

# Лабораторная работа №14

## Настройка файловых служб Samba

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# Настройка сервера Samba

```

[root@server.kazhavoronkov.net ~]# dnf -y install samba samba-client cifs-utils
Last metadata expiration check: 2:19:54 ago on Sat 06 Dec 2025 12:10:53 PM UTC.
Dependencies resolved.
=====
Package                                Architecture      Version            Repository          Size
=====
Installing:
cifs-utils                             x86_64             7.2-1.el10         baseos               117 k
samba                                  x86_64             4.22.4-106.el10    baseos               959 k
samba-client                           x86_64             4.22.4-106.el10    appstream            770 k
Installing dependencies:
libnetapi                              x86_64             4.22.4-106.el10    baseos               144 k
samba-common-tools                     x86_64             4.22.4-106.el10    baseos               481 k
samba-dcerpc                           x86_64             4.22.4-106.el10    baseos               716 k
samba-ldb-ldap-modules                 x86_64             4.22.4-106.el10    baseos                35 k
samba-libs                             x86_64             4.22.4-106.el10    baseos               124 k

Transaction Summary
=====
Install 8 Packages

Total download size: 3.3 M
Installed size: 12 M
Downloading Packages:
(1/8): cifs-utils-7.2-1.el10.x86_64.rpm           171 kB/s | 117 kB    00:00
(2/8): libnetapi-4.22.4-106.el10.x86_64.rpm       195 kB/s | 144 kB    00:00
(3/8): samba-4.22.4-106.el10.x86_64.rpm           936 kB/s | 959 kB    00:01
(4/8): samba-common-tools-4.22.4-106.el10.x86_64  1.4 MB/s | 481 kB    00:00

```

Рис. 1.1. Установка на сервере необходимых пакетов samba samba-client cifs- utils.

# Настройка сервера Samba

```
[root@server.kazhavoronkov.net ~]# groupadd -g 1010 sambagroup  
[root@server.kazhavoronkov.net ~]# usermod -aG sambagroup kazhavoronkov  
[root@server.kazhavoronkov.net ~]# mkdir -p /srv/smbashare  
[root@server.kazhavoronkov.net ~]# █
```

# Настройка сервера Samba

```
root@server:~ - sudo -i
GNU nano 8.1 /etc/samba/smb.conf Modified
# See smb.conf.example for a more detailed config file or
# read the smb.conf manpage.
# Run 'testparm' to verify the config is correct after
# you modified it.
#
# Note:
# SMB1 is disabled by default. This means clients without support for SMB2 or
# SMB3 are no longer able to connect to smbd (by default).

[global]
    workgroup = KAZHAVORONKOV-NET
    security = user

    passdb backend = tdbsam

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

# Настройка сервера Samba

```
root@server:~ - sudo -i
GNU nano 8.1 /etc/samba/smb.conf Modified
include = /etc/samba/usershares.conf

[homes]
comment = Home Directories
valid users = %S, %D%w%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

[sambashare]
comment = My Samba Share
path = /srv/sambashare
write list = @sambagroup
```

# Настройка сервера Samba

```
[root@server.kazhavoronkov.net ~]# 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)

Server role: ROLE_STANDALONE

Press enter to see a dump of your service definitions
```

# Настройка сервера Samba

```
[root@server.kazhavoronkov.net ~]# systemctl start smb
[root@server.kazhavoronkov.net ~]# systemctl enable smb
Created symlink '/etc/systemd/system/multi-user.target.wants/smb.service' → '/usr/lib/systemd/system/smb.service'.
[root@server.kazhavoronkov.net ~]# systemctl status smb
● smb.service - Samba SMB Daemon
   Loaded: loaded (/usr/lib/systemd/system/smb.service; enabled; preset: disabled)
   Active: active (running) since Sat 2025-12-06 14:35:21 UTC; 20s ago
 Invocation: f8bc2fb7095c4789bc2dfe95cf490668
    Docs: man:smbd(8)
          man:samba(7)
          man:smb.conf(5)
 Main PID: 18149 (smbd)
   Status: "smbd: ready to serve connections..."
    Tasks: 3 (limit: 10691)
  Memory: 13.5M (peak: 13.7M)
     CPU: 77ms
    CGroup: /system.slice/smb.service
            └─18149 /usr/sbin/smbd --foreground --no-process-group
              └─18152 /usr/sbin/smbd --foreground --no-process-group
                └─18153 /usr/sbin/smbd --foreground --no-process-group

Dec 06 14:35:21 server.kazhavoronkov.net systemd[1]: Starting smb.service - Samba SMB Daemon...
Dec 06 14:35:21 server.kazhavoronkov.net systemd[1]: Started smb.service - Samba SMB Daemon.
[root@server.kazhavoronkov.net ~]#
```

# Настройка сервера Samba

```
[root@server.kazhavoronkov.net ~]# smbclient -L //server
Password for [KAZHAVORONKOV-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.kazhavoronkov.net ~]#
```



# Настройка сервера Samba

```
root@server:~ -- sudo -i

<?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 network
s. You need the 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)
```

# Настройка сервера Samba

```
[root@server.kazhavoronkov.net ~]# firewall-cmd --add-service=samba
success
[root@server.kazhavoronkov.net ~]# firewall-cmd --add-service=samba --permanent
success
[root@server.kazhavoronkov.net ~]# firewall-cmd --reload
success
[root@server.kazhavoronkov.net ~]#
```

# Настройка сервера Samba

```
[root@server.kazhavoronkov.net ~]# chgrp sambagroup /srv/smbashare
[root@server.kazhavoronkov.net ~]# chmod g=rwx /srv/smbashare
[root@server.kazhavoronkov.net ~]# cd /srv
[root@server.kazhavoronkov.net srv]# ls -Z
unconfined_u:object_r:nfs_t:s0 nfs unconfined_u:object_r:var_t:s0 smbashare
[root@server.kazhavoronkov.net srv]# semanage fcontext -a -t samba_share_t */srv/smbashare(/.*)?*
[root@server.kazhavoronkov.net srv]# restorecon -vR /srv/smbashare
Relabeled /srv/smbashare from unconfined_u:object_r:var_t:s0 to unconfined_u:object_r:samba_share_t:s0
[root@server.kazhavoronkov.net srv]# ls -Z
unconfined_u:object_r:nfs_t:s0 nfs unconfined_u:object_r:samba_share_t:s0 smbashare
[root@server.kazhavoronkov.net srv]# setsebool samba_export_all_rw 1
[root@server.kazhavoronkov.net srv]# setsebool samba_export_all_rw 1 -P
[root@server.kazhavoronkov.net srv]# id
uid=0(root) gid=0(root) groups=0(root) context=unconfined_u:unconfined_r:unconfined_t:s0-s0:c0.c1023
[root@server.kazhavoronkov.net srv]#
```

# Монтирование файловой системы Samba на клиенте

```
root@client:~ -- sudo -i

[kazhavoronkov@client.kazhavoronkov.net ~]$ sudo -i
[sudo] password for kazhavoronkov:
[root@client.kazhavoronkov.net ~]# dnf -y install samba-client cifs-utils
Last metadata expiration check: 2:57:07 ago on Sat 06 Dec 2025 12:09:41 PM UTC.
Dependencies resolved.
=====
Package                                Architecture Version                                Repository                               Size
=====
Installing:
cifs-utils                             x86_64    7.2-1.el10                             baseos                                   117 k
samba-client                           x86_64    4.22.4-106.el10                         appstream                               770 k

Transaction Summary
=====
Install 2 Packages

Total download size: 887 k
Installed size: 3.0 M
Downloading Packages:
(1/2): cifs-utils-7.2-1.el10.x86_64.rpm 164 kB/s | 117 kB 00:00
(2/2): samba-client-4.22.4-106.el10.x86_64.rpm 742 kB/s | 770 kB 00:01
-----
Total                                     485 kB/s | 887 kB 00:01
Running transaction check
Transaction check succeeded.
Running transaction test
```

# Монтирование файловой системы Samba на клиенте

```
root@client:~ -- sudo -i

<?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>
~
~
~
~
~
~
~
```

# Монтирование файловой системы Samba на клиенте

```
[root@client.kazhavoronkov.net ~]# firewall-cmd --add-service=samba-client
success
[root@client.kazhavoronkov.net ~]# firewall-cmd --add-service=samba-client --permanent
success
[root@client.kazhavoronkov.net ~]# firewall-cmd --reload
success
[root@client.kazhavoronkov.net ~]# groupadd -g 1010 sambagroup
[root@client.kazhavoronkov.net ~]# usermod -aG sambagroup kazhavoronkov
[root@client.kazhavoronkov.net ~]#
```

# Монтирование файловой системы Samba на клиенте

```
root@client:~ - sudo -i
GNU nano 8.1 /etc/samba/smb.conf Modified
# See smb.conf.example for a more detailed config file or
# read the smb.conf manpage.
# Run 'testparm' to verify the config is correct after
# you modified it.
#
# Note:
# SMB1 is disabled by default. This means clients without support for SMB2 or
# SMB3 are no longer able to connect to smbd (by default).

[global]
    workgroup = KAZHAVORONKOV-NET
    security = user

    passdb backend = tdbsam

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

    # Install samba-usershares package for support
    include = /etc/samba/usershares.conf
```

# Монтирование файловой системы Samba на клиенте

```
[root@client.kazhavoronkov.net ~]# smbclient -L //server
Password for [KAZHAVORONKOV-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
```



# Монтирование файловой системы Samba на клиенте

```
Password for [KAZHAVORONKOV-NET\root]:
Anonymous login successful

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

SMB1 disabled -- no workgroup available
[root@client.kazhavoronkov.net ~]# smbclient -L //server -U user
Password for [KAZHAVORONKOV-NET\user]:
session setup failed: NT_STATUS_LOGON_FAILURE
[root@client.kazhavoronkov.net ~]# smbclient -L //server -U kazhavoronkov
Password for [KAZHAVORONKOV-NET\kazhavoronkov]:

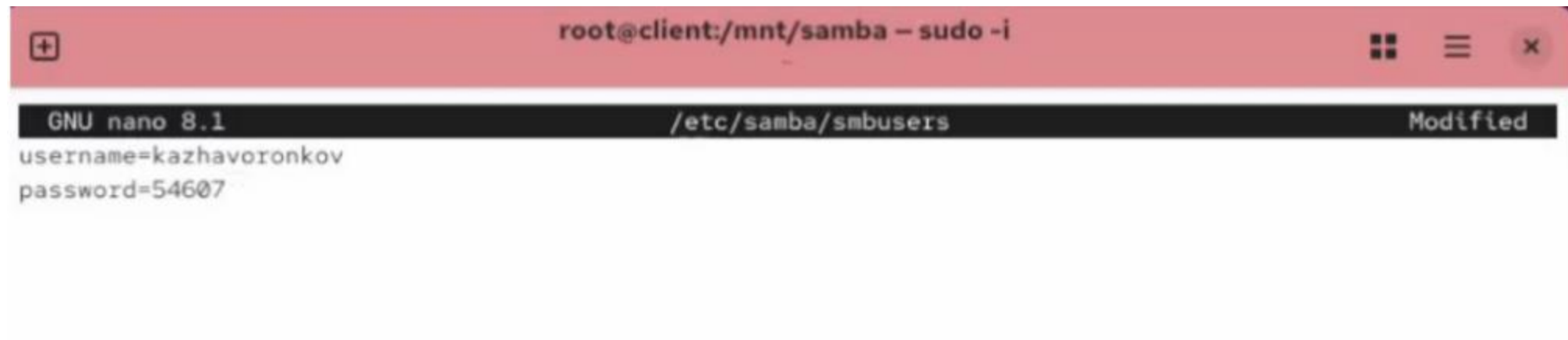
  Sharename      Type            Comment
  -----
  print$         Disk            Printer Drivers
  sambashare     Disk            My Samba Share
  IPC$           IPC             IPC Service (Samba 4.22.4)
  kazhavoronkov  Disk            Home Directories

SMB1 disabled -- no workgroup available
[root@client.kazhavoronkov.net ~]#
```

# Монтирование файловой системы Samba на клиенте

```
[root@client.kazhavoronkov.net samba]# touch /etc/samba/smbusers  
[root@client.kazhavoronkov.net samba]# chmod 600 /etc/samba/smbusers  
[root@client.kazhavoronkov.net samba]#
```

# Монтирование файловой системы Samba на клиенте



```
root@client:/mnt/samba -- sudo -i
GNU nano 8.1 /etc/samba/smbusers Modified
username=kazhavoronkov
password=54607
```

# Монтирование файловой системы Samba на клиенте

```
root@client:/mnt/samba -- sudo -i
GNU nano 8.1 /etc/fstab Modified
#
# /etc/fstab
# Created by anaconda on Sat Sep  6 13:15:18 2025
#
# Accessible filesystems, by reference, are maintained under '/dev/disk/'.
# See man pages fstab(5), findfs(8), mount(8) and/or blkid(8) for more info.
#
# After editing this file, run 'systemctl daemon-reload' to update systemd
# units generated from this file.
#
UUID=e0f3fcee-7799-4294-8547-121e1623c157 / xfs defaults 0 0
UUID=401bb276-312f-4651-9a99-1f0db4e65ae4 /boot xfs defaults 0 0
UUID=db95190e-ed05-4b2b-9d66-f80338c9589f none swap defaults 0 0
/swapfile none swap defaults 0 0
server.kazahvoronkov.net:/srv/nfs /mnt/nfs nfs _netdev 0 0
#VAGRANT-BEGIN
# The contents below are automatically generated by Vagrant. Do not modify.
vagrant /vagrant vboxsf uid=1000,gid=1000,_netdev 0 0
#VAGRANT-END
//server/sambashare /mnt/samba cifs user,rw,uid=kazhavoronkov,gid=sambagroup,credentials=/etc/samba/smb2
```

# Монтирование файловой системы Samba на клиенте

```
[root@client.kazhavoronkov.net samba]# systemctl daemon-reload  
[root@client.kazhavoronkov.net samba]# mount -a  
[root@client.kazhavoronkov.net samba]#
```

# Внесение изменений в настройки внутреннего окружения виртуальных машин

```
[root@server.kazhavoronkov.net ~]# cd /vagrant/provision/server
[root@server.kazhavoronkov.net server]# mkdir -p /vagrant/provision/server/smb/etc/samba
[root@server.kazhavoronkov.net server]# cp -R /etc/samba/smb.conf /vagrant/provision/server/smb/etc/samba/
[root@server.kazhavoronkov.net server]# touch smb.sh
[root@server.kazhavoronkov.net server]# chmod +x smb.sh
[root@server.kazhavoronkov.net server]# smb.sh
```

# Внесение изменений в настройки внутреннего окружения виртуальных машин

```
root@server:/vagrant/provision/server - sudo -i
root@server:/srv/sambashare - sudo -i
root@server:/vagrant/provision/server - sudo -i

GNU nano 8.1 smb.sh Modified
PASS=123456
echo "Provisioning script $@"
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
systemctl start smb
systemctl restart firewalld

^G Help      ^O Write Out  ^F Where Is   ^K Cut        ^T Execute    ^C Location   M-U Undo
^X Exit      ^R Read File  ^\ Replace    ^U Paste      ^J Justify    ^_ Go To Line  M-E Redo
```

# Внесение изменений в настройки внутреннего окружения виртуальных машин

```
[root@client.kazhavoronkov.net ~]# cd /vagrant/provision/client
[root@client.kazhavoronkov.net client]# mkdir -p /vagrant/provision/client/smb/etc/samba
[root@client.kazhavoronkov.net client]# cp -R /etc/samba/smb.conf /vagrant/provision/client/smb/etc/samba/
[root@client.kazhavoronkov.net client]# cp -R /etc/samba/smbusers /vagrant/provision/client/smb/etc/samba/
[root@client.kazhavoronkov.net client]# touch smb.sh
[root@client.kazhavoronkov.net client]# chmod +x smb.sh
[root@client.kazhavoronkov.net client]# nano █
```



# Внесение изменений в настройки внутреннего окружения виртуальных машин

```
root@client:/vagrant/provision/client -- sudo -i
root@client:/mnt/samba -- sudo -i  kazhavoronkov@client:~  root@client:/vagrant/provision/client:~
GNU nano 8.1  smb.sh  Modified
#!/bin/bash
LOGIN=kazhavoronkov
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/sambashare
echo "//server/sambashare /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
```

# Внесение изменений в настройки внутреннего окружения виртуальных машин

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

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