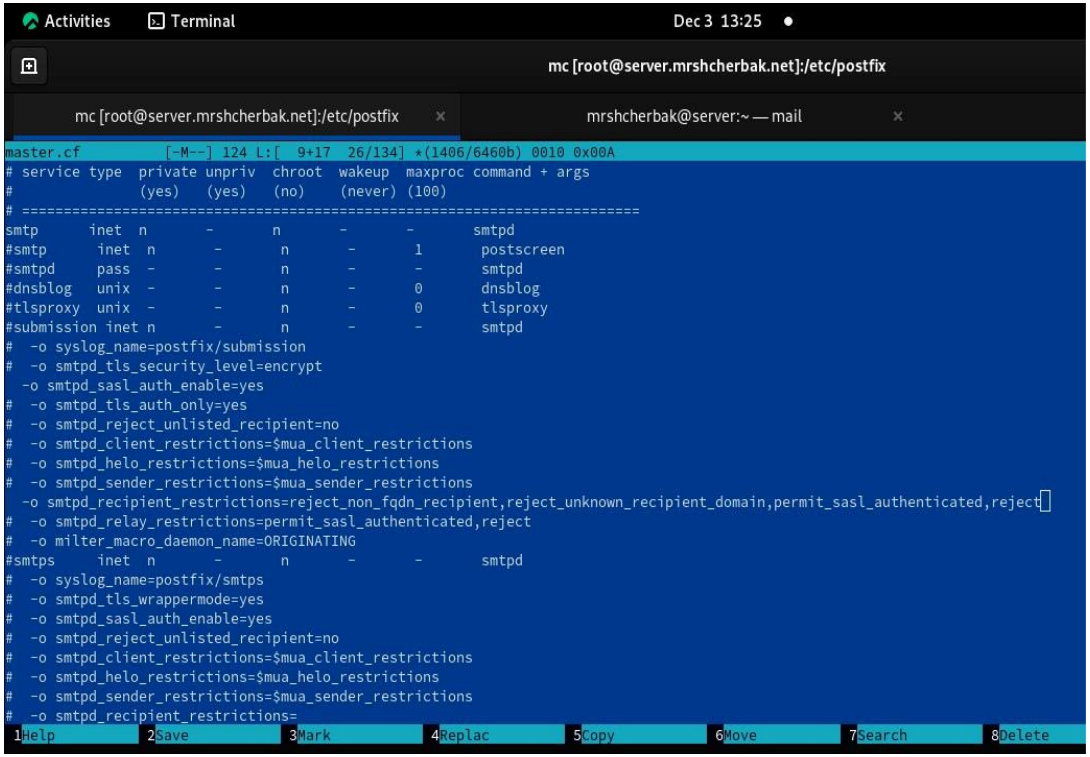
mc [root@server.mrshcherbak.net]:/etc/dovecot/conf.d

/etc/dovecot/conf.d/10-master.conf

```
service auth {
  # auth_socket_path points to this userdb socket by default. It's typically
  # used by dovecot-lda, doveadm, possibly imap process, etc. Users that have
  # full permissions to this socket are able to get a list of all usernames and
  # get the results of everyone's userdb lookups.
  #
  # The default 0666 mode allows anyone to connect to the socket, but the
  # userdb lookups will succeed only if the userdb returns an "uid" field that
  # matches the caller process's UID. Also if caller's uid or gid matches the
  # socket's uid or gid the lookup succeeds. Anything else causes a failure.
  #
  # To give the caller full permissions to lookup all users, set the mode to
  # something else than 0666 and Dovecot lets the kernel enforce the
  # permissions (e.g. 0777 allows everyone full permissions).
  unix_listener /var/spool/postfix/private/auth {
    group = postfix
    user = postfix
    mode = 0660
  }

  # Postfix smtp-auth
  unix_listener auth-userdb {
    mode = 0600
    user = dovecot
  }

  # Auth process is run as this user.
  #user = $default_internal_user
}

service auth-worker {
  # Auth worker process is run as root by default, so that it can access
  # /etc/shadow. If this isn't necessary, the user should be changed to
  # $default_internal_user.
  #user = root
```

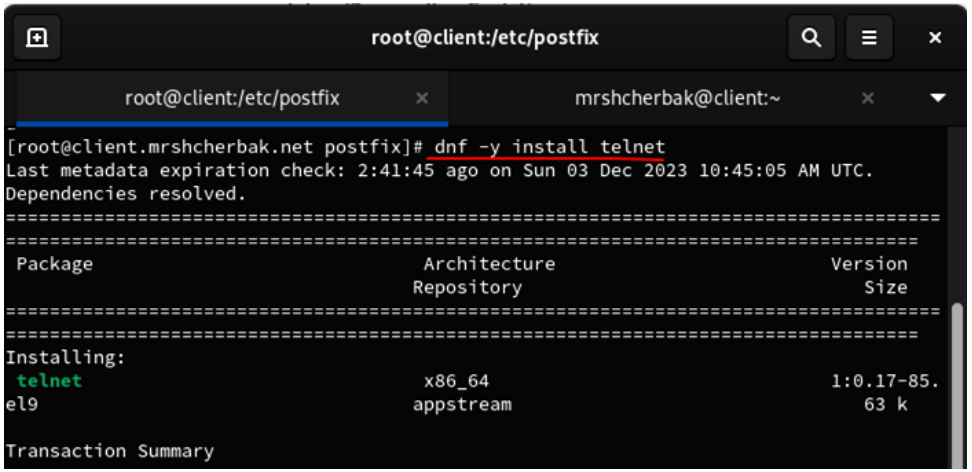
1Help 2UnWrap 3Quit 4Hex 5Goto

```
[root@server.mrshcherbak.net conf.d]# postconf -e 'smtpd_sasl_type = dovecot'
[root@server.mrshcherbak.net conf.d]# postconf -e 'smtpd_sasl_path = private/auth'
[root@server.mrshcherbak.net conf.d]# postconf -e 'smtpd_recipient_restrictions = reject_unknown_recipient_domain, pe
rmit_mynetworks, reject_non_fqdn_recipient, reject_unauth_destination, reject_unverified_recipient, permit'
[root@server.mrshcherbak.net conf.d]# postconf -e 'mynetworks = 127.0.0.0/8'
[root@server.mrshcherbak.net conf.d]#
```




```
[root@server.mrshcherbak.net conf.d]# systemctl restart postfix
[root@server.mrshcherbak.net conf.d]# systemctl restart dovecot
```

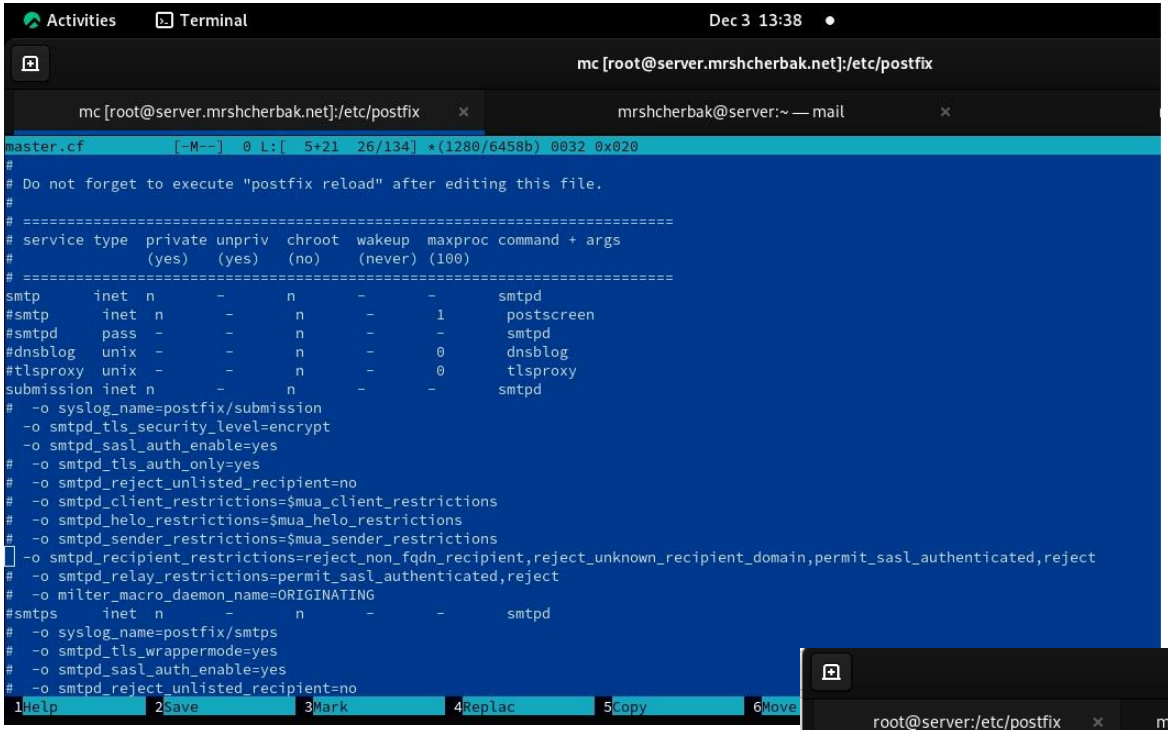
Установка telnet



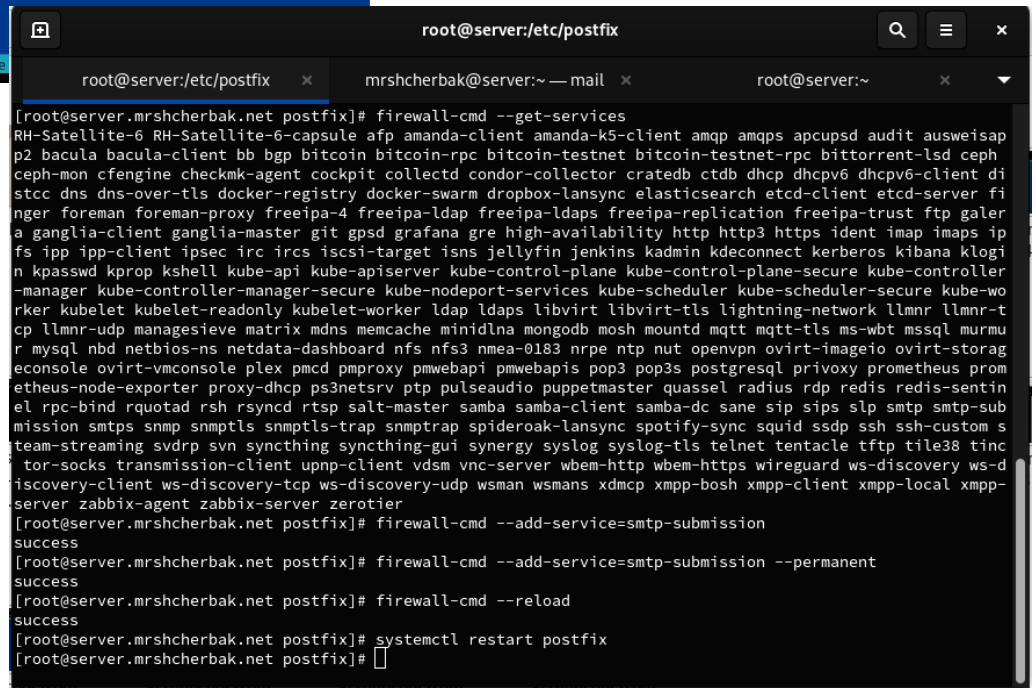
```
[root@client.mrshcherbak.net postfix]# printf 'mrshcherbak\x00mrshcherbak\x00Rastamana035' | base64
bXJzaGNoZXJiYWsAbXJzaGNoZXJiYWsAUmFzdGFtYW5hMDM1
[root@client.mrshcherbak.net postfix]# telnet server.mrshcherbak.net 25
Trying 192.168.1.1...
Connected to server.mrshcherbak.net.
Escape character is '^]'.
220 server.mrshcherbak.net ESMTP Postfix
EHLO test
250-server.mrshcherbak.net
250-PIPELINING
250-SIZE 10240000
250-VRFY
250-ETRN
250-STARTTLS
250-AUTH PLAIN
250-ENHANCEDSTATUSCODES
250-8BITMIME
250-DSN
250-SMTPUTF8
250 CHUNKING
AUTH PLAIN bXJzaGNoZXJiYWsAbXJzaGNoZXJiYWsAUmFzdGFtYW5hMDM1
235 2.7.0 Authentication successful
quit
221 2.0.0 Bye
Connection closed by foreign host.
[root@client.mrshcherbak.net postfix]#
```

Настройка SMTP over TLS

```
[root@server.mrshcherbak.net ~]# cp /etc/pki/dovecot/certs/dovecot.pem /etc/pki/tls/certs
[root@server.mrshcherbak.net ~]# cp /etc/pki/dovecot/private/dovecot.pem /etc/pki/tls/private
[root@server.mrshcherbak.net ~]# postconf -e 'smtpd_tls_cert_file=/etc/pki/tls/certs/dovecot.pem'
[root@server.mrshcherbak.net ~]# postconf -e 'smtpd_tls_key_file=/etc/pki/tls/private/dovecot.pem'
[root@server.mrshcherbak.net ~]# postconf -e 'smtpd_tls_session_cache_database = btree:/var/lib/postfix/smtpd_scache'
[root@server.mrshcherbak.net ~]# postconf -e 'smtpd_tls_security_level = may'
[root@server.mrshcherbak.net ~]# postconf -e 'smtp_tls_security_level = may'
[root@server.mrshcherbak.net ~]#
```



Настроила межсетевой экран, разрешив работать службе smtp-submission и перезапустила Postfix



Activities Terminal Dec 3 14:15

root@client:/etc/postfix

```
[root@client.mrshcherbak.net postfix]# openssl s_client -starttls smtp -crlf -connect server.mrshcherbak.net:587
CONNECTED(00000003)
depth=0 OU = IMAP server, CN = imap.example.com, emailAddress = postmaster@example.com
verify error:num=18:self-signed certificate
verify return:1
depth=0 OU = IMAP server, CN = imap.example.com, emailAddress = postmaster@example.com
verify return:1
---
Certificate chain
 0 s:OU = IMAP server, CN = imap.example.com, emailAddress = postmaster@example.com
   i:OU = IMAP server, CN = imap.example.com, emailAddress = postmaster@example.com
   a:PKEY: rsaEncryption, 3072 (bit); sigalg: RSA-SHA256
   v:NotBefore: Dec  3 09:54:22 2023 GMT; NotAfter: Dec  2 09:54:22 2024 GMT
---
Server certificate
-----BEGIN CERTIFICATE-----
MIIEcjCCAtqgAwIBAgIUSlyNLAx9Ttvs8GnT9gFjYCAt67QwDQYJKoZIhvcNAQEL
BQAwWDEUMBIGA1UECwwLSU1BUCBzZXJ2ZXIxGTAXBgNVBAMMEGltYXAuZXhhbXBs
ZS5jb20xJTAjBgkqhkiG9w0BCQEWFnBvc3RtYXN0ZXJAZXhhbXBsZS5jb20wHhcN
MjMxMjAzMDk1NDIyWhcNMjQxMjAyMDk1NDIyWjBYMRQwEgYDVQQLDAtJTUFQIHNl
cnZlcjEZMBcGA1UEAwwQaW1hcC5leGFtcGxlLmNvbTElMCMGCSqGSIb3DQEJARYW
cG9zdG1hc3RlckBleGFtcGxlLmNvbTCCAaIwDQYJKoZIhvcNAQEBBQADggGPADCC
AYoCggGBAKjXz4pvlGve9aGes0e9XFkIyNjhlC0eliltYY9baARudgmldgoTjMt
uRjzJheQDiVE8RxS42/5XdmmJcqexMU1uSLOrpDWEYwa3K0KmLCapwNjHPAxoxjD
rGPOPaTh9txzE571cTT3QFsO2Praht5+xyzm9CVAV0aGpSlnPtblAG6ESc6hk4b9
CAZwndm3W+PSDdexNTukuiTBbpXEE8phfw5R45fugHxzY4juwhyVarBd9kGB2ARD
9PJvJ+SJoI0E/JFuy7b7eRGXgXOvfCN27eWMzuL5MCAB5QGkkdVT3Cee0ukgLYpH
Bac5VLXvmqyQ/cwFbnMBMbisTZeBJpXFrHO4yXfWOAHQ/5PyQ8teBNYpvmUZFFf4
2NJfvBnerMWSCoJwirrm0DtZ+9T7yp5xHSQizfg3reJnOV/tYR5RMRop2RKeJdGp
q9/QAsGsUDHa7YM58ZNKUgparjyul+LNoDggTtT3VceBIXai0JjIZPwLXAKe9AXF
dBMAk6prlwIDAQABozQwMjARBglghkgBhvhCAQEEBAMCBkAwHQYDVR0OBBYEFNIq
qu++RRqnRi7qvikL5WlCkd7FMA0GCSqGSIb3DQEBCwUAA4IBgQCkNwPW2sDhpX2v
aQIctj50xJTq6Ht0uShoKJ2yf+oDbQuB64B7QSD6PGYU8JZkCBQKf81oHvQEy7Bh
Xp8Nn4y37LAXLhrvDaMWp8Rc45dY4RAtjJLHgOB+6HwS6lIIvGAMfr2kvQufO8o9
HMAU2sL2qz8+Y+72C26umibJOwVheiUtESTvU4DHrET7HlCxpDezRZXC7hF8oiJY
5qSplnlviJJorjh9nQqfwPclgRWETnI4ckzpdayB2TXFdRHBUzzDAtkBdV/e79Eq
lb2SYmkMmazrVQhNtWj3dW0vcECgkLkhOryc2OvZjzEEQ8DkrlOHpLYwsKRAIWld
P8U+K0LcHIVk7v4S4qVnUkKc4ZvbdqLw8i7MK0amtDqGu5lXCvtE0A4ypVaHAfOH
bsf4ZT2/rrQKRCrAEtNkpBjymscZFeySaIuRowe/aLy1620z/uU/US4znmzJylAO
KZnOqReYGdGDSFnk/+CbtzAvM0nK6QS+CFJNfohOjx0RGaSU7Tc=
-----END CERTIFICATE-----
```

Подключение к SMTP-серверу через 587-й порт посредством openssl

Activities Terminal Dec 3 14:15

root@client:/etc/postfix

```
subject=OU = IMAP server, CN = imap.example.com, emailAddress = postmaster@example.com
issuer=OU = IMAP server, CN = imap.example.com, emailAddress = postmaster@example.com
---
No client certificate CA names sent
Peer signing digest: SHA256
Peer signature type: RSA-PSS
Server Temp Key: X25519, 253 bits
---
SSL handshake has read 2071 bytes and written 439 bytes
Verification error: self-signed certificate
---
New, TLSv1.3, Cipher is TLS_AES_256_GCM_SHA384
Server public key is 3072 bit
Secure Renegotiation IS NOT supported
Compression: NONE
Expansion: NONE
No ALPN negotiated
Early data was not sent
Verify return code: 18 (self-signed certificate)
---
250 CHUNKING
---
Post-Handshake New Session Ticket arrived:
SSL-Session:
    Protocol  : TLSv1.3
    Cipher    : TLS_AES_256_GCM_SHA384
    Session-ID: FA2B395E5C3CA73497519A7650C43FD3CF0F6E80CC7C00A216586672A6AFB281
    Session-ID-ctx:
    Resumption PSK: 171EFE9ECBA73F12B28A457BD99F43FBC41ABBAE37DC7541BB448ED7BE0C72FEF2E54DA4D19F9584525533437CDEF1AF
    PSK identity: None
    PSK identity hint: None
    SRP username: None
    TLS session ticket lifetime hint: 7200 (seconds)
    TLS session ticket:
    0000 - 62 97 9b 65 e7 ac 98 5d-e8 8d 07 46 be 76 4c 53   b..e...]...F.vLS
    0010 - 7c 96 05 17 e8 9d 21 f3-84 98 0e 97 6d 5d c8 88   |.....!.....m]..
    0020 - 4a 5e 48 e5 fb ef 23 c7-57 9f bb 82 aa 86 ab 2b   J^H...#.W......+
    0030 - 01 16 c7 b4 83 4f 44 5e-69 7c b8 06 5a ef 5c c2   .....OD^i|..Z.\.
    0040 - 64 7d 9f a9 41 3d 02 34-25 8b c7 e4 69 aa 6a c9   d}..A=.4%...i.j.
    0050 - 65 0a 96 d4 9e 27 53 fd-5e 23 15 e8 7c af 9c cb   e....'S.^#..|...
    0060 - 29 73 70 77 e8 d2 c5 98-11 62 50 c0 7a 5e 60 07   )spw.....bP.z^`.
```

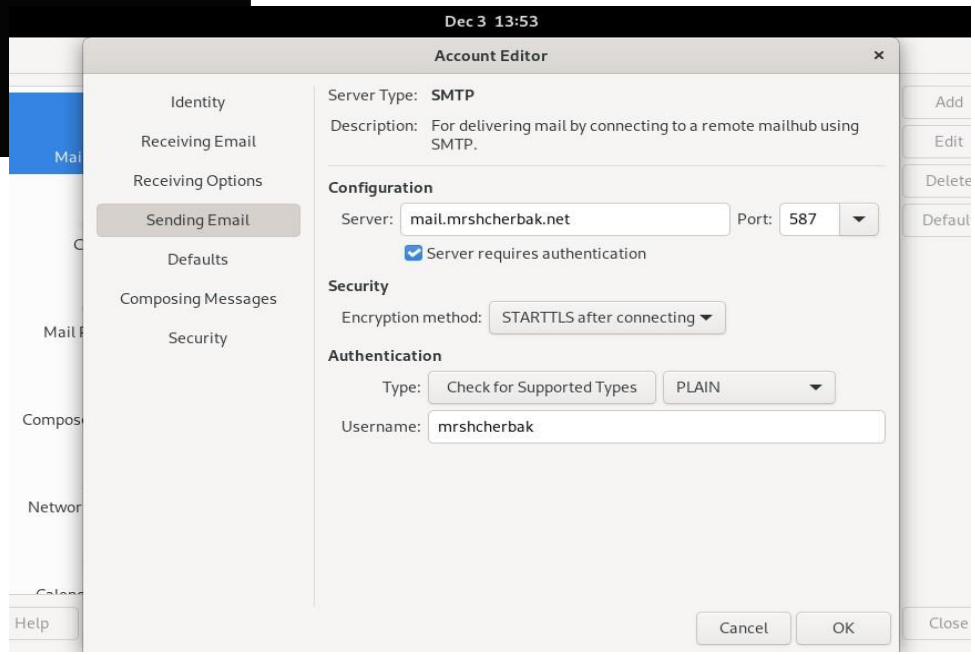
Activities Terminal Dec 3 14:15

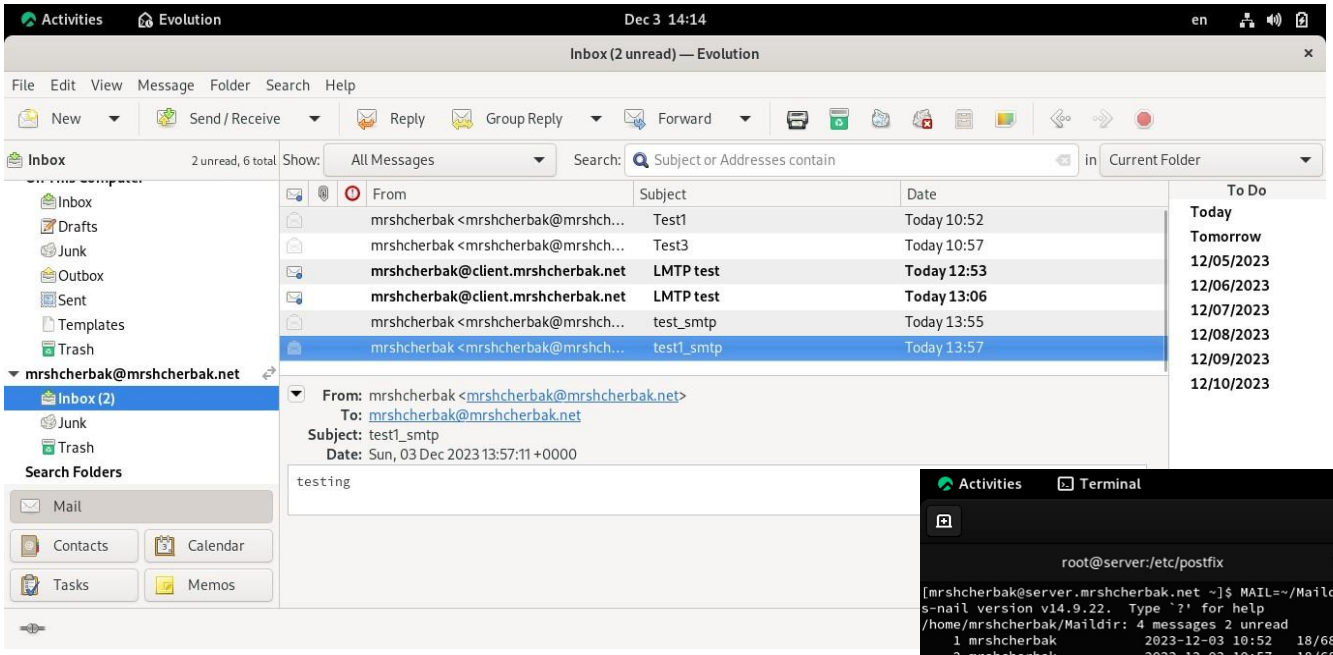
root@client:/etc/postfix

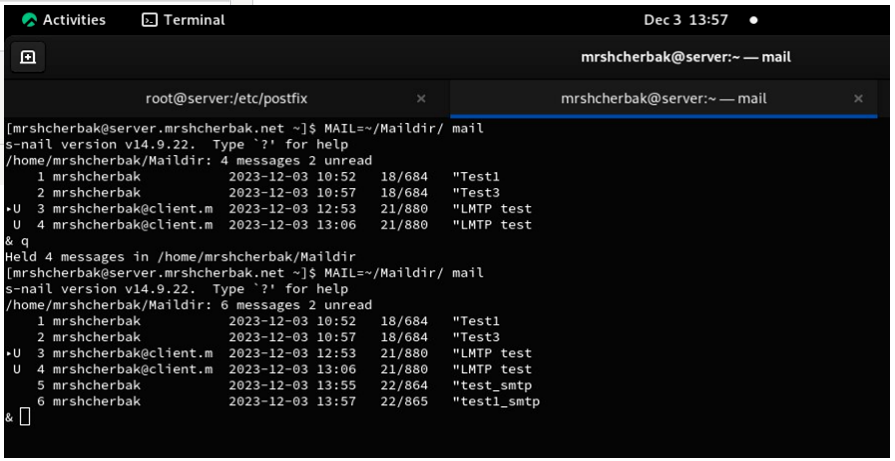
```
    TLS session ticket:
    0000 - 62 97 9b 65 e7 ac 98 5d-e8 8d 07 46 be 76 4c 53   b..e...]...F.vLS
    0010 - 7c 96 05 17 e8 9d 21 f3-84 98 0e 97 6d 5d c8 88   |.....!.....m]..
    0020 - 4a 5e 48 e5 fb ef 23 c7-57 9f bb 82 aa 86 ab 2b   J^H...#.W......+
    0030 - 01 16 c7 b4 83 4f 44 5e-69 7c b8 06 5a ef 5c c2   .....OD^i|..Z.\.
    0040 - 64 7d 9f a9 41 3d 02 34-25 8b c7 e4 69 aa 6a c9   d}..A=.4%...i.j.
    0050 - 65 0a 96 d4 9e 27 53 fd-5e 23 15 e8 7c af 9c cb   e....'S.^#..|...
    0060 - 29 73 70 77 e8 d2 c5 98-11 62 50 c0 7a 5e 60 07   )spw.....bP.z^`.
    0070 - c5 c8 82 77 ec 89 5b c6-3a 74 50 b1 d2 6f 47 23   ...w..[.:tP..oG#
    0080 - 58 52 e8 20 18 0e 58 96-0a 6e ed 78 39 3b 2c bd   XR. ..X..n.x9;,.
    0090 - 16 3c 75 92 79 49 a7 76-9b a0 69 bc 40 bb e7 5b   .<u.yI.v..i.@..[
    00a0 - 9b 89 1d 1c ac 2a ee 39-39 6b 8f 21 0a 40 8c 72   .....*.99k.!.@.r
    00b0 - f1 0b d4 af ea 56 a8 d7-db 08 49 99 ce 1a 15 fc   .....V....I.....
    00c0 - e1 f9 1e 19 70 0d 41 c8-34 c6 3a 23 c8 e7 1c 6a   ....p.A.4.:#...j

    Start Time: 1701610830
    Timeout   : 7200 (sec)
    Verify return code: 18 (self-signed certificate)
    Extended master secret: no
    Max Early Data: 0
---
read R BLOCK
EHLO test
250-server.mrshcherbak.net
250-PIPELINING
250-SIZE 10240000
250-VRFY
250-ETRN
250-AUTH PLAIN
250-ENHANCEDSTATUSCODES
250-8BITMIME
250-DSN
250-SMTPUTF8
250 CHUNKING
AUTH PLAIN <строка для аутентификации>
535 5.7.8 Error: authentication failed: Invalid base64 data in initial response
AUTH PLAIN bXJzaGNoZXJiYWsAbXJzaGNoZXJiYWsAUmFzdGFtYW5hMDM1
235 2.7.0 Authentication successful
421 4.4.2 server.mrshcherbak.net Error: timeout exceeded
closed
[root@client.mrshcherbak.net postfix]#
```

Тестирование подключения и проверка аутентификации

Настройка учетной записи

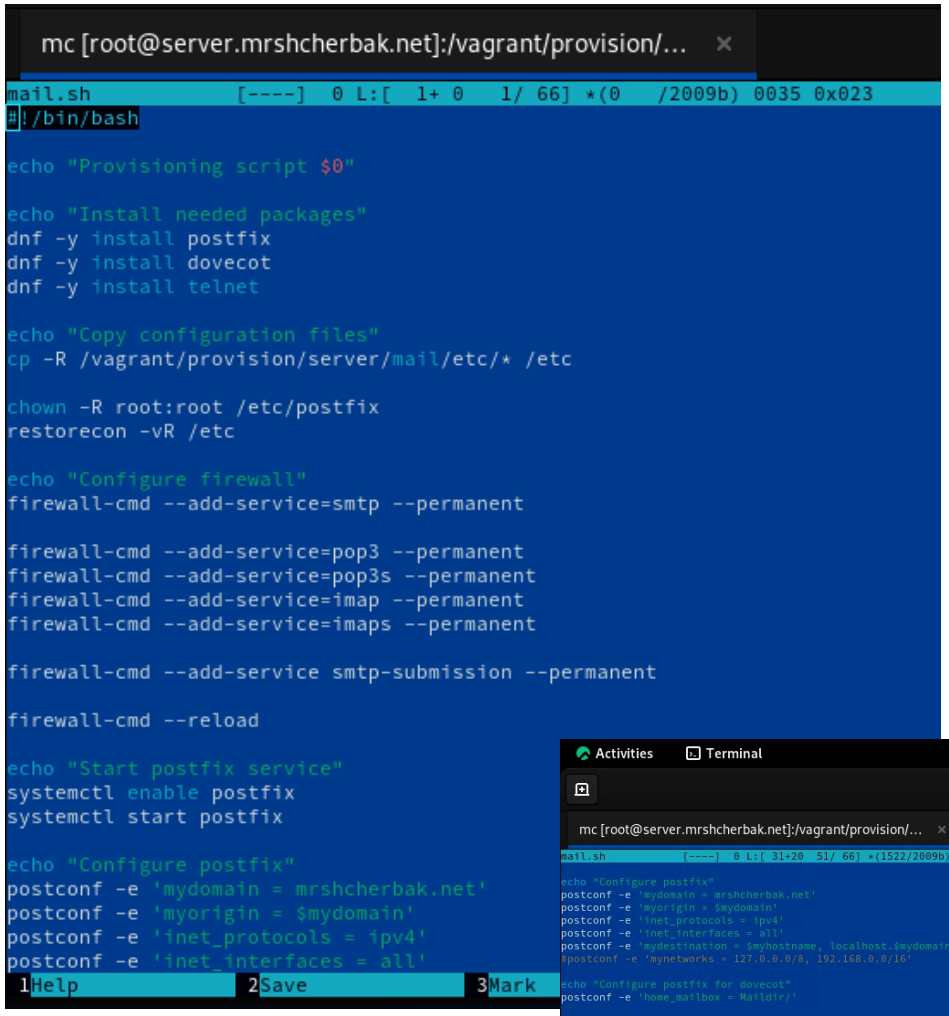


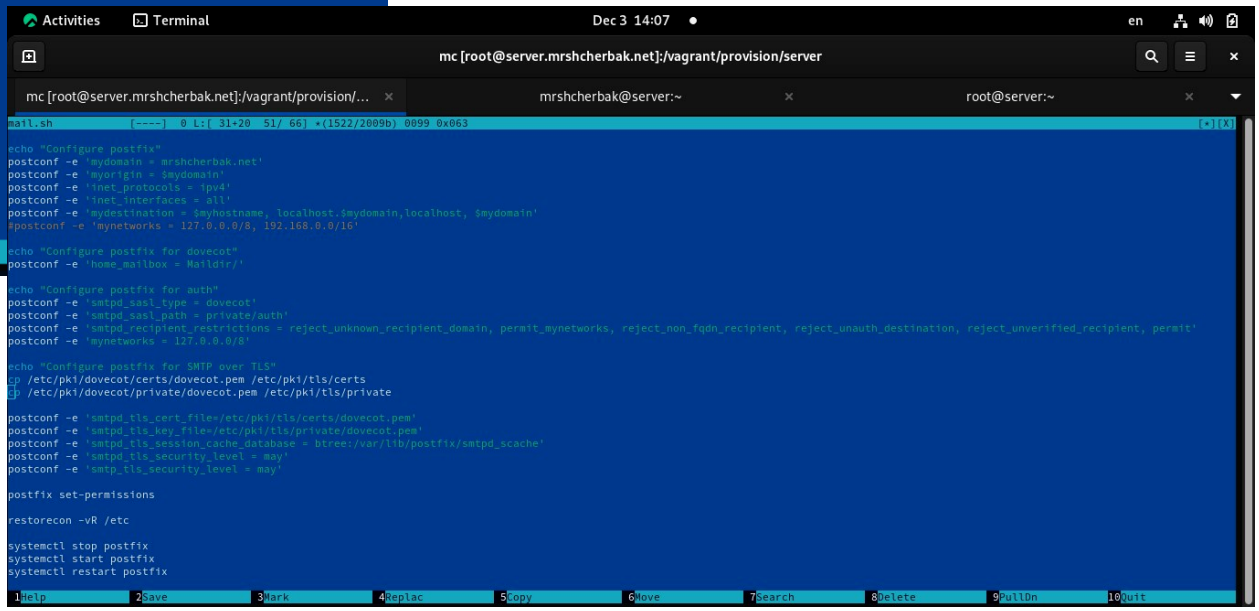




Внесение изменений в настройки внутреннего окружения виртуальной машины

```
[root@server.mrshcherbak.net postfix]# cd /vagrant/provision/server
[root@server.mrshcherbak.net server]# cp -R /etc/dovecot/dovecot.conf /vagrant/provision/server/mail/etc/dovecot/
cp: overwrite '/vagrant/provision/server/mail/etc/dovecot/dovecot.conf'? y
[root@server.mrshcherbak.net server]# cp -R /etc/dovecot/conf.d/10-master.conf /vagrant/provision/server/mail/etc/dovecot/conf.d/
[root@server.mrshcherbak.net server]# cp -R /etc/dovecot/conf.d/10-auth.conf /vagrant/provision/server/mail/etc/dovecot/conf.d/
cp: overwrite '/vagrant/provision/server/mail/etc/dovecot/conf.d/10-auth.conf'? y
[root@server.mrshcherbak.net server]# cp -R /etc/postfix/master.cf /vagrant/provision/server/mail/etc/postfix/
[root@server.mrshcherbak.net server]#
```


mc [root@server.mrshcherbak.net]:/vagrant/provision/...
mail.sh [----] 0 L:[1+ 0 1/ 66] *(0 /2009b) 0035 0x023
#!/bin/bash
echo "Provisioning script $0"
echo "Install needed packages"
dnf -y install postfix
dnf -y install dovecot
dnf -y install telnet
echo "Copy configuration files"
cp -R /vagrant/provision/server/mail/etc/* /etc
chown -R root:root /etc/postfix
restorecon -vR /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 --add-service smtp-submission --permanent
firewall-cmd --reload
echo "Start postfix service"
systemctl enable postfix
systemctl start postfix
echo "Configure postfix"
postconf -e 'mydomain = mrshcherbak.net'
postconf -e 'myorigin = $mydomain'
postconf -e 'inet_protocols = ipv4'
postconf -e 'inet_interfaces = all'
1Help 2Save 3Mark


Activities
Terminal
Dec 3 14:07
en
mc [root@server.mrshcherbak.net]:/vagrant/provision/server
mc [root@server.mrshcherbak.net]:/vagrant/provision/...
mrshcherbak@server:~
root@server:~
mail.sh [----] 0 L:[31+20 51/ 66] *(1522/2009b) 0099 0x063
echo "Configure postfix"
postconf -e 'mydomain = mrshcherbak.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'
echo "Configure postfix for dovecot"
postconf -e 'home_mailbox = Maildir/'
echo "Configure postfix for auth"
postconf -e 'smtpd_sasl_type = dovecot'
postconf -e 'smtpd_sasl_path = private/auth'
postconf -e 'smtpd_recipient_restrictions = reject_unknown_recipient_domain, permit_mynetworks, reject_non_fqdn_recipient, reject_unauth_destination, reject_unverified_recipient, permit'
postconf -e 'mynetworks = 127.0.0.0/8'
echo "Configure postfix for SMTP over TLS"
cp /etc/pki/dovecot/certs/dovecot.pem /etc/pki/tls/certs
cp /etc/pki/dovecot/private/dovecot.pem /etc/pki/tls/private
postconf -e 'smtpd_tls_cert_file=/etc/pki/tls/certs/dovecot.pem'
postconf -e 'smtpd_tls_key_file=/etc/pki/tls/private/dovecot.pem'
postconf -e 'smtpd_tls_session_cache_database = btree:/var/lib/postfix/smtpd_scache'
postconf -e 'smtpd_tls_security_level = may'
postconf -e 'smtp_tls_security_level = may'
postfix set-permissions
restorecon -vR /etc
systemctl stop postfix
systemctl start postfix
systemctl restart postfix
1Help 2Save 3Mark 4Replac 5Copy 6Move 7Search 8Delete 9PullDn 10Quit

Содержимое файла /vagrant/provision/client/mail.sh

mc [root@server.mrshcherbak.net]:/vagrant/provision/...

```
/vagrant/provision/client/mail.sh
#!/bin/bash

echo "Provisioning script $0"

echo "Install needed packages"
dnf -y install postfix
dnf -y install s-nail
dnf -y install evolution
dnf -y install telnet


echo "Configure postfix"
postconf -e 'inet_protocols = ipv4'

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

Вывод: таким образом, в ходе выполнения л/р №10, я приобрела практические навыки по конфигурированию SMTP-сервера в части настройки аутентификации.