

Презентация по лабораторной работе 14

Настройка файловых служб Samba

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Раздел 1

1. Информация

1.1 Докладчик

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1.1 Докладчик

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Раздел 2

2. Вводная часть

2.1 Цели и задачи

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

Раздел 3

3. Выполнение заданий

3.1 слайд 1

```

root@server:/vagrant/provision/server - sudo -i
~/common

[root@server.dasedokhin.net server]# dnf -y install samba samba-client cifs-utils
Last metadata expiration check: 0:04:45 ago on Wed 26 Nov 2025 02:01:43 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                220 kB/s | 117 kB  00:00
(2/8): samba-common-tools-4.22.4-106.el10.x86_64.rpm    598 kB/s | 481 kB  00:00
(3/8): samba-4.22.4-106.el10.x86_64.rpm                 641 kB/s | 959 kB  00:01
(4/8): libnetapi-4.22.4-106.el10.x86_64.rpm             96 kB/s | 144 kB  00:01
(5/8): samba-libs-4.22.4-106.el10.x86_64.rpm            676 kB/s | 124 kB  00:00
(6/8): samba-ldb-ldap-modules-4.22.4-106.el10.x86_64.rpm 142 kB/s | 35 kB  00:00
(7/8): samba-dcerpc-4.22.4-106.el10.x86_64.rpm          668 kB/s | 716 kB  00:01
(8/8): samba-client-4.22.4-106.el10.x86_64.rpm          624 kB/s | 770 kB  00:01
-----
Total                                                    932 kB/s | 3.3 MB  00:03
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction

```

3.2 слайд 2

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

Рисунок 2: Создание группы sambagroup, добавление пользователя dasedokhin и создание каталога для монтирования разделяемых ресурсов

3.3 слайд 3

```
root@server:/vagrant/provision/server - sudo -i
~/common

GNU nano 8.1 /etc/samba/smb.conf Modified

[global]
    workgroup = DASEDOKHIN-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

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

3.4 слайд 4

```
[root@server.dasedokhin.net 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)

Server role: ROLE_STANDALONE

Press enter to see a dump of your service definitions

# Global parameters
[global]
    printcap name = cups
    security = USER
    workgroup = DASEDOKHIN-NET
    idmap config * : backend = tdb
    cups options = raw
    include = /etc/samba/usershares.conf
```

3.5 слайд 5

```
[root@server.dasedokhin.net server]# systemctl start smb
[root@server.dasedokhin.net server]# systemctl enable smb
Created symlink '/etc/systemd/system/multi-user.target.wants/smb.service' → '/usr/lib/systemd/system/smb.service'.
[root@server.dasedokhin.net server]# systemctl status smb
● smb.service - Samba SMB Daemon
   Loaded: loaded (/usr/lib/systemd/system/smb.service; enabled; preset: disabled)
   Active: active (running) since Wed 2025-11-26 14:11:03 UTC; 16s ago
 Invocation: e632048a79e14b05bfc954d09c2b42cd
    Docs: man:smbd(8)
          man:samba(7)
          man:smb.conf(5)
 Main PID: 6208 (smbd)
   Status: "smbd: ready to serve connections..."
    Tasks: 3 (limit: 10395)
  Memory: 13.5M (peak: 13.9M)
     CPU: 105ms
    CGroup: /system.slice/smb.service
            └─6208 /usr/sbin/smbd --foreground --no-process-group
              └─6211 /usr/sbin/smbd --foreground --no-process-group
                └─6212 /usr/sbin/smbd --foreground --no-process-group

Nov 26 14:11:03 server.dasedokhin.net systemd[1]: Starting smb.service - Samba SMB Daemon...
Nov 26 14:11:03 server.dasedokhin.net systemd[1]: Started smb.service - Samba SMB Daemon.
[root@server.dasedokhin.net server]#
```

3.6 слайд 6

```
[root@server.dasedokhin.net server]# smbclient -L //server
Password for [DASEDOKHIN-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.dasedokhin.net server]# less /usr/lib/firewalld/services/samba.xml

[1]+  Stopped                  less /usr/lib/firewalld/services/samba.xml
[root@server.dasedokhin.net server]#
```

Рисунок 6: Проверка наличия общего доступа и просмотр файла конфигурации межсетевого экрана Samba

3.7 слайд 7

```
[root@server.dasedokhin.net server]# firewall-cmd --add-service=samba
success
[root@server.dasedokhin.net server]# firewall-cmd --add-service=samba --permanent
success
[root@server.dasedokhin.net server]# firewall-cmd --reload
success
[root@server.dasedokhin.net server]# chgrp sambagroup /srv/smbashare
[root@server.dasedokhin.net server]# chmod g=rwx /srv/smbashare
```

Рисунок 7: Настройка межсетевого экрана и прав доступа для каталога с разделяемым ресурсом

3.8 слайд 8

```
[root@server.dasedokhin.net server]# cd /srv
[root@server.dasedokhin.net srv]# ls -Z
unconfined_u:object_r:nfs_t:s0 nfs unconfined_u:object_r:var_t:s0 sambashare
[root@server.dasedokhin.net srv]# semanage fcontext -a -t samba_share_t "/srv/sambashare(/.*)?"
[root@server.dasedokhin.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.dasedokhin.net srv]# cd /srv
[root@server.dasedokhin.net srv]# ls -Z
unconfined_u:object_r:nfs_t:s0 nfs unconfined_u:object_r:samba_share_t:s0 sambashare
[root@server.dasedokhin.net srv]# setsebool samba_export_all_rw 1
[root@server.dasedokhin.net srv]# setsebool samba_export_all_rw 1 -P
[root@server.dasedokhin.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.dasedokhin.net srv]#
```

Рисунок 8: Просмотр контекста безопасности, его настройка, проверка его изменений. Разрешение экспорта разделяемых ресурсов для чтения и записи и просмотр UID пользователя и в какие группы он входит

3.9 слайд 9

```
[dasedokhin@server.dasedokhin.net ~]$ cd /srv/smbshare  
[dasedokhin@server.dasedokhin.net smbshare]$ touch dasedokhin@server.txt
```

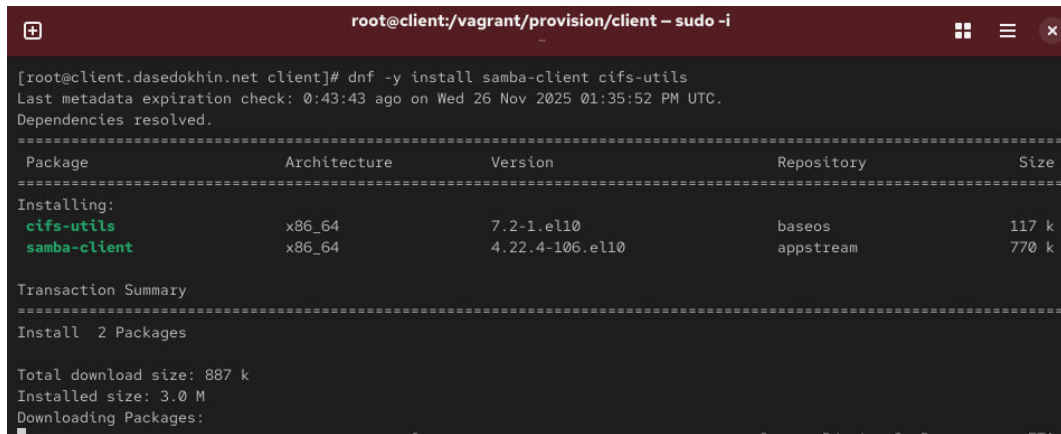
Рисунок 9: Попытка создать файл на разделяемом ресурсе под пользователем dasedokhin

3.10 слайд 10

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

Рисунок 10: Добавление пользователя dasedokhin в базу пользователей Samba

3.11 слайд 11



```
root@client:/vagrant/provision/client – sudo -i

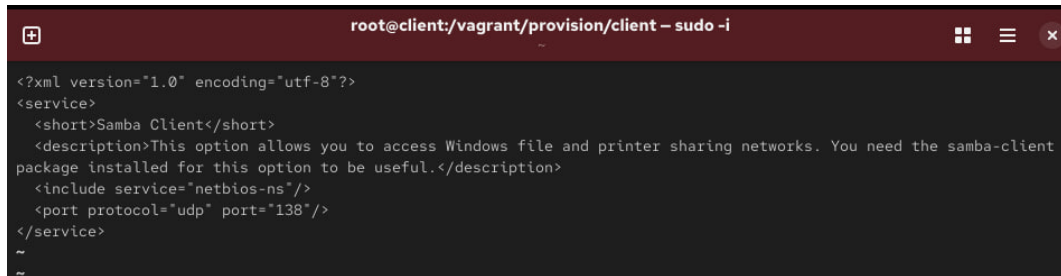
[root@client.dasedokhin.net client]# dnf -y install samba-client cifs-utils
Last metadata expiration check: 0:43:43 ago on Wed 26 Nov 2025 01:35:52 PM UTC.
Dependencies resolved.
=====
Package                        Architecture      Version           Repository        Size
=====
Installing:
cifs-utils                     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:
```

Рисунок 11: Установка необходимых пакетов на клиенте

3.12 слайд 12



```
root@client:/vagrant/provision/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>
~
~
```

Рисунок 12: Просмотр файла конфигурации межсетевого экрана для клиента samba-client.xml

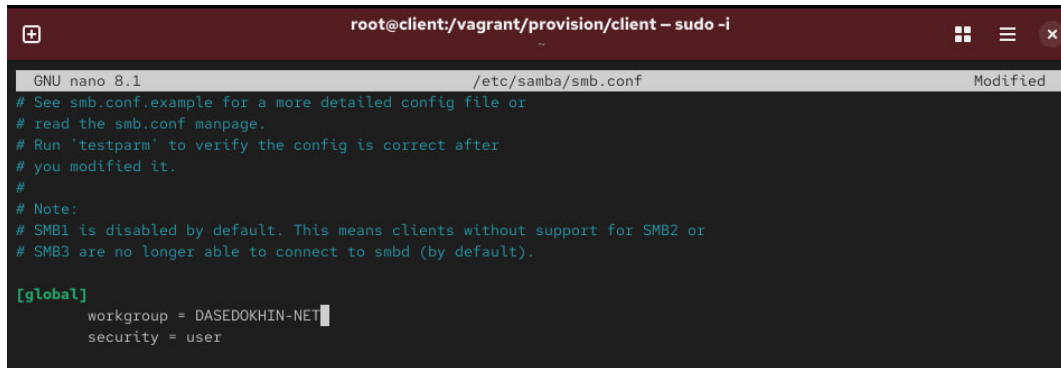
3.13 слайд 13

```
Complete!
[root@client.dasedokhin.net client]# less /usr/lib/firewalld/services/samba-client.xml

[1]+  Stopped                  less /usr/lib/firewalld/services/samba-client.xml
[root@client.dasedokhin.net client]# firewall-cmd --add-service=samba-client
success
[root@client.dasedokhin.net client]# firewall-cmd --add-service=samba-client --permanent
success
[root@client.dasedokhin.net client]# firwall-cmd --reload
bash: firwall-cmd: command not found...
[root@client.dasedokhin.net client]# firewall-cmd --reload
success
[root@client.dasedokhin.net client]# groupadd -g 1010 sambagroup
[root@client.dasedokhin.net client]# usermod -aG sambagroup dasedokhin
[root@client.dasedokhin.net client]# █
```

Рисунок 13: Настройка межсетевого экрана. Создание группы sambagroup и добавление пользователя dasedokhin

3.14 слайд 14



```
root@client:/vagrant/provision/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 = DASEDOKHIN-NET
    security = user
```

Рисунок 14: Редактирование файла smb.conf, добавление параметра рабочей группы

3.15 слайд 15

```
[root@client.dasedokhin.net client]# smbclient -L //server
```

```
Password for [DASEDOKHIN-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@client.dasedokhin.net client]# su - dasedokhin
```

```
Last login: Wed Nov 26 13:15:17 UTC 2025 on tty2
```

```
[dasedokhin@client.dasedokhin.net ~]$ smbclient -L //server -U dasedokhin
```

```
Password for [DASEDOKHIN-NET\dasedokhin]:
```

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

3.16 слайд 16

```
[root@client.dasedokhin.net ~]# mount -o username=dasedokhin,user,rw,uid=dasedokhin,gid=sambagroup //server/smbashare /mnt/samba
Password for dasedokhin@//server/smbashare:
[root@client.dasedokhin.net ~]# cd /mnt/samba
[root@client.dasedokhin.net samba]# touch dasedokhin@client.txt
[root@client.dasedokhin.net samba]# umount /mnt/samba
umount: /mnt/samba: target is busy.
[root@client.dasedokhin.net samba]# cd /
[root@client.dasedokhin.net /]# umount /mnt/samba
[root@client.dasedokhin.net /]#
```

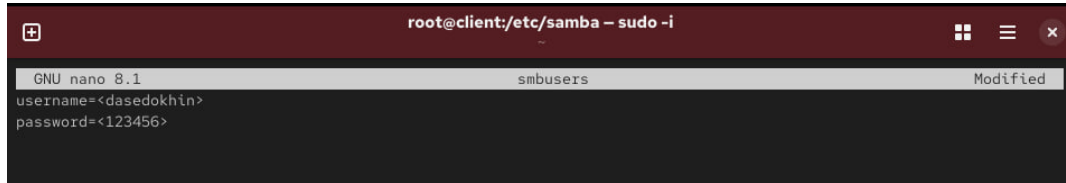
Рисунок 16: Создание точки монтирования, получение доступа к общему ресурсу с помощью mount, проверка возможности записывать файлы на разделяемом ресурсе, отмонтирование каталога

3.17 слайд 17

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

Рисунок 17: Создание файла smbusers в каталоге /etc/samba

3.18 слайд 18

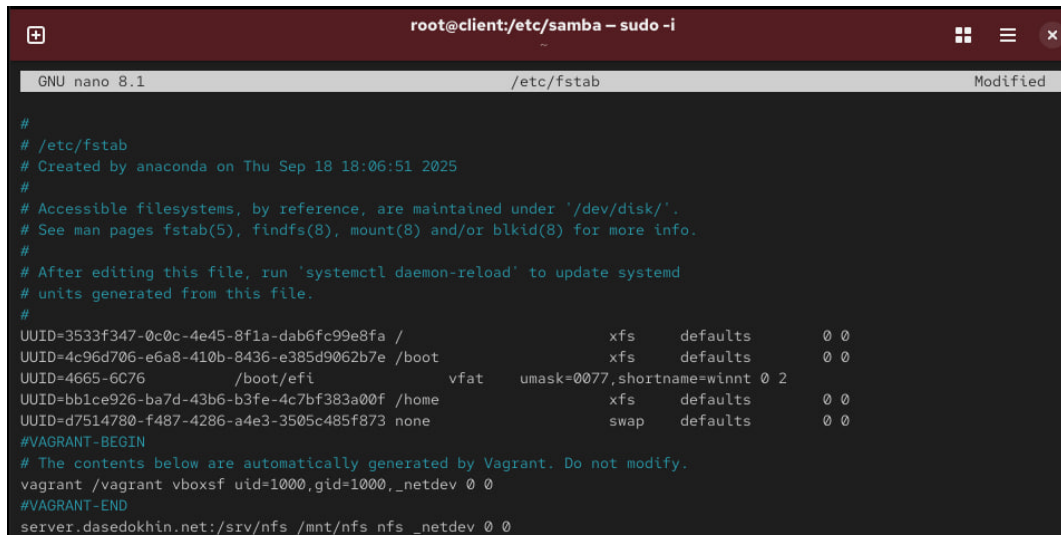


The screenshot shows a terminal window with a dark red title bar. The title bar text is "root@client:/etc/samba – sudo -i". On the right side of the title bar are three icons: a plus sign in a square, a hamburger menu, and a close button. The main area of the terminal is black with white text. At the top, a light gray status bar shows "GNU nano 8.1" on the left, "smbusers" in the center, and "Modified" on the right. Below the status bar, the text "username=<dasedokhin>" is on the first line and "password=<123456>" is on the second line.

```
root@client:/etc/samba – sudo -i
GNU nano 8.1 smbusers Modified
username=<dasedokhin>
password=<123456>
```

Рисунок 18: Редактирование файла smbusers

3.19 слайд 19



The screenshot shows a terminal window titled "root@client:/etc/samba – sudo -i". The terminal is running the nano text editor on the file "/etc/fstab". The editor's status bar at the top indicates "GNU nano 8.1" and "Modified". The content of the file is as follows:

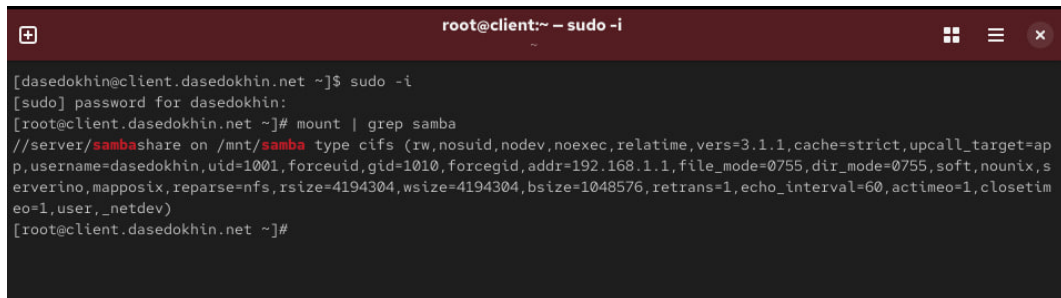
```
#  
# /etc/fstab  
# Created by anaconda on Thu Sep 18 18:06:51 2025  
#  
# Accessible filesystems, by reference, are maintained under '/dev/disk/'.  
# See man pages fstab(5), findfs(8), mount(8) and/or blkid(8) for more info.  
#  
# After editing this file, run 'systemctl daemon-reload' to update systemd  
# units generated from this file.  
#  
UUID=3533f347-0c0c-4e45-8f1a-dab6fc99e8fa / xfs defaults 0 0  
UUID=4c96d706-e6a8-410b-8436-e385d9062b7e /boot xfs defaults 0 0  
UUID=4665-6C76 /boot/efi vfat umask=0077,shortname=winnt 0 2  
UUID=bb1ce926-ba7d-43b6-b3fe-4c7bf383a00f /home xfs defaults 0 0  
UUID=d7514780-f487-4286-a4e3-3505c485f873 none swap defaults 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.dasedokhin.net:/srv/nfs /mnt/nfs nfs _netdev 0 0
```

3.20 слайд 20

```
[root@client.dasedokhin.net samba]# mount -a  
[root@client.dasedokhin.net samba]# █
```

Рисунок 20: Монтирование общего ресурса

3.21 слайд 21

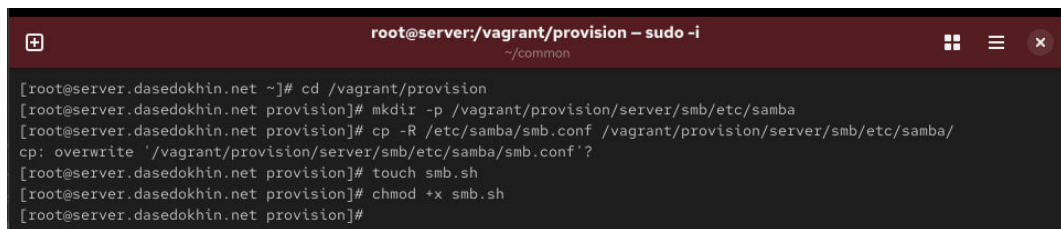


```
root@client:~ – sudo -i

[dasedokhin@client.dasedokhin.net ~]$ sudo -i
[sudo] password for dasedokhin:
[root@client.dasedokhin.net ~]# mount | grep samba
//server/samba share on /mnt/samba type cifs (rw,nosuid,nodev,noexec,relatime,vers=3.1.1,cache=strict,upcall_target=app,username=dasedokhin,uid=1001,forceuid,gid=1010,forcegid,addr=192.168.1.1,file_mode=0755,dir_mode=0755,soft,nounix,serverino,mapposix,reparsing,nfs,rsync=4194304,wsync=4194304,bsync=1048576,retrans=1,echo_interval=60,actimeo=1,closetimeo=1,user,_netdev)
[root@client.dasedokhin.net ~]#
```

Рисунок 21: Проверка монтирования ресурса после перезагрузки и доступ пользователя к разделяемым ресурсам

3.22 слайд 22

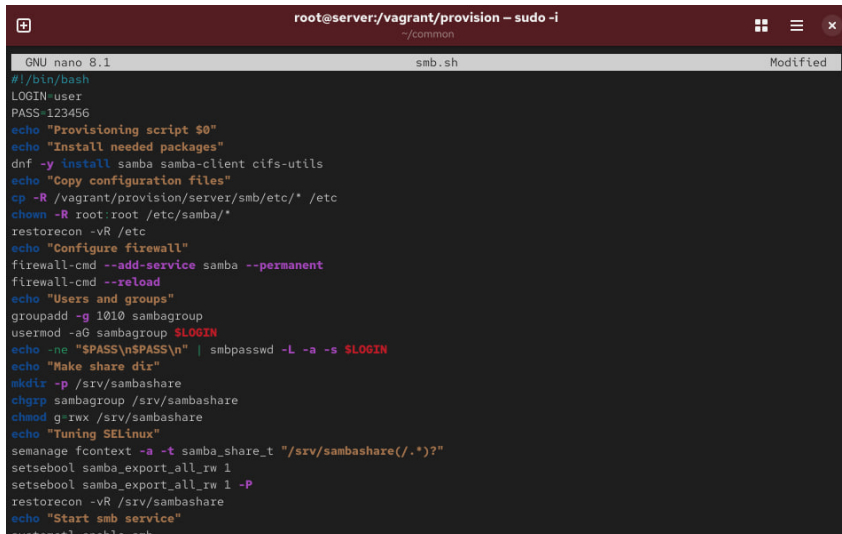


```
root@server:/vagrant/provision – sudo -i
~/common

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

Рисунок 22: Внесение изменений в настройки внутреннего окружения виртуальной машины сервер

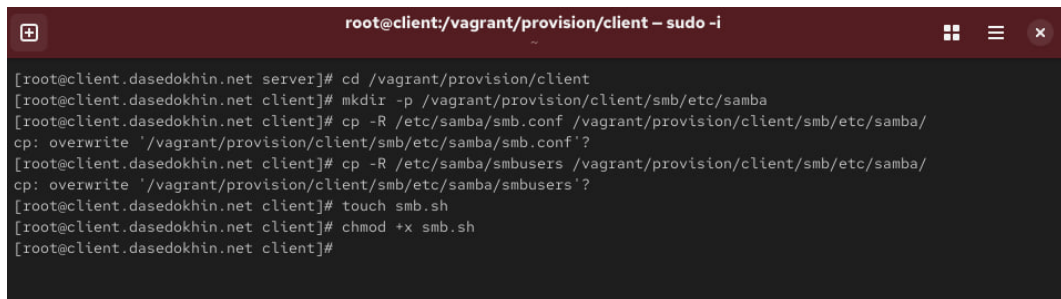
3.23 слайд 23



```
root@server:/vagrant/provision -- sudo -i
~/common

GNU nano 8.1                                smb.sh                                Modified
#!/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
```

3.24 слайд 24

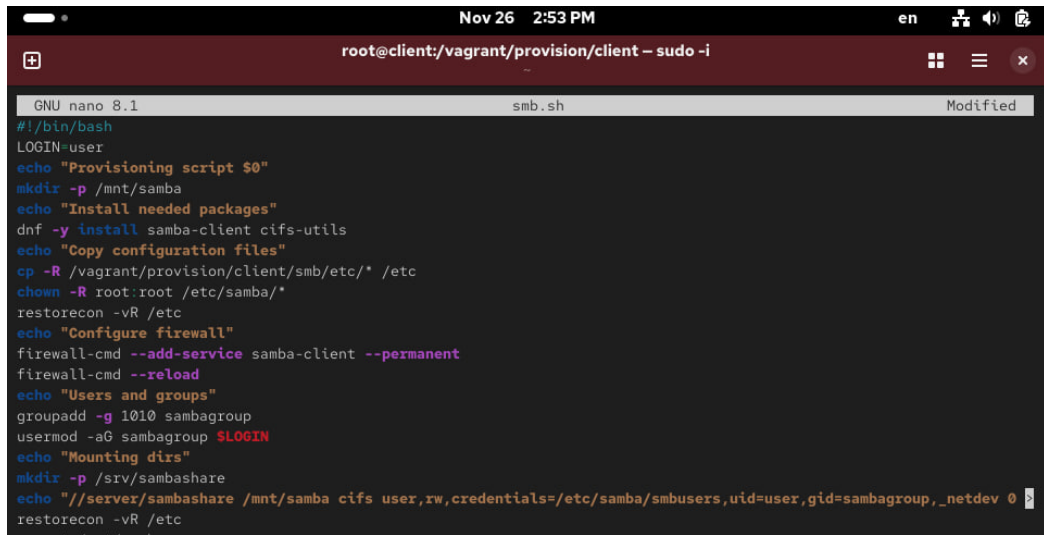


```
root@client:/vagrant/provision/client – sudo -i

[root@client.dasedokhin.net server]# cd /vagrant/provision/client
[root@client.dasedokhin.net client]# mkdir -p /vagrant/provision/client/smb/etc/samba
[root@client.dasedokhin.net client]# cp -R /etc/samba/smb.conf /vagrant/provision/client/smb/etc/samba/
cp: overwrite '/vagrant/provision/client/smb/etc/samba/smb.conf'?
[root@client.dasedokhin.net client]# cp -R /etc/samba/smbusers /vagrant/provision/client/smb/etc/samba/
cp: overwrite '/vagrant/provision/client/smb/etc/samba/smbusers'?
[root@client.dasedokhin.net client]# touch smb.sh
[root@client.dasedokhin.net client]# chmod +x smb.sh
[root@client.dasedokhin.net client]#
```

Рисунок 24: Внесение изменений в настройки внутреннего окружения виртуальной машины клиент

3.25 слайд 25



The screenshot shows a terminal window titled "root@client:/vagrant/provision/client – sudo -i". The terminal content is a Samba provisioning script. The script starts with "GNU nano 8.1" and "smb.sh" in the header. It sets the shell to "/bin/bash" and the login user to "user". It then echoes "Provisioning script \$0". The script creates the directory "/mnt/samba" with permissions "-p". It echoes "Install needed packages" and uses "dnf -y install" to install "samba-client" and "cifs-utils". It echoes "Copy configuration files" and uses "cp -R" to copy files from "/vagrant/provision/client/smb/etc/" to "/etc". It uses "chown -R root:root" to set ownership on "/etc/samba/*". It runs "restorecon -vR /etc". It echoes "Configure firewall" and uses "firewall-cmd --add-service samba-client --permanent" and "firewall-cmd --reload". It echoes "Users and groups" and uses "groupadd -g 1010 sambagroup" and "usermod -aG sambagroup \$LOGIN". It echoes "Mounting dirs" and creates the directory "/srv/sambashare" with permissions "-p". It echoes "Server configuration" and sets "server smbshare" to "/mnt/samba" with options "cifs user,rw,credentials=/etc/samba/smbusers,uid=user,gid=sambagroup,_netdev 0". It ends with "restorecon -vR /etc".

```
GNU nano 8.1                                smb.sh                                Modified
#!/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/sambashare
echo "Server configuration"
server smbshare /mnt/samba cifs user,rw,credentials=/etc/samba/smbusers,uid=user,gid=sambagroup,_netdev 0
restorecon -vR /etc
```

3.26 слайд 26

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

Рисунок 26: Скрипт конфигураций сервера

3.27 слайд 27

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

Рисунок 27: Скрипт конфигураций клиента

Раздел 4

4. Выводы

4.1 слайд 1

Я приобрел навыки настройки доступа групп пользователей к общим ресурсам по протоколу SMB.