


Защита лабораторной работы № 2

Настройка DNS-сервера

Администрирование сетевых подсистем

Работу Выполнил:
Саинт-Амур Измаэль
Группа: НПИбд-02-20



Цель работы

Приобретение практических навыков по установке и конфигурированию DNS-сервера, усвоение принципов работы системы доменных имён.

Установка DNS-сервера

```
root@server:~
[saismael@server.saismael.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.

[sudo] password for saismael:
[root@server.saismael.net ~]#
```

```
[sudo] password for saismael:
[root@server.saismael.net ~]# dnf -y install bind bind-utils
Extra Packages for Enterprise Linux 9 - x86_64 29 kB/s | 21 kB 00:00
Extra Packages for Enterprise Linux 9 - x86_64 1.1 MB/s | 11 MB 00:10
Rocky Linux 9 - BaseOS 7.0 kB/s | 3.6 kB 00:00
Rocky Linux 9 - BaseOS 696 kB/s | 1.7 MB 00:02
Rocky Linux 9 - AppStream 7.8 kB/s | 3.6 kB 00:00
Rocky Linux 9 - AppStream 2.0 MB/s | 6.0 MB 00:03
Rocky Linux 9 - Extras 6.1 kB/s | 2.9 kB 00:00
Package bind-utils-32:9.16.23-1.el9_0.1.x86_64 is already installed.
Dependencies resolved.
=====
Package Arch Version Repository Size
=====
Installing:
bind x86_64 32:9.16.23-1.el9_0.1 appstream 489 k
Installing dependencies:
bind-dnssec-doc noarch 32:9.16.23-1.el9_0.1 appstream 46 k
python3-bind noarch 32:9.16.23-1.el9_0.1 appstream 61 k
python3-ply noarch 3.11-14.el9 appstream 103 k
Installing weak dependencies:
bind-dnssec-utils x86_64 32:9.16.23-1.el9_0.1 appstream 114 k
```

Конфигурирование кэширующего DNS-сервера

Делаем DNS-сервер сервером по умолчанию для хоста server и внутренней виртуальной сети.

```
[root@server.saismael.net ~]# nmcli connection edit System\ eth0
===| nmcli interactive connection editor |===
Editing existing '802-3-ethernet' connection: 'System eth0'

Type 'help' or '?' for available commands.
Type 'print' to show all the connection properties.
Type 'describe [<setting>.<prop>]' for detailed property description.

You may edit the following settings: connection, 802-3-ethernet (ethernet), 802-
1x, dcb, sriov, ethtool, match, ipv4, ipv6, hostname, tc, proxy
nmcli> remove ipv4.dns
nmcli> set ipv4.ignore-auto-dns yes
nmcli> set ipv4.dns 127.0.0.1
nmcli> save
Connection 'System eth0' (5fb06bd0-0bb0-7ffb-45f1-d6edd65f3e03) successfully upd
ated.
nmcli> quit
[root@server.saismael.net ~]#
```

Конфигурирование кэширующего DNS-сервера

Настраиваем направление DNS-запросов от всех узлов внутренней сети, включая запросы от узла server, через узел server (etc/named.conf)

```
options {
    listen-on port 53 { 127.0.0.1; any; };
    listen-on-v6 port 53 { ::1; };
    directory      "/var/named";
    dump-file       "/var/named/data/cache_dump.db";
    statistics-file "/var/named/data/named_stats.txt";
    memstatistics-file "/var/named/data/named_mem_stats.txt";
    secroots-file   "/var/named/data/named.secroots";
    recursing-file  "/var/named/data/named.recursing";
    allow-query     { localhost; 192.168.0.0/16; };

    /*
     - If you are building an AUTHORITATIVE DNS server, do NOT en
     - If you are building a RECURSIVE (caching) DNS server, you
       recursion.
     - If your recursive DNS server has a public IP address, you

       control to limit queries to your legitimate users. Failing
```

```
[root@server.saismael.net ~]# firewall-cmd --add-service=dns
success
[root@server.saismael.net ~]# firewall-cmd --add-service=dns --permanent
success
[root@server.saismael.net ~]#
```


Внесение изменений в настройки внутреннего окружения виртуальной машины

```
[root@server.saismael.net vagrant]# mkdir -p /vagrant/provision/server/dns/etc/named
[root@server.saismael.net vagrant]# mkdir -p /vagrant/provosion/server/dns/var/named/master
[root@server.saismael.net vagrant]# cp -R /etc/named.conf /vagrant/provision/server/dns/etc/
[root@server.saismael.net vagrant]# cp -R /etc/named/* /vagrant/provision/server/dns/etc/named/
[root@server.saismael.net vagrant]# cp -R /var/named/master/* /vagrant/provision/server/dns/var/named/master
cp: invalid option -- '/'
Try 'cp --help' for more information.
[root@server.saismael.net vagrant]# cp -R /var/named/master/* /vagrant/provision/server/dns/var/named/master
cp: target '/vagrant/provision/server/dns/var/named/master' is not a directory
[root@server.saismael.net vagrant]# cp -R /var/named/master/* /vagrant/provision/server/dns/var/named/master
cp: target '/vagrant/provision/server/dns/var/named/master' is not a directory
[root@server.saismael.net vagrant]# S
```

Внесение изменений в настройки внутреннего окружения виртуальной машины

```
#!/bin/bash

echo "Provisioning script $0"

echo "Install needed packages"
dnf -y install bind bind-utils

echo "Copy configuration files"
cp -R /vagrant/provision/server/dns/etc/* /etc
cp -R /vagrant/provision/server/dns/var/named/* var/named

chown -R named:named /etc/named
chown -R named:named /var/named

restorecon -vR /etc
restorecon -vR /var/named

echo "Configure firewall"
firewall-cmd --add-service=dns
firewall-cmd --add-service=dns --permanent

echo "Tuning SELinux"
setsebool named_write_master_zones 1
setsebool -P named_write_master_zones 1

echo "Change dns server address"
nmcli connection edit "System eth0" <<EOF
```

Приобрел практические навыки по установке и конфигурированию DNS-сервера, усвоил принципы работы системы доменных имён.