

Администрирование сетевых подсистем

Лабораторная работа №14

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Информация

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Приобретение навыков настройки доступа групп пользователей к общим ресурсам по протоколу SMB.

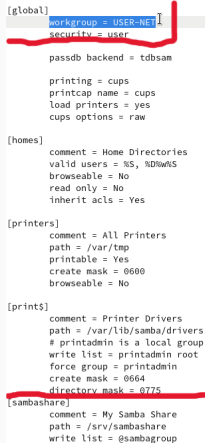
Выполнение лабораторной работы

```
[root@server ~]# dnf -y install samba samba-client cifs-utils
Last metadata expiration check: 1:08:11 ago on Thu 12 Feb 2026 04:53:07 PM MSK
Dependencies resolved.
=====
Package                Arch      Version      Repository    Size
=====
Installing:
cifs-utils              x86_64    7.2-1.el9    baseos       113 k
samba                   x86_64    4.22.4-6.el9 baseos       929 k
samba-client            x86_64    4.22.4-6.el9 appstream     760 k
Installing dependencies:
libnetapi                x86_64    4.22.4-6.el9 baseos       142 k
samba-common-tools       x86_64    4.22.4-6.el9 baseos       483 k
samba-dcerpc             x86_64    4.22.4-6.el9 baseos       718 k
samba-ldb-ldap-modules   x86_64    4.22.4-6.el9 baseos        34 k
samba-libs               x86_64    4.22.4-6.el9 baseos       123 k
Transaction Summary
=====
Install 8 Packages

Total download size: 3.2 M
Installed size: 12 M
Downloading Packages:
[      === ] --- B/s | 0 B ---:-- ETA
```

Рис. 1: Установка необходимых пакетов

Выполнение лабораторной работы



The image shows a text editor window displaying the configuration file `smb.conf`. The file is organized into sections: `[global]`, `[homes]`, `[printers]`, `[print$]`, and `[smbshare]`. Red annotations highlight specific parts: a red box around the `workgroup = USER-NET` line in the `[global]` section, and a red bracket under the `[smbshare]` section. The `[global]` section also includes `security = user`, `passdb backend = tdbsam`, and printer-related settings. The `[homes]` section sets home directory permissions. The `[printers]` section sets printer permissions. The `[print$]` section sets printer driver permissions. The `[smbshare]` section sets share permissions.

```
[global]
workgroup = USER-NET
security = user

passdb backend = tdbsam

printing = cups
printcap name = cups
load printers = yes
cups options = raw

[homes]
comment = Home Directories
valid users = %S, %D\\%u%S
browseable = No
read only = No
inherit acls = Yes

[printers]
comment = All Printers
path = /var/tmp
printable = Yes
create mask = 0600
browseable = No

[print$]
comment = Printer Drivers
path = /var/lib/samba/drivers
# printadmin is a local group
write list = printadmin root
force group = printadmin
create mask = 0664
directory mask = 0775

[smbshare]
comment = My Samba Share
path = /srv/smbshare
write list = @smbagroup
```

Рис. 2: Редактирование файла `smb.conf`

```
[root@server ~]# testparm
Load smb config files from /etc/samba/smb.conf
Loaded services file OK.
Weak crypto is allowed by GnuTLS (e.g. NTLM as a compatibility fallback)
```

Рис. 3: Проверка smb.conf на ошибки

Выполнение лабораторной работы

```
[root@server ~]# systemctl start smb
systemctl enable smb
systemctl status smb
Created symlink /etc/systemd/system/multi-user.target.wants/smb.service → /usr/lib/systemd/system/smb.service.
• smb.service - Samba SMB Daemon
   Loaded: loaded (/usr/lib/systemd/system/smb.service; enabled; preset: disabled)
   Active: active (running) since Thu 2026-02-12 18:06:55 MSK; 263ms ago
     Docs: man:smbd(8)
           man:samba(7)
           man:smb.conf(5)
  Main PID: 11582 (smbd)
    Status: "smbd: ready to serve connections..."
     Tasks: 3 (limit: 48821)
    Memory: 12.6M
       CPU: 64ms
    CGroup: /system.slice/smb.service
            └─11582 /usr/sbin/smbd --foreground --no-process-group
              └─11584 /usr/sbin/smbd --foreground --no-process-group
                └─11585 /usr/sbin/smbd --foreground --no-process-group

Feb 12 18:06:55 server systemd[1]: Starting Samba SMB Daemon...
Feb 12 18:06:55 server systemd[1]: Started Samba SMB Daemon.
lines 1-18/18 (END)
```

Рис. 4: Запуск и проверка Samba


```
[root@server ~]# firewall-cmd --add-service=samba
firewall-cmd --add-service=samba --permanent
firewall-cmd --reload
Warning: ALREADY_ENABLED: 'samba' already in 'public'
success
Warning: ALREADY_ENABLED: samba
success
success
[root@server ~]#
```

Рис. 5: Настройка межсетевого экрана

```
[root@server srv]# setsebool samba_export_all_rw 1
setsebool samba_export_all_rw 1 -P
[root@server srv]#
```

Рис. 6: Разрешение экспортирования

```
[root@server srv]# smbpasswd -L -a user
New SMB password:
Retype new SMB password:
Added user user.
[root@server srv]# █
```

Рис. 7: Добавление пользователя в базу пользователей

```
[root@server ~]# smbclient -L //server
Password for [USER-NET\root]:
Anonymous login successful
```

Sharename	Type	Comment
-----	----	-----
print\$	Disk	Printer Drivers
smbashare	Disk	My Samba Share
IPC\$	IPC	IPC Service (Samba 4.22.4)

```
SMB1 disabled -- no workgroup available
[root@server ~]#
```

Рис. 8: Проверка общего доступа

```
[user@server ~]$ cd /srv/smbshare  
touch user@server.txt  
touch: cannot touch 'user@server.txt': Permission denied  
[user@server smbshare]$
```

Рис. 9: Попытка создания txt-файла

Выполнение лабораторной работы

```
[user@client ~]$ sudo -i
[sudo] password for user:
[root@client ~]# dnf -y install samba-client cifs-utils
Last metadata expiration check: 3:36:22 ago on Thu 12 Feb 2026 02:37:42 PM MSK
.
Dependencies resolved.
=====
Package                Architecture Version           Repository        Size
=====
Installing:
  cifs-utils             x86_64        7.2-1.el9        baseos            113 k
  samba-client           x86_64        4.22.4-6.el9     appstream         760 k
=====
Transaction Summary
=====
Install 2 Packages

Total download size: 873 k
Installed size: 3.0 M
Downloading Packages:
(1/2): cifs-utils-7.2-1.el9.x86_64.rpm 613 kB/s | 113 kB 00:00
(2/2): samba-client-4.22.4-6.el9.x86_64.rpm 2.5 MB/s | 760 kB 00:00
-----
Total                                     886 kB/s | 873 kB 00:00
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing      :                                1/1
  Installing     : samba-client-4.22.4-6.el9.x86_64 1/2
  Running scriptlet: samba-client-4.22.4-6.el9.x86_64 1/2
  Installing     : cifs-utils-7.2-1.el9.x86_64      2/2
  Running scriptlet: cifs-utils-7.2-1.el9.x86_64      2/2
  Verifying      : cifs-utils-7.2-1.el9.x86_64      1/2
  Verifying      : samba-client-4.22.4-6.el9.x86_64 2/2

Installed:
  cifs-utils-7.2-1.el9.x86_64          samba-client-4.22.4-6.el9.x86_64

Complete!
[root@client ~]#
```

Рис. 10: Установка необходимых пакетов на клиент

```
[root@client ~]# firewall-cmd --add-service=samba-client  
firewall-cmd --add-service=samba-client --permanent  
firewall-cmd --reload  
success  
success  
success  
[root@client ~]#
```

Рис. 11: Настройка firewall на клиенте

```
[root@client ~]# smbclient -L //server
do_connect: Connection to server failed (Error NT_STATUS_NOT_FOUND)
[root@client ~]#
```

Рис. 12: Подключение к серверу

Выполнение лабораторной работы

```
#!/bin/bash

LOGIN=user
PASS=123456

echo "Provisioning script $0"

echo "Install needed packages"
dnf -y install samba samba-client cifs-utils

echo "Copy configuration files"
cp -R /vagrant/provision/server/smb/etc/* /etc
chown -R root:root /etc/samba/*
restorecon -vR /etc

echo "Configure firewall"
firewall-cmd --add-service samba --permanent
firewall-cmd --reload

echo "Users and groups"
groupadd -g 1010 sambagroup
usermod -aG sambagroup $LOGIN
echo -ne "$PASS\n$PASS\n" | smbpasswd -L -a -s $LOGIN

echo "Make share dir"
mkdir -p /srv/sambashare
chgrp sambagroup /srv/sambashare
chmod g=rwx /srv/sambashare

echo "Tuning SELinux"
semanage fcontext -a -t samba_share_t "/srv/sambashare(/.*)?"

setsebool samba_export_all_rw 1
setsebool samba_export_all_rw 1 -P

restorecon -vR /srv/sambashare

echo "Start smb service"
systemctl enable smb
```

Рис. 13: smb.sh для сервера

Выполнение лабораторной работы

```
#!/bin/bash

LOGIN=user

echo "Provisioning script $0"

mkdir -p /mnt/samba

echo "Install needed packages"
dnf -y install samba-client cifs-utils

echo "Copy configuration files"
cp -R /vagrant/provision/client/smb/etc/* /etc
chown -R root:root /etc/samba/*
restorecon -vR /etc

echo "Configure firewall"
firewall-cmd --add-service samba-client --permanent
firewall-cmd --reload

echo "Users and groups"
groupadd -g 1010 sambagroup
usermod -aG sambagroup $LOGIN

echo "Mounting dirs"
mkdir -p /srv/smbashare
echo "//server/smbashare /mnt/samba cifs user,rw,credentials=/etc/samba/smbusers,uid=user,gid=sambagroup,_netdev 0 0" >> /etc/fstab

restorecon -vR /etc

umount /mnt/samba
mount /mnt/samba
```

Рис. 14: smb.sh для клиента

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

Рис. 15: Vagrantfile для сервера

```
client.vm.provision "SMB client",  
  type: "shell",  
  preserve_order: true,  
  path: "provision/client/smb.sh"
```

Рис. 16: Vagrantfile для клиента

Во время выполнения данной лабораторной работы я освоил навыки настройки доступа групп пользователей к общим ресурсам по протоколу SMB.