Лабораторная работа

Номер 4

Мошаров Д.М.

01 января 1970

Российский университет дружбы народов, Москва, Россия

Информация

Докладчик

- Мошаров Денис Максимович
- Студент
- Российский университет дружбы народов

Цель работы

Приобретение практических навыков по установке и базовому конфигурированию HTTP-сервера Apache.

Запуск сервера

```
C:\Users\denis>cd C:\work_asp\dmmosharov\vagrant

C:\work_asp\dmmosharov\vagrant>vagrant up server
Bringing machine 'server' up with 'virtualbox' provider...
==> server: You assigned a static IP ending in ".1" or ":1" to this machine.
==> server: This is very often used by the router and can cause the
==> server: network to not work properly. If the network doesn't work
==> server: properly, try changing this IP.
==> server: You assigned a static IP ending in ".1" or ":1" to this machine.
==> server: This is very often used by the router and can cause the
==> server: network to not work properly. If the network doesn't work
==> server: properly, try changing this IP.
==> server: Clearing any previously set forwarded ports...
==> server: Clearing any previously set network interfaces...
==> server: Preparing network interfaces based on configuration...
    server: Adapter 1: nat
    server: Adapter 2: intnet
==> server: Forwarding ports...
    server: 22 (guest) => 2222 (host) (adapter 1)
==> server: Running 'pre-boot' VM customizations...
==> server: Booting VM...
==> server: Waiting for machine to boot. This may take a few minutes...
    server: SSH address: 127.0.0.1:2222
    server: SSH username: vagrant
    server: SSH auth method: password
```

Рис. 1: Запуск сервера

Установка пакетов

```
[dmmosharov@server.dmmosharov.net ~]$ sudo -i
[sudo] password for dmmosharov:
[root@server.dmmosharov.net ~]# LANG=C yum grouplist
Extra Packages for Enterprise Li 0.0  B/s |   0  B     00:10
Errors during downloading metadata for repository 'epel':
  - Curl error (6): Could not resolve hostname for https://mirror
s.fedoraproject.org/metalink?repo=epel-z-10&arch=x86_64 [Could no
t resolve host: mirrors.fedoraproject.org]
Error: Failed to download metadata for repo 'epel': Cannot prepar
e internal mirrorlist: Curl error (6): Could not resolve hostname
 for https://mirrors.fedoraproject.org/metalink?repo=epel-z-10&ar
ch=x86_64 [Could not resolve host: mirrors.fedoraproject.org]
[root@server.dmmosharov.net ~]# LANG=C yum grouplist
Extra Packages for Enterprise Li  30 kB/s |  39 kB     00:01
Extra Packages for Enterprise Li 661 kB/s | 5.6 MB     00:08
Rocky Linux 10 - BaseOS          1.4 kB/s | 4.3 kB     00:03
Rocky Linux 10 - BaseOS          506 kB/s | 7.6 MB     00:15
Rocky Linux 10 - AppStream       1.9 kB/s | 4.3 kB     00:02
Rocky Linux 10 - AppStream       366 kB/s | 2.1 MB     00:05
Rocky Linux 10 - CRB             1.7 kB/s | 4.3 kB     00:02
Rocky Linux 10 - CRB             144 kB/s | 495 kB     00:03
Rocky Linux 10 - Extras          2.7 kB/s | 3.1 kB     00:01
Rocky Linux 10 - Extras          1.5 kB/s | 5.9 kB     00:03
Available Environment Groups:
   Server
   Minimal Install
```

Рис. 2: Установка пакетов

/etc/httpd/conf/httpd.conf

```
  GNU nano 8.1                    httpd.conf
#
# This is the main Apache HTTP server configuration file.  It co>
# configuration directives that give the server its instructions.
# See <URL:http://httpd.apache.org/docs/2.4/> for detailed infor>
# In particular, see
# <URL:http://httpd.apache.org/docs/2.4/mod/directives.html>
# for a discussion of each configuration directive.
#
# See the httpd.conf(5) man page for more information on this co>
# and httpd.service(8) on using and configuring the httpd servic>
#
# Do NOT simply read the instructions in here without understand>
# what they do.  They're here only as hints or reminders.  If yo>
# consult the online docs. You have been warned.
#
# Configuration and logfile names: If the filenames you specify >
# of the server's control files begin with "/" (or "drive:/" for>
# server will use that explicit path.  If the filenames do *not*>
# with "/", the value of ServerRoot is prepended -- so 'log/acce>
# with ServerRoot set to '/www' will be interpreted by the
# server as '/www/log/access_log', where as '/log/access_log' wi>
# interpreted as '/log/access_log'.
                          [ Read 358 lines ]
^G Help      ^O Write Out ^F Where Is  ^K Cut       ^T Execute
^X Exit      ^R Read File ^\ Replace   ^U Paste     ^J Justify
```

Рис. 3: /etc/httpd/conf/httpd.conf

/etc/httpd/conf/magic

```
  GNU nano 8.1                    magic
# Magic data for mod_mime_magic Apache module (originally for fi>
# The module is described in /manual/mod/mod_mime_magic.html
#
# The format is 4-5 columns:
#    Column #1: byte number to begin checking from, ">" indicate>
#    Column #2: type of data to match
#    Column #3: contents of data to match
#    Column #4: MIME type of result
#    Column #5: MIME encoding of result (optional)

#----------------------------------------------------------------->
# Localstuff:  file(1) magic for locally observed files
# Add any locally observed files here.

#----------------------------------------------------------------->
# end local stuff
#----------------------------------------------------------------->

#----------------------------------------------------------------->
# Java

0       short           0xcafe
                        [ Read 397 lines ]
^G Help      ^O Write Out ^F Where Is  ^K Cut       ^T Execute
^X Exit      ^R Read File ^\ Replace   ^U Paste     ^J Justify
```

Рис. 4: /etc/httpd/conf/magic

/etc/httpd/conf.d/autoindex.conf

```
  GNU nano 8.1                 autoindex.conf
#
# Directives controlling the display of server-generated directo>
#
# Required modules: mod_authz_core, mod_authz_host,
#                   mod_autoindex, mod_alias
#
# To see the listing of a directory, the Options directive for t>
# directory must include "Indexes", and the directory must not c>
# a file matching those listed in the DirectoryIndex directive.
#


#
# IndexOptions: Controls the appearance of server-generated dire>
# listings.
#
IndexOptions FancyIndexing HTMLTable VersionSort

# We include the /icons/ alias for FancyIndexed directory listin>
# you do not use FancyIndexing, you may comment this out.
#
Alias /icons/ "/usr/share/httpd/icons/"

                        [ Read 93 lines ]
^G Help      ^O Write Out ^F Where Is   ^K Cut     ^T Execute
^X Exit      ^R Read File ^\ Replace    ^U Paste   ^J Justify
```

Рис. 5: /etc/httpd/conf.d/autoindex.conf

/etc/httpd/conf.d/manual.conf

```
  GNU nano 8.1                    manual.conf
#
# This configuration file allows the manual to be accessed at
# http://localhost/manual/
#
Alias /manual /usr/share/httpd/manual

<Directory "/usr/share/httpd/manual">
    Options Indexes
    AllowOverride None
    Require all granted

    RedirectMatch 301 ^/manual/(?:da|de|en|es|fr|ja|ko|pt-br|ru|
</Directory>
```

Рис. 6: /etc/httpd/conf.d/manual.conf

/etc/httpd/conf.d/userdir.conf

Рис. 7: /etc/httpd/conf.d/userdir.conf

/etc/httpd/conf.d/fcgid.conf

Рис. 8: /etc/httpd/conf.d/fcgid.conf

/etc/httpd/conf.d/ssl.conf

```
root@server:/etc/httpd/conf.d – sudo -i
  GNU nano 8.1                    ssl.conf
#
# When we also provide SSL we have to listen to the
# standard HTTPS port in addition.
#
Listen 443 https

##
##  SSL Global Context
##
##  All SSL configuration in this context applies both to
##  the main server and all SSL-enabled virtual hosts.
##

#   Pass Phrase Dialog:
#   Configure the pass phrase gathering process.
#   The filtering dialog program (`builtin' is a internal
#   terminal dialog) has to provide the pass phrase on stdout.
SSLPassPhraseDialog exec:/usr/libexec/httpd-ssl-pass-dialog

#   Inter-Process Session Cache:
#   Configure the SSL Session Cache: First the mechanism
#   to use and second the expiring timeout (in seconds).
                              [ Read 203 lines ]
^G Help      ^O Write Out ^F Where Is  ^K Cut       ^T Execute
^X Exit      ^R Read File ^\ Replace   ^U Paste     ^J Justify
```

Рис. 9: /etc/httpd/conf.d/ssl.conf

/etc/httpd/conf.d/welcome.conf

Рис. 10: /etc/httpd/conf.d/welcome.conf

Настройка firewall

```
[root@server.dmmosharov.net conf.d]# firewall-cmd --list-services
cockpit dhcp dhcpv6-client dns ssh
[root@server.dmmosharov.net conf.d]# firewall-cmd --get-services
0-AD RH-Satellite-6 RH-Satellite-6-capsule afp alvr amanda-client amanda-k5-client amqp amqps anno
-1602 anno-1800 apcupsd aseqnet audit ausweisapp2 bacula bacula-client bareos-director bareos-file
daemon bareos-storage bb bgp bitcoin bitcoin-rpc bitcoin-testnet bitcoin-testnet-rpc bittorrent-ls
d ceph ceph-exporter ceph-mon cfengine checkmk-agent civilization-iv civilization-v cockpit collec
td condor-collector cratedb ctdb dds dds-multicast dds-unicast dhcp dhcpv6 dhcpv6-client distcc dn
s dns-over-quic dns-over-tls docker-registry docker-swarm dropbox-lansync elasticsearch etcd-clien
t etcd-server factorio finger foreman foreman-proxy freeipa-4 freeipa-ldap freeipa-ldaps freeipa-r
eplication freeipa-trust ftp galera ganglia-client ganglia-master git gpsd grafana gre high-availa
bility http http3 https ident imap imaps iperf2 iperf3 ipfs ipp ipp-client ipsec irc ircs iscsi-ta
rget isns jenkins kadmin kdeconnect kerberos kibana klogin kpasswd kprop kshell kube-api kube-apis
erver kube-control-plane kube-control-plane-secure kube-controller-manager kube-controller-manager
-secure kube-nodeport-services kube-scheduler kube-scheduler-secure kube-worker kubelet kubelet-re
adonly kubelet-worker ldap ldaps libvirt libvirt-tls lightning-network llmnr llmnr-client llmnr-tc
p llmnr-udp managesieve matrix mdns memcache minecraft minidlna mndp mongodb mosh mountd mpd mqtt
mqtt-tls ms-wbt mssql murmur mysql nbd nebula need-for-speed-most-wanted netbios-ns netdata-dashbo
ard nfs nfs3 nmea-0183 nrpe ntp nut opentelemetry openvpn ovirt-imageio ovirt-storageconsole ovirt
-vmconsole plex pmcd pmproxy pmwebapi pmwebapis pop3 pop3s postgresql privoxy prometheus prometheu
s-node-exporter proxy-dhcp ps2link ps3netsrv ptp pulseaudio puppetmaster quassel radius radsec rdp
 redis redis-sentinel rootd rpc-bind rquotad rsh rsyncd rtsp salt-master samba samba-client samba-
dc sane settlers-history-collection sip sips slimevr slp smtp smtp-submission smtps snmp snmptls s
nmptls-trap snmptrap spideroak-lansync spotify-sync squid ssdp ssh statsrv steam-lan-transfer stea
m-streaming stellaris stronghold-crusader stun stuns submission supertuxkart svdrp svn syncthing s
yncthing-gui syncthing-relay synergy sysconlan syslog syslog-tls telnet tentacle terraria tftp til
e38 tinc tor-socks transmission-client turn turns upnp-client vdsm vnc-server vrrp warpinator wbem
-http wbem-https wireguard ws-discovery ws-discovery-client ws-discovery-host ws-discovery-tcp ws-
discovery-udp wsdd wsdd-http wsman wsmans xdmcp xmpp-bosh xmpp-client xmpp-local xmpp-server zabbi
x-agent zabbix-java-gateway zabbix-server zabbix-trapper zabbix-web-service zero-k zerotier
[root@server.dmmosharov.net conf.d]# firewall-cmd --add-service=http
success
[root@server.dmmosharov.net conf.d]# firewall-cmd --add-service=http --permanent
success
[root@server.dmmosharov.net conf.d]#
```

98 × 35

Рис. 11: Настройка firewall

journalctl

```
[dmmosharov@server.dmmosharov.net ~]$ sudo -i
[sudo] password for dmmosharov:
[root@server.dmmosharov.net ~]# journalctl -x -f
Jan 20 16:28:16 server.dmmosharov.net systemd[1]: Started systemd-coredump@244-12805-0.service - Process C
ore Dump (PID 12805/UID 0).
    Subject: A start job for unit systemd-coredump@244-12805-0.service has finished successfully
    Defined-By: systemd
    Support: https://wiki.rockylinux.org/rocky/support

    A start job for unit systemd-coredump@244-12805-0.service has finished successfully.

    The job identifier is 11157.
Jan 20 16:28:16 server.dmmosharov.net systemd-coredump[12806]: [↗] Process 12801 (VBoxClient) of user 1001
 dumped core.

                                                                Module libXau.so.6 from rpm libXau-1.0.11-8
.el10.x86_64
```

Рис. 12: journalctl

запуск службы httpd

```
[root@server.dmmosharov.net conf.d]# systemctl enable httpd
Created symlink '/etc/systemd/system/multi-user.target.wants/httpd.serv
ice' → '/usr/lib/systemd/system/httpd.service'.
[root@server.dmmosharov.net conf.d]# systemctl start httpd
```

Рис. 13: запуск службы httpd

Лог об успешном запуске

```
   Subject: Process 13212 (VBoxClient) dumped core
   Defined-By: systemd
   Support: https://wiki.rockylinux.org/rocky/support
   Documentation: man:core(5)

   Process 13212 (VBoxClient) crashed and dumped core.

   This usually indicates a programming error in the crashing program and
   should be reported to its vendor as a bug.
Jan 20 16:29:37 server.dmmosharov.net systemd[1]: systemd-coredump@260-13216-0.service: Deactivated succes
sfully.
   Subject: Unit succeeded
   Defined-By: systemd
   Support: https://wiki.rockylinux.org/rocky/support

   The unit systemd-coredump@260-13216-0.service has successfully entered the 'dead' state.
Jan 20 16:29:38 server.dmmosharov.net ptyxis[8378]: context mismatch in svga_surface_destroy
Jan 20 16:29:38 server.dmmosharov.net ptyxis[8378]: context mismatch in svga_surface_destroy
Jan 20 16:29:38 server.dmmosharov.net ptyxis[8378]: context mismatch in svga_surface_destroy
Jan 20 16:29:38 server.dmmosharov.net ptyxis[8378]: context mismatch in svga_surface_destroy
Jan 20 16:29:42 server.dmmosharov.net kernel: traps: VBoxClient[13225] trap int3 ip:41db4b sp:7f10208cfcd0
 error:0 in VBoxClient[1db4b,400000+bb000]
Jan 20 16:29:42 server.dmmosharov.net systemd-coredump[13226]: Process 13222 (VBoxClient) of user 1001 ter
minated abnormally with signal 5/TRAP, processing...
Jan 20 16:29:42 server.dmmosharov.net systemd[1]: Started systemd-coredump@261-13226-0.service - Process C
ore Dump (PID 13226/UID 0).
   Subject: A start job for unit systemd-coredump@261-13226-0.service has finished successfully
   Defined-By: systemd
   Support: https://wiki.rockylinux.org/rocky/support

   A start job for unit systemd-coredump@261-13226-0.service has finished successfully.

   The job identifier is 12330.
Jan 20 16:29:43 server.dmmosharov.net systemd-coredump[13227]: [↗] Process 13222 (VBoxClient) of user 1001
 dumped core.

                                                                 Module libXau.so.6 from rpm libXau-1.0.11-8
```

Рис. 14: Лог об успешном запуске

Запуск клиента

```
Microsoft Windows [Version 10.0.19045.6456]
(c) Корпорация Майкрософт (Microsoft Corporation). Все права защищены.

C:\Users\denis>cd C:\work_asp\dmmosharov\vagrant

C:\work_asp\dmmosharov\vagrant>vagrant up client
Bringing machine 'client' up with 'virtualbox' provider...
==> client: Clearing any previously set forwarded ports...
==> client: Fixed port collision for 22 => 2222. Now on port 2200.
==> client: Clearing any previously set network interfaces...
==> client: Preparing network interfaces based on configuration...
    client: Adapter 1: nat
    client: Adapter 2: intnet
==> client: Forwarding ports...
    client: 22 (guest) => 2200 (host) (adapter 1)
==> client: Running 'pre-boot' VM customizations...
==> client: Booting VM...
```

Рис. 15: Запуск клиента

Страница по умолчанию

Рис. 16: Страница по умолчанию

/var/log/httpd/error_log

```
[root@server.dmmosharov.net ~]# tail -f /var/log/httpd/error_log
[Tue Jan 20 16:55:14.025451 2026] [suexec:notice] [pid 17425:tid 17425] AH01232: suEXEC mechanism
enabled (wrapper: /usr/sbin/suexec)
[Tue Jan 20 16:55:14.039448 2026] [lbmethod_heartbeat:notice] [pid 17425:tid 17425] AH02282: No sl
otmem from mod_heartmonitor
[Tue Jan 20 16:55:14.041624 2026] [systemd:notice] [pid 17425:tid 17425] SELinux policy enabled; h
ttpd running as context system_u:system_r:httpd_t:s0
[Tue Jan 20 16:55:14.043637 2026] [mpm_event:notice] [pid 17425:tid 17425] AH00489: Apache/2.4.63
(Rocky Linux) OpenSSL/3.5.1 mod_fcgid/2.3.9 configured -- resuming normal operations
[Tue Jan 20 16:55:14.043647 2026] [core:notice] [pid 17425:tid 17425] AH00094: Command line: '/usr
/sbin/httpd -D FOREGROUND'
[Tue Jan 20 17:30:32.547929 2026] [autoindex:error] [pid 17431:tid 17572] [client ::1:50826] AH012
76: Cannot serve directory /var/www/html/: No matching DirectoryIndex (index.html) found, and serv
er-generated directory index forbidden by Options directive
[Tue Jan 20 17:31:05.168426 2026] [autoindex:error] [pid 17431:tid 17574] [client 127.0.0.1:37016]
 AH01276: Cannot serve directory /var/www/html/: No matching DirectoryIndex (index.html) found, an
d server-generated directory index forbidden by Options directive
[Tue Jan 20 18:08:54.748766 2026] [autoindex:error] [pid 17429:tid 17500] [client 192.168.1.30:460
48] AH01276: Cannot serve directory /var/www/html/: No matching DirectoryIndex (index.html) found,
 and server-generated directory index forbidden by Options directive
[Tue Jan 20 18:22:32.906849 2026] [autoindex:error] [pid 17429:tid 17502] [client 192.168.1.30:352
58] AH01276: Cannot serve directory /var/www/html/: No matching DirectoryIndex (index.html) found,
 and server-generated directory index forbidden by Options directive
```

Рис. 17: /var/log/httpd/error_log

/var/log/httpd/access_log

```
[root@server.dmmosharov.net ~]# tail -f /var/log/httpd/access_log
::1 - - [20/Jan/2026:17:30:32 +0000] "GET / HTTP/1.1" 403 7620 "-" "curl/8.9.1"
127.0.0.1 - - [20/Jan/2026:17:31:05 +0000] "GET / HTTP/1.1" 403 7620 "-" "curl/8.9.1"
192.168.1.30 - - [20/Jan/2026:18:08:54 +0000] "GET / HTTP/1.1" 403 7620 "-" "Mozilla/5.0 (X11; Lin
ux x86_64; rv:140.0) Gecko/20100101 Firefox/140.0"
192.168.1.30 - - [20/Jan/2026:18:08:54 +0000] "GET /poweredby.png HTTP/1.1" 200 5714 "http://192.1
68.1.1/" "Mozilla/5.0 (X11; Linux x86_64; rv:140.0) Gecko/20100101 Firefox/140.0"
192.168.1.30 - - [20/Jan/2026:18:08:54 +0000] "GET /icons/poweredby.png HTTP/1.1" 200 15443 "http:
//192.168.1.1/" "Mozilla/5.0 (X11; Linux x86_64; rv:140.0) Gecko/20100101 Firefox/140.0"
192.168.1.30 - - [20/Jan/2026:18:08:54 +0000] "GET /favicon.ico HTTP/1.1" 404 196 "http://192.168.
1.1/" "Mozilla/5.0 (X11; Linux x86_64; rv:140.0) Gecko/20100101 Firefox/140.0"
192.168.1.30 - - [20/Jan/2026:18:22:32 +0000] "GET / HTTP/1.1" 403 7620 "-" "Mozilla/5.0 (X11; Lin
ux x86_64; rv:140.0) Gecko/20100101 Firefox/140.0"
192.168.1.30 - - [20/Jan/2026:18:22:32 +0000] "GET /icons/poweredby.png HTTP/1.1" 200 15443 "http:
//192.168.1.1/" "Mozilla/5.0 (X11; Linux x86_64; rv:140.0) Gecko/20100101 Firefox/140.0"
192.168.1.30 - - [20/Jan/2026:18:22:32 +0000] "GET /poweredby.png HTTP/1.1" 200 5714 "http://192.1
68.1.1/" "Mozilla/5.0 (X11; Linux x86_64; rv:140.0) Gecko/20100101 Firefox/140.0"
192.168.1.30 - - [20/Jan/2026:18:22:32 +0000] "GET /favicon.ico HTTP/1.1" 404 196 "http://192.168.
1.1/" "Mozilla/5.0 (X11; Linux x86_64; rv:140.0) Gecko/20100101 Firefox/140.0"
```

Рис. 18: /var/log/httpd/access_log

Остановка службы named

```
[root@server.dmmosharov.net ~]# systemctl stop named
```

Рис. 19: Остановка службы named

Файл зоны /var/named/master/fz/dmmosharov

```
  GNU nano 8.1   /var/named/master/fz/user.net
$TTL 1D
@       IN SOA  @ server.user.net. (
                                        2025121705 ; seria>
                                        1D       ; refresh
                                        1H       ; retry
                                        1W       ; expire
                                        3H )     ; minimum
        NS      @
        A       192.168.1.1
$ORIGIN user.net.
server  A       192.168.1.1
ns      A       192.168.1.1
www     A       192.168.1.1
```

Рис. 20: Файл зоны /var/named/master/fz/dmmosharov

Файл зоны /var/named/master/rz/192.168.1

```
root@server:~ — sudo -i

  GNU nano 8.1   /var/named/master/rz/192.168.1   Modified
$TTL 1D
@       IN SOA  @ server.user.net. (
                                        2025121704 ; serial
                                        1D         ; refresh
                                        1H         ; retry
                                        1W         ; expire
                                        3H )       ; minimum
        NS      @
        A       192.168.1.1
        PTR     server.user.net.
$ORIGIN 1.168.192.in-addr.arpa.
1       PTR     server.user.net.
1       PTR     ns.user.net.
1       PTR     www.user.net.
```

Рис. 21: Файл зоны /var/named/master/rz/192.168.1

Удаление журналов

```
[root@server.dmmosharov.net ~]# rm -f /var/named/master/fz/
dmmosharov.net.jnl 2>/dev/null
[root@server.dmmosharov.net ~]# rm -f /var/named/master/fz/
192.168.1.jnl 2>/dev/null
```

Рис. 22: Удаление журналов

Создание конфигурационных файлов

```
[root@server.dmmosharov.net ~]# systemctl start named
[root@server.dmmosharov.net ~]# cd /etc/httpd/conf.d
[root@server.dmmosharov.net conf.d]# touch server.dmmosharo
v.net.conf
[root@server.dmmosharov.net conf.d]# touch www.dmmosharov.n
et.conf
[root@server.dmmosharov.net conf.d]# nano server.dmmosharov
.net.conf
```

Рис. 23: Создание конфигурационных файлов

server.dmmosharov.net

root@server:/etc/httpd/conf.d – sudo -i

```
  GNU nano 8.1    server.dmmosharov.net.conf     Modified
<VirtualHost *:80>
ServerAdmin webmaster@dmmosharov.net
DocumentRoot /var/www/html/server.dmmosharov.net
ServerName server.dmmosharov.net
ErrorLog logs/server.dmmosharov.net-error_log
CustomLog logs/server.dmmosharov.net-access_log common
</VirtualHost>
```

Рис. 24: server.dmmosharov.net

root@server:/var/www/html/server.dmmosharov.net – sudo -i

```
  GNU nano 8.1          www.dmmosharov.conf
<VirtualHost *:80>
ServerAdmin webmaster@dmmosharov.net
DocumentRoot /var/www/html/www.dmmosharov.net
ServerName www.dmmosharov.net
ErrorLog logs/www.dmmosharov.net-error_log
CustomLog logs/www.dmmmosharov.net-access_log common
</VirtualHost>
```

Рис. 25: www.dmmosharov.net

Файлы index.html

```
[root@server.dmmosharov.net conf.d]# cd /var/www/html
[root@server.dmmosharov.net html]# cd /var/www/htm
-bash: cd: /var/www/htm: No such file or directory
[root@server.dmmosharov.net html]# mkdir server.dmmosharov.
net
[root@server.dmmosharov.net html]# cd /var/www/html/server.
dmmosharov.net/
[root@server.dmmosharov.net server.dmmosharov.net]# touch i
ndex.html
[root@server.dmmosharov.net server.dmmosharov.net]# nano in
dex.html
```

Рис. 26: Файлы index.html

Обновление меток и перезапуск службы

```
[root@server.dmmosharov.net www.dmmosharov.net]# chown -R a
pache:apache /var/www
[root@server.dmmosharov.net www.dmmosharov.net]# restorecon
 -vR /etc
Relabeled /etc/NetworkManager/system-connections/eth1.nmcon
nection from unconfined_u:object_r:user_tmp_t:s0 to unconfi
ned_u:object_r:NetworkManager_etc_rw_t:s0
[root@server.dmmosharov.net www.dmmosharov.net]# restorecon
 -vR /var/named
[root@server.dmmosharov.net www.dmmosharov.net]# restorecon
 -vR /var/www
[root@server.dmmosharov.net www.dmmosharov.net]# systemctl
restart httpd
```

Рис. 27: Обновление меток и перезапуск службы

server.dmmosharov.net

Рис. 28: server.dmmosharov.net

www.dmmosharov.net

Рис. 29: www.dmmosharov.net

Обновление конфигурации vagrant

```
 a directory
[root@server.dmmosharov.net server]# cp -R /etc/httpd/conf.
d/* /vagrant/provision/server/http/etc/httpd/conf.d/
[root@server.dmmosharov.net server]# cp -R /var/www/html/*
/vagrant/provision/server/http/var/www/html
[root@server.dmmosharov.net server]# cd /vagrant/provision/
server/dns/
[root@server.dmmosharov.net dns]# cp -R /var/named/* /vagra
nt/provision/server/dns/var/named/
cp: overwrite '/vagrant/provision/server/dns/var/named/data
/named.run-20251215'? y
cp: overwrite '/vagrant/provision/server/dns/var/named/data
/named.run'? y
cp: overwrite '/vagrant/provision/server/dns/var/named/dyna
mic/managed-keys.bind'? y
cp: overwrite '/vagrant/provision/server/dns/var/named/dyna
mic/managed-keys.bind.jnl'? y
cp: overwrite '/vagrant/provision/server/dns/var/named/mast
er/fz/dmmosharov.net'? y
cp: overwrite '/vagrant/provision/server/dns/var/named/mast
er/rz/192.168.1'? y
cp: overwrite '/vagrant/provision/server/dns/var/named/name
d.ca'? y
cp: overwrite '/vagrant/provision/server/dns/var/named/name
d.empty'? y
cp: overwrite '/vagrant/provision/server/dns/var/named/name
d.localhost'? y
cp: overwrite '/vagrant/provision/server/dns/var/named/name
d.loopback'? y
[root@server.dmmosharov.net dns]# cd /vagrant/provision/ser
ver
[root@server.dmmosharov.net server]# touch http.sh
[root@server.dmmosharov.net server]# chmod +x http.sh
```

Рис. 30: Обновление конфигурации vagrant

Скрипт http.sh

```
  GNU nano 8.1                http.sh
#!/bin/bash
echo "Provisioning script $0"
echo "Install needed packages"
dnf -y groupinstall "Basic Web Server"
echo "Copy configuration files"
cp -R /vagrant/provision/server/http/etc/httpd/* /etc/httpd
cp -R /vagrant/provision/server/http/var/www/* /var/www
chown -R apache:apache /var/www
restorecon -vR /etc
restorecon -vR /var/www
echo "Configure firewall"
firewall-cmd --add-service=http
firewall-cmd --add-service=http --permanent
echo "Start http service"
systemctl enable httpd
systemctl start httpd
```

Рис. 31: Скрипт http.sh

Vagrantfile

```
server.vm.provision "server dummy",
                    type: "shell",
                    preserve_order: true,
                    path: "provision/server/01-dummy.sh"

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

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


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

Рис. 32: Vagrantfile

Выводы

В результате выполнения лабораторной работы были получены навыки работы и настройки http сервера