Отчёта по лабораторной работе 8

Настройка SMTP-сервера

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Содержание I

Раздел 1

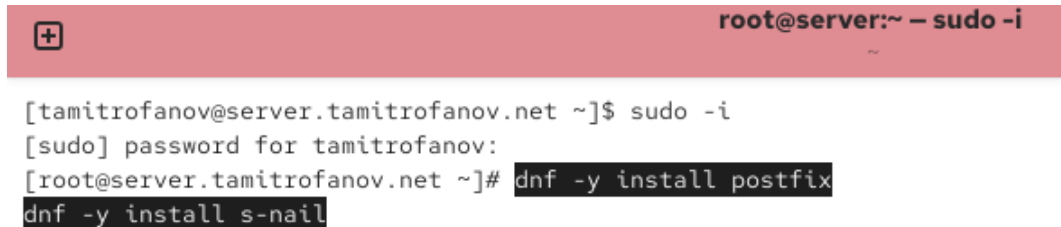1. Информация

1.1 Докладчик

▶ Митрофанов Тимур Александрович

1.1 Докладчик

- Митрофанов Тимур Александрович
- Российский университет дружбы народов им. П. Лумумбы

Раздел 2

2. Выполнение заданий

2.1 слайд 1


```
[tamitrofanov@server.tamitrofanov.net ~]$ sudo -i
[sudo] password for tamitrofanov:
[root@server.tamitrofanov.net ~]# dnf -y install postfix
dnf -y install s-nail
```
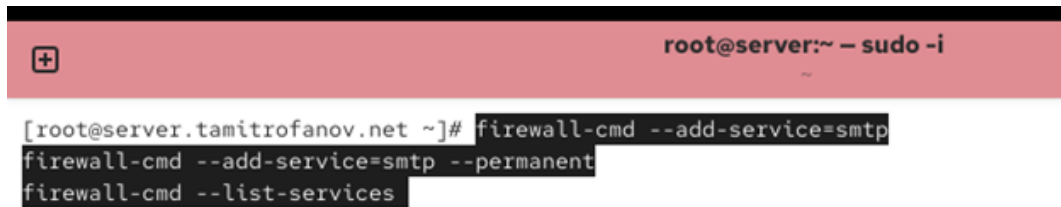
Рисунок 1: установка пакетов

2.2 слайд 2

Рисунок 2: конфигурация межсетевого экрана

2.3 слайд 3

```
[root@server.tamitrofanov.net ~]#
[root@server.tamitrofanov.net ~]# restorecon -vR /etc
[root@server.tamitrofanov.net ~]# systemctl enable postfix
systemctl start postfix
```

Рисунок 3: Востановление безопасности и запуск Postfix

2.4 слайд 4

```
[root@server.tamitrofanov.net ~]#
[root@server.tamitrofanov.net ~]# postconf
2bounce_notice_recipient = postmaster
access_map_defer_code = 450
access_map_reject_code = 554
address_verify_cache_cleanup_interval = 12h
address_verify_default_transport = $default_transport
address_verify_local_transport = $local_transport
address_verify_map = btree:$data_directory/verify_cache
address_verify_negative_cache = yes
address_verify_negative_expire_time = 3d
address_verify_negative_refresh_time = 3h
address_verify_pending_request_limit = 5000
address_verify_poll_count = ${stress?{1}:{3}}
address_verify_poll_delay = 3s
```

2.5 слайд 5


```
[root@server.tamitrofanov.net ~]#
[root@server.tamitrofanov.net ~]#
[root@server.tamitrofanov.net ~]# postconf myorigin
myorigin = $myhostname
[root@server.tamitrofanov.net ~]# postconf mydomain
mydomain = tamitrofanov.net
[root@server.tamitrofanov.net ~]#
[root@server.tamitrofanov.net ~]#
```

Рисунок 5: просмотр значений myorigin и mydomain

2.6 слайд 6

```
[root@server.tamitrofanov.net ~]# postconf -e myorigin=tamitrofanov.net
[root@server.tamitrofanov.net ~]# postconf myorigin
myorigin = tamitrofanov.net
```

Рисунок 6: замена значений

2.7 слайд 7

```
[root@server.tamitrofanov.net postfix]#
[root@server.tamitrofanov.net postfix]#
[root@server.tamitrofanov.net postfix]# postfix check
[root@server.tamitrofanov.net postfix]# systemctl reload postfix
[root@server.tamitrofanov.net postfix]# postconf -n
alias_database = lmdb:/etc/aliases
alias_maps = lmdb:/etc/aliases
command_directory = /usr/sbin
compatibility_level = 3.8
daemon_directory = /usr/libexec/postfix
data_directory = /var/lib/postfix
debug_peer_level = 2
debugger_command = PATH=/bin:/usr/bin:/usr/local/bin:/usr/X11R6/bin ddd $daemon_directory/$process_name $process_i
 sleep 5
default_database_type = lmdb
html_directory = no
inet_interfaces = localhost
inet_protocols = all
mail_owner = postfix
mailq_path = /usr/bin/mailq.postfix
manpage_directory = /usr/share/man
meta_directory = /etc/postfix
mydestination = $myhostname, localhost.$mydomain, localhost
myorigin = tamitrofanov.net
newaliases_path = /usr/bin/newaliases.postfix
queue_directory = /var/spool/postfix
readme_directory = /usr/share/doc/postfix/README_FILES
sample_directory = /usr/share/doc/postfix/samples
sendmail_path = /usr/sbin/sendmail.postfix
setgid_group = postdrop
shlib_directory = /usr/lib64/postfix
smtp_tls_CAfile = /etc/pki/tls/certs/ca-bundle.crt
smtp_tls_CApath = /etc/pki/tls/certs
smtp_tls_security_level = may
```

2.8 слайд 8

```
[root@server.tamitrofanov.net postfix]# postconf -e 'mydomain = tamitrofanov.net'
[root@server.tamitrofanov.net postfix]# postconf inet_protocols
postconf -e 'inet_protocols = ipv4'
inet_protocols = all
[root@server.tamitrofanov.net postfix]# postfix check
systemctl reload postfix
[root@server.tamitrofanov.net postfix]#
[root@server.tamitrofanov.net postfix]#
```

Рисунок 8: Задание жесткого значения и перезагрузка подсистем

2.9 слайд 9


```
[root@server.tamitrofanov.net postfix]#
[root@server.tamitrofanov.net postfix]#
[root@server.tamitrofanov.net postfix]#
[root@server.tamitrofanov.net postfix]# echo .| mail -s test1 tamitrofanov@server.tamitrofanov.net
[root@server.tamitrofanov.net postfix]#
```

Рисунок 9: отправка письма самому себе

2.10 слайд 10

```
[root@server.tamitrofanov.net ~]# tail -f /var/log/maillog
Oct 25 14:04:50 server postfix/postfix-script[8816]: refreshing the Postfix mail system
Oct 25 14:04:50 server postfix/master[6207]: reload -- version 3.8.5, configuration /etc/postfix
Oct 25 14:04:50 server postfix/master[6207]: warning: ignoring inet_protocols parameter value change
Oct 25 14:04:50 server postfix/master[6207]: warning: old value: "all", new value: "ipv4"
Oct 25 14:04:50 server postfix/master[6207]: warning: to change inet_protocols, stop and start Postfix
Oct 25 14:05:53 server postfix/pickup[8820]: 24C9D226B796: uid=0 from=<root>
Oct 25 14:05:53 server postfix/cleanup[8968]: 24C9D226B796: message-id=<20251025140553.24C9D226B796@server.tamitrofan
ov.net>
Oct 25 14:05:53 server postfix/qmgr[8821]: 24C9D226B796: from=<root@tamitrofanov.net>, size=360, nrcpt=1 (queue activ
e)
Oct 25 14:05:53 server postfix/local[8970]: 24C9D226B796: to=<tamitrofanov@server.tamitrofanov.net>, relay=local, del
ay=0.05, delays=0.03/0.02/0/0, dsn=2.0.0, status=sent (delivered to mailbox)
Oct 25 14:05:53 server postfix/qmgr[8821]: 24C9D226B796: removed
```

Рисунок 10: служба логов

2.11 слайд 11

```
[tamitrofanov@client.tamitrofanov.net ~]$ sudo -i

We trust you have received the usual lecture from the local System
Administrator. It usually boils down to these three things:

    #1) Respect the privacy of others.
    #2) Think before you type.
    #3) With great power comes great responsibility.

For security reasons, the password you type will not be visible.

[sudo] password for tamitrofanov:
[root@client.tamitrofanov.net ~]#
[root@client.tamitrofanov.net ~]#
[root@client.tamitrofanov.net ~]#
[root@client.tamitrofanov.net ~]# dnf -y install postfix
dnf -y install s-nail
```

2.12 слайд 12


```
[root@client.tamitrofanov.net ~]# postconf inet_protocols
postconf -e 'inet_protocols = ipv4'
inet_protocols = all
[root@client.tamitrofanov.net ~]# systemctl enable postfix
systemctl start postfix
Created symlink '/etc/systemd/system/multi-user.target.wants/postfix.service' → '/usr/lib/systemd/system/postfix.serv
ice'.
[root@client.tamitrofanov.net ~]#
```

Рисунок 12: отключение IPv6 и запуск Postfix

2.13 слайд 13

```
[root@server.tamitrofanov.net ~]# tail -f /var/log/maillog
Oct 25 14:04:50 server postfix/postfix-script[8816]: refreshing the Postfix mail system
Oct 25 14:04:50 server postfix/master[6207]: reload -- version 3.8.5, configuration /etc/postfix
Oct 25 14:04:50 server postfix/master[6207]: warning: ignoring inet_protocols parameter value change
Oct 25 14:04:50 server postfix/master[6207]: warning: old value: "all", new value: "ipv4"
Oct 25 14:04:50 server postfix/master[6207]: warning: to change inet_protocols, stop and start Postfix
Oct 25 14:05:53 server postfix/pickup[8820]: 24C9D226B796: uid=0 from=<root>
Oct 25 14:05:53 server postfix/cleanup[8968]: 24C9D226B796: message-id=<20251025140553.24C9D226B796@server.tamitrofan
ov.net>
Oct 25 14:05:53 server postfix/qmgr[8821]: 24C9D226B796: from=<root@tamitrofanov.net>, size=360, nrcpt=1 (queue activ
e)
Oct 25 14:05:53 server postfix/local[8970]: 24C9D226B796: to=<tamitrofanov@server.tamitrofanov.net>, relay=local, del
ay=0.05, delays=0.03/0.02/0/0, dsn=2.0.0, status=sent (delivered to mailbox)
Oct 25 14:05:53 server postfix/qmgr[8821]: 24C9D226B796: removed
```

Рисунок 13: подтверждение недоставки письма по логам

2.14 слайд 14

```
[root@server.tamitrofanov.net postfix]#
[root@server.tamitrofanov.net postfix]# postconf inet_interfaces
postconf mynetworks
inet_interfaces = localhost
mynetworks = 127.0.0.1/32
[root@server.tamitrofanov.net postfix]#
```

Рисунок 14: Просмотр значений параментров

2.15 слайд 15

```
[root@server.tamitrofanov.net postfix]#
[root@server.tamitrofanov.net postfix]# postconf -e 'inet_interfaces = all'
[root@server.tamitrofanov.net postfix]# postconf -e 'mynetworks = 127.0.0.0/8, 192.168.0.0/16'
[root@server.tamitrofanov.net postfix]# postfix check
systemctl reload postfix
systemctl stop postfix
systemctl start postfix
[root@server.tamitrofanov.net postfix]# █
```

Рисунок 15: настройка Postfix

2.16 слайд 16

```
Oct 25 14:20:43 server postfix/postfix-script[10997]: refreshing the Postfix mail system
Oct 25 14:20:43 server postfix/master[6207]: reload -- version 3.8.5, configuration /etc/postfix
Oct 25 14:20:43 server postfix/master[6207]: warning: ignoring inet_protocols parameter value change
Oct 25 14:20:43 server postfix/master[6207]: warning: old value: "all", new value: "ipv4"
Oct 25 14:20:43 server postfix/master[6207]: warning: to change inet_protocols, stop and start Postfix
Oct 25 14:20:43 server postfix/master[6207]: warning: service smtp: ignoring inet_interfaces change
Oct 25 14:20:43 server postfix/master[6207]: warning: to change inet_interfaces, stop and start Postfix
Oct 25 14:20:43 server postfix/postfix-script[11013]: stopping the Postfix mail system
Oct 25 14:20:43 server postfix/master[6207]: terminating on signal 15
Oct 25 14:20:43 server postfix/postfix-script[11093]: starting the Postfix mail system
Oct 25 14:20:43 server postfix/master[11095]: daemon started -- version 3.8.5, configuration /etc/postfix
Oct 25 14:20:59 server postfix/smtpd[11131]: connect from client.tamitrofanov.net[192.168.1.30]
Oct 25 14:20:59 server postfix/smtpd[11131]: 6C04221BDB0C: client=client.tamitrofanov.net[192.168.1.30]
Oct 25 14:20:59 server postfix/cleanup[11135]: 6C04221BDB0C: message-id=<20251025142059.4CB93412A342@client.tamitrofa
nov.net>
Oct 25 14:20:59 server postfix/smtpd[11131]: disconnect from client.tamitrofanov.net[192.168.1.30] ehlo=2 starttls=1
mail=1 rcpt=1 data=1 quit=1 commands=7
Oct 25 14:20:59 server postfix/qmgr[11097]: 6C04221BDB0C: from=<root@client.tamitrofanov.net>, size=599, nrcpt=1 (que
ue active)
Oct 25 14:20:59 server postfix/local[11136]: 6C04221BDB0C: to=<tamitrofanov@server.tamitrofanov.net>, relay=local, de
lay=0.02, delays=0.01/0.01/0/0, dsn=2.0.0, status=sent (delivered to mailbox)
Oct 25 14:20:59 server postfix/qmgr[11097]: 6C04221BDB0C: removed
```

2.17 слайд 17

```
Oct 25 14:24:21 client postfix/pickup[5694]: 92AE7412A342: uid=0 from=<root>
Oct 25 14:24:21 client postfix/cleanup[7068]: 92AE7412A342: message-id=<20251025142421.92AE7412A342@client.tamitrofan
ov.net>
Oct 25 14:24:21 client postfix/qmgr[5696]: 92AE7412A342: from=<root@client.tamitrofanov.net>, size=367, nrcpt=1 (queu
e active)
Oct 25 14:24:21 client postfix/smtp[7071]: 92AE7412A342: to=<tamitrofanov@server.tamitrofanov.net>, relay=server.tami
trofanov.net[192.168.1.1]:25, delay=0.12, delays=0.04/0.03/0.03/0.02, dsn=2.0.0, status=sent (250 2.0.0 Ok: queued as
 AAFF721BDB0C)
Oct 25 14:24:21 client postfix/qmgr[5696]: 92AE7412A342: removed
Oct 25 14:24:54 client postfix/qmgr[5696]: 08DC3412A2FA: from=<root@client.tamitrofanov.net>, size=367, nrcpt=1 (queu
e active)
Oct 25 14:24:54 client postfix/qmgr[5696]: 7DC43412A2FB: from=<tamitrofanov@client.tamitrofanov.net>, size=365, nrcpt
=1 (queue active)
Oct 25 14:24:54 client postfix/smtp[7071]: 08DC3412A2FA: to=<tamitrofanov@server.tamitrofanov.net>, relay=server.tami
trofanov.net[192.168.1.1]:25, delay=544, delays=544/0/0.02/0.01, dsn=2.0.0, status=sent (250 2.0.0 Ok: queued as CFC3
921BDB0C)
Oct 25 14:24:54 client postfix/qmgr[5696]: 08DC3412A2FA: removed
Oct 25 14:24:54 client postfix/smtp[7071]: 7DC43412A2FB: to=<tamitrofanov@server.tamitrofanov.net>, relay=server.tami
trofanov.net[192.168.1.1]:25, delay=441, delays=441/0.03/0.02/0, dsn=2.0.0, status=sent (250 2.0.0 Ok: queued as D550
021BDB0C)
Oct 25 14:24:54 client postfix/qmgr[5696]: 7DC43412A2FB: removed
```

Рисунок 17: логи почты клиента

2.18 слайд 18

```
[root@client.tamitrofanov.net ~]#
[root@client.tamitrofanov.net ~]# postqueue -p
Mail queue is empty
```

Рисунок 18: Просмотр очереди почты

2.19 слайд 19

2.20 слайд 20


```
  GNU nano 8.1                                    192.168.1
$TTL 1D
@ IN SOA @ server.tamitrofanov.net. (
                2020110500 ; serial
                1D ; refresh
                1H ; retry
                1W ; expire
                3H ) ; minimum
        NS @
        A 192.168.1.1
        PTR server.tamitrofanov.net.
        MX 10 mail.tamitrofanov.net.
$ORIGIN 1.168.192.in-addr.arpa.
1 PTR server.tamitrofanov.net.
1 PTR ns.tamitrofanov.net.
1 PTR dhcp.tamitrofanov.net.
1 PTR www.tamitrofanov.net.
1 PTR mail.tamitrofanov.net.
```

2.21 слайд 21


```
[root@server.tamitrofanov.net rz]#
[root@server.tamitrofanov.net rz]#
[root@server.tamitrofanov.net rz]# postconf -e 'mydestination = $myhostname, localhost.$mydomain, localhost, $mydomai
n'
[root@server.tamitrofanov.net rz]# postfix check
systemctl reload postfix
[root@server.tamitrofanov.net rz]# restorecon -vR /etc
restorecon -vR /var/named
[root@server.tamitrofanov.net rz]# systemctl restart named
[root@server.tamitrofanov.net rz]# postqueue -f
[root@server.tamitrofanov.net rz]#
```

Рисунок 21: Перенайстройка и перезапуск Postfix

2.22 слайд 22

Рисунок 22: логи почты

2.23 слайд 23

```
[root@server.tamitrofanov.net named]#
[root@server.tamitrofanov.net named]# cd /vagrant/provision/server/dns/var/named
cp -R /var/named/* /vagrant/provision/server/dns/var/named
cp: overwrite '/vagrant/provision/server/dns/var/named/data/named.run-20251018'?
cp: overwrite '/vagrant/provision/server/dns/var/named/data/named.run-20251004'?
cp: overwrite '/vagrant/provision/server/dns/var/named/data/named.run-20251011'?
cp: overwrite '/vagrant/provision/server/dns/var/named/data/named.run'?
cp: overwrite '/vagrant/provision/server/dns/var/named/data/named.run-20251025'?
cp: overwrite '/vagrant/provision/server/dns/var/named/dynamic/managed-keys.bind'?
cp: overwrite '/vagrant/provision/server/dns/var/named/dynamic/managed-keys.bind.jnl'?
cp: overwrite '/vagrant/provision/server/dns/var/named/master/fz/user.net'?
cp: overwrite '/vagrant/provision/server/dns/var/named/master/fz/tamitrofanov.net'?
cp: overwrite '/vagrant/provision/server/dns/var/named/master/fz/tamitrofanov.net.jnl'?
cp: overwrite '/vagrant/provision/server/dns/var/named/master/rz/fz/tamitrofanov.net'?
cp: overwrite '/vagrant/provision/server/dns/var/named/master/rz/192.168.1.jnl'?
cp: overwrite '/vagrant/provision/server/dns/var/named/master/rz/192.168.1'?
cp: overwrite '/vagrant/provision/server/dns/var/named/named.ca'?
cp: overwrite '/vagrant/provision/server/dns/var/named/named.empty'?
cp: overwrite '/vagrant/provision/server/dns/var/named/named.localhost'?
cp: overwrite '/vagrant/provision/server/dns/var/named/named.loopback'?
```

2.24 слайд 24

```
[root@server.tamitrofanov.net named]#
[root@server.tamitrofanov.net named]# cd /vagrant/provision/server
touch mail.sh
chmod +x mail.sh
```

Рисунок 24: создание конф. файла

2.25 слайд 25


```
  GNU nano 8.1                                          mail.sh
#!/bin/bash
echo "Provisioning script $0"
echo "Install needed packages"
dnf -y install postfix
dnf -y install s-nail
echo "Copy configuration files"
#cp -R /vagrant/provision/server/mail/etc/* /etc
echo "Configure firewall"
firewall-cmd --add-service=smtp --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'
postfix set-permissions
restorecon -vR /etc
systemctl stop postfix
systemctl start postfix
```

2.26 слайд 26

```
[root@client.tamitrofanov.net var]#
[root@client.tamitrofanov.net var]# cd /vagrant/provision/client
[root@client.tamitrofanov.net client]# touch mail.sh
chmod +x mail.sh
[root@client.tamitrofanov.net client]#
```

Рисунок 26: создание конф. файла

2.27 слайд 27

2.28 слайд 28


```
server.vm.provision "server mail",
  type: "shell",
  preserve_order: true,
  path: "provision/server/mail.sh"
```

Рисунок 28: добавленный код

2.29 слайд 29

Рисунок 29: добавленный код

Раздел 3

3. Выводы

3.1 слайд 1

В ходе выполнение лабораторной работы я приобрёл практические навыки по установке и конфигурированию SMTP сервера.