

# Администрирование сетевых подсистем

## Настройка файловых служб Samba

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19 ноября 2025

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## Цели и задачи работы

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

## Выполнение лабораторной работы

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## Установка Samba на сервере

```
Upgraded:
libldb-4.21.3-113.el10_0.x86_64
libwbclient-4.21.3-113.el10_0.x86_64
samba-common-4.21.3-113.el10_0.noarch
libsmclient-4.21.3-113.el10_0.x86_64
samba-client-libs-4.21.3-113.el10_0.x86_64
samba-common-libs-4.21.3-113.el10_0.x86_64

Installed:
cifs-utils-7.1-2.el10.x86_64
samba-4.21.3-113.el10_0.x86_64
samba-common-tools-4.21.3-113.el10_0.x86_64
samba-ldb-ldap-modules-4.21.3-113.el10_0.x86_64
libnetapi-4.21.3-113.el10_0.x86_64
samba-client-4.21.3-113.el10_0.x86_64
samba-dcerpc-4.21.3-113.el10_0.x86_64
samba-libs-4.21.3-113.el10_0.x86_64

Complete!
[root@server.ahmedfarg.net ~]#
[root@server.ahmedfarg.net ~]# groupadd -g 1010 sambagroup
[root@server.ahmedfarg.net ~]# usermod -aG sambagroup ahmedfarg
[root@server.ahmedfarg.net ~]# mkdir -p /srv/sambashare
[root@server.ahmedfarg.net ~]#
```

Рис. 1: Установка пакетов Samba

# Изменение рабочей группы и добавление ресурса

```
smb.conf
/etc/samba

12 security = user
13
14 passwd backend = tdbsam
15
16 printing = cups
17 printcap name = cups
18 load printers = yes
19 cups options = raw
20
21 # Install samba-usershares package for support
22 include = /etc/samba/usershares.conf
23
24 [homes]
25 comment = Home Directories
26 valid users = %S, %Dw%S
27 browseable = No
28 read only = No
29 inherit acls = Yes
30
31 [printers]
32 comment = All Printers
33 path = /var/tmp
34 printable = Yes
35 create mask = 0600
36 browseable = No
37
38 [print$]
39 comment = Printer Drivers
40 path = /var/lib/samba/drivers
41 # printadmin is a local group
42 write list = printadmin root
43 force group = printadmin
44 create mask = 0664
45 directory mask = 0775
46
47 [smbashare]
48 comment = My Samba Share
49 path = /srv/smbashare
50 write list = @smbagroup
```

```
<?xml version="1.0" encoding="utf-8"?>
<service>
  <short>Samba</short>
  <description>This option allows you to access and participate in Windows file and printer sharing networks. You need th
e samba package installed for this option to be useful.</description>
  <include service="samba-client"/>
  <port protocol="tcp" port="139"/>
  <port protocol="tcp" port="445"/>
</service>
/usr/lib/firewalld/services/samba.xml (END)
```

Рис. 3: Файл samba.xml

```
[root@server.ahmedfarg.net ~]#  
[root@server.ahmedfarg.net ~]# firewall-cmd --add-service=samba  
success  
[root@server.ahmedfarg.net ~]# firewall-cmd --add-service=samba --permanent  
success  
[root@server.ahmedfarg.net ~]# firewall-cmd --reload  
success  
[root@server.ahmedfarg.net ~]# chgrp sambagroup /srv/sambashare/  
[root@server.ahmedfarg.net ~]# chmod g=rwx /srv/sambashare/  
[root@server.ahmedfarg.net ~]# cd /srv  
[root@server.ahmedfarg.net srv]# ls -Z  
unconfined_u:object_r:nfs_t:s0 nfs unconfined_u:object_r:var_t:s0 sambashare  
[root@server.ahmedfarg.net srv]# semanage fcontext -a -t samba_share_t "/srv/sambashare(/.*)?"  
[root@server.ahmedfarg.net srv]# restorecon -vR /srv/sambashare/  
Relabeled /srv/sambashare from unconfined_u:object_r:var_t:s0 to unconfined_u:object_r:samba_share_t:s0  
[root@server.ahmedfarg.net srv]# ls -Z  
unconfined_u:object_r:nfs_t:s0 nfs unconfined_u:object_r:samba_share_t:s0 sambashare  
[root@server.ahmedfarg.net srv]# setsebool samba_export_all_rw 1  
[root@server.ahmedfarg.net srv]# setsebool samba_export_all_rw 1 -P  
[root@server.ahmedfarg.net srv]#
```

Рис. 4: Первичный контекст SELinux



## Проверка групп пользователя

```
[ahmedfarg@server.ahmedfarg.net ~]$  
[ahmedfarg@server.ahmedfarg.net ~]$ id  
uid=1001(ahmedfarg) gid=1001(ahmedfarg) groups=1001(ahmedfarg),10(wheel) context=unconfined_u:unconfined_r:unconfined_t:s0-s0:c0.c1023  
[ahmedfarg@server.ahmedfarg.net ~]$ newgrp sambagroup  
[ahmedfarg@server.ahmedfarg.net ~]$  
[ahmedfarg@server.ahmedfarg.net ~]$ id  
uid=1001(ahmedfarg) gid=1010(sambagroup) groups=1010(sambagroup),10(wheel),1001(ahmedfarg) context=unconfined_u:unconfined_r:unconfined_t:s0-s0:c0.c1023  
[ahmedfarg@server.ahmedfarg.net ~]$ cd /srv/smbashare/  
[ahmedfarg@server.ahmedfarg.net sambashare]$ touch ahmedfarg@server.txt  
[ahmedfarg@server.ahmedfarg.net sambashare]$ ls  
ahmedfarg@server.txt  
[ahmedfarg@server.ahmedfarg.net sambashare]$ █
```

Рис. 5: Информация о пользователе

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

Рис. 6: Добавление SMB-пользователя

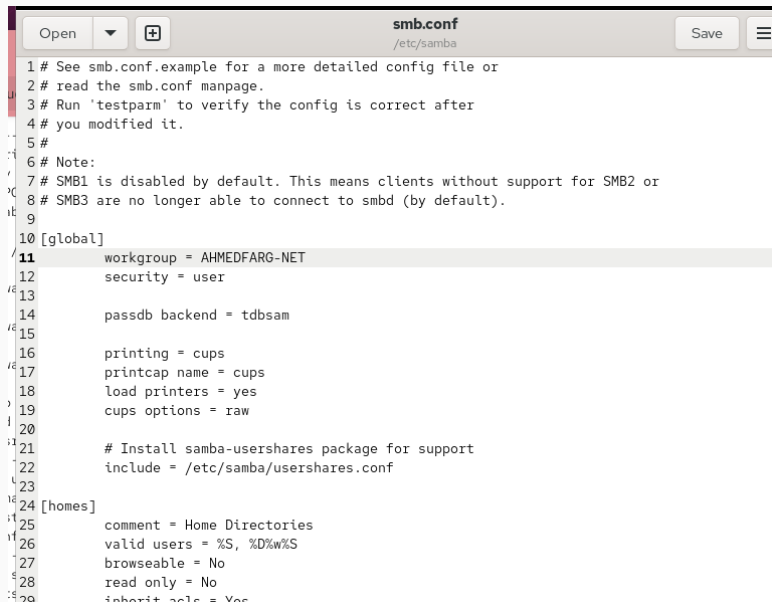
```
Installed:
  cifs-utils-7.1-2.el10.x86_64      kernel-core-6.12.0-55.40.1.el10_0.x86_64
  kernel-modules-6.12.0-55.40.1.el10_0.x86_64  kernel-modules-core-6.12.0-55.40.1.el10_0.x86_64
  samba-client-4.21.3-113.el10_0.x86_64

Complete!
[root@client.ahmedfarg.net ~]#
[root@client.ahmedfarg.net ~]# less /usr/lib/firewalld/services/samba-client.xml
[root@client.ahmedfarg.net ~]#
[root@client.ahmedfarg.net ~]# firewall-cmd --add-service=samba-client
success
[root@client.ahmedfarg.net ~]# firewall-cmd --add-service=samba-client --permanent
success
[root@client.ahmedfarg.net ~]# firewall-cmd --reload
success
[root@client.ahmedfarg.net ~]# groupadd -g 1010 sambagroup
[root@client.ahmedfarg.net ~]# usermod -aG sambagroup ahmedfarg
[root@client.ahmedfarg.net ~]#
```

Рис. 7: Установка пакетов на клиенте

```
<?xml version="1.0" encoding="utf-8"?>
<service>
  <short>Samba Client</short>
  <description>This option allows you to access Windows file and printer sharing networks. You need
the samba-client package installed for this option to be useful.</description>
  <include service="netbios-ns"/>
  <port protocol="udp" port="138"/>
</service>
/usr/lib/firewalld/services/samba-client.xml (END)
```

Рис. 8: Файл samba-client.xml



```
1 # See smb.conf.example for a more detailed config file or
2 # read the smb.conf manpage.
3 # Run 'testparm' to verify the config is correct after
4 # you modified it.
5 #
6 # Note:
7 # SMB1 is disabled by default. This means clients without support for SMB2 or
8 # SMB3 are no longer able to connect to smbd (by default).
9
10 [global]
11     workgroup = AHMEDFARG-NET
12     security = user
13
14     passdb backend = tdbsam
15
16     printing = cups
17     printcap name = cups
18     load printers = yes
19     cups options = raw
20
21     # Install samba-usershares package for support
22     include = /etc/samba/usershares.conf
23
24 [homes]
25     comment = Home Directories
26     valid users = %S, %D%n%S
27     browseable = No
28     read only = No
29     inherit acls = Yes
```

```
[root@client.ahmedfarg.net ~]# smbclient -L //server
Password for [AHMEDFARG-NET\root]:
Anonymous login successful
```

Sharename	Type	Comment
-----	----	-----
print\$	Disk	Printer Drivers
smbashare	Disk	My Samba Share
IPC\$	IPC	IPC Service (Samba 4.21.3)

SMB1 disabled -- no workgroup available

```
[root@client.ahmedfarg.net ~]# smbclient -L //server -U ahmedfarg
Password for [AHMEDFARG-NET\ahmedfarg]:
```

Sharename	Type	Comment
-----	----	-----
print\$	Disk	Printer Drivers
smbashare	Disk	My Samba Share
IPC\$	IPC	IPC Service (Samba 4.21.3)
ahmedfarg	Disk	Home Directories

SMB1 disabled -- no workgroup available

```
[root@client.ahmedfarg.net ~]# █
```



```
[root@client.ahmedfarg.net ~]#  
[root@client.ahmedfarg.net ~]# mkdir /mnt/samba  
[root@client.ahmedfarg.net ~]# mount -o username=ahmedfarg,user,rw,uid=ahmedfarg,gid=sambagroup //s  
erver/sambashare /mnt/samba/  
Password for ahmedfarg@//server/sambashare:  
mount: (hint) your fstab has been modified, but systemd still uses  
the old version; use 'systemctl daemon-reload' to reload.  
[root@client.ahmedfarg.net ~]#
```

Рис. 11: Ручное монтирование



```
[ahmedfarg@client.ahmedfarg.net ~]$  
[ahmedfarg@client.ahmedfarg.net ~]$ newgrp sambagroup  
[ahmedfarg@client.ahmedfarg.net ~]$  
[ahmedfarg@client.ahmedfarg.net ~]$ id  
uid=1001(ahmedfarg) gid=1010(sambagroup) groups=1010(sambagroup),10(wheel),1001(ahmedfarg) context=  
unconfined_u:unconfined_r:unconfined_t:s0-s0:c0.c1023  
[ahmedfarg@client.ahmedfarg.net ~]$  
[ahmedfarg@client.ahmedfarg.net ~]$ cd /mnt/samba/  
[ahmedfarg@client.ahmedfarg.net samba]$ ls  
ahmedfarg@server.txt  
[ahmedfarg@client.ahmedfarg.net samba]$ touch ahmedfarg@client.txt  
[ahmedfarg@client.ahmedfarg.net samba]$ ls  
ahmedfarg@client.txt ahmedfarg@server.txt  
[ahmedfarg@client.ahmedfarg.net samba]$ █
```

Рис. 12: Создание файла на общем ресурсе

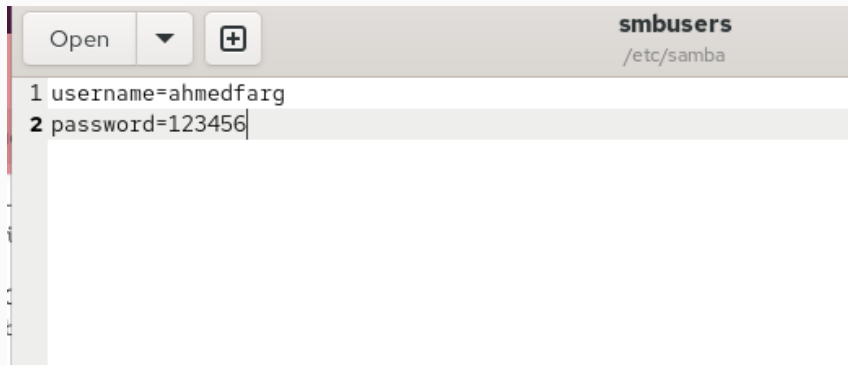


Рис. 13: Файл учетных данных smbusers



```
1
2 #
3 # /etc/fstab
4 # Created by anaconda on Wed Sep 3 08:53:23 2025
5 #
6 # Accessible filesystems, by reference, are maintained under '/dev/disk/'.
7 # See man pages fstab(5), findfs(8), mount(8) and/or blkid(8) for more info.
8 #
9 # After editing this file, run 'systemctl daemon-reload' to update systemd
10 # units generated from this file.
11 #
12 UUID=908334c5-81ab-40aa-ad89-1bd296275208 / xfs defaults 0 0
13 UUID=964b6a41-d718-411a-a362-f90f740c04d8 /boot xfs defaults 0 0
14 UUID=2000-E25B /boot/efi vfat umask=0077,shortname=winnt 0 2
15 UUID=7e0ea0d4-0dbc-4e9b-bcd8-a0b4c565de96 /home xfs defaults 0 0
16 UUID=3c01d968-53fe-4cb3-8a7c-cc0f286d9e58 none swap defaults 0 0
17 server.ahmedfarg.net:/srv/nfs /mnt/nfs nfs _netdev 0 0
18 //server/smbashare /mnt/samba cifs user,rw,uid=ahmedfarg,gid=sambagroup,credentials=/etc/samba/
smbusers,_netdev 0 0
19 #VAGRANT-BEGIN
20 # The contents below are automatically generated by Vagrant. Do not modify.
21 vagrant /vagrant vboxsf uid=1000,gid=1000,_netdev 0 0
22 #VAGRANT-END
```

```
[root@client.ahmedfarg.net ~]#  
[root@client.ahmedfarg.net ~]# gedit /etc/fstab  
[root@client.ahmedfarg.net ~]# mount -a  
mount: (hint) your fstab has been modified, but systemd still uses  
the old version; use 'systemctl daemon-reload' to reload.  
[root@client.ahmedfarg.net ~]# mount | grep mnt  
server.ahmedfarg.net:/srv/nfs on /mnt/nfs type nfs4 (rw,relatime,vers=4.2,rsz=262144,wsz=262144  
,namlen=255,hard,proto=tcp,timeo=600,retrans=2,sec=sys,clientaddr=192.168.1.30,local_lock=none,addr  
=192.168.1.1,_netdev)  
//server/sambashare on /mnt/samba type cifs (rw,nosuid,nodev,noexec,relatime,vers=3.1.1,cache=strict,  
upcall_target=app,username=ahmedfarg,uid=1001,forceuid,gid=1010,forcegid,addr=192.168.1.1,file_mode=0755,  
dir_mode=0755,soft,nounix,serverino,mapposix,repase=nfs,rsz=4194304,wsz=4194304,bsz=1048576,  
retrans=1,echo_interval=60,actimeo=1,closetimeo=1,user,_netdev)  
[root@client.ahmedfarg.net ~]#
```

Рис. 15: Проверка монтирования через fstab

## Выводы

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- Настроены сервер и клиент Samba
- Обеспечен общий доступ к каталогу
- Настроены SELinux-контексты и межсетевой экран
- Реализовано автоматическое монтирование ресурса
- Созданы сценарии автоматизации настройки